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Admin. Law Judge: K. Bemesderfer
ORA Project Mgr.: Ana Maria Johnson
ORA Expert Witness: Adam Clark



Office of Ratepayer Advocates
California Public Utilities Commission

**Office of Ratepayer Advocates Supplemental
Testimony Regarding Service Quality on
Broadband Services**

- PUBLIC -

San Francisco, California
September 11, 2015

MEMORANDUM

This report was prepared Adam Clark of the Communications & Water Policy Branch of the Office of Ratepayer Advocated (ORA) under the general supervision of Program & Project Supervisor, Ana Maria Johnson. A statement of qualifications from Adam Clark is presented in Attachment A to this testimony. ORA is represented in this proceeding by legal counsel, Lindsay Brown.

This supplemental testimony is comprised of the following chapters:

Chapter	Description
I	Introduction: A brief introduction into the important role that broadband plays in this proceeding, the scope of the proceeding, and the data used to prepare this report.
II	Consideration of Broadband: A summary of statues the Commission must consider in its evaluation of the proposed Transaction, and the methods used to present the Commission with relevant information.
III	Lack of Adequate Broadband: A discussion of the current lack of adequate broadband in Verizon California’s service territory.
IV	Condition of Verizon’s Network: A discussion of the current condition of Verizon California’s copper networks, including evidential statements from actual customers, a former Verizon employee and a comparison of Verizon’s fiber and copper networks.
V	Maintaining or Improving the Quality of Broadband Services: A discussion of Frontier’s plans, or lack thereof, to maintain or improve the quality, reliability and availability of broadband services post-Transaction.
VI	Conclusion: Concluding remarks and recommendations, including comments on previously recommended conditions the CPUC should adopt if it chooses to approve the Application.

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ATTACHMENTS

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1 **EXECUTIVE SUMMARY**

2 On March 18, 2015, Frontier Communications Corporation (“Frontier”), Frontier
3 Communications of America, Inc. (“Frontier America”), Verizon California Inc. (“Verizon
4 California”), Verizon Long Distance, LLC (“Verizon LD”), and Newco West Holdings LLC
5 (collectively, “Joint Applicants”) filed an Application 15-03-005 (“Application”) seeking
6 approval from California Public Utilities Commission (“Commission” or “CPUC”) for the sale
7 and transfer of Verizon California and Verizon LD’s (collectively, “Verizon”) customer accounts
8 in Verizon California’s service territory to Frontier (“Transaction”). If the Transaction is
9 approved, Verizon California’s physical assets will be transferred to Frontier and approximately
10 2.2 million customers of Verizon will become customers of Frontier.

11 My testimony filed in this proceeding on July 28, 2015 addresses the proposed
12 Transaction’s impact on the quality, reliability and availability of broadband services in
13 California. That testimony prioritized certain analysis given the expedited schedule of the
14 proceeding, and expressed my intention to provide additional analysis in supplemental
15 testimony. This supplemental testimony builds upon that filing. More specifically, this
16 supplemental testimony presents ORA’s findings relating to the proceeding’s Public
17 Participation Hearings (PPH) and Workshops held to date. This supplemental testimony also
18 addresses issues raised in the July 2, 2015 Assigned Commissioner’s Amended Scoping Ruling.¹

19 The data presented herein reaffirms the need for mitigating measures to ensure that
20 California consumers receive high quality, reliable broadband service post-Transaction. If the
21 Commission chooses to approve the Transaction, it should adopt the mitigating measures
22 identified in my July 28, 2015 testimony as a condition of its approval.

23

¹ See September 4, 2015 Ruling of ALJ Colbert.

1 **Organization of Report**

2 Chapter I of this report contains a brief introduction into the important role that
3 broadband plays in this proceeding, the scope of the proceeding, and the data used to prepare this
4 report.

5 Chapter II contains a summary of the statute and issues the Commission must consider in
6 its evaluation of the proposed Transaction with respect to broadband services.

7 Chapter III contains a discussion of the current lack of adequate broadband in Verizon
8 California’s service territory.

9 Chapter IV contains a discussion of the current condition of Verizon California’s copper
10 networks, including evidential statements from actual customers, a former Verizon employee and
11 a comparison of Verizon’s fiber and copper networks.

12 Chapter V contains a discussion of Frontier’s plans, or lack thereof, to maintain or
13 improve the quality, reliability and availability of broadband services post-Transaction.

14 Finally, Chapter VI contains concluding remarks, including comments on the previously
15 recommended conditions that the CPUC should adopt if it chooses to approve the Application.

16

1 **I. INTRODUCTION**

2 My testimony filed in this proceeding on July 28, 2015 addresses the proposed
3 Transaction’s impact on the quality, reliability and availability of broadband services in
4 California. This supplemental testimony builds upon that filing and presents ORA’s findings
5 relating to the proceeding’s PPHs and Workshops held to date. This supplemental testimony also
6 addresses the issues raised in the July 2, 2015 Amended Scoping Ruling, including:

- 7 • How would the condition of Verizon’s network affect the proposed
8 transaction in terms of service to customers, interconnection of
9 Competitive Local Exchange Carriers (CLECs), and investments
10 needed to fulfill the obligations of a Carrier of Last Resort (COLR)?

11 In order to look closely at this and other issues, the Commission recently held facility
12 tours, workshops and PPHs throughout the state. The facility tours allowed the parties to see,
13 first hand, portions of Verizon’s network. The workshops provided a venue for parties to discuss
14 the facility tours and other issues relevant to this proceeding. Finally, and perhaps most
15 importantly, the PPHs provided the public an opportunity to offer comments to the Commission,
16 and share their experiences with Verizon’s services.

17 The people that offered comments to the Commission at the various PPHs are
18 representative of a larger customer base. In fact, many speakers represented a group or
19 community in an official capacity. Community representatives, business leaders, local
20 governments, organizations and individual members of the public all expressed to the
21 Commission a desire and need for reliable, high quality broadband services. The Commission
22 should carefully consider the facts and opinions expressed during the PPHs.

23 The following testimony presents ORA’s findings relating to those PPHs and workshops,
24 addresses the condition of Verizon’s network, and speaks to how the Commission can
25 appropriately consider relevant statutes.

