

1991-11-23-0A-~~FEA~~-Diamond Head Bikeway Phase II
SMA

ENVIRONMENTAL ASSESSMENT

Special Management Area Use Permit

for the

DIAMOND HEAD ROAD BIKEWAY

at

Diamond Head & Kahala Districts
Honolulu, Oahu, Hawaii

TMK: 3-01-33 to 39, & 42

August 1991

Prepared By:

Stanley Yim & Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819
Telephone: 833-7313 Fax: 833-4764

1991 AUG 14 AM 9 05
DEPT OF LAND UTILIZATION
CITY & COUNTY OF HONOLULU

I. GENERAL INFORMATION

- A. **APPLICANT:** Department of Transportation Services
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813
- B. **RECORDED FEE OWNER(S):**
City and County of Honolulu
and
Department of Land & Natural Resources,
State of Hawaii
- C. **AGENT:** Stanley Yim & Associates, Inc.
2850 Paa Street, Suite 200
Honolulu, Hawaii 96819
- D. **TAX MAP KEY:** 3-01-33 to 39 & 42
- E. **LOT AREA:** N/A (Project is not a subdivision nor for the development of land)
- F. **AGENCIES CONSULTED IN MAKING ASSESSMENT:**
Department of Public Works, City
Department of Transportation Services, City
Division of Wastewater Management, DPW, City
Board of Water Supply, City
Department of Land Utilization, City

II. DESCRIPTION OF PROPOSED ACTION:

- A. **GENERAL:** The proposed project involves the planning, conceptual design, and construction of a new bikeway for Diamond Head Road. The new bikeway is to be located in the Diamond Head and Kahala Districts and will be between Coconut Avenue at the Ewa end of the project and Kahala Avenue at the other (Koko Head) end. The bikeway will be about 7,100 feet long and will be along bothsides of Diamond Head Road.

In addition to the new bikeway along both sides of Diamond Head Road, the work also includes moving back the existing curbs on the makai side of Diamond Head Road between Coconut Avenue and Beach Road; pavement widening along certain portions of the mauka side of the alignment when the existing pavement is too narrow to satisfy the design widths or where the existing slope bank extends into the existing right of way and interferes with the new bike lane section; and extending the existing pedestrian walk on the makai side of Diamond Head Road from where it currently ends at the first lookout to the Lookout No. 3. Other work will be paint striping and signage. Some existing utility poles on the mauka side may need to be set back at areas being widened.

This project is a continuation of the Paki Avenue and Kalakaua Avenue bikeways. The Diamond Head Road Bikeway, along with those two projects, will ultimately become a part of the masterplanned transportation system in the area that will provide for an efficient mix of vehicular, bicycle, and pedestrian

traffic. The bikeway project also conforms with the Statewide Bikeway Masterplan.

- B. **OBJECTIVES:** As bicycling becomes more and more popular with people for recreation as well as for utilitarian purposes, bikeways are necessary to segregate bicycle traffic from both vehicular and pedestrian traffic thereby providing safety to bicyclists, motorists, and pedestrians.

The objectives of a bikeway route should be to:

1. improve the overall safety of bicycling
2. encourage to use of bicycles as a means of everyday transportation
3. encourage the use of bicycles for recreation, sport, and physical fitness
4. develop a continuous bikeway system on Oahu for intracommunity and intercommunity travel

The Diamond Head Road bikeway will basically follow these objectives during its planning and design phases. However, due to varying conditions along the route of the proposed bikeway, a single type of bikeway facility may not necessarily be suitable for the entire route. Diamond Head Road is already heavily used by a mixture of buses, cars, bicyclists, mopeds, joggers, and pedestrians. The shared use of the existing road is an important factor which the proposed bikeway facility must address.

