



CPTED SECURITY SURVEY AND ASSESSMENT

Public Access Pathways: Fernside Blvd. and Eastshore Dr.

Abstract

A Crime Prevention Through Environmental Design assessment based on the guidelines set by the National Institute of Crime Prevention to address and enhance the safety concerns of visitors, surrounding residents, and first responders.

Alameda Police Department
December 13, 2018

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Disclaimer

This security survey has been conducted as a public service of the Alameda Police Department's Community Oriented Policing and Problem Solving (COPPS) Unit. The information contained herein is based on the guidelines set by National Institute of Crime Prevention's CPTED course and the observations of the Crime Prevention Technician conducting the survey. This survey is intended to assist in improving the overall level of security only. It is not intended to imply the existing security measures, or proposed security measures are absolute or perfect.

All new construction, retrofitting, or installations should comply with existing building, zoning laws, and fire codes. Licenses and variances should be obtained and inspections should be conducted by the City of Alameda or other certified authorities.

Site Description

Site A – 3227 – 3229 Fernside Boulevard

Recognized by the City of Alameda as a shoreline public access path. Pathway is currently under evaluation for future use. Due to the pathway's curve, grade/slope, dense vegetation, and lack of public lighting, visibility is extremely poor for those approaching the pathway or from those on the roadway. These factors provide areas of concealment and ambush points for pathway visitors or first responders.

Key Services

- Residential access/foot traffic
- Shoreline access
 - Recreational fishing
 - Vessel access
- Pedestrian traffic

Site B – 3267 – 3301 Fernside Boulevard

Recognized by the City of Alameda as a shoreline public access path. Pathway is currently under evaluation for future use. There is limited private vegetation encroachment on the pathway, however, the narrow width and length of path combined with parked street vehicles limit vantage points from the roadway during daylight hours. The lack of lighting conceals potential activity on pathway during evening hours.

Key Services

- Residential access
- Residential garage access (1)
- Vessel access
- Non-motorized vessel launching area
- Recreational fishing
- Pedestrian traffic

Site C – 3335 – 3341 Fernside Boulevard

Recognized by the City of Alameda as a shoreline public access path. Pathway is currently under evaluation for future use. Due to length of pathway, parked street vehicles, and overgrown private vegetation, visibility is limited from the road way on Fernside Blvd. during daytime hours. Lack of lighting conceals potential activity on pathway during evening hours.

Key Services

- Residential access
- Residential garage access (4)

- Vessel access
- Non-motorized vessel launching area
- Recreational fishing
- Pedestrian traffic

Site D – 3335 Liberty/1450 Eastshore

Recognized by the City of Alameda as a shoreline public access path. Pathway is currently under evaluation for future use. Pathway provides direct access from the intersection of Liberty Avenue and Eastshore Drive to the water front. Due to minimal vegetation and clearance on the 50-foot lot, a clear view of the path and the Estuary can be seen from the road way. Despite the lack of public lighting on pathway, first responders are able to use vehicle lights to illuminate pathway, if needed, due to “T” shaped intersection and limited parking in front of entrance.

Key Services

- Recreational fishing
- Sightseeing
- Pedestrian traffic

Site E – 1380 – 1400 Eastshore

Recognized by the City of Alameda as a shoreline public access path. Pathway is currently under evaluation for future use. Pathway provides direct access from the street to water front. Mature vegetation and city owned utility boxes provide areas of concealment from the road way in day or evening hours. Lack of lighting is problematic for visibility from the street during night time hours. However, landscaping maintenance and use of security mirrors or lights can reduce these limitations.

Key Services

- Recreational fishing
- Sightseeing
- Pedestrian access
- Dog walking

Site F – 1328 – 1350 Eastshore Drive

Recognized by the City of Alameda as a shoreline public access path. Pathway is currently under evaluation for future use. Currently, private developments have been established on public grounds and gates off use of pathway and water access.

