

# LANGLEY MARINE BLUFFS



Do you know the above view from Cascade avenue? You are standing at the top of a steep (and unstable) bluff above the small boat harbor, marina and small park below. The bluff has problems when there are heavy rains and everyone hopes we never get a big earthquake at the same time that the soil is saturated.

Langley is a small town experiencing growth pressure. New residential and small commercial units are needed to meet future growth demands. What type of development could be appropriate for this town?

Here is a short list of ideal development criteria:

- Growth takes place on land not now desirable for building and solves a potential future problem.
- Residential units are close to town and provide walking access to shopping and services.
- The development blocks no existing views and increases public access between different areas of town.
- The project adds additional public and community open space for views, sitting and gatherings such as summer fairs.

- The project meets requirements of the county and state growth management act with a creative solution that can serve as model for other communities.

What follows is an evolving idea for using the steep bluff below Cascade avenue for a hillside development of residences and small shops and offices.

- Page 2 has aerial photos of the site and initial thoughts.
- Page 3 has a quick overlay sketch and notes of the development terraced into the hillside. Note the proposed incline trolley for access to the various levels of the development and the park below (Switzerland has used these for many years.)
- Page 4 has a cross section through the hillside showing how the units lock together and anchor back into the hill to stabilize the bluff. A combination of one and two story units provide walkways and plaza spaces on the rooftops above.
- Page 5 shows examples of other historic hillside towns and the character we might hope to emulate.



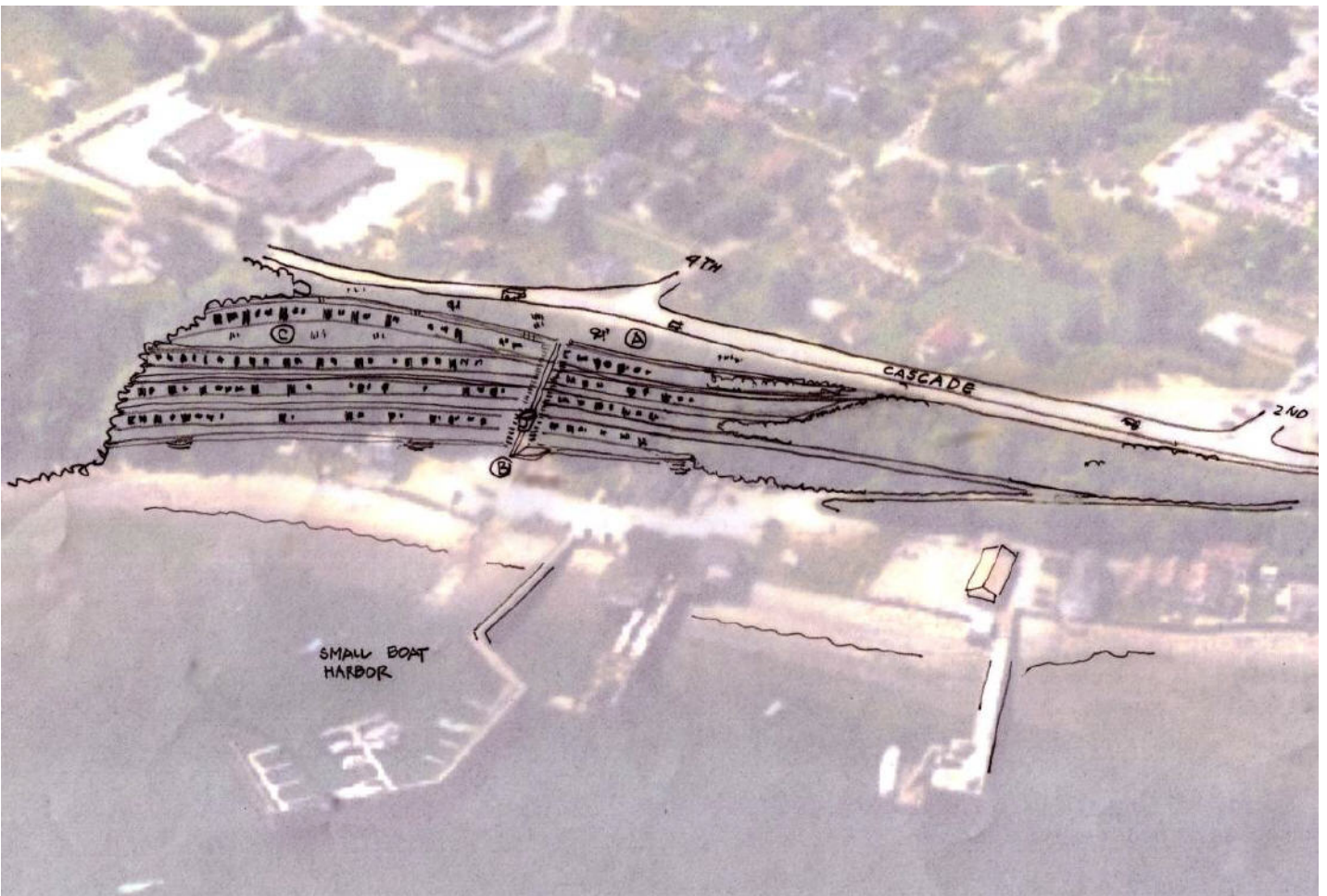
### **Initial thoughts on Cascade Ave. bluff development**

