$\label{eq:final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_final_$ aYbhUfm 7Yfh] WhY cZ h\Y GYWbX; fUXYž UbX j U X Zcf h\fYY mYUfg X WYfh]Z]WUhYg UbX X daU [fUbhYX" 5`` jchYX UmY" H\Y 6cUf X h\Yb kYth | h c Yl YWh] j Y gYgg] cb fl\% \% 5" A" L" H\Y 6cUfX fYhifbYXY c fYgc`ih]cb kUg c**XZY**Y cdYb gYggNcBn Uh %%)\$ UbX h\Y Zc``ck]b[Vm FY[VbW/Cfi6f]Yb. | V V F X K<\$F95Gž UZh]bjYgh][Uh]kbž]hUddYUfgh\Uh8f" KUhYf UhY cZ h Y [\]c KYg YmUb Ib]jYfg]hmž [JbX 9" | 7` Uf _] g l h] hi h] cb |\] g XY[f YY cZ 6UWY` cf cZ 5f ngž ∖c|Xg Zfca h\ U[HOMES U! J

gUaY Uf Y $\$ Yf YVm UVWVdhYX UbX Uddf cj YX'' JchY.

Af g'	' 6U_Yf	5mY
Af "	7i f`Yf	5mY
Af "	Cfi6f] Yb	5mY
8f "	Gi``] j Ub	5mY
Af "	5VY`	5m Y

 $H \backslash Y \ \ 6cUf \ X \ \ h \backslash Yb \ \ f \ YVV gg YX \ \ i \ bh] \ ` \ \ \& \ D" \ A"$

 $H\Y fYWYggYX aYYh]\,b[\ cZ\ h\Y 6cUfX\ cZ\ FY[Ybhg\ kUg\ WU`YX\ hc\ cfXYfUh\ \& ' \ D"A"$

Df

YX h\Uh A] gg A]``] WYbh GYUf gfi Uddc] bhaYbh UbX ghUhi g VY Uddf cj YX Ug f YWaaYbXYX Vm h\Y 5Wh] b[Df Yg] XYbh" JchY.

Af g'	' 6U_Yf	5mY
Af "	7i f`Yf	5m Y
Af "	Cfi6f] Yb	5m Y
8f "	Gi``] j Ub	5m Y
Af "	5VY`	5mY

 $5Wh] \ b[\ Df Yg] \ XYbh \ @YkYfg \ f YWcaaYbXYX \ h\Y \ f U] \ gY \] \ b \ f Ub_ \ cZ \ A] \ gg \\ ?Uh\Yf] \ bY \ FY] \ [Y`\i h\ Zf ca \ h\Uh \ cZ \ 5gg] \ ghUbh \ Df cZYggcf \ hc \ 5ggcW! \\ UhY \ Df cZYggcf \ cZ \ ; Yf aUb" = h \ kUg \ acj YX \ h\Uh \ h\Y \ f YWcaaYbXUh] \ cb \\ cZ \ h\Y \ 5Wh] \ b[\ Df Yg] \ XYbh \ k] \ h\ f YZYf YbWY \ hc \ A] \ gg \ FY] \ Q$

Af " KccXkUfXfig f Ydcfh kUg f YUX UbX] bZcfaU `m X] gWlggYX Ug hc h\Y aYf] hg cZ h\Y ' cdh] cbg cZZYf YX" Af " ; cfaUb kUg WU `YX] b hc UXj] gY Ug hc WlfhU] b Z] bUbWU aUhhYf g aYbh] cbYX"

