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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Form 11-K		
ANNUAL REPORT PURSUANT TO SECTION 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934		
For the fiscal year ended December 31, 2004		
or		
TRANSITION REPORT PURSUANT TO SECTION 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934		
For the transition period from to		
Commission file number 001-16441		
CROWN CASTLE INTERNATIONAL CORP. 401(K) PLAN		

(Full title of the Plan and address of the Plan, if different from that of the issuer named below)

CROWN CASTLE INTERNATIONAL CORP.

510 Bering Drive, Suite 500 Houston, Texas 77057-1457

(Name of issuer of the securities held pursuant to the plan and the address of principal executive office)

EXHIBIT

CROWN CASTLE INTERNATIONAL CORP. 401(K) PLAN

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23.1 Consent of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm

To the Plan Administrator for the Crown Castle International Corp. 401(k) Plan:

We have audited the accompanying statements of net assets available for benefits of the Crown Castle International Corp. 401(k) Plan as of December 31, 2004 and 2003, and the related statements of changes in net assets available for benefits for the years then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2004 and 2003 and the changes in net assets available for benefits for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Our audits were made for the purpose of formulating an opinion on the financial statements taken as a whole. The supplemental schedule included as Schedule 1 is presented for purposes of additional analysis and is not a required part of the basic financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. The supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in our audits of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

/s/ KPMG LLP Pittsburgh, Pennsylvania June 21, 2005

CROWN CASTLE INTERNATIONAL CORP. 401(k) PLAN

Statements of Net Assets Available for Benefits

December 31, 2004 and 2003

	2004	2003
Assets		
Investments, at fair value (note 3):		
Registered investment companies	\$ 23,643,267	\$ 17,505,484
Common collective fund	1,639,987	1,155,150
Unitized trust fund	2,984,941	1,870,391
Participant loans	438,224	318,882
Total investments	28,706,419	20,849,907
Receivables:		
Employer contributions	1,165,880	1,103,249
Participant contributions	_	100,010
Other receivables	1,384	2,194
Total receivables	1,167,264	1,205,453
Net assets available for benefits	\$ 29,873,683	\$ 22,055,360

See accompanying notes to financial statements.

CROWN CASTLE INTERNATIONAL CORP. 401(k) PLAN

Statements of Changes in Net Assets Available for Benefits

Years ended December 31, 2004 and 2003

	2004	2003
Additions to net assets attributed to:		
Investment income:		
Net realized gain and unrealized appreciation on investments (note 3)	\$ 2,659,051	\$ 4,055,822
Dividends and interest	633,010	227,325
Total investment income	3,292,061	4,283,147
Contributions:		
Employer, net of forfeitures	2,359,668	1,862,819
Participant	3,643,118	3,456,121
Rollovers	485,803	201,409
Total contributions	6,488,589	5,520,349
Total additions	9,780,650	9,803,496
Deductions from net assets attributed to:		
Benefits paid to participants	1,865,792	2,076,033
Administrative expenses	96,535	59,241
Total deductions	1,962,327	2,135,274
Net increase	7,818,323	7,668,222
Net assets available for benefits:		
Beginning of year	22,055,360	14,387,138
End of year	\$ 29,873,683	\$ 22,055,360

See accompanying notes to financial statements.

CROWN CASTLE INTERNATIONAL CORP. 401(k) PLAN

Notes to Financial Statements

December 31, 2004 and 2003

(1) Plan Description

The following description of the Crown Castle International Corp. 401(k) Plan (the Plan) provides only general information. Participants should refer to the Plan agreement for a more complete description of the Plan's provisions.

(a) General

The Plan is a defined contribution plan available to eligible employees of Crown Castle International Corp. (the Company). For the period from January 1, 2002 through January 31, 2003, PNC Bank, N.A. was the trustee of the Plan and served as both the custodian and the recordkeeper. Beginning February 1, 2003, The Charles Schwab Trust Company was the trustee of the Plan, and Schwab Retirement Plan Services, Inc. served as custodian and recordkeeper. The Plan was established on May 1, 1999. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA) and is administered by a plan administrator appointed by the Company.

