



Agenda Item #: _____

Staff Report

City of Manhattan Beach

TO: Honorable Mayor Ward and Members of the City Council

THROUGH: Richard Thompson, Interim City Manager

FROM: Richard Gill, Director of Parks and Recreation
Jim Arndt, Public Works Director

DATE: April 13, 2010

SUBJECT: Consideration of Proposed Uses of the Dune at Sand Dune Park: SPECIAL MEETING

RECOMMENDATION:

It is recommended that City Council discuss and consider the proposed uses of the Dune at Sand Dune Park, and provide staff with direction to move forward and implement.

FISCAL IMPLICATION:

There are significant capital and operational costs, depending on the selected operational change. All costs could be considered in the annual budgeting process of the City Council.

BACKGROUND:

Operations of the Dune have been the focus of many public meetings before the City Council, Parks and Recreation Commission, and Parking and Public Improvements Commission (PPIC). Most recently, at the City Council meeting of January 19, 2010, the Council reviewed recommendations from the PPIC and Parks and Recreation Commission, as well as public testimony, and directed Staff to return with operational options that:

- Assess the Structural Integrity of the Dune (as determined by a Geotechnical firm) in both its current state, as well as if the Dune were restored to its original condition:
- Reopen the Dune by exploring what physical changes to the Dune could be made to accommodate the conditions of the specific uses prescribed by the Council, including reshaping, planting, and stabilizing to provide some form of an unspecified quantity of Dune walking:
- Identify Specific Uses or Recreation Programs to coincide with the reopening of the Dune, with the Council directives: no exercise; limited walking use; low impact to the neighborhood; and favoring use by children:
- Review Parking and Traffic, given there will be no residential parking program and no parking meters installed at this time:
- Consider Proposed Ordinance eliminating exercise on the Dune.

DISCUSSION:

It is helpful to begin discussion of the Dune with some background on the existing topography of the Dune and surrounding Park.

Figure 1 depicts the Dune in recent operation; Figure 2 shows the Dune and the area of the Park adjacent to and north of the Dune, including existing paved paths and plantings; Figure 3 shows the same area as Figure 2, with the topographic contours; Figure 4 notes the dimensions of length, width, and approximate degree of slope of the Dune.

The conditions shown in Figures 1-4 exist as a result of the ever increasing use of the Dune up through the summer of 2009, and include periodic replenishment of the Dune sand at the top to prevent erosion moving westerly toward existing pavement. Continued use of the Dune has also resulted in the migration of the Dune to the north, leaving a concave depression in the center of the Dune.

The following is a discussion of the five bulleted considerations outlined in the BACKGROUND section of this report:

Assess the Structural Integrity of the Dune

On January 19, 2010, City Council directed staff to procure a Geotechnical Engineer to determine if the dune is geologically stable. On February 16, 2010, City Council appropriated funds for the geotechnical investigation. Professional Services Industries (PSI) of Long Beach, California was hired to conduct the investigation.

PSI performed four borings to a depth of 10 feet below the surface of the dune. Uncompacted sand was evident through the depth of all borings. As expected, the dune is composed primarily of beach sand.

The dune at Sand Dune Park exists on the leeward side of a large coastal dune that parallels the beach from 15th Street to Rosecrans Avenue. The leeward faces of active dunes typically rest at or near their angle of repose which is defined as the maximum angle of slope, measured from horizontal at which loose, sandy material will come to rest on a pile of similar material. The type of sand at the dune should possess an angle of repose from 30 to 35 degrees. The current slope averages 27.7 degrees. A short pitch at the top of the dune rests at approximately 33 degrees (Figure 5). Given that the current slope is resting at or below the expected angle of repose, PSI deems the slope to be stable in its current resting state as long as it is not subjected to external forces. Any external forces, such as pedestrian traffic or seismic activity, will cause further movement of material down the slope face, similar to what has been experienced during past dune use. However, used in the manner it has been, with replenishment, the Dune is safe.

Based on PSI findings, any foot traffic allowed on the Dune will cause downward movement of sand requiring eventual replenishment activities. The frequency of replenishments can be mitigated only by limiting foot traffic on the dune. Additionally, anything built or planted on the dune would be impacted by downward sand movement caused by pedestrians and would require the support of retaining structures.

If the Dune were restored to its original condition by relocating excess material from the north side of the Dune, the slope angle would be less than the natural angle of repose and sand would remain in place if not subjected to foot traffic exerting downward movement of the sand.

The geotechnical investigation conducted by PSI was limited to the stability of the dune's surface. Additional geotechnical analysis would be required if Council elects to move ahead with construction of retaining structures on the dune.

Reopen the Dune

Seven options are listed that change the physical characteristics of the Dune. Options 1-3 refer to physical changes without any activity permitted (shown to provide basis for costs), and Options 4-7 relate to Dune changes that accommodate some activity. Those specific uses recommended in the following section, "Identify Specific Uses or Recreation Programs" would be combined with Options 4-7. Estimated costs for all options are shown on Table 1, Options/Cost Menu.

When considering "Limited Use", Staff has defined that to mean a maximum of two replenishment per year (hauling sand from the bottom to the top of the Dune). In the most recent year, there would have been eight replenishments. To arrive at two replenishments, both historical Parks hourly use observation data and Public Works replenishment data recorded since 2000 were reviewed. The hourly use observation data provides a snapshot of the number of people on the dune at the top of each hour and does not correlate exactly to total attendance. There is an approximate correlation of 10-15,000 hourly use observations per year for each replenishment. Defining "Limited Use" at two replenishments per year (25,000 hourly observations) reflects actual use in 2000 and establishes a quantifiable definition of "Limited Use". The number of replenishments could be altered to fit Council's definition of "Limited Use" and impacts could be determined by proportioning programs and costs shown in Table 1.

Options 1-3, shown in Figures 6-8, establish costs for items such as fencing, reshaping the Dune to its original shape, and planting. Under these options, no activity would be permitted on the dune.

Option 4 (Figure 9), calls for restoring the Dune to its original condition, planting the entire Dune, providing a raised wood path (Figure 10) across the Dune face, and some new fence to limit access (all limited use options include fencing as the preferred method of access control, however access may alternately be achieved through strict enforcement for use outside established program hours). As indicated in the geotechnical report, any walking on the Dune will result in downward movement of the dune surface, ultimately requiring some form of replenishment. Consequently, all options considering dune access include either replenishment considerations or trail stabilization. In the case of the trail in option 4, a raised wooden walkway supported by piles is considered.

Option 5 (Figure 11) calls for restoring the Dune to its original condition and providing for limited use over the entire existing Dune face. No plants or pathways would be included. This is one of the lowest cost alternatives, and would comply with the reduced replenishment goal. As

with other limited use options, perimeter fencing is included which staff believes is necessary to restrict and manage use of the dune.

Option 6 (Figure 12), limits use over approximately one-half of the dune. Key features include construction of a retaining wall at mid-dune and planting the upper half of the dune. Replenishment of sand would be performed by a conveyer system that could be brought in to replenish up to approximately 90 feet up the Dune face (Figure 13). This replenishment method would eliminate truck-hauling impacts in the neighborhood above the dune. Figure 14 depicts a cross-section of conveyer replenishment activities. There is a significant cost to construct the retaining wall which would be needed to prevent erosion at mid-slope.

Option 7 (Figure 15), is a combination of Options 4 and 6 with the mid-slope retaining wall and the raised wooden pathways in the upper portion of the Dune. It is the most costly of the options and includes both the retaining wall and conveyer replenishment methodology.

Identify Specific Uses or Recreation Programs

Specific programs are indicated below that would allow use of the dune at the reduced level of approximately 25,000 hourly observations over the course of a year. It is impossible to know if these suggested programs would generate the exact number of observations, but rather are approximate and would, if implemented, begin an iterative process by staff to alter programs to meet the goal of two replenishments per year. Programs could be altered in any combination of daily use, hours of operation, length of season, or number of persons allowed on the Dune.

In addition to any program that may be adopted for use, staff believes that use by children 12 and younger would impact on the Dune slope significantly less than adult activity (see section entitled “Proposed Ordinance”, Page 7). Because of the reduced impact of children, it is **recommended that use of the Dune by children be unlimited and allowable at those times that the Dune is open and not otherwise utilized by the reservation system program.** If unlimited child access, in combination with a reservation program, causes erosion that requires extra replenishments (above two/year), either program reservation modifications or unlimited child access would need to be reconsidered.

