

Telecommunications
Technology Counsel
for Government Agencies
and Private Institutions

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Our File Reference:
39112.334.8

July 16, 2010

Ms. Megan Lowery, Planner
Planning & Development
Santa Barbara County
123 East Anapamu St.
Santa Barbara, CA 93101-2058

Re: NextG Networks Application to Install Distributed Antenna System
Equipment Sites in Santa Barbara County

Dear Ms. Lowery:

You have asked me to discuss two questions that have come up in connection with NextG Networks ("NextG") application to install Distributed Antenna System ("DAS") equipment sites in Santa Barbara County (the "County"). My statement of qualifications is attached as Exhibit 1 of this letter.

I.

The first question is whether there any other DAS designs, in my knowledge, that exist that would be less visually intrusive than that proposed by NextG.

The answer to this question is yes, there visually less intrusive ways to install DAS system equipment, including undergrounding.

The bulk of a DAS site mounted on a utility pole that is visible and apparent to the public is the "DAS node" (the device that converts optical signals carried via the fiber optic portion of the DAS network to radio frequency ["RF"] and vice versa), and the associated equipment and structures located starting at about 8 feet above ground level.

For example, on the next page is a photograph of a NextG pole-mounted node installed in Rolling Hills Estates, California. Depicted in the photograph are:

- (1) The DAS Node;
- (2) An electrical connection box;
- (3) A fuse/breaker box;
- (4) Ground connection block;
- (5) A covered ground wire to a ground rod driven into the soil;
- (6) A covered ground wire to the antenna above the Node;
- (7) An antenna coax conduit;
- (8) A fiber optic conduit; and
- (9) A steel "U-Channel" equipment mounting frame.

