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" DISEÑOS TIPO PARA LOS MODULOS DE LOS CENTROS DE DESARROLLO INFANTIL
CDI 160 NIÑOS"

CONTIENE

MEMORIA DE ANALISIS, CÁLCULO Y DISEÑO Y ESTRUCTURAL INFRAESTRUCTURA EDUCATIVA

CENTRO DE DESARROLLO INFANTIL_160 NIÑOS

BLQ. 4 / 4A

ZONA ALTA / INTERMEDIA / BAJA

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JULIO DE 2014

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MEMORIAS DE ANALISIS, CALCULO Y DISEÑO ESTRUCTURAL, PARA LA INFRAESTRUCTURA EDUCATVIA – CENTRO DE DESARROLLO INFANTIL

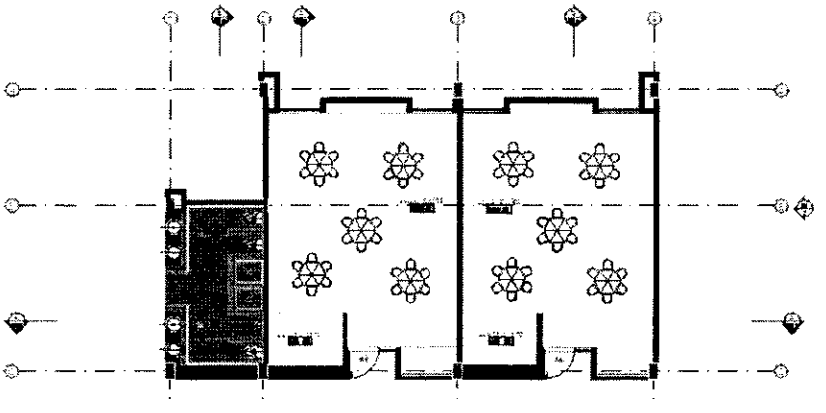
1. OBJETO

Realizar los Estudios y Diseños estructurales para el prototipo "CDI– CENTROS DE DESARROLLO INFANTIL – CDI 160 CUPOS"

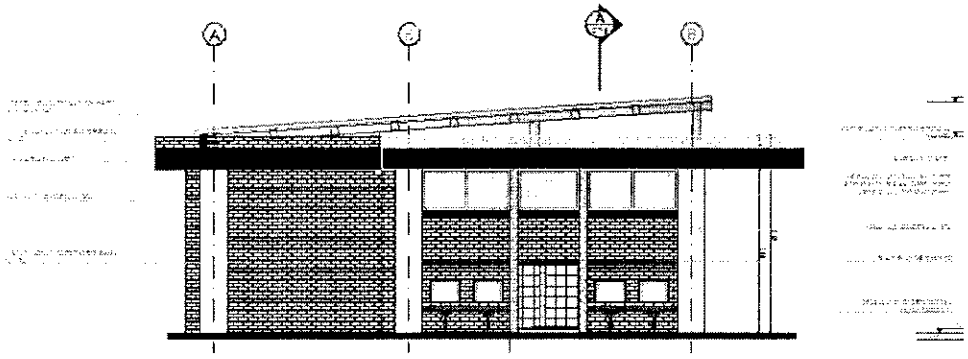
En cumplimiento de este objetivo, relacionado con el área de Diseño Estructural, se presenta a continuación la memoria de análisis y calculo estructural junto con los planos de diseño estructural para la Infraestructura del Blq. 4 / 4A.

2. DESCRIPCIÓN

El Blq. 4 / 4A que hace parte del CDI 160 Niños, consta de salones destinado a Aulas y batería sanitaria; la edificación arquitectónicamente esta configurada en altura en un solo nivel, y en planta se muestra implantada en un área aprox de 180 m2 la que resulta de una configuración conformada por cuatro (4) ejes en sentido longitudinal que van del 1 al 4 y en sentido transversal por tres (3) ejes, el A, B y C; a continuación se presentan detalles en planta y en altura de la arquitectura del modulo típico en consideración.



Configuracion en planta – Blq. 4 / 4A



Fachada lateral izquierda – Blq. 4 / 4A

3. LOCALIZACION DEL PROYECTO

La zona del proyecto en estudio corresponde al territorio nacional y esto por cuanto a que lo que se pretende es efectuar una tipificación de las instituciones educativas teniendo en cuenta que desde el punto de vista de la sismicidad donde se puedan emplazar los proyectos estos podrán localizarse en zonas de amenaza sísmica Alta, Intermedia y Baja, como las define la norma N.S.R-10; y a su vez y para cada una de estas zonas las características del suelo variarán a suelos Tipo A, B, C, D, y E de acuerdo con la definición que para el efecto indica la norma referida.

4. ALCANCE

El estudio comprende la realización del análisis estático ante la acción de las cargas muertas, vivas, de viento, y dinámicas a las que estará sometida la estructura y su cimentación, y a partir de esto la realización de los cálculos necesarios que den como resultado el diseño estructural de todos los elementos componentes de la edificación

Las instituciones educativas y sus edificaciones anexas deberán ser analizadas y producto de esto diseñadas para que puedan ser implantadas en diferentes regiones del territorio nacional; en este orden de ideas deberán tener un funcionamiento ante cargas de servicio y ultimas tal que su estabilidad global y la de sus elementos conformantes se cumpla para Condiciones de Zona Sísmica Alta, Intermedia y Baja, así como para suelos agrupados por tipo AB, CD y E, todo lo anterior de común acuerdo con las definiciones y procedimientos enmarcados en el Titulo A, B, C y E de la norma NSR-10.

4.1. CONSIDERACIONES GENERALES

El análisis y diseño se realizó de acuerdo con los lineamientos establecidos en el Reglamento Colombiano de Construcción Sismo Resistente – NSR-10

4.2. CONSIDERACIONES PARTICULARES

El análisis y diseño del Blq. 4 / 4A que se detalla a continuación se realizará para la zona de Amenaza Sismica Alta, Intermedia y Baja.

5. ESPECIFICACIONES DE MATERIALES

5.1. CONCRETOS _ ACERO

f'_c : Resistencia nominal del concreto a compresión
f_y : Resistencia nominal a la fluencia del acero de refuerzo
f_s : Resistencia del acero en el rango elástico
f_r : Modulo de rotura del concreto
M_{sr} : Momento de agrietamiento por flexión

Concreto Estructural

Columnas	f'_c = 28. MPa (280 Kg/cm^2). Relación agua cemento menor o igual a 0.45
Vigas aéreas	f'_c = 21. MPa (210 Kg/cm^2). Relación agua cemento menor o igual a 0.45
Vigas, Zapatas de cimentación	f'_c = 24.5. MPa (245 Kg/cm^2).
Concreto de limpieza	f'_c = 14.00 MPa (140 Kg/cm^2).

Acero de Refuerzo

Acero de Refuerzo	≥ 3/8", f_y = 420. MPa (4200 Kg/cm^2).
Malla Electrosoldada	f_y = 420. MPa (4200 Kg/cm^2).
Perfiles	Norma NSR-10, ASTM A1011 Grado 50
Angulos metálicos	A572 Gr.50

5.2. SUELOS

Se efectuaron análisis particulares para suelos Agrupados por tipo AB, CD y E de acuerdo con la descripción de la tabla A.2.4.-1 de la Norma NSR-10.

Particularmente el suelo se idealizó como un medio continuo conformado por resortes desacoplados con una magnitud Ks (kN/m2/m) = FS x 40 x $_{adm}$ (kN/m2) (ec.9-9 - foundation Analysis and Desing – Joseph Bowles -4th edition). En esta ecuación 40 esta calibrado para asentamientos de 1pulg (25.4mm) por lo que deberá modificarse cuando para un estudio particular el estudio de las condiciones de suelos considere un asentamiento diferente, asi mismo se asumió un valor de FS = 2.0.

Como se mencionó al inicio la tipificación de las edificaciones se realizó teniendo en cuenta que una de las variables para el análisis y diseño consistirá en tener en cuenta diferentes condiciones de suelos de fundación, esta variable se obtuvo agrupando los suelos en tipos AB, CD y E; a cada una de estas condiciones, y teniendo en cuenta la descripción que la norma NSR-10 en el numeral A.2.4.-1 da para los diferentes perfiles de suelos, se le asignó un valor para la capacidad admisible ($_{adm}$) por lo que a partir de ello se calculó un valor para el modulo de subrasante (Ks) aplicando la formulación antes indicada.

A continuación se presenta la tipificación de los suelos, asignando para cada una de ellas la capacidad admisible ($_{adm}$) y su correspondiente módulo de subrasante (Ks)

Tipo Suelo	$_{adm}$, (kN/m^2)	Ks (kN/m^2 / m)
AB	400	32000
CD	150	12000
E	100	8000

En el modelo matemático del sistema de cimentación los ejes estructurales se cargaron con las reacciones provenientes de la estructura (reacciones de un análisis estructural efectuado en ETABs 9.7.4), y la combinación de estas para cargas de servicio y ultimas sirvieron para verificar que las cargas trasmitidas al suelo no superaran la capacidad admisible del mismo, y para el diseño estructural de los diferentes elementos de la cimentación respectivamente.

6. EVALUACIÓN DE CARGAS

Las cargas evaluadas son las cargas debidas al peso propio de la estructura, las cargas permanentes impuestas por paneles de cubierta y acabados, la carga viva transitoria sobre la cubierta, Cargas por Granizo cuando aplique según la zona del país, cargas de viento y los efectos sísmicos dependientes de la zona de amenaza sísmica para cada análisis en particular.

6.1. CARGAS APLICADAS

Se adoptó por criterio para el análisis y diseño estructural el Reglamento Colombiano de Construcción Sismo Resistente NSR-10, por tanto las cargas tenidas en cuentas para el estudio son todas las aplicables del capítulo del B.1 al B.4 y particularmente las definidas en el Capitulo B.6 de la referida norma.

6.1.1. Peso Propio (Pp)

Corresponde a la carga por peso propio de los elementos que constituyen la estructura, el programa de análisis lo tiene en cuenta internamente al definir para Pp la condición Self Weight =1.0

6.1.2. Carga permanente (Ld)

La carga sobre impuesta (D) para cada eje o area de la estructura se evalúa a continuación

Analisis de Cargas

Estructura de Concreto

Nivel: Cubierta

Carga Muerta Distribuida en Cubierta:

Peso Propio **(PP)**: ETAB la tiene en cuenta para cada elemento, se ha definido en el analisis como PP. Esta condicion de carga tiene en cuenta el peso de vigas, viguetas y columnas

Carga Muerta, **LD - analisis carga cubiertas / cielo raso**:

Cub. Liviana: Teja tipo sandwich, aluzinc cal.26, aislante en poliuretano e=30mm. 4.8kg/m2 + Correas (9.56kg/m2)			0.17 kN/m2
Cielo Raso: Tablero de yeso	e(mm) =	10	0.06 kN/m2
Sistema Susp. Madera			0.15 kN/m2
Instalaciones electricas, luminarias			0.15 kN/m2
Marco metalico apoyo correas, TUB. 100x150x6		Colmena	0.05 kN/m2
Total LD =			**0.60** kN/m2

Cargas sobre ejes

Ejes: ***4 entre A y C***

Carga en cubierta / Cielo Raso	W=	0.60 kN/m2			
Apoyo 1 y 4	B =	3.00 m	D =	2.60	kN
	L =	1.45 m			
Apoyo 2 y 3	B =	3.00 m	D =	5.20	kN
	L =	2.90 m			
Ladrillo Tolete Macizo Prensado, 2.9 kg/und y 60 und/m2. Pega = 0.023m3/m2	W=	2.29 kN/m2	D =	4.01	kN/m
	h=	1.75 m			

Ejes: ***3 entre A y C***

Carga en cubierta / Cielo Raso	W=	0.60 kN/m2			
Apoyo 1 y 4	B =	6.00 m	D =	5.20	kN
	L =	1.45 m			
Apoyo 2 y 3	B =	6.00 m	D =	10.41	kN
	L =	2.90 m			
Ladrillo Tolete Macizo Prensado, 2.9 kg/und y 60 und/m2. Pega = 0.023m3/m2	W=	2.29 kN/m2	D =	4.01	kN/m
	h=	1.75 m			

Ejes: ***2 entre A y B***

Carga en cubierta / Cielo Raso	W=	0.60 kN/m2			
Apoyo 1 y 4	B =	3.00 m	D =	2.60	kN
	L =	1.45 m			
Apoyo 2 y 3	B =	3.00 m	D =	5.20	kN
	L =	2.90 m			
Ladrillo Tolete Macizo Prensado, 2.9 kg/und y 60 und/m2. Pega = 0.023m3/m2	W=	2.29 kN/m2	D =	4.01	kN/m
	h=	1.75 m			

Ejes: ***1 entre A y B***

Carga en cubierta / Cielo Raso	W=	0.60 kN/m2			
Apoyo 1 y 4	B =	m	D =	0.00	kN
	L =	m			
Apoyo 2 y 3	B =	m	D =	0.00	kN Son 2
	L =	m			
Ladrillo Tolete Macizo Prensado, 2.9 kg/und y 60 und/m2. Pega = 0.023m3/m2	W=	2.29 kN/m2	D =	4.01	kN/m
	h=	1.75 m			

Ejes: ***A / C entre 1 y 4***

Carga en cubierta / Cielo Raso	W=	0.60 kN/m2	D =	1.20	kN/m
	L =	2.00 m			
Ladrillo Tolete Macizo Prensado, 2.9 kg/und y 60 und/m2. Pega = 0.023m3/m2	W=	2.29 kN/m2	D =	4.01	kN/m
	h=	1.75 m			

300

6.1.3. Carga Viva de Cubierta (Lr)

La carga Viva (Lr) sobre la cubierta, para cada eje o area de la estructura se evalúa a continuación

Tabla B.4.2.1-2
Cargas vivas mínimas en cubiertas

Tipo de cubierta	Carga uniforme (kN/m²) por m² de área en planta	Carga uniforme (kgf/m²) por m² de área en planta
Cubiertas Azoteas y Terrazas	la misma de resto de la edificacion (Nota-1)	la misma del resto de la edificación (Nota-1)
Cubiertas usadas para jardines de cubierta o para reuniones	5.00	500
Cubiertas inclinadas con más de 15° de pendiente en estructura metálica o de madera con imposibilidad física de verse sometidas a cargas superiores a la aquí estipulada	0.35	35
Cubiertas inclinadas con pendiente de 15° o menos en estructura metálica o de madera con imposibilidad física de verse sometidas a cargas superiores a la aquí estipulada	0.50	50

Tabla tomada de N.S.R-10, Capitulo B.4, num B.4.2

Carga Viva (Lr)

p= 6.4% % = 3.67 ° => Lr en Cubiertas = **0.50** kN/m2

Ejes: *4 entre A y C*

Apoyo 1/4, Carga Viva / Granizo en	B =	3.00 m	Lr =	2.18 kN
Apoyo 2/3, Carga Viva / Granizo en	B =	3.00 m	Lr =	4.35 kN

Ejes: *3 entre A y C*

Apoyo 1/4, Carga Viva / Granizo en	B =	6.00 m	Lr =	4.35 kN
Apoyo 2/3, Carga Viva / Granizo en	B =	6.00 m	Lr =	8.70 kN

Ejes: *2 entre A y B*

Apoyo 1/4, Carga Viva / Granizo en	B =	3.00 m	Lr =	2.18 kN
Apoyo 2/3, Carga Viva / Granizo en	B =	3.00 m	Lr =	4.35 kN

Ejes: *1 entre A y B*

Apoyo 1/4, Carga Viva / Granizo en	B =	0.00 m	Lr =	0.00 kN
Apoyo 2/3, Carga Viva / Granizo en	B =	0.00 m	Lr =	0.00 kN

Ejes: *A / C entre 1 y 4*

Carga Viva / Granizo en Cubierta	L =	2.00 m	Lr =	1.00 kN/m

6.1.4. Carga por Granizo (G)

El mapa de sismicidad del territorio nacional, figura A.2.3-1 de la NSR-10, muestra que las regiones sísmicas Altas e Intermedias se ubican en su gran mayoría en zonas de la cordillera occidental, central y en gran medida en la oriental a alturas sobre el nivel del mar mayores a los 1500m, es decir en lugares con alta posibilidad de ocurrencia de granizadas intensas; y lo contrario ocurre en áreas de sismicidad baja, por tal motivo en el presente estudio se ha tenido en cuenta que la carga de granizo
(G) solo aplica para zonas de amenaza sísmica Alta e Intermedia y no aplica para zonas de Amenaza Baja.

B.4.8.3 — CARGA DE GRANIZO

B.4.8.3.1 — Las cargas de granizo, G, deben tenerse en cuenta en las regiones del país con más de 3.000 metros de altura sobre el nivel del mar o en lugares de menor altura donde la autoridad municipal o distrital así lo exija.

B.4.8.3.2 — En los municipios y distritos donde la carga de granizo deba tenerse en cuenta, su valor es de 1.0 kN/m^2 (100 kgf/m^2). Para cubiertas con una inclinación mayor a 15° este valor puede reducirse a 0.5 kN/m^2 (50 kgf/m^2).

En B.4.8.3.2 La pendiente de 15° debe cambiarse por 15%.

Notas:

Numeral tomado de de Capitulo B.4 de N.S.R-10.
Según decreto 092 de 17 de Enero de 2011, "En B.4.8.3.2 La pendiente de 15° debe cambiarse por 15%"

Carga Granizo (G)

p= 6.4% % = 3.67 O => G en Cubiertas = **1.00** kN/m2

Ejes: *4 entre A y C*				
Apoyo 1/4, Carga Viva / Granizo en	L =	1.45 m	G =	4.35kN
Apoyo 2/3, Carga Viva / Granizo en	L =	2.90	G =	8.70kN
Ejes: *3 entre A y C*				
Apoyo 1/4, Carga Viva / Granizo en	L =	1.45 m	G =	8.70kN
Apoyo 2/3, Carga Viva / Granizo en	L =	2.90	G =	17.40kN
Ejes: *2 entre A y B*				
Apoyo 1/4, Carga Viva / Granizo en	L =	1.45 m	G =	4.35kN
Apoyo 2/3, Carga Viva / Granizo en	L =	2.90	G =	8.70kN
Ejes: *1 entre A y B*				
Apoyo 1/4, Carga Viva / Granizo en	L =	0.00 m	G =	0.00kN
Apoyo 2/3, Carga Viva / Granizo en	L =	0.00	G =	0.00kN
Ejes: *A / C entre 1 y 4*				
Carga Viva / Granizo en Cubierta	L =	2.00 m	G =	2.00kN/m

6.1.5. Carga sísmica (Fx / Ex)

Para la tipificación de las Instituciones educativas y sus edificaciones anexas se exige que esta se realice con fundamento en las tres regiones en las que a nivel global la norma NSR-10 da una caracterización sísmica del país, estas regiones o zonas corresponden a Baja, Intermedia y Alta.

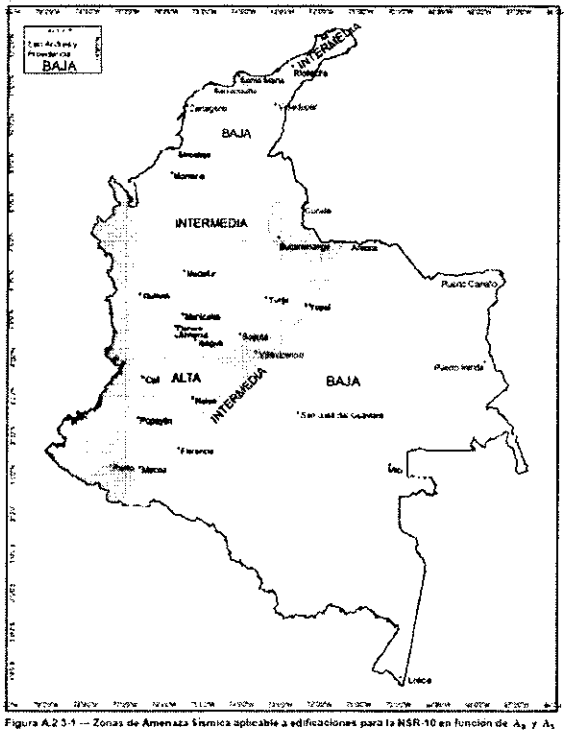


Figura A.2.3-1 — Zonas de Amenaza Sísmica aplicable a edificaciones para la NSR-10 en función de A_a y A_v

Un parámetro que puede dar una "medida" cualitativa del grado de sismicidad lo da el coeficiente que representa la aceleración horizontal pico efectiva, para diseño, Aa; así mismo ello también se puede lograr con su correspondiente en la velocidad representado por el coeficiente Av.

Los valores de Aa / Av varían desde la región 1 a la 10 entre 0.05 a 0.50 respectivamente de tal manera que a mayor región o coeficiente mayor es el grado de sismicidad de la zona en estudio.

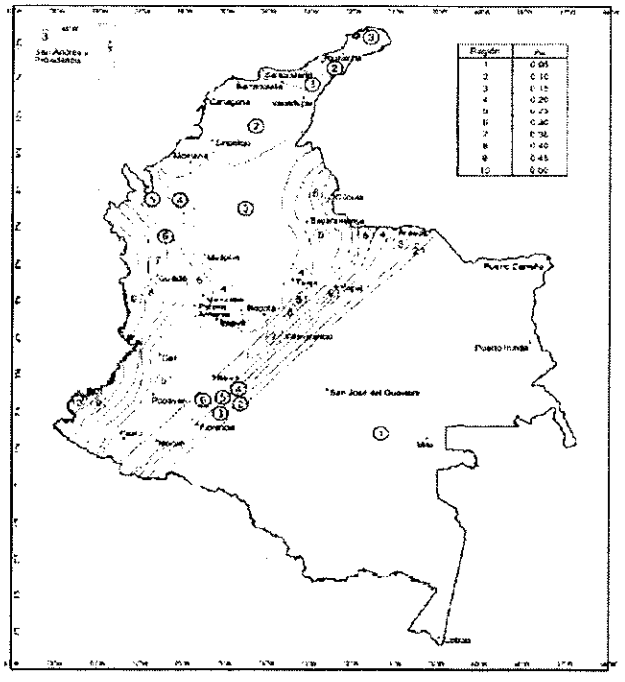


Figura A.2.3-2 — Mapa de valores de A_a

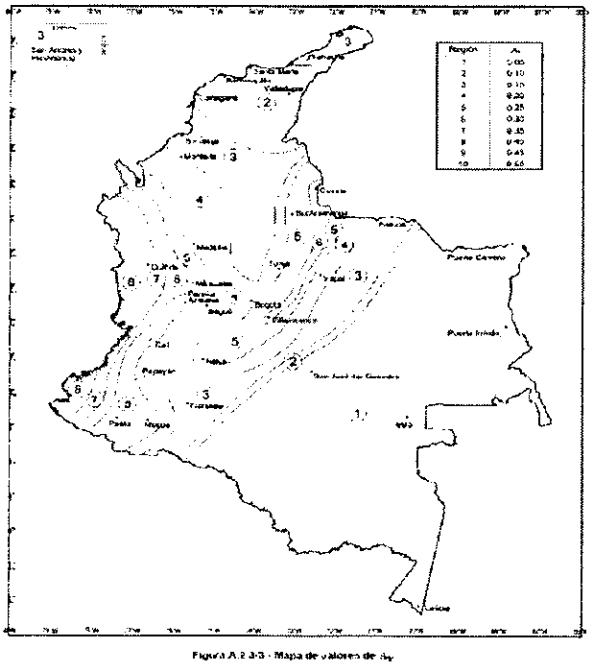


Figura A.2.3-3 - Mapa de valores de A_v

Efectuar la tipificación de las estructuras basándose para ello en cada una de las regiones y su correspondiente coeficiente, de forma sucesiva, se convierte en una labor dispendiosa, pero más allá de ello en un proceso que a nivel de diseño estructural no mostraría diferencias significativas en la geometría de las secciones de elementos estructurales y su correspondiente refuerzo.

Por otra parte y al realizar un análisis del mapa de regiones, figura A.2.3-2, y del mapa de Zona de amenaza sísmica, figura A.2.3-1, encontramos que para Zonas de Amenaza sísmica Intermedia la región que predomina es la 3 y la 4, para Zona de amenaza sísmica Alta la que va de la región 5 a la 10, y para Zona de amenaza sísmica Baja la región 1 y 2; con fundamento en lo anterior el análisis lo realizaremos para la Zona de Amenaza Sísmica alta en región 8 con coeficientes de 0.4 y 0.4 para Aa y Av respectivamente, Zona de Amenaza Sísmica Intermedia en región 4 con coeficientes de 0.15 y 0.2 para Aa y Av respectivamente, y Zona de Amenaza Sísmica Baja en región 2 con coeficientes de 0.1 y 0.1 para Aa y Av respectivamente.

Zona	Ad	Aa	Av
Alta	0.10	0.40	0.40
Intermedia	0.06	0.15	0.20
Baja	0.03	0.10	0.10

Coeficientes Aa / Av /Ad consolidados para evaluación de espectro elástico de aceleraciones

La norma NSR-10 clasifica los suelos de acuerdo con una escala que va del tipo de perfil del A al F, numeral A.2.4.4 – tabla A.2.4-1 de la norma NSR-10, de tal manera que de acuerdo con esto y con los coeficientes Aa y Av se obtengan los valores del coeficiente de amplificación que afecta la aceleración en la zona de periodos cortos, debida a los efectos de sitio, Fa, y del coeficiente de amplificación que afecta la aceleración en la zona de periodos Intermedios, debida a los efectos de sitio, Fv.

Tabla A.2.4-1
Clasificación de los perfiles de suelo

Tipo de perfil	Descripción	Definición
A	Perfil de roca competente	$\bar{v}_s \geq 1500$ m/s
B	Perfil de roca de rigidez media	760 m/s $< \bar{v}_s \leq$ 1500 m/s
C	Perfil de suelo muy denso o roca blanda que cumple con el criterio de velocidad de la onda de cortante, o	360 m/s $< \bar{v}_s \leq$ 760 m/s
	Perfil de suelo muy denso o roca blanda que cumple con los criterios de falla por cortante	$\bar{N} \geq 50$ golpes/pie $\bar{s}_u \geq$ 100 kPa (1 kg/cm²)
D	Perfil de suelo rígido que cumple con el criterio de velocidad de la onda de cortante, o	180 m/s $\leq \bar{v}_s \leq$ 360 m/s
	perfil de suelo rígido que cumple con cualquiera de los dos criterios	$50 > \bar{N} \geq 15$ golpes/pie 100 kPa (1 kg/cm²) $> \bar{s}_u \geq$ 50 kPa (0.5 kg/cm²)
E	Perfil que cumple el criterio de velocidad de la onda de cortante, o	$\bar{v}_s <$ 180 m/s
	perfil que contiene un espesor total H mayor de 3 m de arcillas blandas	IP > 20 $w \geq 40\%$ $\bar{s}_u <$ 50 kPa (0.5 kg/cm²)
F	Los perfiles de suelo tipo F requieren una evaluación específica del sitio por un ingeniero geotecnista se deberán seguir los procedimientos de A.2.4.5. Se contemplan las siguientes subclases: F_1 — Suelos susceptibles a la falla o colapso causado por la excitación sísmica, tales como suelos licuables, arcillas sensibles, suelos dispersivos o débilmente cementados, etc. F_2 — Turbas y arcillas orgánicas y muy orgánicas ($H > 3$ m para turbas o arcillas orgánicas y muy orgánicas. F_3 — Arcillas de muy alta plasticidad ($H > 7.5$ m con índice de Plasticidad IP > 75). F_4 — Perfiles de gran espesor de arcillas de rigidez mediana a blanda ($H > 36$ m).	

Con los coeficientes Aa / Av y el tipo del perfil de suelo se obtienen los valores de Fa y Fv en las tablas A.2.4.-3 y A.2.4-4 del título A de la norma NSR-10, ahora bien de acuerdo con la descripción del tipo de perfil de suelos dada en la tabla A.2.4-1 de la NSR-10 es posible clasificar los perfiles por grupos así: suelos constituidos por roca competente y rígida, grupo AB, suelos muy densos a rígidos, grupo CD, suelos conformados por arcillas blandas, grupo E; por tal motivo y debido a lo anterior se hace necesario construir gráficos para obtener valores de Fa / Fv en función de los coeficientes Aa / Av y los perfiles de suelos entre A y B para el grupo AB, entre C y D para el grupo CD, y entre E y F para el grupo EF

Tabla A.2.4-3
Valores del coeficiente F_a, para la zona de períodos cortos del espectro

Tipo de Perfil	Intensidad de los movimientos sísmicos				
	$A_a \leq 0.1$	$A_a = 0.2$	$A_a = 0.3$	$A_a = 0.4$	$A_a \geq 0.5$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	véase nota	véase nota	véase nota	véase nota	véase nota

Nota: Para el perfil tipo F debe realizarse una investigación geotécnica particular para el lugar específico y debe llevarse a cabo un análisis de amplificación de onda de acuerdo con A.2.10.

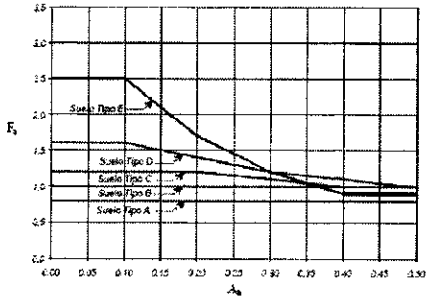


Figura A.2.4-1 - Coeficiente de amplificación F_a del suelo para la zona de períodos cortos del espectro

Tabla A.2.4-4
Valores del coeficiente F_v, para la zona de períodos intermedios del espectro

Tipo de Perfil	Intensidad de los movimientos sísmicos				
	$A_V \leq 0.1$	$A_V = 0.2$	$A_V = 0.3$	$A_V = 0.4$	$A_V \geq 0.5$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	véase nota	véase nota	véase nota	véase nota	véase nota

Nota: Para el perfil tipo F debe realizarse una investigación geotécnica particular para el lugar específico y debe llevarse a cabo un análisis de amplificación de onda de acuerdo con A.2.10.

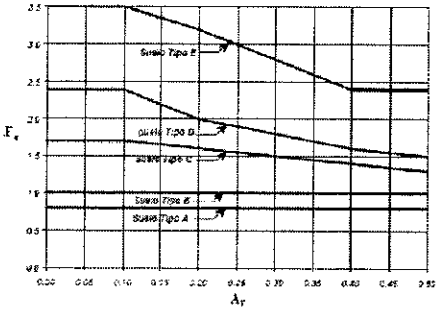
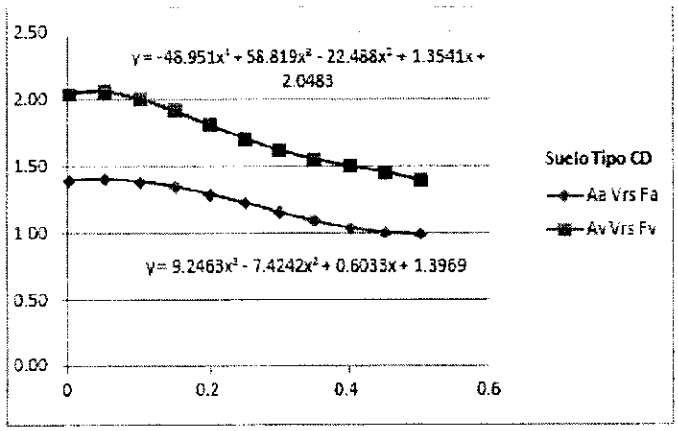
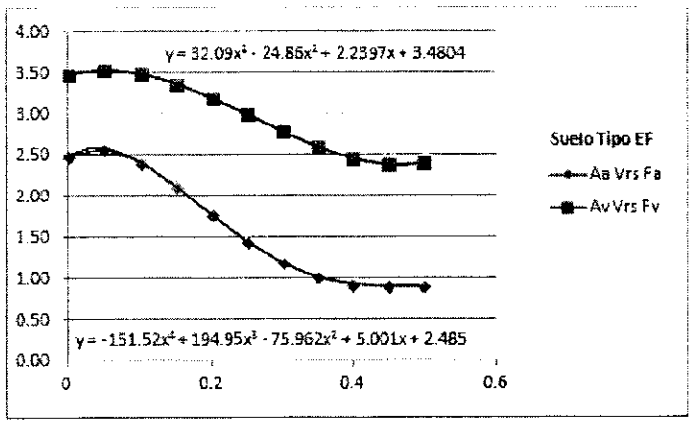


Figura A.2.4-2 — Coeficiente de amplificación F_v del suelo para la zona de períodos intermedios del espectro

Aa/Av	C-D		EF	
	Fa	Fv	Fa	Fv
0	1.40	2.05	2.49	3.48
0.05	1.41	2.07	2.57	3.53
0.1	1.39	2.01	2.41	3.49
0.15	1.35	1.92	2.11	3.07
0.2	1.29	1.81	1.76	3.19
0.25	1.23	1.71	1.44	2.99
0.3	1.16	1.62	1.19	2.78
0.35	1.10	1.55	1.01	2.59
0.4	1.04	1.50	0.93	2.45
0.45	1.01	1.46	0.90	2.38
0.5	1.00	1.40	0.89	2.40

Tabla de valores de Fa / Fv en función de coeficientes Aa / Av y perfil de suelos por Grupo



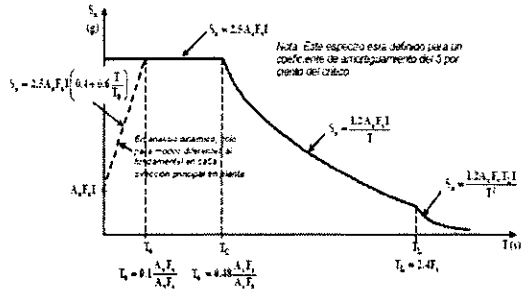


Gráficos con valores de Fa / Fv en función de coeficientes Aa / Av y perfil de suelos por Grupo, preparados a partir de tabla de valores para grupos de suelos

La edificación en estudio se analizó globalmente para dos (2) consideraciones, una que corresponde a un estado de servicio en el que la operatividad de la estructura se verificará manteniendo las deformaciones por carga sísmica dentro de las derivas máximas permitidas por la Norma NSR-10, y la otra asegurando que la resistencia de los elementos estructurales ante cargas ultimas sea mayor a las que por las solicitaciones de las diferentes cargas se producen en la estructura; el 1er caso se cumple verificando que la edificación se mantenga dentro del rango elástico de respuesta al verse sometida ante cargas sísmicas correspondientes al inicio del daño, o umbral de daño, y para el caso de diseño opteniendo la carga sísmica por medio del espectro elástico de aceleraciones, en ambos casos la carga sísmica sobre la estructura se obtuvo por medio de la forma del espectro elástico de aceleraciones, Sd o Sa, aplicada sobre la masa propia de la edificación.

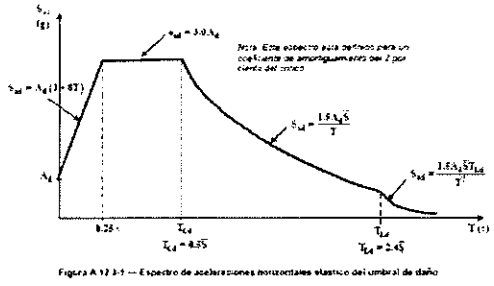
Se debe tener en cuenta que los movimientos sísmicos del umbral de daño aplican a edificaciones clasificadas como indispensables de los grupos de uso III y IV.

El espectro elástico de aceleraciones, Sa, expresada como la fracción de la gravedad, para un coeficiente de cinco por ciento (5%) del amortiguamiento critico, que se utilizará en el análisis y diseño se definió de acuerdo con el numeral A.2.6 de NSR-10 y corresponde a:



Forma del espectro elástico de aceleraciones como fracción de la gravedad para diseño

El espectro de aceleraciones horizontales para el umbral de daño en el campo elástico, para un amortiguamiento critico del 2%, Sd, expresado como la fracción de la gravedad que se utilizará para verificación de derivas de acuerdo con el numeral A.12.3 de NSR-10 corresponde a:



Forma del espectro elástico de aceleraciones en el umbral de daño como una fracción de la gravedad, para verificación de derivas

La deriva máxima permitida, para cualquier piso no puede exceder los limites definidos en la tabla A.6.4.-1 de NSR-10

Derivas máximas como porcentaje de h_{pi}

Estructuras de:	Deriva máxima
concreto reforzado, metálicas, de madera, y de mampostería que cumplen los requisitos de A.6.4.2.2	$1.0\% \left(\Delta^i_{max} \leq 0.010\ h_{pi}\right)$
de mampostería que cumplen los requisitos de A.6.4.2.3	$0.5\% \left(\Delta^i_{max} \leq 0.005\ h_{pi}\right)$

Deriva máxima permitida – Numeral A.6.4 de NSR-10

La deriva máxima permitida, para el umbral de daño, en cualquier punto de la edificación no puede exceder los limites definidos en la tabla A.12.5.-1 de NSR-10

Tabla A.12.5-1
Derivas máximas para el umbral de daño como porcentaje de h_{pi}

Estructuras de:	Deriva máxima
concreto reforzado, metálicas, de madera, y de mampostería que cumplen los requisitos de A.12.5.3.1	$0.40\% \left(\Delta^i_{max} \leq 0.0040\ h_{pi}\right)$
de mampostería que cumplen los requisitos de A.12.5.3.2	$0.20\% \left(\Delta^i_{max} \leq 0.0020\ h_{pi}\right)$

A continuación se presenta el cálculo del espectro de aceleraciones horizontales para cada grupo de suelos; el análisis dinámico empleado en el presente estudio corresponde al Método del Análisis Dinámico Elástico Espectral, por tal motivo en los cálculos que se presentan a continuación se efectúa también el ajuste de los resultados de acuerdo con el numeral A.5.4.5 de la norma NSR-10.

Los efectos dinámicos sobre la estructura producidos por el sismo se calcularon a través del método Dinámico Elástico Espectral descrito en el numeral A.5.4 del título A de la norma NSR-10.

Las fuerzas sísmicas se identifican en el modelo matemático con Fx/y y Ex/y, la primera corresponde a la carga para la determinación de desplazamientos laterales (deriva en X/Y) y la segunda a la fuerza sísmica para diseño

Fx/y = Fuerza sísmica para determinación de derivas en sentido X / Y

Ex/y = Fuerza sísmica para Diseño de elementos = Fx/y / $_p$ $_a$ $_r$ Ro

$_{p,\ a}$ corresponden a los factores de reducción por irregularidades en planta y altura del coeficiente de disipación de energía básico Ro, para los casos en estudio ambos factores tienen un valor de 1.0

$_r$ corresponde al factor de reducción por ausencia de redundancia, para los casos en estudio los valores son los siguientes:

Estructuras en Zona de Amenaza Sísmica Alta => DES => $_r$ = 0.75 - Num. A.3.3.8.2 de NSR-10

Estructuras en Zona de Amenaza Sísmica Inter. => DMO => $_r$ = 0.75 - Num. A.3.3.8.2 de NSR-10

Estructuras en Zona de Amenaza Sísmica Baja => DMI => $_r$ = 1.0 - Num. A.3.3.8.1 de NSR-10

El coeficiente de disipación de energía básico Ro asignado para los casos en estudio corresponde a:

Estructuras en Zona de Amenaza Sísmica Alta => DES => Ro = 7.0 – Tabla A.3.3. de NSR-10

Estructuras en Zona de Amenaza Sísmica Inter. => DMO => Ro = 5.0 – Tabla A.3.3. de NSR-10

Estructuras en Zona de Amenaza Sísmica Baja => DMI => Ro = 2.5 – Tabla A.3.3. de NSR-10

6.1.5.1. Zona Alta

Espectro de aceleraciones horizontales del Umbral de daño, Zona de Amenaza Sísmica Alta– Perfil de suelo AB/CD/E

ANALISIS SISMICO

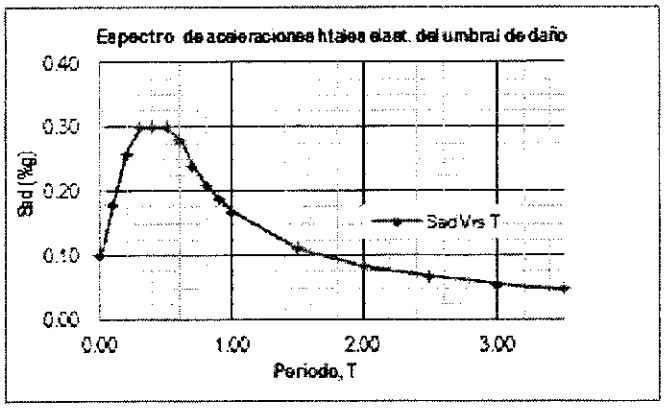
El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Metodo del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

PARAMETROS PARA EL ANALISIS		Derivas
Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.00	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Alta
Perfil de Suelo	A-B
Ad (g) = Acel. ma pico efectiva para umbral de daño =	0.10
Aa (g) = Acel. ma pico efectiva, para diseño =	0.40
Av (g) = Acel. de la vel. pico efec. para diseño =	0.40
Fa = Coef. de ampl. afecta la acel. en zona de T_{corto} =	0.90
Fv = Coef. de ampl. afecta la vel. en zona de T_{roz} =	0.90
T_{ad} (s) = 0.25 sg	0.25
T_{ac} (s) = 0.5 (1.25Fv)=	0.56
T_{ad} (s) = 2.4 (1.25Fv)=	2.70
I = Coef. de importancia	1.00

T (seg)	A-B S_{ad} %g
0.00	0.10
0.10	0.18
0.20	0.26
0.30	0.30
0.40	0.30
0.50	0.30
0.60	0.28
0.70	0.24
0.80	0.21
0.90	0.19
1.00	0.17
1.50	0.11
2.00	0.08
2.50	0.07
3.00	0.06
3.50	0.05
4.00	0.04
4.50	0.04
5.00	0.03



COEFICIENTE DE CAPACIDAD DE DISIPACION DE ENERGIA, R

(Sistema Estructural de Pórtico en Concreto)

$R = \Phi_a \Phi_p \Phi_r R_o$

Normas Aplicables. NSR-10, Numerales A.3.3.3, Tabla A.3-3, Tabla A.3-5 a la 7

Capacidad de Disipacion de Energia =	DES		
Zona Amenaza Sismica =	Alta	R_o = 7.00	Portico Resistente a Mtos
Uso Permitido =	Si		
Altura Maxima =	Sin Limite		

IRREGULARIDADES DE LA ESTRUCTURA

Irregularidad Torsional en Planta **NSR-10, Capitulo A.3 figura A.3-1**

No hay Irregularidad Torsional ρx = 1.00

No hay Irregularidad Torsional ρy = 1.00

CBT	***Sismo en X***	Δ_1 =	8.2	mm	Δ_2 =	9.2	mm	ρx = 1.00
	Sismo en Y	Δ_1 =	6.3	mm	Δ_2 =	4.8	mm	ρy = 1.00

Tipo 2P (Si o No): N ρ = 1.00 ***Tipo 3P*** (Si o No): N ρ = 1.00

Tipo 4P (Si o No): N ρ = 1.00 ***Tipo 5P*** (Si o No): N ρ = 1.00

Irregularidad Torsional en Altura NSR-10, Capitulo A.3 figura A.3-2

Tipo 1aA/1bA (Si o No): N a = 1.00 ***Tipo 2A*** (Si o No): N a = 1.00

Tipo 3A (Si o No): N a = 1.00 ***Tipo 4A*** (Si o No): N a = 1.00

Tipo 5aA/5bA (Si o No): N a = 1.00

Irregularidad en Planta, ρx =	1.00	Rx = 7.00	
Irregularidad en Planta, ρy =	1.00		Portico Resistente a Mtos
Irregularidad en altura, a =	1.00	Ry = 5.25	
Ausencia de redundancia, ρx =	1.00		
Ausencia de redundancia, ρy =	0.75		

Tx = 0.35 sg

Ty = 0.25 sg

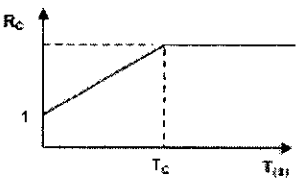
CORRECCION DE R PARA PERIODOS DE VIBRACION QUE TIENDAN A CERO NSR-10, Numeral A.2.9.4

$R_{Cx} = (R-1)\ T/To + 1 \leq R$ = 13.63

Rx = 5.25

$R_{Cy} = (R-1)\ T/To + 1 \leq R$ = 24.13

Ry = 7.00



M = 110.71 kN sg^2/m
Tx = 0.346 sg
Ty = 0.247 sg

Numero de Modos de Vibración (NM)
NSR-10, Capitulo A.5 Numeral A.5.4.2
p = 30

Combinación de los Modos
NSR-10, Capitulo A.5 Numeral A.5.4.4
Combinación Modal: CQC
Combinación Direccional: SRSS

Análisis

Descripción: La estructura se modeló en ETABS, ***Versión 9.7.4.*** Para efectos de conocer el periodo de la estructura ver resultados de análisis modal

Participación de masa en X, %Mx =	99.9%	p es el adecuado => Ok	NSR-10, Capitulo A.5
Participación de masa en Y, %My =	99.7%	p es el adecuado => Ok	Numeral A.5.4.2

(Ver resultados de Análisis Modal)

Ajuste de los Resultados NSR-10, Capitulo A.5 Numeral A.5.4.5

Clasificación de la estructura (Regular o Irregular) = R

= 0.90 Cu= 1.75 - 1.2AvFv = 1.318

C_t = 0.047 $_{CuTa\ (sg)=\ CuC_thn\ =}$ 0.24 Vs = Sd g M = 312 kN NSR-10, Capitulo A.4, Numerales A.4.2.2

h_n (m) = 4.40 Sa = 0.29

Cortante Dinamico (sin corregir)

Cortante Dinámico Total en la Base, Vi_{tx} = 305 kN ***Vtx > 0.80Vs => Ok No Ajustar Resultados*** SF_x = 0.82

Cortante Dinámico Total en la Base, Vi_{ty} = 259 kN ***Vty > 0.80Vs => Ok No justar Resultados*** SF_y = 0.97

Cortante Dinamico (Corregidos)

Cortante Dinámico Total en la Base, Vf_{tx} = 305 kN ***Vf_{tx} = SFx Vf_{tx}*** *en modelo: $F_{x/y}$* SF_x = 0.82

Cortante Dinámico Total en la Base, Vf_{ty} = 259 kN ***Vf_{ty} = SFy Vf_{ty}*** *= $SF_{x/y}$ Sa M* SF_y = 0.97

Espectro de aceleraciones para diseño, para Zona de amenaza sísmica Alta, y para cada grupo de perfil de suelos.

Espectro de aceleraciones, Zona de Amenaza Sísmica Alta – Perfil de suelo AB

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

PARAMETROS PARA EL ANALIS - Diseño

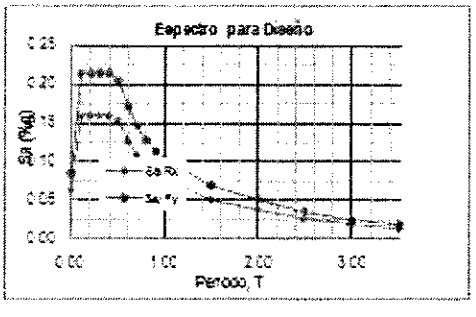
Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de importancia (I) =	1.25	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Alta
Perfil de Suelo	AB
Aa (g) = Acel. htal pico efectiva, para diseño :	0.40
Av (g) = Acel. de la vel. pico efec. para diseñc	0.40
Fa = Coef. de ampl. afecta la acel. en zona de'	0.90
Fv = Coef. de ampl. afecta la vel. en zona de T	0.90
T_o (s) = Periodo Inicial	0.10
T_c (s) = Periodo Corto	0.48
T_L (s) = Periodo largo	2.48
I = Coef. de Importantancia	1.25

Página 1

T (seg)	AB S_a %g
0.00	0.45
0.10	1.13
0.20	1.13
0.30	1.13
0.40	1.13
0.50	1.08
0.60	0.90
0.70	0.77
0.80	0.68
0.90	0.60
1.00	0.54
1.50	0.38
2.00	0.27
2.50	0.19
3.00	0.13
3.50	0.10
4.00	0.07
4.50	0.06
5.00	0.05



Espectro de aceleraciones, Zona de Amenaza Sísmica Alta – Perfil de suelo CD

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

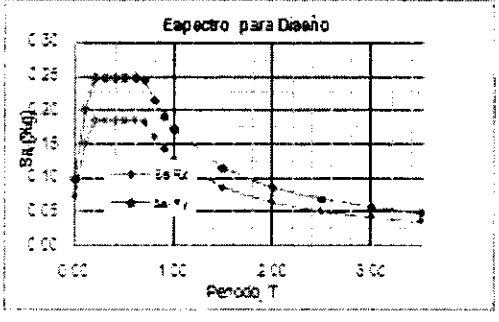
PARAMETROS PARA EL ANALIS - Diseño

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Alta
Perfil de Suelo	CD
Aa (g) = Acel. hrizl pico efectiva, para diseño :	0.40
Av (g) = Acel. de la vel. pico efec. para diseño	0.40
Fa = Coef. de ampl. afecta la acel. en zona de	1.04
Fv = Coef. de ampl. afecta la vel. en zona de T	1.50
T_o (s) = Periodo Inicial	0.14
T_c (s) = Periodo Corto	0.69
T_L (s) = Periodo largo	3.61
I = Coef. de Importantancia	1.25

T (seg)	CD S_a %g
0.00	0.52
0.10	1.06
0.20	1.30
0.30	1.30
0.40	1.30
0.50	1.30
0.60	1.30
0.70	1.29
0.80	1.13
0.90	1.00
1.00	0.90
1.50	0.60
2.00	0.45
2.50	0.36
3.00	0.30
3.50	0.26
4.00	0.20
4.50	0.16
5.00	0.13



Espectro de aceleraciones, Zona de Amenaza Sísmica Alta – Perfil de suelo E

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

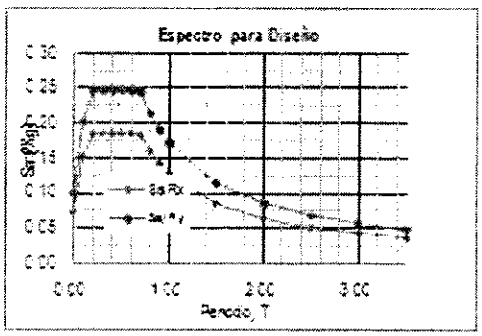
PARAMETROS PARA EL ANAL - Diseño

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.4.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Alta
Perfil de Suelo	E
Aa (g) = Acel. hrizl pico efectiva, para dise	0.40
Av (g) = Acel. de la vel. pico efec. para dis	0.40
Fa = Coef. de ampl. afecta la acel. en zona	0.93
Fv = Coef. de ampl. afecta la vel. en zona c	2.45
T_o (s) = Periodo Inicial	0.26
T_c (s) = Periodo Corto	1.27
T_L (s) = Periodo largo	5.89
I = Coef. de importantancia	1.25

T (seg)	E S_a %g
0.00	0.46
0.10	0.73
0.20	0.99
0.30	1.16
0.40	1.16
0.50	1.16
0.60	1.16
0.70	1.16
0.80	1.16
0.90	1.16
1.00	1.16
1.50	0.98
2.00	0.74
2.50	0.59
3.00	0.49
3.50	0.42
4.00	0.37
4.50	0.33
5.00	0.29



6.1.5.2. Zona Intermedia

Espectro de aceleraciones horizontales del Umbral de daño, Zona de Amenaza Sísmica Intermedia– Perfil de suelo AB/CD/E

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

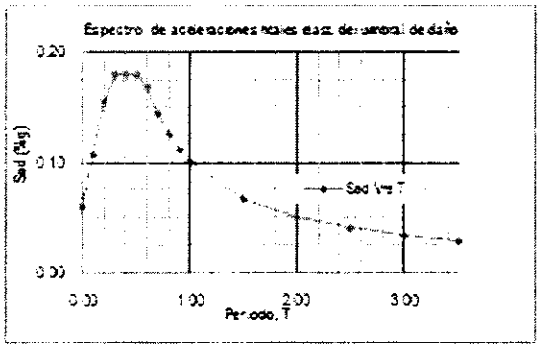
PARAMETROS PARA EL ANALIS - Derivas

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.00	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Progecto (Zona):	Intermedia
Perfil de Suelo	AB
Ad (g) = Acel. hta! pico efectiva para umbral d	0.06
Aa (g) = Acel. hta! pico efectiva, para diseño =	0.15
Av (g) = Acel. de la vel. pico efec. para diseño	0.20
Fa = Coef. de ampl. afecta la acel. en zona de	0.90
Fv = Coef. de ampl. afecta la vel. en zona de T	0.90
T_{o} **(s)** = 025 sg	0.25
T_{o} **(s)** = 0.5 (1.25Fv)=	0.56
T_{L} **(s)** = 2.4 (1.25Fv)=	2.70
I = Coef. de Importantancia	1.00

T (seg)	AB S_{ad} %g
0.00	0.06
0.10	0.11
0.20	0.16
0.30	0.18
0.40	0.18
0.50	0.18
0.60	0.17
0.70	0.14
0.80	0.13
0.90	0.11
1.00	0.10
1.50	0.07
2.00	0.05
2.50	0.04
3.00	0.03
3.50	0.03
4.00	0.03
4.50	0.02
5.00	0.02



COEFICIENTE DE CAPACIDAD DE DISIPACION DE ENERGIA, R

(Sistema Estructural de Pórtico en Concreto)

$R = \Phi_a \Phi_p \Phi_r R_o$

Normas Aplicables: NSR-10, Numerales A.3.3.3, Tabla A.3-3, Tabla A.3-5 a la 7

Capacidad de Disipación de Energía =	DMO		
Zona Amenaza Sísmica =	Intermedia	R_o = 5.00	Portico Resistente a Mtos
Uso Permitido =	Si		
Altura Máxima =	Sin Limite		

IRREGULARIDADES DE LA ESTRUCTURA

Irregularidad Torsional en Planta **NSR-10, Capitulo A.3 figura A.3-1**

No hay Irregularidad Torsional px = 1.00

No hay Irregularidad Torsional py = 1.00

CBT	*Sismo en X*	Δ_1 =	4.9	mm	Δ_2 =	5.5	mm	px =	1.00
	Sismo en Y	Δ_1 =	3.8	mm	Δ_2 =	2.9	mm	py =	1.00

Tipo 2P (Si o No):	N	p =	1.00	***Tipo 3P*** (Si o No):	N	p =	1.00
Tipo 4P (Si o No):	N	p =	1.00	***Tipo 5P*** (Si o No):	N	p =	1.00

Irregularidad Torsional en Altura NSR-10, Capitulo A.3 figura A.3-2

Tipo 1aA/1bA (Si o No):	N	a =	1.00	***Tipo 2A*** (Si o No):	N	a =	1.00
Tipo 3A (Si o No):	N	a =	1.00	***Tipo 4A*** (Si o No):	N	a =	1.00
Tipo 5aA/5bA (Si o No):	N	a =	1.00				

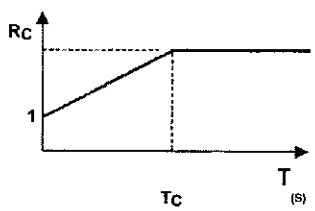
Irregularidad en Planta, p_x =	1.00	Rx = 5.00	Portico Resistente a Mtos
Irregularidad en Planta, p_y =	1.00		
Irregularidad en altura, a =	1.00	Ry = 3.75	
Ausencia de redundancia, r_x =	1.00		
Ausencia de redundancia, r_y =	0.75		

Tx = 0.35 sg

Ty = 0.25 sg

CORRECCION DE R PARA PERIDDOS DE VIBRACION QUE TIENDAN A CERO NSR-10, Numeral A.2.9.4

$R_{Cx} = (R-1)\, T/To + 1 \leq R$ =	11.37
Rx = 5.00	
$R_{Cy} = (R-1)\, T/To + 1 \leq R$ =	6.10
Ry = 3.75	



M = 110.71 kN sg^2/m
Tx = 0.346 sg
Ty = 0.247 sg

Numero de Modos de Vibración (NM)
NSR-10, Capitulo A.5 Numeral A.5.4.2
p = 30

Combinación de los Modos
NSR-10, Capitulo A.5 Numeral A.5.4.4
Combinación Modal: CQC
Combinación Direccional: SRSS

Análisis

Descripción: La estructura se modeló en ETABS, ***Versión 9.7.4.*** Para efectos de conocer el periodo de la estructura ver resultados de análisis modal

Participación de masa en X, %Mx =	99.9%	p es el adecuado => Ok	NSR-10, Capitulo A.5
Participación de masa en Y, %My =	99.7%	p es el adecuado => Ok	Numeral A.5.4.2
(Ver resultados de Análisis Modal)			

Ajuste de los Resultados NSR-10, Capitulo A.5 Numeral A.5.4.5

Clasificación de la estructura (Regular o Irregular) = R
= 0.90 Cu= 1.75 - 1.2AvFv = 1.534
C_t = 0.047 $_{CuTa\ (sg) = CuCth_n}$ = 0.27 Vs = Sd g M = 195 kN NSR-10, Capitulo A.4, Numerales A.4.2.2
h_n (m) = 4.40 Sa = 0.18

Cortante Dinamico (sin corregir)

Cortante Dinámico Total en la Base, Vi_{tx} =	183	kN	***Vtx > 0.80Vs => Ok No Ajustar Resultados***	**SF_x = 0.85**
Cortante Dinámico Total en la Base, Vi_{ty} =	145	kN	***Vty < 0.80Vs => Ajustar Resultados***	**SF_y = 1.08**

Cortante Dinamico (Corregidos)

Cortante Dinámico Total en la Base, Vf_{tx} =	183	kN	***Vf_{tx} = SFx Vf tx en modelo: $F_{x/y}$***	**SF_x = 0.85**
Cortante Dinámico Total en la Base, Vf_{ty} =	157	kN	***Vf_{ty} = SFy Vf ty = $SF_{x/y}$ Sa M***	**SF_y = 1.00**

Espectro de aceleraciones para diseño, para Zona de amenaza sísmica Intermedia, y para cada grupo de perfil de suelos.

