

Before the
Federal Communications Commission

Washington, D.C. 20554

#S"%&' " ()%% '*"+,

K'Nl<"G+P P '\$"7)%'0"U@ST 7ML : "M-FHK">J WX#GMF#E 3 "#3" -H7HKMX"KH / #: FHKY

W<"%&"G&.' ,R">;Ql.9":), '%<)"\$6"Z+P 'l)\$6": '9;.*%<"W;.*');

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Z')6.\$[

>)*[*]N&"\

#? #3 FKE 7 JGF#E 3 "M3 7 "WMG] / KE J 3 7 @
##? #3 I J #KL A
M? >+%'9%.\$["G+\$. ,6 '\$%.)1.%<R"#S%' [*.%<R")\$6"M8).1)Q.1.%< V
@? M;%'\$%.9)%.+\$ @
S? H\$9*<N%.+\$ @S
C? >&<2.9)1": '9;.*%< @A
^? 7 '8.9": '9;.*%< @V
D? >+%'9%.\$["D / "3 '%4+*52",*+P'7+ : "\$6"7 7 + : "M%%)952 ST
A? >)%9&" ()\$)[' P '\$% SS
_? K.25": '[P '\$%)%.+\$ SA
W? M66%.+\$)l D / "G+\$2.6'*)%.+\$2 CS
@? E8 '8.' 4 CS
S? K+l'2)"\$6"K'2N+\$2.Q.1.%.'2 C_
C? E%&'*G+\$2.6'*)%.+\$2 ^T
^? W '\$',.%2)"\$6"G+2%2 ^@
G? D / "#PNl.9)%.+\$2,+* >;Ql.9":), '%< ^C
###? >KEGH7 J KMX" (MFFHK : ^D
M? Ex Parte K;1'2 ^D
W? G+P P '\$">'*.+6)"\$6">+9'6;.*'2 ^A
G? M99'22.Ql'" -+*P)%2 ^_
7? - ;*%&'*#S,+*P)%.\$ ^`
#a?'EK7HK#3 / "GXMJ : H: ^V

\$' 4'.22; '2*)'.2'6"Q<"D / '2'9; *%< .\$.+*6'***+ ,+2%'*6.)l+ [; 'Q'%'4 ' '\$*'1'8)\$%'2%)\$6)*62"Q+6. '2')\$6" N*+2N'9%.8'"D / "N*+8.6' *2"+\$%'&' "Q'2" P'%'&+62",+*' '\$2; *.\$["%'&)"\$' %4+*52")\$6"6'8.9'2")* '2'9; *' ,+P'%'&' " Q' [.\$.\$. \$[?D

^? 0 '")* '\$+%'9+\$6;9%.\$["%'&.2'3 E#".\$.)'8)9; ; P?' 0 '".\$%'6"%'&.2'.d; *%<"9+PNI' P '\$% %&' " .PN+*%)\$%' 4+*5"+\$'9<Q' *2'9; *%<"%'&)"%'2.))i'*)6<"%)5.\$["Ni)9'"4. %&.\$%'&' " [+8'*\$P '\$%)\$6"N*.8)"%'2'9+*?^A"" F&' "G+P P.22.+\$R%'&' 2'"+%'&' *%["*+;N2R")\$6"%'&' "4. *'1'22".\$6;2%*<")11'&)'8'"2. [\$.,.9)\$%' .\$.%' *2%'. \$%' '\$2; *.\$[" %&)"%'&' 2'"\$' 4'\$' %4+*52"9+\$2.6' *2'9; *%< *25")\$6" P.%. [).+%'9&\$.d; '2',+P'%'&' " +;%'2'%"?F&.2'3 E#R")\$6" %&' *'9+*6' .%'2' '52%" +6'8' l+NR"4.11&' 'lN' .\$.%'&)"%' , ,+*%?"

D? 0 '""9+[\$.j' "%&)"%' +; *'. \$d; *%<R",+9;2.\$["+'9<Q' *2'9; *%<"+*D / R*)'.2'2", ;\$6) P '\$%)l" d; '2%'+\$2* '1).8' "%+29+N'")\$6" *2N+\$2.Q.l.%' .2?'" : '9; *%<"+, '\$' %4+*5' .\$.%)2%* ;9%; *' R2;9&')2'N*+%'9%.\$["

D #\$.'.22; .\$.["%'&.2'3 E#R"> : Z: W'&)'2'9+*6.\$%)%'6'4. %&'&'&' "E.,.9'"+, 'HS[. '\$' *.\$["]\$6" F'9&\$+l+ [<)"\$6 %&' "0. *'1'22" F'1'9+P P; \$.9)%.+\$2'W; *') ;?""See id.)%"`@TAR'N")?'SAD?"

