

Digital Realty Trust, Inc.  
Form 424B7  
September 08, 2011

Filed Pursuant to Rule 424(b)(7)  
Registration No. 333-142396

**PROSPECTUS SUPPLEMENT NO. 34**

**(To Prospectus dated April 26, 2007)**

**6,245,466 Shares**

**Common Stock**

This prospectus supplement no. 34 supplements the prospectus dated April 26, 2007 and supersedes, in its entirety, prospectus supplement no. 33, dated August 15, 2011, relating to the resale by selling securityholders of shares of our common stock that may be issuable upon exchange of the 4.125% Exchangeable Senior Debentures due 2026 of our operating partnership, Digital Realty Trust, L.P.

You should read this prospectus supplement no. 34 in conjunction with the prospectus. This prospectus supplement no. 34 is not complete without, and may not be delivered or used except in conjunction with, the prospectus, including any amendments or supplements to it. This prospectus supplement no. 34 is qualified by reference to the prospectus, except to the extent that the information provided by this prospectus supplement no. 34 supersedes information contained in the prospectus.

**You should consider carefully the risk factors beginning on page 2 of the prospectus as well as the risk factors relating to our business that are incorporated by reference in the prospectus before investing in the shares of common stock that may be issuable upon exchange of the debentures.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of the prospectus or this prospectus supplement no. 34. Any representation to the contrary is a criminal offense.**

The date of this prospectus supplement no. 34 is September 8, 2011.

The section entitled "Selling Securityholders" in the prospectus is superseded in its entirety with the following:

### SELLING SECURITYHOLDERS

The 4.125% Exchangeable Senior Debentures due 2026 were originally issued by Digital Realty Trust, L.P., our operating partnership, and sold by the initial purchasers of the debentures in transactions exempt from the registration requirements of the Securities Act to persons reasonably believed by the initial purchasers to be qualified institutional buyers as defined by Rule 144A under the Securities Act. Under certain circumstances, we may issue shares of our common stock upon the exchange of the debentures. In such circumstances, the recipients of shares of our common stock, whom we refer to as the selling securityholders, may use this prospectus and any accompanying prospectus supplement to resell from time to time the shares of our common stock that we may issue to them upon the exchange of the debentures. Information about selling securityholders is set forth in this prospectus, and information about additional selling securityholders may be set forth in a prospectus supplement, in a post-effective amendment or in filings we make with the SEC under the Exchange Act that are incorporated by reference in this prospectus.

The following table sets forth information, as of September 8, 2011, with respect to the selling securityholders and the maximum number of shares of our common stock that could become beneficially owned by each selling securityholder should we issue shares of our common stock to such selling securityholder that may be offered pursuant to this prospectus upon the exchange of the debentures. The information is based on information provided by or on behalf of the selling securityholders. The selling securityholders may offer all, some or none of the shares of our common stock which we may issue upon the exchange of the debentures. The number of shares of our common stock issuable upon the exchange of the debentures shown in the table below assumes exchange of the full amount of debentures held by each selling securityholder at the maximum exchange rate of 36.2056 shares of our common stock per \$1,000 principal amount of debentures and a cash payment in lieu of any fractional share. The exchange rate of the debentures is currently 32.2730 shares of our common stock per \$1,000 principal amount of debentures. The exchange rate on the debentures is subject to adjustment in certain events. Accordingly, the number of shares of our common stock issuable upon the exchange of the debentures may increase or decrease from time to time. In addition, due to the exchange settlement provisions of the debentures, we may not be required to issue the maximum number of shares of our common stock upon any exchanges of debentures. The percent of shares of common stock beneficially owned following the exchange is based on 100,593,161 shares of common stock outstanding as of September 2, 2011.

