
UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

UNITED STATES OF AMERICA,
Appellant

v.

Nos. 19-1582, 19-1625

NIA MOORE-BUSH, A/K/A NIA DINZEY,
Defendant–Appellee

&

Nos. 19-1584, 19-1626

DAPHNE MOORE,
Defendant–Appellee

ON APPEAL FROM A JUDGMENT OF THE UNITED STATES DISTRICT
COURT FOR THE DISTRICT OF MASSACHUSETTS

PROPOSED BRIEF OF *AMICI CURIAE*
THE AMERICAN CIVIL LIBERTIES UNION AND THE AMERICAN
CIVIL LIBERTIES UNION OF MASSACHUSETTS
IN SUPPORT OF APPELLEES

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TABLE OF CONTENTS

TABLE OF AUTHORITIES	iii
INTRODUCTION	1
INTERESTS OF AMICI	3
ARGUMENT	4
I. Training a pole camera on a home for long-term, continuous surveillance violates a reasonable expectation of privacy.....	4
A. The Fourth Amendment does not require people to take extraordinary measures to manifest a subjective expectation of privacy against pervasive technological surveillance.	5
B. The depth of sensitive information inescapably revealed by long-term around- the-clock pole camera surveillance of a home impinges on objectively reasonable expectations of privacy.....	7
C. Positive law reinforces the defendants’ reasonable expectation of privacy against long-term pole camera surveillance of their home.	9
II. To protect the degree of privacy the public enjoyed before the current technological age, the government must obtain a warrant before conducting long-term pole camera surveillance of a home.	12
A. Prolonged pole camera surveillance significantly encroaches upon traditional spheres of privacy.	13
B. Law enforcement in Massachusetts already use technologies that could enhance the surveillance capabilities of pole cameras even beyond what occurred in this case.	18
III. Authorizing warrantless, prolonged pole camera surveillance of a home would disparately impact those with the fewest resources to protect themselves from surveillance.....	22
A. Economic disparity is growing in this country.....	22
B. Reversing the district court’s order would transform economic disparities into disparate protections for fundamental Fourth Amendment rights.....	24
CONCLUSION	26
CERTIFICATE OF COMPLIANCE.....	28
CERTIFICATE OF SERVICE.....	29

TABLE OF AUTHORITIES

Cases

<i>Arizona v. Gant</i> , 556 U.S. 332 (2009).....	4
<i>California v. Ciraolo</i> , 476 U.S. 207 (1986).....	10, 16
<i>Carpenter v. United States</i> , 138 S. Ct. 2206 (2018).....	passim
<i>Collins v. Virginia</i> , 138 S. Ct. 1663 (2018)	25
<i>Commonwealth v. Almonor</i> , 482 Mass. 35, 120 N.E. 3d 1183 (2019).....	4
<i>Commonwealth v. Augustine</i> , 467 Mass. 230, 4 N.E. 3d 846 (2014)	4
<i>Florida v. Jardines</i> , 569 U.S. 1 (2013).....	2, 7, 10
<i>Florida v. Riley</i> , 488 U.S. 445 (1989).....	10, 17
<i>Georgia v. Randolph</i> , 547 U.S. 103 (2006)	24
<i>Katz v. United States</i> , 389 U.S. 347 (1967)	4, 16
<i>Kyllo v. United States</i> , 533 U.S. 27 (2001)	passim
<i>Payton v. New York</i> , 445 U.S. 573 (1980).....	24
<i>Riley v. California</i> , 573 U.S. 373 (2014).....	26
<i>Tennessee v. Garner</i> , 471 U.S. 1 (1985).....	9
<i>United States v. Anderson-Bagshaw</i> , 509 F. App'x 396 (6th Cir. 2012).....	17
<i>United States v. Broadhurst</i> , 805 F.2d 849 (9th Cir. 1986).....	17
<i>United States v. Bucci</i> , 582 F.3d 108 (1st Cir. 2009).....	15
<i>United States v. Cuevas-Sanchez</i> , 821 F.2d 248 (5th Cir. 1987)	17
<i>United States v. Jones</i> , 565 U.S. 400 (2012)	passim
<i>United States v. Karo</i> , 468 U.S. 705 (1984).....	14, 22
<i>United States v. Nerber</i> , 222 F.3d 597 (9th Cir. 2000)	17
<i>United States v. Pineda-Moreno</i> , 617 F.3d 1120 (9th Cir. 2010).....	22, 26
<i>United States v. Ross</i> , 456 U.S. 798 (1982).....	22

<i>United States v. Vargas</i> , No. CR-13-6025-EFS, 2014 U.S. Dist. LEXIS 184672 (E.D. Wash. Dec. 15, 2014).....	14
<i>United States v. Watson</i> , 423 U.S. 411 (1976)	10
<i>Verizon New England, Inc. v. Fibertech Networks, LLC</i> , No. Civ.A. 02-831, Civ. A. 02-843, 2002 WL 32156845 (Mass. Super. Aug. 19, 2002).....	12

Statutes

47 U.S.C. § 224.....	11
49 U.S.C. § 40103	10
49 U.S.C. App. § 1304	10
Fed. R. App. Proc. (29)(c)(5)	3
Mass. Gen. Laws ch. 166, § 25A.....	12
Me. Stat. tit. 35-A, § 2310.....	11
Okla. Stat. tit. 21, § 1838	11
Springfield, Mass., Code, art. II § 275-4	11
Springfield, Mass., Zoning Ordinances, art. 7, § 7.4.23.....	6
Wash. Rev. Code § 70.54.090	11

Other Authorities

Bill Chappell, <i>US Income Inequality Worsens, Widening to a New Gap</i> , NPR (Sept 26, 2019)	22
Brian R. Ballou, <i>At Logan, New Device Keeps Eye on Everything</i> , Boston Globe (May 3, 2010)	19
BriefCam, <i>BriefCam at Work in Safe Cities</i>	20, 21
BriefCam, <i>Intelligent Video Analytics Solutions</i>	20
BriefCam, <i>Real-Time Alerting & Rapid Response</i>	20
BriefCam, <i>Search & Review Hours of Video in Minutes: Solutions to Help Investigators Accelerate Investigations</i>	20
BriefCam, <i>Technology That Allows You to Review Video Fast</i>	20

