

!'
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L* < 1 +, " 0 * 1 5, + (% '&' J (@ % . 7 " N 2 " 0 (B (, " C (@ ? ' & " D " > (, . " \$ E " 0 * * < 7 (% + ' * < "	S =
C . X) . & ' & ' 9 * < " 0 * % 9 (7 . % ' (+, (' 2 / " 8 * ' " * " \$ % B . & ' (@ + ' . / " * < " 8 * ' " * " ; (& 6 (5, (% . "	S =
H 7 7 (' (* % +, " G < * B (& * % & "	S F
H 5 5 . % 7 (4 " H V " ; (& 6 (5, (% + < 2 " C . & * ,) ' (* % " * 9 " + " ^ < (. B + % 6 . " * 9 " > (, . " \$ E " J . 4) +, " O + < + & & 1 . % " "	= !
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8 * ' (6 . " * 9 " \$ % B . & ' (@ + ' (* % "	= M
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, :&'&-&'8, +7!<+7-\$:!!98 = = -, '&/'!'>?\$%&+&'8, :!+, @!A8&'%\$!8#!A8, B
C':%.'=' , +&'8, !

\$"(&"?. "5*, (62"*9"U66(7. %'+, "0*, ,. @. _\U66(7. %'+, `"*<_ '?."0*, ,. @. `]"**" 1+(%'+(%+"%". %B(<*% 1. %'"
9*<'&')7. %'&/'9+6), '2"/+7 1 (%(&'<+ '*<&/'&' +99/" +7"B(&'<&'?' +'"(&"9<. ."9"+, , "9*< 1 &"*9"7(&6<(1 (%+'(*%"
+%7" ?+<+&& 1. %'/' (%6,) 7(%@ &.4)+, "+%7" (%'. <5. <&*%+, " 1 (&6*%7)6'a" >?. " 0*, ,. @. " ?+&" .%+6'. 7" '?(&"
J.4)+, "+%7" \$%' .<5. <&*%+, " Q(&6*%7)6" G*, (62"_G*, (62`]" '*"<. 9. .6"+%7" 1+(%'+(%' (&' (%&'(') '(*%+, "
B+,) .&"+%7"6* 1 1)%('2". 45. 6'+(%&/' '*5<*B(7. "9*<'9+(<"+%7" .X)(' +N, . "5<*6. 7)<. &"9*<'7. ' .< 1 (%(%@ "
I ?. %"'?(&'G*, (62"?+&"N. . %'B(*, +'. 7"/+%7" '*5<*B(7. "<. 6*)<&. "9*<'(%7(B(7)+, &"+%7"?' . "6* 1 1)%('2a"
"

>?(&"G*, (62"5<*?(N('&+, , "9*< 1 &"*9"7(&6<(1 (%+'(*%*"<?" +<+&& 1. %'"*%"'? . "N+&(&"*9" &. 4" \(%6,) 7(%@ "%% "
'? . "N+&(&"*9" &. 4" &. 4)+, " *(<. (%+'(*%/" @. %7.<" .45<. &&(*%/" @. %7.<" (7. %'('2"/ *"<. 5<*%7)6'(B. "? . +, '? "
7. 6(&(*%: 1+Y(%@]" (%6,) 7(%@ &.4)+, " +&&+), '/' 7+'(%@ " B(*. %6. /" 7* 1. &'(6" B(*. %6. /" &.4)+, "
.45, *('+'(%%/'&'+, Y(%@/" +%7"6* 15, (6'2a">?(&'G*, (62"+, &*%5<*?(N('&<. '+, (+('*%"+@+(&'*"+5. <&*% " I ?* "
<. 5*<'&/'6* 15, +(%&"+N*) '/' *"< I ?* *"? . < I (&. "5+<'(6(5+' . &'(%@**7"9+('?' (%/" +%2" 1+' .< "<. +, . 7" *"?(& "
G*, (62a"H, " " ? . "9*<. @*(%@ "6*%7)6" I (, "N. "<. 9. <<. 7" *"+& _G<*?(N(' . 7" 0*%7)6'a`""

U66(7. %'+, "0*, ,. @. "7* .&'%*"7(&6<(1 (%+' . "%*"'? . "N+&(&"*9" &. 4" (%' ('&' . 7)6+'(*%+, /" . 4'<+6)<<(6), +</"
+?' . '(6"*<*"'? .< 5<*@+ 1 &"*<'(%"'? . "6*%'. 4" *9" . 15, *2 1. %'a" J. 4"7(&6<(1 (%+'(*%")(&"5<*?(N(' . 7"N2"
>(' . "\$E"*9"?' . "37)6+'(*%")H 1. %7 1. %'&"*9"! [M#/" +9. 7.<+, , + I "'? + "5<*B(7. &V"

8* 5. <&*% " (%' '? . " W%(' . 7" J'+'. &'&?+ , /" *% " '? . " N+&(&"*9" &. 4" N. " .46,) 7. 7" 9* 1 "
5+<'(6(5+'(*%")("N. "7. %(' . 7"?' . "N. % . 9('&"*9" *"<N. "&)Nb. 6'. 7" *7(&6<(1 (%+'(*%") %7.< "
+%2" . 7)6+'(*%")5<*@+ 1 " *"<+6'(B('2"<. 6. (B(%@ "L. 7.<+, "9(%+%6(+, "+&&(&' +%6. a"
"

J.4)+, "?+<+&& 1. %' (&'+, &*%5<*?(N(' . 7) %7. < ">(' . "\$E/" >(' . " - \$\$"*9"?' . "0(B, "C(@?'&'H6"*9"! [K=/"?' . "
0+, (9*% (+L+(<' 3 15, *2 1. %'" +%7"O*) &(%@"H6'/" +%7" *"? .< +55, (6+N, . "&'+')' . &a">?(&'G*, (62"5<*?(N('& "
&.4)+, "?+<+&& 1. %'" +@+(&"U66(7. %'+, "6* 1 1)%('2" 1. 1 N. <&"*9" +%2" &. 4"/&. 4)+, " *(<. (%+'(*%/" @. %7.< "
(7. %'('2"/ *"< @. %7.<" .45<. &&(*%") (%' '? . " 6*%'. 4" *9" . 7)6+'(*%") *"< . 15, *2 1. %'a" >?(&' G*, (62" +, &* "
5<*?(N('&@. %7. <: N+&. 7"?+<+&& 1. %' "'? + "7* . &"*%'"(%B*, B. "6*%7)6" *9"+&. 4)+, "%+')<. a"
"

>?. "0*, ,. @. "&'<*%@, 2" . %6*)<+@. &"+, , 1. 1 N. <&"*9")<6* 1 1)%('2" *"+6" * " 1+(%'+(%+"%7"9+6, ('+' . "+"
&'9. /" I . , 6* 1 (%@/" +%7"<. &5. 6'9), " . %B(<*% 1. %'" *% "6+ 15) &a">?. "0*, ,. @. " .45. 6'&"?' + " +, "U66(7. %'+, "
6* 1 1)%('2" 1. 1 N. <&" I (, " '+Y. " <. +&*%+N, . "+%7" 5<)7. %'" +6'(*%&" * " 5<. B. %'" *"< &'*5" G<*?(N(' . 7 "
0*%7)6'a" >?. " 0*, ,. @. "&'<*%@, 2" &)55*<'&" (%7(B(7)+, &" I ?* "6? * * &. " * " '+Y. "&)6?" +6'(*%"+%7" I (, "
5<*'. 6"&)6?" (%7(B(7)+, &"9<* 1 "<. '+, (+('*%a"W5*% "<. 6. (5" *9" + "<. 5*<'/"?' . "0*, ,. @. " I (, " '+Y. "5<* 1 5"
+%7" .X)(' +N, . "+6'(*% " * " ., (1 (%+' . "'? . " G<*?(N(' . 7" 0*%7)6" \ (9"+%2]" 5<. B. %'" ('&"<. 6)<<. %6. /" +%7 "
<. 1. 72" ('&" . 99. 6'&a"\$%"+77('(*%/"?' . "0*, ,. @. " I (, "9), 9(, ('&"*N, (@+'(*%&") %7.<"?' . " - (*, . %6. "H@+(&&"
c * 1. %"C. +)' ? * (<+('(*%")H6" *9" #R!S"\ - H c H "] + 1. %7 1. %'&" * " ? . "e. +%%. "0, . <2" ; (&6, * &)<. " *9 "
0+ 15) &" J. 6)<'2" G*, (62"+%7" 0+ 15) &" 0<(1. " J'+' (&'(6&"H6" \ 0, . <2" H6' "] (%<. &5*%&. " * " <. 5*<' . 7"

5D\$!9877\$E\$F:!9'(!G'ED&:!H!5'&7\$!; I!988.@', +&8.!!

>?. "0(B("C(@?'&"D">(',\$E"0**<7(%+'*<"6**<7(%+'.&"+%7" 1+%+@.&"'?. "0*,,@.A&"6* 15,(+%6." I('?"
>(',\$E"+%7"<.,+'.7"5<*B(&(*%&"*9"'?. "0,.<2"H6'"\"+&"+ 1.%7.7"N2"- H c H]a">?. "0(B("C(@?'&"D">(',\$E"0**<7(%+'*<"6**<7(%+'.&"+%7" 1+%+@.&"'?. "0*,,@.A&"6.%"<+, (d.7"<.&5*%&."*" +, "<.5* <'&"*9"G<*?(N('7"0*%7)6""*"
. %&)<."6*%&(&' .%""(15,. 1 .%'+'(*%*"9"'?(&"G*,(62"+%7"6* 15,(+%6." I('?"9.7.<+,"+%7"&'+'. ,+ I a">?. "
0(B("C(@?'&"D">(',\$E"0**<7(%+'*<"6**<7(%+'.&"+%7" 1+%+@.&"'?. "0*,,@.A&"6.%"<+, (d.7"<.&5*%&."*" +, "<.5* <'&"*9"G<*?(N('7"0*%7)6""*"

f

M%8?#!J87%!/

>?(&"G*,(62"+55,(. &"*"+,,"<.5*<'&"*9"G<*?(N(' .7"0*%7)6'"<.6.(B.7*%*"<"+9'.<"'?. .99.6'(B."7+'."*9'?'(&"G*,(62a"\$9"'?. "+, .@.7"G<*?(N(' .7"0*%7)6'"*66)<<.7"N.9*<."?'?. .99.6'(B."7+'."*9'?'(&"G*,(62/" +55,(6+N, .7.9(%('(*%&"*9"1(&6*%7)6'"(%0*,,@.5*,(6.&"(%".4(&' .%6."+'??"(1."*9'?'."6*%7)6'"I(,," N.")&.7"*'?'?. .4'.%"'"?'+'?' .2"6*%9,(6" I('?'7.9(%('(*%&"*9"'.<1&"(%"?'(&"G*,(62a">?. " ^<(.B+%6." G<*6.&&.&)"%7.<"'?'(&"G*,(62" I(,,"N.")&.7"*'(%B.&'(+'. "+%7'<.&*,B." +,,"<.5*<'&"1+7."*<'?'+'<." 5.%7(%@*"%"<"+9'.<"'?. .99.6'(B."7+'."*9'?'(&"G*,(62/"<.@+<7,.&&"*9" I?."%"'?. "(%6(7.%'\&]"*66)<<.7a"

>?(&"G*,(62")&.&"'?. ".<1&6* 15,+(%+%/'<.&5*%7.%/'"?'(<7"5+<'2"/+%7" I('%.&&"&"9*,, * I &V"

f _____V" H%" (%7(B(7)+, " I ?*" (& <.5*<' .7" '* ' ?+B." .45.<(.%6.7" 6*%7)6'" ' ?+' 6*),7" 6*%&'(')'. "G<*?(N(' .7"0*%7)6'" /".B."(9'?' .2"7*%*"5<'(6(5+' .(%+%2"<.,+' .7"5<*6.&&a"

f _____V" H%" (%7(B(7)+, " I ?*" ?+&N. .%"<.5*<' .7" '* ' ?+B." .%@+@.7"(%6*%7)6'" ' ?+' 6*),7" 6*%&'(')'. "G<*?(N(' .7"0*%7)6'" a"

f _____V" H"6* 15,+(%+% '"<.&5*%7.%'"5<'(6(5+'(%@"(%"+<.&*,)'(*%5<*6.&&a"

f _____V" H%" (%7(B(7)+, " I ?*" 1+2" ?+B." (%9*<1+'(*%<.,.B+% '" '* '+<.5*<' *9" G<*?(N(' .7" 0*%7)6'" a" H" I('%.&&" 1+2" N."+'&')7.%/'+"%. 15,*2../'*<+"?'(<7"5+<'2a"

U66(7.%'+,"0*,,@.A&"5<(1+<2"6*%6.<%"(&"&')7.%'"+"%7". 15,*2.."+9.'2a"L*<".B.<2"<.5*<'/'"?'."0(B," C(@?'&"D">('.,.\$E"0**<7(%+'*<" I(,,"<.B.(I"'?'."6<6) 1&'+%6.&"*9'?'."<.5*<' .7"6*%7)6'" '*7'. '<1 (%." I?.'?'<"'?'."0*,,@."?'&"b)<(&7(6'(*%*"<7(&6(5,(%+<2"')'?'*<(2"*B.<'?'<.&5*%7.%'"*<'?'."6*%7)6'" a" \$%".4.<6(&(%@b)<(&7(6'(*%*"B.<+%U66(7.%'+,+.99,(+' .7.<.5*%7.%'"9*<.<.5*<' .7"6*%7)6'" ' ?+' *66)<&" *99"6+15)&"+"%7" ' ?+' ?+&"%*"%.4)&" '* ' ?'. "0*,,@." *<+" 0*,,@. :.<.,+' .7" *"&5*%&*<.7" .7)6+'(*% 5<*@<+1 " *<"+6'(B('2"/'?'."0*,,@.A&"+N('2" '* ' (%B.&'(+'. "+%7" (15*&."7(&6(5,(%+<2"'+6'(*% 1+2" N." , (1('7a"\$%("(&'&+%6.&" I?<."?'."0*,,@."7*.&"%*"?'?+B."7(&6(5,(%+<2"')'?'*<(2"*B.<'?'<.&5*%7.%/' ' ?'. "0*,,@." I(,,"&'(+'. "+Y.<.+&*%+N,2"+B(+,N, "&' .5&" '* '&')55*<'+"6* 15,+(%+% "'<?*)@?'(%'<(1 " *< &')55*<'(B."1.+&)<.&"+"%7" I(,,"+&&(&"+"6* 15,+(%+% "'(%(7.%'92(%@" .4'.<+%+,"<.5*<'(%@"1.6?+&(&1 a"

