Adaptive design strategies for data collection can increase the quality of response data even under a reduced survey budget. In this framework, the U.S. Census Bureau is investigating nonresponse subsampling strategies for usage in the 2017 Economic Census. In previous research, we developed optimized allocation procedure for subsampling nonrespondents that selects larger systematic samples in domains with lower initial response. This paper expands upon our previous research by exploring improvements to (1) the optimal allocation method and (2) the adaptive collection design employed for nonresponse follow-up (NRFU). First, we discuss refinements to our original allocation procedures that incorporate the balance indicators presented in Särndal and Lundquist (2014) with simultaneous objectives of allocating high proportions of sample in domains that indicate potential nonresponse bias and of equalizing response rates across domains. Second, we discuss two different adaptive NRFU protocols: one that selects a subsample of nonrespondents and restricts NRFU to sampled cases; and one that includes NRFU for *all* nonresponding units, but restricts the usage of intensive or expensive NRFU procedures to the optimally- allocated subsampled units. We compare the effects of both allocation methods and both collections protocols on Horvitz-Thompson estimates via a simulation study using data from the 2014 Annual Survey of Manufactures.