*5(*1(#$2%*'4,##*G-#'&##-("𝕍*M(&*,%2*,4#(*%2a&-%2G*$(*6(#$*("2*(62">2"G2G*a&2#$-("*,"G*$ / (*%2#6("#2#*N-,*$72*
("4-"2*64,$1(%C𝕍*X,'PL,'P𝔻**X,'PL,'P*b&2#$-("#*-#*,*/,M*$(*2"U,U2*#$&G2"$#*$7%(&U7*("4-"2*G-#'&##-("𝔻*
X,%$-'-6,$-("*-#*,*%2a&-%2C2"$$1(%*$7-#*'(&%#2𝕍*,"G*$72*X,'PL,'P*b&2#$-("#*-#*,*("#64,$1(%C*/ -44*L2*&#2G*1(%*("4-"2*

:𝔻*3 0 :)*] 664M*C2$7(G#*1(%*2N,4&,$-("*(1*,*6(4-'M*(%*6%(U%,C*1(%*,*6&L4-'*,U2"'M𝕎*U(N2%"C2"$*G26,%$C2"$*
(%*"("">6%(1-$*(%U,"-^,$-("𝔻*57-#*(&$'(C2*-#*,##2##2G*LM*X(4-'M*+2'(CC2"G,$-("* . 2C(#𝕎*f%(&6*X(4-'M*
+26(%$*,"G*f%(&6*X(4-'M*X%2#2"$,$-("𝔻!

L*M=,.*>!N*0)'𝔾L*#>,$F'!!

N*0)E&&Q!

J𝔻 T 2-C,%𝕎*R,N-GY*`-"-"U𝕎*] -G,"𝕎*X(4-'M*] ",4M#-#𝕎*A$7*2G𝔻*8+(&$42GU2𝕎*<=J@;*!_ [gh*I@?JJ9?<JAKJ?*

◁𝔻 B&U2"2*[,%G,'7𝕎*]*X%,'$-',4* f&-G2*1(%*X(4-'M*] ",4M#-#)*572*B-U7$1(4G*X,$7*$(* . (%2*B112'$-N2*X%(L42C*
_ (4N-"U𝕎*A$7*2G𝔻*8_,U2*Qb*X%2##𝕎*<=JI;**
!_ [gh*I@?JK=A9A???@*

9𝔻 _$("2𝕎*R2L(%,7*] 𝔻*"#$%&'!( )*)+#,-!. ∕0!)*1!#2!(#$%1%&)$!+0&%3%#4!5)6%47𝔻*`(4𝔻*J9𝔻*8 g (%$("𝕎*JII@;*

B)R*.!L*#>,$F'!

* ᴶH(7C𝕎*Q7,%42#*e𝔻𝕎*,"G*c,C2#*] 𝔻*f 4M""𝕎*2G#𝔻*8)$%2#*4%)93!3#&%)$!(*#:$0 5 3𝔻*X-"2*e (%U2*X%2##𝕎*<==◁𝔻*
*
f 2%#$("𝕎*3 ,%%M𝔻*g ($*_(* f (4G2"*] 1$2%*] 44𝔻*8Q+Q*X%2##𝕎*<=J<;**
*
i %,1$𝕎* . -'7,24*B𝔻𝕎*,"G*_'($$*+𝔻*e&%4("UD*";:$%&!(#$%&'-!"#$%1%&3⟨!)4)$'3%3⟨!)4+!)$10*4)1%=03𝔻*8_,U2*Qb*
X%2##𝕎*<=JI)