>?(&" G*,(62" +55,(. &" '*"+,," U66(7.%'+, " 6* 1 1)%('2" 1.1N.< &/" (%6,)7(%@" &')7.%'&/" 9+6), '2/" +7 1 (%(&'<+'*<&/" &' +99/" B*),%' .< &/" B.%7* < &/" 6*% '<+6' * < &/" B(&' * < &/" +%7" (%7(B(7)+, &' < .@), +<2" * < ' .15* < +<(2" .15,*2.7" 6*%7)6'" (%@" N)&(%.&&/" &')72(%@" /", (B(%@" /" B(&'(%@" /" * < ' ?+B(%@" +2" *99(6(+, " 6+5+6('2" I('?'?'."0*,,@." * < *% ("&'5<*5.<'2a">?. "0*,,@." &'< *% @,2".%6*)<+@.&.<.5*<'&"*9"G<*?(N(' .7" 0*%7)6'"<.@+<7,.&&"*9" I ?*% .%@+@.7"(%"'"?'."6*%7)6'" a"

>?(&"G*,(62"+55,(. &"*"+,,"*%:6+15)&"6*%7)6'"+"%7"&* 1."*99:6+15)&"6*%7)6'" /"&"7.&6<(N.7"N., * I a" >?. "0*,,@." &'< *% @,2".%6*)<+@.&.<.5*<'&"*9"G<*?(N(' .7"0*%7)6'"<.@+<7,.&&"*9", *6+'(*%a"3B.%"(9'?'." G*,(62"7*.&"%*"55,2" '* "'?'."6*%7)6'"N.6+)&."*9'('&', *6+'(*%/"'?'."0*,,@." I(,,"'+Y."5<* 15"'+6'(*% " *5<*B(7."9*<'?'."&+9.'2"+%7" I .,,:N.(%@"*9'?'."6* 15,+(%+% "'+"%7"?'."N<*+7.<'6+15)&"6* 1 1)%('2a"

f _____V"0*%7)6'" ' ?+' *66)<&"%*:6+15)&/"(%6,)7(%@"6*%7)6'" I?(6?"*66)<&"%*" 5<*5.<'2" * I % .7" * < ' 6*% '< *,,.7"N2"?'."0*,,@." a"

f _____V"0*%7)6'" ' ?+' *66)<&"(%"?'."6*%'.4" '*9"0*,,@." .15,*2 1.%'"*<' .7)6+'(*% "

f $\frac{V^0 * 7) 6''' ? + '* 66) < \& * 99 : 6 + 15) \& + \% 7" ? + \& " 6 * \% '(\%) (\% @ + 7 B . < \& . " . 99 . 6' \& " * \% / " * < " 6 < . + ' . \& + " ? * \& '(, . " . \% B (< * \% 1 . \% " 9 * < / " + \% 2" 1 . 1 N . < " * 9" ' ? . " U 66 (7 . \% '+ , " 6 * 1 1) \% (' 2" * \% : 6 + 15) \& * < "(\% + \% 2" 0 * , , . @ . " . 15 , * 2 1 . \% " * < . 7) 6 + '(* \% 5 < * @ < + 1 " * < " + 6' (B (' 2 a'$

U 66 (7 . \% '+ , " 0 * , , . @ . " I (, , '+ Y . " < . + \& * \% + N , . " \& . 5 \& " ' * " < . \& 5 * \% 7 " ' * " . + 6 ? " (\% 6 (7 . \% " * 9" \& . 4) + , " ? + < + \& \& 1 . \% "

! "#\$%&' (&)%*+, \$& - , . , // 0 %1#&

_>(',\$E"J.4)+,"O+<+&&1.%"`"(&+"&)N&."*9"G<*(N('7"0*%7)6'a"W%7.<";.5+<'1.%"*9"37)6+'(%%<.@),+'(%%&"\ "S="0aLaCa"G+<!"RKJ]"(&&).7"(%Q+2"#R#R"*"(15,.1.%">(',\$E"*9"?."37)6+'(%%<H1.%"71.%"&"*9"! [M#/"'?."0*,,.@"(&<.X)(<.7"*5<*(N("6.<'+(%"9*<1&"*9"&.4)+,"?+<+&&1.%"+"&7.9(%7"(%"?*&."<.@),+'(%%&a""

G<*(N('7"0*%7)6"1.. '&'?. "7.9(%('(%%"*9">(',\$E"J.4)+,"O+<+&&1.%" "I?."%V""

H%"315,*2.. "6*%7('(%%&"'?."5<*B(&(%%"*9"+%"+(7/"+"N.%9('/*<+"&.<B(6."*%"+%")(%7(B(7)+,A&"5+<'(6(5+'(%%")(%%)%I.,6*1."&.4)+,"6*%7)6""(a.a"" "&.4)+,"?+<+&&1.%"']/"I('?(% "'?."W%('7"J'+'.&i"*<"

H"J')7.%/'315,*2../*< ">?(<7"G+<'2".%@+@.&"(%%)%I.,6*1."6*%7)6""*%""'?."N+&(&"*9"&.4" '?+"I"),7"N."7.'.<1(%7"N2"+<.+&*%+N,. "5.<&*%""*N."&*"&.B.<./"5.<B+&(B./+%7"*Nb.6'(B.,2" *99.%&(B."?'+"("".99.6'(B.,2"7.(.&"+%*'?.<'5.<&*%".X)+,"+66.&&"*"'?."0*,,. @.A&"5<*@<+1&" *<"+6'(B('.&/'(%"'?."W%('7"J'+'.&i"*<"

H"J')7.%/'315,*2../*< ">?(<7"G+<'2".%@+@.&"(% "J.4)+,"H&&+),/' ; *1.&'(6" - (*,.%6./" ;+'(%@" - (*,.%6./"*<"J.4)+,"+%7g*<"^.%7.<:N+&.7"J'+,Y(%@"+&"7.9(%7"N.,*Ii"+%7"

- o >?."+,.,. @.7"6*%7)6" I+&"5.<5.'.<+'.7"+@+(%&"+"5.<&*%")(%"'?."W%('7"J'+'.&i"+%7"
- o >?".6*%7)6""*%Y"5,+6."I('?(%"'?."0*,,. @.A&"5<*@<+1&"+%7"+6'(B('.&a"

0*%7)6""+Y.&"5,+6."I('?(%"'?."_0*,,. @.A&"5<*@<+1&"+%7"+6'(B('.&"I?."%"'?+"6*%7)6""*66)<&V\!]" (%"+,*6+'(%%"/"+%".B.%/'/*<("+"6(<6)1&"+%6."I?.<."?'."0*,,. @."4.<6(&.&"&)N&'+%'+,"6*%'<*,*B.<N*?'??"<.&5*%7.%"+%7""?."6*%'4"(% "I?(6"'?."6*%7)6""*66)<&i"*<#\#]"(%+%2"N)(,7(%@"*I%.7"*<6*%'<*,.7"N2"+&'7.%""*<@+% (d+'(%%"<.6*@(d.7"N2"'?."0*,,. @.a"3B.%&"'?'+"*66)<"*99"6+15)&"*<(%",*6+'(%%&"I('?'%*"6*%%.6'(%%"*"'?."0*,,. @."+<.)%,(Y.,2"*N."6*%&(7.<.7"+0*,,. @."5<*@<+1" "<

>(',\$E&.4)+,"+&&+),"(%6,)7.&"<+5./"9*%7,(%@/"(%6.&'/*<'&'+')'*<2"<+5./"7.9(% .7"+&'9*,,* I &V"

f C+5."(&"?".5.% .<+'(*%/"%*" 1+' .<?* I "&,@?'/*"9"?' ."B+@(%+"*"+%)&" I ('?"+%2"N*72"5+<"*<" *Nb.6/'/*<"*<+,:@.%('+,6*%' +6'"*9"+%*'?' .<"5.<&*%" I ('?*)" [+99<1+\(B."6*%&.%'a"](#)

f L*%7,(%@(&"'?. '*)6?(%@"*9"?' ."5<(B+' ."N*72" 5+<'&"*9"+%*'?' .<"5.<&*%"9*<"'?. "5)<5*&."*9"

V" j)(7" 5<* X)*" ?+<+&& 1 .% " *66)<&" I ? .% &)N1 (&&(*% " '* " *<
<.b.6'(*%*"9")% I .,6* 1 ."6*%7)6"(&')&.7"/.45,(6('2"*<(15,(6('2"/+&""? ."N+&(&'9* <7.6(&(*%&
+99.6'(%@" +%" (%7(B(7)+,A&" .7)6+'(*%" \.a@a/" +71 (&&(*%/" +6+7. 1 (6' &'+%7(%@"/" @<+7.&/"
+&&(@% 1 .%'ji" . 15,*21 .%' "\.a@a/" ?(<(%@"/" +7B+%6. 1 .%' /" +&&(@% 1 .%'ji" * <5+<'(6(5+'(*%" (% " +
0* ,. @ .5<*@<+ 1 "*<"+6'(B('2"\.a@a/"6+ 15)&"?*)&(%@]a

C. '+,(+(*%" (%6,)7.&"+7B.<&." +6'(*%" '+Y.%"+@+(%&"" +5.<&*% "9* <1 +Y(%@" +@**7"9+('?'<.5* <"*9"
G<*?(N('7"0*%7)6""* <5+<'(6(5+'(%@"(% "+2"5<*6..7(%@")%7.<'?(&"G*,(62a"H7B.<&." +6'(*%" (%6,)7.&
6*%7)6""'+""?'<.'+%&/" ('(1(7+'&/" ?+<+&&.&/"6* .<6.&/"* <'?'+"&..Y&" '*7(&6*)<+@." +<.+&*%+N,."
5.<&*% "9<* 1 " .%@"+@(%@"(% "+6'(B('2"5<*'.6'.7")%7.<'?(&"G*,(62a"C.'+(+(*%"6+% "N."6* 1 1 ('.7"N2"*<
+@+(%&""+2"(%7(B(7)+, "*<@<*)5"*9"(%7(B(7)+, &/"%*"b)&""+"0* 15,+(%+% ""* <"C.&5*%7.% 'a"C.'+(+(*%"
7* .&%"*""(%6,)7. "@**7"9+('?'+6'(*%&"+I9),,2"5)<&).7"(%<.&5*%&." '*"+<.5* <"*9"G<*?(N('7"0*%7)6'a"
C.'+(+(*%" 1+2"N."5<.&.% " .B.% "I ? .<."?<."(&"+9(%7(%@"*9"_%* <.&5*%&(N('2`"I ('?'<.&5.6""*""? ."
+,,. @+(*%&"*9"G<*?(N('7"0*%7)6'a"
!
>?."0* ,. @ .I(,,"+Y.(1 1.7(+."+%7"<.&5*%&(B." +6'(*%"*""+%2"<.5* <"*9"<.'+(+(*%" +7" I(,"5)<&)." 7
(&6(5,(%+<2"+6'(*%" +&"+55<*5<(+'.a" H%" (%7(B(7)+, "<.5* <'(%@" G<*?(N('7" 0*%7)6" (&)."%'('.,7" '*"
5<*'.6'(*%9<* 1 "+%2"9* <1 "*9"<.'+(+(*%"9* ,. I (%@" +<.5* <"*9"?'+"(& 1+7."(%@"**7"9+('?'/" .B.% "9"?'."
<.5* <"(&,"+.'<%"*""5<*B.%a"
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H&".45,+(% .7"N.,* I/"6* 15,+(% '&'*9"7(&6<(1 (%+'(*%/" ?+<+&& 1 .% ""* < <.'+(+(*%" 1+2"+, &* "N." 1+7."
I ('?' '?'." U99(6."9* <0(B(," C(@?'&"9* <'?'." ;.5+<1 .%' " *9" 37)6+'(*%" _U0C`ji" '?'." 0+, (9* <%(+
; .5+<1 .%' " *9" L+(< 3 15,*21 .%' " +%7" O*)&(%@" _ ;L3O`j" * <" '?'." 9.7.<+, 3X)+, U55* <")%(2"
3 15,*21 .%' "0* 1 1 (&&(*%" _33U0`ja"

8.39": "#%7& ; %\$, #31/9" </&&

J.4)+, "*<"<* 1+% '(6<.,+(*%&?(5&"(% "I ?(6?"*% ."5+<'2" 1+(%'+(%&" k "+%7"9+(&""*5<* 15',2"<.5* <" +%7"
7(&6*% '(%) . " k "

3B.%"(9"+%".15,*2..*9"'?.0*,,.@."\.46,)7(%@"&')7.%"' .15,*2..&]7* .&"%*"?"*,7+"5*&'(%%"*9
)'?'*(<'2"*B.<+"&')7.%'/"%2&.4)+,"*<"*1+%'(6'<.,+'(%&?(5'N.'I..%"+%".15,*2.."+%7+"&')7.%'
9"'?.0,,.@."6*),7b.*5+<7(d."?'."(%' .@<'2"*9"'?. "+6+7.1(6'+%7", (B(%@" .%B(<*"1.%'"*9"'?.
U66(7.%'+,"6*11)%('2'+%7"7+1+@."?'."&')7.%'>?<.9*.</"&.4)+,"*<"*1+%'(6'<.,+'(%&?(5&
N.'I..%"+%".15,*2.."+%7"+%2'&')7.%'"*9"'?.0*,,.@." +<.5<*(N('7aH"&.4)+,"*<"*1+%'(6'
<.,+'(%&?(5(%"B(*,+'(%%"*9"'?(&"&.6'(%%"1+2<.&), "(%7(&6(5,(%+<2"+6'(%%" +@+(%&"'"? ".15,*2.."/)5"
'*"+%7"(%6,)7(%@"7&1(&&+,a"

