

結構系統:

一、構架

本建築物 1F~2F 採用鋼筋混凝土建造(梁柱韌性立體剛構架)。

二、樓版

2F 15 cm R.C. 版

三、基礎

採筏式基礎設計。

壹、分析方法:

一、依彈性構架理論,以勁度法分析構架應力及應變。

二、分析程式及設計:

1. 構架採用 CSI-ETABS 程式分析。

2. 採用強度設計法 (USD),並考慮韌性設計。

3. 設計規範:

a.內政部營建署『建築技術規則』

b.內政部營建署『結構混凝土工程設計規範』(土木 401-86a)

c.內政部營建署『建築物耐震設計規範及解說』(94 年)

d. ACI『Building Code Requirements for structural Concrete』  
ACI 318-99

貳、設計載重 (T/m<sup>2</sup>)

2FL

1. 15cm 鋼筋混凝土版	0.360
2. 防水層	0.030
3. 1.5cm 水泥砂漿粉光	0.020
4. 天花及其他	0.030

靜載重 (D.L.)	合計=	0.440
活載重 (L.L.)	=	0.200
水箱載重(TON)	=	2.000

參、材料強度:

鋼筋:  $F_y = 4200 \text{ kg/cm}^2$  ( $\geq \#6$ )

$F_y = 2800 \text{ kg/cm}^2$  ( $< \#6$ )

(鋼筋材質符合 CNS560 熱軋竹節鋼筋之規定)

混凝土:

$f_c' = 210 \text{ kg/cm}^2$  (RC)

(混凝土 28 天抗壓強度)

肆、地震力分析

一、用途係數:

第四類建築物  $I=1.00$

二、第二類地盤 (普通地盤)

三、最小設計水平總橫力:

$$V = \frac{S_{aD}IW}{1.4\alpha_y F_u} = \frac{I}{1.4\alpha_y} \left( \frac{S_{aD}}{F_u} \right)_m W$$

避免中度地震降伏之設計地震力:

$$\text{一般工址與近斷層區域: } *V = \frac{IF_u}{4.2\alpha_y} \left( \frac{S_{aD}}{F_u} \right)_m W$$

$$\text{台北盆地: } V^* = \frac{IF_u}{3.5\alpha_y} \left( \frac{S_{aD}}{F_u} \right)_m W$$

避免最大考量地震崩塌之設計地震力:

$$V_M = \frac{I}{1.4\alpha_y} \left( \frac{S_{aM}}{F_{uM}} \right)_m W$$

四、基本振動週期:

$$T = 0.07H^{0.75} \quad (H = \text{結構物總高度})$$

$$T = 0.05H^{0.75} \quad (H = \text{結構物總高度})$$

伍、結構桿件分析程式及分析後結果

1. 地震力分析結果 (如下附件)

2. 結構分析輸入 (如下附件)

3. 結構桿件分析結果 (如下附件)

4. 結構平面圖 (如下附件)

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*****
*                               *
*           地震力計算           *
*           依據我國建築物耐震設計規範           *
*           (2007.01版)           *
*           BY: S. L. LEE           *
*           01/03/2007           *
*****
工程名稱: CHEN225-3
日期: 04/30/2008
時間: 13:35:36

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INPUT ECHO
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屋突樓層數	(NP):	0
地面樓層數	(NF):	1
地下樓層數	(NB):	0
用途係數	(I):	1.00
基礎種類		第二類地盤
震區短週期水平譜加速度係數	(SsD):	.700
	(SsM):	.900
震區1秒週期水平譜加速度係數	(SID):	.400
	(SIM):	.500
反應譜等加速度段之工址放大係數:	(FaD):	1.000
	(FaM):	1.000
反應譜等速度段之工址放大係數:	(FvD):	1.300
	(FvM):	1.100
工址設計水平譜加速度係數	(SDs):	.700
	(SD1):	.520
工址最大水平譜加速度係數	(SMs):	.900
	(SM1):	.550
設計地震近斷層調整因子	NA:	1.00
	NV:	1.00
最大考量地震近斷層調整因子	NAM:	1.00
	NVM:	1.00
短週期與中週期分界點	(TOD):	.743
	(TOM):	.611
起始降伏地震力放大倍數		1.50
地面建物總高(不含屋突)	(HnF):	3.0

LEVEL	Hi	Wi	XMi	YMi	DXi	DYi	IXYi
2FL	3.00	128.98	3.36	8.24	6.54	17.12	26.44
1FL	.00	128.98	3.36	8.24	6.54	17.12	26.44

#### 設計參數計算

X-向:

結構系統種類	:	鋼筋混凝土
韌性容量	(R):	4.00
容許韌性容量	(Ra):	3.00
建物靜力基本震動周期	(Ts):	.160
動力基本震動周期	(Td):	.281
周期上限係數	(Cu):	1.200
設計用基本震動周期	(T):	.191
計算設計地震力 V 之參數	:	
設計水平譜加速度係數	(Sa <sub>d</sub> ):	.700
地震力折減係數	(Fu):	2.236
	[(Sa <sub>d</sub> /Fu) <sub>m</sub> ]:	.307
計算中小度地震設計地震力 V* 之參數:		
設計水平譜加速度係數	(Sa <sub>d</sub> ):	.700
地震力折減係數	(Fu <sub>m</sub> ):	2.236
	[(Sa <sub>d</sub> /Fu <sub>m</sub> ) <sub>m</sub> ]:	.307
計算最大考量地震設計地震力 VM 之參數:		
設計水平譜加速度係數	(Sa <sub>M</sub> ):	.900
地震力折減係數	(Fu <sub>M</sub> ):	2.646
	[(Sa <sub>M</sub> /Fu <sub>M</sub> ) <sub>m</sub> ]:	.321
計算層間位移角及建物間隔之參數:		
基本震動周期	(T):	.281
設計水平譜加速度係數	(Sa <sub>d</sub> ):	.700
	[(Sa <sub>d</sub> /Fu) <sub>m</sub> ]:	.307
地震力折減係數	(Fu):	2.236