<&=.'*!L*M=,.*A*$)'!#$>!3'',F$A*$)'*

0&1,2∕!L*2&AA*$>#),&$! 5 *A&'*J6; S !&@!F.#>*K!#1,F$'!C,)R!< I B!7⟨!6!#$>!TU!!572*C,-"*6&%6(#2*(1*$7-#*6%(F2'$-#-#$(*1,C-4-,%-^2*M(&*∕-$7*$72*4,"U&,U2*(1*6(4-'M,",4M#2#*,"G,"-'"*6&%6(#2*(1*$7-#*6%(F2'$-#$(*6%(N-G2*,"G*-"$%(G&'$-("*$(*$72*4,"U&,U2*(1*6(4-'M,",4M#2#,##-U"2G*,#*,"(#(&%'2*1(%*M(&%*#$&GM*,"G*%2#2,%'7*(1*$72*4,"U&,U2*%26(%$2G*-"*$72*2=$-*('&C2"$#$(*$72*4,"U&,U2*/%-$$2"(%*%26(%$2G*-"*$72*2=$-*('&C2"$#(*,"G(*,"G*-"$%(G&'$-("*$(*$72*4,"U&,U2,*U(G*$72*%-U7$(#%('2##*(1*$72*6(4-'M*,",4M#2#(G*$72*%-U7$#*%2#2%N2G*,",4M#2#(%2$%-2N2G*,4#(*1%(C*$72*G&C2"$*(1*$72*U(N2%"C2"$*(1*$72*&"-$2G*#$,$2#

$(U2$72%*/-$7*$72*4-#$*(1*6%2#2"$,$-("#*("*Q]g`]_D**.,P2*#&%2*$(*&64(,G*M(&%*#4-G2#*LM*T2G"2#G,M*K)==*6C𝕍*
$72*G,M*(1*M(&%*6%2#2"$,$-("*("*Q,"N,#𝔻*
*

0#.),2,X#),&$!J7Y S !&@!F.#>*K!#1,F$'!C,)R!< I B!7!#$>!8U!!572*#&''2##*(1*$7-#*'(&%#2*-#*6%-C,%-4M*L,#2G*("*M(&%*
6,%$-'-6,$-("*-"*$'4,##𝕍,"G*#7(/-"U*$7,$*M(&%2,G*$72*C,$2%-,4D***

H.#>,$F!?$@&.A#),&$!!

!"*$7-#*'(&%#2𝕍*#$&G2"$#*/-44*"($L2*U%,G2G*("*,$$2"G,"'2𝔻**57-#*'4,##*-#*6%-C,%-4M,#2G*("*"*G(-"U*$72*%2,G-"U#*

5 #Q*\=XⲢI#)*!0&l,2/!!

!

572%2*,%2*"(*C,P2>&6*2V,C#*(%*($72%*,##-U"C2"$#*/-$7(&$*,66%(6%-,$2*G('&C2"$,$-("*8#2%-(&#*C2G-',4*-44"2##*
(%*#2%-(&#*C2G-',4*2C2%U2"'Mⵗ'%24-U-(&#*7(4-G,Mⵗ*6%2>,66%(N2G*&"-N2%#-$M>#,"'$-("2G*2N2"$*(%*,'$-N-$Mⵗ*C-4-$,%M*
(%G2%#Wⵗ*1,C-4M*2C2%U2"'M;*$7,$*M(&*/2%2*&",L42*$(*'(C642$2*$72*,##-U"C2"$*(*"$-C2Dⵗ*

*

57-#*,4#(*,664-2#*$(*-">'4,##*,##-U"C2"$*#Dⵗ!1*M(&*,%2*#2%-(&#4M*-44Wⵗ*M(&*C&#$*"($-1M*C2*,#*#((("*,#*6(##-L42*LM*
2C,-4*(%*("*CM*(11-'2*67("2*$7,$*M(&*/-44*L2*&",L42*$(*'(C642$2*,"*,##-U"C2"$*(*"$-C2Dⵗ*BV'26$-"*',#2#*(1*
G('&C2"$2G*C2G-',4*2C2%U2"'MⵗM(&*.d_5*"($-1M*C2*L21(%2*$72*#'72G&42G*,##-U"C2"$*$Dⵗ0&$*(1*1,-%"2##*$(*M(&*%*
'(442,U&2#Wⵗ/(%P Wⵗ C-##-"U*,"*,4,%CWⵗ,"G*U2"2%'M,44M*"($*1224-"U*/244*/-44*"($*L2*,'26$2G*2V'&#2#*1(%*C-##-"U*
,##-U"C2"$*#Dⵗ[2*#&%2*M(&*#'72G&42*,44*(1*(&%*,##-U"C2"$*#%-U7$*,/,$-(&*7,N2**,$-("2#*7,N2*,$-("2"*,,$-(*"*(%*#-("*-C-C-4,%*2N2"$*$(*
64,""2G*G&%-"U*("2*(1*$72#2*,##-U"C2"$*$(*G,M*W M(&*C&#$*C(N2*1(%*$7-#*$(*$,P2*$7-#-#*(&%*$72%*"#2##*("*("(%#-("*-("*("*("*("*("*("*("*