Name (1)	Shares of Common Stock Beneficially Owned Prior to the Exchange	Maximum Number of Shares of Common Stock Issuable Upon Exchange of Outstanding Debentures (2)	Shares of Common Stock Beneficially Owned Following the Exchange (3)		Number of Shares of Common Stock Offered	Common Stock Beneficially Owned after Resale (4)	
			Shares	Percent		Shares	Percent
1976 Distribution Trust FBO A.R. Lauder (5)		181	181	*	181		
2000 Revocable Trust FBO A.R. Lauder (5)		144	144	*	144		
AHFP Context (6)		24,438	24,438	*	24,438		
Alcon Laboratories (5)(55)	8,677	16,690	25,367	*	16,690	8,677	*
Altma Fund Sicav plc in respect of the Grafton Sub Fund (6)		114,952	114,952	*	114,952		
Amaranth LLC (7)	15,600	117,668	133,268	*	117,668	15,600	*
Amida Partners Special Opportunity Master Fund, Ltd. (70)		108,616	108,616	*	108,616		
AQR Absolute Return Master Fund, L.P. (14)		8,146	8,146	*	8,146		
AQR DELTA Master Account, L.P. (14)		217,233	217,233	*	217,233		
Argent Classic Convertible Arbitrage Fund II, L.P. (44)		2,534	2,534	*	2,534		
Argent Classic Convertible Arbitrage Fund L.P. (44)		9,413	9,413	*	9,413		
Argent Classic Convertible Arbitrage Fund Ltd. (44)		57,928	57,928	*	57,928		
Argentum Multi-Strategy Fund L.P. (44)		724	724	*	724		
Argentum Multi-Strategy Fund Ltd (44)		2,534	2,534	*	2,534		
Arkansas Teacher Retirement System (8)		133,598	133,598	*	133,598		

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Arlington County Employees Retirement System (5)	23,931	23,931	*	23,931
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Name (1)	Shares of Common Stock Beneficially Owned Prior to the Exchange	Maximum Number of Shares of Common Stock Issuable Upon Exchange of Outstanding Debentures (2)	Shares of Common Stock Beneficially Owned Following the Exchange (3)		Number of Shares of Common Stock Offered	Common Stock Beneficially Owned after Resale (4)	
			Shares	Percent		Shares	Percent
Baptist Health of South Florida (8)		41,274	41,274	*	41,274		
Bayerische Hypo und Vereinsbank AG (45)		452,570	452,570	*	452,570		
Black Diamond Convertible Offshore LDC (9)		72,411	72,411	*	72,411		
Black Diamond Offshore Ltd. (9)(50)	6,812	24,981	31,793	*	24,981	6,812	*
BMO Nesbitt Burns, Inc. (10)		128,529	128,529	*	128,529		
British Virgin Islands Social Security Board (5)(56)	3,800	5,539	9,339	*	5,539	3,800	*
Casam Context Offshore Advantage Fund Limited (6)		56,118	56,118	*	56,118		
CB Richard Ellis Investors, LLC (11)		24,852	24,852	*	24,852		
Cincinnati Insurance Company (12)		5,430	5,430	*	5,430		
Citadel Equity Fund Ltd. (65)		271,542	271,542	*	271,542		
Citigroup Global Markets Inc. (13)		36,205	36,205	*	36,205		
City University of New York (5)		4,779	4,779	*	4,779		
CNH CA Master Account, L.P. (14)(51)	162,554	31,933	194,487	*	31,933	162,554	*
CNH CA Master Fund, L.P. (14)		44,605	44,605	*	44,605		
Compass Offshore SAV PCC Ltd. (66)		41,636	41,636	*	41,636		
Compass SAV L.L.C. (66)		41,636	41,636	*	41,636		
Context Advantage Master Fund, L.P. (6)		383,779	383,779	*	383,779		
Continental Assurance Company on Behalf of Its Separate Account (E)(16)		94,134	94,134	*	94,134		
Convertible Securities Fund (15)		724	724	*	724		
CQS Convertible and Quantitative Strategies Master Fund Ltd (17)		90,514	90,514	*	90,514		
D.E. Shaw Valence Portfolios, L.L.C. (19)		181,028	181,028	*	181,028		
Daimler Chrysler Corp. Emp. #1 Pension Plan dated 4/1/89 (18)		45,655	45,655	*	45,655		
DBAG London (46)		570,093	570,093	*	570,093		
Deutsche Bank Securities Inc. (68)		224,474	224,474	*	224,474		
DKR SoundShore Oasis Holding Fund Ltd. (47)	336,600	362,056	698,656	*	362,056	336,600	*
Double Black Diamond Offshore LDC (9)(52)	112,712	156,046	268,758	*	156,046	112,712	*
Elite Classic Convertible Arbitrage Ltd. (44)		5,792					