346.5'(%&"*"?'&."5<*(N('(%&"I(,"N."6*%&(7.<.7"*%"+6&.:N2:6+&."N+&(&"N2"'?.0?(.9"O)1+%
C.&*)<6.& U99(6.<("6*%&),+'(%%"I('?'?'."0(B(,"C(@?'&"D">('.,."\$E"0**<7(%+'*<"+%7"'?.
&).5<B(&*<]&]"*9"'?.(%7(B(7)+,\&])(%B*,B.7a">?."(%7(B(7)+,"I('?'?'."5* I.<*"<*&'&')&"+7B+%' +@."(%
'?'<.,+'(%&?(5"1)&'<.X).&"'"?'."46.5'(%%"(%I<'(%@a">?."0?(.9"O)1+%C.&*)<6."U99(6.<I(,"
<.&5*%7"*"?'<.X).&"'"I<'(%@a"G*%&&(N,."46.5'(%&"1+2(%6,)7.V!]'"?'<.,+'(%&?(5".4(&'.7"5<(*<
'*"'?.99.6'(B."7+'."*9"'?(&"G*,(62i"+%7g*%<#]"'"?'<.,+'(%&?(5".4(&'.7"5<(*<'*"+6'+%@."(%'.'?<
5+<'%.<A&"&'&')&"+'"?'."0*,,.@."a"

≡%>"1"#"31/3>?%@&!%.0/k,17&A#9%.&B31/"7%.,#"31/k

>*5<*(B(7."6,+<'2"+&"*"'?.Y(%7&"*9"N.?+B(*<'?'+"6*%&'(')."G<*(N('7"0*%7)6'/"?'."0*,,.@."
7.9(%.&Y.2"'.<1&I?(6?)I(,"N.")&.7"(%".B+,)+'(%@"I?'?'<G<*(N('7"0*%7)6'"+&*66)<<.7a"

_H99(<1+'(B."0*%&.%'\`"(&+%"+99(<1+'(B."/6*%&6(*)&"/+%7"B*,)'+<2'+@<..1.%'"*%".%@+@."(%"&.4)+,
+6'(B('2a"H99(<1+'(B."6*%&.%'"(&"<.X)(.7"9*%<+%2'&.4)+,"+6'(B('2"*%*66)<"N.'I..%'"I*%<1*%<.
(%7(B(7)+,&a\$"(&"'?"<.&5*%&(N,('2*9".+6?5.<*&*(%B*,B.7"(%"'?"&.4)+,"+6'(B('2"*%".%&)<."?'+'"'?."
5.<*&%"?+&"'?.+99(<1+'(B."6*%&.%'"*9"'?."*"'?<]&]"*%".%@+@."(%"'?"&.4)+,"+6'(B('2a"

\$"I(,"%*"N."+"B+(7".46)&."*"+,.,@.",+6Y"*9"+99(<1+'(B."6*%&.%'"?'+'"'?"<.&5*%7.%'"N.,(B.7"'?+'
'?'."6*15,+(%+%'"6*%&.%'.7"*"'"?"&.4)+,"+6'(B('2")%7.<.(?'<*"9"'?.9*,*I(%@"6(<6)1&'+%6.&V"\+]
>?<.&5*%7.%'AN.,(.9"(%"+99(<1+'(B."6*%&.%'" +<*&."9<*1"'?."(%'*4(6+'(%%"*%<6Y,.&&%&.&&"*9"'?.
<.&5*%7.%'/*<N]"'"?'<.&5*%7.%'"7(7"*"'+Y.<.+&*"N,."&'.5&/"(%"'?.6(<6)1&'+%6.&Y%*I%"*"'?."
<.&5*%7.%'"+"'"?'."(1./'"*"+&6.<'+(%I?'?'<"'?.6*15,+(%+%'" +99(<1+'(B.,2"6*%&.%'.7a"

>?."9*,*I(%@"<."&&.%'(+,".,.1.%'&"*9"+99(<1+'(B."6*%&.%'V"

f

"H,,"

+6'(B."<.&5*%&.a"H%(%7(B(7)+,"I?*"7*.&"%*"5?2&(6+,2"<.&(&"*<"B.<N+,2"<.9)&."&.4)+,
+6'(B('2'(&"%*"6*%&.6.&&+<(,2"@B(%@"6*%&.%'a'C..2(%@"&*,.,2")5*%*%*:B.<N+,6*11)% (6+'(%%
6+%,.,+7"'*"+9+,&."6*%6,)&(%%"+&"* I?.'?.'?<"6*%&.%" I+&"&*)@?"*%<"@B.%a"

f _____ "H99(<1+'(B."6*%&.%"11)&"N."*%*%*(%@"?<*)@?*"')"'?'+6'(B('2a"0*%&.%"1+2"
N."I('?'7<+I%"N2"+%2'5+<'2'+"+%2"(1.a'C.6*%@%(d(%@"'?'."72%+1(6%"+')<."*9&.4)+,+6'(B('2/"
(%7(B(7)+,&"6?*"*&(%@"*"'.%@+@."(%&.4)+,+6'(B('2"1)&"'.B+,)'."6*%&.%'(%@"+%"*%*%*(%@"
1+%%.<"+%7"6*11)% (6+'."6,.,+<,2"'?<*)@?*"')"'+,,"&'+@.&"*9"&.4)+,+6'(B('2a" c ('?'7<+I+,"*9"
6*%&.%"6+%"N."+"B.<N+,2".45<.&&.7"_%*%`*%<_&'5`*%<"6+%"N."N+&.7"*%"+%"*')I+<7"
7.1*%&'<+'(%%"?'+'6*%B.2&"'?'+'+"(%7(B(7)+,(&"?.&(+%/6*%9)&.7"/)%6.<+(/%/"*%<(&"%*"
,*%@.<+"1)')+,"5+<'(6(5+%a"U6."6*%&.%"(&"I('?'7<+I%"'?'."&.4)+,+6'(B('2"1)&"'6.+&."
(11.7(+'.2"/+7"+,,"5+<'(&"1)&"*N'+(%"1)')+,,2".45<.&&.7"*%<"6,.,+<,2'&'+.7"6*%&.%"
N.9*%<."6*%(')(%@"9)<'?.'<"&.4)+,+6'(B('2a"

f _____ "O*%&.%"1*%*%."9*%<1"*9"&.4)+,"6*%'+6"7*.&"%*"6*%&'(')'."6*%&.%"1*%+,,"
9*%<1&"*9"&.4)+,"6*%'+6"/%*%<7*.&"6*%&.%"1*%&.4)+,+6'(B('2" I ('?'*%."5.<&*%6*%&'(')'."
6*%&.%"1*%'+6'(B('2" I ('?'+%2"*'?'<.5.<&*%a"3+6?"5+<'(6(5+%'"(%+"&.4)+,."6*%')%<'1)&"
6*%&.%"1*%'+6?"9*%<1"*9"&.4)+,"6*%'+6" I ('?'"+6?"5+<'(6(5+%a"3B.%"(%"?'."6*%'.4"*9"+
6)<<.%"*%<5<.B(*)&'(%'(1+'."<.,+'(%*&?(5)".+6?"5+<'2"1)&"6*%&.%"1*%'+6?"(%&'+%6."*9"&.4)+,
6*%'+6"'+6?"(1.a">?".6*%&.%"1)&"N."N+&.7"*%("1)')+,,2")%7.<&'+%7+N,."6*11)% (6+'(%%
'?'+'6,.,+<,2"/%7(6+'.&"+I(,.(%@%.&&"*%'.%@+@."(%&.4)+,+6'(B('2a">?".1.<."9+6"'+?+'?<."
'?+&"N..%"5<(*%<'(1+62"*%<"&.4)+,+6'(B('2"7*.&"%*"N2'(&.9)/(15,2"6*%&.%"1*%9)')<."6'&a"

"

\$%'.B+,)'(%@"I?.'?<."6*%&.%"1?+&"N..%9<.,2"&*)@?*"'+%7"@B.%/"?'."0*,,@."I(,"6*%&(7.<"+,,"
<.,.B+%9+6'&"+%7"6(<6)1&+%6.&"/(%6,)7(%@"N)"*%*", (1('7"*"/?'."+@.&"*9"?'."5+<'(&i"?'."5<.&.%6."
9"+%2"9%<6."?'<.+""*9"9*%<6."/(%'(1(7+'(%%/"*%<6*.<6(*%i" I?.'?<'?."6*15,+(%+%'"?'+'7"?'."6+5+6('2"
'*%@B."6*%&.%'i'+%7"/I?.'?<'?."6*11)% (6+'(%%'\?<*)@?*"I*%<7&"+%7g*%<+6'(%%&]N."I..%"?'."
5+<'(&"I*),7"N."(%'<5<.'.7"N2"+<.+&*%+N,."5.<&*%")%7.<&(1(+<'6(<6)1&+%6.&"+%7" I ('?'&(1(+<
(7.%'('(&]"+&"+I(,.(%@%.&&"*%'.%@+@."(%+"5+<'(6),+<"&.4)+,+6'a"

>?".J'+."*9"0+, (9*%<(+6*%&(7.<&"&.4)+,("%'.<6*)<&."I('?'+"1(%*%<"\+5.<&*%")%7.<?"?'."+@."*9"!P]"*%
N.")%+,I9),a"H"5.<&*% I?*"'.%@+@.&"(%)"%+,I9),"&.4)+,("%'.<6*)<&."I('?'+"1(%*%<'7*.&"&*% I ('?*)"
+99(<1+'(B."6*%&.%"'+&"7.9(%."7"N2"?'."0*,,@.A&"J.4)+,+%7"\$%'.<5.<&*%+,,"Q(&6*%7)6"G*,(62a"

_L*%<6.`(&"'?'.)&."*%<'?<.+""*9"5?2&(6+,B(*,.%6."*%*%B.<6*1."+"(%7(B(7)+,A&"9<..7*1"*9" I(,,"*%
6?*"*&."I?.'?<."*%<'*%*"5+<'(6(5+'."(%&.4)+,+6'(B('2"*%<5<*B(7."6*%&.%'a"0*%&.%"1*%N'+(%."7"N2"
9*%<6."(&"%*"B+, (7a"L*%<'?'.)&."*9"9*%<6."1*%N."7.1*%&'<+'.7"/'?'<."(&"%*"<.X)(<.1.%"1?'+'+"
6*15,+(%+%'"<.&(&"'?'."&.4)+,+7B+%6."*%<.<.X).&'a"O*I.B.</"B(7.%6."*9"<.&(&'+%6."N2"?'."
6*15,+(%+%'"I(,"N."B.(I.7"+&"+6,.,+<7.1*%&'<+'(%%*9"+,+6Y"*9"6*%&.%'a"

\$%'(1(7+'(%%`(&"'?'.)&."*9"(15,(.7"?'<.+""*%*%B.<6*1."+"(%7(B(7)+,A&"9<..7*1"*9" I(,,"*%6?*"*&."
I?.'?<."*%<'*%*"5+<'(6(5+'."(%&.4)+,+6'(B('2"*%<5<*B(7."6*%&.%'a"0*%&.%"1*%N'+(%."7"N2"
(%'(1(7+'(%%`(&"%*"B+, (7a"

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_0* .<6(*%`"(&"'?. "(15<*5.<")& . "*9"5<.&&< . "'*6* 15. ,"+%*'?.< "(%7(B(7)+, "'*(%('+' . "*<"6*%'(%). "

0* .<6(*%6+%("%6,)7. "+ I(7. "<+%@. "*9"N. ?+B(*<&/"(6,)7(%@"(1(7+'(*%/" 1+%5),+'(*%/"?'<.+ '&"/+7" N,+6Y 1+(,a"H"5.<&*%A& I *<7&"*<"6*%7)6""+< . "&)99(6(. %"'*6*%&'(') . "6* .<6(*%("9"'?. 2" I<*%@9),,2" (15+(<+%*'?.< "(%7(B(7)+,A&"9< . 7* 1 "*9" I(, "+%7+N('2""6?*"& . " I ? . '?.<"*<"%""*"' . %@+@. "(%&. 4)+, "+6'(B('2a"34+ 15, .&"*9"6* .<6(*%("%6,)7. ""?< . +'. %(@""*"_*) '^&* 1 . *% . "N+&. 7"*% "&. 4)+, "*<(. %'+('*%/" @. %7.<(7. %('2"/" *<'@. %7.<. 45<.&&(*%"+%7""?< . +'. %(@""*"?+< 1 "%*% .&.,9"(9"'?. "*'?.<5+<2"7* .&"%*" .%@+@. "(%""?. "&. 4)+, "+6'(B('2a" c ? . %&* 1 . *% . "(%7(6+' .&/"B.<N+,2"*<5?2&(6+,2"/'?'+'? . 2"7*"%*" I+%""* . %@+@. "(%"+5+<(6),+<"&. 4)+, "+6'(B('2"/'?'+'? . 2" I+%""* '&'*5+"5+<(6),+<+6'(B('2"/" *<'?'+' '? . 2"7*"%*" I+%""* '@*5+&'+"6.<'+(%"5*(%""*9"&. 4)+, "(%'.<+6'(*%/"6*%'(%). 7"+6'(B('2"*<5<.&&< . "'* 6*%'(%). "N. 2*%7""?'+"5*(%""6+%N. "6* .<6(B.a">?. "0* , , . @ . " I(, , . B+,)+ . ""?. "9* , , * I(@("%7. ' .<1(%(@ I ? . '?.<6* .<6(*% I +&"

I ? . < . " ? . " < . &5*%7 . % 'A&" * I % " (%6+5+6('+'(%*" \9<* 1 " +,6*?* , " * < " 7 <) @ &] " 6 +) & . 7 " ' ? . " < . &5*%7 . % " ' * " 1 (&b)7@ . " ' ? . " 6 * 1 5 , + (% + % ' A & " (% 6 + 5 + 6 (' 2 a " \$ " (& " ' ? . " < . &5*% & (N (, (' 2 " * 9 " . + 6 ? " 5 + < ' 2 " ' * " N . " + I + < . " * 9 " ' ? . " (% ' * 4 (6 + ' (* % , . B . , " * 9 " ' ? . " * ' ? . < ' 5 + < ' 2 " N . 9 * < . " . % @ + @ (% @ " (% & . 4) + , " + 6 ' (B (' 2 a " \$ % " @ . % . < + , / " & . 4) + , " + 6 ' (B (' 2 " I ? (, .) % 7 . < " ' ? . " (% 9 ,) . % 6 . " * 9 " + , 6 * ? * , " * < " * ' ? . < " 7 <) @ & ' 5 * & . & " + < (& Y " ' * " + , " 5 + < (. & a " \$ 9 " ' ? . < . " (& " + % 2 " 7 *) N " + & " ' * " ' ? . " , . B . , " * < . 4 ' . % " * 9 " ' ? . " * ' ? . < " (% 7 (B (7) + , A & " (% ' * 4 (6 + ' (* % / " (" (& " & + 9 . & " ' * " 9 * < @ " * * < " 6 . + & . " + % 2 " & . 4) + , " 6 * % ' + 6 " * < " + 6 ' (B (' 2 a " Z . (% @ " (% ' * 4 (6 + ' . 7 " N 2 " 7 <) @ & " * < " + , 6 * ? * , " (& " * " 7 . 9 . % & . " ' * " + % 2 " B (* , + ((% " * 9 " ' ? (& " G * , (6 2 " + % 7 " 7 * . & " % * " 7 (1 (% (& ? " * % . A & " < . & 5 * % & (N (, (' 2 " ' * " * N " + (% 6 * % & . % ' a ")

98, # '@ \$, & ' + 7 ' & / ! ! J . ' (+ % / ! ! + , @ ! G \$ 7 + & \$ @ ! G \$? 8 . & ' , E ! G \$: ? 8 , : ' 6 ' 7 ' & ' \$: !

