

PLYMOUTH OPPORTUNITY REIT, INC.
SUPPLEMENT NO. 5 DATED AUGUST 20, 2012
TO THE PROSPECTUS DATED NOVEMBER 1, 2011

This document ("Supplement No. 5") supplements and should be read in conjunction with the prospectus of Plymouth Opportunity REIT, Inc. dated November 1, 2011 (the "Prospectus"), as supplemented by Supplement No. 1, dated March 29, 2012, Supplement No. 2, dated May 11, 2012, Supplement No. 3, dated July 30, 2012 and Supplement No. 4, dated August 13, 2012. As used herein the terms "we," "our" and "us" refer to Plymouth Opportunity REIT, Inc. and, as required by context, Plymouth Opportunity OP, LP, which we refer to as our "operating partnership." Capitalized terms used in this supplement have the same meanings as set forth in the Prospectus. The purpose of this Supplement No. 5 is to disclose the acquisition of an equity interest in a property located in Atlanta, Georgia.

Acquisition of Equity Interest in Wyntrope Forest Apartments

On August 17, 2012, Plymouth Opportunity REIT, Inc. (the "Company"), through its operating partnership, Plymouth Opportunity OP LP, acquired a 51.5% equity interest in Colony Hills Capital Residential II, LLC, ("CHCR II") which is a joint venture with Colony Hills Capital. CHCR II is the sole member of Wyntrope Holdings, LLC, which owns Wyntrope Forest Apartments, a 23 building, 270 unit multifamily complex located in Riverdale, a suburb of Atlanta, Georgia. The property was 93.3% occupied at the time of acquisition, with a majority of the leases ranging from one year or longer. The total purchase price the joint venture paid for the property was \$13.9 million which includes \$10.6 million of secured debt. The purchase price the Company paid for its equity interest was \$1,250,000. The Company funded the purchase price with proceeds from its initial public offering.