

COUNCIL OF THE CITY OF PHILADELPHIA
COMMITTEE ON PUBLIC SAFETY

Room 400, City Hall
Philadelphia, Pennsylvania
Monday, February 11, 2013
12:20 p.m.

PRESENT:

COUNCILMAN CURTIS JONES, JR., CHAIR
COUNCIL PRESIDENT DARRELL L. CLARKE
COUNCILWOMAN CINDY BASS
COUNCILWOMAN JANNIE BLACKWELL
COUNCILMAN WILLIAM GREENLEE
COUNCILMAN BOBBY HENON
COUNCILMAN KENYATTA JOHNSON
COUNCILMAN DENNIS O'BRIEN
COUNCILMAN MARK SQUILLA

RESOLUTION 130030 - Resolution calling for the
Philadelphia City Council Committee on Public
Safety to hold hearings on the status of the
City's surveillance camera program.

- - -

1

2

3

COUNCILMAN JONES: Good

4

afternoon. The City Council Committee on

5

Public Safety is now in a public hearing

6

to hear testimony on Resolution No.

7

130030.

8

In attendance are Council

9

President Clarke and Councilmember Dennis

10

O'Brien, at-large.

11

Will the Clerk please read the

12

title of the resolution.

13

THE CLERK: Resolution 130030,

14

a resolution calling for the Philadelphia

15

City Council Committee on Public Safety

16

to hold hearings on the status of the

17

City's surveillance camera program.

18

COUNCILMAN JONES: Before we

19

call up our first panel to testify, I'd

20

like to give President Clarke, the author

21

of the resolution, an opportunity to

22

speak.

23

COUNCIL PRESIDENT CLARKE:

24

Thank you so much, Mr. Chairman.

25

Good morning, everyone -- I'm

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 sorry; good afternoon, everyone.

3 Mr. Chairman, as you know, we had the
4 pleasure of recently visiting Baltimore
5 with a couple of other members of Council
6 and some staff, and we were quite
7 impressed with what we saw there. In the
8 prior Administration, myself, along with
9 Councilman Rizzo at the time, traveled to
10 Baltimore before we enacted a video
11 surveillance program in the City of
12 Philadelphia. We were impressed then,
13 but it has come miles beyond what was
14 happening at that particular time.

15 One of the things that we hope
16 to find out today, if we can in fact
17 enhance our system beyond what it was in
18 our earlier version. As a matter of
19 fact, some might say we would like to get
20 back to the system that we used to have,
21 because we have had significant
22 challenges with our system as it relates
23 to maintenance, as it relates to
24 deployment and other things associated
25 with our current system here in the City

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 of Philadelphia.

3 I was extremely impressed with
4 the things that were put in place in the
5 Baltimore system, and I think the thing
6 that impressed me most was the
7 intelligence associated with the
8 deployment of the video cameras. It
9 wasn't just simply we'll throw up a
10 brunch of cameras and hope that we
11 prevent crime. The intelligence put into
12 place as it relates to not only
13 deployment but as it relates to
14 monitoring, as it relates to prevention,
15 which I think is the most significant
16 thing, was quite impressive.

17 So I want to thank you for
18 having this hearing today. I see we have
19 a good cadre of individuals here today.
20 And I think that the most important thing
21 that we learned as a result of our trip
22 to Baltimore was the public-private
23 partnership, and I think at the end of
24 the day, having everybody engaged, the
25 business sector, the residents, the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 community organizations and, most
3 importantly, the City of Philadelphia and
4 their ability to kind of pull it
5 together, will ultimately allow us to
6 create probably one of the most enhanced
7 security cam systems in the City of
8 Philadelphia, so we won't simply be
9 relegated to running around after the
10 crime is committed to ask people can they
11 view their cameras way after that
12 particular crime has been committed, but
13 hopefully send a signal that while in
14 realtime, one, we're probably going to
15 get you if you contemplate a crime during
16 the course of the commission of the
17 crime, and how about not even the
18 committing the crime because at the end
19 of the day, we're going to get you.

20 So thank you again,

21 Mr. Chairman.

22 COUNCILMAN JONES: We're
23 thankful to you for initiating this in
24 2006, along with Councilwoman Miller and
25 Councilman Rizzo. I remember those

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 hearings specifically, and it was almost
3 like a Star Wars concept at the time.

4 For the record, we've been
5 joined by Councilman Bill Greenlee, who
6 also went on the trip, and our Committee
7 member Councilman Squilla has joined us
8 as well.

9 I just wanted to point out that
10 after 2006, that you engaged the
11 Administration to pursue cameras as a
12 crime-fighting tool, and back then, the
13 number one technology that criminals used
14 was a pager. The number two piece of
15 technology was a public phone on a
16 corner. Today you don't have pagers and
17 you don't have -- I haven't seen a
18 working pay phone in quite some time. As
19 the technology that the lawbreakers are
20 using has evolved, so must the technology
21 that we use to apprehend them.

22 I applaud the Mayor for the use
23 of social media as one of those arrows in
24 the quiver to fight crime, but we also
25 need to pursue this type of technology.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 I would bring this Committee
3 and those who are listening to the
4 attention of two documented-by-camera
5 crimes. One, the young lady Nai'lla
6 Robinson in Southwest Philadelphia that
7 was abducted from a public school, and as
8 horrific as that crime was, the reason we
9 are hot on the trail of one of the
10 assailants -- and we're joined by
11 Councilwoman Blackwell, and that happened
12 in the 3rd Councilmanic District -- is
13 because of the use of the School Board's
14 cameras.

15 And then the second occurrence
16 was the young lady that was pulled from a
17 subway platform, thrown onto the tracks.
18 The reason we apprehended that individual
19 was because of the use of surveillance
20 cameras.

21 So those two crimes, one that
22 we hope and pray that we will apprehend
23 the individual, but the other one we did
24 apprehend was because of that technology.

25 You got us on the train, took

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 us down to Baltimore where we observed,

3 and I guess the hearing will also go on

4 to talk about effective use of cameras.

5 And the startling statistic that struck

6 me in our trip down there was twofold.

7 One, they were able to successfully

8 reduce crime, documented crime, by 25

9 percent. I'm going to say it again.

10 Twenty-five percent through the use of

11 not just technology but a triangulation

12 of eyes on monitors, boots on ground,

13 meaning police officers, and that camera

14 technology.

15 So we hope to learn best

16 practices today. We hope to find out

17 what some of the next steps are on how we

18 can be -- and I hate to say it -- the

19 next Baltimore, not just in football but

20 by way of --

21 COUNCIL PRESIDENT CLARKE: That

22 would be a good thing.

23 COUNCILMAN GREENLEE: We'll

24 take that too.

25 COUNCILMAN JONES: We'll take

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 that too?

3 But by way of crime prevention.

4 So we're really excited and thankful,

5 Mr. President, for being consistent then

6 and forward-thinking and consistent now.

7 I'll note for the record that

8 Councilwoman Bass has joined us as well.

9 So can the Clerk please read

10 the name and title of the first panel to

11 testify.

12 THE CLERK: City Controller

13 Alan Butkovitz; the School District of

14 Philadelphia, Chief Inspector Cynthia

15 Dorsey; SEPTA, Ronald Hopkins; and the

16 Police Chief, Thomas Nestel; and, lastly,

17 PHA, the Interim Executive Director

18 Kelvin Jeremiah.

19 (Witnesses approached witness

20 table.)

21 COUNCILMAN JONES: We want to

22 thank you all for taking the time out to

23 testify on this worthwhile effort. In

24 particular, congrats to you, Controller

25 Butkovitz, for taking time away from your

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 other activity you just left to join us
3 on this public policy issue.

4 CONTROLLER BUTKOVITZ: Thank
5 you very much, Mr. Chairman.

6 COUNCILMAN JONES: Can you
7 state your name for the record and begin
8 your testimony.

9 CONTROLLER BUTKOVITZ: Yes.
10 I'll Alan --

11 COUNCILMAN JONES: Would any
12 other members of the Committee like to
13 have remarks at this time?

14 (No response.)

15 COUNCILMAN JONES: Please
16 begin.

17 CONTROLLER BUTKOVITZ: My name
18 is Alan Butkovitz. I'm the Philadelphia
19 City Controller. First of all, I'd like
20 to commend Council President Clarke and
21 Councilman Jones and every member of the
22 panel for having the initiative to search
23 out the best practices and going down to
24 Baltimore and becoming real students of
25 this. I think you're correct that

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 there's tremendous potential improvement
3 in safety available in the technology
4 that is out there.

5 Now, as Council is aware, we
6 did an audit in June of last year, and
7 unfortunately, Philadelphia's progress on
8 this does not compare favorably with
9 Baltimore.

10 The audit reviewed the cost,
11 maintenance, inventory, and goals of the
12 City's police surveillance cameras. The
13 audit revealed that the City spent \$13.9
14 million for surveillance cameras, but
15 only 102 of the 216 installed cameras
16 were functioning properly. With less
17 than half of the cameras working, it has
18 resulted in the cost to the City of
19 \$136,000 for operating cameras.

20 In addition to the initial \$14
21 million contract, the City awarded
22 another \$3.2 million contract for
23 maintenance service, supplies, and
24 installation of the video surveillance
25 cameras. While the cost is exceedingly

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 alarming and outright excessive, it was
3 more troubling to find out only 102 of
4 the 216 installed cameras were working
5 properly.

6 This meant that at any given
7 time when crime was occurring around our
8 city, only 47 percent of the cameras were
9 able to capture criminal activity at
10 camera locations. Our audit determined
11 that the project was plagued with
12 problems from the beginning, starting
13 with the assessment and risk phase. The
14 City initially estimated each operating
15 camera was supposed to cost \$3,017. The
16 audit also found that unsatisfactory
17 performance from the selected vendor
18 which resulted in the City terminating
19 the contract and placing the burden on
20 the City's limited resources to manage
21 the surveillance cameras.

22 In addition, there was an
23 absence of warranty information and
24 maintenance records for cameras and other
25 video surveillance equipment that was

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 supposed to be maintained by the Office
3 of Innovative Technology. We found
4 numerous unopened boxes containing camera
5 equipment at a warehouse and could not
6 determine if the equipment was even
7 compatible with the cameras currently
8 installed.

9 Before the City moves forward
10 with purchasing new equipment, it needs
11 to determine if any of the current
12 equipment can be put to immediate use.
13 As recommended in our audit, the City
14 needs to fully measure the success of the
15 video surveillance program against the
16 original project goals. This should be
17 evaluated on a regular periodic basis and
18 provided to City officials.

19 Providing effective public
20 safety needs to be our city's number one
21 priority. It needs to be done in a
22 cost-efficient method to ensure that
23 every tax dollar goes toward efforts to
24 properly protect our citizens.

25 Thank you for this opportunity.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN JONES: We are going
3 to, because you have an agenda for today
4 that is very ambitious, we want to start.

5 We'll question the Controller
6 and then we'll hear the other testimony.

7 I guess I would start with
8 saying the 13.9 million -- was it?

9 CONTROLLER BUTKOVITZ: Yes.

10 COUNCILMAN JONES: --
11 (continued) that was mentioned, what was
12 the source of those dollars?

13 CONTROLLER BUTKOVITZ: I
14 believe it's operating.

15 COUNCILMAN JONES: We'll
16 confirm that. But also the amount of
17 equipment that was left still in the box
18 was?

19 CONTROLLER BUTKOVITZ: Was 114
20 out of 216.

21 COUNCILMAN JONES: A hundred
22 and fourteen out of 216. That's about --

23 CONTROLLER BUTKOVITZ:
24 Fifty-three percent.

25 COUNCILMAN JONES: Fifty-three

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 percent. And what was the date -- under
3 your report, the year that we bought
4 those cameras, what was the date of those
5 cameras, roughly? So I'm trying to
6 figure out what year. I know that when
7 you have an iPhone, every two years --

8 CONTROLLER BUTKOVITZ: The
9 development of the planning started in
10 2007.

11 COUNCILMAN JONES: So actual
12 purchase might have been thereabouts.

13 CONTROLLER BUTKOVITZ: Well,
14 the network design was in 2009 and
15 essentially the installation of cameras,
16 the procurement and installation of
17 cameras, was occurring in 2009.

18 COUNCILMAN JONES: So in your
19 estimation, the cameras that we currently
20 have, are they operational today? Are
21 they obsolete? Are they cutting edge?
22 How would you rank them?

23 CONTROLLER BUTKOVITZ: After
24 the audit, the City asked for -- made a
25 promise that 90 percent of them would be

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 operational by last September. And so as
3 we frequently do, we started a re-audit
4 that is currently in fieldwork. So we'll
5 know the answer to that. Certainly the
6 representation of the Administration is
7 that they're compatible. The problem, as
8 in so many technology issues in
9 Philadelphia, is that Philadelphia
10 doesn't really put its money up front to
11 get the job done right. So there were
12 glitches such as the fact that the
13 wireless system they tried to install
14 could not cope with the high-rise
15 buildings in Philadelphia. It's an issue
16 that you heard with respect to emergency
17 communication systems as well. The real
18 question is, why did it take from 2009 to
19 2013 to recognize that and to adapt to
20 it, the old adage about not throwing good
21 money after bad.

22 COUNCILMAN JONES: Do you
23 recall whether they're analog or digital?

24 CONTROLLER BUTKOVITZ: Wow, you
25 got me on that.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN JONES: This is not
3 a "gotcha ya" kind of hearing. I kid you
4 not. We are trying to figure out how we
5 get to a point where we optimize
6 technology in a way. So the question
7 becomes -- because as astutely raised by
8 one individual, analog is very difficult,
9 at best, to identify. And I'm not a
10 techie person, I'll just establish that
11 at the beginning of this hearing. But
12 it's easier through digital, it's more
13 pixels, or whatever the technical term
14 is, that you can more easily identify
15 individuals in images.

16 So a couple of other things.
17 So the fiberoptic systems were a problem.
18 Do we have a centralized command center
19 that monitors the cameras?

20 CONTROLLER BUTKOVITZ: Yes, we
21 do.

22 COUNCILMAN JONES: And are
23 there individuals actually monitoring the
24 cameras?

25 CONTROLLER BUTKOVITZ: Yes.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN JONES: What's the
3 ratio of live eyes to monitors; do you
4 know that?

5 CONTROLLER BUTKOVITZ: I don't
6 know.

7 COUNCILMAN JONES: I think
8 that's important, because if you have 100
9 locales that you're trying to monitor,
10 it's more difficult than if you have, in
11 the case of Baltimore, maybe seven. They
12 had seven cameras where a monitor was
13 responsible for seven hot corners. That
14 was, as the President mentioned,
15 predicted by crime intelligence that
16 these are the seven corners we want to
17 prioritize during this time of day, which
18 I thought -- we were sitting there
19 astounded by that kind of triangulation,
20 if you would.

21 I'm going to let other members
22 of the Committee, if you have questions
23 at this point. Councilman.

24 COUNCILMAN GREENLEE: Thank
25 you, Mr. Chairman.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 Good afternoon. You kind of
3 answered this question with the Chairman,
4 but I guess I have a more general
5 question, Mr. Butkovitz. You said you
6 recommended in your audit the City needs
7 to fully measure the success of the video
8 surveillance program. Have you seen or
9 have you been able to see yet any success
10 in that? What have they been doing? I
11 know you talked about trying to get the
12 cameras operational, which is obviously a
13 real basic thing.

14 CONTROLLER BUTKOVITZ: Well,
15 the City terminated the contract with
16 Unisys and they selected a new vendor.
17 So the issue is going to be does that
18 solve the problem.

19 COUNCILMAN GREENLEE: Right.

20 CONTROLLER BUTKOVITZ: The
21 City's position was bad vendor.

22 COUNCILMAN GREENLEE: They said
23 that before our Committee, I think, one
24 time too.

25 CONTROLLER BUTKOVITZ: So we're

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 in the middle of fieldwork. We'll
3 probably have the new audit completed by
4 March or April of this year. So I don't
5 have --

6 COUNCILMAN GREENLEE: You'll
7 know more then.

8 CONTROLLER BUTKOVITZ: -- the
9 interim data.

10 COUNCILMAN GREENLEE: Okay.
11 All right. No. I appreciate that.

12 But I just -- if I could make
13 just a real comment. You put in the end
14 of your statement that providing public
15 safety needs to be the City's number one
16 priority, and I think we saw when we were
17 in Baltimore that it really is a priority
18 down there. They really -- it's amazing
19 how they have really made this
20 determination that they're going to cut
21 down on crime, and they have been able to
22 do it. And I think what was interesting
23 too, the people who were monitoring, I
24 don't know fully, but mostly were retired
25 police officers. So I thought that was

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 interesting, because they knew what to
3 look for. And while we were there, a
4 retired officer monitoring the camera
5 recognized somebody that she once
6 arrested when she was a police officer,
7 saw what the gentleman was doing, and got
8 him rearrested. So I thought that was
9 just kind of interesting how they --
10 everybody is in on this. Everybody, like
11 the Council President said, the business
12 community, the private sector, the public
13 sector, and I think you agree, that's
14 what we need to do here.

15 CONTROLLER BUTKOVITZ: I
16 understand that there were plans going
17 back four years for about a \$125 million
18 upgrade in the City's technology that
19 were shelved as a result of the financial
20 crisis. You can't piecemeal your way in
21 to these complicated systems and get the
22 kind of results that you accomplish. I
23 mean, we had similar issues with 3-1-1
24 relative to New York City, for example.
25 New York City has got a system that

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 worked seamlessly. Well, I think it was
3 an initial investment of \$25 million.

4 So this is the kind of thing
5 that ought to be financeable through
6 bonds. It's a capital improvement. I
7 think you got to take a serious look at
8 what does it take to get it done right
9 and make the appropriate investment up
10 front.

11 COUNCILMAN GREENLEE: I think
12 we agree with that. Okay. Thank you.

13 Thank you, Mr. Chairman.

14 COUNCILMAN JONES: Thank you,
15 Councilman.

16 Council President Clarke.

17 COUNCIL PRESIDENT CLARKE:
18 Thank you, Mr. Chair.

19 Real quick. I just wanted to I
20 guess somewhat respond to your question,
21 and I may have to be corrected, but my
22 recollection, there were approximately
23 three iterations of cameras. Initially
24 there were cameras that were the big box
25 that had the City of Philadelphia

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 security blah, blah, blah that has since
3 been pretty much deemed outmoded both by
4 Baltimore and obviously by Philadelphia.
5 And then they came up with the hard-wired
6 camera that was pretty much relegated to
7 areas where there were fiberoptics. It
8 was extremely limited in the City. I
9 think Broad Street and maybe one or two
10 other. And then they came up with a
11 hybrid system, and when they implemented
12 the hybrid system was when they found out
13 the sight lines were blocked as a result
14 of a lot of high buildings in the City of
15 Philadelphia, and we actually at one
16 point talked to the Housing Authority
17 about utilizing some of the high-rise
18 Housing Authority buildings for antennas
19 and a number of other locations.

20 So I know at a minimum there
21 were three of those iterations, and at
22 the end of the day, I don't know what
23 happened with that particular proposal,
24 but it's clearly not in place and I'm
25 assuming for a number of reasons.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 Mr. Chair.

3 COUNCILMAN JONES: Thank you,
4 Mr. President.

5 Maintenance costs, you focused
6 a bit on that in your report. Have we
7 reconciled the records on maintenance,
8 and does that attribute to the high per
9 unit cost of the cameras?

10 CONTROLLER BUTKOVITZ: Well, in
11 the audit that was done last June, OIT
12 just didn't have maintenance records,
13 didn't have warranty information. So we
14 don't know the answer to that.

15 COUNCILMAN JONES: One of the
16 things -- and, again, I get municipal
17 envy when I think of Baltimore and having
18 to refer to them both for Super Bowls and
19 then also for these cameras, but
20 nevertheless, one of the things that they
21 were able to do by their upgrades was
22 significantly reduce maintenance costs
23 almost that warranted the upgrade,
24 because they had these recurring
25 breakdowns that the vendors had to

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 respond to. And so that, at a certain
3 level, warranted them just going ahead
4 and upgrading, and they've been able to
5 realize savings based on the reduction in
6 ongoing maintenance and breakdowns.

7 The other issue was, it was so
8 bad that they had the old cameras, they
9 had converted them to recycling bins,
10 because they were useless basically.
11 They couldn't use them for parts.

12 So I guess what we're going to
13 anxiously anticipate is this next audit
14 to basically say the 13.9 million that we
15 invested, how much of that is still
16 useful going forward and whether or not
17 we need to just write it off and start
18 again from where we are.

19 Now, we understand that the
20 Administration has done a great job of
21 procuring some federal assistance to
22 create a new command center, and so a
23 part of the hearings here today is how
24 does that integrate with the old system,
25 how does it incorporate other public,

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 quasi governmental entities. Because
3 what we were able to ascertain -- and
4 we're going to hear from the folk from
5 Baltimore later -- was the use of
6 public-private partnerships. It just
7 magnified and gave an auxiliary to the
8 municipally owned cameras.

9 So we'd be looking forward to
10 also reviewing that aspect of it, how you
11 can better synergize using the University
12 of Penn and other hospitals that are big
13 institutions next to neighborhoods that
14 could use the help, particularly under
15 the infrastructure side that we picked
16 up.

17 Councilman Squilla.

18 COUNCILMAN SQUILLA: Yes.

19 Thank you.

20 We see that we know that
21 probably the best way to go is not all
22 City expenses but a public-private
23 partnership with the City of
24 Philadelphia, and we see what has
25 happened in the past by the police being

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 able to catch some of the perpetrators
3 through the use of private cameras. Is
4 there something that was recommended from
5 your office -- I know the police were
6 trying to come up with a
7 recommendation -- of a type of camera or
8 a quality that would be accepted?
9 Because we do have some cameras, and you
10 always hear that, well, the footage
11 wasn't good or we couldn't really get a
12 good look at it because the quality
13 wasn't there.

14 Is that something that your
15 office would be interested in coming up
16 with or would you defer that to another
17 department?

18 CONTROLLER BUTKOVITZ: That is
19 probably beyond the scope of this audit,
20 but I will check with our people when I
21 get back.

22 COUNCILMAN SQUILLA: So we
23 would need to do that with --

24 CONTROLLER BUTKOVITZ: I mean,
25 really it strikes me as an OIT issue.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 They're the experts in the technology.

3 COUNCILMAN SQUILLA: Okay.

4 COUNCILMAN JONES: I have one
5 other aspect.

6 Thank you, Councilman.

7 In your next report, I would be
8 and this body would be interested in just
9 like when you look at a management
10 information system, like computers, the
11 question becomes should we lease them or
12 should we own them. Upgrades happen on
13 the iPhone. Every year and a half you
14 got a new rendition of it and the old
15 rendition, it's designed to do that. By
16 way of upgrades like that, is there a way
17 that we could fashion a contract that
18 said after two years of obsolescence, we
19 get upgrades at a particular point? And
20 so you don't have to answer that now, but
21 a question just like that should we --

22 CONTROLLER BUTKOVITZ: It's a
23 great idea. The City has had a history
24 of making poor contracts in technology.
25 When we were in Oracle, we were basically

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 paying a company to develop -- to

3 experiment and develop technology on our

4 dime, without any even measurements or

5 deliverables. So if Baltimore has got

6 that right, then we can learn a lot from

7 them on the contract and compliance side.

8 I think it would be a great idea to lease

9 rather than to own given the fast pace of

10 technological change.

11 COUNCILMAN JONES: Thank you,

12 Mr. --

13 COUNCILWOMAN BASS: Councilman.

14 COUNCILWOMAN JONES: Yes.

15 Councilwoman Bass.

16 COUNCILWOMAN BASS: Yes. Thank

17 you, Mr. Chairman.

18 Good afternoon.

19 CONTROLLER BUTKOVITZ: Good

20 afternoon.

21 COUNCILWOMAN BASS: Just a

22 couple of things. So just going back to

23 your previous statement in terms of the

24 City having a long history of entering

25 into contracts that are not in its best

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 interest. You know, I just wanted to
3 stop there for a second because I know
4 Councilman Squilla had asked a question
5 about minimum standards as we go down
6 this road again in the future, and I know
7 that it's really kind of outside of the
8 scope of the Controller's Office to make
9 recommendations in terms of what we
10 should be purchasing and what types of
11 equipment, but I'm hopeful that you would
12 maybe consider making some suggestions in
13 terms of minimum standards, because I'm
14 not particularly comfortable that we
15 would leave it up to a department that
16 hasn't produced what we've needed, even
17 though it may have been different people,
18 different circumstances, different mayors
19 even maybe from the time it started to
20 the time it finished. But I just would
21 just suggest that it would be very
22 helpful to all of us if we had some other
23 suggestions in terms of minimum standards
24 that would be suggested.

25 CONTROLLER BUTKOVITZ: That's

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 an excellent suggestion. Thank you.

3 COUNCILWOMAN BASS: Thank you.

4 COUNCILMAN JONES: Just to
5 elaborate, Councilwoman, before we go to
6 you, Mr. O'Brien, your initiative for
7 using cameras in rec centers, for
8 example.

9 COUNCILWOMAN BASS: That's
10 correct.

11 COUNCILMAN JONES: It would be
12 important or useful to us to figure out
13 how on a publicly owned parcel versus
14 this system or do we use the same system
15 on that street versus the actual
16 facility, and if not the same system, to
17 at least make sure that they're
18 compatible so that we're not building in
19 obsolescence. Those guidances would be
20 particularly helpful.

21 COUNCILWOMAN BASS: Agreed.
22 Agreed. Absolutely.

23 And also I just wanted to make
24 just another observation, which was in
25 terms of the transformation that the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 camera systems have had in Baltimore,
3 it's been -- from the visit it was quite
4 obvious that the work that's been done,
5 the investment that's been made, it's
6 paid off in a major way. There's a
7 relatively low cost that has transformed
8 entire communities from the work that's
9 been done in making sure that there's
10 security cameras, that they're available,
11 that they're working, that they're
12 picking up, that they're actually staffed
13 by folks who know how to staff them
14 appropriately. And so I just really want
15 to encourage you and your office to stay
16 on top of this issue and to help us and
17 to help the OIT office. We all need to
18 be engaged to make sure that this happens
19 correctly.

20 CONTROLLER BUTKOVITZ: Okay.

21 COUNCILMAN JONES: Thank you,
22 Councilwoman.

23 Councilman O'Brien.

24 COUNCILMAN O'BRIEN: I have a
25 two-part question, maybe an observation

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 in the beginning. My office is
3 researching what we would call an
4 authority on the City of Philadelphia,
5 but in England, they have an organization
6 that they've created where they evaluate
7 these types of technological advances and
8 they make recommendations, but they're
9 standalone from law enforcement and other
10 agencies, and they're implemented on a
11 strategic long-term basis. And I don't
12 know if the Controller's Office has
13 looked at any of those models either for
14 this type of coordination of IT.

15 The second issue is, has the
16 Controller's Office looked at auditing,
17 for instance, the backlog of DNA or
18 focused deterrence in Southwest Philly in
19 conjunction with cameras and others? And
20 is there a blending of those strategies
21 or is there a priority of one strategy
22 over another that would be appropriate
23 for us to consider at a hearing like
24 this?

25 CONTROLLER BUTKOVITZ: No.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 Your suggestion is to look at the backlog
3 of DNA?

4 COUNCILMAN O'BRIEN: Well, I'm
5 wondering as we look at, as you say in
6 your last paragraph, the effective use of
7 public safety needs, which includes all
8 the resources, is there any type of
9 evaluation as to the strategic importance
10 or evaluation that's attached to putting
11 more money into a DNA laboratory
12 advancement as opposed to cameras on the
13 street or investing in other strategies
14 that the department has created in
15 Southwest Philly, like focus deterrence
16 or other strategies like that that are
17 more integrated and complete in their
18 approach?

19 CONTROLLER BUTKOVITZ: That
20 would be a rather expensive study. I
21 mean, we would -- we're always prepared
22 to do projects for Council if we can get
23 funding for it. We did --

24 COUNCILMAN O'BRIEN: How much
25 money would you need for something like

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 that?

3 CONTROLLER BUTKOVITZ: I don't
4 know. I don't know.

5 COUNCILMAN SQUILLA: A lot.

6 CONTROLLER BUTKOVITZ: It
7 strikes me as a multi hundred thousand
8 dollar project.

9 COUNCILMAN JONES: Thank you,
10 Councilman.

11 Thank you, Mr. Controller.

12 COUNCILWOMAN BASS: Mr. Chair,
13 I'm sorry.

14 COUNCILMAN JONES: Councilwoman
15 Bass.

16 COUNCILWOMAN BASS: I have one
17 other really quick question, because I
18 know you have to go.

19 I don't know if you know this
20 or not, but from the scope of your audit,
21 do you know if the cameras, if they move,
22 if they're stationary, can they follow
23 activity, do they zoom in? I don't know
24 if this is necessarily the scope of your
25 audit.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 CONTROLLER BUTKOVITZ: I
3 believe they are mobile. I think they
4 can zoom in.

5 COUNCILWOMAN BASS: Okay.
6 Thank you.

7 COUNCILMAN JONES: Thank you,
8 Councilwoman.

9 Thank you again.

10 CONTROLLER BUTKOVITZ: Thank
11 you.

12 COUNCILMAN JONES: Will the
13 next witness state your name for the
14 record. Thank you for your patience, and
15 good afternoon.

16 CHIEF INSPECTOR DORSEY: Good
17 afternoon. Good afternoon, Chairman
18 Curtis Jones, members of the Council, and
19 members of the Public Safety Committee.
20 My name is Chief Inspector Cynthia
21 Dorsey. I'm assigned to the Office of
22 School Safety.

23 Currently, the School District
24 of Philadelphia's camera and surveillance
25 system is managed by our office, the

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 Office of School Safety. The District's
3 Innovative Technology section and its
4 Facilities Management section provide
5 assistance with maintenance, network
6 access, and system upkeep. For the past
7 five years, GE, General Electric, has
8 been the District's vendor. To date, we
9 have approximately 5,767 individual
10 cameras installed throughout our
11 elementary, middle, and high schools. We
12 also operate in Aiphone system that is
13 separate from our camera system. The
14 Aiphone consists of a monitor that is
15 usually installed in the Central Office
16 where the school's administrative staff
17 is located. The apparatus connected to
18 the Aiphone is installed at the visitor's
19 entrance, the main door, where parents
20 and other visitors ring a bell or buzzer.
21 The person inside the office who monitors
22 the Aiphone then speaks to the visitor,
23 and after the visitor has identified
24 themselves and their purpose, the person
25 may then remotely unlock the door by

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 buzzing the visitor into the building.
3 This system has been in place roughly ten
4 years. It does not have recording
5 capabilities.

6 All School District elementary
7 schools have Aiphone systems, 11 middle
8 schools out of 26 have this system, and
9 13 out of 50 high schools have Aiphones.

10 The breakdown for cameras in
11 District schools as of February 8th, 2013
12 is as follows: Elementary schools -- and
13 just realize that some of our elementary
14 schools are K to 5, K to 6, K to 8, and K
15 to 12. Forty-six currently do not have
16 camera systems installed, approximately
17 120 have camera systems installed. For
18 our middle schools, 11 currently do not
19 have camera systems installed and
20 approximately 15 have camera systems
21 installed. Out of our high schools, 43
22 have camera systems installed, while
23 eight do not have camera systems
24 installed.

25 To date, the District's cameras

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 are not yet fully integrated. Currently,
3 we have the ability to tap into some of
4 the schools from our headquarters located
5 440 North Broad Street. In other words,
6 we are only able to tap into those
7 schools that are online.

8 Financial limitations are the
9 main reason the District has not yet
10 worked on integrating the system. The
11 installation of one system can cost
12 anywhere from \$25,000 to \$35,000. For
13 instance, we recently in January went out
14 to Dobbins High School. The principal
15 was having problems with students smoking
16 marijuana in the hallways and things of
17 that nature. She had an obsolete system
18 that probably had been put in at the
19 inception of this program, which started
20 around 1993 as a result of the assault of
21 a teacher inside Martin Luther King by a
22 student. So that's when this camera
23 system was started.

24 We have concentrated on high
25 schools and worked backwards,

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 concentrating on the high schools having
3 them, then getting them to middle schools
4 and then elementary schools.

5 We are going to have to rethink
6 our strategies because in light of the
7 Sandy Hook, Connecticut incident and also
8 of the recent abduction from the Bryant
9 School of five-year-old Nai'lla, we're
10 going to have to rethink that.

11 Every elementary school needs
12 to be hard and needs to have camera
13 systems, needs to have Aiphones, and
14 probably needs to have metal detectors
15 and scans. Just this morning at the
16 Reynolds School a seven-year-old brought
17 a fully-loaded 357 magnum into the
18 schoolyard and pointed it at another
19 student. So these are the things we're
20 dealing with security-wise.

21 The system consists of a
22 closed-circuit television system
23 involving monitors, interior and exterior
24 cameras, and a DVR, digital video
25 recorder. The DVR records on a 24-hour

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 basis and continues to record even during
3 playback.

4 The success in any camera
5 surveillance system involves efficient
6 monitoring of the camera. Most high
7 schools have a school police officer
8 whose sole responsibility is to monitor
9 their systems. The officers monitor the
10 cameras from a room usually designated at
11 the school police office. Schools such a
12 South Philadelphia High, Fels High
13 School, Roxborough, Overbrook, and Martin
14 Luther King have excellent monitoring
15 systems. Recently school police officers
16 at South Philly High arrested a student
17 who was in possession of a fully-loaded
18 38 caliber weapon on school property by
19 utilizing CCTV remote surveillance.

20 Elementary and middle schools
21 often do not have the resources to
22 monitor the camera system unless the
23 monitor is placed directly in the office.
24 And that's a place where they have shared
25 responsibility. Maybe a secretary has to

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 monitor the Aiphone, and they just can't
3 do it.

4 This is not an ideal situation.
5 Cameras are useful in detecting thefts,
6 trespassers, students engaged in
7 disorderly or criminal conduct, and also
8 detering this behavior. Ideally, there
9 should be a monitor in every office or
10 operation center in each school, with one
11 person designated to monitor that system.

12 To ensure uniformity, the
13 District gives capital budgeting the
14 specs for our cameras whenever bidding is
15 to take place for camera systems, such as
16 new construction. We have two alarm
17 technicians who currently conduct
18 installation of cameras. Installation of
19 cameras and alarms must be done after
20 school hours. The same applies to alarm
21 systems and Aiphone installations.

22 Camera system maintenance is
23 performed during the day. The setup is
24 that there are usually 12 interior and
25 four exterior cameras installed in each

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 school. At this time, our technicians
3 are not able to maintain the exterior
4 cameras unless we have help from our
5 Facilities Management, because we do not
6 possess the necessary equipment to access
7 these cameras. Bucket trucks, because
8 these cameras are located so high on the
9 buildings, are needed to access exterior
10 cameras.

11 Another challenge is that
12 during the previous administration, \$7.5
13 million was devoted to the 19 Schools
14 Camera Project, and 19 schools --

15 COUNCILMAN JONES: Repeat that
16 number. I'm sorry.

17 CHIEF INSPECTOR DORSEY: It's
18 called the 19 Schools Camera Project.

19 COUNCILMAN JONES: No; the
20 amount.

21 CHIEF INSPECTOR DORSEY: Seven
22 point five million dollars.

23 These cameras were installed by
24 an outside company, IBS. Therefore, our
25 technicians cannot perform maintenance on

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 these cameras if they become defective
3 without voiding the warranty. Our legal
4 department is working on this issue with
5 the company.

6 Approximately 65 schools are
7 without cameras. Other systems, like
8 Dobbins, have become obsolete, while some
9 have older systems that are still
10 operational; i.e., they're in black and
11 white, but they still function well.

12 There is great value in having
13 camera systems in schools. They deter
14 crime, aid in apprehending criminals,
15 provide realtime testimony, and provide a
16 feeling of security for staff and
17 students.

18 District attorneys, homicide
19 units, and divisional detectives and
20 other investigators request recorded
21 camera footage for court and for the
22 investigation of crime. The challenges
23 of maintaining these systems are cost,
24 maintenance, human resources needed to
25 monitor them and to install the system,

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 and keeping up with trends in technology.

3 I'm open for questions from
4 members.

5 COUNCILMAN JONES: Is it the
6 will of the group that we hear all of the
7 testimony and then we'll do questions.
8 But don't go anywhere, because this was
9 very thorough. I have two pages of
10 questions. You answered most of them
11 within your testimony. So thank you.