With the condition of unlimited use by children, Parks and Recreation staff believes that the most viable option is to allow limited use over the full dune (Option 5, Figure 11). The specifics of the program and impacts are described below:

Recommended Use Program:

Staff is recommending that a reservation system be implemented which will restrict the number of people on the Dune at any one time and also limit the total number of people per year. Reservations are believed to be the best method to limit use and comply with the commitment to the neighborhood of a maximum of two replenishments per year.

Staff recommends implementing a reservation system for use Monday through Friday and Saturday mornings. Reservations would be for one hour with a half hour gap in between reservations to allow for people to leave the area before the next reservation group arrives. Reservations would be scheduled for the morning at 7:00 a.m., 8:30 a.m., and 10:00 a.m. and in

the afternoon at 4:00 p.m., 5:30 p.m. and 7:00 p.m. (summer). Afternoon reservations in the winter will only occur during the daylight hours. On Saturdays, the reservations would be 7:30 a.m., 9:00 a.m. and 10:30 a.m.. This allows for 33 reservation time slots per week in summer and 28 reservation time slots in winter (October through March). Calculations of use are:

33 reservation slots/week x 20 people x 26 summer weeks = 17,160 hrly. observations
<u>28 reservation slots/week x 20 people x 26 winter weeks = 14,560 hrly. observations</u>
TOTAL 31,720 hrly. observations

Although this exceeds the targeted 25,000 hourly observations, staff believes with rain, cold weather, holidays and cancellations, the targeted number would be realized. The program is crafted to meet the total estimated use levels described in the “Limited Use” of 25,000 hourly observations with a maximum of two Dune replenishments per year. This compares with approximately 57,000 hourly observations and eight replenishments for 2009 (based on actual usage and projections from time of closure in August to end of 2009).

Children would be given unlimited access in those time periods not otherwise taken up by program timeslots.

The Parks and Recreation Department currently has the technology to implement a reservation system through the ActiveNet software program, making reservations possible either at City Hall or online. Persons wishing to attain a reservation would sign up to obtain a reservation number, thereby providing contact information (name, phone number, emergency contact information). Reservations could be made up to seven days in advance for one of the designated timeslots. If the reservation time was available, the participant would print out a pass (similar to printing out a boarding pass for an airline reservation) and would bring the pass to the park to enter the dune at the designated time/s.

Staff proposes a charge of \$5.00 for each one hour reservation in summer, and \$3.00 in the winter. If all reservations were taken, it would generate an estimated \$119,000 annually. However, given the inability to account for public acceptance of the program, cancellations, no-shows, credit card and registration fees, the City would only realize a net of approximately \$43,000. See Table 1 (Options/Cost Menu) for a comparison of program expenses and offsetting revenues.

If it is the City’s intention to recoup all of its costs, staff would have to charge each participant \$15 per hour in summer and \$9 in the winter months. Staff believes these amounts would be cost prohibitive for participants.

Santa Monica Stairs

During the community meetings over the last eight months, staff was informed of a similar condition in the City of Santa Monica that has caused significant neighborhood impact. Staff has contacted Santa Monica personnel and read staff reports from prior community and Council meetings to understand similarities of the dune and the Santa Monica Stairs.

The stairs are at the end of 4th Street in Santa Monica and lead down into Runyon Canyon which is the City of Los Angeles. Santa Monica controls the access point to the top of the stairs only.

Santa Monica attempted to implement a neighborhood permit parking program to control crowds and provide relief to the neighborhood. The California Coastal Commission prevented Santa Monica from implementing the program, an action the City of Santa Monica may challenge. Santa Monica has not made a decision and have taken no other action.

Public Safety Costs and Use of Resources for the Dune

The impact of Dune use on police and fire resources has been considered in the evaluation of the Dune reopening.

In their analysis of the past five year history for EMS calls for Polliwog, Sand Dune and Marine, the Fire Department found that Sand Dune and Polliwog Park were very similar in the number of calls, both of which ranged from 6-15 per year. A review of the 15 calls to Sand Dune in 2009 revealed that two were for bees, one for a water leak, and one for a trash fire.

Several times a year, the Police Department concentrates resources to help control traffic, parking and speeding problems in the Sand Dune area. Depending on the option selected, and if there will be a fence or not, will effect the level resources needed for the future operation. If a reservation system with a fence is implemented, the Police Department stated that they would not need to dedicate resources; they would respond to calls from our park attendant as needed. If the Dune remains closed, no resources would be needed except on a situational basis where rules are broken.

Currently, the majority of citations issued for rules violations are written by the Park Services Enforcement Officer (Park Ranger).

Review Parking and Traffic

On January 19, 2010, City Council decided to exclude consideration of parking meters and permit parking in the area. A request was made to review both traffic volume and parking with the Dune closed and the Dune open. Erik Zandvliet, City Traffic Engineer, assessed both issues as follows:

TRAFFIC

“A closure of the Dune area of the Park for Traffic volumes on the neighborhood streets vary widely depending on the purpose of the street. For example, Bell Avenue and Blanche Road serve as connecting roads to the major streets, and carried about 1,500 and 4,000 vehicles per day respectively prior to the dune closure. The numbered east-west streets north and west of the Park serve primarily residential homes, with each street segment carrying between 300 and 500 vehicles per day.

While actual traffic counts have not been conducted since 2004, the Traffic Engineer estimates that the expected traffic volume reduction on Bell Avenue is approximately 200 to 500 vehicles per day, and about 200 vehicles per day on Blanche Road both north and south of the park. The numbered streets have experienced much smaller reductions, generally noticeable only on the historically busiest days when dune users drove into the neighborhood looking for overflow parking. South of the Park, the total traffic volume reduction on peak days is about 200 vehicles per day, primarily on Bell Avenue.”

PARKING

“With the dune closed, daily residential parking occupies approximately 40 percent of the available street spaces during the day. Also, at least half of the 44 diagonal street spaces are available along Bell Avenue during most of the day.”

Additionally, the Traffic Engineer goes on to comment on traffic /parking reductions as a result of reduced or eliminated Dune activity by stating:

“A closure of the Dune area of the Park for recreational use of any type will result in the greatest reduction in traffic volumes and parking demand within the adjacent neighborhood. Essentially, Sand Dune Park will operate as a pocket (neighborhood) park with a low level of activity. Minor use of the Dune by children would be consistent with the impacts of a neighborhood park. Traffic volumes on nearby local streets will decrease to a range equivalent with other local residential streets, and carry primarily locally generated trips to/from adjacent homes and the school. Park traffic will be a very small percentage of the total daily volume, estimated at less than 100 trips per day distributed on the street network. Bell Avenue will still have a relatively high volume for a residential street, but the removal of Dune traffic will reduce the daily volume by approximately 200 to 500 vehicles per day depending on seasonal peaks. On other north-south streets such as Blanche Road and Alma Avenue, traffic volumes would not be expected to change significantly.

Parking within the neighborhood would be almost exclusively residential in nature, and Park parking demand would be easily accommodated by street spaces on Bell Avenue in the immediate vicinity. Overflow parking into the neighborhood would be rare, perhaps limited to a large birthday party or gathering. Informal playground and field uses would not be expected to generate a need for over twenty (20) spaces at any one time. Since sufficient street parking would be provided near the park, residential parking permits would not be useful to residents.”

These comments indicate that either closure of the Dune or curtailment of activity would likely allow parking to be accommodated within the available spaces available, and traffic volumes would be consistent with a residential street.

Proposed Ordinance

Attached is a proposed Ordinance that prohibits exercise on the Dune. The adoption of the Ordinance would be necessary to help enforce/regulate compliance with limited use of the Dune. Access control would be enhanced with construction of a physical barrier such as a fence, although adoption of an Ordinance would give the City an ability to regulate use by law and enforcement without the costs or the negative aesthetics of a fence.

CONCLUSION :

In consideration of Council objectives, physical constraints of the Dune, protection of neighborhoods, costs and possible revenues, **Staff recommends Option 5, with a reservation system, program, and unlimited use by children in off-reservation program hours.**

Because of the approximations necessary in projections and use, the process should be considered an iterative one. Program(s) ultimately will be altered to more closely meet the defined limit of a maximum of two replenishments per year as actual results become available. The recommendation provides limited use, activity over the full face of the Dune, reshapes the Dune to its original condition, provides full perimeter fencing and a return to use levels experienced in the year 2000.