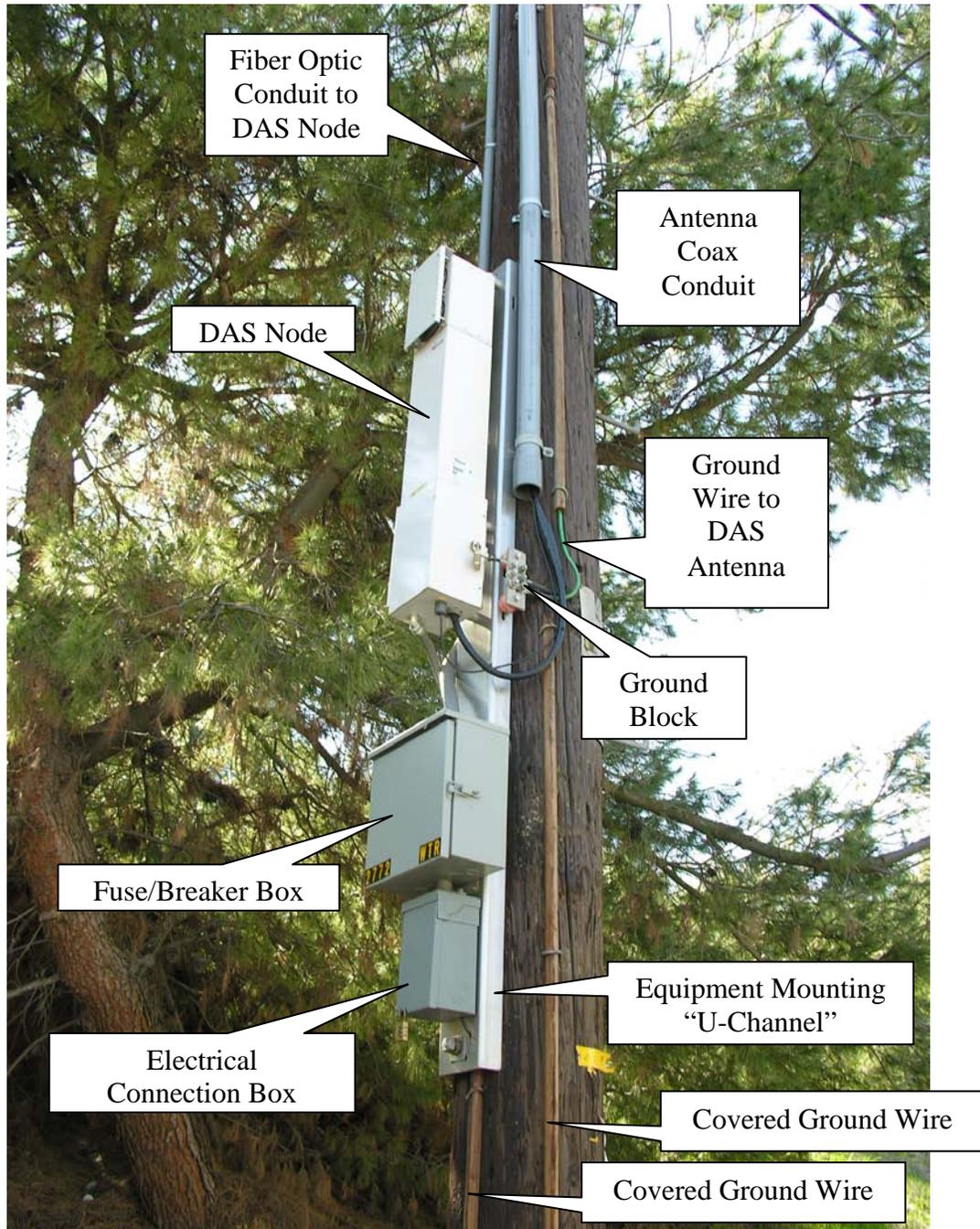


Figure 1: NextG Node Installed on a Utility Pole in Rolling Hills Estates, California.

Next, I have reproduced the relevant part of a photo simulation provided by NextG to the County showing its proposed DAS sites ("ESB-09" at 104 San Ysidro Road).



Figure 2: NextG Photo Simulation of DAS Site ESB-09 (Source: NextG)

Comparing Figure 1 with Figure 2, it is apparent that the photo simulation in Figure 2 may under-represent what is being proposed by NextG at, for example, the ESB-09 site.

It is not unusual for there to be some under-representation of a project at this level of the planning review. This is because photo simulations do not usually contain all of the project elements as would a photograph of a site already constructed. Given, however, the proposed wide-spread distribution of the proposed DAS system throughout the County, the amount of project under-representation can become an important consideration as to whether a project is fully-disclosed for government consideration.

My review of this photo simulation in Figure 2 also indicates that the site, as illustrated, may violate the state-mandated pole spacing requirements contained within California Public Utilities Code General Order 95, Rule 94 ("GO95 Rule 94"). That rule requires a minimum two-foot radial clearance between a pole-mounted antenna and other facilities on or attached to a pole. In the case of this site, it appears that the antenna and antenna cable will be mounted within two feet of the existing telephone company cable strand (wire rope) shown just below the antenna, cable, and antenna mounting kit.

Having now discussed what NextG may propose to install in Santa Barbara County, I provide a photograph of a far less visible NextG DAS Node installation, also located in the City of Rolling Hills Estates, California.

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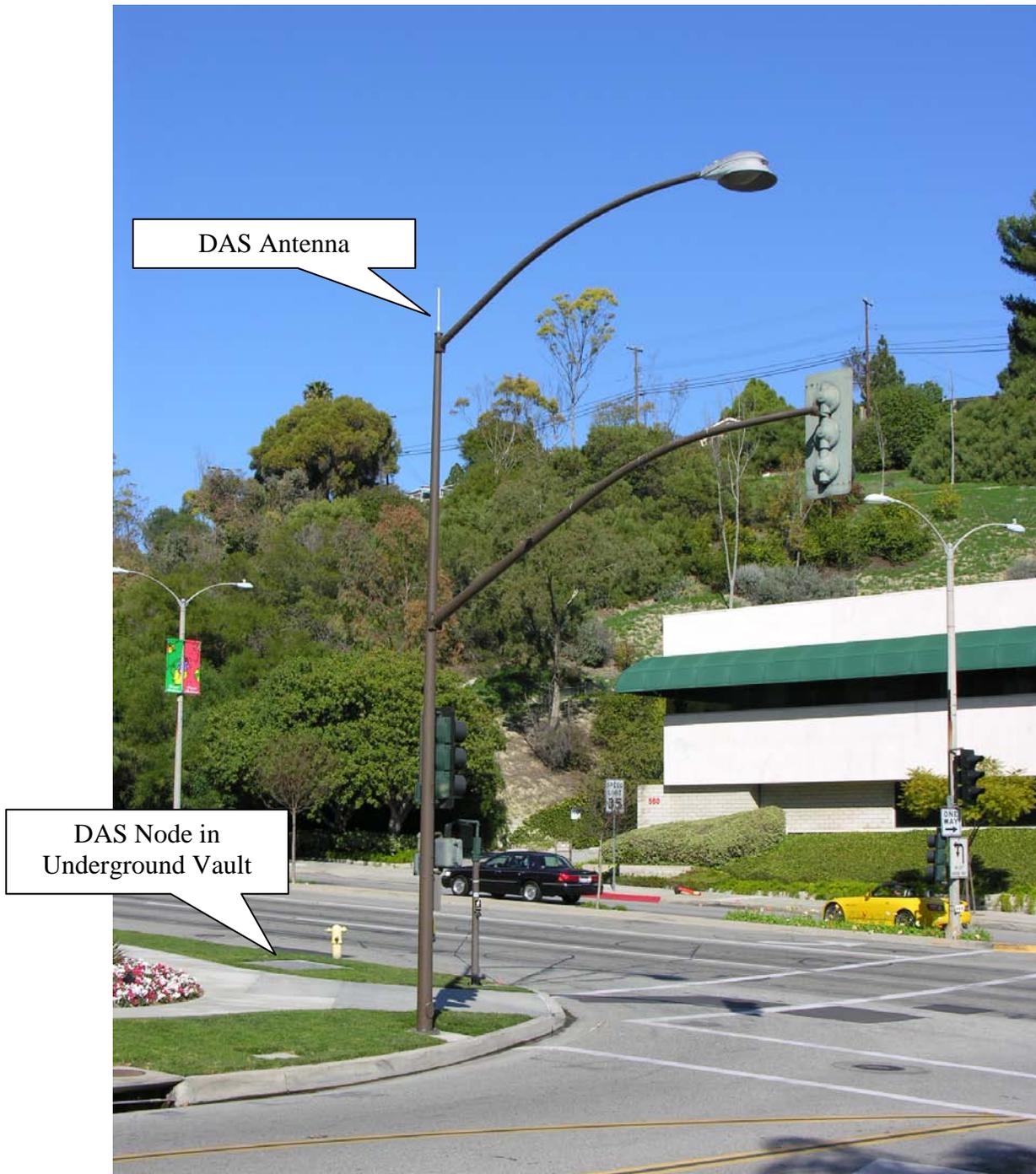