12 CHIEF INSPECTOR DORSEY: You're
13 welcome.

14 MR. HOPKINS: Good afternoon,
15 Councilman Jones and members of the City
16 Council Committee on Public Safety.
17 Thank you for the opportunity to provide
18 testimony today. My name is Ronald
19 Hopkins. I'm SEPTA's Assistant General
20 Manager of Operations, and I'm here today
21 to provide testimony on SEPTA's program
22 regarding the use of cameras at the
23 Authority.

24 As the fifth largest public
25 transportation system in the nation, we

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 take public safety seriously. With me
3 today is SEPTA's Police Chief Tom Nestel.

4 SEPTA's current camera
5 population includes a total of 12,089
6 cameras systemwide. We have 1,185
7 cameras at our Broad Street Subway
8 stations, our Market-Frankford subway
9 stations, and our trolley stations. We
10 also have 195 cameras at seven regional
11 rail stations, including Market East,
12 Suburban Station, 30th Street Station,
13 Olney, Fox Chase, and Fern Rock Stations.

14 We have 1,348 cameras on the
15 entire fleet of 125 Broad Street Subway
16 Line cars; 2,200 cameras on the entire
17 fleet of 220 Market-Frankford Line cars;
18 5,499 cameras on 772 buses, which is
19 approximately 55 percent of the fleet,
20 with plans to equip the remainder of the
21 entire fleet; 304 cameras on 38 trackless
22 trolleys; and 1,358 cameras on 120
23 regional rail cars.

24 All our camera views associated
25 with the stations are directly shared

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 with the Philadelphia Police Department's
3 Realtime Crime Center. The video
4 retrieved from incidents involving SEPTA
5 vehicles is also shared with the
6 Philadelphia Police Department after
7 downloading the video at SEPTA's offices.

8 Recent collaboration with the
9 City in the use of cameras at SEPTA
10 stations and on our vehicles resulted in
11 the apprehension of the suspects involved
12 in the following incidents: There was a
13 shooting incident at 46th and Market
14 Street Station, another shooting incident
15 at our Susquehanna Station on the Broad
16 Street Subway, a homicide in the Spring
17 Garden section of the City where we used
18 video from our station to identify the
19 suspect, and as you mentioned at the
20 opening, the attack of a woman thrown
21 into the track area at Chinatown Station.
22 We were able to gather that video.

23 The video is also shared with
24 the Philadelphia School District if there
25 are events involving school students. We

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 feel these collaborations promote the
3 common goal of crime prevention, and when
4 there is an incident, we all work
5 together to reach a positive resolution
6 as quickly as possible.

7 Thank you for the opportunity
8 to be here in City Council today and I'm
9 available to answer any questions.

10 COUNCILMAN JONES: We're going
11 to go to PHA, and then I guess because of
12 the amount of good information that we
13 can get out of that, we'll start
14 questions from there.

15 Good afternoon. Please state
16 your name for the record and begin your
17 testimony.

18 MR. JEREMIAH: Good morning,
19 Chairman Jones, members of the City
20 Council Committee on Public Safety. My
21 name is Kelvin Jeremiah. I'm the Interim
22 Executive Director and the HUD-appointed
23 Administrative Receiver for the
24 Philadelphia Housing Authority. Also
25 joining me this afternoon is PHA's Police

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 Chief and Director of Public Safety Chief
3 Benjamin Walton.

4 I am here today to brief the
5 Committee of the steps PHA is taking to
6 create safer and more secure communities
7 for both our residents and the citizens
8 of Philadelphia.

9 Let me say at the outset that
10 nothing is more important than the safety
11 of PHA's families, which is a critical
12 component of our mission. Indeed,
13 security is the cornerstone of a
14 neighborhood's health and stability, and
15 providing for the safety of our residents
16 must be, has to be, our first priority.
17 As PHA develops a long-term vision for
18 increasing its public housing stock,
19 improving the quality of life for our
20 residents by providing safeguards for
21 their well-being and implementing
22 strategies that will reduce both the
23 likelihood and incidence of crime are
24 critically important.

25 In August 2012, PHA conducted a

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 resident survey designed to gauge the
3 interests and concerns of our residents
4 around public safety. We have revised --
5 as a result of the survey, PHA began work
6 on a major new initiative to improve
7 public safety at our sites. We have
8 revised our long-term public safety and
9 security strategy by rethinking the way
10 we do policing by finding new and
11 creative ways to reallocate resources for
12 safety and security; by improving the
13 quality of life for our residents by
14 providing safeguards for their
15 well-being; and, thirdly, implementing
16 strategies that will reduce both the
17 likelihood and incidence of crime.

18 At the core of PHA's new safety
19 and security strategy is the Safe,
20 Affordable Housing for Everyone, or SAFE
21 Program. PHA has invested upwards of \$20
22 million in the SAFE Program through key
23 initiatives like the expansion of the PHA
24 police force and the installation of an
25 upgraded closed-circuit television

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 technology network.

3 The expansion of PHAPD
4 includes, for the first time in more than
5 a decade, the hiring and deployment of 50
6 new sworn police officers and eight new
7 senior and lieutenant level officers.
8 This adds to the existing force of
9 approximately 28, and this is being paid
10 for by reducing the total number and
11 costs associated with private security
12 guard contracts.

13 In response to the addition of
14 officers, the PHAPD has also developed a
15 new patrol deployment plan. This
16 deployment plan increases the number of
17 officers on duty, with a focus on late
18 night shifts; the number of patrols;
19 officers' familiarity with the
20 neighborhoods and issues where they will
21 be serving; and the overall
22 accountability for crime reduction and
23 issue resolution.

24 The new officers will focus
25 their efforts in the beginning primarily

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 on five priority developments. These
3 developments are Blumberg Apartments,
4 Raymond Rosen, Wilson Park, Whitehall
5 Apartments, and West Park Apartments.

6 The officers will also rotate
7 patrols throughout PHA's other
8 developments. The new deployment plan
9 will now afford PHA the opportunity to
10 have 24-hour presence at its priority
11 sites and is placing a police officer,
12 assigned 24 hours, inside the security
13 booths at Blumberg and West Park.

14 Additionally, PHA's SAFE
15 Program also includes the appropriation
16 of nearly \$10 million, subject to the
17 availability of federal funding -- I
18 note, Councilman, that we do not receive
19 Council/City funds for that purpose, and
20 I would love to get some, for the record.

21 COUNCILMAN JONES: Strike that,
22 please.

23 MR. HOPKINS: Just for the
24 record.

25 These additional \$10 million

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 will fund security contracts for
3 technology upgrades that are designed to
4 improve public safety and access control
5 at PHA buildings.

6 Over the course of the next 14
7 months, nearly 500 new cameras will be
8 installed throughout PHA's properties.
9 These include a mix of fixed internal and
10 external as well as external Pan, Tilt,
11 and Zoom cameras, all of which are
12 digital.

13 The goal is to establish a CCTV
14 presence in communal areas and allow for
15 the surveillance of our developments and
16 office locations that PHAPD has deemed a
17 priority.

18 The CCTV rollout will be
19 augmented by new access control equipment
20 to electronically monitor some 383 doors.
21 This gives PHA the ability to provide
22 enhanced security and control, while
23 establishing the necessary infrastructure
24 to permit a transition to a key card
25 access system across our developments.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 As of the delivery of this
3 testimony, Mr. Chairman, 96 cameras are
4 in the process of being installed at six
5 PHA developments, which are Hill Creek
6 Apartments, Emlen Arms, Spring Garden
7 Apartments, Whitehall Apartments, Gladys
8 B. Jacobs, and Morton village.

9 Twenty-six additional cameras
10 will begin to roll out in PHA's central
11 warehouse next week, with 54 more
12 scheduled to be begin rollout at Raymond
13 Rosen, Johnson Homes, Bentley Hall, and
14 Katie B. Jackson over the next two
15 months. PHA hopes to confirm the
16 schedule for the remaining locations in
17 the coming weeks and will gladly provide
18 this information to the Committee.

19 By the conclusion of the
20 installation of cameras and upgrades
21 targeted for 2014, PHA will have
22 approximately 800 cameras in place across
23 the PHA footprint.

24 While the safety and security
25 of our residents is a top priority for

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 the Authority, we recognize that we
3 cannot do this urgent work alone. Thus,
4 over the last several months, PHA has
5 worked diligently to improve residents'
6 and stakeholders' relationships, to
7 identify vulnerabilities in our current
8 security systems, designed strategies to
9 address those challenges, and provide a
10 framework for how we can consistently
11 improve safety over the long term,
12 understanding that it is a permanent part
13 of our mission.

14 Preventing and combatting
15 criminal activities through better
16 coordination is also an integral part of
17 the PHA's SAFE Program. PHA, the
18 Philadelphia Police Department, and other
19 City, State, and federal law enforcement
20 agencies who serve our communities
21 understand I think that some
22 responsibilities of keeping neighborhoods
23 safe can only be addressed through
24 effective policing and improved
25 communication between organizations.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 To that end, PHA is working to
3 connect our system to the City's greater
4 camera surveillance system, and both our
5 police and IT departments have been
6 working closely with the Philadelphia
7 Police Department and the City's IT
8 department to make this a reality.

9 In the further spirit of
10 cooperation, PHA has become a key
11 stakeholder in the Mayor's Youth Violence
12 Reduction Initiative, a federally funded
13 pilot program, which aims to reduce
14 instances of youth violence in the 22nd
15 Police District, where PHA has a high
16 number of assets, both capital and
17 programmatic.

18 It is our goal to maximize
19 participation in programs such as this to
20 make PHA a safer, more secure place for
21 its residents and their neighbors
22 citywide.

23 Thank you for your time. I'm
24 available to answer any questions you and
25 the members may have.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN JONES: Thank you
3 all for your testimony. I'm going to
4 take the Chair prerogative and let the
5 President of Council ask his questions
6 first, not because --

7 COUNCIL PRESIDENT CLARKE: I
8 defer.

9 COUNCILMAN JONES: You defer?
10 All right. That's why you're President.
11 Councilwoman Bass.

12 COUNCILWOMAN BASS: I will step
13 right up.

14 I just have a couple of brief
15 questions. First for SEPTA. Good
16 afternoon.

17 MR. HOPKINS: Good afternoon.

18 COUNCILWOMAN BASS: And I just
19 wanted to know if you had some idea or
20 figures available on the rates of
21 apprehension as a result of the extensive
22 camera network that you have. I've been
23 over to 1234 Market Street and I've seen
24 your system, and it's very, very
25 impressive. I mean, you can't spit out a

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 piece of bubble gum on a SEPTA platform
3 without somebody seeing it, and I think
4 it's impressive, but I would like to get
5 an idea of how effective it's been in
6 terms of actually getting folks who are
7 doing things that they should not be
8 doing on SEPTA property.

9 I have a sister who is a driver
10 for SEPTA, who has been through it all,
11 as most drivers. I think people don't
12 realize how much drivers actually go
13 through, and attacks on the general
14 public are very disturbing, but when you
15 attack a driver who is actually driving
16 and you have other lives in your hands
17 besides your own, it's just very, very
18 disturbing. So I just didn't know if you
19 had any figures so that could quantify
20 how effective your system has actually
21 been.

22 MR. HOPKINS: Yes. We do have
23 some figures. In fact, the Chief and I
24 were just talking about the most recent
25 numbers, and just so I don't get them

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 wrong, it was about 133 incidents, Part I
3 crimes, that we were able to use our
4 video to apprehend a suspect, and that
5 was in Calendar Year 2012. And the
6 previous year, in 2011, it was 75.

7 COUNCILWOMAN BASS: And how
8 many incidents would you say there were
9 beyond what was caught on camera on SEPTA
10 property?

11 MR. HOPKINS: We're still going
12 through some of those numbers to be able
13 to give it out, but I know it was
14 roughly, I think, about 280 Part I is
15 what we're looking at.

16 COUNCILWOMAN BASS: And in
17 those areas where those additional crimes
18 occurred, are you looking at camera
19 systems for those areas, or what's the
20 status of that?

21 MR. HOPKINS: All our cameras
22 when we installed our cameras, especially
23 at stations, we went through a process to
24 make sure that we had all our stairs, our
25 elevators, all the areas where crimes

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 typically occurred is where we actually
3 identified them. So most of our stations
4 as far as like our normal station may
5 have about 20 cameras in there versus a
6 larger station like AT&T has about 45
7 cameras throughout the station. So it
8 varies. And we haven't installed any as
9 a part -- any additional ones as part of
10 any crimes, but as you heard from other
11 speakers, the Pan, Tilt, and Zoom
12 cameras, we do have typically at least
13 two at each of our stations, and one of
14 the things we'll do, if there's an active
15 incident or if we're having an high area
16 that needs our police attention, we will
17 have people monitor that area and
18 redirect the Pan, Tilt, and Zoom cameras
19 in that specific area. So that way, we
20 can capture it. So we kind of laid out
21 every station based on having our SEPTA
22 police actually identify areas that are
23 most important to us.

24 COUNCILWOMAN BASS: Okay. So
25 it looks like you have about a 50 percent

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 rate of addressing this issue in terms of
3 apprehension from the crimes that were
4 committed to the incidents you actually
5 have on camera.

6 MR. HOPKINS: That's -- I mean,
7 yes. If we have the 238, and, like I
8 said, we'd have to break down where some.

9 COUNCILWOMAN BASS: You said
10 238 or 280?

11 MR. HOPKINS: I'm sorry; 280.
12 But we'd have to break down where those
13 other locations are to see if there were
14 any cameras in those areas. I don't
15 think we got to that level of why we
16 weren't able to use video at the
17 particular time.

18 COUNCILWOMAN BASS: That would
19 be helpful.

20 CHIEF NESTEL: Councilwoman, we
21 have a number of where we have --

22 COUNCILMAN JONES: You got to
23 speak into the mic.

24 CHIEF NESTEL: -- where we have
25 pictures, but have not successfully

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 identified the suspects yet.

3 COUNCILMAN JONES: State your
4 name.

5 CHIEF NESTEL: My name is
6 Thomas Nestel. I'm the Chief of Police
7 for SEPTA.

8 So we still have a number of
9 open cases out of that 280-some where we
10 do have video, we have pictures of the
11 suspects, but we have not closed those
12 cases yet.

13 COUNCILWOMAN BASS: Okay. So
14 there are still some out there that just
15 haven't been closed yet?

16 CHIEF NESTEL: That's correct.

17 COUNCILWOMAN BASS: That you're
18 working on.

19 And one other question. So was
20 there a single contractor who has
21 basically done the SEPTA camera system or
22 were there multiple contractors?

23 MR. HOPKINS: For the vehicles,
24 yes. It's been GE, similar company. I
25 don't know if it's the same group that's

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 doing it for the schools, but our station
3 cameras were done as part of a multi
4 million dollar -- like a whole bunch of
5 other activity, audiovisual public
6 address systems, and that was done by the
7 same contractor. It was Fairfield --
8 Farfield, I believe it was. But there
9 were two separate contracts that did our
10 60 subway stations.

11 COUNCILWOMAN BASS: So
12 essentially it's just the two?

13 MR. HOPKINS: Yes.

14 COUNCILWOMAN BASS: And just a
15 quick statement for Mr. Jeremiah. I
16 notice that you said that there was a
17 number of cameras that were going in to
18 different facilities and there's some
19 that are in process, some that have
20 actually been done. Could you provide a
21 list to the Chair of what's actually been
22 done, what's in process, what's scheduled
23 to receive cameras, what's remaining, at
24 some point soon to the Chair as soon as
25 you have it available?

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 MR. JEREMIAH: I'd be happy to
3 do that.

4 COUNCILWOMAN BASS: Thank you.
5 That's it.

6 COUNCILMAN JONES: Council
7 President.

8 Thank you, Councilwoman.

9 COUNCIL PRESIDENT CLARKE:
10 Thank you, Mr. Chair.

11 Thank you for your testimony.
12 A couple of quick questions, and kind of
13 where I thought you would be, having
14 known all of you over a period of years.
15 Is the part of the public-private
16 partnership, you all being the public
17 partnership, let me ask a couple of
18 questions with respect to specifications
19 on cameras. Would it be -- if you can't
20 answer this today, that's fine. If you
21 can just get information.

22 With respect to the specs on
23 cameras for each agency, I understand
24 there are probably certain standards and
25 they may be different for say SEPTA that

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 has moving vehicles versus the stationary
3 target, but I got to believe that there
4 is some level of standards for each
5 agency. So if you can kind of tell us
6 now or provide later the minimum
7 standards as it relates to resolution,
8 types of cameras, recording capacity,
9 those things, it would be helpful.

10 The other thing, the other
11 question -- and I'm kind of going
12 somewhere with this -- is the number of
13 cameras that you have in your facilities
14 or locations that have an external,
15 because I know a number of you probably
16 have some internal cameras, particularly
17 School District and I guess SEPTA to some
18 degree and Housing Authority -- the
19 number of cameras that you have either in
20 external on your facilities; i.e.,
21 buildings or platforms, those numbers.
22 And then the other question to follow up
23 on that particular one, do you have the
24 capacity to extend the feed, be it
25 fiber optic or be it wireless, beyond your

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 jurisdiction? So if you have a building
3 that's within the footprint of the
4 traditional community and you have a
5 camera outside and its feed, be it
6 fiberoptic, does that camera or that
7 building or that system have the ability
8 to extend its feed out two, three blocks
9 into the general community, surrounding
10 community? Do you understand what I'm
11 saying? So I know it's like a lot of
12 questions, but let me tell you where I'm
13 going. Let me cut to the chase. I know.
14 I sometimes do that. I'm sorry. I don't
15 get to sit up here much. I'm sorry.

16 At the end of the day, I
17 anticipate that you all will have a
18 clear, concise strategy for all of your
19 jurisdictional issues relating to sites
20 and all of that, but the question remains
21 how can we expand the capacity beyond
22 your footprint to help us in
23 neighborhoods and help the City of
24 Philadelphia police in neighborhoods
25 where we may not have the ability to have

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 fiberoptics or cable, and can we expand?
3 Because in Baltimore what they did in
4 Johns Hopkins, which was a pretty
5 expansive facility down right in the
6 middle -- it happened to be adjacent to
7 one of the most challenging communities
8 in Baltimore. They basically, utilizing
9 their resources, expanded that out into
10 the adjacent neighborhood, and then that
11 was fed into the police, the City of
12 Baltimore's crime camera program. So it
13 actually enhanced not only Johns Hopkins'
14 safety net, but it gave the City of
15 Baltimore the ability to enhance their
16 safety net as it relates to crime cameras
17 in the neighborhood.

18 So could you all conceivably,
19 one, expand your footprint? And, two,
20 the reason why I was asking you about
21 capacity, under government, be whatever
22 level of municipal, state, there is a
23 thing -- and, Councilman, what did they
24 call that? The requirements contract?

25 COUNCILMAN JONES: It's a

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 requirement contract where you can
3 jointly do procurement, which would give
4 each of the individual entities a cost
5 savings resulting by the volume of
6 cameras that we would purchase.

7 COUNCIL PRESIDENT CLARKE: And
8 I understand it's actually because we're
9 a municipal authority or government
10 authorities, the purchase price,
11 particularly as it relates to the taxes
12 associated with the purchase, diminishes
13 the cost dramatically.

14 So the reason I asked about the
15 specs, if the Housing Authority, School
16 District, SEPTA, and the City of
17 Philadelphia said, You know what, we're
18 going to go out for a contract for
19 purchase of services jointly, that could
20 probably diminish significantly the cost
21 of, at a minute, the purchase of the
22 cameras themselves. In terms of the
23 operation, I'm assuming everybody would
24 like to have some level of individual
25 operations capacity, but I'm just trying

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 to figure out -- as an example, it
3 appears that SEPTA and the Housing
4 Authority have a little bit more money
5 than the School District. So we want to
6 be in a position -- and all of you all
7 have more money than us. Well, maybe not
8 the School District. But we're just
9 trying to figure out a way to maximize
10 opportunities.

11 MR. HOPKINS: When you think
12 about, to answer the first question,
13 about the cameras that are outside of our
14 footprint, out of our 1,200 cameras that
15 we have, roughly 1,200 cameras at our
16 stations, there's a very small percentage
17 of that that is actually outside of our
18 stations, like Walnut, Locust, City Hall.
19 We do have some outside cameras, but it's
20 a very small percentage.

21 But to answer your second
22 part -- I think it's probably the most
23 critical -- is that we do have to be able
24 to transmit that information or share it
25 is to be on the fiber because of the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 heavy data requirement to be able to
3 transmit that. And we do have a fiber
4 backbone throughout our system, which is
5 how we're able to -- all our 1,200
6 cameras, we already share with the
7 Philadelphia Police Department because
8 they have the same work station that we
9 have at SEPTA. So that capability is
10 there. It's just a matter do you expand
11 outside and be close enough to your fiber
12 network.

13 COUNCIL PRESIDENT CLARKE:

14 Right. So your fiber could actually
15 allow us to build out off -- we can build
16 off of the fiber that you currently have?

17 MR. HOPKINS: Yeah. I mean,
18 obviously we'd have to look at how many
19 cameras and how much more capacity to
20 take a look at that. That's more on the
21 technical side, but I understand what
22 you're looking for with respect to the
23 cameras.

24 COUNCIL PRESIDENT CLARKE: Our
25 problem was, we were operating with Broad

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 Street and Susquehanna Avenue. Maybe
3 that was the extent of it.

4 Okay. Thank you.

5 MR. JEREMIAH: So,
6 Mr. Councilman, we do have similar
7 capabilities. What we're confronting
8 with the City is a compatibility issue
9 that we're working to resolve. So we are
10 not yet able to share those feeds. The
11 expectation is that we'll be able to do
12 that and do it in realtime.

13 COUNCIL PRESIDENT CLARKE: What
14 does that mean, if you could say?

15 MR. JEREMIAH: I'm sorry?

16 COUNCIL PRESIDENT CLARKE: What
17 does that mean, if you can say here
18 today?

19 MR. JEREMIAH: What that means
20 is that we have -- the PHA system is
21 different than the City's infrastructure,
22 the City's system. We're working to
23 resolve that compatibility issue so that
24 we can be -- "we," PHA -- would be able
25 to share and receive information.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCIL PRESIDENT CLARKE: So
3 the resolution centers on technology and
4 not bureaucracy?

5 MR. JEREMIAH: Absolutely not.
6 It's a technological one, not
7 bureaucracy.

8 COUNCIL PRESIDENT CLARKE:
9 Okay.

10 CHIEF INSPECTOR DORSEY: And
11 currently we do not have those
12 capabilities. We don't have that
13 fiberoptic thingy built in, you know. We
14 don't have that technology. We don't
15 that thingy, that thingy. So we don't
16 have that capability. And also what
17 happens, I know the Philadelphia Police
18 Department's Realtime Crime Center is
19 working on a fully integrated system. We
20 are not fully integrated within the
21 School District. We are able to tap into
22 those schools that are now online, but if
23 we were able to integrate with the
24 Philadelphia Police Department, which
25 involves not only the schools but also

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 private as well as public entities, then

3 I think that the most that we could get

4 out of that system is realtime crime.

5 When either the school police officers or

6 the police officers as a crime is

7 unfolding, such as that can happen,

8 that's what realtime means, as the crime

9 is unfolding, as the crime is in

10 progress, not after. Right now what's

11 happening is homicide detectives are

12 coming to get our burned DVDs or DVRs

13 recordings of crimes, after they have

14 occurred. Every second, especially in

15 that abduction, is paramount.

16 So if we could get, like you

17 said, the funding, because we do have

18 it -- as a matter of fact, we have been

19 cut -- I think last year or last budget

20 we got \$125,000. We will receive roughly

21 \$50,000, and next year it's projected

22 that will be cut down to \$25,000. And if

23 we have a system that's costing us

24 \$25,000 to install, not talking about

25 maintenance, that's going to put a major

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 quirk in our operations.

3 COUNCIL PRESIDENT CLARKE:

4 Okay. Thank you.

5 Thank you, Councilman.

6 COUNCILMAN JONES: Good

7 questions, Mr. President.

8 The Chair recognizes Councilman

9 Greenlee.

10 COUNCILMAN GREENLEE: Thank

11 you, Mr. Chairman.

12 Good afternoon, everyone.

13 Mr. Hopkins, I was just
14 wondering, how long did it take to roll
15 out all these cameras? I mean, how long
16 has this program been in place?

17 MR. HOPKINS: The station
18 programs were started first, and we
19 started those projects back in about
20 2006, 2007. And they've been up fully
21 functional. Because of the number of
22 cameras, we have had to increase the
23 pipeline, for lack of a better term, to
24 be able to get the video back, but we've
25 been up and running, probably all our

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 stations, since 2006, 2007.

3 Our cameras on our buses, we
4 took a very -- we were certainly
5 supported by Department of Homeland
6 Security money to install -- start
7 looking at our bus fleet and as well as
8 our rail vehicles, and the numbers that
9 we have now out of the 12,000 cameras
10 that we have out there, 11,000 of them
11 are on our buses and trains and trolleys.
12 And I don't know the exact date, but we
13 started right around that same timeframe,
14 2004, 2005.

15 COUNCILMAN GREENLEE: I know
16 you said you planned to equip the entire
17 bus fleet. Do you have a target date on
18 that?

19 MR. HOPKINS: Yes. The ones
20 that we're putting on, we have by the end
21 of this coming June we'll have a total of
22 16,000 cameras on our buses, and that
23 probably gets us to about maybe 80
24 percent of our fleet. The ones that are
25 remaining are instead of retrofitting or

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 putting cameras on some of the buses that
3 are ready to be retired, we start our
4 delivery of a new bus fleet in -- starts
5 in July through December of 2015. So
6 instead of putting cameras on buses that
7 are ready to retire, there will be a
8 population of vehicles out there that
9 don't have cameras, but as the buses come
10 in new, they all are equipped with
11 cameras.

12 COUNCILMAN GREENLEE: Okay.
13 And as far as measuring the success -- I
14 know you talked about this a little bit
15 with Councilwoman Bass -- did you do any
16 study before the records of violence or
17 crime on SEPTA before the cameras were
18 installed as to now? I'm thinking of
19 that because that's what Baltimore talks
20 about, how much they cut down once
21 cameras went in. I don't know if you
22 ever looked at that.

23 MR. HOPKINS: I don't know if
24 we looked at the actual number of crimes.
25 I think one of the big, from a crime

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 standpoint, our fraud campaign, that
3 we've seen those numbers reduced
4 dramatically because we're seeing people
5 post incident go on to a vehicle and
6 submit a claim. So we've seen a very
7 positive trend for SEPTA from a fraud
8 standpoint or a claims reduction. But I
9 think what people are also seeing from
10 things get out in the social media now
11 and when we use our video on vehicles or
12 stations and we catch people, I think the
13 word is getting out there saying that we
14 have eyes on you. I know the Chief is
15 out there on a regular basis saying we
16 have eyes on you. We're apprehending
17 people, and we're trying to make it a --
18 get it out to the public that we have
19 this tool with us.

20 So I'd have to go back to see
21 if we have historical numbers.

22 COUNCILMAN GREENLEE: I was
23 just wondering. And maybe along those
24 same lines, Chief Inspector Dorsey, I
25 know it's sort of -- you don't have them

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 all over the place, but where you've had
3 cameras, have you seen, again, any
4 measurable that you can say decline in
5 incidents that you can that you know of?

6 CHIEF INSPECTOR DORSEY: Well,
7 since I've taken over in November, what
8 we do is, we actually -- it's hard to
9 measure deterrence, as I said, but maybe
10 that's something we should look at.

11 COUNCILMAN GREENLEE: I guess
12 what I'm talking about is crime before.
13 Like you've heard so many incidents at
14 this school, and since you've had the
15 cameras, there's been so many incidents
16 at that school, you know.

17 CHIEF INSPECTOR DORSEY: Since
18 it's been in 1993, I'll have to look at
19 that. Maybe we have them. What we have
20 measured mostly is the weapon detection
21 and the metal detection system. We have
22 measured those, but right now we do not
23 have those statistics. But I'll look
24 into that.

25 COUNCILMAN GREENLEE: Okay. I

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 appreciate that.

3 And I assume, Mr. Jeremiah,
4 they probably haven't been in effect long
5 enough to really get a measurement there.

6 MR. JEREMIAH: That's correct.

7 COUNCILMAN GREENLEE: See, I'm
8 stealing your line, Councilman Jones.

9 What is it? If it ain't measured --

10 COUNCILMAN JONES: Then it
11 ain't managed.

12 COUNCILMAN GREENLEE: Thank
13 you. Thank you very much.

14 COUNCILMAN JONES: I want to
15 thank you for your questions.

16 Also, Councilman Henon was with
17 us. I want to put that on for the
18 record.

19 A couple of quick questions for
20 all members. If I recall from your
21 testimony, how many cameras does SEPTA
22 have on buses and off?

23 MR. HOPKINS: On buses?

24 COUNCILMAN JONES: Together.

25 MR. HOPKINS: Together it's

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 12,000 right now.

3 COUNCILMAN JONES: Twelve
4 thousand cameras, which quadruples
5 Baltimore in effect.

6 How many cameras does the
7 School District have?

8 CHIEF INSPECTOR DORSEY: Five
9 thousand seven hundred sixty-seven
10 individual cameras.

11 COUNCILMAN JONES: And how many
12 does PHA have?

13 MR. JEREMIAH: PHA, 800.

14 COUNCILMAN JONES: Eight
15 hundred cameras.

16 So working together -- do what
17 degree do you work with the City of
18 Philadelphia officially on an integrated
19 system today?

20 MR. JEREMIAH: So as I
21 mentioned before, Councilman, we have
22 been engaged over the last several months
23 with the City's Police Department as well
24 as its IT department to try to address
25 how we can share and link up our two

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 systems.

3 COUNCILMAN JONES: So we're
4 exploring that?

5 MR. JEREMIAH: We are exploring
6 that. I think we are near a conclusion
7 around that. The goal is to make sure
8 that we have an integrated system that
9 can essentially speak to each other, such
10 that the Police Department, if they
11 choose, could remotely monitor what's
12 happening on PHA's site those cameras and
13 similarly PHA can do the same around
14 public cameras that are around its
15 facilities.

16 COUNCILMAN JONES: School
17 Board?

18 CHIEF INSPECTOR DORSEY: We
19 have not been involved in those talks.
20 However, it is our understanding that the
21 Realtime Crime Center wishes to
22 integrate, so we are going to reach out
23 today and see where we are, where we
24 stand in that.

25 COUNCILMAN JONES: And what

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 about SEPTA?

3 MR. HOPKINS: We actually
4 integrate with them on a daily basis. We
5 do have a memorandum of understanding for
6 sharing our video. As I had mentioned
7 earlier, we have -- the Realtime Crime
8 Center has a work station that shows our
9 station cameras, which is about 1,200
10 cameras. The video off of our vehicles
11 is readily downloaded by SEPTA and shared
12 with members of the Philadelphia Police
13 Department.

14 COUNCILMAN JONES: What is your
15 ratio of live monitors to cameras?

16 MR. HOPKINS: Monitoring the --

17 COUNCILMAN JONES: Actual eyes
18 on.

19 MR. HOPKINS: We do not have a
20 staff that monitors the cameras. To
21 catch realtime with 12,000 cameras, it's
22 quite extensive, even the stationary
23 cameras, but when we are -- if there is
24 an incident, we have the capability at a
25 certain location to bring up the 20-plus

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 cameras at a location, and there are eyes
3 in, as Councilwoman mentioned, in our
4 control center. We have our police
5 dispatch as well as our command center
6 where we can bring up the video feeds of
7 a specific location and we can rewind the
8 video there to see if we can catch
9 something while still capturing.

10 COUNCILMAN JONES: I get it,
11 but in a perfect fiscal world, what would
12 be the optimal kind of number of cameras
13 to number of monitors that we should as a
14 municipality similar to what Baltimore
15 has? What would you recommend for us?

16 MR. HOPKINS: Councilman, I
17 don't know if I have that answer right
18 now. I'd have to think about it, because
19 we were always -- our policy within SEPTA
20 has always really been driven more
21 towards the evidentiary collection of the
22 video. So we really never analyzed the
23 eyes on.

24 COUNCILMAN JONES: So we're
25 going to evolve to prevent.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 MR. HOPKINS: I understand.

3 COUNCILMAN JONES: So something
4 to give future consideration of.

5 How about -- I think you do a
6 little better with your eyes on ratio
7 because of the nature of your monitors.
8 Could you answer the question?

9 CHIEF INSPECTOR DORSEY: Well,
10 ideally, right now most of the high
11 schools have the centers. They actually
12 do it the way it's supposed to be done,
13 where we actually delegate an officer
14 whose sole responsibility is to watch
15 that monitor and that operations --
16 actually, it's an operations center,
17 where each school has a room or school
18 police room or suite of rooms dedicated
19 to that.

20 So I would say that at least
21 for, in an optimum world, every school
22 that has a camera should have a resource
23 center or resource room with one person
24 dedicated to do just that. I would
25 say --

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN JONES: That doesn't
3 mean one per camera per person?

4 CHIEF INSPECTOR DORSEY: No;
5 one system.

6 COUNCILMAN JONES: Yes, one
7 system.

8 CHIEF INSPECTOR DORSEY: So I
9 would say right now, projected, possibly
10 100, 120 where we have maybe 60 doing it
11 the right way. That would be like twice
12 as much.

13 COUNCILMAN JONES: But that's
14 something I want you to think about. If
15 manna from heaven, pennies from heaven
16 come from somewhere to pay for these
17 things, then what would be the optimum
18 ratio of eyes on cameras to the number of
19 monitors they would have to actually
20 observe. Same question for you.

21 MR. JEREMIAH: So we have a
22 command center that contains all of the
23 camera feed -- the monitors from the
24 camera feeds that we have, and currently
25 we have a staff of three folks monitoring

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 those. The expectation obviously given
3 the resources that we have, the limited
4 resources that we have, would be to
5 increase that number probably threefold,
6 but that we're not there yet.

7 COUNCILMAN JONES: And since
8 I've gotten the answers I've got, I know
9 the answer to the next question. One of
10 the things that I think was intriguing
11 about Baltimore was that they used
12 criminal intelligence to know which
13 cameras at what time activity spiked and
14 peaked. And so obviously with a school
15 board, departure/arrival times in schools
16 might warrant eyes on at that point
17 versus when the school is closed. That
18 may be counterintuitive to your law
19 enforcement experience, but just from a
20 layperson, we should monitor when those
21 activities are needed most, when criminal
22 activity naturally occurs, so that we can
23 prioritize, A, locations and, B, times
24 that we deploy resources, because they
25 are limited.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 So in your future coordination
3 among yourselves but also with the City
4 of Philadelphia, if we could get a sense
5 of that, it will be helpful for us to
6 take limited resources to get real people
7 at real times when they're needed.

8 So are there any other
9 questions for this panel?

10 (No response.)

11 COUNCILMAN JONES: Seeing none,
12 see, I knew the guys in uniform actually
13 were cheering us on with their head nods,
14 talk about, yeah, we need more people.
15 So I won't put them on the record saying
16 that. But if you will help the
17 administrators to give us that
18 information as we make decisions about
19 procurement allocations to departments,
20 that will be helpful to us.

21 Thank you so much for your
22 testimony.

23 (Thank you.)

24 COUNCILMAN JONES: Will the
25 Clerk please read the names and titles of

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 the next panel.

3 THE CLERK: Bart Blatstein from
4 Tower Investments, Maureen Rush from
5 University of Pennsylvania.

6 COUNCILMAN JONES: We would
7 welcome those who can and have time to
8 stay around. We're going to get a
9 presentation from some of the operators
10 of the system in Baltimore that may give
11 you some ideas of food for thought. So
12 if you can or designate a staff person to
13 stay, that would be helpful.

14 THE CLERK: The panel also
15 includes DVTel and Video Systems.

16 (Witnesses approached witness
17 table.)

18 COUNCILMAN JONES: Thank you so
19 much. And we want to try to incorporate
20 all resources, including the private
21 sector. So we're thankful that you took
22 the time to come down and testify.

23 Could you officially state your
24 name for the record and begin your
25 testimony.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 MS. RUSH: Good afternoon. My
3 name is Maureen Rush. I'm Vice President
4 for Public Safety and Superintendent of
5 Penn Police Department, University of
6 Pennsylvania.