- C. **EXISTING CONDITIONS:**

Between Coconut Avenue and Beach Road

This is an older residential area with some homes dating back to the 1920's and or 30's. Renovation work and other new homes followed during the later 30's and into the 1940's. The recorded road right of way for Diamond Head Road in this area is around 50 feet. The road travelway width varies and is about 24 feet wide, more or less. The pavement material is asphaltic concrete and there are concrete curbs along both sides of the road. On street parking is not permitted between Coconut Avenue and Beach Road. The sidewalk area varies in width and contains a concrete walk and strips of grassed areas. Water and sewer services are underground with water meters located in the sidewalk areas. The electric and telephone services are overhead and, with the exception of four anchor poles, are all located along the mauka side of the road.

Between Beach Road and Kahala Avenue

There are four public parks and a scenic vista with three observation areas on the oceanside of the road from Beach Road to Kahala Avenue. The road right of way widens from 50 feet to 60 feet which then remains constant for most of the distance. The road travelway varies in width and ranges from around 34 feet to 40 feet wide. The pavement material is asphaltic concrete and there are no curbs, gutters, or sidewalks along either side of the road until the third lookout area is passed and the project approaches the Kahala end of the alignment. Parking along the makai side of the road is not allowed between Beach Road and the first lookout area. People now parallel park along the existing wall between the first lookout area and the third lookout area and also randomly across the road on the mauka side. There is an asphaltic concrete

berm from Beach Road to the first lookout area separating a pedestrian walk of about 6 feet wide for joggers and pedestrians from vehicular traffic. The walk ends at the first lookout area. The slope banks of Diamond Head and some landscaped areas occupy parts of the mauka side of the road. The landscaped areas are past beautification projects that were put in over the years by volunteer citizen groups.

General

Diamond Head Road is one of two major streets that connect the residential areas of Kahala with the business districts of Waikiki and Kapahulu.

An 11-hour weekday traffic count taken on Diamond Head Road shows a total volume of about 7,314 vehicles. During another 11-hour period at this same location, from 7:00 AM to 6:00 PM, the bicycle count was 319; the moped count was 442; and the jogger and pedestrian count was 556. A similar 11-hour but weekend count showed the total traffic volume increasing to about 8,730 vehicles. The bicycle count was 924; the moped count was 707; and the jogger and pedestrian count was 1,098. While the total volume for vehicular traffic increased by a little more than 19% for weekend usage, the bicycle usage almost tripled (2.90 times), and the number of joggers and pedestrians almost doubled (1.98 times). Moped usage increased just 160%.

During the 8-year period from 1982 to 1989, 24 bicycle accidents were recorded. Of the 24 accidents, one bicyclist was killed and all the others were injured. An annual breakdown of the bicycle accidents reflect the following,

1982	=	2 accidents,	2 injured,	0 fatality
1983	=	4 accidents,	4 injured,	0 fatality
1984	=	5 accidents,	5 injured,	0 fatality
1985	=	1 accident,	1 injured,	0 fatality
1986	=	3 accidents,	3 injured,	0 fatality
1987	=	4 accidents,	4 injured,	0 fatality
1988	=	3 accidents,	3 injured,	0 fatality
1989	=	2 accidents,	1 injured,	1 fatality

A random on street parking survey taken at 4:00 PM along Diamond Head Road showed 98 vehicles were parked on the weekday while 173 vehicles were parked during the weekend, an increase of 196%, more or less.

The posted speed for Diamond Head Road is 25 MPH.

Diamond Head Road is under both State and City jurisdiction. The State's jurisdiction is under the State Land and Natural Resources and is from Beach Road to Kahala Avenue whereas the City's jurisdiction is from Coconut Avenue to Beach Road.