A 0 ' "+Q2' *8' "%&)"%'&' " J? : ?'7' N)"%' P '\$%' +, "G+P P *9' l2'3)%.+)\$' l"#2% %; %' "+, " : %) \$6)*62")\$6" F'9&\$+l+ [. '2'b3# : F=" 3# : F'" *9' '\$%l<' .22; '6' [; .6' l. \$'2'+\$'9<Q' *2'9; *%<"+*#"\$%' *\$' %B9+\$'9%'6'6'8.9'2R'2%*22.\$[")\$' '\$' [.\$' '\$[BQ)2'6')NN*+)9&"%'&)"%'Q; .162'2'9; *%<2<2% 'P2'6. *'9%l<".\$.%+"#F'"9&\$+l+ [<?"See 3# : FR" : <2% 'P2' : '9; *%<HS[. '\$' *.\$[0' G+\$2.6' *)%.+\$2',+*") (; l%.6.29.Nl.\$) *%<MNN*+)9&".\$%'&' "HS[. '\$' *.\$["+, "F* ;2%4+*%&< : '9; *' " : <2% 'P, 3# : F" : N'9.)l" > ; Q'" TTB@AT"b3+8)"ST@A=R'&"%N20hh6+.?+*[h@T?ATS`h3# : F? :>? TTB@AT?"F&' "7' N)"%' P '\$%' +, "Z+P' l)\$6" : '9; *%< " b7Z : =)"l2+* *9' '\$%l<' *'1')2'6. %2'+4\$'9<Q' *2'9; *%<N+1.9<"+*#F'"6'8.9'2R'6' l.\$')%. \$["2.c'2%*%)' [.9'N*.\$9.Nl'2%&)"%' . " Q' l. '8'2'4.11&' 'lN'2%)5' +&l6' *2'2%+N; \$) ; %&+* .j' '6' .\$.% ; 6' *2', +P'%) PN' *.\$["4. %&'9+\$'9%'6'6'8.9'2?)"See J? : ?'7' N%"? +, "Z+P' l)\$6" : '9; *%<R" : %)%" [.9"> *.\$9.Nl'2",+* : '9; *.\$["%'&' "#\$%' *\$' %+" ,F&.\$[2'b#F=R" a' *2'+\$@?T"b3+8)"@DR"ST@A=R' &"%N20hh444?6&2? [+8h2'9; *.\$["%'&' #F?" 3# : F")\$6"%'&' "3)%.+)\$' l'F'1'9+P P; \$.9)%.+\$2")\$6"#\$, +*P)%.+\$'M6P. \$.2%*)%.+\$' b3F#M=6'8' l+ N'6')*.25'P)\$[" P '\$%' ,) P' 4+*5",+*')66*22.\$["9<Q' *2'9; *%<.22; '2?""See 3# : FR" - *) P' 4+*5",+* #PN*+8.\$["G% .9)l'#\$, *)2%* ;9%; *' "G<Q' *2'9; *%< "bST@^=R' &"%N20hh444?\$.2%? [+8h2.%'2h6' ,) ; l%h., l'2h6+9; P' '\$%2h9<Q' *2'9; *%<B, *) P' 4+*5h9<Q' *2'9; *%<B, *) P' 4+*5BTS@S@^?N6,?"F&' " G+P P; \$.9)%.+\$2" : '9; *%<R'K' l.)Q.l.%<R")\$6"#\$%' *N*)Q.l.%<G+; \$9. l"#a12"bG : K#G"#a12="G<Q' *2'9; *%<K.25" ()\$[" P '\$%)\$6" W'2%">*)9%.9'2' 0 +*5.\$[" / *+; N" ^"6'8' l+ N'6')'2' [P '\$%B2N'9.,.9')\$)l<2.2"+, "%&' ")NNl.9)%.+\$' +, "%&' " G<Q' *2'9; *%< *) P' 4+*5R")2'4' l1")2* '9+P P '\$6)%.+\$2',+*8+1; \$%)< *' ,+*2%+")66*22'9<Q' *2'9; *%<9+\$9' *2?""See G : K#G"#aR' 0 +*5.\$[" / *+; N" ^R" G<Q' *2'9; *%<K.25" ()\$[" P '\$%)\$6" W'2%">*)9%.9'2R' -. \$)l'K' N+*% "bST@D=R' &"%N20hh%)\$2.%.+\$?,99? [+8h2%2h)96+92h* 'N+*%2hST@Dh -GGBFMGBG<Q' *B#F&B)N' *BK' l@?@BST@D?N6,?"See also -FG"K' N+*%+\$'#\$%' *\$' %+" ,F&.\$[2'J' *2'G+PN)\$. '2%+"M6+N%W'2%">*)9%.9'2%+"M66*22'G+\$2; P' *">*.8)9<)"\$6" : '9; *%<K.252 bg)\$'S_R"ST@D=R' &"%N20hh444? ,%9? [+8h2<2% 'Ph., l'2h6+9; P' '\$%2h* 'N+*%2h, '6' *)lB%)6' B9+P P.22.+ \$B2) , , B * 'N+*%B\$+8' P Q' *BST@CB4+*52&+NB' %%.%1'6B. \$%' *\$' %B%&.\$[2BN*.8)9<h@DT@S_+*%N'N6, "bN*+N+2. \$["N*.8)9<)"\$6" 9<Q' *2'9; *%<Q'2%N")9%.9'2")22+9.)%'6'4. %&' #F=i" J? : ?'7' N%"? +, "Z')l%&')\$6"Z ; P)\$' : *8.9'2R' K)6.+ - *'d ; '\$9< " 0. *'1'22" F'9&\$+l+ [<'. \$ ('6.9)l'7'8.9'20' / ; .6)\$9' ,+*#%\$6; 2%*<)"\$6" - ++6)"\$6"7* ; ["M6P. \$.2%*)%.+\$' : %) , , bM; [?"@^R"ST@C=R' &"%N0hh444? ,6)? [+8h6+4\$1+62h ('6.9)l7'8.9'2h7'8.9' K' [; 1)%.+\$)\$6 / ; .6)\$9' h / ; .6)\$9'7+9; P' '\$%2h; 9PT__S_S?N 6, "b [; .6)\$9' "%&'&' " . \$6; 2%*<"+\$9+\$2.6' *)%.+\$2',+*%&'&'2), '")\$6" , , '9%.8'6'8' l+ NP '\$%)\$6" ; 2'"+, "K- %'9&\$+l+ [<'. \$' P'6.9)l'6'8.9'2=?

2+,%4)*")\$6&)*64)*'%)*)*'22'\$%)1%+2.[(\$)1.\$[")\$6"9+\$%+1+",K)6.+M99'22"3 '%4+*52)\$6%+'\$2;*'"
 %&'N*+N*'*)%.\$'+,%&'\$%4+*5R'9*')%'2'+\$'N'*2N'9%.8'?"MS+%&'*N'*2N'9%.8'R"&+4'8'*R'n;2%)2"
 '1'8)\$%"+%&'9+\$2;P'R".2%&'"\$6B%+B'\$6'2'9;.%<+,"Q+%&"\$%4+*5)\$6%&'6'8.9'2%&)'9+\$9%"+
 9+PP'9.)1"\$%4+*5'2'*8.9'2?""7'8.9'2)\$6"+%&'*\$%4+*5"'1'P'\$%2'P)<"Q'",;*.2&'6"Q<"&'2'*8.9'"
 N*+8.6'*R%&.*6"N)*. '2R")\$6"9+\$2;P'*2%&'P2'18'2?-"0&+2&+;16"Q"'*2N+\$2.Q1'",+*9<Q'*N*+%9%+\$2,+*"
)"6'8.9'R"+*2&+;16"*2N+\$2.Q.1.%<"Q'"2&)*'6".\$2+P'"*9+[\$.j)Q1"')\$9*+22%&'D/"'9+2<2%Po"0'"
)12+)"NN*'9.)%'"%&)"D/"'.2"\$+%)N%"+Q")'2'N)*%'"\$%4+*5R"Q;%)&'*4.11"Q".\$.%['*]'6"4.%&'c.2%.\$["
 N*'8.+;2['\$'*)%.\$"\$%4+*52R'N'*)&N2".\$6',.\$.%1<?"7+"d;'2%.\$2)Q+;%&'9<Q'*N*+%9%+\$2+",D/"
 '\$%4+*52".\$&'*\$%1<".PN1.9)%'"%&'"+%&'*\$%4+*52")22+9.)%'6"4.%&"&'Po"0&'*2&+;16%&'1.\$'2'Q'4' '\$
 '\$%4+*52"Q'"6*)4\$"*1)%%.8'"%+*"2N+\$2.Q.1.%<,+*D/"9<Q'*2'9;*.%<o"0' ".\$.%'"9+PP'\$%+\$%&'2'")\$6"+%&'*

\$'4+*52',*
'c91;2.8"1.

