APPENDIX A

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APPENDIX A – MODE OF ENTRY

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Note: **BOLD** indicates Critical Measure

Table A-1-1: Resale - Mode of Entry Weights

PO	Pre-Ordering	Weight
1-01	**Customer Service Record**	**15**
1-02	**Due Date Availability**	**5**
1-03	**Address Validation**	**5**
1-04	**Product and Service Availability**	**5**
1-05	**Telephone Number Availability and Reservation**	**5**
1-06	**Facility Availability (Loop Qualification)**	**5**
2-02	**OSS System Availability – Prime**	**20**
3-02	% Answered within 30 Seconds – Ordering	10
3-04	% Answered within 30 Seconds – Repair	10
OR	**Ordering**	
1-02	% On Time LSRC - Flow Through - POTS	40
1-04	% OT LSRC <10 Lines (Elec.- No Flow Through) – POTS	10
1-04	% OT LSRC <10 Lines (Elec.- No Flow Through) – Specials	5
1-06	% On Time LSRC >= 10 Lines (Electronic) – POTS	10
1-06	% On Time LSRC >= 10 Lines (Electronic) – Specials	5
2-02	% On Time LSR Reject - Flow Through – POTS	30
2-04	% OT LSR Reject<10 Lines (Elec.-No Flow Through)-POTS	30
2-04	% OT LSR Reject<10 Lines (Elec.-No Flow Through)-Specials	5
2-06	% On Time LSR Reject >=10 Lines (Electronic) – POTS	10
2-06	% On Time LSR Reject >=10 Lines (Electronic) – Specials	5
4-09	% SOP to Bill Completion Notice Sent Within 3 Business Days	30
5-03	% Flow Through Achieved	20
6-03	% Accuracy – LSRC	10
PR	**Provisioning**	
3-08	% Completed w/in 5 Days (1-5 lines - No Dispatch) – POTS	10
3-09	% Completed w/n 5 Days (1-5 lines - Dispatch) – POTS	5
4-01	**% Missed Appointment - BA - Total – Specials**	**10**
4-02	Average Delay Days - Total – POTS	10
4-02	Average Delay Days - Total – Specials	10
4-04	**% Missed Appointment - BA - Dispatch – POTS**	**10**
4-05	**% Missed Appointment- BA - No Dispatch - POTS**	**20**
5-01	% Missed Appointment - Facilities – POTS	10
5-01	% Missed Appointment - Facilities – Specials	10
5-02	% Orders Held for Facilities > 15 days – POTS	5
5-02	% Orders Held for Facilities > 15 days – Specials	5
6-01	% Installation Troubles within 30 days – POTS	15
6-01	% Installation Troubles within 30 days – Specials	15
MR	**Maintenance & Repair**	
1-01	Average Response Time - Create Trouble	5
1-03	Average Response Time - Modify Trouble	5
1-04	Average Response Time - Request Cancellation of Trouble	5
1-06	Average Response Time - Test Trouble (POTS only)	5
2-01	Network Trouble Report Rate – Specials	10
2-02	Network Trouble Report Rate - Loop (POTS)	10
3-01	% Missed Repair Appointments – Loop	20
3-02	% Missed Repair Appointments - Central Office	5
4-01	**Mean Time to Repair – Specials**	**20**
4-02	**Mean Time to Repair - Loop Trouble**	**15**
4-03	**Mean Time to Repair - CO Trouble**	**5**
4-08	**% Out of Service > 24 Hours – POTS**	**20**
4-08	% Out of Service > 24 Hours – Specials	10
5-01	**% Repeat Reports w/in 30 days - POTS**	**15**
5-01	**% Repeat Reports w/in 30 days - Specials**	**15**
BI	**Billing**	
1-01	% DUF in 4 Business Days	10
		510