Espectro de aceleraciones, Zona de Amenaza Sísmica Intermedia – Perfil de suelo AB

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

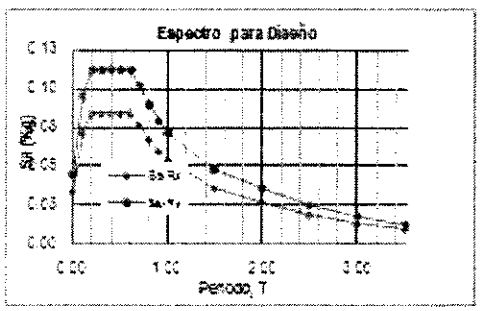
PARAMETROS PARA EL ANALIS - Diseño

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Intermedia
Perfil de Suelo	AB
Aa (g) = Acel. hrizontal pico efectiva, para diseño :	0.15
Av (g) = Acel. de la vel. pico efec. para diseño	0.20
Fa = Coef. de ampl. afecta la acel. en zona de T	0.90
Fv = Coef. de ampl. afecta la vel. en zona de T	0.90
T_o (s) = Periodo Inicial	0.13
T_c (s) = Periodo Corto	0.64
T_L (s) = Periodo largo	2.16
I = Coef. de Importancia	1.25

T (seg)	Sa (Aa) Sa g
0.00	0.17
0.10	0.36
0.20	0.42
0.30	0.42
0.40	0.42
0.50	0.42
0.60	0.42
0.70	0.39
0.80	0.34
0.90	0.30
1.00	0.27
1.50	0.18
2.00	0.14
2.50	0.09
3.00	0.06
3.50	0.05
4.00	0.04
4.50	0.03
5.00	0.02



820

Espectro de aceleraciones, Zona de Amenaza Sísmica Intermedia – Perfil de suelo CD

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

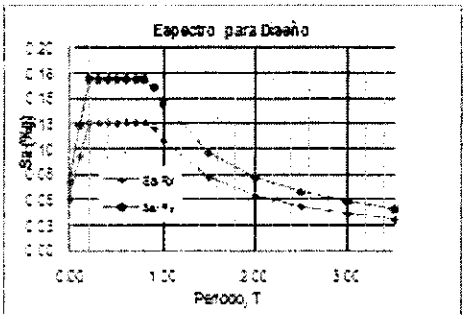
PARAMETROS PARA EL ANALIS - Diseño

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Intermedia
Perfil de Suelo	CD
Aa (g) = Acel. hzl pico efectiva, para diseño :	0.15
Av (g) = Acel. de la vel. pico efec. para diseñc	0.20
Fa = Coef. de ampl. afecta la acel. en zona de `	1.35
Fv = Coef. de ampl. afecta la vel. en zona de T	1.81
T_o (s) = Periodo Inicial	0.18
T_c(s) = Periodo Corto	0.86
T_L(s) = Periodo largo	4.35
I = Coef. de Importantancia	1.25

T (seg)	CD S_a %g
0.00	0.25
0.10	0.47
0.20	0.63
0.30	0.63
0.40	0.63
0.50	0.63
0.60	0.63
0.70	0.63
0.80	0.63
0.90	0.60
1.00	0.54
1.50	0.36
2.00	0.27
2.50	0.22
3.00	0.18
3.50	0.16
4.00	0.14
4.50	0.12
5.00	0.09



Espectro de aceleraciones, Zona de Amenaza Sísmica Intermedia – Perfil de suelo E

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

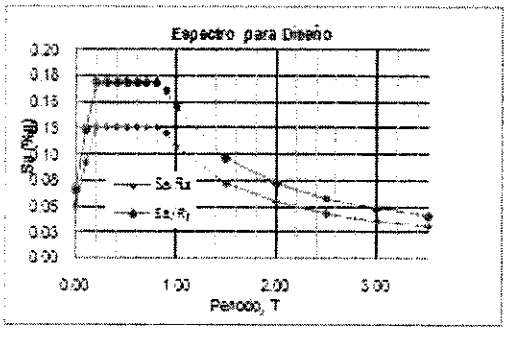
PARAMETROS PARA EL ANAL - Diseño

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Progecto (Zona):	Intermedia
Perfil de Suelo	E
Aa (g) = Acel. htal pico efectiva, para diseñ	0.15
Av (g) = Acel. de la vel. pico efec. para dise	0.20
Fa = Coef. de ampl. afecta la acel. en zona	2.11
Fv = Coef. de ampl. afecta la vel. en zona d	3.19
T_o (s) = Periodo Inicial	0.20
T_c(s) = Periodo Corto	0.97
T_L(s) = Periodo largo	7.66
I = Coef. de Importantancia	1.25

T (seg)	E S_a %g
0.00	0.40
0.10	0.69
0.20	0.98
0.30	0.99
0.40	0.99
0.50	0.99
0.60	0.99
0.70	0.99
0.80	0.99
0.90	0.99
1.00	0.96
1.50	0.64
2.00	0.48
2.50	0.38
3.00	0.32
3.50	0.27
4.00	0.24
4.50	0.21
5.00	0.19



6.1.5.3. Zona Baja

Espectro de aceleraciones horizontales del Umbral de daño, Zona de Amenaza Sísmica Baja– Perfil de suelo AB/CD/E

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

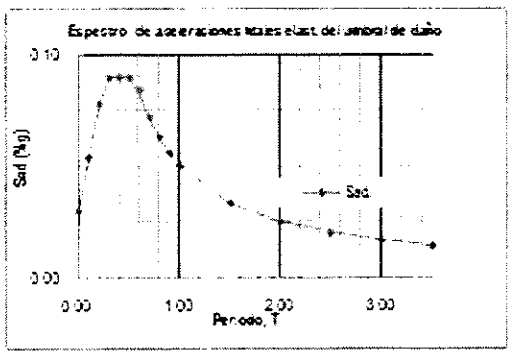
PARAMETROS PARA EL ANAL - Derivas

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.00	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Progecto (Zona):	Baja
Perfil de Suelo	AB
Ad (g) = Acel. htal pico efectiva para umbr	0.03
Aa (g) = Acel. htal pico efectiva, para diseñ	0.10
Av (g) = Acel. de la vel. pico efec. para dise	0.10
Fa = Coef. de ampl. afecta la acel. en zona	0.90
Fv = Coef. de ampl. afecta la vel. en zona d	0.90
T_o (s) = 025 sg	0.25
T_c (s) = 0.5 (1.25Fv)=	0.56
T_L (s) = 2.4 (1.25Fv)=	2.70
I = Coef. de Importantancia	1.00

T (seg)	AB S_{ad} %g
0.00	0.03
0.10	0.05
0.20	0.08
0.30	0.09
0.40	0.09
0.50	0.09
0.60	0.08
0.70	0.07
0.80	0.06
0.90	0.06
1.00	0.05
1.50	0.03
2.00	0.03
2.50	0.02
3.00	0.02
3.50	0.01
4.00	0.01
4.50	0.01
5.00	0.01



COEFICIENTE DE CAPACIDAD DE DISIPACION DE ENERGIA, R

(Sistema Estructural de Pórtico en Concreto)

$R = \Phi_a \Phi_p \Phi_r R_O$

Normas Aplicables: NSR-10, Numerales A.3.3.3, Tabla A.3-3, Tabla A.3-5 a la 7

Capacidad de Disipación de Energía =	DMI		
Zona Amenaza Sísmica =	Baja	R_O = 2.50	Portico Resistente a Mtos
Uso Permitido =	Si		
Altura Máxima =	Sin Limite		

IRREGULARIDADES DE LA ESTRUCTURA

Irregularidad Torsional en Planta **NSR-10, Capitulo A.3 figura A.3-1**

No hay Irregularidad Torsional px = 1.00

No hay Irregularidad Torsional py = 1.00

CBT	*Sismo en X*	Δ_1 =	2.5	mm	Δ_2 =	2.8	mm	px =	1.00
	Sismo en Y	Δ_1 =	1.9	mm	Δ_2 =	1.5	mm	py =	1.00

Tipo 2P (Si o No):	N	p =	1.00	***Tipo 3P*** (Si o No):	N	p =	1.00
Tipo 4P (Si o No):	N	p =	1.00	***Tipo 5P*** (Si o No):	N	p =	1.00

Irregularidad Torsional en Altura NSR-10, Capitulo A.3 figura A.3-2

Tipo 1aA/1bA (Si o No):	N	a =	1.00	***Tipo 2A*** (Si o No):	N	a =	1.00
Tipo 3A (Si o No):	N	a =	1.00	***Tipo 4A*** (Si o No):	N	a =	1.00
Tipo 5aA/5bA (Si o No):	N	a =	1.00				

Irregularidad en Planta, px =	1.00		
Irregularidad en Planta, py =	1.00	Rx = 2.50	Portico Resistente a Mtos
Irregularidad en altura, a =	1.00	Ry = 1.88	
Ausencia de redundancia, rx=	1.00		
Ausencia de redundancia, ry=	0.75		

Tx = 0.35 sg

Ty = 0.25 sg

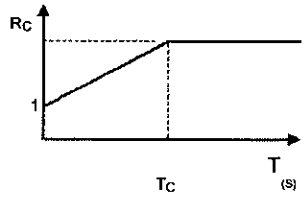
CORRECCION DE R PARA PERIDDOS DE VIBRACION QUE TIENDAN A CERO NSR-10, Numeral A.2.9.4

$R_{Cx} = (R-1)\,T/To + 1 \leq R =$ 6.18

Rx = 2.50

$R_{Cy} = (R-1)\,T/To + 1 \leq R =$ 3.16

Ry = 1.88



M = 110.71 kN sg^2/m
Tx = 0.346 sg
Ty = 0.247 sg

Numero de Modos de Vibración (NM)
NSR-10, Capitulo A.5 Numeral A.5.4.2
p = 30

Combinación de los Modos
NSR-10, Capitulo A.5 Numeral A.5.4.4
Combinación Modal: CQC
Combinación Direccional: SRSS

Análisis

Descripción: La estructura se modeló en ETABS, *Versión 9.7.4.* Para efectos de conocer el periodo de la estructura ver resultados de análisis modal

Participación de masa en X, %Mx =	99.9%	p es el adecuado => Ok	NSR-10, Capitulo A.5
Participación de masa en Y, %My =	99.7%	p es el adecuado => Ok	Numeral A.5.4.2

(Ver resultados de Análisis Modal)

Ajuste de los Resultados NSR-10, Capitulo A.5 Numeral A.5.4.5

Clasificación de la estructura (Regular o Irregular) = R

= 0.90 Cu= 1.75 - 1.2AvFv = 1.642

C_t = 0.047 $_{CuTa\ (sg)=\ CuC_th_n\ =}$ 0.29 Vs = Sd g M = 98 kN NSR-10, Capitulo A.4, Numerales A.4.2.2

h_n (m) = 4.40 Sa = 0.09

Cortante Dinamico (sin corregir)

Cortante Dinámico Total en la Base, Vi_{tx} = 91 kN ***Vtx > 0.80Vs => Ok No Ajustar Resultados*** **SF_x = 0.85**

Cortante Dinámico Total en la Base, Vi_{ty} = 73 kN ***Vty < 0.80Vs => Ajustar Resultados*** **SF_y = 1.08**

Cortante Dinamico (Corregidos)

Cortante Dinámico Total en la Base, Vf_{tx} = 91 kN ***Vf_{tx} = SFx Vf tx en modelo: $F_{x/y}$*** **SF_x = 0.85**

Cortante Dinámico Total en la Base, Vf_{ty} = 78 kN ***Vf_{ty} = SFy Vf ty = $SF_{x/y}$ Sa M*** **SF_y = 1.00**

Espectro de aceleraciones para diseño, para Zona de amenaza sísmica Baja, y para cada grupo de perfil de suelos.

Espectro de aceleraciones, Zona de Amenaza Sísmica Baja – Perfil de suelo AB

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

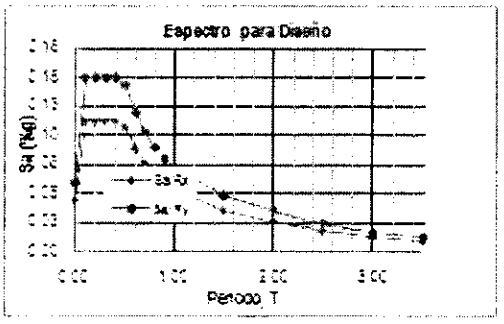
PARAMETROS PARA EL ANALIS - Diseño

Grupo de Uso :	III	NSR-10, Table A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.4.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Baja
Perfil de Suelo	AB
Aa (g) = Acel. hrtal pico efectiva, para diseño :	0.10
Av (g) = Acel. de la vel. pico efec. para diseñc	0.10
Fa = Coef. de ampl. afecta la acel. en zona de	0.90
Fv = Coef. de ampl. afecta la vel. en zona de T	0.90
T_o (s) = Periodo Inicial	0.10
T_c (s) = Periodo Corto	0.48
T_L (s) = Periodo largo	2.16
I = Coef. de Importantancia	1.25

T (seg)	AB S_a %g
0.00	0.11
0.10	0.28
0.20	0.28
0.30	0.28
0.40	0.28
0.50	0.27
0.60	0.23
0.70	0.19
0.80	0.17
0.90	0.15
1.00	0.14
1.50	0.09
2.00	0.07
2.50	0.05
3.00	0.03
3.50	0.02
4.00	0.02
4.50	0.01
5.00	0.01



Espectro de aceleraciones, Zona de Amenaza Sísmica Baja – Perfil de suelo CD

AMALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

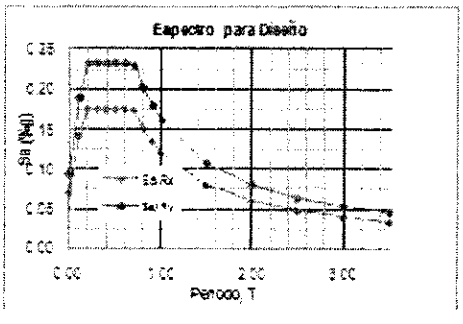
PARAMETROS PARA EL ANALIS - Diseño

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Baja
Perfil de Suelo	CD
Aa (g) = Acel. hrizl pico efectiva, para diseño :	0.10
Av (g) = Acel. de la vel. pico efec. para diseñc	0.10
Fa = Coef. de ampl. afecta la acel. en zona de '	1.39
Fv = Coef. de ampl. afecta la vel. en zona de T	2.01
T_o (s) = Periodo Inicial	0.14
T_c (s) = Periodo Corto	0.69
T_L (s) = Periodo largo	4.83
I = Coef. de Importantancia	1.25

T (seg)	CD S_a %g
0.00	0.17
0.10	0.35
0.20	0.44
0.30	0.44
0.40	0.44
0.50	0.44
0.60	0.44
0.70	0.43
0.80	0.38
0.90	0.34
1.00	0.30
1.50	0.20
2.00	0.15
2.50	0.12
3.00	0.10
3.50	0.09
4.00	0.08
4.50	0.07
5.00	0.06



Espectro de aceleraciones, Zona de Amenaza Sísmica Baja – Perfil de suelo E

ANALISIS SISMICO

El procedimiento que se seguirá para efectos de tener en cuenta los efectos dinámicos producidos en la estructura por el sismo de diseño será el Método del Análisis Dinamico Elastico Espectral, este se describe en el numeral A.5.4 de la N.S.R-10.

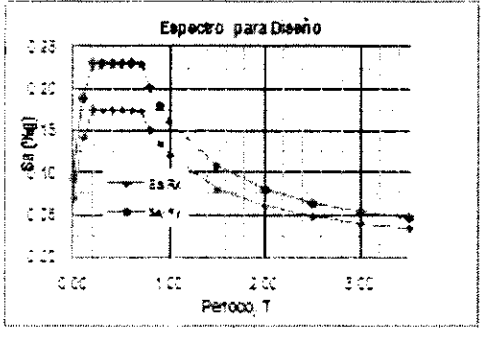
PARAMETROS PARA EL ANALIS - Diseño

Grupo de Uso :	III	NSR-10, Tabla A.2.5-1
Coeficiente de Importancia (I) =	1.25	NSR-10, A.6.2.1.2

MOVIMIENTO SISMICO DE DISEÑO
ESPECTRO DE DISEÑO

Localización de Proyecto (Zona):	Baja
Perfil de Suelo	E
Aa (g) = Acel. htal pico efectiva, para diseño :	0.10
Av (g) = Acel. de la vel. pico efec. para diseño	0.10
Fa = Coef. de ampl. afecta la acel. en zona de T	2.41
Fv = Coef. de ampl. afecta la vel. en zona de T	3.49
T_o (s) = Periodo Inicial	0.15
T_c (s) = Periodo Corto	0.70
T_L (s) = Periodo largo	8.37
I = Coef. de Importantancia	1.25

T (seg)	E S_a %g
0.00	0.30
0.10	0.61
0.20	0.75
0.30	0.75
0.40	0.75
0.50	0.75
0.60	0.75
0.70	0.75
0.80	0.65
0.90	0.58
1.00	0.52
1.50	0.35
2.00	0.26
2.50	0.21
3.00	0.17
3.50	0.15
4.00	0.13
4.50	0.12
5.00	0.10



6.1.6. Cargas de Viento (W)

La carga de viento se tuvo en cuenta solo para el análisis y diseño de elementos de cubierta metálica, en este caso para el diseño de elementos de lamina delgada (perlines); para la estructura aporticada en concreto no se tuvo en cuenta dado que su magnitud comparada con la carga sísmica es muy pequeña y por tanto no es determinante.

La carga de viento (w) para diseño de perlines corresponde a 0.40 kN/m2

6.2. COMBINACIONES DE CARGA

Fueron tenidas en cuenta las combinaciones de carga del capítulo B.2 de la NSR-10, tanto las relacionadas para el método de Resistencia Ultima, numeral B.2.4, como las del Método de los Esfuerzos admisibles, numeral B.2.3, las primeras para la definición del diseño y las segundas para verificación de los criterios de estabilidad.

7. ANALISIS DE LA ESTRUCTURA

El sistema estructural básico propuesto para el Blq. 4 / 4A corresponde a pórticos en concreto resistentes a momento; el pórtico para el modulo en estudio lo conforman cuatro (4) ejes localizados en sentido transversal (sentido Y) implantados sobre los ejes del 1 al 4, tres (3) en sentido Longuitudinal (sentido X) el A y C, y un solo nivel en altura (sentido Z).

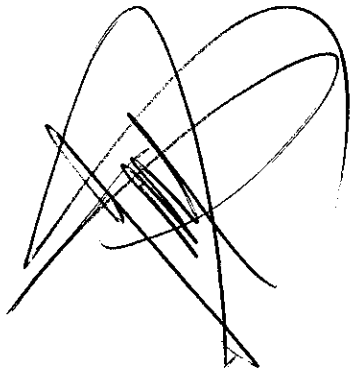
La estructura la conforman columnas en concreto de 30x50 para la zona alta, zona Intermedia y baja; y vigas aéreas también en concreto de 30x50cm.
Todo el sistema descrito anteriormente se soporta en zapatas de cimentación vinculadas en sentido transversal y longitudinal por vigas de amarre, este sistema así conformado se localiza dentro del terreno a una cota asumida en el presente estudio de -1.50m bajo el nivel de piso terminado.

El sistema estructural propuesto para la estructura aporticada en concreto se analizó utilizando para ello ETABS 9.7.4; mediante este software el edificio es idealizado por pórticos interconectados por losas de entrepiso que constituyen diafragmas rígidos en su propio plano, cada columna admite deformaciones axiales por flexión y corte (en el caso particular de la estructura en consideración estas deformaciones son prácticamente nulas dada la poca carga que llega a las columnas), así mismo las vigas admiten deformaciones por flexión y corte.

Las cargas aplicadas a la estructura fueron las correspondientes al peso propio de los elementos estructurales (PP), carga muerta (LD) debida a los acabados, muros de fachada y divisorios, carga viva para cubiertas (Lr), Granizo (G) y las correspondientes a las solicitaciones por sismo en dirección X (Fx / Ex) y Y (Fy / Ey).

La cimentación se analizó a través de un modelo matemático en SAFE v12., estructurado por elementos tipo Frame para las vigas de cimentación y elementos tipo Shell para las zapatas; en este modelo todo el sistema se apoya directamente al suelo a través de resortes desacoplados con una magnitud Ks definida según lo anunciado en el numeral 5.2 del presente estudio.

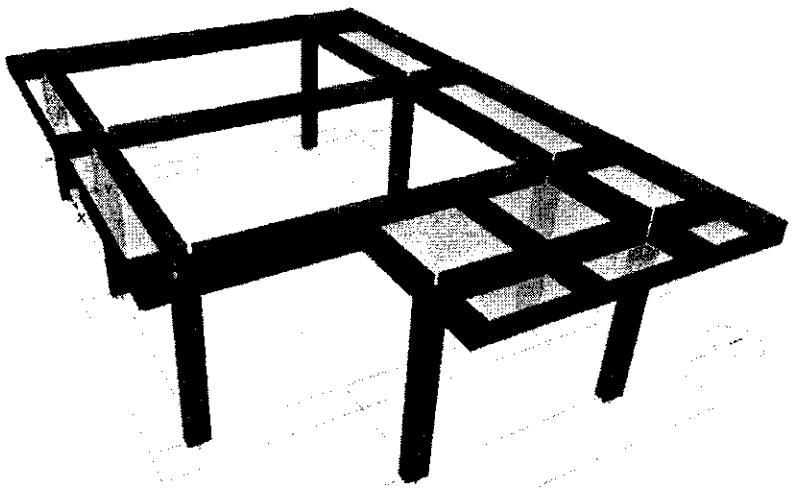
Los ejes en el modelo matematico se cargaron con las reacciones provenientes de la estructura, y la combinación de estas para cargas de servicio y últimas sirvieron para verificar que las cargas trasmitidas al suelo no superaran la capacidad admisible del mismo, y para el diseño estructural de los diferentes elementos de la cimentación respectivamente.



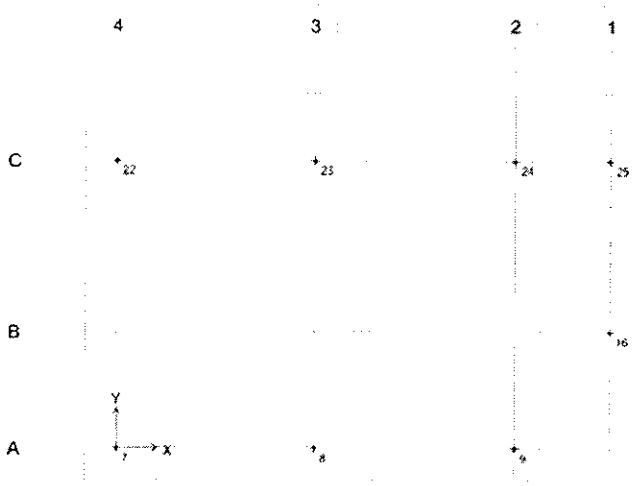
8. ANALISIS y DISEÑO CON ETABs 9.7.4

8.1. Modulo Bloque 4 / 4A

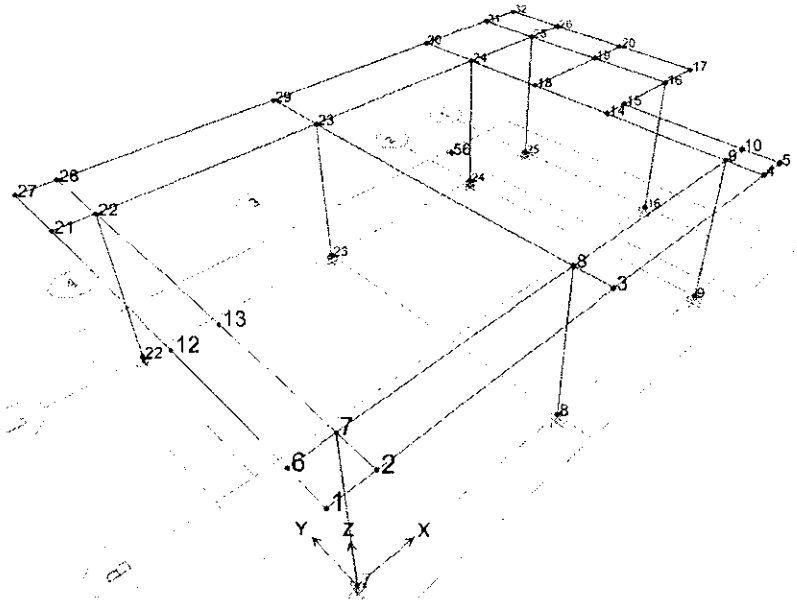
8.1.1. Modelo Matematico



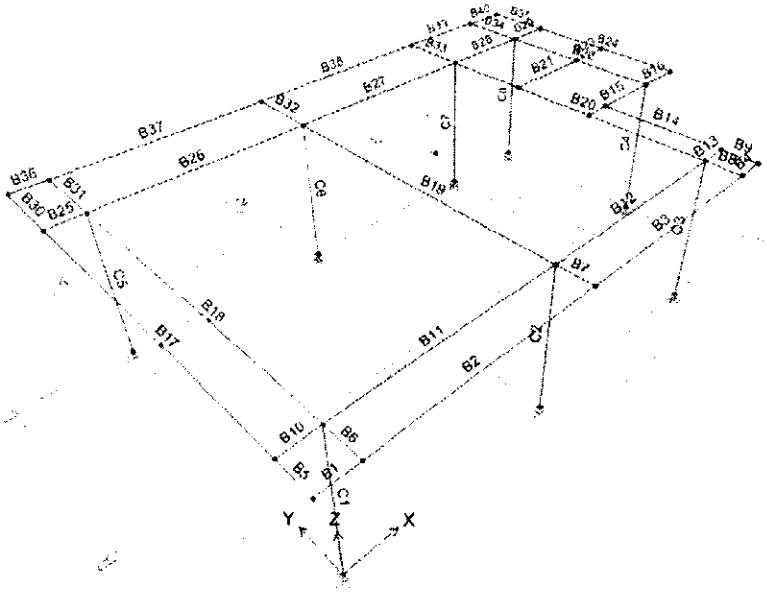
Modelo 3D – Portico en concreto



Modelo 2D - Numeracion apoyos



Modelo 3D – Numeracion nudos



Modelo 3D – Numeracion elementos

8.1.2. Sistema de coordenadas, conectividades, Materiales, Geometria Secciones

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 10:17 PAGE 1

S T O R Y D A T A

STORY	SIMILAR TO	HEIGHT	ELEVATION
CBT	None	4.400	4.400
BASE	None		0.000

C O O R D I N A T E S Y S T E M L O C A T I O N D A T A

NAME	TYPE	X	Y	ROTATION	BUBBLESIZE	VISIBLE
GLOBAL	Cartesian	0.000	0.000	0.00000	1.250	Yes

C O O R D I N A T E S Y S T E M G R I D D A T A

SYSTEM NAME	GRID DIR	GRID ID	GRID TYPE	GRID HIDE	BUBBLE LOC	GRID COORDINATE
GLOBAL	X		Sec	No	Top	-0.950
GLOBAL	X	4	Primary	No	Top	0.000
GLOBAL	X	3	Primary	No	Top	6.000
GLOBAL	X	2	Primary	No	Top	12.000
GLOBAL	X		Sec	No	Top	12.800
GLOBAL	X	1	Primary	No	Top	14.850
GLOBAL	X		Sec	No	Top	16.200
GLOBAL	Y		Sec	No	Left	-1.000
GLOBAL	Y	A	Primary	No	Left	0.000
GLOBAL	Y	B	Primary	No	Left	3.550
GLOBAL	Y	C	Primary	No	Left	8.700
GLOBAL	Y		Sec	No	Left	10.750

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 10:17 PAGE 3

P O I N T C O O R D I N A T E S

POINT	X	Y	DZ-BELOW
1	-0.950	-1.000	0.000
2	0.000	-1.000	0.000
3	6.000	-1.000	0.000
4	12.000	-1.000	0.000
5	12.800	-1.000	0.000
6	-0.950	0.000	0.000
7	0.000	0.000	0.000
8	6.000	0.000	0.000
9	12.000	0.000	0.000
10	12.800	0.000	0.000
12	-0.950	3.550	0.000
13	0.000	3.550	0.000
14	12.000	3.550	0.000
15	12.800	3.550	0.000
16	14.850	3.550	0.000
17	16.200	3.550	0.000
18	12.000	6.125	0.000
19	14.850	6.125	0.000
20	16.200	6.125	0.000
21	-0.950	8.700	0.000
22	0.000	8.700	0.000
23	6.000	8.700	0.000
24	12.000	8.700	0.000
25	14.850	8.700	0.000
26	16.200	8.700	0.000
27	-0.950	10.750	0.000
28	0.000	10.750	0.000
29	6.000	10.750	0.000
30	12.000	10.750	0.000
31	14.850	10.750	0.000
32	16.200	10.750	0.000

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 10:17 PAGE 4

C O L U M N C O N N E C T I V I T Y D A T A

COLUMN	I END PT	J END PT	I END STORY
C1	7	7	Below
C2	8	8	Below
C3	9	9	Below
C4	16	16	Below
C5	22	22	Below
C6	23	23	Below
C7	24	24	Below
C8	25	25	Below

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 10:17 PAGE 5

B E A M C O N N E C T I V I T Y D A T A

BEAM	I END PT	J END PT
B1	1	2
B2	2	3
B3	3	4
B4	4	5
B5	1	6
B6	2	7
B7	3	8
B8	4	9
B9	5	10
B10	6	7
B11	7	8
B12	8	9
B13	9	10
B14	10	15
B15	14	16
B16	16	17
B17	6	21
B18	7	22
B19	8	23
B20	9	24
B21	18	19
B22	16	25
B23	19	20
B24	17	26
B25	21	22
B26	22	23
B27	23	24
B28	24	25
B29	25	26
B30	21	27
B31	22	28
B32	23	29
B33	24	30
B34	25	31
B35	26	32
B36	27	28
B37	28	29
B38	29	30
B39	30	31
B40	31	32

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 10:17 PAGE 6

F L O O R C O N N E C T I V I T Y D A T A

FLOOR	PDINT	POINT	POINT	PDINT
F1	1	2	7	6
F2	2	3	8	7
F3	3	4	9	8
F4	4	5	10	9
F5	6	7	13	12
F6	9	10	15	14
F7	12	13	22	21
F8	14	16	25	24
F9	16	17	26	25
F10	21	22	28	27
F11	22	23	29	28
F12	23	24	30	29
F13	24	25	31	30
F14	25	26	32	31

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-A8-160-VR.1.0 Units:KN-m Julio 10, 2013 10:17 PAGE 7

M A T E R I A L P R O P E R T Y D A T A

MATERIAL NAME	MATERIAL TYPE	DESIGN TYPE	MATERIAL DIR/PLANE	MODULUS OF ELASTICITY	PDISSON'S RATIO	THERMAL COEFF	SHEAR MODULUS
STEEL	Iso	Steel	All	199947978.80	0.3000	1.1700E-05	76903068.77
FC21	Iso	Concrete	All	21538106.000	0.2000	9.9000E-06	8974210.833
OTHER	Iso	None	All	199947978.80	0.3000	1.1700E-05	76903068.77
FC28	Iso	Concrete	All	24870062.000	0.2000	9.9000E-0610362525.833	

M A T E R I A L P R O P E R T Y M A S S A N D W E I G H T

MATERIAL NAME	MASS PER UNIT VOL	WEIGHT PER UNIT VOL
STEEL	7.8271E+00	7.6820E+01
FC21	2.4007E+00	2.3562E+01
OTHER	7.8271E+00	7.6820E+01
FC28	2.4007E+00	2.3562E+01

M A T E R I A L D E S I G N D A T A F O R S T E E L M A T E R I A L S

MATERIAL NAME	STEEL FY	STEEL FU	STEEL COST ($)
STEEL	344737.894	448159.263	271447.16

M A T E R I A L D E S I G N D A T A F O R C O N C R E T E M A T E R I A L S

MATERIAL NAME	LIGHTWEIGHT CONCRETE	CONCRETE FC	REBAR FY	REBAR FYS	LIGHTWT REDUC FACT
FC21	No	21000.000	420000.000	420000.000	N/A
FC28	No	28000.000	420000.000	420000.000	N/A

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-A8-160-VR.1.0 Units:KN-m Julio 10, 2013 10:17 PAGE 8

F R A M E S E C T I O N P R O P E R T Y D A T A

FRAME SECTION NAME	MATERIAL NAME	SECTION SHAPE NAME OR NAME IN SECTION DATABASE FILE	CONC COL	CONC BEAM
C30X50A	FC28	Rectangular	Yes	
VG30X50	FC21	Rectangular		Yes
VG20X50	FC21	Rectangular		Yes
R	FC21	Rectangular		Yes
C30X50B	FC28	Rectangular	Yes	
C30X50C	FC28	Rectangular	Yes	
C30X50D	FC28	Rectangular	Yes	
C30X50E	FC28	Rectangular	Yes	

F R A M E S E C T I O N P R O P E R T Y D A T A

FRAME SECTION NAME	SECTION DEPTH	FLANGE WIDTH TOP	FLANGE THICK TOP	WEB THICK	FLANGE WIDTH BOT	FLANGE THICK BOT
C30X50A	0.3000	0.5000	0.0000	0.0000	0.0000	0.0000
VG30X50	0.5000	0.3000	0.0000	0.0000	0.0000	0.0000
VG20X50	0.5000	0.2000	0.0000	0.0000	0.0000	0.0000
R	0.4000	0.1000	0.0000	0.0000	0.0000	0.0000
C30X50B	0.3000	0.5000	0.0000	0.0000	0.0000	0.0000
C30X50C	0.3000	0.5000	0.0000	0.0000	0.0000	0.0000
C30X50D	0.3000	0.5000	0.0000	0.0000	0.0000	0.0000
C30X50E	0.3000	0.5000	0.0000	0.0000	0.0000	0.0000

F R A M E S E C T I O N P R O P E R T Y D A T A

FRAME SECTION NAME	SECTION AREA	TORSIONAL CONSTANT	MOMENTS OF INERTIA I33	MOMENTS OF INERTIA I22	SHEAR AREAS A2	SHEAR AREAS A3
C30X50A	0.1500	0.0028	0.0011	0.0031	0.1250	0.1250
VG30X50	0.1500	0.0028	0.0031	0.0011	0.1250	0.1250
VG20X50	0.1000	0.0010	0.0021	0.0003	0.0833	0.0833
R	0.0400	0.0001	0.0005	0.0000	0.0333	0.0333
C30X50B	0.1500	0.0028	0.0011	0.0031	0.1250	0.1250
C30X50C	0.1500	0.0028	0.0011	0.0031	0.1250	0.1250
C30X50D	0.1500	0.0028	0.0011	0.0031	0.1250	0.1250
C30X50E	0.1500	0.0028	0.0011	0.0031	0.1250	0.1250

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FRAME SECTION PROPERTY DATA

FRAME SECTION NAME	SECTION MODULI S33	SECTION MODULI S22	PLASTIC MODULI Z33	PLASTIC MODULI Z22	RADIUS OF GYRATION R33	RADIUS OF GYRATION R22
C30X50A	0.0075	0.0125	0.0113	0.0188	0.0866	0.1443
VG30X50	0.0125	0.0075	0.0188	0.0113	0.1443	0.0866
VG20X50	0.0083	0.0033	0.0125	0.0050	0.1443	0.0577
R	0.0027	0.0007	0.0040	0.0010	0.1155	0.0289
C30X50B	0.0075	0.0125	0.0113	0.0188	0.0866	0.1443
C30X50C	0.0075	0.0125	0.0113	0.0188	0.0866	0.1443
C30X50D	0.0075	0.0125	0.0113	0.0188	0.0866	0.1443
C30X50E	0.0075	0.0125	0.0113	0.0188	0.0866	0.1443

FRAME SECTION WEIGHTS AND MASSES

FRAME SECTION NAME	TOTAL WEIGHT	TOTAL MASS
C30X50A	15.5507	1.5845
VG30X50	252.3447	25.7115
VG20X50	120.9888	12.3276
R	35.1068	3.5770
C30X50B	31.1013	3.1689
C30X50C	15.5507	1.5845
C30X50D	31.1013	3.1689
C30X50E	31.1013	3.1689

CONCRETE COLUMN DATA

FRAME SECTION NAME	REINF CONFIGURATION LONGIT	REINF CONFIGURATION LATERAL	REINF SIZE/TYPE	NUM BARS 3DIR/2DIR	NUM BARS CIRCULAR	BAR COVER
C30X50A	Rectangular	Ties	#4/Check	4/3	N/A	0.0400
C30X50B	Rectangular	Ties	#5/Check	4/3	N/A	0.0400
C30X50C	Rectangular	Ties	#5/Check	4/3	N/A	0.0400
C30X50D	Rectangular	Ties	#6/Check	4/3	N/A	0.0400
C30X50E	Rectangular	Ties	#6/Check	5/3	N/A	0.0400

CONCRETE BEAM DATA

FRAME SECTION NAME	TOP COVER	BOT COVER	TOP LEFT AREA	TOP RIGHT AREA	BOT LEFT AREA	BOT RIGHT AREA
VG30X50	0.0400	0.0300	0.000	0.000	0.000	0.000
VG20X50	0.0400	0.0300	0.000	0.000	0.000	0.000
R	0.0400	0.0300	0.000	0.000	0.000	0.000

RIGID DIAPHRAGM ASSIGNMENTS TO POINT OBJECTS

STORY	DIAPHRAGM	POINT	POINT	PDINT	POINT	POINT
CBT	D1	7	13	22	8	23
CBT	D1	9	14	24	16	25
CBT	D1	6	10	12	17	21
CBT	D1	26	2	28	3	29
CBT	D1	4	30	31	27	32
CBT	D1	1	5	15	18	19
CBT	D1	20				

SUPPORT (RESTRAINT) DATA

STORY	PDINT	RESTRAINED DOF'S UX	UY	UZ	RX	RY	RZ
BASE	7	Yes	Yes	Yes	Yes	Yes	Yes
BASE	8	Yes	Yes	Yes	Yes	Yes	Yes
BASE	9	Yes	Yes	Yes	Yes	Yes	Yes
BASE	16	Yes	Yes	Yes	Yes	Yes	Yes
BASE	22	Yes	Yes	Yes	Yes	Yes	Yes
BASE	23	Yes	Yes	Yes	Yes	Yes	Yes
BASE	24	Yes	Yes	Yes	Yes	Yes	Yes
BASE	25	Yes	Yes	Yes	Yes	Yes	Yes

8.1.3. Asignación de elementos.

8.1.3.1. Vigas - Zona Alta / Intermedia / Baja, Todos los tipos de Suelo

FRAME SECTION ASSIGNMENTS TO LINE OBJECTS

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	B1	Beam	Rectangular	None	R	Conc Frame	R
CBT	B2	Beam	Rectangular	None	R	Conc Frame	R
CBT	B3	Beam	Rectangular	None	R	Conc Frame	R
CBT	B4	Beam	Rectangular	None	R	Conc Frame	R
CBT	B5	Beam	Rectangular	None	R	Conc Frame	R
CBT	B6	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B7	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B8	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B9	Beam	Rectangular	None	R	Conc Frame	R
CBT	B10	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B11	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B12	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B13	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B14	Beam	Rectangular	None	R	Conc Frame	R
CBT	B15	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B16	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B17	Beam	Rectangular	None	R	Conc Frame	R
CBT	B18	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B19	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B20	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B21	Beam	Rectangular	None	VG20X50	Conc Frame	VG20X50
CBT	B22	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B23	Beam	Rectangular	None	VG20X50	Conc Frame	VG20X50
CBT	B24	Beam	Rectangular	None	R	Conc Frame	R
CBT	B25	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B26	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B27	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B28	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B29	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B30	Beam	Rectangular	None	R	Conc Frame	R
CBT	B31	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B32	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B33	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B34	Beam	Rectangular	None	VG30X50	Conc Frame	VG30X50
CBT	B35	Beam	Rectangular	None	R	Conc Frame	R
CBT	B36	Beam	Rectangular	None	VG20X50	Conc Frame	VG20X50
CBT	B37	Beam	Rectangular	None	VG20X50	Conc Frame	VG20X50
CBT	B38	Beam	Rectangular	None	VG20X50	Conc Frame	VG20X50
CBT	B39	Beam	Rectangular	None	VG20X50	Conc Frame	VG20X50
CBT	B40	Beam	Rectangular	None	VG20X50	Conc Frame	VG20X50

8.1.3.2. Columnas

Zona alta / Suelo Tipo AB

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FRAME SECTION ASSIGNMENTS TO LINE OBJECTS

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B
CBT	C2	Column	Rectangular	None	C30X50E	Conc Frame	C30X50E
CBT	C3	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C4	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C5	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C6	Column	Rectangular	None	C30X5DE	Conc Frame	C30X50E
CBT	C7	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C8	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B

Zona alta / Suelo Tipo CD

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-CD-160-VR.1.0 Units:KN-m Julio 10, 2013 11:06 PAGE 1

F R A M E S E C T I O N A S S I G N M E N T S T O L I N E O B J E C T S

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C2	Column	Rectangular	None	C30X50E	Conc Frame	C30X50E
CBT	C3	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C4	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C5	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C6	Column	Rectangular	None	C30X50E	Conc Frame	C30X50E
CBT	C7	Column	Rectangular	None	C30X50E	Conc Frame	C30X50E
CBT	C8	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C

Zona alta / Suelo Tipo E

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-E-160-vR.1.0 Units:KN-m Julio 10, 2013 11:10 PAGE 1

F R A M E S E C T I O N A S S I G N M E N T S T O L I N E O B J E C T S

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B
CBT	C2	Column	Rectangular	None	C30X50E	Conc Frame	C30X50E
CBT	C3	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C4	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C5	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C6	Column	Rectangular	None	C30X50E	Conc Frame	C30X50E
CBT	C7	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C8	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B

Zona Intermedia / Suelo Tipo AB

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-INT.-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 11:13 PAGE 1

F R A M E S E C T I O N A S S I G N M E N T S T O L I N E O B J E C T S

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C2	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C3	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C4	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C5	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B
CBT	C6	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C7	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C8	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A

Zona Intermedia / Suelo Tipo CD

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-INT.-CD-160-VR.1.0 Units:KN-m Julio 10, 2013 11:14 PAGE 1

F R A M E S E C T I O N A S S I G N M E N T S T O L I N E O B J E C T S

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B
CBT	C2	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C3	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C4	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C5	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C6	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C7	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C8	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B

Zona Intermedia / Suelo Tipo E

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-INT.-E-160-VR.1.0 Units:KN-m Julio 10, 2013 11:15 PAGE 1

F R A M E S E C T I O N A S S I G N M E N T S T O L I N E O B J E C T S

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C2	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C3	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C4	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C5	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C6	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C7	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C8	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C

Zona Baja / Suelo Tipo AB, CD

ETABS v9.7.4 File:COI-BLQ. 4 / 4A-BAJA-AB-CD - 160-VR.1.0 Units:KN-m Julio 10, 2013 11:19 PAGE 1

F R A M E S E C T I O N A S S I G N M E N T S T O L I N E O B J E C T S

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C2	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C3	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C4	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C5	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C6	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C7	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A
CBT	C8	Column	Rectangular	None	C30X50A	Conc Frame	C30X50A

Zona Baja / Suelo Tipo E

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-BAJA-E-160-VR.1.0 Units:KN-m Julio 10, 2013 11:20 PAGE 1

F R A M E S E C T I O N A S S I G N M E N T S T O L I N E O B J E C T S

STORY LEVEL	LINE ID	LINE TYPE	SECTION TYPE	AUTO SELECT SECTION	ANALYSIS SECTION	DESIGN PROCEDURE	DESIGN SECTION
CBT	C1	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C2	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B
CBT	C3	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B
CBT	C4	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C5	Column	Rectangular	None	C30X50D	Conc Frame	C30X50D
CBT	C6	Column	Rectangular	None	C30X50B	Conc Frame	C30X50B
CBT	C7	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C
CBT	C8	Column	Rectangular	None	C30X50C	Conc Frame	C30X50C

8.1.4. Cargas, Combinaciones

ETABS v9.7.4 File:CDI-BLDQUE 4 / 4A-Alta/Int./Baja-AB/CD/E-160-VR.1.0 Units:KN-m Julio 10, 2013 11:20 PAGE 1

S T A T I C L D A D C A S E S

STATIC CASE	CASE TYPE	AUTO LAT LOAD	SELF WT MULTIPLIER	NDTIONAL FACTDR	NDTIDNAL DIRECTIDN
PP	DEAD	N/A	1.0000		
DL	DEAD	N/A	0.0000		
LR	LIVE	N/A	0.0000		
G	SNOW	N/A	0.0000		

ETABS v9.7.4 File:CDI-BLDQUE 4 / 4A-Alta-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 11:20 PAGE 1

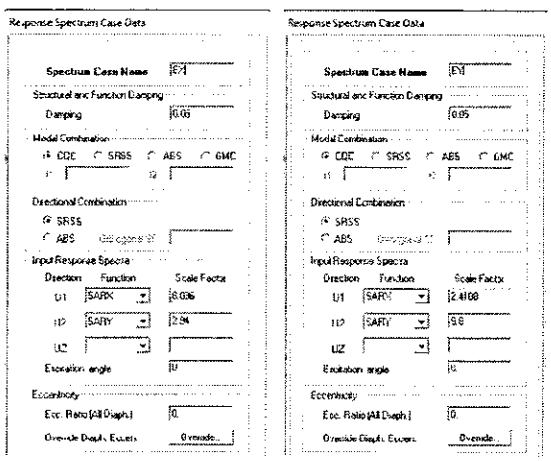
RESP SPEC CASE: EX

BASIC RESPDNSE SPECTRUM DATA

MDDAL CDMBD	DIRECTION CDMBD	MDDAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTIDN ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	8.0360
U2	SARY	2.94
UZ	----	N/A



RESP SPEC CASE: EY

BASIC RESPDNSE SPECTRUM DATA

MDDAL CDMBD	DIRECTIDN CDMBD	MDDAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPDNSE SPECTRUM FUNCTIDN ASSIGNMENT DATA

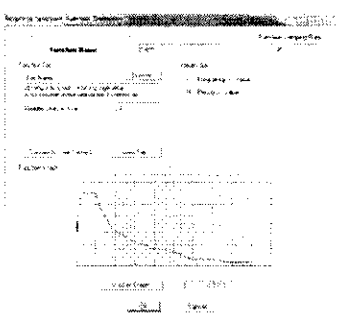
DIRECTION	FUNCTIDN	SCALE FACT
U1	SARX	2.4108
U2	SARY	9.8
UZ	----	N/A

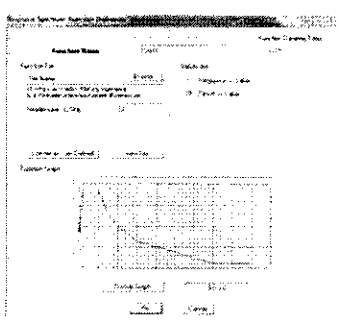
FUNCTIDN NAME: SARY

PERIOD	ACCEL
0.0000	0.0600
0.1000	0.1600
0.2000	0.1600
0.3000	0.1600
0.4000	0.1600
0.5000	0.1500
0.6000	0.1300
0.7000	0.1100
0.8000	0.1000
0.9000	0.0900
1.0000	0.0800
1.5000	0.0500
2.0000	0.0400
2.5000	0.0300
3.0000	0.0200
3.5000	0.0100
4.0000	0.0100
4.5000	0.0100

FUNCTIDN NAME: SARX

PERIDD	ACCEL
0.0000	0.0900
0.1000	0.2100
0.2000	0.2100
0.3000	0.2100
0.4000	0.2100
0.5000	0.2100
0.6000	0.1700
0.7000	0.1500
0.8000	0.1300
0.9000	0.1100
1.0000	0.1000
1.5000	0.0700
2.0000	0.0500
2.5000	0.0400
3.0000	0.0200
3.5000	0.0200
4.0000	0.0100
4.5000	0.0100





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R E S P O N S E S P E C T R U M C A S E S

RESP SPEC CASE: EX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	8.0360
U2	SARY	2.94
UZ	----	N/A

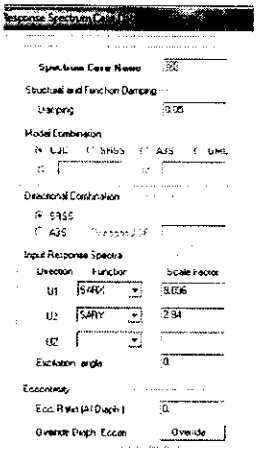
RESP SPEC CASE: EY

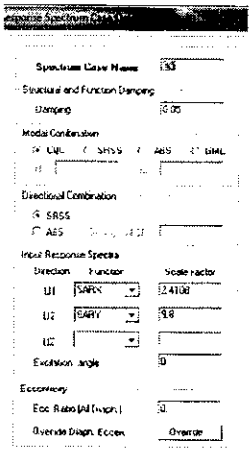
BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.4108
U2	SARY	9.8
UZ	----	N/A





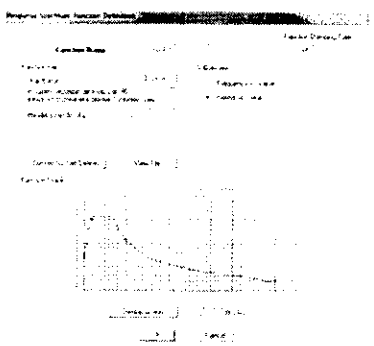
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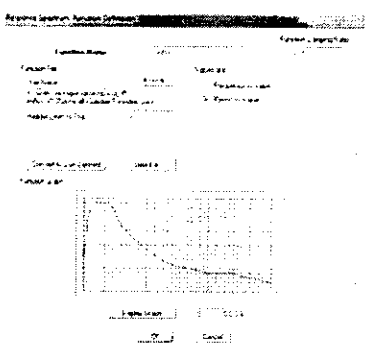
FUNCTION NAME: SARY

PERIOD	ACCEL
0.0000	0.0700
0.1000	0.1500
0.2000	0.1900
0.3000	0.1900
0.4000	0.1900
0.5000	0.1900
0.6000	0.1900
0.7000	0.1800
0.8000	0.1600
0.9000	0.1400
1.0000	0.1300
1.5000	0.0900
2.0000	0.0600
2.5000	0.0500
3.0000	0.0400
3.5000	0.0400
4.0000	0.0300
4.5000	0.0200

FUNCTION NAME: SARX

PERIOD	ACCEL
0.0000	0.1000
0.1000	0.2000
0.2000	0.2500
0.3000	0.2500
0.4000	0.2500
0.5000	0.2500
0.6000	0.2500
0.7000	0.2500
0.8000	0.2100
0.9000	0.1900
1.0000	0.1700
1.5000	0.1100
2.0000	0.0900
2.5000	0.0700
3.0000	0.0600
3.5000	0.0500
4.0000	0.0400
4.5000	0.0300





ETABS v9.7.4 File:CDI-BLOQUE 4 / 4A-ALTA-E-160-VR.1.0 Units:KN-m Julio 10, 2013 11:20 PAGE 1

R E S P O N S E S P E C T R U M C A S E S

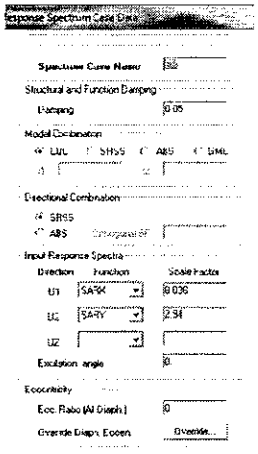
RESP SPEC CASE: EX

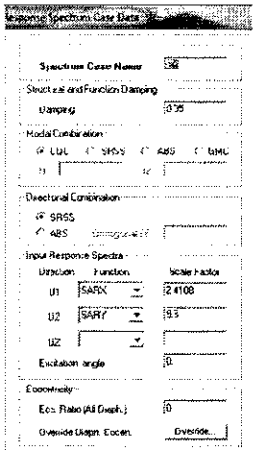
BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	8.0360
U2	SARY	2.94
UZ	----	N/A





RESP SPEC CASE: EY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.4108
U2	SARY	9.8
UZ	----	N/A

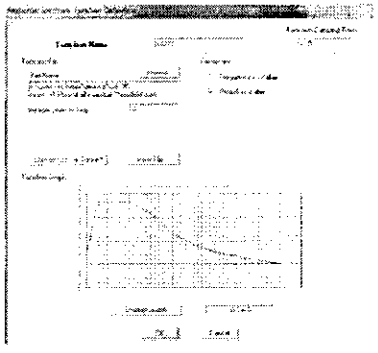
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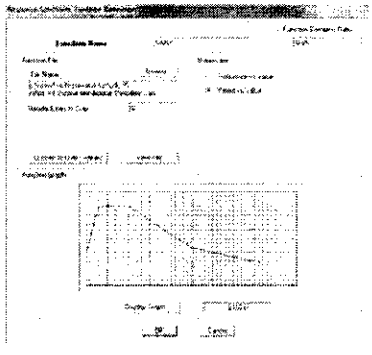
FUNCTION NAME: SARY

PERIOD	ACCEL
0.0000	0.0700
0.1000	0.1000
0.2000	0.1400
0.3000	0.1700
0.4000	0.1700
0.5000	0.1700
0.6000	0.1700
0.7000	0.1700
0.8000	0.1700
0.9000	0.1700
1.0000	0.1700
1.5000	0.1400
2.0000	0.1100
2.5000	0.0800
3.0000	0.0700
3.5000	0.0600
4.0000	0.0500
4.5000	0.0500

FUNCTION NAME: SARX

PERIOD	ACCEL
0.0000	0.0900
0.1000	0.1400
0.2000	0.1900
0.3000	0.2300
0.4000	0.2300
0.5000	0.2300
0.6000	0.2300
0.7000	0.2300
0.8000	0.2300
0.9000	0.2300
1.0000	0.2300
1.5000	0.1900
2.0000	0.1400
2.5000	0.1100
3.0000	0.0900
3.5000	0.0800
4.0000	0.0700
4.5000	0.0600





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R E S P O N S E S P E C T R U M C A S E S

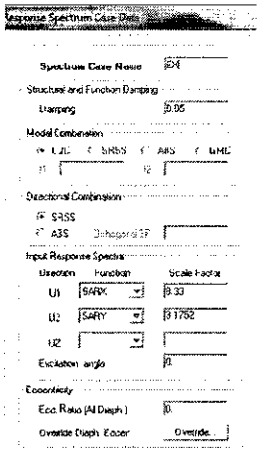
RESP SPEC CASE: EX

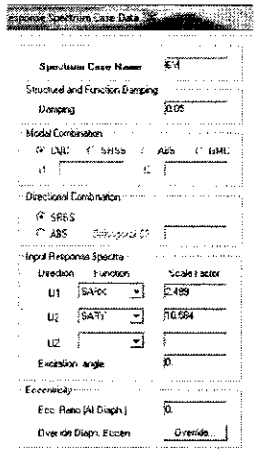
BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	8.3300
U2	SARY	3.1752
UZ	----	N/A





RESP SPEC CASE: EV

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.499
U2	SARY	10.584
UZ	----	N/A

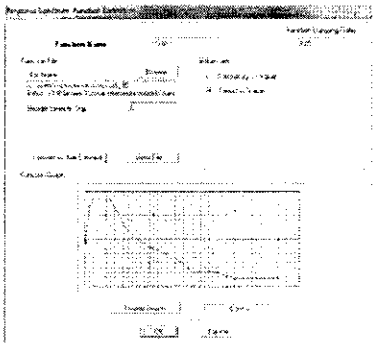
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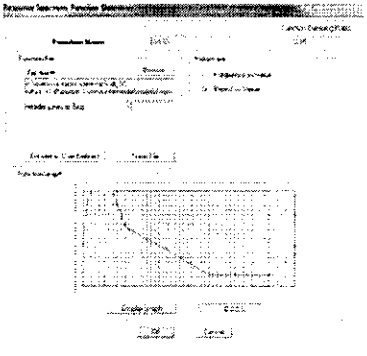
FUNCTION NAME: SARY

PERIOD	ACCEL
0.0000	0.0300
0.1000	0.0700
0.2000	0.0800
0.3000	0.0800
0.4000	0.0800
0.5000	0.0800
0.6000	0.0800
0.7000	0.0800
0.8000	0.0700
0.9000	0.0600
1.0000	0.0500
1.5000	0.0400
2.0000	0.0300
2.5000	0.0200
3.0000	0.0100
3.5000	0.0100
4.0000	0.0100
4.5000	0.0100

FUNCTION NAME: SARX

PERIOD	ACCEL
0.0000	0.0500
0.1000	0.1000
0.2000	0.1100
0.3000	0.1100
0.4000	0.1100
0.5000	0.1100
0.6000	0.1100
0.7000	0.1000
0.8000	0.0900
0.9000	0.0800
1.0000	0.0700
1.5000	0.0500
2.0000	0.0400
2.5000	0.0200
3.0000	0.0200
3.5000	0.0100
4.0000	0.0100
4.5000	0.0100





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R E S P O N S E S P E C T R U M C A S E S

RESP SPEC CASE: EX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	8.3300
U2	SARY	3.1752
UZ	----	N/A

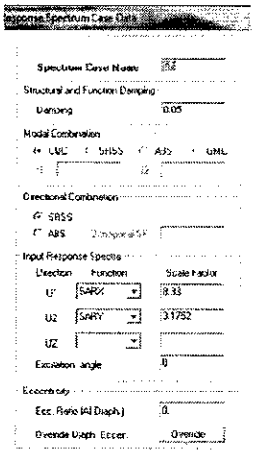
RESP SPEC CASE: EY

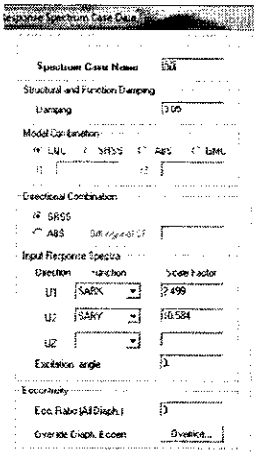
BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.4990
u2	SARY	10.584
uZ	----	N/A





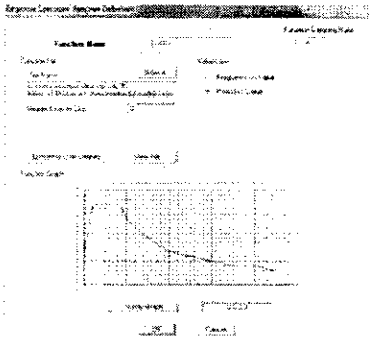
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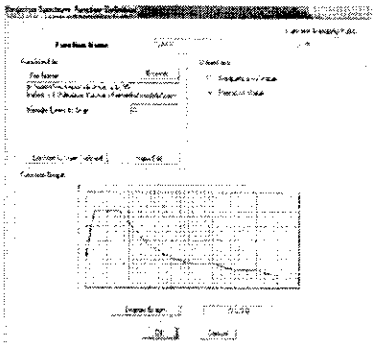
FUNCTION NAME: SARY

PERIOD	ACCEL
0.0000	0.0500
0.1000	0.0900
0.2000	0.1300
0.3000	0.1300
0.4000	0.1300
0.5000	0.1300
0.6000	0.1300
0.7000	0.1300
0.8000	0.1300
0.9000	0.1200
1.0000	0.1100
1.5000	0.0700
2.0000	0.0500
2.5000	0.0400
3.0000	0.0400
3.5000	0.0300
4.0000	0.0300
4.5000	0.0200

FUNCTION NAME: SARX

PERIOD	ACCEL
0.0000	0.0700
0.1000	0.1200
0.2000	0.1700
0.3000	0.1700
0.4000	0.1700
0.5000	0.1700
0.6000	0.1700
0.7000	0.1700
0.8000	0.1700
0.9000	0.1600
1.0000	0.1400
1.5000	0.1000
2.0000	0.0700
2.5000	0.0600
3.0000	0.0500
3.5000	0.0400
4.0000	0.0400
4.5000	0.0300





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R E S P O N S E S P E C T R U M C A S E S

RESP SPEC CASE: EX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	8.3300
U2	SARY	3.1752
UZ	----	N/A

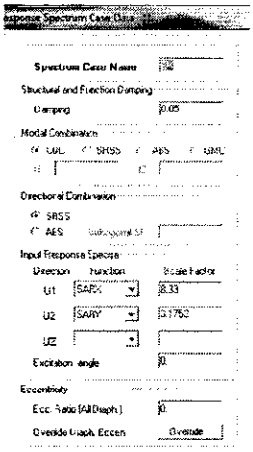
RESP SPEC CASE: EY

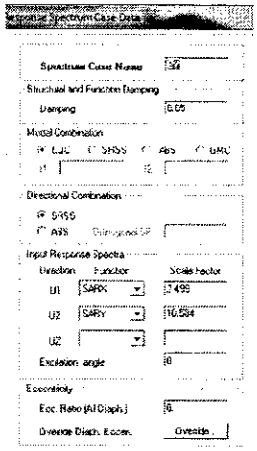
BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.4990
U2	SARY	10.584
UZ	----	N/A





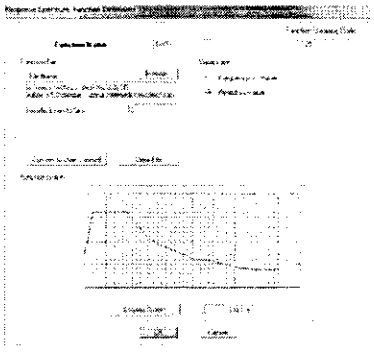
R E S P O N S E S P E C T R U M F U N C T I O N - F R O M F I L E

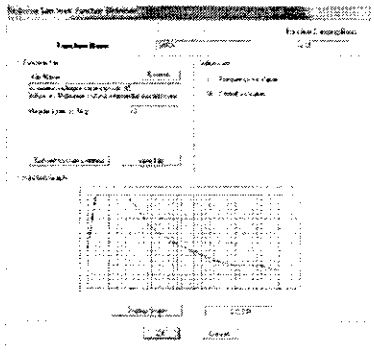
FUNCTION NAME: SARY

PERIOD	ACCEL
0.0000	0.0800
0.1000	0.1400
0.2000	0.2000
0.3000	0.2000
0.4000	0.2000
0.5000	0.2000
0.6000	0.2000
0.7000	0.2000
0.8000	0.2000
0.9000	0.2000
1.0000	0.1900
1.5000	0.1300
2.0000	0.1000
2.5000	0.0800
3.0000	0.0600
3.5000	0.0500
4.0000	0.0500
4.5000	0.0400