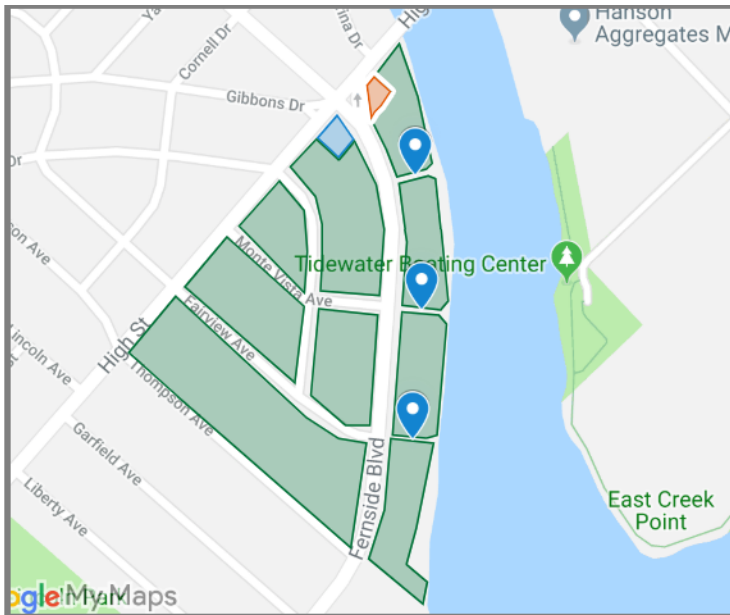
Key Services

- Private access to neighboring homes

ARIEL VIEW

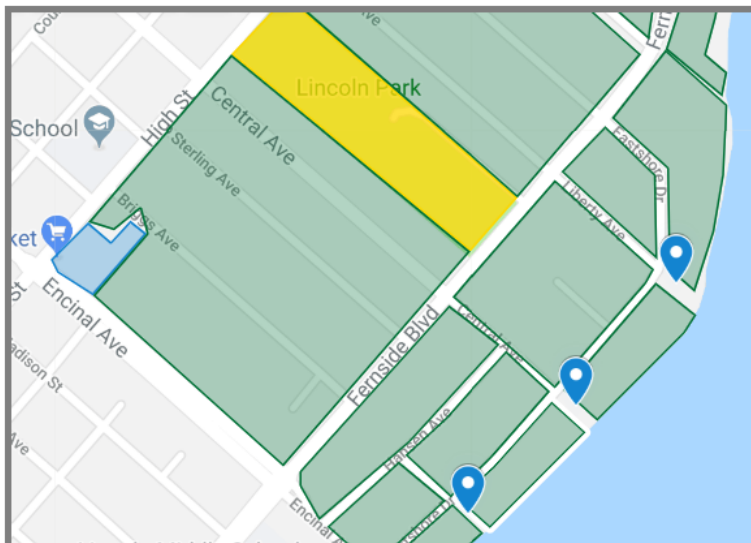


NEIGHBORHOOD CONNECTIONS



COLORATION LEGEND

- COMMERCIAL
- RESIDENTIAL
- NURSING FACILITY