@@?
 1.P.%.(\$")99...PNI.2&'6"&*+; [&' , '9%.8'R")\$6"2+P'%.P'2"
 P ;%;)lR");%...\$% +\$"&'";2'+,");%&'\$.9).+\$.\$"\$'4+*52"+6)<")\$6"4&'%&'*"
 'c.2%.(\$");%...1"Q")NNI.9)Q1'"%+%&'D / "'\$8.*+\$P'\$%?" 0 "2' '5"9+PP'\$%+\$%&'"
 ', '9%.8";2...)+\$R'\$.N)*%.9;1)*R ,+*N*+% '9%.\$[D / "\$'4+*52)(.)\$2%";\$);%&+*.j'6"
)99'22)\$6"'\$6B;2'*"6'8.9'2")(.)\$2%)%%)9&.\$["+"P)1.9.+;2"\$'4+*5"9+PN+\$'\$.2R")2'4'11")2%&'N'*9'.8'6"
 1.P.%)%+\$2")\$6"6*)4Q)952+",%&+2'";2'2?"M*'"%&'*'"2N'9.,.9"9+\$2.6'*)%.\$2%&)"4+;16")NNI<"+D / "
 6'8.9'2o""J\$6'*"4&)"9.*9;P2%)\$9'2"4+;16 P ;%;)1");%&'\$.9).+\$ Q' 9+\$2.6'*'6"22'\$.)1%+"\$2;*' +*"
 Q+12'"*2'9;*.%<o""M*'"%&'*'"\$<"9.*9;P2%)\$9'2"4&'*'"P ;%;)1");%&'\$.9).+\$ 4+;16"\$+%Q'"Q'\$',.9.)lo"#,")"
 9+PP ;\$.9).+\$2"N*+8.6'*"6.6"\$+%. \$8'2%\$.P ;%;)1");%&'\$.9).+\$R"&+4"4+;16"%&)"1.5'1<"), '9% .%2*'1)%8'"
 +8'*)11"2'9;*.%<*"25o""0 &)"%+%&'*");%&'\$.9).+\$2"P'%'&+6+1+['.2"P.[&"Q'", , '9%.8", +*D / "2'9;*.%<o""
 0 +;16"%&' P)22"6'Nl+<P'\$% +, "&.[&B8+1; P'R'1+4B9+2"D / "6'8.9'2".S#+F"\$'4+*52"N* '2'\$%N)*%.9;1)*"
);%&'\$.9).+\$9&)11'\$["'2o""Z+4"9)\$N*+8.6'*2', , '9%.8'1<");%&'\$.9)%"%&'9+PP ;\$.9).+\$2+", "&.[&B

2' '5'9+P P '\$% +\$N&<2.9)1'2'9;*.%<" +Qn'9%.8'2")\$6'\$ '62'\$.%&'D / "'\$8.*+\$P '\$%R)\$6"+\$) \$<"+%&' *"
9+\$2.6'*)%.\$2%'&' "G+P P.22.+\$2&+;16"%5' ".%+"99+; '\$%\$.%2' c) P.\$%.\$+" ,N&<2.9)1'2'9;*.%<"+, "D / "
\$' %4+*52")\$6'6'8.9'2'?"

@_? 0 &)%'6'8.9'B)\$6'\$ %4+*5BQ)2'6 N&<2.9)1'2'9;*.%<"P '%&+62"4+;16"Q'"P+2%"', , '9%.8' ".
)NNI. '6"%+D / "6'8.9'2o""F+4&)%' c% '\$%6+'2'1)95"+, "N&<2.9)1'2'9;*.%<"N+2'")"%&'*)"%%+R"+*".%\$%+6;9' "*25"
, *+P"; \$2; N' *8.2'6'D / "6'8.9'2o""F+4&)%' c% '\$%6+'2'1)95 +, "N&<2.9)1'2'9;*.%<"N+2'")"%&'*)"%%+R"+*"
. \$%+6;9' "*25", *+P ; \$2; N' *8.2'6'D / "6'8.9'2o"" 0 .11"%&'D / "'\$8.*+\$P '\$%N'2'\$%)\$< '\$4"+*"; \$, d; "
9&)1' \$['2o"" 0 &)%'+%&' *'.22; '2')\$6' ,)9%+*2'2&+;16"%&' "G+P P.22.+\$9+\$2.6' *'\$%&' 'd; '2%.\$+ , "N' *2' *8.\$["
9+\$, .6' \$%.)1.%<R'\$.% [*%<')\$6')8).1)Q.1.%< %&*+; [&'N&<2.9)1'2'9;*.%<o

@^? 0 &)%'2N'9%2'+*'; 2'2'+, "D / "\$' %4+*52'2&+;16"Q'"9+\$2.6' *'6'eP.22.+\$9*.%9)1f bi.e.R"*'1)'6'
%+2), '%<=")\$6R')2'2; 9&R'6+%&' '<'4)**)\$%2N'9'.1)9+\$2.6'*)%.\$+4. %&' *2N'9"%+N&<2.9)1'2'9;*.%<o"" 0 &)%"
eP.22.+\$9*.%9)1f")9%.8%. '2'6.2%.\$[; .2%&'&'2' "\$' %4+*52')\$6'&+4'9)\$%&'<'Q'"N&<2.9)11<'2'9; *'6'\$.%&'&'D / "
'\$8.*+\$P '\$%o" : &+; 16'9' *%).'D / "\$' %4+*52'Q'"N&<2.9)11<'6.8' *2'")%&'&' "\$' %4+*5'1'8'1'2'")' *'2; 1%+ , "%&' "
eP.22.+\$B9*.%9)1f")2N'9%2%'&' <2; NN+*%'+*')\$Q'l'o #, "2+R'&+4'2&+;16"%&)%'6.8' *2.%<'Q'"9&.'8'6o""

4. Device Security

@V? H\$2; *.\$["%&'&'N*+8.2+\$+, "9+\$, .6' \$%.)1.%<R'\$.% [*%<R')\$6")8).1)Q.1.%< *'d; *'2%'&)%'6'8.9'2'
) *'2'9; *'1)\$6'9)N)Ql' "+,); %&' \$%.9)%. \$[+\$%&' "\$' %4+*5'?" 0 &)%' P '%&+6+1+ [. '2'4.11"Q'"; 2'6'+N*+%'9%'&'&' "
8)*. '%<"+, '6'8.9'2'9+\$ \$9%'6'+D / "\$' %4+*52o""-+*')c) PNI'R'2+P '6'8.9'2%'&)%'4.11'9+\$ \$9%'&'&'D / "
\$' %4+*52'4.11'\$.9+*N+*%)'"2+P' , +*P' +, : ; Q29*.Q' *'#6' \$%.%< (+6; 1' "b: # (= %'9&\$+1+ [<?@V #29; *'\$%": # ("
% '9&\$+1+ [< *+Q; 2% '\$+; [&'&' + '\$2; *'2'9; *.%<'4. %&+; %'N+2. \$["%&'&')%2%+9+\$2; P' *2R'2' *8.9'N*+8.6' *2R' +*"
&'&"; \$6' *1<.\$[".\$, *)2%*; 9%; *'o"" 0 .11": # ("%'9&\$+1+ [<'Q'"1'8'*) ['6', +*D / o""7+2%)\$6')62', +*'\$' c%"
['\$' *)%.\$+': # ('9')62 be.g.R' PQ'66'6': # (2'b': # (2== ', , '9%.8'1<')66' *22'2'9; *.%<)"\$6'\$.% [*%<'9+\$9'*\$2o"
0 &)%'\$'4'2'9; *.%<'Q'\$', %2'+*9&)1' \$['2') *'9*')% '6'Q<'&'&' ; 2' "+, " : # (2o""M* '%&' *'\$+ \$B: # ("P' %&+62"
&)%'2&+; 16"Q'"9+\$2.6' *'6', +*%&. [&B8+1; P' R'1+4B9+2%'6'8.9'2R')\$6'., "2+R') *'2%\$6')62'Q+6. '2'9; *'\$%1<
6'8'1+N.\$['2%\$6')62', +*2; 9&P' '%&+62o"" 0 &)%'+%&' *'.22; '2')\$6' ,)9%+*2'2&+;16"%&' "G+P P.22.+\$9+\$2.6' *'
+\$%&'&'d; '2%.\$+ , "N' *2' *8.\$["G#M"%&'&+; [&'6'8.9'2'9; *.%<o