26

1 **II. CONSIDERATION OF BROADBAND**

2 In considering the proposed Transaction, the Commission must weigh the criteria
3 enumerated in Public Utility Code Section 854(c) and find that the Transaction is in the public
4 interest.² One of the criteria listed within Public Utility Code Section 854(c) requires that the
5 Transaction maintains or improves the quality of service to public utility ratepayers in the state.
6 Based on advice of counsel, the Commission must carefully consider those criteria as they apply
7 to broadband service in California. Also according to counsel, Public Utilities Code Section 854
8 and Section 706(a) of the 1996 Telecommunications Act furnish the Commission with the
9 requisite affirmative authority to adopt the conditions discussed in my testimony.³

10 Considering these facts and statutes, the Commission must consider the effects of the
11 proposed Transaction on the quality, reliability and availability of broadband services in
12 California. This is a difficult task due to the lack of explicit service quality standards for
13 broadband. Therefore, in my July 28, 2015 testimony, I presented the Commission with an
14 analysis that that used certain telephone service quality standards as a proxy to assess the quality
15 of the Joint Applicants’ broadband services. Here I build upon that approach, and also apply
16 additional methods of analysis. The sections below assess Verizon’s broadband service quality
17 and availability with information gleaned from PPH and workshops, as well as comparing the
18 performance of Verizon’s older copper networks to its newer fiber networks.

19 ORA will provide a legal analysis of the Commission’s jurisdiction and statutory
20 authority pertaining to broadband in Legal Briefs.

21

² Scoping Ruling at 3.

³ Verizon v. FCC, 740 F3d at 623, 635 (D.C. Cir. 2014).

1 **III. LACK OF ADEQUATE BROADBAND**

2 Many communities within Verizon’s service territory currently do not have access to
3 broadband. Other communities have access to broadband, but only at inadequate speeds that
4 cannot support important applications. As a result, the people in these communities are at a
5 disadvantage. The lack of adequate broadband severely hinders the public’s safety, health,
6 education and economy.

7 During the PPHs, many people spoke of the importance of broadband services, and
8 expressed their frustration regarding the lack of access in their community. Those communities
9 made it abundantly clear that broadband availability is inadequate within many areas of
10 Verizon’s service territory. For example, the Hoopa community is one of many communities
11 within Verizon’s service territory that currently lacks broadband access.

12 The Commission held a PPH at Hoopa, where one member of the public poignantly
13 stated, “[i]f we could have broadband... it would be a miracle for the people in the community...
14 it could change lives.”⁴ Indeed, broadband is essential to many important aspects of everyday
15 life. Education, for instance, is greatly enhanced and even dependent upon broadband access.
16 Carla Parravano, the Assistant Editor and Lead Writer for the Two Rivers Tribune, the
17 community’s local newspaper, expressed to the Commission:

18 Up here it is a struggle to be able to function and to teach students,
19 have them be taught the latest technologies when we don't have the
20 infrastructure that is necessary... It is crippling for [an] educational
21 institution to try and function without adequate bandwidth.⁵

22 Approximately [REDACTED] households in Verizon’s service territory do not have access to
23 broadband (at any speed tier).⁶ Verizon has not deployed broadband at [REDACTED] of its central offices in
24 California.⁷ In other parts of its service territory, Verizon only provides slow, low quality
25 broadband. At the end of 2014, at least [REDACTED] of Verizon’s existing consumer connections
26 were located in areas where Verizon did not offer speeds of 6 mbps download and 1.5 mbps

⁴ Reporter’s Transcript at 68. A.15-03-005 Public Participation Hearing at Hoopa, California. July 7, 2015.

⁵ *Id.* at 53.

⁶ White Testimony. See Exhibit MW-2 at 3. May 11, 2015.

⁷ White Testimony at 13. May 11, 2015.

1 upload.⁸ Those areas are both urban and rural communities, including (but not limited to)
2 portions of [REDACTED]. The vast majority of
3 those areas are not eligible for Federal or State support mechanisms.⁹

4 If the Commission approves the proposed Transaction it should adopt mitigating
5 measures to ensure that Frontier quickly deploys broadband to unserved and underserved
6 communities. Deploying broadband to these areas will help to satisfy the criteria of Public Utility
7 Code § 854(c) to maintain or improve the quality of the broadband service in California. Plus,
8 the California legislature is currently attempting to support the deployment of broadband to 98%
9 of the households in California.¹⁰ Requiring Frontier to expand the availability of broadband
10 services post-Transaction will contribute to the State’s goal and help ensure that the Transaction
11 is in the public interest.

12

⁸ Verizon’s response to ORA’s Data Request No.003. June 9, 2015. See “ORA_VZ3.3_Attachment 2_CA FCC Form 477_A1503005VZ110004_CONFIDENTIAL.xlsx” at ORA Confidential Exhibit A-3 to July 28, 2015 Reply Testimony served on parties.

⁹ Refer to Chapter V Section B for a more in-depth discussion of the geographic limitations of Federal and State support mechanisms.

¹⁰ See Senate Bill 740 (Padilla). August 7, 2013.

1 **IV. CONDITION OF VERIZON’S NETWORK**

2 The data suggest that Verizon’s failure to adequately maintain its copper networks
3 negatively impacts the quality of services provisioned over those networks. Even Frontier
4 concedes that some areas served by Verizon, “tend to be served by older equipment that is more
5 prone to service quality problems.”¹¹ As such, the maintenance and repair of those networks is
6 especially necessary to ensure a quality product. Verizon’s maintenance practices are not always
7 adequate.

8 At PPHs across the state, the Commission heard from many knowledgeable persons that
9 reaffirmed this fact. Michael Nichols (County Manager for Access Sonoma Broadband), for
10 example, noted the poor condition of Verizon’s network in his county:

11 My Sonoma County, especially in the Cazadero exchange, we have
12 an aging infrastructure. We have -- unfortunately, we have garbage
13 bags on our splice boxes along our highways, and this is to prevent
14 rain water from shortening out the circuits to reduce noise in our
15 lines; but that is not an effective way to really maintain
16 infrastructure, as far as we are concerned.¹²

17 A service provider must properly repair and maintain an aging network in order to
18 provide an adequate level of service quality and reliability. To this point, the Commission
19 already has ample evidence of Verizon’s substandard network maintenance. On August 27,
20 2015, the Commission adopted Decision 15-08-041, which directs Commission staff to conduct a
21 study to evaluate the condition of Verizon’s (and other) networks. In that Decision, the
22 Commission asserts that Verizon has consistently failed to meet existing service quality
23 metrics.¹³ Verizon’s failure to meet those telephone service quality metrics is evidence of
24 inadequate maintenance.