FUNCTION NAME: SARX

PERIOD	ACCEL
0.0000	0.1100
0.1000	0.1800
0.2000	0.2600
0.3000	0.2600
0.4000	0.2600
0.5000	0.2600
0.6000	0.2600
0.7000	0.2600
0.8000	0.2600
0.9000	0.2600
1.0000	0.2600
1.5000	0.1700
2.0000	0.1300
2.5000	0.1000
3.0000	0.0900
3.5000	0.0700
4.0000	0.0600
4.5000	0.0600





ETABS v9.7.4 File: CDI-BLOQUE 4 / 4A-BAJA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 11:40 PAGE 1

R E S P O N S E S P E C T R U M C A S E S

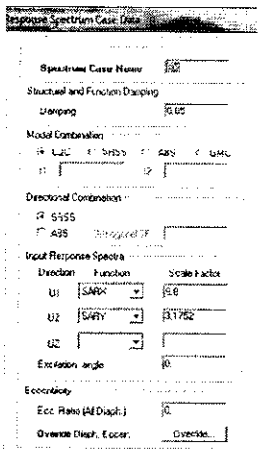
RESP SPEC CASE: EX

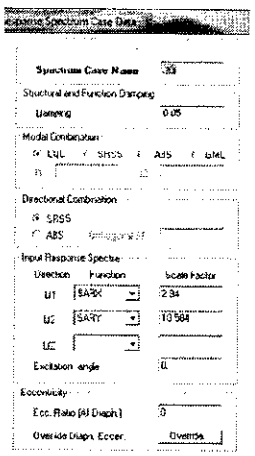
BASIC RESPONSE SPECTRUM DATA

MODAL COMBD	DIRECTIDN COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTIDN ASSIGNMENT DATA

DIRECTIDN	FUNCTIDN	SCALE FACT
U1	SARX	9.8000
U2	SARY	3.1752
UZ	-----	N/A





RESP SPEC CASE: EY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBD	DIRECTIDN COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPDNSE SPECTRUM FUNCTIDN ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.94
U2	SARY	10.584
U2	-----	N/A

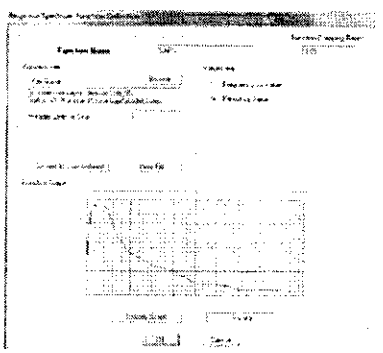
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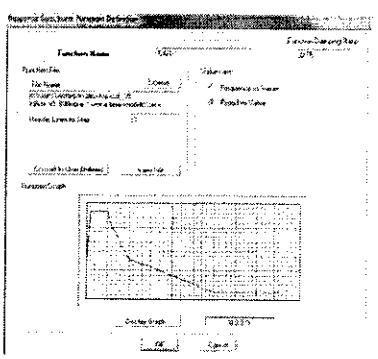
FUNCTION NAME: SARY

PERIDD	ACCEL
0.0000	0.0600
0.1000	0.1500
0.2000	0.1500
0.3000	0.1500
0.4000	0.1500
0.5000	0.1400
0.6000	0.1200
0.7000	0.1000
0.8000	0.0900
0.9000	0.0800
1.0000	0.0700
1.5000	0.0500
2.0000	0.0400
2.5000	0.0300
3.0000	0.0200
3.5000	0.0100
4.0000	0.0100
4.5000	0.0100

FUNCTIDN NAME: SARX

PERIOD	ACCEL
0.0000	0.0500
0.1000	0.1100
0.2000	0.1100
0.3000	0.1100
0.4000	0.1100
0.5000	0.1100
0.6000	0.0900
0.7000	0.0800
0.8000	0.0700
0.9000	0.0600
1.0000	0.0500
1.5000	0.0400
2.0000	0.0300
2.5000	0.0200
3.0000	0.0100
3.5000	0.0100
4.0000	0.0100
4.5000	0.0100





ETABS v9.7.4 File: CDI-BLOQUE 4 / 4A-BAJA-CD-160-VR.1.0 Units:KN-m Julio 10, 2013 11:40 PAGE 1

R E S P D N S E S P E C T R U M C A S E S

RESP SPEC CASE: EX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMB O	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	9.8
U2	SARY	3.1752
U 2	----	N/A

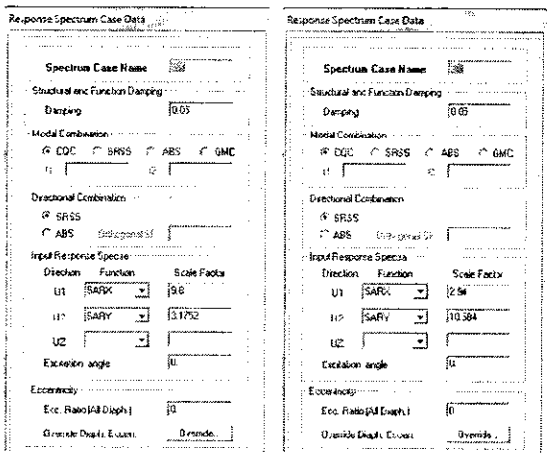
RESP SPEC CASE: EY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.94
U2	SARY	10.584
UZ	-----	N/A



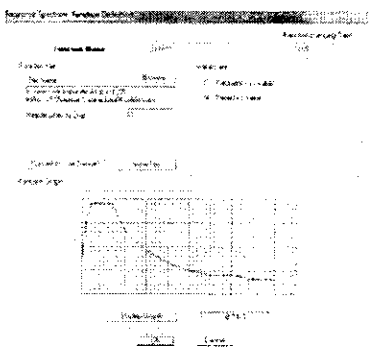
R E S P O N S E S P E C T R U M F U N C T I O N - F R O M F I L E

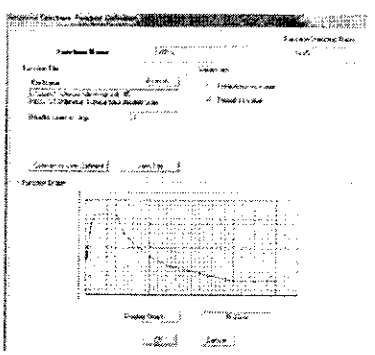
FUNCTION NAME: SARY

PERIOD	ACCEL
0.0000	0.0900
0.1000	0.1900
0.2000	0.2300
0.3000	0.2300
0.4000	0.2300
0.5000	0.2300
0.6000	0.2300
0.7000	0.2300
0.8000	0.2000
0.9000	0.1800
1.0000	0.1600
1.5000	0.1100
2.0000	0.0800
2.5000	0.0600
3.0000	0.0500
3.5000	0.0500
4.0000	0.0400
4.5000	0.0400

FUNCTION NAME: SARX

PERIOD	ACCEL
0.0000	0.0700
0.1000	0.1400
0.2000	0.1700
0.3000	0.1700
0.4000	0.1700
0.5000	0.1700
0.6000	0.1700
0.7000	0.1700
0.8000	0.1500
0.9000	0.1300
1.0000	0.1200
1.5000	0.0800
2.0000	0.0600
2.5000	0.0500
3.0000	0.0400
3.5000	0.0300
4.0000	0.0300
4.5000	0.0300





ETABS v9.7.4 File: CDI-BLOQUE 4 / 4A-BAJA-E-16D-VR.1.0 Units:KN-m Julio 10, 2013 11:42 PAGE 1

R E S P O N S E S P E C T R U M C A S E S

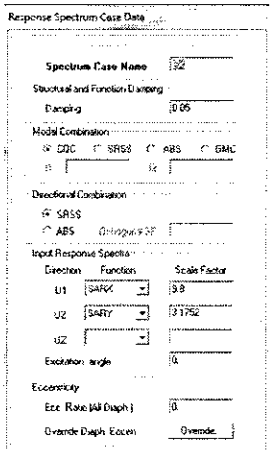
RESP SPEC CASE: EX

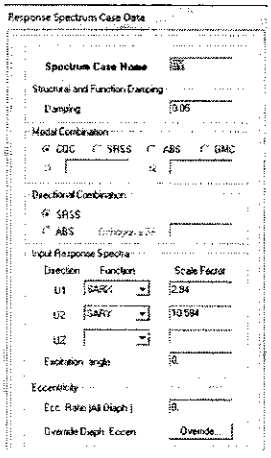
BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	9.8
U2	SARY	3.1752
UZ	----	N/A





RESP SPEC CASE: EY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SARX	2.94
U2	SARY	10.584
UZ	----	N/A

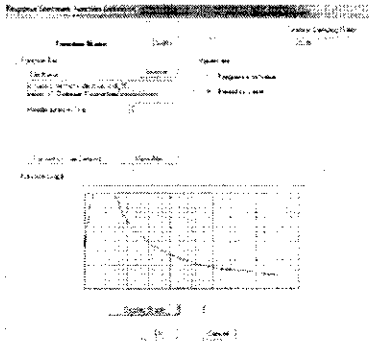
R E S P O N S E S P E C T R U M F U N C T I O N - F R O M F I L E

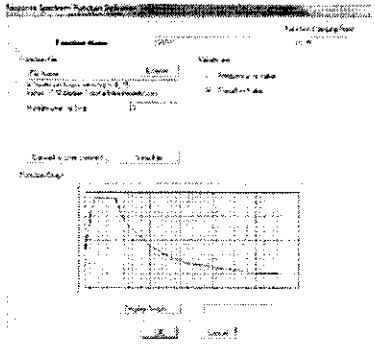
FUNCTION NAME: SARY

PERIOD	ACCEL
0.0000	0.1600
0.1000	0.3300
0.2000	0.4000
0.3000	0.4000
0.4000	0.4000
0.5000	0.4000
0.6000	0.4000
0.7000	0.4000
0.8000	0.3500
0.9000	0.3100
1.0000	0.2800
1.5000	0.1900
2.0000	0.1400
2.5000	0.1100
3.0000	0.0900
3.5000	0.0800
4.0000	0.0700
4.5000	0.0600

FUNCTION NAME: SARX

PERIOD	ACCEL
0.0000	0.1200
0.1000	0.2400
0.2000	0.3000
0.3000	0.3000
0.4000	0.3000
0.5000	0.3000
0.6000	0.3000
0.7000	0.3000
0.8000	0.2600
0.9000	0.2300
1.0000	0.2100
1.5000	0.1400
2.0000	0.1000
2.5000	0.0800
3.0000	0.0700
3.5000	0.0600
4.0000	0.0500
4.5000	0.0500





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DISTRIBUTED LOAD ASSIGNMENTS TO LINE OBJECTS

LDAD CASE	STDRY LEVEL	LINE ID	LDAD TYPE	LDAD DIRECTIDN	ABSDLUTE DISTANCE A	ABSDLUTE DISTANCE B	LOAD A PER LENGTH	LOAD B PER LENGTH
DL	CBT	B11	Force	Gravity	0.000	6.DDD	5.200	5.20D
DL	CBT	B12	Force	Gravity	0.D0D	6.000	5.200	5.200
DL	CBT	B15	Force	Gravity	D.D00	2.85D	5.200	5.200
DL	CBT	B18	Force	Gravity	D.D0Q	8.700	4.000	4.0D0
DL	CBT	B19	Force	Gravity	0.00D	8.700	4.000	4.000
DL	CBT	B20	Force	Gravity	0.000	8.700	4.0DD	4.000
DL	CBT	B22	Force	Gravity	0.000	5.150	4.000	4.000
DL	CBT	B26	Force	Gravity	0.000	6.000	5.200	5.200
DL	CBT	B27	Force	Gravity	0.000	6.000	5.200	5.200
DL	CBT	B28	Force	Gravity	0.000	2.850	5.200	5.200

UNIFDRM LDAD ASSIGNMENTS TD AREA DBJECTS

CASE	STORY	AREA	AREATYPE	DIRECTIDN	LOAD
DL	CBT	F1	Floor	Gravity	1.1000
DL	CBT	F2	Floor	Gravity	1.1000
DL	CBT	F3	Floor	Gravity	1.1000
DL	CBT	F4	Floor	Gravity	1.1000
DL	CBT	F5	Floor	Gravity	1.1000
DL	CBT	F6	Floor	Gravity	1.1000
DL	CBT	F7	Floor	Gravity	1.1000
DL	CBT	F8	Floor	Gravity	1.1000
DL	CBT	F9	Floor	Gravity	1.1000
DL	CBT	F10	Floor	Gravity	1.1000
DL	CBT	F11	Floor	Gravity	1.1000
DL	CBT	F12	Floor	Gravity	1.1000
DL	CBT	F13	Floor	Gravity	1.1000
DL	CBT	F14	Floor	Gravity	1.1000
LR	CBT	F1	Floor	Gravity	1.0000
LR	CBT	F2	Floor	Gravity	1.0000
LR	CBT	F3	Floor	Gravity	1.0000
LR	CBT	F4	Floor	Gravity	1.0000
LR	CBT	F5	Floor	Gravity	1.0000
LR	CBT	F6	Floor	Gravity	1.0000
LR	CBT	F7	Floor	Gravity	1.0000
LR	CBT	F8	Floor	Gravity	1.5000
LR	CBT	F9	Floor	Gravity	1.0000
LR	CBT	F10	Floor	Gravity	1.0000
LR	CBT	F11	Floor	Gravity	1.0000
LR	CBT	F12	Floor	Gravity	1.0000
LR	CBT	F13	Floor	Gravity	1.0000
LR	CBT	F14	Floor	Gravity	1.0000

LDADING CDMBINATIONS

CDMBD	COMBD TYPE	CASE	CASE TYPE	SCALE FACTDR
D	ADD	PP	Static	1.0D00
		DL	Static	1.0DD0
DRV1X	ADD	D	Combo	1.0000
		FX	Spectra	1.D000
DRV1Y	ADD	D	Combo	1.D00D
		FY	Spectra	1.0000
DRV2X	ADD	0	Combo	0.6000
		FX	Spectra	1.0000
DRV2Y	ADD	0	Combo	D.600D
		FY	Spectra	1.D000
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADO	D	Combo	1.2000
		G	Static	1.6000
DIS2X	ADO	D	Combo	1.200D
		EX	Spectra	1.0000
		LR	Static	1.0D00
DIS2Y	ADD	D	Combo	1.2DDD
		EY	Spectra	1.00D0
		LR	Static	1.0000
DIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0D00
DIS3Y	AOD	D	Combo	0.9000
		EY	Spectra	1.0000
ENVOL	ENVE	DIS1A	Combo	1.0000
		DIS1B	Combo	1.0000
		DIS2X	Combo	1.0000
		DIS2Y	Combo	1.0000
		DIS3X	Combo	1.0000
		DIS3Y	Combo	1.0000

8.1.5. Resultados – Diseño, vigas

Se efectuó análisis para Zona de amenaza sísmica, alta, intermedia y baja asi como para todas las condiciones de suelos, y se pudo comprobar que el dimensionamiento y diseño del refuerzo de elementos es mayor en Zona Alta para Suelo Tipo CD, en Zona Intermedia para Suelo Tipo E, y en Zona Baja para suelo Tipo E.
Para una misma zona y comparando el refuerzo para los distintos tipos de suelos las diferencias no superan el 10%; por esta razón y para no hacer la presente memoria tan extensa solo presentamos a continuación los resultados de Mto y Cortante, y el refuerzo determinado a partir de esto para las zonas y tipo de suelo anunciados, pero en todo caso en planos de diseño se presenta el diseño particular para cada zona y tipo de suelo.

8.1.5.1. Vigas Zona alta, Suelo Tipo CD

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
ENVOL	ENVE	DIS1A	Combo	1.0000
		DIS1B	Combo	1.0000
		DIS2X	Combo	1.0000
		DIS2Y	Combo	1.0000
		DIS3X	Combo	1.0000
		DIS3Y	Combo	1.0000

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B E A M F O R C E E N V E L O P E S

STORY	BEAM	ITEM	P	V2	V3	T	M2	M3
CBT	B6	Min Value	-0.36	3.18	-0.21	-10.616	-0.029	-11.137
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.36	18.06	0.21	-2.377	0.029	0.437
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B7	Min Value	-0.49	14.99	-0.32	-4.182	-0.048	-20.523
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.49	30.56	0.32	3.304	0.048	0.091
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B8	Min Value	-0.32	4.85	-0.20	0.971	-0.028	-12.220
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.32	19.23	0.20	6.562	0.028	0.259
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B10	Min Value	-0.13	8.30	-0.21	3.478	-0.035	-19.925
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.13	28.51	0.21	17.265	0.035	0.551
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B11	Min Value	-1.81	-43.55	-0.77	-1.158	-0.310	-63.975
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.81	49.39	0.77	2.836	0.310	30.628
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B12	Min Value	-1.67	-52.81	-0.73	-2.227	-0.294	-70.119
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.67	39.10	0.73	1.527	0.294	37.639
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B13	Min Value	-0.10	-17.71	-0.17	-8.234	-0.022	-9.470
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.10	-1.63	0.17	1.393	0.022	0.582
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B15	Min Value	-0.50	-10.79	-0.45	-9.228	-0.134	-79.629
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.50	57.78	0.45	9.960	0.134	18.366
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL

BEAM FORCE ENVELOPES

STORY	BEAM	ITEM	P	V2	V3	T	M2	M3
CBT	B16	Min Value	-0.22	-16.26	-0.32	-7.944	-0.074	-14.944
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.22	-4.02	0.32	1.412	0.074	0.185
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B18	Min Value	-1.05	-65.54	-0.64	-0.800	-0.197	-149.611
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.05	76.00	0.64	1.236	0.197	65.324
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B19	Min Value	0.00	-71.96	0.00	-0.583	0.000	-151.401
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.00	82.81	0.00	0.338	0.000	71.828
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B20	Min Value	-0.94	-65.21	-0.46	-8.601	-0.107	-155.189
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.94	89.69	0.46	11.163	0.107	65.926
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.83	21.69	0.17	-1.756	0.058	8.979
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B22	Min Value	-1.34	-71.66	-0.63	-0.635	-0.124	-118.596
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.34	85.72	0.63	8.603	0.124	52.212
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B23	Min Value	-0.43	-14.58	-0.14	-3.602	-0.040	-13.726
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.43	-0.70	0.14	-0.335	0.040	0.502
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B25	Min Value	-0.21	11.67	-0.31	-17.455	-0.053	-22.731
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.21	31.61	0.31	-4.021	0.053	0.489
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B26	Min Value	-1.65	-50.32	-0.86	-6.383	-0.315	-75.192
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.65	57.11	0.86	3.412	0.315	35.411
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B27	Min Value	-1.57	-52.54	-0.85	-3.705	-0.308	-68.721
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.57	45.60	0.85	6.541	0.308	25.360
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B28	Min Value	-0.81	-61.40	-0.66	-2.591	-0.187	-62.392
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.81	44.08	0.66	1.180	0.187	36.121
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B29	Min Value	-0.38	-25.63	-0.43	-4.476	-0.097	-24.041
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.38	-4.66	0.43	3.645	0.097	0.838
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B31	Min Value	-1.36	-41.94	-0.67	0.040	-0.119	-54.087
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.36	-11.40	0.67	11.891	0.119	5.005
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B32	Min Value	-2.08	-70.06	-0.88	-4.039	-0.160	-97.382
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.08	-29.51	0.88	3.510	0.160	9.057
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B33	Min Value	-1.71	-54.93	-0.76	-4.481	-0.135	-74.738
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.71	-19.68	0.76	1.016	0.135	4.534
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B34	Min Value	-1.02	-34.50	-0.54	-3.590	-0.097	-42.912
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.02	-5.67	0.54	2.667	0.097	1.878
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B36	Min Value	-0.13	-2.54	-0.08	-3.157	-0.020	-3.067
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.13	4.67	0.08	0.097	0.020	0.794
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL

B E A M F O R C E E N V E L O P E S

STORY	BEAM	ITEM	P	V2	V3	T	M2	M3
CBT	B37	Min Value	-1.50	-20.31	-0.24	-4.880	-0.095	-26.760
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.50	25.87	0.24	2.386	0.095	22.213
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B38	Min Value	-1.43	-24.06	-0.23	-2.925	-0.093	-25.592
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.43	21.97	0.23	4.605	0.093	15.833
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B39	Min Value	-0.53	-14.14	-0.15	-0.348	-0.054	-17.252
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.53	7.58	0.15	2.219	0.054	0.662
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B40	Min Value	-0.21	-9.01	-0.10	-0.305	-0.030	-8.068
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.21	0.17	0.10	1.874	0.030	0.201
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL

C O N C R E T E B E A M D E S I G N O U T P U T (ACI 318-08/IBC 2009)

FLEXURAL AND TORSION OESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B6	VG30X50	0.000	0.000	ENVOL	0.033	ENVOL	4.013	ENVOL
CBT	B6	VG30X50	50.000	0.524	ENVOL	0.209	ENVOL	4.013	ENVOL
CBT	B6	VG30X50	50.000	0.524	ENVOL	0.209	ENVOL	4.013	ENVOL
CBT	B6	VG30X50	75.000	0.859	ENVOL	0.419	ENVOL	4.013	ENVOL
CBT	B7	VG30X50	50.000	1.009	ENVOL	0.386	ENVOL	5.343	ENVOL
CBT	B7	VG30X50	50.000	1.009	ENVOL	0.386	ENVOL	5.343	ENVOL
CBT	B7	VG30X50	75.000	1.590	ENVOL	0.774	ENVOL	5.343	ENVOL
CBT	B8	VG30X50	0.000	0.000	ENVOL	0.019	ENVOL	5.115	ENVOL
CBT	B8	VG30X50	50.000	0.585	ENVOL	0.230	ENVOL	5.115	ENVOL
CBT	B8	VG30X50	50.000	0.585	ENVOL	0.230	ENVOL	5.115	ENVOL
CBT	B8	VG30X50	75.000	0.943	ENVOL	0.460	ENVOL	5.115	ENVOL
CBT	B10	VG30X50	0.000	0.000	ENVDL	0.041	ENVDL	4.694	ENVDL
CBT	B10	VG30X50	47.500	0.846	ENVOL	0.375	ENVOL	4.694	ENVOL
CBT	B10	VG30X50	47.500	0.846	ENVOL	0.375	ENVOL	4.694	ENVOL
CBT	B10	VG30X50	80.000	1.543	ENVOL	0.751	ENVOL	4.694	ENVOL
CBT	B11	VG30X50	15.000	4.414	ENVOL	2.128	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	50.000	3.242	ENVDL	1.465	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	50.000	3.242	ENVOL	1.465	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	1.814	ENVOL	1.823	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	1.814	ENVOL	1.823	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	1.236	ENVOL	2.185	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	1.236	ENVOL	2.185	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	200.000	1.236	ENVOL	2.333	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	200.000	1.236	ENVOL	2.333	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	250.000	1.236	ENVOL	2.228	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	250.000	1.236	ENVOL	2.228	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	300.000	1.236	ENVOL	1.872	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	300.000	1.236	ENVDL	1.872	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	350.000	1.236	ENVDL	1.344	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	350.000	1.236	ENVOL	1.344	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	400.000	1.236	ENVOL	1.224	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	400.000	1.236	ENVDL	1.224	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	450.000	1.236	ENVDL	1.209	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	450.000	1.236	ENVDL	1.209	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	2.055	ENVOL	1.209	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	2.055	ENVDL	1.209	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	550.000	3.722	ENVDL	1.209	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	550.000	3.722	ENVDL	1.209	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	585.000	4.531	ENVDL	2.438	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	15.000	4.531	ENVOL	2.676	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	4.122	ENVOL	1.327	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	4.122	ENVOL	1.327	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	100.000	2.311	ENVDL	1.327	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	100.000	2.311	ENVOL	1.327	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	150.000	1.356	ENVOL	1.327	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	150.000	1.356	ENVOL	1.327	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	200.000	1.356	ENVDL	1.327	ENVOL	0.000	ENVDL
CBT	B12	VG30X50	200.000	1.356	ENVOL	1.327	ENVDL	0.000	ENVOL
CBT	B12	VG30X50	250.000	1.356	ENVOL	1.528	ENVOL	0.000	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B12	VG30X50	250.000	1.356	ENVOL	1.528	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	1.356	ENVOL	2.149	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	1.356	ENVOL	2.149	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	350.000	1.356	ENVOL	2.639	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	350.000	1.356	ENVOL	2.639	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	1.356	ENVOL	2.877	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	1.356	ENVOL	2.877	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	450.000	1.356	ENVOL	2.861	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	450.000	1.356	ENVDL	2.861	ENVDL	0.000	ENVOL
CBT	B12	VG30X50	500.000	1.356	ENVOL	2.592	ENVDL	0.000	ENVOL
CBT	B12	VG30X50	500.000	1.356	ENVOL	2.592	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	2.057	ENVOL	2.071	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	2.057	ENVOL	2.071	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	585.000	3.020	ENVOL	1.702	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	15.000	0.730	ENVOL	0.356	ENVOL	4.660	ENVOL
CBT	B13	VG30X50	40.000	0.402	ENVOL	0.178	ENVOL	4.660	ENVOL
CBT	B13	VG30X50	40.000	0.402	ENVOL	0.178	ENVOL	4.660	ENVOL
CBT	B13	VG30X50	80.000	0.000	ENVOL	0.044	ENVOL	4.660	ENVDL
CBT	B15	VG30X50	0.000	0.000	ENVOL	1.390	ENVOL	4.441	ENVOL
CBT	B15	VG30X50	40.000	1.542	ENVOL	1.508	ENVOL	4.441	ENVOL
CBT	B15	VG30X50	40.000	1.542	ENVOL	1.508	ENVOL	4.441	ENVOL
CBT	B15	VG30X50	47.500	1.542	ENVOL	1.508	ENVOL	4.441	ENVOL
CBT	B15	VG30X50	47.500	1.542	ENVOL	1.508	ENVOL	4.511	ENVOL
CBT	B15	VG30X50	80.000	1.542	ENVOL	1.508	ENVOL	4.511	ENVOL
CBT	B15	VG30X50	80.000	1.542	ENVOL	1.508	ENVOL	4.390	ENVOL
CBT	B15	VG30X50	95.000	1.542	ENVOL	1.508	ENVOL	4.390	ENVOL
CBT	B15	VG30X50	95.000	1.542	ENVOL	1.508	ENVOL	4.549	ENVOL
CBT	B15	VG30X50	142.500	1.542	ENVOL	1.508	ENVOL	4.549	ENVOL
CBT	B15	VG30X50	142.500	1.542	ENVOL	1.508	ENVOL	4.424	ENVOL
CBT	B15	VG30X50	190.000	2.928	ENVOL	1.508	ENVOL	4.424	ENVOL
CBT	B15	VG30X50	190.000	2.928	ENVOL	1.508	ENVOL	4.261	ENVOL
CBT	B15	VG30X50	237.500	4.531	ENVOL	1.508	ENVOL	4.261	ENVOL
CBT	B15	VG30X50	237.500	4.531	ENVOL	1.508	ENVOL	4.191	ENVOL
CBT	B15	VG30X50	270.000	4.774	ENVOL	3.046	ENVOL	4.191	ENVOL
CBT	B16	VG30X50	15.000	1.154	ENVOL	0.563	ENVOL	4.739	ENVOL
CBT	B16	VG30X50	45.000	0.795	ENVOL	0.281	ENVOL	4.739	ENVOL
CBT	B16	VG30X50	45.000	0.795	ENVOL	0.281	ENVOL	4.750	ENVOL
CBT	B16	VG30X50	90.000	0.347	ENVOL	0.281	ENVOL	4.750	ENVOL
CBT	B16	VG30X50	90.000	0.347	ENVOL	0.281	ENVOL	4.762	ENVOL
CBT	B16	VG30X50	135.000	0.006	ENVOL	0.014	ENVOL	4.762	ENVOL
CBT	B18	VG30X50	25.000	6.489	ENVOL	4.105	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	5.686	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	5.686	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	4.531	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	4.531	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	3.317	ENVOL	2.962	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	3.317	ENVOL	2.962	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	2.923	ENVOL	3.701	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	2.923	ENVOL	3.701	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	221.875	2.923	ENVOL	4.373	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	266.250	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	289.710	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	289.710	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	310.625	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	310.625	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	355.000	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	355.000	2.923	ENVOL	4.629	ENVOL	0.000	ENVDL
CBT	B18	VG30X50	401.818	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	401.818	2.923	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	2.923	ENVOL	4.578	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	2.923	ENVOL	4.578	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	495.455	2.923	ENVOL	4.252	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	495.455	2.923	ENVDL	4.252	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	542.273	2.923	ENVOL	4.039	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	542.273	2.923	ENVDL	4.039	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	2.923	ENVOL	3.848	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	2.923	ENVOL	3.848	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	589.091	2.923	ENVDL	3.697	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	589.091	2.923	ENVOL	3.697	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	635.909	2.923	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	635.909	2.923	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	3.226	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	3.226	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	4.531	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	4.531	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	776.364	6.068	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	776.364	6.068	ENVOL	2.858	ENVDL	0.000	ENVOL
CBT	B18	VG30X50	823.182	8.243	ENVOL	2.858	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	823.182	8.243	ENVOL	2.858	ENVDL	0.000	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B18	VG30X50	845.000	9.349	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	25.000	6.188	ENVOL	3.921	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	69.118	4.531	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	113.237	3.948	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	157.355	2.958	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	201.473	2.958	ENVOL	3.300	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	245.592	2.958	ENVOL	4.130	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	2.958	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	2.958	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	337.995	2.958	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	386.280	2.958	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	434.565	2.958	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	482.850	2.958	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	531.135	2.958	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	2.958	ENVOL	4.081	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	2.958	ENVOL	4.081	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	623.683	2.958	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	667.947	2.958	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	712.210	4.531	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	756.473	5.355	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	800.737	7.314	ENVOL	2.893	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	845.000	9.472	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	25.000	6.171	ENVOL	3.910	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	44.375	5.378	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	44.375	5.378	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	88.750	4.531	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	88.750	4.531	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	133.125	3.034	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	133.125	3.034	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	177.500	3.034	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	177.500	3.034	ENVOL	2.967	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	221.875	3.034	ENVOL	3.148	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	221.875	3.034	ENVOL	3.148	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	266.250	3.034	ENVOL	3.793	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	266.250	3.034	ENVOL	3.793	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	289.710	3.034	ENVOL	4.076	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	289.710	3.034	ENVOL	4.076	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	310.625	3.034	ENVOL	4.207	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	310.625	3.034	ENVOL	4.207	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	355.000	3.034	ENVOL	4.629	ENVOL	4.560	ENVOL
CBT	B20	VG30X50	355.000	3.034	ENVOL	4.629	ENVOL	3.864	ENVOL
CBT	B20	VG30X50	397.917	3.034	ENVOL	4.629	ENVOL	3.864	ENVOL
CBT	B20	VG30X50	397.917	3.034	ENVOL	4.629	ENVOL	3.917	ENVOL
CBT	B20	VG30X50	440.833	3.034	ENVOL	4.629	ENVOL	3.917	ENVOL
CBT	B20	VG30X50	440.833	3.034	ENVOL	4.629	ENVOL	4.041	ENVOL
CBT	B20	VG30X50	483.750	3.034	ENVOL	4.629	ENVOL	4.041	ENVOL
CBT	B20	VG30X50	483.750	3.034	ENVOL	4.629	ENVOL	4.199	ENVOL
CBT	B20	VG30X50	526.667	3.034	ENVOL	4.168	ENVOL	4.199	ENVOL
CBT	B20	VG30X50	526.667	3.034	ENVOL	4.168	ENVOL	4.324	ENVOL
CBT	B20	VG30X50	569.583	3.034	ENVOL	3.876	ENVOL	4.324	ENVOL
CBT	B20	VG30X50	569.583	3.034	ENVOL	3.876	ENVOL	4.377	ENVOL
CBT	B20	VG30X50	579.420	3.034	ENVOL	3.785	ENVOL	4.377	ENVOL
CBT	B20	VG30X50	579.420	3.034	ENVOL	3.785	ENVOL	4.377	ENVOL
CBT	B20	VG30X50	612.500	3.034	ENVOL	3.154	ENVOL	4.377	ENVOL
CBT	B20	VG30X50	612.500	3.034	ENVOL	3.474	ENVOL	5.304	ENVOL
CBT	B20	VG30X50	655.417	3.034	ENVOL	2.967	ENVOL	5.304	ENVOL
CBT	B20	VG30X50	655.417	3.034	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	698.333	3.034	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	698.333	3.034	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	741.250	4.531	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	741.250	4.531	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	784.167	6.245	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	784.167	6.245	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	827.083	8.648	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	827.083	8.648	ENVOL	2.967	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	845.000	9.733	ENVOL	4.629	ENVOL	5.343	ENVOL
CBT	B21	VG20X50	0.000	0.490	ENVOL	0.138	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	47.500	0.088	ENVOL	0.374	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	142.500	0.000	ENVOL	0.678	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	142.500	0.000	ENVOL	0.678	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	190.000	0.202	ENVOL	0.504	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	190.000	0.202	ENVOL	0.503	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	237.500	0.679	ENVOL	0.181	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	237.500	0.680	ENVOL	0.181	ENVOL	2.736	ENVOL
CBT	B21	VG20X50	285.000	1.426	ENVOL	0.000	ENVOL	2.736	ENVOL
CBT	B22	VG30X50	25.000	4.602	ENVOL	3.888	ENVOL	5.068	ENVOL
CBT	B22	VG30X50	42.917	4.531	ENVOL	3.882	ENVOL	5.068	ENVOL
CBT	B22	VG30X50	42.917	4.531	ENVOL	3.882	ENVOL	5.031	ENVOL
CBT	B22	VG30X50	85.833	2.989	ENVOL	3.947	ENVOL	5.031	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B22	VG30X50	85.833	2.989	ENVOL	3.947	ENVOL	4.938	ENVOL
CBT	B22	VG30X50	128.750	2.308	ENVOL	4.020	ENVOL	4.938	ENVOL
CBT	B22	VG30X50	128.750	2.308	ENVOL	4.020	ENVOL	4.819	ENVOL
CBT	B22	VG30X50	171.667	2.308	ENVOL	3.818	ENVOL	4.819	ENVOL
CBT	B22	VG30X50	171.667	2.308	ENVOL	3.817	ENVOL	4.726	ENVOL
CBT	B22	VG30X50	214.583	2.308	ENVOL	3.362	ENVOL	4.726	ENVOL
CBT	B22	VG30X50	214.583	2.308	ENVOL	3.361	ENVOL	4.689	ENVOL
CBT	B22	VG30X50	257.500	2.308	ENVOL	3.440	ENVOL	4.689	ENVOL
CBT	B22	VG30X50	257.500	2.308	ENVOL	3.216	ENVOL	4.939	ENVOL
CBT	B22	VG30X50	300.417	2.308	ENVOL	3.102	ENVOL	4.939	ENVOL
CBT	B22	VG30X50	300.417	2.308	ENVOL	3.102	ENVOL	4.902	ENVOL
CBT	B22	VG30X50	343.333	2.308	ENVOL	2.798	ENVOL	4.902	ENVOL
CBT	B22	VG30X50	343.333	2.308	ENVOL	2.798	ENVOL	4.809	ENVOL
CBT	B22	VG30X50	386.250	2.967	ENVOL	2.324	ENVOL	4.809	ENVOL
CBT	B22	VG30X50	386.250	2.967	ENVOL	2.324	ENVOL	4.689	ENVOL
CBT	B22	VG30X50	429.167	4.531	ENVOL	2.257	ENVOL	4.689	ENVOL
CBT	B22	VG30X50	429.167	4.531	ENVOL	2.257	ENVOL	4.597	ENVOL
CBT	B22	VG30X50	472.083	6.283	ENVOL	2.257	ENVOL	4.597	ENVOL
CBT	B22	VG30X50	472.083	6.283	ENVOL	2.257	ENVOL	4.560	ENVOL
CBT	B22	VG30X50	490.000	7.271	ENVOL	4.582	ENVOL	4.560	ENVOL
CBT	B23	VG20X50	0.000	1.063	ENVOL	0.000	ENVOL	3.038	ENVOL
CBT	B23	VG20X50	45.000	0.584	ENVOL	0.000	ENVOL	3.038	ENVOL
CBT	B23	VG20X50	45.000	0.583	ENVOL	0.000	ENVOL	3.038	ENVOL
CBT	B23	VG20X50	90.000	0.222	ENVOL	0.000	ENVOL	3.038	ENVOL
CBT	B23	VG20X50	90.000	0.222	ENVOL	0.000	ENVOL	3.038	ENVOL
CBT	B23	VG20X50	135.000	0.000	ENVOL	0.038	ENVOL	3.038	ENVOL
CBT	B25	VG30X50	0.000	0.000	ENVOL	0.037	ENVOL	4.745	ENVOL
CBT	B25	VG30X50	47.500	0.986	ENVOL	0.428	ENVOL	4.745	ENVOL
CBT	B25	VG30X50	47.500	0.986	ENVOL	0.428	ENVOL	4.745	ENVOL
CBT	B25	VG30X50	80.000	1.763	ENVOL	0.858	ENVOL	4.745	ENVOL
CBT	B26	VG30X50	15.000	4.531	ENVOL	2.375	ENVOL	5.163	ENVOL
CBT	B26	VG30X50	50.000	3.565	ENVOL	1.548	ENVOL	5.163	ENVOL
CBT	B26	VG30X50	50.000	3.565	ENVOL	1.548	ENVOL	5.220	ENVOL
CBT	B26	VG30X50	100.000	1.870	ENVOL	1.981	ENVOL	5.220	ENVOL
CBT	B26	VG30X50	100.000	1.870	ENVOL	1.982	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	150.000	1.455	ENVOL	2.490	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	150.000	1.455	ENVOL	2.490	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	200.000	1.455	ENVOL	2.703	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	200.000	1.455	ENVOL	2.703	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	250.000	1.455	ENVOL	2.609	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	250.000	1.455	ENVOL	2.609	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	300.000	1.455	ENVOL	2.209	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	300.000	1.455	ENVOL	2.209	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	350.000	1.455	ENVOL	1.844	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	350.000	1.455	ENVOL	1.844	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	1.455	ENVOL	1.676	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	1.455	ENVOL	1.676	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	1.455	ENVOL	1.423	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	1.455	ENVOL	1.423	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	500.000	2.427	ENVOL	1.423	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	500.000	2.427	ENVOL	1.423	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	550.000	4.411	ENVOL	1.423	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	550.000	4.411	ENVOL	1.423	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	585.000	4.531	ENVOL	2.873	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	15.000	4.531	ENVOL	2.622	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	4.016	ENVOL	1.300	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	4.016	ENVOL	1.300	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	2.222	ENVOL	1.300	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	2.222	ENVOL	1.300	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	1.329	ENVOL	1.300	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	1.329	ENVOL	1.300	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	1.329	ENVOL	1.508	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	1.329	ENVOL	1.508	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	1.329	ENVOL	1.856	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	1.329	ENVOL	1.856	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	300.000	1.329	ENVOL	1.901	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	300.000	1.329	ENVOL	1.901	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	400.000	1.329	ENVOL	1.844	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	400.000	1.329	ENVOL	1.844	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	450.000	1.329	ENVOL	1.458	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	450.000	1.329	ENVOL	1.458	ENVOL	5.305	ENVOL
CBT	B27	VG30X50	500.000	1.329	ENVOL	1.300	ENVOL	5.305	ENVOL
CBT	B27	VG30X50	500.000	1.329	ENVOL	1.300	ENVOL	5.177	ENVOL
CBT	B27	VG30X50	550.000	2.424	ENVOL	1.300	ENVOL	5.177	ENVOL
CBT	B27	VG30X50	550.000	2.424	ENVOL	1.300	ENVOL	5.120	ENVOL
CBT	B27	VG30X50	585.000	3.641	ENVOL	1.760	ENVOL	5.120	ENVOL
CBT	B28	VG30X50	15.000	4.531	ENVOL	2.377	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	3.377	ENVOL	1.179	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	3.376	ENVOL	1.179	ENVOL	0.000	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
C8T	B28	VG30x50	95.000	1.390	ENVOL	1.179	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	95.000	1.390	ENVOL	1.179	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	142.500	1.205	ENVOL	1.179	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	142.500	1.205	ENVOL	1.179	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	190.000	1.406	ENVOL	1.357	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	190.000	1.406	ENVOL	1.357	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	237.500	2.705	ENVOL	2.241	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	237.500	2.706	ENVOL	2.241	ENVOL	0.000	ENVOL
C8T	B28	VG30x50	270.000	3.800	ENVOL	2.758	ENVOL	0.000	ENVOL
C8T	B29	VG30x50	15.000	1.866	ENVOL	0.907	ENVOL	5.343	ENVOL
C8T	B29	VG30x50	45.000	1.285	ENVOL	0.452	ENVOL	5.343	ENVOL
C8T	B29	VG30x50	45.000	1.285	ENVOL	0.452	ENVOL	5.343	ENVOL
C8T	B29	VG30x50	90.000	0.542	ENVOL	0.452	ENVOL	5.343	ENVOL
C8T	B29	VG30x50	90.000	0.542	ENVOL	0.452	ENVOL	5.343	ENVOL
C8T	B29	VG30x50	135.000	0.000	ENVOL	0.063	ENVOL	5.343	ENVOL
C8T	B31	VG30x50	25.000	4.264	ENVOL	2.056	ENVOL	3.666	ENVOL
C8T	B31	VG30x50	41.000	3.727	ENVOL	1.021	ENVOL	3.666	ENVOL
C8T	B31	VG30x50	41.000	3.727	ENVOL	1.021	ENVOL	3.697	ENVOL
C8T	B31	VG30x50	82.000	2.483	ENVOL	1.021	ENVOL	3.697	ENVOL
C8T	B31	VG30x50	82.000	2.483	ENVOL	1.021	ENVOL	3.762	ENVOL
C8T	B31	VG30x50	123.000	1.407	ENVOL	1.021	ENVOL	3.762	ENVOL
C8T	B31	VG30x50	123.000	1.407	ENVOL	1.021	ENVOL	3.827	ENVOL
C8T	B31	VG30x50	164.000	1.044	ENVOL	1.021	ENVOL	3.827	ENVOL
C8T	B31	VG30x50	164.000	1.044	ENVOL	1.021	ENVOL	3.858	ENVOL
C8T	B31	VG30x50	205.000	0.000	ENVOL	0.377	ENVOL	3.858	ENVOL
C8T	B32	VG30x50	25.000	5.897	ENVOL	3.742	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	41.000	5.189	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	41.000	5.189	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	82.000	4.531	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	82.000	4.531	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	123.000	2.672	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	123.000	2.672	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	164.000	1.890	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	164.000	1.890	ENVOL	1.849	ENVOL	5.343	ENVOL
C8T	B32	VG30x50	205.000	0.000	ENVOL	0.683	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	25.000	4.531	ENVOL	2.856	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	41.000	4.531	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	41.000	4.531	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	82.000	3.534	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	82.000	3.534	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	123.000	2.052	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	123.000	2.052	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	164.000	1.446	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	164.000	1.446	ENVOL	1.415	ENVOL	5.343	ENVOL
C8T	B33	VG30x50	205.000	0.000	ENVOL	0.341	ENVOL	5.343	ENVOL
C8T	B34	VG30x50	25.000	3.363	ENVOL	1.627	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	41.000	2.927	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	41.000	2.927	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	82.000	1.921	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	82.000	1.920	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	123.000	1.083	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	123.000	1.083	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	164.000	0.827	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	164.000	0.827	ENVOL	0.809	ENVOL	0.000	ENVOL
C8T	B34	VG30x50	205.000	0.029	ENVOL	0.141	ENVOL	0.000	ENVOL
C8T	B36	VG20x50	0.000	0.038	ENVOL	0.000	ENVOL	3.230	ENVOL
C8T	B36	VG20x50	47.500	0.099	ENVOL	0.053	ENVOL	3.230	ENVOL
C8T	B36	VG20x50	47.500	0.099	ENVOL	0.053	ENVOL	3.230	ENVOL
C8T	B36	VG20x50	95.000	0.236	ENVOL	0.060	ENVOL	3.230	ENVOL
C8T	B37	VG20x50	0.000	1.101	ENVOL	0.055	ENVOL	3.565	ENVOL
C8T	B37	VG20x50	50.000	0.360	ENVOL	0.462	ENVOL	3.565	ENVOL
C8T	B37	VG20x50	50.000	0.359	ENVOL	0.462	ENVOL	3.655	ENVOL
C8T	B37	VG20x50	100.000	0.000	ENVOL	0.990	ENVOL	3.655	ENVOL
C8T	B37	VG20x50	100.000	0.000	ENVOL	0.990	ENVOL	0.000	ENVOL
C8T	B37	VG20x50	150.000	0.000	ENVOL	1.380	ENVOL	0.000	ENVOL
C8T	B37	VG20x50	200.000	0.000	ENVOL	1.616	ENVOL	0.000	ENVOL
C8T	B37	VG20x50	250.000	0.000	ENVOL	1.694	ENVOL	0.000	ENVOL
C8T	B37	VG20x50	250.000	0.000	ENVOL	1.694	ENVOL	0.000	ENVOL
C8T	B37	VG20x50	300.000	0.000	ENVOL	1.614	ENVOL	0.000	ENVOL
C8T	B37	VG20x50	300.000	0.000	ENVOL	1.614	ENVOL	3.651	ENVOL
C8T	B37	VG20x50	350.000	0.000	ENVOL	1.398	ENVOL	3.651	ENVOL
C8T	B37	VG20x50	350.000	0.000	ENVOL	1.398	ENVOL	3.349	ENVOL
C8T	B37	VG20x50	400.000	0.000	ENVOL	1.035	ENVOL	3.349	ENVOL
C8T	B37	VG20x50	400.000	0.000	ENVOL	1.035	ENVOL	3.051	ENVOL
C8T	B37	VG20x50	450.000	0.000	ENVOL	0.519	ENVOL	3.051	ENVOL
C8T	B37	VG20x50	450.000	0.000	ENVOL	0.519	ENVOL	2.778	ENVOL
C8T	B37	VG20x50	500.000	0.257	ENVOL	0.001	ENVOL	2.778	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOPTDM	COMBO	BOTTDM	COMBO	TORSION	COMBO
CBT	B37	VG20X50	500.000	0.257	ENVOL	0.001	ENVOL	2.574	ENVOL
CBT	B37	VG20X50	550.000	1.115	ENVOL	0.000	ENVOL	2.574	ENVOL
CBT	B37	VG20X50	550.000	1.115	ENVOL	0.000	ENVOL	2.484	ENVOL
CBT	B37	VG20X50	600.000	2.094	ENVOL	0.000	ENVOL	2.484	ENVOL
CBT	B38	VG20X50	0.000	2.001	ENVOL	0.000	ENVOL	2.603	ENVOL
CBT	B38	VG20X50	50.000	1.090	ENVOL	0.000	ENVOL	2.603	ENVOL
CBT	B38	VG20X50	50.000	1.090	ENVOL	0.000	ENVOL	2.693	ENVOL
CBT	B38	VG20X50	100.000	0.332	ENVOL	0.000	ENVOL	2.693	ENVOL
CBT	B38	VG20X50	100.000	0.332	ENVOL	0.000	ENVOL	2.897	ENVOL
CBT	B38	VG20X50	150.000	0.000	ENVOL	0.357	ENVOL	2.897	ENVOL
CBT	B38	VG20X50	150.000	0.000	ENVOL	0.357	ENVOL	3.170	ENVOL
CBT	B38	VG20X50	200.000	0.000	ENVOL	0.787	ENVOL	3.170	ENVOL
CBT	B38	VG20X50	200.000	0.000	ENVOL	0.787	ENVOL	3.468	ENVOL
CBT	B38	VG20X50	250.000	0.000	ENVOL	1.078	ENVOL	3.468	ENVOL
CBT	B38	VG20X50	250.000	0.000	ENVOL	1.078	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	300.000	0.000	ENVOL	1.202	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	300.000	0.000	ENVOL	1.202	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.000	ENVOL	1.158	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.000	ENVOL	1.158	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	400.000	0.000	ENVOL	0.961	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	450.000	0.000	ENVOL	0.630	ENVOL	3.625	ENVOL
CBT	B38	VG20X50	500.000	0.106	ENVOL	0.149	ENVOL	3.625	ENVOL
CBT	B38	VG20X50	500.000	0.106	ENVOL	0.149	ENVOL	3.421	ENVOL
CBT	B38	VG20X50	550.000	0.779	ENVOL	0.000	ENVOL	3.421	ENVOL
CBT	B38	VG20X50	550.000	0.779	ENVOL	0.000	ENVOL	3.331	ENVOL
CBT	B38	VG20X50	600.000	1.575	ENVOL	0.000	ENVOL	3.331	ENVOL
CBT	B39	VG20X50	0.000	1.340	ENVOL	0.000	ENVOL	3.637	ENVOL
CBT	B39	VG20X50	47.500	0.904	ENVOL	0.000	ENVOL	3.637	ENVOL
CBT	B39	VG20X50	47.500	0.904	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	95.000	0.587	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	95.000	0.586	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	142.500	0.432	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	142.500	0.432	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	190.000	0.458	ENVOL	0.028	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	190.000	0.458	ENVOL	0.028	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.614	ENVOL	0.050	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.614	ENVOL	0.050	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	285.000	0.864	ENVOL	0.010	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	0.000	0.622	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	45.000	0.335	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	45.000	0.335	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	90.000	0.127	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	90.000	0.128	ENVOL	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	135.000	0.003	ENVOL	0.015	ENVOL	0.000	ENVOL

C O N C R E T E B E A M D E S I G N O U T P U T (ACI 318-08/IBC 2009)