結構系統容許韌性容量 (Ra\*): 3.000

Y-向:	
結構系統種類	:其他構造
韌性容量	(R): 4.00
容許韌性容量	(Ra): 3.00
建物靜力基本震動周期	(Ts): .114
動力基本震動周期	(Td): .238
周期上限係數	(Cu): 1.200
設計用基本震動周期	(T): .137
計算地震力 V 之參數	:
設計水平譜加速度係數	(SaD): .667
地震力折減係數	(Fu): 2.138
	[(SaD/Fu)m]: .306
計算中小度地震設計地震力 V* 之參數:	
設計水平譜加速度係數	(SaD): .667
地震力折減係數	(Fu): 2.138
	[(SaD/Fu)m]: .306
計算最大考量地震設計地震力 VM 之參數:	
設計水平譜加速度係數	(SaM): .900
地震力折減係數	(FuM): 2.646
	[(SaM/FuM)m]: .321
計算層間位移角及建物間隔之參數:	
基本震動周期	(T): .238
設計水平譜加速度係數	(SaD): .700
	[(SaD/Fu)m]: .314
地震力折減係數	(Fu): 2.138
結構系統容許韌性容量	(Ra*): 3.000

## RESULTS

設計水平地震力：						
X-向：	V=	18.84	V*=	14.04	Vm=	19.71 used V= 19.71
Y-向：	V=	18.80	V*=	13.40	Vm=	19.71 used V= 19.71
LEVEL	HEIGHT	H		W	FX	TMX FY TMY
=====						
(FTPX=				.00	FTPY=	.00)
(FTY=				.00	FTY=	.00)

2FL	3.00	3.00	128.98		19.71	16.87		19.71	6.44	
	(SUM)		128.98		19.71	16.87		19.71	6.44	
1FL	.00	.00	128.98		11.61	9.94		11.61	3.80	
	OMX= RMX=	59.1 866.8	OMY= RMY=		59.1 2125.6					

計算層間位移用水平地震力:

X-向：	V=	21.07	
Y-向：	V=	20.63	
容許層間位移角放大倍數(根據設計地震力分析結果)			
X向	:	1.06890	Y向 : 1.04687
設計地震力下之容許層間位移角			
X向	:	.00468	Y向 : .00478
建物間隔所需之位移放大倍數(根據設計地震力分析結果)			
X向	:	3.78000	Y向 : 3.78000

設計垂直地震力計算：

X-向	:	Tx:	.191	SaDvx:	.467				
		Tx/10:	.019	Fuvvx:	1.118	(Sa/Fu)m:	.313	Kzx:	.149
		Tx/15:	.013	Fuvvx:	1.079	(Sa/Fu)m:	.321	Kzx:	.153
		建議使用垂直地震力係數(Kzx): .15285							
Y-向	:	Ty:	.137	SaDvy:	.444				
		Ty/10:	.014	Fuvvy:	1.084	(Sa/Fu)m:	.309	Kzy:	.147
		Ty/15:	.009	Fuvvy:	1.056	(Sa/Fu)m:	.315	Kzy:	.150
		建議使用垂直地震力係數(Kzy): .14991							

\$ PROGRAM INFORMATION

\$ CONTROLS

UNITS "KGF" "M"  
PREFERENCE MEGACGTOL 0.001  
RLFF METHOD "TRIBAREAUCB97" USEDDEFAULTMIN 'YES'

\$ STORIES - IN SEQUENCE FROM TOP

STORY "2F" HEIGHT 3 MASTERTORY "1yes"  
STORY "BASE" ELEV 0

\$ DIAPHRAGM NAMES

DIAPHRAGM "D1"

\$ GRIDS

COORDSYSTEM "GLOBAL" TYPE "CARTESIAN" BUBBLESIZE 0  
GRID "GLOBAL" LABEL "A" DIR "X" COORD 0 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "B" DIR "X" COORD 1.895 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "C" DIR "X" COORD 3.0975 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "E" DIR "X" COORD 4.045 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "D" DIR "X" COORD 6.195 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "1" DIR "Y" COORD 0 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "2" DIR "Y" COORD 3 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "3" DIR "Y" COORD 6.2 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "4" DIR "Y" COORD 12.46 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "5" DIR "Y" COORD 14.67 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "6" DIR "Y" COORD 16.895 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"

\$ MATERIAL PROPERTIES

MATERIAL "STEEL" M 788.142 W 7833.414 TYPE "ISOTROPIC" E 2.038902E+10 U 0.3 A 1.16999998509017E-05  
MATERIAL "STEEL" DESIGNTYPE "STEEL" FY 3.515348E+07 FU 5.609952E+07 PRICE 2.767901E+07  
MATERIAL "CONC280" M 244.8 W 2403 TYPE "ISOTROPIC" E 2.509998E+09 U 0.2 A 9.89999989542412E-06  
MATERIAL "CONC280" DESIGNTYPE "CONCRETE" FY 4.2E+07 FC 2800000 FYS 2.8E+07  
MATERIAL "OTHER" M 788.142 W 7833.414 TYPE "ISOTROPIC" E 2.038902E+10 U 0.3 A 1.16999998509017E-05  
MATERIAL "OTHER" DESIGNTYPE "OTHER"  
MATERIAL "CONC210" M 244.8 W 2403 TYPE "ISOTROPIC" E 2.17371E+09 U 0.2 A 9.89999989542412E-06  
MATERIAL "CONC210" DESIGNTYPE "CONCRETE" FY 4.2E+07 FC 2100000 FYS 2.8E+07