25 The Commission received more evidence of Verizon’s inadequate maintenance practices
26 at the PPH in Long Beach, California. Dianne Sundstrom spoke of issues within her home
27 community of Belmont Heights in southeast Long Beach. Ms. Sundstrom described issues
28 concerning safety and abandon wires. She stated:

¹¹ Gregg Rebuttal Testimony at 36. September 24, 2015.

¹² *Id.* at 6.

¹³ Decision (D.) 15-08-041 at 1.

1 So about two years ago, in 2013, we did a very comprehensive
2 review of our community. We documented what we saw, what we
3 perceived as safety issues, wire blight, wires to homes in excess of
4 what we felt should be there.

5 And since we really did not get any response from Verizon, we
6 filed a complaint with the CPUC about I think it was in October of
7 2013. So in mid 2014, we walked our community with Verizon,
8 with Charter, and with Mr. Stepanian from the CPUC. And many
9 violations were noted by both Verizon and Mr. Stepanian. The
10 majority of the violations were with Verizon rather than Charter.¹⁴

11 In a Memorandum dated April 6, 2015, Raffy Stepanian, a Senior Engineer with the
12 CPUC described the above-referenced assessment of Verizon's poor network conditions in
13 Belmont Heights. In that Memorandum, which is appended to this testimony as Attachment B,
14 Mr. Stepanian documents Verizon's reluctance and/or failure to correct the numerous General
15 Order 95 violations that were identified in Belmont Heights. Mr. Stepanian then describes his
16 inspection of Verizon's supposed corrections, and concludes, "The intent of the inspection was
17 to spot check the area to determine if Verizon had corrected its violations... We found a large
18 number of GO95 violations on Verizon's facilities, many of which are serious." Mr. Stepanian
19 attached to his Memorandum a list of his findings, which are 36 separate General Order 95
20 violations that Verizon failed to correct. That list is included in Attachment B.

21 The Commission received even more evidence of Verizon's inadequate maintenance
22 practices at the PPH in Claremont, California. There, Mr. Bill Garden spoke of various problems
23 with Verizon's copper network that he is personally aware of. Mr. Garden's intimate knowledge
24 of the company's maintenance practices and procedures make his comments especially valuable.
25 Mr. Garden was a Verizon employee for 40 years.¹⁵ He held positions as a cable splicer, cable
26 maintenance technician and customer operations technician. Mr. Garden worked at the Rim
27 Forest Yard that services portions of San Bernardino County.

¹⁴ Reporter's Transcript at 529. A.15-03-005 Public Participation Hearing at Long Beach, California. August 10, 2015.

¹⁵ Reporter's Transcript at 389. A.15-03-005 Public Participation Hearing at Claremont, California. July 21, 2015.

1 According to Mr. Garden, “[P]roblems cause customers to lose service, get noise on their
2 lines, get lines crossed with other customers, and can pose problems for public safety when their
3 lines go down.”¹⁶ Some of the issues Mr. Garden spoke of are enumerated below.

- 4 1. Verizon’s misuse of temporary splice closure tarps is contributing to poor service
5 quality. These tarps are temporary enclosures that protect a cable splice from rain
6 and moisture damage. Mr. Garden stated, “These tarps are not being replaced in a
7 timely manner with permanent closures and wire repair that keeps the plant in
8 good order.”¹⁷ Essentially, Mr. Garden claims that Verizon is utilizing temporary
9 fixes as long term solutions, which can harm the quality of service. Mr. Garden
10 went on to state:

11 The company asked our technicians to write-up PMOs, which are
12 plant maintenance orders to have these bad splices and terminals
13 replaced. Most of these orders are seldom taken care of and many
14 of them are totally ignored. Many of these tarps are found to be in
15 place years later. The tarps end up having tears, which allows easy
16 access for the rain, sun, and home for many birds and varmints.
17 Actually, we will find many bird nests. They love our cable.
18 Believe me. They get in the cables all the time and have bird nests,
19 which cause a lot of problems.¹⁸

- 20 2. Many backup batteries at remote terminals are in poor condition, and can harm
21 the reliability of services.¹⁹ Mr. Garden stated, “The [batteries] many times are
22 corroded and do not hold the charge long enough to be useful. These [batteries]
23 are supposed to be checked routinely by our technicians and changed out if need
24 be. This does not happen.”²⁰
- 25 3. The lack of proper air pressure in underground and aerial facilities can contribute
26 to poor service quality. Mr. Garden explained: “[m]any aerial cables in our

¹⁶ Reporter’s Transcript at 391. A.15-03-005 Public Participation Hearing at Claremont, California. July 21, 2015.

¹⁷ *Id.* at 392.

¹⁸ *Id.* at 392.

¹⁹ Refer to the July 28, 2015 Testimony of Enrique Gallardo for a more in-depth discussion of backup batteries.

²⁰ Reporter’s Transcript at 392. A.15-03-005 Public Participation Hearing at Claremont, California. July 21, 2015.

1 network, which are paper insulated cables, do not even have air pressure on them.
2 If these paper cables get wet, it can cause up to a 4 to 600 outage because the
3 wires, due to the insulation of the paper, soak up like a sponge.”²¹

4 Additionally, the Commission received more evidence of inadequate maintenance
5 practices at the PPH in Garberville, California. Thomas Runnion, the Vice President of
6 Communication Workers of America (District 9), explained to the Commission:

7 We've just participated in a tour of Verizon facilities in the
8 surrounding community.... The copper plant serving these
9 communities is old, and in all too many places it has not been
10 properly maintained. In fact, the Commission has an ongoing
11 service quality proceeding that has produced extensive evidence
12 that Verizon California is allowing its facilities to deteriorate and is
13 failing to meet service standards. Part of the problem is that
14 Verizon has cut staffing by half in recent years. There simply are
15 not enough technicians and customer service representatives to
16 provide prompt, quality service.²²

17 Mr. Runnion’s statement regarding the number of Verizon employees raises an important
18 point. As explained in my testimony filed July 28, 2015, Verizon ██████ significantly during
19 the past five years. For example, from 2010 through 2014, Verizon ██████ the number of
20 ██████²³ Figure 1 below depicts the total number of Verizon Managers,
21 Associates and work locations within California for 2010 through 2014.

²¹ Reporter’s Transcript at 392. A.15-03-005 Public Participation Hearing at Claremont, California. July 21, 2015.

²² Reporter’s Transcript at 4. A.15-03-005 Public Participation Hearing at Garberville, California. July 6, 2015.

²³ For additional information, refer to July 28, 2015 Testimony of Adam Clark at page III-31.