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TORSION	COMBO	SHEAR	COMBO
CBT	B6	VG30X50	0.000	0.023	ENVOL	0.020	ENVOL
CBT	B6	VG30X50	50.000	0.023	ENVOL	0.020	ENVOL
CBT	B6	VG30X50	50.000	0.023	ENVOL	0.020	ENVOL
CBT	B6	VG30X50	75.000	0.023	ENVOL	0.020	ENVOL
CBT	B7	VG30X50	0.000	0.009	ENVOL	0.035	ENVOL
CBT	B7	VG30X50	50.000	0.009	ENVOL	0.035	ENVOL
CBT	B7	VG30X50	50.000	0.009	ENVOL	0.035	ENVOL
CBT	B7	VG30X50	75.000	0.009	ENVOL	0.035	ENVOL
CBT	B8	VG30X50	0.000	0.014	ENVOL	0.021	ENVOL
CBT	B8	VG30X50	50.000	0.014	ENVOL	0.022	ENVOL
CBT	B8	VG30X50	50.000	0.014	ENVOL	0.022	ENVOL
CBT	B8	VG30X50	75.000	0.014	ENVOL	0.022	ENVOL
CBT	B10	VG30X50	0.000	0.038	ENVOL	0.032	ENVOL
CBT	B10	VG30X50	47.500	0.038	ENVOL	0.033	ENVOL
CBT	B10	VG30X50	47.500	0.038	ENVOL	0.033	ENVOL
CBT	B10	VG30X50	80.000	0.038	ENVOL	0.033	ENVOL
CBT	B11	VG30X50	15.000	0.000	ENVOL	0.038	ENVOL
CBT	B11	VG30X50	50.000	0.000	ENVOL	0.035	ENVOL
CBT	B11	VG30X50	50.000	0.000	ENVOL	0.034	ENVOL
CBT	B11	VG30X50	100.000	0.000	ENVOL	0.029	ENVOL
CBT	B11	VG30X50	100.000	0.000	ENVOL	0.029	ENVOL
CBT	B11	VG30X50	150.000	0.000	ENVOL	0.023	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
CBT	B11	VG30X50	150.000	0.000	ENVOL	0.023	ENVOL
CBT	B11	VG30X50	200.000	0.000	ENVOL	0.020	ENVOL
CBT	B11	VG30X50	200.000	0.000	ENVOL	0.020	ENVOL
CBT	B11	VG30X50	250.000	0.000	ENVOL	0.019	ENVOL
CBT	B11	VG30X50	250.000	0.000	ENVOL	0.019	ENVOL
CBT	B11	VG30X50	300.000	0.000	ENVOL	0.019	ENVOL
CBT	B11	VG30X50	300.000	0.000	ENVOL	0.019	ENVOL
CBT	B11	VG30X50	350.000	0.000	ENVOL	0.019	ENVOL
CBT	B11	VG30X50	350.000	0.000	ENVOL	0.019	ENVOL
CBT	B11	VG30X50	400.000	0.000	ENVOL	0.022	ENVOL
CBT	B11	VG30X50	400.000	0.000	ENVOL	0.022	ENVOL
CBT	B11	VG30X50	450.000	0.000	ENVOL	0.028	ENVOL
CBT	B11	VG30X50	450.000	0.000	ENVOL	0.028	ENVOL
CBT	B11	VG30X50	500.000	0.000	ENVOL	0.034	ENVOL
CBT	B11	VG30X50	500.000	0.000	ENVOL	0.034	ENVOL
CBT	B11	VG30X50	550.000	0.000	ENVOL	0.040	ENVOL
CBT	B11	VG30X50	550.000	0.000	ENVOL	0.040	ENVOL
CBT	B11	VG30X50	585.000	0.000	ENVOL	0.043	ENVOL
CBT	B12	VG30X50	15.000	0.000	ENVOL	0.046	ENVOL
CBT	B12	VG30X50	50.000	0.000	ENVOL	0.043	ENVOL
CBT	B12	VG30X50	50.000	0.000	ENVOL	0.043	ENVOL
CBT	B12	VG30X50	100.000	0.000	ENVOL	0.037	ENVOL
CBT	B12	VG30X50	100.000	0.000	ENVOL	0.037	ENVOL
CBT	B12	VG30X50	150.000	0.000	ENVOL	0.031	ENVOL
CBT	B12	VG30X50	150.000	0.000	ENVOL	0.031	ENVOL
CBT	B12	VG30X50	200.000	0.000	ENVOL	0.025	ENVOL
CBT	B12	VG30X50	200.000	0.000	ENVOL	0.025	ENVOL
CBT	B12	VG30X50	250.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	250.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	300.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	300.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	350.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	350.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	400.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	400.000	0.000	ENVOL	0.017	ENVOL
CBT	B12	VG30X50	450.000	0.000	ENVOL	0.018	ENVOL
CBT	B12	VG30X50	450.000	0.000	ENVOL	0.018	ENVOL
CBT	B12	VG30X50	500.000	0.000	ENVOL	0.025	ENVOL
CBT	B12	VG30X50	500.000	0.000	ENVOL	0.025	ENVOL
CBT	B12	VG30X50	550.000	0.000	ENVOL	0.031	ENVOL
CBT	B12	VG30X50	550.000	0.000	ENVOL	0.031	ENVOL
CBT	B12	VG30X50	585.000	0.000	ENVOL	0.034	ENVOL
CBT	B13	VG30X50	15.000	0.018	ENVOL	0.020	ENVOL
CBT	B13	VG30X50	40.000	0.018	ENVOL	0.020	ENVOL
CBT	B13	VG30X50	40.000	0.018	ENVOL	0.020	ENVOL
CBT	B13	VG30X50	80.000	0.018	ENVOL	0.020	ENVOL
CBT	B15	VG30X50	0.000	0.020	ENVOL	0.036	ENVOL
CBT	B15	VG30X50	40.000	0.020	ENVOL	0.036	ENVOL
CBT	B15	VG30X50	40.000	0.020	ENVOL	0.036	ENVOL
CBT	B15	VG30X50	47.500	0.020	ENVOL	0.036	ENVOL
CBT	B15	VG30X50	47.500	0.019	ENVOL	0.036	ENVOL
CBT	B15	VG30X50	80.000	0.019	ENVOL	0.036	ENVOL
CBT	B15	VG30X50	80.000	0.020	ENVOL	0.036	ENVOL
CBT	B15	VG30X50	95.000	0.020	ENVOL	0.037	ENVOL
CBT	B15	VG30X50	95.000	0.019	ENVOL	0.037	ENVOL
CBT	B15	VG30X50	142.500	0.019	ENVOL	0.037	ENVOL
CBT	B15	VG30X50	142.500	0.020	ENVOL	0.037	ENVOL
CBT	B15	VG30X50	190.000	0.020	ENVOL	0.040	ENVOL
CBT	B15	VG30X50	190.000	0.021	ENVOL	0.042	ENVOL
CBT	B15	VG30X50	237.500	0.021	ENVOL	0.047	ENVOL
CBT	B16	VG30X50	15.000	0.017	ENVOL	0.016	ENVOL
CBT	B16	VG30X50	45.000	0.017	ENVOL	0.016	ENVOL
CBT	B16	VG30X50	45.000	0.017	ENVOL	0.016	ENVOL
CBT	B16	VG30X50	90.000	0.017	ENVOL	0.016	ENVOL
CBT	B16	VG30X50	90.000	0.017	ENVOL	0.016	ENVOL
CBT	B16	VG30X50	135.000	0.017	ENVOL	0.016	ENVOL
CBT	B18	VG30X50	25.000	0.000	ENVOL	0.057	ENVOL
CBT	B18	VG30X50	44.375	0.000	ENVOL	0.056	ENVOL
CBT	B18	VG30X50	44.375	0.000	ENVOL	0.056	ENVOL
CBT	B18	VG30X50	88.750	0.000	ENVOL	0.051	ENVOL
CBT	B18	VG30X50	88.750	0.000	ENVOL	0.051	ENVOL
CBT	B18	VG30X50	133.125	0.000	ENVOL	0.047	ENVOL
CBT	B18	VG30X50	133.125	0.000	ENVOL	0.047	ENVOL
CBT	B18	VG30X50	177.500	0.000	ENVOL	0.042	ENVOL
CBT	B18	VG30X50	177.500	0.000	ENVOL	0.042	ENVOL
CBT	B18	VG30X50	221.875	0.000	ENVOL	0.038	ENVOL
CBT	B18	VG30X50	221.875	0.000	ENVOL	0.038	ENVOL
CBT	B18	VG30X50	266.250	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	266.250	0.000	ENVOL	0.025	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
CBT	B18	VG30X50	289.710	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	289.710	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	310.625	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	310.625	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	355.000	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	355.000	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	401.818	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	401.818	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	448.636	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	448.636	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	495.455	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	495.455	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	542.273	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	542.273	0.000	ENVOL	0.025	ENVOL
CBT	B18	VG30X50	589.091	0.000	ENVOL	0.041	ENVOL
CBT	B18	VG30X50	589.091	0.000	ENVOL	0.041	ENVOL
CBT	B18	VG30X50	635.909	0.000	ENVOL	0.046	ENVOL
CBT	B18	VG30X50	635.909	0.000	ENVOL	0.046	ENVOL
CBT	B18	VG30X50	682.727	0.000	ENVOL	0.050	ENVOL
CBT	B18	VG30X50	682.727	0.000	ENVOL	0.050	ENVOL
CBT	B18	VG30X50	729.545	0.000	ENVOL	0.055	ENVOL
CBT	B18	VG30X50	729.545	0.000	ENVOL	0.055	ENVOL
CBT	B18	VG30X50	776.364	0.000	ENVOL	0.060	ENVOL
CBT	B18	VG30X50	776.364	0.000	ENVOL	0.060	ENVOL
CBT	B18	VG30X50	823.182	0.000	ENVOL	0.064	ENVOL
CBT	B18	VG30X50	823.182	0.000	ENVOL	0.065	ENVOL
CBT	B18	VG30X50	845.000	0.000	ENVOL	0.067	ENVOL
CBT	B19	VG30X50	25.000	0.000	ENVOL	0.063	ENVOL
CBT	B19	VG30X50	69.118	0.000	ENVOL	0.060	ENVOL
CBT	B19	VG30X50	113.237	0.000	ENVOL	0.056	ENVOL
CBT	B19	VG30X50	157.355	0.000	ENVOL	0.053	ENVOL
CBT	B19	VG30X50	201.473	0.000	ENVOL	0.049	ENVOL
CBT	B19	VG30X50	245.592	0.000	ENVOL	0.045	ENVOL
CBT	B19	VG30X50	289.710	0.000	ENVOL	0.041	ENVOL
CBT	B19	VG30X50	289.710	0.000	ENVOL	0.025	ENVOL
CBT	B19	VG30X50	337.995	0.000	ENVOL	0.025	ENVOL
CBT	B19	VG30X50	386.280	0.000	ENVOL	0.025	ENVOL
CBT	B19	VG30X50	434.565	0.000	ENVOL	0.025	ENVOL
CBT	B19	VG30X50	482.850	0.000	ENVOL	0.025	ENVOL
CBT	B19	VG30X50	531.135	0.000	ENVOL	0.025	ENVOL
CBT	B19	VG30X50	579.420	0.000	ENVOL	0.025	ENVOL
CBT	B19	VG30X50	579.420	0.000	ENVOL	0.050	ENVOL
CBT	B19	VG30X50	623.683	0.000	ENVOL	0.055	ENVOL
CBT	B19	VG30X50	667.947	0.000	ENVOL	0.059	ENVOL
CBT	B19	VG30X50	712.210	0.000	ENVOL	0.062	ENVOL
CBT	B19	VG30X50	756.473	0.000	ENVOL	0.066	ENVOL
CBT	B19	VG30X50	800.737	0.000	ENVOL	0.069	ENVOL
CBT	B19	VG30X50	845.000	0.000	ENVOL	0.073	ENVOL
CBT	B20	VG30X50	25.000	0.019	ENVOL	0.057	ENVOL
CBT	B20	VG30X50	44.375	0.019	ENVOL	0.055	ENVOL
CBT	B20	VG30X50	44.375	0.019	ENVOL	0.055	ENVOL
CBT	B20	VG30X50	88.750	0.019	ENVOL	0.051	ENVOL
CBT	B20	VG30X50	88.750	0.019	ENVOL	0.051	ENVOL
CBT	B20	VG30X50	133.125	0.019	ENVOL	0.047	ENVOL
CBT	B20	VG30X50	133.125	0.019	ENVOL	0.047	ENVOL
CBT	B20	VG30X50	177.500	0.019	ENVOL	0.042	ENVOL
CBT	B20	VG30X50	177.500	0.019	ENVOL	0.042	ENVOL
CBT	B20	VG30X50	221.875	0.019	ENVOL	0.026	ENVOL
CBT	B20	VG30X50	221.875	0.019	ENVOL	0.026	ENVOL
CBT	B20	VG30X50	266.250	0.019	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	266.250	0.019	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	289.710	0.019	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	289.710	0.019	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	310.625	0.019	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	310.625	0.019	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	355.000	0.019	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	355.000	0.024	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	397.917	0.024	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	397.917	0.024	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	440.833	0.024	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	440.833	0.023	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	483.750	0.023	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	483.750	0.022	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	526.667	0.022	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	526.667	0.021	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	569.583	0.021	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	569.583	0.020	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	579.420	0.020	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	579.420	0.020	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	612.500	0.020	ENVOL	0.025	ENVOL
CBT	B20	VG30X50	612.500	0.013	ENVOL	0.051	ENVOL
CBT	B20	VG30X50	655.417	0.013	ENVOL	0.055	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---REQUIRED REINFORCING---> TORSION	COMBO	SHEAR	COMBO
CBT	B20	VG30X50	655.417	0.013	ENVOL	0.056	ENVOL
CBT	B20	VG30X50	698.333	0.013	ENVOL	0.060	ENVOL
CBT	B20	VG30X50	698.333	0.012	ENVOL	0.061	ENVOL
CBT	B20	VG30X50	741.250	0.012	ENVOL	0.065	ENVOL
CBT	B20	VG30X50	741.250	0.011	ENVOL	0.067	ENVOL
CBT	B20	VG30X50	784.167	0.011	ENVOL	0.071	ENVOL
CBT	B20	VG30X50	784.167	0.010	ENVOL	0.072	ENVOL
CBT	B20	VG30X50	827.083	0.010	ENVOL	0.077	ENVOL
CBT	B20	VG30X50	827.083	0.010	ENVOL	0.077	ENVOL
CBT	B20	VG30X50	845.000	0.010	ENVOL	0.079	ENVOL
CBT	B21	VG20X50	0.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	47.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	47.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	95.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	95.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	142.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	142.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	190.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	190.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	237.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	237.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	285.000	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	25.000	0.015	ENVOL	0.063	ENVOL
CBT	B22	VG30X50	42.917	0.015	ENVOL	0.061	ENVOL
CBT	B22	VG30X50	42.917	0.015	ENVOL	0.060	ENVOL
CBT	B22	VG30X50	85.833	0.015	ENVOL	0.055	ENVOL
CBT	B22	VG30X50	85.833	0.016	ENVOL	0.054	ENVOL
CBT	B22	VG30X50	128.750	0.016	ENVOL	0.048	ENVOL
CBT	B22	VG30X50	128.750	0.017	ENVOL	0.047	ENVOL
CBT	B22	VG30X50	171.667	0.017	ENVOL	0.041	ENVOL
CBT	B22	VG30X50	171.667	0.017	ENVOL	0.039	ENVOL
CBT	B22	VG30X50	214.583	0.017	ENVOL	0.037	ENVOL
CBT	B22	VG30X50	214.583	0.018	ENVOL	0.037	ENVOL
CBT	B22	VG30X50	257.500	0.018	ENVOL	0.037	ENVOL
CBT	B22	VG30X50	300.417	0.016	ENVOL	0.045	ENVOL
CBT	B22	VG30X50	300.417	0.016	ENVOL	0.046	ENVOL
CBT	B22	VG30X50	343.333	0.016	ENVOL	0.052	ENVOL
CBT	B22	VG30X50	343.333	0.017	ENVOL	0.054	ENVOL
CBT	B22	VG30X50	386.250	0.017	ENVOL	0.059	ENVOL
CBT	B22	VG30X50	386.250	0.018	ENVOL	0.061	ENVOL
CBT	B22	VG30X50	429.167	0.018	ENVOL	0.066	ENVOL
CBT	B22	VG30X50	429.167	0.018	ENVOL	0.067	ENVOL
CBT	B22	VG30X50	472.083	0.018	ENVOL	0.073	ENVOL
CBT	B22	VG30X50	472.083	0.019	ENVOL	0.074	ENVOL
CBT	B22	VG30X50	490.000	0.019	ENVOL	0.075	ENVOL
CBT	B23	VG20X50	0.000	0.015	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	45.000	0.015	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	45.000	0.015	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	90.000	0.015	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	90.000	0.015	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	135.000	0.015	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	0.000	0.038	ENVOL	0.037	ENVOL
CBT	B25	VG30X50	47.500	0.038	ENVOL	0.037	ENVOL
CBT	B25	VG30X50	47.500	0.038	ENVOL	0.037	ENVOL
CBT	B25	VG30X50	80.000	0.038	ENVOL	0.037	ENVOL
CBT	B26	VG30X50	15.000	0.014	ENVOL	0.044	ENVOL
CBT	B26	VG30X50	50.000	0.014	ENVOL	0.041	ENVOL
CBT	B26	VG30X50	50.000	0.013	ENVOL	0.040	ENVOL
CBT	B26	VG30X50	100.000	0.013	ENVOL	0.035	ENVOL
CBT	B26	VG30X50	100.000	0.012	ENVOL	0.034	ENVOL
CBT	B26	VG30X50	150.000	0.012	ENVOL	0.028	ENVOL
CBT	B26	VG30X50	150.000	0.011	ENVOL	0.027	ENVOL
CBT	B26	VG30X50	200.000	0.011	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	200.000	0.010	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	250.000	0.010	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	250.000	0.000	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	300.000	0.000	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	300.000	0.000	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	350.000	0.000	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	350.000	0.000	ENVOL	0.021	ENVOL
CBT	B26	VG30X50	400.000	0.000	ENVOL	0.025	ENVOL
CBT	B26	VG30X50	400.000	0.000	ENVOL	0.027	ENVOL
CBT	B26	VG30X50	450.000	0.000	ENVOL	0.033	ENVOL
CBT	B26	VG30X50	450.000	0.000	ENVOL	0.034	ENVOL
CBT	B26	VG30X50	500.000	0.000	ENVOL	0.039	ENVOL
CBT	B26	VG30X50	500.000	0.000	ENVOL	0.041	ENVOL
CBT	B26	VG30X50	550.000	0.000	ENVOL	0.046	ENVOL
CBT	B26	VG30X50	550.000	0.000	ENVOL	0.047	ENVOL
CBT	B26	VG30X50	585.000	0.000	ENVOL	0.050	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<--------REQUIRED REINFORCING--------> TORSION	COMBO	SHEAR	COMBO
CBT	B27	VG30X50	15.000	0.000	ENVOL	0.046	ENVOL
CBT	B27	VG30X50	50.000	0.000	ENVOL	0.043	ENVOL
CBT	B27	VG30X50	50.000	0.000	ENVOL	0.042	ENVOL
CBT	B27	VG30X50	100.000	0.000	ENVOL	0.037	ENVOL
CBT	B27	VG30X50	100.000	0.000	ENVOL	0.035	ENVOL
CBT	B27	VG30X50	150.000	0.000	ENVOL	0.030	ENVOL
CBT	B27	VG30X50	150.000	0.000	ENVOL	0.029	ENVOL
CBT	B27	VG30X50	200.000	0.000	ENVOL	0.023	ENVOL
CBT	B27	VG30X50	200.000	0.000	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	250.000	0.000	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	250.000	0.000	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	300.000	0.000	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	300.000	0.000	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	350.000	0.000	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	400.000	0.011	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	450.000	0.011	ENVOL	0.018	ENVOL
CBT	B27	VG30X50	450.000	0.013	ENVOL	0.024	ENVOL
CBT	B27	VG30X50	500.000	0.013	ENVOL	0.029	ENVOL
CBT	B27	VG30X50	500.000	0.014	ENVOL	0.030	ENVOL
CBT	B27	VG30X50	550.000	0.014	ENVOL	0.036	ENVOL
CBT	B27	VG30X50	550.000	0.014	ENVOL	0.037	ENVOL
CBT	B27	VG30X50	585.000	0.014	ENVOL	0.040	ENVOL
CBT	B28	VG30X50	15.000	0.000	ENVOL	0.054	ENVOL
CBT	B28	VG30X50	47.500	0.000	ENVOL	0.050	ENVOL
CBT	B28	VG30X50	47.500	0.000	ENVOL	0.049	ENVOL
CBT	B28	VG30X50	95.000	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	95.000	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	142.500	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	142.500	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	190.000	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	190.000	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	237.500	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	237.500	0.000	ENVOL	0.047	ENVOL
CBT	B28	VG30X50	270.000	0.000	ENVOL	0.047	ENVOL
CBT	B29	VG30X50	15.000	0.010	ENVOL	0.027	ENVOL
CBT	B29	VG30X50	45.000	0.010	ENVOL	0.027	ENVOL
CBT	B29	VG30X50	45.000	0.010	ENVOL	0.027	ENVOL
CBT	B29	VG30X50	90.000	0.010	ENVOL	0.027	ENVOL
CBT	B29	VG30X50	90.000	0.010	ENVOL	0.027	ENVOL
CBT	B29	VG30X50	135.000	0.010	ENVOL	0.026	ENVOL
CBT	B31	VG30X50	25.000	0.026	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	41.000	0.026	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	41.000	0.026	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	82.000	0.026	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	82.000	0.025	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	123.000	0.025	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	123.000	0.025	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	164.000	0.025	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	164.000	0.024	ENVOL	0.042	ENVOL
CBT	B31	VG30X50	205.000	0.024	ENVOL	0.041	ENVOL
CBT	B32	VG30X50	25.000	0.009	ENVOL	0.061	ENVOL
CBT	B32	VG30X50	41.000	0.009	ENVOL	0.061	ENVOL
CBT	B32	VG30X50	41.000	0.009	ENVOL	0.060	ENVOL
CBT	B32	VG30X50	82.000	0.009	ENVOL	0.058	ENVOL
CBT	B32	VG30X50	82.000	0.009	ENVOL	0.058	ENVOL
CBT	B32	VG30X50	123.000	0.009	ENVOL	0.058	ENVOL
CBT	B32	VG30X50	123.000	0.009	ENVOL	0.058	ENVOL
CBT	B32	VG30X50	164.000	0.009	ENVOL	0.058	ENVOL
CBT	B32	VG30X50	164.000	0.009	ENVOL	0.058	ENVOL
CBT	B32	VG30X50	205.000	0.009	ENVOL	0.057	ENVOL
CBT	B33	VG30X50	25.000	0.010	ENVOL	0.048	ENVOL
CBT	B33	VG30X50	41.000	0.010	ENVOL	0.047	ENVOL
CBT	B33	VG30X50	41.000	0.010	ENVOL	0.047	ENVOL
CBT	B33	VG30X50	82.000	0.010	ENVOL	0.044	ENVOL
CBT	B33	VG30X50	82.000	0.010	ENVOL	0.044	ENVOL
CBT	B33	VG30X50	123.000	0.010	ENVOL	0.044	ENVOL
CBT	B33	VG30X50	123.000	0.010	ENVOL	0.044	ENVOL
CBT	B33	VG30X50	164.000	0.010	ENVOL	0.044	ENVOL
CBT	B33	VG30X50	164.000	0.010	ENVOL	0.044	ENVOL
CBT	B33	VG30X50	205.000	0.010	ENVOL	0.043	ENVOL
CBT	B34	VG30X50	25.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	41.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	41.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	82.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	82.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	123.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	123.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	164.000	0.000	ENVOL	0.032	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBD	SHEAR	COMBD
CBT	B34	VG30X50	164.000	0.000	ENVOL	0.032	ENVOL
CBT	B34	VG30X50	205.000	0.000	ENVOL	0.032	ENVDL
CBT	B36	VG20X50	0.000	0.013	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	47.500	0.013	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	47.500	0.013	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	95.000	0.013	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	0.000	0.010	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	50.000	0.010	ENVDL	0.000	ENVDL
CBT	B37	VG20X50	50.000	0.009	ENVOL	0.000	ENVDL
CBT	B37	VG20X50	100.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	100.000	0.000	ENVDL	0.000	ENVOL
CBT	B37	VG20X50	150.000	0.000	ENVDL	0.000	ENVDL
CBT	B37	VG20X50	150.000	0.000	ENVDL	0.000	ENVOL
CBT	B37	VG20X50	200.000	0.000	ENVDL	0.000	ENVDL
CBT	B37	VG20X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	250.000	0.000	ENVOL	0.000	ENVDL
CBT	B37	VG20X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	300.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	350.000	0.009	ENVOL	0.000	ENVDL
CBT	B37	VG20X50	350.000	0.012	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	400.000	0.012	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	400.000	0.015	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	450.000	0.015	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	450.000	0.017	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	500.000	0.017	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	500.000	0.019	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	550.000	0.019	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	550.000	0.020	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	600.000	0.020	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	0.000	0.019	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	50.000	0.019	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	50.000	0.018	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	100.000	0.018	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	100.000	0.016	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	150.000	0.016	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	150.000	0.014	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	200.000	0.014	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	200.000	0.011	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	250.000	0.011	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	400.000	0.000	ENVDL	0.000	ENVOL
CBT	B38	VG20X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	450.000	0.009	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	500.000	0.009	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	500.000	0.011	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	550.000	0.011	ENVOL	0.000	ENVDL
CBT	B38	VG20X50	550.000	0.012	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	600.000	0.012	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	0.000	0.009	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	47.500	0.009	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	47.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	95.000	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	95.000	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	142.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	142.500	0.000	ENVOL	0.000	ENVDL
CBT	B39	VG20X50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	285.000	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	0.000	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	45.000	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	45.000	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	90.000	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	90.000	0.000	ENVDL	0.000	ENVOL
CBT	B40	VG20X50	135.000	0.000	ENVOL	0.000	ENVOL

8.1.5.2. Vigas Zona Intermedia, Suelo Tipo E

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
ENVOL	ENVE	DIS1A	Combo	1.0000
		DIS1B	Combo	1.0000
		DIS2X	Combo	1.0000
		DIS2Y	Combo	1.0000
		DIS3X	Combo	1.0000
		DIS3Y	Combo	1.0000

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B E A M F O R C E E N V E L O P E S

STORY	BEAM	ITEM	P	V2	V3	T	M2	M3
CBT	B6	Min Value	-0.40	2.81	-0.23	-10.859	-0.032	-11.432
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.40	18.44	0.23	-2.133	0.032	0.450
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B7	Min Value	-0.56	14.98	-0.36	-4.521	-0.054	-20.523
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.56	30.56	0.36	3.643	0.054	0.093
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B8	Min Value	-0.36	4.54	-0.22	0.790	-0.032	-12.462
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.36	19.54	0.22	6.742	0.032	0.267
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B10	Min Value	-0.14	7.80	-0.23	2.908	-0.039	-20.314
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.14	29.01	0.23	17.836	0.039	0.564
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B11	Min Value	-2.03	-44.43	-0.87	-1.390	-0.348	-66.086
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.03	50.27	0.87	3.068	0.348	31.901
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B12	Min Value	-1.87	-53.64	-0.82	-2.456	-0.330	-72.144
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.87	39.94	0.82	1.757	0.330	39.033
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B13	Min Value	-0.11	-18.24	-0.19	-8.736	-0.025	-9.812
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.11	-1.11	0.19	1.895	0.025	0.594
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B15	Min Value	-0.55	-11.79	-0.51	-10.274	-0.151	-82.301
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.55	58.92	0.51	11.006	0.151	18.827
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B16	Min Value	-0.24	-16.39	-0.36	-8.434	-0.083	-15.073
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.24	-3.88	0.36	1.902	0.083	0.195
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B18	Min Value	-1.18	-67.16	-0.70	-0.919	-0.215	-156.264
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.18	77.62	0.70	1.355	0.215	67.691
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B19	Min Value	0.00	-71.96	0.00	-0.636	0.000	-156.649
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.00	82.81	0.00	0.392	0.000	71.828
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B20	Min Value	-1.06	-66.62	-0.50	-8.864	-0.117	-160.477
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.06	91.20	0.50	11.456	0.117	67.041
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B21	Min Value	-0.90	-15.33	-0.20	-4.354	-0.065	-18.910
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.90	22.06	0.20	-1.699	0.065	9.234
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL

BEAM FORCE ENVELOPES

STORY	BEAM	ITEM	P	V2	V3	T	M2	M3
CBT	B22	Min Value	-1.51	-75.12	-0.69	-0.929	-0.136	-125.793
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.51	88.66	0.69	8.740	0.136	58.013
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B23	Min Value	-0.46	-14.76	-0.15	-3.752	-0.045	-13.972
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.46	-0.53	0.15	-0.185	0.045	0.510
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B25	Min Value	-0.23	11.26	-0.34	-17.994	-0.060	-23.064
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.23	32.02	0.34	-3.481	0.060	0.504
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B26	Min Value	-1.86	-51.31	-0.96	-6.612	-0.354	-77.724
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.86	58.10	0.96	3.640	0.354	36.701
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B27	Min Value	-1.76	-53.11	-0.95	-3.961	-0.346	-70.461
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.76	46.17	0.95	6.797	0.346	25.529
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B28	Min Value	-0.88	-64.06	-0.74	-2.769	-0.210	-65.412
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.88	46.74	0.74	1.358	0.210	39.874
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B29	Min Value	-0.41	-26.08	-0.49	-4.959	-0.109	-24.571
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.41	-4.22	0.49	4.129	0.109	0.845
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B31	Min Value	-1.53	-42.22	-0.74	-0.358	-0.130	-54.486
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.53	-11.11	0.74	12.288	0.130	5.126
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B32	Min Value	-2.34	-70.06	-0.96	-4.383	-0.174	-97.382
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.34	-29.41	0.96	3.854	0.174	9.057
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B33	Min Value	-1.92	-54.93	-0.82	-4.699	-0.147	-74.738
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.92	-19.52	0.82	1.234	0.147	4.592
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B34	Min Value	-1.15	-34.81	-0.59	-3.858	-0.106	-43.376
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.15	-5.37	0.59	2.935	0.106	1.964
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B36	Min Value	-0.14	-2.75	-0.09	-3.277	-0.022	-3.261
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.14	4.88	0.09	0.217	0.022	0.988
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B37	Min Value	-1.69	-20.44	-0.27	-4.952	-0.107	-27.008
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.69	25.87	0.27	2.458	0.107	22.433
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B38	Min Value	-1.61	-24.06	-0.26	-3.014	-0.105	-25.592
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.61	21.97	0.26	4.694	0.105	15.833
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B39	Min Value	-0.58	-14.33	-0.17	-0.400	-0.061	-17.381
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.58	7.77	0.17	2.270	0.061	0.998
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B40	Min Value	-0.23	-9.17	-0.11	-0.389	-0.033	-8.236
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.23	0.33	0.11	1.958	0.033	0.210
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL

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C O N C R E T E B E A M O E S I G N O U T P U T (ACI 318-08/IBC 2009)

FLEXURAL AND TORSION OESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<-REQUIRED REINFORCING-> TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B6	VG30X50	0.000	0.000	ENVDL	0.034	ENVOL	3.946	ENVOL
CBT	B6	VG30X50	50.000	0.539	ENVOL	0.172	ENVOL	3.946	ENVOL
CBT	B6	VG30X50	50.000	0.539	ENVOL	0.172	ENVOL	3.946	ENVOL
CBT	B6	VG30X50	75.000	0.882	ENVOL	0.287	ENVOL	3.946	ENVOL
CBT	B7	VG30X50	0.000	1.551E-04	ENVOL	0.007	ENVOL	5.343	ENVOL
CBT	B7	VG30X50	50.000	1.009	ENVOL	0.309	ENVOL	5.343	ENVOL
CBT	B7	VG30X50	50.000	1.009	ENVOL	0.309	ENVOL	5.343	ENVOL
CBT	B7	VG30X50	75.000	1.590	ENVOL	0.515	ENVOL	5.343	ENVOL
CBT	B8	VG30X50	0.000	0.000	ENVDL	0.020	ENVOL	5.066	ENVOL
CBT	B8	VG30X50	50.000	0.597	ENVOL	0.187	ENVOL	5.066	ENVOL
CBT	B8	VG30X50	50.000	0.597	ENVDL	0.187	ENVOL	5.066	ENVOL
CBT	B8	VG30X50	75.000	0.962	ENVOL	0.312	ENVOL	5.066	ENVOL
CBT	B10	VG30X50	0.000	0.000	ENVOL	0.042	ENVOL	4.849	ENVOL
CBT	B10	VG30X50	47.500	0.864	ENVOL	0.306	ENVOL	4.849	ENVOL
CBT	B10	VG30X50	47.500	0.864	ENVOL	0.306	ENVOL	4.849	ENVOL
CBT	B10	VG30X50	80.000	1.574	ENVOL	0.510	ENVOL	4.849	ENVOL
CBT	B11	VG30X50	15.000	4.531	ENVOL	1.486	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	50.000	3.449	ENVOL	1.663	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	50.000	3.449	ENVOL	1.663	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	1.983	ENVOL	1.988	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	1.983	ENVDL	1.988	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	1.020	ENVDL	2.317	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	1.020	ENVOL	2.317	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	200.000	1.020	ENVOL	2.431	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	200.000	1.020	ENVDL	2.431	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	250.000	1.020	ENVDL	2.292	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	250.000	1.020	ENVDL	2.292	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	300.000	1.020	ENVDL	1.903	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	300.000	1.020	ENVDL	1.903	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	350.000	1.020	ENVOL	1.347	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	350.000	1.020	ENVOL	1.347	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	400.000	1.020	ENVOL	1.261	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	400.000	1.020	ENVOL	1.261	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	450.000	1.020	ENVDL	0.998	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	450.000	1.020	ENVOL	0.998	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	2.163	ENVOL	0.998	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	2.163	ENVOL	0.998	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	550.000	3.868	ENVOL	0.998	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	550.000	3.868	ENVOL	0.998	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	585.000	4.531	ENVOL	1.671	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	15.000	4.531	ENVDL	1.826	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	4.262	ENVDL	1.090	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	4.262	ENVDL	1.090	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	100.000	2.415	ENVDL	1.090	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	100.000	2.415	ENVDL	1.090	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	150.000	1.114	ENVOL	1.090	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	150.000	1.114	ENVOL	1.090	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	200.000	1.114	ENVOL	1.276	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	200.000	1.114	ENVOL	1.276	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	250.000	1.114	ENVDL	1.534	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	250.000	1.114	ENVDL	1.534	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	1.114	ENVOL	2.176	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	1.114	ENVDL	2.176	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	1.114	ENVOL	2.968	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	1.114	ENVOL	2.968	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	450.000	1.114	ENVOL	2.985	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	450.000	1.114	ENVOL	2.985	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	500.000	1.217	ENVOL	2.748	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	500.000	1.217	ENVOL	2.748	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	2.249	ENVOL	2.259	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	2.249	ENVOL	2.259	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	585.000	3.237	ENVDL	1.911	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	15.000	0.756	ENVOL	0.246	ENVOL	4.524	ENVOL
CBT	B13	VG30X50	40.000	0.418	ENVOL	0.147	ENVOL	4.524	ENVOL
CBT	B13	VG30X50	40.000	0.418	ENVOL	0.147	ENVOL	4.524	ENVOL
CBT	B13	VG30X50	80.000	0.000	ENVOL	0.045	ENVOL	4.524	ENVOL
CBT	B15	VG30X50	0.000	0.000	ENVDL	1.426	ENVOL	4.208	ENVOL
CBT	B15	VG30X50	40.000	1.273	ENVDL	1.245	ENVOL	4.208	ENVOL
CBT	B15	VG30X50	40.000	1.273	ENVDL	1.245	ENVOL	4.208	ENVOL
CBT	B15	VG30X50	47.500	1.273	ENVDL	1.245	ENVOL	4.208	ENVOL
CBT	B15	VG30X50	47.500	1.273	ENVDL	1.245	ENVOL	4.278	ENVOL
CBT	B15	VG30X50	80.000	1.273	ENVOL	1.245	ENVOL	4.278	ENVOL
CBT	B15	VG30X50	80.000	1.273	ENVOL	1.245	ENVOL	4.105	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<-----REQUIRED REINFORCING-----> TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B15	VG30X50	95.000	1.273	ENVOL	1.245	ENVOL	4.105	ENVOL
CBT	B15	VG30X50	95.000	1.273	ENVOL	1.245	ENVOL	4.265	ENVOL
CBT	B15	VG30X50	142.500	1.419	ENVOL	1.245	ENVOL	4.265	ENVOL
CBT	B15	VG30X50	142.500	1.419	ENVOL	1.245	ENVOL	4.140	ENVOL
CBT	B15	VG30X50	190.000	3.068	ENVOL	1.245	ENVOL	4.140	ENVOL
CBT	B15	VG30X50	190.000	3.069	ENVOL	1.245	ENVOL	3.977	ENVOL
CBT	B15	VG30X50	237.500	4.531	ENVOL	1.245	ENVOL	3.977	ENVOL
CBT	B15	VG30X50	237.500	4.531	ENVOL	1.245	ENVOL	3.907	ENVOL
CBT	B15	VG30X50	270.000	4.941	ENVOL	2.086	ENVOL	3.907	ENVOL
CBT	B16	VG30X50	15.000	1.164	ENVOL	0.378	ENVOL	4.606	ENVOL
CBT	B16	VG30X50	45.000	0.803	ENVOL	0.227	ENVOL	4.606	ENVOL
CBT	B16	VG30X50	45.000	0.802	ENVOL	0.227	ENVOL	4.617	ENVOL
CBT	B16	VG30X50	90.000	0.351	ENVOL	0.227	ENVOL	4.617	ENVOL
CBT	B16	VG30X50	90.000	0.351	ENVOL	0.227	ENVOL	4.629	ENVOL
CBT	B16	VG30X50	135.000	0.006	ENVOL	0.015	ENVOL	4.629	ENVOL
CBT	B18	VG30X50	25.000	6.922	ENVOL	2.886	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	6.092	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	6.092	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	4.531	ENVOL	2.892	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	4.531	ENVOL	2.892	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	3.711	ENVOL	3.346	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	3.711	ENVOL	3.346	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	2.434	ENVOL	4.031	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	2.434	ENVOL	4.031	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	221.875	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	221.875	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	266.250	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	266.250	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	310.625	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	310.625	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	355.000	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	355.000	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	401.818	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	401.818	2.434	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	2.434	ENVOL	4.578	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	2.434	ENVOL	4.578	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	495.455	2.434	ENVOL	4.252	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	495.455	2.434	ENVOL	4.252	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	542.273	2.434	ENVOL	4.176	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	542.273	2.434	ENVOL	4.176	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	2.434	ENVOL	4.033	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	2.434	ENVOL	4.033	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	589.091	2.434	ENVOL	3.894	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	589.091	2.434	ENVOL	3.894	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	635.909	2.434	ENVOL	3.107	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	635.909	2.434	ENVOL	3.107	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	3.548	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	3.548	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	4.531	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	4.531	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	776.364	6.425	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	776.364	6.425	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	823.182	8.667	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	823.182	8.667	ENVOL	2.381	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	845.000	9.807	ENVOL	4.010	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	25.000	6.527	ENVOL	2.728	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	69.118	4.788	ENVOL	2.387	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	113.237	4.281	ENVOL	2.387	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	157.355	2.440	ENVOL	2.641	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	201.473	2.440	ENVOL	3.535	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	245.592	2.440	ENVOL	4.322	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	2.440	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	2.440	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	337.995	2.440	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	386.280	2.440	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	434.565	2.440	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	482.850	2.440	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	531.135	2.440	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	2.440	ENVOL	4.081	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	2.440	ENVOL	4.081	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	623.683	2.440	ENVOL	2.539	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	667.947	2.841	ENVOL	2.387	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	712.210	4.531	ENVOL	2.387	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	756.473	5.616	ENVOL	2.387	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	800.737	7.622	ENVOL	2.387	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	845.000	9.833	ENVOL	4.020	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	25.000	6.491	ENVOL	2.713	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	44.375	5.676	ENVOL	2.446	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	44.375	5.676	ENVOL	2.446	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	88.750	4.531	ENVOL	2.446	ENVOL	4.489	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B20	VG30X50	88.750	4.531	ENVOL	2.446	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	133.125	3.219	ENVOL	2.446	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	133.125	3.219	ENVOL	2.446	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	177.500	2.501	ENVOL	2.569	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	177.500	2.501	ENVOL	2.569	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	221.875	2.501	ENVOL	3.322	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	221.875	2.501	ENVOL	3.322	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	266.250	2.501	ENVOL	3.921	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	266.250	2.501	ENVOL	3.921	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	289.710	2.501	ENVOL	4.179	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	289.710	2.501	ENVOL	4.179	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	310.625	2.501	ENVOL	4.279	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	310.625	2.501	ENVOL	4.279	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	355.000	2.501	ENVOL	4.629	ENVOL	4.489	ENVOL
CBT	B20	VG30X50	355.000	2.501	ENVOL	4.629	ENVOL	3.784	ENVOL
CBT	B20	VG30X50	397.917	2.501	ENVOL	4.629	ENVOL	3.784	ENVOL
CBT	B20	VG30X50	397.917	2.501	ENVOL	4.629	ENVOL	3.837	ENVOL
CBT	B20	VG30X50	440.833	2.501	ENVOL	4.629	ENVOL	3.837	ENVOL
CBT	B20	VG30X50	440.833	2.501	ENVOL	4.629	ENVOL	3.962	ENVOL
CBT	B20	VG30X50	483.750	2.501	ENVOL	4.629	ENVOL	3.962	ENVOL
CBT	B20	VG30X50	483.750	2.501	ENVOL	4.629	ENVOL	4.120	ENVOL
CBT	B20	VG30X50	526.667	2.501	ENVOL	4.229	ENVOL	4.120	ENVOL
CBT	B20	VG30X50	526.667	2.501	ENVOL	4.229	ENVOL	4.245	ENVOL
CBT	B20	VG30X50	569.583	2.501	ENVOL	3.974	ENVOL	4.297	ENVOL
CBT	B20	VG30X50	579.420	2.501	ENVOL	3.892	ENVOL	4.297	ENVOL
CBT	B20	VG30X50	579.420	2.501	ENVOL	3.892	ENVOL	4.297	ENVOL
CBT	B20	VG30X50	612.500	2.501	ENVOL	3.290	ENVOL	4.297	ENVOL
CBT	B20	VG30X50	612.500	2.501	ENVOL	3.613	ENVOL	5.303	ENVOL
CBT	B20	VG30X50	655.417	2.501	ENVOL	2.446	ENVOL	5.303	ENVOL
CBT	B20	VG30X50	655.417	2.501	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	698.333	3.218	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	698.333	3.218	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	741.250	4.531	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	741.250	4.531	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	784.167	6.527	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	784.167	6.527	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	827.083	8.987	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	827.083	8.987	ENVOL	2.446	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	845.000	10.099	ENVOL	4.121	ENVOL	5.343	ENVOL
CBT	B21	VG20X50	0.000	0.525	ENVOL	0.173	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	47.500	0.291	ENVOL	0.396	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	47.500	0.291	ENVOL	0.397	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	95.000	0.291	ENVOL	0.596	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	95.000	0.291	ENVOL	0.596	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	142.500	0.291	ENVOL	0.698	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	142.500	0.291	ENVOL	0.698	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	190.000	0.291	ENVOL	0.531	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	190.000	0.291	ENVOL	0.530	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	237.500	0.715	ENVOL	0.285	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	237.500	0.716	ENVOL	0.285	ENVOL	2.711	ENVOL
CBT	B21	VG20X50	285.000	1.471	ENVOL	0.475	ENVOL	2.711	ENVOL
CBT	B22	VG30X50	25.000	5.070	ENVOL	4.479	ENVOL	4.988	ENVOL
CBT	B22	VG30X50	42.917	4.531	ENVOL	4.425	ENVOL	4.988	ENVOL
CBT	B22	VG30X50	42.917	4.531	ENVOL	4.425	ENVOL	4.951	ENVOL
CBT	B22	VG30X50	85.833	3.419	ENVOL	4.372	ENVOL	4.951	ENVOL
CBT	B22	VG30X50	85.833	3.418	ENVOL	4.372	ENVOL	4.858	ENVOL
CBT	B22	VG30X50	128.750	1.954	ENVOL	4.327	ENVOL	4.858	ENVOL
CBT	B22	VG30X50	128.750	1.954	ENVOL	4.327	ENVOL	4.739	ENVOL
CBT	B22	VG30X50	171.667	1.954	ENVOL	4.007	ENVOL	4.739	ENVOL
CBT	B22	VG30X50	171.667	1.954	ENVOL	4.007	ENVOL	4.646	ENVOL
CBT	B22	VG30X50	214.583	1.954	ENVOL	3.434	ENVOL	4.646	ENVOL
CBT	B22	VG30X50	214.583	1.954	ENVOL	3.433	ENVOL	4.609	ENVOL
CBT	B22	VG30X50	257.500	1.954	ENVOL	3.486	ENVOL	4.609	ENVOL
CBT	B22	VG30X50	257.500	1.954	ENVOL	3.245	ENVOL	4.901	ENVOL
CBT	B22	VG30X50	300.417	1.954	ENVOL	3.230	ENVOL	4.901	ENVOL
CBT	B22	VG30X50	300.417	1.954	ENVOL	3.230	ENVOL	4.864	ENVOL
CBT	B22	VG30X50	343.333	1.954	ENVOL	3.023	ENVOL	4.864	ENVOL
CBT	B22	VG30X50	343.333	1.954	ENVOL	3.023	ENVOL	4.772	ENVOL
CBT	B22	VG30X50	386.250	3.299	ENVOL	2.646	ENVOL	4.772	ENVOL
CBT	B22	VG30X50	386.250	3.299	ENVOL	2.646	ENVOL	4.652	ENVOL
CBT	B22	VG30X50	429.167	4.531	ENVOL	2.472	ENVOL	4.652	ENVOL
CBT	B22	VG30X50	429.167	4.531	ENVOL	2.471	ENVOL	4.559	ENVOL
CBT	B22	VG30X50	472.083	6.715	ENVOL	2.131	ENVOL	4.559	ENVOL
CBT	B22	VG30X50	472.083	6.715	ENVOL	2.131	ENVOL	4.522	ENVOL
CBT	B22	VG30X50	490.000	7.746	ENVOL	3.211	ENVOL	4.522	ENVOL
CBT	B23	VG20X50	0.000	1.083	ENVOL	0.351	ENVOL	2.973	ENVOL
CBT	B23	VG20X50	45.000	0.597	ENVOL	0.210	ENVOL	2.973	ENVOL
CBT	B23	VG20X50	45.000	0.596	ENVOL	0.210	ENVOL	2.973	ENVOL
CBT	B23	VG20X50	90.000	0.228	ENVOL	0.210	ENVOL	2.973	ENVOL
CBT	B23	VG20X50	90.000	0.229	ENVOL	0.210	ENVOL	2.973	ENVOL
CBT	B23	VG20X50	135.000	0.000	ENVOL	0.038	ENVOL	2.973	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<-----REQUIRED REINFORCING-----> TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B25	VG30X50	0.000	0.000	ENVOL	0.038	ENVOL	4.892	ENVOL
CBT	B25	VG30X50	47.500	1.001	ENVOL	0.347	ENVOL	4.892	ENVOL
CBT	B25	VG30X50	47.500	1.001	ENVOL	0.347	ENVOL	4.892	ENVOL
CBT	B25	VG30X50	80.000	1.789	ENVOL	0.579	ENVOL	4.892	ENVOL
CBT	B26	VG30X50	15.000	4.531	ENVOL	1.655	ENVOL	5.101	ENVOL
CBT	B26	VG30X50	50.000	3.789	ENVOL	1.761	ENVOL	5.101	ENVOL
CBT	B26	VG30X50	50.000	3.789	ENVOL	1.761	ENVOL	5.158	ENVOL
CBT	B26	VG30X50	100.000	2.049	ENVOL	2.157	ENVOL	5.158	ENVOL
CBT	B26	VG30X50	100.000	2.049	ENVOL	2.157	ENVOL	5.286	ENVOL
CBT	B26	VG30X50	150.000	1.201	ENVOL	2.629	ENVOL	5.286	ENVOL
CBT	B26	VG30X50	150.000	1.201	ENVOL	2.628	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	200.000	1.201	ENVOL	2.804	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	200.000	1.201	ENVOL	2.804	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	250.000	1.201	ENVOL	2.671	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	250.000	1.201	ENVOL	2.671	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	300.000	1.201	ENVOL	2.232	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	300.000	1.201	ENVOL	2.232	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	350.000	1.201	ENVOL	1.859	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	350.000	1.201	ENVOL	1.859	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	1.201	ENVOL	1.729	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	1.201	ENVOL	1.729	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	1.201	ENVOL	1.297	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	1.201	ENVOL	1.297	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	500.000	2.561	ENVOL	1.175	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	500.000	2.561	ENVOL	1.175	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	550.000	4.531	ENVOL	1.175	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	550.000	4.531	ENVOL	1.175	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	585.000	4.655	ENVOL	1.969	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	15.000	4.531	ENVOL	1.783	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	4.141	ENVOL	1.065	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	4.140	ENVOL	1.065	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	2.322	ENVOL	1.065	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	2.322	ENVOL	1.065	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	1.088	ENVOL	1.065	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	1.088	ENVOL	1.065	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	1.088	ENVOL	1.561	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	1.088	ENVOL	1.561	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	1.088	ENVOL	1.887	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	1.088	ENVOL	1.887	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	300.000	1.088	ENVOL	1.910	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	350.000	1.088	ENVOL	1.939	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	350.000	1.088	ENVOL	1.939	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	400.000	1.088	ENVOL	1.879	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	400.000	1.088	ENVOL	1.879	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	450.000	1.088	ENVOL	1.515	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	450.000	1.088	ENVOL	1.515	ENVOL	5.235	ENVOL
CBT	B27	VG30X50	500.000	1.088	ENVOL	1.065	ENVOL	5.235	ENVOL
CBT	B27	VG30X50	500.000	1.088	ENVOL	1.065	ENVOL	5.107	ENVOL
CBT	B27	VG30X50	550.000	2.527	ENVOL	1.065	ENVOL	5.107	ENVOL
CBT	B27	VG30X50	550.000	2.527	ENVOL	1.065	ENVOL	5.051	ENVOL
CBT	B27	VG30X50	585.000	3.763	ENVOL	1.207	ENVOL	5.051	ENVOL
CBT	B28	VG30X50	15.000	4.531	ENVOL	1.653	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	3.550	ENVOL	0.988	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	3.549	ENVOL	0.988	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	95.000	1.460	ENVOL	0.988	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	95.000	1.460	ENVOL	0.988	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	142.500	1.010	ENVOL	0.988	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	142.500	1.010	ENVOL	0.988	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	190.000	1.534	ENVOL	1.482	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	190.000	1.534	ENVOL	1.482	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	237.500	2.935	ENVOL	2.464	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	237.500	2.936	ENVOL	2.464	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	270.000	4.103	ENVOL	3.051	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	15.000	1.907	ENVOL	0.617	ENVOL	5.343	ENVOL
CBT	B29	VG30X50	45.000	1.316	ENVOL	0.370	ENVOL	5.343	ENVOL
CBT	B29	VG30X50	45.000	1.316	ENVOL	0.370	ENVOL	5.343	ENVOL
CBT	B29	VG30X50	90.000	0.557	ENVOL	0.370	ENVOL	5.343	ENVOL
CBT	B29	VG30X50	90.000	0.557	ENVOL	0.370	ENVOL	5.343	ENVOL
CBT	B29	VG30X50	135.000	0.000	ENVOL	0.063	ENVOL	5.343	ENVOL
CBT	B31	VG30X50	25.000	4.296	ENVOL	1.375	ENVOL	3.558	ENVOL
CBT	B31	VG30X50	41.000	3.760	ENVOL	0.822	ENVOL	3.558	ENVOL
CBT	B31	VG30X50	41.000	3.760	ENVOL	0.822	ENVOL	3.589	ENVOL
CBT	B31	VG30X50	82.000	2.509	ENVOL	0.822	ENVOL	3.589	ENVOL
CBT	B31	VG30X50	82.000	2.509	ENVOL	0.822	ENVOL	3.654	ENVOL
CBT	B31	VG30X50	123.000	1.423	ENVOL	0.822	ENVOL	3.654	ENVOL
CBT	B31	VG30X50	123.000	1.423	ENVOL	0.822	ENVOL	3.719	ENVOL
CBT	B31	VG30X50	164.000	0.840	ENVOL	0.822	ENVOL	3.719	ENVOL
CBT	B31	VG30X50	164.000	0.840	ENVOL	0.822	ENVOL	3.749	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B31	VG30X50	205.000	0.000	ENVOL	0.386	ENVOL	3.749	ENVOL
CBT	B32	VG30X50	25.000	5.897	ENVOL	2.474	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	41.000	5.189	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	41.000	5.189	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	82.000	4.531	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	82.000	4.531	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	123.000	2.672	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	123.000	2.672	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	164.000	1.508	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	164.000	1.508	ENVOL	1.475	ENVOL	5.343	ENVOL
CBT	B32	VG30X50	205.000	0.000	ENVOL	0.683	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	25.000	4.531	ENVOL	1.892	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	41.000	4.531	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	41.000	4.531	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	82.000	3.534	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	82.000	3.534	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	123.000	2.052	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	123.000	2.052	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	164.000	1.155	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	164.000	1.155	ENVOL	1.130	ENVOL	5.343	ENVOL
CBT	B33	VG30X50	205.000	0.000	ENVOL	0.345	ENVOL	5.343	ENVOL
CBT	B34	VG30X50	25.000	3.400	ENVOL	1.093	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	41.000	2.960	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	41.000	2.960	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	82.000	1.943	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	82.000	1.943	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	123.000	1.096	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	123.000	1.096	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	164.000	0.668	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	164.000	0.668	ENVOL	0.654	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	205.000	0.036	ENVOL	0.148	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	0.000	0.039	ENVOL	0.013	ENVOL	3.178	ENVOL
CBT	B36	VG20X50	47.500	0.106	ENVOL	0.060	ENVOL	3.178	ENVOL
CBT	B36	VG20X50	47.500	0.106	ENVOL	0.060	ENVOL	3.178	ENVOL
CBT	B36	VG20X50	95.000	0.251	ENVOL	0.082	ENVOL	3.178	ENVOL
CBT	B37	VG20X50	0.000	1.144	ENVOL	0.370	ENVOL	3.533	ENVOL
CBT	B37	VG20X50	50.000	0.416	ENVOL	0.499	ENVOL	3.533	ENVOL
CBT	B37	VG20X50	50.000	0.416	ENVOL	0.499	ENVOL	3.624	ENVOL
CBT	B37	VG20X50	100.000	0.416	ENVOL	1.022	ENVOL	3.624	ENVOL
CBT	B37	VG20X50	100.000	0.416	ENVOL	1.022	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	150.000	0.416	ENVOL	1.407	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	150.000	0.416	ENVOL	1.407	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	200.000	0.416	ENVOL	1.638	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	200.000	0.416	ENVOL	1.638	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	250.000	0.416	ENVOL	1.711	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	300.000	0.416	ENVOL	1.626	ENVOL	3.620	ENVOL
CBT	B37	VG20X50	350.000	0.416	ENVOL	1.398	ENVOL	3.620	ENVOL
CBT	B37	VG20X50	350.000	0.416	ENVOL	1.398	ENVOL	3.317	ENVOL
CBT	B37	VG20X50	400.000	0.416	ENVOL	1.035	ENVOL	3.317	ENVOL
CBT	B37	VG20X50	400.000	0.416	ENVOL	1.035	ENVOL	3.020	ENVOL
CBT	B37	VG20X50	450.000	0.416	ENVOL	0.523	ENVOL	3.020	ENVOL
CBT	B37	VG20X50	450.000	0.416	ENVOL	0.523	ENVOL	2.746	ENVOL
CBT	B37	VG20X50	500.000	0.416	ENVOL	0.407	ENVOL	2.746	ENVOL
CBT	B38	VG20X50	50.000	1.101	ENVOL	0.386	ENVOL	2.655	ENVOL
CBT	B38	VG20X50	100.000	0.394	ENVOL	0.386	ENVOL	2.655	ENVOL
CBT	B38	VG20X50	100.000	0.394	ENVOL	0.386	ENVOL	2.859	ENVOL
CBT	B38	VG20X50	150.000	0.394	ENVOL	0.386	ENVOL	2.859	ENVOL
CBT	B38	VG20X50	150.000	0.394	ENVOL	0.386	ENVOL	3.132	ENVOL
CBT	B38	VG20X50	200.000	0.394	ENVOL	0.787	ENVOL	3.132	ENVOL
CBT	B38	VG20X50	200.000	0.394	ENVOL	0.787	ENVOL	3.429	ENVOL
CBT	B38	VG20X50	250.000	0.394	ENVOL	1.078	ENVOL	3.429	ENVOL
CBT	B38	VG20X50	250.000	0.394	ENVOL	1.078	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	300.000	0.394	ENVOL	1.202	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	300.000	0.394	ENVOL	1.202	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.394	ENVOL	1.158	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.394	ENVOL	1.158	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	400.000	0.394	ENVOL	0.971	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	400.000	0.394	ENVOL	0.971	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	450.000	0.394	ENVOL	0.643	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	450.000	0.394	ENVOL	0.643	ENVOL	3.587	ENVOL
CBT	B38	VG20X50	500.000	0.394	ENVOL	0.386	ENVOL	3.587	ENVOL
CBT	B38	VG20X50	500.000	0.394	ENVOL	0.386	ENVOL	3.383	ENVOL

FLEXURAL AND TORSIDN DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<-----REQUIRED REINFORCING-----> TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B38	VG2DX50	550.000	0.797	ENVOL	0.386	ENVOL	3.383	ENVOL
CBT	B38	VG20X50	550.000	0.798	ENVOL	0.386	ENVOL	3.292	ENVOL
CBT	B38	VG20X50	600.000	1.596	ENVOL	0.515	ENVOL	3.292	ENVOL
CBT	B39	VG20X50	0.000	1.350	ENVOL	0.437	ENVOL	3.615	ENVOL
CBT	B39	VG20X50	47.500	0.915	ENVOL	0.262	ENVOL	3.615	ENVOL
CBT	B39	VG20X50	47.500	0.915	ENVOL	0.262	ENVOL	3.697	ENVOL
CBT	B39	VG20X50	95.000	0.598	ENVOL	0.262	ENVOL	3.697	ENVOL
CBT	B39	VG20X50	95.000	0.598	ENVOL	0.262	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	142.500	0.444	ENVOL	0.262	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	142.500	0.444	ENVOL	0.262	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	190.000	0.477	ENVOL	0.262	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	190.000	0.477	ENVOL	0.262	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.640	ENVOL	0.262	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.640	ENVOL	0.262	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	285.000	0.897	ENVOL	0.291	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	0.000	0.635	ENVOL	0.206	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	45.000	0.344	ENVOL	0.124	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	45.000	0.344	ENVOL	0.124	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	90.000	0.132	ENVOL	0.124	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	90.000	0.132	ENVOL	0.124	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	135.000	0.003	ENVOL	0.016	ENVOL	0.000	ENVOL

C O N C R E T E B E A M D E S I G N O U T P U T (ACI 318-08/IBC 2009)

TORSIDN AND SHEAR DESIGN DF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION IO	STATIDN ID	<---------REQUIRED REINFDRCING---------> TORSION	CDMBO	SHEAR	CDMBO
CBT	B6	VG30X50	0.000	0.024	ENVDL	0.000	ENVDL
CBT	B6	VG30X50	50.000	0.024	ENVOL	0.000	ENVOL
CBT	B6	VG30X50	50.000	0.024	ENVOL	0.000	ENVOL
CBT	B6	VG30X50	75.000	0.024	ENVOL	0.000	ENVDL
CBT	B7	VG30X50	0.000	0.010	ENVOL	0.000	ENVOL
CBT	B7	VG30X50	50.000	0.010	ENVOL	0.000	ENVOL
CBT	B7	VG30X50	50.000	0.010	ENVOL	0.000	ENVOL
CBT	B7	VG30X50	75.000	0.010	ENVOL	0.000	ENVDL
CBT	B8	VG30X50	0.000	0.015	ENVOL	0.000	ENVOL
CBT	B8	VG30X50	50.000	0.015	ENVDL	0.000	ENVDL
CBT	B8	VG30X50	50.000	0.015	ENVDL	0.000	ENVOL
CBT	B8	VG30X50	75.000	0.015	ENVOL	0.000	ENVOL
CBT	B10	VG30X50	0.000	0.039	ENVOL	0.000	ENVOL
CBT	B10	VG30X50	47.500	0.039	ENVDL	0.000	ENVDL
CBT	B10	VG30X50	47.500	0.039	ENVOL	0.000	ENVOL
CBT	B10	VG30X50	80.000	0.039	ENVDL	0.000	ENVOL
CBT	B11	VG30X50	15.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	50.000	0.000	ENVDL	0.000	ENVDL
CBT	B11	VG30X50	50.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	0.000	ENVOL	0.000	ENVDL
CBT	B11	VG30X50	200.000	0.000	ENVDL	0.000	ENVDL
CBT	B11	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	300.000	0.000	ENVOL	0.000	ENVDL
CBT	B11	VG30X50	350.000	0.000	ENVOL	0.000	ENVDL
CBT	B11	VG30X50	350.000	0.000	ENVOL	0.000	ENVDL
CBT	B11	VG30X50	400.000	0.000	ENVOL	0.000	ENVDL
CBT	B11	VG30X50	400.000	0.000	ENVOL	0.000	ENVDL
CBT	B11	VG30X50	450.000	0.000	ENVDL	0.000	ENVDL
CBT	B11	VG30X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	550.000	0.000	ENVDL	0.000	ENVOL
CBT	B11	VG30X50	550.000	0.000	ENVDL	0.000	ENVOL
CBT	B11	VG30X50	585.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	15.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	100.000	0.000	ENVDL	0.000	ENVOL
CBT	B12	VG30X50	100.000	0.000	ENVDL	0.000	ENVOL
CBT	B12	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
CBT	B12	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	585.000	0.000	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	15.000	0.019	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	40.000	0.019	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	40.000	0.019	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	80.000	0.019	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	0.000	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	40.000	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	40.000	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	47.500	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	47.500	0.021	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	80.000	0.021	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	80.000	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	95.000	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	95.000	0.021	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	142.500	0.021	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	142.500	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	190.000	0.022	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	190.000	0.023	ENVDL	0.000	ENVOL
CBT	B15	VG30X50	237.500	0.023	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	237.500	0.024	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	270.000	0.024	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	15.000	0.018	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	45.000	0.018	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	45.000	0.018	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	90.000	0.018	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	90.000	0.018	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	135.000	0.018	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	25.000	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	221.875	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	221.875	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	266.250	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	266.250	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	310.625	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	355.000	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	401.818	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	401.818	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	495.455	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	495.455	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	542.273	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	542.273	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	0.000	ENVDL	0.000	ENVOL
CBT	B18	VG30X50	589.091	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	589.091	0.000	ENVDL	0.000	ENVOL
CBT	B18	VG30X50	635.909	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	635.909	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	776.364	0.000	ENVOL	0.000	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION IO	<--------REQUIREO REINFORCING--------> TORSION	COMBO	SHEAR	COMBO
CBT	B18	VG30X50	776.364	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	823.182	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	823.182	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	845.000	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	25.000	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	69.118	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	113.237	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	157.355	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	201.473	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	245.592	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	337.995	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	386.280	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	434.565	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	482.850	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	531.135	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	623.683	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	667.947	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	712.210	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	756.473	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	800.737	0.000	ENVOL	3.268E-05	ENVOL
CBT	B19	VG30X50	845.000	0.000	ENVOL	0.003	ENVOL
CBT	B20	VG30X50	25.000	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	44.375	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	44.375	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	88.750	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	88.750	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	133.125	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	133.125	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	177.500	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	177.500	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	221.875	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	221.875	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	266.250	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	266.250	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	289.710	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	289.710	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	310.625	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	355.000	0.019	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	355.000	0.025	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	397.917	0.025	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	440.833	0.025	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	440.833	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	483.750	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	483.750	0.022	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	526.667	0.022	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	526.667	0.021	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	569.583	0.021	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	569.583	0.021	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	579.420	0.021	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	579.420	0.021	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	612.500	0.021	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	612.500	0.013	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	655.417	0.013	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	655.417	0.013	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	698.333	0.013	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	698.333	0.012	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	741.250	0.012	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	741.250	0.011	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	784.167	0.011	ENVOL	0.003	ENVOL
CBT	B20	VG30X50	784.167	0.010	ENVOL	0.004	ENVOL
CBT	B20	VG30X50	827.083	0.010	ENVOL	0.007	ENVOL
CBT	B20	VG30X50	827.083	0.010	ENVOL	0.008	ENVOL
CBT	B20	VG30X50	845.000	0.010	ENVOL	0.009	ENVOL
CBT	B21	VG20X50	0.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	47.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	47.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	95.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	95.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	142.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	142.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	190.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	190.000	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	237.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	237.500	0.018	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	285.000	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	25.000	0.015	ENVOL	0.000	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<--------REQUIRED REINFORCING--------> TORSION	COMBO	SHEAR	COMBO
CBT	B22	VG30X50	42.917	0.015	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	42.917	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	B5.B33	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	85.833	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	128.750	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	128.750	0.017	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	171.667	0.017	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	171.667	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	214.583	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	214.583	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	257.500	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	257.500	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	300.417	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	300.417	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	343.333	0.016	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	343.333	0.017	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	386.250	0.017	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	386.250	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	429.167	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	429.167	0.019	ENVOL	8.471E-04	ENVOL
CBT	B22	VG30X50	472.083	0.019	ENVOL	0.005	ENVOL
CBT	B22	VG30X50	472.083	0.019	ENVOL	0.006	ENVOL
CBT	B22	VG30X50	490.000	0.019	ENVOL	0.007	ENVOL
CBT	B23	VG20X50	0.000	0.016	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	45.000	0.016	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	45.000	0.016	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	90.000	0.016	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	90.000	0.016	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	135.000	0.016	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	0.000	0.039	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	47.500	0.039	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	47.500	0.039	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	80.000	0.039	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	15.000	0.014	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	50.000	0.014	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	50.000	0.014	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	100.000	0.014	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	100.000	0.013	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	150.000	0.013	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	150.000	0.012	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	200.000	0.012	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	200.000	0.010	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	250.000	0.010	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	550.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	550.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	585.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	15.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	300.000	0.009	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	350.000	0.009	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	350.000	0.010	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	400.000	0.010	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	400.000	0.012	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	450.000	0.012	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	450.000	0.013	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	500.000	0.013	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	500.000	0.014	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	550.000	0.014	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	550.000	0.015	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	585.000	0.015	ENVOL	0.000	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
CBT	B28	VG30X50	15.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	95.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	95.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	142.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	142.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	270.000	0.000	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	15.000	0.011	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	45.000	0.011	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	45.000	0.011	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	90.000	0.011	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	90.000	0.011	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	135.000	0.011	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	25.000	0.027	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	41.000	0.027	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	41.000	0.027	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	82.000	0.026	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	123.000	0.026	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	123.000	0.026	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	164.000	0.026	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	164.000	0.025	ENVOL	0.000	ENVOL
CBT	B31	VG30X50	205.000	0.025	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	25.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	41.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	41.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	82.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	82.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	123.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	123.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	164.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	164.000	0.010	ENVOL	0.000	ENVOL
CBT	B32	VG30X50	205.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	25.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	41.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	41.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	82.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	82.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	123.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	123.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	164.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	164.000	0.010	ENVOL	0.000	ENVOL
CBT	B33	VG30X50	205.000	0.010	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	25.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	41.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	41.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	82.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	123.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	123.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	164.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	164.000	0.000	ENVOL	0.000	ENVOL
CBT	B34	VG30X50	205.000	0.000	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	0.000	0.014	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	47.500	0.014	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	47.500	0.014	ENVOL	0.000	ENVOL
CBT	B36	VG20X50	95.000	0.014	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	0.000	0.010	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	50.000	0.010	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	50.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	100.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	100.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	300.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	350.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	350.000	0.012	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	400.000	0.012	ENVOL	0.000	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
C8T	B37	VG20X50	400.000	0.015	ENVOL	0.000	ENVOL
C8T	B37	VG20X50	450.000	0.015	ENVOL	0.000	ENVOL
C8T	B37	VG20X50	450.000	0.018	ENVOL	0.000	ENVOL
C8T	B37	VG20X50	500.000	0.018	ENVOL	0.000	ENVOL
C8T	B37	VG20X50	500.000	0.020	ENVOL	0.000	ENVOL
C8T	B37	VG20X50	550.000	0.020	ENVOL	0.000	ENVOL
C8T	B37	VG20X50	550.000	0.021	ENVOL	0.000	ENVOL
C8T	B37	VG20X50	600.000	0.021	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	0.000	0.019	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	50.000	0.019	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	50.000	0.019	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	100.000	0.019	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	100.000	0.017	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	150.000	0.017	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	150.000	0.014	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	200.000	0.014	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	200.000	0.011	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	250.000	0.011	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	250.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	300.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	300.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	350.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	350.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	400.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	400.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	450.000	0.000	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	450.000	0.010	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	500.000	0.010	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	500.000	0.012	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	550.000	0.012	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	550.000	0.013	ENVOL	0.000	ENVOL
C8T	B38	VG20X50	600.000	0.013	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	0.000	0.009	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	47.500	0.009	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	47.500	0.009	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	95.000	0.009	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	95.000	0.000	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	142.500	0.000	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	142.500	0.000	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	190.000	0.000	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	190.000	0.000	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	237.500	0.000	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	237.500	0.000	ENVOL	0.000	ENVOL
C8T	B39	VG20X50	285.000	0.000	ENVOL	0.000	ENVOL
C8T	B40	VG20X50	0.000	0.000	ENVOL	0.000	ENVOL
C8T	B40	VG20X50	45.000	0.000	ENVOL	0.000	ENVOL
C8T	B40	VG20X50	45.000	0.000	ENVOL	0.000	ENVOL
C8T	B40	VG20X50	90.000	0.000	ENVOL	0.000	ENVOL
C8T	B40	VG20X50	90.000	0.000	ENVOL	0.000	ENVOL
C8T	B40	VG20X50	135.000	0.000	ENVOL	0.000	ENVOL

8.1.5.3. Vigas Zona baja, Suelo Tipo E

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
ENVOL	ENVE	DIS1A	Combo	1.0000
		DIS1B	Combo	1.0000
		DIS2X	Combo	1.0000
		DIS2Y	Combo	1.0000
		DIS3X	Combo	1.0000
		DIS3Y	Combo	1.0000