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H%2". 15,*2.. "1+2"5)<&)."+"%2"6?+<@."*9"7(&6<(1(%+'(*%"*<?"?+<+&& 1.%'" I('?'?."0+,(9*<%(+" ; .5+< 1.%'"*9"L+(<"3 15,*2 1.%'"+"%7"O*)&(%@"\ ; L3O`]"*<""?."9.7.<+,"3X)+,"U55*<')%('2" 3 15,*2 1.%'"0* 1 1(&&(*%"_33U0`]a"\$"("&)"%,+I9),""*<.'+(+.'."+@+(%&"+"%2". 15,*2.. "9*<*55*&(%@"'?"5<+6'(6.&"5<*?(N(' .7"N2"'?"0+,(9*<%(+"L+(<"3 15,*2 1.%'"+"%7"O*)&(%@"H6""*<6* 15+<+N,."9.7.<+,"+I"*<9*<9(,(%"+"6* 15,(+" I('?'/*<9*<*"?"<.I(&."5+<(6(5+'(%@"(%+"% (%B.&'(@+'(*%/"5<*6..7(%@"/*<?"?+<(%@"6*%7)6'.7"N2"'?" ; L3O"*<"33U0a"

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('&'<.6)<<.%6./" +%7" +77.&&" ('&' .99.6'&/' N)'" ('&' +N,('2" '*"' +Y. " 7(&6(5,(%+<2" +6'(*%"+@+(%&' "'?'." "
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N.&'("%'<.&"*9"?'(&"6* 1 1)('2"?'+"&" 1+2"6* 15,+(%+% '&'+&"5* &&(N,."6?*"&."*"<.5* <' "*%6*,,. @. "
*99(6(+,&" +%7"?'+"5+<'(6(5+% '&'(%"?'."@<(.B+%6. "5<*6.&&"+<."9* <'?<(@?"'("%&'?+<(%@"(%9* < 1+'(*%a">*"
@)+<7" +@+(%&"7(&6*)<+@(%@"<.5* <'(%@"* <"5+<'(6(5+'(*%/"+"&')7.%" I ?*"<.5* <'&"G<*?(N(' .7"0*%7)6" '* <
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- f H%2"*'?.<<. 1.72"'?+"6+%N."'+(*<.7""*"?."(%B*,B.7"(%7(B(7)+,&""*<.+&*%+N,2"+6? (.B."?." @*+,&"*9"?(&"G*,(62a"

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5<*6.7)<./" '*"+B*(7"?'." 5*%&&(N,('2" *9" 6*%6)<<.%'" (%B.&'@+'(%&' +%7" 6*%9,(6'(%@" 9(%7(%@" I('?"
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'?." +55,(6+N,."@<(.B+%6."5<*6.7)<./"?'." 0(B,"C(@?'&+%7">(',"\$E"U99(6." 1+2"<.X).&"'"+'?"?)%(*%
<.5<.&.%'+(B."'+&9.<+,, "%9* < 1+'(%*"@+'?<.7"+%7"<.,+'."7"9(%7(%@"&"*"'?." 0(B,"C(@?'&+%7">(',"
\$E"U99(6."*"'7.'. < 1(%." I?.'?'<9)<'?<(%B.&'@+'(%%("&%.6.&&+<2) "%7.<"'(&"G*,(62a"

>?."&' +%7+<7"9*?<7'.'. < 1(%@" I?.'?'<"?'<.&5*%7.%'"(&"<.&5*%&(N,."9*?<"+5*,(62"B(*,+'(%%("&"?'."
5<.5*%7.<+%6."*9"?'."B(7.6."&' +%7+<7/"(a.a/" I?.'?'<("(&" 1 *<.,(Y.,2"?'+%%"*"'?+'+"B(*,+'(%*"9
0*,,.@."5*,(62"*66)<<.7a"

H%2"(%7(B(7)+,"6+<<2(%@"*)"'?'&."5<*6.7)<.&" 1)&"N."9<.. "9<* 1 "+%2"+6'+), "6*%9,(6'"*9"(%'.<.&"* <
N(+&"'?'+" I *),7"(15+6"'"?'."?+%7,(%@"*9"?'(&" 1+''.<a"J?*) ,7"?'." 0(B,"C(@?'&"D">(',"\$E"0**<7(%+'* <
'?+B." "+6*%9,(6'"*9"(%'.<.&'/'?'." 0(B,"C(@?'&"D">(',"\$E"0**<7(%+'* <("(&"*(1 1.7(+'.2"%*(92"?'."
G<.&(7.%"*9"?'." 0*,,.@./" I ?* I(, "+55*(%"+0*,,.@." +71 (%(&'<+'* <"*%&.<B." +&"H6'(%@"0(B,"C(@?'&
D">(',"\$E"0**<7(%+'* <9*?<"?'." 1+''.<+"'"(&&).a">* <+(&." +%2"6*%6.<%("B*,B(%@"N(+&/"6*%9,(6'"*9
(%'.<.&'/'* <7(&6<(1 (%+'(%%"N2"?'." 0(B,"C(@?'&"D">(',"\$E"0**<7(%+'* </"

>?."

c ? . < . " ? . < . (& . B(7 . %6 . " *9 + " 5 + ' . < % " *9 " 6 * %7) 6 " & (1 (, + < " (% " % + ') < . " N2 " " ? . < . & 5 * %7 . % ' / " . (' ? . < " 5 < (* < / " * < " &) N & . X) . % ' / " " * " " ? . " 6 * %7) 6 " (% X) . & ' (* % / " " ? (& " (% 9 * < 1 + ' (* % " 1 + 2 " N . " 7 . . 1 . 7 " < . . . B + % " + % 7 " 5 < * N + ' (B . " * " " ? . " 7 . 6 (& (* % : 1 + Y . < A & " 7 . ' . < 1 (% + ' (* % " * 9 < . & 5 * % & (N (, ' 2 / " + % 7 g * < " " ? . " 7 . ' . < 1 (% + ' (* % " * 9 & + % 6 ' (* % a " > ? . " 0 (B (, " C (@ ? ' & " D " > (' , . " \$ E " 0 * * < 7 (% + ' * < " I (, , " 1 + Y . " + " 7 . ' . < 1 (% + ' (* % " * 9 < . . . B + % 6 . " N + & . 7 " * % " + % " + & & . & & 1 . % " " * 9 " I ? . ' ? . < " " ? . " 5 < . B (*) & " (% 6 (7 . % " I + & " &) N & ' + % ' (+ , , 2 " & (1 (, + < " " * " " ? . " 6 * %7) 6 " 6 (' . 7 " (% " " ? . " < . 5 * < " + % 7 " (% 7 (6 + ' . & " + " 5 + ' . < % " * 9 " N . ? + B (* < " + % 7 " " ? . " 0 * , , @ . / " ' ? < *) @ ? " " ? . " 0 (B (, " C (@ ? ' & " D " > (' , . " \$ E " 0 * * < 7 (% + ' * < / " 1 + 2 " 6 ? * * & . " " * " 5 < * B (7 . " " ? (& " (% 9 * < 1 + ' (* % " " * " " ? . " \$ B . & ' (@ + ' * < " * < " O . + < (% @ " U99 (6 . < / " I (' ? " + 5 5 < * 5 < (+ ' . % " * ' (6 . " " " " ? . " 5 + < (. & a " > ? . " 0 (B (, " C (@ ? ' & " D " > (' , . " \$ E " 0 * * < 7 (% + ' * < " I (, , + 6 6 . & & " " ? . " < . . . B + % 6 . " * 9 " " ? (& " (% 9 * < 1 + ' (* % " + % 7 " 7 . ' . < 1 (% . " (9 " (" & " + 5 5 < * 5 < (+ ' . 9 * < " (% 6 ,) & (* % " (% " " ? . " (% B . & ' (@ + ' (* % " < . 5 * < a ")

> ? < *) @ ? *) " + % 2 " (% B . & ' (@ + ' (* % " * < . & * ,) ' (* % / " . + 6 ? " 5 + < ' 2 " ? + & " " ? . " < (@ ? " " " * 6 * % &) , " I (' ? " + % + 7 B (& * < " * 9 " ' ? . (< " 6 ? * * & (% @ a " > ? . " + 7 B (& * < " 1 + 2 " N . " + % 2 " 5 . < & * % / " (% 6 ,) 7 (% @ " + % " + ' * < % . 2 a " > ? . " 5 + < (. & " 1 + 2 " N . " + 6 6 * 1 5 + (. 7 " N2 " " ? . (< . & 5 . 6 ' (B . " + 7 B (& * < " + " + % 2 " 1 . . ' (% @ " * < 5 < * 6 . . 7 (% @ " < . , + ' . 7 " " * " " ? . " (% B . & ' (@ + ' (* % " * < . & * ,) ' (* % " * 9 + " < . 5 * < ") % 7 . < " " ? (& " G * , (6 2 a " c ? , (. " " ? . " + 7 B (& * < " 1 + 2 " 5 < * B (7 . &) 5 5 * < " + % 7 " + 7 B (6 . " " " " ? . " 5 + < (. & " + " + % 2 " 1 . . ' (% @ " + % 7 g * < 5 < * 6 . . 7 (% @ " / " " ? . " (% & ' (') ' (* % " 1 + 2 " . & ' + N , (& ? " < . & ' < (6 ' (* % & " < . @ + < 7 (% @ " ' ? . " . 4 ' . % " " * " I ? (6 ? " " ? . " + 7 B (& * < " 1 + 2 " 5 + < ' (6 (5 + ' . " (% " " ? . " 5 < * 6 . . 7 (% @ & a " H7B (& * < & " 1 + 2 " % " * " & 5 . + Y " * % " N . ? + , 9 " * 9 " " ? . " 5 + < (. & " * < " * " ? . < I (& . " 5 + < ' (6 (5 + ' . " (% / " * < " (% " + % 2 " 1 + % % . < 7 . , + 2 " / 7 (& <) 5 " / " * < " (% ' . < 9 . < . " I (' ? " 1 . . ' (% @ & " + % 7 g * < 5 < * 6 . . 7 (% @ & " / " I (' ? " " ? . " 4 6 . 5 ' (* % " " ? + " + " 5 + < ' 2 a & " + 7 B (& * < " 5 + < ' (6 (5 + ' (% @ " (% " + " ? . + < (% @ ") % 7 . < " H55 . % 7 (4 " H " I (, , + & Y " X) . & ' (* % & " * 9 " " ? . " * " ? . < 5 + < ' 2 + % 7 " I (' % . & & . & a " ^ . % . < + , , 2 " / " ? . " 0 (B (, " C (@ ? ' & " D " > (' , . " \$ E " U99 (6 . + % 7 " \$ B . & ' (@ + ' * < " I (, , 6 * 1 1) % (6 + ' . " 7 (< . 6 ' , 2 " I (' ? " " ? . " 6 * 1 5 , + (% + % " * < < . & 5 * % 7 . % ' a " H " + 7 B (& * < & ? *) , 7 " 5 , + % " * " 1 + Y . " " ? . 1 & . , B . & < . + & * % + N , 2 " + B (, + N , . / " + % 7 " " ? . " 0 * , , @ . " I (, , % " * ") % 7) , 2 " 7 . , + 2 " " ? . " & 6 ? . 7) , (% @ " * 9 " 1 . . ' (% @ & " * < 5 < * 6 . . 7 (% @ & " N + & . 7 " * % " " ? . " + 7 B (& * < A & ") % + B (, + N (, ' 2 a ")

\$9 " + % " + 7 B (& * < 9 + (, & " " * 6 * 1 5 , 2 " I (' ? " " ? . " 5 < * 6 . 7) < . & & . " 9 * < ' ? " ? . < . (% / " " ? . " 0 * , , @ . " < . & . < B . & " " ? . " < (@ ? " " " * . 4 6 ,) 7 . " " ? . " + 7 B (& * < 9 * 1 " 9) < ' ? . < 5 + < ' (6 (5 + ' (* % " (% " " ? . " 5 < * 6 . & & a " \$9 " + 5 + < ' (6 (5 + % " 9 + (, & " " * 6 * 1 5 , 2 " I (' ? " ' ? . " 5 < * 6 . 7) < . & & . " 9 * < ' ? " ? . < . (% / " " ? . " 0 * , , @ . " < . & . < B . & " " ? . " < (@ ? " " " * " N (% @ " + 7 7 (' (* % + , " 6 ? + < @ . & " * 9 " 1 (& 6 * % 7) 6 " + @ + (% & " " " ? . " 5 + < ' (6 (5 + % ' a " > ? . " 0 (B (, " C (@ ? ' & " D " > (' , . " \$ E " 0 * * < 7 (% + ' * < " (& < . & 5 * % & (N , . 9 * < " (% ' . < 5 . < ' (% @ " + % 7 " + 5 5 , 2 (% @ " " ? (& " 5 < * B (& (* % a ")

> ? . & . " 5 < * 6 . 7) < . & " + < . . % ' (< . , 2 " + 7 1 (% (& ' < + ' (B . " (% " % + ') < . " + % 7 " + < . % " * " 6 * % & (7 . < 7 " . , @ + , " 5 < * 6 . . 7 (% @ & " / " N) " < + ' ? . < 5 < * 6 . 7) < . & " 7 . & (@ % . 7 " " * " + 7 7 < . & & " 5 * , (6 2 " B (* , + ' (* % & a " 8 * " 5 + < ' 2 " 1 + 2 " +) 7 (* " * < " B (7 . * " < . 6 * < 7 " ' ? . " 5 < * 6 . . 7 (% @ & a " H7B (& * < & " 1 + 2 " % " * " & 5 . + Y " 9 * < / " * < " * % " N . ? + , 9 " * 9 " 5 + < (. & / " I (' ? " " ? . " 4 6 . 5 ' (* % " * 9 " + " 5 + < ' 2 a & " + 7 B (& * < " 5 + < ' (6 (5 + ' (% @ " (% " + " ? . + < (% @ ") % 7 . < " H55 . % 7 (4 " H " I ? * " I (, , + & Y " X) . & ' (* % & " * 9 " " ? . " * " ? . < 5 + < ' 2 " + % 7 " I (' % . & & . & N) " " I (, , % " * " " ? . < I (& . " + 6 " " * " N . ? + , 9 " * 9 " + 5 + < ' 2 a ")