7 MR. BLATSTEIN: Bart Blatstein,
8 President of Tower Investments.

9 COUNCILMAN JONES: In either
10 order, please begin your testimony.

11 MS. RUSH: Good afternoon,
12 Council President Clarke and Chairman
13 Jones and members of the City Council
14 Committee on Public Safety, and a special
15 shout-out to my Councilwoman, Blackwell.
16 I wanted to thank you very much, by the
17 way, for having the opportunity to
18 present our thoughts on this very
19 important issue. A little brief overview
20 of the Division of Public Safety at the
21 University of Pennsylvania.

22 For the Division of Public
23 Safety, we have six departments. We have
24 176 Penn employees, 116 of which are Penn
25 police officers. The Penn police

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 officers are fully sworn, trained, and
3 have the same arrest powers as the
4 Philadelphia police, and, in fact, many
5 of us, including myself, came from
6 Philadelphia police.

7 In addition to police on the
8 streets, we have over 550 Allied Barton
9 security officers that are unarmed, but
10 they provide visibility, they provide
11 walking escorts, et cetera, and they
12 supplement our police. They also are
13 inside of our buildings and hospitals.

14 Just to give you a context of
15 our patrol zone and how we interact with
16 the Philadelphia police, we operate from
17 30th Street Station to the east, 43rd
18 Street to the west, Market to the north,
19 and Baltimore Avenue to the south. And
20 just a context also, because I will speak
21 a little bit about camera sharing that
22 we're going to be doing with Drexel
23 shortly, Drexel is right to our north,
24 University of the Sciences is to our
25 south, and then, of course, we have three

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 hospitals. We have two hospitals for
3 Penn, Presbyterian, University of
4 Pennsylvania Hospital, HUP, and then
5 Children's Hospital, all of which have a
6 lot of security technology.

7 We began integrating CCTV as a
8 force multiplier, and that was the term
9 we used in 1997, and it really has come
10 to fruition that it has been a very
11 successful force multiplier. And in
12 order to sell that in 1997 to a very
13 liberal community at the University of
14 Pennsylvania, we made sure that everyone
15 felt comfortable, so we did a couple
16 things. We have a very strict CCTV
17 policy that is published on our website.
18 We also have a monitoring panel, which is
19 really our community. It's faculty,
20 staff, and students. And when we put up
21 cameras, we put signage up on the street,
22 so very visible, and it's very good for
23 two reasons. Number one, there's no
24 hiding cameras. We're very visible about
25 our cameras, very -- we publish our

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 camera locations in various publications.

3 But it's also a good deterrent for the

4 bad guy who is thinking about maybe

5 committing a crime. And, by the way,

6 when we arrest people for committing

7 crimes in our jurisdiction, we remind

8 them; in fact, a lot of times we'll show

9 them themselves on CCTV, which is always

10 a bright spot for our detectives.

11 We currently have 121

12 Pan-Tilt-Zoom cameras. I heard you had a

13 little bit of background on that. So our

14 Pan-Tilt-Zoom cameras like most PTZs, as

15 they're called, can operate and we can

16 see three blocks in any direction 360

17 degrees. We can zoom in and read your

18 plates, your name plates. So if someone

19 is trying to escape, maybe you need a tag

20 number, and we do.

21 And so those 121 Pan-Tilt-Zoom

22 cameras come into our what we call

23 PennCom Center. It's like our 9-1-1

24 center. We have a 5-1-1 answering

25 center, which is a command control

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 center. We have all of our alarms that
3 come in for the University come into the
4 center, as well as radio calls from the
5 police and Allied Barton, as well as
6 calls for service from our community.

7 Also in that center, which I
8 think you'll like to hear, is that we
9 also years ago in the '90s, around the
10 same time we did the cameras, we worked
11 with then Charlie Brennan, Deputy
12 Commissioner, in integrating our CAD
13 systems, which is our computer-aided
14 dispatch system. So we actually see
15 9-1-1 calls well beyond our patrol zone.
16 And with our MOU, we take about 120 jobs
17 off of the 9-1-1 radio system and through
18 our CAD system let radio know realtime
19 what the end result was on those calls.
20 So we use CCTV on Philadelphia calls as
21 well.

22 The way we use the -- and, by
23 the way, we also have an additional about
24 1,500 stationary cameras inside buildings
25 and on the streets around Penn and the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 University.

3 So I wanted to just give you
4 some example of how we use the
5 Pan-Tilt-Zooms, and having listened to
6 the previous panel in your questions --
7 and I think I understand where you're
8 going with this -- we use them
9 interactively. We do what we call
10 virtual patrol. So we have anywhere
11 between five and seven people in the room
12 at any given time, and what we do is --
13 by the way, Baltimore came up to work
14 with us when they were putting their
15 cameras in. So if these names sound
16 familiar, it's because we talked to them
17 about this.

18 So when a dispatcher or
19 call-taker is not doing something else,
20 like being on the phone with someone,
21 they are doing virtual patrol. And we
22 have split the campus -- well, we split
23 the patrol zone into north, south, east,
24 west, and they all have X numbers of
25 cameras that they watch. The one thing

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 that we learned since 1997 is, you can't
3 put a bank of cameras up and expect
4 people to be able to have any ability to
5 really decipher what's going on. It
6 just -- it's not possible, and they'll
7 wander.

8 But what we do is, every one of
9 the stations has a monitor and they have
10 the control -- they can bring up
11 anywhere, usually like 25 cameras or so
12 for each station, and then they do what
13 police do. They patrol virtually. And
14 they're basically motoring through their
15 joystick up and down the streets, and we
16 have had great success in prevention of
17 crime prior to it occurring.

18 A good example is, a lot of
19 times all college campuses have one big
20 problem, and that is bicycle theft. So
21 we have a billion bike racks on all of
22 our campuses, and unfortunately it draws
23 a couple of types of people. It draws
24 the guys who used to be the robbers who
25 no longer have that ability, so they

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 become common thieves, and bicycles are a
3 great way to fence stuff. So they'll
4 come and they'll do it. But the other
5 problem is, on the other end of the
6 spectrum, we have kids as young as 11
7 years old who will come maybe from the
8 Busty project, they'll come down, and
9 what we try to do is, we spot a kid at a
10 camera -- I'm sorry; by camera at a bike
11 rack and we start to see the bolt cutters
12 come out. We dispatch police immediately
13 to stop that child from doing the act.
14 Then we can take them to their parents,
15 and then we also are involved in the
16 Police Athletic League. We have an
17 officer assigned with Philadelphia
18 police, and we get them involved in that.
19 So proactively you're stopping a crime,
20 but you're also stopping a kid from
21 getting a record.

22 Most recently, for areas such
23 as bike racks and -- I don't know if
24 you're all familiar. I know Jannie is
25 familiar with Penn Park, which is a brand

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 new park that we have on the east end.

3 We have three bridges that go into the

4 park. We have 29 cameras down there, and

5 we just came -- we just installed some

6 new technology. It's a Sony camera. It

7 has analytics, which allows you to set

8 parameters, timelines, and basically

9 build a little block or a line that is

10 obviously invisible to the eye, but

11 people walking down and they break that

12 barrier at midnight when the park is

13 closed, they will automatically hear a

14 message. By the way, when people hear a

15 message, what they do is, they look for

16 where that sound is coming from and they

17 look up and the picture is --

18 automatically the camera is on their

19 face. They're told the park is closed,

20 that they're welcome visit at any time,

21 and the park is secured by the Penn

22 police.

23 We have those now at bike

24 racks, and we're putting them on our bike

25 racks, and what that does for us is, the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 people who are doing virtual patrol, they
3 don't have to take their attention now
4 and worry about the bike racks and the
5 walkways going into, say, Penn Park. And
6 this is a fairly new technology that
7 we've deployed on our campus. It's
8 working really well. And it takes their
9 time and allows them to let the
10 technology handle that problem so they
11 can look at other problems.

12 The other thing I wanted to
13 mention is, Mike Resnick, our Director of
14 Public Safety for the City of
15 Philadelphia, when I saw the article in
16 the paper, I worked with Mike on -- I'm
17 President of the Philadelphia Police
18 Foundation for Commissioner Ramsey, and I
19 invited Director Resnick to come over and
20 visit, because he hadn't yet -- Pedro
21 Ramos back in the day had come to see the
22 center. Well, it was really interesting.
23 Mike was in the room, and while he's in
24 the room -- one of our big problems is
25 retail theft. We have a store called

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 American Apparel that's a hot place to
3 commit retail theft. It's right at 37th
4 and Walnut.

5 While he's standing in the
6 room, we get a call from the manager of
7 the store. The manager of the store
8 steps out. We have him on camera. We're
9 talking to him and watching the manager.
10 The manager then says, Okay, the two
11 women that are committing the retail
12 theft are now coming out. The police had
13 already been dispatched, and the women
14 split up and the police were directed by
15 the patrol -- by the PennCom dispatcher
16 that that woman there, that woman there.
17 They were both apprehended, end of story.

18 So he got to experience that.
19 And we are very early discussions about
20 how we could be helpful.

21 The one thing I will say is
22 that even for us, we can't bring every
23 camera. We don't bring all of those
24 other cameras I mentioned. We're really
25 concentrating on Pan-Tilt-Zooms on the

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 streets. And all cameras are digitally
3 taped, and we hold the tape. They write
4 over digitally from 16 to 20 days. And
5 you can only look at so many cameras, and
6 you only have the capacity, even in our
7 PennCom center, to bring in so many
8 cameras. But the one thing that is -- I
9 was talking Director Resnick, I was
10 saying is, just like we're going to do
11 with Drexel, we have patrols along Drexel
12 that are on Chestnut and Market Street
13 that we co-police, because we have
14 various buildings there. They have
15 about -- I think we have about ten
16 cameras on each side of the universities
17 that rather than -- just because we can't
18 see that camera now, why should we put
19 another camera up. They're \$30,000 to
20 put a camera up for a Pan-Tilt-Zoom. So
21 what we're doing now is, we both employ
22 Tyco as our security integrator. We're
23 going to share the technology to be able
24 to see Drexel cameras. They'll see our
25 cameras. We won't control them. They'll

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 control them. And I think it's a good
3 idea to keep the control where the owner
4 is, but because you're going to -- I'm
5 going to want to see if I'm the
6 dispatcher in the PennCom center what the
7 Drexel person wants to see, and then
8 we're both looking at it. We're both
9 deploying our resources. I would suggest
10 that that would work really well for like
11 SEPTA and us, Philadelphia. And you
12 don't need to have 9,000 cameras coming
13 into one location. It's very expensive,
14 number one to integrate, and, number two,
15 if it can be a call-up, so at the
16 Realtime Crime Center if something is
17 going on in University City area, we'd be
18 happy to be able to push that button and
19 be in communication. We're in
20 communication, by the way, with the
21 Southwest Division, 18th, 16th District
22 and J Band. So we could say, We're
23 watching X and here's the feed.

24 So it would be a matter of
25 really integrating from behind the scenes

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 and saving a lot of money and not having
3 the head-end equipment just being so
4 overwrought with technology coming in
5 that it would almost be useless.

6 So we know that the force
7 multiplier is working. I'm a big
8 proponent of CCTV. We have used it for
9 some active shooter situations, where if
10 we had not had the CAD from Philadelphia
11 police to know that there was a shooting
12 that occurred west of us and that there's
13 two individuals armed with guns crashed
14 into our bollards at 40th and Locust
15 walk, had we not had the Philly CAD to
16 know that that car jacking had occurred
17 out at 52nd and Girard and had our ears
18 on and then brought our camera up -- and
19 we have a videotape. I'd be happy to
20 show you this. In fact, I'm coming back
21 on March 7th post Council meeting in the
22 caucus meeting at the invitation of
23 Councilwoman Blackwell to talk some more
24 about this and about how we use
25 technology along with our community

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 policing methods that we use with the
3 community to decrease a lot of our crime.
4 And I will tell you that since '96
5 through 2011, we've had an overall
6 reduction of 47 percent in
7 all-across-the-board crime, but
8 majorly --

9 COUNCILMAN JONES: Could you
10 repeat that, please.

11 MS. RUSH: Since '96 to 2011,
12 we have a 47 percent decrease in overall
13 crime for our patrol zone.

14 So with that, I appreciate your
15 attention and I'm happy to speak when
16 you're ready with Q and A.

17 COUNCILMAN JONES: The Chair
18 recognizes Councilwoman Blackwell.

19 COUNCILWOMAN BLACKWELL: You
20 didn't have to go to Baltimore. Just
21 come to West Philly. West is best, I
22 keep telling you.

23 Thank you. Thank you.
24 Excellent.

25 COUNCILMAN JONES: Can't argue

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 with that.

3 Mr. Blatstein.

4 MR. BLATSTEIN: I'm a little
5 partial to North Philly. Sorry.

6 Thank you. Good afternoon,
7 Councilpeople. I'm a private developer.
8 I probably have today 75, 80 cameras.
9 Three and a half years ago we had an
10 incident, a violent incident, at 2nd and
11 Girard. It was shocking. Thank God for
12 the cameras. We had cameras inside; we
13 had cameras outside.

14 We caught the bad guys. We saw
15 them wiping their fingerprints off the
16 elevator buttons and then we saw the same
17 geniuses from the cameras putting their
18 fingerprints on the exit doors leaving
19 the building. We got the car from the
20 outside cameras and we got the license
21 plate.

22 Because of our camera system,
23 the crime was settled, was resolved right
24 away. We knew -- the cops knew who --
25 police knew who they were. And although

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 it was a shocking incident, it was
3 resolved very quickly, and because of
4 that, the resources of the Police
5 Department weren't necessarily needed for
6 an extensive search.

7 So I'm a huge proponent. And
8 it was widely publicized about the
9 incident and about our camera system.

10 The flip side to it,
11 Councilman, is that I have a community
12 that's very young and single, and I had
13 several phone calls and contacts from
14 single people wondering if they were
15 caught on camera with significant others'
16 friends; in other words, you know what
17 I'm saying. It's true.

18 There was an incident in the
19 community a year ago where we had a lot
20 of break-ins, car break-ins, and we
21 helped the police solve who it was. They
22 were identified and apprehended, and the
23 break-ins went down significantly.

24 I can't say enough about the
25 camera system, increasing camera system,

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 in the City, and I'm happy to work in
3 tandem with the City to help support
4 this. There's nothing better today than
5 that.

6 COUNCILMAN JONES: Thank you so
7 much.

8 State your name for the record.

9 MR. O'DEA: Good afternoon. My
10 name is Mike O'Dea. I'm the Vice
11 President of Business Partnerships for
12 VidSys. Thank you for allowing me to
13 speak today.

14 About seven years ago, we
15 started to recognize a pattern, and it
16 was more and more technologies were
17 coming to the market, and we focused on
18 video in the beginning. And the glaring
19 problem is, there are no standards in the
20 video and physical security market. So
21 the standard you spoke of earlier are now
22 being developed by independent
23 committees. But the challenge is,
24 they've been owned by large companies
25 over the years, and they've kept the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 standards the way they've wanted them.

3 They'd want to own you as an entity, and

4 they'd want to do everything in your

5 building. And the challenge that that

6 has brought was, a lot of competition

7 came in and has changed that, but it's

8 been a slow process.

9 What we saw was the need to

10 have technology that sits between all of

11 those systems, because the industry was

12 built to not cooperate. At the time, a

13 brand X didn't want to tie their system.

14 They wanted to have everything be theirs.

15 We saw that was going to be a challenge,

16 and all of our clients today, that's one

17 of the top reasons that they move to this

18 type of model, which is leverage over

19 those vendors. And when projects are

20 designed in such with cameras in mind,

21 the new technology could be obsolete one

22 year from the time the project is

23 designed. So people want now to have

24 better purchasing abilities by making

25 better decisions based on what's

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 available.

3 So we consult with CIOs across
4 the country. Boston is a very popular
5 one right now with us. We're doing
6 thousands and thousands of cameras with
7 them, in doing things like allowing them
8 to have multiple video vendors in their
9 organization. So the rail system now is
10 able to buy five different video
11 management systems that don't talk to
12 each other, but they can buy per station
13 as they upgrade, because they now have an
14 integration platform that ties together
15 these disparate systems and gives them
16 excellent economic value.

17 We also sought in the case of
18 the World Trade Center where we used to
19 allow them to put in up to 11 different
20 systems in each building, and it's all
21 integrated together, so cameras are
22 integrated with building management with
23 sensors, and everything is geospatially
24 mapped, so when an alarm goes off,
25 everything is automatically placed for an

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 operator. Because the challenges that
3 you're going to have as a city --
4 everything you've talked about is fully
5 possibly. The challenges, though, are
6 when you get all those cameras, where do
7 you look? The ratios you're talking
8 about operators to cameras is being
9 changed. That is now being answered by
10 data. Integrating the camera systems
11 with CAD systems and other type of sensor
12 systems that are already out there, all
13 the information is out there, but it's
14 siloes between each agency. Everyone has
15 their own system. But upon
16 integration -- I'll show you some
17 examples. If you're able to help
18 operators know where to look, you can
19 have thousands of cameras in your
20 inventory, and they're not sitting
21 monitoring. Baltimore does an excellent
22 job from an intel standpoint, but they've
23 now realized -- we're getting ready to
24 turn on additional private systems for
25 them. They now have five different video

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 systems they have to monitor. People are
3 constantly getting trained, and they have
4 to get past that.

5 So we sit as an overlay over
6 top of all those video management
7 systems, and now we're tying in other
8 data points. So we're going to connect
9 to their CAD system and allow them now --
10 they're going to have a few thousand
11 cameras by November, and none of those
12 additional ones will be theirs.

13 We recently brokered a deal on
14 Friday with Johns Hopkins University.
15 They'll share their system, but they'll
16 also get the city's cameras that are
17 around them, and Johns Hopkins is
18 actually going to make a small donation
19 to the city to help fund that portion.

20 When we stood up the platform
21 for Baltimore, it was actually funded
22 originally by a private investor, who was
23 a corporation. They wanted to help
24 improve public safety. And I'll touch on
25 why it's so important to take a look at

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 this not from just a criminal element,
3 because I've presented a package for you
4 that we've researched and there's
5 information in there that will help you
6 staggering numbers that are financial
7 benefits for the City. So the discussion
8 wouldn't necessarily be what does this
9 camera cost; it's about the economic
10 benefit of improved public safety. And
11 it goes across crime. It's also about
12 transportation and it's also about
13 critical infrastructure.

14 We get 240,000 water main
15 breaks in the country a year. If you
16 were to measure what they cost you as a
17 city right now, if I told you that we
18 could save you a hundred thousand dollars
19 an hour by responding to those events
20 faster, by agencies collaborating and
21 coordinating together, where now
22 everybody is siloed. Public works
23 doesn't have access to police cameras.
24 Police could now better operate together
25 by knowing where the traffic patterns

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 are. We can reroute traffic better. We
3 can get public works safety support
4 faster and start saving money.

5 I'll touch on some of the other
6 financial points, but I'd like to tell
7 you a little bit about a few more cities.

8 Baltimore itself, we were able
9 to integrate 12 different video systems
10 for them in September of 2002 in 90 days.
11 They were actually automatically able to
12 get thousands for this special event.
13 They were turned on temporarily, because
14 it's no longer a technology problem. It
15 becomes a people and process problem.
16 There has to be MOUs and agreement to
17 connect. It becomes a networking issue.
18 We have one of our -- Mike Hughes is one
19 of our subject matter experts on the IT
20 side, because that's the part that we
21 need. We need connectivity. Is there
22 fiber there. Is there any type of
23 connectivity. Because you can share now.
24 You can have 20,000 cameras, like we have
25 right now in Chicago. There are 9,000

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 actually today and in two months, they'll
3 go to 20,000 when they bring in the high
4 schools and other school systems. Then
5 we're going to integrate with CAD, their
6 gunshot detection systems.

7 Another example is
8 transportation. In New York City, all
9 the transportation is run using this
10 platform now. So they have a thousand
11 cameras that are just focused on
12 workflow -- I'm sorry; traffic flow. So
13 what you'll see -- and there's example of
14 this in the report -- they're able to --
15 a sensor will pick up transportation has
16 slowed down, traffic has dropped below a
17 certain speed. Cameras in that area will
18 be immediately teed up and an operator
19 will start managing that. And we call
20 this situation management, as you'll see
21 this evolve. Then they have ConOps and
22 SOPs that step up, and operators start
23 following whatever their agency policy
24 is. And they are actually responding to
25 accidents now before 9-1-1 calls come

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 from, and they're able to assess from the
3 scene. They become the first officer on
4 scene, and they're trained to gather the
5 information that officers typically do
6 when they arrive in a patrol car. So by
7 being able to proactively do that,
8 they're able to reduce congestion. They
9 have numbers as much as 50 percent
10 decrease in response and clean-up time.

11 And there's an interesting
12 statistic that the City of Philadelphia
13 has a vehicle accident cost of \$8.7
14 billion or \$1,460 per person for the
15 overall effects of accidents, direct and
16 indirect. But congestion alone costs the
17 City \$3.27 billion a year in indirect
18 expenses. If we took 10 percent of that
19 by helping you improve the transportation
20 flow, 10 percent reduction in time, we're
21 dealing with \$300 million. That's one
22 department by 10 percent.

23 If we look at crime and address
24 that from a 10 percent factor, Baltimore,
25 Chicago, Houston, everyone that we work

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 with has an average of 10 to 33 percent
3 reduction in crime, and that's studied
4 over a three-year period. There's
5 numbers in here to show what they get for
6 their money. They get an average of
7 immediate justifiable return of \$1.50 per
8 camera for every dollar spent to \$4.30
9 per camera. And that's based on
10 reduction in policing costs, reduction in
11 the public safety system. You have a 98
12 percent plead-out rate for people caught
13 on crime with cameras. The system gets
14 faster. It's quicker.

15 So if you start to look at
16 these collective numbers on policing
17 alone and -- crime going down by 10
18 percent saves the City \$33 million a
19 year, just 10 percent. If we go to 25,
20 it gets up to \$70 and \$80 million. So if
21 we look at it collectively as a city --
22 we create master plans now with the
23 larger cities, and we start with the
24 integration plan for all the various
25 agencies, because once you have that, you

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 have eyes everywhere. Then you can
3 determine where do we really put our
4 cameras. The expensive part is not the
5 integration. It would be a fraction of
6 what you've spent so far. But once you
7 have those tens of thousands of cameras,
8 now we determine where don't you have
9 eyes. Where do you need them now. Then
10 you're able to make strategic, informed
11 decisions on where to put things and when
12 to put them. Many often will move their
13 cameras around according to where their
14 crimes are.

15 The situation with SEPTA, we
16 have that same thing in Boston where
17 they're now able to connect to the train
18 systems. In Baltimore they now have the
19 ability to go in and follow a subject.
20 They have above-ground cameras. A lot of
21 subjects will run into a train station.
22 They lose their eyes at that point. So
23 now the new integration I don't believe
24 you got to see is, they can now follow
25 into the state cameras. So in Maryland

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 we have the first city and state
3 integrations. We're now doing it in
4 airports with TSA and airport security
5 where they don't even integrate together.
6 But the key is, everybody gets to operate
7 independently.

8 You'll find an example of a
9 smaller city in Texas called Plano, was
10 just voted the most -- the best-run city
11 in the country. Three years ago when we
12 worked with them, we created the model of
13 there's going to be a platform and it's a
14 software technology. The platform will
15 allow you to integrate anything they have
16 from cameras to begin with, and then it
17 brings in all their other data. They're
18 now able to do things like eliminate --
19 reduce the cost of alarm monitoring
20 companies, the Brinks and ADTs of the
21 world that do monitor, of city buildings.
22 Because I can tie in the access control
23 systems and the people that are
24 monitoring cameras now become monitoring
25 situations. And I don't know if we -- I

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 think we have that for you. I'll just
3 skip ahead, but you have that in your
4 deck.

5 So now these agencies are all
6 sharing information. Those are all
7 agencies in Maryland working together.

8 We had a recent event where the
9 last Grand Prix we had 15 different
10 sub-systems. Then we were also tracking
11 weather, lightning strikes, which
12 actually became a problem. We had to
13 execute a shelter-in-place ConOp for
14 them. In the room we had 43 separate
15 agencies, city, state, and federal, in a
16 Marriott ballroom for a stood-up unified
17 command center where everyone had
18 monitors around the room. They were all
19 looking at one unified city system. It
20 was not siloed anymore. And the value to
21 them is unbelievable. They can't go back
22 now.

23 So here's the problem you're
24 going to face. It's a similar problem
25 with cameras. You're going to have so

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 many cameras, you're not going to know
3 where to look. But that's a good
4 problem. This is where we introduce the
5 model of situation management.

6 There's a lot of alarms and
7 events that are happening out there. It
8 could be a CAD system. It could be
9 somebody breaking into a building at
10 night. Software can listen to that and
11 find anomalies that operators can't find.
12 So it listens to it and it detects
13 problems. This is someone trying to
14 break into a building. They're going
15 through with an access control card like
16 you'll have for buildings. The software
17 is able to find that and put that in
18 front of an operator now. So they're
19 only looking at situations around the
20 city. So I can be managing a traffic
21 accident with a HAZMAT spill somewhere.
22 I can drill into that, and the operator
23 now has all the information at their
24 hands from their agency and other city
25 agencies together. And it's your GIS

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 maps, it's your intercom systems, it's
3 your radio system. Everything you
4 already have now has a home and it's able
5 to be used by everyone in the City,
6 primarily public safety, but -- Chicago
7 uses it for snow clearing. The trucks
8 all have GPS, but that goes into another
9 system. We listen to that. They're able
10 to check where snow needs to be cleared,
11 and they manage their streets faster now
12 and they're using police cameras. They
13 don't touch them or control them. They
14 view it, but they now see where all their
15 assets are.

16 Baltimore now has the GPS from
17 the phones of their officers on their
18 BlackBerries. They're able to look and
19 see which officer is where and be able to
20 dispatch them fastest.

21 There is an example. It's a
22 technical example. I won't drill into it
23 for you. But the concept is, everyone's
24 siloes information gets shared in a
25 cloud, if you will, which is sort of the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 popular terminology these days. But we
3 want to give agencies that can benefit
4 from the City's information that it
5 already owns to help improve their
6 operations. And when you have time, if
7 you read through some of the financial
8 numbers, I think you'll see some dramatic
9 numbers by just 10 percent improvements
10 across the board. It is in the billions
11 of dollars.

12 Any questions?

13 COUNCILMAN GREENLEE: Very
14 impressive, and I think the key is the
15 preventing, and I think Ms. Rush talked
16 about that too. Obviously if crimes are
17 committed, we want to catch the
18 perpetrators, but if we can stop it
19 before it happens I think is even the
20 bigger key. And I keep referencing
21 Baltimore. That's what they talked about
22 too, that it was a crime-prevention
23 program more than anything else.

24 Councilman Squilla.

25 COUNCILMAN SQUILLA: Good

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 afternoon. Thank you. It was very
3 impressive. We have, as you hear, so
4 many different organizations that have
5 cameras that would most likely be willing
6 to work with the City to make this
7 happen. What is the cost of something
8 like this for our city?

9 MR. O'DEA: It's software
10 licensing, and for your city, an
11 enterprise model would be created,
12 because small operations, they're done by
13 the number of systems they have. It's
14 not -- Baltimore started at a hundred
15 thousand dollars. There'll be a
16 multi-million-dollar project eventually.
17 We don't see most major cities going
18 over, when they're all said and done,
19 probably a few million dollars, and
20 that's integration of a lot of -- are you
21 familiar with the term "smart cities"
22 that is marketed by companies like IBM
23 and Cisco and such? This is already it.
24 It's already built, and it's COTS. It's
25 software that's already built. It gets

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 configured for you. You're not entering
3 into a long-term engagement with a very
4 big company that's going to own you.
5 This is changing the market. This is the
6 way the federal government is now going
7 too.

8 COUNCILMAN SQUILLA: And would
9 this be a yearly contract and would --
10 I'm sure there would be upgrades?

11 MR. O'DEA: There are upgrades
12 every year. It's a maintenance program,
13 but as a part of those upgrades, one of
14 the challenge is, we stay current with
15 all those underlying agencies. So when
16 we have a partner like DVTel, who does a
17 lot of your video now, when they upgrade
18 their product to their newest thing, we
19 upgrade it as well, and that's part of
20 the cost. So that stays current. It's a
21 management process where someone has to
22 manage this, because otherwise you do
23 upgrades and your system stops working.
24 But we're able to absorb almost
25 everything they do. But one big problem

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 in cities is training. It costs a
3 fortune to train people. And when you
4 bring all these systems together, they
5 now only learn one system. They don't
6 learn all the other sub-systems
7 underneath. They have one. So when you
8 turn on another campus or another
9 building, those are just more assets on
10 the map for the operator to have. We've
11 been able to save hundreds of thousands
12 of dollars just in that.

13 So when we bring the product
14 in, we do maintain it, and then we work
15 very well with them in regards to helping
16 you determine purchase patterns later.
17 We did define standards for video for
18 Houston and Boston, but our goal is to be
19 product agnostic to allow you to pick who
20 you want. Some agencies may want to put
21 something very inexpensive in; some
22 others may want a more robust system with
23 video analytics. So you have that
24 flexibility now. You don't have to worry
25 about is this going out of date or going

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 to be obsolete. The platform remains.
3 You can change cameras and systems when
4 you need.

5 COUNCILMAN SQUILLA: Because I
6 think that's the key too, especially with
7 a lot of private-public partnerships. We
8 have maybe community groups even putting
9 up sets of cameras and doing different
10 things that we could link into. And
11 every time you added a new organization
12 or department into this system, is there
13 an added cost?

14 MR. O'DEA: For cities, we
15 design a specific model, because your
16 problems are all the same; the approaches
17 are different. And they're always taken
18 on as projects.

19 But I'll give you an example.
20 For \$50,000, you could bring on a campus
21 with a 100 cameras. And what typically
22 costs Baltimore \$25,000 to put up a
23 camera, we can -- we did a study where we
24 just gave them \$18 million worth of
25 cameras that it would have taken five

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 years to install, and the total cost on
3 that was, I think -- the add-on was
4 \$250,000. So integration is huge.

5 Now, you're not going to get
6 the quality of a DVTel system all the
7 time. You're going to inherit what we
8 call the in-laws, the technology that's
9 out there, but what it does is, it gives
10 you the best and fastest start to make
11 the most dramatic impact as fast as -- in
12 months as opposed to years, and in years
13 you find out you have problems.

14 COUNCILMAN SQUILLA: And what's
15 the timeline to put something like this
16 together say the City decided to go in
17 this direction?

18 MR. O'DEA: That depends on the
19 City. Every city says they have their
20 politics, and we all know that.

21 COUNCILMAN GREENLEE: Not in
22 Philadelphia. No problem there.

23 MR. O'DEA: So it becomes a top
24 down approach. We are changing
25 governance. We are changing the way

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 people do business. You're telling them
3 now to work together. We've had the
4 Governor come in several times and say, I
5 keep thinking I'm seeing things here
6 because police, fire, all you guys are
7 working together. I never thought this
8 would happen. And I believe what the
9 future will be is, we will evolve into --
10 an emergency operation center will become
11 a city operation center. The assets are
12 already there. They're turned on for
13 storms and big events, but if you already
14 have people on payroll from each agency
15 working in that center every day and the
16 water main breaks happen and they can
17 collaborate over the City's network of
18 information, as Lieutenant Hood calls it,
19 a common operational picture, they
20 collaborate on resolving events faster,
21 clearing traffic faster. All of those
22 things talk about those 10 percent that
23 brings you billions, and I believe that's
24 where cities will go.

25 MS. RUSH: If I may add also,

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 you have to crawl before you run, and
3 this is great stuff, but this is a lot
4 down the line. And there's also going to
5 be integration from people like
6 University of Pennsylvania and the
7 hospitals that we're not going want to be
8 taking on additional costs to run your
9 company.

10 So I think there's a lot to --
11 there's a lot that could be done
12 immediately without anything, and I would
13 just -- it's all great and we have a
14 billion things we'd like to do, but right
15 now, what we want to do is crime, and
16 that's what the City of Philadelphia I
17 think is definitely needing to look at.
18 And you have a billion cameras just
19 within SEPTA and the private entities
20 that are already here. If we can just
21 push that into your -- it's not going to
22 probably be the 9-1-1 center, but the
23 Realtime Crime Center so that they can
24 see what we're seeing. And also just
25 even from a GPS map to see all the

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 cameras that are already in Philadelphia.
3 I think it would be startling for
4 everyone to say, wow. And I know the
5 Philadelphia police have done that and
6 it's worked quite well and that
7 unfortunate homicide of the CHOP doctor
8 where people are registering on the
9 website for the Philadelphia police that
10 they're willing to have their cameras be
11 viewed. Now, it's not realtime, but at
12 least the detectives know where to go.

13 So there's a lot of steps
14 going. There's certainly the future
15 ones, but, you know, there's going to be
16 costs, there's going to be integration
17 from established programs, but there's
18 ways that -- cameras are just amazing,
19 and they are a force multiplier. And I
20 did want -- one thing that you said that
21 I totally agree with, when you go into
22 court and you have a digital DVR -- DVD,
23 I should say, there's no argument.
24 There's usually a plea, and it saves a
25 lot of police overtime and you get a

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 conviction.

3 COUNCILMAN SQUILLA: My
4 question, though -- I don't think you
5 answered it all the way -- was, what
6 would be the timeline of setting
7 something like that up? Would it be --

8 MR. O'DEA: In a case of DVTel
9 where they have several deployments --
10 we're already integrated with the
11 majority of the major products that are
12 out there, so you don't have to build
13 integrations. It's configuring. And one
14 per person configures about 100 cameras a
15 day. So if we went with DVTel as the
16 initial deployment, wherever they are,
17 they could be up in -- depending on
18 agreements between IT and IT getting
19 connectivity, our labor part would be 90
20 days.

21 COUNCILMAN SQUILLA: Ninety
22 days?

23 MR. O'DEA: Yes.

24 COUNCILMAN SQUILLA: All right.

25 Thank you.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN GREENLEE: Thank
3 you.

4 I'm sorry. I probably jumped a
5 little bit. DVTel wanted to make a
6 presentation too.

7 MR. ZUSSMAN: Sure. Just not a
8 big presentation. I think --

9 COUNCILMAN GREENLEE: Wait a
10 minute. You're going to have to come up
11 here.

12 MR. ZUSSMAN: Sorry about that.

13 COUNCILMAN GREENLEE: If you
14 could just identify yourself as you start
15 in.

16 MR. ZUSSMAN: Thank you very
17 much. My name is Yaron Zussman. I'm
18 with DVTel. Thank you for having us
19 here.

20 I don't want to make a
21 presentation. I just want to follow up
22 on a lot of the things that was said here
23 before. I think the key is really to
24 understand -- from what we heard from the
25 different entities, you have thousands of

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 and thousands of cameras around the City
3 that you guys could leverage. And just
4 from a DVTel perspective -- and DVTel
5 just is a technology that is in the City
6 of Baltimore. We currently have the
7 Convention Center here in town. We have
8 the new Philly courthouse. We have the
9 DRPA, Philadelphia Hospital. This is
10 just -- the new Philly Housing Authority
11 system that's coming up is DVTel. So you
12 do have really the same technology that
13 you guys have seen in Baltimore deployed
14 in many, many of the agencies and
15 probably thousands of cameras around the
16 City. It's really understanding the
17 operations and how do you only operate
18 the system.

19 If you look at Baltimore, they
20 have not done any magic in terms of
21 technology. They perfected the operation
22 in terms of how they run this real
23 command center that they have over there.
24 They have a modus operandi that they have
25 seven cameras per ex-police officer that

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 knows what they're doing. We're moving
3 PTZ tours. A lot of those things I think
4 are key for you guys just to think, Okay,
5 what is the operational planning that we
6 want to put together, serving what are
7 the technology -- you don't have to hire
8 \$13 million. And if you look at
9 Baltimore, I think their overall cost of
10 the whole project was actually cheaper
11 than the \$13 million. So I don't think
12 it's necessarily hiring this huge IT firm
13 to come and do everything. It's
14 understanding what you have, how do you
15 want to improve the operation, and start,
16 like Maureen said here, just put it
17 together slowly and -- slowly and just --

18 COUNCILMAN GREENLEE: Make it
19 fit your need.

20 MR. ZUSSMAN: You will see the
21 operation improve significantly. Because
22 you can have the nicest command center in
23 the world and it can be unoperational,
24 because you'll just get feeds and feeds
25 and feeds, too much data, too much

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 information, and this is where companies
3 like VidSys have helped Baltimore and
4 have helped Chicago and have helped us in
5 Boston to make sense of everything. So I
6 think the key is really understanding
7 what you have, how do you make it
8 operational, and I can guarantee that the
9 crime is going to go down once you
10 actually define your operation.

