PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE

SAN FRANCISCO, CA 94102-3298

January 3, 2024 CA2023-1162

John Gutierrez
Senior Director- Government Affairs
Comcast

SUBJECT: Communications Infrastructure Provider (CIP) Audit of Comcast's East Bay Region

Dear Mr. Gutierrez:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Joe Murphy of ESRB staff conducted a CIP audit of Comcast East Bay Region from October 23, 2023 through October 27, 2023. During the audit, ESRB staff conducted field inspections of Comcast's facilities and equipment and reviewed pertinent documents and records.

As a result of the audit, ESRB staff identified violations of General Order (GO) 95 and GO 128. A copy of the audit findings itemizing the violations and observations is enclosed.

Please provide a response no later than February 2, 2024, via electronic copy of all corrective actions and preventive measures taken by Comcast to correct the identified violations and prevent the recurrence of such violations and observations. The response should indicate the date of each remedial action and preventive measure taken for the violations and observations. For any outstanding items not addressed, please provide the projected completion dates of Comcast's corrective actions.

Please note that ESRB will be posting the audit report and your response to our audit on the CPUC website. If there is any information in your response that you would like us to consider as confidential, we request that in addition to your confidential response, you provide us with a public version (a redacted version of your confidential response) to be posted on our website.

If you have any questions concerning this audit, please contact Joe Murphy at (415) 308-4159 or muj@cpuc.ca.gov.

Sincerely,

Rickey Tse, P.E.

Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Enclosure: CPUC Audit Findings of Comcast East Bay Region

Cc: Lee Palmer, Director, Safety and Enforcement Division (SED), CPUC
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COMCAST EAST BAY REGION
COMMUNICATIONS AUDIT FINDINGS
OCTOBER 23-27, 2023

I. Records Review

Electric Safety and Reliability Branch (ESRB) staff reviewed the following standards, procedures, and records for Comcast's East Bay Region:

- Facility statistics as of August 2023, including miles of overhead lines, miles of underground lines, number of poles, number of vaults, and number of pedestals.
- Overhead and Underground facility maps as of August 2023.
- The U-Safe Program, General Order (GO) 95/128 Repair and Reporting Documentation, version March 2, 2010.
- Patrol and detailed inspection records containing data for the inspected facility type, facility location, fire threat district location, inspection date, and resulting inspection findings and repairs from August 2018 through August 2023.
- Safety Hazards Notifications sent to third-party utilities from August 2018 through August 2023.
- Safety Hazards Notifications received from third-party utilities from August 2018 through August 2023.
- Pole loading calculations, including intrusive testing for Tier 2 and Tier 3 High Fire Threat Districts from August 2022 through August 2023.
- Intrusive test records for the CIP facilities, wired and wireless, in the Tier 2 and Tier 3 HFTDs from August 2022 through August 2023.
- Work orders records for wired and wireless, OH and UG facilities containing data for inspected facility type, facility location, fire threat district location, repair, due date and completed date from August 2018 through August 2023.
- Employee statistics and employee training records.
- Employee training materials, including the Comcast Outside Plant Handbook for Clearances and Regulations in California.
- Contractor training PowerPoint on GO 95, and the Patrol Inspection Training Form.
- New construction projects from August 2022 through August 2023.

II. Records Violations

ESRB staff observed the following violations during the record review portion of the audit:

1. **General Order (GO) 95, Rule 31.2, Inspection of Lines** states in part:

> *"Lines shall be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard."*

GO 95, Rule 80.1-A(2), Statewide Inspection Requirements states in part:

> *"Each company shall prepare, follow, and modify as necessary, procedures for conducting patrol or detailed inspections for all of its Communication Lines throughout the State."*

GO 128, Rule 17.2, Inspection states in part:

> *"Systems shall be inspected by the operator frequently and thoroughly for the purpose of insuring that they are in good condition and in conformance with all applicable requirements of these rules."*

Comcast only conducts complete patrol and detailed inspections of their communication lines and assets in High Fire Threat Districts (HFTD) as required by Rule 80.1.A.(1). In all other areas, inspections only take place during other scheduled work. When sending a technician into the field to investigate an issue, the technician inspects the assigned pole and the associated assets, along with one span in each direction. Comcast has no set schedule for detailed inspections and patrols that ensures all poles and assets are inspected thoroughly and completely as required by GO 95 and GO 128 in non-HFTD.

ESRB notes that Comcast East Bay's service area includes 103,533 poles. Comcast reports that Comcast averages 135,000 truck dispatches per year that include "one span in each direction" inspection. Truck dispatches are based on customer calls and service changes with multiple dispatches frequently occurring at a single address. This method of inspection does not assure thorough and complete inspection of all facilities on a timely basis.