- PUBLIC ACCESS PATHWAYS



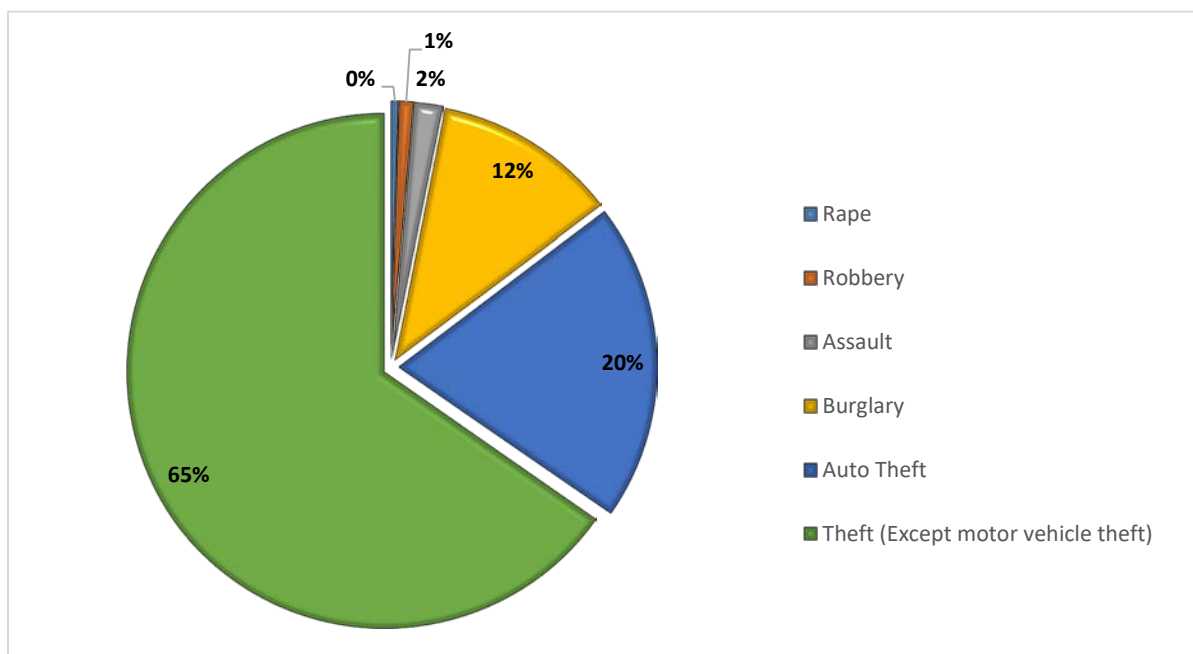
COLORATION LEGEND

- COMMERCIAL
- RESIDENTIAL
- PARKS
- PUBLIC ACCESS PATHWAYS

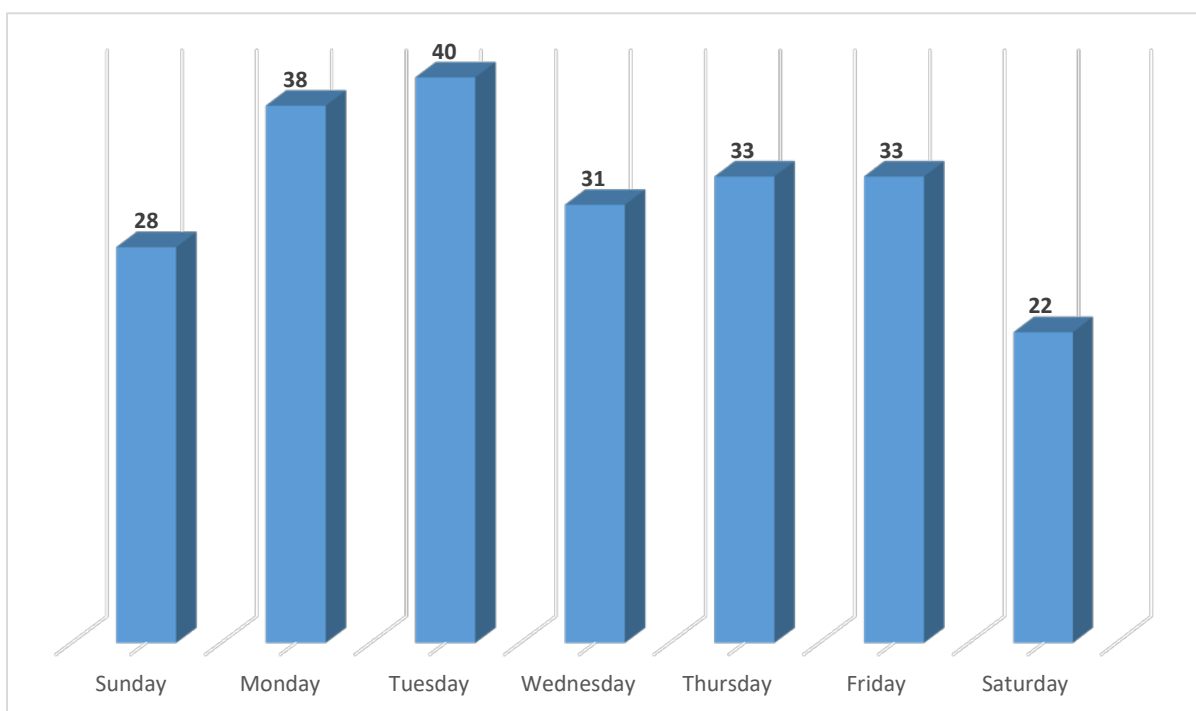
Part 1 UCR 5-year Crime Analysis (January 2014 – December 2018)