*

.,F(%*,##-U"C2"$*#*4-P2$*$72*6(4-'M*6,62%#*/-44*L2*U2G&-'%$*1%7,"G2G*(&*$72G*42L2%$"*4-1M*62",L42*,4L%*
'(CC2"#&%,$2*/-$7*7(/*4,$2*$72*,##-U"C2"$*-#*#&L(C-$$2G*/-$7*($72%*&",L42*,66%(6%-,$2*1(%*C-##-"U*,##-U"C2"$*#*
42,#(",L4%*,$$2C6$2G*Wⵗ(%*-"'(C642$2*1(%C*/-44*#&L(C-$$2G*1(%*'%2G-$*%246(4-'M*2(&*%*Wⵗ-"'(C642$2*
,4%,G%#-#*/-44*M(&%*G%,G2*(1*C(&%#2$*L2*$72*,N2%,U2*(1*$72*UD*'(C642$2G*

*

<1#''.&&A!0&l,2,*'!#$>!0.&)&2&l!!

!

3))*$>#$2*!#$>!X#.),2,X#),&$!!

!

_$&G2"$#*C,M*L2*',',442G*&6("*'LM,*C2G-',4*2C2%U2"'M*($72%*#2%-(&#*&"1(%#2#2"*'-%'&C#$,"'2#*(*$72-%*'("$%(4*
211(%$*("*$72*#&L(C-$#-("*($*$7#4*#$&G2"*#&L(C-$#-("*("4M*,##-U"C2"$*,44(/#*72*"-1-',"$*L2U-"*,##-U"C2"$#*

X42,#2*(L$,-"*CM*62%C-##-("*L21(%2*$,P-"U*,"*,&G-(*(%*N-G2(*%2'(%G-"U*(1*42'$&%2#*(%*($72%*'4,##*,'$-N-$-2#D*!*/-44*
,4C(#$*'2%$,-"4M*U%,"$*#&'7*62%C-##-("W*L&$*-$*-#*'(CC("*'(&%$2#M*$(*42$*62(642*P"(/*M(&*/-44*L2*%2'(%G-"U*
$72C*L21(%2*M(&*G(*#(D*57&#W*(&$*(1*%2#62'$*$(*M(&%*'(442,U&2#*,"G*$(*C2W*642,#2*G(*"($*%2'(%G-"U*'4,##*/-$7(&$*
CM*2V64-'-$*62%C-##-("("D**
*
+$,-*.',)/!0&1,2,*'!
!
X2%*d"-N2%#-$M*X(4-'M*_JA>IW*&"-N2%#-$M>/-G2*6(4-'M*-"1(%C,$-("%242N,"$$(*,44*'(&%#2#W*#&'7*#*,',G2C-'*
-"$2U%-$MW*,''(CC(G,$-("#W*2$'D*/-44*L2*,N,-4,L42*("*011-'2*(1*f%,G&,$2*,"G*d"G2%U%,G&,$2*X%(U%,C#Z*_M44,L&#*
!"1(%C,$-("*/2L*6,U2*,*7$$6)SS///D#F#&D2G&SU&6S#M44,L&#-"1(Sl**
!

03 4 5 !678!_!0&1,2/!3 $#1/ ',''!
"X.,$F!6;67!!
!

<&=.'*!''2R*>=1*!!

T 22P*	R,$2*	5(6-'*	]##-U''2G*+2,G-''U#*	R24-N2%,L42#*R&2*
+$,)!`7\!0&1,2/!NR*&.,*'!				
J*	T 2G''2#G,M* =?S<KS<J*	>Q(&%#2* !''$%(G&'$-(''*,''G* _M44,L&#* >T 7,$*-#*X(4-'M*]'',4M#-#m*	T 2-C,%*n*`-''-''U▥* Q7D*<* *	X,'PL,'P*G-#'&##-(''* 6(#$▥*8-''$%(G&'$-(''▥*

		R2N24(6-"U*] 4$2%",$-N2#*	_$("2*X,%$*!!!* R2'-#-("#*	**8U!H.&=X!0&l,2/! B=)l,$*** *

?*

T 2G"2#G,M* J=$J9$<=<J*

\>