2. **GO 95, Rule 80.1-A(1), Inspection Requirements for Joint-Use Poles in High Fire-Threat District** states in part:

> *"In Tiers 2 and 3 of the High Fire-Threat District, the inspection intervals… shall not exceed the time specified in the following Table."*

Inspection	Tier 2	Tier 3
Patrol	2 years	1 year
Detailed	10 years	5 years

ESRB reviewed Comcast's East Bay Region patrol and detailed inspection records from August 2018 through August 2023 for the interval between inspections and the period since the last inspection.[1] The East Bay Region covers parts of two counties: Alameda and Contra Costa. ESRB found a total of 9,297 inspections were late or are past due. Table 1 breaks down the total late inspections for the East Bay Region by HFTD Tier and delinquent category. Late inspections are any sequential inspections completed after the required interval. Past due inspections are inspections where the most recent inspection is overdue (past the required interval) as of August 31, 2023, the closing date of the record review.

Table 1: East Bay Region Late and Past Due Inspections

HFTD Tier	Late Inspections	Past Due Inspections*	Total
2	1,496	4,543	6,039
3	1,195	2,063	3,258
Total	2,691	6,606	**9,297**

*as of August 31, 2023

ESRB used GO 95, Rule 80.1-A(1) inspection intervals for Tier 2 and 3 to assess the timeliness of Comcast's inspection. Comcast reports that internal standards require annual inspections of all poles in Tier 2 and 3 areas regardless of HFTD Tier and proximity to supply lines.[2] ESRB's analysis was based on street address as a unique identifier.[3]

Table 2 lists the most past due inspections.

Table 2: East Bay Region Most Past Due Inspections

HFTD Tier	Late Inspection Address	Most Recent Inspection	Days Late[4]
2	1196 Keith Ave. Berkeley	8/20/2018	1,004
3	27398 Fairview Ave. Hayward	8/15/2018	1,370

[1] ESRB analysis of Pre-Audit Data Request Responses Exhibit 5A Detailed and 5B Patrol.
[2] Comcast Response to Pre-Audit Data Request Follow Up #1 and #2, December 7, 2023.
[3] During the field audit, Comcast noted that multiple poles can be assigned to the same address, so the late and overdue inspection count here is conservative.
[4] As of August 31, 2023, calculated by using inspection intervals noted in GO 95, Rule 80.1-A(1).

3. **GO 95, Rule 18-B, Maintenance Programs** states in part:

"Each company (including electric utilities and communications companies) shall establish and implement an auditable maintenance program for its facilities and lines for the purpose of ensuring that they are in good condition so as to conform to these rules. Each company must describe in its auditable maintenance program the required qualifications for the company representatives who perform inspections and/or who schedule corrective actions. Companies that are subject to GO 165 may maintain procedures for conducting inspections and maintenance activities in compliance with this rule and with GO 165.

The auditable maintenance program must include, at a minimum, records that show the date of the inspection, type of equipment/facility inspected, findings, and a timeline for corrective actions to be taken following the identification of a potential violation of GO 95 or a Safety Hazard on the company's facilities."

(1) "Companies shall undertake corrective actions within the time periods stated for each of the priority levels set forth below.

a. The maximum time periods for corrective actions associated with potential violation of GO 95 or a Safety Hazard are based on the following priority levels:

i. Level 1 -- An immediate risk of high potential impact to safety or reliability:

- *Take corrective action immediately, either by fully repairing or by temporarily repairing and reclassifying to a lower priority.*

ii. Level 2 -- Any other risk of at least moderate potential impact to safety or reliability:

- *Take corrective action within specified time period (either by fully repair or by temporarily repairing and reclassifying to Level 3 priority). Time period for corrective action to be determined at the time of identification by a qualified company representative, but not to exceed: (1) six months for potential violations that create a fire risk located in Tier 3 of the High Fire-Threat District; (2) 12 months for potential violations that create a fire risk located in Tier 2 of the High Fire-Threat District; (3) 12 months for potential violations that compromise worker safety; and (4) 36 months for all other Level 2 potential violations.*

iii. Level 3 -- Any risk of low potential impact to safety or reliability:

- *Take corrective action within 60 months subject to the exception specified below."*

Comcast's *U-Safe Program: GO 95/128 Repair & Reporting Documentation* outlines the process for compliance reporting, documenting repairs, and reporting violations for technicians or contractors in the field. Upon arrival at the repair location, the technician will inspect the pole and one span to the left and right of the identified pole and report any violations. The technical uses the following to categorize the pole:

- P = Pass meaning there were no GO95/128 infractions at the assigned job.
- R = Repair meaning there were GO95/128 infractions that were corrected while on the job.
- F = Fail meaning that there were GO95/128 infractions that they could not fix in the time allotted for the job.

