

! "#\$%& ' ( # \$

! " " # \$ ! % ! & ' # ( ) \*

!  
!

"# \$%%&'()\*+!, -&.+%&&-!&.! , / (0&%&1/23!4 / +! 5 6(7+-%(\*2!&.! 8)00)%3!9)6: )-2! ; < ; " =  
1-+%+6\*#!  
;# \$%%&'()\*+!, -&.+%&&-!&.! , / (0&%&1/23!4 / +! >)\* / &0('! 5 6(7+-%(\*2!&.! \$ ? +-( ')3!  
@) % / (6A\*&63! 8 >3! ; < " ; !B! 8 + ' + ? C+! ; < ; < !!  
D# \$%%(%\*)6\*! , -&.+%&&-3!4 / +! >)\* / &0('! 5 6(7+-%(\*2!&.! \$ ? +-( ')3! ; <<E!B! ; < " ; !!  
E# F6%\*- : '\*&-3! 5 6(7+-%(\*2!&.! G&\*+! 8) ? +3! G&\*+! 8) ? +3! F6H( )6)3! ; <<D!B! ; <<E!

!

!  
" # I+%) - ' / ! J+00&K% / (1! . -& ? ! G&\*+! 8) ? +L% ! H+! G(' &0)! > +6\*+! !M. &-! / +! ; < ; N0  
; < ; P! % ' / &&0! 2+) - Q!  
; # R-) 6\*! . -& ? ! \* / +! 4+ ? 10+\* & 6! J & : 6H) \* (&6S! ! " " # \$ % & ' (%& ) \* + , - . " . ) % / ' " \* ! & 0 # % 1 2 \* ' & 3 \*  
4 , I % 5 ( % ' & \* 6 ( , % / 5 \* + , I . # ) , \* + I ' % & % & ) % & \* 7 5 2 / , . " . ) % / ' " \* 8 / % - & / - \* M T 1 - ( 6 A ! ; < ; D =  
, -+%+6\*Q  
D# U)AA)-!T' / &0)-! \$ K)-H3! 5 6(7+-%(\*2!&.! 8)00)%! ; < ; D  
E# VH(\*&-()0!W&)-H3! 9 . : '\*-( \* ; -(-I' < \* ; < ; D01-+%+6\*  
N# VH(\*&-()0!W&)-H3! 8(#3%-5\*%&\*4 , I%5(%' &\*6( , % / 53! ; < ; < 0 ; < ; D  
P# VX+ ' : \*(7+! > & : 6' (03! \$ ? +-( ')6! >)\* / &0('! , / (0&%&1 / ( ' ) 0! \$ % % & ' ( ) \* (&63! ; < ; < 0 ; < ; D  
Y# J+00&K3! F6%\*( \* : \*+! . &-! U : ? ) 6! V ' & 0 & A 2 3 ! ; < " P 0 , -+%+6\*  
Z# 8(-+ '\*&-!&.! R-)H:) \*+! T\* : H(+%3! 5 6(7+-%(\*2!&.! 8)00)%3! ; < ; ; = 1-+%+6\*!  
[# > & ? ? (\*+! & 6! T\* : H+6\*! 8 (% ' (10(6+3! 5 6(7+-%(\*2!&.! 8)00)%3! ; < ; D  
" < # 4 / + & 0 & A 2 ! H + 1) - \* ? + 6 \* ! \ & C ! % +) - ' / ! ' & ? ? (\*+! 3! 5 6(7+-%(\*2!&.! 8)00)%3! ; < ; ; 0 ; < ; D  
" " # , -& 7 % % ! % +) - ' / ! ' & ? ? (\*+! 3! 5 6(7+-%(\*2!&.! 8)00)%3! ; < ; " 0 ; < ; ;  
" ; # , / (0&%&1 / 2! H + 1) - \* ? + 6 \* ! \ & C ! % +) - ' / ! ' & ? ? (\*+! 3! 5 6(7+-%(\*2!&.! 8)00)%3! ; < ; 20! 240601.92cmBT000501704



Y# UT, U!"<"S!4/+!\$-(%\*&\*+0()6!T\*:H(: ?!  
Z# UT, U!"<;S!V\*/('%)6H!, &0\*('%!  
[# ,/(0!; ""S!4/+!>0)%%(')0! a (6H!M/&6&-%Q!  
"<# ,/(0!;<"S!4/+!>0)%%(')0! a (6H!  
""# ,/(0!; "S!4/+! a &H+-6! a (6H!M/&6&-%Q!  
";# ,/(0!;<;S!4/+! a &H+-6! a (6H!  
"D# ,/(0!D<DS!W(& ?+H(')0!V\*/('%!  
"E# ,/(0!D<[S!4/+&-(+!&.!V\*/('%!  
"N# ,/(0!D""S!>&6\*+ ? 1&-)-2! a &-)0!F%% : +%!