D. TECHNICAL: The proposed bikeway will be located within the existing State and City rights of ways for Diamond Head Road. Three types of bikeway facilities will be considered for the Diamond Head Road Bikeway Project. They are,

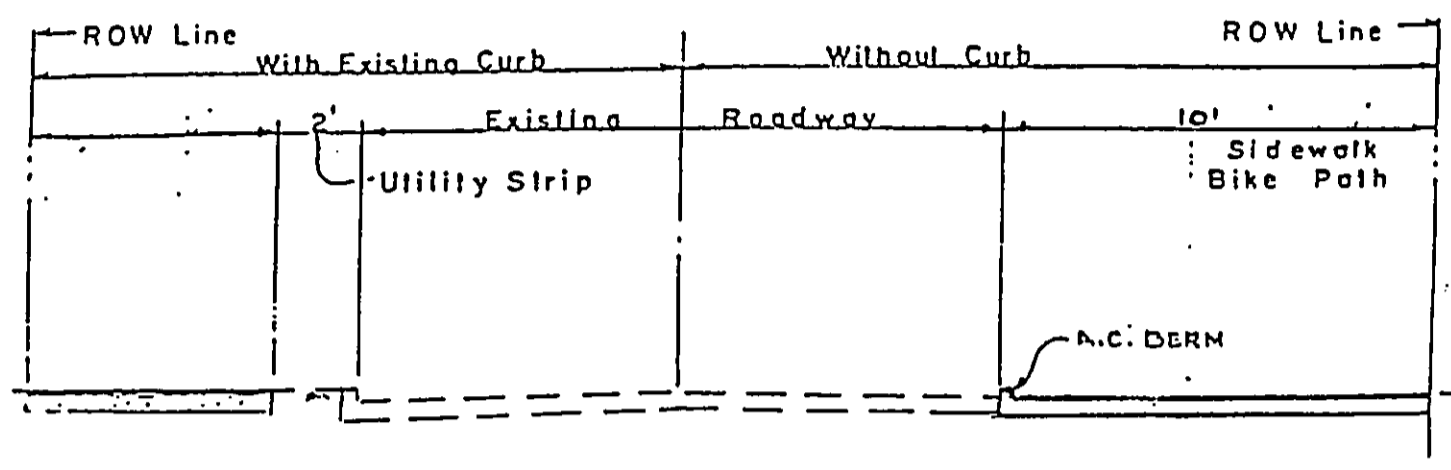
1. **Bike Path:** A bike path, 10 feet wide, in the sidewalk area to be shared with joggers and pedestrians
2. **Bike Lane:** A bike lane, minimum width of 4 feet, located in the shoulder area, and separated from the vehicular travelway by a 4-inch wide white paint line.
3. **Bike Route:** A specifically designated lane that would be officially marked as a "bike route" with the installation of signs. Bicycles will share the lane with moving vehicles.

Figure 1 shows each facility as described above.

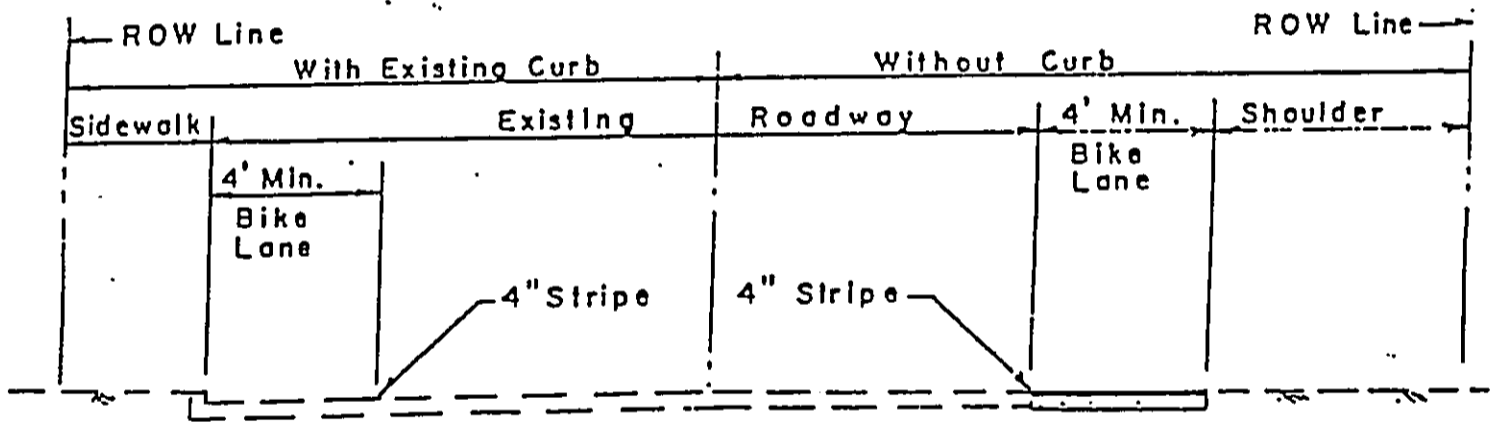
Traffic safety and smooth traffic operations are major considerations for this bikeway project. There is no doubt the vehicles, bicycles, mopeds, pedestrians, as well as heavy trucks and buses, are already using Diamond Head Road every day. The present traffic mix lends to potential daily problems that usually result in accidents. The project plans to address the mix problem as follows,