If a job is marked as Repair (R), the technician must document it with the appropriate completion code. If a job is marked as Fail (F), the technician must create an ER ticket, and if the work cannot be completed onsite, it will be assigned to the appropriate department for corrective action.

However, Comcast's U-Safe program manual does not include the timelines required for corrective actions. The list of work orders provided to ESRB include priority codes and timelines, but Comcast does not include the timelines associated with each priority code and how to assign the appropriate priority code to any findings of nonconformances identified as required by GO 95 with their manual.

Additionally, ESRB's review of Comcast's East Bay Region work orders from August 2018 through August 2023 found that 1,028 work orders that Comcast either closed late or were late and pending completion.[5] Late closed work orders are work orders completed after the due date. Late pending work orders are work orders that had due dates prior to August 31, 2023 but were not complete by that date. Table 3 breaks down the total late and past due work orders for the East Bay Region by priority level and status.

Table 3: East Bay Region Late Closed and Pending Work Orders

Priority Levels	Late Closed Work Order	Late Pending Work Order	Total
1	222	-	222
2	800	6	806
3	-	-	-
Total	1,022	6	**1,028**

[5] ESRB analysis of Pre-Audit Data Request Responses Exhibit 5A Detailed and 5B Patrol.

Table 4 lists the most overdue closed work orders.

Table 4: East Bay Region Most Overdue Closed Work Orders

Priority Levels	Latest Repair Address	Due Date/ Closed Date	Days Late
1	6632 Sunnymere Ave. Oakland	11/19/2020 7/27/2021	250
2	6382 Valley View Rd. Oakland	2/9/2019 10/16/2020	615

4. **General Order (GO) 95, Rule 31.2, Inspection of Lines** states in part:

> *"Lines shall be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard."*

GO 95, Rule 80.1-A(1), Inspection Requirements for Joint-Use Poles in High Fire-Threat District states in part:

> *"In Tiers 2 and 3 of the High Fire-Threat District, the inspection intervals… shall not exceed the time specified in the following Table."*

ESRB reviewed Comcast's East Bay Region patrol and detailed inspection records from August 2018 through August 2023 for the listed HFTD Tier level and found 778 locations (and approximately 1,600 occurrences) where the listed HFTD Tier level changed for sequential inspections. Tier levels should be consistent and are necessary to determine inspection and repair intervals. Table 5 provides an example of sequential records where the recorded HFTD level changed for a given address.

Table 5: Example of Changing HFTD Tier Level on Sequential Inspections

Street Address	City	Inspection Date	HFTD Tier
1020 Villa Nueva Dr.	El Cerrito	2/6/2021	**2**
1020 Villa Nueva Dr.	El Cerrito	5/29/2021	**0**
1020 Villa Nueva Dr.	El Cerrito	9/18/2021	**3**
1020 Villa Nueva Dr.	El Cerrito	2/2/2022	**2**
1020 Villa Nueva Dr.	El Cerrito	12/1/2022	**3**
1020 Villa Nueva Dr.	El Cerrito	1/28/2023	**2**

III. Field Inspection

During the field audit, ESRB inspected the following facilities noted in Table 6:

Table 6: Locations of East Bay Region Field Audit

Loc#	Struct Type	ID	Address	City	Lat	Long
1	OH	CALGP88520689	46th Ave/ Ygnacio Ave	Oakland	37.77497	-122.20938
2	OH		4524 Ygnacio Ave	Oakland	37.77488	-122.20941
3	OH		4424 Ygnacio Ave	Oakland	37.77524	-122.21024
4	OH		Foothill Blvd/ High St.	Oakland	37.77482	-122.21153
5	OH		1805 33rd Ave	Oakland	37.78184	-122.22258
6	OH		1819 33rd Ave	Oakland	37.78221	-122.22237
7	OH		1845 33rd Ave	Oakland	37.78287	-122.22221
8	OH		1915 33rd Ave	Oakland	37.78292	-122.22200
9	OH		14122 Skyline Blvd	Oakland	37.77853	-122.13695
10	OH		14100 Skyline Blvd	Oakland	37.77863	-122.13732
11	OH		14074 Skyline Blvd	Oakland	37.77896	-122.13784
12	OH		14102 Skyline Blvd	Oakland	37.77938	-122.13845
13	OH		248 Inverness Ct.	Oakland	37.76019	-122.13238
14	OH		224 Inverness Ct.	Oakland	37.76051	-122.13308
15	OH		95 Donna Way	Oakland	37.76020	-122.13201
16	OH		268 Silverado Ct.	Oakland	37.76003	-122.13161
17	OH		1912 Ivy Way	Fremont	37.50834	-121.93139
18	OH		1922 Ivy Way	Fremont	37.50832	-121.93149
19	OH		1801 Shaddy Terrace	Fremont	37.50869	-121.93121
20	OH		44991 Winding Dr.	Fremont	37.50748	-121.93142
21	UG		39201 Cedar Blvd	Newark	37.52268	-122.00442
22	Pedestal		39203 Cedar Blvd	Newark	37.52264	-122.00558
23	Pedestal		39127 Cedar Blvd	Newark	37.52312	-122.00641
24	UG		6066 Mowry	Newark	37.52629	-122.00736
25	OH		Farwell Dr./ Keystone Dr.	Fremont	42.38912	-122.01416
26	OH		37840 Farwell Dr.	Fremont	37.53898	-122.01374
27	OH		37935 Farwell Dr.	Fremont	37.53874	-122.01362
28	OH		37963 Farwell Dr.	Fremont	37.53847	-122.01375
29	OH	CALSP80588466	4549 Central Ave.	Fremont	37.54930	-122.00985
30	Pedestal		4549 Central Ave. B	Fremont	37.54934	-122.01012
31	OH		4580 Central Ave.	Fremont	37.54935	-122.00990
32	OH		4534 Central Ave.	Fremont	37.54954	-122.00929
33	OH		4495 Central Ave.	Fremont	37.54979	-122.00939
34	OH		215 School St.	Fremont	37.57708	-121.98499
35	OH		233 School St.	Fremont	37.57659	-121.98532
36	OH		301 School St.	Fremont	37.57615	-121.98543
37	UG		3240 San Andreas Dr.	Union City	37.58921	-122.06619