In summary, the costs associated with the recommended Option 5 are as follows:

One-time construction costs	\$136,000
Current operating costs (Dune closed)	\$ 47,500
Annual operations and maintenance costs (Option 5)	\$113,000
Increase in operations and maintenance costs (Option 5)	\$ 65,500
Estimated offsetting annual revenue	\$ 43,000
Net budget impact	\$ 22,500

Attachments: Table and Figures (Table 1, Figures 1 through 15)
Ordinance Prohibiting Exercise

Agenda Item #: _____

Tables and Figures

Table 1
Figures 1 through 15

TABLE 1 SAND DUNE OPTIONS/COSTS MENU											
Option#	Option	Restoration Cost	Planting Cost	Tubular Steel Fence Cost	Raised Wood Path Cost	Retaining Wall Cost	Total Construction Cost	Annual O&M Cost Public Works	Annual O&M Costs Parks	Annual O&M Cost Total	Offsetting Revenue
1	Leave Closed in Current Condition (Figure 6)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500	\$ 46,000	\$ 47,500	NA
2	Restore Shape - Fence (Figure 7)	\$ 21,000	\$ -	\$ 115,000	\$ -	\$ -	\$ 136,000	\$ 1,500	\$ 46,000	\$ 47,500	NA
3	Restore Shape - Plant - Fence (Figure 8)	\$ 21,000	\$ 308,000	\$ 115,000	\$ -	\$ -	\$ 444,000	\$ 10,000	\$ 46,000	\$ 56,000	NA
4	Restore Shape - Trail - Plant (Figure 9)	\$ 21,000	\$ 273,000	\$ 61,000	\$ 481,000	\$ -	\$ 836,000	\$ 12,000	\$ 46,000	\$ 58,000	NA
5	Restore Shape - Limit Use Full Dune 2 Replenishments/Yr. (Figure 11)	\$ 21,000	\$ -	\$ 115,000	\$ -	\$ -	\$ 136,000	\$ 10,000	\$ 103,000	\$ 113,000	\$ 43,000
6	Restore Shape - Limit Use Partial Dune - Plant top 2 Replenishments/Yr. - (Figure 12)	\$ 21,000	\$ 210,000	\$ 41,000	\$ -	\$ 660,000	\$ 932,000	\$ 14,000	\$ 103,000	\$ 117,000	\$ 21,500
7	Restore shape - Limit Use Partial Dune - Trail - Plant 2 Replenishments/Yr. (Figure 15)	\$ 21,000	\$ 175,000	\$ 41,000	\$ 481,000	\$ 660,000	\$ 1,378,000	\$ 16,000	\$ 103,000	\$ 119,000	\$ 21,500