 $H\Y Zc\`ck] \ b[\ ach] \ cb \ kUg \ cZZYf YX \ Vm \ Af" \ 7i \ f\ Yf. = acj Y \ h\Uh \ h\Y \ f Ydcf h \ cZ \ Df \ cZYggcf \ 9" ; " \ KccXkUf Xz \ XUhYX \ GYdhYaVYf , z % %+z \ VY \ f YWY] j YX \ UbX \ d\ UWYX \ cb \ Z] \ Y \ UbX \ h\Uh \ Cdh] \ cb \ 6 \ cZ \ h\Y \ gU] X \ f Ydcf h \ VY \ UXcdhYX \ UbX \ h\Uh \ Yz \] b \ WebbYWh] \ cb \ k] \ h\ h\Y \ 7cadhf \ c\ Yf z \ df \ cWYYX \ hc \ WUf f m \ ci \ h \Y \ df \ cj \] g] \ cbg \ cZ \ Cdh] \ cb \ 6z \ UbX \ h\Uh \ h\Y \ dc\] \ Wh \ ci \ h\] b \ f Y[\ Uf X \ hc \ Z] \ bU\ m \ aU_] \ b[\ h\Y \Yf X \ di \ f YVf YX \ VY \ U \ gc \ UXcdhYX \ UbX \ h\Uh \ Df \ cZYggcf \ KccXkUf X \ VY \ Ui \ h\cf \] \ nYX \ hc \ di \ h \] b \ U \ WebWf YhY \ aUb[\ Yf \ UbX \ U \ WU \ Z \ g\YX \ UbX \ Vi \ g\YX" \ JchY.$

Af g'	' 6U_Yf	5mY
Af"	7i f`Yf	5m Y
Af "	Cfi6f] Yb	5mY
8f "	Gi``] j Ub	5mY
Af "	5VY`	5m Y

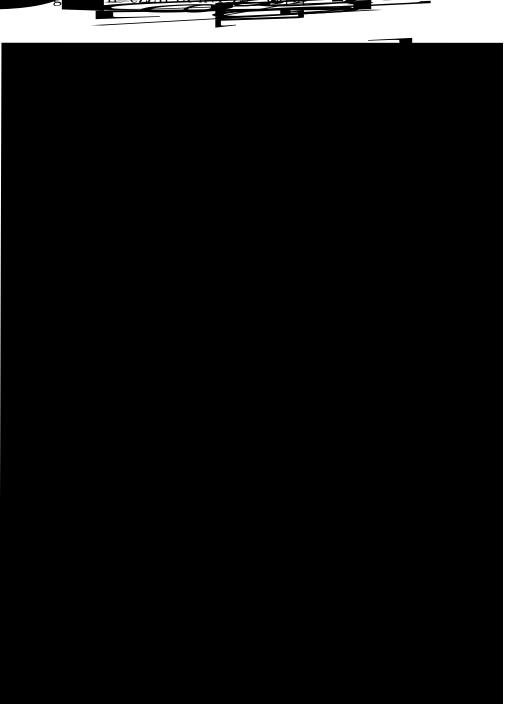
Af g" $6U_Yf$ $cZZYfYX hY Zc`ck] b[ach] cb. = acj Y hVh hYfY VY gYh UdUfh Zf ca hY GhUhY Zi bXg cb hY I b] j Yf g] hm Vcc_g hY gi a cZ $\%&\$ Zcf gU`Uf] Yg UbX`UVcf Zcf hY 8U] fm 8YdUfhaYbh Zf ca >i`m % hc 8YW' \%z % \%+\zec UbX \$'*\$ hc di f WUgY ZYYX Zcf hY 8U] fm 8YdUfhaYbh Zcf hY mYUf >i bY ' \$z % \%+ hc >i bY ' \$z % \%+\zec UbX hVh Ug ZUf Ug dcgg] V`Y hY acbYm XYf] j YX Zf ca hY gU`Y cZ ghcW_Zf ca hY 8U] fm 8YdUfhaYbh VY Y`X Zcf hY di f WUgY cZ di f YVf YX ghcW_Ug ci h`] bYX cb dU[Y' cZ Df cZYggcf KccXkUf Xfig f Ydcf h" JchY.$

Af g	" 6U_Yf	5mY
Af "	7i f`Yf	5mY
Af "	Cfi6f] Yb	5mY
8f "	Gi``] j Ub	5mY
Af "	5VY`	5mY

=h kUg acj YX Vm Af " Cfi6f] Yb h\Uh Af " H\cfj U` X 5bXYf gYb VY Ud! dc] bhYX \Yf XgaUb Zcf h\Y 8U] fm 8YdUf haYbh Uh U gU` Uf m cZ \$\%\$\$ dYf acbh\ž VY[] bb] b[GYdhYaVYf % % \%+" JchY.