\$ FRAME SECTIONS

FRAMESECTION "B35X50" MATERIAL "CONC210" SHAPE "Rectangular" D 0.5 B 0.35  
FRAMESECTION "C45X45" MATERIAL "CONC210" SHAPE "Rectangular" D 0.45 B 0.45  
FRAMESECTION "B25X50" MATERIAL "CONC210" SHAPE "Rectangular" D 0.5 B 0.25  
FRAMESECTION "C25X50" MATERIAL "CONC210" SHAPE "Rectangular" D 0.25 B 0.5  
FRAMESECTION "B35X50" JMOD 0.1  
FRAMESECTION "B25X50" JMOD 0.1

\$ REBAR DEFINITIONS

REBARDEFINITION "#2" AREA 3.2258E-05 DIA 0.00635  
REBARDEFINITION "#3" AREA 7.08670E-05 DIA 0.00925  
REBARDEFINITION "#4" AREA 1.29032E-04 DIA 0.0127  
REBARDEFINITION "#5" AREA 1.998990E-04 DIA 0.015875  
REBARDEFINITION "#6" AREA 2.838704E-04 DIA 0.01905  
REBARDEFINITION "#7" AREA 3.87096E-04 DIA 0.02225  
REBARDEFINITION "#8" AREA 5.096744E-04 DIA 0.0254  
REBARDEFINITION "#9" AREA 6.4516E-04 DIA 0.028612  
REBARDEFINITION "#10" AREA 8.193532E-04 DIA 0.03258  
REBARDEFINITION "#11" AREA 1.00645E-03 DIA 0.035814  
REBARDEFINITION "#14" AREA 1.45161E-03 DIA 0.0430022  
REBARDEFINITION "#16" AREA 2.58064E-03 DIA 0.0573278  
REBARDEFINITION "10M" AREA 0.0001 DIA 0.0115  
REBARDEFINITION "15M" AREA 0.0002 DIA 0.016  
REBARDEFINITION "20M" AREA 0.0003 DIA 0.0195  
REBARDEFINITION "25M" AREA 0.0005 DIA 0.0252  
REBARDEFINITION "30M" AREA 0.0007 DIA 0.0299  
REBARDEFINITION "35M" AREA 0.001 DIA 0.0357  
REBARDEFINITION "45M" AREA 0.0015 DIA 0.0437  
REBARDEFINITION "55M" AREA 0.0025 DIA 0.0564  
REBARDEFINITION "64" AREA 0.000283 DIA 0.006  
REBARDEFINITION "84" AREA 0.000593 DIA 0.008  
REBARDEFINITION "104" AREA 0.000785 DIA 0.01  
REBARDEFINITION "124" AREA 0.00113 DIA 0.012  
REBARDEFINITION "144" AREA 0.00154 DIA 0.014  
REBARDEFINITION "164" AREA 0.00201 DIA 0.016  
REBARDEFINITION "204" AREA 0.00314 DIA 0.02  
REBARDEFINITION "254" AREA 0.00491 DIA 0.025  
REBARDEFINITION "264" AREA 0.00531 DIA 0.026  
REBARDEFINITION "284" AREA 0.00616 DIA 0.028

\$ CONCRETE SECTIONS

CONCRETESECTION "C45X45" TYPE "COLUMN" PATTERN "R-4-4" TRANSREIN 'TIES' COVER 0.069 REBAR "#10" DESIGNCHECK "DESIGN"  
CONCRETESECTION "C25X50" TYPE "COLUMN" PATTERN "R-3-3" TRANSREIN 'TIES' COVER 0.069 REBAR "#7" DESIGNCHECK "DESIGN"  
CONCRETESECTION "B35X50" TYPE "BEAM" COVERTOP 0.0655 COVERBOTTOM 0.0655 ATI 0 ARI 0 ATJ 0 ARJ 0  
CONCRETESECTION "B25X50" TYPE "BEAM" COVERTOP 0.0655 COVERBOTTOM 0.0655 ATI 0 ARI 0 ATJ 0 ARJ 0

\$ WALL/SLAB/DECK PROPERTIES

SHELLPROP "WALL25" MATERIAL "CONC210" PROPTYPE "WALL" TYPE "MEMBRANE" TM 0.25 TB 0.25  
SHELLPROP "SLAB15" MATERIAL "CONC210" PROPTYPE "SLAB" TYPE "MEMBRANE" TM 0.15 TB 0.15  
SHELLPROP "DECK1" PROPTYPE "DECK" TYPE "MEMBRANE"  
SHELLPROP "DECK1" DECKTYPE "FILLED" CONCUMATERIAL "CONC280" SLABDEPTH 0.0889  
SHELLPROP "DECK1" RIBDEPTH 0.0782 RIBWIDTH 0.15240000188397 RIBSPACING 0.3048 WEIGHT 11.22958  
SHELLPROP "DECK1" STUDDIA 0.01905 STUDHEIGHT 0.1524 STUDSTRENGTH 4.218418E+07  
SHELLPROP "PLANK1" MATERIAL "CONC280" PROPTYPE "SLAB" TYPE "MEMBRANE" ONERAY 'YES' TM 0.25 TB 0.25  
SHELLPROP "PLANK1" F1MOD 0.01 F2MOD 0.01

\$ LINE PROPERTIES

LINELPROP "NLPR1" TYPE "DAMPEN"  
LINELPROP "NLPR1" DOF "U1"

\$ PIER/SPANDREL NAMES

PIERNAME "P1"  
SPANDRELNAME "S1"