Table 1

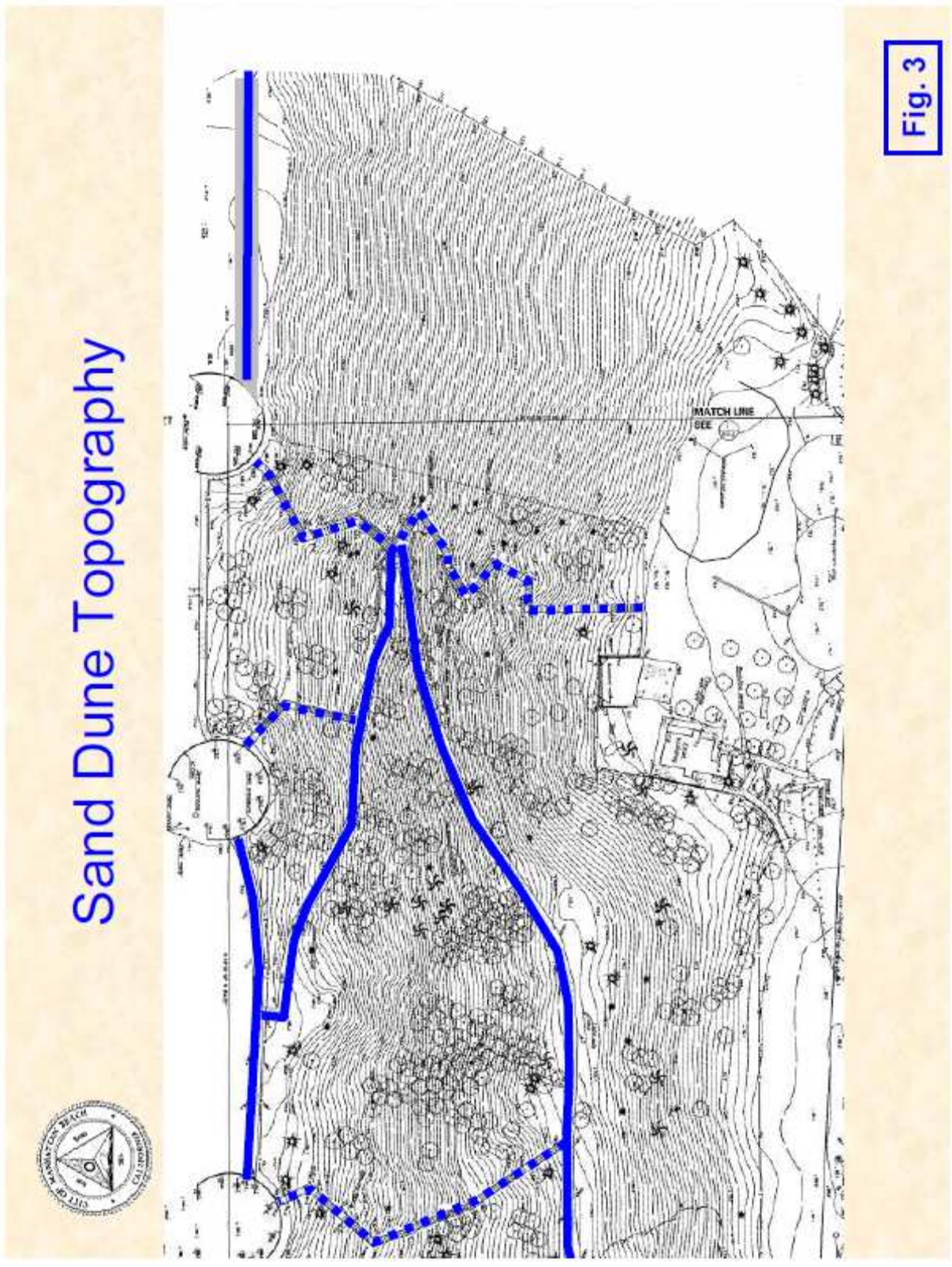


Sand Dune



Fig. 1





Sand Dune Topography

Fig. 3

Sand Dune Dimensions

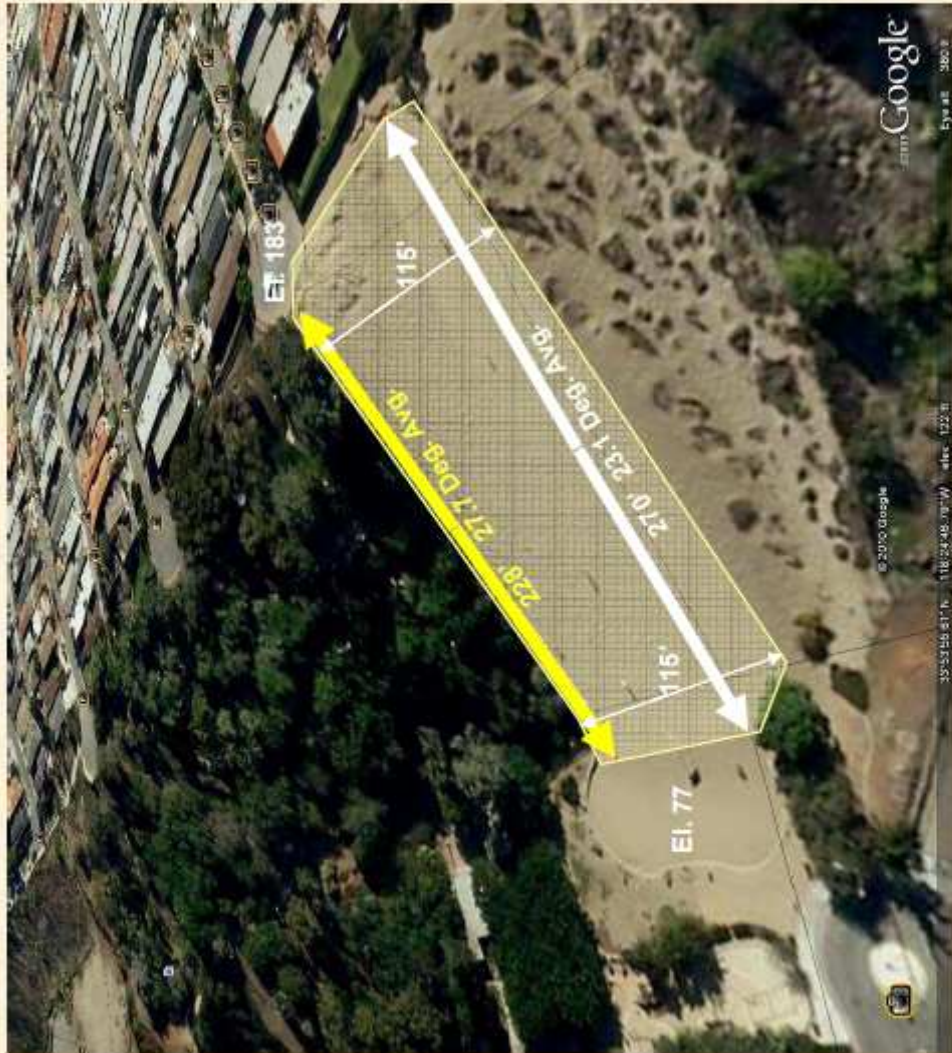
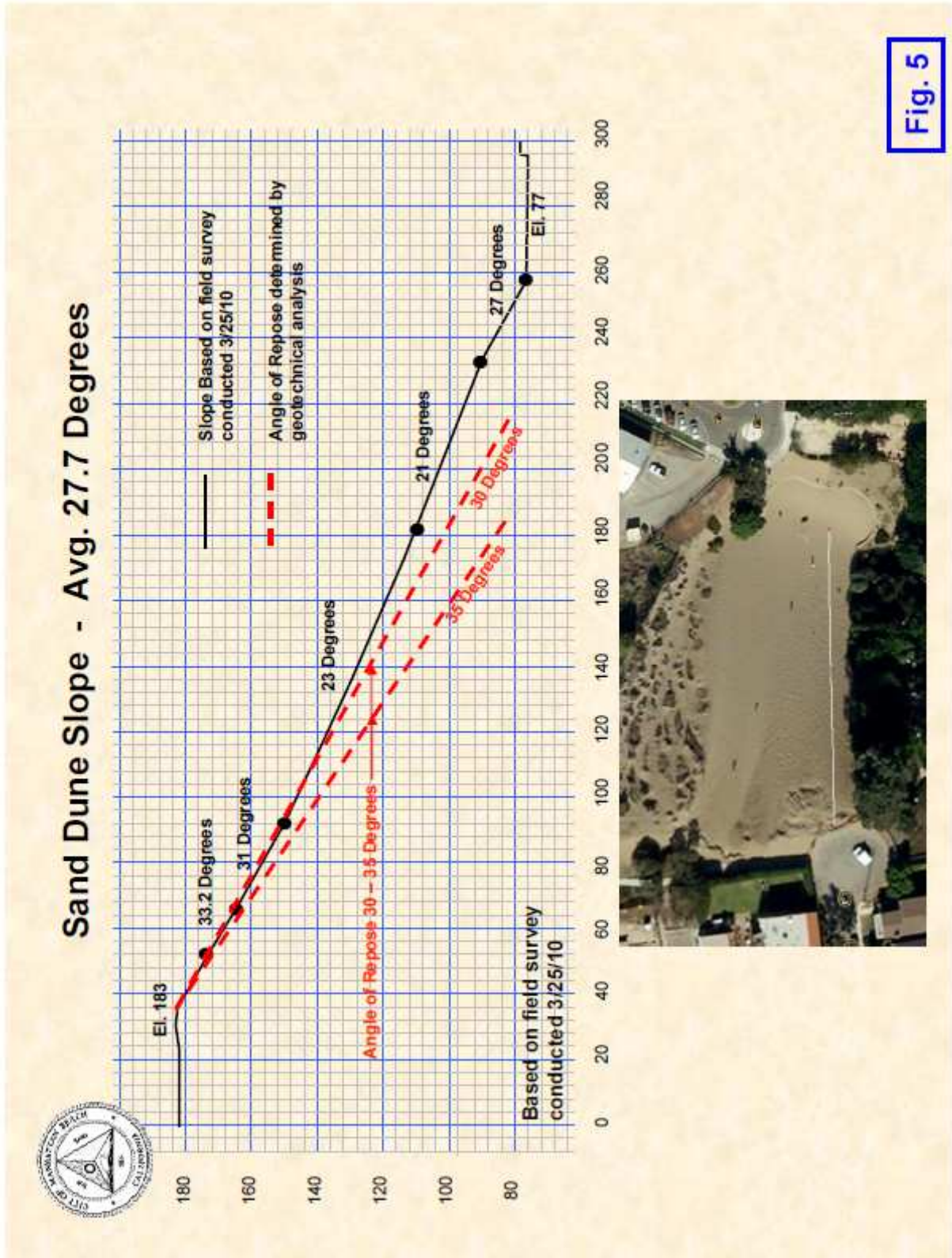
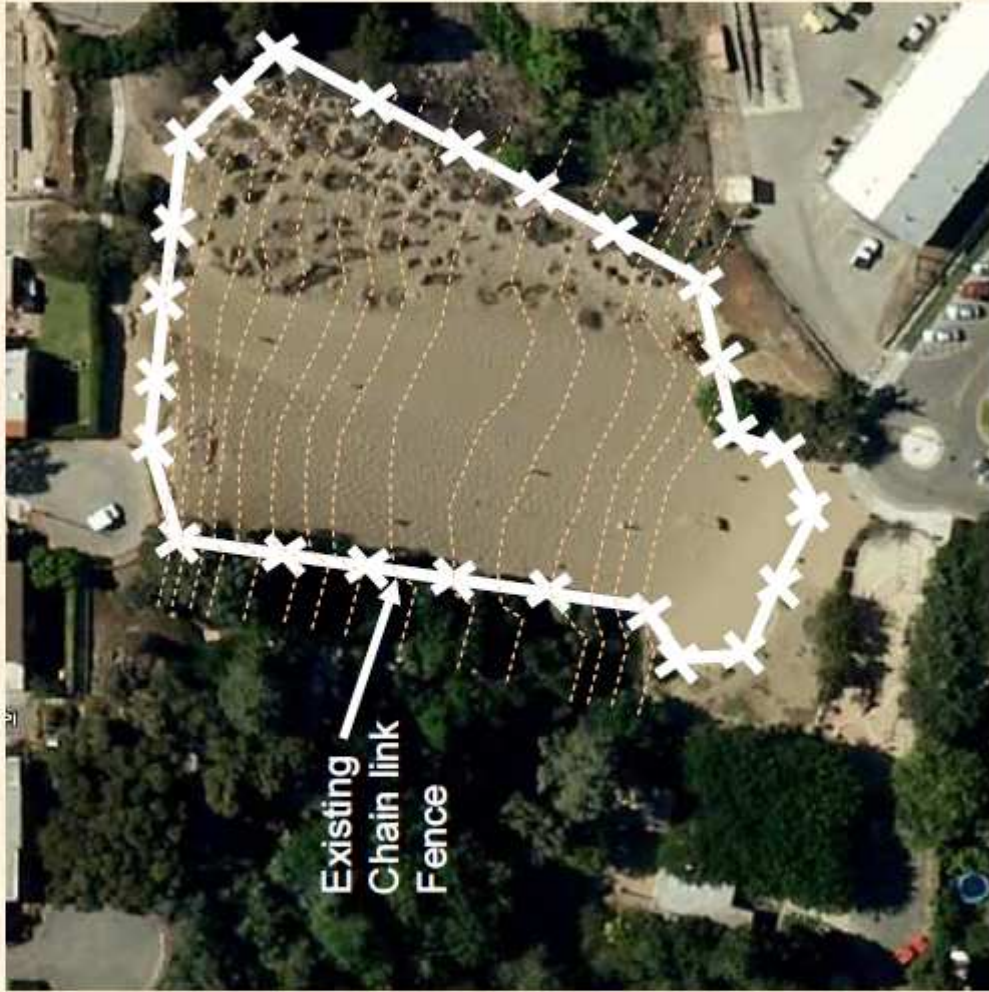