Table A-1-2: Unbundled Network Elements - Mode of Entry Weights

PO	Pre-Ordering	Weight
1-01	**Customer Service Record**	**15**
1-02	**Due Date Availability**	**5**
1-03	**Address Validation**	**5**
1-04	**Product and Service Availability**	**5**
1-05	**Telephone Number Availability and Reservation**	**5**
1-06	**Facility Availability (Loop Qualification)**	**5**
2-02	**OSS Interface Availability – Prime**	**20**
3-02	% Answered within 30 Seconds – Ordering	10
3-04	% Answered within 30 Seconds – Repair	10
OR	**Ordering**	
1-02	% On Time LSRC - Flow Through - POTS	40
1-04	% OT LSRC<10 Lines (Elec.-No Flow Through)-POTS	10
1-04	% OT LSRC<10 Lines (Elec.-No Flow Through)-Specials	5
1-04	% OT LSRC<10 Lines (Elec.-No Flow Through)-Complex	0
1-06	% On Time LSRC >=10 Lines (Electronic) – POTS	10
1-06	% On Time LSRC >=10 Lines (Electronic) – Specials	5
1-06	% On Time LSRC >=10 Lines (Electronic) – Complex	0
2-02	% On Time LSR Reject - Flow Through – POTS	30
2-04	% OT LSR Reject<10 lines (Elec.-No Flow Through)-POTS	30
2-04	% OT LSR Reject<10 lines (Elec.-No Flow Through)-Specials	5
2-04	% OT LSR Reject<10 lines (Elec.-No Flow Through)-Complex	0
2-06	% On Time LSR Reject >= 10 Lines (Electronic) – POTS	10
2-06	% On Time LSR Reject >= 10 Lines (Electronic) – Specials	5
2-06	% On Time LSR Reject >= 10 Lines (Electronic) – Complex	0
4-09	**% SOP to Bill Completion Sent Within 3 Business Days**	**30**
5-03	**% Flow Through – Achieved**	**20**
6-03	**% OT Accuracy LSRC**	**10**
PR	**Provisioning**	
3-08	% Completed w/in 5 Days (1-5 lines-No Dispatch)-UNE-P/Other	5
3-09	% Completed w/in 5 Days (1-5 lines-Dispatch)-UNE-P/Other	10
4-01	**% Missed Appointment - BA – Total – Specials**	**10**
4-01	**% Missed Appointment - BA – Total – EEL**	**10**
4-01	% Missed Appointment - BA - Total – IOF	10
4-02	Average Delay Days - Total – POTS	10
4-02	Average Delay Days - Total – Specials	10
4-02	Average Delay Days - Total – Complex	10
4-04	% Missed Appointment - BA – Dispatch – Platform	10
4-04	**% Missed Appointment - BA – Dispatch - New Loop**	**10**
4-04	**% Missed Appointment - BA – Dispatch – Complex**	**10**
4-05	**% Missed Appointment- BA - No Dispatch - Platform**	**20**
4-05	**% Missed Appointment- BA - No Dispatch - Complex**	**10**
4-06	**% On Time Performance - Hot Cut**	**20**
5-01	% Missed Appointment - Facilities – POTS	10
5-01	% Missed Appointment - Facilities – Specials	10
5-02	% Orders Held for Facilities > 15 days – POTS	5
5-02	% Orders Held for Facilities > 15 days – Specials	5
6-01	% Installation Troubles within 30 days - POTS Other	15
6-01	% Installation Troubles within 30 days – Specials	15
6-02	**% Installation Troubles within 7 days – Hot Cut Loops**	**15**

MR	Maintenance & Repair	
1-01	Average Response Time - Create Trouble	5
1-03	Average Response Time - Modify Trouble	5
1-04	Average Response Time - Request Cancellation of Trouble	5
1-06	Average Response Time - Test Trouble (POTS only)	5
2-01	Network Trouble Report Rate – Specials	10
2-02	Network Trouble Report Rate - Loop (POTS)	10
3-01	% Missed Repair Appointments – Loop	20
3-02	% Missed Repair Appointments - Central Office	5
4-01	**Mean Time to Repair – Specials**	**20**
4-02	**Mean Time to Repair - Loop Trouble**	**15**
4-03	**Mean Time to Repair - CO Trouble**	**5**
4-08	**% Out of Service > 24 Hours – POTS**	**20**
4-08	% Out of Service > 24 Hours – Specials	10
5-01	**% Repeat Reports w/in 30 days - POTS**	**15**
5-01	**% Repeat Reports w/in 30 days - Specials**	**15**
BI	Billing	
1-01	% DUF in 4 Business Days	10
		625

Table A-1-3: Interconnection - Mode of Entry Weights

		Weight
OR-	**Ordering**	
1-12	% On Time Firm Order Confirmations	15
1-13	% On Time Design Layout Record	10
2-12	% On Time Trunk ASR Reject	10
PR-	**Provisioning**	
4-01	**% Missed Appointment - BA – Total**	**20**
4-02	Average Delay Days – Total	10
4-07	**% On Time Performance - LPN only**	**20**
5-01	% Missed Appointment – Facilities	10
5-02	% Orders Held for Facilities > 15 Days	10
6-01	**% Installation Troubles w/in 30 Days**	**15**
MR-	**Maintenance & Repair**	
4-01	**Mean Time to Repair – Total**	**20**
5-01	% Repeat Reports w/in 30 Days	10
NP-	**Network Performance**	
1-03	**# of Final Trunk Groups Blocked 2 Months**	**10**
1-04	**# of Final Trunk Groups Blocked 3 Months**	**20**
		180

Table A-1-4: Collocation - Mode of Entry Weights

NP-	Network Performance	Weight
2-01	% OT Response to Request for Physical Collocation	10
2-02	% OT Response to Request for Virtual Collocation	10
2-05	**% On Time – Physical Location**	**20**
2-06	**% On Time – Virtual Location**	**20**
2-07	**Average Delay Days – Physical**	**20**
2-08	**Average Delay Days – Virtual**	**20**
		100

2.   **Mode of Entry: Dollars At Risk – $41,200,000**

	Resale	**UNE**	**Collocation**	**Trunks**
Monthly	$515,000	$2,060,000	$118,391	$739,943
Annual	$6,180,000	$24,720,000	$1,420,690	$8,879,310

3.   **Minimum and Maximum Bill Credit Tables:**

        Table A-3-1: Resale

        Table A-3-2: Unbundled Network Elements

        Table A-3-3: Interconnection Trunks

        Table A-3-4: Collocation

Table A-3-1: Resale

- Maximum of $ 6,180,000 per year
- Maximum Credit Performance Score "X" = -0.670
- Minimum threshold = -0.1908
- Mid-point between minimum and maximum = -0.4304

Score Range		Monthly Dollars:	
<	And ³		
	-0.1908	$0	
-0.1908	-0.2160	$103,000	
-0.2160	-0.2412	$124,684	
-0.2412	-0.2664	$146,368	
-0.2664	-0.2917	$168,053	
-0.2917	-0.1369	$189,737	
-0.1369	-0.3421	$211,421	
-0.3421	-0.3673	$233,105	
-0.3673	-0.3926	$254,789	
-0.3926	-0.4178	$276,474	
-0.4178	-0.4430	$298,158	
-0.4430	-0.4682	$319,842	
-0.4682	-0.4934	$341,526	
-0.4934	-0.5187	$363,211	
-0.5187	-0.5439	$384,895	
-0.5439	-0.5991	$406,579	
-0.5991	–0.5973	$428,263	
–0.5973	-0.6196	$449,947	
-0.6196	-0.6448	$471,632	
-0.6448	-0.6700	$493,316	
-0.6700		$515,000	