The following is a breakdown of the Part 1 crimes that have been reported in the reporting districts 342 and 343 (inclusive of Fernside Boulevard and Eastshore Drive) over the last five years.

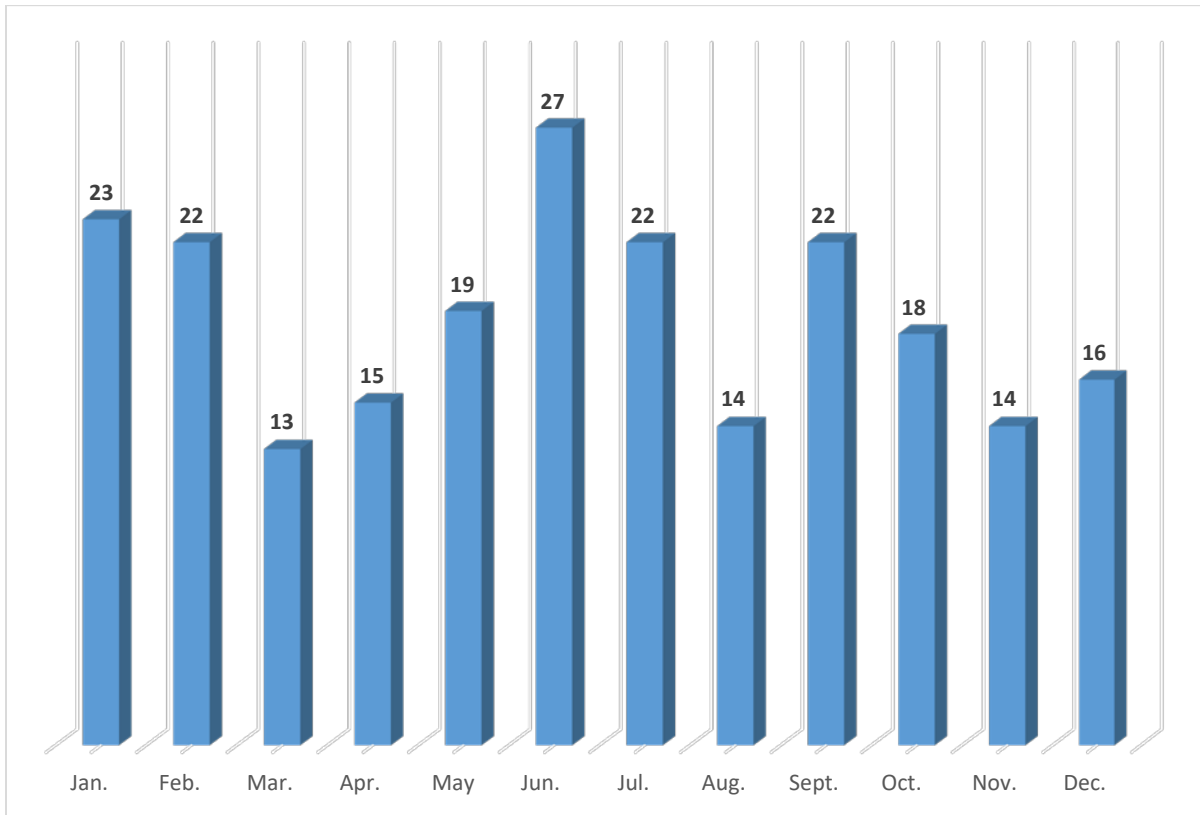
Part 1 UCR Offenses



Report Breakdown – Day of the Week



Report Breakdown – Monthly



What is CPTED

Crime Prevention Through Environmental Design

CPTED is the proper design and effective use of an environment that can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life.