- Construction can stabilize the bluff from potential erosion and earthquake damage.
- Can provide pedestrian access between the harbor and town for view units of mixed residential/commercial activity.
- Living units will be primarily pedestrian with short walks to town.
- Provides enhanced and enlarged Cascade Ave view and plaza area for gatherings and community activities.
- Integrates the small boat harbor, the existing commercial areas of town and the potential future commercial areas of Cascade avenue.
- Might incorporate a moving stairway or incline trolley to beach.





1993 aerial view of bluff area, marina and Porter beach park. Overlay sketch of development below.



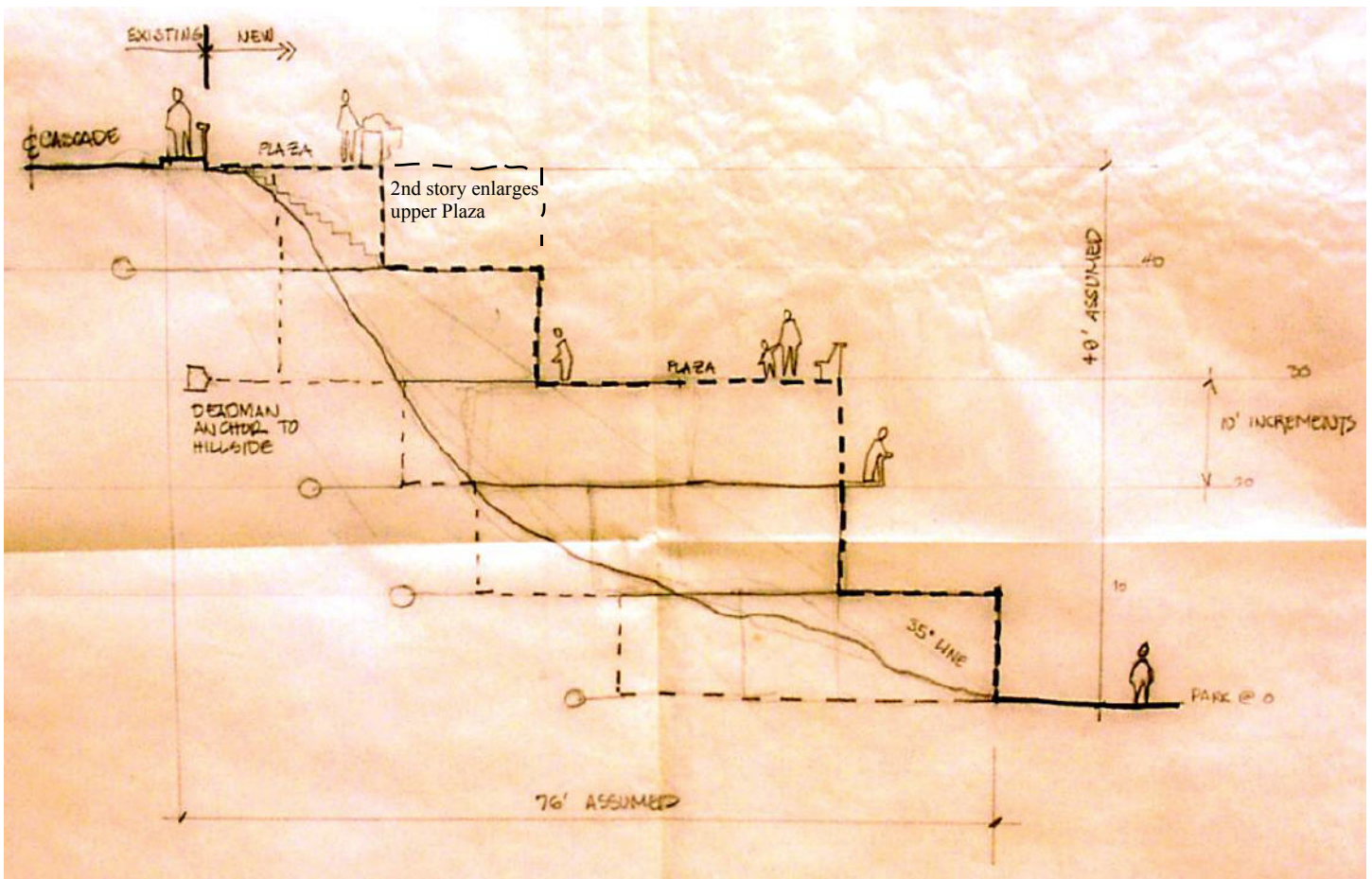
#### Notes:

- A. The roof of units below become an enlarged plaza area and view park along Cascade Ave. This wider area provides room for benches, vendors and community events. Step down as needed.
- B. Stairway and automatic incline trolley to beach park below.
- C. Rooftops of units below could also become terraced plazas at intermediate areas. Use for outdoor dining, etc. Mixed commercial and residential units are built into the hillside. Several of the

plazas and access ways will meet Cascade as it comes down to the right.

The beach park might be enlarged depending on how steeply the terracing is done.

Other terraced walkways and access ways may be able to come off of current beach access road. Service could be by small electric vehicles.



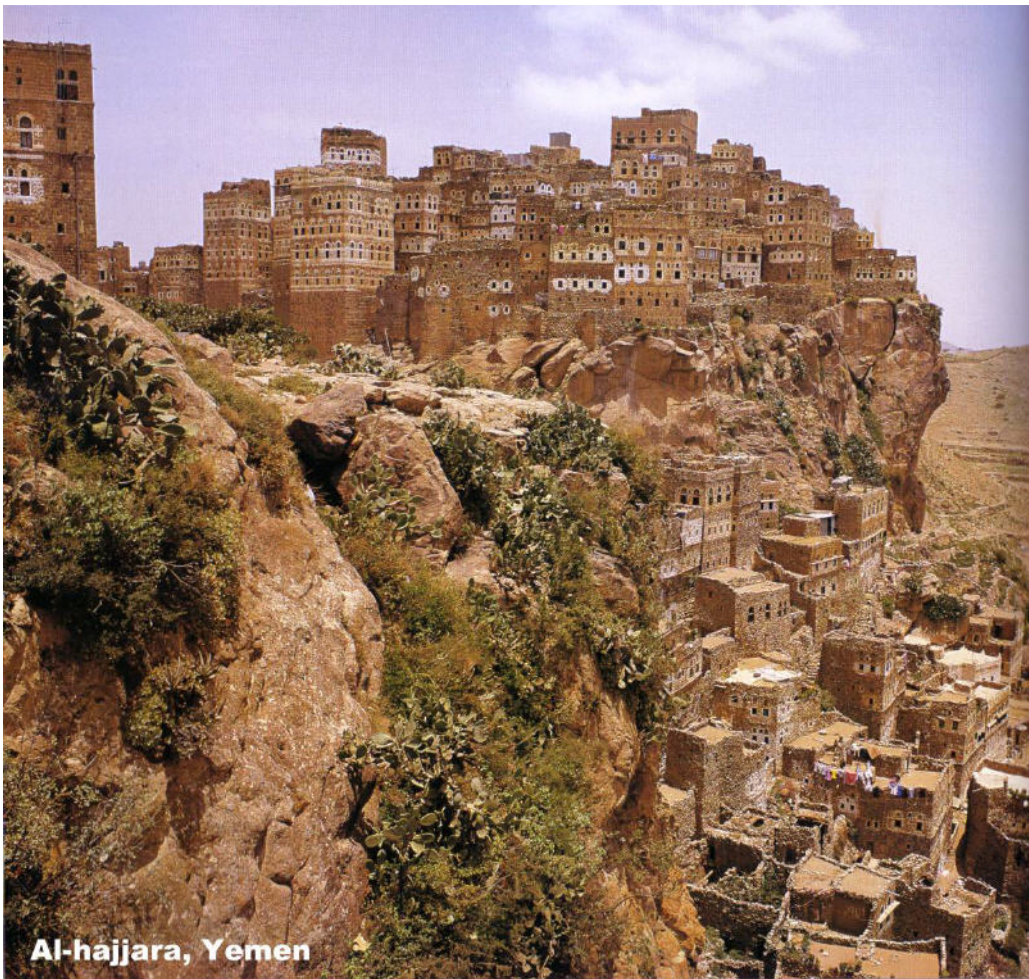
## Cross Section through hillside and project

It might make sense to have two story units for much of the development. Notice that if the the top unit becomes two story it provides a larger plaza area above. Building height could be varied to provide different sized units and varied access ways and open plaza areas.

Structural anchors such as keyed units and deadmen drilled back into the hillside will stabilize the bank and Cascade Ave. above.

Photos on the next page are references to hillside towns that have used much more primitive technology and are still in use after several centuries of use and development.

John Raabe 4/18/04



**Al-hajjara, Yemen**



**Cacares, Spain**