5. Protecting 5G Networks from DoS and DDoS Attacks

ST? M'2'9; *.%<' cN1+.%&)%' * ['%2'\$' %4+*5' *2+; *9'2R'2; 9&")2')'7'\$.)1B+, B: *'8.9' b7+ : ="+*"
7.2%*.Q; %'6'7'\$.)1" +, " : *'8.9' b77+ : =")%95R'9+; 16'&)8'")\$. PN)9%+\$)8).1)Q.1.%<"+, "2' *8.9'Q<'9); 2.\$[")
%+%)1'+*N)%'.)1'6.2*; N%.\$+ , "2' *8.9' ?ST"" 0 '2' '5'9+P P '\$%)\$6'2; NN+*%.\$['(6)%'+\$%&' 'P'9&)\$.2P2'P+2%"

@V : ; Q29*.Q' *'#6' \$%.%< (+6; 1'2'b: # (2=) *' *' P+8)Ql' '9+PN+\$' \$%2+, "P+Q.1' "N&+\$'2')\$6'6'8.9'2%'&)%' (\$)Ql' "%&'&'9'11"
N&+\$' "%+)99'22'2; Q29*.Q' '6'2' *8.9'2'Q<"); %&' \$%.9)%. \$["%&'&' ; 2' *'+, "%&'&'9'11"N&+\$' "%+&'&' \$' %4+*5'?" : # (2')12+2%+*'
N' *2+\$)1'\$. +*P)%.\$+R'\$. \$91; 6.\$["%' c%P'22) ['2R'9+\$)9%1.2'2')\$6'2' *8.9' B* '1)'6'\$. +*P)%.\$+?" See 0)<\$'g)\$2' \$'k"
K.95"M<' *2R'Forensic Software Tools for Cell Phone Subscriber Identity ModulesR'3)%.\$)1'#\$2%.; %' +, " : %\$6')62"
)\$6' F'9&\$+1+ [<R'&%%Noh92*9?\$.2%? [+8h [+; N2h: 3 : hP+Q.1' m2'9; *.%<h6+9; P' \$'2hP+Q.1' m, +* '\$2.92hNNB: # (B%+12B
..\$)1'N6, "b1)2%"8.2.%'6'3+8'Vh"ST@A=

ST #\$(%)6'\$.)1B+, B2' *8.9' b77+ : =")%95R')\$)%%)95' *)%PN%2%+N' *8'\$%; 2' *2', *+P)99'22.\$[".\$, +*P)%.\$+*2' *8.9'2'
Q<'%) * ['%.\$['9+PN; %' *2R'2N'9., .9'4' Q2. '%2'+*2' *8.9'2R'+*'\$' %4+*5'9+\$ \$9%.\$+2'F&' "P+2%9+P P+\$%<N' "+, "7+ : ")%95"
+99; *2'4&' \$%)\$)%%)95' *'e, 1+62f")\$' %4+*5'4. %&'\$. +*P)%.\$+R'+8' *1+)6.\$["%&'&'2' *8' *4. %&'&'&'d; '2%2%+8. '4'")

(continued...)

1.5'1<"%+"Q"'', '9%.8'')%N*'2'*8.\$[9+\$.6 '\$%.).1.%<R'\$.% [*.%<")\$6")8).1)Q.1.%< %&*+; [&"P.%.().+\$.+", 7+: "
)\$6'7 7+:. ")%%)952?'"\$.252'\$.%&'N1)\$ \$'6'D / "'\$8. *+P '\$%R'\$.91; 6.\$["% '9&\$.d; '2',+*N*+% '9%.\$["Q+%&'&%"
\$ '%4+*5'9+\$%*+1')\$6'6)%"N1)\$ '2?S^e"" 0 &.9&"P '%&+62"+, '6', '\$2'")(.).\$2%"7+:)\$6'7 7+:)%%)952?)"*'%&'
P+2%"9+2%B',, '9%.8'o

S@? 0 ' 2 ' 5'9+P P '\$%+"\$4 &'&'*)66.%.+\$.)l"2%)\$6)*62)*'"\$ ' 6'6"+"22.2%\$.)P.%.().\$.["7+:
)\$6'7 7+:. ")%%)952?'" ()\$<2;9&")%%)952 .\$.8+18'"%&'",+*[\$["+, "#>B2 '\$6 '*')66*'22'2'b2N++,. \$[="2+"%&'
)%%)952.\$["P)9&.\$'2'9)\$ \$+%Q'")'2.1<".6 '\$%.. '6)\$6"+"11+4")PNI.,.9)%+\$.+",)%%)952?'" 0 &)"%)\$.B2N++,. \$["
%'9&\$.+1+['. '2')*'"P+2%"1.5'1<"%+"Q"'', '9%.8'").\$%&'D / "'\$8. *+P '\$%R'")\$6'4&)"%)*'%&'9&")11'["'2'%"%&'.' *
6'NI+<P '\$%o

6. Patch Management

SS? -+*"P+*"%"&)\$")'6'9)6'R'9+P P ;\$.9)%+.\$2'2'9;*.%<");%&+*.%. '2")\$6' cN'%"Q+6. '2R'2;9&")2"
%&'G+P P.22+.\$12- '6'*)1"M68.2+*<"G+P P.%%' ',+*9+P P ;\$.9)%+.\$2'2'9;*.%<"N+1.9<"6'8'1+NP '\$% b&%"
G+P P ;\$.9)%+.\$2' : '9;*.%<"K'1.).Q.1.%<")\$6"#%\$ '*+N'*)Q.1.%<"G+; \$.9.1'bG: K#G=R'&)"8'2%"22'6'%"
.PN+%)\$9'"+, *' [;1)'2<2% 'P'N)%9&.\$[?SS ""MNN1<.\$["2'9;*.%<"N)%9&'2")\$6'*+;%. '\$' N)%9&'P)\$) ['P '\$%9)\$"
'6;9'5\$+4\$8;1\$')Q.1.%.'2'.'.6'8.9'2')\$6'2+, %4)'R^SC *'6;9.\$["%&'%.25"+, "2;99'22; ;1'2'9;*.%<"' cN1+.%2 %+

(Continued from previous page)

4'QN) ['?'M2)"*2; 1%R%&'2'2*8'*4.11"Q'";)\$Q1'%"N+*9'22*'d; '2%2R'")\$6")1' ['.P)%"'; 2'*4.11"Q'";)\$Q1'%"+"99'22%'&"
2.%'?"See J \$.%'6':.%)'2'G+PN; %*"HP' * ['\$9<"K')6.\$'22'F')P'R'Security Tip: Understanding Denial of Service
Attacksr"&%N20hh4 4 4?; 2B9' *%? [+8h\$9)2hh.N2h: FT^BT@D'bl)2%"8.2%'6'3+8"VR'ST@A=?""#\$")'6.2%*.Q; %'6'6'\$.)lB+, B2'*8.9'
b7 7+:. ")%%)95R'")\$)%%)95' *P (<%)5'9+\$%*+1+", +%&'"; 2' *21'9+PN; %' *2%"&+; [&'2'9;*.%<"8; 1\$'*)Q.1.%.'2?""F&'")%%)95' *
9)\$%&'\$. ,+*9'%'&'9+PN; %' *2%"&+2' '\$6'1)* ['"]P+; %\$2'+, '6)%"%+"")4' Q2.%'"+*'"P).1)66*'22?""F&'")%%)95' *e6.2%*.Q; %'2'F
%&'2'")%%)952?)"P+[\$'P; 1%.NI' '9+PN; %' *2R'4&.9&'4+*5'\$.%)\$6'P'%"+"8' *1+)6%"&'2'2*8'?"?""See id.