The Alameda Police Department interoperates with the City's Planning Department, Parks and Recreation Departments, and developmental compliance to ensure crime prevention strategies are designed into projects – no matter how big or small.

CPTED works by influencing the behavior of criminals prior to crimes being committed by tipping the scales of risk v. reward. If proper design is implemented, then a criminal's perceived risk of being caught by any legitimate user or law enforcement official will outweigh the value of the reward. At the moment, crime can be displaced to another area and its seriousness will be reduced or the crime will not happen.

CPTED Strategies

Natural Surveillance – Design of built environment that allows for bidirectional visibility. People have a greater sense of security when they can see and be seen by others. Lighting, landscaping, and window placement all contribute to this strategy.

Natural Access Controls – Design of the built environment that obstructs or guides people and vehicles in and around a property. Landscaping, sidewalks, and signs all influence the pedestrian and vehicle circulation at a site. The moment when a pedestrian becomes lost, the chances of him or her becoming a victim increases.

Territorial Reinforcement – Design of the built environment that clearly shows ownership of an area. This concept reinforces ownership of the property and delineates the distinction of the property from public, semi-public to semi-private to private. Landscaping, road pavers, sidewalks, bollards, and fences all contribute to deterring potential crime.

Maintenance – The long term upkeep and repair of buildings and surrounding property. Continual maintenance sends a very clear message of ownership to criminals. The lack of maintenance is an indication there may be weaknesses in security that can be exploited.

Supporting CPTED Strategies

Wayfinding – The concept of wayfinding is to move pedestrians and/or vehicles to and from or through buildings and sites using roadway transitions, sidewalks, signage, and focal points.

Activity Generators – Items or activities placed in strategic locations where natural surveillance is limited or unavailable. Activity generators help to attract capable individuals to the areas where they can over watch and deter potential crime. Bicycle racks, gazebos, benches, dining, or designated smoking areas encourage activity in the established environment.

Lighting – Lighting is the number one deterrent for crime during nighttime hours. A well-lit parking lot, pathway, exterior building, or outdoor facility by a white light source with good uniformity contributes to the perceived safety of pedestrians. High Intensity Discharge bulbs such as Metal Halide and High Pressure Sodium offer good lighting; however, LED provides the best. LED lighting has quickly become the dominant bulb on the market, offering superior light emittance, uniformity, and color rendering for witness identification.

Natural v. Organized v. Mechanical – CPTED focuses on the organic and natural modification of the built environment to accomplish its strategies. Organized strategies utilize the human element to complement the natural goal by way of security guards, receptionist, and property managers. Mechanical elements can be built to further harden a target. Security gates, security cameras, and alarm systems all contribute to the mechanical strategy of crime prevention.

Signage and Wayfinding

Advantages:

Five (5) of the six (6) pathways include a 12x18 inch sign affixed to a curbside 7-8ft pole. Site F does not have visible signs displayed as it has been gated off by private development. The signs provided the following statement:

SHORELINE PUBLIC ACCESS Open dawn to dusk be courteous and respectful of neighbors. Take your trash with you, walk your bike, scooter or skateboard.

The signs also include images of no smoking or consumption of alcohol followed by the Alameda Municipal Codes, 23-1.5 & 23-1.7.

The placement of the signs did not play a factor in obstructing the sight line from the sidewalk or street view of the pathways which could impact pedestrian visibility and safety.

Site E provides additional signage compared to the ones posted at site A, B, C, and D. The additional signs at site E's entrance indicate dog leashing and waste laws in addition to Alameda Recreation and Parks Department sign.

Challenges:

Due to the signs high placement and the 12x18 inch frame, the visibility of the signs are not easily comprehended. The signs size and placement make it challenging for an individual to easily identify the pathway's location and guidelines. The entrances lack a celebrated entry way, which attributes to an increase in natural surveillance and a decrease in unwanted behavior due to perceived risk of being in an identifiable public location.