Table A-3-2: Unbundled Network Elements

- Maximum of $ 24,720,000 per year
- Maximum Credit Performance Score "X" = -0.670
- Minimum threshold = -0.1904
- Mid-point between minimum and maximum = -0.4302

Score Range		Monthly Dollars:	
<	And ³		
	-0.1904	$0	
-0.1904	-0.2157	$412,000	
-0.2157	-0.2409	$498,737	
-0.2409	-0.2662	$585,474	
-0.2662	-0.2914	$672,211	
-0.2914	-0.3166	$758,947	
-0.3166	-0.3419	$845,684	
-0.3419	-0.3671	$932,421	
-0.3671	-0.3924	$1,019,158	
-0.3924	-0.4176	$1,105,895	
-0.4176	-0.4428	$1,192,632	
-0.4428	-0.4681	$1,279,368	
-0.4681	-0.4933	$1,366,105	
-0.4933	-0.5186	$1,452,842	
-0.5186	-0.5438	$1,539,579	
-0.5438	-0.5690	$1,626,316	
-0.5690	-0.5943	$1,713,053	
-0.5943	-0.6195	$1,799,789	
-0.6195	-0.6448	$1,886,526	
-0.6448	-0.6700	$1,973,263	
-0.6700		$2,060,000	

Table A-3-3: Interconnection Trunks

- Maximum of $ 8,879,310 per year
- Maximum Credit Performance Score "X" = -1.000
- Minimum threshold = -0.3014
- Mid-point between minimum and maximum = -0.6507

Score Range		Monthly Dollars:	
<	And ³		
	-0.3014	$0	
-0.3014	-0.3551	$147,989	
-0.3551	-0.4088	$193,523	
-0.4088	-0.4626	$239,058	
-0.4626	-0.5163	$284,593	
-0.5163	-0.5701	$330,128	
-0.5701	-0.6238	$375,663	
-0.6238	-0.6776	$421,198	
-0.6776	-0.7313	$466,733	
-0.7313	-0.7850	$512,268	
-0.7850	-0.8388	$557,803	
-0.8388	-0.8925	$603,338	
-0.8925	-0.9463	$648,873	
-0.9463	-1.0000	$694,408	
-1.0000		$739,943	

Table A-3-4: Collocation

- Maximum of $ 1,420,690 per year
- Maximum Credit Performance Score "X" = -1.200
- Minimum threshold = 0
- Mid-point between minimum and maximum = -0.6

Score Range		Monthly Dollars:	
<	And ³		
	0	$0	
0.00000	-0.10	$23,678	
-0.10	-0.20	$31,571	
-0.20	-0.30	$39,464	
-0.30	-0.40	$47,356	
-0.40	-0.50	$55,249	
-0.50	-0.60	$63,142	
-0.60	-0.70	$71,034	
-0.70	-0.80	$78,927	
-0.80	-0.90	$86,820	
-0.90	-1.00	$94,713	
-1.00	-1.10	$102,605	
-1.10	-1.20	$110,498	
-1.20		$118,391	

APPENDIX B

Appendix B CRITICAL MEASURES				Resale	UNE	Coll
			Description	**Resale**	**UNE**	**Coll**
1			**Response Time OSS Interface**	**$82,873**	**$195,345**	
	PO-1-01		Customer Service Record	$31,078	$73,254	
	PO-1-02		Due Date Availability	$10,360	$24,418	
	PO-1-03		Address Validation	$10,360	$24,418	
	PO-1-04		Product & Service Availability	$10,360	$24,418	
	PO-1-05		TN Reservation	$10,360	$24,418	
	PO-1-06		Facility Availability (Loop Qualification)	$10,360	$24,418	
2	**PO-2-02**		**OSS Interface Availability (Prime Time)**	**$82,873**	**$195,345**	
3	**OR-6-03**		**% Accuracy LSRC**		**$195,345**	
4a	**PR-4-01**		**% Missed Appointment - BA - Total - EEL**		**$65,115**	
4b			**% Missed Appointments – Complex**		**$65,115**	
	PR-4-04		% Missed Appointment – Dispatch- Complex		$21,705	
	PR-4-05		% Missed Appointment – No Dispatch- Complex		$43,410	
4c			**% Missed Appointments**	**$82,873**	**$65,115**	
	PR-4-01		Total – Specials	$20,718	$130,231	
	PR-4-01		Total – Trunks			
	PR-4-04		Dispatch - POTS	$20,718		
	PR-4-04		Dispatch - Loop – New		$65,114	
	PR-4-05		No Dispatch – POTS	$41.437		
5	**PR-4-05**		**% Missed Appointment - BA - No Dispatch - Platform**		**$195,345**	
6			**Hot Cut Loop Performance** [1]		**$390,690**	
	PR-4-06		% On Time – Hot Cut Loop (adjusted for MA due to late LSRC)			
	PR-6-01		% Installation Troubles within 7 Days – Hot Cut Loop			
7	**PR-4-07**		**% On Time Performance - UNE LNP**			
8			**% Repeat Reports within 30 Days**	**$82,873**	**$195,345**	
	MR-5-01		POTS	$41.437	$97,672	
	MR-5-01		Specials	$41.437	$97,672	
9			**Mean Time To Repair**	**$82,873**	**$195,345**	
	MR-4-01		Total (Specials/Trunks)	$27,624	$65,115	
	MR-4-02		Dispatch	$20,718	$48,837	
	MR-4-03		No Dispatch	$6.906	$16.278	
	MR-4-08		% Out of Service > 24 Hours	$27.624	$65,115	
10			**% Final Trunks Groups Blocking**			
	NP-1-03		Blocked 2 Months			
	NP-1-04		Blocked 3 Months			
11			**Collocation**			
	NP-2-5\6		% Completed on Time – Physical & Virtual			
	NP-2-7\8		Average Delay Days – Physical & Virtual			
12			**xDSL Performance**		**$195,345**	
	PO-8-01		Avg. Response Time - Manual Loop Qualification		$24,418	
	PO-8-02		Avg. Response Time - Engineering Record Request		$24,418	
	PR-4-14-18		% Completed on Time (Consolidated measure to be developed)		$122,091	
	PR-6-01		% Installation Troubles - xDSL Loops		$24,418	
			Total Dollars At Risk – Monthly	**$414,368**	**$1,953,448**	
			Total Dollars At Risk – Annual	**$4,972,414**	**$23,441,379**	