1. The existing 24 feet wide pavement between Coconut Avenue and Beach Road is considered narrow for both bicycle and vehicular traffic to flow together. Vehicular traffic in this area is comprised of large tour buses, trucks, and cars. Moving vehicular traffic have been seen crossing over the double solid yellow centerline from time to time to pass the slower moving bicycles and mopeds. This overtaking movement creates a safety hazard to both the bicyclists, moped riders, and motorists. The project will redo this section of roadway to obtain two vehicular lanes of about 11 feet wide each. There will also be a separate 4 feet wide bike lane along each side for a total pavement width of about 30 feet. This new width, along with the designated lanes, will separate, accommodate, and should ease the two way bicycle, moped, and traffic movement and also contribute towards reducing the accident potential for bicyclists, moped riders and motorists in the area by making available control measures for the police to use. Due to the limited space in the area, there may be some pavement widening along certain portions of the mauka side of the road towards Beach Road. Some of the existing utility poles may be affected and may need to be relocated accordingly. While there are no plans to move the existing curbs back on the mauka side, and efforts will be made to keep the curbs on the mauka side at their present locations, there may be isolated instances where curb relocation may be necessary.
2. The section from Beach Road to the first of the three lookout areas will have two bike lanes, one on each side of the road and each travelling in opposite directions from the other. An existing pedestrian walk area that is now separated from the traffic flow by an asphalt concrete berm will remain unchanged. It will be extended from the first lookout area where it now ends to the third lookout area. The walk area is heavily used by joggers and pedestrians.