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B E A M F O R C E E N V E L O P E S

STORY	BEAM	ITEM	P	V2	V3	T	M2	M3
CBT	B6	Min Value	-0.62	0.92	-0.40	-13.068	-0.056	-12.901
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.62	20.32	0.40	0.075	0.056	0.528
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B7	Min Value	-0.86	14.90	-0.59	-7.516	-0.084	-20.523
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.86	30.56	0.59	6.638	0.084	0.109
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B8	Min Value	-0.56	2.82	-0.39	-0.797	-0.054	-13.699
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.56	21.26	0.39	8.330	0.054	0.342
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B10	Min Value	-0.25	5.35	-0.35	0.093	-0.060	-22.229
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.25	31.47	0.35	20.651	0.060	0.629
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B11	Min Value	-3.12	-52.39	-1.34	-2.533	-0.536	-85.179
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	3.12	58.22	1.34	4.212	0.536	45.933
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B12	Min Value	-2.89	-61.16	-1.26	-3.597	-0.508	-90.441
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.89	47.46	1.26	2.898	0.508	54.160
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B13	Min Value	-0.19	-20.89	-0.29	-11.207	-0.038	-11.540
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.19	1.54	0.29	4.366	0.038	0.698
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B15	Min Value	-0.97	-20.91	-0.78	-15.413	-0.232	-106.656
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.97	69.24	0.78	16.144	0.232	25.349
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B16	Min Value	-0.42	-17.17	-0.56	-10.847	-0.127	-16.205
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.42	-3.11	0.56	4.316	0.127	0.282
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B18	Min Value	-1.83	-75.14	-1.24	-1.503	-0.380	-188.949
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.83	85.60	1.24	1.940	0.380	79.318
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B19	Min Value	0.00	-71.96	0.00	-0.905	0.000	-182.419
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.00	82.81	0.00	0.660	0.000	73.387
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B20	Min Value	-1.63	-73.68	-0.88	-11.208	-0.205	-186.592
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.63	98.79	0.88	12.892	0.205	78.411
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B21	Min Value	-1.59	-17.19	-0.30	-4.857	-0.100	-23.970
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.59	23.91	0.30	-1.196	0.100	11.572
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL

BEAM FORCE ENVELOPES

STORY	BEAM	ITEM	P	V2	V3	T	M2	M3
CBT	B22	Min Value	-2.32	-92.15	-1.21	-3.569	-0.239	-161.136
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.32	103.07	1.21	11.062	0.239	94.743
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B23	Min Value	-0.82	-16.32	-0.23	-4.498	-0.069	-16.163
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.82	1.04	0.23	0.562	0.069	0.612
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B25	Min Value	-0.41	9.22	-0.53	-20.656	-0.092	-24.728
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.41	34.05	0.53	-0.819	0.092	0.637
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B26	Min Value	-2.87	-60.38	-1.48	-7.733	-0.544	-100.873
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.87	67.18	1.48	4.762	0.544	50.782
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B27	Min Value	-2.72	-58.31	-1.46	-5.219	-0.533	-86.357
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.72	51.37	1.46	8.056	0.533	28.880
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B28	Min Value	-1.55	-88.34	-1.14	-3.657	-0.323	-93.010
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.55	71.02	1.14	2.246	0.323	74.189
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B29	Min Value	-0.72	-28.30	-0.75	-7.334	-0.167	-27.225
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.72	-2.00	0.75	6.504	0.167	0.909
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B31	Min Value	-2.35	-44.77	-1.29	-3.975	-0.230	-57.973
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.35	-8.56	1.29	15.906	0.230	6.233
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B32	Min Value	-3.60	-70.06	-1.70	-7.444	-0.307	-97.382
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	3.60	-28.47	1.70	6.916	0.307	9.057
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B33	Min Value	-2.95	-54.93	-1.45	-6.634	-0.259	-75.968
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.95	-18.04	1.45	3.168	0.259	4.879
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B34	Min Value	-1.77	-37.57	-1.05	-6.278	-0.187	-47.553
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.77	-2.61	1.05	5.355	0.187	2.757
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B36	Min Value	-0.25	-3.93	-0.14	-4.357	-0.035	-4.633
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.25	6.06	0.14	1.297	0.035	2.361
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B37	Min Value	-2.61	-21.65	-0.41	-5.309	-0.165	-29.257
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.61	26.94	0.41	2.815	0.165	24.417
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B38	Min Value	-2.49	-24.06	-0.40	-3.451	-0.161	-26.202
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	2.49	21.97	0.40	5.131	0.161	15.833
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B39	Min Value	-1.02	-16.08	-0.27	-0.652	-0.093	-18.512
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	1.02	9.52	0.27	2.523	0.093	4.418
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
CBT	B40	Min Value	-0.40	-10.16	-0.17	-1.147	-0.051	-9.699
		Min Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL
		Max Value	0.40	1.32	0.17	2.716	0.051	0.568
		Max Case	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL	ENVOL

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C O N C R E T E B E A M D E S I G N O U T P U T (ACI 318-08/IBC 2009)

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	CDMBD	BOTTOM	COMBO	TORSION	COMBO
CBT	B6	VG30x50	0.000	0.000	ENVOL	0.040	ENVOL	3.553	ENVOL
CBT	B6	VG30x50	50.000	0.616	ENVOL	0.000	ENVOL	3.553	ENVOL
CBT	B6	VG30x50	50.000	0.616	ENVOL	0.000	ENVOL	3.553	ENVOL
CBT	B6	VG30x50	75.000	0.996	ENVOL	0.000	ENVOL	3.553	ENVOL
CBT	B7	VG30x50	0.000	1.551E-04	ENVOL	0.008	ENVOL	4.855	ENVOL
CBT	B7	VG30x50	50.000	1.009	ENVOL	0.000	ENVOL	4.855	ENVOL
CBT	B7	VG30x50	50.000	1.009	ENVOL	0.000	ENVOL	4.855	ENVOL
CBT	B7	VG30x50	75.000	1.590	ENVOL	0.000	ENVOL	4.855	ENVOL
CBT	B8	VG30x50	0.000	0.006	ENVOL	0.026	ENVOL	4.634	ENVOL
CBT	B8	VG30x50	50.000	0.662	ENVOL	0.000	ENVOL	4.634	ENVOL
CBT	B8	VG30x50	50.000	0.662	ENVOL	0.000	ENVOL	4.634	ENVOL
CBT	B8	VG30x50	75.000	1.058	ENVOL	0.000	ENVOL	4.634	ENVOL
CBT	B10	VG30x50	0.000	0.000	ENVOL	0.047	ENVOL	5.614	ENVOL
CBT	B10	VG30x50	47.500	0.951	ENVOL	0.000	ENVOL	5.614	ENVOL
CBT	B10	VG30x50	47.500	0.951	ENVOL	0.000	ENVOL	5.614	ENVOL
CBT	B10	VG30x50	80.000	1.724	ENVOL	0.000	ENVOL	5.614	ENVOL
CBT	B11	VG30x50	15.000	5.116	ENVOL	3.359	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	50.000	4.531	ENVOL	3.482	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	50.000	4.531	ENVOL	3.482	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	100.000	3.531	ENVOL	3.502	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	100.000	3.531	ENVOL	3.502	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	150.000	2.196	ENVOL	3.525	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	150.000	2.196	ENVOL	3.525	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	200.000	1.103	ENVOL	3.329	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	200.000	1.103	ENVOL	3.329	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	250.000	0.206	ENVOL	2.878	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	250.000	0.206	ENVOL	2.878	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	350.000	0.000	ENVOL	1.378	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	350.000	0.000	ENVOL	1.378	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	400.000	0.175	ENVOL	1.596	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	400.000	0.175	ENVOL	1.596	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	450.000	1.432	ENVOL	1.564	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	450.000	1.432	ENVOL	1.564	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	500.000	3.142	ENVOL	1.517	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	500.000	3.142	ENVOL	1.517	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	550.000	4.531	ENVOL	1.325	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	550.000	4.531	ENVOL	1.325	ENVOL	5.343	ENVOL
CBT	B11	VG30x50	585.000	5.122	ENVOL	1.084	ENVOL	5.343	ENVOL
CBT	B12	VG30x50	15.000	5.455	ENVOL	0.603	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	50.000	4.531	ENVOL	0.935	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	50.000	4.531	ENVOL	0.935	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	100.000	3.363	ENVOL	1.260	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	100.000	3.363	ENVOL	1.260	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	150.000	1.499	ENVOL	1.406	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	150.000	1.499	ENVOL	1.406	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	200.000	0.167	ENVOL	1.611	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	200.000	0.167	ENVOL	1.611	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	250.000	0.000	ENVOL	1.582	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	250.000	0.000	ENVOL	1.582	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	300.000	0.000	ENVOL	2.418	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	300.000	0.000	ENVOL	2.418	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	350.000	0.000	ENVOL	3.235	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	350.000	0.000	ENVOL	3.235	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	400.000	0.551	ENVOL	3.804	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	400.000	0.551	ENVOL	3.804	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	450.000	1.499	ENVOL	4.117	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	450.000	1.499	ENVOL	4.117	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	500.000	2.646	ENVOL	4.174	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	500.000	2.646	ENVOL	4.174	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	550.000	4.001	ENVOL	3.972	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	550.000	4.001	ENVOL	3.972	ENVOL	0.000	ENVOL
CBT	B12	VG30x50	585.000	4.531	ENVOL	3.823	ENVOL	0.000	ENVOL
CBT	B13	VG30x50	15.000	0.890	ENVOL	0.025	ENVOL	3.852	ENVOL
CBT	B13	VG30x50	40.000	0.500	ENVOL	0.046	ENVOL	3.852	ENVOL
CBT	B13	VG30x50	40.000	0.500	ENVOL	0.046	ENVOL	3.852	ENVOL
CBT	B13	VG30x50	80.000	0.000	ENVOL	0.052	ENVOL	3.852	ENVOL
CBT	B15	VG30x50	0.000	0.000	ENVOL	1.605	ENVOL	3.839	ENVOL
CBT	B15	VG30x50	40.000	0.000	ENVOL	1.340	ENVOL	3.839	ENVOL
CBT	B15	VG30x50	40.000	0.000	ENVOL	1.340	ENVOL	3.839	ENVOL
CBT	B15	VG30x50	47.500	0.000	ENVOL	1.294	ENVOL	3.839	ENVOL
CBT	B15	VG30x50	47.500	0.000	ENVOL	1.295	ENVOL	3.768	ENVOL
CBT	B15	VG30x50	80.000	0.403	ENVOL	1.551	ENVOL	3.768	ENVOL
CBT	B15	VG30x50	80.000	0.374	ENVOL	1.557	ENVOL	4.190	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B15	VG30x50	95.000	0.773	ENVOL	1.634	ENVOL	4.190	ENVOL
CBT	B15	VG30x50	95.000	0.773	ENVOL	1.634	ENVOL	4.031	ENVOL
CBT	B15	VG30x50	142.500	2.299	ENVOL	1.786	ENVOL	4.031	ENVOL
CBT	B15	VG30x50	142.500	2.299	ENVOL	1.786	ENVOL	4.156	ENVOL
CBT	B15	VG30x50	190.000	4.365	ENVOL	1.926	ENVOL	4.156	ENVOL
CBT	B15	VG30x50	190.000	4.365	ENVOL	1.926	ENVOL	4.319	ENVOL
CBT	B15	VG30x50	237.500	5.096	ENVOL	1.877	ENVOL	4.319	ENVOL
CBT	B15	VG30x50	237.500	5.096	ENVOL	1.876	ENVOL	4.389	ENVOL
CBT	B15	VG30x50	270.000	6.493	ENVOL	1.748	ENVOL	4.389	ENVOL
CBT	B16	VG30x50	15.000	1.253	ENVOL	0.000	ENVOL	3.950	ENVOL
CBT	B16	VG30x50	45.000	0.870	ENVOL	0.000	ENVOL	3.950	ENVOL
CBT	B16	VG30x50	45.000	0.870	ENVOL	0.000	ENVOL	3.961	ENVOL
CBT	B16	VG30x50	90.000	0.388	ENVOL	0.000	ENVOL	3.961	ENVOL
CBT	B16	VG30x50	90.000	0.388	ENVOL	0.000	ENVOL	3.973	ENVOL
CBT	B16	VG30x50	135.000	0.013	ENVOL	0.021	ENVOL	3.973	ENVOL
CBT	B18	VG30x50	25.000	9.104	ENVOL	4.588	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	44.375	8.135	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	44.375	8.135	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	88.750	6.089	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	88.750	6.089	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	133.125	4.531	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	133.125	4.531	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	177.500	3.864	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	177.500	3.864	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	221.875	2.327	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	221.875	2.327	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	266.250	0.947	ENVOL	4.636	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	266.250	0.947	ENVOL	4.636	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	289.710	0.277	ENVOL	4.645	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	310.625	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	310.625	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	355.000	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	355.000	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	401.818	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	448.636	0.000	ENVOL	4.578	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	448.636	0.000	ENVOL	4.578	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	495.455	0.000	ENVOL	4.559	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	495.455	0.000	ENVOL	4.559	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	542.273	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	542.273	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	579.420	1.028	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	579.420	1.028	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	589.091	1.355	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	589.091	1.355	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	635.909	3.041	ENVOL	4.367	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	635.909	3.041	ENVOL	4.367	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	682.727	4.531	ENVOL	3.898	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	682.727	4.531	ENVOL	3.898	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	729.545	5.912	ENVOL	3.610	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	729.545	5.912	ENVOL	3.610	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	776.364	8.213	ENVOL	3.182	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	776.364	8.213	ENVOL	3.182	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	823.182	10.800	ENVOL	2.616	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	823.182	10.800	ENVOL	2.616	ENVOL	0.000	ENVOL
CBT	B18	VG30x50	845.000	12.119	ENVOL	2.305	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	25.000	8.223	ENVOL	2.898	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	69.118	6.249	ENVOL	3.369	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	113.237	4.531	ENVOL	3.740	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	157.355	3.769	ENVOL	4.008	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	201.473	2.316	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	245.592	1.015	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	289.710	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	289.710	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	337.995	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	386.280	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	434.565	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	482.850	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	531.135	0.000	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	579.420	0.713	ENVOL	4.312	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	579.420	0.713	ENVOL	4.312	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	623.683	2.187	ENVOL	3.464	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	667.947	4.015	ENVOL	2.697	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	712.210	4.873	ENVOL	2.261	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	756.473	6.917	ENVOL	1.725	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	800.737	9.165	ENVOL	1.092	ENVOL	0.000	ENVOL
CBT	B19	VG30x50	845.000	11.648	ENVOL	0.364	ENVOL	0.000	ENVOL
CBT	B20	VG30x50	25.000	8.098	ENVOL	2.284	ENVOL	3.852	ENVOL
CBT	B20	VG30x50	44.375	7.169	ENVOL	2.515	ENVOL	3.852	ENVOL
CBT	B20	VG30x50	44.375	7.169	ENVOL	2.515	ENVOL	3.852	ENVOL
CBT	B20	VG30x50	88.750	5.202	ENVOL	2.959	ENVOL	3.852	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION IO	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B20	VG30X50	88.750	5.202	ENVOL	2.959	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	133.125	4.531	ENVOL	3.284	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	133.125	4.531	ENVOL	3.284	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	177.500	2.657	ENVOL	3.656	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	177.500	2.657	ENVOL	3.656	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	221.875	1.217	ENVOL	4.184	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	221.875	1.217	ENVOL	4.184	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	266.250	0.000	ENVOL	4.560	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	266.250	0.000	ENVOL	4.560	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	289.710	0.000	ENVOL	4.629	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	289.710	0.000	ENVOL	4.629	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	310.625	0.000	ENVOL	4.629	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	310.625	0.000	ENVOL	4.629	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	355.000	0.000	ENVOL	4.629	ENVOL	3.852	ENVOL
CBT	B20	VG30X50	355.000	0.000	ENVOL	4.629	ENVOL	3.505	ENVOL
CBT	B20	VG30X50	397.917	0.000	ENVOL	4.629	ENVOL	3.505	ENVOL
CBT	B20	VG30X50	397.917	0.000	ENVOL	4.629	ENVOL	3.452	ENVOL
CBT	B20	VG30X50	440.833	0.000	ENVOL	4.629	ENVOL	3.452	ENVOL
CBT	B20	VG30X50	440.833	0.000	ENVOL	4.629	ENVOL	3.571	ENVOL
CBT	B20	VG30X50	483.750	0.000	ENVOL	4.629	ENVOL	3.571	ENVOL
CBT	B20	VG30X50	526.667	0.000	ENVOL	4.609	ENVOL	3.729	ENVOL
CBT	B20	VG30X50	526.667	0.000	ENVOL	4.609	ENVOL	3.854	ENVOL
CBT	B20	VG30X50	569.583	0.000	ENVOL	4.463	ENVOL	3.854	ENVOL
CBT	B20	VG30X50	569.583	0.000	ENVOL	4.463	ENVOL	3.907	ENVOL
CBT	B20	VG30X50	579.420	0.000	ENVOL	4.422	ENVOL	3.907	ENVOL
CBT	B20	VG30X50	579.420	0.000	ENVOL	4.422	ENVOL	3.907	ENVOL
CBT	B20	VG30X50	612.500	0.603	ENVOL	3.959	ENVOL	3.907	ENVOL
CBT	B20	VG30X50	612.500	0.473	ENVOL	4.305	ENVOL	5.064	ENVOL
CBT	B20	VG30X50	655.417	2.204	ENVOL	3.368	ENVOL	5.064	ENVOL
CBT	B20	VG30X50	655.417	2.204	ENVOL	3.369	ENVOL	5.116	ENVOL
CBT	B20	VG30X50	698.333	4.435	ENVOL	2.598	ENVOL	5.116	ENVOL
CBT	B20	VG30X50	698.333	4.435	ENVOL	2.598	ENVOL	5.241	ENVOL
CBT	B20	VG30X50	741.250	5.492	ENVOL	2.030	ENVOL	5.241	ENVOL
CBT	B20	VG30X50	741.250	5.492	ENVOL	2.030	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	784.167	7.940	ENVOL	1.323	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	784.167	7.940	ENVOL	1.323	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	827.083	10.699	ENVOL	0.489	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	827.083	10.699	ENVOL	0.488	ENVOL	5.343	ENVOL
CBT	B20	VG30X50	845.000	11.948	ENVOL	0.107	ENVOL	5.343	ENVOL
CBT	B21	VG20X50	0.000	0.701	ENVOL	0.344	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	47.500	0.221	ENVOL	0.504	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	47.500	0.221	ENVOL	0.505	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	95.000	0.016	ENVOL	0.706	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	95.000	0.016	ENVOL	0.707	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	142.500	0.162	ENVOL	0.876	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	142.500	0.162	ENVOL	0.876	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	190.000	0.480	ENVOL	0.777	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	190.000	0.480	ENVOL	0.776	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	237.500	1.039	ENVOL	0.530	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	237.500	1.039	ENVOL	0.529	ENVOL	2.493	ENVOL
CBT	B21	VG20X50	285.000	1.872	ENVOL	0.312	ENVOL	2.493	ENVOL
CBT	B22	VG30X50	25.000	7.435	ENVOL	5.594	ENVOL	4.270	ENVOL
CBT	B22	VG30X50	42.917	6.370	ENVOL	5.362	ENVOL	4.270	ENVOL
CBT	B22	VG30X50	42.917	6.369	ENVOL	5.363	ENVOL	4.233	ENVOL
CBT	B22	VG30X50	85.833	4.531	ENVOL	4.872	ENVOL	4.233	ENVOL
CBT	B22	VG30X50	85.833	4.531	ENVOL	4.872	ENVOL	4.140	ENVOL
CBT	B22	VG30X50	128.750	3.191	ENVOL	4.629	ENVOL	4.140	ENVOL
CBT	B22	VG30X50	128.750	3.191	ENVOL	4.629	ENVOL	4.021	ENVOL
CBT	B22	VG30X50	171.667	1.068	ENVOL	4.629	ENVOL	4.021	ENVOL
CBT	B22	VG30X50	171.667	1.068	ENVOL	4.629	ENVOL	3.928	ENVOL
CBT	B22	VG30X50	214.583	0.000	ENVOL	3.787	ENVOL	3.928	ENVOL
CBT	B22	VG30X50	214.583	0.000	ENVOL	3.786	ENVOL	3.891	ENVOL
CBT	B22	VG30X50	257.500	0.000	ENVOL	3.716	ENVOL	3.891	ENVOL
CBT	B22	VG30X50	257.500	0.000	ENVOL	3.399	ENVOL	4.717	ENVOL
CBT	B22	VG30X50	300.417	0.419	ENVOL	3.861	ENVOL	4.717	ENVOL
CBT	B22	VG30X50	300.417	0.418	ENVOL	3.862	ENVOL	4.680	ENVOL
CBT	B22	VG30X50	343.333	2.522	ENVOL	4.140	ENVOL	4.680	ENVOL
CBT	B22	VG30X50	343.333	2.522	ENVOL	4.140	ENVOL	4.587	ENVOL
CBT	B22	VG30X50	386.250	4.531	ENVOL	4.245	ENVOL	4.587	ENVOL
CBT	B22	VG30X50	386.250	4.531	ENVOL	4.245	ENVOL	4.468	ENVOL
CBT	B22	VG30X50	429.167	6.131	ENVOL	4.558	ENVOL	4.468	ENVOL
CBT	B22	VG30X50	429.167	6.131	ENVOL	4.558	ENVOL	4.375	ENVOL
CBT	B22	VG30X50	472.083	8.888	ENVOL	4.629	ENVOL	4.375	ENVOL
CBT	B22	VG30X50	472.083	8.888	ENVOL	4.629	ENVOL	4.338	ENVOL
CBT	B22	VG30X50	490.000	10.144	ENVOL	4.629	ENVOL	4.338	ENVOL
CBT	B23	VG20X50	0.000	1.254	ENVOL	0.000	ENVOL	2.649	ENVOL
CBT	B23	VG20X50	45.000	0.712	ENVOL	0.000	ENVOL	2.649	ENVOL
CBT	B23	VG20X50	45.000	0.712	ENVOL	0.000	ENVOL	2.649	ENVOL
CBT	B23	VG20X50	90.000	0.289	ENVOL	0.046	ENVOL	2.649	ENVOL
CBT	B23	VG20X50	90.000	0.289	ENVOL	0.046	ENVOL	2.649	ENVOL
CBT	B23	VG20X50	135.000	0.000	ENVOL	0.044	ENVOL	2.649	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B25	VG3DX50	0.000	0.008	ENVOL	0.048	ENVOL	5.616	ENVOL
CBT	B25	VG30X50	47.500	1.079	ENVOL	0.000	ENVOL	5.616	ENVOL
CBT	B25	VG30X50	47.500	1.079	ENVOL	0.000	ENVOL	5.616	ENVOL
CBT	B25	VG30X50	80.000	1.920	ENVOL	0.000	ENVOL	5.616	ENVOL
CBT	B26	VG30X50	15.000	5.685	ENVOL	3.590	ENVOL	4.796	ENVOL
CBT	B26	VG30X50	50.000	4.531	ENVOL	3.736	ENVOL	4.796	ENVOL
CBT	B26	VG30X50	50.000	4.531	ENVOL	3.736	ENVOL	4.853	ENVOL
CBT	B26	VG30X50	100.000	3.711	ENVOL	3.784	ENVOL	4.853	ENVOL
CBT	B26	VG30X50	100.000	3.711	ENVOL	3.784	ENVOL	4.981	ENVOL
CBT	B26	VG30X50	150.000	2.195	ENVOL	3.907	ENVOL	4.981	ENVOL
CBT	B26	VG30X50	150.000	2.195	ENVOL	3.907	ENVOL	5.152	ENVOL
CBT	B26	VG30X50	200.000	0.932	ENVOL	3.727	ENVOL	5.152	ENVOL
CBT	B26	VG30X50	200.000	0.932	ENVOL	3.727	ENVOL	5.339	ENVOL
CBT	B26	VG30X50	250.000	0.000	ENVOL	3.236	ENVOL	5.339	ENVOL
CBT	B26	VG30X50	250.000	0.000	ENVOL	3.236	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	300.000	0.000	ENVOL	2.443	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	350.000	0.000	ENVOL	1.999	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	350.000	0.000	ENVOL	1.999	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	0.351	ENVOL	2.218	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	0.351	ENVOL	2.218	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	1.803	ENVOL	2.133	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	1.803	ENVOL	2.133	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	500.000	3.794	ENVOL	2.021	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	500.000	3.794	ENVOL	2.021	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	550.000	4.675	ENVOL	1.780	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	550.000	4.675	ENVOL	1.780	ENVOL	5.343	ENVOL
CBT	B26	VG30X50	585.000	6.121	ENVOL	1.503	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	15.000	5.197	ENVOL	0.138	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	50.000	4.531	ENVOL	0.644	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	50.000	4.531	ENVOL	0.644	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	100.000	3.234	ENVOL	1.219	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	100.000	3.234	ENVOL	1.219	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	150.000	1.545	ENVOL	1.610	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	150.000	1.545	ENVOL	1.610	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	0.445	ENVOL	2.042	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	0.445	ENVOL	2.042	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	0.000	ENVOL	2.170	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	0.000	ENVOL	2.170	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	300.000	0.000	ENVOL	1.992	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	300.000	0.000	ENVOL	1.992	ENVOL	5.343	ENVOL
CBT	B27	VG30X50	350.000	0.000	ENVOL	2.058	ENVOL	5.251	ENVOL
CBT	B27	VG30X50	400.000	0.000	ENVOL	2.198	ENVOL	5.251	ENVOL
CBT	B27	VG30X50	400.000	0.000	ENVOL	2.198	ENVOL	5.065	ENVOL
CBT	B27	VG30X50	450.000	0.593	ENVOL	2.032	ENVOL	5.065	ENVOL
CBT	B27	VG30X50	450.000	0.593	ENVOL	2.032	ENVOL	4.893	ENVOL
CBT	B27	VG30X50	500.000	1.745	ENVOL	1.588	ENVOL	4.893	ENVOL
CBT	B27	VG30X50	500.000	1.745	ENVOL	1.588	ENVOL	4.765	ENVOL
CBT	B27	VG30X50	550.000	3.480	ENVOL	1.196	ENVOL	4.765	ENVOL
CBT	B27	VG30X50	550.000	3.480	ENVOL	1.196	ENVOL	4.709	ENVOL
CBT	B27	VG30X50	585.000	4.531	ENVOL	0.816	ENVOL	4.709	ENVOL
CBT	B28	VG30X50	15.000	5.618	ENVOL	3.340	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	4.531	ENVOL	2.438	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	47.500	4.531	ENVOL	2.438	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	95.000	2.101	ENVOL	0.976	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	95.000	2.101	ENVOL	0.976	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	142.500	0.715	ENVOL	0.473	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	142.500	0.715	ENVOL	0.473	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	190.000	2.707	ENVOL	2.629	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	190.000	2.707	ENVOL	2.629	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	237.500	4.531	ENVOL	4.538	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	237.500	4.531	ENVOL	4.538	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	270.000	5.201	ENVOL	4.629	ENVOL	0.000	ENVOL
CBT	B29	VG30X50	15.000	2.116	ENVOL	0.000	ENVOL	4.905	ENVOL
CBT	B29	VG30X50	45.000	1.471	ENVOL	0.000	ENVOL	4.905	ENVOL
CBT	B29	VG30X50	45.000	1.471	ENVOL	0.000	ENVOL	4.905	ENVOL
CBT	B29	VG30X50	90.000	0.633	ENVOL	0.000	ENVOL	4.905	ENVOL
CBT	B29	VG30X50	90.000	0.634	ENVOL	0.000	ENVOL	4.906	ENVOL
CBT	B29	VG30X50	135.000	0.000	ENVOL	0.068	ENVOL	4.906	ENVOL
CBT	B31	VG30X50	25.000	4.531	ENVOL	0.000	ENVOL	4.324	ENVOL
CBT	B31	VG30X50	41.000	4.004	ENVOL	0.000	ENVOL	4.324	ENVOL
CBT	B31	VG30X50	41.000	4.004	ENVOL	0.000	ENVOL	4.293	ENVOL
CBT	B31	VG30X50	82.000	2.647	ENVOL	0.000	ENVOL	4.293	ENVOL
CBT	B31	VG30X50	82.000	2.646	ENVOL	0.000	ENVOL	4.228	ENVOL
CBT	B31	VG30X50	123.000	1.505	ENVOL	0.000	ENVOL	4.228	ENVOL
CBT	B31	VG30X50	123.000	1.506	ENVOL	0.000	ENVOL	4.163	ENVOL
CBT	B31	VG30X50	164.000	0.532	ENVOL	0.000	ENVOL	4.163	ENVOL
CBT	B31	VG30X50	164.000	0.532	ENVOL	0.000	ENVOL	4.133	ENVOL
CBT	B31	VG30X50	205.000	0.026	ENVOL	0.469	ENVOL	4.133	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B32	VG30X50	25.000	5.897	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	41.000	5.189	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	41.000	5.189	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	82.000	4.531	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	82.000	4.531	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	123.000	2.672	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	123.000	2.672	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	164.000	0.911	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	164.000	0.912	ENVOL	0.000	ENVOL	4.875	ENVOL
CBT	B32	VG30X50	205.000	0.000	ENVOL	0.683	ENVOL	4.875	ENVOL
CBT	B33	VG30X50	25.000	4.545	ENVOL	0.000	ENVOL	5.105	ENVOL
CBT	B33	VG30X50	41.000	4.531	ENVOL	0.000	ENVOL	5.105	ENVOL
CBT	B33	VG30X50	41.000	4.531	ENVOL	0.000	ENVOL	5.103	ENVOL
CBT	B33	VG30X50	82.000	3.633	ENVOL	0.000	ENVOL	5.103	ENVOL
CBT	B33	VG30X50	82.000	3.632	ENVOL	0.000	ENVOL	5.100	ENVOL
CBT	B33	VG30X50	123.000	2.133	ENVOL	0.000	ENVOL	5.100	ENVOL
CBT	B33	VG30X50	123.000	2.133	ENVOL	0.000	ENVOL	5.097	ENVOL
CBT	B33	VG30X50	164.000	0.831	ENVOL	0.000	ENVOL	5.097	ENVOL
CBT	B33	VG30X50	164.000	0.832	ENVOL	0.000	ENVOL	5.095	ENVOL
CBT	B33	VG30X50	205.000	0.000	ENVOL	0.367	ENVOL	5.095	ENVOL
CBT	B34	VG30X50	25.000	3.736	ENVOL	0.000	ENVOL	5.192	ENVOL
CBT	B34	VG30X50	41.000	3.259	ENVOL	0.000	ENVOL	5.192	ENVOL
CBT	B34	VG30X50	41.000	3.258	ENVOL	0.000	ENVOL	5.210	ENVOL
CBT	B34	VG30X50	82.000	2.149	ENVOL	0.000	ENVOL	5.210	ENVOL
CBT	B34	VG30X50	82.000	2.148	ENVOL	0.000	ENVOL	5.249	ENVOL
CBT	B34	VG30X50	123.000	1.210	ENVOL	0.000	ENVOL	5.249	ENVOL
CBT	B34	VG30X50	123.000	1.210	ENVOL	0.000	ENVOL	5.289	ENVOL
CBT	B34	VG30X50	164.000	0.452	ENVOL	0.000	ENVOL	5.289	ENVOL
CBT	B34	VG30X50	164.000	0.452	ENVOL	0.000	ENVOL	5.301	ENVOL
CBT	B34	VG30X50	205.000	0.097	ENVOL	0.207	ENVOL	5.301	ENVOL
CBT	B36	VG20X50	0.000	0.049	ENVOL	0.007	ENVOL	2.710	ENVOL
CBT	B36	VG20X50	47.500	0.165	ENVOL	0.117	ENVOL	2.710	ENVOL
CBT	B36	VG20X50	47.500	0.165	ENVOL	0.117	ENVOL	2.710	ENVOL
CBT	B36	VG20X50	95.000	0.357	ENVOL	0.177	ENVOL	2.710	ENVOL
CBT	B37	VG20X50	0.000	1.538	ENVOL	0.474	ENVOL	3.379	ENVOL
CBT	B37	VG20X50	50.000	0.738	ENVOL	0.833	ENVOL	3.379	ENVOL
CBT	B37	VG20X50	50.000	0.738	ENVOL	0.834	ENVOL	3.469	ENVOL
CBT	B37	VG20X50	100.000	0.240	ENVOL	1.313	ENVOL	3.469	ENVOL
CBT	B37	VG20X50	100.000	0.240	ENVOL	1.313	ENVOL	3.673	ENVOL
CBT	B37	VG20X50	150.000	0.000	ENVOL	1.654	ENVOL	3.673	ENVOL
CBT	B37	VG20X50	150.000	0.000	ENVOL	1.654	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	200.000	0.000	ENVOL	1.839	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	200.000	0.000	ENVOL	1.839	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	250.000	0.000	ENVOL	1.865	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	250.000	0.000	ENVOL	1.865	ENVOL	0.000	ENVOL
CBT	B37	VG20X50	350.000	0.000	ENVOL	1.443	ENVOL	3.465	ENVOL
CBT	B37	VG20X50	350.000	0.000	ENVOL	1.443	ENVOL	3.163	ENVOL
CBT	B37	VG20X50	400.000	0.000	ENVOL	1.035	ENVOL	3.163	ENVOL
CBT	B37	VG20X50	400.000	0.000	ENVOL	1.035	ENVOL	2.865	ENVOL
CBT	B37	VG20X50	450.000	0.000	ENVOL	0.556	ENVOL	2.865	ENVOL
CBT	B37	VG20X50	450.000	0.000	ENVOL	0.556	ENVOL	2.592	ENVOL
CBT	B37	VG20X50	500.000	0.346	ENVOL	0.088	ENVOL	2.592	ENVOL
CBT	B37	VG20X50	500.000	0.347	ENVOL	0.088	ENVOL	2.388	ENVOL
CBT	B37	VG20X50	550.000	1.258	ENVOL	0.000	ENVOL	2.388	ENVOL
CBT	B37	VG20X50	550.000	1.259	ENVOL	0.000	ENVOL	2.302	ENVOL
CBT	B37	VG20X50	600.000	2.294	ENVOL	0.000	ENVOL	2.302	ENVOL
CBT	B38	VG20X50	0.000	2.049	ENVOL	0.000	ENVOL	2.375	ENVOL
CBT	B38	VG20X50	50.000	1.156	ENVOL	0.000	ENVOL	2.375	ENVOL
CBT	B38	VG20X50	50.000	1.156	ENVOL	0.000	ENVOL	2.465	ENVOL
CBT	B38	VG20X50	100.000	0.381	ENVOL	0.000	ENVOL	2.465	ENVOL
CBT	B38	VG20X50	100.000	0.381	ENVOL	0.000	ENVOL	2.669	ENVOL
CBT	B38	VG20X50	150.000	0.000	ENVOL	0.389	ENVOL	2.669	ENVOL
CBT	B38	VG20X50	150.000	0.000	ENVOL	0.389	ENVOL	2.942	ENVOL
CBT	B38	VG20X50	200.000	0.000	ENVOL	0.787	ENVOL	2.942	ENVOL
CBT	B38	VG20X50	200.000	0.000	ENVOL	0.787	ENVOL	3.240	ENVOL
CBT	B38	VG20X50	250.000	0.000	ENVOL	1.078	ENVOL	3.240	ENVOL
CBT	B38	VG20X50	250.000	0.000	ENVOL	1.078	ENVOL	3.543	ENVOL
CBT	B38	VG20X50	300.000	0.000	ENVOL	1.202	ENVOL	3.543	ENVOL
CBT	B38	VG20X50	300.000	0.000	ENVOL	1.202	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.000	ENVOL	1.180	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	350.000	0.000	ENVOL	1.180	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	400.000	0.000	ENVOL	1.020	ENVOL	0.000	ENVOL
CBT	B38	VG20X50	400.000	0.000	ENVOL	1.020	ENVOL	3.671	ENVOL
CBT	B38	VG20X50	450.000	0.000	ENVOL	0.705	ENVOL	3.671	ENVOL
CBT	B38	VG20X50	450.000	0.000	ENVOL	0.705	ENVOL	3.397	ENVOL
CBT	B38	VG20X50	500.000	0.197	ENVOL	0.239	ENVOL	3.397	ENVOL
CBT	B38	VG20X50	500.000	0.197	ENVOL	0.239	ENVOL	3.193	ENVOL
CBT	B38	VG20X50	550.000	0.889	ENVOL	0.000	ENVOL	3.193	ENVOL

FLEXURAL AND TORSION DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TOP	COMBO	BOTTOM	COMBO	TORSION	COMBO
CBT	B38	VG20X50	550.000	0.889	ENVOL	0.000	ENVOL	3.103	ENVOL
CBT	B38	VG20X50	600.000	1.703	ENVOL	0.000	ENVOL	3.103	ENVOL
CBT	B39	VG20X50	0.000	1.439	ENVOL	0.000	ENVOL	3.505	ENVOL
CBT	B39	VG20X50	47.500	0.970	ENVOL	0.000	ENVOL	3.505	ENVOL
CBT	B39	VG20X50	47.500	0.970	ENVOL	0.000	ENVOL	3.587	ENVOL
CBT	B39	VG20X50	95.000	0.656	ENVOL	0.000	ENVOL	3.587	ENVOL
CBT	B39	VG20X50	95.000	0.656	ENVOL	0.000	ENVOL	0.000	ENVDL
CBT	B39	VG20X50	142.500	0.552	ENVOL	0.041	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	142.500	0.552	ENVOL	0.041	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	190.000	0.648	ENVOL	0.213	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	190.000	0.648	ENVOL	0.213	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.876	ENVOL	0.303	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	237.500	0.876	ENVOL	0.303	ENVOL	0.000	ENVOL
CBT	B39	VG20X50	285.000	1.199	ENVOL	0.333	ENVOL	0.000	ENVOL
CBT	B40	VG20X50	0.000	0.749	ENVOL	0.000	ENVOL	3.422	ENVOL
CBT	B40	VG20X50	45.000	0.421	ENVOL	0.016	ENVOL	3.422	ENVOL
CBT	B40	VG20X50	45.000	0.421	ENVOL	0.016	ENVOL	3.441	ENVOL
CBT	B40	VG20X50	90.000	0.173	ENVOL	0.043	ENVOL	3.441	ENVOL
CBT	B40	VG20X50	90.000	0.173	ENVOL	0.043	ENVOL	3.461	ENVOL
CBT	B40	VG20X50	135.000	0.009	ENVOL	0.021	ENVOL	3.461	ENVDL

C O N C R E T E B E A M D E S I G N O U T P U T (ACI 318-08/IBC 2009)

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	REQUIRED REINFORCING TORSION	COMBO	SHEAR	COMBO
CBT	B6	VG30X50	0.000	0.029	ENVOL	0.000	ENVOL
CBT	B6	VG30X50	50.000	0.029	ENVOL	0.000	ENVOL
CBT	B6	VG30X50	50.000	0.029	ENVOL	0.000	ENVOL
CBT	B6	VG30X50	75.000	0.029	ENVOL	0.000	ENVOL
CBT	B7	VG30X50	0.000	0.016	ENVOL	0.000	ENVOL
CBT	B7	VG30X50	50.000	0.016	ENVOL	0.000	ENVOL
CBT	B7	VG30X50	50.000	0.016	ENVOL	0.000	ENVOL
CBT	B7	VG30X50	75.000	0.016	ENVOL	0.000	ENVOL
CBT	B8	VG30X50	0.000	0.018	ENVOL	0.000	ENVOL
CBT	B8	VG30X50	50.000	0.018	ENVOL	0.000	ENVOL
CBT	B8	VG30X50	50.000	0.018	ENVOL	0.000	ENVOL
CBT	B8	VG30X50	75.000	0.018	ENVOL	0.000	ENVOL
CBT	B10	VG30X50	0.000	0.045	ENVOL	0.000	ENVOL
CBT	B10	VG30X50	47.500	0.045	ENVOL	0.000	ENVOL
CBT	B10	VG30X50	47.500	0.045	ENVOL	0.000	ENVOL
CBT	B10	VG30X50	80.000	0.045	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	15.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	50.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	50.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	100.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	150.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	200.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	200.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	250.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	300.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	350.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	350.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	400.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	400.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	450.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	450.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	500.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	550.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	550.000	0.009	ENVOL	0.000	ENVOL
CBT	B11	VG30X50	585.000	0.009	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	15.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	50.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	100.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	100.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIREO REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
CBT	B12	VG30X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	500.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	550.000	0.000	ENVOL	0.000	ENVOL
CBT	B12	VG30X50	585.000	0.000	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	15.000	0.024	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	40.000	0.024	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	40.000	0.024	ENVOL	0.000	ENVOL
CBT	B13	VG30X50	80.000	0.024	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	0.000	0.031	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	40.000	0.031	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	40.000	0.031	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	47.500	0.031	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	47.500	0.030	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	80.000	0.030	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	80.000	0.034	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	95.000	0.034	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	95.000	0.032	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	142.500	0.032	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	142.500	0.033	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	190.000	0.033	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	190.000	0.035	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	237.500	0.035	ENVOL	0.000	ENVOL
CBT	B15	VG30X50	237.500	0.035	ENVDL	0.000	ENVOL
CBT	B15	VG30X50	270.000	0.035	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	15.000	0.024	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	45.000	0.024	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	45.000	0.024	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	90.000	0.024	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	90.000	0.024	ENVOL	0.000	ENVOL
CBT	B16	VG30X50	135.000	0.024	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	25.000	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	44.375	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	88.750	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	133.125	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	177.500	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	221.875	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	221.875	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	266.250	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	266.250	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	310.625	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	355.000	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	401.818	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	401.818	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	448.636	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	495.455	0.000	ENVDL	0.000	ENVOL
CBT	B18	VG30X50	495.455	0.000	ENVDL	0.000	ENVOL
CBT	B18	VG30X50	542.273	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	542.273	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	579.420	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	589.091	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	589.091	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	635.909	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	635.909	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	682.727	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	729.545	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	776.364	0.000	ENVOL	0.000	ENVOL
CBT	B18	VG30X50	776.364	0.000	ENVOL	0.000	ENVOL

CBT	B18	VG30X50	845.000	0.000	ENVOL	0.005	ENVOL
CBT	B19	VG30X50	25.000	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	69.118	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	113.237	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	157.355	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	201.473	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	245.592	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	289.710	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	337.995	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	386.280	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	434.565	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	482.850	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	531.135	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	579.420	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	623.683	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	667.947	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	712.210	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	756.473	0.000	ENVOL	0.000	ENVOL
CBT	B19	VG30X50	800.737	0.000	ENVOL	3.268E-05	ENVOL
CBT	B19	VG30X50	845.000	0.000	ENVOL	0.003	ENVOL
CBT	B20	VG30X50	25.000	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	44.375	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	44.375	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	88.750	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	88.750	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	133.125	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	133.125	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	177.500	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	177.500	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	221.875	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	221.875	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	266.250	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	266.250	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	289.710	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	289.710	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	310.625	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	310.625	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	355.000	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	355.000	0.028	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	397.917	0.028	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	397.917	0.028	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	440.833	0.028	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	440.833	0.027	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	483.750	0.027	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	483.750	0.025	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	526.667	0.025	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	526.667	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	569.583	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	569.583	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	579.420	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	579.420	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	612.500	0.024	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	612.500	0.015	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	655.417	0.015	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	655.417	0.014	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	698.333	0.014	ENVOL	0.000	ENVOL
CBT	B20	VG30X50	698.333	0.013	ENVOL	4.961E-05	ENVOL
CBT	B20	VG30X50	741.250	0.013	ENVOL	0.004	ENVOL
CBT	B20	VG30X50	741.250	0.012	ENVOL	0.005	ENVOL
CBT	B20	VG30X50	784.167	0.012	ENVOL	0.008	ENVOL
CBT	B20	VG30X50	784.167	0.011	ENVOL	0.009	ENVOL
CBT	B20	VG30X50	827.083	0.011	ENVOL	0.013	ENVOL
CBT	B20	VG30X50	827.083	0.011	ENVOL	0.013	ENVOL
CBT	B20	VG30X50	845.000	0.011	ENVOL	0.014	ENVOL
CBT	B21	VG20X50	0.000	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	47.500	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	47.500	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	95.000	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	95.000	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	142.500	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	142.500	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	190.000	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	190.000	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	237.500	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	237.500	0.020	ENVOL	0.000	ENVOL
CBT	B21	VG20X50	285.000	0.020	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	25.000	0.021	ENVOL	0.009	ENVOL
CBT	B22	VG30X50	42.917	0.021	ENVOL	0.008	ENVOL

TORSIDN AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<--REQUIRED REINFORCING--> TORSION	COMBO	SHEAR	COMBO
CBT	B22	VG30X50	42.917	0.021	ENVOL	0.008	ENVOL
CBT	B22	VG30X50	85.833	0.021	ENVOL	0.003	ENVOL
CBT	B22	VG30X50	85.833	0.022	ENVOL	0.002	ENVOL
CBT	B22	VG30X50	128.750	0.022	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	128.750	0.023	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	171.667	0.023	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	171.667	0.024	ENVOL	0.000	ENVDL
CBT	B22	VG30X50	214.583	0.024	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	214.583	0.024	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	257.500	0.024	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	257.500	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	300.417	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	300.417	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	343.333	0.018	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	343.333	0.019	ENVOL	0.000	ENVOL
CBT	B22	VG30X50	386.250	0.019	ENVOL	0.004	ENVOL
CBT	B22	VG30X50	386.250	0.020	ENVOL	0.006	ENVOL
CBT	B22	VG30X50	429.167	0.020	ENVOL	0.010	ENVOL
CBT	B22	VG30X50	429.167	0.020	ENVOL	0.011	ENVOL
CBT	B22	VG30X50	472.083	0.020	ENVOL	0.015	ENVOL
CBT	B22	VG30X50	472.083	0.021	ENVOL	0.016	ENVOL
CBT	B22	VG30X50	490.000	0.021	ENVOL	0.017	ENVOL
CBT	B23	VG20X50	0.000	0.019	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	45.000	0.019	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	45.000	0.019	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	90.000	0.019	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	90.000	0.019	ENVOL	0.000	ENVOL
CBT	B23	VG20X50	135.000	0.019	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	0.000	0.045	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	47.500	0.045	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	47.500	0.045	ENVOL	0.000	ENVOL
CBT	B25	VG30X50	80.000	0.045	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	15.000	0.017	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	50.000	0.017	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	50.000	0.016	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	100.000	0.016	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	100.000	0.015	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	150.000	0.015	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	150.000	0.014	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	200.000	0.014	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	200.000	0.013	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	250.000	0.013	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	250.000	0.011	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	300.000	0.011	ENVDL	0.000	ENVOL
CBT	B26	VG30X50	300.000	0.009	ENVDL	0.000	ENVDL
CBT	B26	VG30X50	350.000	0.009	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	0.000	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	450.000	0.009	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	500.000	0.010	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	550.000	0.010	ENVDL	0.000	ENVOL
CBT	B26	VG30X50	550.000	0.010	ENVOL	0.000	ENVOL
CBT	B26	VG30X50	585.000	0.010	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	15.000	0.011	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	0.011	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	50.000	0.011	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	0.011	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	100.000	0.010	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	0.010	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	200.000	0.000	ENVOL	0.000	ENVDL
CBT	B27	VG30X50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	250.000	0.010	ENVDL	0.000	ENVOL
CBT	B27	VG30X50	300.000	0.010	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	300.000	0.012	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	350.000	0.012	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	350.000	0.013	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	400.000	0.013	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	400.000	0.015	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	450.000	0.015	ENVDL	0.000	ENVOL
CBT	B27	VG30X50	450.000	0.016	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	500.000	0.016	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	500.000	0.017	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	550.000	0.017	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	550.000	0.018	ENVOL	0.000	ENVOL
CBT	B27	VG30X50	585.000	0.018	ENVOL	0.000	ENVOL
CBT	B28	VG30X50	15.000	0.000	ENVOL	0.007	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STDRY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
CBT	B28	VG30x50	47.500	0.000	ENVOL	0.004	ENVOL
CBT	B28	VG30x50	47.500	0.000	ENVOL	0.003	ENVOL
CBT	B28	VG30x50	95.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	95.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	142.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	142.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B28	VG30x50	270.000	0.000	ENVOL	0.000	ENVOL
CBT	B29	VG30x50	15.000	0.016	ENVOL	0.000	ENVOL
CBT	B29	VG30x50	45.000	0.016	ENVOL	0.000	ENVOL
CBT	B29	VG30x50	45.000	0.016	ENVOL	0.000	ENVOL
CBT	B29	VG30x50	90.000	0.016	ENVOL	0.000	ENVOL
CBT	B29	VG30x50	90.000	0.016	ENVOL	0.000	ENVOL
CBT	B29	VG30x50	135.000	0.016	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	25.000	0.035	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	41.000	0.035	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	41.000	0.035	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	82.000	0.035	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	82.000	0.034	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	123.000	0.034	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	123.000	0.033	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	164.000	0.033	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	164.000	0.033	ENVOL	0.000	ENVOL
CBT	B31	VG30x50	205.000	0.033	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	25.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	41.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	41.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	82.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	82.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	123.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	123.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	164.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	164.000	0.016	ENVOL	0.000	ENVOL
CBT	B32	VG30x50	205.000	0.016	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	25.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	41.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	41.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	82.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	82.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	123.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	123.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	164.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	164.000	0.014	ENVOL	0.000	ENVOL
CBT	B33	VG30x50	205.000	0.014	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	25.000	0.014	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	41.000	0.014	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	41.000	0.014	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	82.000	0.014	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	82.000	0.013	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	123.000	0.013	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	123.000	0.013	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	164.000	0.013	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	164.000	0.013	ENVOL	0.000	ENVOL
CBT	B34	VG30x50	205.000	0.013	ENVOL	0.000	ENVOL
CBT	B36	VG20x50	0.000	0.018	ENVOL	0.000	ENVOL
CBT	B36	VG20x50	47.500	0.018	ENVOL	0.000	ENVOL
CBT	B36	VG20x50	47.500	0.018	ENVOL	0.000	ENVOL
CBT	B36	VG20x50	95.000	0.018	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	0.000	0.012	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	50.000	0.012	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	50.000	0.011	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	100.000	0.011	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	100.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	150.000	0.009	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	150.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	200.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	250.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	300.000	0.011	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	350.000	0.011	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	350.000	0.014	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	400.000	0.014	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	400.000	0.017	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	450.000	0.017	ENVOL	0.000	ENVOL

TORSION AND SHEAR DESIGN OF BEAM-TYPE ELEMENTS

STORY ID	BEAM BAY	SECTION ID	STATION ID	<---------REQUIRED REINFORCING---------> TORSION	COMBO	SHEAR	COMBO
CBT	B37	VG20x50	450.000	0.019	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	500.000	0.019	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	500.000	0.021	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	550.000	0.021	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	550.000	0.022	ENVOL	0.000	ENVOL
CBT	B37	VG20x50	600.000	0.022	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	0.000	0.021	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	50.000	0.021	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	50.000	0.020	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	100.000	0.020	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	100.000	0.018	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	150.000	0.018	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	150.000	0.016	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	200.000	0.016	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	200.000	0.013	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	250.000	0.013	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	250.000	0.010	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	300.000	0.010	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	300.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	350.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	400.000	0.000	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	400.000	0.009	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	450.000	0.009	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	450.000	0.012	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	500.000	0.012	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	500.000	0.013	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	550.000	0.013	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	550.000	0.014	ENVOL	0.000	ENVOL
CBT	B38	VG20x50	600.000	0.014	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	0.000	0.010	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	47.500	0.010	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	47.500	0.010	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	95.000	0.010	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	95.000	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	142.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	142.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	190.000	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	237.500	0.000	ENVOL	0.000	ENVOL
CBT	B39	VG20x50	285.000	0.000	ENVOL	0.000	ENVOL
CBT	B40	VG20x50	0.000	0.011	ENVOL	0.000	ENVOL
CBT	B40	VG20x50	45.000	0.011	ENVOL	0.000	ENVOL
CBT	B40	VG20x50	45.000	0.011	ENVOL	0.000	ENVOL
CBT	B40	VG20x50	90.000	0.011	ENVOL	0.000	ENVOL
CBT	B40	VG20x50	90.000	0.011	ENVOL	0.000	ENVOL
CBT	B40	VG20x50	135.000	0.011	ENVOL	0.000	ENVOL

8.1.6. Resultados – Diseño, columnas

8.1.6.1. Zona alta, Suelo Tipo AB

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 14:59 PAGE 1

L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	O	Combo	1.2000
		G	Static	1.6000
DIs2X	ADD	O	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
DIS2Y	ADD	O	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
DIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DIS3Y	ADD	D	Combo	0.9000
		EY	Spectra	1.0000

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-ALTA-AB-160-VR.1.0 Units:KN-m Julio 10, 2013 14:59 PAGE 2

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C1	DIS1A							
			0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B							
			0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.930
			1.9500	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2x MAX							
			0.0000	-145.58	7.54	-8.79	0.491	8.374	19.764
			1.9500	-137.31	7.54	-8.79	0.491	25.519	5.071
			3.9000	-129.03	7.54	-8.79	0.491	68.711	37.848
CBT	C1	DIS2X MIN							
			0.0000	-166.21	-20.27	-28.03	-0.938	-40.617	-41.204
			1.9500	-157.94	-20.27	-28.03	-0.938	14.039	-1.679
			3.9000	-149.67	-20.27	-28.03	-0.938	42.647	-9.626
CBT	C1	DIS2Y MAX							
			0.0000	-145.54	2.14	11.51	1.833	59.843	7.689
			1.9500	-137.27	2.14	11.51	1.833	37.397	3.523
			3.9000	-129.00	2.14	11.51	1.833	96.418	28.881
CBT	C1	DIS2Y MIN							
			0.0000	-166.25	-14.87	-48.33	-2.279	-92.086	-29.129
			1.9500	-157.98	-14.87	-48.33	-2.279	2.160	-0.132
			3.9000	-149.71	-14.87	-48.33	-2.279	14.940	-0.658
CBT	C1	DIS3X MAX	0.0000	-96.10	9.41	-2.26	0.569	14.318	23.035
			1.9500	-89.90	9.41	-2.26	0.569	18.740	4.689
			3.9000	-83.70	9.41	-2.26	0.569	49.209	33.813
CBT	C1	DIS3x MIN							
			0.0000	-116.73	-18.40	-21.51	-0.860	-34.673	-37.933
			1.9500	-110.53	-18.40	-21.51	-0.860	7.260	-2.061
			3.9000	-104.33	-18.40	-21.51	-0.860	23.145	-13.661
CBT	C1	DIS3Y MAX							
			0.0000	-96.06	4.01	18.04	1.910	65.787	10.960
			1.9500	-89.86	4.01	18.04	1.910	30.619	3.141
			3.9000	-83.66	4.01	18.04	1.910	76.916	24.846
CBT	C1	DIS3Y MIN							
			0.0000	-116.77	-13.00	-41.81	-2.201	-86.142	-25.858
			1.9500	-110.57	-13.00	-41.81	-2.201	-4.619	-0.514
			3.9000	-104.37	-13.00	-41.81	-2.201	-4.561	-4.694
CBT	C2	DIS1A							
			0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
			3.9000	-195.32	-3.57	-15.06	-0.241	46.203	7.031

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C2	DIS1B							
			0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
			3.9000	-206.92	-3.44	-25.76	-0.203	71.609	6.751
CBT	C2	DIS2X MAX							
			0.0000	-197.88	14.81	-6.62	0.491	6.620	30.128
			3.9000	-181.34	14.81	-6.62	0.491	49.477	40.528
CBT	C2	DIS2X MIN	0.0000	-203.04	-21.35	-19.70	-0.938	-27.361	-42.746
			1.9500	-194.77	-21.35	-19.70	-0.938	11.051	-1.109
CBT	C2	DIS2Y MAX	0.0000	-192.01	7.43	8.06	1.833	44.865	15.222
			1.9500	-183.74	7.43	8.06	1.833	29.142	0.735
			3.9000	-175.47	7.43	8.06	1.833	68.493	26.632
CBT	C2	DIS2Y MIN							
			0.0000	-208.90	-13.97	-34.38	-2.279	-65.606	-27.839
			1.9500	-200.63	-13.97	-34.38	-2.279	1.443	-0.604
			3.9000	-192.36	-13.97	-34.38	-2.279	13.418	-13.752
CBT	C2	DIS3X MAX							
			0.0000	-133.51	16.01	-0.95	0.569	11.933	32.429
			1.9500	-127.31	16.01	-0.95	0.569	13.790	1.216
			3.9000						
CBT	C2	OIS3X MIN		-121.11	16.01	-0.95	0.569	32.678	38.180
			0.0000	-138.67	-20.16	-14.03	-0.860	-22.048	-40.445
			1.9500	-132.47	-20.16	-14.03	-0.860	5.309	-1.132
			3.9000	-126.27	-20.16	-14.03	-0.860	15.635	-29.997
CBT	C2	DIS3Y MAX							
			0.0000	-127.65	8.62	13.73	1.910	50.178	17.523
			1.9500	-121.45	8.62	13.73	1.910	23.399	0.711
			3.9000	-115.24	8.62	13.73	1.910	51.694	24.284
CBT	C2	OIS3Y MIN	0.0000	-144.54	-12.77	-28.71	-2.201	-60.292	-25.538
			1.9500	-138.34	-12.77	-28.71	-2.201	-4.300	-0.628
			3.9000	-132.13	-12.77	-28.71	-2.201	-3.381	-16.100
CBT	C3	OIS1A							
			0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B							
			0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
			3.9000	-132.52	4.34	-23.24	-0.203	63.825	-12.495
CBT	C3	OIS2X MAX							
			0.0000	-140.16	18.99	-11.97	0.491	-3.603	36.078
			1.9500	-131.89	18.99	-11.97	0.491	21.768	-0.958
			3.9000	-123.62	18.99	-11.97	0.491	67.333	11.992
CBT	C3	DIS2X MIN							
			0.0000	-147.59	-9.83	-26.60	-0.938	-37.673	-26.337
			1.9500	-139.32	-9.83	-26.60	-0.938	12.170	-7.173
			3.9000	-131.05	-9.83	-26.60	-0.938	41.819	-37.996
CBT	C3	DIS2Y MAX	0.0000	-133.06	13.22	2.86	1.833	34.948	23.458
			1.9500	-124.79	13.22	2.86	1.833	29.507	-2.299
			3.9000						
CBT	C3	DIS2Y MIN		-116.52	13.22	2.86	1.833	85.454	2.082
			0.0000	-154.69	-4.05	-41.43	-2.279	-76.223	-13.717
			1.9500	-146.42	-4.05	-41.43	-2.279	4.432	-5.832
			3.9000	-138.15	-4.05	-41.43	-2.279	23.698	-28.086
CBT	C3	DIS3X MAX							
			0.0000	-95.11	17.78	-5.16	0.569	3.892	34.948
			1.9500	-88.91	17.78	-5.16	0.569	15.980	0.286
			3.9000						
CBT	C3	DIS3X MIN		-82.70	17.78	-5.16	0.569	48.261	15.611
			0.0000	-102.53	-11.05	-19.79	-0.860	-30.178	-27.467
			1.9500	-96.33	-11.05	-19.79	-0.860	6.381	-5.929
			3.9000	-90.13	-11.05	-19.79	-0.860	22.747	-34.377
CBT	C3	DIS3Y MAX							
			0.0000	-88.01	12.00	9.67	1.910	42.443	22.328
			1.9500	-81.81	12.00	9.67	1.910	23.718	-1.055
			3.9000	-75.60	12.00	9.67	1.910	66.382	5.701
CBT	C3	DIS3Y MIN							
			0.0000	-109.64	-5.27	-34.62	-2.201	-68.728	-14.847
			1.9500	-103.43	-5.27	-34.62	-2.201	-1.357	-4.587
			3.9000	-97.23	-5.27	-34.62	-2.201	4.626	-24.467

CDLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C4	DIS1A	0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	DIS1B	0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX	0.0000	-112.90	26.12	0.88	0.491	15.568	46.954
			1.9500	-104.63	26.12	0.88	0.491	13.858	-3.976
CBT	C4	DIS2X MIN	0.0000	-141.85	-1.53	-19.02	-0.938	-29.636	-14.541
			1.9500	-133.57	-1.53	-19.02	-0.938	7.451	-11.576
			3.9000	-125.30	-1.53	-19.02	-0.938	12.143	-54.931
CBT	C4	DIS2Y MAX	0.0000	-106.42	17.69	22.49	1.833	64.559	27.804
			1.9500	-98.15	17.69	22.49	1.833	20.699	-6.369
			3.9000	-89.88	17.69	22.49	1.833	79.850	-22.255
CBT	C4	DIS2Y MIN	0.0000	-148.33	6.91	-40.63	-2.279	-78.626	4.608
			1.9500	-140.06	6.91	-40.63	-2.279	0.610	-9.182
			3.9000	-131.79	6.91	-40.63	-2.279	-23.164	-41.260
CBT	C4	DIS3X MAX	0.0000	-72.09	21.81	4.28	0.569	18.533	41.292
			1.9500	-65.89	21.81	4.28	0.569	10.190	-1.224
			3.9000	-59.69	21.81	4.28	0.569	34.242	2.580
CBT	C4	DIS3X MIN	0.0000	-101.04	-5.84	-15.62	-0.860	-26.671	-20.202
			1.9500	-94.83	-5.84	-15.62	-0.860	3.782	-8.824
			3.9000	-88.63	-5.84	-15.62	-0.860	1.841	-43.766
CBT	C4	DIS3Y MAX	0.0000	-65.61	13.37	25.89	1.910	67.524	22.143
			1.9500	-59.41	13.37	25.89	1.910	17.031	-3.617
			3.9000	-53.21	13.37	25.89	1.910	69.548	-11.091
CBT	C4	DIS3Y MIN	0.0000	-107.52	2.60	-37.23	-2.201	-75.662	-1.053
			1.9500	-101.31	2.60	-37.23	-2.201	-3.059	-6.431
			3.9000	-95.11	2.60	-37.23	-2.201	-33.465	-30.096
CBT	C5	DIS1A	0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	DIS1B	0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	DIS2X MAX	0.0000	-189.50	9.88	33.43	0.491	67.820	25.051
			1.9500	-181.23	9.88	33.43	0.491	2.660	5.786
			3.9000	-172.96	9.88	33.43	0.491	-34.728	41.637
CBT	C5	DIS2X MIN	0.0000	-209.23	-21.89	13.49	-0.938	17.868	-43.752
			1.9500	-200.96	-21.89	13.49	-0.938	-8.480	-1.059
			3.9000	-192.69	-21.89	13.49	-0.938	-62.600	-13.481
CBT	C5	DIS2Y MAX	0.0000	-187.76	0.06	53.60	1.833	119.101	3.585
			1.9500	-179.49	0.06	53.60	1.833	14.599	3.501
			3.9000	-171.22	0.06	53.60	1.833	-7.395	24.816
CBT	C5	DIS2Y MIN	0.0000	-210.97	-12.08	-6.67	-2.279	-33.413	-22.286
			1.9500	-202.70	-12.08	-6.67	-2.279	-20.419	1.226
CBT	C5	DIS3X MAX	0.0000	-125.40	11.67	25.20	0.569	52.981	27.910
			1.9500	-119.20	11.67	25.20	0.569	3.878	5.147
			3.9000	-113.00	11.67	25.20	0.569	-17.453	37.497
CBT	C5	DIS3X MIN	0.0000	-145.13	-20.10	5.26	-0.860	3.029	-40.892
			1.9500	-138.92	-20.10	5.26	-0.860	-7.262	-1.699
			3.9000	-132.72	-20.10	5.26	-0.860	-45.326	-17.621
CBT	C5	DIS3Y MAX	0.0000	-123.66	1.86	45.36	1.910	104.262	6.444
			1.9500	-117.46	1.86	45.36	1.910	15.817	2.861

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000						
CBT	C5	DIS3Y MIN		-111.25	1.86	45.36	1.910	9.879	20.677
			0.0000	-146.87	-10.28	-14.90	-2.201	-48.252	-19.426
			1.9500	-140.67	-10.28	-14.90	-2.201	-19.201	0.587
			3.9000	-134.46	-10.28	-14.90	-2.201	-72.658	-0.800
CBT	C6	DIS1A							
			0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX							
			0.0000	-252.21	18.10	13.95	0.491	35.569	36.752
			1.9500	-243.94	18.10	13.95	0.491	8.406	1.461
			3.9000	-235.67	18.10	13.95	0.491	-2.026	36.974
CBT	C6	DIS2X MIN							
			0.0000	-263.98	-20.01	0.98	-0.938	1.777	-41.072
			1.9500	-255.71	-20.01	0.98	-0.938	-0.173	-2.049
			3.9000	-247.44	-20.01	0.98	-0.938	-18.854	-33.830
CBT	C6	DIS2Y MAX	0.0000	-249.12	6.05	28.71	1.833	73.943	12.121
			1.9500	-240.85	6.05	28.71	1.833	17.953	0.322
			3.9000	-232.58	6.05	28.71	1.833	17.159	14.625
CBT	C6	DIS2Y MIN							
			0.0000	-267.08	-7.97	-13.78	-2.279	-36.596	-16.440
			1.9500	-258.81	-7.97	-13.78	-2.279	-9.720	-0.909
			3.9000	-250.54	-7.97	-13.78	-2.279	-38.039	-11.481
CBT	C6	DIS3X MAX	0.0000	-167.63	18.50	10.33	0.569	27.813	37.633
			1.9500	-161.42	18.50	10.33	0.569	7.693	1.553
			3.9000	-155.22	18.50	10.33	0.569	4.304	36.277
CBT	C6	DIS3X MIN							
			0.0000	-179.40	-19.61	-2.63	-0.860	-5.979	-40.191
			1.9500	-173.19	-19.61	-2.63	-0.860	-0.887	-1.957
			3.9000	-166.99	-19.61	-2.63	-0.860	-12.525	-34.527
CBT	C6	DIS3Y MAX							
			0.0000	-164.53	6.46	25.10	1.910	66.186	13.001
			1.9500	-158.33	6.46	25.10	1.910	17.239	0.413
			3.9000	-152.13	6.46	25.10	1.910	23.489	13.927
CBT	C6	DIS3Y MIN							
			0.0000	-182.49	-7.56	-17.40	-2.201	-44.353	-15.559
			1.9500	-176.29	-7.56	-17.40	-2.201	-10.433	-0.818
			3.9000	-170.09	-7.56	-17.40	-2.201	-31.710	-12.178
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			1.9500	-236.95	1.73	18.43	-0.241	-3.095	-1.792
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			3.9000	-210.15	1.43	20.40	-0.203	-44.904	-4.509
CBT	C7	DIS2X MAX							
			0.0000	-204.18	22.07	24.30	0.491	48.029	42.402
			3.9000	-187.64	22.07	24.30	0.491	-23.615	33.303
CBT	C7	DIS2X MIN	0.0000	-257.63	-18.53	9.32	-0.938	12.359	-38.960
			1.9500	-249.36	-18.53	9.32	-0.938	-6.464	-2.829
			3.9000	-241.09	-18.53	9.32	-0.938	-47.134	-43.656
CBT	C7	DIS2Y MAX							
			0.0000	-217.91	9.21	38.59	1.833	85.301	16.623
			1.9500	-209.64	9.21	38.59	1.833	10.079	-1.343
			3.9000	-201.37	9.21	38.59	1.833	-5.539	8.957
CBT	C7	DIS2Y MIN							
			0.0000	-243.91	-5.68	-4.96	-2.279	-24.912	-13.181
			1.9500	-235.64	-5.68	-4.96	-2.279	-15.259	-2.113
			3.9000	-227.37	-5.68	-4.96	-2.279	-65.209	-19.311
CBT	C7	DIS3X MAX							
			0.0000	-128.57	21.67	18.07	0.569	37.158	42.146
			1.9500	-122.37	21.67	18.07	0.569	2.562	-0.115
			3.9000	-116.17	21.67	18.07	0.569	-10.187	34.583
CBT	C7	DIS3X MIN							
			0.0000	-182.02	-18.92	3.09	-0.860	1.488	-39.217
			1.9500	-175.82	-18.92	3.09	-0.860	-5.185	-2.317

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-169.62	-18.92	3.09	-0.860	-33.706	-42.377
CBT	C7	DIS3Y MAX							
			0.0000	-142.29	8.82	32.36	1.910	74.429	16.367
			1.9500	-136.09	8.82	32.36	1.910	11.357	-0.831
			3.9000	-129.89	8.82	32.36	1.910	7.888	10.237
CBT	C7	DIS3Y MIN							
			0.0000	-168.30	-6.07	-11.19	-2.201	-35.783	-13.438
			1.9500	-162.10	-6.07	-11.19	-2.201	-13.981	-1.601
			3.9000	-155.89	-6.07	-11.19	-2.201	-51.782	-18.031
CBT	C8	DIS1A							
			0.0000	-163.43	-2.17	13.21	-0.241	24.660	-3.969
			1.9500	-155.16	-2.17	13.21	-0.241	-1.108	0.259
			3.9000	-146.89	-2.17	13.21	-0.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.013
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	OIS2X MAX							
			0.0000	-128.48	16.50	21.46	0.491	44.543	34.476
			1.9500	-120.21	16.50	21.46	0.491	2.732	2.304
			3.9000	-111.94	16.50	21.46	0.491	-10.071	38.428
CBT	C8	DIS2X MIN	0.0000	-180.95	-20.60	2.91	-0.938	1.257	-41.907
			1.9500	-172.68	-20.60	2.91	-0.938	-4.459	-1.741
			3.9000	-164.41	-20.60	2.91	-0.938	-39.182	-29.872
CBT	C8	DIS2Y MAX							
			0.0000	-132.20	4.92	40.86	1.833	90.419	10.502
			1.9500	-123.93	4.92	40.86	1.833	10.761	0.955
			3.9000	-115.66	4.92	40.86	1.833	19.700	17.239
CBT	C8	DIS2Y MIN	0.0000	-177.23	-9.02	-16.49	-2.279	-44.619	-17.933
			1.9500	-168.96	-9.02	-16.49	-2.279	-12.488	-0.393
			3.9000	-160.69	-9.02	-16.49	-2.279	-68.954	-8.683
CBT	C8	DIS3X MAX	0.0000	-78.91	17.16	17.13	0.569	36.618	35.721
			1.9500	-72.71	17.16	17.13	0.569	3.254	2.260
CBT	C8	OIS3X MIN	3.9000	-66.51	17.16	17.13	0.569	-1.103	37.096
			0.0000	-131.38	-19.94	-1.42	-0.860	-6.668	-40.662
			1.9500	-125.18	-19.94	-1.42	-0.860	-3.937	-1.785
			3.9000	-118.97	-19.94	-1.42	-0.860	-30.214	-31.204
CBT	C8	OIS3Y MAX							
			0.0000	-82.63	5.58	36.53	1.910	82.494	11.747
			1.9500	-76.43	5.58	36.53	1.910	11.283	0.912
CBT	C8	DIS3Y MIN	3.9000	-70.23	5.58	36.53	1.910	28.668	15.907
			0.0000	-127.66	-8.36	-20.82	-2.201	-52.544	-16.688
			1.9500	-121.45	-8.36	-20.82	-2.201	-11.966	-0.436
			3.9000	-115.25	-8.36	-20.82	-2.201	-59.985	-10.015

C O N C R E T E C O L U M N C H E C K O U T P U T (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50B	0.000	0.550	DIS2Y	0.031	DIS2X	0.042	DIS2Y
CBT	C1	C30X50B	195.000	0.176	DIS2Y	0.031	DIS2X	0.042	DIS2Y
CBT	C1	C30X50B	390.000	0.568	DIS2Y	0.031	DIS2X	0.042	DIS2Y
CBT	C2	C30X50E	0.000	0.350	DIS2Y	0.033	DIS2X	0.030	DIS2Y
CBT	C2	C30X50E	195.000	0.141	DIS2Y	0.033	DIS2X	0.030	DIS2Y
CBT	C2	C30X50E	390.000	0.361	DIS2X	0.033	DIS2X	0.030	DIS2Y
CBT	C3	C30X50A	0.000	0.498	DIS2Y	0.029	DIS2X	0.036	DIS2Y
CBT	C3	C30X50A	195.000	0.163	DIS2Y	0.029	DIS2X	0.036	DIS2Y
CBT	C3	C30X50A	390.000	0.605	DIS2Y	0.029	DIS2X	0.036	DIS2Y
CBT	C4	C30X50C	0.000	0.445	DIS2Y	0.040	DIS2X	0.036	DIS2Y
CBT	C4	C30X50C	390.000	0.539	DIS2Y	0.040	DIS2X	0.036	DIS2Y
CBT	C5	C30X50D	0.000	0.520	DIS2Y	0.034	DIS2X	0.047	DIS2Y
CBT	C5	C30X50D	195.000	0.119	DIS2Y	0.034	DIS2X	0.047	DIS2Y

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C5	C30X50D	390.000	0.440	DIS2X	0.034	DIS2X	0.047	DIS2Y
CBT	C6	C30X50E	0.000	0.347	DIS2X	0.030	DIS3X	0.022	DIS3Y
CBT	C6	C30X50E	195.000	0.126	DIS2Y	0.030	DIS3X	0.022	DIS3Y
CBT	C6	C30X50E	390.000	0.280	DIS2X	0.030	DIS3X	0.022	DIS3Y
CBT	C7	C30X50D	0.000	0.408	DIS2X	0.034	DIS2X	0.028	DIS3Y
CBT	C7	C30X50D	195.000	0.117	DIS2Y	0.034	DIS2X	0.034	DIS2Y
CBT	C7	C30X50D	390.000	0.407	DIS2X	0.034	DIS2X	0.034	DIS2Y
CBT	C8	C30X50B	0.000	0.485	DIS2Y	0.032	DIS2X	0.036	DIS2Y
CBT	C8	C30X50B	195.000	0.094	DIS2Y	0.032	DIS2X	0.036	DIS2Y
CBT	C8	C30X50B	390.000	0.411	DIS2X	0.032	DIS2X	0.036	DIS2Y

Story	ColLine	SecID	StnLoc	PMMCombD	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50B	0	DIS2Y	20	2	2	0.55
CBT	C1	C30X50B	195	DIS2Y	20	2	2	0.176
CBT	C1	C30X50B	390	DIS2Y	20	2	2	0.568
CBT	C2	C30X50E	0	DIS2Y	34.064	2.839	2.839	0.35
CBT	C2	C30X50E	195	DIS2Y	34.064	2.839	2.839	0.141
CBT	C2	C30X50E	390	DIS2X	34.064	2.839	2.839	0.361
CBT	C3	C30X50A	0	DIS2Y	15.742	2	1.29	0.498
CBT	C3	C30X50A	195	DIS2Y	15.742	2	1.29	0.163
CBT	C3	C30X50A	390	DIS2Y	15.742	2	1.29	0.605
CBT	C4	C30X50C	0	DIS2Y	23.355	2.839	2	0.445
CBT	C4	C30X50C	195	DIS2Y	23.355	2.839	2	0.135
CBT	C4	C30X50C	390	DIS2Y	23.355	2.839	2	0.539
CBT	C5	C30X50D	0	DIS2Y	28.387	2.839	2.839	0.52
CBT	C5	C30X50D	195	DIS2Y	28.387	2.839	2.839	0.119
CBT	C5	C30X50D	390	DIS2X	28.387	2.839	2.839	0.44
CBT	C6	C30X50E	0	DIS2X	34.064	2.839	2.839	0.347
CBT	C6	C30X50E	195	DIS2Y	34.064	2.839	2.839	0.126
CBT	C6	C30X50E	390	DIS2X	34.064	2.839	2.839	0.28
CBT	C7	C30X50D	0	DIS2X	28.387	2.839	2.839	0.408
CBT	C7	C30X50D	195	DIS2Y	28.387	2.839	2.839	0.117
CBT	C7	C30X50D	390	DIS2X	28.387	2.839	2.839	0.407
CBT	C8	C30X50B	0	DIS2Y	20	2	2	0.485
CBT	C8	C30X50B	195	DIS2Y	20	2	2	0.094
CBT	C8	C30X50B	390	DIS2X	20	2	2	0.411

8.1.6.2. Zona Alta, Suelo Tipo CD

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	O	Combo	1.2000
		G	Static	1.6000
DIS2X	ADD	D	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
DIS2Y	ADD	D	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
OIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DIS3Y	ADD	D	Combo	0.9000
		EY	Spectra	1.0000

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C O L U M N F O R C E S

STORY	COLUMN	LDAD	LOC	P	V2	V3	T	M2	M3
CBT	C1	DIS1A							
			0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B							
			0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.93D
			1.950D	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2K MAX							
			0.0000	-143.64	10.14	-6.96	0.627	13.030	25.482
			1.9500	-135.37	10.14	-6.96	0.627	26.609	5.704
			3.9000	-127.10	10.14	-6.96	0.627	71.189	42.301
CBT	C1	DIS2X MIN							
			0.0000	-168.15	-22.88	-29.86	-1.073	-45.273	-46.922
			1.9500	-159.88	-22.88	-29.86	-1.073	12.948	-2.312
			3.9000	-151.61	-22.88	-29.86	-1.073	40.169	-14.078
CBT	C1	DIS2Y MAX							
			0.0000	-143.57	3.75	17.21	2.224	74.312	11.182
			1.9500	-135.30	3.75	17.21	2.224	40.753	3.870
			3.9000	-127.03	3.75	17.21	2.224	104.177	31.684
CBT	C1	DIS2Y MIN	0.0000	-168.22	-16.49	-54.03	-2.671	-106.555	-32.622
			1.9500	-159.95	-16.49	-54.03	-2.671	-1.196	-0.479
			3.9000	-151.68	-16.49	-54.03	-2.671	7.181	-3.462
CBT	C1	DIS3X MAX							
			0.0000	-94.16	12.02	-0.44	0.705	18.974	28.753
			1.9500	-87.96	12.02	-0.44	0.705	19.831	5.321
			3.9000	-81.76	12.02	-0.44	0.705	51.687	38.265
CBT	C1	DIS3X MIN							
			0.0000	-118.67	-21.00	-23.34	-0.995	-39.329	-43.651
			1.9500	-112.47	-21.00	-23.34	-0.995	6.169	-2.694
			3.9000	-106.27	-21.00	-23.34	-0.995	20.668	-18.114
CBT	C1	OIS3Y MAX							
			0.0000	-94.09	5.63	23.74	2.302	80.256	14.454
			1.9500	-87.89	5.63	23.74	2.302	33.974	3.488
			3.9000	-81.69	5.63	23.74	2.302	84.676	27.649
CBT	C1	DIS3Y MIN							
			0.0000	-118.74	-14.61	-47.51	-2.593	-100.611	-29.351
			1.9500	-112.54	-14.61	-47.51	-2.593	-7.975	-0.861
			3.9000	-106.34	-14.61	-47.51	-2.593	-12.321	-7.497
CBT	C2	DIS1A							
			0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
			3.9000	-195.32	-3.57	-15.06	-0.241	46.203	7.031
CBT	C2	DIS1B							
			0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
			3.9000	-206.92	-3.44	-25.76	-0.203	71.609	6.751

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C2	DIS2X MAX							
			0.0000	-197.39	18.21	-5.38	0.627	9.854	36.963
			1.9500	-189.12	18.21	-5.38	0.627	20.340	1.460
			3.9000	-180.85	18.21	-5.38	0.627	51.098	46.922
CBT	C2	DIS2X MIN							
			0.0000	-203.53	-24.74	-20.95	-1.073	-30.595	-49.580
			1.9500	-195.26	-24.74	-20.95	-1.073	10.244	-1.329
			3.9000	-186.99	-24.74	-20.95	-1.073	30.812	-34.042
CBT	C2	DIS2Y MAX							
			0.0000	-190.41	9.46	12.11	2.224	55.386	19.307
			1.9500	-182.14	9.46	12.11	2.224	31.779	0.862
			3.9000	-173.87	9.46	12.11	2.224	73.738	30.463
CBT	C2	DIS2Y MIN							
			0.0000	-210.51	-16.00	-38.43	-2.671	-76.127	-31.924
			1.9500	-202.24	-16.00	-38.43	-2.671	-1.195	-0.731
			3.9000	-193.97	-16.00	-38.43	-2.671	8.173	-17.583
CBT	C2	DIS3X MAX							
			0.0000	-133.02	19.40	0.29	0.705	15.167	39.264
			1.9500	-126.82	19.40	0.29	0.705	14.598	1.437
			3.9000	-120.62	19.40	0.29	0.705	34.299	44.574
CBT	C2	DIS3X MIN							
			0.0000	-139.16	-23.55	-15.28	-0.995	-25.281	-47.279
			1.9500	-132.96	-23.55	-15.28	-0.995	4.501	-1.353
			3.9000	-126.76	-23.55	-15.28	-0.995	14.013	-36.391
CBT	C2	DIS3Y MAX							
			0.0000	-126.04	10.65	17.78	2.302	60.699	21.608
			1.9500	-119.84	10.65	17.78	2.302	26.037	0.838
			3.9000	-113.64	10.65	17.78	2.302	56.939	28.115
CBT	C2	DIS3Y MIN							
			0.0000	-146.15	-14.80	-32.76	-2.593	-70.813	-29.623
			1.9500	-139.94	-14.80	-32.76	-2.593	-6.938	-0.755
			3.9000	-133.74	-14.80	-32.76	-2.593	-8.626	-19.932
CBT	C3	DIS1A							
			0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B							
			0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
			3.9000	-132.52	4.34	-23.24	-0.203	63.825	-12.495
CBT	C3	DIS2X MAX							
			0.0000	-139.46	21.70	-10.58	0.627	-0.360	41.931
			1.9500	-131.19	21.70	-10.58	0.627	22.677	-0.375
			3.9000	-122.92	21.70	-10.58	0.627	69.745	16.681
CBT	C3	DIS2X MIN							
			0.0000	-148.29	-12.53	-27.99	-1.073	-40.915	-32.190
			1.9500	-140.02	-12.53	-27.99	-1.073	11.262	-7.756
			3.9000	-131.75	-12.53	-27.99	-1.073	39.408	-42.684
CBT	C3	DIS2Y MAX							
			0.0000	-131.00	14.85	7.07	2.224	45.535	26.985
			1.9500	-122.73	14.85	7.07	2.224	31.895	-1.964
			3.9000	-114.46	14.85	7.07	2.224	91.335	4.944
CBT	C3	DIS2Y MIN							
			0.0000	-156.75	-5.69	-45.65	-2.671	-86.811	-17.244
			1.9500	-148.48	-5.69	-45.65	-2.671	2.044	-6.167
CBT	C3	DIS3X MAX							
			0.0000	-94.41	20.48	-3.77	0.705	7.135	40.801
			1.9500	-88.20	20.48	-3.77	0.705	16.888	0.869
			3.9000	-82.00	20.48	-3.77	0.705	50.672	20.299
CBT	C3	DIS3X MIN							
			0.0000	-103.24	-13.75	-21.18	-0.995	-33.421	-33.320
			1.9500	-97.04	-13.75	-21.18	-0.995	5.473	-6.512
			3.9000	-90.83	-13.75	-21.18	-0.995	20.335	-39.066
CBT	C3	DIS3Y MAX							
			0.0000	-85.95	13.64	13.89	2.302	53.030	25.855
			1.9500	-79.75	13.64	13.89	2.302	26.106	-0.720
			3.9000	-73.54	13.64	13.89	2.302	72.263	8.563
CBT	C3	DIS3Y MIN							
			0.0000	-111.70	-6.91	-38.83	-2.593	-79.316	-18.373
			1.9500	-105.49	-6.91	-38.83	-2.593	-3.745	-4.922
			3.9000	-99.29	-6.91	-38.83	-2.593	-1.255	-27.329
CBT	C4	DIS1A							
			0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	DIS1B							
			0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX							
			0.0000	-110.18	28.72	2.77	0.627	19.867	52.719
			1.9500	-101.91	28.72	2.77	0.627	14.467	-3.263
			3.9000	-93.64	28.72	2.77	0.627	47.625	-4.239
CBT	C4	DIS2X MIN							
			0.0000	-144.57	-4.12	-20.91	-1.073	-33.934	-20.306
			1.9500	-136.30	-4.12	-20.91	-1.073	6.842	-12.288
			3.9000	-128.03	-4.12	-20.91	-1.073	9.061	-59.276
CBT	C4	DIS2Y MAX							
			0.0000	-102.43	18.70	28.50	2.224	78.196	29.992
			1.9500	-94.16	18.70	28.50	2.224	22.613	-6.104
			3.9000	-85.89	18.70	28.50	2.224	89.660	-20.460
CBT	C4	DIS2Y MIN							
			0.0000	-152.32	5.89	-46.65	-2.671	-92.263	2.421
			1.9500	-144.05	5.89	-46.65	-2.671	-1.303	-9.447
			3.9000	-135.78	5.89	-46.65	-2.671	-32.974	-43.055
CBT	C4	DIS3X MAX							
			0.0000	-69.37	24.40	6.17	0.705	22.831	47.058
			1.9500	-63.17	24.40	6.17	0.705	10.799	-0.512
			3.9000	-56.97	24.40	6.17	0.705	37.323	6.926
CBT	C4	OIS3X MIN							
			0.0000	-103.76	-8.43	-17.51	-0.995	-30.970	-25.968
			3.9000	-91.35	-8.43	-17.51	-0.995	-1.241	-48.112
CBT	C4	DIS3Y MAX							
			0.0000	-61.62	14.39	31.91	2.302	81.160	24.331
			1.9500	-55.42	14.39	31.91	2.302	18.944	-3.352
			3.9000	-49.22	14.39	31.91	2.302	79.358	-9.296
CBT	C4	OIS3Y MIN							
			0.0000	-111.51	1.58	-43.25	-2.593	-89.298	-3.241
			1.9500	-105.30	1.58	-43.25	-2.593	-4.972	-6.696
CBT	C5	DIS1A							
			0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	DIS1B							
			0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	DIS2X MAX							
			0.0000	-187.65	12.86	35.33	0.627	72.566	31.501
			1.9500	-179.38	12.86	35.33	0.627	3.719	6.428
			3.9000	-171.11	12.86	35.33	0.627	-32.082	46.805
CBT	C5	OIS2X MIN							
			0.0000	-211.08	-24.87	11.60	-1.073	13.122	-50.203
			1.9500	-202.81	-24.87	11.60	-1.073	-9.539	-1.701
			3.9000	-194.54	-24.87	11.60	-1.073	-65.246	-18.649
CBT	C5	DIS2Y MAX							
			0.0000	-185.55	1.21	59.34	2.224	133.626	6.024
			1.9500	-177.28	1.21	59.34	2.224	17.934	3.714
			3.9000	-169.01	1.21	59.34	2.224	0.465	26.843
CBT	C5	DIS2Y MIN							
			0.0000	-213.18	-13.22	-12.41	-2.671	-47.938	-24.725
			1.9500	-204.91	-13.22	-12.41	-2.671	-23.754	1.013
			3.9000	-196.64	-13.22	-12.41	-2.671	-97.793	1.313
CBT	C5	DIS3X MAX							
			0.0000	-123.55	14.65	27.09	0.705	57.727	34.361
			1.9500	-117.35	14.65	27.09	0.705	4.937	5.788
			3.9000	-111.14	14.65	27.09	0.705	-14.808	42.665
CBT	C5	DIS3X MIN							
			0.0000	-146.98	-23.08	3.37	-0.995	-1.716	-47.343
			1.9500	-140.78	-23.08	3.37	-0.995	-8.321	-2.341
			3.9000	-134.57	-23.08	3.37	-0.995	-47.971	-22.789
CBT	C5	DIS3Y MAX							
			0.0000	-121.45	3.00	51.10	2.302	118.787	8.884
			1.9500	-115.25	3.00	51.10	2.302	19.152	3.075
			3.9000	-109.05	3.00	51.10	2.302	17.740	22.703
CBT	C5	DIS3Y MIN							
			0.0000	-149.08	-11.43	-20.64	-2.593	-62.777	-21.865
			1.9500	-142.87	-11.43	-20.64	-2.593	-22.537	0.373

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-136.67	-11.43	-20.64	-2.593	-80.519	-2.827
CBT	C6	DIS1A							
			0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX	0.0000	-251.11	21.67	15.18	0.627	38.786	44.049
			1.9500	-242.84	21.67	15.18	0.627	9.223	1.790
			3.9000						
CBT	C6	DIS2X MIN		-234.57	21.67	15.18	0.627	-0.424	43.613
			0.0000	-265.09	-23.58	-0.25	-1.073	-1.439	-48.368
			1.9500	-256.82	-23.58	-0.25	-1.073	-0.989	-2.378
			3.9000	-248.55	-23.58	-0.25	-1.073	-20.456	-40.468
CBT	C6	DIS2Y MAX							
			0.0000	-247.41	7.37	32.76	2.224	84.470	14.812
			1.9500	-239.14	7.37	32.76	2.224	20.589	0.438
			3.9000	-230.87	7.37	32.76	2.224	22.416	17.085
CBT	C6	DIS2Y MIN	0.0000	-268.79	-9.29	-17.83	-2.671	-47.124	-19.132
			1.9500	-260.52	-9.29	-17.83	-2.671	-12.355	-1.025
			3.9000	-252.25	-9.29	-17.83	-2.671	-43.296	-13.941
CBT	C6	DIS3X MAX							
			0.0000	-166.52	22.08	11.57	0.705	31.029	44.929
			1.9500	-160.32	22.08	11.57	0.705	8.509	1.882
			3.9000	-154.11	22.08	11.57	0.705	5.906	42.915
CBT	C6	DIS3X MIN	0.0000	-180.50	-23.18	-3.86	-0.995	-9.196	-47.487
			1.9500	-174.30	-23.18	-3.86	-0.995	-1.703	-2.286
			3.9000	-168.10	-23.18	-3.86	-0.995	-14.127	-41.166
CBT	C6	DIS3Y MAX	0.0000	-162.82	7.78	29.15	2.302	76.714	15.693
			1.9500	-156.62	7.78	29.15	2.302	19.875	0.529
			3.9000						
CBT	C6	DIS3Y MIN		-150.42	7.78	29.15	2.302	28.746	16.388
			0.0000	-184.20	-8.88	-21.44	-2.593	-54.880	-18.251
			1.9500	-178.00	-8.88	-21.44	-2.593	-13.069	-0.934
			3.9000	-171.80	-8.88	-21.44	-2.593	-36.967	-14.639
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			1.9500	-236.95	1.73	18.43	-0.241	-3.095	-1.792
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			1.9500	-218.42	1.43	20.40	-0.203	-5.129	-1.726
			3.9000	-210.15	1.43	20.40	-0.203	-44.904	-4.509
CBT	C7	DIS2X MAX							
			0.0000	-199.17	25.87	25.72	0.627	51.419	50.031
			1.9500	-190.90	25.87	25.72	0.627	2.021	-0.420
			3.9000						
CBT	C7	DIS2X MIN		-182.63	25.87	25.72	0.627	-21.390	40.518
			0.0000	-262.64	-22.34	7.90	-1.073	8.969	-46.589
			1.9500	-254.37	-22.34	7.90	-1.073	-7.201	-3.035
			3.9000	-246.10	-22.34	7.90	-1.073	-49.359	-50.872
CBT	C7	DIS2Y MAX							
			0.0000	-215.44	10.62	42.73	2.224	95.797	19.432
			1.9500	-207.17	10.62	42.73	2.224	12.492	-1.270
			3.9000	-198.90	10.62	42.73	2.224	0.143	11.622
CBT	C7	DIS2Y MIN							
			0.0000	-246.37	-7.08	-9.11	-2.671	-35.408	-15.990
			1.9500	-238.10	-7.08	-9.11	-2.671	-17.672	-2.186
CBT	C7	DIS3X MAX	0.0000	-123.56	25.48	19.49	0.705	40.548	49.774
			1.9500	-117.36	25.48	19.49	0.705	3.299	0.091
			3.9000	-111.16	25.48	19.49	0.705	-7.962	41.798
CBT	C7	DIS3X MIN							
			0.0000	-187.03	-22.73	1.67	-0.995	-1.902	-46.845
CBT	C7	DIS3Y MAX							
			0.0000	-139.83	10.22	36.50	2.302	84.926	19.176

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-133.63	10.22	36.50	2.302	13.770	-0.758
			3.9000	-127.43	10.22	36.50	2.302	13.571	12.901
CBT	C7	DIS3Y MIN							
			0.0000	-170.76	-7.47	-15.34	-2.593	-46.279	-16.247
			1.9500	-164.56	-7.47	-15.34	-2.593	-16.394	-1.674
			3.9000	-158.36	-7.47	-15.34	-2.593	-57.464	-20.695
CBT	C8	DIS1A							
			0.0000	-163.43	-2.17	13.21	-0.241	24.660	-3.969
			1.9500	-155.16	-2.17	13.21	-0.241	-1.108	0.259
			3.9000	-146.89	-2.17	13.21	-0.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.013
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	DIS2X MAX							
			0.0000	-123.56	19.98	23.23	0.627	48.657	41.637
			1.9500	-115.29	19.98	23.23	0.627	3.417	2.683
			3.9000	-107.02	19.98	23.23	0.627	-7.306	44.831
CBT	C8	DIS2X MIN							
			0.0000	-185.87	-24.08	1.15	-1.073	-2.857	-49.068
			1.9500	-177.60	-24.08	1.15	-1.073	-5.143	-2.121
			3.9000	-169.33	-24.08	1.15	-1.073	-41.948	-36.276
CBT	C8	DIS2Y MAX							
			0.0000	-127.92	6.23	46.32	2.224	103.279	13.183
			1.9500	-119.65	6.23	46.32	2.224	12.975	1.082
			3.9000	-111.38	6.23	46.32	2.224	28.143	19.684
CBT	C8	DIS2Y MIN							
			0.0000	-181.51	-10.33	-21.95	-2.671	-57.479	-20.614
			1.9500	-173.24	-10.33	-21.95	-2.671	-14.702	-0.520
			3.9000	-164.97	-10.33	-21.95	-2.671	-77.397	-11.128
CBT	C8	DIS3X MAX							
			0.0000	-73.99	20.64	18.89	0.705	40.732	42.882
			1.9500	-67.79	20.64	18.89	0.705	3.938	2.640
			3.9000	-61.58	20.64	18.89	0.705	1.662	43.500
CBT	C8	DIS3X MIN	0.0000	-136.30	-23.42	-3.18	-0.995	-10.782	-47.823
			1.9500	-130.10	-23.42	-3.18	-0.995	-4.622	-2.164
			3.9000	-123.90	-23.42	-3.18	-0.995	-32.979	-37.607
CBT	C8	DIS3Y MAX							
			0.0000	-78.35	6.89	41.99	2.302	95.354	14.428
			1.9500	-72.15	6.89	41.99	2.302	13.497	1.039
			3.9000	-65.95	6.89	41.99	2.302	37.111	18.352
CBT	C8	DIS3Y MIN							
			0.0000	-131.94	-9.67	-26.28	-2.593	-65.404	-19.369
			1.9500	-125.73	-9.67	-26.28	-2.593	-14.180	-0.563
			3.9000	-119.53	-9.67	-26.28	-2.593	-68.428	-12.460

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CONCRETE COLUMN CHECK OUTPUT (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50C	0.000	0.575	DIS2Y	0.035	DIS2X	0.047	DIS2Y
CBT	C1	C30X50C	195.000	0.177	DIS2Y	0.035	DIS2X	0.047	DIS2Y
CBT	C1	C30X50C	390.000	0.560	DIS2Y	0.035	DIS2X	0.047	DIS2Y
CBT	C2	C30X50E	0.000	0.399	DIS2Y	0.038	DIS2X	0.034	DIS2Y
CBT	C2	C30X50E	195.000	0.150	DIS2Y	0.038	DIS2X	0.034	DIS2Y
CBT	C2	C30X50E	390.000	0.398	DIS2X	0.038	DIS2X	0.034	DIS2Y
CBT	C3	C30X50A	0.000	0.594	DIS2Y	0.034	DIS2X	0.040	DIS2Y
CBT	C3	C30X50A	195.000	0.173	DIS2Y	0.034	DIS2X	0.040	DIS2Y
CBT	C3	C30X50A	390.000	0.664	DIS2Y	0.034	DIS2X	0.040	DIS2Y
CBT	C4	C30X50C	0.000	0.507	DIS2Y	0.044	DIS2X	0.041	DIS2Y
CBT	C4	C30X50C	195.000	0.143	DIS2Y	0.044	DIS2X	0.041	DIS2Y
CBT	C4	C30X50C	390.000	0.585	DIS2Y	0.044	DIS2X	0.041	DIS2Y
CBT	C5	C30X50D	0.000	0.582	DIS2Y	0.039	DIS2X	0.052	DIS2Y
CBT	C5	C30X50D	195.000	0.129	DIS2Y	0.039	DIS2X	0.052	DIS2Y
CBT	C5	C30X50D	390.000	0.481	DIS2X	0.039	DIS2X	0.052	DIS2Y
CBT	C6	C30X50E	0.000	0.391	DIS2X	0.036	DIS3X	0.026	DIS3Y
CBT	C6	C30X50E	195.000	0.134	DIS2Y	0.036	DIS3X	0.026	DIS3Y

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
EBT	C6	C30X50E	390.000	0.316	DIS2X	0.036	DIS3X	0.026	DIS3Y
CBT	C7	C30X50E	0.000	0.432	DIS2X	0.040	DIS2X	0.032	DIS3Y
CBT	C7	C30X50E	195.000	0.119	DIS2Y	0.040	DIS2X	0.037	DIS2Y
CBT	C7	C30X50E	390.000	0.425	DIS2X	0.040	DIS2X	0.037	DIS2Y
CBT	C8	C30X50C	0.000	0.496	DIS2Y	0.037	DIS2X	0.041	DIS2Y
CBT	C8	C30X50C	195.000	0.098	DIS2Y	0.037	DIS2X	0.041	DIS2Y
CBT	C8	C30X50C	390.000	0.427	DIS2X	0.037	DIS2X	0.041	DIS2Y

Story	ColLine	SecID	StnLoc	PMMCombo	AsMin	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.575
CBT	C1	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.177
CBT	C1	C30X50C	390	DIS2Y	15	23.355	2.839	2	0.56
CBT	C2	C30X50E	0	DIS2Y	15	34.064	2.839	2.839	0.399
CBT	C2	C30X50E	195	DIS2Y	15	34.064	2.839	2.839	0.15
CBT	C2	C30X50E	390	DIS2X	15	34.064	2.839	2.839	0.398
CBT	C3	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.594
CBT	C3	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.173
CBT	C3	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.664
CBT	C4	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.507
CBT	C4	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.143
CBT	C4	C30X50C	390	DIS2Y	15	23.355	2.839	2	0.585
CBT	C5	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.582
CBT	C5	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.129
CBT	C5	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.481
CBT	C6	C30X50E	0	DIS2X	15	34.064	2.839	2.839	0.391
CBT	C6	C30X50E	195	DIS2Y	15	34.064	2.839	2.839	0.134
CBT	C6	C30X50E	390	DIS2X	15	34.064	2.839	2.839	0.316
CBT	C7	C30X50E	0	DIS2X	15	34.064	2.839	2.839	0.432
CBT	C7	C30X50E	195	DIS2Y	15	34.064	2.839	2.839	0.119
CBT	C7	C30X50E	390	DIS2X	15	34.064	2.839	2.839	0.425
CBT	C8	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.496
CBT	C8	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.098
CBT	C8	C30X50C	390	DIS2X	15	23.355	2.839	2	0.427

8.1.6.3. Zona Alta, Suelo Tipo E

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L O A D I N G C O M B I N A T I O N S

CDMBO	CDMBO TYPE	CASE	CASE TYPE	SCALE FACTDR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	D	Combo	1.2000
		G	Static	1.6000
DIS2X	ADD	D	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
OIS2Y	ADD	D	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
DIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DIS3Y	ADD	D	Combo	0.9000
		EY	Spectra	1.0000

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C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C1	DIS1A							
			0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B							
			0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.930
			1.9500	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2X MAX							
			0.0000	-144.93	8.40	-8.11	0.532	10.105	21.653
			1.9500	-136.66	8.40	-8.11	0.532	25.922	5.280
			3.9000	-128.39	8.40	-8.11	0.532	69.636	39.319
CBT	C1	DIS2X MIN							
			0.0000	-166.85	-21.13	-28.71	-0.979	-42.347	-43.093
			1.9500	-158.58	-21.13	-28.71	-0.979	13.636	-1.889
			3.9000	-150.31	-21.13	-28.71	-0.979	41.722	-11.096
CBT	C1	DIS2Y MAX							
			0.0000	-144.90	2.65	13.71	1.952	65.403	8.793
			1.9500	-136.63	2.65	13.71	1.952	38.680	3.630
			3.9000	-128.36	2.65	13.71	1.952	99.411	29.773
CBT	C1	OIS2Y MIN	0.0000	-166.89	-15.39	-50.53	-2.398	-97.646	-30.233
			1.9500	-158.62	-15.39	-50.53	-2.398	0.877	-0.238
			3.9000	-150.35	-15.39	-50.53	-2.398	11.946	-1.551
CBT	C1	DIS3X MAX							
			0.0000	-95.45	10.27	-1.58	0.610	16.048	24.924
			1.9500	-89.25	10.27	-1.58	0.610	19.143	4.898
			3.9000	-83.05	10.27	-1.58	0.610	50.134	35.283
CBT	C1	DIS3X MIN							
			0.0000	-117.38	-19.26	-22.19	-0.901	-36.403	-39.822
			1.9500	-111.18	-19.26	-22.19	-0.901	6.857	-2.271
			3.9000	-104.97	-19.26	-22.19	-0.901	22.221	-15.132
CBT	C1	DIS3Y MAX							
			0.0000	-95.42	4.53	20.23	2.030	71.347	12.064
			1.9500	-89.22	4.53	20.23	2.030	31.901	3.248
			3.9000	-83.02	4.53	20.23	2.030	79.910	25.738
CBT	C1	DIS3Y MIN							
			0.0000	-117.41	-13.51	-44.00	-2.320	-91.702	-26.962
			1.9500	-111.21	-13.51	-44.00	-2.320	-5.902	-0.620
			3.9000	-105.01	-13.51	-44.00	-2.320	-7.555	-5.586
CBT	C2	OIS1A							
			0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
			3.9000	-195.32	-3.57	-15.06	-0.241	46.203	7.031
CBT	C2	DIS1B							
			0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
CBT	C2	DIS2X MAX							
			0.0000	-197.73	15.94	-6.26	0.532	7.566	32.386

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-189.46	15.94	-6.26	0.532	19.770	1.313
			3.9000	-181.19	15.94	-6.26	0.532	49.951	42.641
CBT	C2	DIS2X MIN							
			0.0000	-203.19	-22.47	-20.07	-0.979	-28.308	-45.004
			1.9500	-194.92	-22.47	-20.07	-0.979	10.815	-1.182
			3.9000	-186.64	-22.47	-20.07	-0.979	31.959	-29.761
CBT	C2	DIS2Y MAX							
			0.0000	-191.53	8.07	9.25	1.952	47.968	16.506
			1.9500	-183.26	8.07	9.25	1.952	29.922	0.774
			3.9000						
CBT	C2	DIS2Y MIN		-174.99	8.07	9.25	1.952	70.036	27.838
			0.0000	-209.39	-14.61	-35.58	-2.398	-68.709	-29.123
			1.9500	-201.12	-14.61	-35.58	-2.398	0.663	-0.643
			3.9000	-192.85	-14.61	-35.58	-2.398	11.874	-14.957
CBT	C2	DIS3X MAX							
			0.0000	-133.37	17.13	-0.59	0.610	12.880	34.687
			1.9500	-127.17	17.13	-0.59	0.610	14.027	1.289
			3.9000	-120.96	17.13	-0.59	0.610	33.152	40.293
CBT	C2	DIS3X MIN							
			0.0000	-138.82	-21.28	-14.40	-0.901	-22.994	-42.703
			1.9500	-132.62	-21.28	-14.40	-0.901	5.072	-1.205
			3.9000	-126.41	-21.28	-14.40	-0.901	15.160	-32.109
CBT	C2	DIS3Y MAX	0.0000	-127.16	9.26	14.92	2.030	53.281	18.807
			1.9500	-120.96	9.26	14.92	2.030	24.179	0.751
			3.9000	-114.76	9.26	14.92	2.030	53.237	25.489
CBT	C2	DIS3Y MIN							
			0.0000	-145.02	-13.41	-29.91	-2.320	-63.396	-26.822
			1.9500	-138.82	-13.41	-29.91	-2.320	-5.080	-0.667
			3.9000	-132.62	-13.41	-29.91	-2.320	-4.925	-17.306
CBT	C3	DIS1A							
			0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B							
			0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
			3.9000	-132.52	4.34	-23.24	-0.203	63.825	-12.495
CBT	C3	DIS2X MAX							
			0.0000	-140.01	19.89	-11.77	0.532	-3.202	38.010
			1.9500	-131.74	19.89	-11.77	0.532	21.962	-0.765
			3.9000	-123.47	19.89	-11.77	0.532	67.840	13.539
CBT	C3	DIS2X MIN							
			0.0000	-147.74	-10.72	-26.81	-0.979	-38.074	-28.269
			1.9500	-139.47	-10.72	-26.81	-0.979	11.976	-7.366
CBT	C3	DIS2Y MAX							
			0.0000	-132.67	13.72	3.36	1.952	36.253	24.546
			1.9500	-124.40	13.72	3.36	1.952	29.847	-2.188
			3.9000	-116.13	13.72	3.36	1.952	86.120	2.947
CBT	C3	DIS2Y MIN							
			0.0000	-155.08	-4.55	-41.93	-2.398	-77.528	-14.805
			3.9000	-138.54	-4.55	-41.93	-2.398	23.032	-28.950
CBT	C3	DIS3X MAX							
			0.0000	-94.96	18.67	-4.95	0.610	4.293	36.881
			1.9500	-88.75	18.67	-4.95	0.610	16.174	0.479
			3.9000	-82.55	18.67	-4.95	0.610	48.767	17.157
CBT	C3	DIS3X MIN	0.0000	-102.69	-11.94	-19.99	-0.901	-30.579	-29.399
			1.9500	-96.49	-11.94	-19.99	-0.901	6.188	-6.122
			3.9000	-90.28	-11.94	-19.99	-0.901	22.240	-35.924
CBT	C3	DIS3Y MAX							
			0.0000	-87.62	12.50	10.17	2.030	43.748	23.416
			1.9500	-81.42	12.50	10.17	2.030	24.058	-0.944
			3.9000	-75.22	12.50	10.17	2.030	67.048	6.565
CBT	C3	DIS3Y MIN							
			0.0000	-110.02	-5.77	-35.12	-2.320	-70.033	-15.935
			1.9500	-103.82	-5.77	-35.12	-2.320	-1.697	-4.699
			3.9000	-97.62	-5.77	-35.12	-2.320	3.960	-25.332
CBT	C4	DIS1A							
			0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	DIS1B							
			0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX	0.0000	-112.11	26.98	1.09	0.532	16.054	48.868
			1.9500	-103.84	26.98	1.09	0.532	13.930	-3.738
			3.9000	-95.57	26.98	1.09	0.532	44.887	-7.146
CBT	C4	DIS2X MIN							
			0.0000	-142.64	-2.39	-19.23	-0.979	-30.121	-16.455
			1.9500	-134.37	-2.39	-19.23	-0.979	7.380	-11.813
			3.9000	-126.10	-2.39	-19.23	-0.979	11.799	-56.370
CBT	C4	DIS2Y MAX	0.0000	-105.97	17.98	23.09	1.952	65.902	28.461
			1.9500	-97.70	17.98	23.09	1.952	20.887	-6.278
			3.9000	-89.43	17.98	23.09	1.952	80.819	-21.787
CBT	C4	DIS2Y MIN	0.0000	-148.78	6.62	-41.23	-2.398	-79.970	3.952
			1.9500	-140.51	6.62	-41.23	-2.398	0.423	-9.273
			3.9000	-132.23	6.62	-41.23	-2.398	-24.133	-41.728
CBT	C4	DIS3X MAX							
			0.0000	-71.30	22.67	4.49	0.610	19.018	43.206
			1.9500	-65.10	22.67	4.49	0.610	10.261	-0.987
			3.9000	-58.89	22.67	4.49	0.610	34.585	4.019
CBT	C4	DIS3X MIN	0.0000	-101.83	-6.70	-15.83	-0.901	-27.157	-22.116
			1.9500	-95.63	-6.70	-15.83	-0.901	3.711	-9.061
			3.9000	-89.43	-6.70	-15.83	-0.901	1.497	-45.205
CBT	C4	DIS3Y MAX							
			0.0000	-65.16	13.66	26.49	2.030	68.867	22.800
			1.9500	-58.96	13.66	26.49	2.030	17.218	-3.526
			3.9000	-52.76	13.66	26.49	2.030	70.517	-10.623
CBT	C4	DIS3Y MIN	0.0000	-107.97	2.31	-37.83	-2.320	-77.005	-1.710
			1.9500	-101.76	2.31	-37.83	-2.320	-3.246	-6.522
			3.9000	-95.56	2.31	-37.83	-2.320	-34.434	-30.564
CBT	C5	DIS1A							
			0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	DIS1B							
			0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	DIS2X MAX	0.0000	-188.88	10.87	34.14	0.532	69.581	27.205
			1.9500	-180.61	10.87	34.14	0.532	3.052	6.001
			3.9000	-172.34	10.87	34.14	0.532	-33.746	43.363
CBT	C5	DIS2X MIN							
			0.0000	-209.85	-22.89	12.79	-0.979	16.106	-45.906
			1.9500	-201.58	-22.89	12.79	-0.979	-8.872	-1.274
CBT	C5	DIS2Y MAX							
			0.0000	-186.96	0.43	55.81	1.952	124.688	4.376
			1.9500	-178.69	0.43	55.81	1.952	15.871	3.568
			3.9000	-170.42	0.43	55.81	1.952	-4.354	25.478
CBT	C5	DIS2Y MIN	0.0000	-211.76	-12.45	-8.88	-2.398	-39.000	-23.077
			1.9500	-203.49	-12.45	-8.88	-2.398	-21.692	1.159
			3.9000	-195.22	-12.45	-8.88	-2.398	-92.975	2.678
CBT	C5	DIS3X MAX							
			0.0000	-124.78	12.67	25.90	0.610	54.743	30.065
			1.9500	-118.58	12.67	25.90	0.610	4.270	5.361
			3.9000	-112.38	12.67	25.90	0.610	-16.472	39.223
CBT	C5	DIS3X MIN							
			0.0000	-145.74	-21.09	4.56	-0.901	1.268	-43.046
			1.9500	-139.54	-21.09	4.56	-0.901	-7.654	-1.913
CBT	C5	DIS3Y MAX	0.0000	-122.86	2.23	47.57	2.030	109.849	7.235
			1.9500	-116.66	2.23	47.57	2.030	17.089	2.929
			3.9000	-110.46	2.23	47.57	2.030	12.921	21.338
CBT	C5	DIS3Y MIN							
			0.0000	-147.66	-10.65	-17.12	-2.320	-53.839	-20.217
			1.9500	-141.46	-10.65	-17.12	-2.320	-20.474	0.519
			3.9000	-135.26	-10.65	-17.12	-2.320	-75.700	-1.462
CBT	C6	DIS1A							
			0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX							
			0.0000	-251.85	19.29	14.31	0.532	36.510	39.188
			1.9500	-243.58	19.29	14.31	0.532	8.646	1.571
CBT	C6	DIS2X MIN	0.0000	-264.35	-21.20	0.62	-0.979	0.837	-43.508
			1.9500	-256.08	-21.20	0.62	-0.979	-0.413	-2.159
			3.9000	-247.81	-21.20	0.62	-0.979	-19.322	-36.046
CBT	C6	DIS2Y MAX							
			0.0000	-248.58	6.48	29.91	1.952	77.052	12.987
			1.9500	-240.31	6.48	29.91	1.952	18.731	0.360
			3.9000	-232.04	6.48	29.91	1.952	18.714	15.415
CBT	C6	OIS2Y MIN							
			0.0000	-267.61	-8.39	-14.98	-2.398	-39.706	-17.306
			1.9500	-259.34	-8.39	-14.98	-2.398	-10.497	-0.948
			3.9000	-251.07	-8.39	-14.98	-2.398	-39.594	-12.271
CBT	C6	DIS3X MAX							
			0.0000	-167.26	19.70	10.70	0.610	28.753	40.069
			1.9500	-161.06	19.70	10.70	0.610	7.933	1.663
			3.9000	-154.86	19.70	10.70	0.610	4.772	38.493
CBT	C6	DIS3X MIN							
			0.0000	-179.76	-20.80	-2.99	-0.901	-6.920	-42.627
			1.9500	-173.56	-20.80	-2.99	-0.901	-1.126	-2.067
			3.9000	-167.36	-20.80	-2.99	-0.901	-12.993	-36.744
CBT	C6	DIS3Y MAX							
			0.0000	-164.00	6.88	26.30	2.030	69.296	13.867
			1.9500	-157.79	6.88	26.30	2.030	18.017	0.451
			3.9000	-151.59	6.88	26.30	2.030	25.043	14.717
CBT	C6	OIS3Y MIN	0.0000	-183.03	-7.99	-18.59	-2.320	-47.462	-16.425
			1.9500	-176.82	-7.99	-18.59	-2.320	-11.211	-0.856
			3.9000	-170.62	-7.99	-18.59	-2.320	-33.265	-12.968
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			1.9500	-218.42	1.43	20.40	-0.203	-5.129	-1.726
			3.9000	-210.15	1.43	20.40	-0.203	-44.904	-4.509
CBT	C7	DIS2X MAX	0.0000	-202.53	23.34	24.55	0.532	48.553	44.949
			1.9500	-194.26	23.34	24.55	0.532	1.377	-0.558
			3.9000	-185.99	23.34	24.55	0.532	-23.133	35.712
CBT	C7	DIS2X MIN							
			0.0000	-259.29	-19.80	9.07	-0.979	11.835	-41.507
			1.9500	-251.02	-19.80	9.07	-0.979	-6.557	-2.898
			3.9000	-242.75	-19.80	9.07	-0.979	-47.616	-46.066
CBT	C7	DIS2Y MAX							
			0.0000	-217.44	9.67	39.14	1.952	86.678	17.529
			1.9500	-209.17	9.67	39.14	1.952	10.386	-1.319
			3.9000						
CBT	C7	DIS2Y MIN		-200.90	9.67	39.14	1.952	-4.768	9.816
			0.0000	-244.37	-6.13	-5.51	-2.398	-26.289	-14.087
			1.9500	-236.10	-6.13	-5.51	-2.398	-15.566	-2.137
			3.9000	-227.83	-6.13	-5.51	-2.398	-65.980	-20.170
CBT	C7	DIS3X MAX							
			0.0000	-126.91	22.94	18.32	0.610	37.682	44.693
			1.9500	-120.71	22.94	18.32	0.610	2.655	-0.046
			3.9000	-114.51	22.94	18.32	0.610	-9.705	36.992
CBT	C7	DIS3X MIN	0.0000	-183.68	-20.19	2.84	-0.901	0.964	-41.764
			1.9500	-177.48	-20.19	2.84	-0.901	-5.279	-2.386
CBT	C7	DIS3Y MAX	0.0000	-141.83	9.27	32.91	2.030	75.807	17.273
			1.9500	-135.63	9.27	32.91	2.030	11.664	-0.808
			3.9000	-129.43	9.27	32.91	2.030	8.659	11.096
CBT	C7	DIS3Y MIN							
			0.0000	-168.76	-6.52	-11.74	-2.320	-37.160	-14.343

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-162.56	-6.52	-11.74	-2.320	-14.287	-1.625
			3.9000	-156.36	-6.52	-11.74	-2.320	-52.553	-18.890
CBT	C8	DIS1A							
			0.0000	-163.43	-2.17	13.21	-0.241	24.660	-3.969
			1.9500	-155.16	-2.17	13.21	-0.241	-1.108	0.259
			3.9000	-146.89	-2.17	13.21	-0.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.013
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	DIS2X MAX							
			0.0000	-126.91	17.66	21.68	0.532	45.032	36.866
			1.9500	-118.64	17.66	21.68	0.532	2.804	2.430
			3.9000	-110.37	17.66	21.68	0.532	-9.716	40.565
CBT	C8	DIS2X MIN							
			0.0000	-182.52	-21.76	2.69	-0.979	0.768	-44.298
			1.9500	-174.25	-21.76	2.69	-0.979	-4.531	-1.868
			3.9000	-165.98	-21.76	2.69	-0.979	-39.538	-32.009
CBT	C8	DIS2Y MAX	0.0000	-131.58	5.33	41.39	1.952	91.675	11.351
			1.9500	-123.31	5.33	41.39	1.952	10.983	0.999
CBT	C8	DIS2Y MIN	3.9000	-115.04	5.33	41.39	1.952	20.519	17.998
			0.0000	-177.85	-9.43	-17.02	-2.398	-45.875	-18.782
			1.9500	-169.58	-9.43	-17.02	-2.398	-12.710	-0.437
			3.9000	-161.31	-9.43	-17.02	-2.398	-69.772	-9.443
CBT	C8	DIS3X MAX							
			0.0000	-77.34	18.32	17.35	0.610	37.107	38.112
			1.9500	-71.14	18.32	17.35	0.610	3.326	2.387
CBT	C8	DIS3X MIN	3.9000	-64.93	18.32	17.35	0.610	-0.747	39.234
			0.0000	-132.95	-21.10	-1.64	-0.901	-7.157	-43.052
			1.9500	-126.75	-21.10	-1.64	-0.901	-4.010	-1.911
			3.9000	-120.54	-21.10	-1.64	-0.901	-30.570	-33.341
CBT	C8	DIS3Y MAX							
			0.0000	-82.01	5.99	37.06	2.030	83.750	12.596
			1.9500	-75.81	5.99	37.06	2.030	11.505	0.956
			3.9000	-69.61	5.99	37.06	2.030	29.487	16.667
CBT	C8	DIS3Y MIN							
			0.0000	-128.28	-8.77	-21.35	-2.320	-53.800	-17.537
			1.9500	-122.07	-8.77	-21.35	-2.320	-12.189	-0.480
			3.9000	-115.87	-8.77	-21.35	-2.320	-60.804	-10.774

C O N C R E T E C O L U M N C H E C K O U T P U T (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50B	0.000	0.580	DIS2Y	0.033	DIS2X	0.044	DIS2Y
CBT	C1	C30X50B	195.000	0.180	DIS2Y	0.033	DIS2X	0.044	DIS2Y
CBT	C1	C30X50B	390.000	0.590	DIS2Y	0.033	DIS2X	0.044	DIS2Y
CBT	C2	C30X50E	0.000	0.365	DIS2Y	0.035	DIS2X	0.031	DIS2Y
CBT	C2	C30X50E	195.000	0.144	DIS2Y	0.035	DIS2X	0.031	DIS2Y
CBT	C2	C30X50E	390.000	0.373	DIS2X	0.035	DIS2X	0.031	DIS2Y
CBT	C3	C30X50A	0.000	0.513	DIS2Y	0.031	DIS2X	0.037	DIS2Y
CBT	C3	C30X50A	195.000	0.165	DIS2Y	0.031	DIS2X	0.037	DIS2Y
CBT	C3	C30X50A	390.000	0.615	DIS2Y	0.031	DIS2X	0.037	DIS2Y
CBT	C4	C30X50C	0.000	0.454	DIS2Y	0.042	DIS2X	0.036	DIS2Y
CBT	C4	C30X50C	390.000	0.546	DIS2Y	0.042	DIS2X	0.036	DIS2Y
CBT	C5	C30X50D	0.000	0.543	DIS2Y	0.035	DIS2X	0.049	DIS2Y
CBT	C5	C30X50D	195.000	0.123	DIS2Y	0.035	DIS2X	0.049	DIS2Y
CBT	C5	C30X50D	390.000	0.454	DIS2X	0.035	DIS2X	0.049	DIS2Y
CBT	C6	C30X50E	0.000	0.361	DIS2X	0.032	DIS3X	0.023	DIS3Y
CBT	C6	C30X50E	195.000	0.129	DIS2Y	0.032	DIS3X	0.023	DIS3Y
CBT	C6	C30X50E	390.000	0.292	DIS2X	0.032	DIS3X	0.023	DIS3Y
CBT	C7	C30X50D	0.000	0.424	DIS2X	0.036	DIS2X	0.029	DIS3Y
CBT	C7	C30X50D	195.000	0.118	DIS2Y	0.036	DIS2X	0.034	DIS2Y
CBT	C7	C30X50D	390.000	0.422	DIS2X	0.036	DIS2X	0.034	DIS2Y
CBT	C8	C30X50B	0.000	0.495	DIS2Y	0.034	DIS2X	0.036	DIS2Y
CBT	C8	C30X50B	195.000	0.095	DIS2Y	0.034	DIS2X	0.036	DIS2Y
CBT	C8	C30X50B	390.000	0.428	DIS2X	0.034	DIS2X	0.036	DIS2Y