11 And I took notes to -- so I
12 take a couple of things. Understanding
13 which technology you have around the
14 City, which it looks like you have a lot,
15 but I think it's probably four, five
16 vendors that you have. Then it's select
17 the right partner going forward in terms
18 of the information, and I think a lot of
19 leveraging existing technology as well.
20 Because I think one of the questions that
21 you were asking about PTZ cameras and
22 non-PTZ cameras or do we have analog or
23 IP, a lot of the technologies today know
24 how to take all of that equipment that
25 you have and make it operational. You're

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 not going to have the nice HD video, but
3 you can still get video that can help you
4 manage your operation, and going forward
5 you can go with HD video.

6 I think the public-private
7 partnership is huge. As I said, the
8 Convention Center, Philly Hospital,
9 Delaware River Port Authority, a lot of
10 those have hundreds of hundreds of
11 cameras installed in their locations.
12 And I know from Philadelphia Hospitals,
13 they constantly provide video to police
14 for specific -- just talking to them as a
15 user of our technology.

16 And just understanding, again,
17 just where -- do a plan and execute on
18 the plan, and you'll see crime come down.

19 I do have one clip, because I
20 was asked to bring a clip from the City
21 of Baltimore, so I do have one clip from
22 the City of Baltimore just in terms of
23 quality of video and also to reiterate
24 what Maureen said about PTZ controls and
25 PTZ tours. And I think with that, from

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 my perspective, I rest my case, unless
3 there's any questions.

4 COUNCILMAN GREENLEE: You jus
5 have to speak into a microphone.

6 MR. ZUSSMAN: This is a HD PTZ,
7 what we call it's in high definition
8 Pan-Tilt-Zoom camera that they're using
9 right now in the City of Baltimore. And
10 just a if you look at the clarity -- but
11 this is really a PTZ tour. It's an
12 operator that has the corner that knows
13 exactly what he's looking at and running
14 a tour. And I think this is, at the end
15 of the day, once you get the technology,
16 this is the most important thing, is just
17 get your operation in place, understand
18 what you want to achieve with the system
19 and roll it out slowly, slowly, because
20 this is the key I think what Maureen said
21 here.

22 MS. RUSH: Can I also add that
23 the way that is operating, we have,
24 again, over 125 Pan-Tilt-Zoom cameras.
25 We have seven operators. We don't have

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 people doing them all the time, but we
3 have them set on tours that are
4 electronically set. We set them with
5 people. So we'll say, All right, I want
6 to look at the MAC machine, I want to
7 look at the bank, I want to look at this.
8 And so the cameras are never just sitting
9 idly looking at a wall. And what happens
10 is, sometimes you get very lucky where a
11 crime will go down, a robbery will go
12 down, and you'll review the DVR and
13 you'll see that the camera was just at
14 that moment panning at the right time.
15 And so there's another force multiplier
16 right there.

17 MR. ZUSSMAN: Any questions?

18 COUNCILMAN JONES: What time of
19 day is this?

20 MR. ZUSSMAN: This is the time
21 of night. This is probably -- I can
22 check, but I think it's somewhere around
23 midnight.

24 COUNCILMAN JONES: We had an
25 opportunity to look at some of

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 Baltimore's actual footage, and it was
3 enlightening and frightening all at the
4 same time. And it was the quality of
5 this at night as well. And what type of
6 actual brand camera? Who produces this?

7 MR. ZUSSMAN: We produce that.
8 This is -- I'm a representative. You
9 were not here the beginning when I
10 started.

11 COUNCILMAN JONES: Sorry.

12 MR. ZUSSMAN: This is DVTel.
13 We're a technology manufacturer. We're
14 not an installer. As Maureen said, we
15 use companies like Tyco and others to do
16 our installation.

17 MS. RUSH: You're at Penn.

18 MR. ZUSSMAN: Yeah.

19 And we're a technology
20 manufacturer. We do software to manage
21 video and we do hardware. This happens
22 to be our HD PTZ, our high definition PTZ
23 camera.

24 One of the things that you were
25 talking about here before when we were

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 discussing is cameras that you got in
3 2006. There is a life cycle. We do have
4 cameras that we support that works from
5 2004, 2003, but you'll not get this
6 quality out of them. And usually on
7 those cameras, especially the engine, the
8 PTZs, because you have an engine inside
9 that is running, the life cycle of a
10 camera is three to four years. That's
11 why I think you heard from Baltimore,
12 especially in the IP world, that they're
13 recycling and moving to new technology,
14 because the quality of picture you can
15 get here was not available even two years
16 ago.

17 COUNCILMAN JONES: Two things.
18 One, Councilman Johnson has joined us,
19 for the record. He is very much an
20 integral part of the Public Safety
21 Committee doing some anti-violence stuff.

22 But can we ask, what is the
23 range on a camera like this?

24 MR. ZUSSMAN: The range?

25 COUNCILMAN JONES: And you can

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 do it by number of blocks.

3 MR. ZUSSMAN: It's based on the
4 zoom.

5 MS. RUSH: I can answer that.
6 Our PTZs go about three blocks in any
7 direction 360 degrees, but then you can
8 zoom in to where you're reading license
9 plates.

10 MR. ZUSSMAN: It's 36 times the
11 optics. That's the technology behind.
12 So you get 36 times the optics, meaning
13 36 times zoom.

14 COUNCILMAN JONES: So people
15 out there will know one camera could
16 effectively cover six blocks, three in
17 each direction, if deployed correctly and
18 lines of sight were --

19 MS. RUSH: Or actually even
20 more, because it's every direction.

21 COUNCILMAN JONES: So if you
22 strategically put -- it could hit 12
23 blocks?

24 MS. RUSH: What we try to do
25 is, we try to put them in intersections.

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 So let's say 43rd and Walnut. So we're
3 seeing all 43rd -- we're seeing all 43rd
4 north, south. We're seeing Walnut east
5 west. And so, you know, you're seeing
6 three blocks in every one of those
7 directions.

8 COUNCILMAN JONES: So on a
9 virtual tour, you can set it to hit key
10 spots, MAC machines, doorways of
11 apartment buildings, but then can it be
12 triggered anomalies that you would
13 figure -- and what types of anomalies
14 would attract the camera to that
15 particular anomaly?

16 MR. ZUSSMAN: I can give you an
17 example with the City of Boston, for
18 example, and actually with the City of
19 Baltimore as well. We have an
20 integration with a company that does
21 gunshot detection.

22 COUNCILMAN JONES: Shots fired?

23 MR. ZUSSMAN: Shots fired. So
24 we do it -- we have the integration with
25 shots fired. So once a shot is found, if

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 we get the coordinate information from
3 the system, the camera will go
4 automatically to where it was. We can
5 also set it up based on presets. So you
6 do have based on an event, based on a
7 gunshot, the camera will go to the exact
8 location where it is. You can just do
9 specific preset bits on different things
10 that are available in the system.

11 The nice thing about all those
12 things, it's software. It's no longer a
13 box of hardware. It's software. So you
14 can configure so many events. Like
15 Maureen said, bicycle thefts, very
16 common, video analytic, something that we
17 see a lot of people deal with.

18 COUNCILMAN JONES: So motion
19 detectors, light detection, things that
20 are anomalies it can be programmed to?

21 MR. ZUSSMAN: Absolutely.

22 COUNCILMAN JONES: And would it
23 also trigger the actual -- I'm just a
24 proponent of eyes on, and I understand
25 that's not cost effective, one, two sets

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 of eyes for one camera, but if there were
3 a grid of cameras that were pretty much
4 dormant unless that park sensor was
5 tripped or for the purpose for us, I
6 might not want to look at a rec center
7 unless someone was crossing the field,
8 and at that point, that motion be tripped
9 and we then zoom in on that particular
10 activity.

11 MS. RUSH: That's the beauty of
12 it, because you're taking that human
13 resource and you're positioning them to
14 look at things that are not analytic
15 driven. And so the more analytics you
16 can drive, the better off you're going to
17 be. And now you've put audio on the
18 table and you're really making an --
19 people are going to remember. They're
20 not going to go back to that location.

21 MR. ZUSSMAN: We have the
22 yell-at-you effect.

23 MS. RUSH: Well, we don't yell.
24 We're very nice at Penn.

25 COUNCILMAN JONES: The Chair --

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 MS. RUSH: We welcome them to
3 come back later.

4 COUNCILMAN JONES: The Chair
5 recognizes Councilwoman Bass.

6 COUNCILWOMAN BASS: Thank you,
7 Mr. Chairman.

8 I just had a question about
9 when you were speaking earlier in
10 reference to using the systems that are
11 already in place. And you said that
12 there were a lot of systems. You're
13 already doing a number of things. And
14 also that your testimony might be able to
15 interface with existing systems that even
16 might seem outdated. Is that correct or
17 is that a correct summation?

18 MR. ZUSSMAN: So just talking
19 about just around Philadelphia right now
20 in terms of what we have, as I said, so
21 the Philadelphia Housing Authority system
22 that's going up is our technology. It's
23 the same as Baltimore. Philly
24 Courthouse, the new courthouse, we were
25 selected in. Philadelphia Hospital, the

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 Delaware River Port Authority, all the
3 bridges, as well as Philly U. I don't
4 think -- it's a little farther away, but
5 Philadelphia University uses the
6 technology as well.

7 In terms of old equipment, we
8 usually interface with old cameras.
9 VidSys right here would write the drivers
10 to a lot of the old -- like, for example,
11 the School District said they have a DVR
12 system from 1993 from General Electric or
13 going forward. This is something that
14 usually we as a technology provider for
15 video, we did not integrate to an old
16 DVR. We provide image processing and the
17 software for a lot of the existing of
18 what you have. In terms of the writing
19 drivers to all the old ones, that would
20 be something like a VidSys or just a
21 piece of what they call the physical
22 security information layer that you put
23 on top that you can bring everything.

24 Where we can probably help
25 is -- and I don't know the model of the

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 original 240 cameras that you have here,
3 but those might be compatible with a
4 DVTel system now. And this is something
5 that needs to be checked just in terms of
6 the model and compatibility and tying in.
7 Again, because the software here, you're
8 not going to get this image out of those
9 cameras that you bought in 2007, but you
10 might be able to bring them into the
11 system and do, instead of a forklift
12 approach, just a software upgrade
13 approach.

14 COUNCILWOMAN BASS: Because I
15 guess what my concern is that I wouldn't
16 want to spend, let's say, if it's \$20
17 million or whatever the figure is to
18 upgrade a system from 1993 or 2003 or
19 whatever when you can use those resources
20 to basically get another system.

21 Here in the City we have a
22 history of, as the Controller put it
23 earlier, not necessarily making the best
24 decisions when it comes to contracts and
25 getting the biggest bang for our buck.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 So I guess I'd like to get more
3 information about that and make sure that
4 if we're trying to interface what's
5 already existing, that we're not spending
6 too much money on trying to make a system
7 work and trying to fit it in versus
8 getting something that has the clarity
9 and has the technology that we need to
10 see today.

11 MR. ZUSSMAN: Of course. I
12 think one of the key things that if you
13 look at the City of Baltimore the way
14 they move forward, they started the
15 system with encoders.

16 COUNCILWOMAN BASS: With what?

17 MR. ZUSSMAN: With encoders.
18 Encoders is a box that encodes analog
19 signals to IT. Regular, not HD
20 resolution, but what they call Forsyth
21 resolution, which is 720 by 480. So they
22 built the migration pack. Only later
23 when they bought all the old cameras into
24 an existing video system with encoders
25 they started upgrading to an HD. So they

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 didn't have to rip out everything that
3 they had; they just combined a bunch of
4 systems, moved them from analog to
5 digital, and started their migration into
6 IP. Now they're moving to HD cameras.

7 So it's really -- that's -- you
8 have to build a smart migration pack as
9 opposed to a rip and replace mentality.

10 MR. GRAGG: If I may, Christian
11 Gragg. I'm with DVTel. I'm actually the
12 rep for not only Maryland but also
13 Pennsylvania.

14 One of the things that they did
15 very, very well and why we talk about the
16 total budget of their system is, they did
17 things sometimes block at a time or a
18 certain amount of blocks at a time. So
19 it didn't tie them into a \$20 million
20 project with said installer that got them
21 wrapped up into a lot of red tape. It
22 essentially was -- and most of the
23 meetings, I've sat in the meetings in the
24 Mayor's Office. They're normally, we're
25 going to look at these four blocks. What

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 do we have -- and the big thing with a
3 city system like this is infrastructure.

4 I know with University of Penn more than
5 likely there's buildings that the cameras
6 are connected to and they can have some
7 type of a recording device in that
8 building. When you're going out to
9 streets and street signs with actual --
10 within intersections, you have to start
11 thinking about who is providing power,
12 where is that coming from, where's our
13 infrastructure, where's our fiber.

14 So when you talked about
15 wireless, we implemented successfully a
16 lot of wireless cameras. Most of the
17 cameras in Baltimore city are wireless,
18 but they're with wireless to a point.
19 I'm going down a block and then I'm tying
20 into my fiber. So it's kind of that
21 hybrid approach. I just need to get this
22 signal to our fiber infrastructure. Once
23 it gets into the fiber infrastructure,
24 then it goes back to the command and
25 control center from there.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 MS. RUSH: We took advantage of
3 a new property that was going up,
4 Homewood Suites at 42nd and Walnut, and
5 Campus Apartments was the builder, and we
6 had a problem to your point where we are
7 following fiber for our -- and it's Penn
8 fiber, but past 40th Street it starts to
9 get a little trickier, and so we didn't
10 have fiber to follow. But what we were
11 able to do was, we were able to put the
12 technology up on the rooftop that were
13 repeaters that will now allow us to put
14 nine cameras in the area between like
15 42nd and 44th Street so that we can then
16 put more of the cameras that speak to
17 that.

18 But you're right, you do need
19 power and you need line of sight, which
20 can change. Even when you put something
21 up on a building like that and four years
22 somebody can put another building up. So
23 it's always changing and the technology
24 always needs to be fed. No matter how
25 much you put in the beginning, it's not

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 the last time you're going to do it. So
3 having almost a master plan, I agree not
4 doing everything at once, but having a
5 master plan to follow and having like a
6 GC. We have an integrator because
7 there's so many technologies that have to
8 speak to each other just in our world.
9 And I just think that with the City
10 trying to talk to all these other
11 systems, you're really going to have --
12 whether there's somebody on payroll
13 already in the City that can do this, I
14 don't think so, because it's a really
15 intricate kind of job.

16 MR. ZUSSMAN: And I think
17 selecting the right partner for
18 installation is key, and I have that in
19 one of my notes. Selecting the right
20 partner to do the project is key.

21 COUNCILMAN JONES: Well, that's
22 a painful lesson a young man learned in
23 2007 when he thought a camera was on and
24 it wasn't. That's a matter of YouTube
25 legend at this point.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 But Councilman Kenyatta
3 Johnson.

4 COUNCILMAN JOHNSON: Yes.
5 Thank you.

6 I just wanted to get some
7 additional insight on camera operations
8 as it relates to, one, manpower to
9 actually do the monitoring. I know I
10 talked to Councilwoman Bass some time ago
11 regarding -- there were a couple of
12 incidents that really brought my
13 attention to how we can utilize these
14 cameras to actually address issues of
15 public safety. One issue in my district
16 at Myers Rec Center, which I actually
17 share responsibilities with with
18 Councilwoman Blackwell, when a young lady
19 was raped in the stairwell. And then I
20 know there were some shootings taking
21 place at some other rec centers, and I
22 know Councilwoman Bass said, Well, let's
23 look at the role that surveillance
24 cameras can play in a certain rec centers
25 so we can have information. Obviously in

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 my district in South Philly, the Graduate
3 Hospital area, a doctor was murdered and
4 some surveillance camera footage played a
5 major role in assisting and apprehending
6 the individual that did it. And then
7 most recently -- and God willing, this
8 case will be closed soon, but up in West
9 Philly, a young lady was abducted, a
10 five-year-old. And separate from -- I
11 don't know how the police went about
12 getting surveillance footage, but it went
13 all the way up to 60th and Walnut area,
14 and that's several different blocks away
15 from the actual Bryant Elementary School.
16 So it really kind of shows how this
17 technology can be used, but some of the
18 questions that came to my mind was, if
19 you're going to do a mass scale -- I know
20 some of the ideas may be intertwined in
21 the system with the Philadelphia Police
22 Department, get the police to really come
23 on board with using this time of system.
24 How do you actually go about monitoring
25 from a manpower standpoint surveillance

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 cameras in locations at scale? Because
3 the thought right now is hopefully -- one
4 of the thoughts is Philadelphia Police
5 Department, they can utilize this
6 technology, private homeowners that buy
7 into it, because they'll have a direct
8 line to plug into Philadelphia Police
9 Department system, which basically means
10 some type of -- I'm not going to say free
11 security, but you'll have to support the
12 Philadelphia Police Department to kind of
13 monitor your local area.

14 How does manpower play in that
15 component? And I think when I came and
16 you briefly talked about infrastructure,
17 how do you go to that type of
18 infrastructure to cover that much
19 coverage?

20 MS. RUSH: Let me just take on
21 the issue of monitoring as the end user.
22 So there's two ways that cameras are
23 used. They're used proactively, which is
24 what we call at Penn virtual patrol. So
25 we're doing it realtime, and we have

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 people who are assigned to sectors of the
3 patrol zone, and maybe they're doing 25
4 cameras, not all at once. So they're
5 doing individual cameras.

6 All the cameras are digitally
7 taped through a DVR, and they're held for
8 up to about 20 days. And so then that's
9 the second side of it. So then there's
10 the investigative side such as the doctor
11 from CHOP. It was post unfortunately the
12 homicide that the homicide division was
13 able to -- in fact, they went to Penn
14 Rittenhouse, and that was one of the
15 cameras, in addition to a couple store
16 cameras, that they put it together and
17 they were able to get that guy with the
18 face shot.

19 So if every entity wanted to
20 give all of their cameras to the City,
21 you probably wouldn't have enough
22 people -- you certainly wouldn't have
23 enough people, and you wouldn't even have
24 enough infrastructure or room, depending
25 on how it's coming into you. But one of

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 the suggestions that I offered earlier in
3 the presentation was that you don't need
4 to have someone in the City at the
5 Realtime Crime Center looking at
6 everybody's cameras, but let's say it's
7 Drexel or Penn or HUP or you name the
8 entity and they have an issue going on in
9 their particular area of the City that
10 they could get it to the Realtime Crime
11 Center at that moment, so that they're
12 seeing and the Realtime Crime Center
13 seeing and they're getting that
14 information out to the 9-1-1 center so
15 that the police can respond realtime with
16 direction from people seeing what's going
17 on on that camera.

18 COUNCILMAN JOHNSON: So not
19 necessarily having to have someone
20 constantly monitoring, but having the
21 ability to actually have the footage --

22 MS. RUSH: Yes.

23 COUNCILMAN JOHNSON: -- in the
24 event that something happened to get the
25 footage to the proper authorities to help

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 address the investigation.

3 MS. RUSH: That's correct.

4 That's correct. And we also said
5 earlier -- and I think the vendors also
6 agreed -- that you will definitely get a
7 conviction, and you will use less police
8 overtime and you will make the community
9 feel safer quicker, as was what happened
10 in the amazing job that the Homicide
11 Division, Philadelphia Police Homicide
12 did, on the woman who was killed in your
13 district by solving that in five days,
14 with the help of good technology, good
15 police investigation, and that saves so
16 many people from worrying and makes you
17 feel better living in that community and
18 makes it easier for you when people are
19 saying, What are you doing.

20 COUNCILMAN JOHNSON: Thank you.

21 COUNCILMAN GREENLEE: Thank
22 you, Councilman.

23 Are there any more questions
24 for this panel?

25 (No response.)

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN GREENLEE: Seeing
3 none, thank you very much. Thank you for
4 your patience. I know you had to wait a
5 while, but we appreciate it. You gave us
6 some great information. And we're
7 jealous -- as a Temple graduate, I'm
8 jealous there.

9 MS. RUSH: Again, any time
10 you're in the neighborhood, as Jannie
11 knows, please let us know and we'll give
12 you a tour.

13 COUNCILMAN GREENLEE: Thank
14 you. Thank you all very much.

15 We have one more panel. Could
16 you please call the names, please.

17 THE CLERK: Stacy Irving from
18 Center City District, Terry Foley from
19 City Avenue Special Services District,
20 and Joe Grace from Philadelphia Chamber
21 of Commerce.

22 COUNCILMAN GREENLEE: And just
23 for my information, is there anyone else
24 here that wanted to speak at the hearing?

25 (No response.)

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN GREENLEE: This will
3 be our final panel, then.

4 Thank you.

5 (Witnesses approached witness
6 table.)

7 COUNCILMAN GREENLEE: Whoever
8 would like to go first, please
9 identify -- and, again, thank you for
10 your patience. I know it's been a couple
11 hours you've been sitting there.

12 Ms. Irving, I think your name
13 was called first, so if you would like to
14 go first, it's up to you.

15 MS. IRVING: My pleasure. Good
16 afternoon. My name is Stacy Irving and
17 I'm the Senior Director of Crime
18 Prevention Services at the Center City
19 District. The Center City District is a
20 business improvement district first
21 authorized by City Council in 1990 and
22 overwhelmingly reapproved by downtown
23 property owners five times in the last 22
24 years. Its primary purpose is to
25 supplement, not to replace, municipal

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 services and to help make Center City a
3 cleaner, safer, and more attractive place
4 to live, work, shop, and visit.

5 The Center City District
6 provides a wide array of services and
7 programs serving more than 220 City
8 blocks. Basic services include cleaning,
9 graffiti removal, public safety,
10 marketing, events, research, strategic
11 planning, and capital projects.

12 Among my basic responsibilities
13 is the coordination of the Center City
14 District's crime prevention services with
15 the Philadelphia Police Department, other
16 local, federal, and state law enforcement
17 professionals, and private security
18 professionals in office and residential
19 buildings, hotels, hospitals,
20 universities, malls, banks, parking
21 companies, business and neighborhood
22 groups, and other institutions in the
23 downtown. I have served in this capacity
24 for nearly two decades.

25 My crime prevention work has

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 been driven by the development and
3 implementation of a wide range of crime
4 prevention strategies, from targeting
5 specific crimes and quality-of-life
6 issues, identifying and analyzing crime
7 patterns, creating crime prevention
8 materials, and conducting security
9 surveys and workshops for local
10 businesses to organizing groups to attend
11 criminal court hearings during the
12 crucial sentencing phases of criminal
13 prosecutions working very closely with
14 the District Attorney's Office.
15 Moreover, I spend a great deal of my time
16 facilitating and nurturing key public
17 private partnerships.

18 Although the Center City
19 District has not installed any
20 surveillance cameras in Center City, we
21 work very closely with many building
22 owners, security directors, and
23 institutional organizations that make
24 extensive use of cameras. We have
25 identified approximately 500 cameras

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 mounted throughout the commercial
3 downtown.

4 We've collected their locations
5 by asking businesses and property owners
6 to voluntarily share their camera
7 locations with the Philadelphia Police
8 Department, with the strict understanding
9 that data gathered will only be shared
10 with law enforcement for investigative
11 purposes. These cameras are an
12 invaluable aid in preventing and
13 deterring crime, providing time-sensitive
14 information for law enforcement, and they
15 can also serve as an essential
16 investigative tool. Sometimes a camera
17 may be the best and only witness to a
18 crime.

19 We are, therefore, supportive
20 of the City and the private sector making
21 additional installations in densely used
22 portions of the downtown.

23 Finally, I was asked by
24 Councilman Jones's office to provide some
25 examples of how we have worked with law

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 enforcement by combining crime prevention
3 and technology to address crime. You may
4 recall a high-profile case in May of 2005
5 that captured the attention of the City.
6 Patricia McDermott, a local nurse, was
7 tragically shot and killed in the early
8 morning hours on May 17th, 2005 near 9th
9 and Chestnut Streets as she made her way
10 to work that morning by a man who was
11 later found to be mentally impaired.
12 Upon arrest, he confessed to four other
13 shootings, in which only two of his
14 victims survived.

15 Working closely with the
16 Philadelphia Police Department's Homicide
17 Unit, we quickly sent out an alert
18 requesting local property owners and
19 businesses in the vicinity of the crime
20 to check their surveillance footage
21 between the hours of 4:00 a.m. and 6:00
22 a.m. As a result, Center City businesses
23 were able to provide critical footage
24 which showed the path that the suspect
25 took as he returned to his workplace

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 where he was subsequently arrested.

3 The surveillance information
4 wasn't the only factor that led to his
5 arrest, but it was one that played a key
6 role in getting a killer off the streets.

7 In addition, we have sent out a
8 wide range of alerts or crime bulletins
9 with images of suspects taken from
10 surveillance cameras provided by the
11 private sector that have been of
12 invaluable help to the Philadelphia
13 Police Department and resulted in several
14 major arrests.

15 These include the arrest of a
16 laptop thief who was breaking into
17 offices and stealing laptops; the arrest
18 of a con man that had been scamming
19 restaurants and dry cleaning businesses;
20 the arrest of a thief who was stealing
21 brass standpipe covers from office
22 buildings, putting the office tenants at
23 risk; the arrest of a con man that had
24 been scamming local hotels posing as a
25 representative of the military; and the

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 arrest of a another laptop thief who had
3 stolen laptop computers from several
4 Center City office buildings and then
5 pushed his luck trying to do the same at
6 the offices of the Philadelphia District
7 Attorney. Needless to say, a sharp-eyed
8 security guard, with the aid of a flyer
9 we circulated with the suspect's photo
10 taken from a surveillance camera,
11 notified police assigned to the DA's
12 Office and that suspect was on the
13 elevator and put the crime spree to an
14 end.

15 In addition, when other serious
16 incidents have occurred over the years,
17 including bank robberies, bomb threats,
18 burglary or robbery patterns or the most
19 serious of such incidents, such as the
20 deadly assault of 23-year-old Kevin Kless
21 in Old City last January, we sent out a
22 request on behalf of the Philadelphia
23 Police Department and/or other law
24 enforcement agencies asking local
25 businesses and property managers to

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 provide the relevant surveillance footage
3 to the law enforcement agency that is
4 conducting the investigation.

5 We are very supportive of the
6 Philadelphia Police Department's efforts
7 to utilize closed circuit TV, the SafeCam
8 Program, as well as the Commerce
9 Department's new SafeCam Program for
10 local merchants in an effort to reduce
11 crime and engage citizens more directly
12 in community safety efforts.

13 We applaud the Committee on
14 Public Safety's continued efforts to
15 focus attention on this matter, and we
16 share Council's renewed emphasis on crime
17 prevention at both the community and
18 citywide level.

19 Thank you.

20 COUNCILMAN JONES: Thank you so
21 much, and for the record, our prior
22 partnership was at PCDC, Philadelphia
23 Commercial Development Corporation. She
24 was so affectionately known as a crime
25 fighter, her nickname was Batwoman.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 MS. IRVING: I was much younger
3 then.

4 MR. FOLEY: Thank you,
5 Mr. Chairman. I'm going to keep this
6 very short because I think what I wanted
7 to say, everyone else has already said
8 several times over, but let me introduce
9 myself first. I'm Terrence Foley. I'm
10 the President of the City Avenue Special
11 Services District, which is a district
12 that was created in 1997 to retain and
13 improve the economic vitality of the City
14 Avenue corridor, which at that time was
15 being threatened by an uptick of crime.

16 The district is a unique
17 partnership between the City of
18 Philadelphia and Lower Merion Township,
19 and the district extends, just so you
20 know, from the Schuylkill Expressway all
21 the way to 63rd Street. We also have
22 three other smaller corridors that we are
23 responsible for on 54th Street, 63rd
24 Street, and Bala Avenue.

25 Our objectives are, number one,

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 enhanced public safety; improve the
3 area's image; and attract and shape
4 development. Currently we operate a bike
5 patrol under the direction of our
6 Director of Public Safety and Operations.
7 It's eight members are on bikes and
8 segues. They patrol six days a week,
9 from noon to 8:00 p.m., and their hours
10 are extended when necessary.

11 We also use a one call system.
12 We do not operate any cameras ourselves,
13 but 16 businesses in the district operate
14 85 cameras. Typically what happened, if
15 they see some activity that they think
16 others need to know, they call us, we
17 engage the one call system. That goes
18 out immediately to everyone so they're
19 aware of this.

20 Those cameras don't include the
21 extensive operations of the St. Joseph's
22 University and the Philadelphia College
23 of Osteopathic Medicine also employed.
24 We're in regular communication with them
25 as well.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 Again, I'm not going to repeat
3 everything else that's said. I'm just
4 going to tell you that the district
5 values the use of surveillance cameras to
6 deter criminal activity and encourages
7 any effort to improve the ability of law
8 enforcement to monitor them in realtime.

9 By the way, the one call system
10 we do share with the 19th. It works both
11 ways. We'll contact them; they will also
12 call us when there are certain things
13 going on they'd like the community to be
14 aware of.

15 Thank you.

16 COUNCILMAN JONES: Thank you so
17 much.

18 Thank you for your patience and
19 please begin your testimony. We will ask
20 the panel questions in unison.

21 MR. GRACE: Thank you,
22 Mr. Chairman.

23 Good afternoon, Chairman Jones
24 and members of the Committee on Public
25 Safety. I'm Joe Grace and I'm the

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 Director of Public Policy at the Greater
3 Philadelphia Chamber of Commerce, and I
4 am here today in support of Resolution
5 130030, which calls on Council's Public
6 Safety Committee to hold hearings on the
7 status of the City's video surveillance
8 camera program.

9 Let me just depart for one
10 second from my prepared testimony, which
11 I will do very briefly, and say that this
12 Council really should be commended for
13 holding a hearing this substantive. I've
14 been privileged to be in this room many
15 times over the years, representing
16 different individuals, different elected
17 officials. This is among the most
18 substantive committee hearings I can
19 recall. So this Council, this committee,
20 should really be commended for drawing
21 forth this many facts and information
22 today about obviously an issue that's
23 critical to public safety here in the
24 City.

25 Public safety is a central

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 concern of a great city. The Chamber
3 supports the commitment of City Council
4 and Mayor Nutter to reducing and
5 preventing gun violence to keep
6 Philadelphia safe. We commend the work
7 of this Committee, Chairman Jones,
8 Council President Clarke in their focus
9 on moving Philadelphia toward 21st
10 century crime-prevention technology and
11 new techniques.

12 We know the Council President
13 recently led a delegation of
14 Councilmembers, including Chairman Jones,
15 Councilwoman Bass, and Councilman
16 Greenlee, to Baltimore to review the
17 latest surveillance technology deployed
18 in that city to reduce and prevent crime.
19 And we understand that Baltimore, a city
20 smaller in size than Philadelphia, has
21 some 600 cameras in operation compared
22 with approximately 150 cameras
23 operational here in our city.

24 We know Philadelphia and the
25 Police Department here first deployed

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 surveillance cameras in 2007, and we do
3 know that there have been a number of
4 problems with the IT system and the
5 technology as utilized.

6 We've heard many times today of
7 the recent case in which Philadelphia
8 police recently apprehended a suspect in
9 the murder of a young physician in her
10 home in South Center City, and they did
11 so with strong police work, significantly
12 aided by video surveillance of the
13 suspect captured by nearby cameras, which
14 were under the operation and control of
15 private businesses.

16 The Greater Philadelphia
17 Chamber of Commerce believes that these
18 very important issues of public safety
19 and emerging technologies offer an ideal
20 opportunity for further public-private
21 partnerships, and we are ready and here
22 today to assist this Committee, Council
23 President Clarke, and the City in any way
24 that's appropriate and feasible to help
25 Philadelphia -- to make Philadelphia

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 safer for every business, every homeowner
3 and resident that call our city home.

4 So in conclusion, I would just
5 like to say that the Greater Philadelphia
6 Chamber of Commerce supports the goals
7 and the intent of this resolution to make
8 Philadelphia a safer place to live and
9 work, and we offer to help and support
10 this Committee and City Council achieve
11 those goals.

12 Thank you for the opportunity
13 to testify today, and if you have any
14 questions, I'm sure any of us would be
15 happy to answer them.

16 COUNCILMAN JONES: This
17 Committee and this panel in particular
18 was put together to kind of -- we talked
19 about big institutions. We talked about
20 the public and quasi governmental
21 component of this, but what you guys
22 represent for me is use in a commercial
23 corridor or commercial environment the
24 potential for interface with those
25 various departments.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 Ms. Irving talked about what
3 happens in Center City and how the
4 location of a crime, the geography then
5 kicks into we have on record existing
6 cameras, and it may be held by a bank or
7 a business there, and I want to talk a
8 little bit about that, and then your one
9 call system. Let's dig down a little bit
10 about that, because that's initiated both
11 by the policing authority or by you guys
12 and your membership. And so you
13 similarly have a grid of cameras where
14 you know where they're located. So we'll
15 start with those two and then I have
16 another question.

17 MS. IRVING: So your question
18 is?

19 COUNCILMAN JONES: My question
20 is, how did it evolve? How did you guys
21 just kind of figure out, Well, we have so
22 many cameras that cover so many areas.
23 Because I've seen on a number of
24 occasions cameras from Center City
25 actually apprehend -- be responsible for

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 the apprehension of criminals and
3 criminal activities.

4 So how did it evolve for you?

5 It wasn't --

6 MS. IRVING: It was after the
7 terrorist attacks in 2001. We decided to
8 start identifying as many cameras as
9 possible for both the counterterrorism
10 and emergency preparedness nature. And
11 although the assumption was if there was
12 an emergency we would be able to help
13 identify where those locations were, we
14 have since obviously been using it and
15 collecting it every year. And what we
16 did was, we asked businesses voluntarily
17 to report to us where these cameras are
18 located. This was prior to the Police
19 Department developing their SafeCam
20 Program asking much of the same
21 information but on a citywide basis. And
22 they asked for much more in-depth
23 information. What I was looking for was
24 where are these cameras located so when
25 any law enforcement agency approached us,

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 we could tell them where there
3 potentially could be surveillance
4 footage, and then on their behalf, we
5 would contact the businesses and ask for
6 them to either contact the police
7 directly or to check that timeframe.

8 We do that on a regular basis
9 and trying to keep up with it, as I said
10 earlier in my testimony, there's about
11 500 or so cameras, public and private
12 cameras, in the downtown. There are
13 significant gaps in certain areas, and so
14 we're looking to expand that as well.

15 COUNCILMAN JONES: But that is
16 mapped out by you?

17 MS. IRVING: Yes. Yes. We
18 have mapped that out. And it was with
19 the clear understanding to the
20 properties, because there was some
21 concern by their legal departments at
22 providing this information, that it would
23 only be used for law enforcement and it
24 would only be accessible to law
25 enforcement. And so we share this

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 information with the Philadelphia Police
3 Department. Every time we get updated
4 information, we send them the map. And
5 every time, whether it's the FBI or ATF
6 or whatever law enforcement agency is
7 conducting an investigation, we will put
8 the private sector in touch with them so
9 that they can directly send them or allow
10 them to view the video.

11 MR. FOLEY: The one call system
12 came out of some work we did a number of
13 years ago. We regularly bring together
14 the officers from the 19th to meet with
15 the command folks at Lower Merion in an
16 informal setting where they can talk
17 about common problems and things of that
18 nature. One of the issues that came up
19 was we have these cameras out there,
20 we're aware of them, but nobody really
21 gets any information from them because
22 they're in private hands. So we did a
23 little homework and we found out about
24 one call, which in the political world
25 you might call robo calls. But we looked

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 into the system and then we went out to
3 our stakeholders and we told them if they
4 gave us their information, where we
5 should contact them, what's the best
6 method, we would keep that information
7 highly confidential. So many of them
8 gave us their cell phone numbers. We can
9 also do e-mail as well. And we have over
10 200 businesses participating in that. So
11 when we get a call, for instance, say one
12 of the shopping centers see some activity
13 in the parking lot from their cameras,
14 they will alert us. We'll put that out
15 there. Then the other centers are aware
16 to be on the lookout for that.

17 I mentioned the 19th. The way
18 it works in the other direction is, they
19 might see a pattern of pizza shop
20 burglaries working its way through the
21 district. So they'll let us know that,
22 and we'll put that out there as well.