BriefCam, <i>Video Analytics Solutions for Post-Event Investigations</i>	19
David Brooks, <i>There are 500,000 Utility Poles in New Hampshire, Yet We Hardly Notice Them</i> , Concord Monitor (Dec. 24, 2016).....	6
Electronic Frontier Foundation, <i>Street Level Surveillance: Face Recognition</i> (Oct. 24, 2017)	19
George Graham, <i>Springfield Police to Dramatically Expand Video Surveillance Capabilities</i> , MassLive (Jan. 30, 2019).....	20, 21
Jack Metzler, <i>Cleaning Up Quotations</i> , 18 J. App. Prac. & Process (2017)	2
Jack Metzler, <i>Use (cleaned up) to Make Your Legal Writing Easier to Read</i> , ABA For Law Students: Before the Bar (Oct. 3, 2017)	2
Jason Koebler, <i>This Drone Zoom Lens Can Identify Your Face from 1000 Feet Away</i> , VICE (Feb. 25, 2015).....	19
Jay Stanley, <i>The Dawn of Robot Surveillance: AI, Video Analytics, and Privacy</i> , American Civil Liberties Union (last updated June 17, 2019).....	19
Jim Davis, <i>State Scans Mass. License Photos to Find Matches with Suspects</i> , Boston Globe, (Dec. 20, 2016)	21
Jon Hegranes, <i>The Past, Present and Future of Anti-Drone Tech</i> , Forbes: Council Post (Jan 26, 2018).....	25
Kevin Bankston & Ashkan Soltani, <i>Tiny Constables & the Cost of Surveillance: Making Cents out of</i> United States v. Jones, 123 Yale L.J. Online 335 (2014).....	14
Lori Culbert, <i>Judge Raps Police for Using Casino Cameras to Read Suspect's Texts</i> , Vancouver Sun (Nov. 11, 2014).....	20
Luc Schuster & Peter Ciurczak, <i>Boston's Booming . . . But for Whom?</i> , Boston Indicators and the Boston Foundation (Oct. 2018).....	23
Michael Rosenberg, <i>The Price of Privacy: How Access to Digital Privacy is Slowly Becoming Divided by Class</i> , 20 UCLA J.L. & Tech., 1 (2016).....	25
Michaela Broyles, <i>A Conversation About the Racial Wealth Gap – And How to Address It</i> , Brookings Now (June 18, 2019)	23
William Baude & James Y. Stern, <i>The Positive Law Model of the Fourth Amendment</i> , 129 Harv. L. Rev. 1821 (2016)	9, 10

INTRODUCTION

This case arises from the government’s warrantless use of a sophisticated camera aimed at a home—what the government calls a “pole camera”—to surveil everyone who came and went for eight months. During that time, police officers could watch the camera’s livestream feed in real time, and remotely pan, tilt, and zoom close enough to read license plates and see faces. Moore-Bush Add. 3; Gov’t App. 106–07, 151–59, 180–92. They could also review the searchable, digitized record of this footage at their convenience. Moore-Bush Add. 3. Despite all of this, the government does not see its failure to obtain a warrant to engage in this kind of surveillance as a mistake. Instead, it argues that the Fourth Amendment’s prohibition against unreasonable searches and seizures places no restriction whatsoever on its use of home-facing cameras. On this view, the government could use pole cameras to keep tabs on untold numbers of American homes without ever thinking twice about the Constitution.

The district court correctly rejected this sweeping assertion of surveillance authority. The court reasoned that defendants Nia Moore-Bush and Daphne Moore “did not subjectively expect to be surreptitiously surveilled with meticulous precision each and every time they or a visitor came or went from their home,” and this expectation was reasonable “[i]n light of the principles that the Supreme Court elucidated” in *Carpenter v. United States*, 138 S. Ct. 2206 (2018). *See* Moore-Bush Add. 6,

8. The district court therefore held that the government’s warrantless, long-term use of a home-facing camera violated the Fourth Amendment. Moore-Bush Add. 2.

Amici submit this brief to highlight three reasons why this Court should uphold the district court’s ruling. First, the surveillance at issue here implicates not only the concerns that animated the decision in *Carpenter*, but also additional concerns relating to the home. In *Carpenter*, the Supreme Court held that the Constitution protected an individual’s *public* movements revealed by cell site location information (CSLI) maintained by his cell phone provider, because such information was “detailed, encyclopedic, [] effortlessly compiled” and “deeply revealing.” *Id.* at 2216, 2223. Those conclusions apply with greater force where, as here, the government effortlessly compiles detailed and deeply revealing information about the comings and goings at someone’s *home*, which is “first among equals” when it comes to Fourth Amendment protections. *Florida v. Jardines*, 569 U.S. 1, 6 (2013) (cleaned up).¹ Under *Carpenter*, and in light of longstanding protections for the home, warrantless long-term technological surveillance that allows the government to monitor and record who and what is entering a home violates subjectively and objectively reasonable expectations of privacy.

¹ “This brief uses (cleaned up) to indicate that internal quotation marks, alterations or citations have been omitted from quotations.” Jack Metzler, *Use (cleaned up) to Make Your Legal Writing Easier to Read*, ABA For Law Students: Before the Bar (Oct. 3, 2017), <https://perma.cc/B2JX-9JSR>.; *see also* Jack Metzler, *Cleaning Up Quotations*, 18 J. App. Prac. & Process 143 (2017).

Second, law enforcement officers in Massachusetts are already using technologies in other contexts that, if applied to home-facing cameras, could substantially enhance their surveillance capabilities. These technologies would enable the government to read messages off cellphone screens at one's doorstep, search weeks of footage in a fraction of the time, and identify everyone entering or exiting a house via artificial intelligence-powered face surveillance. The Supreme Court has made clear that this Court's Fourth Amendment analysis must "take account of [these] more sophisticated systems that are already in use." *Kyllo v. United States*, 533 U.S. 27, 36 (2001); *see also Carpenter*, 138 S. Ct. at 2218.