Story	ColLine	SecID	StnLoc	PMMCombo	AsMin	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50B	0	DIS2Y	15	20	2	2	0.58
CBT	C1	C30X50B	195	DIS2Y	15	20	2	2	0.18
CBT	C1	C30X50B	390	DIS2Y	15	20	2	2	0.59
CBT	C2	C30X50E	0	DIS2Y	15	34.064	2.839	2.839	0.365
CBT	C2	C30X50E	195	DIS2Y	15	34.064	2.839	2.839	0.144
CBT	C2	C30X50E	390	DIS2X	15	34.064	2.839	2.839	0.373
CBT	C3	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.513
CBT	C3	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.165
CBT	C3	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.615
CBT	C4	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.454
CBT	C4	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.136
CBT	C4	C30X50C	390	DIS2Y	15	23.355	2.839	2	0.546
CBT	C5	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.543
CBT	C5	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.123
CBT	C5	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.454
CBT	C6	C30X50E	0	DIS2X	15	34.064	2.839	2.839	0.361
CBT	C6	C30X50E	195	DIS2Y	15	34.064	2.839	2.839	0.129
CBT	C6	C30X50E	390	DIS2X	15	34.064	2.839	2.839	0.292
CBT	C7	C30X50D	0	DIS2X	15	28.387	2.839	2.839	0.424
CBT	C7	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.118
CBT	C7	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.422
CBT	C8	C30X50B	0	DIS2Y	15	20	2	2	0.495
CBT	C8	C30X50B	195	DIS2Y	15	20	2	2	0.095
CBT	C8	C30X50B	390	DIS2X	15	20	2	2	0.428

8.1.6.4. Zona intermedia, Suelo Tipo AB

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	D	Combo	1.2000
		G	Static	1.6000
DIS2X	ADD	D	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
DIS2Y	ADD	D	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
DIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DIS3Y	ADD	D	Combo	0.9000
		EY	Spectra	1.0000

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C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C1	DIS1A							
			0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B							
			0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.930
			1.9500	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2X MAX							
			0.0000	-150.50	0.86	-13.02	0.172	-2.416	5.117
			1.9500	-142.23	0.86	-13.02	0.172	22.986	3.448
			3.9000	-133.96	0.86	-13.02	0.172	62.979	26.446
CBT	C1	DIS2X MIN							
			0.0000	-161.28	-13.59	-23.80	-0.619	-29.827	-26.557
			1.9500	-153.01	-13.59	-23.80	-0.619	16.572	-0.057
			3.9000	-144.74	-13.59	-23.80	-0.619	48.379	1.777
CBT	C1	DIS2Y MAX							
			0.0000	-150.07	-1.65	-1.48	0.939	26.848	-0.509
			1.9500	-141.80	-1.65	-1.48	0.939	29.745	2.704
			3.9000	-133.53	-1.65	-1.48	0.939	78.723	22.314
CBT	C1	DIS2Y MIN	0.0000	-161.71	-11.09	-35.34	-1.386	-59.091	-20.931
			1.9500	-153.44	-11.09	-35.34	-1.386	9.813	0.687
			3.9000	-145.17	-11.09	-35.34	-1.386	32.635	5.909
CBT	C1	DIS3X MAX							
			0.0000	-101.03	2.73	-6.50	0.250	3.528	8.388
			1.9500	-94.83	2.73	-6.50	0.250	16.207	3.066
			3.9000	-88.62	2.73	-6.50	0.250	43.477	22.410
CBT	C1	DIS3X MIN							
			0.0000	-111.81	-11.72	-17.27	-0.541	-23.883	-23.286
			1.9500	-105.60	-11.72	-17.27	-0.541	9.793	-0.439
CBT	C1	DIS3Y MAX							
			0.0000	-100.60	0.23	5.04	1.017	32.792	2.762
			1.9500	-94.40	0.23	5.04	1.017	22.966	2.322
			3.9000	-88.19	0.23	5.04	1.017	59.222	18.278
CBT	C1	DIS3Y MIN							
			0.0000	-112.24	-9.21	-28.81	-1.308	-53.147	-17.660
			1.9500	-106.03	-9.21	-28.81	-1.308	3.034	0.305
			3.9000	-99.83	-9.21	-28.81	-1.308	13.133	1.874
CBT	C2	DIS1A							
			0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
			3.9000	-195.32	-3.57	-15.06	-0.241	46.203	7.031
CBT	C2	DIS1B							
			0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
			3.9000	-206.92	-3.44	-25.76	-0.203	71.609	6.751
CBT	C2	DIS2X MAX							
			0.0000	-199.00	6.12	-9.48	0.172	-0.797	12.619

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-190.73	6.12	-9.48	0.172	17.684	0.676
			3.9000	-182.46	6.12	-9.48	0.172	45.752	24.148
CBT	C2	DIS2X MIN							
			0.0000	-201.91	-12.66	-16.84	-0.619	-19.944	-25.236
			1.9500	-193.64	-12.66	-16.84	-0.619	12.901	-0.544
			3.9000	-185.37	-12.66	-16.84	-0.619	36.158	-11.268
CBT	C2	DIS2Y MAX							
			0.0000	-195.68	2.66	-1.15	0.939	20.876	5.622
			1.9500	-187.41	2.66	-1.15	0.939	23.127	0.436
			3.9000						
CBT	C2	DIS2Y MIN		-179.14	2.66	-1.15	0.939	56.533	17.631
			0.0000	-205.24	-9.20	-25.17	-1.386	-41.617	-18.240
			1.9500	-196.97	-9.20	-25.17	-1.386	7.458	-0.305
CBT	C2	DIS3X MAX							
			0.0000	-134.64	7.32	-3.81	0.250	4.516	14.920
			1.9500	-128.44	7.32	-3.81	0.250	11.941	0.652
			3.9000	-122.23	7.32	-3.81	0.250	28.953	21.799
CBT	C2	DIS3X MIN							
			0.0000	-137.55	-11.47	-11.17	-0.541	-14.631	-22.935
			1.9500	-131.35	-11.47	-11.17	-0.541	7.158	-0.568
CBT	C2	DIS3Y MAX	0.0000	-131.32	3.85	4.52	1.017	26.189	7.924
			1.9500	-125.11	3.85	4.52	1.017	17.384	0.412
			3.9000	-118.91	3.85	4.52	1.017	39.734	15.283
CBT	C2	DIS3Y MIN							
			0.0000	-140.87	-8.01	-19.50	-1.308	-36.304	-15.939
			1.9500	-134.67	-8.01	-19.50	-1.308	1.715	-0.328
			3.9000	-128.47	-8.01	-19.50	-1.308	8.579	-7.099
CBT	C3	DIS1A							
			0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B							
			0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
			3.9000	-132.52	4.34	-23.24	-0.203	63.825	-12.495
CBT	C3	DIS2X MAX							
			0.0000	-141.82	12.07	-15.21	0.172	-11.033	21.082
			1.9500	-133.55	12.07	-15.21	0.172	19.598	-2.452
			3.9000	-125.28	12.07	-15.21	0.172	61.511	-0.017
CBT	C3	DIS2X MIN							
			0.0000	-145.93	-2.90	-23.36	-0.619	-30.242	-11.341
			1.9500	-137.66	-2.90	-23.36	-0.619	14.341	-5.679
			3.9000	-129.39	-2.90	-23.36	-0.619	47.641	-25.987
CBT	C3	DIS2Y MAX							
			0.0000	-137.76	9.37	-6.76	0.939	10.807	15.174
			1.9500	-129.49	9.37	-6.76	0.939	24.059	-3.089
			3.9000	-121.22	9.37	-6.76	0.939	72.034	-4.635
CBT	C3	DIS2Y MIN							
			0.0000	-149.99	-0.20	-31.81	-1.386	-52.082	-5.433
			1.9500	-141.72	-0.20	-31.81	-1.386	9.879	-5.043
			3.9000	-133.45	-0.20	-31.81	-1.386	37.118	-21.368
CBT	C3	DIS3X MAX							
			0.0000	-96.76	10.85	-8.39	0.250	-3.538	19.952
			1.9500	-90.56	10.85	-8.39	0.250	13.809	-1.208
			3.9000	-84.36	10.85	-8.39	0.250	42.439	3.602
CBT	C3	DIS3X MIN	0.0000	-100.88	-4.12	-16.55	-0.541	-22.747	-12.471
			1.9500	-94.68	-4.12	-16.55	-0.541	8.552	-4.435
			3.9000	-88.48	-4.12	-16.55	-0.541	28.569	-22.368
CBT	C3	DIS3Y MAX							
			0.0000	-92.71	8.15	0.05	1.017	18.302	14.044
			1.9500	-86.50	8.15	0.05	1.017	18.270	-1.844
			3.9000	-80.30	8.15	0.05	1.017	52.962	-1.017
CBT	C3	DIS3Y MIN							
			0.0000	-104.94	-1.42	-25.00	-1.308	-44.587	-6.563
			1.9500	-98.74	-1.42	-25.00	-1.308	4.091	-3.798
			3.9000	-92.53	-1.42	-25.00	-1.308	18.046	-17.750
CBT	C4	DIS1A							
			0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	DIS1B							
			0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX	0.0000	-119.75	19.47	-3.49	0.172	5.652	32.150
			1.9500	-111.48	19.47	-3.49	0.172	12.450	-5.805
			3.9000	-103.21	19.47	-3.49	0.172	37.441	-19.739
CBT	C4	DIS2X MIN	0.0000	-135.00	5.13	-14.66	-0.619	-19.719	0.263
			3.9000	-118.46	5.13	-14.66	-0.619	19.245	-43.776
CBT	C4	DIS2Y MAX	0.0000	-115.56	15.20	8.78	0.939	33.465	22.427
			1.9500	-107.29	15.20	8.78	0.939	16.337	-7.023
			3.9000						
CBT	C4	OIS2Y MIN		-99.02	15.20	8.78	0.939	57.479	-26.617
			0.0000	-139.19	9.40	-26.93	-1.386	-47.532	9.986
			1.9500	-130.92	9.40	-26.93	-1.386	4.973	-8.528
			3.9000	-122.65	9.40	-26.93	-1.386	-0.793	-36.899
CBT	C4	DIS3X MAX	0.0000	-78.94	15.15	-0.08	0.250	8.616	26.488
			1.9500	-72.73	15.15	-0.08	0.250	8.781	-3.054
			3.9000	-66.53	15.15	-0.08	0.250	27.139	-8.574
CBT	C4	DIS3X MIN	0.0000	-94.19	0.81	-11.25	-0.541	-16.755	-5.398
			1.9500	-87.99	0.81	-11.25	-0.541	5.191	-6.994
			3.9000	-81.79	0.81	-11.25	-0.541	8.944	-32.612
CBT	C4	DIS3Y MAX	0.0000	-74.75	10.88	12.19	1.017	36.429	16.766
			1.9500	-68.54	10.88	12.19	1.017	12.668	-4.271
			3.9000	-62.34	10.88	12.19	1.017	47.177	-15.452
CBT	C4	DIS3Y MIN	0.0000	-98.38	5.08	-23.52	-1.308	-44.567	4.324
			1.9500	-92.18	5.08	-23.52	-1.308	1.304	-5.777
			3.9000	-85.98	5.08	-23.52	-1.308	-11.095	-25.734
CBT	C5	DIS1A	0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	DIS1B	0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	DIS2X MAX	0.0000	-194.20	2.23	29.02	0.172	56.788	8.487
			1.9500	-185.93	2.23	29.02	0.172	0.213	4.138
			3.9000	-177.66	2.23	29.02	0.172	-40.916	28.369
CBT	C5	DIS2X MIN	0.0000	-204.53	-14.25	17.91	-0.619	28.900	-27.189
			1.9500	-196.26	-14.25	17.91	-0.619	-6.033	0.589
			3.9000	-187.99	-14.25	17.91	-0.619	-56.412	-0.214
CBT	C5	DIS2Y MAX	0.0000	-192.83	-2.75	40.51	0.939	85.978	-2.415
			1.9500	-184.56	-2.75	40.51	0.939	6.994	2.963
			3.9000						
CBT	C5	DIS2Y MIN		-176.29	-2.75	40.51	0.939	-25.322	19.858
			0.0000	-205.90	-9.27	6.42	-1.386	-0.290	-16.286
			1.9500	-197.63	-9.27	6.42	-1.386	-12.815	1.764
CBT	C5	OIS3X MAX	0.0000	-130.09	4.03	20.79	0.250	41.949	11.347
			1.9500	-123.89	4.03	20.79	0.250	1.430	3.498
			3.9000	-117.69	4.03	20.79	0.250	-23.641	24.229
CBT	C5	OIS3X MIN	0.0000	-140.43	-12.45	9.67	-0.541	14.061	-24.329
			1.9500	-134.23	-12.45	9.67	-0.541	-4.815	-0.051
			3.9000	-128.03	-12.45	9.67	-0.541	-39.138	-4.353
CBT	C5	DIS3Y MAX	0.0000	-128.73	-0.95	32.27	1.017	71.140	0.445
			1.9500	-122.53	-0.95	32.27	1.017	8.212	2.323
			3.9000	-116.32	-0.95	32.27	1.017	-8.047	15.718
CBT	C5	DIS3Y MIN	0.0000	-141.80	-7.47	-1.81	-1.308	-15.129	-13.426
			1.9500	-135.60	-7.47	-1.81	-1.308	-11.597	1.124
			3.9000	-129.39	-7.47	-1.81	-1.308	-54.732	4.158
CBT	C6	OIS1A	0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX							
			0.0000	-254.99	8.92	11.12	0.172	28.203	18.016
			1.9500	-246.72	8.92	11.12	0.172	6.531	0.616
			3.9000	-238.45	8.92	11.12	0.172	-5.692	19.928
CBT	C6	DIS2X MIN	0.0000	-261.21	-10.84	3.81	-0.619	9.144	-22.335
			1.9500	-252.94	-10.84	3.81	-0.619	1.702	-1.204
			3.9000	-244.67	-10.84	3.81	-0.619	-15.188	-16.784
CBT	C6	DIS2Y MAX							
			0.0000	-253.03	2.79	19.49	0.939	49.939	5.475
			1.9500	-244.76	2.79	19.49	0.939	11.944	0.033
			3.9000	-236.49	2.79	19.49	0.939	5.173	8.554
CBT	C6	DIS2Y MIN							
			0.0000	-263.17	-4.70	-4.56	-1.386	-12.593	-9.794
			1.9500	-254.90	-4.70	-4.56	-1.386	-3.710	-0.621
			3.9000	-246.63	-4.70	-4.56	-1.386	-26.053	-5.410
CBT	C6	DIS3X MAX							
			0.0000	-170.40	9.33	7.51	0.250	20.446	18.896
			1.9500	-164.20	9.33	7.51	0.250	5.817	0.708
			3.9000	-158.00	9.33	7.51	0.250	0.637	19.231
CBT	C6	DIS3X MIN							
			0.0000	-176.62	-10.43	0.20	-0.541	1.387	-21.455
			1.9500	-170.42	-10.43	0.20	-0.541	0.989	-1.112
			3.9000	-164.22	-10.43	0.20	-0.541	-8.859	-17.481
CBT	C6	DIS3Y MAX							
			0.0000	-168.44	3.20	15.87	1.017	42.183	6.355
			1.9500	-162.24	3.20	15.87	1.017	11.230	0.125
			3.9000	-156.04	3.20	15.87	1.017	11.502	7.857
CBT	C6	DIS3Y MIN	0.0000	-178.58	-4.30	-8.17	-1.308	-20.349	-8.914
			1.9500	-172.38	-4.30	-8.17	-1.308	-4.424	-0.529
			3.9000	-166.17	-4.30	-8.17	-1.308	-19.724	-6.108
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			1.9500	-236.95	1.73	18.43	-0.241	-3.095	-1.792
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			1.9500	-218.42	1.43	20.40	-0.203	-5.129	-1.726
			3.9000	-210.15	1.43	20.40	-0.203	-44.904	-4.509
CBT	C7	DIS2X MAX	0.0000	-217.04	12.29	20.97	0.172	40.168	22.814
			1.9500	-208.77	12.29	20.97	0.172	-0.405	-1.157
			3.9000	-200.50	12.29	20.97	0.172	-28.952	14.775
CBT	C7	DIS2X MIN							
			0.0000	-244.78	-8.76	12.66	-0.619	20.220	-19.372
			1.9500	-236.51	-8.76	12.66	-0.619	-4.775	-2.299
			3.9000	-228.24	-8.76	12.66	-0.619	-41.796	-25.128
CBT	C7	DIS2Y MAX							
			0.0000	-223.78	5.75	29.13	0.939	61.365	9.686
			1.9500	-215.51	5.75	29.13	0.939	4.577	-1.523
			3.9000						
CBT	C7	DIS2Y MIN		-207.24	5.75	29.13	0.939	-18.504	2.380
			0.0000	-238.04	-2.21	4.50	-1.386	-0.977	-6.244
			1.9500	-229.77	-2.21	4.50	-1.386	-9.757	-1.933
CBT	C7	DIS3X MAX							
			0.0000	-141.43	11.90	14.74	0.250	29.297	22.558
			1.9500	-135.23	11.90	14.74	0.250	0.873	-0.645
CBT	C7	DIS3X MIN	0.0000	-169.17	-9.15	6.43	-0.541	9.349	-19.628
			1.9500	-162.96	-9.15	6.43	-0.541	-3.497	-1.787
			3.9000	-156.76	-9.15	6.43	-0.541	-28.369	-23.848
CBT	C7	DIS3Y MAX	0.0000	-148.17	5.35	22.90	1.017	50.494	9.430
			1.9500	-141.96	5.35	22.90	1.017	5.855	-1.012
			3.9000	-135.76	5.35	22.90	1.017	-5.077	3.660
CBT	C7	DIS3Y MIN							
			0.0000	-162.43	-2.61	-1.73	-1.308	-11.848	-6.501

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-156.23	-2.61	-1.73	-1.308	-8.479	-1.421
			3.9000	-150.02	-2.61	-1.73	-1.308	-38.817	-11.454
CBT	C8	DIS1A							
			0.0000	-163.43	-2.17	13.21	-0.241	24.660	-3.969
			1.9500	-155.16	-2.17	13.21	-0.241	-1.108	0.259
			3.9000	-146.89	-2.17	13.21	-0.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.013
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	DIS2X MAX							
			0.0000	-141.04	7.57	17.37	0.172	35.020	16.087
			1.9500	-132.77	7.57	17.37	0.172	1.161	1.330
			3.9000	-124.50	7.57	17.37	0.172	-16.504	21.986
CBT	C8	DIS2X MIN							
			0.0000	-168.39	-11.67	7.00	-0.619	10.780	-23.518
			1.9500	-160.12	-11.67	7.00	-0.619	-2.888	-0.767
			3.9000	-151.85	-11.67	7.00	-0.619	-32.750	-13.430
CBT	C8	DIS2Y MAX	0.0000	-142.10	1.69	28.41	0.939	61.093	3.898
			1.9500	-133.83	1.69	28.41	0.939	5.712	0.637
CBT	C8	DIS2Y MIN	3.9000	-125.56	1.69	28.41	0.939	0.446	11.235
			0.0000	-167.33	-5.79	-4.03	-1.386	-15.293	-11.330
			1.9500	-159.06	-5.79	-4.03	-1.386	-7.439	-0.075
			3.9000	-150.79	-5.79	-4.03	-1.386	-49.700	-2.679
CBT	C8	DIS3X MAX							
			0.0000	-91.47	8.23	13.04	0.250	27.095	17.332
			1.9500	-85.27	8.23	13.04	0.250	1.683	1.286
CBT	C8	DIS3X MIN	3.9000	-79.07	8.23	13.04	0.250	-7.535	20.654
			0.0000	-118.82	-11.01	2.67	-0.541	2.855	-22.273
			1.9500	-112.61	-11.01	2.67	-0.541	-2.366	-0.810
			3.9000	-106.41	-11.01	2.67	-0.541	-23.782	-14.762
CBT	C8	DIS3Y MAX							
			0.0000	-92.53	2.35	24.07	1.017	53.168	5.144
			1.9500	-86.32	2.35	24.07	1.017	6.234	0.594
			3.9000	-80.12	2.35	24.07	1.017	9.415	9.903
CBT	C8	DIS3Y MIN							
			0.0000	-117.76	-5.12	-8.37	-1.308	-23.218	-10.085
			1.9500	-111.56	-5.12	-8.37	-1.308	-6.918	-0.118
			3.9000	-105.36	-5.12	-8.37	-1.308	-40.731	-4.010

CONCRETE COLUMN CHECK OUTPUT (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50A	0.000	0.389	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50A	195.000	0.156	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50A	390.000	0.510	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	0.000	0.250	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	195.000	0.125	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	390.000	0.289	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	0.000	0.316	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	195.000	0.139	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	390.000	0.471	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	0.000	0.299	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	195.000	0.115	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	390.000	0.431	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50B	0.000	0.436	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50B	195.000	0.105	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50B	390.000	0.403	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	0.000	0.248	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	195.000	0.117	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	390.000	0.206	DIS1B	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50C	0.000	0.291	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50C	195.000	0.107	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50C	390.000	0.306	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50A	0.000	0.326	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50A	195.000	0.080	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50A	390.000	0.287	DIS2X	0.000	DIS3Y	0.000	DIS3Y

Story	ColLine	SecID	StnLoc	PMMCombo	AsMin	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.389
CBT	C1	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.156
CBT	C1	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.51
CBT	C2	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.25
CBT	C2	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.125
CBT	C2	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.289
CBT	C3	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.316
CBT	C3	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.139
CBT	C3	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.471
CBT	C4	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.299
CBT	C4	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.115
CBT	C4	C30X50C	390	DIS2Y	15	23.355	2.839	2	0.431
CBT	C5	C30X50B	0	DIS2Y	15	20	2	2	0.436
CBT	C5	C30X50B	195	DIS2Y	15	20	2	2	0.105
CBT	C5	C30X50B	390	DIS2Y	15	20	2	2	0.403
CBT	C6	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.248
CBT	C6	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.117
CBT	C6	C30X50D	390	DIS1B	15	28.387	2.839	2.839	0.206
CBT	C7	C30X50C	0	DIS2X	15	23.355	2.839	2	0.291
CBT	C7	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.107
CBT	C7	C30X50C	390	DIS2X	15	23.355	2.839	2	0.306
CBT	C8	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.326
CBT	C8	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.08
CBT	C8	C30X50A	390	DIS2X	15	15.742	2	1.29	0.287

8.1.6.5. Zona intermedia, Suelo Tipo CD

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	D	Combo	1.2000
		G	Static	1.6000
DIS2X	ADD	D	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
OIS2Y	ADD	D	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
OIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DI53Y	ADD	O	Combo	0.9000
		EY	Spectra	1.0000

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C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
C8T	C1	DIS1A							
			0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B							
			0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.930
			1.9500	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2X MAX	0.0000	-147.17	5.35	-10.04	0.396	5.190	14.979
			1.9500	-138.90	5.35	-10.04	0.396	24.769	4.540
			3.9000	-130.63	5.35	-10.04	0.396	67.023	34.124
C8T	C1	DIS2X MIN							
			0.0000	-164.61	-18.09	-26.78	-0.842	-37.433	-36.419
			1.9500	-156.34	-18.09	-26.78	-0.842	14.788	-1.149
			3.9000	-148.07	-18.09	-26.78	-0.842	44.335	-5.901
C8T	C1	OIS2Y MAX							
			0.0000	-146.87	1.01	7.75	1.574	50.290	5.235
			1.9500	-138.60	1.01	7.75	1.574	35.182	3.276
			3.9000	-130.33	1.01	7.75	1.574	91.295	26.919
CBT	C1	DIS2Y MIN							
			0.0000	-164.92	-13.74	-44.57	-2.020	-82.533	-26.675
			1.9500	-156.65	-13.74	-44.57	-2.020	4.376	0.115
			3.9000	-148.38	-13.74	-44.57	-2.020	20.063	1.304
C8T	C1	DIS3X MAX							
			0.0000	-97.70	7.23	-3.51	0.473	11.134	18.250
			1.9500	-91.50	7.23	-3.51	0.473	17.991	4.158
			3.9000	-85.29	7.23	-3.51	0.473	47.521	30.089
CBT	C1	DI53X MIN	0.0000	-115.13	-16.21	-20.26	-0.764	-31.489	-33.148
			1.9500	-108.93	-16.21	-20.26	-0.764	8.009	-1.531
			3.9000	-102.73	-16.21	-20.26	-0.764	24.834	-9.937
CBT	C1	DIS3Y MAX	0.0000	-97.39	2.88	14.27	1.652	56.234	8.506
			1.9500	-91.19	2.88	14.27	1.652	28.403	2.894
			3.9000	-84.99	2.88	14.27	1.652	71.793	22.883
CBT	C1	DIS3Y MIN							
			0.0000	-115.44	-11.87	-38.05	-1.942	-76.589	-23.404
			1.9500	-109.24	-11.87	-38.05	-1.942	-2.403	-0.267
			3.9000	-103.04	-11.87	-38.05	-1.942	0.562	-2.731
CBT	C2	DIS1A							
			0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
			3.9000	-195.32	-3.57	-15.06	-0.241	46.203	7.031
C8T	C2	DIS1B							
			0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
			3.9000	-206.92	-3.44	-25.76	-0.203	71.609	6.751

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C2	DIS2X MAX	0.0000	-198.21	11.98	-7.45	0.396	4.457	24.407
			1.9500	-189.94	11.98	-7.45	0.396	18.995	1.056
			3.9000	-181.67	11.98	-7.45	0.396	48.389	35.177
CBT	C2	DIS2X MIN	0.0000	-202.71	-18.51	-18.87	-0.842	-25.199	-37.025
			1.9500	-194.44	-18.51	-18.87	-0.842	11.590	-0.924
			3.9000	-186.17	-18.51	-18.87	-0.842	33.521	-22.296
CBT	C2	DIS2Y MAX	0.0000	-193.08	6.00	5.39	1.574	37.920	12.344
			1.9500	-184.81	6.00	5.39	1.574	27.400	0.645
			3.9000	-176.54	6.00	5.39	1.574	65.030	23.934
CBT	C2	DIS2Y MIN	0.0000	-207.84	-12.54	-31.72	-2.020	-58.661	-24.961
			1.9500	-199.57	-12.54	-31.72	-2.020	3.184	-0.514
			3.9000	-191.30	-12.54	-31.72	-2.020	16.880	-11.054
CBT	C2	DIS3X MAX	0.0000	-133.84	13.17	-1.78	0.473	9.771	26.708
			1.9500	-127.64	13.17	-1.78	0.473	13.252	1.032
			3.9000	-121.44	13.17	-1.78	0.473	31.590	32.828
CBT	C2	DIS3X MIN	0.0000	-138.35	-17.32	-13.20	-0.764	-19.885	-34.724
			1.9500	-132.14	-17.32	-13.20	-0.764	5.847	-0.948
			3.9000	-125.94	-17.32	-13.20	-0.764	16.722	-24.645
CBT	C2	DIS3Y MAX	0.0000	-128.71	7.19	11.06	1.652	43.234	14.645
			1.9500	-122.51	7.19	11.06	1.652	21.658	0.622
			3.9000	-116.31	7.19	11.06	1.652	48.231	21.586
CBT	C2	DIS3Y MIN	0.0000	-143.48	-11.35	-26.05	-1.942	-53.348	-22.660
			1.9500	-137.27	-11.35	-26.05	-1.942	-2.559	-0.538
			3.9000	-131.07	-11.35	-26.05	-1.942	0.081	-13.402
CBT	C3	DIS1A	0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B	0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
CBT	C3	DIS2X MAX	0.0000	-140.66	16.73	-12.93	0.396	-5.767	31.179
			1.9500	-132.39	16.73	-12.93	0.396	21.106	-1.446
			3.9000	-124.12	16.73	-12.93	0.396	65.536	8.069
CBT	C3	DIS2X MIN	0.0000	-147.09	-7.57	-25.64	-0.842	-35.509	-21.437
			1.9500	-138.82	-7.57	-25.64	-0.842	12.833	-6.685
			3.9000	-130.55	-7.57	-25.64	-0.842	43.616	-34.073
CBT	C3	DIS2Y MAX	0.0000	-134.42	12.06	0.07	1.574	27.959	20.976
			1.9500	-126.15	12.06	0.07	1.574	27.929	-2.537
			3.9000	-117.88	12.06	0.07	1.574	81.565	0.071
CBT	C3	DIS2Y MIN	0.0000	-153.33	-2.90	-38.64	-2.020	-69.235	-11.235
			1.9500	-145.06	-2.90	-38.64	-2.020	6.010	-5.594
			3.9000	-136.79	-2.90	-38.64	-2.020	27.587	-26.074
CBT	C3	DIS3X MAX	0.0000	-95.60	15.51	-6.12	0.473	1.728	30.049
			1.9500	-89.40	15.51	-6.12	0.473	15.317	-0.202
			3.9000	-83.20	15.51	-6.12	0.473	46.464	11.688
CBT	C3	DIS3X MIN	0.0000	-102.04	-8.78	-18.83	-0.764	-28.014	-22.567
			1.9500	-95.84	-8.78	-18.83	-0.764	7.044	-5.441
			3.9000	-89.63	-8.78	-18.83	-0.764	24.544	-30.454
CBT	C3	DIS3Y MAX	0.0000	-89.37	10.85	6.88	1.652	35.454	19.846
			1.9500	-83.17	10.85	6.88	1.652	22.140	-1.293
			3.9000	-76.96	10.85	6.88	1.652	62.493	3.689
CBT	C3	DIS3Y MIN	0.0000	-108.28	-4.12	-31.83	-1.942	-61.740	-12.365
			1.9500	-102.07	-4.12	-31.83	-1.942	0.221	-4.350
			3.9000	-95.87	-4.12	-31.83	-1.942	8.515	-22.456
CBT	C4	DIS1A	0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	DIS1B							
			0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX							
			0.0000	-115.10	23.94	-0.40	0.396	12.657	42.107
			1.9500	-106.83	23.94	-0.40	0.396	13.444	-4.575
			3.9000						
CBT	C4	DIS2X MIN		-98.56	23.94	-0.40	0.396	42.460	-12.235
			0.0000	-139.65	0.65	-17.74	-0.842	-26.725	-9.695
			1.9500	-131.38	0.65	-17.74	-0.842	7.865	-10.977
			3.9000	-123.11	0.65	-17.74	-0.842	14.226	-51.280
CBT	C4	DIS2Y MAX							
			0.0000	-109.08	16.91	18.52	1.574	55.557	26.114
			1.9500	-100.81	16.91	18.52	1.574	19.436	-6.575
			3.9000	-92.54	16.91	18.52	1.574	73.373	-23.610
CBT	C4	DIS2Y MIN							
			0.0000	-145.67	7.69	-36.67	-2.020	-69.624	6.299
			1.9500	-137.40	7.69	-36.67	-2.020	1.873	-8.976
			3.9000	-129.13	7.69	-36.67	-2.020	-16.687	-39.905
CBT	C4	DIS3X MAX	0.0000	-74.29	19.63	3.00	0.473	15.622	36.446
			1.9500	-68.09	19.63	3.00	0.473	9.775	-1.823
			3.9000	-61.89	19.63	3.00	0.473	32.159	-1.071
CBT	C4	DIS3X MIN							
			0.0000	-98.84	-3.66	-14.34	-0.764	-23.760	-15.356
			3.9000	-86.43	-3.66	-14.34	-0.764	3.924	-40.116
CBT	C4	DIS3Y MAX	0.0000	-68.27	12.59	21.93	1.652	58.521	20.453
			1.9500	-62.07	12.59	21.93	1.652	15.768	-3.824
			3.9000						
CBT	C4	DIS3Y MIN		-55.86	12.59	21.93	1.652	63.071	-12.446
			0.0000	-104.86	3.37	-33.26	-1.942	-66.660	0.637
			1.9500	-98.66	3.37	-33.26	-1.942	-1.796	-6.224
CBT	C5	DIS1A							
			0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	DIS1B							
			0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	DIS2X MAX							
			0.0000	-191.02	7.38	32.12	0.396	64.552	19.628
			1.9500	-182.75	7.38	32.12	0.396	1.940	5.247
			3.9000	-174.48	7.38	32.12	0.396	-36.574	37.294
CBT	C5	DIS2X MIN							
			0.0000	-207.71	-19.39	14.80	-0.842	21.136	-38.329
			1.9500	-199.44	-19.39	14.80	-0.842	-7.760	-0.520
			3.9000	-191.17	-19.39	14.80	-0.842	-60.755	-9.138
CBT	C5	DIS2Y MAX							
			0.0000	-189.24	-0.82	49.81	1.574	109.511	1.697
			1.9500	-180.97	-0.82	49.81	1.574	12.397	3.328
			3.9000	-172.70	-0.82	49.81	1.574	-12.586	23.265
CBT	C5	DIS2Y MIN	0.0000	-209.49	-11.19	-2.88	-2.020	-23.823	-20.399
			1.9500	-201.22	-11.19	-2.88	-2.020	-18.218	1.399
			3.9000	-192.95	-11.19	-2.88	-2.020	-84.742	4.891
CBT	C5	DIS3X MAX							
			0.0000	-126.92	9.17	23.89	0.473	49.714	22.488
			1.9500	-120.72	9.17	23.89	0.473	3.158	4.607
			3.9000	-114.51	9.17	23.89	0.473	-19.299	33.154
CBT	C5	DIS3X MIN							
			0.0000	-143.61	-17.60	6.57	-0.764	6.297	-35.470
			1.9500	-137.41	-17.60	6.57	-0.764	-6.542	-1.159
			3.9000	-131.20	-17.60	6.57	-0.764	-43.480	-13.278
CBT	C5	DIS3Y MAX							
			0.0000	-125.14	0.97	41.57	1.652	94.672	4.557
			1.9500	-118.94	0.97	41.57	1.652	13.615	2.688
			3.9000	-112.73	0.97	41.57	1.652	4.688	19.125
CBT	C5	DIS3Y MIN							
			0.0000	-145.39	-9.40	-11.11	-1.942	-38.661	-17.539
			1.9500	-139.19	-9.40	-11.11	-1.942	-17.000	0.759

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-132.98	-9.40	-11.11	-1.942	-67.467	0.751
CBT	C6	DIS1A							
			0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX							
			0.0000	-253.10	15.09	13.12	0.396	33.425	30.618
			1.9500	-244.83	15.09	13.12	0.396	7.859	1.184
			3.9000						
CBT	C6	DIS2X MIN		-236.56	15.09	13.12	0.396	-3.092	31.393
			0.0000	-263.09	-17.01	1.81	-0.842	3.921	-34.937
			1.9500	-254.82	-17.01	1.81	-0.842	0.375	-1.772
			3.9000	-246.55	-17.01	1.81	-0.842	-17.788	-28.249
CBT	C6	DIS2Y MAX							
			0.0000	-250.26	5.02	26.04	1.574	66.994	10.022
			1.9500	-241.99	5.02	26.04	1.574	16.213	0.230
			3.9000	-233.72	5.02	26.04	1.574	13.690	12.710
CBT	C6	DIS2Y MIN							
			0.0000	-265.94	-6.94	-11.11	-2.020	-29.647	-14.342
			1.9500	-257.67	-6.94	-11.11	-2.020	-7.980	-0.818
			3.9000	-249.40	-6.94	-11.11	-2.020	-34.570	-9.566
CBT	C6	DIS3X MAX							
			0.0000	-168.52	15.50	9.51	0.473	25.669	31.499
			1.9500	-162.31	15.50	9.51	0.473	7.145	1.276
			3.9000	-156.11	15.50	9.51	0.473	3.237	30.696
CBT	C6	DIS3X MIN							
			0.0000	-178.51	-16.60	-1.81	-0.764	-3.835	-34.057
			1.9500	-172.30	-16.60	-1.81	-0.764	-0.339	-1.680
			3.9000	-166.10	-16.60	-1.81	-0.764	-11.459	-28.947
CBT	C6	DIS3Y MAX							
			0.0000	-165.67	5.43	22.43	1.652	59.238	10.903
			1.9500	-159.47	5.43	22.43	1.652	15.500	0.322
			3.9000						
CBT	C6	DIS3Y MIN		-153.26	5.43	22.43	1.652	20.019	12.012
			0.0000	-181.35	-6.53	-14.72	-1.942	-37.404	-13.461
			1.9500	-175.15	-6.53	-14.72	-1.942	-8.694	-0.726
			3.9000	-168.95	-6.53	-14.72	-1.942	-28.240	-10.263
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			1.9500	-236.95	1.73	18.43	-0.241	-3.095	-1.792
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			1.9500	-218.42	1.43	20.40	-0.203	-5.129	-1.726
CBT	C7	DIS2X MAX							
			0.0000	-208.39	18.87	23.30	0.396	45.707	35.989
			1.9500	-200.12	18.87	23.30	0.396	0.792	-0.801
			3.9000						
CBT	C7	DIS2X MIN		-191.85	18.87	23.30	0.396	-25.251	27.237
			0.0000	-253.43	-15.33	10.32	-0.842	14.681	-32.547
			1.9500	-245.16	-15.33	10.32	-0.842	-5.972	-2.655
			3.9000	-236.89	-15.33	10.32	-0.842	-45.497	-37.590
CBT	C7	DIS2Y MAX							
			0.0000	-219.69	8.12	35.85	1.574	78.371	14.433
			1.9500	-211.42	8.12	35.85	1.574	8.486	-1.400
			3.9000	-203.15	8.12	35.85	1.574	-9.295	6.881
CBT	C7	DIS2Y MIN							
			0.0000	-242.12	-4.58	-2.22	-2.020	-17.982	-10.991
			3.9000	-225.58	-4.58	-2.22	-2.020	-61.453	-17.235
CBT	C7	DIS3X MAX							
			0.0000	-132.78	18.47	17.07	0.473	34.836	35.733
			1.9500	-126.57	18.47	17.07	0.473	2.070	-0.289
			3.9000	-120.37	18.47	17.07	0.473	-11.824	28.517
CBT	C7	DIS3X MIN							
			0.0000	-177.82	-15.72	4.09	-0.764	3.810	-32.804
			1.9500	-171.61	-15.72	4.09	-0.764	-4.694	-2.144
CBT	C7	DIS3Y MAX							
			0.0000	-144.08	7.73	29.62	1.652	67.499	14.176

C O L U M N F O R C E S

STORY	CDLUMN	LDAD	LDC	P	V2	V3	T	M2	M3
			1.9500	-137.88	7.73	29.62	1.652	9.764	-0.888
			3.9000	-131.68	7.73	29.62	1.652	4.132	8.161
CBT	C7	DIS3Y MIN							
			0.0000	-166.51	-4.98	-8.45	-1.942	-28.853	-11.247
			1.95DD	-160.31	-4.98	-8.45	-1.942	-12.388	-1.544
			3.9000	-154.11	-4.98	-8.45	-1.942	-48.026	-15.955
CBT	C8	DIS1A							
			D.DDDD	-163.43	-2.17	13.21	-D.241	24.660	-3.969
			1.95D0	-155.16	-2.17	13.21	-D.241	-1.108	0.259
			3.900D	-146.89	-2.17	13.21	-D.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.D13
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	DIS2X MAX							
			0.0000	-132.57	13.58	20.26	D.396	41.737	28.456
			1.9500	-124.30	13.58	20.26	0.396	2.273	1.985
			3.9000	-116.03	13.58	20.26	0.396	-11.978	33.045
CBT	C8	DIS2X MIN							
			0.0000	-176.86	-17.67	4.12	-0.842	4.064	-35.887
			1.9500	-168.59	-17.67	4.12	-0.842	-4.000	-1.422
			3.9000	-160.32	-17.67	4.12	-0.842	-37.276	-24.489
CBT	C8	DIS2Y MAX							
			0.0000	-135.12	3.90	37.26	1.574	81.928	8.422
			1.9500	-126.85	3.90	37.26	1.574	9.299	0.853
			3.9000	-118.58	3.90	37.26	1.574	14.125	15.353
CBT	C8	DIS2Y MIN							
			0.0000	-174.32	-8.00	-12.88	-2.020	-36.128	-15.853
			1.9500	-166.05	-8.00	-12.88	-2.020	-11.026	-0.291
			3.9000	-157.78	-8.00	-12.88	-2.020	-63.379	-6.797
CBT	C8	DIS3X MAX							
			0.0000	-83.00	14.24	15.92	0.473	33.811	29.701
			1.9500	-76.80	14.24	15.92	0.473	2.795	1.942
			3.9000	-70.59	14.24	15.92	0.473	-3.009	31.714
CBT	C8	DIS3X MIN	0.0000	-127.29	-17.01	-0.21	-0.764	-3.862	-34.642
			1.9500	-121.09	-17.01	-0.21	-0.764	-3.479	-1.466
			3.9000	-114.88	-17.01	-0.21	-0.764	-28.307	-25.821
CBT	C8	DIS3Y MAX							
			0.0000	-85.54	4.56	32.92	1.652	74.003	9.667
			1.9500	-79.34	4.56	32.92	1.652	9.821	0.810
			3.9000	-73.14	4.56	32.92	1.652	23.094	14.022
CBT	C8	DIS3Y MIN							
			0.0000	-124.74	-7.34	-17.21	-1.942	-44.053	-I4.608
			1.9500	-118.54	-7.34	-17.21	-1.942	-10.505	-0.334
			3.9000	-112.34	-7.34	-17.21	-1.942	-54.410	-8.129

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C D N C R E T E C O L U M N C H E C K O U T P U T (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTIDN CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	CDLUMN LINE	SECTIDN ID	STATIDN ID	INTERACTION RATID	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50B	0.000	0.494	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50B	195.000	0.169	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50B	390.000	0.532	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	0.000	0.335	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	195.000	0.141	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	390.000	0.354	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	0.000	0.436	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	195.000	0.156	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	390.000	0.566	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	0.000	0.402	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	195.000	0.129	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50C	0.000	0.508	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50C	195.000	0.117	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50C	390.000	0.440	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	0.000	0.330	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	195.000	0.127	DIS2Y	0.000	DIS3Y	0.000	DIS3Y

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C6	C30X50D	390.000	0.266	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50D	0.000	0.367	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50D	195.000	0.112	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50D	390.000	0.370	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50B	0.000	0.423	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50B	195.000	0.089	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50B	390.000	0.364	DIS2X	0.000	DIS3Y	0.000	DIS3Y

Story	ColLine	SecID	StnLoc	PMMCombo	AsMin	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50B	0	DIS2Y	15	20	2	2	0.494
CBT	C1	C30X50B	195	DIS2Y	15	20	2	2	0.169
CBT	C1	C30X50B	390	DIS2Y	15	20	2	2	0.532
CBT	C2	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.335
CBT	C2	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.141
CBT	C2	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.354
CBT	C3	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.436
CBT	C3	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.156
CBT	C3	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.566
CBT	C4	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.402
CBT	C4	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.129
CBT	C4	C30X50C	390	DIS2Y	15	23.355	2.839	2	0.507
CBT	C5	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.508
CBT	C5	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.117
CBT	C5	C30X50C	390	DIS2X	15	23.355	2.839	2	0.44
CBT	C6	C30X50D	0	DIS2X	15	28.387	2.839	2.839	0.33
CBT	C6	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.127
CBT	C6	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.266
CBT	C7	C30X50D	0	DIS2X	15	28.387	2.839	2.839	0.367
CBT	C7	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.112
CBT	C7	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.37
CBT	C8	C30X50B	0	DIS2Y	15	20	2	2	0.423
CBT	C8	C30X50B	195	DIS2Y	15	20	2	2	0.089
CBT	C8	C30X50B	390	DIS2X	15	20	2	2	0.364

8.1.6.6. Zona intermedia, Suelo Tipo E

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L O A D I N G C O M B I N A T I O N S

CDMBD	CDMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	D	Combo	1.2000
		G	Static	1.6000
DIS2X	ADD	D	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
DIS2Y	ADD	D	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
DIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DIS3Y	ADD	D	Combo	0.9000
		EY	Spectra	1.0000

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C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C1	DIS1A	0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B	0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.930
			1.9500	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2X MAX	0.0000	-142.49	11.66	-5.60	0.725	16.497	28.811
			1.9500	-134.22	11.66	-5.60	0.725	27.418	6.071
			3.9000	-125.95	11.66	-5.60	0.725	73.040	44.895
CBT	C1	DIS2X MIN	0.0000	-169.30	-24.40	-31.22	-1.171	-48.740	-50.251
			1.9500	-161.03	-24.40	-31.22	-1.171	12.140	-2.680
			3.9000	-152.76	-24.40	-31.22	-1.171	38.318	-16.672
CBT	C1	DIS2Y MAX	0.0000	-142.08	4.93	21.60	2.525	85.450	13.714
			1.9500	-133.81	4.93	21.60	2.525	43.336	4.117
			3.9000	-125.54	4.93	21.60	2.525	110.151	33.724
CBT	C1	DIS2Y MIN	0.0000	-169.70	-17.66	-58.42	-2.972	-117.693	-35.154
			1.9500	-161.43	-17.66	-58.42	-2.972	-3.779	-0.726
			3.9000	-153.16	-17.66	-58.42	-2.972	1.207	-5.501
CBT	C1	DIS3X MAX	0.0000	-93.01	13.54	0.93	0.802	22.441	32.082
			1.9500	-86.81	13.54	0.93	0.802	20.639	5.689
			3.9000	-80.61	13.54	0.93	0.802	53.538	40.859
CBT	C1	DIS3X MIN	0.0000	-119.82	-22.52	-24.70	-1.093	-42.796	-46.980
			1.9500	-113.62	-22.52	-24.70	-1.093	5.361	-3.062
			3.9000	-107.42	-22.52	-24.70	-1.093	18.816	-20.708
CBT	C1	DIS3Y MAX	0.0000	-92.61	6.80	28.12	2.603	91.394	16.985
			1.9500	-86.40	6.80	28.12	2.603	36.558	3.735
			3.9000	-80.20	6.80	28.12	2.603	90.649	29.688
CBT	C1	DIS3Y MIN	0.0000	-120.23	-15.79	-51.90	-2.894	-111.749	-31.883
			1.9500	-114.03	-15.79	-51.90	-2.894	-10.558	-1.108
			3.9000	-107.82	-15.79	-51.90	-2.894	-18.294	-9.536
CBT	C2	DIS1A	0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
CBT	C2	DIS1B	0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
			3.9000	-206.92	-3.44	-25.76	-0.203	71.609	6.751
CBT	C2	DIS2X MAX	0.0000	-197.01	20.18	-4.43	0.725	12.314	40.940

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-188.74	20.18	-4.43	0.725	20.956	1.588
			3.9000	-180.47	20.18	-4.43	0.725	52.329	50.643
CBT	C2	DIS2X MIN							
			0.0000	-203.90	-26.72	-21.89	-1.171	-33.055	-53.557
			1.9500	-195.63	-26.72	-21.89	-1.171	9.629	-1.457
			3.9000	-187.36	-26.72	-21.89	-1.171	29.582	-37.763
CBT	C2	DIS2Y MAX							
			0.0000	-189.17	10.93	15.22	2.525	63.486	22.259
			1.9500	-180.90	10.93	15.22	2.525	33.811	0.953
			3.9000						
CBT	C2	DIS2Y MIN		-172.63	10.93	15.22	2.525	77.776	33.233
			0.0000	-211.75	-17.46	-41.54	-2.972	-84.227	-34.876
			1.9500	-203.48	-17.46	-41.54	-2.972	-3.226	-0.822
			3.9000	-195.21	-17.46	-41.54	-2.972	4.134	-20.353
CBT	C2	DIS3X MAX							
			0.0000	-132.65	21.37	1.24	0.802	17.627	43.241
			1.9500	-126.45	21.37	1.24	0.802	15.213	1.565
			3.9000	-120.24	21.37	1.24	0.802	35.530	48.295
CBT	C2	DIS3X MIN							
			0.0000	-139.54	-25.53	-16.22	-1.093	-27.742	-51.256
			1.9500	-133.34	-25.53	-16.22	-1.093	3.886	-1.481
			3.9000	-127.13	-25.53	-16.22	-1.093	12.783	-40.112
CBT	C2	DIS3Y MAX	0.0000	-124.80	12.12	20.89	2.603	68.799	24.560
			1.9500	-118.60	12.12	20.89	2.603	28.068	0.930
			3.9000	-112.40	12.12	20.89	2.603	60.977	30.885
CBT	C2	DIS3Y MIN							
			0.0000	-147.39	-16.27	-35.87	-2.894	-78.914	-32.575
			1.9500	-141.18	-16.27	-35.87	-2.894	-8.969	-0.846
			3.9000	-134.98	-16.27	-35.87	-2.894	-12.665	-22.701
CBT	C3	DIS1A							
			0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B							
			0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
			3.9000	-132.52	4.34	-23.24	-0.203	63.825	-12.495
CBT	C3	DIS2X MAX							
			0.0000	-138.95	23.27	-9.56	0.725	2.111	45.338
			1.9500	-130.68	23.27	-9.56	0.725	23.310	-0.036
			3.9000	-122.41	23.27	-9.56	0.725	71.384	19.410
CBT	C3	OIS2X MIN							
			0.0000	-148.80	-14.10	-29.01	-1.171	-43.387	-35.597
			1.9500	-140.53	-14.10	-29.01	-1.171	10.629	-8.095
CBT	C3	DIS2Y MAX							
			0.0000	-129.42	16.04	10.32	2.525	53.687	29.536
			1.9500	-121.15	16.04	10.32	2.525	33.731	-1.724
			3.9000	-112.88	16.04	10.32	2.525	95.856	7.019
CBT	C3	DIS2Y MIN							
			0.0000	-158.33	-6.87	-48.89	-2.972	-94.962	-19.795
			1.9500	-150.06	-6.87	-48.89	-2.972	0.207	-6.407
			3.9000	-141.79	-6.87	-48.89	-2.972	13.297	-33.022
CBT	C3	DIS3X MAX							
			0.0000	-93.89	22.05	-2.75	0.802	9.606	44.208
			1.9500	-87.69	22.05	-2.75	0.802	17.521	1.208
CBT	C3	OIS3X MIN	0.0000	-103.75	-15.32	-22.20	-1.093	-35.892	-36.727
			1.9500	-97.55	-15.32	-22.20	-1.093	4.840	-6.851
			3.9000	-91.34	-15.32	-22.20	-1.093	18.696	-41.795
CBT	C3	DIS3Y MAX							
			0.0000	-84.36	14.82	17.13	2.603	61.182	28.406
			1.9500	-78.16	14.82	17.13	2.603	27.942	-0.480
			3.9000	-71.96	14.82	17.13	2.603	76.783	10.637
CBT	C3	DIS3Y MIN							
			0.0000	-113.28	-8.09	-42.08	-2.894	-87.468	-20.925
			1.9500	-107.08	-8.09	-42.08	-2.894	-5.581	-5.163
			3.9000	-100.88	-8.09	-42.08	-2.894	-5.775	-29.404
CBT	C4	DIS1A							
			0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	OIS1B							
			0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX	0.0000	-108.51	30.21	4.19	0.725	23.098	56.053
			1.9500	-100.24	30.21	4.19	0.725	14.923	-2.851
			3.9000	-91.97	30.21	4.19	0.725	49.945	-1.724
CBT	C4	DIS2X MIN	0.0000	-146.23	-5.62	-22.34	-1.171	-37.166	-23.640
			1.9500	-137.96	-5.62	-22.34	-1.171	6.386	-12.700
			3.9000	-129.69	-5.62	-22.34	-1.171	6.741	-61.791
CBT	C4	DIS2Y MAX	0.0000	-99.39	19.37	33.13	2.525	88.693	31.414
			1.9500	-91.12	19.37	33.13	2.525	24.086	-5.933
			3.9000						
CBT	C4	DIS2Y MIN		-82.85	19.37	33.13	2.525	97.213	-19.259
			0.0000	-155.36	5.22	-51.28	-2.972	-102.761	0.999
			1.9500	-147.09	5.22	-51.28	-2.972	-2.776	-9.619
			3.9000	-138.82	5.22	-51.28	-2.972	-40.527	-44.256
CBT	C4	DIS3X MAX	0.0000	-67.70	25.90	7.60	0.802	26.063	50.391
			1.9500	-61.50	25.90	7.60	0.802	11.255	-0.100
CBT	C4	DIS3X MIN	0.0000	-105.42	-9.93	-18.93	-1.093	-34.201	-29.301
			1.9500	-99.22	-9.93	-18.93	-1.093	2.717	-9.948
			3.9000	-93.02	-9.93	-18.93	-1.093	-3.561	-50.626
CBT	C4	DIS3Y MAX	0.0000	-58.58	15.06	36.53	2.603	91.658	25.753
			3.9000	-46.17	15.06	36.53	2.603	86.911	-8.095
CBT	C4	DIS3Y MIN	0.0000	-114.55	0.91	-47.87	-2.894	-99.796	-4.663
			1.9500	-108.35	0.91	-47.87	-2.894	-6.445	-6.867
			3.9000	-102.15	0.91	-47.87	-2.894	-50.829	-33.092
CBT	C5	DIS1A	0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	DIS1B	0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	DIS2X MAX	0.0000	-186.54	14.58	36.72	0.725	76.075	35.231
			1.9500	-178.27	14.58	36.72	0.725	4.512	6.799
			3.9000	-170.00	14.58	36.72	0.725	-30.151	49.793
CBT	C5	DIS2X MIN	0.0000	-212.19	-26.60	10.21	-1.171	9.613	-53.932
			1.9500	-203.92	-26.60	10.21	-1.171	-10.332	-2.072
			3.9000	-195.65	-26.60	10.21	-1.171	-67.178	-21.638
CBT	C5	DIS2Y MAX	0.0000	-183.87	1.95	63.75	2.525	144.806	7.608
			1.9500	-175.60	1.95	63.75	2.525	20.502	3.846
			3.9000						
CBT	C5	DIS2Y MIN		-167.33	1.95	63.75	2.525	6.514	28.176
			0.0000	-214.85	-13.97	-16.83	-2.972	-59.118	-26.310
			1.9500	-206.58	-13.97	-16.83	-2.972	-26.322	0.881
			3.9000	-198.31	-13.97	-16.83	-2.972	-103.843	-0.021
CBT	C5	DIS3X MAX	0.0000	-122.44	16.38	28.49	0.802	61.236	38.091
			1.9500	-116.23	16.38	28.49	0.802	5.730	6.159
			3.9000	-110.03	16.38	28.49	0.802	-12.876	45.654
CBT	C5	DIS3X MIN	0.0000	-148.09	-24.80	1.97	-1.093	-5.226	-51.072
			1.9500	-141.89	-24.80	1.97	-1.093	-9.115	-2.712
			3.9000	-135.69	-24.80	1.97	-1.093	-49.903	-25.778
CBT	C5	DIS3Y MAX	0.0000	-119.77	3.75	55.52	2.603	129.967	10.468
			1.9500	-113.57	3.75	55.52	2.603	21.720	3.206
			3.9000	-107.37	3.75	55.52	2.603	23.789	24.037
CBT	C5	DIS3Y MIN	0.0000	-150.75	-12.17	-25.06	-2.894	-73.957	-23.450
			1.9500	-144.55	-12.17	-25.06	-2.894	-25.104	0.242
			3.9000	-138.35	-12.17	-25.06	-2.894	-86.568	-4.160
CBT	C6	DI51A	0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX							
			0.0000	-250.42	23.74	16.12	0.725	41.240	48.266
			1.9500	-242.15	23.74	16.12	0.725	9.842	1.980
			3.9000	-233.88	23.74	16.12	0.725	0.800	47.450
CBT	C6	DIS2X MIN	0.0000	-265.77	-25.65	-1.19	-1.171	-3.893	-52.586
			1.9500	-257.50	-25.65	-1.19	-1.171	-1.608	-2.568
			3.9000	-249.23	-25.65	-1.19	-1.171	-21.680	-44.306
CBT	C6	DIS2Y MAX							
			0.0000	-246.10	8.22	35.88	2.525	92.576	16.543
			1.9500	-237.83	8.22	35.88	2.525	22.618	0.511
			3.9000	-229.56	8.22	35.88	2.525	26.464	18.671
CBT	C6	DIS2Y MIN							
			0.0000	-270.09	-10.14	-20.95	-2.972	-55.229	-20.863
			1.9500	-261.82	-10.14	-20.95	-2.972	-14.384	-1.099
CBT	C6	DIS3X MAX							
			0.0000	-165.84	24.14	12.51	0.802	33.483	49.147
			1.9500	-159.63	24.14	12.51	0.802	9.128	2.072
			3.9000	-153.43	24.14	12.51	0.802	7.130	46.753
CBT	C6	DIS3X MIN							
			0.0000	-181.19	-25.25	-4.80	-1.093	-11.650	-51.705
			1.9500	-174.98	-25.25	-4.80	-1.093	-2.322	-2.476
			3.9000	-168.78	-25.25	-4.80	-1.093	-15.351	-45.003
CBT	C6	DIS3Y MAX							
			0.0000	-161.52	8.63	32.26	2.603	84.819	17.424
			1.9500	-155.31	8.63	32.26	2.603	21.904	0.602
			3.9000	-149.11	8.63	32.26	2.603	32.793	17.974
CBT	C6	DIS3Y MIN	0.0000	-185.51	-9.73	-24.56	-2.894	-62.986	-19.982
			1.9500	-179.30	-9.73	-24.56	-2.894	-15.098	-1.007
			3.9000	-173.10	-9.73	-24.56	-2.894	-41.015	-16.224
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			1.9500	-236.95	1.73	18.43	-0.241	-3.095	-1.792
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			1.9500	-218.42	1.43	20.40	-0.203	-5.129	-1.726
			3.9000	-210.15	1.43	20.40	-0.203	-44.904	-4.509
CBT	C7	DIS2X MAX	0.0000	-196.27	28.07	26.75	0.725	53.939	54.440
			1.9500	-188.00	28.07	26.75	0.725	2.584	-0.301
			3.9000	-179.73	28.07	26.75	0.725	-19.855	44.689
CBT	C7	DIS2X MIN							
			0.0000	-265.55	-24.54	6.87	-1.171	6.449	-50.998
			1.9500	-257.28	-24.54	6.87	-1.171	-7.764	-3.155
			3.9000	-249.01	-24.54	6.87	-1.171	-50.894	-55.043
CBT	C7	DIS2Y MAX							
			0.0000	-213.72	11.52	45.93	2.525	103.876	21.238
			1.9500	-205.45	11.52	45.93	2.525	14.350	-1.225
			3.9000	-197.18	11.52	45.93	2.525	4.512	13.336
CBT	C7	DIS2Y MIN	0.0000	-248.09	-7.98	-12.30	-2.972	-43.488	-17.795
			1.9500	-239.82	-7.98	-12.30	-2.972	-19.530	-2.231
			3.9000	-231.55	-7.98	-12.30	-2.972	-75.261	-23.690
CBT	C7	DIS3X MAX							
			0.0000	-120.65	27.68	20.52	0.802	43.068	54.184
			1.9500	-114.45	27.68	20.52	0.802	3.862	0.211
			3.9000	-108.25	27.68	20.52	0.802	-6.427	45.969
CBT	C7	DIS3X MIN	0.0000	-189.94	-24.93	0.64	-1.093	-4.422	-51.254
			1.9500	-183.74	-24.93	0.64	-1.093	-6.486	-2.643
CBT	C7	DIS3Y MAX	0.0000	-138.11	11.13	39.70	2.603	93.005	20.981
			1.9500	-131.91	11.13	39.70	2.603	15.628	-0.713
			3.9000	-125.71	11.13	39.70	2.603	17.940	14.616
CBT	C7	DIS3Y MIN							
			0.0000	-172.48	-8.38	-18.53	-2.894	-54.359	-18.052