S^ F&.2'P)<'. \$91; 6'%"%&'"; 2'"+, "P; 1%.NI'1)1)<'2'+, '6', '\$2'R'2%)%\$.["'4. %&', *+\$.B'\$6")NN1.9)%+.\$2+*%&)*64)*'%"Q1+95"
9'*)\$.%<N'2'+, %&*, ..9i'5' '<9+PN1'%.+\$. \$.6.9)%+*2i'Q1)95&+1.\$["+*2. \$5&+1.\$ [i'\$.%& ; 2+\$.N* '8'\$.+\$.2<2% 'P2i"
.. *'4)112R' *+; %' *2R'")\$6'24. %9&'2i'; N2%*)'P',. 1%'\$. \$[i'")\$6'7+: '6', '\$2'2<2% 'P2?""See / '+* ['"]+; 2+; *2R'] '<"
G+PN1'%.+\$.#\$.6.9)%+*20' (.\$.P. j.\$["%&'H., '9%+", '7+: M%%)952+\$'H1)2%.9'G1+; 6BQ)2'6'MNN1.9)%+.\$2'W)2'6'+\$"
MNN1.9)%+.\$B1'8'1' ()5+8'G&).\$'G&'95N+.\$2R'ASSR'ASC^bST@^=R""
&%N20hh, 1'2?.. ?; j&9&h2%.11' *hGXE : HK t STST@^hGXE : HKhGXE : HKhGXE : HKhGXE ; 6 t STG+PN; %\$. \$ [t STH\$)Q1.\$ [t STF'9&\$.+
1+ [<h: &+*% t ST>N' *2hGXE : HKmST@^m@@"mGK?N6,i"see also G&)*1)PN+2">)*.5)5.2'")1?)"Distributed Denial of
Service Attacksr'_F&'""#%\$'%">*%+9+1"g+; *\$)1'^b7'9' ST@^=R&%N0hh4 4 4?9.29+?9+Ph9h' \$h; 2h)Q+; %hN* '22h.\$% '\$B
N*+%+9+1Bn+; *\$)lhQ)95B.22; '2h%)Q1' B9+\$% '\$2BCTh6+2B)%%)952?&% P li"" a)1%' *">+N'25.9R'Z+4'%">+*8' '\$%+*%": %+N'7+: "
M%%)952o"bE9?@AR'ST@S=R'&%N20hh&+46+ '2.\$% '\$'4+*5'9+PhST@ShN* '8' '\$B2%+NB6+2B)%%)952?"

SS See G+P P ;\$.9)%+.\$2' : '9;*.%<"K'1.).Q.1.%<R'")\$6"#%\$ '*+N'*)Q.1.%<"G+; \$.9.1'bG: K#G=R' 0 +*5.\$[" / *+; N'S@0'G<Q' *
: '9;*.%<"W'2%>)*9.9'2'-.)1)K'N+*%")%CD'bST@@"=R'&%N20hh*)\$.2.%.+\$.99? [+8hN2&2h6+92h92*.9h 0 / SMBG<Q' *B: '9;*.%<B
W'2%B>)*9.9'2B-.)1)BK'N+*%?N6,?

SC See e.g.R'Protect Myself from Cyber Attacksr'7'N'*)%P '\$%+", "Z+P'1)\$6": '9;*.%<"bM; [?'^R'ST@A=R"
&%N20hh4 4 4?6&2? [+8h&+4B6+B.hN*+% '9%B P<2'1, B9<Q' *B)%%)952?be] ' 'N<+; *+N'*)\$.["2<2% 'P'R'Q*+42' *R'")\$.B8.*; 2'")\$6"
+&'%'9%*.9)1'2+, %4' *'"; N%"6)%"?": '9;*.%<"; N6)%"2')\$6'N)%9&'2'")*")8).1)Q1' ",+*%,' ' ",+*P'P)n+*9+PN)\$.'2?f=i
-+\$.%.' *G+P P ;\$.9)%+.\$2R'Frontier Communications Encourages Hyper Vigilance When It Comes to Anything
Cyber bE9?Cr'ST@C=R'&%N0hh.\$8'2%+*?; *+\$.%.' *9+Ph'1')2'6'").1?9, PoK'1')2'#7q_V^__S"be] ' 'N<+; *+N'*)%\$.["
2<2% 'P'R'Q*+42' *R'")\$.B8.*; 2'")\$6'&+%*9%.9)1'2+, %4' *'"; N%"6)%"?": '9;*.%<"; N6)%"2')\$6'N)%9&'2'")*")8).1)Q1' ",+*%,' *' "
, *+P'P)n+*9+PN)\$.'2?f=i"Ten Steps to Smartphone Security, - '6'*)'l'G+P P ;\$.9)%+.\$2'G+P P.22+\$.R"
&%N20hh4 4 4?99? [+8h2.%'2h6'); 1%h.,.1'2h2P' *%N&+\$'mP)2% '*m6+9; P '\$%?N6, "beM99'N"; N6)%"2')\$6'N)%9&'2'%"<+; *
2P' *%N&+\$'12'2+, %4' *' ?f=i"&%N20hh4 4 4?99? [+8h2.%'2h6'); 1%h.,.1'2h2P' *%N&+\$'mP)2% '*m6+9; P '\$%?N6, "bl)2%"8.2.%'6'

(continued...)

6'8.9 Â 4787

+*2'*8.9'R"\$+1+[\$ '*Q' .\$["2+16")%*"%) .1R".2"2%.11"*'9'.8.\$["2'9; *%<B*'1)'6"N)%9&'2")\$6"4&'%&'*.%"2"2%.11"2),'"%+";2'o

SD? -. \$)1<R"4'2'5"9+PP'\$%+\$"4&'%&'**'1'8)\$%2%)\$6)*62"&)8'"Q'"\$N*+6;9'6"%&)"N*'2'\$%"9+PP+\$)NN*+)9&R"+*6'29*.Q'"")Q'2%"N*)9%.9'R%+",)9.1.%)"N)%9&"P)\$['P'\$%N*+9'6;*2%&)"9)\$"Q'"")NNI.'6**'["*6l'22"+,%&'";\$6'*1<.\$["6'8.9"+N'*)%.\$["2<2%'P".)\$]"D/"'9+2<2%'P?""#\$%&'")Q2'\$9'+,)"\$<"6'Nl+<'6"2%)\$6)*6R"2&+;16"%&.2"'',+*%Q'"'cNl+*'6R")\$6".,2+R"4&.9&"2%)\$6)*62"Q+6<"+*"+*";P"4+;16"Q' %&'")Q'2%"9)\$6.6)%'"%+)"66*'22"%&.2".22; 'o""0 &)"%+%&'*.22; '2")\$6",)9%+*2"2&+;16"%&'")G+PP.22.+\$"9+\$2.6'*\$"+\$"%&'d; '2%.+\$"+,N*'2'*8.\$["G#M"%&*+; [&"N)%9&"P)\$['P'\$%o