\$ POINT COORDINATES

POINT "1" 0 0  
POINT "2" 1.895 0  
POINT "3" 6.195 0  
POINT "4" 0 3  
POINT "5" 0 895.3  
POINT "6" 6.195 3  
POINT "7" 0 6.19999980926514  
POINT "8" 1.895 6.19999980926514  
POINT "9" 6.195 6.19999980926514  
POINT "10" 0 12.460000038147  
POINT "11" 1.895 12.460000038147  
POINT "12" 6.195 12.460000038147  
POINT "13" 0 14.6700000762939  
POINT "14" 1.895 14.6700000762939  
POINT "15" 6.195 14.6700000762939  
POINT "16" 1.895 16.8950004577637  
POINT "17" 6.195 16.8950004577637

\$ LINE CONNECTIVITIES

LINE "C1" COLUMN "1" "1" 1  
LINE "C2" COLUMN "2" "2" 1  
LINE "C3" COLUMN "3" "3" 1  
LINE "C4" COLUMN "4" "4" 1

LINE "C5" COLUMN "5" "5" 1  
LINE "C6" COLUMN "6" "6" 1  
LINE "C7" COLUMN "7" "7" 1  
LINE "C8" COLUMN "8" "8" 1  
LINE "C9" COLUMN "9" "9" 1  
LINE "C10" COLUMN "10" "10" 1  
LINE "C11" COLUMN "11" "11" 1  
LINE "C12" COLUMN "12" "12" 1  
LINE "C13" COLUMN "13" "13" 1  
LINE "C14" COLUMN "14" "14" 1  
LINE "C15" COLUMN "15" "15" 1  
LINE "C16" COLUMN "16" "16" 1  
LINE "C17" COLUMN "17" "17" 1  
LINE "B1" BEAM "1" "2" 0  
LINE "B2" BEAM "2" "3" 0  
LINE "B3" BEAM "1" "4" 0  
LINE "B4" BEAM "2" "5" "8" 0  
LINE "B5" BEAM "3" "6" 0  
LINE "B6" BEAM "4" "5" 0  
LINE "B7" BEAM "5" "6" 0  
LINE "B8" BEAM "4" "7" 0  
LINE "B9" BEAM "5" "8" 0  
LINE "B10" BEAM "6" "9" 0  
LINE "B11" BEAM "7" "8" 0  
LINE "B12" BEAM "8" "9" 0  
LINE "B13" BEAM "7" "10" 0  
LINE "B14" BEAM "8" "11" 0  
LINE "B15" BEAM "9" "12" 0  
LINE "B16" BEAM "10" "11" 0  
LINE "B17" BEAM "11" "12" 0  
LINE "B18" BEAM "10" "13" 0  
LINE "B19" BEAM "11" "14" 0  
LINE "B20" BEAM "12" "15" 0  
LINE "B21" BEAM "13" "14" 0  
LINE "B22" BEAM "14" "15" 0  
LINE "B23" BEAM "14" "16" 0  
LINE "B24" BEAM "15" "17" 0  
LINE "B25" BEAM "16" "17" 0

\$ AREA CONNECTIVITIES

AREA "W1" PANEL 4 "1" "4" "4" "1" 1 1 0 0  
AREA "W2" PANEL 4 "4" "7" "7" "4" 1 1 0 0  
AREA "W3" PANEL 4 "7" "10" "10" "7" 1 1 0 0  
AREA "W4" PANEL 4 "10" "13" "13" "10" 1 1 0 0  
AREA "F1" FLOOR 4 "1" "4" "5" "2" 0 0 0 0  
AREA "F2" FLOOR 4 "2" "5" "6" "3" 0 0 0 0  
AREA "F3" FLOOR 4 "4" "7" "8" "5" 0 0 0 0  
AREA "F4" FLOOR 4 "5" "8" "9" "6" 0 0 0 0  
AREA "F5" FLOOR 4 "7" "10" "11" "8" 0 0 0 0  
AREA "F6" FLOOR 4 "8" "11" "12" "9" 0 0 0 0  
AREA "F7" FLOOR 4 "10" "13" "14" "11" 0 0 0 0  
AREA "F8" FLOOR 4 "11" "14" "15" "12" 0 0 0 0  
AREA "F9" FLOOR 4 "14" "16" "17" "15" 0 0 0 0

\$ POINT ASSIGNS

POINTASSIGN "14" "2F" DIAPH "D1"  
POINTASSIGN "2" "2F" DIAPH "D1"  
POINTASSIGN "5" "2F" DIAPH "D1"  
POINTASSIGN "8" "2F" DIAPH "D1"  
POINTASSIGN "11" "2F" DIAPH "D1"  
POINTASSIGN "2" "BASE" DIAPH "D1"  
POINTASSIGN "3" "BASE" DIAPH "D1"  
POINTASSIGN "5" "BASE" DIAPH "D1"  
POINTASSIGN "6" "BASE" DIAPH "D1"  
POINTASSIGN "8" "BASE" DIAPH "D1"  
POINTASSIGN "11" "BASE" DIAPH "D1"  
POINTASSIGN "14" "BASE" DIAPH "D1"  
POINTASSIGN "9" "BASE" DIAPH "D1"  
POINTASSIGN "12" "BASE" DIAPH "D1"  
POINTASSIGN "15" "BASE" DIAPH "D1"  
POINTASSIGN "16" "BASE" DIAPH "D1"  
POINTASSIGN "17" "BASE" DIAPH "D1"  
POINTASSIGN "2" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "3" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "5" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "6" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "8" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "11" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "14" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "9" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "12" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "15" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "1" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "4" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "7" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "10" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "13" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "16" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "17" "BASE" RESTRAINT "UX UY UZ"

