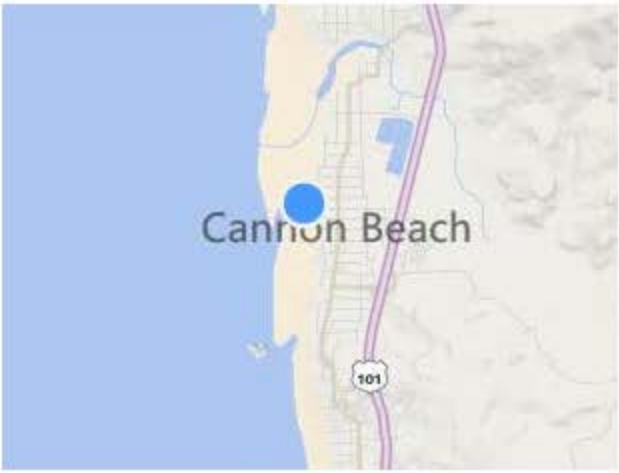
Location Map

Ocean Avenue Dune Grading

NWP-2014-398



Within the Pacific Ocean, adjacent to Ocean Avenue between Jackson and Jefferson Streets, Section 30, Township 5 North, Range 10 West, Cannon Beach, Clatsop County, Oregon (45.89294, -123.96477).