Figure 3: NextG Node Installed In An Underground Vault
in Rolling Hills Estates, California.

As may be seen in the preceding photograph, placing the DAS node in an underground vault eliminates the most visible portion of the DAS node site equipment bulk. While NextG has told various local governments that they no longer wish to install DAS

nodes in underground vaults due to increased costs, other DAS vendors continue to install undergrounded nodes.

Other less visible designs for NextG nodes also exist using street light standards, as is shown below.

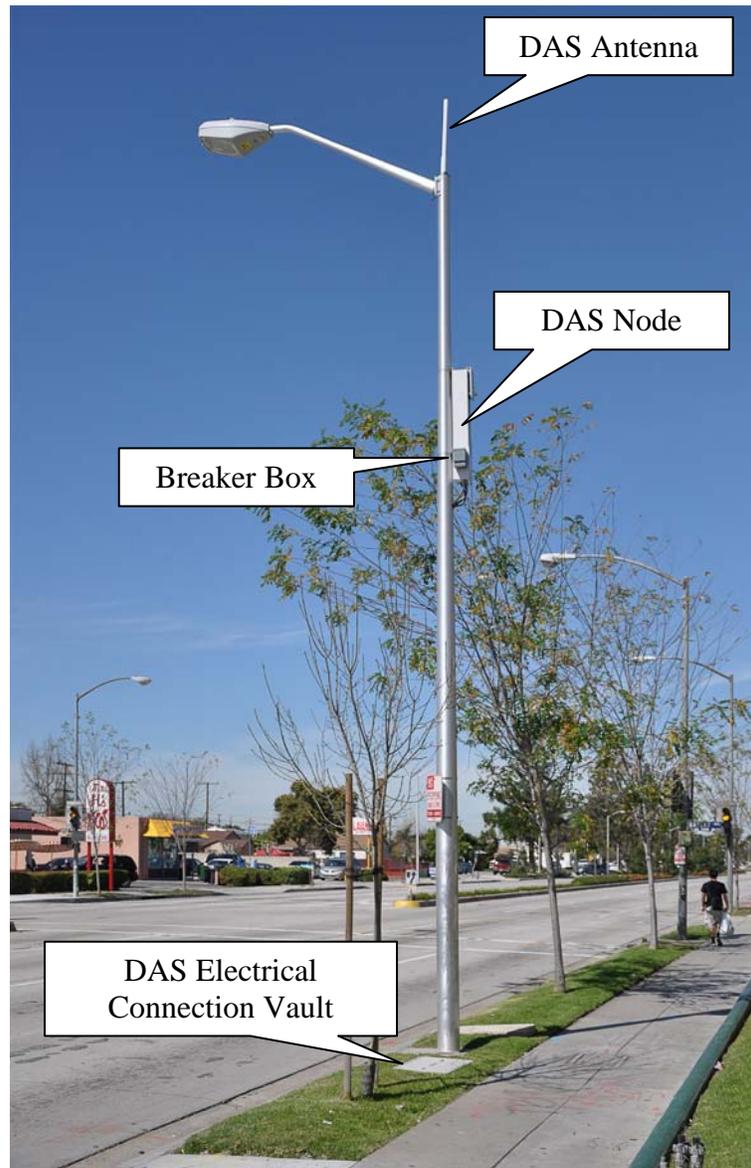


Figure 4: NextG Node Installed on a Street Light in Norwalk, California

From just the two photographs above (Figures 3 and 4) of existing NextG Network sites in Southern California, it is apparent that less visually intrusive designs for NextG sites are not only possible; they are already in place. The examples shown here are of steel standards; however the visual benefit of undergrounded DAS equipment is also true of wooden utility poles and other such antenna supports.