\$ LINE ASSIGNS

LINEASSIGN "B3" "2F" SECTION "B25X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B8" "2F" SECTION "B25X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B13" "2F" SECTION "B25X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B18" "2F" SECTION "B25X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B21" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B15" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B4" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B25" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B5" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B10" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B15" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B20" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B24" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B6" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B7" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B2" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "C2" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C3" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C5" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C8" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C11" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C14" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C9" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"

LINEASSIGN "C12" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C15" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C1" "2F" SECTION "C25X50" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C4" "2F" SECTION "C25X50" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C7" "2F" SECTION "C25X50" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C10" "2F" SECTION "C25X50" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C13" "2F" SECTION "C25X50" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "B23" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B9" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B14" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B19" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B22" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B17" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B12" "2F" SECTION "B35X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B16" "2F" SECTION "B25X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B11" "2F" SECTION "B25X50" ANG 0 MAJSTASC 0.5 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "C16" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C17" "2F" SECTION "C45X45" ANG 0 MINNUSTA 3 MESH "POINTSANDLINES"

\$ AREA ASSIGNS

AREAASSIGN "W1" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
LOADCASE "W2" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
AREAASSIGN "W3" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
AREAASSIGN "W4" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
AREAASSIGN "F1" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F2" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F3" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F4" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F5" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F6" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F7" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F8" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F9" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"

\$ STATIC LOADS

LOADCASE "DEAD" TYPE "DEAD" SELFWEIGHT 1  
LOADCASE "LIVE" TYPE "LIVE" SELFWEIGHT 0  
LOADCASE "EQN" TYPE "QUAKE" SELFWEIGHT 0  
LOADCASE "EQM" TYPE "QUAKE" SELFWEIGHT 0  
LOADCASE "EQW" TYPE "QUAKE" SELFWEIGHT 0  
SEISMIC "EQX" "USERLOADS" ECC 0.65  
SEISMIC "EQX" "USERLOAD" "2F" "D1" FX 19710  
SEISMIC "EQM" "USERLOADS" ECC -0.65  
SEISMIC "EQM" "USERLOAD" "2F" "D1" FY 19710  
SEISMIC "EQY" "USERLOADS" ECC 0.65  
SEISMIC "EQY" "USERLOAD" "2F" "D1" FY 19710  
SEISMIC "EQW" "USERLOADS" ECC -0.65  
SEISMIC "EQW" "USERLOAD" "2F" "D1" FY 19710

\$ AREA OBJECT LOADS

AREALOAD "W1" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "W2" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "W3" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "W4" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F1" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F3" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F4" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F5" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F6" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F7" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F8" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F9" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 300  
AREALOAD "F1" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F3" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F4" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F5" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F6" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F7" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F8" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F9" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 200  
AREALOAD "F2" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 560  
AREALOAD "F2" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 690

\$ ANALYSIS OPTIONS

ACTIVEDOF "UX UY UZ KX KY KZ"  
DYNAMICS MODES 100 MODETYPE "EIGEN" TOL 0.0000001  
MASSOPTIONS GRAVITY 9.80665 SOURCE "MASS" LATERALONLY 'YES' STORYLEVELONLY 'YES'

\$ LOAD COMBINATIONS

COMBO "EQN" TYPE "ADD"  
COMBO "EQM" LOAD "DEAD" SF 0.15285  
COMBO "COMB1" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB1" LOAD "DEAD" SF 1.4  
COMBO "COMB2" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB2" LOAD "DEAD" SF 1.4  
COMBO "COMB2" LOAD "LIVE" SF 1.7  
COMBO "COMB3" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB3" LOAD "DEAD" SF 1.65  
COMBO "COMB3" LOAD "LIVE" SF 1.275  
COMBO "COMB4" LOAD "EQN" SF 1.4025  
COMBO "COMB5" COMBO "EQN" SF 0.42075  
COMBO "COMB4" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB4" LOAD "DEAD" SF 1.65  
COMBO "COMB4" LOAD "LIVE" SF 1.275  
COMBO "COMB4" LOAD "EQN" SF 1.4025  
COMBO "COMB5" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB5" LOAD "DEAD" SF 1.65  
COMBO "COMB5" LOAD "LIVE" SF 1.275  
COMBO "COMB5" LOAD "EQN" SF 1.4025  
COMBO "COMB6" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB6" LOAD "DEAD" SF 1.65  
COMBO "COMB6" LOAD "LIVE" SF 1.275  
COMBO "COMB6" LOAD "EQN" SF 1.4025  
COMBO "COMB6" COMBO "EQN" SF -0.42075  
COMBO "COMB7" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB7" LOAD "DEAD" SF 0.9  
COMBO "COMB7" LOAD "EQN" SF 1.43  
COMBO "COMB7" COMBO "EQN" SF 0.429  
COMBO "COMB8" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB8" LOAD "DEAD" SF 0.9  
COMBO "COMB8" LOAD "EQN" SF 1.43  
COMBO "COMB8" COMBO "EQN" SF -0.429  
COMBO "COMB9" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB9" LOAD "DEAD" SF 0.9  
COMBO "COMB9" LOAD "EQN" SF -1.43  
COMBO "COMB9" COMBO "EQN" SF 0.429  
COMBO "COMB10" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB10" LOAD "DEAD" SF 0.9  
COMBO "COMB10" LOAD "EQN" SF -1.43  
COMBO "COMB10" COMBO "EQN" SF 0.429  
COMBO "COMB11" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB11" LOAD "DEAD" SF 1.65  
COMBO "COMB11" LOAD "LIVE" SF 1.275  
COMBO "COMB11" LOAD "EQN" SF 1.4025  
COMBO "COMB11" COMBO "EQN" SF 0.42075