7. Risk Segmentation

SA? K.25"2' [P '\$%)%.\$.S8+18'2"2Nl.%%.\$["\$'%4+*5''1'P '\$%2'\$.%+2'N)*%"9+PN+\$'\$%2%+"&'lN".2+1)%'"2'9; *%<Q*')9&'2")\$6"P.\$.P.j'"8'*)11"*25?"-+*'c)PNI'R'\$%4+*52"9)\$Q'"6.8.6'6".%+ ".2+1)%'6"2;Q\$'%4+*52%+"Q++2%"N'*,+*P)\$9'")\$6".PN*+8'"2'9; *%<?S^"K.25"2' [P '\$%)%.\$+*"\$%4+*5"21.9.\$["P.[&"")1l+4['*')%*"2.1.'\$9<R"p+*'""', '9%.8'"9<Q'***&*)"P+\$.%+*.\$[")\$6")l<2.2")\$6"2%*+[\$ '*2'9; *%<"+*"\$%4+*5"2'*8.9'"2;NN+*%.\$["9*%.9)l".,\$*)2%*;9%; *'"9+PP;\$.9)%.\$2"b%+ ".9l;6'"#G:")\$6":GM7M=?""0'"2'5"9+PP'\$%+\$%&'";2'"+,2' [P '\$%)%.\$.S"D/"\$'%4+*52)\$6"&+4"2' [P '\$%)%.\$+9)\$"*'6;9'"*.25".\$2;9&"\$'%4+*52?"

S_? 0'"2'5"9+PP'\$%)\$6"2;NN+*%.\$["6%)"+\$4)<2"%&)"2' [P '\$%)%.\$+9+;16"Q'")9&.'8'6"%&*+; [&+;%%&'")D/"'9+2<2%'P"%+P"

C^? 0 ")12+2' '5"9+P P '\$%+\$4&'%'*)\$6"&+4 2'9;*.%<"\$ ' 62",+*D / "#+F"6'8.9'2"P.[&%"

CD? / .8'\$%&'1.5'1<";\$N*'9'6'\$%'6"6.8'*2.%<"+,"9+\$9'6"6'8.9'2")\$6%&'.'*P)\$;,)9%;* *2R"

CA? 0 '";,%&' *2' '5"9+P P '\$%+\$Q'\$',.2")\$6"9+2%2)22+9.)%'6"4.%&'",,'9%.8'")*64)*'R"

2. Roles and Responsibilities

C_? W'9);2"+,"%&'")\$%.9.N)%'6"N*+1., '*).+,\$+",D / "\$'4+*52")\$6%&'6'8.9'2%&)"4.11"Q'"

P)S) ['6"4. %&.\$"9+PN)\$.'2?" Z+4"2&+; 16"N*+8.6' *2' 4 +*5"%+ ['%&' *")9*+22%&' "D / "'9+2<2%' P"%+)"9&.'8'" 6'2.*)Ql'" +; %9+P '2' .\$"9<Q' *"* .25" P)S) [' P ' \$%o""

C`? K'1) %'6l<R"4 "'2' '5". \$,+*P) %.\$+\$&+4 "%&' "D / "'9+2<2%' P"4. 1l"2&)*' ". \$,+*P) %.\$+)Q+; %' 9<Q' *"%&* ')%2")\$6"9+\$9' *\$2?"" -+*" c) PNI 'R'#\$,+*P) %.\$+:&)*.\$[")\$6"MS)l<2.2"E* [)\$.j) %.\$+2'b#: ME=" 2%)\$6)*62") *'"2%. 1l"1)* ['l<)"4+*5". \$"N*+ ['*22R")\$6"%&' . *2; 99' 22"6' N' \$62"+\$"%&' '1'8'1'+, ". \$6; 2%*<" N)*%. 9.N) %.\$?" 0 "'2' '5"9+P P '\$%+\$"4 &' %&' *")\$#: ME"9+\$2%*; 9%"9+; 16"Q' "+*2&+; 16"Q' ")NNl. '6"%+&' "D / "'9+2<2%' P'?" 0 +; 16". %"Q' ")NN*+N*).) "%+"6'8' 1+N")"D / B2N'9..9"#: MEo"" :&+; 16"D / "\$' %4+*52"Q' " . \$2%*; P '\$' %6"%+2; NN+*%) ; %+P) %'6"9<Q' *2'9; *%<"%&* ')%". \$6.9) %+*2")\$6"\$' %4+*5")\$+P)l<". \$,+*P) %.\$+ 2&)*.\$[")\$6")\$)l<2.2o"#2")\$#: ME"+*P ; 1%. Nl' "#: ME2"%&' "*" . [&%", +9)1"N+. \$%, +*"); %+P) %'6"9<Q' *" . \$,+*P) %.\$+2&)*.\$[")\$6")\$)l<2.2o"" :&+; 16". %)66* '22"#+F"9+\$9' *\$2" P+*"Q*+)6l<"+* , +9; 2+"\$' %4+*5B Q)2'6"9+\$2.6' *)%.\$+2o"" 0 &+"2&+; 16"Q' ". \$8+18'6o"" :&+; 16"4+*5"+, "#: ME2'6')l.\$["4. %&* '1) %'6"%+N.92"Q' " ,+*P)l< "9+*+*6.\$) %'6o""#, "2+R"&+4o"" 0 &%) *'"%&' "N*+N' *"+1'2+", "2%)\$6)*62"Q+6. '2R")68.2+*<"9+P P. %%" '2" 2; 9&")2 %&' "3+*%&"MP' *.9)\$'3 ; PQ' *.\$["G+; \$9.1"b3 M3 G=R. \$6; 2%*<"); %&+* .%. '2R"\$; PQ' *.\$[")\$6"6)%" 2' *8.9'2")\$6"%&' "-GGo

CV? 0 "'+Q2' *8' "%&)"%&' "3#: F- *)P' 4+*5", +*#PN*+8.\$["G*. %.9)l"#\$, *)2%*; 9%; *'"G<Q' *2'9; *%<" -*)P' 4+*5"b3#: F"G: -=^{CT} 2~6")*.

)+6)<12"\$; PQ '*.\$["29&' P)2%+" '\$9+PN)22"D / o"" 0 &)"N*)9%.9)1"2% 'N2'2&+; 16"D / "NI)\$ \$ '*2%)5' ". \$+*6' *%+ '\$2; *'%&)"% %&' ", ; \$9%.\$2'6.29; 22'6' ". \$%&.2'3 E#")(\$6")\$<+&%' *'1'8)\$% ", ; \$9%.\$2R') *'N*+N' *1<'9+\$2.6' *'6')\$6". PNI' P '\$% '6'4. %&.\$%&' . *'1'2N'9%.8' "+*[]).j).%+\$2o"