!

!

"# a#\$#e, /#8#3!56(7+-%(\*2!&.!G&\*+!8) ?+3!G&\*+!8) ?+3!F6H()6)3!" [[ [!B!;<<E!  
D%55-1('%. &<\*+, -\*!&#5-3\*' &3\*E/0#%1-3\*; %1(#-5%&\*E0#%&'5<\*D%1-/(-3\*F2\*  
E"01-3\*G1-33.5.H\*  
\*

;# a#\$#3! a)\*/+?)\*(%3!56(7+-%(\*2!&.! a )-20)6H3!" [[ Y0" [[ [!#!  
!

D# W#\$#3! a)\*/+?)\*(%!)6H!, /(0&%&1/23!4/+!>)\*/&0('!56(7+-%(\*2!&.!\$ ?+-(')3!  
" [[ D0" [[ Y!

!

S!

!

"# I- '3%&)5%&\*E>>"%-3\*6(,%/5!\$6A+0)! f6&C+03!>)\* /+-(6+!G&0)6!TK++6+23!, +\*+!  
f&-(\*%6%]2!)6H!9&+! a 'F6+-623!+H%#!!

!

;# g, :\*(6A!&6!d(-\*:+S! I+.++6'+%!\*&!d(-\*:+!(6!\$c:(6)%L!T'-(1\*:+!  
>&? ?+6\*)-(+%h!

!  
!

!

"# E0#%&'5\*' &3\*(, -\*!&#5-3\* ? . 1'"\*; %1(#-53!56(7+-%(\*2!&.!G&\*+!8) ?+!, -+%#3!;<; "#!  
M, )1+-C) ' ]!7+-%(&6!-+0+)%+H!(6!J+C-)-2!;<; EQ#!  
I+7(+K+H!(6!8>-/#"# \$3!+, - . ". )23!J. #1&' '\* . @\* ? . 1'"\*+, - . ". )23!)6H! I- :-%-K\*. @\*  
? -( '>, 25%/5#!! I+7(+K%!.&-\* / '& ? (6A!(6!9 . : '\*-(\*; -(-1'\*)6H!&\* /+-%#!!

!

;# ;%I(#-<\*'F(\*' &3\*B1' /-\*/&+\*, . \$ '5\*E0#%&'5L\*8(#3%-5%&\*4, 1%5%'&\*6(,%/5<\*  
8>-/%'"!55#-M\* a )23!;<; D3!>&0VH(\*&-!MK(\*!/8)7(H!V00(&\*!)6H!@ (00) ?!  
a)\*\*(%&6Q#!

\*

D# 4, '1' /(-IL\*9-K\*D%1-/(% . &5%01. \$\*7, %". 5.>, 2<\*752/, . ". )2<\* '&3\*+, - . ". )2#!VH#!  
>/-(%\*(%)6! a (00+3! I#! a (' /)+0!J : --3!\$6A+0)! f6&C+03!)6H!@ (00) ? !J0++%&6#!G+K!  
b&-]S!^X.&-H!56(7+-%(\*2!, -+%#!;<"N#!

!

!

!

\*  
\*  
\*

""#

!  
!  
!  
!  
!  
!  
!

;N# g4K&!4/+&-(!&.!>/-(%\*)6!d(-\*:+#h!+, -\*E\$-I%/'&\*4'(. "%/\*7,% ".5.>, %/'"\*  
P# 'I(-I"23!7#ZE!MDQ#!T: ? ? +!;<"<S!N[ [0P"Z#!

;P# g>)6!\* /+!F6.:+%+H!)6H!\$ 'c:(-+H!d(-\*:+%!)>&X(%\*(6!\* /+!>/-(%\*)6!` (.+mh!8(#3%-5\*  
%&\*4, I%5(%' &\*6(, %/53!7#;D!MEQ#!J)00!;<"<S!DZ"0D[P#!

;Y# gT26H+-+%(%3!` )K3!)6H!d(-\*:+#h!(6!+, -\*9.I\$ '(%:(2\*. @\*(, -\*9 '(#I' "3!+H(\*+H!C2!  
a )-]!>/+---23!DD0EE#!!!T1-(6A+-3!;<<[#!

;Z# g, :C0('02!\$ ' ' +%%(C0+!F6\*:(\*&6#h!!4, I%5(%' &\*N%. -(, %/5!7#"D!M;<<YQS!"ZD0" [Y#!

;[# g\$ c:(6)%!&6!\* /+!V6H!&.! a )--()A+#h!(6!=#\$ ' &\*G-I(%"(2L\*Q, -I-\*G' %(, \*' &3\*  
8/%- &/- \* ? --(3!+H(\*+H!C2!4 /+-%) !G&\*)-+3!ND0Y<#!! a (0K): ]++S! a )-c: +\*\*+!  
56(7+-%(\*2!, -+%3!;<<Z#!