> ? . " 0 (B (, " C (@ ? ' & " D " > (' , . " \$ E " 0 * * < 7 (% + ' * < " I (, , < . ' + (% " < . 6 * < 7 & " * 9 " + , , < . 5 * < ' & " + % 7 " 6 * 1 5 , + (% ' & / " < . @ + < 7 , & & " * 9 " I ? . ' ? . < " " ? . " 1 + ' . < " (& < . & * , B . 7 " N2 " 1 . + % & " * 9 " \$9 " (' (+ , " H & & . & & 1 . % ' / " H7 + 5 " + N , . " C . & * ,) ' (* % " * < " ; (& 6 (5 , (% + < 2 " C . & * ,) ' (* % a " 0 * 1 5 , + (% ' & " < . & * , B . 7 " N2 " 1 . + % & " * 9 " + % " \$9 " (' (+ , " H & & . & & 1 . % " " * < " H7 + 5 " + N , . " C . & * ,) ' (* % " + < . " % " * " 5 + < " " * 9 " + " & ') 7 . % ' A & " 6 * % 7) 6 " 9 (. " * < " + 6 + 7 . 1 (6 " < . 6 * < 7 a " H99 (< 1 + ' (B . " 9 (% 7 (% @ & " * 9 " < . & 5 * % & (N (, ' 2 " (% " 1 + ' . < & < . & * , B . 7 " " ? < *) @ ? " ; (& 6 (5 , (% + < 2 " C . & * ,) ' (* % " < . " 5 + < " " * 9 " + " & ') 7 . % ' A & " 6 * % 7) 6 ")

f '?. "7.9(%('(*%*"9"&.4)+,"?+<+&&1 .%")%7.<"S="OLC"!RKaSR\+|j"

f '?. "&6*5. "9"?."0*,,. @.A&".7)6+'(*%"5<*@<+1 "*<"+6'(B('2"+&"7.9(% .7"N2""?. "&+1 .<.@),+ '(*%&i"

f ?* I "'* "6*%7)6'" (%B.&'(@+'(*%&" \%"*"'<.X)(<.7"9* "<?. +<(%@&" * "<+55.+,&" *99(6.<&|/" ? . +<(%@&/" +55.+,&/" +%7"(%9* "<1+, "<.&*,) '(*%"5<*6. &&. &i"

f ?* I "'* "&. <B. "(15+<'(+,,2/"(%6,)7(%@"N2"+B*(7(%@"5<.b)7@1 .%" '*9""?. "9+6'&"+'("&&)./"6*%9,(6'&" *9"(%' .<.&"/"+%7"N(+&i"+%7"

f (&&).&"*9"<.,.B+%6. "9"X).&'(*%&" +%7" .B(7.%6./" (%6,)7(%@" I?.%"X).&'(*%&" +%7" .B(7.%6. " +N*) ""?. "6*15,+(%+% 'A&"&.4)+,"5<.7(&5* &'(*%"* "<5<("<*&.4)+,"N. ?+B(*<"+<."%*" "<.,.B+% 'a"

H%2"(%7(B(7)+," I ?* I (,"N. "6**<7(%+'(%@"+"2"? . +<(%@"(%B*,B(%@">('."\$E"J.4)+,"O+<+&&1 .%" 1)&" +,&*?" +B. ""<+(%(%@"*%" ?* I "'*")&. "+%2".6?%*, *@2""?+" I (,"N. ")&.7"+'"+,(B. "? . +<(%@a"

\$%B.&'(@+'* "<1)&""?+B. ""<+(%(%@"*%" ?."9*,, * I (%@"5<(*<""*6* 1 1 .%6(%@"+"<*,. "(%"+%2"6+&. "(%B*,B(%@" >('."\$E"J.4)+,"O+<+&&1 .%" 'V"

f '?. "7.9(%('(*%*"9"&.4)+,"?+<+&&1 .%")%7.<"S="OLC"!RKaSR\+|j"

f '?. "&6*5. "9"?."0*,,. @.A&"_.7)6+'(*%"5<*@<+1 "*<"+6'(B('2`"+&"7.9(% .7"N2""?. "<.@),+ '(*%&i"

f ?* I "'* "6*%7)6'" (%B.&'(@+'(*%&/" ? . +<(%@&/" +55.+,&/" +%7"(%9* "<1+, "<.&*,) '(*%"5<*6. &&. &i"

f ?* I "'* "&. <B. "(15+<'(+,,2/"(%6,)7(%@"N2"+B*(7(%@"5<.b)7@1 .%" '*9""?. "9+6'&"+'("&&)./"6*%9,(6'&" *9"(%' .<.&"/"+%7"N(+&i"

f (&&).&"*9"<.,.B+%6.i"+%7"

f ?* I "'* "6<.+.' ."+%(%B.&'(@+'(B. "<.5* "<""?+"9+(<,2"&) 1 1 +<(d.&"<.,.B+% "" .B(7.%6. a"

!

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>?. "\$%B.&'(@+'*<" I(,, " 5<.5+<." +" &) 1 1+<2" *9" .+6?" (%'.<B(. I" _\$\$'<B(. I" J) 1 1+<2`ja" >?."

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'*"<.,.B+%'"(%9*<1+'(*%/'"?.\$%B.&'(@+'*<"I(, ".45,+(%""*"?."5+<'2" I ?*"5<*5*&.7"?."X).&'(*%&"+%2"
7.6(&(*%""*".46,)7."+X).&'(*%"+&"%*" "<.,.B+% 'a"
"

W5*% "<.6.(5"*9".+6?"5+<'2A&"<.&5*%&."*"?."B(7.%6."<.B(. I .7/"'?."\$%B.&'(@+'*<"I(, "7.'<1(%."9"
+%2"+77('(*%+,("%B.&'(@+'(*%("&"%..7.7a"\$%"+77('(*%/'.'(?.<'5+<'2" 1+2"*99.<"% . I " I ('%.&&.&"*<"*'?.<"
% . I ".B(7.%6.a">?."\$%B.&'(@+'*<"I(, "6*%&(7.<"'?."<.&5*%&.&"5<*B(7.7/" I (, "5*&.X).&'(*%&"*5+<(&"
*<" I ('%.&&.&"+&"+55<*5<(+'. "\+'"'?."7(&6<.'(*%""*9"'?."\$%B.&'(@+'*<]"/"+%7"(%'.<B(. I "% . I " I ('%.&&.&/'
+%7"+66.5""% . I /" <.,.B+% '/'" .B(7.%6.a" \$9" % . I " <.,.B+% "' .B(7.%6." (&" 5<*B(7.7" N2" .('?.<'5+<'2/" *<"
@+'?.<.7" N2" '?." \$%B.&'(@+'*</" '?." % . I ,2" @+'?.<.7" .B(7.%6." \(%6,)7(%@" +%&I .<&" '*" 6,+<(92(%@"
X).&'(*%&] I (, "N." 1+7."+B+(,+N,. "9* "<.B(. I "N2".+6?"5+<'2a"3+6?"5+<'2" I (, "?+B."9(B. "\F]N)&(%.&&"

- % . " 1Fk

O.+<(%@&" I(,,"N."?.,7"B(+B(7.*6*%9.<.%6(%@a"G<(*<"*"?."? .+<(%@/"'?"O.+<(%@"U99(6.<" I(,,"<.6.(B." (%&'<)6'(*%&" <.@+<7(%@" '?'." *5.<+(*%" *9" +%2" +)7(*:B(&)+," .X)(5 1 .%" 9*<" '?'." ?.+<(%@a" 3+6?" 5+<'(6(5+% '&'?+,,"+,&*N."5<*B(7.7" I('?'(%&'<)6'(*%&"*%?"* I""*"+66.&&"'?"? .+<(%@a"3+6?"? .+<(%@" I(,,"

f H%*B.<B(I "9"?' . 5<*6.7)<+,"*5'(*%&"+%7"5<*6.&&/'(%6,)7(%@"H7+5'+N,."C.&*,)'(*%"+%7"
;(&6(5,(%+<2"C.&*,)'(*%a"

f 345,+(% "'?+' "'?."&')7.% "'?+&" +<(@? "' '*'+%" +7B(&*<"*9"?' .(<"6?*(6."7)<(%@"'?' . 5<*6.&&"+%7"
5<*B(7."+,(&"*9"0*,,@." . 15,*2..&"<+(% .7"+&" +7B(&*<&")5*%<.X) .&'a"

f >?. "0*,,@.A&"+6*?*, "+%7"7<)@+1% .&'2"5*,(62a"

f >?. "0*,,@.A&"5*,(62"5<*?(N('(%@"<. '+,(+'(*%a"

"

0*%6)<<.% ',2/'?' . 0(B, "C(@?'&"D">(',."\$E" 0**<7(%+'*<" I(,,"&.,.6"'+'<+(% .7"(%' .<%+, "*<" .4' .<%+,
\$%B.&'(@+'*<"_\$_%B.&'(@+'*<" j" '*6*%7)6"'+"<.+&*%+N,./" (15+<'(+,/" +%7"5<* 15"'(%B.&'(@+'(*%)*9"?' .
6* 15,+(% "'_\$_%B.&'(@+'(*%` ja">?. "0(B, "C(@?'&"D">(',."\$E" 0**<7(%+'*<" I(,,"&.,.6"'+"\$%B.&'(@+'*<"
N+&.7"*%&.&.B.<+,"9+6'*<&/'(%6,)7(%@"'?' .5+<'(.&'(%B*,B.7/"?' .6* 15,.4('2"*9"?' .6* 15,+(% '/'?' .% .7"
'*"+B*(7" +%2" 5*'.%'(+," 6*%9,(6" *9" (%' .<.&'/" +%7" I?*" 1+2" N.&" 6*%7)6"' +9+<' +%7" .X)(' +N,."
(%B.&'(@+'(*%)*9*<"+,," 5+<'(.&'(%B*,B.7a">?. "0(B, "C(@?'&"D">(',."\$E" 0**<7(%+'*<" I(,,"%*(92"?' .
5+<'(.&'(% I<'(%@"/*9"?' .%+1 ."*9"?' .7.&(@%+' .7"\$%B.&'(@+'*<+' "'?' ."(1 ."'?' .0(B, "C(@?'&"D">(',."
\$E" 0**<7(%+'*<'(&&)&'?' .%*(6."*9"(%B.&'(@+'(*%a">?. "5+<'(.&' I(,,"?+B."?'<.. \Sj'N)&(% .&&"7+2"*
Nb.6"' '"'?' ."\$%B.&'(@+'*<A&"&.,.6'(*%*"%'?' .N+&(&"*9"N+&"*<"6*%9,(6" *9"(%' .<.&'a"\$9' .('?' .<"*9"?' .
5+<'(.&' *Nb.6'&/'?' . 0(B, "C(@?'&"D">(',."\$E" 0**<7(%+'*<" I(,," B+,)+'. I?.'?' .<"?' . *Nb.6'(*%("&
&)N&'+'(+'.7a">?. "0(B, "C(@?'&"D">(',."\$E" 0**<7(%+'*<" I(,,"<. 1 *B." +%7"<.5,+6." +%2"\$%B.&'(@+'*<"
'?' .0(B, "C(@?'&"D">(',."\$E" 0**<7(%+'*<"

"

U%6."?'."\$%('(+,"L+6':^+'?.<(%@"(&"6* 15,.'./'?'."0(B("C(@?'&"D">('."\$E"0**<7(%+'*<" I(,"5<*B(7."
'?."\$%'.<B(. I "J

\$%B.&'@+'*<"7.'.<1(%.&""?+'""?."G<.,(1(%+<2"\$%B.&'@+'(*%"(&"6*15,. ' /""?. "\$%B.&'@+'*<"I(, "&)N1("'
'?."\$%B.&'@+'(*%"C.5*<""*""?."