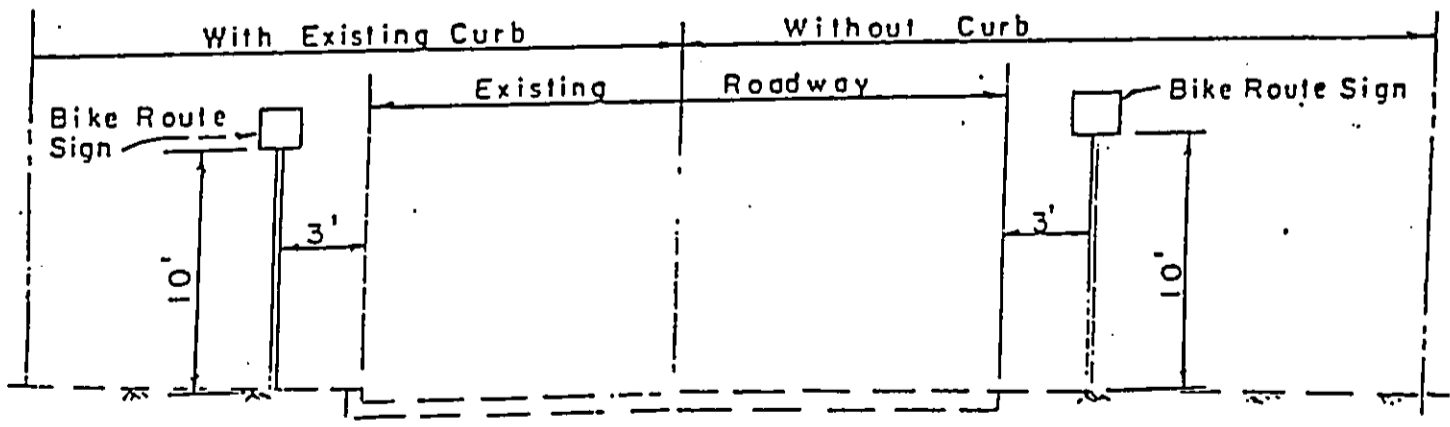
DOCUMENT CAPTURED AS RECEIVED



BIKE PATH



BIKE LANE



BIKE ROUTE

TYPICAL SECTIONS

NO SCALE

FIGURE 1

3. Parking is presently not allowed alongside the walk area between Beach Road and the first lookout area. The public now parallel park alongside the existing wall between the first lookout area and the third lookout area. The parking spaces are heavily used by tourists, surfers, and the general public. This parallel parking arrangement presently forces the walkers and joggers out into the active bicycle, moped, and vehicular traffic and, thereby, exposes them to considerable danger. The parallel parking arrangement will be continued but will be located next to the newly extended walk area. The intent is to create a secured walk area for the pedestrians and joggers. The parked cars will be prevented from parking on the walk areas by the newly extended asphalt concrete berm. The parked cars will however, keep the active traffic flow away from the walkers and joggers. The new bike lane on the makai side of the road along this section will be located on the traffic side of the parked cars. This arrangement will also keep the bicyclists separated and away from the walkers and joggers.
4. Creating the new bike lanes, extending the existing asphaltic concrete curb along the makai side of the road to extend the existing walk area, and placing the parallel parking stalls between the bikers and motorists will help to sort out the mixed traffic flow of bicycles, pedestrians, and moving vehicles. Locating the bike lane on the traffic side of the parked cars will further segregate bicycle and moped traffic from the walkers and joggers using the walk area. In addition to the makai improvements, there is also a new bike lane on the mauka side of the road. Most of the work on the mauka side will be striping but there will be some pavement widening but only where needed. A few existing utility poles and some existing curb sections may be affected by the widening and will be moved accordingly. Grade adjustment walls may be used where needed to accommodate the existing slope banks.
5. Parking is now permitted at each of the three lookout areas. Extending the existing walk and the asphaltic concrete berm will not close off these areas to parking. The new parallel parking stalls and the asphaltic concrete berm for the newly extended walk area will terminate prior to reaching the lookout areas and resume after the lookout areas are passed by. The work will not change any parking arrangements at the lookout areas.
6. The existing road from the third lookout area to Kahala Avenue varies in width and is wide. There is enough width to comfortably create two new bike lanes, again, one on each side of the road and travelling in opposite directions from each other. The two new bike lanes will safely separate the mix of vehicular traffic from both bicycle and pedestrian traffic without creating hazardous conditions. The sidewalk areas and shoulders as they exist are already wide enough to enable the joggers and pedestrians to move about without jeopardizing themselves to moving vehicles and bicycles. There are existing sidewalk areas at the Kahala end of the project that are already available for the joggers and pedestrians to use.

III. AFFECTED ENVIRONMENT: The new work will be contained within the existing Diamond Head Road rights of ways.

The new work will include;

setting back the curbs, and sidewalks along the makai side of the road between Coconut Avenue and Beach Road

adjust utilities on the makai side of Diamond Head Road between Coconut Avenue and Beach Road due to the moving back of the curbs

pavement widening along the mauka side of Diamond Head Road when needed

relocate affected utility poles and existing curbs along the mauka side of Diamond Head Road only when impacted by the new work and as needed due to the pavement widening work

extending the existing asphaltic concrete berm and existing walk area from the first lookout area where it presently ends to the third lookout area

creation of new bike lanes

paint striping and traffic signage.