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Figure 1 (CONFIDENTIAL)

Verizon – California Employees and Work Locations



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Verizon’s [REDACTED] of its workforce far outpaced the [REDACTED] in the company’s total lines in service. From 2010 through 2014, Verizon [REDACTED] the number of its employees by [REDACTED].²⁴ During that same timeframe, the total number of Verizon’s lines in service [REDACTED].²⁵ Verizon [REDACTED]. Without an adequate number of technicians, repairs and maintenance issues can linger and compound. An inadequate workforce can result in insufficient maintenance and repair, which contributes to poor service quality.

11 If Frontier is to acquire Verizon, the Commission should require Frontier to at least
12 maintain Verizon’s current ratio of employees to lines in service, which is one employee for

²⁴ Verizon’s response to ORA’s Data Request No.002. May 11, 2015. See “ORA_VZ2.17_Attachment 1_A1503005VZ20086_CONFIDENTIAL.xlsx” at ORA Confidential Exhibit B-5 to July 28, 2015 Reply Testimony served on parties.

²⁵ The total number of lines in service includes: Broadband, FiOS Video, FiOS VoIP, FiOS Voice, and Copper Voice Lines.

Source: Verizon’s response to ORA’s Data Request No.004. June 25, 2015. See “Attachment ORA_VZ4 13_Attachment 1_A1503005VZ_120001_CONFIDENTIAL.xlsx” at ORA Confidential Exhibit B-3 to July 28, 2015 Reply Testimony served on parties.

1 every [REDACTED] broadband lines in service.²⁶ This condition, as detailed in the July 28th ORA
2 Executive Summary on Reply Testimony at page 15, will help to ensure that Frontier will at least
3 maintain the current level of broadband service quality.

4 In summary, Verizon's inadequate repair and maintenance of its copper networks affects
5 both rural and urban areas. In fact, Verizon's broadband outages are especially concentrated in
6 urban areas, namely [REDACTED].²⁷ The
7 Commission should require Frontier and/or Verizon to repair Verizon's copper networks in order
8 to improve broadband service quality. To initiate this effort, the Commission should require the
9 Joint Applicants to provide a strategic plan detailing the steps and schedule to improve the
10 current poor condition of Verizon's network.²⁸

11 **A. FIBER VERSUS COPPER NETWORKS**

12 Comparing Verizon's older copper networks to its newer fiber networks is yet another
13 method of assessing the quality and reliability of Verizon's broadband service. Comparing
14 Verizon's networks and services is not a means of discouraging or downplaying investments in
15 infrastructure. Instead, analyzing the differences between Verizon's fiber and copper networks
16 provides context and an evaluation of network conditions and service quality that consumers
17 experience. This is especially appropriate for broadband services, where the Commission is yet
18 to adopt explicit service quality standards. Given that a high number of Verizon customers still
19 rely on a copper network, an estimated [REDACTED] customers as discussed below, it is critical that
20 the Commission address service quality issues experienced by these customers.

21 Nearly [REDACTED] of Verizon's broadband customers receive fiber based broadband service,
22 while the remaining [REDACTED] receive copper based broadband service.²⁹ Verizon currently has

²⁶ Verizon's response to ORA's Data Request No.003. June 9, 2015. See "ORA_VZ3.3_Attachment 2_CA FCC Form 477_A1503005VZ110004_CONFIDENTIAL.xlsx" at ORA Confidential Exhibit A-3 to July 28, 2015 Reply Testimony served on parties.

²⁷ See July 28, 2015 Testimony of Adam Clark at III-20 to III-28.

²⁸ See July 28, 2015 Testimony of Adam Clark at V-1.

²⁹ Verizon's response to ORA's Data Request No.004. June 25, 2015. See "ORA_VZ4 13_Attachment 1_A1503005VZ_120001_CONFIDENTIAL.xlsx" at ORA Confidential Exhibit B-3 to July 28, 2015 Reply Testimony served on parties.

1 approximately [REDACTED] FiOS customers, which is Verizon's fiber-to-the-home service, and
2 around [REDACTED] customers of DSL service.³⁰

3 Verizon's DSL customers, who rely on a copper connection to receive broadband,
4 experience a slower connection and an inferior quality of service as compared to Verizon's FiOS
5 customers.³¹ Verizon's FiOS service can reach upload and download data transfer speeds of up
6 to 500 Mbps, which far surpasses the speeds available via Verizon's DSL service.³² Furthermore,
7 Verizon's fiber networks are relatively new compared to many of its copper networks.³³ Older
8 copper networks can experience significant deterioration that negatively impacts service
9 quality.³⁴

10 The difference between the quality of Verizon's copper and fiber broadband services is
11 also evident in the experiences of actual customers. During the PPHs, Verizon's FiOS customers
12 conveyed general satisfaction with the fiber based service. For instance, Karen Grunell of
13 Huntington Beach simply stated, "I have [had] Verizon FiOS for many years, and I love it."³⁵ In
14 contrast, Verizon's DSL customers often expressed the opposite sentiment and were generally
15 disappointed. For example, Ms. Brentnall, on behalf of a Morgan Hill business owner, stated:

16 When we opened in 2006, we needed a reliable business data line,
17 and Verizon was able to provide what they represented as a 6 meg
18 by 740 kV DSL service. Cost was initially \$49 a month, and this
19 cost rose for the duration of our stay...

20 The throughput on our line was very poor, and after installation
21 Verizon admitted we were, quote, "too from the CO," end quote.

³⁰ Verizon's response to ORA's Data Request No.004. June 25, 2015. See "ORA_VZ4 13_Attachment 1_A1503005VZ_120001_CONFIDENTIAL.xlsx" at ORA Confidential Exhibit B-3 to July 28, 2015 Reply Testimony served on parties.

³¹ For example, outages to Verizon's FiOS services last, on average, [REDACTED] than outages to Verizon's DSL services. For more information, refer to the July 28, 2015 Testimony of Adam Clark at III-21.

³² See <http://fios.verizon.com/fios-speeds.html>

³³ See <http://www.verizon.com/about/our-company/history-timeline>

³⁴ Veach, Julie. Protecting Consumers in the Transition from Copper Networks. Federal Communications Commission. Wireline Competition Bureau. May 7, 2014. Available at <https://www.fcc.gov/blog/protecting-consumers-transition-copper-networks>

³⁵ Transcript of the A.15-03-005 Public Participation Hearing at Long Beach at page 459. August 10, 2015.

1 And instead of upgrading their service, they let us operate with
2 poor internet service...

3 When we moved in 2014 only 50 yards away, I contacted Verizon
4 a band – excuse me -- about a new DSL service. I was advised that
5 I could get a business grade 6 by 3 meg service on twisted pair, but
6 the cost now would be 800 a month. This was an exorbitant
7 charge...

