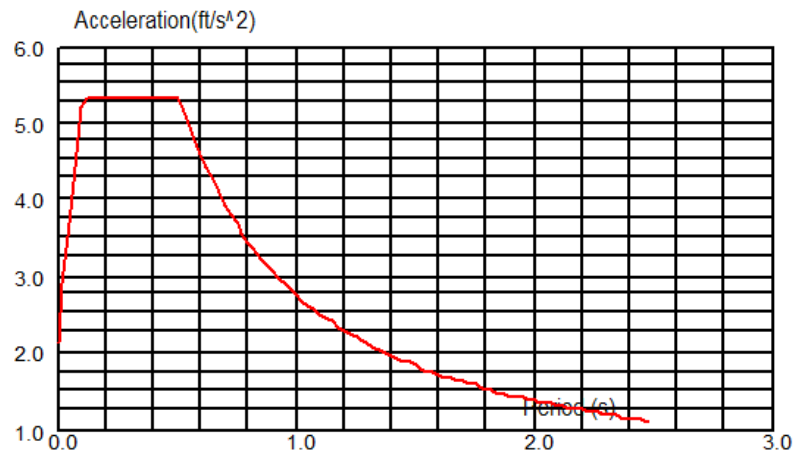


Here are the values Robot calculated after I entered S2, Ss, etc:



Data:

Soil : C
S₁ : 0.229
S_s : 0.598
Damping : X = 0.050

Spectrum parameters:

F _s = 1.161	F _v = 1.571
S _{MS} = 0.694	S _{M1} = 0.360
S _{DS} = 0.463	S _{D1} = 0.240
T _o = 0.104	T _s = 0.518
I = 1.250	R = 3.500

Here are my values from an excel spreadsheet:

Mapped Acceleration Parameters				ASCE 7-05
Location	Latitude	39.7		Section
	Longitude	-121.84		
Site Class	C			20.3
S_s	0.598			11.4.1
S_1	0.229			11.4.1
S_{MS}	0.791			11.4.3
S_{M1}	0.445			11.4.3
F_a	1.32274			11.4.3
F_v	1.94323			11.4.3
S_{DS}	0.527			11.4.4
S_{D1}	0.297			11.4.4
$T = T_a$	0.16987	s		12.8.2.1
C_t	0.02		Table	12.8-2
x	0.75		Table	12.8-2
h_n	17.33	ft		12.8.2.1
T_0	0.11271	s		11.4.5
T_s	0.56357	s		11.4.5
T_L	16	s		11.4.5
Occupancy Category	III		Table	1-1
I	1.25		Table	11.5-1
Seismic Category	D		Table	11.6-1
S_a	0.527		$T_0 < T < T_s$	11.4.5

Design Coefficients and Factors				ASCE 7-05 Section
Response Modification Coefficient, R	3.5		Table	12.2-1
System Overstrength Factor, Ω	2.5		Table	12.2-1
Deflection Amplification Factor, C_d	2.25		Table	12.2-1
redundancy factor, ρ	1.3			12.3.4.2
Seismic Response Coefficient, C_s	0.188214			12.8.1.1
upper limit for C_s	0.624409	$T < T_L$		12.8.1.1
Base Shear, V	362.6653	kips		12.8.1
k	1			12.8.3
C_{vx}	1			12.8.3
F_x	362.6653	kips		12.8.3
Seismic Load Combination				
$1.2 + 0.2S_{DS}$	1.3054			12.14.3.1
$0.9 - 0.2S_{DS}$	0.7946			12.14.3.1
Strength Design; LRFD				

Design Response Spectrum