Af " 7i f`Yf 5 Af " Cfi6f] Yb 5h 8f " Gi``] j Ub 5mY Af "U 5MY) 5mY

A] gg GYUf gž Df cZYggcf cZ <caY 6cUf X Vm Uddc] bhaYbh UbX X] gW ggYX kj n bulb aUh! hYfg dYfhU]b]b[hc h\Y <caY_9Wbca]Wg fccag UbX `UVcf] b h\Y bYk 5[f] W\`hifU` Vi]` @Yk]gž UfW]hY WU YXXII OD PHOED PROPERTIES AND ANY AT g U gc U d`UWYZcf dfUWh]WY d`UWX VYZcf oc Uf X \ Yf XYg Ug_YX]Z h\Y DfYg \ci gY_YYd] b fig \cigY a][\h VY igYX bh]`>UbiUfm%ž ♀ HAY aUhhYfg df YgYbhYX Vm Zcf h\]g Wei Algg GYUfg kYfY $A \setminus U$ ab#



@' h\Y FY[' 7cb; dYf	gVUfnž; Yc" AW VYXYbh]U`gžkYf 7if`Yfh\Uh; Yc Wh]cbcZh\Y5[h\žVY[]bb]b[H	eYZZY`/ hc_h\Y VY_Y`YV Vi]`X]b[nYaVYf ^Y 9	Wk Uf X X C Uh %	nž hc[Yh\Y ⊧h kUg acj /m ᠻ]bhYbXYbh ౮UfmcZ \$	
6YZ GYI h\Y UbX	h\Y aUhhYf kUg \UbX Af" @Yk]g chhYf cZ h\Y gidY	Af" 9`` Z]faž g YgY`YW gZc``cl	m c _Y ?"	Yk]gž 9``Y n∖Y 6cUfX gh]cb WU``	
	;" 6U_Yf 7i f`Yf Cfi6f]Yb 5VY` Gi``]jUb	Xf Ukb Zf	. h\	YYh] b[
FYW	kUg hU_Yb ibh]`	Y Yj Yb] l			
AYY	WU `YX hc cf XY	o h\Y C 2	VY	n∖Y D f Yg] X	
Df Y		5 11 (1	f		
DI I;	. FY[Ybhg 7if`	l l	1	J	

 $aYbh] cbgž Ug UZ Yf Yl Ua]b]b[h\Y FY[Ybhgfi Z]`Yg UbX h\Y DfYg]!$ XYbhfig Z] Ygž b gi W XcWaYbh Ug \Y gdYU_g cZ] g Zci bX' iYgh c**x** 8YUb ?b][∖h hc VY dYfa]hhYX hc fYdfY! FY`Uh]jY hc h\ 9ld¶f]aYbh GhUh]cb Uh h\Y¶5ggcW[Uh]cb cZ gYbh h\Y 5[f] W Y[Yg UbX PldYf]aYbh GlUh]cbgž h\Y 5Wh! 5aYf] WUb 5[f] WV h\Uh \Y VV XY`Y[UhYX hc UhhYbX h\Y] b[Df Yg] XYbh f Uh]jYZf¢ah∖YIb]jYfg]hmž∖]gY! WebZYfYbWY Ug h Af" 7if` of cZZYfYX h\Y dYbgYg hc VY Vc Y [b]jYfg]hmcZ BYjUXU UbX 8YUb ach]cb h\Uh DfY ?b] [\h cZ h\Y 7 G" hc VY h Y I b j Y g hmYldYbgYg cZ Zf ca Bcj YaVYf % dU] X Zf ca h\Y < h\W : i Af" 7 f`Yf Αf