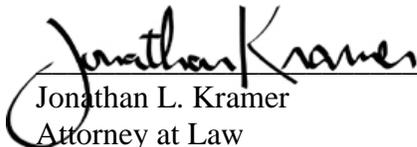
II.

The second question deals with DAS system functionality. Does a DAS system design require that all of the proposed nodes be approved and placed on-air, or can a DAS system operate will less than one hundred percent of the proposed nodes?

DAS nodes are not physically or electrically interconnected with other DAS nodes in a manner that would prevent one node from operating in the absence of any other. Even if NextG were not permitted to install all of the DAS nodes that it has proposed, the remaining nodes and its fiber optic network would still function.

Very truly yours,

KRAMER TELECOM LAW FIRM, P.C.
by


Jonathan L. Kramer
Attorney at Law

JK/39112.334.8

EXHIBIT 1

Jonathan L. Kramer, Esq.

FSCTE, BTS, BPS, BDS, CBT

Principal Attorney – Kramer Telecom Law Firm, P.C.

Principal Technologist – Kramer.Firm, Inc.

2001 S. Barrington Avenue, Suite 306 – Los Angeles, CA 90025

TelecomLawFirm.com / KramerFirm.com

2006 – Present	Principal Attorney, Kramer Telecom Law Firm, P.C. (Los Angeles, CA)
1999 – Present	Principal Consultant, Kramer.Firm, Inc. (Los Angeles, CA)
1987 – 1999	President, Communications Support Corp. (El Toro, CA; Los Angeles, CA)
1984 – 1987	Owner, Communicable Consultants (El Toro, CA)
1982 – 1984	Technical Manager; later Regional Technical Manager, Storer Communications (Southern California Region) (Laguna Niguel, CA)
1982 – 1982	Engineering Manager, Western Cable Services, Inc. (Ventura, CA)
1979 – 1982	System Engineer, Warner Cable of Malibu (Malibu, CA)
1978 – 1979	Self employed radio telecommunications engineer (Malibu, California)
1976 – 1978	Field Technician, Motorola Communications & Electronics Area F Project Management (California, Nevada, Arizona, New Mexico)
1971 – 1972	Rovafone of Los Angeles (Woodland Hills, CA)

Admitted as an Attorney by the State Bar of California (SBN 244074)

Admitted as an Attorney by the United States District Court, Central District of California

Attorney Member, Federal Communications Bar Association

Attorney Member, International Municipal Lawyers Association

Attorney Member, Los Angeles County Bar Association

Attorney Member, Second Life Bar Association

Licensed by the Federal Communications Commission: General Radiotelephone Operator License, with Ship Radar and Broadcast endorsements; Previously licensed as a Second Class Radio Telephone Operator, Sept. 1975; First Class Radiotelephone Operator, Nov. 1977; General Radiotelephone Operator License, June 1987; Global Maritime Distress and Safety System Operator / Maintainer License, with Ship Radar Endorsement; Restricted Radiotelephone licensee; Amateur radio operator since November 1970 currently licensed as an Extra Class operator.

Licensed by the California Contractors State License Board for low voltage communications (Class C7). License No. 433113. Licensed since 1982.

Life member of the American Radio Relay League; ARRL book article author and review editor on cable television RF interference matters; Appointed Volunteer Counsel of the ARRL.

Former wireless technology advisor to and testifying expert before the FCC State & Local Government Advisory Committee

Co-author, co-editor of “A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance”, a wireless technology advisory to local governments based on OET Bulletin 65 published by the FCC, Spring 2000 (download from: <http://www.FCC.gov/oet/rfsafety>)

Former Chairperson, International Right of Way Association Wireless Committee

Former National Board of Directors member, National Association of Telecommunications Officers and Advisors (NATOA), an affiliate of the National League of Cities (Terms: 1997-2000, 1992-1994)

Former Co-chair of the Joint Task Force on Technical Standards Committee, appointed by NATOA, National League of Cities, and US Conference of Mayors to develop the national technical standards for cable television systems adopted by the FCC in February 1992

NATOA's only twice-honored Member of the Year (1997 and 1991)

Executive Committee Board Member, State Bar of California, Public Law Section (2008-2011).

Immediate Past President, States of California and Nevada Chapter of NATOA (SCAN NATOA) (2006-2008); founding member of that Chapter. Chapter President: 2009-2010.

Charter Member, California Wireless Association

Former Co-chair of National Technical Standards committee appointed by NATOA, National League of Cities, and US Conference of Mayors to develop the national technical standardized testing manual to determine compliance with the FCC rules

Fellow Member of Society of Cable Telecommunication Engineers, United Kingdom society (FSCTE designation).

Senior Member of Society of Cable Telecommunications Engineers, United States society (SCTE-US). SCTE-US Senior Member since April 1993; member since 1981.