(b) Contributions

Employees are eligible for participation in the Plan once they are twenty-one years of age and have completed three months of service with the Company. Effective November 11, 2003, employees can participate in the Plan on the first day of the month coinciding with or following three months of service. Participants may contribute any percentage that allows the participant to reach the section 401(k) pre-tax contribution limit of \$13,000 for participants under age 50. Participants who are age 50 and older can contribute an additional \$3,000 for a total of \$16,000. These salary reduction contributions are fully vested at all times. Participants may also contribute amounts representing distributions from other qualified plans. Participants direct the investment of their contributions into various investment options offered by the Plan. As of December 31, 2004, the Plan offers thirteen mutual funds, one common collective fund, and Crown Castle International Corp. Common Stock Unitized Trust Fund. The Company matches and contributes 100% of the first 3% of compensation that a participant contributes to the Plan. Additional discretionary amounts may be contributed at the option of the Company's board of directors. Contributions are subject to certain limitations. The Company made discretionary contributions of \$1,089,607 and \$1,011,066 for the years ended December 31, 2004 and 2003, respectively.

(c) Participant Accounts

Participant accounts are maintained at fair market value. Each participant's account is credited with the participant's contribution and allocations of (a) the Company's matching contribution and (b) Plan earnings and losses. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

(d) Vesting

Participants are vested immediately in their contributions plus actual earnings thereon. Vesting in the Company's contribution portion of their accounts is based on years of service. A participant is 33% vested after one year of credited service, 67% vested after two years of credited service, and 100% vested after three years of credited service.

(e) Participant Loans

Participants are permitted to borrow from their fund accounts a minimum of \$1,000 up to a maximum of 50% of vested balance or \$50,000, whichever is less. The loans are secured by the balance in the participant's account and bear interest at a fixed rate of prime plus 1%. All loans are subject to specific repayment terms and must be repaid within a five-year period. Each participant is granted one loan at a time.

CROWN CASTLE INTERNATIONAL CORP. 401(k) PLAN

Notes to Financial Statements (Continued)

December 31, 2004 and 2003

(f) Payment of Benefits

Participants are permitted to withdraw any portion of their vested account balance due to death, permanent disability, retirement, attainment of age 59 ½, in the event of financial hardship or termination of service. The participant may elect to receive a lump-sum payment, subject to federal income tax withholdings, or rollover the vested account balance to another qualified plan. These withdrawals, prior to retirement, may result in certain suspensions of future participation in the plan.

(g) Forfeitures

Company contributions and earnings thereon that have not become vested, and have been forfeited by the withdrawal of participants' savings in accordance with the applicable provisions of the Plan, are applied against administrative expenses of the Plan. Excess forfeitures are applied to reduce the Company's contributions required under the Plan. Amounts forfeited were \$116,500 and \$106,614 during the years ended December 31, 2004 and 2003, respectively. Forfeited amounts of \$96,535 and \$59,241 were applied against administrative expenses for the years ended December 31, 2004 and 2003, respectively. The forfeited non-vested accounts that were unallocated to participants totaled \$234,225 and \$190,623 as of December 31, 2004 and 2003, respectively.

(h) Termination of Plan

In the event of termination of the Plan, the plan administrator will continue to function during such period as is necessary to make remaining normal distributions and to administer and distribute the residual interests of the participants. Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA. In the event of Plan termination, participants become 100% vested in their accounts. Any unallocated assets of the Plan shall be allocated to participant accounts and distributed in such a manner as the Company may determine.

(2) Summary of Significant Accounting Policies

(a) Basis of Financial Statements

The accompanying financial statements have been prepared on the accrual basis. Amounts payable to participants terminating participation in the Plan are included as a component of net assets available for Plan Benefits. The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires the plan administrator to make estimates and assumptions that affect the amounts reported in the financial statements and notes thereto. Actual results could differ from those estimates.