Loc#	Struct Type	ID	Address	City	Lat	Long
38	UG		3240 San Andreas Dr. B	Union City	37.58924	-122.06602
39	UG		3232 San Andreas Dr.	Union City	37.58917	-122.06587
40	UG		3216 San Andreas Dr.	Union City	37.58877	-122.06540
41	UG		32241 Devonshire St.	Union City	37.60282	-122.05608
42	UG		32266 Devonshire St.	Union City	37.60272	-122.05506
43	Pedestal		32305 Claremont St. B	Union City	37.60101	-122.05317
44	UG		32306 Claremont St.	Union City	37.60103	-122.05329
45	Pedestal		595 Blue Jay Dr.	Hayward	37.63003	-122.04472
46	Pedestal		599 Blue Jay Dr.	Hayward	37.63029	-122.04478
47	Pedestal		571 Blue Jay Dr.	Hayward	37.62979	-122.04475
48	Pedestal		543 Blue Jay Dr.	Hayward	37.62953	-122.04542
49	OH	CALCP76979401	5331 Greenridge Rd.	Castro Valley	37.70367	-122.04373
50	OH	CALCP76979402	Crow Canyon Rd. A	Castro Valley	37.70498	-122.04224
51	OH	CALCP76979403	Crow Canyon Rd. B	Castro Valley	37.70492	-122.04333
52	OH	CALCP76979404	Crow Canyon Rd. C	Castro Valley	37.70510	-122.04382
53	OH	CALCP76988098	5511 Jensen Rd.	Castro Valley	37.70377	-122.04054
54	OH	CALCP76988097	5500 Jensen Rd.	Castro Valley	37.70362	-122.04051
55	OH	CALCP76985207	5496 Jensen Rd.	Castro Valley	37.70346	-122.04072
56	OH	CALCP76985203	5514 Jensen Rd.	Castro Valley	37.70382	-122.04445
57	OH		25509 Industrial Blvd.	Hayward	37.63613	-122.11469
58	OH		25500 Industrial Blvd.	Hayward	37.63641	-122.11502
59	OH		25509 Industrial Blvd. B	Hayward	37.63639	-122.11488
60	OH		25447 Industrial Blvd.	Hayward	37.63702	-122.11512
61	OH		1991 Bandoni Ave.	San Lorenzo	37.66653	-122.14481
62	OH		1959 Bandoni Ave.	San Lorenzo	37.66690	-122.14434
63	OH		1936 Bandoni Ave.	San Lorenzo	37.66721	-122.14407
64	OH		1920 Bandoni Ave.	San Lorenzo	37.66755	-122.14332
65	OH		1335 Graff Ave	San Leandro	37.73093	-122.13564
66	OH		1384 Graff Ave	San Leandro	37.73064	-122.13503
67	OH		1398 Graff Ave	San Leandro	37.73053	-122.13497

