

((((((((Y104#"/-7(21%(30-%45"#(J4?%"%&(388154"/41#(C11[(3V"%7'(UWWU_(Y104#"/-7("#7(24#";48/(((
((((((((21%(J"0?7"(C11[(3V"%7'(UWWU_(Y104#"/-7(21%(L\$8/"E\$8(T&-%8(3V"%7'(UWWU(
(
((((51:-74/-7(V4/A(P%48(Z1\$#@'(
((((((((C;1104#@/1#<(P#74"#"(D#4E-%84/&(G%-88'(UW]W(
(
(((((/8397!'3=3>9?@8!
(
35"54"(G%-88'(UW]+(
(
!
*97<AB:5!?!;!2334!"8?@7:95!
!
`922\$;@-#5-8'(G"%/45;-8(4#(T1/41#'(F&5;4#@(A-(T4#785" .-8(12(3.45A"/.1#@((K--%"8-/A"[\$;ba((P#((
((((((((3#4[(6"%["%'(!"&[4/(6"%["%'(-78B(B((
((((((((J4E-%.11;<((J4E-%.11;(D#4E-%84/&(G%-88'(21%/A5104#@((T"%5A')*)+((
(
RH1%-V1%7'R(!\$#(G"#'('("0?%47@-<(F4"1(C11[8')*)+'UU(((((((
(
RNA-(J"8/(H48A'(GA"#/10(P8;"#78'("#7(O--2(O\$4#8<(D#8-//;4#@(J1@458(12(G-%0"#-#5-BR((FA%48((
((((((((G%-#/45-'(-7B'(6.-54";(488\$-'(^N40-8(12(,48"8/-%'a(

((((((((NA-(S"@\$-<(I;\$V-%'(UWW^'+W:\ f(

(

(((R3(O-8.1#8-/1("J-//-%(2%10(G-@(6401#8'(-5-0?-%(UWWfBR(P#(T"%@""-/(6401#8'(-7B(

((((((((

B(G-##8&;E"#4"((

((((((((6"/-(D#4E-%84/&(G%-88'(UWW^'(Uuf:UfX

(

(((R6401#-(7-(C-"\$E14%BR(P#(T B9B(K"4/A-'(-7B(

(PmB(NA-(((

(UfB+(bUW]^c<(fU\ :f)\(
(
((((((((G%4#/-7(4#("#(-M."#7-7(E-%841#< B(3B(L"%%&("#7(TB((((
((((((((G-"%8";;'(-78B(J1#71#<(D#V4#(S&0"#'(UW]W'(f^:+X(
((((
((((Rj-8?4"#(951#10458BR((](bUW]Xc<(f^:\ f(
(
((((((((O- .%4#/-7(4#(/%"#8;"/41#<(RD#-(951#104-(-;8?4-##-BR((+bUW]Xc<(UX:)^(
(
((((RNA%1\$@A/A-(K4;7(O-@41#<(3#(988"&(4#(GA-#10-#1;1@45";(H-04#480BR(6.-54";(488\$-(1#(((
((((((((T"\$%45-(T-%;-"\$:G1#/'(((U](bUW]Xc<(((
((((((((()+U:) \X(
(
((((Rj11[4#@("/(r\$%(C;117<(3(J-8?4"#(O-8.1#8-/(1(T-#8(N-%%1%480(12(K10-#BR(
((+bUW]+c<(UU:f)(
((((
((((O- .%4#/-7(4#(/%"#8;"/41#<(RO-@"%7(8\$%(#1/%-(8"#@BR((fB)(bUW]+c<(]*:WX(
(
((((RT1/A-%A117<(NA-(3##4A4;"/41#(12(K10-#BR(P#!1&5-(N%-?4;51/'(-7B(
B(Y-V(!-%8-&<(J4//;-24-;7'(37"08("#7(F1B'(UW]+'(fU\ :ff*(
(
((((O- .%4#/-7(4#<(T"%4;&#(G-"%8";;'(-7B(
B(F";421%#4"<(K"78V1%/A'(UW] \ '(