Third, authorizing warrantless, prolonged pole camera surveillance of a home would disparately impact those with the fewest resources to protect themselves from surveillance. But constitutional protections cannot turn on the accoutrements of wealth. To guard against this outcome, and to address the additional concerns described above, this Court should affirm the district court's suppression order.

INTERESTS OF AMICI²

The American Civil Liberties Union of Massachusetts, Inc. (ACLUM) and the American Civil Liberties Union (ACLU) are membership organizations dedicated to

² No party's counsel authored this brief in whole or in part. No party or party's counsel contributed money that was intended to fund preparing or submitting this brief. Only amici, their members or their counsel contributed money that was intended to fund preparing or submitting this brief. Fed. R. App. P. (29)(c)(5).

the principles of liberty and equality embodied in the constitutions and laws of the Commonwealth and the United States. The rights they defend through direct representation and amicus briefs include the right to be free from the government’s use of technology to conduct unreasonable searches and seizures. *See, e.g., Carpenter v. United States*, 138 S. Ct. 2206 (2018) (direct representation challenging the warrantless use of historical CSLI); *United States v. Jones*, 565 U.S. 400 (2012) (amicus brief on the warrantless collection of GPS-location data); *Commonwealth v. Almonor*, 482 Mass. 35, 120 N.E. 3d 1183 (2019) (amicus brief on the warrantless collection of real-time CSLI); *Commonwealth v. Augustine*, 467 Mass. 230, 4 N.E. 3d 846 (2014) (direct representation challenging the warrantless use of historical CSLI).

ARGUMENT

I. **Training a pole camera on a home for long-term, continuous surveillance violates a reasonable expectation of privacy.**

Where an individual has a reasonable expectation of privacy in an item or location to be searched, the search is “*per se* unreasonable under the Fourth Amendment” unless conducted pursuant to a judicial warrant. *Arizona v. Gant*, 556 U.S. 332, 338 (2009) (quoting *Katz v. United States*, 389 U.S. 347, 357 (1967)). As the government acknowledges, under *Carpenter*, “a person may have a reasonable expectation of privacy that includes activities exposed to the public.” Gov’t Br. 27. *Carpenter* held that the government’s acquisition of long-term CSLI, collected about a cell phone user from his service provider, violated a reasonable expectation of privacy.

138 S. Ct. at 2217, 2223. Here, the government used a sophisticated camera trained at the defendants' home to surveil them for eight months. Applying *Carpenter*, the district court correctly held that the defendants manifested a subjective privacy interest in not being subjected to this kind of surveillance, and that defendants' expectation of privacy was objectively reasonable. Overlapping regulatory and statutory provisions that prevent private individuals from attaching items to utility poles further supports the reasonableness of this expectation.

A. The Fourth Amendment does not require people to take extraordinary measures to manifest a subjective expectation of privacy against pervasive technological surveillance.

The district court held that, by their choice of home and neighborhood, the defendants established a subjective privacy interest in avoiding prolonged surveillance from a pole camera. Moore-Bush Add. 5–6. That is correct, but it is also difficult to imagine a situation in which a person would *lack* a subjective expectation that they can live their life free from continuous, prolonged recording of every single detail and event occurring immediately outside of their home. *Compare* Gov't Br. 24–25. If a typical person were to turn on the television only to find that it is showing eight consecutive months of footage that some stranger took of the front of their home, they would not likely think this was merely the price of having a house that is visible from the street.

The government argues otherwise. It claims that, when a person does not erect a fence or plant hedges that obstruct the street view of the front of their home, it

denotes tacit approval for the continuous, prolonged, and digitized recording of all events that occur around their front door. *See* Gov't Br. 24–25. But that is not the law.

The Fourth Amendment does not require people to take extraordinary measures to protect themselves from invasive government surveillance using modern technologies. Thus, in *Kyllo*, the Court rejected the dissent's suggestion that people should be required to add extra insulation to their homes to avoid police surveillance using thermal-imaging equipment. *Compare* 533 U.S. at 29–40, *with id.* at 45 (Stevens, J., dissenting). In *Carpenter*, the Court made clear that people need not “disconnect[] from the phone network . . . to avoid leaving behind a trail of location data.” 138 S. Ct. at 2220. Accepting the government's position would require people to erect towering walls around their homes to shield themselves from pervasive video surveillance; such a rule would threaten to reduce the Fourth Amendment's practical protections to a nullity.³

³ Standard utility poles for residential power delivery are approximately 40 feet tall. *See* David Brooks, *There are 500,000 Utility Poles in New Hampshire, Yet We Hardly Notice Them*, Concord Monitor (Dec. 24, 2016), <https://perma.cc/XT7U-8MYT>. Erecting a wall high enough to block a camera mounted on a pole would be expensive, difficult, and often precluded by local regulatory requirements. *See, e.g.*, Springfield, Mass., Zoning Ordinances, art. 7, § 7.4.23 (prohibiting construction of fences at the front of certain residential properties, and limiting the height of fences to four feet at others). Even where such walls are legal, they would protect only those with the resources to purchase them. *See infra* Section III.

B. The depth of sensitive information inescapably revealed by long-term around-the-clock pole camera surveillance of a home impinges on objectively reasonable expectations of privacy.

It is reasonable for people to expect that the government will not use a sophisticated camera trained at their home to surveil their comings and goings for eight months. *Carpenter* explained that individuals have a “reasonable expectation of privacy in the whole of their physical movements revealed by cell site location information” because of “the deeply revealing nature of CSLI, its depth, breadth, and comprehensive reach, and the inescapable and automatic nature of its collection.” *Carpenter*, 138 S. Ct. at 2217, 2223. This case includes additional elements: the government (not a third party) collected the information at issue, and it did so by training a camera at someone’s home, which represents “the very core” of what the Fourth Amendment protects. *Jardines*, 569 U.S. at 6 (cleaned up); *see also* CDT Amicus Br. 11–14. This surveillance is at least as revealing, deep, and inescapable as that which triggered a warrant in *Carpenter*.