D<#

P# I+7(+K!&.!9&6)\* / )6!T)6.&-H3!E@(-I\* ;%I(#-#!M@)% / (6A\*&63! 8#>#S!4 / +!>)\* / &0('!  
5 6(7+-%(\*2!&.!\$ ?+-(')! , -+%3! ; <"NQ!

!

Y# I+7(+K!&.!8)7(H! 8+'&%( ?&3!6( , %/5\* '5\* '\*Q. 10\*. @\*4 , 'I%(2L\*+ , . \$ '5\*EO#%&'5\*  
'&3\*7 ') ' &\* ;%I(#-3!MT\*)6.&-H3!> \$S!T\*)6.&-H! 5 6(7+-%(\*2! , -+%3! ; <"EQ3!+ , - \*  
+ , . \$%5(\*!

!

Z# I+7(+K!&.!\$ 6H-+K! , (6%+6\*3!+ , -\*8- / . &3\*7-15. &\*7-15>- / (%: -%&\*EO#%&'5S5\*  
6( , %/53!M I & : \*0+HA+! ; <"Q3!+ , -\*+ , . \$%5(\*YY3!MEQ!

!

!

M0(%\*!0( ? (\*+H!\*&! ; <"P01-+ %+6\*3!%& ? +! . : \* -+! ' & ? ? (\* ? +6\*%!(6'0 : H+HQ!

!

"# F67(\*+H!>&6.++6'+! , )1+-S!g \$ c : (6)!6H!n , : \*\* (6A!&6!d (-\* : +3Lh!EO#%&'5\* '(\*TUUL\*  
E3\* ? #'(. 5\*E&&. 5<\*5 6(7+-%(\*2!&.!G&\*-+!8) ? +3!T+1\*#! ; < ; E#!

!

;# F67(\*+H!` + '\* : -+S!gJ+ ? (6(% ? 3! ^C0(A)\*(&6!)6H! \$ C&-\*(&6#h! \$ 66 : )0!4 / & ? )%!  
\$ c : (6)!` + '\* : -+3!T\*#! a )-2L%!>&00+A+3!T& : \* / !W+6H!FG#!T+1\*#! ; < ; E#!

!

D# F67(\*+H!>&6.++6'+! , )1+-S!g4 / +!@+00!R : )-H+H!4&6A : +S! \$ c : (6)!&6!\*/+!d (-\* : +!  
&.!d+-(\*)%3h!5 6(7+-%(\*2!&.!4 : 0%)3! a )-' / ! ; < ; E#!

!

E# F67(\*+H!` + '\* : -+S!g4 / +! , )-H&X+%!&.! , -&0` (.+!J+ ? (6(% ? #h!4 / & ? (%\*( ' !F6\*%(\* : \*+3!  
9&/6%!U&1J](6%!5 6(7+-%(\*2!!J+C- : )-2! ; < ; E#!

!

N# F67(\*+H!` + '\* : -+S!g>&66)\* : -)0(\*2!)6H!\*/+! , )%(%&63h! , / (0&%&1 / 2!>&00&c : ( : ? 3!