23 We try to only use it when we
24 know we have really good information.
25 We'll typically follow up if we get

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 copies of pictures and stuff like that.
3 Our patrol will take them out to the
4 businesses. But we don't use it every
5 time we get a little thing, because we
6 want people to pay attention to it when
7 we do send it out.

8 COUNCILMAN JONES: So two
9 things that -- the reason why we asked
10 those questions is that at the end of
11 this series or hearing, we want to have
12 useful information that might be offered
13 to the Administration or utilized in a
14 way that allows us to move our camera
15 program forward.

16 So two things. One, if there
17 was manna from heaven and we ran into
18 some money, would a rebate to encourage
19 businesses to install cameras outside be
20 warmly received to help particularly for
21 those blind spots that you currently
22 have?

23 MS. IRVING: There is a new
24 program that is just being introduced by
25 the Commerce Department which is offering

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 a rebate. I believe it's 50 percent up
3 to \$3,000, and it is to encourage
4 businesses citywide to install cameras,
5 and the agreement is that they will
6 provide their information through the
7 SafeCam Program so the police would know
8 where there potentially was video.

9 So the answer is, yes. It's
10 very important. It is often an expense
11 that businesses will hold to the very end
12 while they address all of the other basic
13 expenses that businesses have to contend
14 with. And so it's not often the thing
15 that they will do until after a crime has
16 occurred and they feel the need and
17 understand the value of having that
18 camera.

19 COUNCILMAN JONES: See, as a
20 budget-developing body, we want to know
21 if that's the kind of thing that if we
22 put money behind would be warmly received
23 by respective business associations.

24 MR. GRACE: Mr. Chairman, I
25 would say that that's a very interesting

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 piece of information to hear and that,
3 generally speaking, if an incentive can
4 be offered, a rebate, an incentive, to a
5 business to encourage a business to
6 engage in this kind of activity to assist
7 the Police Department, that's something
8 that I think potentially -- I'd like to
9 take it back to my organization, but that
10 we could get behind.

11 And one other broad comment for
12 you just as you develop the record. You
13 had a number of very serious subject
14 matter experts here today obviously, and,
15 again, the Committee should be commended.
16 There's real interest on the part of the
17 Chamber of Commerce in finding a way to
18 be helpful on this issue. We think this
19 issue is very important.

20 To the extent we could bring
21 any subject matter experts to the table
22 to be of assistance, we'd be willing to
23 work on that with you. And I'm not
24 saying that our subject matter experts
25 would be any more knowledgeable than the

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 very knowledgeable experts that you
3 brought here today, but we want to be
4 helpful. So I extend that almost as an
5 open-ended offer to dialogue with you and
6 the Committee on that.

7 COUNCILMAN JONES: I know the
8 President is very interested in moving
9 this issue forward. So it will be
10 reflected in our budgetary consideration,
11 and these kinds of partnerships, it makes
12 our money go farther. By giving talent
13 that might offer expertise, it can only
14 help.

15 The second part of this is, you
16 mentioned that mapping. One of the
17 things that other members -- as we try to
18 develop public policy that will be
19 helpful and not a hindrance to you in the
20 private sector, one of the things that we
21 wanted to offer also an incentive, again,
22 for them to want to plug into the
23 monitoring aspect of the City and also
24 give developers an opportunity in the
25 submission of their plans to give us a

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 map of where they intend to place cameras
3 so that law enforcement will have a
4 better idea of a contiguous map, even
5 recognizing the blind spots, and maybe
6 those are the places where we put public
7 dollars where there are no private
8 dollars to complement cameras. So that's
9 the other thing. So at the submission
10 point of plans, we would automatically
11 see a security plan or proposal, not
12 mandated but if you offer it, it would be
13 useful information to us.

14 MS. IRVING: Many developers
15 don't plan on cameras in their original
16 development plan. It is often, as I
17 said, a secondary cost. So if there was
18 a way to encourage them to have a
19 security plan for all kinds of
20 businesses, it would be very helpful.

21 I think the caution that I
22 would say to you is that many of the
23 legal advisors for these companies are
24 very leery about sharing that information
25 and often feel as though they are setting

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 themselves up for an additional liability
3 by implying they have a certain level of
4 security. That's a debatable issue. I'm
5 not a lawyer. But it is something to
6 keep in mind, particularly if you are
7 asking that the information is to be
8 submitted in a way that it would not be
9 kept confidential.

10 COUNCILMAN JONES: Good point.

11 MS. IRVING: And I will tell
12 you that when there has been news
13 coverage of a particular high-profile
14 crime in Center City and I have been
15 contacted by the news media asking for
16 that information or a copy of the map, we
17 have not provided it because that was not
18 the agreement, and the concern is that
19 criminals would then have additional
20 information. And it doesn't always
21 prevent the crime. It can, but it
22 doesn't always, but it is always a
23 valuable tool after the fact. And so in
24 not giving them any additional
25 information, that is very helpful.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 COUNCILMAN JONES: It is a
3 delicate balance that we would probably
4 need to be mindful of always.

5 Councilman Greenlee.

6 COUNCILMAN GREENLEE: Thank
7 you, Mr. Chairman. Just very quickly. I
8 know we've been here a while.

9 But, Ms. Irving, you talked --
10 just to follow up on what you just said
11 about the concerns of businesses and
12 privacy and all. Were there any -- were
13 there businesses that just basically said
14 we don't want to cooperate? I mean, we
15 don't want to really interact with you at
16 all?

17 MS. IRVING: I had some
18 businesses who told me they would need to
19 check with their legal advisors as to
20 whether they could tell me if they had
21 cameras, which told me they had cameras.
22 But also we additionally every time a
23 camera is observed, an exterior camera is
24 observed, we will add it to the map,
25 whether that information was provided

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 directly to us or not. And that's why I
3 say to you it's roughly 500. I'm sure
4 it's more.

5 But, yes, there are businesses.
6 We also looked at the opportunity to see
7 if we could link some of the businesses
8 with law enforcement agencies so they
9 could have access to their feed, and that
10 was resoundingly denied by many of the
11 legal advisors of the private-sector
12 businesses.

13 COUNCILMAN GREENLEE: Was it a
14 whole privacy issue?

15 MS. IRVING: It's more of a
16 liability issue. They're concerned that
17 there is a liability implied.

18 COUNCILMAN GREENLEE: I know
19 lawyers worry about that.

20 COUNCILMAN JONES: Every one.

21 COUNCILMAN GREENLEE: And the
22 cameras themselves, I assume the ones
23 that do have them, I guess they're of
24 different quality?

25 MS. IRVING: They are all of

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 very different quality and of different
3 age, and there is significant problem in
4 the quality of the images in whether the
5 business person has access to download
6 that information, whether they need to
7 wait for someone from their corporate
8 headquarters to download the information.
9 Many of the businesses, particularly
10 small businesses, have had their systems
11 for a very long time. Many of them still
12 use a VHS tape and still tape over it.
13 There are lots of questions of quality
14 and connectivity.

15 So it is a massive undertaking,
16 but I will tell you that many crimes have
17 been solved by images that we have
18 been -- that have been shared with us
19 that we've put out in crime bulletins.
20 And as you see from the Philadelphia
21 Police Department, they've made their
22 hundredth -- actually, more than a
23 hundred arrests based on tips related to
24 images that they have posted.

25 COUNCILMAN GREENLEE: They're

1 2/11/13 - PUBLIC SAFETY - RES. 130030
2 definitely valuable if it works.
3 Speaking of working, the public cameras,
4 have you found the same problem, that a
5 lot of those are not operative in your
6 area?

7 MS. IRVING: Have I found the
8 problem in terms of quality?

9 COUNCILMAN GREENLEE: No; that
10 they're not operating.

11 MS. IRVING: No. I haven't
12 found that in the majority that they're
13 not operating. The public sector,
14 particularly federal properties and other
15 public properties, they have the
16 resources to make sure they are working.
17 And because of the heightened security
18 issues, they often have had access to
19 federal funds for that purchase.

20 COUNCILMAN GREENLEE: Thank
21 you.

22 Thank all three of you.

23 COUNCILMAN JONES: Thank you,
24 Councilman.

25 Thank you for your testimony.

1 2/11/13 - PUBLIC SAFETY - RES. 130030

2 It is valuable. The private-sector
3 partnerships helps the public-sector
4 money go further through use of expert
5 technology or just your experiences on
6 what you've gone through, and it allows
7 us not to make similar mistakes or to
8 build upon what you've already done.

9 MS. IRVING: Please, as Joe
10 said, for all of us, we are at your
11 disposal.

12 COUNCILMAN JONES: Thank you so
13 much.

14 MR. GRACE: You're very
15 welcome.

16 COUNCILMAN JONES: Thank you.
17 Is there anyone else here to
18 testify on this resolution?

19 (No response.)

20 COUNCILMAN JONES: So seeing
21 none, we will be at recess for the call
22 of the Chair.

23 Thank you very much, everyone.

24 (Committee on Public Safety
25 concluded at 3:10 p.m.)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE

I HEREBY CERTIFY that the
proceedings, evidence and objections are
contained fully and accurately in the
stenographic notes taken by me upon the
foregoing matter, and that this is a true and
correct transcript of same.

MICHELE L. MURPHY
RPR-Notary Public

(The foregoing certification of this
transcript does not apply to any reproduction
of the same by any means, unless under the
direct control and/or supervision of the
certifying reporter.)

A				
abducted 7:7 153:9	114:15	administration 3:8 6:11 16:6	129:21 151:3	amount 14:16
abduction 40:8 73:15	accomplish 21:22	25:20 43:12	agreed 31:21,22	43:20 48:12
abilities 107:24	51:22	179:13	157:6	148:18
ability 5:4 39:3	accurately 190:5	administrative 37:16 48:23	agreement 112:16	analog 16:23 17:8
53:21 66:7,25	achieve 136:18	administrators 87:17	180:5 184:18	134:22 147:18
67:15 95:4,25	173:10	ADTs 117:20	agreements 130:18	148:4
116:19 156:21	act 96:13	advancement 34:12	ahead 25:3 118:3	analytic 142:16
169:7	active 60:14 102:9	advances 33:7	aid 44:14 162:12	143:14
able 8:7 12:9 19:9	activities 55:15	advantage 150:2	165:8	analytics 97:7
20:21 24:21	86:21 175:3	advisors 183:23	aided 172:12	124:23 143:15
25:4 26:3 27:2	activity 10:2 12:9	185:19 186:11	aims 56:13	analyzed 83:22
39:6 43:3 47:22	35:23 63:5	affectionately 166:24	ain't 79:9,11	analyzing 161:6
59:3,12 61:16	86:13,22 143:10	afford 52:9	Aiphone 37:12,14	and/or 165:23
69:23 70:2,5	168:15 169:6	Affordable 50:20	37:18,22 38:7	190:22
71:10,11,24	178:12 181:6	afternoon 2:4 3:2	42:2,21	anomalies 119:11
72:21,23 74:24	actual 15:11	19:2 29:18,20	Aiphones 38:9	141:12,13
95:4 100:23	31:15 76:24	36:15,17,17	40:13	142:20
101:18 108:10	82:17 138:2,6	45:14 48:15,25	airport 117:4	anomaly 141:15
109:17 112:8,11	142:23 149:9	57:16,17 74:12	airports 117:4	answer 16:5
113:14 114:2,7	153:15	89:2,11 104:6	Alan 9:13 10:10	24:14 28:20
114:8 116:10,17	adage 16:20	106:9 122:2	10:18	48:9 56:24
117:18 119:17	adapt 16:19	159:16 169:23	alarm 42:16,20	64:20 69:12,21
120:4,9,18,19	add 127:25	age 187:3	108:24 117:19	83:17 84:8 86:9
123:24 124:11	136:22 185:24	agencies 33:10	alarming 12:2	140:5 173:15
144:14 146:10	added 125:11,13	55:20 111:20	alarms 42:19 93:2	180:9
150:11,11	addition 11:20	115:25 118:5,7	119:6	answered 19:3
155:13,17	12:22 51:13	118:15 119:25	alert 163:17	45:10 109:9
163:23 175:12	90:7 155:15	121:3 123:15	178:14	130:5
above-ground 116:20	164:7 165:15	124:20 132:14	alerts 164:8	answering 92:24
absence 12:23	additional 52:25	165:24 186:8	Allied 90:8 93:5	answers 86:8
Absolutely 31:22	54:9 59:17 60:9	agency 64:23 65:5	allocations 87:19	antennas 23:18
72:5 142:21	93:23 109:24	109:14 113:23	allow 5:5 53:14	anticipate 25:13
absorb 123:24	110:12 128:8	119:24 127:14	70:15 108:19	66:17
accepted 27:8	152:7 162:21	166:3 175:25	110:9 117:15	anti-violence 139:21
access 37:6 43:6,9	184:2,19,24	177:6	124:19 150:13	anxiously 25:13
53:4,19,25	additionally 52:14 185:22	agenda 14:3	177:9	anymore 118:20
111:23 117:22	address 55:9 63:6	agnostic 124:19	allowing 106:12	apartment 141:11
119:15 186:9	80:24 114:23	ago 93:9 104:9	108:7	Apartments 52:3
187:5 188:18	152:14 157:2	105:19 106:14	allows 97:7 98:9	52:5,5 54:6,7,7
accessible 176:24	163:3 180:12	117:11 139:16	179:14 189:6	150:5
accident 114:13	addressed 55:23	152:10 177:13	all-across-the-b... 103:7	apparatus 37:17
119:21	addressing 61:2	agree 21:13 22:12	amazing 20:18	Apparel 99:2
accidents 113:25	adds 51:8		129:18 157:10	appears 69:3
	add-on 126:3		ambitious 14:4	applaud 6:22
	adjacent 67:6,10		American 99:2	166:13
				applies 42:20

apply 190:20	area's 168:3	68:12	authority 23:16	25:8 92:4
appreciate 20:11	argue 103:25	associations	23:18 33:4	104:14
79:2 103:14	argument 129:23	180:23	45:23 48:24	Bala 167:24
158:5	armed 102:13	assume 79:3	55:2 65:18 68:9	balance 185:3
apprehend 6:21	Arms 54:6	186:22	68:15 69:4	ballroom 118:16
7:22,24 59:4	array 160:6	assuming 23:25	132:10 135:9	Baltimore 3:4,10
174:25	arrest 90:3 92:6	68:23	144:21 145:2	4:5,22 8:2,19
apprehended	163:12 164:5,15	assumption	174:11	10:24 11:9
7:18 99:17	164:17,20,23	175:11	authorized	18:11 20:17
105:22 172:8	165:2	astounded 18:19	159:21	23:4 24:17 26:5
apprehending	arrested 21:6	astutely 17:7	automatically	29:5 32:2 67:3,8
44:14 77:16	41:16 164:2	ATF 177:5	97:13,18 108:25	67:15 76:19
153:5	arrests 164:14	Athletic 96:16	112:11 142:4	80:5 83:14
apprehension	187:23	attached 34:10	183:10	86:11 88:10
47:11 57:21	arrive 114:6	attack 47:20	auxiliary 26:7	90:19 94:13
61:3 175:2	arrows 6:23	58:15	availability 52:17	103:20 109:21
approach 34:18	article 98:15	attacks 58:13	available 11:3	110:21 112:8
126:24 146:12	ascertain 26:3	175:7	32:10 48:9	114:24 116:18
146:13 149:21	asked 15:24 30:4	attend 161:10	56:24 57:20	120:16 121:21
approached 9:19	68:14 135:20	attendance 2:8	63:25 108:2	122:14 125:22
88:16 159:5	162:23 175:16	attention 7:4	139:15 142:10	132:6,13,19
175:25	175:22 179:9	60:16 98:3	Avenue 71:2	133:9 134:3
approaches	asking 67:20	103:15 152:13	90:19 158:19	135:21,22 136:9
125:16	134:21 162:5	163:5 166:15	167:10,14,24	139:11 141:19
appropriate 22:9	165:24 175:20	179:6	average 115:2,6	144:23 147:13
33:22 172:24	184:7,15	Attorney 165:7	awarded 11:21	149:17 171:16
appropriately	aspect 26:10 28:5	attorneys 44:18	aware 11:5	171:19
32:14	182:23	Attorney's 161:14	168:19 169:14	Baltimore's 67:12
appropriation	assailants 7:10	attract 141:14	177:20 178:15	138:2
52:15	assault 39:20	168:3	a.m 163:21,22	Band 101:22
approximately	165:20	attractive 160:3		bang 146:25
22:22 37:9	assess 114:2	attribute 24:8	B	bank 95:3 137:7
38:16,20 44:6	assessment 12:13	AT&T 60:6	B 54:8,14 86:23	165:17 174:6
46:19 51:9	assets 56:16	at-large 2:10	back 3:20 6:12	banks 160:20
54:22 161:25	120:15 124:9	audio 143:17	21:17 27:21	barrier 97:12
171:22	127:11	audiovisual 63:5	29:22 74:19,24	Bart 88:3 89:7
April 20:4	assigned 36:21	audit 11:6,10,13	77:20 98:21	Barton 90:8 93:5
area 47:21 60:15	52:12 96:17	12:10,16 13:13	102:20 118:21	based 25:5 60:21
60:17,19 101:17	155:2 165:11	15:24 19:6 20:3	143:20 144:3	107:25 115:9
113:17 150:14	assist 172:22	24:11 25:13	149:24 181:9	140:3 142:5,6,6
153:3,13 154:13	181:6	27:19 35:20,25	backbone 70:4	187:23
156:9 188:6	assistance 25:21	auditing 33:16	background	basic 19:13 160:8
areas 23:7 53:14	37:5 181:22	augmented 53:19	92:13	160:12 180:12
59:17,19,25	Assistant 45:19	August 49:25	backlog 33:17	basically 25:10,14
60:22 61:14	assisting 153:5	author 2:20	34:2	28:25 62:21
96:22 174:22	associated 3:24	authorities 68:10	backwards 39:25	67:8 95:14 97:8
176:13	4:7 46:24 51:11	156:25	bad 16:21 19:21	146:20 154:9

185:13	84:6 106:4	blending 33:20	bridges 97:3	buildings 16:15
basis 13:17 33:11	107:24,25	blind 179:21	145:3	23:14,18 43:9
41:2 77:15 82:4	111:24 112:2	183:5	brief 49:4 57:14	53:5 65:21
175:21 176:8	143:16 157:17	block 97:9 148:17	89:19	90:13 93:24
Bass 1:11 9:8	183:4	149:19	briefly 154:16	100:14 117:21
29:13,15,16,21	beyond 3:13,17	blocked 23:13	170:11	119:16 141:11
31:3,9,21 35:12	27:19 59:9	blocks 66:8 92:16	bright 92:10	149:5 160:19
35:15,16 36:5	65:25 66:21	140:2,6,16,23	bring 7:2 82:25	164:22 165:4
57:11,12,18	93:15	141:6 148:18,25	83:6 95:10	built 72:13 107:12
59:7,16 60:24	bicycle 95:20	153:14 160:8	99:22,23 100:7	122:24,25
61:9,18 62:13	142:15	Blumberg 52:3,13	113:3 124:4,13	147:22
62:17 63:11,14	bicycles 96:2	board 81:17	125:20 135:20	bulletins 164:8
64:4 76:15	bidding 42:14	86:15 121:10	145:23 146:10	187:19
144:5,6 146:14	big 22:24 26:12	153:23	177:13 181:20	bunch 63:4 148:3
147:16 152:10	76:25 95:19	Board's 7:13	brings 117:17	burden 12:19
152:22 171:15	98:24 102:7	BOBBY 1:12	127:23	bureaucracy 72:4
Batwoman	123:4,25 127:13	body 28:8 180:20	Brinks 117:20	72:7
166:25	131:8 149:2	bollards 102:14	broad 23:9 39:5	burglaries 178:20
beauty 143:11	173:19	bolt 96:11	46:7,15 47:15	burglary 165:18
becoming 10:24	bigger 121:20	bomb 165:17	70:25 181:11	burned 73:12
began 50:5 91:7	biggest 146:25	bonds 22:6	brokered 110:13	bus 75:7,17 76:4
beginning 12:12	bike 95:21 96:10	booths 52:13	brought 40:16	buses 46:18 75:3
17:11 33:2	96:23 97:23,24	boots 8:12	102:18 107:6	75:11,22 76:2,6
51:25 106:18	98:4 168:4	Boston 108:4	152:12 182:3	76:9 79:22,23
138:9 150:25	bikes 168:7	116:16 124:18	brunch 4:10	business 4:25
behalf 165:22	Bill 6:5	134:5 141:17	Bryant 40:8	21:11 106:11
176:4	billion 95:21	bought 15:3 146:9	153:15	127:2 159:20
behavior 42:8	114:14,17	147:23	bubble 58:2	160:21 173:2
believe 14:14 36:3	128:14,18	Bowls 24:18	buck 146:25	174:7 180:23
63:8 65:3	billions 121:10	box 14:17 22:24	Bucket 43:7	181:5,5 187:5
116:23 127:8,23	127:23	142:13 147:18	budget 73:19	businesses 161:10
180:2	bins 25:9	boxes 13:4	148:16	162:5 163:19,22
believes 172:17	bit 24:6 69:4	brand 96:25	budgetary 182:10	164:19 165:25
bell 37:20	76:14 90:21	107:13 138:6	budgeting 42:13	168:13 172:15
benefit 111:10	92:13 112:7	brass 164:21	budget-develop...	175:16 176:5
121:3	131:5 174:8,9	break 61:8,12	180:20	178:10 179:4,19
benefits 111:7	bits 142:9	97:11 119:14	build 70:15,15	180:4,11,13
Benjamin 49:3	black 44:10	breakdown 38:10	97:9 130:12	183:20 185:11
Bentley 54:13	BlackBerries	breakdowns	148:8 189:8	185:13,18 186:5
best 8:15 10:23	120:18	24:25 25:6	builder 150:5	186:7,12 187:9
17:9 26:21	Blackwell 1:11	breaking 119:9	building 31:18	187:10
29:25 103:21	7:11 89:15	164:16	38:2 66:2,7	Busty 96:8
126:10 146:23	102:23 103:18	breaks 111:15	104:19 107:5	Butkovitz 9:13,25
162:17 178:5	103:19 152:18	127:16	108:20,22 119:9	10:4,9,17,18
best-run 117:10	blah 23:2,2,2	break-ins 105:20	119:14 124:9	14:9,13,19,23
better 26:11	Blatstein 88:3	105:20,23	149:8 150:21,22	15:8,13,23
55:15 74:23	89:7,7 104:3,4	Brennan 93:11	161:21	16:24 17:20,25

18:5 19:5,14,20 19:25 20:8 21:15 24:10 27:18,24 28:22 29:19 30:25 32:20 33:25 34:19 35:3,6 36:2,10 button 101:18 buttons 104:16 buy 108:10,12 154:6 buzzer 37:20 buzzing 38:2	camera 1:17 2:17 8:13 12:10,15 13:4 21:4 23:6 27:7 32:2 36:24 37:13 38:16,17 38:19,20,22,23 39:22 40:12 41:4,6,22 42:15 42:22 43:14,18 44:13,21 46:4 46:24 56:4 57:22 59:9,18 61:5 62:21 66:5 66:6 67:12 84:22 85:3,23 85:24 90:21 92:2 96:10,10 97:6,18 99:8,23 100:18,19,20 102:18 104:22 105:9,15,25,25 109:10 111:9 115:8,9 125:23 136:8 137:13 138:6,23 139:10 139:23 140:15 141:14 142:3,7 143:2 151:23 152:7 153:4 156:17 162:6,16 165:10 170:8 179:14 180:18 185:23,23 cameras 4:8,10 5:11 6:11 7:14 7:20 8:4 11:12 11:14,15,17,19 11:25 12:4,8,21 12:24 13:7 15:4 15:5,15,17,19 17:19,24 18:12 19:12 22:23,24 24:9,19 25:8 26:8 27:3,9 31:7 32:10 33:19 34:12 35:21 37:10 38:10,25	40:24 41:10 42:5,14,18,19 42:25 43:4,7,8 43:10,23 44:2,7 45:22 46:6,7,10 46:14,16,18,21 46:22 47:9 53:7 53:11 54:3,9,20 54:22 59:21,22 60:5,7,12,18 61:14 63:3,17 63:23 64:19,23 65:8,13,16,19 67:16 68:6,22 69:13,14,15,19 70:6,19,23 74:15,22 75:3,9 75:22 76:2,6,9 76:11,17,21 78:3,15 79:21 80:4,6,10,15 81:12,14 82:9 82:10,15,20,21 82:23 83:2,12 85:18 86:13 91:21,24,25 92:12,14,22 93:10,24 94:15 94:25 95:3,11 97:4 99:24 100:2,5,8,16,24 100:25 101:12 104:8,12,12,13 104:17,20 107:20 108:6,21 109:6,8,19 110:11,16 111:23 112:24 113:11,17 115:13 116:4,7 116:13,20,25 117:16,24 118:25 119:2 120:12 122:5 125:3,9,21,25 128:18 129:2,10 129:18 130:14	132:2,15,25 134:21,22 135:11 136:24 137:8 139:2,4,7 143:3 145:8 146:2,9 147:23 148:6 149:5,16 149:17 150:14 150:16 152:14 152:24 154:2,22 155:4,5,6,15,16 155:20 156:6 161:20,24,25 162:11 164:10 168:12,14,20 169:5 171:21,22 172:2,13 174:6 174:13,22,24 175:8,17,24 176:11,12 177:19 178:13 179:19 180:4 183:2,8,15 185:21,21 186:22 188:3 campaign 77:2 campus 94:22 98:7 124:8 125:20 150:5 campuses 95:19 95:22 capabilities 38:5 71:7 72:12 capability 70:9 72:16 82:24 capacity 65:8,24 66:21 67:21 68:25 70:19 100:6 160:23 capital 22:6 42:13 56:16 160:11 capture 12:9 60:20 captured 163:5 172:13 capturing 83:9 car 102:16 104:19	105:20 114:6 card 53:24 119:15 cars 46:16,17,23 case 18:11 108:17 130:8 136:2 153:8 163:4 172:7 cases 62:9,12 catch 27:2 77:12 82:21 83:8 121:17 caucus 102:22 caught 59:9 104:14 105:15 115:12 caution 183:21 CCTV 41:19 53:13,18 91:7 91:16 92:9 93:20 102:8 cell 178:8 center 17:18 25:22 42:10 47:3 72:18 81:21 82:8 83:4 83:5 84:16,23 85:22 92:23,24 92:25 93:2,4,7 98:22 100:7 101:6,16 108:18 118:17 127:10 127:11,15 128:22,23 132:7 132:23 133:22 135:8 143:6 149:25 152:16 156:5,11,12,14 158:18 159:18 159:19 160:2,5 160:13 161:18 161:20 163:22 165:4 172:10 174:3,24 184:14 centers 31:7 72:3 84:11 152:21,24 178:12,15 central 37:15
---	---	---	---	---

54:10 170:25 centralized 17:18 century 171:10 certain 25:2 64:24 82:25 113:17 148:18 152:24 169:12 176:13 184:3 certainly 16:5 75:4 129:14 155:22 CERTIFICATE 190:2 certification 190:19 CERTIFY 190:3 certifying 190:23 cetera 90:11 Chair 1:10 22:18 24:2 35:12 57:4 63:21,24 64:10 74:8 103:17 143:25 144:4 189:22 Chairman 2:24 3:3 5:21 10:5 18:25 19:3 22:13 29:17 36:17 48:19 54:3 74:11 89:12 144:7 167:5 169:22,23 171:7,14 180:24 185:7 challenge 43:11 106:23 107:5,15 123:14 challenges 3:22 44:22 55:9 109:2,5 challenging 67:7 Chamber 158:20 170:3 171:2 172:17 173:6 181:17 change 29:10 125:3 150:20	changed 107:7 109:9 changing 123:5 126:24,25 150:23 Charlie 93:11 chase 46:13 66:13 cheaper 133:10 check 27:20 120:10 137:22 163:20 176:7 185:19 checked 146:5 cheering 87:13 Chestnut 100:12 163:9 Chicago 112:25 114:25 120:6 134:4 Chief 9:14,16 36:16,20 43:17 43:21 45:12 46:3 49:2,2 58:23 61:20,24 62:5,6,16 72:10 77:14,24 78:6 78:17 80:8 81:18 84:9 85:4 85:8 child 96:13 Children's 91:5 Chinatown 47:21 choose 81:11 CHOP 129:7 155:11 Christian 148:10 CINDY 1:11 CIOs 108:3 circuit 166:7 circulated 165:9 circumstances 30:18 Cisco 122:23 cities 112:7 115:23 122:17 122:21 124:2 125:14 127:24	citizens 13:24 49:7 166:11 city 1:2,6,16 2:4 2:15 3:11,25 5:3 5:7 9:12 10:19 11:13,18,21 12:8,14,18 13:9 13:13,18 15:24 19:6,15 21:24 21:25 22:25 23:8,14 26:22 26:23 28:23 29:24 33:4 45:15 47:9,17 48:8,19 55:19 66:23 67:11,14 68:16 69:18 71:8 80:17 87:3 89:13 98:14 101:17 106:2,3 109:3 110:19 111:7,17 113:8 114:12,17 115:18,21 117:2 117:9,10,21 118:15,19 119:20,24 120:5 122:6,8,10 126:16,19,19 127:11 128:16 132:2,5,16 134:14 135:20 135:22 136:9 141:17,18 146:21 147:13 149:3,17 151:9 151:13 155:20 156:4,9 158:18 158:19 159:18 159:19,21 160:2 160:5,7,13 161:18,20 162:20 163:5,22 165:4,21 167:10 167:13,17 170:24 171:2,3 171:18,19,23	172:10,23 173:3 173:10 174:3,24 182:23 184:14 citywide 56:22 166:18 175:21 180:4 city's 1:17 2:17 11:12 12:20 13:20 19:21 20:15 21:18 56:3,7 71:21,22 80:23 110:16 121:4 127:17 170:7 claim 77:6 claims 77:8 clarity 136:10 147:8 Clarke 1:10 2:9 2:20,23 8:21 10:20 22:16,17 57:7 64:9 68:7 70:13,24 71:13 71:16 72:2,8 74:3 89:12 171:8 172:23 cleaner 160:3 cleaning 160:8 164:19 clean-up 114:10 clear 66:18 176:19 cleared 120:10 clearing 120:7 127:21 clearly 23:24 Clerk 2:11,13 9:9 9:12 87:25 88:3 88:14 158:17 clients 107:16 clip 135:19,20,21 close 70:11 closed 62:11,15 86:17 97:13,19 153:8 166:7 closed-circuit 40:22 50:25	closely 56:6 161:13,21 163:15 cloud 120:25 collaborate 127:17,20 collaborating 111:20 collaboration 47:8 collaborations 48:2 collected 162:4 collecting 175:15 collection 83:21 collective 115:16 collectively 115:21 college 95:19 168:22 combatting 55:14 combined 148:3 combining 163:2 come 3:13 27:6 76:9 85:16 88:22 91:9 92:22 93:3,3 96:4,7,8,12 98:19,21 103:21 113:25 127:4 131:10 133:13 135:18 144:3 153:22 comes 146:24 comfortable 30:14 91:15 coming 27:15 54:17 73:12 75:21 97:16 99:12 101:12 102:4,20 106:17 132:11 149:12 155:25 command 17:18 25:22 83:5 85:22 92:25 118:17 132:23
---	---	---	---	--