Certified as a Broadband Transport Specialist (BTS designation) by the SCTE-US.

Certified as a Broadband Distribution Specialist (BDS designation) by the SCTE-US.

Certified as a Broadband Premises Specialist (BPS designation) by the SCTE-US.

Member, SCTE's Loyal Order of the 704 (Membership restricted to recognized cable engineers with a minimum of 30 years in CATV engineering experience)

Co-Chair, SCTE's WG7 Committee developing standardized cable TV industry interpretations to the National Electrical Code

Member, Society of Broadcast Engineers (member since 2008)

Awarded recognition as a "Certified Broadcast Technologist" by the Society of Broadcast Engineers (2009).

Awarded recognition as a "Public Safety Radio Technician" by the Association of Public-Safety Communications Officials – International, Inc. (APCO)

Elected Life Member, American Radio Relay League (member since 1971)

Witness before the FCC's State & Local Government Advisory Committee on OET 65, March 2000

Witness before the FCC in Cable TV re-regulation hearings, March 1990, representing NATOA, et al

Testifying expert witness in federal and state court cases regarding cable television technology, and federal and state court cases regarding wireless technology.

Technology speaker at every NATOA National Conference from 1988 to 2000, and 2002 to 2004;
Technology speaker at many regional and local NATOA and SCAN NATOA meetings

Communications technology speaker at Society of Cable Telecommunications Engineers conferences, and cable industry conferences

Published author of book and magazine articles on communications technology, plant safety, construction and administration

Cable system engineering and technical management experience six years before forming Kramer.Firm, Inc.; Chief Technician, Technical Manager, Regional Engineer.

Former Field Engineering Representative for Motorola Communications and Electronics, Area F Program Management team — Areas of experience include microwave radio; baseband RF and audio; digital signaling; UHF and VHF two-way radio (including high stability Simulcast® radio operations); telephony; and command and control communications.

Juris Doctor Degree *cum laude*, Abraham Lincoln University School of Law, Los Angeles (2001).
Undergraduate education at CSUN, UCLA, LATTC, and WLAC; AS Degree in Radio Communications (with honors), Los Angeles Trade Technical College.

* * *

The following is a partial list of the nearly 600 governments and agencies which have relied upon Mr. Kramer's broadband and/or radio-telecommunications advice as a telecommunications technology advisor/inspector since 1984, and/or as an attorney since 2006:

Selected Federal Agencies - National Associations – States – Local Agencies

Federal Communications Commission	United States Conference of Mayors
U.S. Department of Justice	National Association of Counties
National Association of	National League of Cities
Telecommunications Officers and Advisors	State of Michigan PUC
Soc. of Cable Telecom. Engineers	State of Connecticut DPUC
United States Army, Ft. Irwin, CA	Connecticut Siting Council
U.S. Marine Corps, Twentynine Palms, CA	League of California Cities
U.S. Marine Corps, San Diego, CA	Los Angeles Police Department
U.S. Navy; Monterey, CA	Otay Water District
U.S. Navy, San Diego, CA	Las Virgines School District
U.S. Navy, Lemoore, CA	

Selected Local Governments and Government Associations

Addison, IL	Austin, Texas	Beverly Hills, CA
Aiken County, SC	Avon, OH	Big Bear Lake, CA
Albany, CA	Azusa, CA	Big Cypress Resv., FL
Albuquerque, NM	Baldwin Park, CA	Birmingham, AL
Alcoa, TN	Barrington, IL	Bloomington, IL
Aliso Viejo, CA	Bartlett, IL	Blount County, TN
Anaheim, CA	Bellbrook, OH	Bolingbrook, IL
Apache Jct., AZ	Bellflower, CA	Bozrah, CT
Arcadia, CA	Bellingham, WA	Branford, CT
Aurora, IL	Berkeley, CA	Brentwood, CA

