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If a vertex operator algebra V has a braided tensor category \mathcal{C} of representations, then Huang, Kirillov, and Lepowsky showed that vertex operator algebra extensions of V in \mathcal{C} correspond essentially to commutative associative algebras A in the braided tensor category \mathcal{C} . Similarly, a vertex operator superalgebra can be realized as a commutative associative algebra in a braided supercategory of representations of its even part. Here, we apply these results to study representations of the extended (super)algebra A via an induction functor from \mathcal{C} to a category of generalized representations of A . In particular, we obtain Verlinde formulae and modular character transformations for regular vertex operator superalgebras, classification of irreducible modules and fusion rules for lattice vertex algebra cosets, and some results on twisted representations associated to finite group orbifold extensions. (Received February 07, 2018)