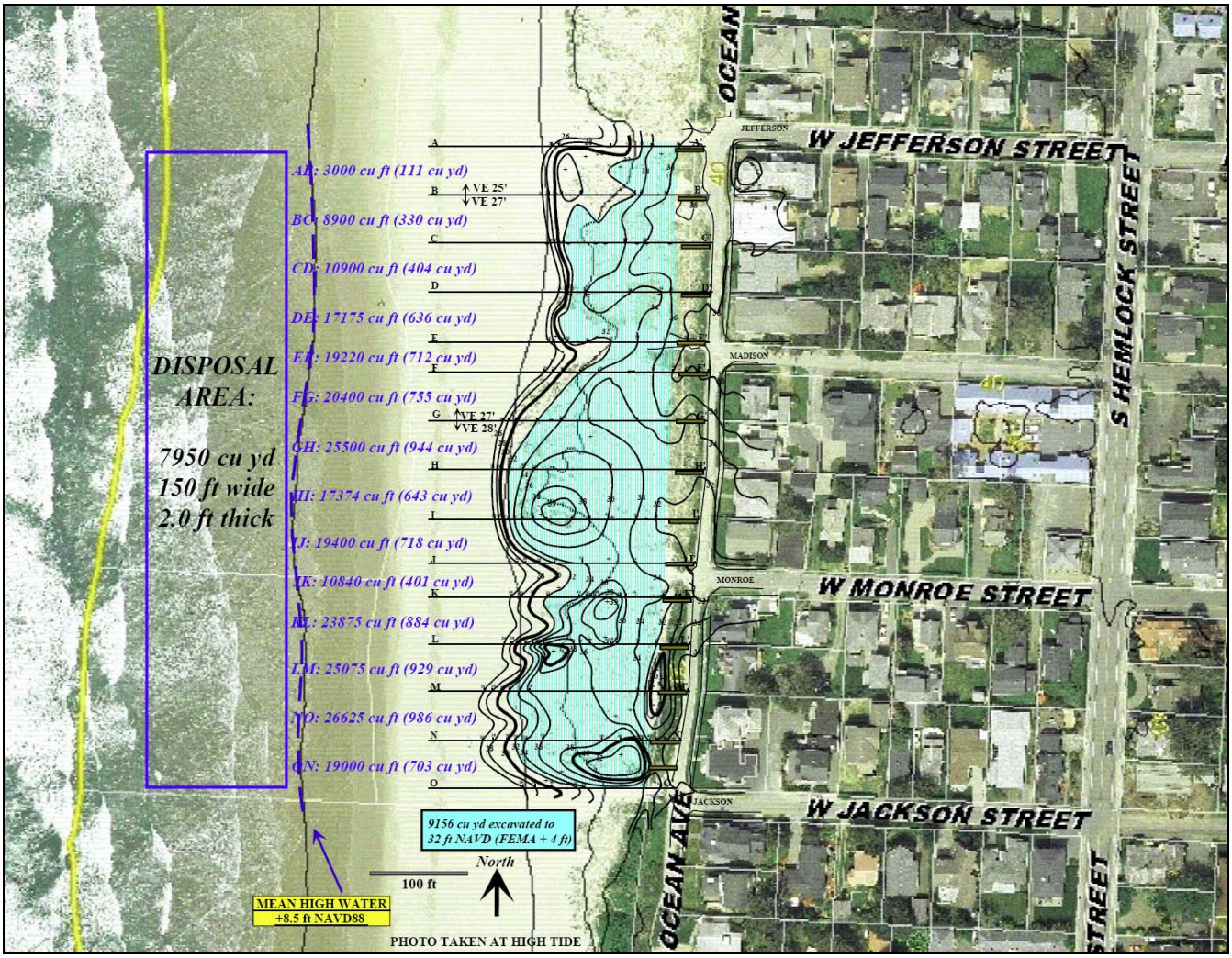


Figure 2: Summary plan for grading and disposal of dune sand from Jackson to Jefferson Streets. The range of sand disposal in the surf zone represents assumptions of whether the 1-ft layer of beach grass-tainted sand is pushed to the beach or disposed of partly or entirely offsite. Sand calculations assume that grading will be to 32 ft NAVD, or to FEMA V-Zone elevation (28 ft NAVD + 4 ft), although at the north end of the area, it could be graded to 29 ft NAVD.