COMBO "COMB12" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB12" LOAD "DEAD" SF 1.65  
COMBO "COMB12" LOAD "LIVE" SF 1.275  
COMBO "COMB12" LOAD "EQN" SF 1.4025  
COMBO "COMB12" COMBO "EQN" SF -0.42075  
COMBO "COMB13" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB13" LOAD "DEAD" SF 1.65  
COMBO "COMB13" COMBO "EQN" SF 1.275  
COMBO "COMB13" LOAD "EQN" SF -1.4025  
COMBO "COMB13" COMBO "EQN" SF 0.42075  
COMBO "COMB14" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB14" LOAD "DEAD" SF 1.65  
COMBO "COMB14" LOAD "LIVE" SF 1.275  
COMBO "COMB14" LOAD "EQN" SF -1.4025  
COMBO "COMB14" COMBO "EQN" SF -0.42075  
COMBO "COMB15" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB15" LOAD "DEAD" SF 0.9  
COMBO "COMB15" LOAD "EQN" SF 1.43  
COMBO "COMB15" COMBO "EQN" SF 0.429  
COMBO "COMB16" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB16" LOAD "DEAD" SF 0.9  
COMBO "COMB16" LOAD "EQN" SF 1.43  
COMBO "COMB16" COMBO "EQN" SF -0.429  
COMBO "COMB17" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB17" LOAD "DEAD" SF 0.9  
COMBO "COMB17" LOAD "EQN" SF -1.43  
COMBO "COMB17" COMBO "EQN" SF 0.429  
COMBO "COMB18" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB18" LOAD "DEAD" SF 0.9  
COMBO "COMB18" LOAD "EQN" SF -1.43  
COMBO "COMB18" COMBO "EQN" SF -0.429  
COMBO "COMB19" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB19" LOAD "DEAD" SF 1.65  
COMBO "COMB19" LOAD "LIVE" SF 1.275  
COMBO "COMB19" LOAD "EQN" SF 1.4025  
COMBO "COMB20" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB20" LOAD "DEAD" SF 1.275  
COMBO "COMB20" LOAD "EQN" SF 1.4025  
COMBO "COMB20" COMBO "EQN" SF -0.42075  
COMBO "COMB21" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB21" LOAD "DEAD" SF 1.65  
COMBO "COMB21" LOAD "LIVE" SF 1.275  
COMBO "COMB21" COMBO "EQN" SF -0.4025  
COMBO "COMB21" COMBO "EQN" SF 0.42075  
COMBO "COMB22" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB22" LOAD "DEAD" SF 1.65  
COMBO "COMB22" LOAD "LIVE" SF 1.275  
COMBO "COMB22" LOAD "EQN" SF -1.4025  
COMBO "COMB22" COMBO "EQN" SF -0.42075  
COMBO "COMB23" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB23" LOAD "DEAD" SF 0.9  
COMBO "COMB23" LOAD "EQN" SF 1.43  
COMBO "COMB23" COMBO "EQN" SF 0.429  
COMBO "COMB24" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB24" LOAD "DEAD" SF 0.9  
COMBO "COMB24" LOAD "EQN" SF 1.43  
COMBO "COMB24" COMBO "EQN" SF -0.429  
COMBO "COMB25" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB25" LOAD "DEAD" SF 0.9  
COMBO "COMB25" LOAD "EQN" SF -1.43  
COMBO "COMB25" COMBO "EQN" SF 0.429  
COMBO "COMB26" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB26" LOAD "DEAD" SF 0.9  
COMBO "COMB26" LOAD "EQN" SF -1.43  
COMBO "COMB26" COMBO "EQN" SF -0.429  
COMBO "COMB27" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB27" LOAD "DEAD" SF 1.65  
COMBO "COMB27" LOAD "LIVE" SF 1.275  
COMBO "COMB27" LOAD "EQN" SF 1.4025  
COMBO "COMB27" COMBO "EQN" SF 0.42075  
COMBO "COMB28" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB28" LOAD "DEAD" SF 1.65  
COMBO "COMB28" LOAD "LIVE" SF 1.275  
COMBO "COMB28" LOAD "EQN" SF 1.4025  
COMBO "COMB28" COMBO "EQN" SF -0.42075  
COMBO "COMB29" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB29" LOAD "DEAD" SF 1.65  
COMBO "COMB29" LOAD "LIVE" SF 1.275  
COMBO "COMB29" LOAD "EQN" SF -1.4025  
COMBO "COMB29" COMBO "EQN" SF 0.42075