Loc#	Struct Type	ID	Address	City	Lat	Long
68	OH		1449 Sandelin Ave	San Leandro	37.73094	-122.13412
69	OH	CALDPC106537110	1825 Astor Dr.	San Leandro	37.72675	-122.12822
70	OH	CALDPC106537109	1849 Astor Dr.	San Leandro	37.72689	-122.12761
71	OH	CALDPC106537152	1860 Astor Dr.	San Leandro	37.72689	-122.12746
72	OH	CALDPC106537111	1805 View Dr.	San Leandro	37.72678	-122.12887
73	OH	CALGP87470949	95 Castle Park Way	Oakland	37.81525	-122.19450
74	OH	CALGP87470950	83 Castle Park Way	Oakland	37.81514	-122.19482
75	OH	CALGP87470953	63 Castle Park Way	Oakland	37.81529	-122.19518
76	OH		52 Castle Park Way	Oakland	37.81559	-122.19556
77	OH	CALGP87450101	6973 Colton Blvd.	Oakland	37.83751	-122.19854
78	OH	CALGP87450100	6955 Colton Blvd.	Oakland	37.83726	-122.19892
79	OH	CALGP87450290	6947 Colton Blvd.	Oakland	37.83708	-122.19911
80	OH	CALGP87450099	6930 Colton Blvd.	Oakland	37.83678	-122.19947
81	OH	CALCP86862603	400 29th St.	Oakland	37.81781	-122.26500
82	OH		Summit St/29th St.	Oakland	37.81795	-122.26504
83	OH		2929 Summit St.	Oakland	37.81827	-122.26492
84	OH		2961 Summit St.	Oakland	37.81875	-122.26465
85	OH		4270 Adeline	Emeryville	37.83346	-122.27734
86	OH		4300 Adeline	Emeryville	37.83375	-122.27710
87	OH		1026 43rd St.	Emeryville	37.83372	-122.27705
88	OH		1014 43rd St.	Emeryville	37.83356	-122.27711
89	OH		2323 Howe St.	Berkeley	37.85699	-122.26028
90	OH		2308 Howe St.	Berkeley	37.85708	-122.26103
91	OH		2300 Howe St.	Berkeley	37.85690	-122.26127
92	OH		2341 Howe St.	Berkeley	37.85704	-122.25977
93	OH	CALGP87517300	135 Evergreen Ln.	Berkeley	37.86137	-122.24023
94	OH	CALGP87517295	105 Evergreen Ln.	Berkeley	37.86076	-122.23935
95	OH	CALGP87517294	85 Evergreen Ln.	Berkeley	37.86084	-122.24012
96	OH	CALGP87517293	73 Evergreen Ln.	Berkeley	37.86048	-122.24018
97	OH	CALSP86054325	287 The Uplands	Berkeley	37.85579	-122.23913
98	OH	CALSP86054352	299 The Uplands	Berkeley	37.85548	-122.23918
99	OH	CALSP86054327	116 Tunnel Rd.	Berkeley	37.85547	-122.23943
100	OH		719 Vaqueros Ave.	Rodeo	38.02764	-122.26429
101	OH		725 Vaqueros Ave.	Rodeo	38.02687	-122.26365
102	OH		737 Vaqueros Ave.	Rodeo	38.02658	-122.26327
103	OH		Vaqueros Ave./ 7th St.	Rodeo	38.02826	-122.26424
104	UG		3219 Auto Plaza	Richmond	37.98321	-122.32375
105	UG		3230 Auto Plaza	Richmond	37.98324	-122.32340
106	UG		3223 Blume Dr.	Richmond	37.98301	-122.32317
107	UG		3230 Auto Plaza B	Richmond	37.98369	-122.32398
108	UG		6315 Jerilynn Ave.	Richmond	37.95823	-122.31799
109	Pedestal		6320 Jerilynn Ave.	Richmond	37.95849	-122.31757
110	Pedestal		6328 Jerilynn Ave.	Richmond	37.95842	-122.31704

Loc#	Struct Type	ID	Address	City	Lat	Long
111	Pedestal		1608 Bonita Rd.	Richmond	37.95842	-122.31972
112	UG		1571 Regency Ct.	El Cerrito	37.92581	-122.29907
113	UG		1534 Regency Ct.	El Cerrito	37.92469	-122.29937
114	UG		1520 Regency Ct.	El Cerrito	37.92450	-122.29932
115	UG		1581 Regency Ct.	El Cerrito	37.92575	-122.29923
116	OH		8508 Betty Ln.	El Cerrito	37.92297	-122.29400
117	OH		8518 Betty Ln.	El Cerrito	37.92338	-122.29418
118	OH		8532 Betty Ln.	El Cerrito	37.92373	-122.29414
119	OH	CALGP88520689	1125 Brewster Dr.	El Cerrito	37.92217	-122.29369

IV. Field Inspection Violations

ESRB identified the following violations during the field inspection:

1. **GO 95, Rule 31.1, Design, Construction and Maintenance** states in part:

   "Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service."

   ESRB's findings related to the above rule are listed in Table 7:

Table 7: GO 95, Rule 31.1 Findings

Location	Findings
26	Service drop not secured to messenger properly.
57	The vertical riser service drop is detached from the pole. (Repaired in field.)
77	Loose messenger (strand), broken lashing.