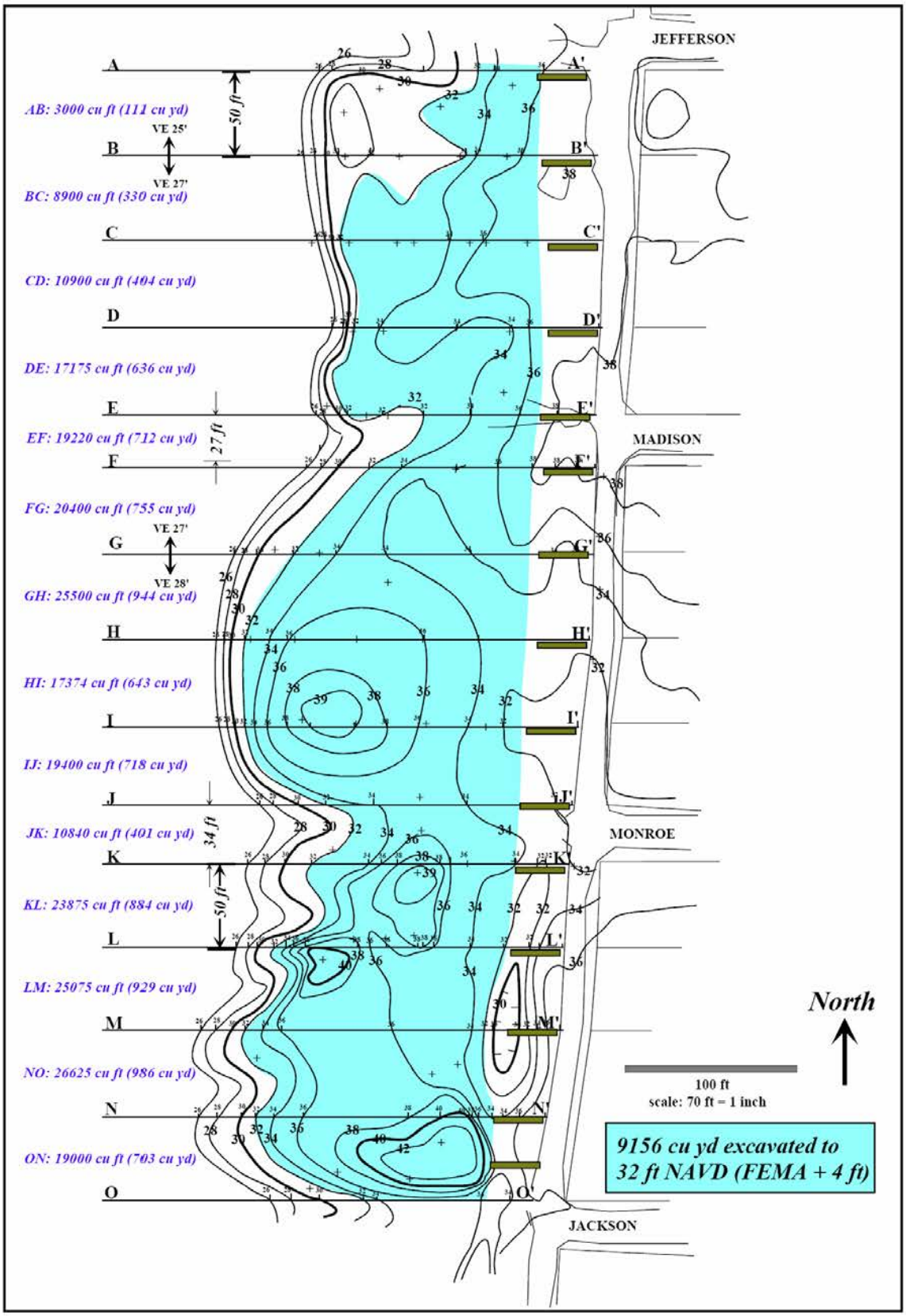


Figure 3: Dune grading plan showing area to be graded (blue), the profiles AA' to OO' and elevation contours at 2-ft intervals. Summary of volume calculations are posted on left side, obtained from cross sectional profiles in Figures 4 and 5. Brown blocks along east ends of profiles mark the approximate edge of the Presidential Streets silty-clay terrace.

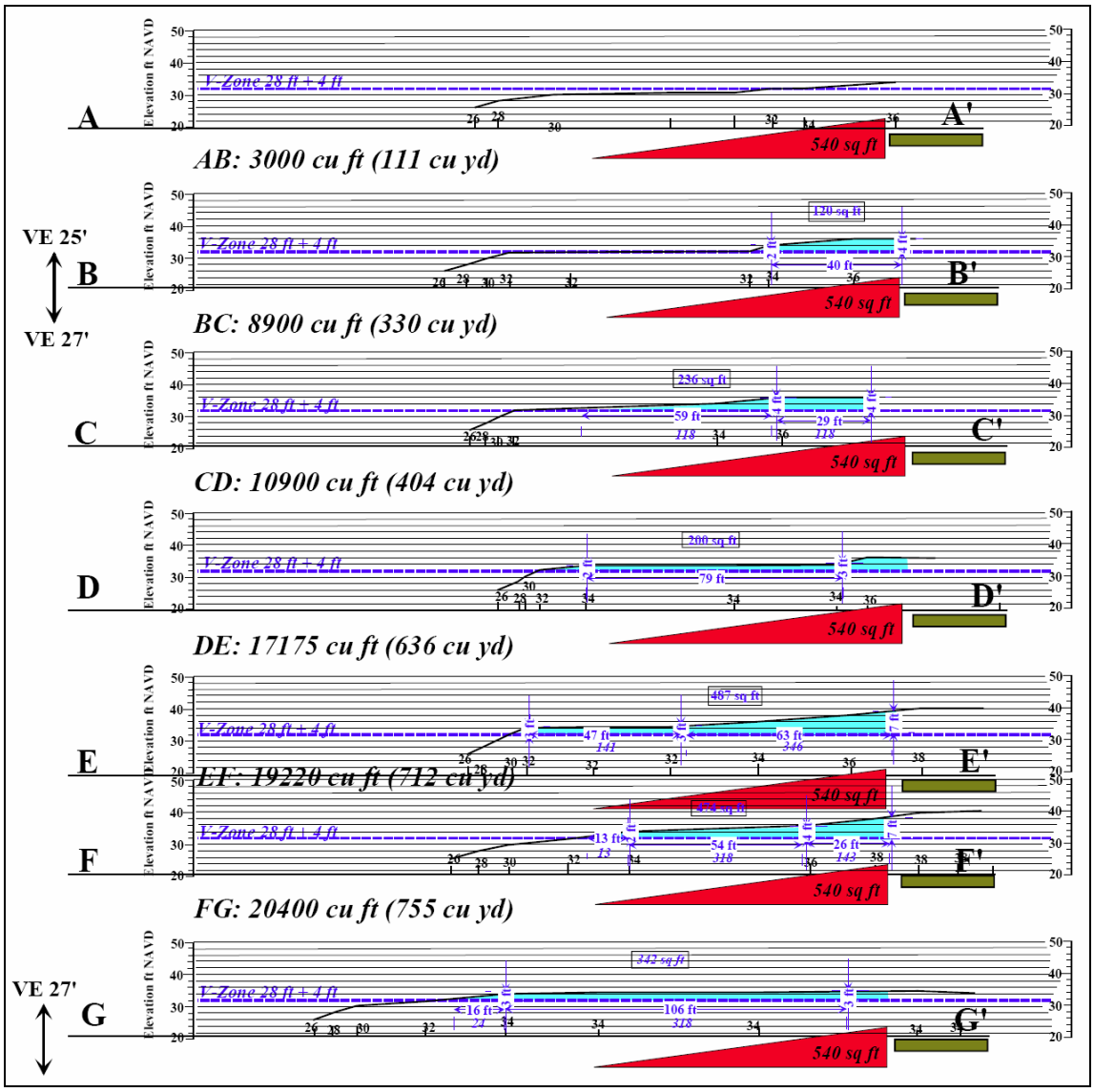


Figure 4: The northern third of the grading profiles. Panel cross sectional areas are shown in boxes above each profile. Panel cross sectional volumes are posted between the relevant profiles. Red triangles mark the minimal cross sectional areas of dune sand that must remain after grading is completed, in all cases met satisfactorily. The base of the beach is regarded conservatively as at 10 ft NAVD.