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COMBO "COMB41" LOAD "DEAD" SF 0.9
COMBO "COMB41" LOAD "EQ" SF -0.429
COMBO "COMB41" COMBO "EQ" SF 1.43
COMBO "COMB42" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB42" LOAD "DEAD" SF 0.9
COMBO "COMB42" LOAD "EQ" SF -0.429
COMBO "COMB42" COMBO "EQ" SF -1.43
COMBO "COMB43" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB43" LOAD "DEAD" SF 1.05
COMBO "COMB43" LOAD "LIVE" SF 1.275
COMBO "COMB43" LOAD "EQ" SF 0.42075
COMBO "COMB43" COMBO "EQ" SF 1.4025
COMBO "COMB44" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB44" LOAD "DEAD" SF 1.05
COMBO "COMB44" LOAD "LIVE" SF 1.275
COMBO "COMB44" LOAD "EQ" SF 0.42075
COMBO "COMB44" COMBO "EQ" SF -1.4025
COMBO "COMB45" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB45" LOAD "DEAD" SF 1.05
COMBO "COMB45" LOAD "LIVE" SF 1.275
COMBO "COMB45" LOAD "EQ" SF -0.42075
COMBO "COMB45" COMBO "EQ" SF 1.4025
COMBO "COMB46" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB46" LOAD "DEAD" SF 1.05
COMBO "COMB46" LOAD "LIVE" SF 1.275
COMBO "COMB46" LOAD "EQ" SF -0.42075
COMBO "COMB46" COMBO "EQ" SF -1.4025
COMBO "COMB47" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB47" LOAD "DEAD" SF 0.9
COMBO "COMB47" LOAD "EQ" SF 0.429
COMBO "COMB47" COMBO "EQ" SF 1.43
COMBO "COMB48" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB48" LOAD "DEAD" SF 0.9
COMBO "COMB48" LOAD "EQ" SF 0.429
COMBO "COMB48" COMBO "EQ" SF -1.43
COMBO "COMB49" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB49" LOAD "DEAD" SF 0.9
COMBO "COMB49" LOAD "EQ" SF -0.429
COMBO "COMB49" COMBO "EQ" SF 1.43
COMBO "COMB50" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB50" LOAD "DEAD" SF 0.9
COMBO "COMB50" LOAD "EQ" SF -0.429
COMBO "COMB50" COMBO "EQ" SF -1.43
COMBO "COMB51" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB51" LOAD "DEAD" SF 1.05
COMBO "COMB51" LOAD "LIVE" SF 1.275
COMBO "COMB51" LOAD "EQ" SF 0.42075
COMBO "COMB51" COMBO "EQ" SF 1.4025
COMBO "COMB52" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB52" LOAD "DEAD" SF 1.05
COMBO "COMB52" LOAD "LIVE" SF 1.275
COMBO "COMB52" LOAD "EQ" SF 0.42075
COMBO "COMB52" COMBO "EQ" SF -1.4025
COMBO "COMB53" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB53" LOAD "DEAD" SF 1.05
COMBO "COMB53" LOAD "LIVE" SF 1.275
COMBO "COMB53" LOAD "EQ" SF -0.42075
COMBO "COMB53" COMBO "EQ" SF 1.4025
COMBO "COMB54" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB54" LOAD "DEAD" SF 1.05
COMBO "COMB54" LOAD "LIVE" SF 1.275
COMBO "COMB54" LOAD "EQ" SF -0.42075
COMBO "COMB54" COMBO "EQ" SF -1.4025
COMBO "COMB55" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB55" LOAD "DEAD" SF 0.9
COMBO "COMB55" LOAD "EQ" SF 0.429
COMBO "COMB55" COMBO "EQ" SF 1.43
COMBO "COMB56" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB56" LOAD "DEAD" SF 0.9
COMBO "COMB56" LOAD "EQ" SF 0.429
COMBO "COMB56" COMBO "EQ" SF -1.43
COMBO "COMB57" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB57" LOAD "DEAD" SF 0.9
COMBO "COMB57" LOAD "EQ" SF -0.429
COMBO "COMB57" COMBO "EQ" SF 1.43
COMBO "COMB58" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB58" LOAD "DEAD" SF 0.9
COMBO "COMB58" LOAD "EQ" SF -0.429
COMBO "COMB58" COMBO "EQ" SF -1.43
COMBO "COMB59" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB59" LOAD "DEAD" SF 1.05
COMBO "COMB59" LOAD "LIVE" SF 1.275
COMBO "COMB59" LOAD "EQ" SF 0.42075
COMBO "COMB59" COMBO "EQ" SF 1.4025
COMBO "COMB60" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB60" LOAD "DEAD" SF 1.05
COMBO "COMB60" LOAD "LIVE" SF 1.275
COMBO "COMB60" LOAD "EQ" SF 0.42075
COMBO "COMB60" COMBO "EQ" SF -1.4025
COMBO "COMB61" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB61" LOAD "DEAD" SF 1.05
COMBO "COMB61" LOAD "LIVE" SF 1.275
COMBO "COMB61" LOAD "EQ" SF -0.42075
COMBO "COMB61" COMBO "EQ" SF 1.4025
COMBO "COMB62" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB62" LOAD "DEAD" SF 1.05
COMBO "COMB62" LOAD "LIVE" SF 1.275
COMBO "COMB62" LOAD "EQ" SF -0.42075
COMBO "COMB62" COMBO "EQ" SF -1.4025
COMBO "COMB63" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB63" LOAD "DEAD" SF 0.9
COMBO "COMB63" LOAD "EQ" SF 0.429
COMBO "COMB63" COMBO "EQ" SF 1.43
COMBO "COMB64" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB64" LOAD "DEAD" SF 0.9
COMBO "COMB64" LOAD "EQ" SF 0.429
COMBO "COMB64" COMBO "EQ" SF -1.43
COMBO "COMB65" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB65" LOAD "DEAD" SF 0.9
COMBO "COMB65" LOAD "EQ" SF -0.429
COMBO "COMB65" COMBO "EQ" SF 1.43
COMBO "COMB66" TYPE "ADP" DESIGN "CONCRETE"
COMBO "COMB66" LOAD "DEAD" SF 0.9
COMBO "COMB66" LOAD "EQ" SF -0.429
COMBO "COMB66" COMBO "EQ" SF -1.43
```