(1) OSS $ allocated to Resale and UNE Lines in Service

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[1]   If either sub-metric performance standard is missed, the critical measure is considered missed.

APPENDIX C

Performance Scores for Measures with Absolute Standards:

Metric #'s	Measure	0	-1	-2
PO-1 and MR-1 [1]	OSS Response Time Measures	≤ 4 second difference	> 4 and ≤ 6 second difference	> 6 second difference
PO-2-02	OSS System Availability – Prime	≥ 99.5%	≥ 98 and < 99.5%	< 98%
See Table [2]	Metrics with 95% standards	≥ 95%	≥ 90 and < 95%	< 90%
PO-3	% Answered within 30 Seconds – Ordering & Repair	≥ 80%	≥ 75 and < 80%	< 75%
NP-2-08 NP-2-09	Collocation – Average Delay Days	≤ 6 Days	> 6 and ≤ 15 Days	> 15 Days
NP-1-03 NP-1-04	# of Final Trunk Groups Blocked for 2 and 3 Months	Final Interconnection Trunks meeting or exceeding blocking standard for one month	Any individual Final Interconnection Trunk group exceeding blocking standard for 2 months in a row	Any individual Final Interconnection Trunk group exceeding blocking standard for 3 months in a row
PR-6-02	% Installation Troubles reported within 7 Days – Hot Cut loop	≤ 2%	> 2 and ≤ 3%	> 3%

Example: If Verizon-MA were to perform at 97.0% for PO-2-02- OSS System Availability – Prime, in a month, then the performance score would be –2 for that measure.

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[1]   Includes PO-1-01, PO-1-02, PO-1-03, PO-1-04, PO-1-05, PO-1-06, MR-1-01, MR-1-03, MR-1-04 and MR-1-06

[2]   The Metrics with a 95% Standard appear on the following page.

Table C-1-1: Performance Metrics with 95% Performance Standard:

OR	**Ordering**
1-02	% On Time LSRC - Flow Through - POTS – 2hrs
1-04	% OT LSRC<10 Lines (Elec.-No Flow Through) - POTS
1-04	% OT LSRC<10 Lines (Elec.-No Flow Through) - Specials
1-04	% OT LSRC<10 Lines (Elec.-No Flow Through) - Complex
1-06	% On Time LSRC >=10 Lines (Electronic) – POTS
1-06	% On Time LSRC >=10 Lines (Electronic) – Specials
1-06	% On Time LSRC >=10 Lines (Electronic) – Complex
1-12	% On Time Firm Order Confirmations
1-13	% On Time Design Layout Record
2-02	% On Time LSR Reject - Flow Through – POTS
2-04	% OT LSR Rej.<10 lines (Elec.-No Flow Through) - POTS
2-04	% OT LSR Rej.<10 lines (Elec.-No Flow Through) - Specials
2-04	% OT LSR Rej.<10 lines (Elec.-No Flow Through) - Complex
2-06	% On Time LSR Reject >= 10 Lines (Electronic) - POTS
2-06	% On Time LSR Reject >= 10 Lines (Electronic) - Specials
2-06	% On Time LSR Reject >= 10 Lines (Electronic) - Complex
2-12	% On Time Trunk ASR Reject
4-09	% SOP to Bill Completion Notice Sent Within 3 Business Days
5-03	% Flow Through Achieved
6-03	% OT Accuracy LSRC
PR	**Provisioning**
4-06	% On Time Performance - Hot Cut
4-07	% On Time Performance - LNP only
BI	**Billing**
1-01	% DUF in 4 Business Days
NP	**Network Performance**
2-01	% OT Response to Request for Physical Collocation
2-02	% OT Response to Request for Virtual Collocation
2-05	% On Time - Physical Location
2-06	% On Time - Virtual Location

**Table C-1-2: Allowable Misses for Small Sample Sizes for
Counted Variable Performance Measures with Absolute Standards**

A.   Allowable Misses:

- If less than 20 items, find volume of items measured in Sample Size Column.
- If the number of misses falls under the Zero weight column, then the performance measure is given a weight of zero and not counted towards the total performance score.
- If the number of misses falls in the "0" column, a performance score of 0 is given the performance metric.
- If the number of misses falls into the "-1" column, the performance score for the metric I –1.
- If the number of misses falls into the –2 column, the performance score is –2.
- "NA" is not applicable