4. Benefits and Costs

^@? 0 '2' '5'9+P P '\$%+\$%&'N; Q1.9')*P' 'cN'9%'6%+"*2; 1% ,+P" ,).1; *'%+ . \$% [' *)' " 9+\$. .6'(\$%).1.%<R' . \$% [' *%<")\$6')8).1)Q.1.%<". \$%+"D / '\$ %4+*52"%&*+; [&); %&' \$%.9)%.\$R' '\$9*<N%.\$R'N&<2.9)1')\$6'6'8.9' '2'9; *%<R'N*+%'9%.\$["]).\$2% 7+: ")%%)952R'N)%9&'P)\$) [' P '\$%)\$6%*.25'2' [P '\$%)%.\$%G+; 16' ,).1; *'%+ ". PNI' P '\$% %&'2' 'P')2; *'2'6'9*')2' "Q*+)6Q)\$6)6+N%.\$+) \$6'6' (%*)9% ,+P . %2'N*+6; 9%.8' " '9+\$+P.9'; 2' o""G+; 16' .%*'6; 9' "%&' *'.25'+, "1+22+", "9+PN' %%.8' 1<'2' \$2%.8' ". \$,+*P)%.\$+ ,+*Q; 2.\$'22'2o"" G+; 16' .%N* '8' \$% %&' "1+22+", "9+\$2; P' *2'1'N' *2+\$)11<'.6' \$% .,.)Q1' ". \$,+*P)%.\$+o""G+; 16' "%NI)<") *+1' ". \$ N* '8' \$%.\$["%&' "; \$ \$9'22)*<'1+22+", "1., ' "+*N*+N' *%<'Q<R' ,+* 'c) PNI' R'N* '8' \$%.\$["P]1.9.+; 2' . \$% *; 2.+ \$. \$%+ '9* .%9)1' . \$, *)2% *; 9% ; *' o""Z+4'2&+; 16'4' "d;)\$% .<%'&'2' 'Q' '\$' , %2' . \$% *'P2+", "%&' . *' '9+\$+P.9'. PN)9%o"" 0 &)"% +%&' *'Q' '\$' , %2'4+; 16'1.5'1<'2% 'P' ,+*P')\$)NN*+N* .) %'1<'2'9; *' "D / '\$ %4+*5o

^S? 0 '")12+'2' '5'9+P P '\$%+\$ %&'9+2%2")22+9.)% '6'4. %&%&' ". PNI' P '\$%)%.\$+ ,+%' "P')2; *'2' 6.29; 22'6')Q+8')2' . \$8'2'P '\$2' ')*1<". \$%&' '6'2. [\$) \$6'Q; .16'NI)\$2' +, "\$ %4+*52R")2'+NN+2'6'+ "eQ+1%B+\$f" 2'9; *%<") , %*'6'NI+<P '\$%?"M* "%&' *' "+NN+*% ; \$% . '2', +* 'D / ". PNI' P '\$%)%.\$+ \$%&)"4+; 16'+\$1<'Q' *'1).j'6' ., "\$ %4+*52") *'N' '9' .8'6%+"Q' '2'9; *' o""M* "%&' *' "2+P' '2'9; *%<'1' P '\$%2%&)"R'Q<'NI)\$R'2&+; 16'Q' "en; 2% . \$% .P' f'+*%*')9%.8' ". \$8'2'P '\$%2R'Q)2'6'+\$*')1.j'6' %&' *')2R' , %' *'D / ". PNI' P '\$%)%.\$+o"" 0+; 16' %&'2' '9+2%2' . \$91; 6' "%&+2' ")22+9.)% '6'4. %&"; N6)%. \$[" 'c.2%.\$ ["&)*64) *'R' , . *P4) *'R'2+, %4) *'R')\$6')NN1.9)%.\$2o""Z+4' 4+; 16' %&' '9+2%2' +, "2<2% 'P"; N6) %'2'9+PN) *' %& %&' '9+2%2' +,)66.\$[" '\$% . *'1<' \$'4' '1' P '\$%2' , +*') %&)"11<' \$'4' 2'9; *%<'N+2% ; *' o" 7+'Q' '\$' , %2')\$6'9+2%2'8)*<'6'N' \$6.\$[" +\$%&' " ; 2' "+, "+N' \$B2+; *'9'2+, %4) *' '9+PN) *'6%+" N*+N* . %)*<'2+, %4) *' o""# , "2+R' "+4&)"% 'c' %' \$%") *' "+N' \$B2+; *'9'2+1; %.\$2")8).1)Q1' "%&)"9+; 16' *'6; 9' '9+2%2o"" M* "%&' *' "29)1' " '9+\$+P. '2'+Q2' *8'6")9*+22'1+9)R' *' [.+\$)1')\$6' \$%)%.\$+4.6' "D / '\$ %4+*52o" 0 '2' '5' 9+P P '\$%+\$2N'9. ,.9'9+2%2")22+9.)% '6'4. %&); %&' \$%.9)%.\$R' '\$9*<N%.\$R'N&<2.9)1')\$6'6'8.9' '2'9; *%<R' N*+%'9%.\$["]).\$2% 77+: ")%%)952R'N)%9&'P)\$) [' P '\$%)\$6%*.25'2' [P '\$%)%.\$%&' "D / '\$8. *+P '\$%?"

C. 5G Implications for Public Safety

^C? ()\$<'N; Q1.9'2), '%<'2' *8.9'2")\$6% '9&\$+1+[. '2')* ' "; \$6' * [+.\$["*6.9)1'9&)"\$ [' ")2" ; \$6' *1<.\$[" '\$ %4+*52"%&)"\$2. %.\$+ ,+*P'1' []9<'%"+"#>BQ)2'6'P+6'2'""Hc) PNI'2' . \$91; 6' "%&' (%*)\$2. %.\$+ ,+%' " \$%)%.\$+12'V@@'2<2% 'P' "+3' 'c% / '\$ *')%.\$+V@@'b3 / V@@-i' "%&' "8+1; %.\$+ ,+ , . *2% *' '2N+\$6' *'9+P P ; \$9)%.\$2' ,+*P'1)\$6'P+Q.1' "*)6.+bX (K="+"XFHR'. \$91; 6.\$[" %&' '6'8'1+NP '\$%+ , - . *2'3' %i")\$6%&' " 'P' * [' \$9' "+, '\$&)"\$9'6' "P' * [' \$9<")1' *%.\$["2' *8.9'2"%&)"% *'1<'+"#>BQ)2'6' '9&\$+1+[. '2%+"9+P P ; \$9)%' "4. %&%&' "N; Q1.9'"" 0 .11)\$<' \$'4'9)"% [+* . '2+, "N; Q1.9'2), '%<'2' \$2+*2 +*+%&' *'P)9&.\$'BQ)2'6' "+12'Q' '9+P' ")\$. \$91; 6'6'N)% *' +, "D / "N; Q1.9'2), '%<'9+P P ; \$9)%.\$2")*9&.% '9% ; *' o"" 0' ")\$%.9.N)% "%&)"%&' "6'8'1+NP '\$%+ , "D / '\$ %4+*52'4.11' 9+\$%*.Q; %' "\$'4'9)N)Q.1. '2%+"%&' '2' "#>BQ)2'6'N; Q1.9'2), '%<'N1)% ,+*P2'4&.1' ")12+'9*')%.\$[" '\$'4'9&)"1' \$ ['2R' . \$91; 6.\$["2'9; *%<'9&)"1' \$ ['2R' ,+*N; Q1.9'2), '%<' '\$% . '2'""

(Continued from previous page) _____

P).\$%).\$2%&)"#F'6'8.9'2'2&+; 16"2; NN+*%*'9' \$%Q'2'N*)9%.9'2', +*#>")66*22.\$[")\$6%&' "; 2' "+, "%&' '7+P). \$'3) P' " :<2% 'P')\$6'2; NN+*%&' "P+2%*'9' \$%8' *2.+\$+ , "%&' "#\$% '\$ %'>*%+9+R' "#>8A'""