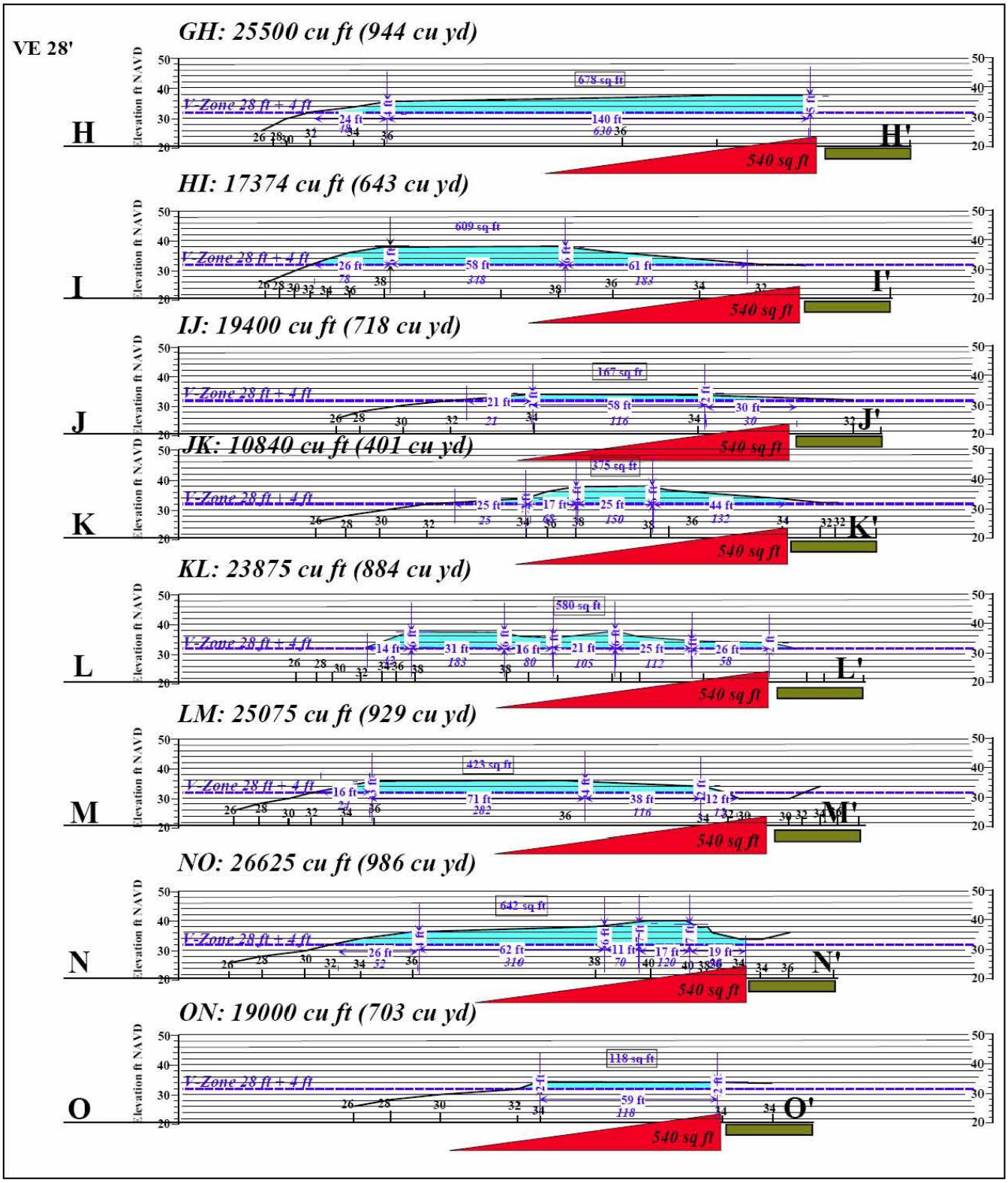


Figure 5: The southern two-thirds of the grading profiles. Panel cross sectional areas are shown in boxes above each profile. Panel cross sectional volumes are posted between the relevant profiles. Red triangles mark the minimal cross sectional areas of dune sand that must remain after grading is completed, in all cases met satisfactorily. The base of the beach is regarded conservatively as at 10 ft NAVD.

