Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

WIRELESS FACILITIES, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

13-3818604

(I.R.S. Employer Identification Number)

4810 Eastgate Mall San Diego, California 92121 (858) 228-2000

(Address of Principal Executive Offices)

1999 Equity Incentive Plan

(Full title of the Plan(s))

James R. Edwards
Senior Vice President and General Counsel
Wireless Facilities, Inc.
4810 Eastgate Mall
San Diego, California 92121
(858) 228-2000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

Scott M. Stanton, Esq. Morrison & Foerster LLP 3811 Valley Centre Drive, Suite 500 San Diego, California 92130 (858) 720-5100

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be registered (1)	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value \$0.001 per share	1,000,000	(2)	\$5,439,152.95	\$641

- (1) Pursuant to Rule 416(a), this Registration Statement shall also cover any additional shares of the Registrant's common stock, par value \$0.001 per share ("Common Stock"), that may be offered or issued in connection with any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding shares of Common Stock.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h) of the Securities Act of 1933, as amended. The price per share and aggregate offering price are based upon (a) the average of the high and low sales prices of Registrant's Common Stock on May 11, 2005, as reported on the Nasdaq National Market, for shares issuable pursuant to options not yet granted under the 1999 Equity Incentive Plan and (b) the

actual exercise price for shares subject to outstanding stock options previously granted under the Registrant's 1999 Equity Incentive Plan. The following chart shows the calculation of the registration fee.

Type of Shares	Number of Shares	Offering Price Per Share	Aggregate Offering Price
Common Stock issuable under the 1999 Equity Incentive Plan	892,655	\$5.32	\$4,748,924.60
Common Stock issuable pursuant to outstanding options granted under the 1999 Equity Incentive Plan	107,345	\$6.43	\$690,228.35

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.

Not required to be filed with this Registration Statement.

Item 2. Registrant Information and Employee Plan Annual Information.

Not required to be filed with this Registration Statement.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed with the Securities and Exchange Commission (the "SEC") by Wireless Facilities, Inc. (the "Company") are incorporated by reference in this Registration Statement:

- (a) The Company's latest annual report on Form 10-K filed pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), containing audited financial statements for the Company's latest fiscal year ended December 31, 2004 as filed with the SEC on March 31, 2005.
- (b) All other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the document referred to in (a) above.
- (c) The description of the Company's Common Stock contained in the Company's registration statement filed under the Exchange Act, including any subsequent amendment or report filed for the purpose of amending such description.

All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which de-registers all securities then remaining unsold, are incorporated by reference in this Registration Statement and are a part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award or a corporation's board of directors to grant indemnification to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended (the "Securities Act"). Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing

provisions, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. The Company's amended and restated bylaws provides for indemnification of its directors, officers, employees and agents to the maximum extent permitted by the Delaware General Corporation Law. The Company's amended and restated certificate of incorporation provides that the liability of its directors for monetary damages shall be eliminated to the fullest extent under applicable law. The Company has entered into indemnification agreements with its officers and directors. The Company maintains directors and officers liability insurance.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits.

The following is a list of exhibits filed as part of this Registration Statement, which are incorporated herein:

Exhibit Numbers	Exhibit Description
4.1(1	Amended and Restated Certificate of Incorporation of the Company
4.2(2	P) Bylaws of the Company
4.3(3	Certificate of Designation of Series C Preferred Stock
4.4(3	Rights Agreement, dated as of December 16, 2004, between the Company and Wells Fargo
5.1	Opinion of Morrison & Foerster LLP
23.1	Consent of KPMG LLP
23.2	Consent of Morrison & Foerster LLP (contained in Exhibit 5.1)
24.1	Power of Attorney (included in the signature page of this Registration Statement)
99.1(2	2) 1999 Equity Incentive Plan
99.2(4	Form of Stock Option Agreement used in connection with the 1999 Equity Incentive Plan

- (1) Previously filed as an exhibit to the Company's Report on Form 8-K filed on October 11, 2001 and incorporated herein by reference.
- (2) Previously filed as an exhibit to the Company's Registration Statement on Form S-1 (File No. 333-85515), originally filed on August 18, 1999, and incorporated herein by reference.
- (3) Previously filed as an exhibit to the Company's Report on Form 8-K filed on December 17, 2004 and incorporated herein by reference.
- (4) Previously filed as an exhibit to the Company's Registration Statement on Form S-1/A filed on September 10, 1999, and incorporated herein by reference.

Item 9. Undertakings.

- (a) The undersigned Registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

- (ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement;
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that the undertakings set forth in paragraphs (a)(l)(i) and (a)(l)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of the expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on this 16th day of May, 2005.

WIRELESS FACILITIES, INC.