!  
""# F67(\*+H!`+'\*:-+S!gR&&H6+%%!@(\*/&:\*!R&Hmh!4/&?(%\*(!'F6%\*(:\*+3!4+X)%)\$ k a 3!  
T+1\*+?C+-!;<;D3!W)20&-!5 6(7+-%(\*23!\$ 1-(0!;<;D3!5 6(7+-%(\*2!&!.!4+X)%)!)\*!  
\$: %\*(63!\$ 1-(0!;<;"#!  
!  
";# f +26&\*+!\$ HH-+%S!g4+) '(6A!d(-\*:+m!4/+!5 T!G)7)0!\$ ')H+ ? 2L%!VX1+-(? +6\*3h!  
T&'(+\*2!&.!>/-(%\*( )6! , / (0&%&1 /+-%3!J0&-(H)!T\*)\*+!5 6(7+-%(\*23!9)6:)-2!;<;<!  
!  
"D# F67(\*+H!'&6.-++6'+!1)1+-S!gJ+?(6(%?!!)6H!\$ C&-(&63h!\$ ?+-(')6!>)\*&0('!  
, / (0&%&1 /(')0!!\$ %%%&' )\*(&63!G&7+?C+-!;<;<" [!  
!  
"E# F67(\*+H!0+'\*:-+S!g I : 0+%)!6H!W:-H+6%S!>)6!)!J+?(6(%\*!C+!, -&00(.+mh3!4/&?(%\*(!'!  
F6%\*(:\*+3!\$ -( \_&6)!T\*)\*+!5 6(7+-%(\*23!G&7+?C+-!;<;<" [3!@+%\*!, &(6\*3!G&7+?C+-!  
;<" [3!9&/6%!U&1 ](6%!J+C-:)-2!;<;<#!  
!  
"N# F67(\*+H!0+'\*:-+S!gT\*+1/+6L%T\*+6A\*/3h!, (6' ])+-%!T2 ? 1&%(: ? 3!5 6(7+-%(\*2!&.!  
G&\*+!8 ) ? +3! a )2!;<;<" [!  
!  
"P# F67(\*+H!0+'\*:-+S!gF6' -+)%!)6H!V..&-\*S!@ / )!\*!8&+%(?! a +)6!\*&!>:0\*(7)\*+!F6.: %+H!  
a &-)0! d(-\*:+%mh!> 5 \$ !T1-(6A!`+'\*:-+!T+-(+%3!T' /&&0!&!. , / (0&%&1 /23!\$ 1-(0!  
;<;<" [!  
!  
"Y# F67(\*+H!0+'\*:-+S!g @ )--(&-%)!6H! a )-2-3h!T\*#! d(6'+6\*p!>&00+A+3!\$ 1-(0!;<;<" [!  
!  
"Z# F67(\*+H!'&6.-++6'+!1)1+-S!g4 /+!J('\*(&6!&.!\* /+!@ / (%) +2!, -(+%3h!5 6(7+-%(\*2!&.!  
J-(C&:-A3!J-(C&:-A!TK(\*\_+0)6H3!^ '\*&C+-!;<;<"Z!  
!  
" [# F67(\*+H!'&6.-++6'+!1-+6%)\*(&6S!g\$ c : (6)%L!>& ? ? +6\*)-2!&6!\*/+!  
T+6\*+6'+%!)6H!>&6\*+? 1&-)-2!\$ ' ' & : 6%\*!&.!F6.: %+H!d(-\*:+3h!F6\*+6)\*(&6)0!  
>&6A-+%\*!&6! a +H(+7)0!T\*:H(+%3!f )0) ? )\_&&! a F3! a )2!;<;<"Y!  
!  
;<# F67(\*+H!0+'\*:-+S!g\$ c : (6)%!)6H!\* /+!, -&C0+ ? !&!. , )A)6!d(-\*:+h!b)0+!5 6(7+-%(\*2!  
4/&?(%\*(!'F6%\*(:\*+3! a )- ' /!;<;<"Y!  
!  
;"# F67(\*+H!0+'\*:-+S!gR&&H6+%%!K(\*/&:\*!R&Hmh!W)20&-!5 6(7+-%(\*2!4/&?(%\*(!'!  
F6%\*(:\*+3!J+C-:)-2!;<;<"Y!  
!  
; ;# gT' -&&A+!)6H!T:HH+6! a &-)0!> / )6A+3h!4+ ? 10+\*6!@&- ](6A!R-&: 1!&6!d(-\*:+3!  
U)11(6+%3!)6H!\* /+! a +)6(6A!&!.!` (.+3!>&0: ? C()3!T>3!8+'+?C+-!;<;<"P!  
!  
;D# g d(-\*:+!)%!8(7(6+!R(. \*3h!4+ ? 10+\*6!@&- ](6A!R-&: 1!&6!d(-\*:+3!U)11(6+%3!)6H!  
\*/+! a +)6(6A!&!.!` (.+3!> / (' )A&3!F` 3!9: 6+!;<;<"P#!  
!  
;E# F67(\*+H!0+'\*:-+S!g>:0\*(7)\*(6A!)!4-:\*/.:0!T&:03h!@)% / (6A\*&6!8#>#!4/&?(%\*(!'!  
F6%\*(:\*+3!^ '\*&C+-!;<;<"P!  
!



;N# F67(\*+H!0+ '\*: -+\$!gU: ? )6! I(A/%3h!G+KC:-A/!\$c:(6)%!@&-]%/ &13! a \*#!T\*#! a )-2!  
>&00+A+3!G+KC:-A/3!G b 3!9: 6+!;<"P#!

!

;P# f +26&\*+! \$HH-+%S!g\$!>&6. : %(6A!>& ? 1)-(%&63h!4 / +!4 / & ? )%F6%\*( \*: \*+3!  
5 6(7+-(%2!&. !4(0C: -A3!5 \*-+ ' / \*3! 8 + ' + ? C+-!;<"P#!

!

!

!

!

M0(%\*!0( ? (\*+H!\*&!;<"P!\*&!1-+%+6\*Q!

!

"# I+)H(6A!R-&: 1S!

!

!

"# ,&H')%\*!