8 Verizon and their successors need to be warned that price gouging,
9 denial of reasonable service requests, and the misrepresentation of
10 what the service delivered actually is will not be tolerated. A
11 written and reasonable and fair plan to provide internet service to
12 Morgan Hill is critical.³⁶

13 Moreover, an analysis of Verizon's service outages and customer complaints also
14 demonstrates the inferior quality of Verizon's DSL service as compared to its FiOS service. Both
15 of Verizon's broadband networks experience service outages. However, there are significant
16 differences between Verizon's FiOS and DSL outages statistics. In 2014 the likelihood that a
17 DSL customer experienced a service outage was [REDACTED] than that of a FiOS
18 customer.³⁷ Figure 2 below depicts the number of outages per 10,000 customers for Verizon's
19 FiOS and DSL services.

³⁶ Transcript of the A.15-03-005 Public Participation Hearing at Santa Clara at page 448 to 450. July 27, 2015.

³⁷ Verizon's response to ORA's Data Request No.002. May 11, 2015. See "ORA_VZ2.29_Attachment 1_A1503005VZ20089_CONFIDENTIAL.xlsx" at ORA Confidential Exhibit B-5 to July 28, 2015 Reply Testimony served on parties.

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Figure 2 (CONFIDENTIAL)

Verizon – Broadband Outages per 10,000 Connections



As the above graph demonstrates, Verizon’s copper networks [REDACTED] [REDACTED] than Verizon’s newer fiber networks. The outages to Verizon’s DSL services were also [REDACTED] than outages to Verizon’s FiOS services. The average DSL outage affected [REDACTED] as compared to FiOS outages.³⁸ In 2014, Verizon’s DSL outages were [REDACTED] as its FiOS outages.³⁹

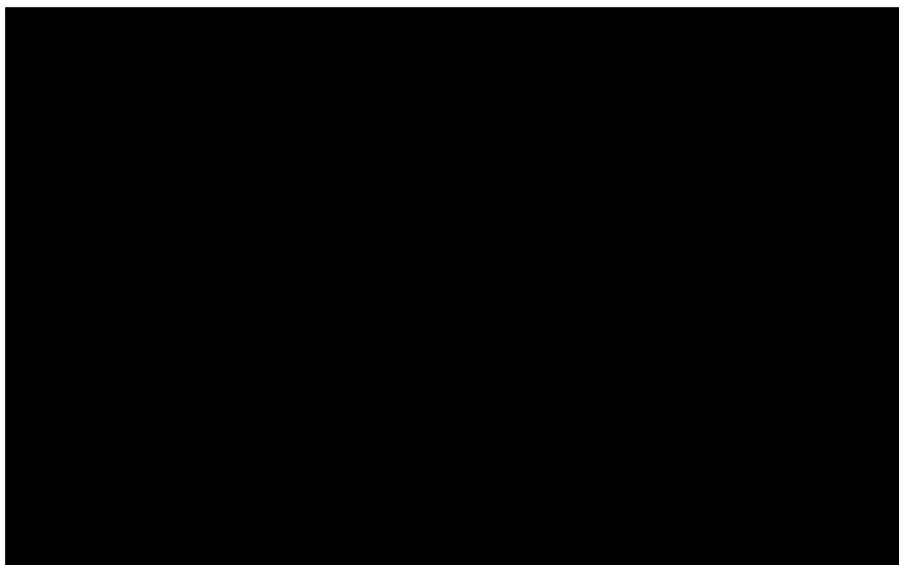
The stark difference between Verizon’s copper networks and its fiber networks is also apparent in the repair complaints submitted by customers. Repair complaints are a good barometer of the condition of a network, and overall service reliability. Figure 3 below depicts the quantity of repair complaints Verizon received, per 10,000 connections, from DSL customers and FiOS customers.

³⁸ *Id.*

³⁹ The severity of Verizon’s broadband outages is measured by total customer-minutes impacted. Refer to the July 28, 2015 Testimony of Adam Clark at page III-18 for a more in-depth discussion of the customer-minutes metric.

1 **Figure 3 (CONFIDENTIAL)**

2 **Verizon – Broadband Repair Complaints per 10,000 Connections**



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5 Figure 3 above depicts a very specific subset of complaints, and does not include all
6 complaints related to poor service quality or reliability. The complaints charted in Figure 3 are
7 only those that are specifically denoted as relating to repair issues for *DSL* or *Fiber data*
8 services. The data show that Verizon's DSL customers submitted repair complaints [REDACTED]
9 [REDACTED] than did Verizon's FiOS customers. This data also coincides with my analysis
10 on Verizon's broadband outages. Service outages and instances of degradation are likely to
11 produce repair complaints. In all, the evidence shows that Verizon's copper networks do not
12 provide the same quality of service as Verizon's fiber networks.

13 The differences in the quality of service provided by Verizon's fiber and copper networks
14 is consistent with the company's stated focus. Sometime in the past 20 years or so, Verizon
15 decided to shift its focus from deploying and maintaining copper networks to deploying fiber
16 networks and wireless services. In 2012, Verizon's Chairman and CEO Lowell McAdam stated:

17 The vision that I have is we are going into the copper plant areas
18 and every place we have FiOS, we are going to kill the copper...
19 We are going to just take it out of service and we are going to
20 move those services onto FiOS. We have got parallel networks in
21 way too many places now, so that is a pot of gold in my view. And
22 then in other areas that are more rural and more sparsely populated,

1 we have got LTE built that will handle all of those services and so
2 we are going to cut the copper off there. We are going to do it over
3 wireless.⁴⁰

4 Apparently, this strategy has produced some positive results for the company. Verizon's
5 2014 Annual Report states:

6 The centerpiece of our wireline business is FiOS, our 100 percent
7 fiber network that has transformed consumer wireline into a
8 growth business. FiOS revenues for 2014 were \$12.7 billion, up
9 13.6 percent compared with 2013, and made up more than three-
10 quarters of all our revenue from the consumer retail business in
11 2014. Thanks to FiOS, consumer revenues have grown more than 4
12 percent in each of the last ten quarters.⁴¹

13 Verizon's decision make FiOS the "centerpiece" of its wireline business appears to have
14 come at the expense of its copper network. Verizon's focus on fiber and wireless networks,
15 rather than its copper networks, is evident in the aforementioned substandard maintenance
16 practices. In California, the [REDACTED] customers of Verizon's copper based DSL service are left
17 with an inferior quality of service. It is important for the Commission to address service quality
18 issues experienced by these customers.