95% Standard:

Sample Size	Zero Weight	0	-1	-2
1	1	0	NA	NA
2	1	0	2	NA
3	1	0	2	3
4	1	0	2	3+
5	1	0	2	3+
6	1	0	2	3+
7	1	0	2	3+
8	1	0	2	3+
9	1	0	2	3+
10	1	0	2	3+
11	1	0	2	3+
12	1	0	2	3+
13	1	0	2	3+
14	1	0	2	3+
15	1	0	2	3+
16	1	0	2	3+
17	1	0	2	3+
18	1	0	2	3+
19	1	0	2	3+
20	NA	≤ 1	2	3+

B.   CLEC Exception Process

Each month each CLEC will have the right to challenge the allowable misses or

exclusions that Verizon-MA may exercise pursuant to the small sample size table for

performance measures with absolute standards. If a CLEC exercises this right, it must file a petition with the Department demonstrating that the exclusion will have a significant impact on the operations of the CLEC's business and that Verizon-MA should not be allowed to exclude the event pursuant to the above table. Verizon-MA will have a right to respond to any such challenge by the CLEC. The Timeline for CLEC Exceptions will be the same as the Timeline for Verizon-MA Exceptions under the small sample size section in Appendix D. If a CLEC's Exception Petition is granted, the appropriate bill credits will be reflected on the CLEC's bill as soon as is practical.

APPENDIX D

STATISTICAL ANALYSIS

A.   Statistical Methodologies:

The Performance Assurance Plan uses statistical methodologies as one means to determine if "parity" exists, or if the wholesale service performance for CLECs is equivalent to the performance for Verizon-MA. For performance measures where "parity" is the standard and sufficient sample size exists, Verizon-MA will use the "modified Z statistic" proposed by a number of CLECs who are members of the Local Competitors User Group ("LCUG"). A Z or t score of below -1.645 provides a 95% confidence level that the variables are different, or that they come from different processes. The specific formulas are as follows:

Measured Variables:	Counted Variables: [1]
$$t = \frac{\overline{X}_{CLEC} - \overline{X}_{BA}}{\sqrt{s_{BA}^2 (\frac{1}{n_{CLEC}} + \frac{1}{n_{BA}})}}$$	$$Z = \frac{P_{CLEC} - P_{BA}}{\sqrt{P_{BA}(1 - P_{BA})(\frac{1}{n_{CLEC}} + \frac{1}{n_{BA}})}}$$

Definitions:

    Measured Variables are metrics of means or averages, such as mean time to repair, or average interval.

    Counted Variables are metrics of proportions, such as percent measures.

    $\overline{X}$ is defined as the average performance or mean of the sample.

    S is defined as the standard deviation.

    n is defined as the sample size.

    p is defined as the proportion, for percentages 90% translates to a 0.90 proportion.

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[1]   For metrics where higher numbers indicate better performance, this equation is reversed. These include: % Completed w/in 5 days – (1-5 lines – No Dispatch and % Completed w/in 5 days (1-5 lines – Dispatch)

B. **Sample Size Requirements:**

The standard Z or t statistic will be used for measures where "parity" is the standard, unless there is insufficient sample size. For measured variables, the minimum sample size is 30. For counted variables, the result of np(1-p) must be greater than or equal to 5. When the sample size requirement is not met, Verizon-MA will do the following:

1. If the performance for the CLEC is better than Verizon-MA's performance or the sample size is less than 10, no statistical analysis is required.

2. If the performance is worse for the CLEC than Verizon-MA, Verizon-MA will use the Permutation Test.

3. If the permutation test shows an "out of parity" condition, Verizon-MA will perform a root cause analysis to determine cause. If the cause is the result of "clustering" within the data, Verizon-MA will provide documentation demonstrating that clustering caused the out of parity condition.

4. The nature of the variables used in the performance measures is such that they do not meet the requirements 100% of the time for any statistical testing including the requirement that individual data points must be independent. The primary example of such non-independence is a cable failure. If a particular CLEC has fewer than 30 troubles and all are within the same cable failure with long duration, the performance will appear out of parity due to this clustering. However, for all troubles, including Verizon-MA troubles, within that individual event, the trouble duration is identical. Another example of clustering is if a CLEC has a small number of orders in a single location, with a facility problem. If this facility problem exists for all customers served by that cable and is longer than the average facility problem, the orders are not independent and clustering

occurs.   Finally, if root cause shows that the difference in performance is the result of CLEC behavior, Verizon-MA will identify such behavior and work with the respective CLEC on corrective action.

C.   Verizon Exceptions Process:

1.   A key frailty of using statistics to evaluate parity is that a key assumption about the data, necessary to use statistics, is faulty. As noted, one such assumption is that the data is independent. Events included in the performance measures of provisioning and maintenance of telecommunication services are not independent. The lack of independence is referred to as "clustering" of data.   Clustering occurs when individual items (orders, troubles, *etc.*) are clustered together as one single event. This being the case, Verizon-MA will have the right to file an exception to the performance scores in the Performance Assurance Plan if the following events occur:

a.   **Event Driven Clustering: Cable Failure:** If a significant proportion (more than 30%) of a CLEC's troubles are in a single cable failure, Verizon-MA may provide data demonstrating that all troubles within that failure, including Verizon-MA troubles were resolved in an equivalent manner. Verizon-MA also will provide the repair performance data with that cable failure performance excluded from the overall performance for both the CLEC and Verizon-MA.   The remaining troubles will be compared according to normal statistical methodologies.