O.<+<(%@U99(6.<" I(,,"6*%7)6'"", (B."?. +<(%@/"+" I?(6?"?. 2" I(,,"5.<1 ("(%7(<.6""6*&&:.4+1 (%+'(%% *9"?'."5+<'(.&"+%7" I('%.&&.&a"L* <"5)<5*&.&"*9"?'(&"G*", (62/"'?'." <1 "\$%7(<.6""0*&&:34+1 (%+'(%% 1 .+%&"?'."O.<+<(%@U99(6.<" I(,,"+,* I"?'."5+<'(.&"+%7g* <"?'.(<+7B(&* <&"*")N1 ("5<*5*&.7"X).&'(%%& 9* <"?'."5+<'(.&"+%7" I('%.&&.&/"&" I .,,"&9* ,,* I :)5"X).&'(%%&N+&.7"*%"".&'(1 *%2"5<*B(7.7"7)<(%@ '?.?"?. +<(%@a">?."O.<+<(%@U99(6.<" I(,,"+&Y"?'."5+<'(.&"+%7" I('%.&&.&"?'."5<*5*&.7"X).&'(%%&"?'+"?'." O.<+<(%@U99(6.<"7.'.<1 (%.&"+<."6*%&&(&'."%"" I('?"'?(&"G*", (62"+%7"+<."5<*N+'(B."*9"9+6'&"<.,.B+% ""' * ?." +7b)7(6+'(%%"*9"?'."1 +'"<a">?."O.<+<(%@U99(6.<"1+2"<.9)&." '*"+,,* I"X).&'(%%&"?'+"<.")%7),2" ?+<+&&(%@"* <"?'+"&."Y"(%9* <1+'(%%"?'+"(&"%*" <.,.B+% "")%7.<"?'(&"G*", (62a"

>?."O.<+<(%@U99(6.<"(&"<. &5*%&&(N,. "9* <"1 +(%+'(%@"+%*" <7.<.2"/9+(</" +%7"<.&5.6'9), "?. +<(%@"+%7"?'&N<*+7")?'* <("2"'* <.&5*%7"'*7(&<)5'(B."* <?"<+&&(%@N."?+B(* <&/"(%6,)7(%@"+7b*) <(%@"?'."?. +<(%@" * <".46,)7(%@"?'."*99.%7(%@"5.<&*%a" G+'(.&"1+2"1+Y."<.X).&'&"*"'?'."0(B("C(@?'&"D">(',"\$E" 0**<7(%+'* <.<.,+.7"*"?'."9* <1+'* <?"?.%+'<."*9"?'.(<5+<'(6(5+'(%%"(%"?'."?. +<(%@a">?."0(B("C(@?'&" D">(',"\$E"0**<7(%+'* <" I(,,"I * <Y" I('?"'?"O.<+<(%@U99(6.<"*"+66*11 *7+'."<.+&*%+N,."<.X).&'&a" H,,"?. +<(%@&" I(,,"*66)"B(+B(7.*6*%9.<.%6(%@a"

>?."0(B("C(@?'&"D">(',"\$E"0**<7(%+'* <" I(,,"&6?.7), . "+"?. +<(%@"7+'." +%7"('1." +%7"*%'(92"?'." 5+<'(.&"*9"?'."&+1 .a">?."O.<+<(%@U99(6.<" I(,,"&'<(B."*?"*?,7"?'." +<(%@" I('?(%"".%\!R]N)&(%.&&"7+2& 9<*1 "<.6.(5""*9"?'."\$%B.&'(@+'(%%"C.5* <"+%7"?'."5+<'(.&"&"<.&5*%&.&/"9"+%2a"

G<(* <"*"'?'."?. +<(%@/"* </"+"?'." ,+.'&'/"*%""?. "7+2"*9"?'."?. +<(%@/"?'."O.<+<(%@U99(6.<"* <"+7.&(@+ '.7" O.<+<(%@"0**<7(%+'* <" I(,,"6*%7)6'" "+5<.:?." +<(%@"1.. '(%" I('?"'?"5+<'(.&"5<(* <"*6*11 .%6(%@"?'." ?." +<(%@a"H"?'(&"5<.:?." +<(%@"1.. '(%" /". +6?"5+<'2" I(,,"<.6.(B."+" .45,+%+'(%%"*9"?'."?. +<(%@"5<*6.&& +%7"?'+B."?'."*55* <')%('2"'*"+&Y"+%2"X).&'(%%&a"\$9"?'."6*15,+(%+"+" +%7g* <.&5*%7."%"?'+B." ., .6'.7" '*"?'+B." +7B(&* <&"?'<*)@?'*)"'?'."?. +<(%@"5<*6.&&/"?'." +7B(&* <("&".%6*) <+@.7" '*"+66*15+%2"?'." 6*15,+(%+"%g<.&5*%7.%""*"'?(&"1.. '(%"@a"

>?."6*15,+(%+"%"/" <.&5*%7.%"/" +%7"?'."O.<+<(%@"U99(6.<" +,,"?+B."?'." <(@?' "'*6+," I('%.&&.&a" c ('%.&&.&"1)&'?"?+B."*N&.<B.7"?'."6*%7)6'"(%"X).&'(%%"* <?"?+B."(%9* <1+'(%%"<.,.B+% ""' *?"?."(%6(7.%" +%7"6+%%"*""N."6+,,.7"&*,.,.2""* &5.+Y"+N*)"'+"(%7(B(7)+,A&"6?+<+6'.<a"\$%"@.%.<+,"/%"*5+<'2" I(,,"N." 5.<1 ("'.7"'*6+,,&"+" I('%.&&"+%2*%." I?'* I +&"%*" (%'<B(. I.7"N2"?'."\$%B.&'(@+'* <"+&"5+<"*9"?'." 0* ,.,@.A&'(%B.&'(@+'(%%a"

>?. "O.+<(%@"U99(6.<" I(,,"7.'.<1(%."(9"'?. "5<*99.<.7" I('%.&&\.&]" ?+&"<.,.B+%'"(%9*<1+'(*%"+%7"(9
'?.<." (&" &)"99(6(.%" b)&'(9(6+'(*%" 9*<" 5.<1('(%@" + " I('%.&&" I ?*" I+&" %*" ("'.<B(. I .7" N2" '?. "
\$%B.&'(@+'*<a" >?. " O.+<(%@" U99(6.<" 1+2" +,&* " <.X)(<." '?. " \$%B.&'(@+'*<" '* ("'.<B(. I " '?. " % . I ,2"
5<*99.<.7" I('%.&&" c ?.%" I('%.&&.&"+<." +55<*B.7"*"N." 5<.&.%/"'?'." <.&5*%7.%'" +%7"6* 15,+(%+%'"
I(,,"N." 5<*B(7.7" I('?'+" ,(&"*9" I('%.&&.&"+%7"+%2"<.,.B+%'"7*6) 1 .%'&"<.,+' .7" '*"'?. " I('%.&&.&A"
+55.+<+%6."+'"'?. "?. .+<(%@"%*" ,+' .<"'?'+%"'?'<.. \S]N)&(%.&&"7+2&"N.9*<."?'."?. .+<(%@"

>?. " ? .+<(%@"(&'(%'.%7.7" '* "5<*B(7. " +9+(<" +%7" + 15, . " *55* <')%('2"9*<" .+6?" &(7. " '* "5<.&.%"'?' .(<"
+66*)% "'*9"'?' .(%6(7.%'" +%7"9*<"'?' . "O.+<(%@"U99(6.<"*7. ' .<1(%." '?. "9+6'&"*9"'?. "6+& . "+%7" 1+Y. "+

**K??\$, @'>!9)!C':%'?'', +./!G\$:87-&'8, !8#!+!Q.'\$(+, %\$!8#!A8, B5'&7\$!; I!
P':%8, @ - %&!KE+', :&!K@=' , ':&**

>?. " 0(B(," C(@?'&" D" >('," \$E" 0**<7(%+'*<" I(," 5<*B(7." '?'." 6* 1 5,+(%+% "'+%7"'?'." <.&5*%7.% "' I('?' %*'(6." *9"+%2"7.,+2&"+%7"@B." "'?. 1 "+%". I"(1.'+N,." 9* <6* 1 5,.'(*%*"9"'?'."(%B.&'(@+'(*%a"

>?. "(%B.&'(@+'(*% I(,"(%6,)7." +%"(%'.<B(. I \&] I ('?' '?'." 6* 1 5,+(%+% '/' '?'." <.&5*%7.% "'+%7g* <" +%2" *'?'.<5.&*% I ?* 1 +2" ?+B." (%9* <1+'(*% "<.@+<7(%@" '?'." (%6(7.% '/' .+6?"*9" I ?* 1 "&".%6*) <+@.7" '* 6**5.<+'." I ('?' +%2"(%B.&'(@+'(*%a">?. "%B.&'(@+'* < I(," 5<.5+<." +&") 1 1 +<2"*9".+6?"(%' .<B(. I /&?+<." '?'." &) 1 1 +<2" I ('?' '?'." (%' .<B(. I .. /"+%7"5<*B(7." '?'." (%' .<B(. I .. I ('?' +% "55* <')%('2" '* 6* <<.6" '* < 6* 1 1 .% "'*%"+%2"&'+' . 1 .%'&' 1 +7." (%"'?'." &) 1 1 +<2a"\$9"%* <.&5*%&." (&'<.6.(B.7"9<* 1 "'?'." (%' .<B(. I .. I ('?' (%"'?<.. \S]N)&(% .&&"7+2&"<.9,.6'(%@"+%2"+77('(*%&"* <6?+%@ .& I ?(6?"?'." (%' .<B(. I .. "N.,(.B.& +<."% .6.&&+<2/"?'." (%' .<B(. I "&) 1 1 +<2"&?+,,"N."7.. 1 .7" '* "N.")%7(&5)' .7a"\$%"+, "(%&' +%6.&" I ?<." '?'." %B.&'(@+'* <" (%6,)7.&"+% "(%' .<B(. I "&) 1 1 +<2"+&"+% ".4?(N(" '* "+<.5* </' '?'." %B.&'(@+'* <" I(," +,&* (%6,)7." +%2" <.&5*%&.a" >?. "%B.&'(@+'* <" 1 +2" +,&* @+'?'." <" +%2" <.,.B+% "' 7*6) 1 .%'&"+%7" 6*%7)6" 9* ,,* I :)5" * <<.N)'+, "(%' .<B(. I &/' +&"% .6.&&+<2a"

>?. " 0(B(," C(@?'&" D" >('," \$E" 0**<7(%+'* <" I(," 5<*B(7." '?'." \$%' .<B(. I " J) 1 1 +<(.&"+%7" +%2" 7*6) 1 .%' +<2" .B(7.%6." @+'?' .<.7" '* " '?'." 5+<'(.&" 9* <" <.B(. I a" ^ (B.% " '?'." &.%&'(B.% '+')<." *9" '?'." (%9* <1+'(*% 5<*B(7.7/" '?'." 0(B(," C(@?'&" D" >('," \$E" 0**<7(%+'* <" I(," 5<*B(7." '?'." (%9* <1+'(*% "(%"+ &.6)<." 1+%%.<" \. a@a/"N2"5<*B(7(%@"7(@('+"6*5(.&"*9"'?'." 1 +'.<(+,&"?'<*)@?'+"5<*'.6'.7/"_<.+7:*%,2`" I .N" 5* <'+,]a" 8.'?'<" '?'." 6* 1 5,+(%+% "'%* <" '?'." <.&5*%7.% "'* <" '?'." (<" +7B(&* <&/' (%6,)7(%@" N) "'%*" , (1 ('.7" '* "9+1 (2" 1 . 1 N.<&" +%7g* <," .@+," 6*)%&.,] " 1 +2" 6*52/" <. 1 *B./" 5?*" * @+5?/" 5<(%'/' (1 +@./"

9<* 1 " '?. " \$%B.&'(@+'*%a" U%6." '?. " \$%B.&'(@+'*<" (&" &+'(&9(.7" '?+' " '?. " <.5*<" (&" 6* 15,. ' /" '?. " \$%B.&'(@+'*<" I(,,"&)N1('"'?. "<.5*<'""*"'?. "0(B("C(@?'&"D">(',"\$E"0**<7(%+'*<a">?. "0(B("C(@?'&"D">(',"\$E"0**<7(%+'*<" I(,,"<.B(. I" '?. " <.5*<" +%7" +&&.&&" I?. '?. "<" '?. " <.5*<" 7. 1 *%&'<+' .&/"N2"+ 5<.5*%7.<+%6. "*9"?. " .B(7.%6./"?'+'V"!]"?. " .B(7.%6. "&)55*<'&"?. "\$%B.&'(@+'*<A&"9+6')+,"9(%7(%@&i" +%7" \#]" '?. " \$%B.&'(@+'*<A&" 9+6')+," 9(%7(%@&" &)55*<" '?. " \$%B.&'(@+'*<A&"),'(1+'." 9(%7(%@ " *9" <.&5*%&(N(,'2"*<"%*%:<.&5*%&(N(,'2a"

>?. " 0(B("C(@?'&"D">(',"\$E"0**<7(%+'*<" 1+2"<.X)(<." '?'+' " '?. " \$%B.&'(@+'*<" 6*%7)6"+77('(*%+," (%B.&'(@+'*%/"6*%&(&'."% I('?' '?. "5<*6.7)<.&*%),'(%."7"+N*B.a"U%6. "'?. " 0(B("C(@?'&"D">(',"\$E"0**<7(%+'*<" ?+&" 6*%9(<1.7" '?+' " '?. " L(%+," C.5*<" (&" 6* 15,. ' /" '?. " 0(B("C(@?'&"D">(',"\$E"

K??\$, @'>!C)!K@+?&+67\$!G\$:87-&'8, !J.8%\$@ - . \$:!

H7+5'+N, . "<.&*,)'(*%" (&+" B*,)'%'+<2/'<. 1.7(&:N+&.7/'&'<6')<.7" (%'.<+6'(*%" N.' I . . % * < " + 1 * % @ " +99.6'.7"5+<'(.&'?'+"N+,+%6.&)&55* < " + % 7 " + 6 6 *) % ' + N (, (' 2 " I (' ? *) ' ' ' + Y (% @ " 9 * < 1 + , " 7 (& 6 (5 , (% + < 2 " + 6 ' (* % " + @ + (% & " " ? . " < . & 5 * % 7 . % ' a " H 7 + 5 ' + N , . "<.&*,)'(*%" (& @ . % . < + , , 2 " 7 . & (@ % . 7 " ' * " + , , * I " ' ? . " < . & 5 * % 7 . % " ' * " + 6 Y % * I , . 7 @ . " ? + < 1 " + % 7 " + 6 6 . 5 " " < . & 5 * % & (N (, (' 2 " 9 * < " < . 5 + ((% @ " ? + < 1 " \ ' * " ' ? . " . 4 ' . % " 5 * & & (N , .] " . 4 5 . < (. % 6 . 7 " N 2 " " ? . " 6 * 1 5 , + (% + % " + % 7 g * < " ' ? . " 0 * , , . @ . " 6 * 1 1) % (' 2 a " H 7 + 5 ' + N , . "<.&*,)'(*%" (& " 7 . & (@ % . 7 " ' * " . , (1 (% + ' . " ? . " G < * ? (N (' . 7 " 0 * % 7) 6 ' / " 5 < . B . % " (' & " < . 6) < < . % 6 . / + % 7 " < . 1 . 7 2 " (' & " . 9 9 . 6 ' & ' (% " + ' 1 + % % . < " ? + " 1 . . ' & " ' ? . " % . . 7 & " * 9 " ' ? . " 6 * 1 5 , + (% + % " I ? (, . 1 + (% ' + (% (% @ " ' ? . " & + 9 . ' 2 " * 9 " ' ? . " 6 + 1 5) & " 6 * 1 1) % (' 2 a " H 7 + 5 ' + N , . "<.&*,)'(*%" (1 + 2 " % * " N . ") & . 7 " (% " 6 + & . & " I ? . < . + % " . 1 5 , * 2 . . (& " + , , . @ . 7 " ' * " ? + B . " 6 * 1 1 (' . 7 " > (' . " \$ E " J . 4) + , O + < + & & 1 . % " + @ + (% & " + & ") 7 . % ' a " > ? . " 0 * , , . @ . " I (, , % * " 1 + % 7 + ' . " 1 . 7 (+ (% * " " * < . & * , B . " + , , . @ + (% * & " * 9 " & . 4) + , ? + < + & & 1 . % ' / " + % 7 " I (, , % * " + , , * I " 1 . 7 (+ (% * " / . B . % " * % " + " B * ,) % ' + < 2 " N + & (& / " ' * " < . & * , B . " + , , . @ + (% * & " * 9 " & . 4) + , " B (* , . % 6 . a "