By: /s/ ERIC M. DEMARCO

Eric M. DeMarco President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints, jointly and severally, Eric M. DeMarco and Deanna H. Lund his attorneys-in-fact, each with the power of substitution, for him in any and all capacities, to sign any amendments to this Registration Statement on Form S-8 (including post-effective amendments), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the SEC, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/s/ ERIC M. DEMARCO	President, Chief Executive Officer and Director	May 16, 2005	
Eric M. DeMarco	- (Principal Executive Officer)		
/s/ DEANNA H. LUND	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	May 16, 2005	
Deanna H. Lund	- (Principal Finalicial and Accounting Officer)		
/s/ MASOOD K. TAYEBI			
Masood K. Tayebi, Ph.D	Executive Chairman and Director	May 16, 2005	
/s/ SCOTT I. ANDERSON	_		
Scott I. Anderson	Director	May 16, 2005	
/s/ BANDEL L. CARANO	_		
Bandel L. Carano	Director	May 16, 2005	
/s/ WILLIAM A. HOGLUND	_		
William A. Hoglund	Director	May 16, 2005	
/s/ SCOT B. JARVIS	_		
Scot B. Jarvis	Director	May 16, 2005	
/s/ ANDREW M. LEITCH	_		
Andrew M. Leitch	Director	May 16, 2005	

EXHIBIT INDEX

Exhibit Numbers		Exhibit Description		
4.1	.1(1)	Amended and Restated Certificate of Incorporation of the Company		
4.2	.2(2)	Bylaws of the Company		
4.3	.3(3)	Certificate of Designation of Series C Preferred Stock		
4.4	.4(3)	Rights Agreement, dated as of December 16, 2004, between the Company and Wells Fargo		
5.1	1	Opinion of Morrison & Foerster LLP		
23.1	1	Consent of KPMG LLP		
23.2	2	Consent of Morrison & Foerster LLP (contained in Exhibit 5.1)		
24.1		Power of Attorney (included in the signature page of this Registration Statement)		
	.1(2)	1999 Equity Incentive Plan		
	.2(4)	Form of Stock Option Agreement used in connection with the 1999 Equity Incentive Plan		

- (1) Previously filed as an exhibit to the Company's Report on Form 8-K filed on October 11, 2001 and incorporated herein by reference.
- (2) Previously filed as an exhibit to the Company's Registration Statement on Form S-1 (File No. 333-85515), originally filed on August 18, 1999, and incorporated herein by reference.
- (3) Previously filed as an exhibit to the Company's Report on Form 8-K filed on December 17, 2004 and incorporated herein by reference.
- (4) Previously filed as an exhibit to the Company's Registration Statement on Form S-1/A filed on September 10, 1999, and incorporated herein by reference.

QuickLinks

PART I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS
PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT
SIGNATURES
POWER OF ATTORNEY
EXHIBIT INDEX

[MORRISON & FOERSTER LLP LETTERHEAD]

May 16, 2005

Wireless Facilities, Inc. 4810 Eastgate Mall San Diego, California 92121

Re: Wireless Facilities, Inc.—Registration Statement on Form S-8

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-8 of Wireless Facilities, Inc., a Delaware corporation (the "Company"), to be filed with the Securities and Exchange Commission in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of 1,000,000 shares of the Company's common stock, \$0.001 par value (the "Stock") issuable from time to time in connection with the Company's 1999 Equity Incentive Plan (the "Plan").

As the Company's counsel, we have examined the proceedings taken by the Company in connection with the adoption of the Plan and the authorization of the issuance of the Stock under the Plan, and such documents as we have deemed necessary to render this opinion. For the purpose of the opinion rendered below, we have assumed that in connection with the issuance of Stock under the Plan, the Company will receive consideration in an amount not less than the aggregate par value of the Stock covered by each such issuance.

Based upon and subject to the foregoing, it is our opinion that the Stock, when issued and outstanding pursuant to the terms of the Plan, will be validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ MORRISON & FOERSTER LLP

Morrison & Foerster LLP

Consent of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders Wireless Facilities, Inc.:

We consent to the use of our report dated March 24, 2005, except for note 18, which is as of March 28, 2005, with respect to the consolidated financial statements and schedule of Wireless Facilities, Inc., which report appears in the December 31, 2004 annual report on Form 10-K of Wireless Facilities, Inc., which is incorporated by reference herein. We also consent to the use of our report dated April 29, 2005, with respect to management's assessment of the effectiveness of internal control over financial reporting and the effectiveness of internal control over financial reporting, which report appears in the Form 10-K/A dated April 29, 2005, incorporated by reference herein. Our report on the consolidated financial statements and schedule refers to a change in method of accounting for goodwill. Our report dated April 29, 2005, on management's assessment of the effectiveness of internal control over financial reporting and the effectiveness of internal control over financial reporting expresses our opinion that Wireless Facilities, Inc. did not maintain effective internal control over financial reporting as of December 31, 2004 because of the effect of a material weakness on the achievement of the objectives of the control criteria, and contains an explanatory paragraph that states that the material weakness in internal control over financial reporting related to the Company's procedures over period-ending closing journal entries related to income taxes.

/s/ KPMG LLP

San Diego, California May 13, 2005

QuickLinks

Consent of Independent Registered Public Accounting Firm