B((D#4E-%84/&(12(P#74"#"(G%-88'(UW]W'(^U:]+(

(
(((

(((((X(b6.%4#@'(UW^Xc<(UX+:U^W(
(
(((RS\$88-%;8(F100\$#";(6.4%4/<(3(GA-#10-#1;1@45";(6/\$7&(12(/A-(H\$#7"0-#/"(6/%\$5/\$%-12(((
((((6154-/&BR(B(K"/-%;11<(F-#/%-(21%(37E"#5-7(O-8-"%5A((((
(((((((4#(GA-#10-#1;1@&'(UW^X'(U)U:))*((
(
((((O-.%4#/-7(4#<((\(bUW^]c<(XW:])(
(
(((RS\$88-%;(C4?;41@%" .A&(12(9#@;48A(N%"#8;"/41#8BR(6.-54";(488\$-(1#(970\$#7(S\$88-%;'(((
((((((((\WBU(bUW^]c<(Uf f:Uf^(
((((
2334!\$:C<:D5!!!
!
(RNA-(S\$0"#(G%-8-#5-'(6/- .A-#(3B(9%45[81# (f](bUW] \c<[]+:]]X(
(
((((` , 14#@i(L-#7-%<(3#(9/A#10-/A171;1@45";(3 . .%1"5ABR(6.-54";(488\$-(1#(9/A#10-/A171;1@&'(((
((((((((f(bUW] *c<(U*^:UU\
(
%=7:9C<:D5
(
(((` 3(6/\$7&(1#(/A-(G-%5-4E-7(O1;-12(P#/-% .% -/%8(4#(/A-(D#4/-7(6/'/-8a(b%-8-"%5A(.%1=-5/c("#7(`P#/-% .% -/%8tP#/-%
(((((((4#(T&(9&-8'a(bE47-1(715\$0-#/"%&c'(4#/-%E4-V("#7(E47-1(?&(!\$#(G"#'(T"&())*)*(
((((` u\$--%(H117(951#10458Ba(4#/-%E4-V(?&(9;48-(I\$;[""(21% '(N1%1#/'(T"&())**U(
(((R6401#-(7-(C-"\$E14%BR(%-51%7-7(21%(Y1/A-"8/(G\$?;45(O"741'(r 5/1?-%(U]'UWWW(
(((RH-04#48/(GA4;181.A&BR(%-51%7-7("/(IGH3'(J18(3#@-;-8'(T"&'(UWW+(21%(\$8-(?&(G\$?;45(O"741(
(((Rj"(T"/-%#4/n(O-ES-'R(((U(bT "%5A'(UWW*c<
(
***97<AB!:3=!EC!D394**
(
(!"5Q\$-;&#(YB(k4/"BR!-22#-%(3;;-#<(3(J-8?4"#(G1%/"4/BR(
 (bH";;(UWW)c<(X:Uf(
(
 O-.%4#/-7(4#<(F;"\$74"(F"%7'(-7B(B(C;1104#@/1#<(P#74"#"
 (((D#4E-%84/&(G%-88'(UWW+'(f:U*(
(
-#2&%"*)%.0!/!*!/-+\$F.\$' *0''+!
(
 '(81\$#7851%(-/M/(2%10(O&(?11['(B((F10.18-%(((((((
 (((F-;-8/-(\$5A4#8_E145-8(L-1%@(C\$8A("#7(!-8845"(H-;70"#'(K1%;7(T\$845(S";;'(K-8;-&"#(((
 (((D#4E-%84/&'(, -5-0?-%())**fB((Y-V(E-%841#('G1;4/45";;&(6.- "[4#@'a(9;-5/%45(N-5A(F"#4E";<(((
 (((K-"E4#@(Y-/V1%[8'(J4#1'(3\$8/%4""(!\$;&())**^(
(
("#(-#"5/0-#/(7%"V#(2%10(O&(V%4/4#@'(`%(-E(-(%(?(-(%('/(4(1#(8(((((((

(((6\$00-%(UWWX_O"75;422(Z"%7'(6\$00-%(UWWX'(H-8/4E";(F-%E"#/4#1'(N-"/%1(!\$%-1'("#7(T\$8-1(((
(((7-("S48/1%4"(T1#/-%%-&'H";;(UWWX(
(
F , '(74@4/";("\$741' , -- .(J48/-#4#@(\U*R'(r;4E-%18(510 . 18-%_(r;4E-%18'((
(((L"0 . -%'O18-'(. -%21%0-%88(K1%7(/-M/2%10(O&(?11[(