2. **GO 95, Rule 31.6, Abandoned Lines** states:

   "Lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use."

   ESRB's findings related to the above rule are listed in Table 8:

Table 8: GO 95, Rule 31.6 Findings

Location	Findings
11	Abandoned service.
72	Abandoned service. (Repaired in field.)
76	Abandoned service, mid span. (Repaired in field.)

3. **GO 95, Rule 35, Vegetation Management s**tates in part:

> *"Communication and electric supply circuits, energized at 750 volts or less, including their service drops, should be kept clear of vegetation in new construction and when circuits are reconstructed or repaired, whenever practicable. When a supply or communication company has actual knowledge, obtained either through normal operating practices or notification to the company, that its circuit energized at 750 volts or less shows strain or evidences abrasion from vegetation contact, the condition shall be corrected by reducing conductor tension, rearranging or replacing the conductor, pruning the vegetation, or placing mechanical protection on the conductor(s). For the purpose of this rule, abrasion is defined as damage to the insulation resulting from the friction between the vegetation and conductor. Scuffing or polishing of the insulation or covering is not considered abrasion. Strain on a conductor is present when vegetation contact significantly compromises the structural integrity of supply or communication facilities. Contact between vegetation and conductors, in and of itself, does not constitute a nonconformance with the rule."*

ESRB's findings related to the above rule are listed in Table 9:

Table 9: GO 95, Rule 35 Findings

Location	Findings
34	Vegetation is causing strain and abrasion. Tree guard moved from needed position, not protecting line or tree.
90	Vegetation is causing strain and abrasion on the service drop.
97	Vegetation is causing strain and abrasion on the service drop.

4. **GO 95, Rule 38, Minimum Clearance of Wires from Other Wires** states in part:

"The minimum vertical, horizontal or radial clearances of wires from other wires shall not be less than the values given in Table 2 and are based on a temperature of 60° F. and no wind. Conductors may be deadended at the crossarm or have reduced clearances at points of transposition, and shall not be held in violation of Table 2, Cases 8–15, inclusive.

Table 2, Case 3C: The clearance between wires, cables and conductors not supported on the same poles, vertically at crossings in spans and radially where colinear or approaching crossings for communication conductors (including open wire, cables and service drops) must be at least 24 inches.

Table 2, Case 8C: Vertical separation between conductors and/or cables, on separate crossarms or other supports at different levels (excepting on related line and buck arms) on the same pole and in adjoining midspans for communication conductors (including open wire, cables and service drops) must be at least 12 inches.

EXCEPTION: Can be less than 12" for strand mounted terminals, splice cases and other equipment located 8" or more from the centerline of the pole, but not less than 1" with mutual agreement between affected owners."

ESRB's findings related to the above rule are listed in Table 10:

Table 10: GO 95, Rule 38 Findings

Location	Findings
5	Drip loops contacting other communication lines.
8	Drip loops contacting other communication lines.
11	Service drop contacting other communication lines.
31	Drip loops contacting other communication lines.
33	Drip loops contacting other communication lines. Insufficient clearance to phone conductors.
54	Insufficient clearance to phone conductors. Lines and messenger embedded in branch section.
90	Insufficient clearance to phone conductors. Phone and communication lines contacting each other.
96	Service drop contacting other communication lines. (Repaired in field.)
97	Insufficient clearance to phone conductors. Phone and communication lines contacting each other.

5. **GO 95, Rule 84.6-B, Ground Wires** states:

"Ground wires, other than lightning protection wires not attached to equipment or ground wires on grounded structures, shall be covered by metal pipe or suitable covering of wood or metal, or of plastic conduit material as specified in Rule 22.8–A, for a distance above ground sufficient to protect against mechanical injury, but in no case shall such distance be less than 7 feet. Such covering may be omitted providing the ground wire in this 7 foot section has a mechanical strength at least equal to the strength of No. 6 AWG medium–hard–drawn copper.

Portions of ground wires which are on the surface of wood poles and within 6 feet vertically of unprotected supply conductors supported on the same pole, shall be covered with a suitable protective covering (see Rule 22.8)."

ESRB's findings related to the above rule are listed in Table 11:

Table 11: GO 95, Rule 84.6-B Findings

Location	Findings
3	The vertical ground wire is exposed, and the protective moulding cover is damaged.
9	The vertical ground wire is exposed, and the protective moulding cover is damaged.
85	The vertical ground wire is exposed, and the protective moulding cover is damaged.
99	The vertical ground wire is exposed, and the protective moulding cover is missing.

6. **GO 95, Rule 84.8-C, Service Drops, Clearances above Ground and Buildings** states:

"(1) Above Public Thoroughfares: Vertical clearance shall not be less than 18 feet.