b.   **Location Driven Clustering: Facility Problems:**   If a significant proportion (more than 30%) of a CLEC's missed installation orders and resulting delay days were due to an individual location with a significant

facility problem, Verizon-MA will provide the data demonstrating that the orders were "clustered" in a single facility shortfall. Then, Verizon-MA will provide the provisioning performance with that data excluded. Additional location driven clustering may be demonstrated by disaggregating performance into smaller geographic areas.

c. **Time Driven Clustering: Single Day Events:** If significant proportion (more than 30%) of CLEC activity, provisioning or maintenance, occur on a single day within a month, and that day represents an unusual amount of activity in a single day, Verizon-MA will provide the data demonstrating that the activity is on that day. Verizon-MA will compare that single day's performance for the CLEC to Verizon-MA's own performance. Then, Verizon will provide data with that day excluded from overall performance to demonstrate "parity."

2.   **Documentation:**

Verizon-MA will provide all details, ensuring protection of customer proprietary information, to the CLEC and Department. Details include, individual trouble reports, and orders with analysis of Verizon-MA and CLEC performance. For cable failures, Verizon-MA will provide appropriate documentation detailing all other troubles associated with that cable failure.

3.	**Timeline for Exceptions Process:**

The following is an example illustrating the timeline for the Exception Process.

Action	**Date**
January Performance Reports	February 25th
Verizon Files Exceptions on January Performance	March 15th
CLEC and other interested parties Files Reply to Verizon Exceptions	April 1st
Department Issues Ruling on Exceptions	April 15th
February Performance Reports	March 25th
March Performance Reports	April 25th
Credits Processed for January Performance	By May 1st

APPENDIX E

Mode of Entry Bill Credit Mechanism

The following are the steps that will be undertaken to determine whether Bill Credits are due to any CLECs for the MOE categories.

1.   For each MOE measure with a "parity" standard: Calculate Z or t score or perform permutation test (for small samples).[1]

2.   Convert Z, t or permutation equivalent score to performance score pursuant to the following table:

Statistical Score	Performance Score
$\pounds$-1.645	-2
< -0.8225 and > -1.645	-1
> -0.8225	0^2

3.   For each MOE measure with an absolute standard: Determine Performance Score using performance range for the applicable measure. For small sample sizes, the small sample size table for measures with absolute standards is used. (*See* Appendix C.)

4.   If the Aggregate Total Performance Score for a MOE is greater than the minimum value allowable for the applicable MOE (*See* Minimum and Maximum Bill Credit Tables in Appendix A), no bill credits are due to the CLECs that received the particular MOE services in that month. If the value is equal to or less than a minimum value, CLECs will be paid Bill

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[1]   When "no activity occurs" in a metric the performance measure and its weight will be excluded from performance score.

[2]   For report rate measures – regardless of z or t score – if absolute difference is less than 0.1%, the performance score is a 0.

Credits pursuant to the Bill Credit Tables in Appendix A, which will be adjusted to reflect the monthly volumes or units being used by the CLECs.[3]

5.   The MOE Bill Credit Table reflects (1) the range of the aggregate performance scores from the minimum to maximum, (2) the monthly dollars attributable to each score, (3) the aggregate CLEC monthly volumes for the measure, and (4) the corresponding monthly rate what will be paid to each CLEC if Verizon-MA's performance is at that particular level.   The individual CLEC's Bill Credit will be determined by multiplying the CLEC's monthly units in service by the applicable rate for the Aggregate MOE score.

6.   For example, assume the first two steps of the UNE Bill Credit Table were as follow:

Score	Mon. $	Mon. Vol.	Mon. Rate
-0.260	$585,474	100,000	$5.85
-0.300	$758,947	100,000	$7.58

Using the above Credit Table, if the Aggregate MOE score was -0.300 and a CLEC had 5,000 UNE lines (at the end of the month), it would entitled to a $26,700 Bill Credit ($7.58 X 5,000 = $37,900).

8.   The Domain Clustering Rule

The Mode of Entry measures are classified into four key domains: Pre-Order, Ordering, Provisioning and Maintenance. To ensure that competition is not negatively influenced by poor performance on measures in any one of these domains, a Domain Clustering Rule has been established under this Plan. The rule, which applies only to the UNE and Resale MOEs, enables the entire mode of entry performance score to be modified if Verizon-MA's aggregate weighted

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[3]   The measurement units for UNEs and Resale are lines in service. For Interconnection, it is minutes in use. For Collocation, it is collocation cages installed in the month.

performance score for the pre-ordering, ordering, provisioning or maintenance domains equals or exceeds 75% of twice the total weights assigned to measures in the domain.[4] In addition, for the Pre-Order domain, the 75% application will apply if all pre-order response time metrics are missed at the -2 level. If the Domain Rule applies, the lower of the overall MOE score or the Domain score will be used to determine whether any bill credits are due. The Rule would be applied as follows: First, determine the total weights for the domain. Second, double the aggregate weights for the Domain. Next, determine whether the aggregate performance score is 75% or greater. For example, the Ordering Domain in UNE has metrics with a total weight of 140, which would be doubled to –280 (-2 x 140). If the Verizon-MA aggregated weighted performance score equaled -220 for the month, the domain percentage would be 78.5% and the Domain Rule would be tripped since this is greater than 75%.