Like longer-term cell phone location data, prolonged pole camera surveillance of a home opens an “intimate window into a person’s life, revealing . . . his ‘familial, political, professional, religious, and sexual associations.’” *Id.* at 2217 (quoting *Jones*, 565 U.S. at 415 (Sotomayor, J., concurring)). Over time, a pole camera trained on a person’s home records the patterns and timing of residents’ movements to and from home, the items they carry with them when they leave and arrive, and the people who visit them and how long those visitors stay. Watching a resident leave home on

Sunday morning with a hymnal, Saturday morning with a prayer shawl, or mid-day Friday with a prayer rug reveals details of religious observance. Leaving with a protest sign or an oversized X-ray film envelope suggests political activity or medical travails. A visitor arriving at the house on a weekend evening with flowers could reveal a romantic liaison, while that visitor spending the night when the homeowner's spouse is away might disclose an affair. *Cf.* Moore-Bush Add. 10–11.

In other words, watching the comings and goings at a home can chart out a detailed picture of the occupant's private life. It matters not that some degree of inference may be required to fill in the blanks: the Supreme Court has “rejected the proposition that ‘inference insulates a search.’” *Carpenter*, 138 S. Ct. at 2218 (quoting *Kyllo*, 533 U.S. at 36). In *Carpenter*, for example, the record showed that individual points of cell phone location data could not pinpoint the defendant's whereabouts, but rather only “placed him within a wedge-shaped sector ranging from one-eighth to four square miles.” *Id.* Nonetheless, the Court explained, “the Government could, in combination with other information, deduce a detailed log of Carpenter's movements.” *Id.* Here, too, over time the information is amply revealing to impinge upon individuals' deepest “privacies of life.” *Id.* at 2217.

Further, exposing such details to view is just as “inescapable” as the cell phone location tracking in *Carpenter*. *Id.* at 2223. “[I]n no meaningful sense does the [homeowner] voluntarily ‘assume[] the risk’ of turning over a comprehensive dossier of his physical movements,” *id.* at 2220, to and from home, nor the myriad incidents

of daily life that take place immediately outside of the home. As noted above, it is no answer to suggest that people could erect high walls around their homes. *See supra* Part I.A & n.3. Nor should people be forced to choose between protecting their privacy and remaining productive members of society able to come and go as they please. Once a pole camera is surreptitiously trained upon a home, there is no way for a person to prevent the recording of a rich digital dossier of their life.

C. Positive law reinforces the defendants’ reasonable expectation of privacy against long-term pole camera surveillance of their home.

The reasonableness of the expectation of privacy here is bolstered by legal prohibitions on the attachment of extraneous materials, including cameras, to utility poles. In assessing whether an expectation of privacy is objectively reasonable, norms and expectations shaped by sources of positive law, including regulations and statutes, can be relevant. *Cf. Carpenter*, 138 S. Ct. at 2268 (Gorsuch, J., dissenting) (“A Fourth Amendment model based on positive legal rights ‘carves out significant room for legislative participation in the Fourth Amendment context,’ too, by asking judges to consult what the people’s representatives have to say about their rights.” (quoting William Baude & James Y. Stern, *The Positive Law Model of the Fourth Amendment*, 129 Harv. L. Rev. 1821, 1852 (2016))); *Tennessee v. Garner*, 471 U.S. 1, 15–18 & n.21 (1985) (noting that “[i]n evaluating the reasonableness of police procedures under the Fourth Amendment,” the Supreme Court has looked to “prevailing rules in individual

jurisdictions” and the trend in relevant state laws (citing *United States v. Watson*, 423 U.S. 411, 421–22 (1976))).

Thus, in *Florida v. Riley*, a plurality of the Court found that police surveillance from a helicopter did not invade a reasonable expectation of privacy in part because “the helicopter in th[at] case was *not* violating the law” by engaging in a one-time flyover above private property at an elevation of 400 feet. 488 U.S. 445, 451 (1989) (plurality op.) (emphasis added). Similarly, in *California v. Ciraolo*, 476 U.S. 207 (1986), the Court looked to whether similarly ephemeral aerial surveillance by law enforcement took place within legally navigable airspace as determined by federal law, where “[a]ny member of the public flying in this airspace who glanced down could have seen everything that these officers observed.” *Id.* at 213–14 (citing 49 U.S.C. App. § 1304 (current version at 49 U.S.C. § 40103)). Conversely, in *Jardines*, the Court concluded that because members of the public lack an implied license under the common law of trespass to enter and remain on a home’s curtilage with a drug-sniffing dog, police officers implicate the Fourth Amendment when engaging in that same conduct. 569 U.S. at 7–9.

In each of these cases, the Court asked whether “a government actor [has] done something that would be unlawful for a similarly situated nongovernment actor to do.” Baude & Stern, 129 Harv. L. Rev. at 1831. “Stated differently, the Fourth Amendment is triggered if the officer—stripped of official authority—could not lawfully act as he or she did.” *Id.* Where a government agent violates such a legal

prohibition for the purpose of gathering information, a Fourth Amendment search has occurred. *Cf. Jones*, 565 U.S. at 404–06 (holding that government commission of a trespass to chattels for the purpose of gathering information constitutes a Fourth Amendment search).

Here, overlapping regulatory and statutory protections prohibit individuals from attaching extraneous items to utility poles. In Springfield, Massachusetts, where the pole camera surveillance in this case took place, the municipal code provides that “[n]o person shall affix any sign, card or other advertising matter, or attach any iron ring to any telephone, telegraph, traffic or electric light pole or post.” Springfield, Mass., Code, art. II § 275-4. Other jurisdictions have similar prohibitions. *See, e.g.*, Me. Stat. tit. 35-A, § 2310 (“A person commits trespass on a utility pole if, without the prior consent of the owner of the pole, that person places any object or makes any attachment on any utility pole”); Okla. Stat. tit. 21, § 1838 (“It is unlawful to attach or insert any object with nails or tacks upon poles erected for the support of electric, telephone, utility or power lines.”); Wash. Rev. Code § 70.54.090 (“Any attachment to utility poles shall only be made with the permission of the utility involved.”).

