

COASTAL PLANNING & ENGINEERING, INC.

COASTAL & OCEAN ENGINEERING
COASTAL SURVEYS
BIOLOGICAL STUDIES
GEOTECHNICAL SERVICES

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12,600.00

June 10, 1993

Ms. Kathi L. Flowers
Director of Public Works
City of Galveston
P.O. Box 779
Galveston, TX 77553-0779

Re.: Beach Nourishment Width

Dear Kathi:

This is an update to our recently submitted interim report on beach width. We have now developed an estimate for the constructed beach width. The beach nourishment project will be constructed to an initial width which is expected to adjust to an equilibrium width. The equilibrium cross-sections were those previously provided. This letter describes the initial constructed beach and further discusses the equilibrium process.

Constructed Width

Just after construction, the beach will average 240 feet at mean sea level; the dry beach at high tide will be about 210 feet wide. Immediately following construction, the beach will be reshaped by wave action to a flatter equilibrium profile that will be about 150 feet wide at MSL (110 ft. at MHW) (See Figure 1).

The beach fill cannot be placed to the natural equilibrium slope. Therefore, it is placed to a construction profile and it is expected to adjust. The constructed width is shown in Figure 1. The beach will be constructed with a berm at +5 feet (NGVD) extending about 90 feet seaward from the existing 5-foot elevation. It will then slope seaward at a 1V:30H slope to NGVD, and then run on a slope of 1V:50H to the intersection with the existing profile. The beach above the waterline will be graded to the construction profile. The profile below water will be allowed to take the slope that occurs through the run-out of the dredged material. These are estimated slopes based on the cross-section developed by the Corps of Engineers. Our experience with similar projects suggests that this cross-section is a reasonable estimate.

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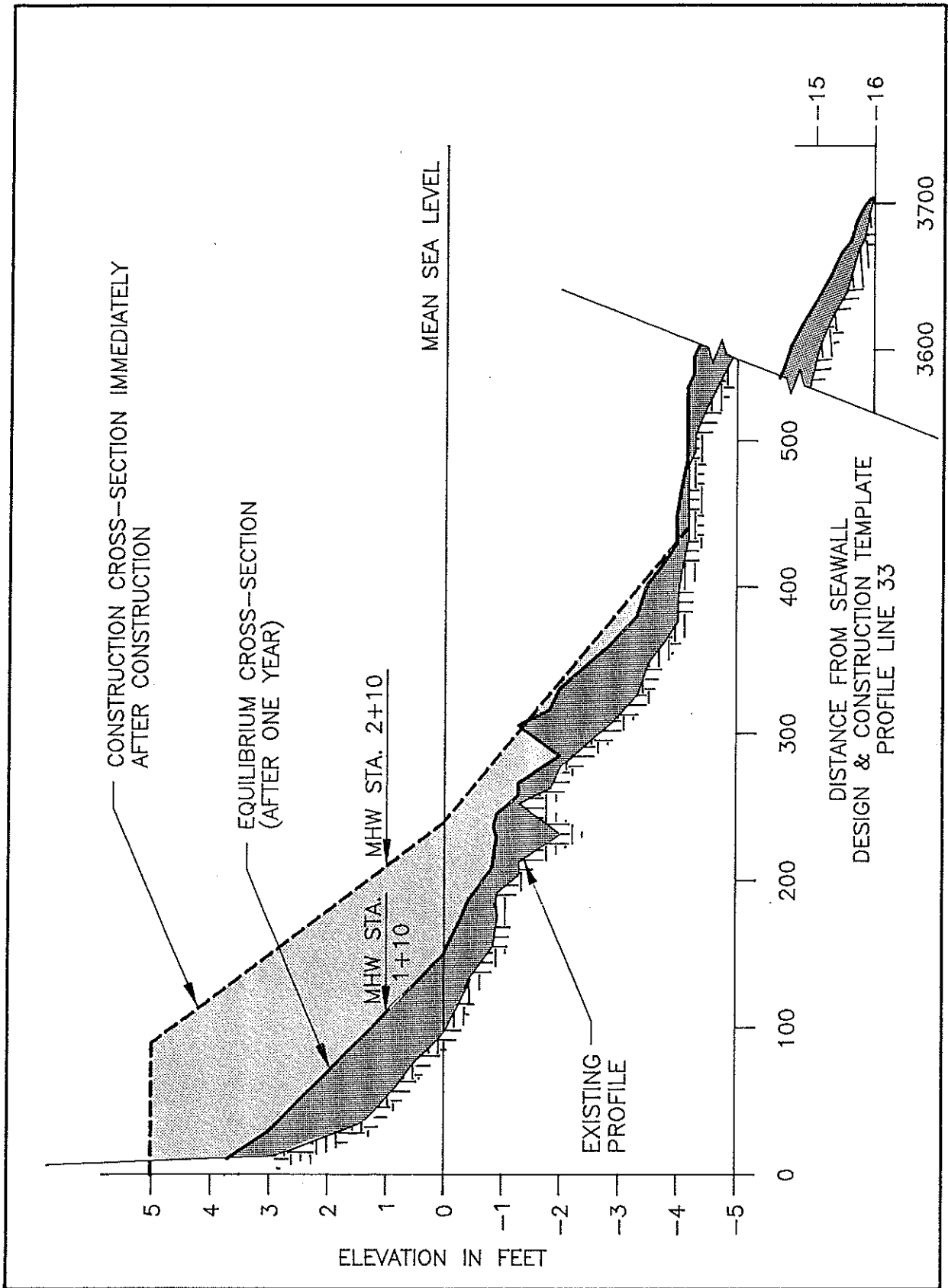
GALVESTON BEACH NOURISHMENT