^^? 0 '2' '5'9+P P '\$'+\$%'2'9; *%<'. PNI.9)%.\$2'+, "1.\$5.\$["+'\$.%' [*]%. \$["D / "\$'4+*52"4. %&" #>BQ)2'6"N; Q1.9'2), '%<'9+P P ;\$.9)%.\$2'NI), +*P2?"G+; 16"%&.2'9*')%'\$'4'2'9; *%<*.252"+*8; 1\$'*)Q.1.%.'2' ,+*3 / V@R", . *2%"*2N+\$6' *9+P P ;\$.9)%.\$2R'+*P' P' [* '\$9<")1' *%.\$["o" 0 &)"*2N+\$2.Q.1.%<"2&+; 16"D / " 2' *8.9' "N*+8.6' *2'&)"8' ,+*P.%. [)%.\$["\$6'P)\$) [. \$["%&'2' *%.252o" G+\$8' *2'1<R'9+; 16"D / "\$'4+*52"&'1N" reduce 2'9; *%<*.252"%&)"N; Q1.9'2), '%<,)9'2'."\$P. [*]%. \$[" ,+P'1' []9<"%+"#>BQ)2'6"%9&\$+1+ [. '2o" - +* "'c) PNI'R", . *2%"*2N+\$6' *2)"* 'NI)\$\$. \$["%+"P)5' " ; 2' "+, "#6' \$%<'G* '6' \$%.)R")\$6'M99'22' ()\$ [' P '\$" b#GM (=2' *8.9'2"%+"\$)Q1' ,)2%)\$6' *'1.)Q1' ")99'22"%+8)*. +; 2" P' [* '\$9<"\$'4+*52R")NNI.9)%.\$2R")\$6' 6)%Q)2'2'6; *.\$["P.2'2", "9*.2.2?^C" H, , '9%.8' ". PNI' P '\$)%.\$+,"#GM ("4.11"Q' "2N'9.)11<". PN+*)\$% ,+* *'2N+\$6.\$["%+"1)* ['B29)1' " P' [* '\$9. '2"%&)"2N)\$n; * .26.9%.\$)1'Q+; \$6)*. '2'Q'9; 2"4. %&+; %)"2'9; *")99'22' P)\$) [' P '\$' N*+9+1R' . \$% *Bn; * .26.9%.\$)1'9+P P ;\$.9)%.\$)6")99'22"%+9* .%9)1' . \$, +*P)%.\$)6")NNI.9)%.\$2'P)<'Q' '9+PN*+P.2'6?"G+; 16"D / '2' *8.9'2'2; NN+*%#GM (". \$) 'P)\$ \$' *%&)"* '6; 9'2"%&'2' " 2'9; *%<*.252o" : &+; 16"N; Q1.9'2), '%<")\$%.9.N)%")'\$'6' ,+* ; \$P)\$ \$'6R"; \$)%\$'6'6'8.9' "#GM (o" M* " %&' *'2N'9.)1'9+\$2.6' *')%.\$2' ,+*2%)\$6)*62'6'8'1+N P '\$% ,+*N; Q1.9'2), '%<'2' *8.9'2')\$6"%9&\$+1+ [. '2 ,+*D / R')\$6' . ,2+R") *'2%)\$6)*62"Q+6. '2")66*22.\$["%&'2' ".22; '2o"#2"%&' *' ")\$'6' ,+*")66.%.\$)1'2%)\$6)*62"Q+6< ". \$8+18' P '\$%o"

III. PROCEDURAL MATTERS

A. Ex Parte Rules

^D? F&.2"N*+9' '6.\$["2&)"1"Q' "%*')%'6'2)"eN' *P. %BQ; %B6.291+2' f"N*+9' '6.\$[".\$)99+*6)\$9' "4. %&" %&' "G+P P .22.+\$12'ex parte *; 1'2?^C" >' *2+\$2'P)5.\$["ex parte N* '2' \$%)%.\$2'P ; 2% ,.1' ")9+N<"+,)\$<"4* .%\$' \$' N* '2' \$%)%.\$+*")P' P+*)\$6; P'2; P P)*.j.\$["\$<+*)1'N* '2' \$%)%.\$+4. %&.\$%4+Q; 2.\$'22"6)<2"), %' *%&' " N* '2' \$%)%.\$+*b; \$1'22")6. , , *'\$%6')61.\$' ")NNI.9)Q1' "%+%&' " : ; \$2&.\$' "N* .+6")NNI. '2=?" >' *2+\$2'P)5.\$["+*)1" ex parte N* '2' \$%)%.\$2') *' *' P. \$6'6"%&)"P' P+*)\$6)2; P P)*.j.\$["%&'N* '2' \$%)%.\$+P' ; 2%"b@="1.2")11" N' *2+\$2')%\$6.\$["+*+%&' *4.2' "N)*% .9.N)\$\$. \$["%&'P' %.\$["%&'4&.9&"%&' "ex parte N* '2' \$%)%.\$+4)2'P)6' R')\$6"bS=2; P P)*.j' ")11"6")N* '2' \$%'6')\$6)* [; P' \$2'P)6' "6; *.\$["%&'N* '2' \$%)%.\$+P' #, %&' "N* '2' \$%)%.\$+ \$' 9+\$2.2% '6' . \$'4&+1' "+* . \$'N)*%+ , %&' "N* '2' \$%)%.\$+ , 6))+*) * [; P' \$2')1')6<* ' , 1'9' '6' . \$%&' "N* '2' \$%'12"

N*+9' '6.\$[2"[+8 '*\$'6"Q<";1"@?^Vb,="+*"+*4&.9&"%&'G+P P.22.+\$&)2"P)6'"8).1)Q1'"")P '%&+6"+,"
'1'9%*+\$.9",.1.\$[R 4*.%%"\$ex parte N* '2'(\$%)%+\$2")\$6"P ' P+*)\$6)"2; P P)*.j.\$["+*)l'ex parte N* '2'(\$%)%+\$2R"
)\$6"11")%%)9&P '\$%2"%&'*'+R"P ;2%Q'",.1'6"%&+; [&"%&'1'9%*+\$.9"9+P P '\$%,.1.\$["2<2%' P")8).1)Q1'",+*"%&)"
N*+9' '6.\$(R)\$6"P ;2%Q'",.1'6".%"&'%.*"(\$).8'",+*P)"%be.g.R"?6+9R"?c P1R"?NN%R"2')*9&)Q1'"?N6,=?">)*%.9.N)\$%2".\$"
%&.2"N*+9' '6.\$["2&+;16",)P.1.)*.j'"%&' P2'18'2"4.%&"%&'G+P P.22.+\$12"ex parte *;1'2?

B. Comment Period and Procedures

^A? >;*2;)\$%%"+2'9%+\$2"@?^@D")\$6"@?^@V"+,%"&'G+P P.22.+\$12"*;1'2R^_"G-K"pp"@?^@DR"@?^@VR"
.\$% '* '2%'6N)%%. '2"P)<,.1"9+P P '\$%2")\$6"*Nl<9+P P '\$%2"+\$+*Q',+* "%&'6)%'2".\$6.9)%'6"+\$%"&'%,*2%"
N)['+,%"&.2"6+9; P '\$%?"G+P P '\$%2"P)<Q'",.1'6";2.\$["%&'G+P P.22.+\$12"H1'9%*+\$.9"G+P P '\$%"-.1.\$["
:<2%' P"bHG- :=?""See Electronic Filing of Documents in Rulemaking Proceedingsr"AC"-K"S^@S@"b@VV`=?