Further, in Massachusetts, as elsewhere, the government carefully regulates what items can be attached to utility poles and by whom.⁴ *See* Mass. Gen. Laws ch.

⁴ In a number of states, pole attachments are regulated by the Federal Communications Commission. *See* 47 U.S.C. § 224.

166, § 25A. The government contemplates that entities wishing to use a utility pole to support other kinds of transmission wires (telephone, cable, or internet, for example) will enter into licensing agreements with the owner of the utility pole, or otherwise obtain consent. *Id.* Where a private party “has made attachments to . . . poles without right to do so,” however, the party is “committing a continuing trespass.” *Verizon New England, Inc. v. Fibertech Networks, LLC*, No. Civ.A. 02-831, Civ. A. 02-843, 2002 WL 32156845, at *3 (Mass. Super. Aug. 19, 2002).

These legal limits bolster the expectation that, as a practical matter, people will not be subjected to extended surveillance of their homes using a camera surreptitiously affixed high on a utility pole.⁵

II. To protect the degree of privacy the public enjoyed before the current technological age, the government must obtain a warrant before conducting long-term pole camera surveillance of a home.

In cases involving the government’s use or exploitation of emerging technologies, the Supreme Court’s Fourth Amendment analysis has considered not

⁵ As Justice Gorsuch has explained, “while positive law may help *establish* a person’s Fourth Amendment interest there may be some circumstances where positive law *cannot be used to defeat it.*” *Carpenter*, 138 S. Ct. at 2270 (Gorsuch, J., dissenting) (emphasis added). In other words, there is “a constitutional floor below which Fourth Amendment rights may not descend. Legislatures cannot pass laws declaring your house or papers to be your property except to the extent the police wish to search them without cause.” *Id.* at 2270–71 (Gorsuch, J., dissenting). Thus, even if the Massachusetts legislature enacted a law purporting to permit warrantless long-term pole camera surveillance of homes by police, people would still have a reasonable expectation of privacy under the Fourth Amendment for all of the reasons set out above. *See supra* Part I.A–B.

only whether the government’s conduct implicates an individual’s reasonable expectation of privacy, but also whether it threatens to disrupt the traditional “relationship between citizen and government in a way that is inimical to democratic society.” *Jones*, 565 U.S. at 416 (Sotomayor, J., concurring) (cleaned up). In *Carpenter*, confronted with the power of CSLI “to encroach upon areas normally guarded from inquisitive eyes,” the Supreme Court “sought to ‘assure [] preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted.’” *Carpenter*, 138 S. Ct. at 2214 (quoting *Kyllo*, 533 U.S. at 34) (alteration in original). In *Jones*, Justice Alito noted that, before computers, practical considerations best protected privacy because “[t]raditional surveillance for any extended period of time was difficult and costly and therefore rarely undertaken.” *Jones*, 565 U.S. at 429 (Alito, J., concurring). Technology can remove these protective barriers, decreasing logistical impediments to long-term surveillance and increasing the ability to evade detection and obtain previously unobtainable information. *Cf. Carpenter*, 138 S. Ct. at 2217–18. In such instances, a warrant requirement maintains the proper equilibrium of privacy protections under the Fourth Amendment.

A. Prolonged pole camera surveillance significantly encroaches upon traditional spheres of privacy.

The long-term use of pole cameras is a surveillance innovation that radically transforms the capabilities of law enforcement to peer into individuals’ private lives.

Forget the classic “stakeout” of yore. Like the cellphone tracking at issue in *Carpenter*, pole camera surveillance “is remarkably easy, cheap, and efficient compared to traditional investigative tools,” enabling a heretofore incredibly costly and resource-intensive kind of monitoring “at practically no expense.”⁶ 138 S. Ct. at 2218. What’s more, police can set up a camera and “travel back in time” months later to review thousands of hours of historical footage. *Id.* Finally, where, as here, a house is located in what the police describe as “a quiet residential street where physical surveillance [is] difficult to conduct without detection,” Gov’t App. 64, pole camera surveillance provides the unique ability to capture undisturbed patterns of behavior. *Cf. United States v. Karo*, 468 U.S. 705, 709 (1984) (noting police used technology to monitor a car’s location where “the agents did not maintain tight surveillance for fear of detection”); *United States v. Vargas*, No. CR-13-6025-EFS, 2014 U.S. Dist. LEXIS 184672, at *26 (E.D. Wash. Dec. 15, 2014) (“[I]t may have been possible for law enforcement agents to take turns personally observing [defendant’s] activities in his front yard for a thirty-day period but the success of such hypothetical constables going unnoticed by [the defendant] for thirty days is highly unlikely.”). These

⁶ Based on one oft-cited analysis estimating the cost of various surveillance techniques, see Kevin Bankston & Ashkan Soltani, *Tiny Constables & the Cost of Surveillance: Making Cents out of United States v. Jones*, 123 Yale L.J. Online 335, 342–43 (2014), amici estimate that it would cost the Bureau of Alcohol, Tobacco & Firearms more than \$200,000 to monitor a home consistently for eight months based on the government pay scale and locality pay.

profound changes “give[] police access to a category”—and a depth—“of information otherwise unknowable.” *Carpenter*, 138 S. Ct. at 2218.

The government argues that these features are immaterial under the Fourth Amendment, relying heavily on the 2009 pole camera case *United States v. Bucci*, 582 F.3d 108 (1st Cir. 2009). Gov’t Br. 15–24. But *Bucci*’s determination that the pole camera surveillance did not trigger the warrant requirement rested on its conclusion that the “legal principle” that “[a]n individual does not have an expectation of privacy in items or places he exposes to the public” was “dispositive.” 582 F.3d at 117. Of course, under *Carpenter* and *Jones*, a rule stating that individuals extinguish their privacy in whatever they expose to the public is no longer dispositive; in fact, such a rule is now untenable.

Attempting to distinguish *Carpenter*, the government contends that, unlike CSLI collected by third parties, pole cameras “do not create a tracking capacity that ‘runs against everyone,’” and do not permit the “retrospective surveillance of something as to which no suspicion existed when the surveillance took place.” Gov’t Br. 22 (quoting *Carpenter*, 138 S. Ct. at 2218). But this assertion substantially underplays the implications of the government’s position that it can warrantlessly train a pole camera on anyone or everyone’s home. One need look no further than *Jones*, *Kyllo*, and *Katz* to understand that, when *the government* deploys surveillance technologies, it acutely implicates the Fourth Amendment even when it deploys that technology against just one person. *See Jones*, 565 U.S. at 430 (Alito, J., concurring) (targeted GPS tracking for

a prolonged period is a search); *Kyllo*, 533 U.S. at 40 (targeted surveillance of a suspect’s home with thermal imaging equipment requires a warrant); *Katz*, 389 U.S. at 358–59 (targeted electronic eavesdropping on a suspect’s conversations in a phone booth requires a warrant). What is more, the government’s legal position, if accepted, would permit it to apply camera technology to everyone without any suspicion. Under its view, it could place pole cameras in front of every house in America, including the homes of politicians, protesters, and judges, indefinitely and without a warrant. *See* Tr. of Oral Arg. 9–10, *United States v. Jones*, 565 U.S. 400 (2012) (No. 10-1259) (counsel for United States conceding that under the government’s view of the Fourth Amendment, it could attach GPS trackers to the cars of every member of the Supreme Court without a warrant).

Finally, although the government argues that the Supreme Court’s decision in *Ciraolo* survived its decision in *Carpenter*, that is of no assistance because *Ciraolo* is entirely consistent with the suppression order here. Gov’t Br. 26–27. On its face, *Ciraolo* held that a warrant was not required when police observed details about a home “discernable to the naked eye” while “passing by” during a one-time flyover in “public[ly] navigable airspace.” 476 U.S. at 213–14. In so doing, it brushed aside the dissent’s concerns that its decision ignored “Justice Harlan’s observations [in *Katz*] about future electronic developments” by explaining that those concerns “were plainly not aimed at simple visual observations from a public place.” *Id.* at 214.

As a result, courts have long appreciated that *Ciraolo* simply authorized one-time, naked-eye surveillance, and does not apply to long-term, technologically enhanced surveillance of the home. *Kyllo*, 533 U.S. at 33.⁷ “[I]t does not follow that *Ciraolo* authorizes any type of surveillance whatever just because one type of minimally-intrusive aerial surveillance is possible.” *Cuevas-Sanchez*, 821 F.2d at 251. Indeed, even when courts have upheld aerial surveillance under the reasoning of *Ciraolo*, they have done so while emphasizing the limited nature of that decision.⁸ *Ciraolo* therefore does not bless pervasive surveillance of a home by a camera that remotely pans, tilts and zooms and indefinitely stores digitized, searchable footage.

⁷ See, e.g., *United States v. Cuevas-Sanchez*, 821 F.2d 248, 251 (5th Cir. 1987) (distinguishing *Ciraolo* to hold that thirty-day pole camera surveillance of a backyard is a Fourth Amendment search); *United States v. Anderson-Bagshaw*, 509 F. App’x 396, 405 (6th Cir. 2012) (in dicta, “confess[ing] misgivings about a rule that would allow the government to conduct long-term video surveillance of a person’s backyard without a warrant” because, in part, “*Ciraolo* involved a brief flyover, not an extended period of constant and covert surveillance”); *United States v. Nerber*, 222 F.3d 597, 603 (9th Cir. 2000) (citing *Cuevas-Sanchez* for the proposition that courts “must consider the severity of the intrusion to which [people] were subjected” when analyzing Fourth Amendment “searches”).

⁸ See *Riley*, 488 U.S. at 448–49 (explaining that *Ciraolo* “control[led]” where a law enforcement officer made observations from a helicopter “[w]ith his naked eye”); *United States v. Broadhurst*, 805 F.2d 849, 854, 856 (9th Cir. 1986) (explaining that *Ciraolo* was limited to “unenhanced visual observations” and that its result “can hardly be said to approve of intrusive technological surveillance where the police could see no more than a casual observer”).

B. Law enforcement in Massachusetts already use technologies that could enhance the surveillance capabilities of pole cameras even beyond what occurred in this case.

In assessing whether the government’s use or exploitation of a certain technology threatens to “shrink the realm of guaranteed privacy,” a court must consider not only the specific technology at issue but also related, existing technologies that could further enhance the government’s surveillance capabilities. *Kyllo*, 533 U.S. at 34, 36; *see also Carpenter*, 138 S. Ct. at 2218; CDT Amicus Br. 19–20. Indeed, “the rule the Court adopts ‘must take account of more sophisticated systems that are already in use or in development.’” *Carpenter*, 138 S. Ct. at 2218 (quoting *Kyllo*, 533 U.S. at 36). And for good reason. Turning a blind-eye to these improvements “would leave the homeowner at the mercy of advancing technology.” *Kyllo*, 533 U.S. at 35.

This Court’s Fourth Amendment analysis therefore must take into account that police in the Commonwealth are already using technologies in other contexts that, if applied to pole cameras, could allow officers to zoom, search and use the footage in increasingly invasive ways. Specifically, as the Center for Democracy and Technology details in their amicus, there are at least three ways in which available technology can enhance pole camera surveillance even further than its use in this case. CDT Amicus Br. 20–26. First, cameras can now hone-in on small details with startling accuracy.⁹

⁹ For example, one company has released a camera small enough to be affixed to a drone that identifies faces from 1,000 feet and reads serial numbers from 100 feet.

Second, video analytic software enables the rapid and targeted “search of volumes of video that would otherwise be impossible.”¹⁰ And third, police officers can use face surveillance technology to identify individuals through their images.¹¹ Notably, Massachusetts law enforcement agencies are already deploying these technologies in other contexts right now.

Nearly ten years ago, Logan Airport installed a camera that can see any object a centimeter-and-a-half wide from 150 meters.¹² That is a distance of more than one-and-a-half football fields. According to the Massport Director of Corporate Security, “the next version is going to be twice as powerful.”¹³ Deployed on a pole camera, a lens with these capabilities could enable officers to read anything coming into or out of a surveilled house. Student loan statements, immigration papers, or texts from a

Jason Koebler, *This Drone Zoom Lens Can Identify Your Face from 1000 Feet Away*, VICE (Feb. 25, 2015), <https://perma.cc/GVM7-L5B2>.

¹⁰ BriefCam, *Video Analytics Solutions for Post-Event Investigations*, <https://perma.cc/9T3K-K3TN> (last visited Nov. 1, 2019); see also Jay Stanley, *The Dawn of Robot Surveillance: AI, Video Analytics, and Privacy*, American Civil Liberties Union (2019), <https://perma.cc/P3N8-TUKZ>.

¹¹ Electronic Frontier Foundation, *Street Level Surveillance: Face Recognition* (Oct. 24, 2017), <https://perma.cc/BUD7-55VB>.

¹² Brian R. Ballou, *At Logan, New Device Keeps Eye on Everything*, Boston Globe (May 3, 2010), <https://perma.cc/YYP3-ENMD>.

¹³ *Id.*

spouse or child¹⁴ could all be reviewed in real-time or retained and searched months later.

With respect to video analytics, the Springfield Police Department began using BriefCam software nearly a year ago.¹⁵ BriefCam allows officers to quickly review hours of video by simultaneously displaying events that occurred at different times.¹⁶ The software also classifies the properties of images, allowing officers to use keywords to search images in 27 categories including gender, age, and “appearance similarity.”¹⁷ Finally, officers can upload photos to set up real-time face-recognition alerts.¹⁸ Springfield currently uses BriefCam “to quickly review footage from traffic cameras” by “condens[ing] hours of footage into a couple of minutes and enable[ing] police to pinpoint objects of interest [and] filter[] out irrelevant objects.”¹⁹ As the Director of

¹⁴ At least one Canadian casino has used cameras to zoom in and read text messages of a phone. See Lori Culbert, *Judge Raps Police for Using Casino Cameras to Read Suspect's Texts*, Vancouver Sun (Nov. 11, 2014), <https://perma.cc/T3EE-ZC7T>.

¹⁵ George Graham, *Springfield Police to Dramatically Expand Video Surveillance Capabilities*, MassLive (Jan. 30, 2019), <https://perma.cc/3XWE-7JU>.

¹⁶ BriefCam, *Technology That Allows You to Review Video Fast*, <https://perma.cc/75WW-CMZ7> (last visited Nov. 1, 2019).

¹⁷ BriefCam, *Intelligent Video Analytics Solutions*, <https://perma.cc/9MDZ-MBRU> (last visited Nov. 1, 2019); BriefCam, *Search & Review Hours of Video in Minutes: Solutions to Help Investigators Accelerate Investigations*, <https://perma.cc/6ZJJ-2QLW> (last visited Nov. 1, 2019).

¹⁸ BriefCam, *Real-Time Alerting & Rapid Response*, <https://perma.cc/PQQ7-MS2R> (last visited Nov. 1, 2019).

¹⁹ BriefCam, *BriefCam at Work in Safe Cities*, <https://perma.cc/B3L4-LTRZ> (last visited Nov. 1, 2019).

the Springfield Police Crime Analysis Unit explains, however, “there’s a lot more it can do.”²⁰ Indeed, he notes that they plan to expand beyond the 50-traffic cameras currently linked to the software, clarifying “[w]e are going to quickly expand in the thousands at some point. The bigger the footprint, the better we are going to get.”²¹

Finally, law enforcement in Massachusetts already utilize face surveillance technology regularly. In 2015, federal, state and local law enforcement agencies made 258 requests to the Massachusetts Registry of Motor Vehicles (RMV) asking the agency to compare images against the RMV’s database to identify an individual, “the equivalent of about one request per weekday.”²² Local police departments are also among the “376 law enforcement agencies [that] have access to a database of 2.6 million photos of people who are arrested and booked” in the Commonwealth.²³ Applying this technology to still images taken from a pole camera trained on a home, police could identify everyone entering or exiting that house.

²⁰ *Id.*

²¹ Graham, *supra* n.15. While the police have also asked homeowners with their own video surveillance “to register their systems with police so they can be contacted to check their systems if a crime” occurs in their neighborhood, “[t]here are no plans . . . for the police to tap into [these] residential systems.” *Id.*

²² Jim Davis, *State Scans Mass. License Photos to Find Matches with Suspects*, Boston Globe, (Dec. 20, 2016), <https://perma.cc/7DLH-T4QD>.

²³ *Id.*

III. Authorizing warrantless, prolonged pole camera surveillance of a home would disparately impact those with the fewest resources to protect themselves from surveillance.

Although reversing the district court's order would threaten everyone's reasonable expectation of privacy, it would have an especially negative impact on poor people who cannot replace constitutional privacy protections with expensive properties and enhanced technology. *Cf. United States v. Pineda-Moreno*, 617 F.3d 1120, 1123 (9th Cir. 2010) (Kozinski, J., dissenting) (noting "the very rich will still be able to protect their privacy" with numerous gadgets if constitutional protections are removed, "but the vast majority" will not). The Supreme Court has long emphasized that, "the most frail cottage in the kingdom is absolutely entitled to the same guarantees of privacy as the most majestic mansion." *Karo*, 468 U.S. at 731; *see also United States v. Ross*, 456 U.S. 798, 822 (1982) (same). To ensure this promise does not ring hollow across the increasing economic disparity gap, prolonged pole camera surveillance of a home must trigger the warrant requirement.

A. Economic disparity is growing in this country.

The gulf between those who have expendable resources and those who do not is growing. According to data from the U.S. Census Bureau, "the gap between the richest and the poorest U.S. households is now the largest it's been in the past 50 years."²⁴ In Massachusetts, the contrast is even more striking. In 2015, Massachusetts

²⁴ Bill Chappell, *US Income Inequality Worsens, Widening to a New Gap*, NPR (Sept 26, 2019), <https://perma.cc/6XHD-4FR6>.

had the sixth highest income inequality in America; the next year, Boston had the seventh highest income inequality among American cities.²⁵

What’s more, these numbers contain troubling racial disparities. White household income in Boston was approximately double that of any other racial group in 2016.²⁶ “[E]ven greater than [these] gaps in income,” however, is the “large, persistent racial wealth gap.”²⁷ The median family wealth of white families living in the metro Boston area in 2015 was \$247,500; it was \$3,020 for a Puerto Rican family, \$8 for a Black family, and \$0 for a Dominican family.²⁸ These numbers are similarly reflected across the country. “Nationally, white college graduates have more than seven times the wealth of black college graduates and four times the wealth of Latinx graduates, and white single parents have approximately twice the wealth of two-parent black and Latinx households.”²⁹

²⁵ Luc Schuster & Peter Ciurczak, *Boston’s Booming . . . But for Whom?*, Boston Indicators and the Boston Foundation, at 16 (Oct. 2018), <https://perma.cc/5KZT-HECU>.

²⁶ *Id.* at 21.

²⁷ *Id.* at 34.

²⁸ *Id.*

²⁹ Michaela Broyles, *A Conversation About the Racial Wealth Gap – And How to Address It*, Brookings Now (June 18, 2019), <https://perma.cc/TD73-HRTT>.

B. Reversing the district court’s order would transform economic disparities into disparate protections for fundamental Fourth Amendment rights.

The foundations of our Fourth Amendment jurisprudence indicate that these economic disparities should not translate into different privacy protections for the home. William Pitt’s oft-quoted 18th-century address urged the House of Commons:

The poorest man may in his cottage bid defiance to all the forces of the Crown. It may be frail; its roof may shake; the wind may blow through it; the storm may enter; the rain may enter; but the King of England cannot enter—all his force dares not cross the threshold of the ruined tenement!

Payton v. New York, 445 U.S. 573, 601 n.54 (1980); see also *Georgia v. Randolph*, 547 U.S. 103, 115 (2006) (same). Pitt’s framework formed the basis for our constitutional protections against unreasonable searches of the home. See, e.g., *Payton*, 445 U.S. at 601 n.54 (“There can be no doubt that Pitt’s address in the House of Commons in March 1763 echoed and re-echoed throughout the colonies.”). As the Supreme Court recognized in *Randolph*, “we have . . . lived our whole national history with an understanding of th[is] ancient adage.” 547 U.S. at 115 (cleaned up). Nearly 250 years after Pitt’s address, the Court rejected the argument that the automobile exception allows warrantless entry into a carport unless it is fully enclosed because that “would grant constitutional rights to those persons with the financial means to afford residences with garages in which to store their vehicles but deprive those persons

without such resources of’ similar constitutional protections. *Collins v. Virginia*, 138 S. Ct. 1663, 1675 (2018).

Upholding the warrantless surveillance here would upend this jurisprudence. If the Constitution no longer protects the sanctity of the home, “people with more money and more power will be able to purchase more privacy protections” to fill in the gaps.³⁰ For example, wealthy people could purchase homes in gated communities or neighborhoods with underground utility lines, where it is more difficult for police to affix a camera. They could buy expansive plots of land with houses set so far back that they obscure any camera angle. They could even build underground tunnels for entry or enclose their entire home with tinted glass to prevent a camera from seeing their front door.³¹ In other words, they could buy a protected space once the Constitution abandoned them.

Those without resources, however, will not be so lucky. Without the ability to afford such neighborhoods, houses or technology, those with less will be more and more subject to the warrantless surveillance of their most private moments in their homes. “Yet poor people are entitled to privacy, even if they can’t afford all the

³⁰ Michael Rosenberg, *The Price of Privacy: How Access to Digital Privacy is Slowly Becoming Divided by Class*, 20 UCLA J.L. & Tech. 1, 5 (2016).

³¹ Such measures are neither impossible nor improbable for those with resources. For example, to combat drone surveillance, one company trained eagles to bring down the devices. See Jon Hegrans, *The Past, Present and Future of Anti-Drone Tech*, Forbes: Council Post (Jan 26, 2018, 7:30 AM), <https://perma.cc/9479-S8F8>.

gadgets of the wealthy for ensuring it.” *Pineda-Moreno*, 617 F.3d at 1123 (Kozinski, J., dissenting). Under our Constitution, privacy should not be cost-prohibitive for some while available to others.

CONCLUSION

For the foregoing reasons, this Court should affirm the district court. Of course, the implication of such a ruling is not that law enforcement will never be able to engage in the kind of surveillance at issue in this case; rather, the “answer to the question of what police must do before [conducting extended pole camera surveillance of a home] is accordingly simple—get a warrant.” *Riley v. California*, 573 U.S. 373, 403 (2014).

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I certify that this brief complies with the typeface and type style requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in a proportionally spaced typeface using Garamond in 14-point type.

I further certify that this brief complies with the type-volume limitation of Fed. R. App. P. 29(a)(5) and Fed. R. App. P. 32(a)(7)(B) because it contains 6,499 words, excluding the parts of the brief exempted under Rule 32(f), according to the count of Microsoft Word.

Dated: November 4, 2019

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CERTIFICATE OF SERVICE

I certify that on November 4, 2019, the foregoing Amici Curiae Brief was filed electronically through the Court's CM/ECF system. Notice of this filing will be sent by email to all parties by operation of the Court's electronic filing system.

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