Brighton Resv., FL	East Windsor, CT	Irvine, CA
Bronxville, NY	Eastchester, NY	Itasca, IL
Buena Park, CA	Easton, CT	Kettering, OH
Buffalo Grove, IL	El Monte, CA	Killingworth, CT
Burr Ridge, IL	Elburn, IL	King Co., WA
Butte County, CA	Elk Grove Village, IL	La Canada Flintridge, CA
Calabasas, CA	Elmhurst, IL	La Grange, IL
Calimesa, CA	Encinitas, CA	La Habra Heights, CA
Canandaigua, NY	Enfield, CT	La Mesa, CA
Canton, MN	Escondido, CA	La Puente, CA
Capitola, CA	Essex, CT	La Quinta, CA
Carol Stream, IL	Fairfax, CA	Lacy, WA
Carson, CA	Federal Way, WA	Laguna Beach, CA
Cedar Lake, IN	Flora, Illinois	Laguna Niguel, CA
Centerville, OH	Fort Wayne, IN	Lake County, IL
Cerritos, CA	Franklin, CT	Lake County, IN
Chelan, WA	Franklin, KY	Lake Station, IN
Cheshire, CT	Fremont, CA	Lemont, IL
Chester, CT	Fullerton, CA	Lisbon, CT
Chico, CA	Galena, IL	Lisle, IL
Chino Hills, CA	Garden Grove, CA	Litchfield, CT
Chino, CA	Gardena, CA	Live Oak, TX
Chula Vista, CA	Germantown, OH	Livermore, CA
Clarendon Hills, IL	Glen Ellyn, IL	Lombard, IL
Cleveland Heights, OH	Glendale Heights, IL	Lompoc, CA
Clinton, CT	Glendale, CA	Lone Tree, CO
Colchester, CT	Glenwood, IL	Longmont, CO
Colton, CA	Goleta, CA	Long Beach, CA
Columbia Heights, MN	Goshen, CT	Los Alamos, CA
Commerce, CA	Granby, CT	Los Altos, CA
Concord, CA	Greenville, IL	Los Angeles Co., CA
Cornwall, CT	Greenwich, CT	Los Angeles, CA
Corona, CA	Griffith, IN	Louisville, CO
Culver City, CA	Guilford, CT	Loveland, CO
Cypress, CA	Haddam, CT	Lowell, IN
Darien, CT	Half Moon Bay, CA	Lynchburg, VA
Darien, IL	Hanover Park, IL	Madison, CT
Davis, CA	Hartland, CT	Malibu, CA
Decatur, AL	Hermosa Beach, CA	Manhattan Beach, CA
Deep River, CT	Hesperia, CA	Maryville, TN
Deerfield Beach, FL	Hidden Hills, CA	Mentor, OH
Denver, CO	Highland Park, IL	Merced, CA
Diamond Bar, CA	Highland, CA	Meriden, CT
Downers Grove, IL	Highland, IN	Merrillville, IN
Duarte, CA	Hillsborough, CA	Miamisburg, OH
Dublin, CA	Hinsdale, IL	Middlebury, CT
Dubuque, IA	Hobart, IL	Milpitas, CA
DuPage County, IL	Hoffman Estates, IL	Minooka, IL
Durango, CO	Hollywood, FL	Mission Viejo, CA
Durham, CT	Homewood, AL	Modesto, CA
Dyer, IN	Homewood, IL	Monterey CO., CA
E. Haven, CT	Huntington Beach, CA	Moreno Valley, CA
Eagan, MN	Immokalee Resv., FL	Morris, CT
East Granby, CT	Indian Wells, CA	Mount Carmel, IL

Mount Orab, OH
Mount Prospect, IL
Mountain View, CA
Munster, IN
Naperville, IL
New Canaan, CT
New Martinsville, WV
New Orleans, LA
Newport Beach, CA
Newton Falls, OH
Niles, IL
No. Aurora, IL
No. Branford, CT
No. Haven, CT
Norfolk, VA
North Aurora, IL
Norwalk, CT
Norwich, CT
Oak Brook, IL
Oak Park, IL
Oakbrook Terrace, IL
Oakwood, OH
Ojai, CA
Old Saybrook, CT
Olean, New York
Olympia, WA
Opelika, AL
Orange CO., CA
Orange, CA
Oxnard, CA
Paducah, KY
Palm Springs, CA
Palos Verdes Est., CA
Paris, IL
Park Forest, IL
Pasadena, CA
Peoria County, IL
Philadelphia, PA
Piqua, OH
Placentia, CA
Plymouth, CT
Plymouth, MI
Port Townsend, WA
Portland, OR
Portola Valley, CA
Poway, CA
Preston, CT
Prospect, CT
Redding, CT
Redondo Beach, CA
Rialto, CA
Richmond, CA
Riverside, CA
Rochester, MN

Rolling Hills Estates, CA
Rolling Meadows, IL
Roselle, IL
Roseville, MN
Salem, IL
San Antonio, TX
Santa Barbara Co., CA
San Bernardino, CA
San Bernardino Co., CA
San Clemente, CA
San Diego County, CA
San Diego, CA
San Francisco, CA
San Juan Capistrano, CA
San Luis Obispo Co., CA
San Luis Obispo, CA
San Marcos, CA
San Rafael, CA
Santa Ana, CA
Santa Barbara Co., CA
Santa Clara, CA
Santa Clarita, CA
Santa Cruz Co., CA
Santa Cruz, CA
Santa Maria, CA
Santa Monica, CA
Schaumburg, IL
Schererville, IN
Seattle, WA
Simi Valley, CA
Sistersville, WV
Solana Beach, CA
Solon, OH
Somers, CT
Southington, CT
Spokane, WA
Springboro, OH
St. Charles, IL
St. John, IN
St. Louis, MO
Stafford, CT
Suffield, CT
Sugar Grove, IL
Sunnyvale, CA
Sutter Co., CA
Temecula, CA
Thomaston, CT
Thousand Oaks, CA
Thurston County, WA
Tiburon, CA
Tipp City, OH
Torrance, CA
Torrington, CT
Troy, OH