Perimeter Observations

Advantages:

Initial first impressions of the pathway's perimeter were mixed. The pathways seamlessly blend into what is predominantly a residential neighborhood. Under present conditions as a pedestrian or a stopped vehicle, site B, C, E and F provided less than fair to fair visuals from the street to the water's edge.

Site A – The north side of the pathway is unfenced and provides exterior access to surrounding homeowners. Due to the lack of fencing, a series of windows face the path. The south side of the patch is partially unfenced with one path-facing window and the remaining light of the pathway is a line by a solid 6ft wood fence that does not provide natural surveillance. The east end of the pathway was lined with a 3ft wrought iron fence.

Site B – Both the north and south side of pathway B is bordered by a knee wall from the entrance to the midway point of the path. The remaining length of the path is fenced off, to the north, by a 10-12ft solid wood fence and, to the south, a 6ft fence that exposes the neighboring residences above ground backyard. Privately owned security cameras and motion sensor LED lights are visible lining the north side of the path.

Site C – Similar to site B, site C is also bordered by knee walls halfway down the pathway. From the street this pathway has limited obstructions during the day. Lack of lighting obstructs view in the nighttime hours.

Side D – The entryway is partially fenced off by a white picket fence to assist with access control. Majority of the path does not have overgrown landscaping, with the exception of landscaping lining the north side solid wood fencing. Aside from the minimal landscaping in need of minimal maintenance, Site D provides an open clearance.

Site E – Of all, this shore access point is more clearly defined as a public space and includes an additional Alameda Recreation and Parks Department sign. Low landscaping at the entrance with trees further along the path. Fencing to the north is solid wood and to the south ground vegetation separates private and public space.

Site F – This site had been gated off by private developments and is locked by the household to the north of the path followed by a second gate that serves the residence to the south. Beyond the private gates is access to the shoreline with a mature pinewood tree.

Challenges:

In all sites, uniformed lighting is non-existent or minimal.

Site A – due to the narrow path way, the steep incline and decline, and dense vegetation, this site lacks natural surveillance from the street and offers several areas of concealment. While the surrounding vegetation is will maintained, it does not oblige to the 2ft by 6ft rule.

Landscaping following the 2ft by 6ft rule would ensure ground vegetation does not exceed 2 feet in height and trees offer a 6 foot clearance under their canopy, both increasing line of sight and reduce ambush points.

Site B – The shoreline access pathway is dually used as residential access to those residing at 3267 Fernside Boulevard and vehicle access for the garage of 3301 Fernside Boulevard creating a concern for pedestrian safety. The solid fence lining the north side of the path further provides a sense of seclusion.

Site C – Moderate landscaping sits atop the knee walls creating areas of concealment and potential ambush points along the south side of the path. The landscaping on the north side of the path is minimal but lacks maintenance. The path acts as both a pedestrian walkway and vehicle path for four garages and a carport.

Site E – Dense brush lines the paths but does not exceed 2 feet and can benefit from regular maintenance. Utility box does provide an area of concealment. During a low tide, the end of the path can provide an area of concealment along the estuary bank.

Exterior Lighting Observations

While visiting the properties during nighttime hours, poor visibility on pathways due to the lack of formalized lighting sources was observed.

Site A – The pathway receives minimal and ununiformed illumination from the porch lights of the surrounding private residences. The fixtures appear to use low sodium bulbs that omit an orange-yellow hues that provide poor color rendering and can hinder witnesses' accuracy in identification. The high density of the pathway's surrounding landscaping blocks lighting on the full path.

Site B – Uniformed lighting in nonexistent at Site B, there are two low pressured sodium lighting fixtures, one that is blocked by a mature tree's canopy and the other that provides too much light. As contradictory as it seems, too much light from a single source or a source that does not have the proper lighting shields to direct and contain light can produce overwhelming glare. This glare affects the pedestrian's night vision for as much as 20 minutes and creates blind spots for onlookers.

Affixed to the top of the fence of the north side residence are two privately owned solar motion sensor LED lights. These should not be considered reliable or uniformed.

Site C – Decorative lighting fixtures with energy efficient bulbs are hung above the garage doors but do not provide illumination for the entire access path. .