Fig. 4





Option 1— Leave Closed in Current Condition

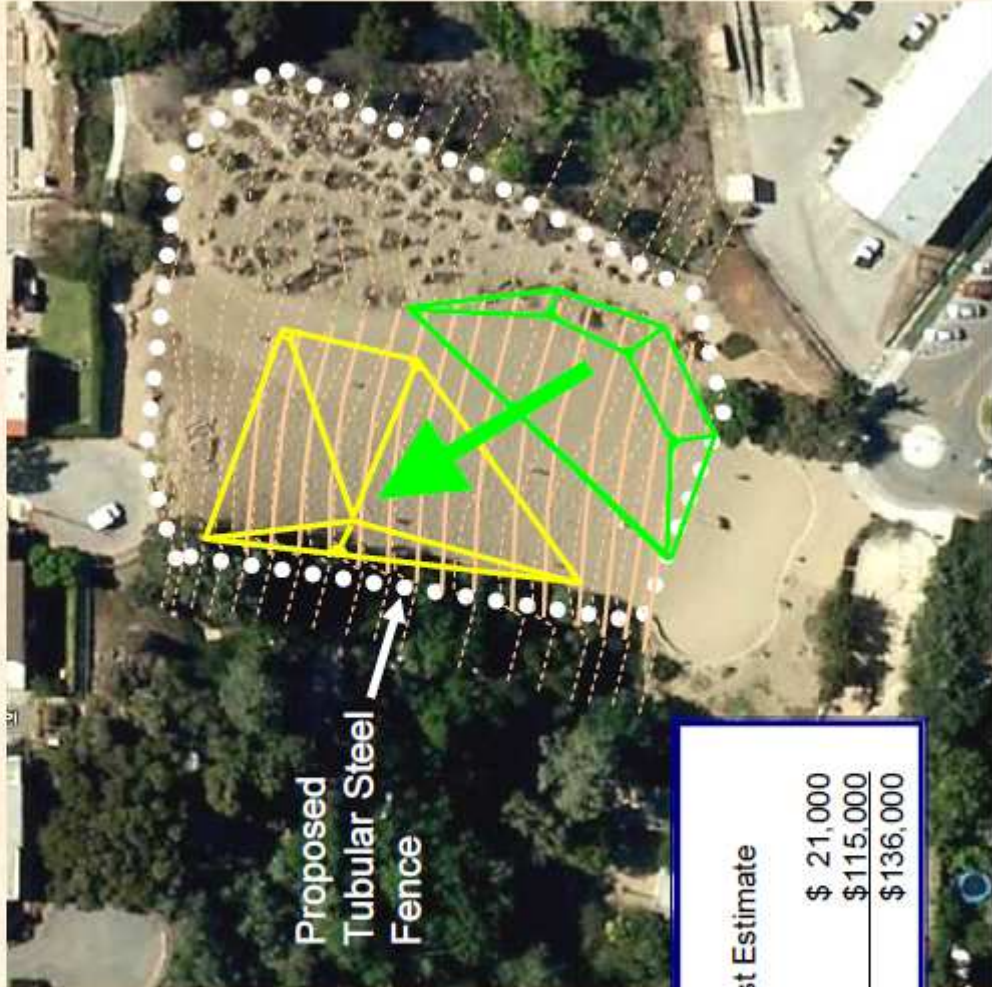


Option 1
No Cost

Fig. 6



Option 2— Restore Shape – Earthwork Balance

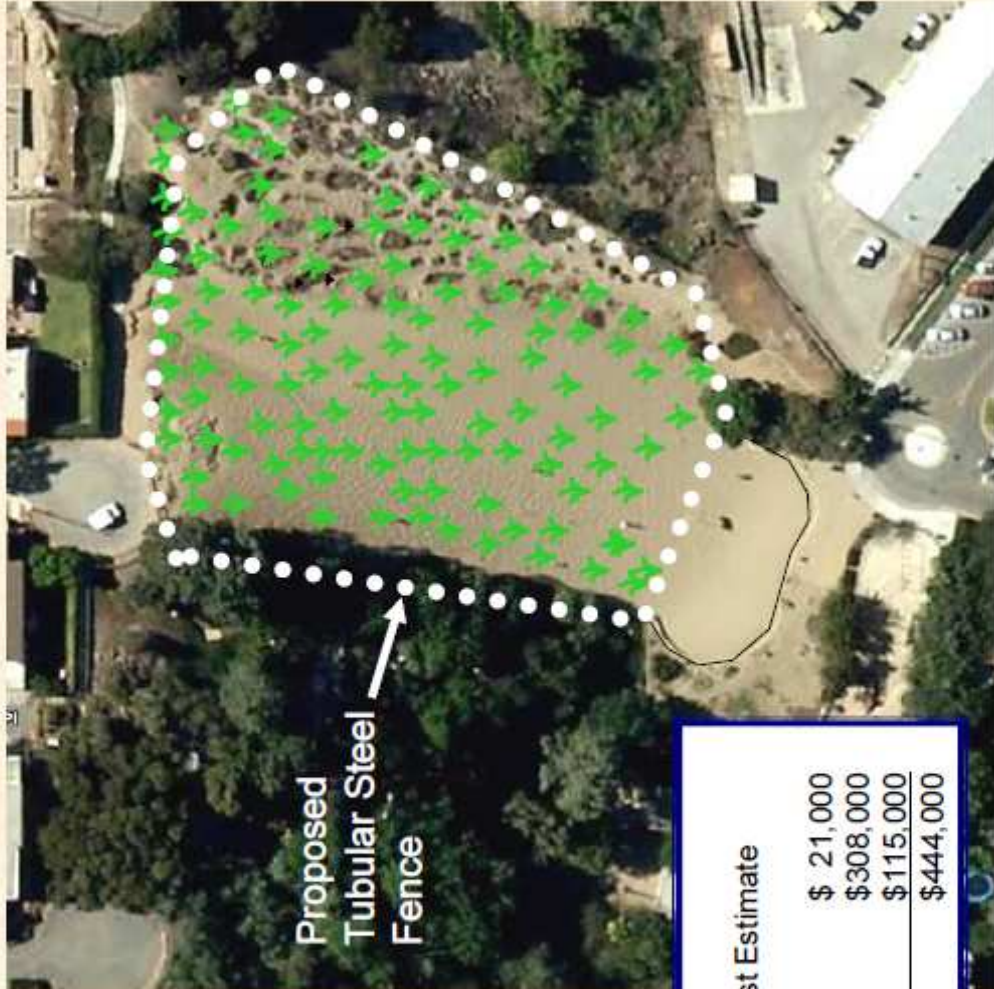


Option 2	
Construction Cost Estimate	
Earthwork	\$ 21,000
Fencing	\$115,000
Total	\$136,000