To determine whether credits would be due under the MOE score or Domain score, the following steps would occur. First, determine the difference between the minimum and maximum performance scores for the MOE in which the Domain appears. For example, the minimum score for the UNE MOE is -0.1904 and the maximum score for the UNE MOE is -0.6700, therefore, the difference is -0.4796. This figure would be multiplied by the 78.5%. This equals -0.3764. This number (-0.3764) would be added to the minimum score and would result in a domain clustering score of -0.5668. If the MOE score were -0.488, the performance score for the MOE would be replaced with the domain clustering score of -0.5668 based on the Domain Clustering Rule for the purpose of calculating bill credits due.

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[4] Under the MOE method each measure will receive a performance score of either 0, -1, or -2. A score of -2 indicates an out of parity condition and is the worst of the three scores. Thus, the worst aggregate performance score Verizon-MA could achieve for a domain would be -2 x the aggregate weights. For example, the worst aggregate score under Ordering Domain for UNEs would be -280 (-2 x 140).

APPENDIX F

Critical Measures Performance Scoring

A. The following steps would be taken to determine which CLECs would be entitled to Bill Credits pursuant to the Aggregate Rule, *i.e.,* when aggregate CLEC performance falls below standard for a critical measure.

   1. Calculate the total dollars available for Bill Credits per critical measure per month.

   An increment table will be developed for each critical measure to determine the Bill Credits available for unsatisfactory performance, *i.e.*, at or less than performance scores of -1. The tables will range from 50% of the maximum monthly amount, for a performance difference of less than 1% to 100% of the amount for performance differences of 10% and greater.[1] A sample table appears below for z and t and performance scores where the maximum monthly amount for the measure is $390,690.

Table F-1-1
Allocation of Dollars for Critical Measures
Measures with Statistical Evaluation Standards

Statistical Score		Performance	Increment	Dollars
From	To	Score		
	> -0.8225	0	0%	$0
≤ -0.8225	> -0.9048	-1.0	50%	$195,345
≤ -0.9048	> -0.9870	-1.1	55%	$214,880
≤ -0.9870	> -1.0693	-1.2	60%	$234,414
≤ -1.0693	> -1.1515	-1.3	65%	$253,949
≤ -1.1515	> -1.2338	-1.4	70%	$273,483
≤ -1.2338	> -1.3160	-1.5	75%	$293,018
≤ -1.3160	> -1.3983	-1.6	80%	$312,552
≤ -1.3983	> -1.4805	-1.7	85%	$332,087
≤ -1.4805	> -1.5628	-1,8	90%	$351,621
≤ -1.5628	> -1.6450	-1.9	95%	$371,156
≤ - 1.645		-2.0	100%	$390,690

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[1] For HOT Cut Performance, if either metric is below standard, the entire critical measure is treated as below standard.

Table F-1-2
Allocation of Dollars for Critical Measures
Measures with 95% Standards [2]

% Performance		Performance	Increment	Dollars
From	To	Score		
	≥ 95.0	0	0%	$0
< 95.0	≥ 94.5	-1.0	50%	$195,345
< 94.5	≥ 94.0	-1.1	55%	$214,880
< 94.0	≥ 93.5	-1.2	60%	$234,414
< 93.5	≥ 93.0	-1.3	65%	$253,949
< 93.0	≥ 92.5	-1.4	70%	$273,483
< 92.5	≥ 92.0	-1.5	75%	$293,018
< 92.0	≥ 91.5	-1.6	80%	$312,552
< 91.5	≥ 91.0	-1.7	85%	$332,087
< 91.0	≥ 90.5	-1,8	90%	$351,621
< 90.5	≥ 90.0	-1.9	95%	$371,156
< 90.0		-2.0	100%	$390,690

2. **The aggregate performance score would be used to determine the amount of Bill Credits available for CLECs who received unsatisfactory performance.**

   Pursuant to table F-1-1, $195,345 would be available if the aggregate z-score equaled -0.823 and the performance score equaled -1[3]

3. **Determine which CLECs qualify for the market adjustment.**

   For measures where the statistical score is used, the cutoff point for qualification is Verizon-MA's score on the critical measure +/- one sampling error (based upon the Verizon-MA sampling error). Each CLEC's performance is compared to the cutoff point. Performance equal to or less than the cutoff qualifies for Bill Credits. For example, if Verizon-MA's performance score was .13 and the sampling error was .03, all CLECs with scores equal to or greater than .16 would qualify.

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[2]   For Performance Measures with other % standards, the range of performance will be similarly distributed in 10 even increments.

[3]   When calculating a market adjustment for metrics that use absolute standards (generally a 95% standard) all CLECs at the -1 level or less would qualify. The calculation of the dollars is similar to the z-score method.

4.   **Calculate the individual market adjustments for qualified CLECs.**

      a.   Determine each CLEC's allocated weight. Multiply the CLEC's score on the measure by the volume of its service to be credited.

      b.   Determine each CLEC's weighted share. Aggregate the amounts from step "a" and divide each CLECs share by this total to determine each CLEC's weighted share.

      c.   Determine each CLEC's dollar share. Multiply the CLEC's weighted share by the total amount available for market adjustment.

B.   The following steps will be taken to determine whether any CLECs would be entitled to Bill Credits pursuant to the Individual Rule, i.e., for CLECs who receive a performance score ≤ -1 for two consecutive months:

    1.   Determine if any CLECs qualify for Bill Credit Adjustment. CLECs qualify for a Bill Credit if they received a final score equal to or less then -.8225 for z and t scores or equal to or less than -1 for absolute scores on any of the measures included in the critical measurements for the applicable month.