Site D – No lighting source on path way. The closest light source is a street high pressure sodium acorn street lamp located outside of the pathway's entrance. The lack of lighting combined with landscaping can provide a sense of seclusion during the nighttime hours.

Site E – A single overhand street lamp is located at the entrance, no additional lighting is on the path. The homeowners at 1380 Eastshore controls a flood light that can be turned on upon request to illuminate the back of the path and their porch light offers minimal illumination halfway through the path when in operation.

Activity Generators

Positive

While walking the various pathways, it was noted that the locations saw very little to no foot traffic during the daytime hours. Site E was the only pathway with provided benches, while Site D had the adequate space to provide seating areas. Upon arrival to Site E, a family of three was observed fishing and utilizing the provided benches.

An onsite interview of the family, who resides at 1401 Eastshore Drive, revealed that Site E is a common gathering spot for juveniles after school. Site E is located 0.7 miles from Lincoln Middle School and 1.4 miles for Alameda High School. The family also expressed concerns over the lack of lighting during the evening hours.

Site E has a Free Little Library installed at the entrance. This encourages visitors to read in the park and increases the number of eyes that stop and look in the direction of the pathway – increasing natural surveillance.

Negative

Due to the setback of the paths from the sidewalks and roadways, the Public Access Walkways provide a sense of isolation and privacy which has laid the foundation for unwanted behavior and criminal activity.

According to Alameda Police calls for service between March 8, 2018 and November 28, 2018, 27% of reported calls for service to Eastshore Drive were for suspicious circumstances, vehicles and/or people.

Recommendations

1. Reinforce the value of continual landscaping maintenance at all sites, especially site A and E. Ensure all ground covering shrubbery and hedges are no taller than 36' and the lower canopy of all trees is no lower than 6'.
2. Remove residential garbage cans from pathways and ensure they are inaccessible to the public so they cannot be used as makeshift ladders to scale fencing and enter surrounding private properties.
3. Pathways at Site B and C are excessively rough with irregular surfaces. To ensure pedestrian safety and reduce the risk of sidewalk falls, grind or repave pathway to provide smooth path of travel.
4. Install outdoor lighting that meets Illuminating Engineering Society (IES) minimum standards at all sites. Lighting should provide uniformity, proper color rendering, minimal glare, and adequate shielding to prevent light pollution to surrounding neighbors. The use of LED bulbs is recommended.
 - a. "Uniformity" refers to the evenness of the distribution of light on the surface. Uniformity standards have been established by the Illuminating Engineering Society of North America (IESNA).
 - b. "Color Rendering Index (CRI)" refers to the ability of a light source to accurately render an object's color in comparison with a natural light source. Measured on a scale of 1-100 with 100 being ideal.
 - c. "Glare" is a visual sensation caused by the excessive and uncontrolled brightness. It can hinder full visibility or be simply uncomfortable.
 - d. "Light pollution" refers to the altered light level in the outdoor environment due to man-made sources of light.
 - e. "Shield" an item that can be attached to a lighting fixture to direct light, reduce lighting pollution, and controls glare.
5. When installed, use a certified arborist to prune branches of trees away from walkway lighting fixtures, signs, and video surveillance cameras.
6. Due to limitation to enhance natural surveillance, install surveillance cameras as a source of mechanical surveillance to discourage criminal behavior and activity at all sites.
7. Provide overlapping surveillance coverage for multiple angles when appropriate.

8. Consider privatizing Site B and C due to the use of motor vehicles on the path or restricting vehicle access to pathways.
9. Site A fails to meet ADA slope/grade compliance by exceeding a 5% incline/decline. It is recommended to clear and re-grade the pathway to meet ADA standards.
10. Create celebrated entrances with prominent signage for easy identification and wayfinding to motorists, pedestrians, and first responders.
11. Create clearly defined territorial reinforcement by installing 3ft decorative wrought iron fencing along the walkways on Site A, B, and C to establish a border. Additionally, 6ft tall privacy fences are recommended in lining the backyards of neighboring residential properties.
12. Install security mirrors at site E to provide vantage points around the permanent utility boxes.