Fig. 7



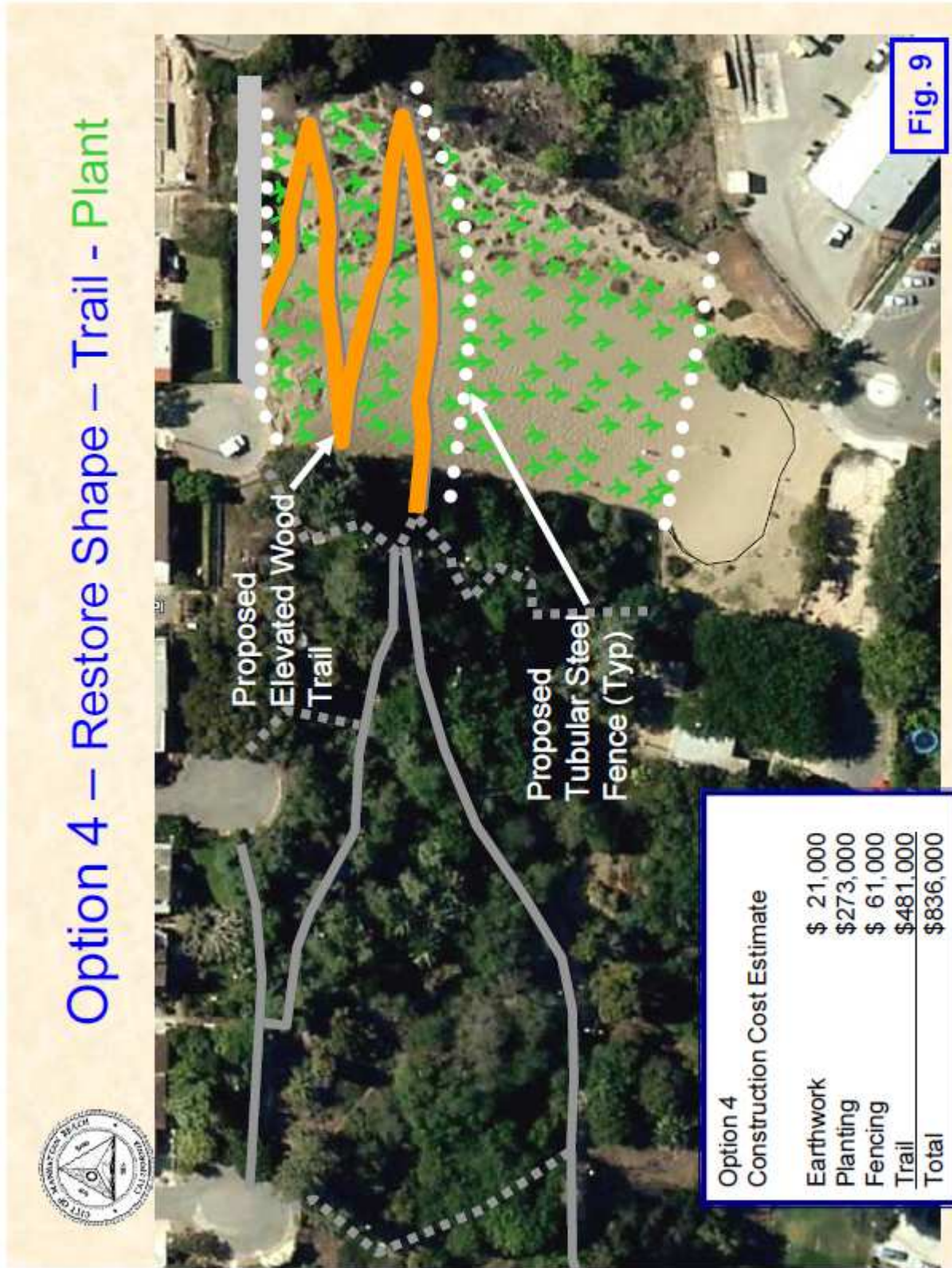
Option 3 – Restore Shape - Plant



Proposed
Tubular Steel
Fence

Option 3 Construction Cost Estimate	
Earthwork	\$ 21,000
Planting	\$308,000
Fencing	\$115,000
Total	\$444,000

Fig. 8





Option 4 (Cont'd) – Elevated Wood Trail

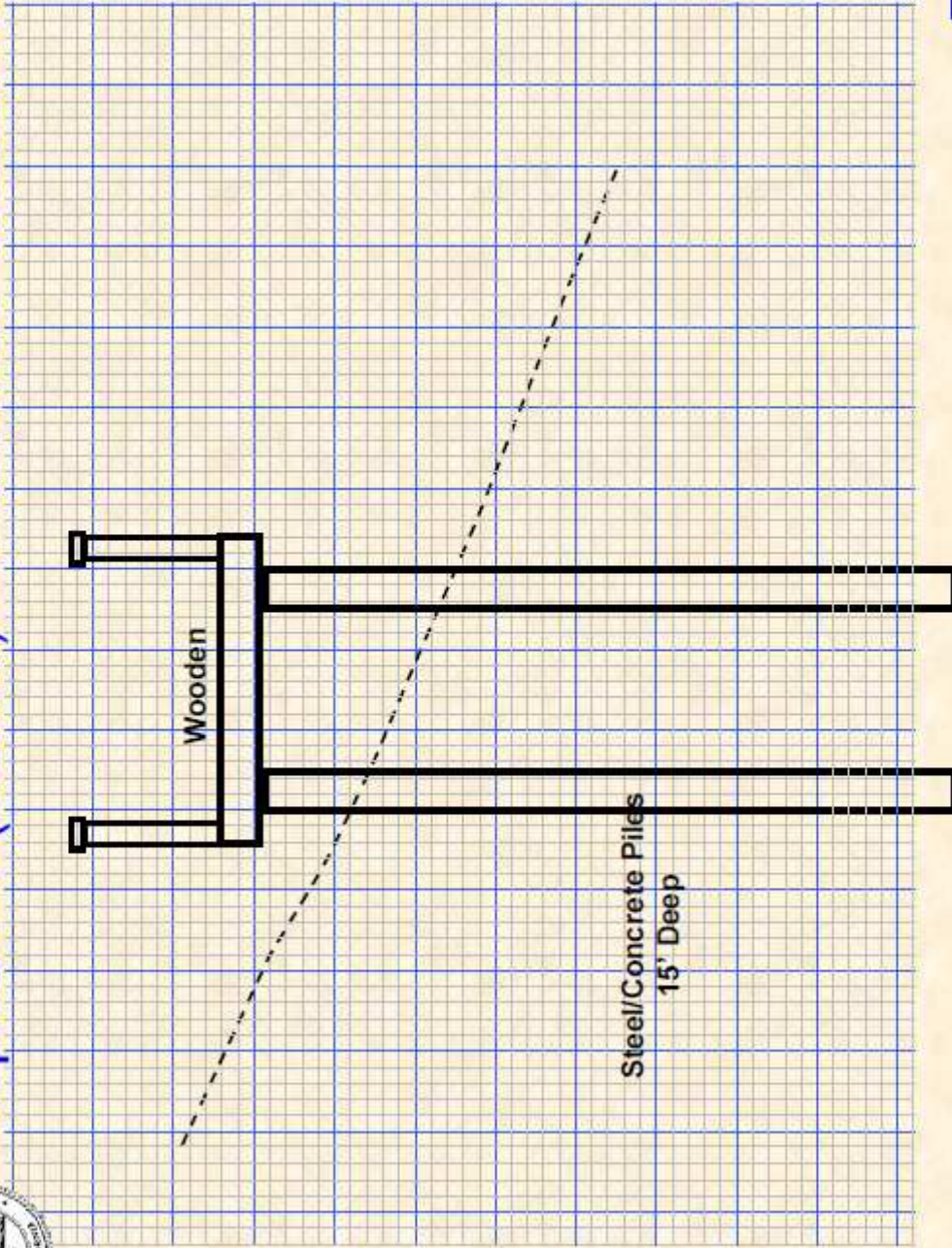
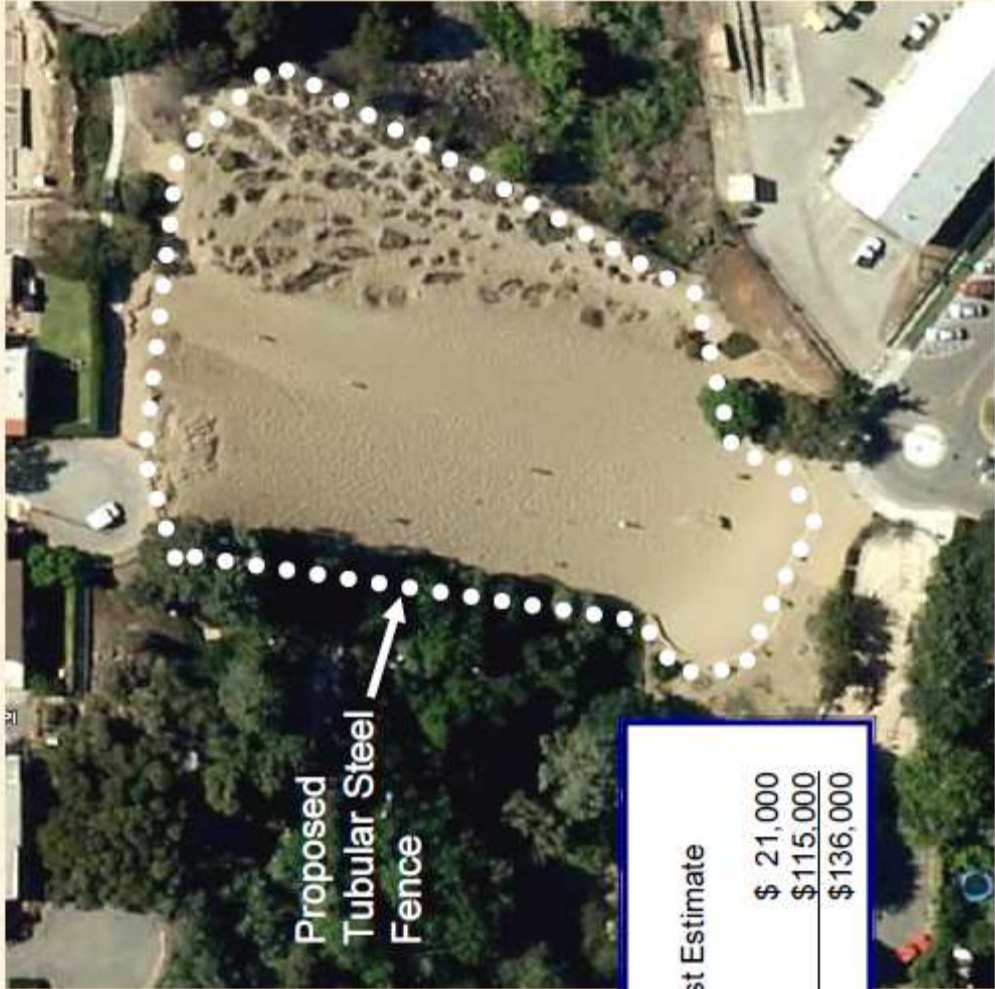