Environmentally, this project will not disturb any natural features nor will it create any major grading or other work requiring the disturbance of environmentally sensitive life or areas. The entire project site is already an existing roadway containing the usual infrastructure improvements. Drainage and surface runoff patterns will not be disturbed and will continue to remain unchanged prior to, during, and after the project's completion.

No historic, cultural, and/or archaeological resources will be disturbed by this project.

The nature of the work under this project will not affect any coastal views from any vantage point.

IV. PROJECT IMPACTS: The short term, or construction related impacts, will be temporary and localized. The long term impact is the creation of a safer area for the general public and tourists to use. Another benefit is a better and more efficient mixing of vehicular traffic with that of mopeds, bicyclists, joggers, and pedestrians thus contributing towards reducing the accident potential between the groups.

V. MITIGATING MEASURES:

- A. This section describes the mitigating measures that would pertain to the short term impacts associated with the construction work for this project. No negative long term impacts are expected from the project and, therefore, no mitigating measures for long term impacts are discussed.

1. **Noise** - An increase in noise level will be experienced during the construction work by the homes fronting Diamond Head Road along the project's alignment. The noise sources will be the various equipment needed for the construction activities which would include heavy vehicles for excavation and removal of spoil material, importation and placement of materials, painting work, and other power equipment.

To mitigate adverse impacts from the construction work, the contractor will be held responsible for properly maintaining all construction equipment to keep noise levels at a minimum during the construction operations. If noise levels are expected to exceed the allowable levels called for under Title 11 of the Administrative Rules, Department of Health, Chapter 43, the contractor will be required to obtain the necessary noise permits prior to commencing with any of the work. In addition, any heavy vehicle required for the construction work must also comply fully with Title 11 of the Administrative Rules, Department of Health, Chapter 42, Vehicular Noise Control for Hawaii.

2. **Air Quality** - Ambient air quality is expected to be temporarily impacted by dust generated from the construction work. In keeping with the State Health Department's regulations, and the applicable City and County of Honolulu's ordinances, the contractor will be required to take the necessary measures to minimize airborne pollutants.

Emissions generated by the various construction equipment can also affect the ambient air quality. However, with the proper equipment and maintenance by the contractor, the adverse impacts caused by emissions from equipment can be controlled and minimized.

3. **Water Quality** - Construction of the proposed bikeway should not adversely affect the water quality of the area. There will be no major grading work nor any major construction work that would lead to adverse impacts upon the water quality for the area. Therefore, no mitigating measures for water quality need be discussed.
4. **Erosion Control** - Sedimentation and erosion potential for the bikeway project is minimal if any. The only excavation and earthwork activity will be for those areas where the existing curb is being moved back and/or those areas where the existing pavement is to be widened. There is no need for specific erosion control measures to be developed for this bikeway project. The Contractor however, will be expected to keep the construction area clean and contain all the earthwork activities only to the work area.
5. **Traffic** - During construction, trucks, heavy equipment, and other construction related vehicles will use the existing roads to import, place, and haul away material. Local traffic flow along the construction may occasionally encounter inconveniences. The contractor shall attempt to keep such inconveniences as brief as possible. The contractor shall also be responsible for providing the necessary traffic controls and precautions to maintain traffic safety on the roads bordering, near to, as well as at the construction site.

6. **Flora and Fauna** - There are no known rare or endangered species of flora or fauna in or around the proposed project site. All of the proposed work will be confined within the existing rights of way for Diamond Head Road. The usual roadway infrastructure is already present and the proposed work will be dealing primarily with these existing features.
7. **Economic** - The short term impact from the construction work include the provision of jobs to local construction personnel. Local suppliers, and retail businesses will also benefit through a multiplier effect from the increased construction activity.
8. **Public Health and Safety** - The necessary measures to assure public health and safety shall be provided by the contractor through all phases of the work. The construction areas shall be properly secured through the adequate use of signs and other devices as required by both the State and City regulations during all non-working hours