((((F1#2-%-#5-'(D#4E-%84/&(12P7"A1'(!\$#-())*U\
(
`I";-471851.45(N%"#8;"/41#<(3%"&"(O"87="0%- "%#811[i8(("#7(/A-(
(12(Z"1(J\$a`N%"#8;"/4#@((384"<((T4@%/41#8("#7(N%"#8@%-8841#8'aX ((
((((384"#(N%"#8;"/41#(N%"74/41#8(F1#2-%-#5-'a(D#4E-%84/&(12(/A-(GA4;4. .4#-8'(T"#4;"((
((((r5/1?-%())*U+3((
(((
`3#(D#8/"?;-'(F"51.A1#1\$8(K"E-'('a(6/%"#@-(C"%1Q\$-(951;1@4-8((
((((6&0 .184\$0'("#(4#/-%#"/41#";(51;;"?1%"41#(A18/-7(?&(T"88-&(D#4E-%84/&('Y-V((
((((k-";"#7'(Y1E-0?-%())*Uf(
(
`NA-(J"8/(H48A'(GA"#/10(P8;"#78'("#7(O--2(O\$4#8<((D#8-//;4#@((J1@458(12(G-%0"#-#5-'a(
((((,48"8/-%z(3(6&0 .184\$0'(-8/"?;48A-7(?&/A-(G18/51;1#4";(6/\$74-8(O-8- "%5A(Y-/V1%['((
((((A18/-7(?&(D#4E-%84/&(12(r/'@1'(Y-V(k-";"#7'(Y1E-0?-%())*Uf(
(
`NA-(Y"4;'/A-(C;"7-'("#7(H\$/\$%";(T-01%&<(N";-8(12(T1\$#/(T-%\$("#7(/A-(F1%";(O--28'a((
((((384"<((J11[4#@((C"5['(T1E4#@((H1%V"%7'a(384"#(6/\$74-8(1#(/A-(G"54245(F1"8/'(T1#/--%-&((
((((P#8

(((F1#2-%-#5-'(D#4E-%84/&(F1;;-@-'(F1%['(P%-;'#7'(H-?%\$"%&())**](
(
` 3//A-(L%- -#(H;"8A(12(/A-(6-//4#@ (6\$#<(61#45(L-#-%"/41#8'a(P#/-%#"/41#";(6154-/&(21%((
(((32%45"#(GA4;181.A&("#7(6/\$74-8'(OA17-8(D#4E-%84/&'(61\$/A(32%45"'(3.%4;())**^(
(
` ,4E4#@ (G;"#-/'%4/&'a(F"%4??-"#(9#@;48A(388154"/41#'(G\$-%/1(O451'(Y1E-0?-%)**X(
(
` J4#@\$48/45(PO"@4#"/41#(4#(/A-())U (F-#/\$%&'a(H4%8/(K1%;7(F1#@%-88(1#(/A-(G1V-%(12((
(((J"#@\$"@-<(NA-1%&'(G%"5/45-'("#7(, -E-;1.0-#/'(C"#@[1['(T"&())**X(
(

#u\$-%47"(E1;\$.4"(G"M"1(#1(=%740(7"8(7-;454"8'a (4#E4/-7(. ".-%'(P#/-%#"/41#";(F1#2-%-#5-((((
((((1#(C17&("#7(P0"@-'(D#4E-%84/&(1

(((6 KPG'(N" 0 . "'(H- ?%\$"%&(UWWf(
(
R/- "(1#/A-(?-"5A("/(O47#4@A/'R(6154- /&(21%(K 1 0 -#(4#(GA4;181 . A&'(6 KPG'(T45A4@"#(6/" /-(
D#4E-%84/&'(J"#84#@'(r 5/1?-%(UWW)(
(
RO-2;-5/41#8(1#/A-(UU(9#5\$-#/%1'R(7485\$88"#/'(6154- /&(21%(K 1 0 -#(4#(GA4;181 . A&'(6 KPGR(3 . %4;(UWWU(
(
Rr #/A-(6- "8A1%-<(3(K %4/4#@((12(3 ?\$#7"#5-'R([-/-("77%-88'(K 1 0 -#8(S48/1%&(K -- ['(D#4E-%84/&(12(P;;4#148'(C;1104#@/1#'(3 . %4;(UWWU(
(
R%(- (E(-(%(?(-(%("/(4(1(#(8(011#2;1V-%8(((;\$5-8(2\$@"5-8'R(. " . -%(6154- /&(21%(K 1 0 -#(4#(GA4;181 . A&'(6 KPG'(D#4E-%84/&(12(K4851#84#'(T "%5A(UWWU

((F1;;-@-'(r 5/1?-%(UW]](

(

RF%-"/4#@ (H- 04#48/(GA4;181 . A&'R(F1%#-;;(D#4E-%84/&(6154- /&(21%/A-(S\$ 0 "#4/4-8'(F1%#-;;(

D#4E-%84/&'(r 5/1?-%(UW]](

R3%-(K-(90?174-7x(P#/-%.%-'/'/41#(12("F1#/%1E-%8&(4#(O-5-#/(H%-#5A(NA1\$@A/'R(GA4;181.A&
6-%4-8'(F"%;-/1#(F1;;-@-'(3.%;(UW)]\(
(