Af " Cfi6f] Yb 5mY Af " 5VY` 5mY

 $\label{thm:conditional} $H\Y 7 cadhfc``Yf $df YgYbhYX \] g f Ydcfh $XUhYX GYdhYaVYf $\% \& k\] W kUg f YUX Vm h\Y 6 cUf X UbX $X] gWiggYX UbX h\Y Zc``ck] b[UVh] cb hU_Yb cb aUhhYfg $WD``YX hc h\Y UhhYbh] cb cZ h\Y 6 cUf X] b h\Y gUaY"$

 $\label{eq:conditional} $: c``ck] b[Ub] bZcfaUh] cb X] gWgg] cb cb h\Y aU_] b[cZ U hYbhU! h] j Y Vi X[Yh h\Y 6cUf X Ui h\cf] nYX Vm Xi Y ach] cb h\Y Zc``ck] b[.$

 $H_{NY} Y I dY bX J hi fY cZ $\% \tilde{z} \&)$ \$ Z f ca h Y 8 Y W V a V Y f h U Y g Z

Af " 5VY` 5mY

Af " 5VY f Ygi aYX h\Y 7\U] f "

5 `YhhYf kUg fYUX Zfca h\Y 7] h] nYbg BUh] cbU` 6Ub_ UXj] g] b[h\Uh h\Uh] bgh] hi h] cb kUg YbW cg] b[Xf UZh Zcf \$&) \$ž VY] b[h\Y [] Zh cZ Af g" 5`] WY; " 7` Uf_" = h kUg acj YX Vm FY[Ybh Cfi6f] Yb h\Uh h\Y 7\U] faUb UbX h\Y GYWYhUf m cZ h\Y 6cUf X UW_bck`YX[Y h\Y f YWY] dh cZ h\Y [] Zh cZ Af g" 7` Uf_" 5`` j chYX UmY"

=h kUg acj YX Vm FY[Ybh 7i f`Yf h\Uh h\Y fYW&aaYbXUh] cb cZ h\Y 7cadhf c``Yf] b fY[UfX hc fUhYg Zcf VcUfX Uh h\Y 8] b] b[<U`` VY Uddf cj YX' J chY.

Af "	7i f`Yf	5mY
Af "	Cfi6f] Yb	5mY
Af "	5VY`	5mY

H\Y UWh]cb cZ h\Y 7cadhfc``Yf]b gi Va]hh]b[W\YW_ Zcf \$&)\$]b ZUj cf cZ Af" <ckUfX 6fckb]b UWWtfXUbWY k]h\ h\Y k]g\Yg cZ Afg" 7`Uf_ž UbX W\YW_]b ZUj cf cZ h\Y FYj c`j]b[:ibX Zcf h\Y Uacibh cZ 5h\`Yh]WZYYg Wt``YWhYX kUg Uddfcj YX k]h\cih ach]cb"

=b f Y[Uf X hc h\Y 7cadhf c``Yf fig f YWtaaYbXUh] cb f Y`Uh] j Y hc h\Y D\]`c 7" 6YbbYhh GWc`Uf g\] dž h\Y Zc``ck] b[ach] cb kUg cZZYf YX Vm FY[Ybh 7i f`Yf. H\Uh h\Y Uaci bh cZZYf YX Ug U df] nY Zf ca h\Y D\]`c 7" 6YbbYhh GWc`Uf g\] d VY`] a] hYX hc h\Y Uaci bh h\Y \$(\$\$ UWhi U``m YUf bg YUW mYUf g" JchY.

Af "	7i f`Yf	5mY
Af "	Cfi6f] Yb	5mY
Af "	5VY`	5mY

 $\label{thm:conditional} $$H\Y $$ \arrowvert_{\coloredge} $$ H\Y $$ \arrowvert_{\coloredge} $$ \arrowvert_{\coloredge} $$ \arrowvert_{\coloredge} $$ H\Y $$ \arrowvert_{\coloredge} $$$

@| gh cZ 7`U| ag Bcg" -+ hc %%& | bWig| j Y Zcf U hchU cZ \$%+ž-)+",) U[U| bgh h\Y GhUhY cZ BYj UXU kUg Uddfcj YX UbX h\Y 7\U| faUb g] [bYX $7\YWg$ Zcf h\Y gUaY"