EXCEPTION: Not more than 12 feet horizontally from the curb line, the 18 foot clearance may be gradually reduced to not less than 16 feet at the curb line. In no case shall the clearance at the center line be less than 18 feet. Where there are no curbs, the foregoing provisions shall apply using the outer limits of normal longitudinal vehicular movement in lieu of a curb line.

(2) Above Private Thoroughfares or Private property:

(a) Industrial and Commercial Premises: Over private driveways, lanes or property accessible to vehicles, service drops shall not be less than 16 feet.

(b) Residential Premises: Over residential driveways, lanes or over property accessible to vehicles, service drops shall not be less than 12 feet.

EXCEPTION: If the building served does not permit an attachment which will provide this 12 foot clearance without the installation of a structure on the building, the clearance shall be as great as possible, but in no case less than 10 feet."

ESRB's findings related to the above rule are listed in Table 12:

Table 12: GO 95, Rule 84.8-C Findings

Location	Findings
61	The service drop is hanging low over the curb line on public street.
76	The service drop is hanging low over the curb line on public street.

7. **GO 95, Rule 86.4-C(4), Guys, Clearances, From Conductors, Passing on Same Poles** states:

"Where mechanical loads imposed on poles, towers or structures are greater than can be supported with the safety factors as specified in Rule 44, additional strength shall be provided by the use of guys or other suitable construction.

The radial clearances between guys and conductors supported by or attached to the same poles or crossarms shall be not less than as specified in Table 2, Case 19 except that the clearance between guys and communication messenger and/or able attached directly to surface of pole may be less than the 3 inches specified in Table 2, Case 19, Column C provided: the guy is not a guy in proximity, or all parts of the guy are not less than 6 feet below 0 - 750 volt supply conductors supported on same pole, and a wood guard or equivalent is placed on the messenger and/or cable; also, a guy attached to a pole which supports supply conductors at a distance of not less than 6 feet above communication messenger and/or cable shall (1) have an insulator placed in the guy above the communication messenger and/or cable, at a distance of not less than 6 feet horizontally from the pole, or (2) have an insulator placed in the guy not less than 3 inches nor more than 6 inches above the messenger and/or cable, and a wood guard or equivalent placed on the messenger and/or cable."

ESRB's finding related to the above rule is listed in Table 13:

Table 13: GO 95, Rule 86.4-C(4) Finding

Location	Finding
98	The down guy is in contact with a tree and is deflected.

8. **GO 95, Rule 86.7-B, Location of Sectionalizing Insulators, Anchor Guys** states in part:

   "In order to prevent trees, buildings, messengers, metal–sheathed cables or other similar objects from grounding portions of guys above guy insulators, it is suggested that anchor guys be sectionalized, where practicable, near the highest level permitted by this Rule 86.7–B."

   ESRB's finding related to the above rule is listed in Table 14:

Table 14: GO 95, Rule 86.7-B Finding

Location	Finding
93	Vegetation above the down guy insulator is contacting and grounding the anchor guy. (Repaired in field.)

9. **GO 95, Rule 87.7-D(1), Risers, Covered from Ground Level to 8 Feet above the Ground** states:

   "Risers shall be protected from the ground level to a level not less than 8 feet above the ground by:

   a) Securely or effectively grounded iron or steel pipe (or other covering at least of equal strength). When metallic sheathed cable rising from underground non-metallic conduit is protected by metallic pipe or moulding, such pipe or moulding shall be effectively grounded as specified in Rule 21.4-A, or

   b) Non-metallic conduit or rigid U-shaped moulding. Such conduit or moulding shall be of material as specified in Rule 22.8"

ESRB's finding related to the above rule is listed in Table 15:

Table 15: GO 95, Rule 87.7-D(1) Finding

Location	Finding
89	The riser guard is lifted and exposing the communication drops.

10. **GO 95, Rule 92.1-F(2), Conductors, Cables and Messengers, Vertical Clearances Between Conductors, Cables, Messengers and Miscellaneous Equipment** states in part:

    "All parts of such metal terminals, boxes or similar equipment which are 8 inches or more from center line of pole shall have vertical clearances from conductors not less than the clearance specified in Table 2, Col. C, Cases 8 to 13 inclusive.

    "EXCEPTION: The minimum vertical distance between all parts of such metal terminals, boxes or similar equipment which are 8 inches or more from the center line of pole and are supported by cable and/or messenger alone can be reduced to not less than 1 inch by mutual agreement between the affected owners (see Rule 38, Table 2, Case 8, Column C)."

ESRB's findings related to the above rule are listed in Table 16:

Table 16: GO 95, Rule 92.1-F(2) Findings

Location	Findings
67	Metal amplifier enclosure is contacting the phone lines.
118	Metal amplifier enclosure is contacting the phone lines.

11. **GO 128, Rule 17.1, Design, Construction and Maintenance** states in part:

    "*Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.*

    For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local

conditions known at the time by those responsible for the design, construction, or maintenance of [the] communication or supply lines and equipment."

ESRB's findings related to the above rule are listed in Table 17:

Table 17: GO 128, Rule 17.1 Findings

Location	Findings
24	Missing ground connection on amplifier.
105	Missing ground connection on amplifier.
106	Raised bolt on cover causing a potential trip hazard. (Repaired in field.)

12. GO 128, Rule 17.8, Identification of Manholes, Handholes, Subsurface and Self-contained Surface-mounted Equipment Enclosures states:

"Manholes, handholes, subsurface and self-contained surface-mounted equipment enclosures shall be marked as to ownership to facilitate identification by persons authorized to work therein and by other persons performing work in their vicinity."

ESRB's finding related to the above rule is listed in Table 18:

Table 18: GO 128, Rule 17.8 Finding

Location	Finding
43	Missing ownership marking.

13. GO 128, Rule 42.7, Covers states:

"Manholes and handholes, while not being worked in shall be securely closed by covers of sufficient strength to sustain such loads as may reasonably be imposed upon them, and arrangement shall be such that a tool or appliance shall be required for their opening and cover removal (Also See Rule 17.8 and Appendix B, Figure 9)."

ESRB's findings related to the above rule are listed in Table 19:

Table 19: GO 128, Rule 42.7 Findings

Location	Findings
21	Unsecured enclosure as found. (Repaired in field.)
30	Unsecured enclosure as found. (Repaired in field.)
105	Cover not secured.
111	Unsecured enclosure as found. (Repaired in field.)

V. Observations

1. **GO 95, Rule 18, Reporting and Resolution of Safety Hazards Discovered by Utilities** states in part:

   "For purposes of this rule, "Safety Hazard" means a condition that poses a significant threat to human life or property..."

   GO 95, Rule 18-A, Resolution of Potential Violations of General Order 95 and Safety Hazards states in part:

   "(3) If a company, while performing inspections of its facilities, discovers a Safety Hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other entity of such Safety Hazard(s) no later than ten (10) business days after the discovery.
   (4) To the extent a company that has a notification requirement under (2) or (3) above cannot determine the facility owner/operator, it shall contact the pole owner(s) within ten (10) business days if the subject of the notification is a Safety Hazard, or otherwise within a reasonable amount of time not to exceed 180 days after discovery. The notified pole owner(s) shall be responsible for promptly (normally not to exceed five business days) notifying the company owning/operating the facility if the subject of the notification is a Safety Hazard, or otherwise within a reasonable amount of time not to exceed 180 days, after being notified of the potential violation of GO 95."

   During the field inspection, ESRB noted the third-party safety concerns listed in Table 20. While in the field, Comcast created and sent third-party notifications to the respective utilities for the items below:

Table 20: Third-Party Observations

Location	Observations
1	Cable has an exposed ground.
2	Cable has a slack down guy.
4	Phone has an unsecured vertical drop.
5	Supply insulator bob has pulled away from building.
11	Phone line have insufficient clearance above bike path.
12	Phone has broken lashing.

Location	Observations
13	Phone service drop is contacting supply lines.
17	Phone and supply have slack down guys.
18	Phone and supply have a buried down guy anchor.
25	Cable has a preform wrapped around lines.
26	Phone has a slack down guy.
28	Phone has an unsecured vertical drop.
31	Phone has an unsecured vertical drop.
53	Supply has not maintained a firebreak around pole in an HFTD area.
54	Phone has an unsecured vertical drop.
66	Phone has tree strain on lines.
67	Phone service drop has low clearance over street.
69	Phone has a slack down guy.
70	Supply has not maintained a firebreak around pole in an HFTD area.
76	Supply and phone service drops have low clearance over street.
78	Phone service drops haw low clearance over street.
79	Phone has an abandoned service drop.
80	Phone service needs to be transferred to the new pole.
81	Phone has an unsecured vertical drop.
83	Supply has a slack span/down guy.
85	Phone has an unsecured vertical drop.
89	Phone has broken lashing.
90	Phone has vegetation strain on service drop.
93	Phone has vegetation strain on span.
94	Phone to supply service drop clearance less than 12 inches within 15 feet of attachment.
94	Phone has a broken lashing.
95	Phone has an abandoned service drop.

Location	Observations
96	Phone serviced drop not attached to pole (attached to pole step).
99	Power, pole has excessive lean (10%), check for loading.
99	Phone has a broken moulding. Phone has abandoned service drop. Phone has an unsecured vertical drop.
100	Phone has low service drop over edge of road.
103	Phone service needs to be transferred to new pole.