```
$ STEEL DESIGN PREFERENCES
STEELREFERENCE CODE "AISC-LRF1989" THDSIGN "ENVELOPES" FRAMETYPE "MOMENT FRAME"
STEELREFERENCE CONSIDERREFLECTION "YES" RELATIVEDEFLECTION "BOTH"
STEELREFERENCE DLDEFLECTIONLIMIT 120 SLDEFLECTIONLIMIT 360 TLDEFLECTIONLIMIT 240
TLMDDEFLECTIONLIMIT 240
STEELREFERENCE DLDEFLECTIONLIMITABS 0.0254 SLDEFLECTIONLIMITABS 0.0254 LLDEFLECTIONLIMITABS 0.0254 TLDEFLECTIONLIMITABS
0.0254 TLMCDDEFLECTIONLIMITABS 0.0254
STEELREFERENCE CALCULATECAMBER "NO" PERCENTCAMBERWDL 1 CAMBERRELMAXLIMIT 180 CAMBERIGNORELIMIT 0.01905
STEELREFERENCE CAMBERABSMAXLIMIT 0.1016 CAMBERINTERVAL 0.00635 CAMBERROUNDOFF "YES"
STEELREFERENCE PATTERNLLF 0.75 MAXITERATION 1 SRLIMIT 0.95
```

```
$ CONCRETE DESIGN PREFERENCES
CONCRETEREFERENCE CODE "ACI 318-99" THDSIGN "ENVELOPES" CONSIDERMINORCENTRICITY "YES"
CONCRETEREFERENCE NUMINTERCURVES 24 NUMINTERPOINTS 11 PATTERNLLF 0.75 UFLIMIT 0.95
CONCRETEREFERENCE PHIBENDING 0.9 PHICOMPCT 0.7 PHICOMP(S) 0.75 PHISHEAR 0.85
```

```
$ COMPOSITE DESIGN PREFERENCES
COMPOSITEREFERENCE CODE "AISC-LRF1989"
COMPOSITEREFERENCE PHI-B 0.9 PHI-BCNE 0.9 PHI-BCNP 0.85 PHI-BCPE 0.9 PHI-BCPP 0.85 PHI-V 0.9
COMPOSITEREFERENCE SHRED "NO" ANIDOLERANGE 70 PATTERNLLF 0.75 SRLIMIT 1 SINGLESEGMENT "NO" STUDINCREASEFACTOR 1
MINNUMEXTRASTUUS 0
COMPOSITEREFERENCE DLLIMIT 0 SLLIMIT 120 LLLIMIT 360 TLLIMIT 240 CREEPPFACTOR 1
COMPOSITEREFERENCE ADLCAMBER 100 CAMBERIGNORE 0.01905 CAMBERABSMAX 0.1016 CAMBERRELMAX 180 CAMBERINTERVAL 0.00635
CAMBERROUNDOFF "YES"
COMPOSITEREFERENCE AVIBLL 25 CONSIDERFREQ "NO" MINFREQ 8 CONSIDERDAMP "NO" SINHERENTDAMP 4
COMPOSITEREFERENCE OPTIMIZEPRICE "NO" CONNECTORPRICE 0 CAMBERPRICE 0
```

```
$ WALL DESIGN PREFERENCES
WALLREFERENCE CODE "UBC97" THDSIGN "ENVELOPES"
WALLREFERENCE REBARUNITS "in/2" REBAR/LENGTHUNITS "in/2/ft"
WALLREFERENCE PHI-B 0.9 PHI-C 0.7 PHI-VNS 0.85 PHI-VS 0.6 PMAXFACTOR 0.8
WALLREFERENCE NUMCURVES 24 NUMPOINTS 11
WALLREFERENCE PPMAX 0.06 PCMAX 0.04 IPMAX 0.02 IPMIN 0.0025
WALLREFERENCE UFLIMIT 0.95
```

```
$ SPECIAL SEISMIC DATA
SPECIALSEISMICDATA USEFORDESIGN "YES"
```

```
$ DIMENSION LINES
DIMENSIONLINE X1 0 Y1 0 Z1 0 XJ 0 YJ 6 ZJ 0 XC -0.75 YC 3 ZC 0
DIMENSIONLINE X1 0 Y1 6 Z1 0 XJ 0 YJ 12 ZJ 0 XC -0.75 YC 9 ZC 0
DIMENSIONLINE X1 0 Y1 12 Z1 0 XJ 0 YJ 18 ZJ 0 XC -0.75 YC 15 ZC 0
DIMENSIONLINE X1 0 Y1 18 Z1 0 XJ 6 YJ 18 ZJ 0 XC 3 YC 18.75 ZC 0
DIMENSIONLINE X1 6 Y1 18 Z1 0 XJ 12 YJ 18 ZJ 0 XC 9 YC 18.75 ZC 0
DIMENSIONLINE X1 12 Y1 18 Z1 0 XJ 18 YJ 18 ZJ 0 XC 15 YC 18.75 ZC 0
```

```
$ LOG
STARTCOMMENTS
ENDCOMMENTS

END
$ END OF MODEL FILE
```

```

ITEM_1: 35.00 50.00 0.00
ITEM_2: #6 3 3 3
ITEM_3: #6 0 0 0
ITEM_4: #6 0 0 0
ITEM_5: #6 3 3 3
ITEM_6: 1#3@10 1#3@10 1#3@10
ITEM_7: #6 0

```

\*\*\*\*\*  
\* Column Fabrication Detailing (COL.DAT) by bpmtohm \*  
\* Version 1.0  
\*\*\*\*\*

TABLE: 1 L T  
ROW: 1 BSF BSF

COL: C1 1  
SEC: 1 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#306  
ITEM\_7: 1#306-12 TIED

COL: C2 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C3 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C4 1  
SEC: 1 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#306  
ITEM\_7: 1#306-12 TIED

COL: C5 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C6 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C7 1  
SEC: 1 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#306  
ITEM\_7: 1#306-12 TIED

COL: C8 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C9 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C10 1  
SEC: 1 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#306  
ITEM\_7: 1#306-12 TIED

COL: C11 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C12 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C13 1  
SEC: 1 RR  
ITEM\_1: 25 50

ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#306  
ITEM\_7: 1#306-12 TIED

COL: C14 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C15 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED