

```
1 function plotOTM(figName, folder, direction)
2     arguments;
3     figName = "temp";
4     folder = "dynamic_EW";
5     direction = "EW"
6 end
7
8 Reaction = load("\." + folder + "\Results_dynamic\Reaction.txt");
9 Disp = load("\." + folder + "\Results_dynamic\Disp.txt");
10
11 figure(1); hold on;
12 title("Overturning Moment of Base Section in the " + direction + " Direction");
13
14 x_arm = 139;
15 y_arm = 62.48;
16 builidngHeight = 2208;
17
18 if direction == "EW"
19     OTM1 = Reaction(:,6) + Reaction(:,4)*x_arm;
20     OTM2 = Reaction(:,12) - Reaction(:,10)*x_arm;
21     drift = Disp(:,2)/builidngHeight;
22 elseif direction == "NS"
23     OTM1 = Reaction(:,5) - Reaction(:,4)*y_arm;
24     OTM2 = Reaction(:,11) + Reaction(:,10)*y_arm;
25     drift = -Disp(:,3)/builidngHeight;
26 end
27
28 OTM_total = OTM1 + OTM2;
29
30
31 plt = plot(drift, -OTM_total, 'k', 'DisplayName', 'Total', 'LineWidth', 3); plt.Color(4) = 0.5;
32 plot(drift, -OTM1, 'r--', 'DisplayName', 'Wall 1', 'LineWidth', 2);
33 plot(drift, -OTM2, 'b--', 'DisplayName', 'Wall 2', 'LineWidth', 2);
34 xlabel("Drift Ratio [%]");
35
36 if direction == "EW"
37     ylabel("Overturning Moment M_y [kip*in]");
38 elseif direction == "NS"
39     ylabel("Overturning Moment M_x [kip*in]");
40 end
41 legend('Location','southeast','Orientation','horizontal');
42 grid on
43 grid minor
44
45 print_figure(figName)
46 end
47
```