133:22 149:24 177:15 commend 10:20 171:6 commended 170:12,20 181:15 comment 20:13 181:11 Commerce 158:21 166:8 170:3 172:17 173:6 179:25 181:17 commercial 162:2 166:23 173:22 173:23 commission 5:16 Commissioner 93:12 98:18 commit 99:3 commitment 171:3 committed 5:10 5:12 61:4 121:17 committee 1:3,16 2:4,15 6:6 7:2 10:12 18:22 19:23 36:19 45:16 48:20 49:5 54:18 89:14 139:21 166:13 169:24 170:6,18,19 171:7 172:22 173:10,17 181:15 182:6 189:24 committees 106:23 committing 5:18 92:5,6 99:11 common 48:3 96:2 127:19 142:16 177:17 communal 53:14	communication 16:17 55:25 101:19,20 168:24 communities 32:8 49:6 55:20 67:7 community 5:2 21:12 66:4,9,10 91:13,19 93:6 102:25 103:3 105:11,19 125:8 157:8,17 166:12 166:17 169:13 companies 106:24 117:20 122:22 134:2 138:15 160:21 183:23 company 29:2 43:24 44:5 62:24 123:4 128:9 141:20 compare 11:8 compared 171:21 compatibility 71:8,23 146:6 compatible 13:7 16:7 31:18 146:3 competition 107:6 complement 183:8 complete 34:17 completed 20:3 compliance 29:7 complicated 21:21 component 49:12 154:15 173:21 computers 28:10 165:3 computer-aided 93:13 con 164:18,23 conceivably 67:18 concentrated 39:24	concentrating 40:2 99:25 concept 6:3 120:23 concern 146:15 171:2 176:21 184:18 concerned 186:16 concerns 50:3 185:11 concise 66:18 concluded 189:25 conclusion 54:19 81:6 173:4 conduct 42:7,17 conducted 49:25 conducting 161:8 166:4 177:7 confessed 163:12 confidential 178:7 184:9 configure 142:14 configured 123:2 configures 130:14 configuring 130:13 confirm 14:16 54:15 confronting 71:7 congestion 114:8 114:16 congrats 9:24 conjunction 33:19 connect 56:3 110:8 112:17 116:17 connected 37:17 149:6 Connecticut 40:7 connectivity 112:21,23 130:19 187:14 ConOp 118:13 ConOps 113:21 consider 30:12 33:23	consideration 84:4 182:10 consistent 9:5,6 consistently 55:10 consists 37:14 40:21 constantly 110:3 135:13 156:20 construction 42:16 consult 108:3 contact 169:11 176:5,6 178:5 contacted 184:15 contacts 105:13 contained 190:5 containing 13:4 contains 85:22 contemplate 5:15 contend 180:13 context 90:14,20 contiguous 183:4 continued 14:11 166:14 continues 41:2 contract 11:21,22 12:19 19:15 28:17 29:7 67:24 68:2,18 123:9 contractor 62:20 63:7 contractors 62:22 contracts 28:24 29:25 51:12 53:2 63:9 146:24 control 53:4,19 53:22 83:4 92:25 95:10 100:25 101:2,3 117:22 119:15 120:13 149:25 172:14 190:22 Controller 9:12 9:24 10:4,9,17 10:19 14:5,9,13	14:19,23 15:8 15:13,23 16:24 17:20,25 18:5 19:14,20,25 20:8 21:15 24:10 27:18,24 28:22 29:19 30:25 32:20 33:25 34:19 35:3,6,11 36:2 36:10 146:22 Controller's 30:8 33:12,16 controls 135:24 Convention 132:7 135:8 converted 25:9 conviction 130:2 157:7 cooperate 107:12 185:14 cooperation 56:10 coordinate 142:2 coordinating 111:21 coordination 33:14 55:16 87:2 160:13 cope 16:14 copies 179:2 cops 104:24 copy 184:16 core 50:18 corner 6:16 136:12 corners 18:13,16 cornerstone 49:13 corporate 187:7 corporation 110:23 166:23 correct 10:25 31:10 62:16 79:6 144:16,17 157:3,4 190:8 corrected 22:21
---	---	--	---	--

correctly 32:19 140:17	19:19,22 20:6 20:10 22:11,14	171:15 173:16 174:19 176:15	29:22 57:14 64:12,17 79:19	160:25 161:3,6 161:7 162:13,18
corridor 167:14 173:23	22:15 24:3,15 26:17,18 27:22	179:8 180:19 182:7 184:10	91:15 95:23 134:12 152:11	163:2,3,19 164:8 165:13
corridors 167:22	28:3,4,6 29:11 29:13 30:4 31:4	185:2,5,6 186:13,18,20,21	155:15 159:10 course 5:16 53:6	166:11,16,24 167:15 171:18
cost 11:10,18,25 12:15 24:9 32:7	31:11 32:21,23 32:24 34:4,24	187:25 188:9,20 188:23,24	90:25 147:11 court 44:21	174:4 180:15 184:14,21
39:11 44:23 68:4,13,20	35:5,9,10,14 36:7,12 43:15	189:12,16,20 Councilmanic	129:22 161:11 courthouse 132:8	187:19 crimes 7:5,21
111:9,16 114:13 117:19 122:7	43:19 45:5,15 48:10 52:18,21	7:12 Councilmember	144:24,24 cover 140:16	59:3,17,25 60:10 61:3
123:20 125:13 126:2 133:9	57:2,9 61:22 62:3 64:6 67:23	2:9 Councilmembers	154:18 174:22 coverage 154:19	73:13 76:24 92:7 116:14
142:25 183:17 costing 73:23	67:25 71:6 74:5 74:6,8,10 75:15	171:14 Councilpeople	184:13 covers 164:21	121:16 161:5 187:16
costs 24:5,22 51:11 114:16	76:12 77:22 78:11,25 79:7,8	104:7 Councilwoman	co-police 100:13 crashed 102:13	crime-fighting 6:12
115:10 124:2 125:22 128:8	79:10,12,14,16 79:24 80:3,11	1:11,11 5:24 7:11 9:8 29:13	crawl 128:2 create 5:6 25:22	crime-prevention 121:22 171:10
129:16 cost-efficient	80:14,21 81:3 81:16,25 82:14	29:14,15,16,21 31:3,5,9,21	49:6 115:22 created 33:6	criminal 12:9 42:7 55:15
13:22 COTS 122:24	82:17 83:10,16 83:24 84:3 85:2	32:22 35:12,14 35:16 36:5,8	34:14 117:12 122:11 167:12	86:12,21 111:2 161:11,12 169:6
Council 1:2,10,16 2:4,8,15,23 3:5	85:6,13 86:7 87:11,24 88:6	57:11,12,18 59:7,16 60:24	creating 161:7 creative 50:11	175:3 criminals 6:13
8:21 10:20 11:5 21:11 22:16,17	88:18 89:9 103:9,17,25	61:9,18,20 62:13,17 63:11	Creek 54:5 crime 4:11 5:10	44:14 175:2 184:19
34:22 36:18 45:16 48:8,20	105:11 106:6 121:13,24,25	63:14 64:4,8 76:15 83:3	5:12,15,17,18 6:24 7:8 8:8,8	crisis 21:20 critical 49:11
57:5,7 64:6,9 68:7 70:13,24	123:8 125:5 126:14,21 130:3	89:15 102:23 103:18,19 144:5	9:3 12:7 18:15 20:21 44:14,22	69:23 111:13 163:23 170:23
71:13,16 72:2,8 74:3 89:12,13	130:21,24 131:2 131:9,13 133:18	144:6 146:14 147:16 152:10	47:3 48:3 49:23 50:17 51:22	critically 49:24 crossing 143:7
102:21 159:21 170:12,19 171:3	136:4 137:18,24 138:11 139:17	152:18,22 171:15	67:12,16 72:18 73:4,6,8,9 76:17	crucial 161:12 current 3:25
171:8,12 172:22 173:10	139:18,25 140:14,21 141:8	Council's 166:16 170:5	76:25 78:12 81:21 82:7 92:5	13:11 46:4 55:7 123:14,20
Councilman 1:10 1:12,12,13,13	141:22 142:18 142:22 143:25	Council/City 52:19	95:17 96:19 101:16 103:3,7	currently 13:7 15:19 16:4
1:14 2:3,18 3:9 5:22,25 6:5,7	144:4 151:21 152:2,4 156:18	counterintuitive 86:18	103:13 104:23 111:11 114:23	36:23 38:15,18 39:2 42:17
8:23,25 9:21 10:6,11,15,21	156:23 157:20 157:21,22 158:2	counterterrorism 175:9	115:3,13,17 128:15,23 134:9	70:16 72:11 85:24 92:11
14:2,10,15,21 14:25 15:11,18	158:13,22 159:2 159:7 162:24	country 108:4 111:15 117:11	135:18 137:11 156:5,10,12	132:6 168:4 179:21
16:22 17:2,22 18:2,7,23,24	166:20 169:16	couple 3:5 17:16	159:17 160:14	Curtis 1:10 36:18

cut 20:20 66:13 73:19,22 76:20 cutters 96:11 cutting 15:21 cycle 139:3,9 Cynthia 9:14 36:20	114:10 dedicated 84:18 84:24 deemed 23:3 53:16 defective 44:2 defer 27:16 57:8,9 define 124:17 134:10 definitely 128:17 157:6 188:2 definition 136:7 138:22 degree 65:18 80:17 degrees 92:17 140:7 Delaware 135:9 145:2 delegate 84:13 delegation 171:13 delicate 185:3 deliverables 29:5 delivery 54:2 76:4 denied 186:10 Dennis 1:13 2:9 densely 162:21 depart 170:9 department 27:17 30:15 34:14 44:4 47:6 55:18 56:7,8 70:7 72:24 75:5 80:23,24 81:10 82:13 89:5 105:5 114:22 125:12 153:22 154:5,9,12 160:15 162:8 164:13 165:23 171:25 175:19 177:3 179:25 181:7 187:21 departments 56:5 87:19 89:23 173:25 176:21 Department's	47:2 72:18 163:16 166:6,9 departure/arriv... 86:15 depending 130:17 155:24 depends 126:18 deploy 86:24 deployed 98:7 132:13 140:17 171:17,25 deploying 101:9 deployment 3:24 4:8,13 51:5,15 51:16 52:8 130:16 deployments 130:9 Deputy 93:11 design 15:14 125:15 designate 88:12 designated 41:10 42:11 designed 28:15 50:2 53:3 55:8 107:20,23 detecting 42:5 detection 78:20 78:21 113:6 141:21 142:19 detectives 44:19 73:11 92:10 129:12 detectors 40:14 142:19 detects 119:12 deter 44:13 169:6 determination 20:20 determine 13:6 13:11 116:3,8 124:16 determined 12:10 deterrence 33:18 34:15 78:9 deterrent 92:3	detrerring 42:8 162:13 develop 29:2,3 181:12 182:18 developed 51:14 106:22 developer 104:7 developers 182:24 183:14 developing 175:19 development 15:9 161:2 166:23 168:4 183:16 developments 52:2,3,8 53:15 53:25 54:5 develops 49:17 device 149:7 devoted 43:13 dialogue 182:5 different 30:17,18 30:18 63:18 64:25 71:21 108:10,19 109:25 112:9 118:9 122:4 125:9,17 131:25 142:9 153:14 170:16,16 186:24 187:2,2 difficult 17:8 18:10 dig 174:9 digital 16:23 17:12 40:24 53:12 129:22 148:5 digitally 100:2,4 155:6 diligently 55:5 dime 29:4 diminish 68:20 diminishes 68:12 direct 114:15 154:7 190:22 directed 99:14	direction 92:16 126:17 140:7,17 140:20 156:16 168:5 178:18 directions 141:7 directly 41:23 46:25 166:11 176:7 177:9 186:2 Director 9:17 48:22 49:2 98:13,19 100:9 159:17 168:6 170:2 directors 161:22 discussing 139:2 discussion 111:7 discussions 99:19 disorderly 42:7 disparate 108:15 dispatch 83:5 93:14 96:12 120:20 dispatched 99:13 dispatcher 94:18 99:15 101:6 disposal 189:11 district 7:12 9:13 36:23 38:6,11 39:9 42:13 44:18 47:24 56:15 65:17 68:16 69:5,8 72:21 80:7 101:21 145:11 152:15 153:2 157:13 158:18 158:19 159:19 159:19,20 160:5 161:14,19 165:6 167:11,11,16,19 168:13 169:4 178:21 District's 37:2,8 38:25 160:14 disturbing 58:14 58:18
---	---	--	---	---

division 89:20,22 101:21 155:12 157:11 divisional 44:19 DNA 33:17 34:3 34:11 Dobbins 39:14 44:8 doctor 129:7 153:3 155:10 documented 8:8 documented-by... 7:4 doing 19:10 21:7 58:7,8 63:2 85:10 90:22 94:19,21 96:13 98:2 100:21 108:5,7 117:3 125:9 133:2 137:2 139:21 144:13 151:4 154:25 155:3,5 157:19 dollar 13:23 35:8 63:4 115:8 dollars 14:12 43:22 111:18 121:11 122:15 122:19 124:12 183:7,8 donation 110:18 door 37:19,25 doors 53:20 104:18 doorways 141:10 dormant 143:4 Dorsey 9:15 36:16 36:21 43:17,21 45:12 72:10 77:24 78:6,17 80:8 81:18 84:9 85:4,8 download 187:5,8 downloaded 82:11 downloading 47:7	downtown 159:22 160:23 162:3,22 176:12 dramatic 121:8 126:11 dramatically 68:13 77:4 drawing 170:20 draws 95:22,23 Drexel 90:22,23 100:11,11,24 101:7 156:7 drill 119:22 120:22 drive 143:16 driven 83:20 143:15 161:2 driver 58:9,15 drivers 58:11,12 145:9,19 driving 58:15 dropped 113:16 DRPA 132:9 dry 164:19 duty 51:17 DVD 129:22 DVDs 73:12 DVR 40:24,25 129:22 137:12 145:11,16 155:7 DVRs 73:12 DVTel 88:15 123:16 126:6 130:8,15 131:5 131:18 132:4,4 132:11 138:12 146:4 148:11	easily 17:14 east 46:11 90:17 94:23 97:2 141:4 economic 108:16 111:9 167:13 edge 15:21 effect 79:4 80:5 143:22 effective 8:4 13:19 34:6 55:24 58:5,20 142:25 effectively 140:16 effects 114:15 efficient 41:5 effort 9:23 166:10 169:7 efforts 13:23 51:25 166:6,12 166:14 eight 38:23 51:6 80:14 168:7 either 33:13 65:19 73:5 89:9 176:6 elaborate 31:5 elected 170:16 Electric 37:7 145:12 electronically 53:20 137:4 element 111:2 elementary 37:11 38:6,12,13 40:4 40:11 41:20 153:15 elevator 104:16 165:13 elevators 59:25 eliminate 117:18 emergency 16:16 127:10 175:10 175:12 emerging 172:19 Emlen 54:6 emphasis 166:16 employ 100:21	employed 168:23 employees 89:24 enacted 3:10 encoders 147:15 147:17,18,24 encodes 147:18 encourage 32:15 179:18 180:3 181:5 183:18 encourages 169:6 enforcement 33:9 55:19 86:19 160:16 162:10 162:14 163:2 165:24 166:3 169:8 175:25 176:23,25 177:6 183:3 186:8 engage 166:11 168:17 181:6 engaged 4:24 6:10 32:18 42:6 80:22 engagement 123:3 engine 139:7,8 England 33:5 enhance 3:17 67:15 enhanced 5:6 53:22 67:13 168:2 enlightening 138:3 ensure 13:22 42:12 entering 29:24 123:2 enterprise 122:11 entire 32:8 46:15 46:16,21 75:16 entities 26:2 68:4 73:2 128:19 131:25 entity 107:3 155:19 156:8 entrance 37:19	environment 173:23 envy 24:17 equip 46:20 75:16 equipment 12:25 13:5,6,10,12 14:17 30:11 43:6 53:19 102:3 134:24 145:7 equipped 76:10 escape 92:19 escorts 90:11 especially 59:22 73:14 125:6 139:7,12 essential 162:15 essentially 15:15 63:12 81:9 148:22 establish 17:10 53:13 established 129:17 establishing 53:23 estimated 12:14 estimation 15:19 et 90:11 evaluate 33:6 evaluated 13:17 evaluation 34:9 34:10 event 112:12 118:8 142:6 156:24 events 47:25 111:19 119:7 127:13,20 142:14 160:10 eventually 122:16 everybody 4:24 21:10,10 68:23 111:22 117:6 everybody's 156:6 everyone's 120:23
--	--	---	--	---

evidence 190:4	99:18	58:23 73:18	feeling 44:16	141:25
evidentiary 83:21	experiences 189:5	90:4 92:8	Fels 41:12	firm 133:12
evolve 83:25	experiment 29:3	102:20 155:13	felt 91:15	first 2:19 9:10
113:21 127:9	expert 189:4	184:23	fence 96:3	10:19 49:16
174:20 175:4	expertise 182:13	factor 114:24	Fern 46:13	51:4 57:6,15
evolved 6:20	experts 28:2	164:4	fiber 69:25 70:3	69:12 74:18
exact 75:12 142:7	112:19 181:14	facts 170:21	70:11,14,16	114:3 117:2
exactly 136:13	181:21,24 182:2	faculty 91:19	112:22 149:13	159:8,13,14,20
example 21:24	exploring 81:4,5	Fairfield 63:7	149:20,22,23	167:9 171:25
31:8 69:2 94:4	Expressway	fairly 98:6	150:7,8,10	fiscal 83:11
95:18 113:7,13	167:20	familiar 94:16	fiberoptic 17:17	fit 133:19 147:7
117:8 120:21,22	extend 65:24 66:8	96:24,25 122:21	65:25 66:6	five 37:7 43:22
125:19 141:17	182:4	familiarity 51:19	72:13	52:2 80:8 94:11
141:18 145:10	extended 168:10	families 49:11	fiberoptics 23:7	108:10 109:25
examples 109:17	extends 167:19	far 60:4 76:13	67:2	125:25 134:15
162:25	extensive 57:21	116:6	field 143:7	157:13 159:23
exceedingly 11:25	82:22 105:6	Farfield 63:8	fieldwork 16:4	five-year-old 40:9
excellent 31:2	161:24 168:21	farther 145:4	20:2	153:10
41:14 103:24	extent 71:3	182:12	fifth 45:24	fixed 53:9
108:16 109:21	181:20	fashion 28:17	Fifty-three 14:24	fleet 46:15,17,19
excessive 12:2	exterior 40:23	fast 29:9 126:11	14:25	46:21 75:7,17
excited 9:4	42:25 43:3,9	faster 111:20	fight 6:24	75:24 76:4
execute 118:13	185:23	112:4 115:14	fighter 166:25	flexibility 124:24
135:17	external 53:10,10	120:11 127:20	figure 15:6 17:4	flip 105:10
Executive 9:17	65:14,20	127:21	31:12 69:2,9	flow 113:12
48:22	extremely 4:3	fastest 120:20	141:13 146:17	114:20
existing 51:8	23:8	126:10	174:21	flyer 165:8
134:19 144:15	ex-police 132:25	favorably 11:8	figures 57:20	focus 34:15 51:17
145:17 147:5,24	eye 97:10	FBI 177:5	58:19,23	51:24 166:15
174:5	eyes 8:12 18:3	feasible 172:24	final 159:3	171:8
exit 104:18	77:14,16 82:17	February 1:7	Finally 162:23	focused 24:5
expand 66:21	83:2,23 84:6	38:11	financeable 22:5	33:18 106:17
67:2,19 70:10	85:18 86:16	fed 67:11 150:24	financial 21:19	113:11
176:14	116:2,9,22	federal 25:21	39:8 111:6	Foley 158:18
expanded 67:9	142:24 143:2	52:17 55:19	112:6 121:7	167:4,9 177:11
expansion 50:23	e-mail 178:9	118:15 123:6	find 3:16 8:16	folk 26:4
51:3		160:16 188:14	12:3 117:8	folks 32:13 58:6
expansive 67:5	F	188:19	119:11,11,17	85:25 177:15
expect 95:3	face 97:19 118:24	federally 56:12	126:13	follow 35:22
expectation 71:11	155:18	feed 65:24 66:5,8	finding 50:10	65:22 116:19,24
86:2	facilitating	85:23 101:23	181:17	131:21 150:10
expense 180:10	161:16	186:9	fine 64:20	151:5 178:25
expenses 26:22	facilities 37:4	feeds 71:10 83:6	fingerprints	185:10
114:18 180:13	43:5 63:18	85:24 133:24,24	104:15,18	following 47:12
expensive 34:20	65:13,20 81:15	133:25	finished 30:20	113:23 150:7
101:13 116:4	facility 31:16 67:5	feel 48:2 157:9,17	fire 127:6	follows 38:12
experience 86:19	fact 3:16,19 16:12	180:16 183:25	fired 141:22,23	food 88:11

footage 27:10 44:21 138:2 153:4,12 156:21 156:25 163:20 163:23 166:2 176:4 football 8:19 footprint 54:23 66:3,22 67:19 69:14 force 50:24 51:8 91:8,11 102:6 129:19 137:15 foregoing 190:7 190:19 forklift 146:11 Forsyth 147:20 forth 170:21 fortune 124:3 Forty-six 38:15 forward 13:9 25:16 26:9 134:17 135:4 145:13 147:14 179:15 182:9 forward-thinking 9:6 found 12:16 13:3 23:12 141:25 163:11 177:23 188:4,7,12 Foundation 98:18 four 21:17 42:25 134:15 139:10 148:25 150:21 163:12 fourteen 14:22 Fox 46:13 fraction 116:5 framework 55:10 fraud 77:2,7 free 154:10 frequently 16:3 Friday 110:14 friends 105:16 frightening 138:3 front 16:10 22:10	119:18 fruition 91:10 fully 13:14 19:7 20:24 39:2 72:19,20 74:20 90:2 109:4 190:5 fully-loaded 40:17 41:17 function 44:11 functional 74:21 functioning 11:16 fund 53:2 110:19 funded 56:12 110:21 funding 34:23 52:17 73:17 funds 52:19 188:19 further 56:9 172:20 189:4 future 30:6 84:4 87:2 127:9 129:14 G gaps 176:13 Garden 47:17 54:6 gather 47:22 114:4 gathered 162:9 gauge 50:2 GC 151:6 GE 37:7 62:24 general 19:4 37:7 45:19 58:13 66:9 145:12 generally 181:3 geniuses 104:17 gentleman 21:7 geography 174:4 geospatially 108:23 getting 40:3 58:6 77:13 96:21 109:23 110:3	130:18 146:25 147:8 153:12 156:13 164:6 Girard 102:17 104:11 GIS 119:25 give 2:20 59:13 68:3 84:4 87:17 88:10 90:14 94:3 121:3 125:19 141:16 155:20 158:11 182:24,25 given 12:6 29:9 86:2 94:12 gives 42:13 53:21 108:15 126:9 giving 182:12 184:24 gladly 54:17 Gladys 54:7 glaring 106:18 glitches 16:12 go 8:3 26:21 30:5 31:5 35:18 45:8 48:11 58:12 68:18 77:5,20 97:3 103:20 113:3 115:19 116:19 118:21 126:16 127:24 129:12,21 134:9 135:5 137:11,11 140:6 142:3,7 143:20 153:24 154:17 159:8,14 182:12 189:4 goal 48:3 53:13 56:18 81:7 124:18 goals 11:11 13:16 173:6,11 God 104:11 153:7 goes 13:23 108:24 111:11 120:8 149:24 168:17 going 5:14,19 8:9	10:23 14:2 18:21 19:17 20:20 21:16 25:3,12,16 26:4 29:22 40:5,10 48:10 57:3 59:11 63:17 65:11 66:13 68:18 73:25 81:22 83:25 88:8 90:22 94:8 95:5 98:5 100:10,23 101:4 101:5,17 107:15 109:3 110:8,10 110:18 113:5 115:17 117:13 118:24,25 119:2 119:14 122:17 123:4,6 124:25 124:25 126:5,7 128:4,7,21 129:14,15,16 131:10 134:9,17 135:2,4 143:16 143:19,20 144:22 145:13 146:8 148:25 149:8,19 150:3 151:2,11 153:19 154:10 156:8,16 167:5 169:2,4 169:13 good 2:3,25 3:2 4:19 8:22 16:20 19:2 27:11,12 29:18,19 36:15 36:16,17 45:14 48:12,15,18 57:15,17 74:6 74:12 89:2,11 91:22 92:3 95:18 101:2 104:6 106:9 119:3 121:25 157:14,14 159:15 169:23	178:24 184:10 gotcha 17:3 gotten 86:8 governance 126:25 government 67:21 68:9 123:6 governmental 26:2 173:20 Governor 127:4 GPS 120:8,16 128:25 Grace 158:20 169:21,25 180:24 189:14 graduate 153:2 158:7 graffiti 160:9 Gragg 148:10,11 Grand 118:9 great 25:20 28:23 29:8 44:12 95:16 96:3 128:3,13 158:6 161:15 171:2 greater 56:3 170:2 172:16 173:5 Greenlee 1:12 6:5 8:23 18:24 19:19,22 20:6 20:10 22:11 74:9,10 75:15 76:12 77:22 78:11,25 79:7 79:12 121:13 126:21 131:2,9 131:13 133:18 136:4 157:21 158:2,13,22 159:2,7 171:16 185:5,6 186:13 186:18,21 187:25 188:9,20 grid 143:3 174:13 ground 8:12
---	--	---	--	---

group 45:6 62:25 groups 125:8 160:22 161:10 guarantee 134:8 guard 51:12 165:8 guess 8:3 14:7 19:4 22:20 25:12 48:11 65:17 78:11 146:15 147:2 186:23 guidances 31:19 gum 58:2 gun 171:5 guns 102:13 gunshot 113:6 141:21 142:7 guy 92:4 155:17 guys 87:12 95:24 104:14 127:6 132:3,13 133:4 173:21 174:11 174:20	174:3 happy 64:2 101:18 102:19 103:15 106:2 173:15 hard 40:12 78:8 hardware 138:21 142:13 hard-wired 23:5 hate 8:18 HAZMAT 119:21 HD 135:2,5 136:6 138:22 147:19 147:25 148:6 head 87:13 headquarters 39:4 187:8 head-end 102:3 health 49:14 hear 2:6 14:6 26:4 27:10 45:6 93:8 97:13,14 122:3 181:2 heard 16:16 60:10 78:13 92:12 131:24 139:11 172:6 hearing 2:5 4:18 8:3 17:3,11 33:23 158:24 170:13 179:11 hearings 1:16 2:16 6:2 25:23 161:11 170:6,18 heaven 85:15,15 179:17 heavy 70:2 heightened 188:17 held 155:7 174:6 help 26:14 32:16 32:17 43:4 66:22,23 87:16 106:3 109:17 110:19,23 111:5 121:5 135:3 145:24 156:25	157:14 160:2 164:12 172:24 173:9 175:12 179:20 182:14 helped 105:21 134:3,4,4 helpful 30:22 31:20 61:19 65:9 87:5,20 88:13 99:20 181:18 182:4,19 183:20 184:25 helping 114:19 124:15 helps 189:3 Henon 1:12 79:16 hiding 91:24 high 23:14 24:8 37:11 38:9,21 39:14,24 40:2 41:6,12,12,16 43:8 56:15 60:15 84:10 113:3 136:7 138:22 highly 178:7 high-profile 163:4 184:13 high-rise 16:14 23:17 Hill 54:5 hindrance 182:19 hire 133:7 hiring 51:5 133:12 historical 77:21 history 28:23 29:24 146:22 hit 140:22 141:9 hold 1:16 2:16 100:3 170:6 180:11 holding 170:13 home 120:4 172:10 173:3 Homeland 75:5 homeowner 173:2	homeowners 154:6 Homes 54:13 Homewood 150:4 homework 177:23 homicide 44:18 47:16 73:11 129:7 155:12,12 157:10,11 163:16 Hood 127:18 Hook 40:7 hope 3:15 4:10 7:22 8:15,16 hopeful 30:11 hopefully 5:13 154:3 hopes 54:15 Hopkins 9:15 45:14,19 52:23 57:17 58:22 59:11,21 61:6 61:11 62:23 63:13 67:4,13 69:11 70:17 74:13,17 75:19 76:23 79:23,25 82:3,16,19 83:16 84:2 110:14,17 horrific 7:8 Hospital 91:4,5 132:9 135:8 144:25 153:3 hospitals 26:12 90:13 91:2,2 128:7 135:12 160:19 hot 7:9 18:13 99:2 hotels 160:19 164:24 hour 111:19 hours 42:20 52:12 159:11 163:8,21 168:9 housing 23:16,18	48:24 49:18 50:20 65:18 68:15 69:3 132:10 144:21 Houston 114:25 124:18 HUD-appointed 48:22 huge 105:7 126:4 133:12 135:7 Hughes 112:18 human 44:24 143:12 hundred 14:21 35:7 80:9,15 111:18 122:14 187:23 hundreds 124:11 135:10,10 hundredth 187:22 HUP 91:4 156:7 hybrid 23:11,12 149:21
H				I
half 11:17 28:13 104:9 Hall 1:6 54:13 69:18 hallways 39:16 handle 98:10 hands 58:16 119:24 177:22 happen 28:12 73:7 122:7 127:8,16 happened 7:11 23:23 26:25 67:6 156:24 157:9 168:14 happening 3:14 73:11 81:12 119:7 happens 32:18 72:17 121:19 137:9 138:21				IBM 122:22 IBS 43:24 idea 28:23 29:8 57:19 58:5 101:3 183:4 ideal 42:4 172:19 ideally 42:8 84:10 ideas 88:11 153:20 identified 37:23 60:3 62:2 105:22 161:25 identify 17:9,14 47:18 55:7 60:22 131:14 159:9 175:13 identifying 161:6 175:8 idly 137:9 image 145:16 146:8 168:3

images 17:15 164:9 187:4,17 187:24	incentive 181:3,4 182:21	information 12:23 24:13 28:10 48:12 54:18 64:21 69:24 71:25 87:18 109:13 111:5 114:5 118:6 119:23 120:24 121:4 127:18 134:2,18 142:2 145:22 147:3 152:25 156:14 158:6,23 162:14 164:3 170:21 175:21 175:23 176:22 177:2,4,21 178:4,6,24 179:12 180:6 181:2 183:13,24 184:7,16,20,25 185:25 187:6,8	36:16,20 43:17 43:21 45:12 72:10 77:24 78:6,17 80:8 81:18 84:9 85:4 85:8	integrating 39:10 91:7 93:12 101:25 109:10
immediate 13:12 115:7	inception 39:19	incidence 49:23 50:17	81:18 84:9 85:4 85:8	integration 108:14 109:16 115:24 116:5,23 122:20 126:4 128:5 129:16 141:20,24
immediately 96:12 113:18 128:12 168:18	incident 40:7 47:13,14 48:4 60:15 77:5 82:24 104:10,10 105:2,9,18	incidents 47:4,12 59:2,8 61:4 78:5 78:13,15 152:12 165:16,19	install 16:13 44:25 73:24 75:6 126:2 179:19 180:4	integrations 117:3 130:13
impact 126:11	include 53:9 160:8 164:15 168:20	includes 34:7 46:5 51:4 52:15 88:15	installation 11:24 15:15,16 39:11 42:18,18 50:24 54:20 138:16 151:18	integrator 100:22 151:6
impaired 163:11	incorporate 25:25 88:19	including 46:11 88:20 90:5 165:17 171:14	installations 42:21 162:21	intel 109:22
implementation 161:3	increase 74:22 86:5	incorporate 25:25 88:19	installed 11:15 12:4 13:8 37:10 37:15,18 38:16 38:17,19,21,22 38:24 42:25 43:23 53:8 54:4 59:22 60:8 76:18 97:5 135:11 161:19	intelligence 4:7 4:11 18:15 86:12
implemented 23:11 33:10 149:15	increases 51:16	infrastructure 26:15 53:23 71:21 111:13 149:3,13,22,23 154:16,18 155:24	instances 56:14	intend 183:2
implementing 49:21 50:15	increasing 49:18 105:25	informed 116:10	installer 138:14 148:20	intent 173:7
implied 186:17	independent 106:22	inherit 126:7	instance 33:17 39:13 178:11	interact 90:15 185:15
implying 184:3	independently 117:7	initial 11:20 22:3 130:16	instances 56:14	interactively 94:9
importance 34:9	indirect 114:16 114:17	initially 12:14 22:23	institutional 161:23	intercom 120:2
important 4:20 18:8 31:12 49:10,24 60:23 89:19 110:25 136:16 172:18 180:10 181:19	individual 7:18 7:23 17:8 37:9 68:4,24 80:10 153:6 155:5	initiated 174:10	institutions 26:13 160:22 173:19	interest 30:2 181:16
importantly 5:3	individuals 4:19 17:15,23 102:13 170:16	initiating 5:23	integral 55:16 139:20	interested 27:15 28:8 182:8
impressed 3:7,12 4:3,6	industry 107:11	initiative 10:22 31:6 50:6 56:12	integrate 25:24 72:23 81:22 82:4 101:14 112:9 113:5 117:5,15 145:15	interesting 20:22 21:2,9 98:22 114:11 180:25
impressive 4:16 57:25 58:4 121:14 122:3	inexpensive 124:21	initiatives 50:23	integrated 34:17 39:2 72:19,20 80:18 81:8 108:21,22 130:10	interests 50:3
improve 50:6 53:4 55:5,11 110:24 114:19 121:5 133:15,21 167:13 168:2 169:7	informal 177:16	Innovative 13:3 37:3		interface 144:15 145:8 147:4 173:24
improved 55:24 111:10		inside 37:21 39:21 52:12 90:13 93:24 104:12 139:8		interim 9:17 20:9 48:21
improvement 11:2 22:6 159:20		insight 152:7		interior 40:23 42:24
improvements 121:9		Inspector 9:14		internal 53:9 65:16
improving 49:19 50:12				intersections 140:25 149:10
				intertwined 153:20
				intricate 151:15
				intriguing 86:10
				introduce 119:4

167:8	27:25 32:16	joined 6:5,7 7:10	JR 1:10	153:16 154:12
introduced	33:15 44:4	9:8 139:18	July 76:5	173:18 174:21
179:24	51:23 61:2 71:8	joining 48:25	jumped 131:4	180:21 181:6
invaluable 162:12	71:23 89:19	jointly 68:3,19	June 11:6 24:11	kinds 182:11
164:12	112:17 152:15	Jones 1:10 2:3,18	75:21	183:19
inventory 11:11	154:21 156:8	5:22 8:25 9:21	jurisdiction 66:2	King 39:21 41:14
109:20	170:22 181:18	10:6,11,15,21	92:7	Kless 165:20
invested 25:15	181:19 182:9	14:2,10,15,21	jurisdictional	knew 21:2 87:12
50:21	184:4 186:14,16	14:25 15:11,18	66:19	104:24,24,25
investigation	issues 16:8 21:23	16:22 17:2,22	jus 136:4	know 3:3 15:6
44:22 157:2,15	51:20 66:19	18:2,7 22:14	justifiable 115:7	16:5 18:4,6
166:4 177:7	152:14 161:6	24:3,15 28:4		19:11 20:7,24
investigative	172:18 177:18	29:11,14 31:4	K	23:20,22 24:14
155:10 162:10	188:18	31:11 32:21	K 38:14,14,14,14	26:20 27:5 30:2
162:16	iterations 22:23	35:9,14 36:7,12	Katie 54:14	30:3,6 32:13
investigators	23:21	36:18 43:15,19	keep 101:3 103:22	33:12 35:4,4,18
44:20	i.e 44:10 65:20	45:5,15 48:10	121:20 127:5	35:19,19,21,23
investing 34:13		48:19 52:21	167:5 171:5	57:19 58:18
investment 22:3,9	J	57:2,9 61:22	176:9 178:6	59:13 62:25
32:5	J 101:22	62:3 64:6 67:25	184:6	65:15 66:11,13
Investments 88:4	jacking 102:16	74:6 79:8,10,14	keeping 45:2	68:17 72:13,17
89:8	Jackson 54:14	79:24 80:3,11	55:22	75:12,15 76:14
investor 110:22	Jacobs 54:8	80:14 81:3,16	Kelvin 9:18 48:21	76:21,23 77:14
invisible 97:10	Jannie 1:11 96:24	81:25 82:14,17	Kenyatta 1:13	77:25 78:5,16
invitation 102:22	158:10	83:10,24 84:3	152:2	83:17 86:8,12
invited 98:19	January 39:13	85:2,6,13 86:7	kept 106:25 184:9	93:18 96:23,24
involved 47:11	165:21	87:11,24 88:6	Kevin 165:20	102:6,11,16
81:19 96:15,18	jealous 158:7,8	88:18 89:9,13	key 50:22 53:24	105:16 109:18
involves 41:5	Jeremiah 9:18	103:9,17,25	56:10 117:6	117:25 119:2
72:25	48:18,21 63:15	106:6 137:18,24	121:14,20 125:6	126:20 129:4,12
involving 40:23	64:2 71:5,15,19	138:11 139:17	131:23 133:4	129:15 134:23
47:4,25	72:5 79:3,6	139:25 140:14	134:6 136:20	135:12 140:15
in-depth 175:22	80:13,20 81:5	140:21 141:8,22	141:9 147:12	141:5 145:25
in-laws 126:8	85:21	142:18,22	151:18,20	149:4 152:9,20
IP 134:23 139:12	job 16:11 25:20	143:25 144:4	161:16 164:5	152:22 153:11
148:6	109:22 151:15	151:21 166:20	kicks 174:5	153:19 158:4,11
iPhone 15:7 28:13	157:10	169:16,23 171:7	kid 17:3 96:9,20	159:10 167:20
Irving 158:17	jobs 93:16	171:14 173:16	kids 96:6	168:16 171:12
159:12,15,16	Joe 158:20 169:25	174:19 176:15	killed 157:12	171:24 172:3
167:2 174:2,17	189:9	179:8 180:19	163:7	174:14 178:21
175:6 176:17	Johns 67:4,13	182:7 184:10	killer 164:6	178:24 180:7,20
179:23 183:14	110:14,17	185:2 186:20	kind 5:4 17:3	182:7 185:8
184:11 185:9,17	Johnson 1:13	188:23 189:12	18:19 19:2 21:9	186:18
186:15,25 188:7	54:13 139:18	189:16,20	21:22 22:4 30:7	knowing 111:25
188:11 189:9	152:3,4 156:18	Jones's 162:24	60:20 64:12	knowledgeable
issue 10:3 16:15	156:23 157:20	Joseph's 168:21	65:5,11 83:12	181:25 182:2
19:17 25:7	join 10:2	joystick 95:15	149:20 151:15	known 64:14