19

⁴⁰ Thompson Reuters SteetEvents Edited Transcript. Interview of Verizon Chairman and CEO Lowell McAdam at Guggenheim Securities Symposium. June 21, 2012.

⁴¹ Verizon Communications, Inc. 2014 Annual Report at page 2. Available at https://www.verizon.com/about/sites/default/files/2014_vz_annual_report.pdf

1 **V. MAINTAINING OR IMPROVING THE QUALITY BROADBAND**
2 **SERVICE**

3 To date, Frontier has identified three sources of funding it can use to improve and deploy
4 broadband. These sources are: (1) the Connect America Fund (CAF), (2) the California
5 Advanced Services Fund (CASF), and (3) the company’s own capital investments.⁴²

6 **A. FRONTIER WILL NOT EXTEND FIOS SERVICE**

7 As previously discussed, Verizon’s FiOS (fiber) networks deliver a higher quality, more
8 reliable broadband service than Verizon’s DSL (copper) networks. Unfortunately, Frontier does
9 not have any intention of deploying FiOS service to additional communities beyond what is
10 currently available.⁴³ At the workshop held in Long Beach California, Ms. White (Frontier’s,
11 Frontier’s Area President for the West Region) stated: “The question is, will we be extending the
12 FiOS service? And the answer today is we do not have plans to extend the FiOS service.”⁴⁴ As a
13 result, in order to increase the quality and speed of broadband services, Frontier will need to
14 repair, enhance/upgrade or deploy copper networks.

15 **B. FEDERAL AND STATE SUPPORT**

16 The Joint Applicants cite Frontier’s desire to utilize Federal and State support
17 mechanisms to deploy high quality broadband services. However, CAF and CASF support is
18 currently available to both Verizon and Frontier, irrespective of the proposed Transaction. Thus,
19 the service quality benefits made possible by those support mechanisms are not a result of the
20 Transaction.

21 Also, Frontier has yet to provide to the Commission any specific plans detailing actual
22 projects or proposals to deploy or improve broadband services post-Transaction. When asked if
23 Frontier will provide details of specific projects or applications that will seek CASF support, the
24 company’s Executive Vice President of External Affairs responded, “[n]o... The engineers have

⁴² Frontier’s response to ORA’s Data Request No.002. April 23, 2015. See Question 32 at ORA Confidential Exhibit B-6 to July 28, 2015 Reply Testimony served on parties.

⁴³ On page II-2 of my July 28, 2015 Testimony I referenced Frontier’s commitment to deploying fiber based broadband. This statement is incorrect. In fact, Frontier did not make any such commitment to deploying fiber based broadband services in the Application.

⁴⁴ Reporter’s Transcript at 476. A.15-03-005 Workshop at Long Beach, California. August 10, 2015.

1 to do their magic and figure out [the] highest and best use, and then submit to the CPUC. We
2 can't do that now.”⁴⁵ This lack of specific assurances led ORA to recommend that the
3 Commission, if it chooses to approve the Application, adopt certain conditions. These conditions
4 will help ensure that benefits to ratepayers are actually realized over the short and long term.
5 Relying simply on a prediction and having faith that the prediction will come true is misguided
6 and not in the interest of customers and our state. As recommended in Dr. Lee Selwyn’s July 28th
7 Testimony, one of those conditions should require Frontier to make high quality broadband
8 services available to 98% of households in its 26 new service territory by no later than December
9 31, 2020.⁴⁶

10 Frontier also identified CAF support as an opportunity to improve and deploy
11 broadband.⁴⁷ Frontier has already accepted the CAF Phase II support.⁴⁸ On August 26, 2015,
12 Verizon informed the FCC it will accept the CAF offer in California of \$31,978,057 annually.⁴⁹
13 However, Verizon placed a condition upon its acceptance, stating:

14 Verizon’s acceptance is thus expressly conditioned upon issuance
15 and acceptance of Regulatory Approvals for the Transaction by
16 December 31, 2015. Regulatory Approvals are the regulatory
17 approvals required to consummate the transaction in accordance
18 with its terms, including approval of the Transaction by the FCC
19 and the California Public Utilities Commission.⁵⁰

20 Verizon’s conditional acceptance of the CAF Phase II support offered by the FCC places
21 the Commission in a difficult position. On the one hand, the Commission is likely encouraged by
22 the funds California can receive as a result of the CAF support. On the other hand, however,
23 Verizon’s decision to only accept the CAF support pending a certain outcome of this ongoing
24 proceeding places irregular pressure upon the Commission. This concern is magnified due the

⁴⁵ Reporter’s Transcript at 91. A.15-03-005 Public Participation Hearing at Hoopa, California. July 7, 2015.

⁴⁶ See Dr. Lee Selwyn’s July 28, 2015 Testimony at 136.

⁴⁷ Frontier’s response to ORA’s Data Request No.002. April 23, 2015. See Question 32 at ORA Confidential Exhibit B-6 to July 28, 2015 Reply Testimony served on parties.

⁴⁸ Reporter’s Transcript at 567. A.15-03-005 Public Participation Hearing at Santa Barbara, California. August 11, 2015.

⁴⁹ See Verizon’s E-mail to the FCC “Re: *Connect America Fund*, WC Docket No. 10-90” dated August 26, 2015. Available online at <https://prodnet.www.neca.org/publicationsdocs/wwwpdf/82715verizon.pdf>

⁵⁰ *Id.*

1 fact that Verizon is able to accept the CAF support irrespective of the proposed Transaction.
2 Essentially, the Joint Applicants are using Verizon’s disinterest in expanding and enhancing its
3 broadband services in California with CAF support as a demonstration of the proposed
4 Transaction’s benefits.

5 Moreover, both CAF and CASF support are limited to certain geographical areas. These
6 support mechanisms are not available for the vast majority of Verizon’s current territory. At the
7 end of 2014, Verizon had approximately [REDACTED] broadband connections deployed in
8 California.⁵¹ The CAF Phase II support currently offered to Verizon will (potentially) improve or
9 deploy broadband service to 77,402 locations. As such, the CAF Phase II support will only affect
10 a very small portion of customers located within Verizon current service territory.