Tuckahoe, NY
Tucson, AZ
Tumwater, WA
Tustin, CA
Union, CT
Ventura County, CA
Victoria, TX
Villa Park, CA
Villa Park, IL
Virginia Beach, VA
Wallingford, CT
Walnut Creek, CA
Walnut, CA
Warren, CT
Warrenville, IL
Waterbury, CT
Waterford, MI
Watertown, CT
Wayne, IL
West Allis, WI
West Carrollton, OH
West Chicago, IL
West Covina, CA
West Frankfort, IL
West Hollywood, CA
West Milton, OH
West Palm Beach, FL
Westbrook, CT
Westmont, IL
Weston, CT
Westport, CT
Wheaton, IL
White Plains, NY
Willowbrook, IL
Wilmette, IL
Wilton, CT
Windsor Locks, CT
Winfield, IL
Wolcott, CT
Wood Dale, IL
Woodridge, IL
Yorba Linda, CA

**Litigation Where Jonathan Kramer Served as a
Testifying or Non-Testifying Expert, or as a Trial Consultant**

(Wireless Communications)

T-Mobile v. City of Los Angeles (Retained by City)
T-Mobile v. City of Albuquerque (Retained by City)
T-Mobile v. City of Huntington Beach (Retained by City)
Armstrong/McEachron v. Cazcom (Retained by Armstrong)
MetroPCS v. City and County of San Francisco (Retained by City)
Bay Area Cellular v. City and County of San Francisco (Retained by City)
Sprint v. City of Palos Verdes Estates (Retained by City)
Sprint v. City of La Canada Flintridge (Retained by City)
AT&T Wireless v. City of San Diego (Retained by City)
Nextel v. City of San Diego (Retained by City)
AT&T Wireless v. City of Carlsbad (Retained by City)
Omnipoint v. Garden City, Michigan (Retained by City)
GTE Mobilenet v. City and County of San Francisco (Retained by City)
Illinois RSA 3 v. Peoria County (Retained by County)

(Wired Communications)

NewPath Networks v. City of Davis (Retained by City)
Marcus Cable Associates v. City of Glendale (Retained by City)
Evergreen v. San Diego Gas & Electric, et al (Retained by Evergreen)
NextG Networks v. City of Huntington Beach (Retained by City)
NewPath Networks v. City of Irvine (Retained by City)
Adelphia Cable v. City of Thousand Oaks (Retained by City)
Malencon v. Cox Communications (Retained by Malencon)
Schaff Dev. Group v. S.E. Fla. Cable, Inc., dba Adelphia Cable (Retained by Schaff)
Qwest v. City of Berkeley (Retained by City)
Playboy Enterprises v. United States (Retained by FCC, Department of Justice)
Jones Intercable v. City of Chula Vista (Retained by City)
Sierra East Television v. Westar Cable (Retained by Sierra East)
Booth American v. United States (Retained by Department of Justice)
D.B. Cable v. Kalma Busk (Retained by Kalma Busk)

Published Articles by Jonathan L. Kramer

A Practical Guide to Radio Frequency Emissions Safety	State Bar of California	2009
Radio Frequency Emissions Safety – A Practical and Practice Guide	NATOA	2009
Use a Cell Phone Jammer and Get Jammed Up With the FCC	Ezinearticles.com	2008
Your California Cable TV Company Missed an Appointment? The Law Protects Cable TV Subscribers	Ezinearticles.com	2008
A Modern Game of Hide and Seek	AGL Magazine	2007

Give Me Your Bond	Communications Technology Magazine	2007
Picture Quality in the Digital World: A lost Science?	NATOA Journal	2007
Effective Management of a Cable TV Rebuild/Upgrade in Your Community	NACO County News	2004
Leveling the Playing Field for Cable TV Franchise Renewals	Public Management Magazine	2003
A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance	Federal Communications Commission	2000

Selected Lectures - Universities, Colleges, School Districts

USC Annenberg School of Communications
University of Alabama
Pepperdine University
Orange Coast College
Rancho Santiago College
Centralia School District
Oxnard Union School District

Selected Lectures – Legal, Industry, and Professional Organizations

Speaking Engagement Name	Conference	Year
Major Issues in WiMAX Tower Leases and Zoning	Lorman Education Services	2010
Recent Wireless Siting Developments	Amer. Plan. Assoc. O.C. Chptr.	2010
Educational Seminar Panel	California Wireless Association	2010
Current Issues in Cell Tower Leasing	Lorman Educational Services	2010
Educational Seminar Panel	California Wireless Association	2010
Technology Solutions for Small Law Firms	Provisors LLP Conference	2009
Major Issues in WiMAX Tower Leases and Zoning	Lorman Education Services	2009
Current Issues in Cell Tower Leasing	Lorman Education Services	2009
Top Tech Topics for a Law Practice	State Bar of California Annual Conference	2009
“I’m from the Government [Planning Department]	Amateur Radio Club of	2009