Fig. 10

Option 5 – Restore Shape Reopen Limited Use - Full Dune



Option 5	
Construction Cost Estimate	
Earthwork	\$ 21,000
Fencing	\$115,000
Total	\$136,000

Fig. 11

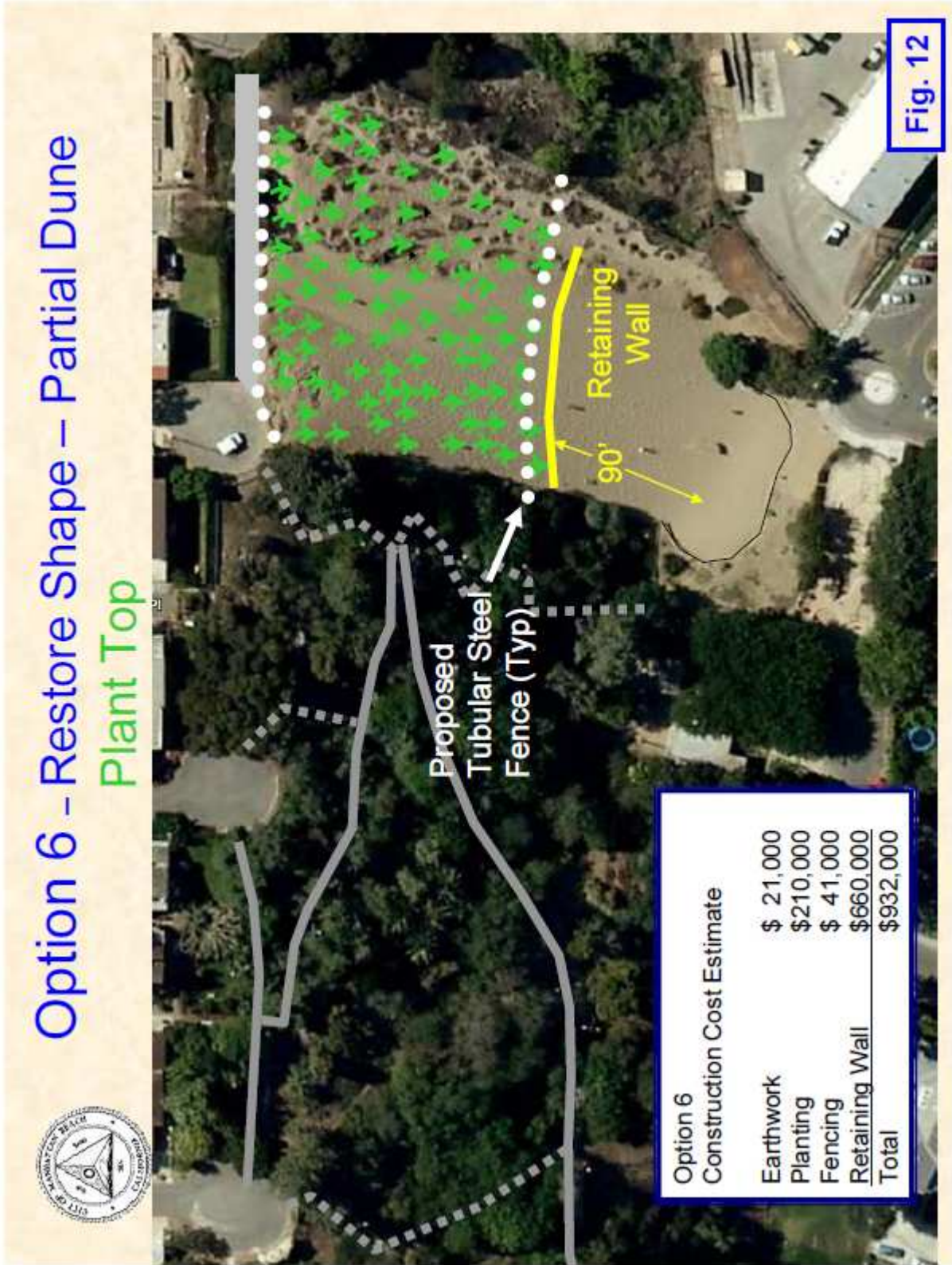


Fig. 12

Option 6/7 – Replenishment 2/Yr. Conveyor System



Fig. 13

Option 6/7 – Replenishment 2/Yr. Conveyor System

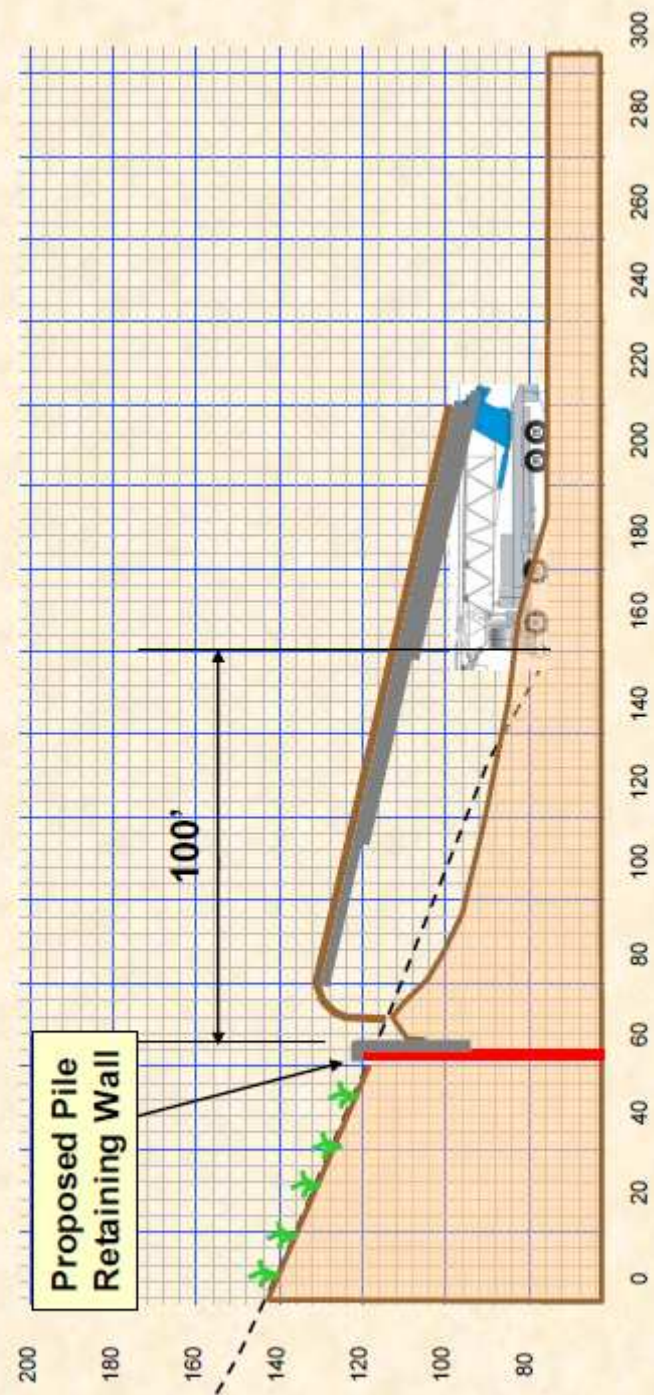


Fig. 14

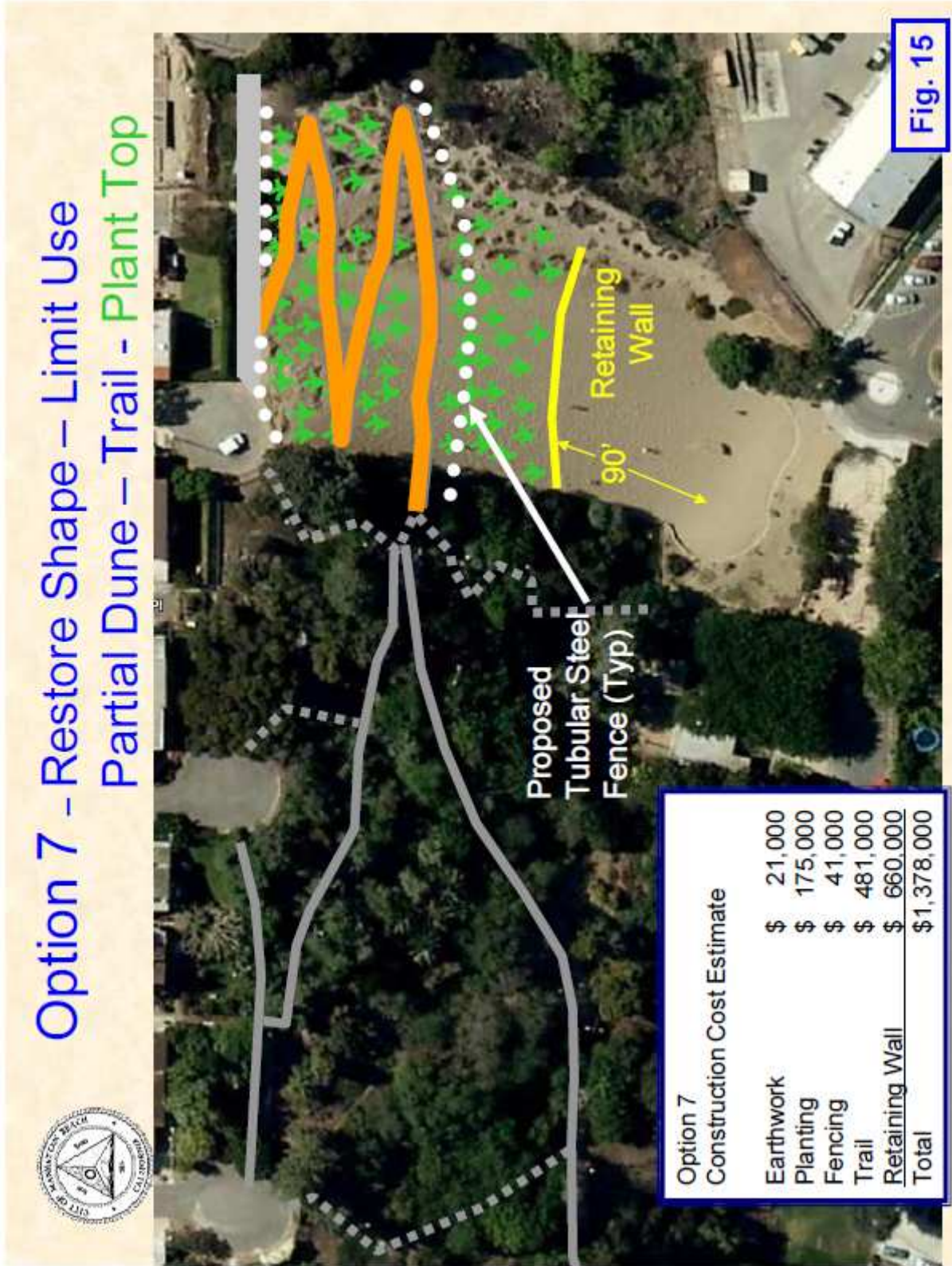


Fig. 15

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
MANHATTAN BEACH, CALIFORNIA, AMENDING
MANHATTAN BEACH MUNICIPAL CODE SECTION
12.48.053 REGARDING ACTIVITY IN SAND DUNE PARK

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF
MANHATTAN BEACH, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The Manhattan Beach City Council hereby finds as follows:

- a. Sand Dune Park in The City of Manhattan Beach has long been a favorite destination for fitness enthusiasts and those seeking physical work outs. In particular the dune area of the park has been used to provide a vigorous and challenging exercise experience;
- b. The congregation of people seeking to use the dune has caused some disruption and increase in traffic in the neighborhood surrounding the park;
- c. It is in the best interests of protecting the health, safety and welfare of the residents of Manhattan Beach to restrict and limit activities on the dune in Sand Dune Park in order to reduce traffic, congestion, noise and neighborhood disruption as well as to help preserve the dune in its natural state by reducing subsidence;
- d. Pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines, the subject Amendments are exempt in that they are covered by the general rule in CEQA Guidelines Section 15061 (3) that CEQA only applies to projects which have the potential for causing a significant effect on the environment, and since it can be seen with certainty that there is no possibility that the activity will have a significant effect on the environment, the activity is not subject to CEQA, in addition the categorical exemptions in CEQA Guidelines sections 15301, 15304 and 15333 apply to this ordinance.

SECTION 2. Section 12.48.053 in Title 12, Chapter 12.48 of the Manhattan Beach Municipal Code entitled "Special Rules For Sand Dune Park" is hereby amended in its entirety to read as follows:

"12.48.053 Special rules for Sand Dune Park.

The following rules shall apply to conduct in Sand Dune Park:

- A. No exercise or fitness activities may be conducted on the dune.
- B. No exercise or fitness activities may be conducted in the grassy areas of the park

- which are reserved exclusively for passive recreation and permitted organized activities;
- B. Running and jogging on stairs and walkways is prohibited;
- C. Sliding down the dune in any way is prohibited.

As used herein the terms “exercise” and “fitness activities” include but are not limited to running, jogging, vigorous walking, calisthenics, use of weights or any other exercise aid or device, or any other activity designed to elevate heart rate and rapidly burn calories or stretch or develop muscles. Neither term shall include walking at a moderate pace.

SECTION 3. Each and every other provision of Chapter 12.48 shall continue in full force and effect.

SECTION 4. Any provisions of the Manhattan Beach Municipal Code, or appendices thereto, or any other ordinances of the City, to the extent that they are inconsistent with this ordinance, and no further, are hereby repealed.

SECTION 5. This notice shall be published by one insertion in *The Beach Reporter*, the official newspaper of the City, and this ordinance shall take effect and be in full force and operation thirty (30) days after its final passage and adoption.

SECTION 6. The City Clerk shall certify to the adoption of this ordinance; shall cause the same to be entered in the book of original ordinances of said City; shall make a minute of the passage and adoption thereof in the records of the meeting at which the same is passed and adopted; and shall within fifteen (15) days after the passage and adoption thereof cause the same to be published by one insertion in *The Beach Reporter*, the official newspaper of the City and a weekly newspaper of general circulation, published and circulated within the City of Manhattan Beach hereby designated for that purpose.

PASSED, APPROVED, and ADOPTED this ____ day of _____, 2010

- Ayes:
- Noes:
- Absent:
- Abstain:

Mayor, City of Manhattan Beach, California

ATTEST:

City Clerk