11 In many rural and urban communities across the state, Verizon only provides slow, low
12 quality broadband. As previously mentioned, in 2014, at least [REDACTED] of Verizon’s existing
13 consumer connections were located in areas where Verizon did not offer speeds of 6 mbps
14 download and 1.5 mbps upload.⁵² The vast majority [REDACTED] of those connections do not
15 qualify for the CAF Phase II support. Figure 4 below lists the number of Verizon’s existing
16 consumer connections that are *not* eligible for CAF Phase II support, despite being located in
17 areas where Verizon does not offer speeds of 6 mbps download and 1.5 mbps upload.

18

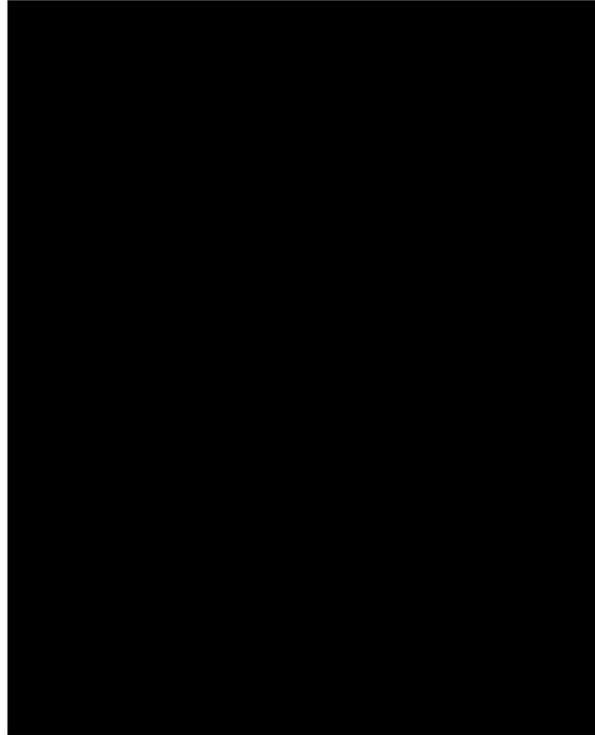
⁵¹ Verizon’s response to ORA’s Data Request No.003. June 9, 2015. See “ORA_VZ3.3_Attachment
2_CA FCC Form 477_A1503005VZ110004_CONFIDENTIAL.xlsx” at ORA Confidential Exhibit A-3
to July 28, 2015 Reply Testimony served on parties.

⁵² *Id.*

1
2

Figure 4 (CONFIDENTIAL)

Verizon – Existing Slow Consumer Connections Not Eligible for CAF⁵³



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4
5
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9

Frontier speaks at length of deploying and improving broadband with the aid of state and federal support, but Frontier does not present plans for connections that are not eligible for those support mechanisms. Therefore, my July 28, 2015 Testimony identified the need for a customer satisfaction survey.⁵⁴ The survey is needed to track changes in service quality for acquired customers, especially those that are not eligible for Federal and State support.

⁵³ These existing Verizon connections are located in areas where Verizon does not offer broadband speeds equal to or greater than 6 mbps download and 1.5 mbps upload. Also, these connections are not eligible for CAF support.

⁵⁴ See July 28, 2015 Testimony of Adam Clark at Chapter V Section D on page V-4.

1VI. CONCLUSION

2 If the Commission approves the Application, it should impose mitigating measures to
3 ensure the Transaction is in the public interest.⁵⁵ The Commission should require Frontier and
4 Verizon to adequately address instances of poor service quality and poor network conditions.
5 Frontier should submit to the Commission a detailed strategic plan to repair, replace or enhance
6 broadband networks in order to address poor network conditions and improve broadband service
7 quality. The mitigating measures should also include conditions that require Frontier, post-
8 transaction, to submit data and performance metrics, expand service quality practices and
9 procedures, and pay for a survey to assess customer satisfaction. These measures are necessary
10 for the Commission and ORA to track and access broadband service quality and deployment.

11 The recommended conditions are Transaction-specific and not advancing industry wide
12 standards. Service quality data was analyzed specifically related to Frontier and Verizon to
13 determine if the proposed Transaction is in the public interest. The Commission must consider if
14 the acquisition will maintain or improve the quality of service to public utility ratepayers in the
15 state.⁵⁶ Furthermore, P.U. Code 854(c)(8) calls for mitigation measures to “prevent significant
16 adverse consequences” that may result from the Transaction. The recommended conditions are
17 necessary requirements suggested uniquely for Frontier because statute requires specific
18 outcomes from the proposed Transaction.

19 The recommended conditions need not apply to any other communication service
20 providers (insofar as this proceeding is concerned), because those other service providers are not
21 in a position to fulfill the statutory requirements related to an approval of the Application. In fact,
22 the Commission,⁵⁷ other states’ regulatory agencies,⁵⁸ and the FCC,⁵⁹ have all imposed

⁵⁵ Refer to the July 28, 2015 Testimony of Adam Clark at Chapter V for additional details and discussion of the recommended conditions.

⁵⁶ P.U. Code § 854 (c)(2)

⁵⁷ For example, *see* Decision 05-11-029. November 18, 2005. Available at http://docs.cpuc.ca.gov/PublishedDocs/PUBLISHED/FINAL_DECISION/51527.htm

⁵⁸ For example, *see* Order Approving CenturyLink-Qwest Telephone Merger, Washington Utilities and Transportation Commission. Docket No. UT-100820. March 14, 2011. Available at www.utc.wa.gov/100820

1 conditions uniquely upon an individual service provider when approving previous acquisitions
2 and mergers. The Commission need not adopt industry-wide rules to fairly impose the
3 recommended conditions solely upon Frontier as a condition of approving the Application.

4

⁵⁹ For example, *see* Bell Atlantic Corporation/GTE Corporation, Memorandum Opinion and Order, FCC 00-221, 15 FCC Rcd 14032. June 16, 2000. Available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-00-221A3.pdf

ATTACHMENTS

ATTACHMENT A

Statement of Qualifications and Experience

My name is Adam Clark. I am currently employed by the CPUC as a Public Utility Regulatory Analyst V assigned to the Communications and Water Policy Branch of the ORA. I received a Bachelor of Arts Degree in Economics and Sociology from the University of California at Santa Barbara in 2006.

I joined the CPUC in June of 2007 as a Regulatory Analyst in the Communications Division, where I worked on various issues, including inter-carrier compensation, public purpose programs, and broadband deployment. I have performed extensive research on California's telecommunications and broadband markets. I have also aided the CPUC in review of previously proposed mergers and acquisitions. I joined ORA in October of 2014.