    2.   Determine each CLECs Bill Credit Adjustment base. The CLECs individual z or t or performance score is used as a starting point to determine the monthly amount available for bill credits to that CLEC.

    3.   Calculate Bill Credit Adjustment to apply to the CLECs impacted. The monthly dollars available to the CLEC are converted to a rate assuming that 1/3 of the market would receive a Z or t-score of -.8225 or less or a performance score of -1 or less. This rate is multiplied by the CLEC's volume (*e.g.*, lines in services) to determine the amount to be credit to the CLEC for that critical measure.

APPENDIX G

APPENDIX H

Special Provisions

UNE Ordering Performance Measures:

Verizon-MA will provide an additional $1,083,333 in monthly bill credits for UNE Order Confirmation Performance based on four POTS metrics included in the MOE category. If on-time performance falls below 90% for any month, a credit of $270,833 for each metric missing the standard will be distributed like the bill credits under Critical Measures. Funding for these credits will be taken from funds that are unused in 6 previous months or from the current month. No new funds are available. The metrics and standards are as follows:

Metric #	POTS Electronically Submitted	Threshold
OR-1-04	% On Time LSRC < 10 Lines	< 90%
OR-1-06	% On Time LSRC ≥ 10 Lines	< 90%
OR-2-04	% On Time Reject < 10 Lines	< 90%
OR-2-06	% On Time Reject ≥ 10 Lines	< 90%

Flow Through:

An additional $5.4 Million per year is available for flow through performance. Two performance measures for UNE from the Carrier to Carrier Performance Guidelines will be used to measure performance with the performance scores set forth below.

Metric #		Threshold
OR-5-01	% Flow Through – Total – UNE	≥ 80%
OR-5-03	% Flow Through – Achieved – UNE	≥ 95%

For each measure, the UNE scores will be combined and reviewed on a quarterly basis. If the combined score meets either target, no additional credits are due. If the combined score meets neither metric target for that quarter, then $1,350,000 will be credited to all CLECs purchasing UNEs based on the number of lines in service. Lines in service will equal: UNE-P, UNE Loops, IOF, and EEL Loops. Performance will be measured for the first time under this measure upon Verizon-MA's entry into the InterLATA market. The prior three months will be examined to determine if bill credits are due.

The following table demonstrates the calculation of quarterly flow through performance:

Quarterly Flow Through Performance:

	Month 1	Month 2	Month 3	Quarter Total
Total Orders that Flow Through				
UNE	15000	18000	17000	50000
Total Orders Processed				
UNE	25000	21000	22000	68000
Total % Flow Through - UNE Combined for Quarter:				73.5%
Total Orders that Flow Through				
UNE	15000	18000	17000	50000
Total Orders Designed to Flow Through:				
UNE	18000	19000	18000	55000
Total % Achieved Flow Through - UNE Combined for Quarter:				90.9%

In this example, neither metric met the performance threshold, therefore, $1,350,000 would have been credited to all CLECs purchasing UNEs.

Additional Hot Cut Loop Performance Measures:

An additional $13 Million per year is available for Hot Cut Loop performance. This measure will be composed of two performance metrics: PR-4-06 – "% On Time Hot Cut Loop" and PR-6-01 – "% Installation Troubles within 7 Days – Hot Cut Loop."[1] If either one of these thresholds is missed, additional bill credits will be distributed to the CLECs.

This measure has two tiers of performance standards. Tier I will be applied to a two month scenario, and Tier II will be applied to a one month scenario. The Tier I threshold is measured based

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[1]   These two measures are also included in the Critical Measurements method, and additional bill credits may be due if Verizon-MA does not satisfy that Critical Measure.

on two consecutive months of performance, while the Tier II threshold is measured based on an

individual month's performance. The performance thresholds are contained in the table below:

Metric #		Tier I Threshold	Tier II
PR-4-06	% On Time Hot Cut Loop[2]	< 90%	< 85%
PR-6-01	% Installation Troubles within 7 Days – Hot Cut Loop	≥ 3.00%	≥ 4.00%

Under Tier I, if Verizon-MA does not satisfy the above standards for two consecutive months,

it will distribute $541,666 million to the affected CLECs. Under Tier II, if Verizon-MA does not

satisfy the above standards for a single month, it will distribute $1,083,333 million to the affected

CLECs. Below is an example of how this measure would work.

Example:

Metric #		Performance For Month 1	Performance for Month 2	Performance for Month 3	Performance for Month 4
PR-4-06	% On Time Hot Cut Loop	84%	91%	91%	91%
PR-6-01	% Installation Troubles within 7 Days – Hot Cut Loop	2%	3.5%	2%	3.5%
	Credit for the Month	$1,083,333	$541,666	$0	$0

In month 1, Verizon-MA did not satisfy the more stringent requirements of Tier II and

$1,083,333 in bill credits would be due.

In month 2, Verizon-MA satisfied the performance standard under Tier II, but not the less

severe standard under Tier I. Bill credits would be due, however, because Verizon-MA failed to meet

the Tier I standard two months in a row. (Month 1 counts against Verizon-MA.)

In month 3 both the Tier I and II standards were met, Verizon-MA would owe nothing.

In month 4, the Tier I performance standard was not met, but no bill credits would be due since Tier I

requires Verizon-MA to fail these performance standards two months in a row. Verizon-MA service in

month 3 was satisfactory. Month 5 would determine whether bill credits would be due under either

Tier I or Tier II.

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[2]   % On Time – Hot Cut Loop performance will be adjusted such that any missed appointment for customer reasons – due to late FOC will be counted as a miss.

APPENDIX I