Rr#/A-(, -51#8/%\$5/41#(12(Y"/\$%-R(5100-#/'%&'(30-%45"#(GA4;181.A45";(388154"/41#'(Y-V(
Z1%['(, -5-0?-%(UW)]+(

(
RK10-#"#7(H117'R(32/-%(A-(6-51#7(6-M(F1#2-%-#5-'(D#4E-%84/&(12(G-##8&;E"#4''(3.%;(UW)]+(

(
RK10-#"#7(K1%[<(GA4;181.A45";(G""74@08'R(F1#2-%-#5-(1#(F1;;"?1%"/41#8("#7(
((((

(((^H4@\$%-8(12(T 1/41#'(H4@\$%-8(12(C-4#@<(N%"#8;" /41#'(, 4"8.1%"("#7(/A-(61#@12(G"% 0 -#47-8a(((
(((*)UW(((
(((O-54.4-#/'(, 48/4#@\$48A-7(, 488-%/" /41#(3 V"%7(
(((((
SV"(S-1#@ (K"#@'(6.%4#@()*U]B((GA4;181.A&'(P#/-%.% -/" /41#'(F\$;/\$%-B((` F1#2\$54"#480("#7(((((((
(((O4/\$";8(21%(K 1 0 -#(4#(FA18 |#(I 1%-"<(3(GA4;181.A45";(P#/-%.% -/" /41#'a)*UW((((
(((O-54.4-#/'(, 48/4#@\$48A-7(, 488-%/" /41#(3 V"%7(
!
Y4;40 "(O"?;'(H";;) *U]B((, - . "%/0 -#/(12(F 1 0 . "%/4E-(J4/-%"/\$%-(bGJFcB((`G\$%-(F1#/" 04#" /41#<(((
(((3 \$/140 0 \$#4/&(4#(A-(32/-% 0 "/A(12(O-"81#a(
((((
(Y1-;;-(FA"7715[(G";-&'(6.%4#@()*U+B((GA4;181.A&'(P#/-%.% -/" /41#("#7(F\$;/\$%-B((` T 4M-7(O"5-(((((
(((P7-#/4/&(4#(A-(T 4; -##4";(D#4/-7(6"/-8<(NA-(G1V-%(12(Y" 04#@ (r \$%(P#/40 "/-(O-";4/4-8a((
((((((((
6/"54-(I 1/85AV"%'(6.%4#@()*U+B((GA4;181.A&'(P#/-%.% -/" /41#("#7(F\$;/\$%-B((` L%--#(C-"\$/&<((

(
3 0&(C\$#/#-'(H";;)**)fB((, -. "%/0 -#/(12(F1 0 . "%"/4E-(J4/-%"/\$%-B(` 6 .% -"74#@ (K47-(T&(Y""%1V((
((((S"#78<(L"/A-%4#@ (9 04;&(, 45[4#81#a((((
(
O-[A"(T-#1#'(H";;)**)B((, -. "%/0 -#/(12(GA4;181 . A&B(` 38A" 0-7(12(1\$(Y" [-7#-88_(P8/A-%-((
(((((-E-%("Y" [-7(C17&xa(
(
J4#7"(K""%-#'(6 .%4#@())**UB((, -. "%/0 -#/(12(GA4;181 . A&B(`H%--71 0 ("#7(951#1 0 &<((6-- [4#@("(((
((((G1-/45(G1;4/458(12(6\$%E4E";a(
(
!"5Q\$-;4#-(TB(L"/-;&'((6 .%4#@())***B((, -. "%/0 -#/(12(GA4;181 . A&B((RN- "5A4#@ (6\$?=-5/8<(NA-((
((((97\$5"/41#("#7(Y""%"/41#(12(6-;E-8(4#(K -8/-%#(GA4;181 . A&a(
((
L-%/%\$7-(!" 0-8(L1#1";-1'(6 .%4#@())***B((, -. "%/0 -#/(12(GA4;181 . A&B((R6-74 0 -#/("#7(6A"71V8<((
((((P7-#/4/&("#7(F1;1#4";48 0 (4#(A-(D#4/-7(6"/-8(m4#@4#(P8;"#78a(
((
O45"%71(6"#/18'((6 .%4#@())***B((, -. "%/0 -#/(12(F1 0 . "%"/4E-(J4/-%"/\$%-B((R3 (, 422-%-#/(K 1 0 "#<((
((((F;"88'(P7-#/4/&("#7(6-M\$";4/&(4#(F"88"#7"(O418'8(K 1% [a(
(
G" 0-;"(K-- 08'(6 .%4#@())***B((, -. "%/0 -#/(12(GA4;181 . A&B((RG%12-8841#8(12(P#/4 0 "5&<((L-#7-%'((
((((, -E-;1 . 0 -#/" ;(G-7"@1@&("#7(6-;2:L1E-%#"#5-a((
(
!-##42-%(K -;8A'(6 .%4#@())***B((, -. "%/0 -#/(12(GA4;181 . A&B(RO"//;-8#" [- (S\$#/4#@'(N-%%4/1%4";4/&