(b) Investment Income

Interest income from investments is recorded as earned on an accrual basis. Dividend income is recorded on the ex-dividend date.

(c) Investments

Investments in the Crown Castle International Corp. Stock Unitized Trust Fund are valued based on the current market value of the underlying assets of the fund. These investments include cash equivalents as well as shares of the common stock of Crown Castle International Corp. which, along with investments in registered investment companies, are valued at their last reported sales price on the last business day of the Plan year. Investments in collective trust funds are valued at the net asset value of the respective funds on the last day of the Plan year. Loans to participants are stated at cost which approximates fair value.

Investment transactions are accounted for on a trade-date basis.

CROWN CASTLE INTERNATIONAL CORP. 401(k) PLAN

Notes to Financial Statements (Continued)

December 31, 2004 and 2003

In accordance with the policy of stating investments at fair value, changes in unrealized appreciation or depreciation are reflected in the statements of changes in net assets available for plan benefits.

(d) Contributions

Participant contributions are recorded on a bi-weekly basis as they are withheld from the participant's wages.

(e) Distributions to Participants

Distributions to participants are recorded when paid by the Plan.

(f) Expenses

Administrative expenses are recorded as paid for by the Plan.

(g) Reclassifications

Certain reclassifications have been made to the 2003 financial statements to conform to the 2004 presentation.

(3) Investment Programs

Schwab Retirement Plan Services, Inc. acted as custodian of the Plan assets as of December 31, 2004. The funds listed below were the investment options for salary reduction contributions as of December 31, 2004. Any of these funds may be invested in short-term debt obligations of any nature or held in cash pending investment or distribution. The assets that comprise these funds may be invested in registered investment companies, collective trust funds or the common stock of the Company.

- · Ariel Appreciation Fund
- Armada Small Cap Value Fund
- Columbia Acorn Z Fund
- Goldman Sachs Government Income Fund
- · Jensen J Fund
- · Julius Baer International Equity A Fund
- One Group Bond Fund
- · Phoenix-Duff Real Estate Fund

- Schwab 1000 Fund
- Schwab MarketTrack Balanced Portfolio
- Schwab MarketTrack Conservative Portfolio
- Schwab MarketTrack Growth Portfolio
- Schwab Stable Value Fund
- Van Kampen Growth & Income A Fund
- Crown Castle International Corp. Stock Unitized Trust Fund

CROWN CASTLE INTERNATIONAL CORP. 401(k) PLAN

Notes to Financial Statements (Continued)

December 31, 2004 and 2003

The following presents investments that represent 5% or more of the Plan's assets:

	December 31	
	2004	2003
REGISTERED INVESTMENT COMPANIES: (valued at fair value)		
Ariel Appreciation Fund	2,528,401	2,132,421
Columbia Acorn Z	1,806,525	685,539
Jensen J Fund	6,267,800	5,853,558
Julius Baer International Equity	3,113,593	_
Schwab 1000 Fund	3,570,460	2,677,401
Templeton Foreign A Fund	_	2,064,989
Van Kampen Growth & Income A Fund	1,715,140	1,117,994
COMMON COLLECTIVE FUND: (valued at net asset value)		
Schwab Stable Value Fund	1,639,987	1,155,150
COMMON STOCK UNITIZED TRUST FUND: (valued at fair value of underlying assets)		
Crown Castle International Corp. Stock Fund	2,984,941	1,870,391

During 2004 and 2003, the Plan's investments (including gains and losses on investments bought and sold, as well as held during the year) appreciated in value by \$2,659,051 and \$4,055,822, respectively, as follows:

	2004	2003
Registered investment companies and common collective funds	\$ 1,707,239	\$ 2,982,768
Common stock	951,812	1,073,054
	\$ 2,659,051	\$ 4,055,822

(4) Federal Income Taxes

The Plan received a favorable determination letter from the Internal Revenue Service dated October 29, 2004, which stated that the Plan and related trust are designed in accordance with the applicable sections of the Internal Revenue Code (IRC). The Plan has been amended since receiving the determination letter. However, the plan administrator believes that the Plan is designed and currently being operated in compliance with the applicable provisions of the IRC. Accordingly, the accompanying financial statements do not include a provision for federal income taxes.