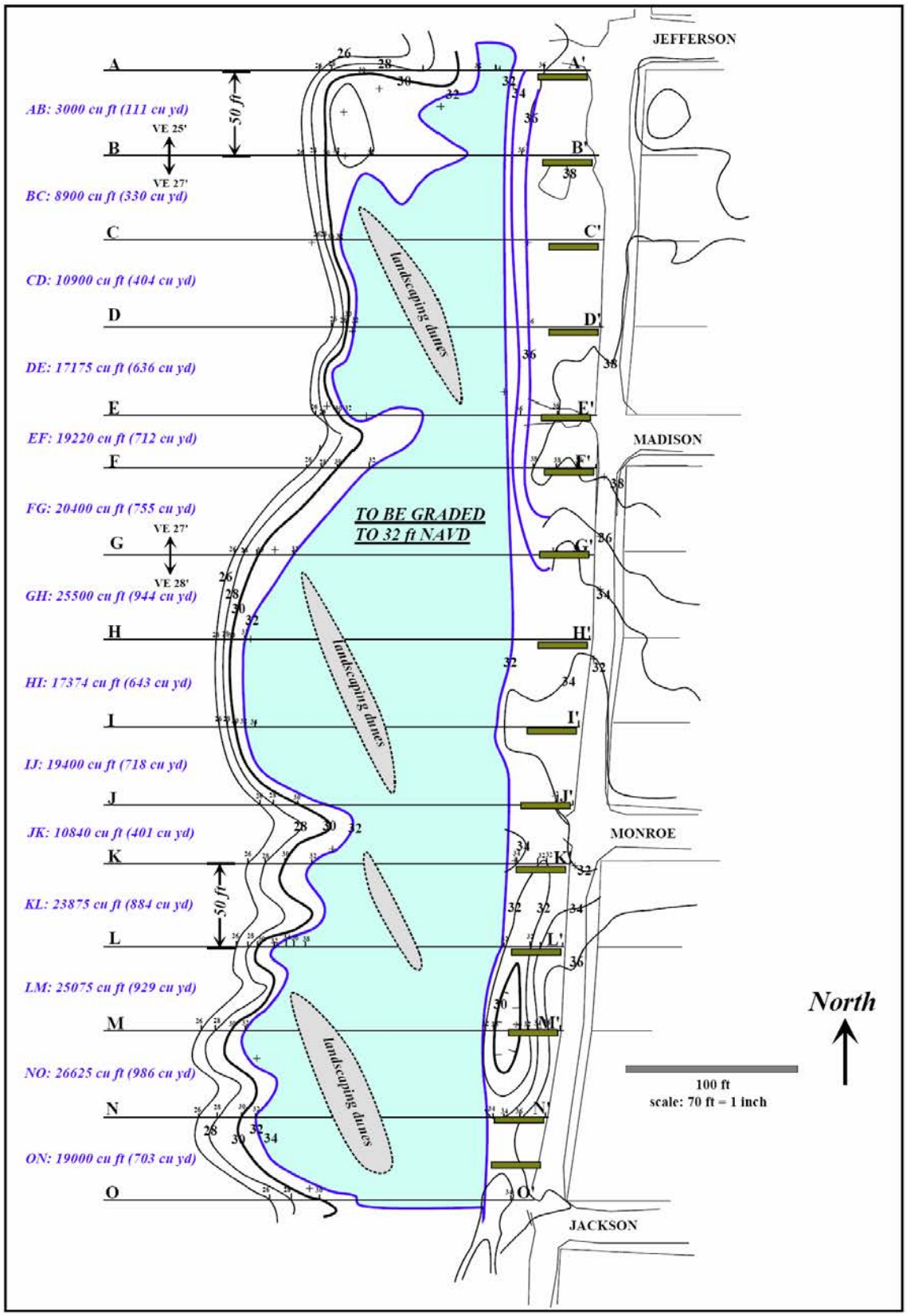


Figure 6: Dune grading plan showing finished dune platform at 32 ft NAVD, plus several 2-ft-high landscaping dunes to provide a more natural appearance to the graded area, also serving as modified baffle dunes to entrap windblown sand more effectively in the first two years of vegetation recovery.

Figure 7: Map showing disposal area for dune sand with dense dune and beach grass. The disposal site is locally known as the Rippet Quarry.