N%"#8Y"/41#";(!1\$%#-&8'(61\$;:-M."#74#@ (, % - " 08(
Y-@1/4"/4#@ (F1#/- 0 . 1%"%&(o384"p_(3\$/1?41@%" . A45";(T &/A<(H- 04#48/("#7(, 4"8. 1%45(
F1#E-%8"/41#8_(P#/%17\$5/41#/1(K10-#8(6/\$74-8_(T\$;/45\$;/\$%";(H- 04#48/(NA-1%&_(H- 04#48/(
GA4;181 . A&<(H%4-#78A4. ("#7(3;;4"#5-8_(H- 04#48/(GA4;181 . A&<(L-#7-%("#7(6-M\$";4/4-8_(L-#7-%'
9/A#454/&'(F\$;/\$_(H- 04#48/(GA4;181 . A&("#7(/A-(Y"04#@ (12(, 422-%-#5-_(T-745";(9/A458_(
GA4;181 . A&("#7(G\$?;45(G1;45&_(H- 04#48/(NA-1%&_(O"#&(P#7- . -#7-#/(6/\$74-8(
(
(((L%"7\$"/-(F1\$%8-8<(((
S"\$#4#@'(T- 01%&'(T4@%"/41#8'(21%(N101%1V8(
)U (F-#/\$%&(J1#@4#@8'(P#(N%"#84/(
N\$0\$;/\$1\$8(6. "5-'(H"/-'("#7(C-;1#@4#@(
Y"""/4E-8(12(6\$%E4E"#5-_(G1%184/&'(T4@%"/41#'(PO . ;1841#8_(, 4"8. 1%45(PO"@4#"4-8_(P#/-%E";8<
N%"#85\$;/\$%";("#7(N%"#874"8. 1%45(G%"5/45-8_(N%"#851;1#4";(H4@\$%"/41#8<(H- 04#48/("#7(, 4"8. 1%45(
r854;"/41#8_(G1%184/&<(N%"#851;1#4";(PO . ;1841#8_(H%4E1;4/&<(N%"#851;1#4";(T-"#7-%4#@8_(
m1;\$./\$1\$8<(N%"#851;1#4";(O-;"/41#";4/4-8_(, -84%1\$8(K%4/4#@<(H- 04#48/(O48[8'
N%"#851;1#4";m1;"/4;4/4-8_(N%"#851;1#4";(H4@\$%"/41#8_(H- 04#48/(N%"#851;1#4";4/4-8<(O42/8(v(
N\$%?\$; -#5-8(12(, 4"8. 1%45(Y"""/4E-(N%"#851;1#4";(F1#E-%8"/41#8_(N%"#85\$;/\$%";(H- 04#4808<
K%4/4#@ (v(G-%21%0"#5-_(N%"#851;1#4";(H4@\$%"/41#8_(J-8?4"#(K%4/4#@_(K%4/4#@ (G18/51;1#4";4/&_
H- 04#48/(K%4/4#@<(F;"88'(O"5-("#7(6-M\$";4/&_(N%"E-; ;4#@ (NA-1%4-8<(G18/51;1#4";(K%4/4#@_
35/4E480("#7(G18/51;1#4";(6/\$74-8_(S&?%474/&("#7(F\$;/\$%";(6\$%E4E";_(J-8?4"#(GA4;181 . A4-8_(
F1;1#41"/41#t , -51;1#41"/41#_H- 04#48/(K%4/4#@_(C174-8'(Y"/\$%-'(G1V-%<(3;/-%#"/4E-(, 4851\$%8-8(
4#(K-8/-%#(GA4;181 . A&(U** :UX*_ _H- 04#480'(J"#@\$"@-'("#7(/A-(C17&_(S\$88-%;_(Y-V(H%-#5A(
H- 04#