(5) Party-In-Interest Transactions

Certain Plan investments are funds managed by The Charles Schwab Trust Company. The Charles Schwab Trust Company was the trustee of the Plan, and Schwab Retirement Plan Services, Inc. served as custodian and recordkeeper, and therefore, these transactions qualify as a party-in-interest.

The Crown Castle International Corp. Stock Unitized Trust Fund holds 173,535 shares of Crown Castle International Corp. common stock as of December 31, 2004 and therefore, qualify as a party-in-interest.

Participants have loans from their fund accounts outstanding in the amount \$438,224 as of December 31, 2004.

CROWN CASTLE INTERNATIONAL CORP. 401(k) PLAN

EIN: 76-0470458 Plan Number: 001

Schedule H, Line 4i – Schedule of Assets (Held at End of Year)

December 31, 2004

Identity of issuer, borrower, lessor, or similar party	Description of investment	Current value
REGISTERED INVESTMENT COMPANIES:		
Ariel Capital Management LLC	Ariel Appreciation Fund	\$ 2,528,401
Armada Funds	Armada Small Cap Value Fund	726,287
Columbia Wagner Asset Management	Columbia Acorn Z Fund	1,806,525
Goldman Sachs Trust	Goldman Sachs Government Income A Fund	678,770
Jensen Funds	Jensen J Fund	6,267,800
Julius Baer Investments Funds	Julius Baer International Equity A Fund	3,113,593
One Group Funds	One Group Bond Fund	1,292,783
Phoenix Investment Partners, LTD	Phoenix-Duff & Phelps Real Estate Securities A Fund	271,274
* The Charles Schwab Trust Company	Schwab 1000 Fund	3,570,460
* The Charles Schwab Trust Company	Schwab MarketTrack Balanced Portfolio	1,212,417
* The Charles Schwab Trust Company	Schwab MarketTrack Conservative Portfolio	177,979
* The Charles Schwab Trust Company	Schwab MarketTrack Growth Portfolio	281,838
Van Kampen Funds	Van Kampen Growth & Income A Fund	1,715,140
Total registered investment companies		23,643,267
COMMON COLLECTIVE FUND:		
* The Charles Schwab Trust Company	Schwab Stable Value Fund	1,639,987
UNITIZED TRUST FUND:		
* Crown Castle International Corp.	Common stock	2,984,941
PARTICIPANT LOANS:		
* Participants	Participant loans with various rates of interest from 5.00% to 10.00% and various maturity dates through 2010	438,224
		\$ 28,706,419

^{*} Party-in-interest.

See accompanying report of independent registered public accounting firm.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Plan Administrator for the Plan has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

CROWN CASTLE INTERNATIONAL CORP. 401(K) PLAN

(Name of Plan)

By /s/ ROB A. FISHER

Rob A. Fisher Vice President and Controller (Principal Accounting Officer)

Date: June 24, 2005

Consent of Independent Registered Public Accounting Firm

The Board of Directors Crown Castle International Corp.:

We consent to the incorporation by reference in the Registration Statement (No. 333-67379) on Form S-8 pertaining to the Crown Castle International Corp. 401(k) Plan of our report dated June 21, 2005, with respect to the financial statements of the Crown Castle International Corp. 401(k) Plan as of and for the years ended December 31, 2004 and 2003, included in this Annual Report (Form 11-K).

/s/ KPMG LLP Pittsburgh, Pennsylvania June 21, 2005