ATTACHMENT B

State of California

M e m o r a n d u m

Date: April 6, 2015

To: Fadi Daye, Program and Project Supervisor

From: **Public Utilities Commission–San Francisco** Raffy Stepanian, Senior Engineer
-

Subject: Investigation into a complaint against Verizon by residents of Belmont Heights, California

On March 21, 2014, I met with the Belmont Heights residents and Verizon at various locations where the residents had noticed a high number of safety issues. Verizon representatives (Todd McMullin, Mike Murray and Antonio Gaskin) indicated that they will send me a plan indicating how long it will take Verizon to correct all GO95 violations in the area designated by the residents on a map.

I did not receive a plan. On April 7, 2014, I sent an email to the Verizon representatives asking them how long it would take to complete the repair of all the Verizon GO95 violations in the area.

After not getting a response to my April 7 email, on April 18, I sent another email to the representatives with copies to Lorraine Kocen (Verizon Governmental Affairs) and Jesus Roman (Verizon Assistant General Counsel) directing Verizon to correct ALL GO95 violations in the area designated on the map. I got an email from Ms. Kocen on the same day acknowledging receipt of my email.

On April 30, 2014, I received an email from Ms. Kocen. In her email, she stated that Verizon is allowed to determine the timing for correcting GO95 violations per Rule 18A and is “willing” to provide us with a progress report by July 18, 2014. It is interesting to note that, although my emails emphasized that ALL GO95 violations must be corrected, Ms. Kocen’s email implied that only the findings from the residents should be considered for correction. On the same date, I replied to Ms. Kocen and again emphasized that ALL violations in the designated area must be corrected and that I will refer the matter to our Legal Division.

Between May 2014 and February 2015, there were multiple email exchanges between Verizon and our legal staff and also between Verizon and you. In its emails, it is apparent that Verizon was still focusing on correcting the findings from the residents rather than ALL GO95 violations in the area, even though this was brought up many times before, including your email of September 16, 2014, in which you clearly state that Verizon must correct the violations, not the residents’ findings.

(Continued on next page)

On September 21, 2014, you sent another email to Ms. Kocen requesting that Verizon submit to us no later than October 27, 2014, a list showing all GO 95 violations pertaining to its facilities in the designated area along with the priority level and corrective actions Verizon has taken for each violation on the list.

On October 28, 2014, Ms. Kocen sent you an email indicating that “Verizon has worked diligently to address the items identified by Belmont Heights residents and the areas highlighted on the Commission Staff’s map. All of the items in the Resident’s Spreadsheet have been investigated and where necessary, repairs have been completed, except for the five items listed below. The items on the Resident’s Spreadsheet include the areas highlighted by the Staff’s map.” In addition, Ms. Kocen stated that Verizon considers the remaining five items “Level 2 priority infractions, and per G.O. 95, Rule 18 A (2) (a) (ii), Verizon has up to 59 months to complete repairs.”

Per your request, on February 13, 2015, Koko Tomassian and I performed an inspection of the designated area. The intent of the inspection was to spot check the area to determine if Verizon had corrected its violations. The inspection only focused on Verizon facilities and was not intended to identify all violations on all the poles in the area.

We found a large number of GO95 violations on Verizon’s facilities, many of which are serious. Attached to this memo is a list of the findings and a map showing the designated area.

Item No.	Structure No.	Violations
1	990819E	Broken riser straps, < 12" clearance between Verizon and CATV
2	Midspan: 4379408E & 437942	Low service drop over alley
3	4379425E	Multiple idle service drops, incidental wiring, vegetation strain at midspan (have pic)
4	4379407E	Broken visibility strip, incidental wiring
5	Midspan: 4379407E & 444881	Trunk line < 18' ground clearance
6	4448812E	Multiple service drops < 16', climbing space (service drop wrapping pole), tree strain, service drop touching walkable roof
7	Midspan: 4448812E & 437953	Multiple low service drops < 16', < 8' clearance over walkable roof
8	4379539E	< 8' clearance over walkable roof, incidental wiring, < 12" clearance from CATV, foreign attachment (rope), climbing space, damaged visibility strips
9	4422993E	Incidental wiring, service drop touching non-walkable roof
10	Midspan: 4422993E & 440313	Multiple low service drops over alley, multiple low service drops over walkable roofs, abandoned service drop
11	4403137E	Incidental wiring, < 8' clearance over walkable roof
12	4243601E	Climbing space, open terminal, vegetation strain on service drop, incidental wiring
13	Midspan: 4243601E & 437942	Multiple low service drops over alley, multiple low service drops over walkable roofs, abandoned service drop
14	4379426E	Incidental wiring, climbing space, service drop touching walkable roof
15	1546757E	Broken ground wire/moulding, trunk line < 12" from street light pole
16	4375206E	Incidental wiring, < 12" clearance from CATV, abandoned service drops
17	B12227Y	Climbing space, damaged pole step, idle service drops, incidental wiring, < 8' clearance over walkable roof
18	B12228Y	< 12" clearance between Verizon and SCE service drops at attachment, multiple low clearance over walkable roof
19	Midspan: B12228Y & 4427162	< 12" clearance from CATV, tunk line touching roof
20	4427162 *(buddy pole)*	Incidental wiring, low service drop over alley and driveway, multiple < 12" clearance between Verizon and SCE service drops at points of attachment (have pic)
21	4375203E	Climbing space, idle service drop attached to house, incidental wiring, low service drop over walkable roof
22	Midspan: 4375203E & 437694	Low service drop over driveway
23	4376949E	Vegetation in climbing space, Verizon and SCE drops in contact, idle service drop, incidental wiring
24	Midspan: 947989E & B9079Y	Verizon cable almost touching street light
25	B9079Y	Low service drop (edge of street)
26	1185785E	Abandoned service drop, incidental wiring
27	364 Roswell Ave.	Vegetation in climbing space, incidental wiring
28	13810	Damaged pole step, incidental wiring
29	Midspan: 990810E & 4379431	Low service drop over alley, < 12" clearance between trunk lines
30	4379431E	Climbing space, 'buddy pole', incidental wiring, Verizon and SCE service drops in contact
31	Midspan: 4379431E & 452763	< 12" clearance between trunk lines
32	4527634E	Incidental wiring, idle service drop
33	Midspan: 4527634E & 455640	Tree strain at midspan
34	4556406E	Low service drop in alley, incidental wiring, abandoned service drop
35	Midspan: 4556406E & 413751	< 12" clearance between trunk lines, tree strain
36	413751E	Missing down guy marker, abandoned service drop, low trunk line attached to pole, incidental wiring

LEGEND

-  = Location 1
-  = Location 2
-  = Location 3
-  = Location 4
-  = Location 5