166:24 knows 133:2 136:12 158:11	186:11 legend 151:25 lesson 151:22 let's 141:2 146:16 152:22 156:6 174:9 level 25:3 51:7 61:15 65:4 67:22 68:24 166:18 184:3 leverage 107:18 132:3 leveraging 134:19 liability 184:2 186:16,17 liberal 91:13 license 104:20 140:8 licensing 122:10 lieutenant 51:7 127:18 life 49:19 50:13 139:3,9 light 40:6 142:19 lightning 118:11 likelihood 49:23 50:17 limitations 39:8 limited 12:20 23:8 86:3,25 87:6 line 46:16,17 79:8 97:9 128:4 150:19 154:8 lines 23:13 77:24 140:18 link 80:25 125:10 186:7 list 63:21 listen 119:10 120:9 listened 94:5 listening 7:3 listens 119:12 little 69:4 76:14 84:6 89:19 90:21 92:13	97:9 104:4 112:7 131:5 145:4 150:9 174:8,9 177:23 179:5 live 18:3 82:15 160:4 173:8 lives 58:16 living 157:17 local 154:13 160:16 161:9 163:6,18 164:24 165:24 166:10 locales 18:9 located 37:17 39:4 43:8 174:14 175:18 175:24 location 82:25 83:2,7 101:13 142:8 143:20 174:4 locations 12:10 23:19 53:16 54:16 61:13 65:14 86:23 92:2 135:11 154:2 162:4,7 175:13 Locust 69:18 102:14 long 29:24 55:11 74:14,15 79:4 187:11 longer 95:25 112:14 142:12 long-term 33:11 49:17 50:8 123:3 look 21:3 22:7 27:12 28:9 34:2 34:5 70:18,20 78:10,18,23 97:15,17 98:11 100:5 109:7,18 110:25 114:23 115:15,21 119:3	120:18 128:17 132:19 133:8 136:10 137:6,7 137:7,25 143:6 143:14 147:13 148:25 152:23 looked 33:13,16 76:22,24 177:25 186:6 looking 26:9 59:15,18 70:22 75:7 101:8 118:19 119:19 136:13 137:9 156:5 175:23 176:14 lookout 178:16 looks 60:25 134:14 lose 116:22 lot 23:14 29:6 35:5 66:11 91:6 92:8 95:18 102:2 103:3 105:19 107:6 116:20 119:6 122:20 123:17 125:7 128:3,10 128:11 129:13 129:25 131:22 133:3 134:14,18 134:23 135:9 142:17 144:12 145:10,17 148:21 149:16 178:13 188:5 lots 187:13 love 52:20 low 32:7 Lower 167:18 177:15 luck 165:5 lucky 137:10 Luther 39:21 41:14	MAC 137:6 141:10 machine 137:6 machines 141:10 magic 132:20 magnified 26:7 magnum 40:17 main 37:19 39:9 111:14 127:16 maintain 43:3 124:14 maintained 13:2 maintaining 44:23 maintenance 3:23 11:11,23 12:24 24:5,7,12,22 25:6 37:5 42:22 43:25 44:24 73:25 123:12 major 32:6 50:6 73:25 122:17 130:11 153:5 164:14 majority 130:11 188:12 majorly 103:8 making 28:24 30:12 32:9 107:24 143:18 146:23 162:20 malls 160:20 man 151:22 163:10 164:18 164:23 manage 12:20 120:11 123:22 135:4 138:20 managed 36:25 79:11 management 28:9 37:4 43:5 108:11,22 110:6 113:20 119:5 123:21 manager 45:20 99:6,7,9,10
---	--	--	---	--

managers 165:25	89:3 133:16	168:7 169:24	133:8,11 146:17	182:23
managing 113:19	135:24 136:20	182:17	148:19	monitors 8:12
119:20	138:14 142:15	membership	mind 107:20	17:19 18:3
mandated 183:12	maximize 56:18	174:12	153:18 184:6	37:21 40:23
manna 85:15	69:9	memorandum	mindful 185:4	82:15,20 83:13
179:17	Mayor 6:22 171:4	82:5	minimum 23:20	84:7 85:19,23
manpower 152:8	mayors 30:18	mentality 148:9	30:5,13,23 65:6	118:18
153:25 154:14	Mayor's 56:11	mentally 163:11	minute 68:21	months 53:7
manufacturer	148:24	mention 98:13	131:10	54:15 55:4
138:13,20	McDermott 163:6	mentioned 14:11	mission 49:12	80:22 113:2
map 124:10	mean 21:23 27:24	18:14 47:19	55:13	126:12
128:25 177:4	34:21 57:25	80:21 82:6 83:3	mistakes 189:7	morning 2:25
183:2,4 184:16	61:6 70:17	99:24 178:17	mix 53:9	40:15 48:18
185:24	71:14,17 74:15	182:16	mobile 36:3	163:8,10
mapped 108:24	85:3 185:14	merchants 166:10	model 107:18	Morton 54:8
176:16,18	meaning 8:13	Merion 167:18	117:12 119:5	motion 142:18
mapping 182:16	140:12	177:15	122:11 125:15	143:8
maps 120:2	means 71:19 73:8	message 97:14,15	145:25 146:6	motoring 95:14
March 20:4	154:9 190:21	metal 40:14 78:21	models 33:13	MOU 93:16
102:21	meant 12:6	method 13:22	modus 132:24	mounted 162:2
marijuana 39:16	measurable 78:4	178:6	moment 137:14	MOUs 112:16
MARK 1:14	measure 13:14	methods 103:2	156:11	move 35:21
market 46:11	19:7 78:9	mic 61:23	Monday 1:7	107:17 116:12
47:13 57:23	111:16	MICHELE	money 16:10,21	147:14 179:14
90:18 100:12	measured 78:20	190:14	34:11,25 69:4,7	moved 148:4
106:17,20 123:5	78:22 79:9	microphone	75:6 102:2	moves 13:9
marketed 122:22	measurement	136:5	112:4 115:6	moving 65:2
marketing 160:10	79:5	middle 20:2 37:11	147:6 179:18	133:2 139:13
Market-Frankf...	measurements	38:7,18 40:3	180:22 182:12	148:6 171:9
46:8,17	29:4	41:20 67:6	189:4	182:8
Marriott 118:16	measuring 76:13	midnight 97:12	monitor 18:9,12	multi 35:7 63:3
Martin 39:21	media 6:23 77:10	137:23	37:14 41:8,9,22	multiple 62:22
41:13	184:15	migration 147:22	41:23 42:2,9,11	108:8
Maryland 116:25	Medicine 168:23	148:5,8	44:25 53:20	multiplier 91:8
118:7 148:12	meet 177:14	Mike 98:13,16,23	60:17 81:11	91:11 102:7
mass 153:19	meeting 102:21	106:10 112:18	84:15 86:20	129:19 137:15
massive 187:15	102:22	miles 3:13	95:9 110:2	multi-million-d...
master 115:22	meetings 148:23	military 164:25	117:21 154:13	122:16
151:3,5	148:23	Miller 5:24	169:8	municipal 24:16
materials 161:8	member 6:7	million 11:14,21	monitoring 4:14	67:22 68:9
matter 3:18 70:10	10:21	11:22 14:8	17:23 20:23	159:25
73:18 101:24	members 3:5	21:17 22:3	21:4 41:6,14	municipality
112:19 150:24	10:12 18:21	25:14 43:13,22	82:16 85:25	83:14
151:24 166:15	36:18,19 45:4	50:22 52:16,25	91:18 109:21	municipally 26:8
181:14,21,24	45:15 48:19	63:4 114:21	117:19,24,24	murder 172:9
190:7	56:25 79:20	115:18,20	152:9 153:24	murdered 153:3
Maureen 88:4	82:12 89:13	122:19 125:24	154:21 156:20	MURPHY 190:14

Myers 152:16	60:16 120:10 146:5 150:24	nine 150:14 Ninety 130:21	32:25 observe 85:20	officers 8:13 20:25 41:9,15
N	neighborhood 67:10,17 158:10	nods 87:13 non-PTZ 134:22	observed 8:2 185:23,24	51:6,7,14,17,19 51:24 52:6 73:5
Nai'ila 7:5 40:9	160:21	noon 168:9 normal 60:4	obsolescence 28:18 31:19	73:6 89:25 90:2 90:9 114:5
name 9:10 10:7 10:17 36:13,20 45:18 48:16,21 62:4,5 88:24 89:3 92:18 106:8,10 131:17 156:7 159:12,16	neighborhoods 26:13 51:20 55:22 66:23,24	normally 148:24 north 39:5 90:18 90:23 94:23 104:5 141:4	obsolete 15:21 39:17 44:8 107:21 125:2	120:17 177:14
names 87:25 94:15 158:16	neighborhood's 49:14	note 9:7 52:18 notes 134:11 151:19 190:6	obvious 32:4 obviously 19:12 23:4 70:18 86:2 86:14 97:10	offices 47:7 164:17 165:6
nation 45:25	neighbors 56:21	notice 63:16 notified 165:11	121:16 152:25 170:22 175:14 181:14	officially 80:18 88:23
naturally 86:22	Nestel 9:16 46:3 61:20,24 62:5,6 62:16	November 78:7 110:11	occasions 174:24 occurred 59:18 60:2 73:14 102:12,16 165:16 180:16	officials 13:18 170:17
nature 39:17 84:7 175:10 177:18	net 67:14,16	number 6:13,14 13:20 20:15 23:19,25 43:16 51:10,16,18 56:16 61:21 62:8 63:17 65:12,15,19 74:21 76:24 83:12,13 85:18 86:5 91:23 92:20 101:14,14 122:13 140:2 144:13 167:25 172:3 174:23 177:12 181:13	170:22 175:14 181:14 occurrences 7:15 occurring 12:7 15:17 95:17	OIT 24:11 27:25 32:17
near 81:6 163:8	network 15:14 37:5 51:2 57:22 70:12 127:17	numbers 58:25 59:12 65:21 75:8 77:3,21 94:24 111:6 114:9 115:5,16 121:8,9 178:8	occurs 86:22 offer 172:19 173:9 182:5,13 182:21 183:12	Okay 20:10 22:12 28:3 32:20 36:5 60:24 62:13 71:4 72:9 74:4 76:12 78:25 99:10 133:4
nearby 172:13	networking 112:17	nurse 163:6 nurturing 161:16	offer 172:19 173:9 182:5,13 182:21 183:12	145:7,8,10,15 145:19 147:23 165:21
nearly 52:16 53:7 160:24	never 83:22 127:7 137:8	Nutter 171:4	offered 156:2 179:12 181:4 offering 179:25 office 13:2 27:5 27:15 30:8 32:15,17 33:2 33:12,16 36:21 36:25 37:2,15 37:21 41:11,23 42:9 53:16 148:24 160:18 161:14 162:24 164:21,22 165:4 165:12	old 16:20 25:8,24 28:14 96:7 145:7,8,10,15 145:19 147:23 165:21
necessarily 35:24 105:5 111:8 133:12 146:23 156:19	nevertheless 24:20		officer 21:4,6 41:7 52:11 84:13 96:17 114:3 120:19 132:25	older 44:9 Olney 46:13
necessary 43:6 53:23 168:10	new 13:10 19:16 20:3 21:24,25 25:22 28:14 42:16 50:6,10 50:18 51:6,6,15 51:24 52:8 53:7 53:19 76:4,10 97:2,6 98:6 107:21 113:8 116:23 125:11 132:8,10 139:13 144:24 150:3 166:9 171:11 179:23			once 21:5 76:20 115:25 116:6 134:9 136:15 141:25 149:22 151:4 155:4
need 6:25 21:14 25:17 27:23 32:17 34:25 87:14 92:19 101:12 107:9 112:21,21 116:9 125:4 133:19 147:9 149:21 150:18,19 156:3 168:16 180:16 185:4,18 187:6	newest 123:18 news 184:12,15 nice 135:2 142:11 143:24			ones 60:9 75:19 75:24 110:12 129:15 145:19 186:22
needed 30:16 43:9 44:24 86:21 87:7 105:5	nicest 133:22			ongoing 25:6
needing 128:17	nickname 166:25			online 39:7 72:22
Needless 165:7	night 51:18 119:10 137:21 138:5			open 45:3 62:9
needs 13:10,14,20 13:21 19:6 20:15 34:7 40:11,12,13,14				opening 47:20 open-ended 182:5 operands 132:24 operate 37:12 90:16 92:15 111:24 117:6 132:17 168:4,12

168:13	108:9 125:11	126:23 130:8,23	partial 104:5	124:16 161:7
operating 11:19	181:9	P	participating	165:18
12:14 14:14	organizations 5:2	pace 29:9	178:10	pay 6:18 85:16
70:25 136:23	55:25 122:4	pack 147:22	participation	179:6
188:10,13	161:23	148:8	56:19	paying 29:2
operation 42:10	organizing	package 111:3	particular 3:14	payroll 127:14
68:23 127:10,11	161:10	pager 6:14	5:12 9:24 23:23	151:12
132:21 133:15	original 13:16	pagers 6:16	28:19 61:17	PCDC 166:22
133:21 134:10	146:2 183:15	pages 45:9	65:23 141:15	peaked 86:14
135:4 136:17	originally 110:22	paid 32:6 51:9	143:9 156:9	Pedro 98:20
171:21 172:14	Osteopathic	painful 151:22	173:17 184:13	Penn 26:12 89:5
operational 15:20	168:23	Pan 53:10 60:11	particularly	89:24,24,25
16:2 19:12	ought 22:5	60:18	26:14 30:14	91:3 93:25
44:10 127:19	outdated 144:16	panel 2:19 9:10	31:20 65:16	96:25 97:21
133:5 134:8,25	outmoded 23:3	10:22 87:9 88:2	68:11 179:20	98:5 138:17
171:23	outright 12:2	88:14 91:18	184:6 187:9	143:24 149:4
operations 45:20	outset 49:9	94:6 157:24	188:14	150:7 154:24
68:25 74:2	outside 30:7	158:15 159:3	partner 123:16	155:13 156:7
84:15,16 121:6	43:24 66:5	169:20 173:17	134:17 151:17	PennCom 92:23
122:12 132:17	69:13,17,19	panning 137:14	151:20	99:15 100:7
152:7 168:6,21	70:11 104:13,20	Pan-Tilt-Zoom	partnership 4:23	101:6
operative 188:5	179:19	92:12,14,21	26:23 64:16,17	pennies 85:15
operator 109:2	overall 51:21	100:20 136:8,24	135:7 166:22	Pennsylvania 1:6
113:18 119:18	103:5,12 114:15	Pan-Tilt-Zooms	167:17	88:5 89:6,21
119:22 124:10	133:9	94:5 99:25	partnerships 26:6	91:4,14 128:6
136:12	Overbrook 41:13	paper 98:16	106:11 125:7	148:13
operators 88:9	overlay 110:5	paragraph 34:6	161:17 172:21	people 5:10 20:23
109:8,18 113:22	overtime 129:25	parameters 97:8	182:11 189:3	27:20 30:17
119:11 136:25	157:8	paramount 73:15	parts 25:11	58:11 60:17
opportunities	overview 89:19	parcel 31:13	path 163:24	77:4,9,12,17
69:10	overwhelmingly	parents 37:19	patience 36:14	87:6,14 92:6
opportunity 2:21	159:22	96:14	158:4 159:10	94:11 95:4,23
13:25 45:17	overwrought	park 52:4,5,13	169:18	97:11,14 98:2
48:7 52:9 89:17	102:4	96:25 97:2,4,12	Patricia 163:6	105:14 107:23
137:25 172:20	owned 26:8 31:13	97:19,21 98:5	patrol 51:15	110:2 112:15
173:12 182:24	106:24	143:4	90:15 93:15	115:12 117:23
186:6	owner 101:3	parking 160:20	94:10,21,23	124:3 127:2,14
opposed 34:12	owners 159:23	178:13	95:13 98:2	128:5 129:8
126:12 148:9	161:22 162:5	part 25:23 55:12	99:15 103:13	137:2,5 140:14
optics 140:11,12	163:18	55:16 59:2,14	114:6 154:24	142:17 143:19
optimal 83:12	owns 121:5	60:9,9 63:3	155:3 168:5,8	155:2,22,23
optimize 17:5	O'Brien 1:13 2:10	64:15 69:22	179:3	156:16 157:16
optimum 84:21	31:6 32:23,24	112:20 116:4	patrols 51:18 52:7	157:18 179:6
85:17	34:4,24	123:13,19	100:11	percent 8:9,10
Oracle 28:25	O'Dea 106:9,10	130:19 139:20	pattern 106:15	12:8 14:24 15:2
order 89:10 91:12	122:9 123:11	181:16 182:15	178:19	15:25 46:19
organization 33:5	125:14 126:18		patterns 111:25	60:25 75:24

103:6,12 114:9 114:18,20,22,24 115:2,12,18,19 121:9 127:22 180:2 percentage 69:16 69:20 perfect 83:11 perfected 132:21 perform 43:25 performance 12:17 performed 42:23 period 64:14 115:4 periodic 13:17 permanent 55:12 permit 53:24 perpetrators 27:2 121:18 person 17:10 37:21,24 42:11 84:23 85:3 88:12 101:7 114:14 130:14 187:5 perspective 132:4 136:2 PHA 9:17 48:11 49:5,17,25 50:5 50:21,23 52:9 53:5,21 54:5,15 54:21,23 55:4 55:17 56:2,10 56:15,20 71:20 71:24 80:12,13 81:13 PHAPD 51:3,14 53:16 phase 12:13 phases 161:12 PHA's 48:25 49:11 50:18 52:7,14 53:8 54:10 55:17 81:12 Philadelphia 1:2	1:6,16 2:14 3:12 4:2 5:3,8 7:6 9:14 10:18 16:9 16:9,15 22:25 23:4,15 26:24 33:4 41:12 47:2 47:6,24 48:24 49:8 55:18 56:6 66:24 68:17 70:7 72:17,24 80:18 82:12 87:4 90:4,6,16 93:20 96:17 98:15,17 101:11 102:10 114:12 126:22 128:16 129:2,5,9 132:9 135:12 144:19 144:21,25 145:5 153:21 154:4,8 154:12 157:11 158:20 160:15 162:7 163:16 164:12 165:6,22 166:6,22 167:18 168:22 170:3 171:6,9,20,24 172:7,16,25,25 173:5,8 177:2 187:20 Philadelphia's 11:7 36:24 Philly 33:18 34:15 41:16 102:15 103:21 104:5 132:8,10 135:8 144:23 145:3 153:2,9 phone 6:15,18 94:20 105:13 178:8 phones 120:17 photo 165:9 physical 106:20 145:21 physician 172:9 pick 113:15	124:19 picked 26:15 picking 32:12 picture 97:17 127:19 139:14 pictures 61:25 62:10 179:2 piece 6:14 58:2 145:21 181:2 piecemeal 21:20 pilot 56:13 pipeline 74:23 pixels 17:13 pizza 178:19 place 4:4,12 23:24 38:3 41:24 42:15 54:22 56:20 74:16 78:2 99:2 136:17 144:11 152:21 160:3 173:8 183:2 placed 41:23 108:25 places 183:6 placing 12:19 52:11 plagued 12:11 plan 51:15,16 52:8 115:24 135:17,18 151:3 151:5 183:11,15 183:16,19 planned 75:16 planning 15:9 133:5 160:11 Plano 117:9 plans 21:16 46:20 115:22 182:25 183:10 plate 104:21 plates 92:18,18 140:9 platform 7:17 58:2 108:14 110:20 113:10 117:13,14 125:2	platforms 65:21 play 152:24 154:14 playback 41:3 played 153:4 164:5 plea 129:24 plead-out 115:12 please 2:11 9:9 10:15 48:15 52:22 87:25 89:10 103:10 158:11,16,16 159:8 169:19 189:9 pleasure 3:4 159:15 plug 154:8 182:22 point 6:9 17:5 18:23 23:16 28:19 43:22 63:24 86:16 116:22 143:8 149:18 150:6 151:25 183:10 184:10 pointed 40:18 points 110:8 112:6 police 8:13 9:16 11:12 20:25 21:6 26:25 27:5 41:7,11,15 46:3 47:2,6 48:25 50:24 51:6 52:11 55:18 56:5,7,15 60:16 60:22 62:6 66:24 67:11 70:7 72:17,24 73:5,6 80:23 81:10 82:12 83:4 84:18 89:5 89:25,25 90:4,6 90:7,12,16 93:5 95:13 96:12,16 96:18 97:22	98:17 99:12,14 102:11 104:25 105:4,21 111:23 111:24 120:12 127:6 129:5,9 129:25 135:13 153:11,21,22 154:4,8,12 156:15 157:7,11 157:15 160:15 162:7 163:16 164:13 165:11 165:23 166:6 171:25 172:8,11 175:18 176:6 177:2 180:7 181:7 187:21 policing 50:10 55:24 103:2 115:10,16 174:11 policy 10:3 83:19 91:17 113:23 170:2 182:18 political 177:24 politics 126:20 poor 28:24 popular 108:4 121:2 population 46:5 76:8 Port 135:9 145:2 portion 110:19 portions 162:22 posing 164:24 position 19:21 69:6 positioning 143:13 positive 48:5 77:7 possess 43:6 possession 41:17 possible 48:6 95:6 175:9 possibly 85:9 109:5 post 77:5 102:21
---	---	--	---	--

155:11 posted 187:24 potential 11:2 173:24 potentially 176:3 180:8 181:8 power 149:11 150:19 powers 90:3 practices 8:16 10:23 pray 7:22 predicted 18:15 prepared 34:21 170:10 preparedness 175:10 prerogative 57:4 Presbyterian 91:3 presence 52:10 53:14 present 1:9 89:18 presentation 88:9 131:6,8,21 156:3 presented 111:3 preset 142:9 presets 142:5 President 1:10 2:9,20,23 8:21 9:5 10:20 18:14 21:11 22:16,17 24:4 57:5,7,10 64:7,9 68:7 70:13,24 71:13 71:16 72:2,8 74:3,7 89:3,8,12 98:17 106:11 167:10 171:8,12 172:23 182:8 pretty 23:3,6 67:4 143:3 prevent 4:11 83:25 171:18 184:21 preventing 55:14 121:15 162:12	171:5 prevention 4:14 9:3 48:3 95:16 159:18 160:14 160:25 161:4,7 163:2 166:17 previous 29:23 43:12 59:6 94:6 price 68:10 primarily 51:25 120:6 primary 159:24 principal 39:14 prior 3:8 95:17 166:21 175:18 prioritize 18:17 86:23 priority 13:21 20:16,17 33:21 49:16 52:2,10 53:17 54:25 privacy 185:12 186:14 private 21:12 27:3 51:11 73:2 88:20 104:7 109:24 110:22 128:19 154:6 160:17 161:17 162:20 164:11 172:15 176:11 177:8,22 182:20 183:7 private-public 125:7 private-sector 186:11 189:2 privileged 170:14 Prix 118:9 proactively 96:19 114:7 154:23 probably 5:6,14 20:3 26:21 27:19 39:18 40:14 64:24 65:15 68:20 69:22 74:25	75:23 79:4 86:5 104:8 122:19 128:22 131:4 132:15 134:15 137:21 145:24 155:21 185:3 problem 16:7 17:17 19:18 70:25 95:20 96:5 98:10 106:19 112:14 112:15 118:12 118:23,24 119:4 123:25 126:22 150:6 187:3 188:4,8 problems 12:12 39:15 98:11,24 119:13 125:16 126:13 172:4 177:17 proceedings 190:4 process 54:4 59:23 63:19,22 107:8 112:15 123:21 processing 145:16 procurement 15:16 68:3 87:19 procuring 25:21 produce 138:7 produced 30:16 produces 138:6 product 123:18 124:13,19 products 130:11 professionals 160:17,18 program 1:17 2:17 3:11 13:15 19:8 39:19 45:21 50:21,22 52:15 55:17 56:13 67:12 74:16 121:23	123:12 166:8,9 170:8 175:20 179:15,24 180:7 programmatic 56:17 programmed 142:20 programs 56:19 74:18 129:17 160:7 progress 11:7 73:10 project 12:11 13:16 35:8 43:14,18 96:8 107:22 122:16 133:10 148:20 151:20 projected 73:21 85:9 projects 34:22 74:19 107:19 125:18 160:11 promise 15:25 promote 48:2 proper 156:25 properly 11:16 12:5 13:24 properties 53:8 176:20 188:14 188:15 property 41:18 58:8 59:10 150:3 159:23 162:5 163:18 165:25 proponent 102:8 105:7 142:24 proposal 23:23 183:11 prosecutions 161:13 protect 13:24 provide 37:4 44:15,15 45:17 45:21 53:21 54:17 55:9	63:20 65:6 90:10,10 135:13 145:16 162:24 163:23 166:2 180:6 provided 13:18 164:10 184:17 185:25 provider 145:14 provides 160:6 providing 13:19 20:14 49:15,20 50:14 149:11 162:13 176:22 PTZ 133:3 134:21 135:24,25 136:6 136:11 138:22 138:22 PTZs 92:14 139:8 140:6 public 1:3,16 2:5 2:5,15 3:1 4:1 5:1 6:1,15 7:1,7 8:1 9:1 10:1,3 11:1 12:1 13:1 13:19 14:1 15:1 16:1 17:1 18:1 19:1 20:1,14 21:1,12 22:1 23:1 24:1 25:1 25:25 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1,7 35:1 36:1 36:19 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1,16,24 46:1 46:2 47:1 48:1 48:20 49:1,2,18 50:1,4,7,8 51:1 52:1 53:1,4 54:1 55:1 56:1 57:1 58:1,14 59:1 60:1 61:1 62:1 63:1,5 64:1,16 65:1 66:1 67:1
---	---	--	--	--

68:1 69:1 70:1 71:1 72:1 73:1,2 74:1 75:1 76:1 77:1,18 78:1 79:1 80:1 81:1 81:14 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1,4 89:14,20,22 90:1 91:1 92:1 93:1 94:1 95:1 96:1 97:1 98:1 98:14 99:1 100:1 101:1 102:1 103:1 104:1 105:1 106:1 107:1 108:1 109:1 110:1,24 111:1 111:10,22 112:1 112:3 113:1 114:1 115:1,11 116:1 117:1 118:1 119:1 120:1,6 121:1 122:1 123:1 124:1 125:1 126:1 127:1 128:1 129:1 130:1 131:1 132:1 133:1 134:1 135:1 136:1 137:1 138:1 139:1,20 140:1 141:1 142:1 143:1 144:1 145:1 146:1 147:1 148:1 149:1 150:1 151:1 152:1,15 153:1 154:1 155:1 156:1 157:1 158:1 159:1 160:1,9 161:1 161:16 162:1 163:1 164:1	165:1 166:1,14 167:1 168:1,2,6 169:1,24 170:1 170:2,5,23,25 171:1 172:1,18 173:1,20 174:1 175:1 176:1,11 177:1 178:1 179:1 180:1 181:1 182:1,18 183:1,6 184:1 185:1 186:1 187:1 188:1,3 188:13,15 189:1 189:24 190:15 publications 92:2 publicized 105:8 publicly 31:13 public-private 4:22 26:6,22 64:15 135:6 172:20 public-sector 189:3 publish 91:25 published 91:17 pull 5:4 pulled 7:16 purchase 15:12 68:6,10,12,19 68:21 124:16 188:19 purchasing 13:10 30:10 107:24 purpose 37:24 52:19 143:5 159:24 purposes 162:11 pursue 6:11,25 push 101:18 128:21 pushed 165:5 put 4:4,11 13:12 16:10 20:13 39:18 73:25 79:17 87:15 91:20,21 95:3	100:18,20 108:19 116:3,11 116:12 119:17 124:20 125:22 126:15 133:6,16 140:22,25 143:17 145:22 146:22 150:11 150:13,16,20,22 150:25 155:16 165:13 173:18 177:7 178:14,22 180:22 183:6 187:19 putting 34:10 75:20 76:2,6 94:14 97:24 104:17 125:8 164:22 p.m 1:7 168:9 189:25 Q quadruples 80:4 quality 27:8,12 49:19 50:13 126:6 135:23 138:4 139:6,14 186:24 187:2,4 187:13 188:8 quality-of-life 161:5 quantify 58:19 quasi 26:2 173:20 question 14:5 16:18 17:6 19:3 19:5 22:20 28:11,21 30:4 32:25 35:17 62:19 65:11,22 66:20 69:12 84:8 85:20 86:9 130:4 144:8 174:16,17,19 questions 18:22 45:3,7,10 48:9 48:14 56:24	57:5,15 64:12 64:18 66:12 74:7 79:15,19 87:9 94:6 121:12 134:20 136:3 137:17 153:18 157:23 169:20 173:14 179:10 187:13 quick 22:19 35:17 63:15 64:12 79:19 quicker 115:14 157:9 quickly 48:6 105:3 163:17 185:7 quirk 74:2 quite 3:6 4:16 6:18 32:3 82:22 129:6 quiver 6:24 R rack 96:11 racks 95:21 96:23 97:24,25 98:4 radio 93:4,17,18 120:3 rail 46:11,23 75:8 108:9 raised 17:7 Ramos 98:21 Ramsey 98:18 ran 179:17 range 139:23,24 161:3 164:8 rank 15:22 raped 152:19 rate 61:2 115:12 rates 57:20 ratio 18:3 82:15 84:6 85:18 ratios 109:7 Raymond 52:4 54:12 reach 48:5 81:22	read 2:11 9:9 87:25 92:17 121:7 readily 82:11 reading 140:8 ready 76:3,7 103:16 109:23 172:21 real 10:24 16:17 19:13 20:13 22:19 87:6,7 132:22 181:16 reality 56:8 realize 25:5 38:13 58:12 realized 109:23 reallocate 50:11 really 9:4 16:10 20:17,18,19 27:11,25 30:7 32:14 35:17 79:5 83:20,22 91:9,19 95:5 98:8,22 99:24 101:10,25 116:3 131:23 132:12 132:16 134:6 136:11 143:18 148:7 151:11,14 152:12 153:16 153:22 170:12 170:20 177:20 178:24 185:15 realtime 5:14 44:15 47:3 71:12 72:18 73:4,8 81:21 82:7,21 93:18 101:16 128:23 129:11 154:25 156:5,10,12,15 169:8 reapproved 159:22 rearrested 21:8 reason 7:8,18 39:9 67:20
---	--	--	--	---

68:14 179:9 reasons 23:25 91:23 107:17 rebate 179:18 180:2 181:4 rec 31:7 143:6 152:16,21,24 recall 16:23 79:20 163:4 170:19 receive 52:18 63:23 71:25 73:20 received 179:20 180:22 Receiver 48:23 recess 189:21 recognize 16:19 55:2 106:15 recognized 21:5 recognizes 74:8 103:18 144:5 recognizing 183:5 recollection 22:22 recommend 83:15 recommendation 27:7 recommendatio... 30:9 33:8 recommended 13:13 19:6 27:4 reconciled 24:7 record 6:4 9:7 10:7 36:14 41:2 48:16 52:20,24 79:18 87:15 88:24 96:21 106:8 139:19 166:21 174:5 181:12 recorded 44:20 recorder 40:25 recording 38:4 65:8 149:7 recordings 73:13 records 12:24 24:7,12 40:25	76:16 recurring 24:24 recycling 25:9 139:13 red 148:21 redirect 60:18 reduce 8:8 24:22 49:22 50:16 56:13 114:8 117:19 166:10 171:18 reduced 77:3 reducing 51:10 171:4 reduction 25:5 51:22 56:12 77:8 103:6 114:20 115:3,10 115:10 refer 24:18 reference 144:10 referencing 121:20 reflected 182:10 regarding 45:22 152:11 regards 124:15 regional 46:10,23 registering 129:8 regular 13:17 77:15 147:19 168:24 176:8 regularly 177:13 reiterate 135:23 related 187:23 relates 3:22,23 4:12,13,14 65:7 67:16 68:11 152:8 relating 66:19 relationships 55:6 relative 21:24 relatively 32:7 relegated 5:9 23:6 relevant 166:2 remainder 46:20 remaining 54:16	63:23 75:25 remains 66:20 125:2 remarks 10:13 remember 5:25 143:19 remind 92:7 remote 41:19 remotely 37:25 81:11 removal 160:9 rendition 28:14 28:15 renewed 166:16 rep 148:12 repeat 43:15 103:10 169:2 repeaters 150:13 replace 148:9 159:25 report 15:3 24:6 28:7 113:14 175:17 reporter 190:23 represent 173:22 representation 16:6 representative 138:8 164:25 representing 170:15 reproduction 190:20 request 44:20 165:22 requesting 163:18 requirement 68:2 70:2 requirements 67:24 reroute 112:2 RES 3:1 4:1 5:1 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1	22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1 90:1 91:1 92:1 93:1 94:1 95:1 96:1 97:1 98:1 99:1 100:1 101:1 102:1 103:1 104:1 105:1 106:1 107:1 108:1 109:1 110:1 111:1 112:1 113:1 114:1 115:1 116:1 117:1 118:1 119:1 120:1 121:1 122:1 123:1 124:1 125:1 126:1 127:1 128:1 129:1 130:1 131:1 132:1 133:1 134:1 135:1 136:1 137:1 138:1 139:1 140:1 141:1	142:1 143:1 144:1 145:1 146:1 147:1 148:1 149:1 150:1 151:1 152:1 153:1 154:1 155:1 156:1 157:1 158:1 159:1 160:1 161:1 162:1 163:1 164:1 165:1 166:1 167:1 168:1 169:1 170:1 171:1 172:1 173:1 174:1 175:1 176:1 177:1 178:1 179:1 180:1 181:1 182:1 183:1 184:1 185:1 186:1 187:1 188:1 189:1 research 160:10 researched 111:4 researching 33:3 resident 50:2 173:3 residential 160:18 residents 4:25 49:7,15,20 50:3 50:13 54:25 55:5 56:21 Resnick 98:13,19 100:9 resolution 1:15,15 2:6,12,13,14,21 48:5 51:23 65:7 72:3 147:20,21 170:4 173:7 189:18 resolve 71:9,23 resolved 104:23 105:3 resolving 127:20 resoundingly
---	--	---	---	--

186:10	76:3	164:6	173:2,8	113:1 114:1
resource 84:22,23	retrieved 47:4	roll 54:10 74:14	safety 1:3,16 2:5	115:1,11 116:1
143:13	retrofitting 75:25	136:19	2:15 3:1 4:1 5:1	117:1 118:1
resources 12:20	return 115:7	rollout 53:18	6:1 7:1 8:1 9:1	119:1 120:1,6
34:8 41:21	returned 163:25	54:12	10:1 11:1,3 12:1	121:1 122:1
44:24 50:11	revealed 11:13	Ronald 9:15	13:1,20 14:1	123:1 124:1
67:9 86:3,4,24	review 137:12	45:18	15:1 16:1 17:1	125:1 126:1
87:6 88:20	171:16	rooftop 150:12	18:1 19:1 20:1	127:1 128:1
101:9 105:4	reviewed 11:10	room 1:6 41:10	20:15 21:1 22:1	129:1 130:1
146:19 188:16	reviewing 26:10	84:17,18,23	23:1 24:1 25:1	131:1 132:1
respect 16:16	revised 50:4,8	94:11 98:23,24	26:1 27:1 28:1	133:1 134:1
64:18,22 70:22	rewind 83:7	99:6 118:14,18	29:1 30:1 31:1	135:1 136:1
respective 180:23	Reynolds 40:16	155:24 170:14	32:1 33:1 34:1,7	137:1 138:1
respond 22:20	re-audit 16:3	rooms 84:18	35:1 36:1,19,22	139:1,20 140:1
25:2 156:15	right 16:11 19:19	Rosen 52:4 54:13	37:1,2 38:1 39:1	141:1 142:1
responding	20:11 22:8 29:6	rotate 52:6	40:1 41:1 42:1	143:1 144:1
111:19 113:24	57:10,13 67:5	roughly 15:5 38:3	43:1 44:1 45:1	145:1 146:1
response 10:14	70:14 73:10	59:14 69:15	45:16 46:1,2	147:1 148:1
51:13 87:10	75:13 78:22	73:20 186:3	47:1 48:1,20	149:1 150:1
114:10 157:25	80:2 83:17	Roxborough	49:1,2,10,15	151:1 152:1,15
158:25 189:19	84:10 85:9,11	41:13	50:1,4,7,8,12,18	153:1 154:1
responsibilities	90:23 99:3	RPR-Notary	51:1 52:1 53:1,4	155:1 156:1
55:22 152:17	104:23 108:5	190:15	54:1,24 55:1,11	157:1 158:1
160:12	111:17 112:25	run 113:9 116:21	56:1 57:1 58:1	159:1 160:1,9
responsibility	128:14 130:24	128:2,8 132:22	59:1 60:1 61:1	161:1 162:1
41:8,25 84:14	134:17 136:9	running 5:9 74:25	62:1 63:1 64:1	163:1 164:1
responsible 18:13	137:5,14,16	136:13 139:9	65:1 66:1 67:1	165:1 166:1,12
167:23 174:25	144:19 145:9	Rush 88:4 89:2,3	67:14,16 68:1	167:1 168:1,2,6
rest 136:2	150:18 151:17	89:11 103:11	69:1 70:1 71:1	169:1,25 170:1
restaurants	151:19 154:3	121:15 127:25	72:1 73:1 74:1	170:6,23,25
164:19	ring 37:20	136:22 138:17	75:1 76:1 77:1	171:1 172:1,18
result 4:21 21:19	rip 148:2,9	140:5,19,24	78:1 79:1 80:1	173:1 174:1
23:13 39:20	risk 12:13 164:23	143:11,23 144:2	81:1 82:1 83:1	175:1 176:1
50:5 57:21	Rittenhouse	150:2 154:20	84:1 85:1 86:1	177:1 178:1
93:19 163:22	155:14	156:22 157:3	87:1 88:1 89:1,4	179:1 180:1
resulted 11:18	River 135:9 145:2	158:9	89:14,20,23	181:1 182:1
12:18 47:10	Rizzo 3:9 5:25		90:1 91:1 92:1	183:1 184:1
164:13	road 30:6		93:1 94:1 95:1	185:1 186:1
resulting 68:5	robberies 165:17		96:1 97:1 98:1	187:1 188:1
results 21:22	robbers 95:24		98:14 99:1	189:1,24
retail 98:25 99:3	robbery 137:11		100:1 101:1	Safety's 166:14
99:11	165:18		102:1 103:1	Sandy 40:7
retain 167:12	Robinson 7:6		104:1 105:1	sat 148:23
rethink 40:5,10	robo 177:25		106:1 107:1	save 111:18
rethinking 50:9	robust 124:22		108:1 109:1	124:11
retire 76:7	Rock 46:13		110:1,24 111:1	saves 115:18
retired 20:24 21:4	role 152:23 153:5		111:10 112:1,3	129:24 157:15

