

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-K/A
Amendment No. 1

(Mark One)

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2004

or

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from to to

Commission file number 0-25739

WELLS REAL ESTATE INVESTMENT TRUST, INC.

(Exact name of registrant as specified in its charter)

Maryland
(State or other jurisdiction of
incorporation or organization)

58-2328421
(I.R.S. Employer
Identification Number)

6200 The Corners Parkway, Norcross, Georgia
(Address of principal executive offices)

30092
(Zip Code)

Registrant's telephone number, including area code (770) 449-7800

Securities registered pursuant to Section 12 (b) of the Act:

Title of each class	Name of exchange on which registered
NONE	NONE

Securities registered pursuant to Section 12 (g) of the Act:

COMMON STOCK
(Title of Class)

COMMON STOCK
(Title of Class)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes No

Aggregate market value of the voting stock held by nonaffiliates:

While there is no established market for the Registrant's shares of voting stock, the Registrant has offered and sold shares of its voting stock pursuant to a Form S-11 Registration Statement under the Securities Act of 1933 at a price of \$10 per share. The number of shares of common stock outstanding as of February 28, 2005 was approximately 473,508,123.

Documents Incorporated by Reference:

Registrant incorporates by reference portions of the Wells Real Estate Investment Trust, Inc. Definitive Proxy Statement for the 2005 Annual Meeting of Stockholders (Items 10, 11, 12, 13 and 14 of Part III) to be filed no later than April 30, 2005.

EXPLANATORY NOTE

This Amendment No. 1 to the Annual Report on Form 10-K for Wells Real Estate Investment Trust, Inc. for the fiscal year ended December 31, 2004, which was originally filed on March 15, 2005, is being filed for the sole purpose of filing Exhibit 23.1, the Consent of Independent Registered Public Accounting Firm, which was inadvertently omitted from the original filing. All other information in the original Form 10-K remains unchanged.

SIGNATURES

Pursuant to the requirements of Sections 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized this 17th day of March 2005.

Wells Real Estate Investment Trust, Inc.
(Registrant)

By: /s/ Leo F. Wells, III

Leo F. Wells, III
President, Principal Executive Officer and Director

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following person on behalf of the Registrant and in the capacity as and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Michael R. Buchanan</u> Michael R. Buchanan	Independent Director	March 17, 2005
<u>/s/ Richard W. Carpenter</u> Richard W. Carpenter	Independent Director	March 17, 2005
<u>/s/ Bud Carter</u> Bud Carter	Independent Director	March 17, 2005
<u>/s/ Donald S. Moss</u> Donald S. Moss	Independent Director	March 17, 2005
<u>/s/ Neil H. Strickland</u> Neil H. Strickland	Independent Director	March 17, 2005
<u>/s/ Williams H. Keogler, Jr.</u> William H. Keogler, Jr.	Independent Director	March 17, 2005
<u>/s/ Walter W. Sessoms</u> Walter W. Sessoms	Independent Director	March 17, 2005
<u>/s/ W. Wayne Woody</u> W. Wayne Woody	Independent Director	March 17, 2005
<u>/s/ Leo F. Wells, III</u> Leo F. Wells, III	President and Director (Principal Executive Officer)	March 17, 2005
<u>/s/ Douglas P. Williams</u> Douglas P. Williams	Executive Vice President and Director (Principal Financial Officer)	March 17, 2005

EXHIBIT INDEX

Exhibit Number	Description of Document
23.1	Consent of Independent Registered Public Accounting Firm

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-3 No. 333-114212) of Wells Real Estate Investment Trust, Inc. and in the related Prospectus of our reports dated March 10, 2005, with respect to the consolidated financial statements and schedules of Well Real Estate Investment Trust, Inc., Wells Real Estate Investment Trust, Inc. management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of Wells Real Estate Investment Trust, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2004.

Ernst + Young LLP

Atlanta, Georgia
March 17, 2005