Decision 1 - Scope of Project

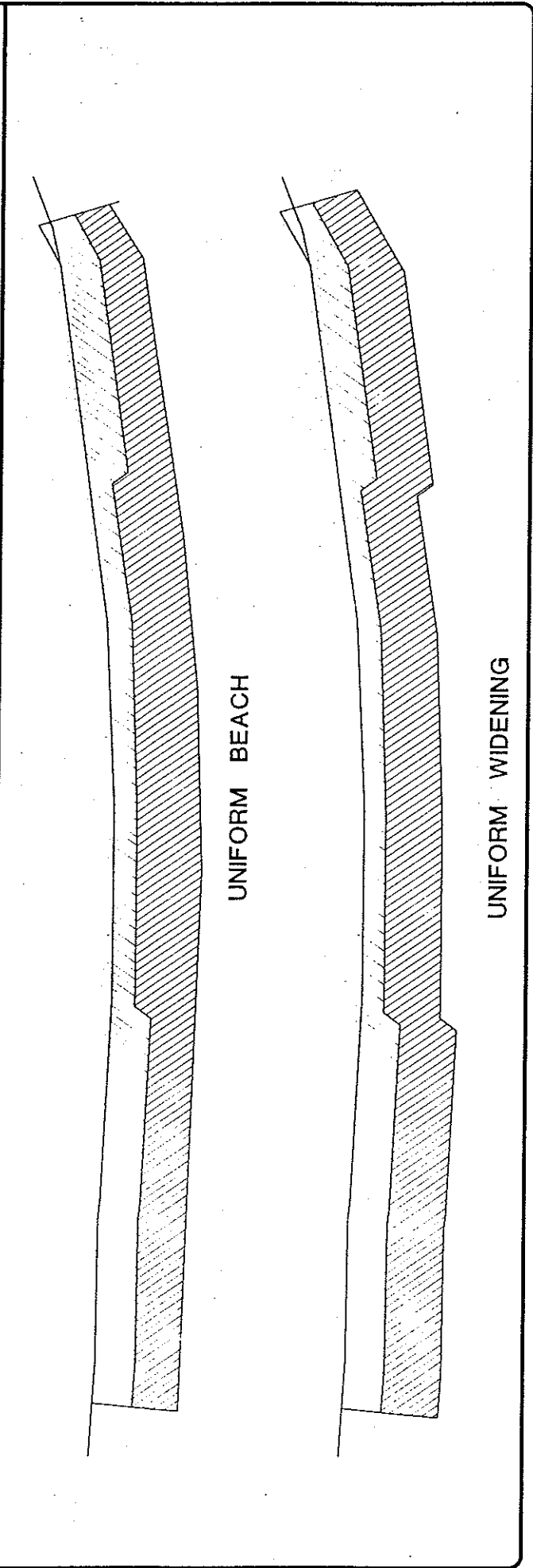
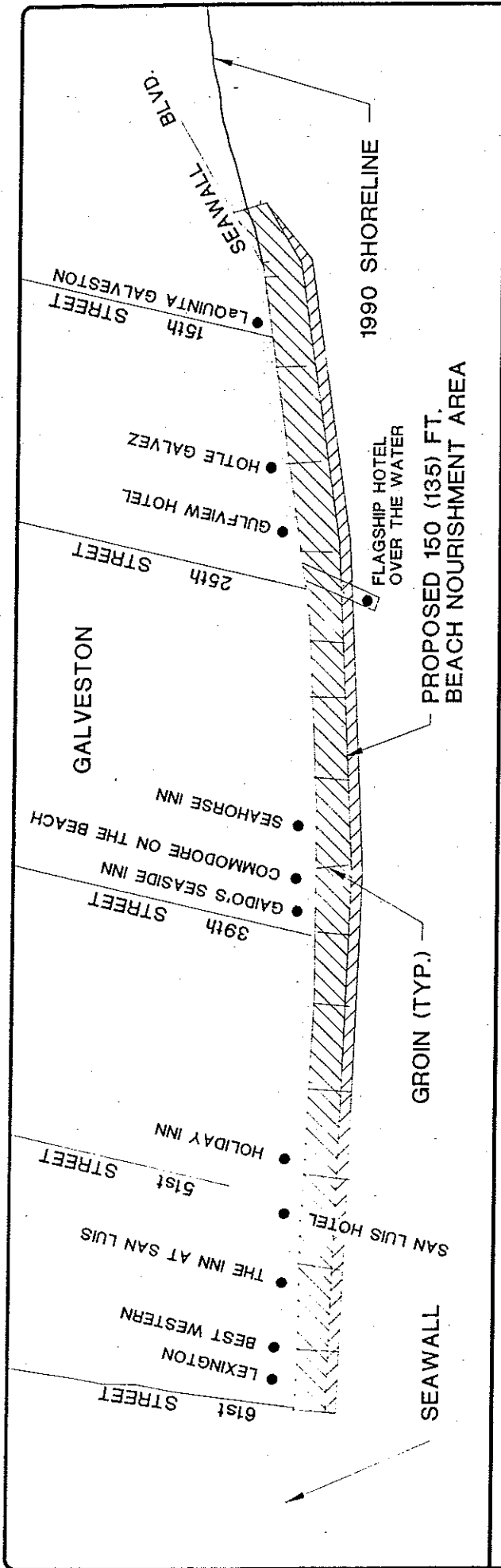
- \$3.8 million - 150 feet
- \$3.2 million - 135 feet