>? . " 0 (B (" C (@ ? ' & " D " > (' . " \$ E " 0 * * < 7 (% + * < < . B (. I & " " ? . " 1 + ' . < " * " " ? . " . 4 ' . % " " % . 6 . & & + < 2 " * " 6 * % 9 (< 1 " " ? + " (" (& " * 9 " " ? . " 2 5 . " " ? + " I *) , 7 " N . " + 5 5 < * 5 < (+ ' . 9 * < " + % " + 7 + 5 ' + N , . "<.&*,)'(*%" 5 < * 6 . & & " + % 7 " " ? + ") & . " * 9 " + % " + 7 + 5 ' + N , . "<.&*,)'(*%" 5 < * 6 . & & " I + & " I (' ? *) " 5 < . & & < . " * < " 6 * 1 5) , & (* % " 9 < * 1 " * " ? . < & a " > ? . " + 7 + 5 ' + N , . "<.&*,)'(*%" * 5 (% * & " + B + (, + N , .) % 7 . < " ? (& " G * , (6 2 " < . 6 * @ % (d . V "

f >? . " @ * + , " * 9 " + 7 + 5 ' + N , . "<.&*,)'(*%" (& " " * " + 7 7 < . & & " " ? . " G < * ? (N (' . 7 " 0 * % 7) 6 ' / " (7 . % ' (9 2 " I + 2 & " " ? + " (% 7 (B (7) + , & " + % 7 g * < " " ? . " 6 * 1 1) % (' 2 " ? + B . " N . . % " ? + < 1 . 7 / " + % 7 " 7 . B . , * 5 " + < . & * ,) ' (* % " + @ < . . 1 . % " ' * " + 7 7 < . & & " " ? . " ? + < 1 " + % 7 " 5 < . B . % " 9) ' < . " G < * ? (N (' . 7 " 0 * % 7) 6 i "

f G + < ' (6 (5 + ' (% * " (& " B * ,) % ' + < 2 " + % 7 " N * " ? " + " 6 * 1 5 , + (% + % " + % 7 " + < . & 5 * % 7 . % ' / " + & " I . , , " + & " + % 2 " * " ? . < " 5 + < ' (6 (5 + ' (% @ " (% 7 (B (7) + , & / " 1) & " 6 * % & . % " (" I < ((% @ " " * 5 + < ' (6 (5 + ' (% * " (" + 7 + 5 ' + N , . "<.&*,)'(*%" i "

f >? . " I < (' . % " 6 * % & . % " " I (, , (% 9 * < 1 " " ? . " 6 * 1 5 , + (% + % " + % 7 " " ? . " < . & 5 * % 7 . % " " ? + " . (' ? . < " 6 + % " < . X) . & " ' * " . % 7 " + 7 + 5 ' + N , . "<.&*,)'(*%" + " + % 2 " (1 . " + % 7 " 5) < &) . " 9 * < 1 + , < . & * ,) ' (* % a " c < (' . % " 6 * % & . % " " I (, , + , & * " (% 9 * < 1 " 5 + < (. & " " ? + " (% 9 * < 1 + ' (* % " @ + ' ? . < . 7 " + % 7 ") ' (, (d . 7 " (" + 7 + 5 ' + N , . "<.&*,)'(*%" N 2 " + % 7 " N . ' I . . % " ' ? . " 5 + < (. & " 6 + % % * " " N . ") & . 7 " (" + % 2 " * " ? . < " 0 * , , . @ . " 5 < * 6 . & & / " (% 6 ,) 7 (% @ " 9 * < 1 + , < . & * ,) ' (* % " / " (9 + 7 + 5 ' + N , . "<.&*,)'(*%" . % 7 & " + % 7 " 9 * < 1 + , < . & * ,) ' (* % " N . @ (% & " * < < . &) 1 . & i "

f

f G+<'(6(5+% '&' (% +7+5'+N, . <.&*,)')(*% 5<*6.&&.& 1)&' N." 5<*'.6'.7" 9<* 1" &.6*%7+<2" B(6'(1(d+'(*% +7" *'?'<' 5*'.%'(+, " ?+<1&/' (%6,)7(%@" '?." 5<.&&)<." '* 5<*6..7" '?<*)@?' +7+5'+N, .<.&*,)')(*%('(&' .+7"*9"9* <1 +, "<.&*,)')(*%a"

I7,<#,:\$%& ;%/3\$+##31&A<##31/&

>?. "+7+5'+N, .<.&*,)')(*%*"5'(*%&' I(, "N. ". %+N, . 7"N2"+<+(% .7"6**<7(%+'*<a">?. "+7+5'+N, .<.&*,)')(*% 6**<7(%+'*< 1)&' "N. "(1 5+<'(+, "+%7"9<.. "9<* 1 "N(+&"*<6*%9,(6""9"(%' .<.&'a"\$9"?' . "+7+5'+N, .<.&*,)')(*% 6**<7(%+'*< ?+&' 6*%6.<%&' '?'+" '? .2" 6+%*%' 9+6,(+'+' . "+ 9+<' *<')%N(+&.7" 5<*6.&&/' '?' . "+7+5'+N, .<.&*,)')(*% 6**<7(%+'*< 1)&'<.5* <'?'*&." 6*%6.<%&' '*"'?' . "0(B("C(@?'&"D">(', . "\$E"0**<7(%+'*<+%7" + " 7(99.<.% "' +7+5'+N, .<.&*,)')(*% 6**<7(%+'*< I(, " N. " +&&(@% .7a" J(1(+<2/" + " 6* 15,+(%+%/' + " <.&5*%7.% '/' *<' +%2" *'?'<' 5+<'(6(5+% "' I ?*" ?+&' 6*%6.<%&' '?'+" '?' . " +&&(@% .7" +7+5'+N, .<.&*,)')(*% 6**<7(%+'*< 6+%*%' . %+N, . "+ 9+<' +%7")%N(+&.7" 5<*6.&&/' 1+2" <.5* <'?'*&." 6*%6.<%&' '*"'?' . " 0(B(" C(@?'&"D">(', . "\$E"0**<7(%+'*< I ?*" I(, "+&&.&&"?' .6<6) 1 &'+%6.&"+%7"7. '. <1 (%. " I ?.'?'<+"7(99.<.% "' +7+5'+N, .<.&*,)')(*% 6**<7(%+'*< &'?),7"N. "+&&(@% .7" '*"'?' . "+7+5'+N, .<.&*,)')(*% 5<*6.&&a"

\$9"+5+<'2"<.X) .&'&'?' . "(('+'(*%*"9"+%"+7+5'+N, .<.&*,)')(*% 5<*6.&&'+%7"?' . "0(B("C(@?'&"D">(', . "\$E" 0**<7(%+'*<"+@<..&'?'+"?' . " 1+'+' .<'(&"+55<*5<(+'. "9* <"+7+5'+N, .<.&*,)')(*%/' .+6?"5+<'2" I(, "<.6.(B. "+ I<'.'%*"*(6. "'?+"7(&6,*&.&V"

f >?. "+,., .@+'(*%&i"

f >?. "<.X)<. 1 .%'&"*9"?' . "+7+5'+N, .<.&*,)')(*% 5<*6.&&/'(%6,)7(%@"'?' . "6<6) 1 &'+%6.&")%7.<' I?(6?" (" 5<.6,)7.&'?' . "5+<'(.&"9<* 1 "<.&) 1 (%@"+"9* <1 +, "6* 15,+(%+"<(&%"9<* 1 "'?' . "&+1 . " +,., .@+'(*%&7.&6@0.2(+)0.(')0.491 .626 - 44 1 Tm/BT5000.2(&)0.2(?.)0.2(")JTJETQq0.24002(")I/

" H%" (%7(<.6'/" 9+6,(+' .7" 6*%B.<&+'(%%" (%7(B(7)+,,2" I('?" '?'." 6* 15,+(%+% '/' " '?' .<.&5*%7.%/'" +%7g* <" *?'<. 5+<(6(5+%'&' '* 7(&6)&&' .45.<.(%6." +%7" 5.<&5.6'(B."+%7" .45,*<.(%'<.&'&' I ?(,." I *<Y(%@" '* I +<7&' 1 ..'(%@" .45<.&&.7"% .7&a">?(&' %.@*(' .7"5<*6.&&'7* .&%"*'"<.X)<."7(<.6'("%'<+6'(%%"N.' I ..%"'"?' .5+<(.&"*'"?' .5+<(.&"+%7" *?'<.5+<(6(5+%'&'N)"<+'?'</"(%7.5.%7.%',2/" I('?"+"6*%<7(%+'*<a"

" H" 9+6,(+' .7" (%'<+6'(%%"N.' I ..%"'"?' .<.&5*%7.%'" +%7" 0*,,.@."9+6), '2"+%7g* <'&'+99"7.&(@% .7"'*5<*B(7."+66*%)'+N,('2/'&'<6')<.7"&)55* </'"+%7"'?' . 7.B.,*5 1 .%" *9" +", .+<%(%" 5,+%a" >?." 9*6)&' *9" + " OUH" (&' '* N+,%+6." &)55* <'"+%7" +66*%)'+N,('2"9* <+"(%7(B(7)+, " I ?*?"&"+6Y* I .,7@.7"'?'<.*N,(@+'(%%"'"<.5+<?"<1 "+"%7" I(,.(%@"&&' *' .%@"+." (%' +%" .7)6+'(%%+, " 5<*6.&&a" >?." OUH" 1 *7., " 7*.&' %*'" <.X)<." 5+<(6(5+%'(%"9<* 1 "'?' .6* 15,+(%+% '/'N)"&+" I('?"*?"<"25.&"*9"+7+5'+N,.<.&*,)'(%%/'(" 1)&" N."B*,)'%'+<2"9* <'?' .6* 15,+(%+% '+'%7"'?' .<.&5*%7.%' a"

Q.+&<.&"'?'+" 1+2"N."+@<. .7"'*"+&"+<.&), "'*9"?' ."+7+5'+N,.<.&*,)'(%%"5<*6.&&' 1+2"(%6,)7."V"

f H,6*?'*,.7)6+'(%%"6,+&&.&"9* <'?'<.&5*%7.%' i"

f C.@),+< 1 ..'(%@"&' I('?"+"%"+55<*5<(+'. "0*,,.@."(%7(B(7)+,/'")%('/*<.&*)<6. i"

f G.<1+% .%" .4'.%&(%%"*9"+%*:6*%' +6'"7(<.6'(B. i"

f C.&'<(6'(%%"9<* 1 "5+<(6(5+%'(%%"&5.6(9(6'6,)N&"+%7g* <*<@+% (d+'(%%"&i"

f <.&5*%7.%'"<.&'<(6'(%%"9<* 1 "5+<(6(5+%'(%%"5+<(6),+<".B.%'&i"

f <.&5*%7.%'"6* 15.,'(%%"*9"+% .7)6+'(%%+, "5,+%" I('?"<.@),+< 1 ..'(%@"&' I('?"'?' ."+7+5'+N,. i" <.&*,)'(%%"6*%<7(%+'*<*'"?'<.55<*5<(+'. "0*,,.@."&'+99* <'9+6), '2" 1 .1 N.<i"+%7g* <"

f 0*)%&.,(%@"&.&&(%%"*9* <'?'<.&5*%7.%' a"

%" 7(B(7)+,&' I ?* I (&' *' 5+<(6(5+.' (%' +%" +7+5'+N,.<.&*,)'(%%"5<*6.&&' 1)&"' ?+B."&)66.&&9),,2" 6* 15,. ' .7" 5<.5+<+'*<2" 1 ..'(%@"&' I('?"'?' ."+7+5'+N,.<.&*,)'(%%"6*%<7(%+'*<a" %7(B(7)+,&' 1+2"N." +66* 15+%(.'7"N2"+%+7B(&.<+"+%2" 1 ..'(%@"&.<.,+' .7"'*"'?' ."+7+5'+N,.<.&*,)'(%%"5<*6.&&a"

I7.<#,:%&k ;%/3\$+##31&IF.%%0%1#/#&

H%2" +@<. . 1 .%'&'<.+6? .7" (%' +%" +7+5'+N,.<.&*,)'(%%" 1)&' N." 7*6) 1 .%' .7" N2" '?' ."+7+5'+N,.<.&*,)'(%%" 6*%<7(%+'*<"+%7" +55<*B.7" N2" '?' . 0(B(," C(@?'&' D" >(' .," \$E" 0*%<7(%+'*<' *' .%&)<." 6*%&(&' .%62" I('?"'?' . "0*,,.@.A&">(' .," \$E"*N,(@+'(%%"&a"H%" +@<. . 1 .%" I(,,"%*"N."6*%&(7.<.7"B+, (7"9" '?' . 0(B(," C(@?'&' D" >(' .," \$E" 0*%<7(%+'*<' 7* .&' %*'" +55<*B." ('a" \$9" '?' . 0(B(," C(@?'&' D" >(' .," \$E" 0*%<7(%+'*<' *' 7.&(@% . ." +55<*B.&' +%" +@<. . 1 .%" +9'<' '?' . " 5+<(.&' ?+B." B*,)'%'+<(2" <.+6? .7" 6*%&.%&)&"+&' *' ('&'<1 &/'?'<.&5*%7.%'" I(,,"N."<.X)<."7"'* 6* 15,2" I('?"'?' . "+@<. . 1 .%' a" \$9" %*"+@<. . 1 .%" ('&'<.+6? .7"?'?' . " 1+'<1+2"N."<.9.<<.7"'*"'?' . 0(B(," C(@?'&' D" >(' .," \$E" 0*%<7(%+'*<' 9* <9)'<'<'+6'(%%"a"U"6."?'?' . 0(B(," C(@?'&' D" >(' .," \$E" 0*%<7(%+'*<' +55<*B.&' +%" +@<. . 1 .%' /'?' . "5+<(.&' +<."N*)%7"N2"('&'<1 &"+%7"6+%*'"<.)<%"*'" ; (&6(5,(%+<2' C.&*,)'(%%"a"

>*9+<(2"&&.&&5+' .<%"*<&2&' . 1 (6"N. ?+B(*<'?"' . 0(B(," C(@?'&' D" >(' .," \$E" 0*%<7(%+'*<' I(,," 1 +(%'+(%' <.6* <7&"*9"+, "<.5* <'&"+%7"6*%7)6'"<.9.<<.7"9* <"+7+5'+N,.<.&*,)'(%%"a">?' . "'(1 . "9<+ 1 . "9* <6* 15, . '(%%" *9"+7+5'+N,.<.&*,)'(%%" 1+2"B+<2"N)"'?"' . 0*,,.@." I(,,"&. . Y"'*'" (%'(+'. " +6'(%%" I('?'(%"9(9' . .)!F]" N)&(&.&7+2&"*9"?' . (%'(+',+&&.&& 1 .%' a" c ?(, . "'?' . 0*,,.@." I(,,"&. . Y"'*'"?%* <"6*%9(7.%'+, ('2"*9"?' . " 5+<(.&A"6* 1 1)%(6+%'(%%"&' I('?"'?' . "9+6,(+'*<'7)<(@%"?' . "+7+5'+N,.<.&*,)'(%%"5<*6.&&"*"'?' . " .4'.%" "

% .6. &&+<2" '*9+6(,('+'.' '?'<.&*,)'(*%/ "'?. " 0*,,.@." 1+2"N."<.X)(<.7" '*5<*7)6."<.6*<7&" 6<.+'.7" 7)<(%@'?'(&'5<*6.&&"(%<.&5*%&." '*"+"b)7(6(+,&)N5* .%+"*("<"+"L3CGH".7)6+'(*%+,"<.6*<7"<.X) .&'a"\$9" +7+5'+N,."<.&*,)'(*% (&'&'*55.7" 5<(*<" '*6* 15,.'(*%/ &'+' . 1.%'&" 1+7." N2" +5+<'2" (%"+7+5'+N,." <.&*,)'(*%" 1+2"%*" "N.")&.7"(%"+7(&6(5,(%+<2"<.&*,)'(*%"5<*6.&&"<.,+' .7" '*"'?'+" 1+''.<a"

I 7, <# , : \$%& ; % 0 %7"/&3.&' 1#%.C% 1#"31/&3.	%&B3\$\$%F%&B3 0 0 +1"#@&

K??\$, @'>'!')!M&- @\$, &!M+, %&'8, ', E!J.8%\$@ - .\$.!