112:4 savings 25:5 68:5 saw 3:7 20:16 21:7 98:15 104:14,16 107:9 107:15 saying 14:8 66:11 77:13,15 87:15 100:10 105:17 157:19 181:24 says 99:10 126:19 scale 153:19 154:2 scamming 164:18 164:24 scans 40:15 scene 114:3,4 scenes 101:25 schedule 54:16 scheduled 54:12 63:22 school 7:7,13 9:13 36:22,23 37:2 38:6 39:14 40:9 40:11,16 41:7 41:11,13,15,18 42:10,20 43:2 47:24,25 65:17 68:15 69:5,8 72:21 73:5 78:14,16 80:7 81:16 84:17,17 84:21 86:14,17 113:4 145:11 153:15 schools 37:11 38:7,8,9,11,12 38:14,18,21 39:4,7,25 40:2,3 40:4 41:7,11,20 43:13,14,18 44:6,13 63:2 72:22,25 84:11 86:15 113:4 schoolyard 40:18 school's 37:16 Schuylkill 167:20	Sciences 90:24 scope 27:19 30:8 35:20,24 seamlessly 22:2 search 10:22 105:6 second 7:15 30:3 33:15 69:21 73:14 155:9 170:10 182:15 secondary 183:17 secretary 41:25 section 37:3,4 47:17 sector 4:25 21:12 21:13 88:21 162:20 164:11 177:8 182:20 188:13 sectors 155:2 secure 49:6 56:20 secured 97:21 security 5:7 23:2 32:10 44:16 49:13 50:9,12 50:19 51:11 52:12 53:2,22 54:24 55:8 75:6 90:9 91:6 100:22 106:20 117:4 145:22 154:11 160:17 161:8,22 165:8 183:11,19 184:4 188:17 security-wise 40:20 see 4:18 19:9 26:20,24 61:13 77:20 79:7 81:23 83:8 87:12 92:16 93:14 96:11 98:21 100:18,24 100:24 101:5,7 113:13,20 116:24 120:14	120:19 121:8 122:17 128:24 128:25 133:20 135:18 137:13 142:17 147:10 168:15 178:12 178:19 180:19 183:11 186:6 187:20 seeing 58:3 77:4,9 87:11 127:5 128:24 141:3,3 141:4,5 156:12 156:13,16 158:2 189:20 seen 6:17 19:8 57:23 77:3,6 78:3 132:13 174:23 segues 168:8 select 134:16 selected 12:17 19:16 144:25 selecting 151:17 151:19 sell 91:12 send 5:13 177:4,9 179:7 senior 51:7 159:17 sense 87:4 134:5 sensor 109:11 113:15 143:4 sensors 108:23 sent 163:17 164:7 165:21 sentencing 161:12 separate 37:13 63:9 118:14 153:10 SEPTA 9:15 47:4 47:9 57:15 58:2 58:8,10 59:9 60:21 62:7,21 64:25 65:17 68:16 69:3 70:9 76:17 77:7	79:21 82:2,11 83:19 101:11 116:15 128:19 SEPTA's 45:19 45:21 46:3,4 47:7 September 16:2 112:10 series 179:11 serious 22:7 165:15,19 181:13 seriously 46:2 serve 55:20 162:15 served 160:23 service 11:23 93:6 services 68:19 158:19 159:18 160:2,6,8,14 167:11 serving 51:21 133:6 160:7 set 97:7 137:3,4,4 141:9 142:5 sets 125:9 142:25 setting 130:6 177:16 183:25 settled 104:23 setup 42:23 seven 18:11,12,13 18:16 43:21 46:10 80:9 94:11 106:14 132:25 136:25 seven-year-old 40:16 shape 168:3 share 69:24 70:6 71:10,25 80:25 100:23 110:15 112:23 152:17 162:6 166:16 169:10 176:25 shared 41:24 46:25 47:5,23 82:11 120:24	162:9 187:18 sharing 82:6 90:21 118:6 183:24 sharp-eyed 165:7 shelter-in-place 118:13 shelved 21:19 shifts 51:18 shocking 104:11 105:2 shooter 102:9 shooting 47:13,14 102:11 shootings 152:20 163:13 shop 160:4 178:19 shopping 178:12 short 167:6 shortly 90:23 shot 141:25 155:18 163:7 shots 141:22,23 141:25 shout-out 89:15 show 92:8 102:20 109:16 115:5 showed 163:24 shows 82:8 153:16 side 26:15 29:7 70:21 100:16 105:10 112:20 155:9,10 sight 23:13 140:18 150:19 signage 91:21 signal 5:13 149:22 signals 147:19 significant 3:21 4:15 105:15 176:13 187:3 significantly 24:22 68:20 105:23 133:21 172:11 signs 149:9
--	--	--	--	---

siloed 109:14 111:22 118:20 120:24 similar 21:23 62:24 71:6 83:14 118:24 189:7 similarly 81:13 174:13 simply 4:9 5:8 single 62:20 105:12,14 sister 58:9 sit 66:15 110:5 site 81:12 sites 50:7 52:11 66:19 sits 107:10 sitting 18:18 109:20 137:8 159:11 situation 42:4 113:20 116:15 119:5 situations 102:9 117:25 119:19 six 54:4 89:23 140:16 168:8 sixty-seven 80:9 size 171:20 skip 118:3 slow 107:8 slowed 113:16 slowly 133:17,17 136:19,19 small 69:16,20 110:18 122:12 187:10 smaller 117:9 167:22 171:20 smart 122:21 148:8 smoking 39:15 snow 120:7,10 social 6:23 77:10 software 117:14 119:10,16 122:9	122:25 138:20 142:12,13 145:17 146:7,12 sole 41:8 84:14 solve 19:18 105:21 solved 187:17 solving 157:13 somebody 21:5 58:3 119:9 150:22 151:12 somewhat 22:20 Sony 97:6 soon 63:24,24 153:8 SOPs 113:22 sorry 3:2 35:13 43:16 61:11 66:14,15 71:15 96:10 104:5 113:12 131:4,12 138:11 sort 77:25 120:25 sought 108:17 sound 94:15 97:16 source 14:12 south 41:12,16 90:19,25 94:23 141:4 153:2 172:10 Southwest 7:6 33:18 34:15 101:21 speak 2:22 61:23 81:9 90:20 103:15 106:13 136:5 150:16 151:8 158:24 speakers 60:11 speaking 144:9 181:3 188:3 speaks 37:22 special 89:14 112:12 158:19 167:10 specific 60:19	83:7 125:15 135:14 142:9 161:5 specifically 6:2 specifications 64:18 specs 42:14 64:22 68:15 spectrum 96:6 speed 113:17 spend 146:16 161:15 spending 147:5 spent 11:13 115:8 116:6 spiked 86:13 spill 119:21 spirit 56:9 spit 57:25 split 94:22,22 99:14 spoke 106:21 spot 92:10 96:9 spots 141:10 179:21 183:5 spre 165:13 Spring 47:16 54:6 Squilla 1:14 6:7 26:17,18 27:22 28:3 30:4 35:5 121:24,25 123:8 125:5 126:14 130:3,21,24 St 168:21 stability 49:14 Stacy 158:17 159:16 staff 3:6 32:13 37:16 44:16 82:20 85:25 88:12 91:20 staffed 32:12 staggering 111:6 stairs 59:24 stairwell 152:19 stakeholder 56:11 stakeholders 55:6	178:3 stand 81:24 standalone 33:9 standard 106:21 standards 30:5,13 30:23 64:24 65:4,7 106:19 107:2 124:17 standing 99:5 standpipe 164:21 standpoint 77:2,8 109:22 153:25 Star 6:3 start 14:4,7 25:17 48:13 75:6 76:3 96:11 112:4 113:19,22 115:15,23 126:10 131:14 133:15 149:10 174:15 175:8 started 15:9 16:3 30:19 39:19,23 74:18,19 75:13 106:15 122:14 138:10 147:14 147:25 148:5 starting 12:12 startling 8:5 129:3 starts 76:4 150:8 state 10:7 36:13 48:15 55:19 62:3 67:22 88:23 106:8 116:25 117:2 118:15 160:16 statement 20:14 29:23 63:15 station 46:12,12 47:14,15,18,21 60:4,6,7,21 63:2 70:8 74:17 82:8 82:9 90:17 95:12 108:12 116:21 stationary 35:22	65:2 82:22 93:24 stations 46:8,9,9 46:11,13,25 47:10 59:23 60:3,13 63:10 69:16,18 75:2 77:12 95:9 statistic 8:5 114:12 statistics 78:23 status 1:16 2:16 59:20 170:7 stay 32:15 88:8,13 123:14 stays 123:20 stealing 79:8 164:17,20 stenographic 190:6 step 57:12 113:22 steps 8:17 49:5 99:8 129:13 stock 49:18 stolen 165:3 stood 110:20 stood-up 118:16 stop 30:3 96:13 121:18 stopping 96:19,20 stops 123:23 store 98:25 99:7,7 155:15 storms 127:13 story 99:17 strategic 33:11 34:9 116:10 160:10 strategically 140:22 strategies 33:20 34:13,16 40:6 49:22 50:16 55:8 161:4 strategy 33:21 50:9,19 66:18 street 23:9 31:15
---	---	---	---	--

34:13 39:5 46:7 46:12,15 47:14 47:16 57:23 71:2 90:17,18 91:21 100:12 149:9 150:8,15 167:21,23,24 streets 90:8 93:25 95:15 100:2 120:11 149:9 163:9 164:6 strict 91:16 162:8 Strike 52:21 strikes 27:25 35:7 118:11 strong 172:11 struck 8:5 student 39:22 40:19 41:16 students 10:24 39:15 42:6 44:17 47:25 91:20 studied 115:3 study 34:20 76:16 125:23 stuff 96:3 128:3 139:21 179:2 subject 52:16 112:19 116:19 181:13,21,24 subjects 116:21 submission 182:25 183:9 submit 77:6 submitted 184:8 subsequently 164:2 substantive 170:13,18 Suburban 46:12 subway 7:17 46:7 46:8,15 47:16 63:10 sub-systems 118:10 124:6 success 13:14	19:7,9 41:4 76:13 95:16 successful 91:11 successfully 8:7 61:25 149:15 suggest 30:21 101:9 suggested 30:24 suggestion 31:2 34:2 suggestions 30:12 30:23 156:2 suite 84:18 Suites 150:4 summation 144:17 Super 24:18 Superintendent 89:4 supervision 190:22 supplement 90:12 159:25 supplies 11:23 support 106:3 112:3 139:4 154:11 170:4 173:9 supported 75:5 supportive 162:19 166:5 supports 171:3 173:6 supposed 12:15 13:2 84:12 sure 31:17 32:9 32:18 59:24 81:7 91:14 123:10 131:7 147:3 173:14 186:3 188:16 surrounding 66:9 surveillance 1:17 2:17 3:11 7:19 11:12,14,24 12:21,25 13:15 19:8 36:24 41:5	41:19 53:15 56:4 152:23 153:4,12,25 161:20 163:20 164:3,10 165:10 166:2 169:5 170:7 171:17 172:2,12 176:3 survey 50:2,5 surveys 161:9 survived 163:14 suspect 47:19 59:4 163:24 165:12 172:8,13 suspects 47:11 62:2,11 164:9 suspect's 165:9 Susquehanna 47:15 71:2 sworn 51:6 90:2 synergize 26:11 system 3:17,20,22 3:25 4:5 16:13 21:25 23:11,12 25:24 28:10 31:14,14,16 36:25 37:6,12 37:13 38:3,8 39:10,11,17,23 40:21,22 41:5 41:22 42:11,22 44:25 45:25 53:25 56:3,4 57:24 58:20 62:21 66:7 70:4 71:20,22 72:19 73:4,23 78:21 80:19 81:8 85:5 85:7 88:10 93:14,17,18 104:22 105:9,25 105:25 107:13 108:9 109:15 110:9,15 115:11 115:13 118:19 119:8 120:3,9 123:23 124:5,22	125:12 126:6 132:11,18 136:18 142:3,10 144:21 145:12 146:4,11,18,20 147:6,15,24 148:16 149:3 153:21,23 154:9 168:11,17 169:9 172:4 174:9 177:11 178:2 systems 5:7 16:17 17:17 21:21 32:2 38:7,16,17 38:19,20,22,23 40:13 41:9,15 42:15,21 44:7,9 44:13,23 55:8 59:19 63:6 81:2 88:15 93:13 107:11 108:11 108:15,20 109:10,11,12,24 110:2,7 112:9 113:4,6 116:18 117:23 120:2 122:13 124:4 125:3 144:10,12 144:15 148:4 151:11 187:10 systemwide 46:6	125:25 164:9 165:10 190:6 takes 98:8 talent 182:12 talk 8:4 87:14 102:23 108:11 127:22 148:15 151:10 174:7 177:16 talked 19:11 23:16 76:14 94:16 109:4 121:15,21 149:14 152:10 154:16 173:18 173:19 174:2 185:9 talking 58:24 73:24 78:12 99:9 100:9 109:7 135:14 138:25 144:18 talks 76:19 81:19 tandem 106:3 tap 39:3,6 72:21 tape 100:3 148:21 187:12,12 taped 100:3 155:7 target 65:3 75:17 targeted 54:21 targeting 161:4 tax 13:23 taxes 68:11 teacher 39:21 techie 17:10 technical 17:13 70:21 120:22 technicians 42:17 43:2,25 techniques 171:11 technological 29:10 33:7 72:6 technologies 106:16 134:23 151:7 172:19 technology 6:13
--	---	--	--	---

6:15,19,20,25 7:24 8:11,14 11:3 13:3 16:8 17:6 21:18 28:2 28:24 29:3 37:3 45:2 51:2 53:3 72:3,14 91:6 97:6 98:6,10 100:23 102:4,25 107:10,21 112:14 117:14 126:8 132:5,12 132:21 133:7 134:13,19 135:15 136:15 138:13,19 139:13 140:11 144:22 145:6,14 147:9 150:12,23 153:17 154:6 157:14 163:3 171:10,17 172:5 189:5 teed 113:18 television 40:22 50:25 tell 65:5 66:12 103:4 112:6 169:4 176:2 184:11 185:20 187:16 telling 103:22 127:2 Temple 158:7 temporarily 112:13 ten 38:3 100:15 tenants 164:22 tens 116:7 term 17:13 55:11 74:23 91:8 122:21 terminated 19:15 terminating 12:18 terminology 121:2	terms 29:23 30:9 30:13,23 31:25 58:6 61:2 68:22 132:20,22 134:17 135:22 144:20 145:7,18 146:5 188:8 Terrence 167:9 terrorist 175:7 Terry 158:18 testify 2:19 9:11 9:23 88:22 173:13 189:18 testimony 2:6 10:8 14:6 44:15 45:7,11,18,21 48:17 54:3 57:3 64:11 79:21 87:22 88:25 89:10 144:14 169:19 170:10 176:10 188:25 Texas 117:9 thank 2:24 4:17 5:20 9:22 10:4 13:25 18:24 22:12,13,14,18 24:3 26:19 28:6 29:11,16 31:2,3 32:21 35:9,11 36:6,7,9,10,14 45:11,17 48:7 56:23 57:2 64:4 64:8,10,11 71:4 74:4,5,10 79:12 79:13,15 87:21 87:23 88:18 89:16 103:23,23 104:6,11 106:6 106:12 122:2 130:25 131:2,16 131:18 144:6 152:5 157:20,21 158:3,3,13,14 159:4,9 166:19 166:20 167:4 169:15,16,18,21	173:12 185:6 188:20,22,23,25 189:12,16,23 thankful 5:23 9:4 88:21 theft 95:20 98:25 99:3,12 thefts 42:5 142:15 theirs 107:14 110:12 thereabouts 15:12 they'd 107:3,4 169:13 thief 164:16,20 165:2 thieves 96:2 thing 4:5,16,20 8:22 19:13 22:4 65:10 67:23 94:25 98:12 99:21 100:8 116:16 123:18 129:20 136:16 142:11 149:2 179:5 180:14,21 183:9 things 3:15,24 4:4 17:16 24:16,20 29:22 39:16 40:19 58:7 60:14 65:9 77:10 85:17 86:10 91:16 108:7 116:11 117:18 125:10 127:5,22 128:14 131:22 133:3 134:12 138:24 139:17 142:9,12 142:19 143:14 144:13 147:12 148:14,17 169:12 177:17 179:9,16 182:17 182:20 thingy 72:13,15	72:15 think 4:5,15,20,23 10:25 18:7 19:23 20:16,22 21:13 22:2,7,11 23:9 24:17 29:8 36:3 55:21 58:3 58:11 59:14 61:15 69:11,22 73:3,19 76:25 77:9,12 81:6 83:18 84:5 85:14 86:10 93:8 94:7 100:15 101:2 118:2 121:8,14 121:15,19 125:6 126:3 128:10,17 129:3 130:4 131:8,23 133:3 133:4,9,11 134:6,15,18,20 135:6,25 136:14 136:20 137:22 139:11 145:4 147:12 151:9,14 151:16 154:15 157:5 159:12 167:6 168:15 181:8,18 183:21 thinking 76:18 92:4 127:5 149:11 thirdly 50:15 Thomas 9:16 62:6 thorough 45:9 thought 18:18 20:25 21:8 64:13 88:11 127:7 151:23 154:3 thoughts 89:18 154:4 thousand 35:7 80:4,9 110:10 111:18 113:10 122:15	thousands 108:6 108:6 109:19 112:12 116:7 124:11 131:25 132:2,15 threatened 167:15 threats 165:17 three 22:23 23:21 66:8 85:25 90:25 92:16 97:3 104:9 117:11 139:10 140:6,16 141:6 167:22 188:22 threefold 86:5 three-year 115:4 throw 4:9 throwing 16:20 thrown 7:17 47:20 tie 107:13 117:22 148:19 ties 108:14 Tilt 53:10 60:11 60:18 time 3:9,14 6:3,18 9:22,25 10:13 12:7 18:17 19:24 30:19,20 43:2 51:4 56:23 61:17 86:13 88:7,22 93:10 94:12 97:20 98:9 107:12,22 114:10,20 121:6 125:11 126:7 137:2,14,18,20 138:4 148:17,18 151:2 152:10 153:23 158:9 161:15 167:14 177:3,5 179:5 185:22 187:11 timeframe 75:13 176:7 timeline 126:15
--	--	---	---	--

130:6	Township 167:18	trucks 43:7 120:7	typically 60:2,12	93:3 94:2
timelines 97:8	track 47:21	true 105:17 190:7	114:5 125:21	101:17 110:14
times 86:15,23	tracking 118:10	try 80:24 88:19	168:14 178:25	128:6 145:5
87:7 92:8 95:19	trackless 46:21	96:9 140:24,25		149:4 168:22
127:4 140:10,12	tracks 7:17	178:23 182:17	U	unlock 37:25
140:13 159:23	Trade 108:18	trying 15:5 17:4	U 145:3	unopened 13:4
167:8 170:15	traditional 66:4	18:9 19:11 27:6	ultimately 5:5	unoperational
172:6	traffic 111:25	68:25 69:9	unarmed 90:9	133:23
time-sensitive	112:2 113:12,16	77:17 92:19	unbelievable	unsatisfactory
162:13	119:20 127:21	119:13 147:4,6	118:21	12:16
tips 187:23	tragically 163:7	147:7 151:10	underlying	updated 177:3
title 2:12 9:10	trail 7:9	165:5 176:9	123:15	upgrade 21:18
titles 87:25	train 7:25 116:17	TSA 117:4	underneath 124:7	24:23 108:13
today 3:16 4:18	116:21 124:3	turn 109:24 124:8	understand 21:16	123:17,19
4:19 6:16 8:16	trained 90:2	turned 112:13	25:19 55:21	146:12,18
14:3 15:20	110:3 114:4	127:12	64:23 66:10	upgraded 50:25
25:23 45:18,20	training 124:2	TV 166:7	68:8 70:21 84:2	upgrades 24:21
46:3 48:8 49:4	trains 75:11	Twelve 80:3	94:7 131:24	28:12,16,19
64:20 71:18	transcript 190:8	Twenty-five 8:10	136:17 142:24	53:3 54:20
80:19 81:23	190:20	Twenty-six 54:9	171:19 180:17	123:10,11,13,23
104:8 106:4,13	transformation	twice 85:11	understanding	upgrading 25:4
107:16 113:2	31:25	two 6:14 7:4,21	55:12 81:20	147:25
134:23 147:10	transformed 32:7	15:7 23:9 28:18	82:5 132:16	upkeep 37:6
170:4,22 172:6	transition 53:24	42:16 45:9	133:14 134:6,12	uptick 167:15
172:22 173:13	transmit 69:24	54:14 60:13	135:16 162:8	upwards 50:21
181:14 182:3	70:3	63:9,12 66:8	176:19	urgent 55:3
told 97:19 111:17	transportation	67:19 80:25	undertaking	use 6:21,22 7:13
178:3 185:18,21	45:25 111:12	91:2,23 99:10	187:15	7:19 8:4,10
Tom 46:3	113:8,9,15	101:14 102:13	unfolding 73:7,9	13:12 25:11
tool 6:12 77:19	114:19	113:2 139:15,17	unfortunate	26:5,14 27:3
162:16 184:23	traveled 3:9	142:25 154:22	129:7	31:14 34:6
top 32:16 54:25	tremendous 11:2	160:24 163:13	unfortunately	45:22 47:9 59:3
107:17 110:6	trend 77:7	174:15 179:8,16	11:7 95:22	61:16 77:11
126:23 145:23	trends 45:2	twofold 8:6	155:11	93:20,22 94:4,8
total 46:5 51:10	trespassers 42:6	two-part 32:25	unified 118:16,19	102:24 103:2
75:21 126:2	triangulation	Tyco 100:22	uniform 87:12	138:15 146:19
148:16	8:11 18:19	138:15	uniformity 42:12	157:7 161:24
totally 129:21	trickier 150:9	tying 110:7 146:6	unique 167:16	168:11 169:5
touch 110:24	tried 16:13	149:19	unison 169:20	173:22 178:23
112:5 120:13	trigger 142:23	type 6:25 27:7	Unisys 19:16	179:4 187:12
177:8	triggered 141:12	33:14 34:8	unit 24:9 163:17	189:4
tour 136:11,14	trip 4:21 6:6 8:6	107:18 109:11	units 44:19	useful 25:16
141:9 158:12	tripped 143:5,8	112:22 138:5	universities	31:12 42:5
tours 133:3	trolley 46:9	149:7 154:10,17	100:16 160:20	179:12 183:13
135:25 137:3	trolleys 46:22	types 30:10 33:7	University 26:11	useless 25:10
Tower 88:4 89:8	75:11	65:8 95:23	88:5 89:5,21	102:5
town 132:7	troubling 12:3	141:13	90:24 91:3,13	user 135:15

154:21	47:22,23 59:4	55:7	warranty 12:23	105:23 130:15
uses 120:7 145:5	61:16 62:10		24:13 44:3	153:11,12
usually 37:15	74:24 77:11	W	Wars 6:3	155:13 178:2
41:10 42:24	82:6,10 83:6,8	wait 131:9 158:4	wasn't 4:9 27:11	weren't 61:16
95:11 129:24	83:22 88:15	187:7	27:13 151:24	105:5
139:6 145:8,14	106:18,20 108:8	walk 102:15	164:4 175:5	west 52:5,13
utilize 152:13	108:10 109:25	walking 90:11	watch 84:14	90:18 94:24
154:5 166:7	110:6 112:9	97:11	94:25	102:12 103:21
utilized 172:5	123:17 124:17	walkways 98:5	watching 99:9	103:21 141:5
179:13	124:23 135:2,3	wall 137:9	101:23	153:8
utilizing 23:17	135:5,13,23	Walnut 69:18	water 111:14	we'll 4:9 8:23,25
41:19 67:8	138:21 142:16	99:4 141:2,4	127:16	14:5,6,15 16:4
	145:15 147:24	150:4 153:13	way 5:11 8:20 9:3	20:2 45:7 48:13
V	170:7 172:12	Walton 49:3	17:6 21:20	60:14 71:11
valuable 184:23	177:10 180:8	wander 95:7	26:21 28:16,16	75:21 92:8
188:2 189:2	videotape 102:19	want 4:17 9:21	32:6 50:9 60:19	137:5 158:11
value 44:12	VidSys 106:12	14:4 18:16	69:9 84:12	169:11 174:14
108:16 118:20	134:3 145:9,20	32:14 69:5	85:11 89:17	178:14,22,25
180:17	view 5:11 120:14	79:14,17 85:14	92:5 93:22,23	we're 5:14,19,22
values 169:5	177:10	88:19 101:5	94:13 96:3	7:10 9:4 19:25
varies 60:8	viewed 129:11	107:3,4,13,23	97:14 101:20	25:12 26:4
various 92:2	views 46:24	121:3,17 124:20	107:2 123:6	31:18 34:21
100:14 115:24	village 54:8	124:20,22 128:7	126:25 130:5	40:9,19 48:10
173:25	violence 56:11,14	128:15 129:20	136:23 147:13	59:11,15 60:15
vehicle 77:5	76:16 171:5	131:20,21 133:6	153:13 163:9	68:8,17 69:8
114:13	violent 104:10	133:15 136:18	167:21 169:9	70:5 71:7,9,22
vehicles 47:5,10	virtual 94:10,21	137:5,6,7 143:6	172:23 178:17	75:20 77:4,16
62:23 65:2 75:8	98:2 141:9	146:16 174:7	178:20 179:14	77:17 81:3
76:8 77:11	154:24	179:6,11 180:20	181:17 183:18	83:24 86:6 88:8
82:10	virtually 95:13	182:3,22 185:14	184:8	88:21 90:22
vendor 12:17	visibility 90:10	185:15	ways 50:11	91:24 97:24
19:16,21 37:8	visible 91:22,24	wanted 6:9 22:19	129:18 154:22	99:8,24 100:10
vendors 24:25	vision 49:17	30:2 31:23	169:11	100:21,22 101:8
107:19 108:8	visit 32:3 97:20	57:19 89:16	weapon 41:18	101:8,19,22
134:16 157:5	98:20 160:4	94:3 98:12	78:20	108:5 109:23
version 3:18	visiting 3:4	107:2,14 110:23	weather 118:11	110:7,8 113:5
versus 31:13,15	visitor 37:22,23	131:5 152:6	website 91:17	114:20 117:3
60:5 65:2 86:17	38:2	155:19 158:24	129:9	123:24 128:7,24
147:7	visitors 37:20	167:6 182:21	week 54:11 168:8	130:10 133:2
VHS 187:12	visitor's 37:18	wants 101:7	weeks 54:17	138:13,13,19
Vice 89:3 106:10	vitality 167:13	warehouse 13:5	welcome 45:13	141:2,3,4
vicinity 163:19	voiding 44:3	54:11	88:7 97:20	143:24 147:4,5
victims 163:14	volume 68:5	warmly 179:20	144:2 189:15	148:24 154:25
video 3:10 4:8	voluntarily 162:6	180:22	well-being 49:21	158:6 168:24
11:24 12:25	175:16	warrant 86:16	50:15	176:14 177:20
13:15 19:7	voted 117:10	warranted 24:23	went 6:6 39:13	we've 6:4 30:16
40:24 47:3,7,18	vulnerabilities	25:3	59:23 76:21	74:24 77:3,6

98:7 103:5 111:4 124:10 127:3 162:4 172:6 185:8 187:19 white 44:11 Whitehall 52:4 54:7 wide 160:6 161:3 164:8 widely 105:8 WILLIAM 1:12 willing 122:5 129:10 153:7 181:22 Wilson 52:4 wiping 104:15 wireless 16:13 65:25 149:15,16 149:17,18 wishes 81:21 witness 9:19 36:13 88:16 159:5 162:17 Witnesses 9:19 88:16 159:5 woman 47:20 99:16,16 157:12 women 99:11,13 wondering 34:5 74:14 77:23 105:14 word 77:13 words 39:5 105:16 work 32:4,8 48:4 50:5 55:3 70:8 80:17 82:8 94:13 101:10 106:2 114:25 122:6 124:14 127:3 147:7 160:4,25 161:21 163:10 171:6 172:11 173:9 177:12 181:23 worked 22:2	39:10,25 55:5 93:10 98:16 117:12 129:6 162:25 workflow 113:12 working 6:18 11:17 12:4 32:11 44:4 56:2 56:6 62:18 71:9 71:22 72:19 80:16 98:8 102:7 118:7 123:23 127:7,15 161:13 163:15 178:20 188:3,16 workplace 163:25 works 111:22 112:3 139:4 169:10 178:18 188:2 workshops 161:9 world 83:11 84:21 108:18 117:21 133:23 139:12 151:8 177:24 worry 98:4 124:24 186:19 worrying 157:16 worth 125:24 worthwhile 9:23 wouldn't 111:8 146:15 155:21 155:22,23 wow 16:24 129:4 wrapped 148:21 write 25:17 100:3 145:9 writing 145:18 wrong 59:2 X X 94:24 101:23 107:13 Y ya 17:3 Yaron 131:17 yeah 70:17 87:14	138:18 year 11:6 15:3,6 20:4 28:13 59:5 59:6 73:19,21 105:19 107:22 111:15 114:17 115:19 123:12 175:15 yearly 123:9 years 15:7 21:17 28:18 37:7 38:4 64:14 93:9 96:7 104:9 106:14,25 117:11 126:2,12 126:12 139:10 139:15 150:21 159:24 165:16 170:15 177:13 yell 143:23 yell-at-you 143:22 York 21:24,25 113:8 young 7:5,16 96:6 105:12 151:22 152:18 153:9 172:9 younger 167:2 youth 56:11,14 YouTube 151:24 Z zone 90:15 93:15 94:23 103:13 155:3 zoom 35:23 36:4 53:11 60:11,18 92:17 140:4,8 140:13 143:9 Zussman 131:7 131:12,16,17 133:20 136:6 137:17,20 138:7 138:12,18 139:24 140:3,10 141:16,23 142:21 143:21	144:18 147:11 147:17 151:16 \$ \$1,460 114:14 \$1.50 115:7 \$10 52:16,25 \$125 21:17 \$125,000 73:20 \$13 133:8,11 \$13.9 11:13 \$136,000 11:19 \$14 11:20 \$18 125:24 \$20 50:21 146:16 148:19 \$25 22:3 \$25,000 39:12 73:22,24 125:22 \$250,000 126:4 \$3,000 180:3 \$3,017 12:15 \$3.2 11:22 \$3.27 114:17 \$30,000 100:19 \$300 114:21 \$33 115:18 \$35,000 39:12 \$4.30 115:8 \$50,000 73:21 125:20 \$7.5 43:12 \$70 115:20 \$8.7 114:13 \$80 115:20 1 1,185 46:6 1,200 69:14,15 70:5 82:9 1,348 46:14 1,358 46:22 1,500 93:24 10 114:18,20,22 114:24 115:2,17 115:19 121:9 127:22 100 18:8 85:10	125:21 130:14 102 11:15 12:3 11 1:7 38:7,18 96:6 108:19 11,000 75:10 114 14:19 116 89:24 12 38:15 42:24 112:9 140:22 12,000 75:9 80:2 82:21 12,089 46:5 12:20 1:7 120 38:17 46:22 85:10 93:16 121 92:11,21 1234 57:23 125 46:15 136:24 13 38:9 13.9 14:8 25:14 130030 1:15 2:7 2:13 3:1 4:1 5:1 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1
---	--	--	---	---

82:1 83:1 84:1	182:1 183:1	63:1 64:1 65:1	169:1 170:1	24 52:12
85:1 86:1 87:1	184:1 185:1	66:1 67:1 68:1	171:1 172:1	24-hour 40:25
88:1 89:1 90:1	186:1 187:1	69:1 70:1 71:1	173:1 174:1	52:10
91:1 92:1 93:1	188:1 189:1	72:1 73:1 74:1	175:1 176:1	240 146:2
94:1 95:1 96:1	133 59:2	75:1 76:1 77:1	177:1 178:1	240,000 111:14
97:1 98:1 99:1	14 53:6	78:1 79:1 80:1	179:1 180:1	25 8:8 95:11
100:1 101:1	15 38:20 118:9	81:1 82:1 83:1	181:1 182:1	115:19 155:3
102:1 103:1	150 171:22	84:1 85:1 86:1	183:1 184:1	26 38:8
104:1 105:1	16 100:4 168:13	87:1 88:1 89:1	185:1 186:1	28 51:9
106:1 107:1	16th 101:21	90:1 91:1 92:1	187:1 188:1	280 59:14 61:10
108:1 109:1	16,000 75:22	93:1 94:1 95:1	189:1	61:11
110:1 111:1	17th 163:8	96:1 97:1 98:1	20 60:5 100:4	280-some 62:9
112:1 113:1	176 89:24	99:1 100:1	155:8	29 97:4
114:1 115:1	18th 101:21	101:1 102:1	20,000 112:24	
116:1 117:1	19 43:13,14,18	103:1 104:1	113:3	3
118:1 119:1	19th 169:10	105:1 106:1	20-plus 82:25	3rd 7:12
120:1 121:1	177:14 178:17	107:1 108:1	200 178:10	3-1-1 21:23
122:1 123:1	195 46:10	109:1 110:1	2001 175:7	3:10 189:25
124:1 125:1	1990 159:21	111:1 112:1	2002 112:10	30th 46:12 90:17
126:1 127:1	1993 39:20 78:18	113:1 114:1	2003 139:5 146:18	304 46:21
128:1 129:1	145:12 146:18	115:1 116:1	2004 75:14 139:5	33 115:2
130:1 131:1	1997 91:9,12 95:2	117:1 118:1	2005 75:14 163:4	357 40:17
132:1 133:1	167:12	119:1 120:1	163:8	36 140:10,12,13
134:1 135:1	2	121:1 122:1	2006 5:24 6:10	360 92:16 140:7
136:1 137:1	2nd 104:10	123:1 124:1	74:20 75:2	37th 99:3
138:1 139:1	2,200 46:16	125:1 126:1	139:3	38 41:18 46:21
140:1 141:1	2/11/13 3:1 4:1	127:1 128:1	2007 15:10 74:20	383 53:20
142:1 143:1	5:1 6:1 7:1 8:1	129:1 130:1	75:2 146:9	4
144:1 145:1	9:1 10:1 11:1	131:1 132:1	151:23 172:2	4:00 163:21
146:1 147:1	12:1 13:1 14:1	133:1 134:1	2009 15:14,17	40th 102:14 150:8
148:1 149:1	15:1 16:1 17:1	135:1 136:1	16:18	400 1:6
150:1 151:1	18:1 19:1 20:1	137:1 138:1	2011 59:6 103:5	42nd 150:4,15
152:1 153:1	21:1 22:1 23:1	139:1 140:1	103:11	43 38:21 118:14
154:1 155:1	24:1 25:1 26:1	141:1 142:1	2012 49:25 59:5	43rd 90:17 141:2
156:1 157:1	27:1 28:1 29:1	143:1 144:1	2013 1:7 16:19	141:3,3
158:1 159:1	30:1 31:1 32:1	145:1 146:1	38:11	44th 150:15
160:1 161:1	33:1 34:1 35:1	147:1 148:1	2014 54:21	440 39:5
162:1 163:1	36:1 37:1 38:1	149:1 150:1	2015 76:5	45 60:6
164:1 165:1	39:1 40:1 41:1	151:1 152:1	21st 171:9	46th 47:13
166:1 167:1	42:1 43:1 44:1	153:1 154:1	216 11:15 12:4	47 12:8 103:6,12
168:1 169:1	45:1 46:1 47:1	155:1 156:1	14:20,22	480 147:21
170:1,5 171:1	48:1 49:1 50:1	157:1 158:1	22 159:23	5
172:1 173:1	51:1 52:1 53:1	159:1 160:1	22nd 56:14	5 38:14
174:1 175:1	54:1 55:1 56:1	161:1 162:1	220 46:17 160:7	5,499 46:18
176:1 177:1	57:1 58:1 59:1	163:1 164:1	23-year-old	5,767 37:9
178:1 179:1	60:1 61:1 62:1	165:1 166:1	165:20	5-1-1 92:24
180:1 181:1		167:1 168:1	238 61:7,10	

50 38:9 51:5 60:25 114:9 180:2 500 53:7 161:25 176:11 186:3 52nd 102:17 54 54:11 54th 167:23 55 46:19 550 90:8				
6				
6 38:14 6:00 163:21 60 63:10 85:10 60th 153:13 600 171:21 63rd 167:21,23 65 44:6				
7				
7th 102:21 720 147:21 75 59:6 104:8 772 46:18				
8				
8 38:14 8th 38:11 8:00 168:9 80 75:23 104:8 800 54:22 80:13 85 168:14				
9				
9th 163:8 9,000 101:12 112:25 9-1-1 92:23 93:15 93:17 113:25 128:22 156:14 90 15:25 112:10 130:19 90s 93:9 96 54:3 103:4,11 98 115:11				