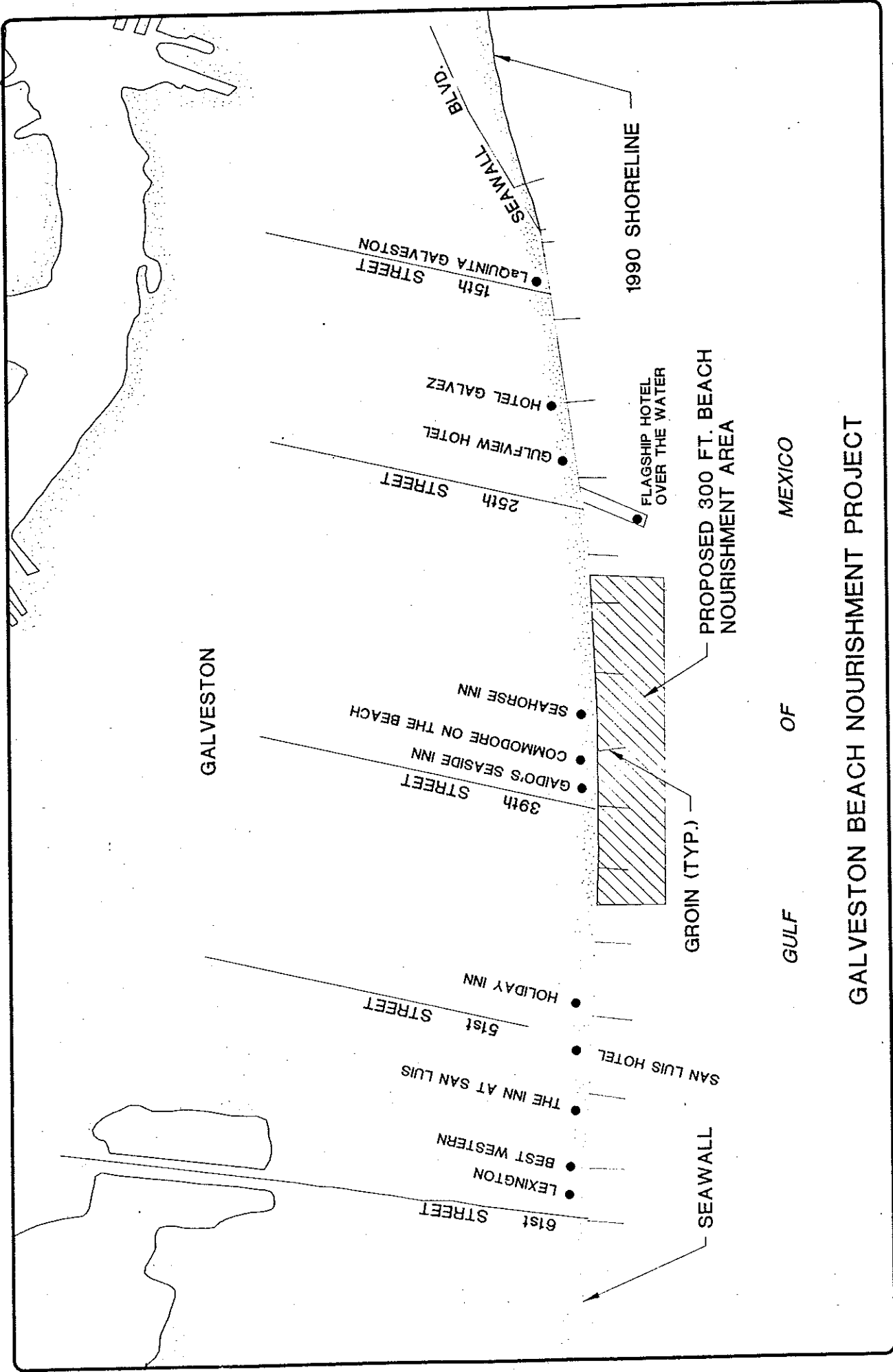
Decision 2 - Fill Width

- Uniform width
- Uniform widening
- 300 feet in center



TYPICAL CROSS-SECTION OF GALVESTON BEACH NOURISHMENT PROJECT





GALVESTON BEACH NOURISHMENT PROJECT