\$9"+<.5*<'5<*6..7&'?'<*)@?' ; (&6(5,(%+<2"C.&*,)')(%%"+%7"'?'."<.&5*%7.%'"(&"9*)%7"<.&5*%&(N,."9*< *%."*<"1 *<."B(*,+('(%&"*9"'?'."0*,,.@.A&"+'(7(&6<(1(%+'(%*"5*(6(.&/'?'."0*,,.@."I(,,"(&&)."&+%6'(%%&" 6*11.1.%&)<+'. "I('?'?'."B(*,+('(%\&]a">?'."0(B,("C(@?'&"D">(',"\$E"0**<7(%+'*<"I(,,"7.&(@%+'."?'<.." '<+(% .7"(%7(B(7)+,&"*"&.<B."*%"+"'?'<..:5.<&*%5+%,,"_C.B(. I"G+%.,`]"*7.'.<1(%."&+%6'(%%&a">?'." 0(B,("C(@?'&"D">(',"\$E"0**<7(%+'*<"I(,,"*%'(92"'?'."5+<'(.&/'(%"I<('(%@/'*9"'?'."%+1."*9"'?'."7.&(@%+'."7" C.B(. I"G+%.,(&'&"+',. +&"9(B.\F]N)&(%.&&"7+2&"5<(*<"*"'?'."?+.<(%@a">?'."5+<'(.&"I(,,"?+B."*?'<.."S]N)&(%.&&"7+2&"*Nb.6""*"+%2"C.B(. I"G+%.,(&'*%"'?'."N+&(&"*9'+6')+,"N(+&"*<"6*%9,(6""*9'(%'<.&'a"\$9"+%2"5+<'2"*Nb.6"/'?'."0(B,("C(@?'&"D">(',"\$E"0**<7(%+'*<"I(,,".B+,)+'. "I?'.'?'<'?'."*Nb.6'(%%('& &)N&'+'(+'.7a">?'."0(B,("C(@?'&"D">(',"\$E"0**<7(%+'*<"I(,,"<.1*B."+%7"<.5,+6."+%2"C.B(. I"

+55<*5<+'.'<.&*,)'(*% "(% ".+6?"6+&.a"

"

>?. "0(B,"C(@?'&"D">(',."\$E"0**<7(%+'*<"+,&*"?+&"'?."7(&6<.'(*% "'* "<.B(. I "+%2"(%' .<(1 "5<*'.6'(B." *<"<. 1 .7(+, " 1 .+&<.&" '*7.'.<1 (%." I ?.'?'<"?' .2"&?*),7"N. "6?+%@.7"*<"+<."%*",*%@.<"+55,(6+N,.a" >?. "C.B(. I "G+% .,"I (,,"(&&)." +7.'.<1 (%+'(*% "%&"+%6'(*%&"+%7"'?. "5+<'(.&" I (,,"<.6.(B. "%*' (6. "*9"'?. " 7.'.<1 (%+'(*% " I ('?("%9(B. "\F]"N)&(% .&&"7+2&"*9"

"

_____ "C.5+21 .% "'*"? . "0* ,. @ . " * < " * + % + 99 . 6 ' . 7 " 5 + < ' 2 " 9 * < " 7 + 1 + @ . & " < . &) , ' (% @ " 9 < * 1 " + B (* , + ' (* % " * 9 " ? (& " 0 * 7 . a " > * " . % 9 * < 6 . " ? (& " & + % 6 ' (* % / " ? . " 0 * , . @ . " < . & . < B . & " ? . " < (@ ? " " * " I (' ? ? * , 7 " (' & " ' < + % & 6 < (5 ' & " + % 7 " 7 . @ < . . & " * < " * " 7 . % 2 " + " & ') 7 . % " 5 + < ' (6 (5 + ' (* % " (% " @ < + 7) + ' (* % " 6 . < . 1 * % (. & " + % 7 " 5 < (B (, . @ . 7 " . B . % ' & a ")

_____ " J ') 7 . % ' & " 1 + 2 " N . " < . 1 * B . 7 " 9 < * 1 " 0 * , . @ . " ? *) & (% @ " + % 7 g * < " N + < < . 7 " 9 < * 1 " + 55 , 2 (% @ " 9 * < " 6 + 1 5) & " ? *) & (% @ " 7) . " " * " 7 (& 6 (5 , (% + < 2 " B (* , + ' (* % & " * 9 " ? (& " 0 * 7 . a ")

_____ " 346 ,) & (* % " 9 < * 1 " 0 * , . @ . " 5 < . 1 (& . & / " + ' . % 7 (% @ " 6 , + & & . & / " + % 7 " * ? . < " 5 < (B (, . @ . & " * < " + 6 ' (B (' . & " 9 * < " + " & 5 . 6 (9 (. 7 " 5 . < (* 7 " * 9 " (1 . / " + & " & . " 9 * < ' ? " (% " ? . " &) & 5 . % & (* % " * ' (6 . a " 8 * ' (6 . " * 9 " ? (& " + 6 ' (* % " I (, " < . 1 + (% " (% " ? . " & ') 7 . % ' A & " 6 * % 7) 6 " 9 (, . + % 7 " I (, " N . " 5 . < 1 + % . % ' , 2 " < . 6 * < 7 . 7 " * % " ? . " & ') 7 . % ' A & " + 6 + 7 . 1 (6 " ' < + % & 6 < (5 ' a " 0 * % 7 (' (* % & " 9 * < " < . + 7 1 (& & (* % " 1 + 2 " N . " & 5 . 6 (9 (. 7 " (% " ? . " &) & 5 . % & (* % " * ' (6 . a ")

_____ " G . < 1 + % . % " " . < 1 (% + ' (* % " * 9 " & ') 7 . % " & ' + ') & " + % 7 " . 46 ,) & (* % " 9 < * 1 " 0 * , . @ . " 5 < . 1 (& . & / " 5 < (B (, . @ . & / " + % 7 " + 6 ' (B (' . & a " > ? (& " + 6 ' (* % " I (, " N . " 5 . < 1 + % . % ' , 2 " < . 6 * < 7 . 7 " * % " ? . " & ') 7 . % ' A & " + 6 + 7 . 1 (6 " ' < + % & 6 < (5 ' a ")

_____ " H 7 1 (& & (* % " ' * / " * < " + " 7 . @ < . . " + I + < 7 . 7 " N 2 / " ? . " 0 * , . @ . " 1 + 2 " N . " < . B * Y . 7 " 9 * < " 9 < +) 7 / " 1 (& < . 5 < . & . % ' + ' (* % " (% " * N ' + (% @ " ? . " 7 . @ < . . " * < " B (* , + ' (* % " * 9 " 0 * , . @ . " 5 * , (6 . & / " ? . " J ') 7 . % " 0 * 7 . " * 9 " 0 * % 7) 6 " * < " 9 * < " * ? . < " & . < (*) & " B (* , + ' (* % & " 6 * 1 1 (' . 7 " N 2 + " & ') 7 . % " 5 < (* < " * " . % < * , 1 . % " * < " @ < + 7) + ' (* % a ")

_____ " > ? . " 0 * , . @ . " 1 + 2 " I (' ? ? * , 7 + I + < 7 (% @ " + 7 . @ < . . " * ? . < I (& . " + < % . 7 ") % ' (, " ? . " 6 * 1 5 , . ' (* % " * 9 " ? . " 5 < * 6 . & & " & . " 9 * < ' ? " (% - ' + < % . 7 " (, 402 (7 ") 0 . 2 (() 2 (") - 1 20 . 9 (- 1 65 . (- ') (7 ") 0 . 2 (() 2 (")

'<).'?'9(%7(%@"+&"* I ?.'?.<"'?. "+,,.@.7"6*%7)6"B(*,+'.7"'?. "J.4)+,"+%7"\$%'<5.<&*%+," Q(&6*%7)6"G*(62a">?. "5+<('.&" I (,"?+B. "'?. "*55*%<')%('2"*&")N1('+"\$15+6"J'+'. 1 .%'""* "'?. " O. +<(%@" 0* 1 1 ('. /" +%7" '?. " O. +<(%@" 0* 1 1 ('. " I (," <.B(I " '?. " 5+<('.&A" \$15+6" J'+'. 1 .%'&/" +%7" +, " *'?. <" 1 +'. <(+,&" (%" '?. " 6+&. " \<.7+6'.7" +&"% .6.&&+<2" +%7" +55<*5<(+'.]/" (%6,)7(%@"'?. " O. +<(%@"*%<"\$%B.&'(@+'(%%"U)'6* 1 . "+%7"+'+6?.7"+55.%7(6.&/"(%"+&&.&&(%@"'?. " +55<*5<(+'. "&+%6'(%%a"

>?. " O. +<(%@" 0* 1 1 ('. . A&<.B(I ("&"7*6) 1 .%' +<2"*% ,2" +%7"%*"? . +<(%@" (&"? . ,7a"L* , * I (%@" &' +%7+<7" 5<+6'(6. /" '?. " 0(B(," C(@?'&" D">(' . "\$E" 0**<7(%+'*%< I (," N. " +B+(, +N, . " '?<*) @?*" " 7. ,(N.<+'(%%&"*"+77<.&&"X) .&'(%%&" +N*)"'?' . " J.4)+,"+%7"\$%'<5.<&*%+," Q(&6*%7)6"G*(62" +%7" < . , +'.7" 5<*6.7) <.&a" H%2" 7.6(&(%%" '* I +<%/ " <.5<(1+%7/" *%<7(&1 (&" + "9+6), '2" 1 . 1 N.< <.X) (<.&" + ' I * : '? (<7&" 1 +b* <('2"*9" '?. " 1 . 1 N.<&" 6*%7)6'(%@"'?. " ? . +<(%@" /" '?. " B*'. " (%" . +6? (%&' +%6. "'*N. " +Y. %"N2"&.6<. "N+ , , *'a* % 7) 6

K??\$, @'>!Q)!K??\$+7!J.8%\$@ - .\$.!

H55.+,&"*9"? .+<(%@"*%<"(%B.&'@+'(B.*)'6* 1 .&" 1+2"N."9(. .7"N2" .('?.<"5+<'2a"H55.+,&" 1)&"N."&.%'" '*"'? ." 0(B("C(@?'&"D">('."\$E" 0**<7(%+'*%<" I('?'(%"9(B." \F]"N)&(% .&&"7+2&"*9"<.6.(5""*9"'? ."L(%+," C.5*<'a" c ? .%"+%" +55.+,"&"9(. .7/"'?' ."*'?' .<"5+<'2" I(,"N."%*'9(.7/"(% I<('(%@/'+"%7"'? .%"?+B."9(B." \F]" N)&(% .&&"7+2&"*%<.&5*%7""*"'? ." +55.+,"a"H%2"5+<'2A&"7.6(&(*% "%*""*""&)"N 1 ("+"<.5,2""*"+%" +55.+,"(& %*"' .B(7.%6."?'+'"'? ."%*%":+55.+,"(%@"5+<'2"+@<.7" I('?'?' ." +55.+,"a"

>? ." +55.+,&"5<*6.&&"(&"7*6) 1 .%'<2"*% ,2"/+%7"%*"? .+<(%@"(&"? .,7a"3('?.<"5+<'2" 1+2"9(. ."+" +55.+," *9V"!]" +7. ' .< 1 (%+'(*%< .@+<7(%@"<.&5*%&(N,('2i+%7g*%<"#]"'?' ." 0(B("C(@?'&"D">('."\$E" 0**<7(%+'*%<A&" 7(& 1 (&&+," *9"+"9*%< 1 +,"6* 15,+(% ""*%<" +%2"+,, .@+'(*%&"'?' .<.(%"9<* 1 ""?' . ">('."\$E" J.4)+,"O+<+&& 1 .%" 5<*6.&&"&*"') ,(% .7"(% "L*%< 1 +,"O* 15,+(% '&"/ ; (& 1 (&&+,&"+%7"H55.+,&"*9" ; (& 1 (&&+,&/"*%""?' ."9* ,,* I (%@" @<*) %7&V""

f G<*6.7)<+,"(<<.@),+<('2"'?+" +99.6'.7"'? ."*)'6* 1 ."*9"'? ." 1+''.<i"

f 8. I ".B(7.%6."?'+' I +&"%*" "<.+&*%+N,2"+B(+,+N, ."+'"'? ." '(1 ."?' ."7. ' .< 1 (%+'(*%< .@+<7(%@"