Speaking Engagement Name	Conference	Year
and I'm here to help you"	El Cajon	
The National Electrical Code: Why comply?	SCTE Live Learning	2009
DTV Transition: Last Steps	SCTE Live Learning	2009
"Tower Siting: Getting to Win/Win for Localities and for Carriers"	California Wireless Association	2009
Telecom 101: What Every Practioner Should Know	State Bar of California Section Education Institute	2009
Secret Life of PDA: Ethical Considerations	State Bar of California Section Education Institute	2009
Cable TV Law Update - Cable Television Unraveled	Pennsylvania Bar Institute	2008
Wireless Telecommunications Law Update: Current Issues in Cell Tower Regulation	Lorman Education Services	2008
Automated Photo Red Light Enforcement Users Group	Los Angeles Police Department	2008
"I'm From the Government (Planning Department) and I'm Here to Help You"	Palomar (California) ARC Meeting	2008
"Surfin' Telecommunication Choices: A New World, A New Direction"	SCAN NATOA Annual Conference	2008
FCC Regulations Regarding Cable TV	SCTE Show Me Chapter	2008
Mobile Security and Ethical Issues for Attorneys	State Bar of California Annual Conference	2008
"I'm From the Government (Planning Department) and I'm Here to Help You"	ARRL Southwest Division Conference	2007
AT&T Project Lightspeed	League of California Cities Policy Conference	2007
Right of Way Furniture	SCAN NATOA Annual Conference	2007
Wild Wired (and Wireless) West	State Bar of California Annual Conference	2007

Speaking Engagement Name	Conference	Year
Wireless telecommunications planning	APA National Conference	2006
Wireless and Wired Telecommunications Law Update	League of California Cities City Attorneys Section Conference	2006
Wireless Case Mock Hearing	PCIA Annual Conference	2006
PEG Programming	Alliance for Community Media	2005
Wireless Siting 101	Association of Environmental Professionals - Orange County Chapter	2005
A Sea Change in Wireless Siting	California APA Conference	2005
Cable TV and Wireless Regulation and Law Update	Florida Cable and Telecommunications Law Local Government Workshop	2005
Emerging and Competing Broadband Technology	NATOA National Conference	2005
"Future of Cable Television"	SCAN NATOA Annual Conference	2005
Wireless Siting Planning: A Government Perspective	APA - Regional Planning Conference	2004
Cable TV Regulation: Local, State, and Federal Regulation	City of Kent (WA) Cable TV Conference	2004
Telecommunications Law Update	City Attorneys Association of San Diego County	2004
Cable TV and Wireless Regulation and Law Update	Florida Cable and Telecommunications Law Local Government Workshop	2004
Telecommunications Safety Code Violations: A Field Guide for Attorneys	IMLA Annual Conference	2004
Keynote Lecture on Telecommunications Grounding	Thomas & Betts Power And Grounding Council Meeting	2004
Cable TV and Wireless Regulation and Law Update	Florida Cable and Telecommunications Law Local Government Workshop	2003
How to Get A Wireless Tower Siting Permit	IRWA Chapter 1 Conference	2003

Speaking Engagement Name	Conference	Year
Application Denied!		
Maximizing Wireless Resources	NATOA Annual Conference	2003
Right of Way Considerations for Local Governments	Law Seminars International - Early Stage Due Diligence Technology Considerations	2002
When Bad Things Happen to Good Cable Systems	Center for International Legal Studies International Info Tech, Media, and Telecom Law Conference	2002
New FCC Technical Standards	NCTA Education Conference	2002
Hiding Cell Phone Sites In Plain Sight Now you see 'um...now you don't	NATOA 2001 Annual Conference	2001
Wireless Siting: Policy Issues and Practical Solutions - A Municipal View	Law Seminars International - The Third Annual Conference on Local Telecommunications Infrastructure	2001
Cable TV Regulation	NATOA Annual Conference	2000
Cable TV Regulation	NATOA Annual Conference	1999
Cable TV Regulation	NATOA Annual Conference	1998
Cable TV Regulation	NATOA Annual Conference	1997
Cable TV Regulation	NATOA Annual Conference	1996
Cable TV Regulation	NATOA Annual Conference	1995
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Cable TV Regulation	NATOA Annual Conference	1992
Cable TV Regulation	NATOA Annual Conference	1991
Cable TV Regulation	NATOA Annual Conference	1990
Cable TV Regulation	NATOA Annual Conference	1989
Cable TV Regulation	Michigan NATOA Conference	1987