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-166.28	-8.38	-18.53	-2.894	-18.252	-1.720
			3.9000	-160.08	-8.38	-18.53	-2.894	-61.833	-22.410
CBT	C8	DIS1A							
			0.0000	-163.43	-2.17	13.21	-0.241	24.660	-3.969
			1.9500	-155.16	-2.17	13.21	-0.241	-1.108	0.259
			3.9000	-146.89	-2.17	13.21	-0.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.013
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	DIS2X MAX							
			0.0000	-120.66	21.99	24.54	0.725	51.729	45.777
			1.9500	-112.39	21.99	24.54	0.725	3.936	2.902
			3.9000	-104.12	21.99	24.54	0.725	-5.263	48.534
CBT	C8	DIS2X MIN							
			0.0000	-188.77	-26.09	-0.16	-1.171	-5.929	-53.209
			1.9500	-180.50	-26.09	-0.16	-1.171	-5.663	-2.340
			3.9000	-172.23	-26.09	-0.16	-1.171	-43.991	-39.978
CBT	C8	DIS2Y MAX	0.0000	-124.72	7.09	50.53	2.525	113.179	14.917
			1.9500	-116.45	7.09	50.53	2.525	14.680	1.160
			3.9000						
CBT	C8	DIS2Y MIN		-108.18	7.09	50.53	2.525	34.641	21.277
			0.0000	-184.71	-11.18	-26.15	-2.972	-67.379	-22.348
			1.9500	-176.44	-11.18	-26.15	-2.972	-16.407	-0.598
			3.9000	-168.17	-11.18	-26.15	-2.972	-83.895	-12.721
CBT	C8	DIS3X MAX							
			0.0000	-71.09	22.65	20.20	0.802	43.804	47.023
			1.9500	-64.89	22.65	20.20	0.802	4.457	2.859
			3.9000						
CBT	C8	DIS3X MIN		-58.68	22.65	20.20	0.802	3.705	47.203
			0.0000	-139.20	-25.43	-4.50	-1.093	-13.854	-51.963
			1.9500	-133.00	-25.43	-4.50	-1.093	-5.141	-2.383
			3.9000	-126.80	-25.43	-4.50	-1.093	-35.022	-41.310
CBT	C8	DIS3Y MAX							
			0.0000	-75.15	7.75	46.20	2.603	105.254	16.162
			1.95DD	-68.95	7.75	46.20	2.603	15.201	1.117
			3.9000	-62.74	7.75	46.20	2.603	43.610	19.946
CBT	C8	DIS3Y MIN							
			0.0000	-135.14	-10.52	-30.49	-2.894	-75.304	-21.103
			1.9500	-128.94	-10.52	-30.49	-2.894	-15.885	-0.641
			3.9000	-122.73	-10.52	-30.49	-2.894	-74.927	-14.053

CONCRETE COLUMN CHECK OUTPUT (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50C	0.000	0.631	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50C	195.000	0.186	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50C	390.000	0.595	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	0.000	0.472	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	195.000	0.163	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50D	390.000	0.462	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	0.000	0.666	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	195.000	0.181	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	390.000	0.708	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	0.000	0.553	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	195.000	0.149	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	390.000	0.619	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50D	0.000	0.629	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50D	195.000	0.139	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50D	390.000	0.506	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	0.000	0.445	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	195.000	0.145	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50D	390.000	0.361	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50D	0.000	0.493	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50D	195.000	0.129	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50D	390.000	0.486	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50C	0.000	0.556	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50C	195.000	0.103	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50C	390.000	0.458	DIS2X	0.000	DIS3Y	0.000	DIS3Y

Story	ColLine	SecID	StnLoc	PMMCombo	AsMin	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.631
CBT	C1	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.186
CBT	C1	C30X50C	390	DIS2Y	15	23.355	2.839	2	0.595
CBT	C2	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.472
CBT	C2	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.163
CBT	C2	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.462
CBT	C3	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.666
CBT	C3	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.181
CBT	C3	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.708
CBT	C4	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.553
CBT	C4	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.149
CBT	C4	C30X50C	390	DIS2Y	15	23.355	2.839	2	0.619
CBT	C5	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.629
CBT	C5	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.139
CBT	C5	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.506
CBT	C6	C30X50D	0	DIS2X	15	28.387	2.839	2.839	0.445
CBT	C6	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.145
CBT	C6	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.361
CBT	C7	C30X50D	0	DIS2X	15	28.387	2.839	2.839	0.493
CBT	C7	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.129
CBT	C7	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.486
CBT	C8	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.556
CBT	C8	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.103
CBT	C8	C30X50C	390	DIS2X	15	23.355	2.839	2	0.458

8.1.6.7. Zona baja, Suelo Tipo AB / CD

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	D	Combo	1.2000
		G	Static	1.6000
DIS2X	ADD	D	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
DIS2Y	ADD	D	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
DIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DIS3Y	ADD	D	Combo	0.9000
		EY	Spectra	1.0000

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-BAJA-CD-160-VR.1.0 Units:KN-m Julio 10, 2013 16:20 PAGE 2

C O L U M N F O R C E S

STORY	COLUMN	LDAD	LDE	P	V2	V3	T	M2	M3
CBT	C1	DIS1A							
			0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B							
			0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.930
			1.9500	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2X MAX	0.0000	-142.62	11.61	-6.88	0.643	13.243	28.697
			1.9500	-134.35	11.61	-6.88	0.643	26.672	6.062
			3.9000	-126.08	11.61	-6.88	0.643	71.280	44.799
CBT	C1	DIS2X MIN							
			0.0000	-169.17	-24.34	-29.94	-1.090	-45.486	-50.137
			3.9000	-152.63	-24.34	-29.94	-1.090	40.078	-16.576
CBT	C1	DIS2Y MAX							
			0.0000	-143.54	3.93	16.99	2.209	73.745	11.573
			1.9500	-135.27	3.93	16.99	2.209	40.622	3.922
			3.9000						
CBT	C1	DIS2Y MIN		-127.00	3.93	16.99	2.209	103.872	31.972
			0.0000	-168.24	-16.66	-53.81	-2.656	-105.988	-33.013
			1.9500	-159.97	-16.66	-53.81	-2.656	-1.065	-0.530
			3.9000	-151.70	-16.66	-53.81	-2.656	7.486	-3.750
CBT	C1	DIS3X MAX							
			0.0000	-93.14	13.48	-0.36	0.721	19.187	31.968
			1.9500	-86.94	13.48	-0.36	0.721	19.893	5.680
			3.9000	-80.74	13.48	-0.36	0.721	51.778	40.763
CBT	C1	DIS3X MIN	0.0000	-119.69	-22.47	-23.41	-1.012	-39.542	-46.866
			1.9500	-113.49	-22.47	-23.41	-1.012	6.107	-3.053
			3.9000	-107.29	-22.47	-23.41	-1.012	20.576	-20.612
CBT	C1	DIS3Y MAX	0.0000	-94.07	5.80	23.51	2.287	79.689	14.844
			1.9500	-87.87	5.80	23.51	2.287	33.843	3.540
			3.9000	-81.66	5.80	23.51	2.287	84.371	27.937
CBT	C1	DIS3Y MIN							
			0.0000	-118.77	-14.79	-47.28	-2.578	-100.044	-29.742
			1.9500	-112.56	-14.79	-47.28	-2.578	-7.844	-0.913
			3.9000	-106.36	-14.79	-47.28	-2.578	-12.016	-7.785
CBT	C2	DIS1A							
			0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
			3.9000	-195.32	-3.57	-15.06	-0.241	46.203	7.031
CBT	C2	DIS1B							
			0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
			3.9000	-206.92	-3.44	-25.76	-0.203	71.609	6.751

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C2	DIS2X MAX	0.0000	-197.40	20.12	-5.38	0.643	9.825	40.811
			1.9500	-189.13	20.12	-5.38	0.643	20.329	1.585
			3.9000	-180.86	20.12	-5.38	0.643	51.096	50.522
CBT	E2	DIS2X MIN	0.0000	-203.52	-26.65	-20.94	-1.090	-30.566	-53.429
			1.9500	-195.25	-26.65	-20.94	-1.090	10.256	-1.453
			3.9000	-186.98	-26.65	-20.94	-1.090	30.814	-37.642
CBT	C2	DIS2Y MAX	0.0000	-190.47	9.70	11.95	2.209	54.968	19.792
			1.9500	-182.20	9.70	11.95	2.209	31.675	0.879
			3.9000	-173.93	9.70	11.95	2.209	73.530	30.915
CBT	C2	DIS2Y MIN	0.0000	-210.45	-16.24	-38.27	-2.656	-75.709	-32.409
			1.9500	-202.18	-16.24	-38.27	-2.656	-1.090	-0.747
			3.9000	-193.91	-16.24	-38.27	-2.656	8.381	-18.035
CBT	C2	DIS3X MAX	0.0000	-133.03	21.31	0.29	0.721	15.139	43.112
			1.9500	-126.83	21.31	0.29	0.721	14.586	1.561
			3.9000	-120.63	21.31	0.29	0.721	34.297	48.174
CBT	C2	DIS3X MIN	0.0000	-139.16	-25.46	-15.27	-1.012	-25.253	-51.128
			1.9500	-132.95	-25.46	-15.27	-1.012	4.513	-1.477
CBT	C2	DIS3Y MAX	0.0000	-126.10	10.89	17.62	2.287	60.281	22.093
			1.9500	-119.90	10.89	17.62	2.287	25.932	0.855
			3.9000	-113.70	10.89	17.62	2.287	56.731	28.567
CBT	C2	DIS3Y MIN	0.0000	-146.08	-15.04	-32.60	-2.578	-70.395	-30.108
			1.9500	-139.88	-15.04	-32.60	-2.578	-6.833	-0.771
			3.9000	-133.68	-15.04	-32.60	-2.578	-8.418	-20.383
CBT	C3	DIS1A	0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B	0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
			3.9000	-132.52	4.34	-23.24	-0.203	63.825	-12.495
CBT	C3	DIS2X MAX	0.0000	-139.38	23.22	-10.48	0.643	-0.403	45.226
			1.9500	-131.11	23.22	-10.48	0.643	22.862	-0.046
			3.9000	-122.84	23.22	-10.48	0.643	70.368	19.317
CBT	C3	DIS2X MIN	0.0000	-148.37	-14.05	-28.09	-1.090	-40.872	-35.485
			1.9500	-140.10	-14.05	-28.09	-1.090	11.076	-8.085
			3.9000	-131.83	-14.05	-28.09	-1.090	38.784	-45.320
CBT	C3	DIS2Y MAX	0.0000	-131.08	15.04	6.91	2.209	45.114	27.394
			1.9500	-122.81	15.04	6.91	2.209	31.807	-1.920
			3.9000	-114.54	15.04	6.91	2.209	91.127	5.265
CBT	C3	DIS2Y MIN	0.0000	-156.67	-5.88	-45.48	-2.656	-86.390	-17.653
			1.9500	-148.40	-5.88	-45.48	-2.656	2.131	-6.211
			3.9000	-140.13	-5.88	-45.48	-2.656	18.025	-31.269
CBT	C3	DIS3X MAX	0.0000	-94.33	22.00	-3.67	0.721	7.092	44.096
			1.9500	-88.13	22.00	-3.67	0.721	17.074	1.198
			3.9000	-81.92	22.00	-3.67	0.721	51.296	22.935
CBT	C3	DIS3X MIN	0.0000	-103.32	-15.27	-21.28	-1.012	-33.378	-36.615
			1.9500	-97.11	-15.27	-21.28	-1.012	5.287	-6.841
			3.9000	-90.91	-15.27	-21.28	-1.012	19.712	-41.702
CBT	C3	DIS3Y MAX	0.0000	-86.03	13.82	13.72	2.287	52.609	26.264
			1.9500	-79.82	13.82	13.72	2.287	26.018	-0.676
			3.9000	-73.62	13.82	13.72	2.287	72.055	8.883
CBT	C3	DIS3Y MIN	0.0000	-111.62	-7.09	-38.67	-2.578	-78.895	-18.783
			1.9500	-105.41	-7.09	-38.67	-2.578	-3.657	-4.967
			3.9000	-99.21	-7.09	-38.67	-2.578	-1.047	-27.650
CBT	C4	DIS1A	0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	DIS1B							
			0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX							
			0.0000	-108.91	30.20	2.81	0.643	19.961	56.031
			1.9500	-100.64	30.20	2.81	0.643	14.488	-2.854
			3.9000						
CBT	C4	DIS2X MIN		-92.37	30.20	2.81	0.643	47.679	-1.749
			0.0000	-145.84	-5.61	-20.95	-1.090	-34.029	-23.618
			1.9500	-137.57	-5.61	-20.95	-1.090	6.821	-12.698
			3.9000	-129.30	-5.61	-20.95	-1.090	9.007	-61.766
CBT	C4	DIS2Y MAX							
			0.0000	-102.50	19.04	28.27	2.209	77.658	30.763
			1.9500	-94.23	19.04	28.27	2.209	22.537	-6.006
			3.9000	-85.96	19.04	28.27	2.209	89.273	-19.936
CBT	C4	OIS2Y MIN							
			0.0000	-152.24	5.56	-46.41	-2.656	-91.725	1.650
			1.9500	-143.97	5.56	-46.41	-2.656	-1.228	-9.545
			3.9000	-135.70	5.56	-46.41	-2.656	-32.587	-43.580
CBT	C4	DIS3X MAX	0.0000	-68.10	25.89	6.21	0.721	22.926	50.369
			1.9500	-61.90	25.89	6.21	0.721	10.819	-0.102
			3.9000	-55.70	25.89	6.21	0.721	37.377	9.415
CBT	C4	DIS3X MIN							
			0.0000	-105.03	-9.92	-17.55	-1.012	-31.064	-29.279
			1.9500	-98.83	-9.92	-17.55	-1.012	3.153	-9.946
			3.9000	-92.62	-9.92	-17.55	-1.012	-1.295	-50.602
CBT	C4	DIS3Y MAX	0.0000	-61.69	14.72	31.67	2.287	80.622	25.102
			1.9500	-55.49	14.72	31.67	2.287	18.869	-3.255
			3.9000						
CBT	C4	DIS3Y MIN		-49.29	14.72	31.67	2.287	78.971	-8.771
			0.0000	-111.43	1.24	-43.01	-2.578	-88.761	-4.012
			1.9500	-105.23	1.24	-43.01	-2.578	-4.897	-6.793
			3.9000	-99.03	1.24	-43.01	-2.578	-42.889	-32.415
CBT	C5	DIS1A							
			0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	DIS1B							
			0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	DIS2X MAX							
			0.0000	-186.71	14.57	35.47	0.643	72.863	35.207
			1.9500	-178.44	14.57	35.47	0.643	3.751	6.798
			3.9000	-170.17	14.57	35.47	0.643	-31.833	49.770
CBT	C5	DIS2X MIN							
			0.0000	-212.02	-26.58	11.46	-1.090	12.825	-53.908
			1.9500	-203.75	-26.58	11.46	-1.090	-9.572	-2.071
CBT	C5	DIS2Y MAX							
			0.0000	-185.56	1.60	59.11	2.209	133.059	6.890
			1.9500	-177.29	1.60	59.11	2.209	17.803	3.814
			3.9000	-169.02	1.60	59.11	2.209	0.162	27.507
CBT	C5	DIS2Y MIN	0.0000	-213.17	-13.61	-12.19	-2.656	-47.371	-25.592
			3.9000	-196.63	-13.61	-12.19	-2.656	-97.490	0.648
CBT	C5	DIS3X MAX							
			0.0000	-122.61	16.36	27.23	0.721	58.024	38.067
			1.9500	-116.41	16.36	27.23	0.721	4.969	6.158
			3.9000	-110.20	16.36	27.23	0.721	-14.559	45.631
CBT	C5	DIS3X MIN							
			0.0000	-147.92	-24.79	3.23	-1.012	-2.014	-51.048
			1.9500	-141.71	-24.79	3.23	-1.012	-8.354	-2.711
			3.9000	-135.51	-24.79	3.23	-1.012	-48.220	-25.754
CBT	C5	DIS3Y MAX							
			0.0000	-121.46	3.39	50.88	2.287	118.221	9.750
			1.9500	-115.26	3.39	50.88	2.287	19.021	3.174
			3.9000	-109.05	3.39	50.88	2.287	17.436	23.368
CBT	C5	DIS3Y MIN							
			0.0000	-149.07	-11.82	-20.42	-2.578	-62.210	-22.732
			1.9500	-142.87	-11.82	-20.42	-2.578	-22.405	0.273

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-136.66	-11.82	-20.42	-2.578	-80.215	-3.492
CBT	C6	DIS1A							
			0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX	0.0000	-250.60	23.72	15.16	0.643	38.733	48.243
			1.9500	-242.33	23.72	15.16	0.643	9.223	1.980
			3.9000	-234.06	23.72	15.16	0.643	-0.455	47.428
CBT	C6	DIS2X MIN	0.0000	-265.59	-25.64	-0.23	-1.090	-1.387	-52.562
			1.9500	-257.32	-25.64	-0.23	-1.090	-0.990	-2.567
			3.9000	-249.05	-25.64	-0.23	-1.090	-20.425	-44.284
CBT	C6	DIS2Y MAX							
			0.0000	-247.44	7.87	32.60	2.209	84.051	15.821
			1.9500	-239.17	7.87	32.60	2.209	20.484	0.486
			3.9000	-230.90	7.87	32.60	2.209	22.207	17.998
CBT	C6	DIS2Y MIN	0.0000	-268.75	-9.78	-17.67	-2.656	-46.705	-20.140
			1.9500	-260.48	-9.78	-17.67	-2.656	-12.251	-1.073
			3.9000	-252.21	-9.78	-17.67	-2.656	-43.087	-14.854
CBT	C6	DIS3X MAX							
			0.0000	-166.02	24.13	11.54	0.721	30.977	49.123
			1.9500	-159.81	24.13	11.54	0.721	8.510	2.071
			3.9000	-153.61	24.13	11.54	0.721	5.874	46.730
CBT	C6	DIS3X MIN	0.0000	-181.01	-25.23	-3.84	-1.012	-9.143	-51.681
			1.9500	-174.80	-25.23	-3.84	-1.012	-1.704	-2.476
			3.9000	-168.60	-25.23	-3.84	-1.012	-14.096	-44.981
CBT	C6	DIS3Y MAX	0.0000	-162.86	8.27	28.99	2.287	76.295	16.701
			1.9500	-156.65	8.27	28.99	2.287	19.770	0.577
			3.9000	-150.45	8.27	28.99	2.287	28.536	17.300
CBT	C6	DIS3Y MIN	0.0000	-184.17	-9.37	-21.28	-2.578	-54.461	-19.259
			1.9500	-177.96	-9.37	-21.28	-2.578	-12.964	-0.982
			3.9000	-171.76	-9.37	-21.28	-2.578	-36.758	-15.551
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			1.9500	-218.42	1.43	20.40	-0.203	-5.129	-1.726
			3.9000	-210.15	1.43	20.40	-0.203	-44.904	-4.509
CBT	C7	DIS2X MAX							
			0.0000	-196.32	28.06	25.88	0.643	51.588	54.416
			1.9500	-188.05	28.06	25.88	0.643	2.009	-0.302
			3.9000	-179.78	28.06	25.88	0.643	-20.887	44.665
CBT	C7	DIS2X MIN	0.0000	-265.50	-24.52	7.74	-1.090	8.800	-50.974
			1.9500	-257.23	-24.52	7.74	-1.090	-7.189	-3.154
			3.9000	-248.96	-24.52	7.74	-1.090	-49.862	-55.019
CBT	C7	DIS2Y MAX							
			0.0000	-214.96	11.14	42.58	2.209	95.386	20.489
			1.9500	-206.69	11.14	42.58	2.209	12.396	-1.240
			3.9000	-198.42	11.14	42.58	2.209	-0.063	12.618
CBT	C7	DIS2Y MIN	0.0000	-246.86	-7.61	-8.95	-2.656	-34.997	-17.047
			3.9000	-230.31	-7.61	-8.95	-2.656	-70.686	-22.971
CBT	C7	DIS3X MAX	0.0000	-120.71	27.67	19.65	0.721	40.717	54.159
			1.9500	-114.50	27.67	19.65	0.721	3.287	0.210
			3.9000	-108.30	27.67	19.65	0.721	-7.459	45.945
CBT	C7	DIS3X MIN	0.0000	-189.89	-24.92	1.51	-1.012	-2.071	-51.230
			3.9000	-177.48	-24.92	1.51	-1.012	-36.434	-53.739
CBT	C7	DIS3Y MAX	0.0000	-139.35	10.75	36.35	2.287	84.515	20.232

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-133.15	10.75	36.35	2.287	13.674	-0.728
			3.9000	-126.95	10.75	36.35	2.287	13.365	13.898
CBT	C7	DIS3Y MIN							
			0.0000	-171.24	-8.00	-15.18	-2.578	-45.869	-17.303
			1.9500	-165.04	-8.00	-15.18	-2.578	-16.298	-1.704
CBT	C8	DIS1A							
			0.0000	-163.43	-2.17	13.21	-0.241	24.660	-3.969
			1.9500	-155.16	-2.17	13.21	-0.241	-1.108	0.259
			3.9000	-146.89	-2.17	13.21	-0.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.013
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	DIS2X MAX							
			0.0000	-120.89	21.98	23.31	0.643	48.819	45.752
			1.9500	-112.62	21.98	23.31	0.643	3.415	2.901
			3.9000	-104.35	21.98	23.31	0.643	-7.125	48.509
CBT	C8	DIS2X MIN							
			0.0000	-188.54	-26.07	1.06	-1.090	-3.018	-53.183
			1.9500	-180.27	-26.07	1.06	-1.090	-5.142	-2.339
			3.9000	-172.00	-26.07	1.06	-1.090	-42.128	-39.953
CBT	C8	DIS2Y MAX							
			0.0000	-127.78	6.70	46.11	2.209	102.774	14.156
			1.9500	-119.51	6.70	46.11	2.209	12.887	1.141
			3.9000	-111.24	6.70	46.11	2.209	27.814	20.534
CBT	C8	DIS2Y MIN							
			0.0000	-181.65	-10.80	-21.74	-2.656	-56.974	-21.587
			1.9500	-173.38	-10.80	-21.74	-2.656	-14.614	-0.578
			3.9000	-165.11	-10.80	-21.74	-2.656	-77.068	-11.978
CBT	C8	DIS3X MAX							
			0.0000	-71.32	22.64	18.98	0.721	40.893	46.997
			1.9500	-65.12	22.64	18.98	0.721	3.937	2.858
			3.9000	-58.91	22.64	18.98	0.721	1.843	47.177
CBT	C8	DIS3X MIN	0.0000	-138.97	-25.41	-3.27	-1.012	-10.944	-51.938
			1.9500	-132.77	-25.41	-3.27	-1.012	-4.620	-2.382
			3.9000	-126.56	-25.41	-3.27	-1.012	-33.160	-41.285
CBT	C8	DIS3Y MAX							
			0.0000	-78.21	7.36	41.78	2.287	94.849	15.401
			1.9500	-72.01	7.36	41.78	2.287	13.409	1.098
			3.9000	-65.81	7.36	41.78	2.287	36.782	19.203
CBT	C8	OIS3Y MIN							
			0.0000	-132.08	-10.14	-26.07	-2.578	-64.899	-20.342
			1.9500	-125.87	-10.14	-26.07	-2.578	-14.092	-0.622
			3.9000	-119.67	-10.14	-26.07	-2.578	-68.099	-13.310

C O N C R E T E C O L U M N C H E C K O U T P U T (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50A	0.000	0.747	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50A	195.000	0.193	OIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50A	390.000	0.744	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50A	0.000	0.582	DIS3X	0.000	DIS3Y	0.000	OIS3Y
CBT	C2	C30X50A	195.000	0.178	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	0.000	0.593	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	195.000	0.173	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50A	390.000	0.664	DIS2Y	0.000	OIS3Y	0.000	DIS3Y
CBT	C4	C30X50A	0.000	0.689	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50A	195.000	0.158	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50A	390.000	0.806	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50A	0.000	0.864	OIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50A	195.000	0.146	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50A	390.000	0.651	DIS2X	0.000	OIS3Y	0.000	DIS3Y
CBT	C6	C30X50A	0.000	0.566	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50A	195.000	0.155	DIS2Y	0.000	DIS3Y	0.000	DIS3Y

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C6	C30X50A	390.000	0.481	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50A	0.000	0.661	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50A	195.000	0.138	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50A	390.000	0.661	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50A	0.000	0.686	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50A	195.000	0.105	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50A	390.000	0.618	DIS3X	0.000	DIS3Y	0.000	DIS3Y

Story	ColLine	SecID	StnLoc	PMMCombo	AsMin	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.747
CBT	C1	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.193
CBT	C1	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.744
CBT	C2	C30X50A	0	DIS3X	15	15.742	2	1.29	0.582
CBT	C2	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.178
CBT	C2	C30X50A	390	DIS2X	15	15.742	2	1.29	0.592
CBT	C3	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.593
CBT	C3	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.173
CBT	C3	C30X50A	390	DIS2Y	15	15.742	2	1.29	0.664
CBT	C4	C30X50A	0	DIS2X	15	15.742	2	1.29	0.689
CBT	C4	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.158
CBT	C4	C30X50A	390	DIS2X	15	15.742	2	1.29	0.806
CBT	C5	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.864
CBT	C5	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.146
CBT	C5	C30X50A	390	DIS2X	15	15.742	2	1.29	0.651
CBT	C6	C30X50A	0	DIS3X	15	15.742	2	1.29	0.566
CBT	C6	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.155
CBT	C6	C30X50A	390	DIS3X	15	15.742	2	1.29	0.481
CBT	C7	C30X50A	0	DIS3X	15	15.742	2	1.29	0.661
CBT	C7	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.138
CBT	C7	C30X50A	390	DIS3X	15	15.742	2	1.29	0.661
CBT	C8	C30X50A	0	DIS2Y	15	15.742	2	1.29	0.686
CBT	C8	C30X50A	195	DIS2Y	15	15.742	2	1.29	0.105
CBT	C8	C30X50A	390	DIS3X	15	15.742	2	1.29	0.618

8.1.6.8. Zona baja, Suelo Tipo E

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DIS1A	ADD	D	Combo	1.2000
		LR	Static	1.6000
DIS1B	ADD	D	Combo	1.2000
		G	Static	1.6000
DIS2X	ADD	D	Combo	1.2000
		EX	Spectra	1.0000
		LR	Static	1.0000
DIS2Y	ADD	D	Combo	1.2000
		EY	Spectra	1.0000
		LR	Static	1.0000
DIS3X	ADD	D	Combo	0.9000
		EX	Spectra	1.0000
DIS3Y	ADD	D	Combo	0.9000
		EY	Spectra	1.0000

ETABS v9.7.4 File:CDI-BLQ. 4 / 4A-BAJA-E-160-VR.1.0 Units:KN-m Julio 10, 2013 16:22 PAGE 2

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
CBT	C1	DIS1A	0.0000	-164.29	-6.59	-19.95	-0.241	-17.652	-11.193
			1.9500	-156.02	-6.59	-19.95	-0.241	21.246	1.662
			3.9000	-147.75	-6.59	-19.95	-0.241	60.145	14.517
CBT	C1	DIS1B	0.0000	-163.01	-6.44	-24.13	-0.203	-25.061	-10.930
			1.9500	-154.74	-6.44	-24.13	-0.203	21.984	1.635
			3.9000	-146.47	-6.44	-24.13	-0.203	69.029	14.199
CBT	C1	DIS2X MAX	0.0000	-132.49	25.34	1.68	1.290	35.068	58.819
			1.9500	-124.22	25.34	1.68	1.290	31.798	9.399
			3.9000	-115.95	25.34	1.68	1.290	82.868	68.248
CBT	C1	OIS2X MIN	1.9500	-171.02	-38.08	-38.50	-1.737	7.760	-6.008
			3.9000	-162.75	-38.08	-38.50	-1.737	28.490	-40.025
CBT	C1	OIS2Y MAX	0.0000	-134.39	11.61	43.15	4.007	140.172	28.208
			1.9500	-126.12	11.61	43.15	4.007	56.029	5.587
			3.9000	-117.85	11.61	43.15	4.007	139.495	45.293
CBT	C1	OIS2Y MIN	0.0000	-177.40	-24.34	-79.98	-4.454	-172.415	-49.648
			3.9000	-160.86	-24.34	-79.98	-4.454	-28.137	-17.071
CBT	C1	DIS3X MAX	0.0000	-83.01	27.22	8.21	1.368	41.012	62.090
			1.9500	-76.81	27.22	8.21	1.368	25.019	9.017
			3.9000	-70.61	27.22	8.21	1.368	63.367	64.213
CBT	C1	DIS3X MIN	0.0000	-129.82	-36.21	-31.98	-1.659	-61.367	-76.988
			1.9500	-123.62	-36.21	-31.98	-1.659	0.981	-6.390
			3.9000	-117.41	-36.21	-31.98	-1.659	8.988	-44.061
CBT	C1	DIS3Y MAX	0.0000	-84.91	13.48	49.68	4.085	146.116	31.480
			1.9500	-78.71	13.48	49.68	4.085	49.250	5.205
			3.9000	-72.51	13.48	49.68	4.085	119.994	41.258
CBT	C1	DIS3Y MIN	0.0000	-127.92	-22.47	-73.45	-4.376	-166.471	-46.377
			1.9500	-121.72	-22.47	-73.45	-4.376	-23.251	-2.577
			3.9000	-115.52	-22.47	-73.45	-4.376	-47.639	-21.106
CBT	C2	DIS1A	0.0000	-211.86	-3.57	-15.06	-0.241	-12.547	-6.888
			1.9500	-203.59	-3.57	-15.06	-0.241	16.828	0.071
			3.9000	-195.32	-3.57	-15.06	-0.241	46.203	7.031
CBT	C2	DIS1B	0.0000	-223.46	-3.44	-25.76	-0.203	-28.858	-6.647
			1.9500	-215.19	-3.44	-25.76	-0.203	21.376	0.052
			3.9000	-206.92	-3.44	-25.76	-0.203	71.609	6.751

COLUMN FORCES

STORY	COLUMN	LDAD	LOC	P	V2	V3	T	M2	M3
CBT	C2	DIS2X MAX							
			0.0000	-195.13	37.99	0.38	1.290	24.783	76.820
			1.9500	-186.86	37.99	0.38	1.290	24.058	2.745
			3.9000	-178.59	37.99	0.38	1.290	58.610	84.210
CBT	C2	DIS2X MIN							
			0.0000	-205.79	-44.53	-26.70	-1.737	-45.524	-89.438
			1.9500	-197.52	-44.53	-26.70	-1.737	6.527	-2.614
			3.9000	-189.25	-44.53	-26.70	-1.737	23.300	-71.330
CBT	C2	DIS2Y MAX							
			0.0000	-183.09	19.38	30.50	4.007	103.262	39.276
			1.9500	-174.82	19.38	30.50	4.007	43.783	1.486
			3.9000	-166.55	19.38	30.50	4.007	97.607	49.186
CBT	C2	DIS2Y MIN							
			0.0000	-217.83	-25.92	-56.82	-4.454	-124.003	-51.894
			1.9500	-209.56	-25.92	-56.82	-4.454	-13.199	-1.355
			3.9000	-201.29	-25.92	-56.82	-4.454	-15.697	-36.305
CBT	C2	DIS3X MAX							
			0.0000	-130.77	39.18	6.05	1.368	30.096	79.121
			1.9500	-124.56	39.18	6.05	1.368	18.315	2.722
			3.9000	-118.36	39.18	6.05	1.368	41.811	81.861
CBT	C2	DIS3X MIN							
			0.0000	-141.42	-43.33	-21.03	-1.659	-40.211	-87.137
			1.9500	-135.22	-43.33	-21.03	-1.659	0.784	-2.638
			3.9000	-129.02	-43.33	-21.03	-1.659	6.501	-73.678
CBT	C2	DIS3Y MAX							
			0.0000	-118.72	20.57	36.17	4.085	108.575	41.577
			1.9500	-112.52	20.57	36.17	4.085	38.041	1.463
			3.9000	-106.32	20.57	36.17	4.085	80.808	46.837
CBT	C2	DIS3Y MIN							
			0.0000	-153.47	-24.73	-51.15	-4.376	-118.690	-49.593
			1.9500	-147.26	-24.73	-51.15	-4.376	-18.942	-1.379
			3.9000	-141.06	-24.73	-51.15	-4.376	-32.496	-38.654
CBT	C3	DIS1A							
			0.0000	-151.14	4.64	-20.88	-0.241	-22.506	4.800
			1.9500	-142.87	4.64	-20.88	-0.241	18.206	-4.248
			3.9000	-134.60	4.64	-20.88	-0.241	58.919	-13.296
CBT	C3	DIS1B							
			0.0000	-149.06	4.34	-23.24	-0.203	-26.798	4.420
			1.9500	-140.79	4.34	-23.24	-0.203	18.514	-4.038
			3.9000	-132.52	4.34	-23.24	-0.203	63.825	-12.495
CBT	C3	DIS2X MAX							
			0.0000	-136.03	37.46	-3.93	1.290	14.579	76.065
			3.9000	-119.49	37.46	-3.93	1.290	82.252	44.014
CBT	C3	DIS2X MIN							
			0.0000	-151.72	-28.29	-34.64	-1.737	-55.855	-66.324
			1.9500	-143.45	-28.29	-34.64	-1.737	6.655	-11.157
			3.9000	-135.18	-28.29	-34.64	-1.737	26.900	-70.017
CBT	C3	DIS2Y MAX							
			0.0000	-121.62	22.85	26.27	4.007	93.714	44.206
			1.9500	-113.35	22.85	26.27	4.007	42.776	-0.318
			3.9000	-105.08	22.85	26.27	4.007	118.152	18.896
CBT	C3	DIS2Y MIN							
			0.0000	-166.13	-13.68	-64.85	-4.454	-134.990	-34.465
			1.9500	-157.86	-13.68	-64.85	-4.454	-8.838	-7.814
			3.9000	-149.59	-13.68	-64.85	-4.454	-8.999	-44.900
CBT	C3	DIS3X MAX							
			0.0000	-90.97	36.24	2.88	1.368	22.074	74.935
			1.9500	-84.77	36.24	2.88	1.368	21.495	4.270
			3.9000	-78.57	36.24	2.88	1.368	63.180	47.632
CBT	C3	DIS3X MIN							
			0.0000	-106.67	-29.51	-27.83	-1.659	-48.360	-67.454
			1.9500	-100.47	-29.51	-27.83	-1.659	0.866	-9.913
			3.9000	-94.27	-29.51	-27.83	-1.659	7.828	-66.399
CBT	C3	DIS3Y MAX							
			0.0000	-76.57	21.63	33.09	4.085	101.209	43.076
			1.9500	-70.37	21.63	33.09	4.085	36.988	0.927
			3.9000	-64.16	21.63	33.09	4.085	99.079	22.515
CBT	C3	DIS3Y MIN							
			0.0000	-121.08	-14.90	-58.03	-4.376	-127.495	-35.595
			1.9500	-114.87	-14.90	-58.03	-4.376	-14.627	-6.569
			3.9000	-108.67	-14.90	-58.03	-4.376	-28.072	-41.281
CBT	C4	DIS1A							
			0.0000	-134.55	13.29	-9.98	-0.241	-7.999	17.494
			1.9500	-126.28	13.29	-9.98	-0.241	11.459	-8.422

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-118.01	13.29	-9.98	-0.241	30.916	-34.338
CBT	C4	DIS1B							
			0.0000	-120.87	13.52	-8.34	-0.203	-6.524	17.808
			1.9500	-112.60	13.52	-8.34	-0.203	9.729	-8.549
			3.9000	-104.33	13.52	-8.34	-0.203	25.983	-34.907
CBT	C4	DIS2X MAX							
			0.0000	-94.87	43.89	11.62	1.290	39.994	86.481
			1.9500	-86.60	43.89	11.62	1.290	17.335	0.910
			3.9000						
CBT	C4	DIS2X MIN		-78.33	43.89	11.62	1.290	62.025	21.194
			0.0000	-159.88	-19.30	-29.77	-1.737	-54.062	-54.068
			1.9500	-151.61	-19.30	-29.77	-1.737	3.975	-16.461
CBT	C4	DIS2Y MAX							
			0.0000	-84.10	24.13	55.87	4.007	140.258	41.773
			1.9500	-75.83	24.13	55.87	4.007	31.321	-4.667
			3.9000	-67.56	24.13	55.87	4.007	134.309	-11.023
CBT	C4	DIS2Y MIN							
			0.0000	-170.65	0.47	-74.01	-4.454	-154.325	-9.360
			1.9500	-162.38	0.47	-74.01	-4.454	-10.011	-10.884
			3.9000	-154.11	0.47	-74.01	-4.454	-77.623	-52.493
CBT	C4	DIS3X MAX	0.0000	-54.06	39.58	15.02	1.368	42.959	80.819
			1.9500	-47.85	39.58	15.02	1.368	13.666	3.661
			3.9000	-41.65	39.58	15.02	1.368	51.723	32.359
CBT	C4	DIS3X MIN							
			0.0000	-119.07	-23.61	-26.36	-1.659	-51.097	-59.729
			1.9500	-112.87	-23.61	-26.36	-1.659	0.306	-13.710
			3.9000	-106.67	-23.61	-26.36	-1.659	-15.640	-73.545
CBT	C4	OIS3Y MAX	0.0000	-43.29	19.81	59.27	4.085	143.223	36.111
			1.9500	-37.08	19.81	59.27	4.085	27.652	-1.916
			3.9000						
CBT	C4	DIS3Y MIN		-30.88	19.81	59.27	4.085	124.008	0.142
			0.0000	-129.84	-3.85	-70.61	-4.376	-151.361	-15.022
			1.9500	-123.64	-3.85	-70.61	-4.376	-13.680	-8.132
			3.9000	-117.44	-3.85	-70.61	-4.376	-87.925	-41.328
CBT	C5	DIS1A							
			0.0000	-210.77	-6.24	25.36	-0.241	46.146	-9.768
			1.9500	-202.50	-6.24	25.36	-0.241	-3.302	2.403
			3.9000	-194.23	-6.24	25.36	-0.241	-52.751	14.574
CBT	C5	OIS1B							
			0.0000	-201.25	-5.97	29.04	-0.203	49.810	-9.479
			1.9500	-192.98	-5.97	29.04	-0.203	-6.825	2.167
			3.9000	-184.71	-5.97	29.04	-0.203	-63.459	13.812
CBT	C5	OIS2X MAX							
			0.0000	-177.07	30.30	44.40	1.290	95.197	69.276
			1.9500	-168.80	30.30	44.40	1.290	8.697	10.189
			3.9000	-160.53	30.30	44.40	1.290	-19.287	77.060
CBT	C5	OIS2X MIN							
			0.0000	-221.66	-42.32	2.52	-1.737	-9.509	-87.977
			1.9500	-213.39	-42.32	2.52	-1.737	-14.518	-5.462
CBT	C5	OIS2Y MAX							
			0.0000	-175.33	7.35	85.46	4.007	199.745	19.175
			1.9500	-167.06	7.35	85.46	4.007	33.113	4.917
			3.9000	-158.79	7.35	85.46	4.007	36.253	37.652
CBT	C5	OIS2Y MIN	0.0000	-223.40	-19.36	-38.54	-4.454	-114.057	-37.877
			1.9500	-215.13	-19.36	-38.54	-4.454	-38.934	-0.190
			3.9000	-206.86	-19.36	-38.54	-4.454	-133.582	-9.496
CBT	C5	DIS3X MAX							
			0.0000	-112.97	32.10	36.17	1.368	80.358	72.136
			1.9500	-106.76	32.10	36.17	1.368	9.915	9.549
			3.9000	-100.56	32.10	36.17	1.368	-2.013	72.921
CBT	C5	DIS3X MIN							
			0.0000	-157.56	-40.52	-5.71	-1.659	-24.348	-85.117
			1.9500	-151.36	-40.52	-5.71	-1.659	-13.300	-6.102
			3.9000	-145.16	-40.52	-5.71	-1.659	-60.767	-53.044
CBT	C5	OIS3Y MAX							
			0.0000	-111.23	9.14	77.23	4.085	184.906	22.035
			1.9500	-105.03	9.14	77.23	4.085	34.331	4.277
			3.9000	-98.83	9.14	77.23	4.085	53.528	33.512
CBT	C5	OIS3Y MIN							
			0.0000	-159.30	-17.57	-46.77	-4.376	-128.895	-35.017
			1.9500	-153.09	-17.57	-46.77	-4.376	-37.716	-0.830

COLUMN FORCES

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			3.9000	-146.89	-17.57	-46.77	-4.376	-116.307	-13.636
CBT	C6	DIS1A							
			0.0000	-274.15	-1.09	8.86	-0.241	21.144	-2.432
			1.9500	-265.88	-1.09	8.86	-0.241	3.864	-0.308
			3.9000	-257.61	-1.09	8.86	-0.241	-13.415	1.816
CBT	C6	DIS1B							
			0.0000	-273.69	-1.30	20.66	-0.203	36.507	-2.822
			1.9500	-265.42	-1.30	20.66	-0.203	-3.776	-0.293
			3.9000	-257.15	-1.30	20.66	-0.203	-44.058	2.235
CBT	C6	DIS2X MAX	0.0000	-244.91	42.60	20.85	1.290	53.583	86.781
			1.9500	-236.64	42.60	20.85	1.290	13.008	3.718
			3.9000						
CBT	C6	DIS2X MIN		-228.37	42.60	20.85	1.290	6.935	82.490
			0.0000	-271.29	-44.51	-5.92	-1.737	-16.236	-91.101
			1.9500	-263.02	-44.51	-5.92	-1.737	-4.775	-4.306
			3.9000	-254.75	-44.51	-5.92	-1.737	-27.815	-79.346
CBT	C6	DIS2Y MAX							
			0.0000	-239.56	14.54	51.18	4.007	132.375	29.435
			1.9500	-231.29	14.54	51.18	4.007	32.582	1.077
			3.9000	-223.02	14.54	51.18	4.007	46.338	30.433
CBT	C6	OIS2Y MIN	0.0000	-276.64	-16.46	-36.25	-4.454	-95.028	-33.755
			1.9500	-268.37	-16.46	-36.25	-4.454	-24.349	-1.665
			3.9000	-260.10	-16.46	-36.25	-4.454	-67.218	-27.289
CBT	C6	DIS3X MAX							
			0.0000	-160.32	43.00	17.24	1.368	45.826	87.662
			1.9500	-154.12	43.00	17.24	1.368	12.294	3.809
			3.9000	-147.91	43.00	17.24	1.368	13.264	81.792
CBT	C6	DIS3X MIN	0.0000	-186.70	-44.11	-9.53	-1.659	-23.993	-90.220
			1.9500	-180.50	-44.11	-9.53	-1.659	-5.488	-4.214
			3.9000	-174.30	-44.11	-9.53	-1.659	-21.485	-80.043
CBT	C6	DIS3Y MAX	0.0000	-154.97	14.95	47.57	4.085	124.618	30.316
			1.9500	-148.77	14.95	47.57	4.085	31.868	1.169
			3.9000						
CBT	C6	DIS3Y MIN		-142.57	14.95	47.57	4.085	52.667	29.735
			0.0000	-192.05	-16.05	-39.86	-4.376	-102.785	-32.874
			1.9500	-185.85	-16.05	-39.86	-4.376	-25.062	-1.573
			3.9000	-179.65	-16.05	-39.86	-4.376	-60.888	-27.986
CBT	C7	DIS1A							
			0.0000	-245.22	1.73	18.43	-0.241	32.852	1.582
			1.9500	-236.95	1.73	18.43	-0.241	-3.095	-1.792
			3.9000	-228.68	1.73	18.43	-0.241	-39.041	-5.165
CBT	C7	DIS1B							
			0.0000	-226.69	1.43	20.40	-0.203	34.646	1.056
			1.9500	-218.42	1.43	20.40	-0.203	-5.129	-1.726
CBT	C7	DIS2X MAX							
			0.0000	-169.88	48.16	32.65	1.290	67.492	94.707
			1.9500	-161.61	48.16	32.65	1.290	5.414	0.789
			3.9000						
CBT	C7	DIS2X MIN		-153.34	48.16	32.65	1.290	-10.004	82.776
			0.0000	-291.94	-44.63	0.98	-1.737	-7.103	-91.265
			1.9500	-283.67	-44.63	0.98	-1.737	-10.594	-4.245
CBT	C7	DIS2Y MAX							
			0.0000	-203.00	18.24	61.62	4.007	143.574	34.701
			3.9000	-186.46	18.24	61.62	4.007	26.044	26.091
CBT	C7	DIS2Y MIN							
			0.0000	-258.81	-14.71	-27.99	-4.454	-83.185	-31.259
			1.9500	-250.54	-14.71	-27.99	-4.454	-28.653	-2.586
CBT	C7	DIS3X MAX	0.0000	-94.27	47.77	26.42	1.368	56.621	94.451
			1.9500	-88.06	47.77	26.42	1.368	6.692	1.301
			3.9000	-81.86	47.77	26.42	1.368	3.424	84.056
CBT	C7	OIS3X MIN							
			0.0000	-216.33	-45.02	-5.25	-1.659	-17.975	-91.521
			1.9500	-210.12	-45.02	-5.25	-1.659	-9.316	-3.733
CBT	C7	OIS3Y MAX							
			0.0000	-127.39	17.85	55.39	4.085	132.703	34.444

C O L U M N F O R C E S

STORY	COLUMN	LOAD	LOC	P	V2	V3	T	M2	M3
			1.9500	-121.19	17.85	55.39	4.085	24.751	-0.358
			3.9000	-114.99	17.85	55.39	4.085	39.471	27.371
CBT	C7	DIS3Y MIN							
			0.0000	-183.20	-15.10	-34.23	-4.376	-94.056	-31.515
			1.9500	-177.00	-15.10	-34.23	-4.376	-27.375	-2.074
			3.9000	-170.80	-15.10	-34.23	-4.376	-83.365	-35.165
CBT	C8	DIS1A							
			0.0000	-163.43	-2.17	13.21	-0.241	24.660	-3.969
			1.9500	-155.16	-2.17	13.21	-0.241	-1.108	0.259
			3.9000	-146.89	-2.17	13.21	-0.241	-26.876	4.488
CBT	C8	DIS1B							
			0.0000	-138.49	-2.13	11.36	-0.203	21.209	-4.013
			1.9500	-130.22	-2.13	11.36	-0.203	-0.942	0.147
			3.9000	-121.95	-2.13	11.36	-0.203	-23.093	4.307
CBT	C8	DIS2X MAX							
			0.0000	-95.07	40.35	31.58	1.290	68.074	83.576
			3.9000	-78.53	40.35	31.58	1.290	5.898	82.328
CBT	C8	DIS2X MIN							
			0.0000	-214.36	-44.44	-7.21	-1.737	-22.273	-91.007
			3.9000	-197.82	-44.44	-7.21	-1.737	-55.152	-73.772
CBT	C8	DIS2Y MAX							
			0.0000	-107.78	13.32	71.18	4.007	161.815	27.680
			1.9500	-99.51	13.32	71.18	4.007	23.051	1.795
			3.9000	-91.24	13.32	71.18	4.007	66.577	32.826
CBT	C8	DIS2Y MIN							
			0.0000	-201.65	-17.42	-46.81	-4.454	-116.014	-35.112
			1.9500	-193.38	-17.42	-46.81	-4.454	-24.778	-1.232
			3.9000	-185.11	-17.42	-46.81	-4.454	-115.831	-24.270
CBT	C8	DIS3X MAX							
			0.0000	-45.50	41.01	27.25	1.368	60.148	84.821
			1.9500	-39.29	41.01	27.25	1.368	7.107	4.862
			3.9000	-33.09	41.01	27.25	1.368	14.866	80.997
CBT	C8	DIS3X MIN	0.0000	-164.79	-43.78	-11.54	-1.659	-30.199	-89.762
			1.9500	-158.59	-43.78	-11.54	-1.659	-7.790	-4.386
			3.9000	-152.39	-43.78	-11.54	-1.659	-46.183	-75.104
CBT	C8	DIS3Y MAX							
			0.0000	-58.21	13.98	66.85	4.085	153.889	28.926
			1.9500	-52.01	13.98	66.85	4.085	23.573	1.751
			3.9000	-45.81	13.98	66.85	4.085	75.546	31.495
CBT	C8	DIS3Y MIN							
			0.0000	-152.08	-16.76	-51.14	-4.376	-123.940	-33.866
			1.9500	-145.87	-16.76	-51.14	-4.376	-24.256	-1.275
			3.9000	-139.67	-16.76	-51.14	-4.376	-106.862	-25.602

C O N C R E T E C O L U M N C H E C K O U T P U T (ACI 318-08/IBC 2009)

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C1	C30X50D	0.000	0.854	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50D	195.000	0.221	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C1	C30X50D	390.000	0.716	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50B	0.000	0.915	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50B	195.000	0.217	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C2	C30X50B	390.000	0.875	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50B	0.000	0.869	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50B	195.000	0.212	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C3	C30X50B	390.000	0.822	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	0.000	0.864	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	195.000	0.181	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C4	C30X50C	390.000	0.827	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50D	0.000	0.886	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50D	195.000	0.184	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C5	C30X50D	390.000	0.710	DIS2X	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50B	0.000	0.940	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C6	C30X50B	195.000	0.193	DIS2Y	0.000	DIS3Y	0.000	DIS3Y

BIAXIAL P-M INTERACTION CAPACITY CHECK AND SHEAR DESIGN OF COLUMN-TYPE ELEMENTS

STORY ID	COLUMN LINE	SECTION ID	STATION ID	INTERACTION RATIO	COMBO ID	SHEAR22 REBAR	COMBO ID	SHEAR33 REBAR	COMBO ID
CBT	C6	C30X50B	390.000	0.812	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50C	0.000	0.907	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50C	195.000	0.164	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C7	C30X50C	390.000	0.877	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50C	0.000	0.893	DIS3X	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50C	195.000	0.135	DIS2Y	0.000	DIS3Y	0.000	DIS3Y
CBT	C8	C30X50C	390.000	0.800	DIS3X	0.000	DIS3Y	0.000	DIS3Y

Story	ColLine	SecID	StnLoc	PMMCombo	AsMin	As	CornerRebarAs	MidRebarAs	PMMRatio
CBT	C1	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.854
CBT	C1	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.221
CBT	C1	C30X50D	390	DIS2Y	15	28.387	2.839	2.839	0.716
CBT	C2	C30X50B	0	DIS3X	15	20	2	2	0.915
CBT	C2	C30X50B	195	DIS2Y	15	20	2	2	0.217
CBT	C2	C30X50B	390	DIS2X	15	20	2	2	0.875
CBT	C3	C30X50B	0	DIS2Y	15	20	2	2	0.869
CBT	C3	C30X50B	195	DIS2Y	15	20	2	2	0.212
CBT	C3	C30X50B	390	DIS2X	15	20	2	2	0.822
CBT	C4	C30X50C	0	DIS2Y	15	23.355	2.839	2	0.864
CBT	C4	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.181
CBT	C4	C30X50C	390	DIS2X	15	23.355	2.839	2	0.827
CBT	C5	C30X50D	0	DIS2Y	15	28.387	2.839	2.839	0.886
CBT	C5	C30X50D	195	DIS2Y	15	28.387	2.839	2.839	0.184
CBT	C5	C30X50D	390	DIS2X	15	28.387	2.839	2.839	0.71
CBT	C6	C30X50B	0	DIS3X	15	20	2	2	0.94
CBT	C6	C30X50B	195	DIS2Y	15	20	2	2	0.193
CBT	C6	C30X50B	390	DIS3X	15	20	2	2	0.812
CBT	C7	C30X50C	0	DIS3X	15	23.355	2.839	2	0.907
CBT	C7	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.164
CBT	C7	C30X50C	390	DIS3X	15	23.355	2.839	2	0.877
CBT	C8	C30X50C	0	DIS3X	15	23.355	2.839	2	0.893
CBT	C8	C30X50C	195	DIS2Y	15	23.355	2.839	2	0.135
CBT	C8	C30X50C	390	DIS3X	15	23.355	2.839	2	0.8

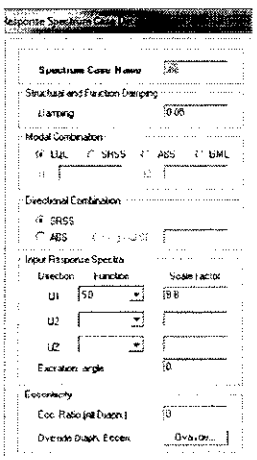
8.1.7. Análisis Sísmico

8.1.8. Zona alta

ETABS v9.7.4 File:CDI-BLOQUE 4 / 4A-ALTA-AB-CD-E-160-VR.1.0 Units:KN-m Julio 10, 2013 16:33

S T A T I C L D A O C A S E S

STATIC CASE	CASE TYPE	AUTO LAT LOAD	SELF WT MULTIPLIER	NDTIONAL FACTOR	NDTIDNAL DIRECTIDN
PP	DEAD	N/A	1.0000		
DL	DEAD	N/A	0.0000		
LR	LIVE	N/A	0.0000		
G	SNOW	N/A	0.0000		



R E S P D N S E S P E C T R U M C A S E S

RESP SPEC CASE: FX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTIDN COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPDNSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTIDN	FUNCTION	SCALE FACT
U1	SD	9.8000
U2	----	N/A
UZ	----	N/A

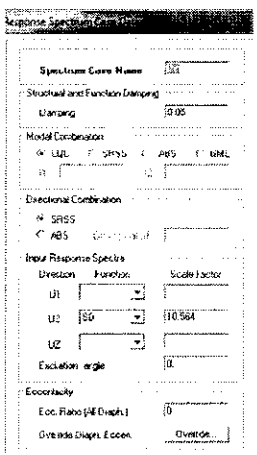
RESP SPEC CASE: FY

BASIC RESPONSE SPECTRUM DATA

MODAL CDMBD	DIRECTIDN COMBD	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPDNSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTIDN	FUNCTION	SCALE FACT
U1	----	N/A
U2	SD	10.584
UZ	----	N/A



M A S S S O U R C E D A T A

MASS FRDM	LATERAL MASS ONLY	LUMP MASS AT STDRIES
Masses & LoaYes		Yes

M A S S S O U R C E L O A D S

LOAD	MULTIPLIER
DL	1.0000

O I A P H R A G M M A S S D A T A

STDRY	DIAPHRAGM	MASS-X	MASS-Y	MMI	X-M	Y-M
CBT	01	7.678E+01	7.678E+01	3.693E+03	7.497	5.019

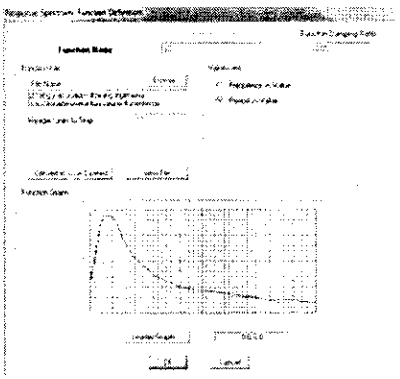
ASSEMBLED PDINT MASSES

STDRY	PDINT	UX	UY	UZ	RX	RY	RZ
CBT	All	1.044E+02	1.044E+02	0.000E+00	0.000E+00	0.000E+00	3.693E+03
BASE	All	6.338E+00	6.338E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Totals	All	1.107E+02	1.107E+02	0.000E+00	0.000E+00	0.000E+00	3.693E+03

RESPONSE SPECTRUM FUNCTIDN - FROM FILE

FUNCTION NAME: SD

PERIDD	ACCEL
0.0000	0.1000
0.1000	0.1800
0.2000	0.2600
0.3000	0.3000
0.4000	0.3000
0.5000	0.3000
0.6000	0.2800
0.7000	0.2400
0.8000	0.2100
0.9000	0.1900
1.0000	0.1700
1.5000	0.1100
2.0000	0.0800
2.5000	0.0700
3.0000	0.0600
3.5000	0.0500
4.0000	0.0400
4.5000	0.0400
5.0000	0.0300



MODE SHAPES

STORY	DIAPHRAGM	MODE	UX	UY	UZ	RX	RY	RZ
CBT	D1	Mode 1	-9.6982E-02	-1.7797E-03	0.00000	0.00000	0.00000	1.3363E-03
CBT	D1	Mode 2	1.1508E-02	-6.6731E-02	0.00000	0.00000	0.00000	1.0581E-02
CBT	D1	Mode 3	-8.0828E-03	-7.1658E-02	0.00000	0.00000	0.00000	-9.2134E-03

MODAL PERIODS AND FREQUENCIES

MODE NUMBER	PERIDD (TIME)	FREQUENCY (CYCLES/TIME)	CIRCULAR FREQ (RADIANS/TIME)
Mode 1	0.34554	2.89404	18.18379
Mode 2	0.28467	3.51278	22.07144
Mode 3	0.24730	4.04371	25.40740

MODAL PARTICIPATION FACTDRS

MODE	UX	UY	UZ	RX	RY	RZ
Mode 1	10.1689	0.1519	0.0000	-0.6682	44.7431	-7.0585
Mode 2	-0.8307	6.6970	0.0000	-29.4669	-3.6550	-53.4223
Mode 3	0.5210	7.7133	0.0000	-33.9384	2.2924	46.1568

MODAL PARTICIPATING MASS RATIDS

MODE NUMBER	X-TRANS %MASS <SUM>	Y-TRANS %MASS <SUM>	Z-TRANS %MASS <SUM>	RX-RDTN %MASS <SUM>	RY-RDTN %MASS <SUM>	RZ-RDTN %MASS <SUM>
Mode 1	99.08 < 99>	0.02 < 0>	0.00 < 0>	0.02 < 0>	99.08 < 99>	0.99 < 1>
Mode 2	0.66 <100>	42.97 < 43>	0.00 < 0>	42.97 < 43>	0.66 <100>	56.69 < 58>
Mode 3	0.26 <100>	57.00 <100>	0.00 < 0>	57.00 <100>	0.26 <100>	42.32 <100>

MODAL LOAD PARTICIPATIDN RATIDS
(STATIC AND DYNAMIC RATIOS ARE IN PERCENT)

TYPE	LOAD	ACCEL	STDRY	LINK	DOF	STATIC	DYNAMIC
Load	PP					0.0000	0.0000
Load	DL					0.0000	0.0000
Load	LR					0.0000	0.0000
Load	G					0.4138	0.0000
Accel		UX				100.0000	100.0000
Accel		UY				100.0000	100.0000
Accel		UZ				0.0000	0.0000
Accel		RX				100.0000	100.0000
Accel		RY				100.0000	100.0000
Accel		RZ				111.6790	100.0000

RESPONSE SPECTRUM ACCELERATIONS
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	DAMP-RATIO	SPEC-FACTOR	U1	U2	U3
FX	Mode 1	0.345538	0.050000	1.000000	2.940000	0.000000	0.000000
FX	Mode 2	0.284675	0.050000	1.000000	2.879926	0.000000	0.000000
FX	Mode 3	0.247297	0.050000	1.000000	2.733406	0.000000	0.000000
FY	Mode 1	0.345538	0.050000	1.000000	0.000000	3.175200	0.000000
FY	Mode 2	0.284675	0.050000	1.000000	0.000000	3.110320	0.000000
FY	Mode 3	0.247297	0.050000	1.000000	0.000000	2.952078	0.000000

RESPONSE SPECTRUM MODAL AMPLITUDES
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	U1	U2	U3
FX	Mode 1	0.345538	-0.090417	0.000000	0.000000
FX	Mode 2	0.284675	0.004911	0.000000	0.000000
FX	Mode 3	0.247297	-0.002206	0.000000	0.000000
FY	Mode 1	0.345538	0.000000	-0.001458	0.000000
FY	Mode 2	0.284675	0.000000	-0.042759	0.000000
FY	Mode 3	0.247297	0.000000	-0.035273	0.000000

RESPONSE SPECTRUM BASE REACTIONS
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	DIR	F1	F2	F3	M1	M2	M3
FX	Mode 1	U1	304.01	4.54	0.00	-19.978	1337.661	-1646.403
FX	Mode 2	U1	1.99	-16.02	0.00	70.493	8.744	-100.703
FX	Mode 3	U1	0.74	10.98	0.00	-48.332	3.265	98.643
FX	All	All	304.50	16.06	0.00	70.665	1339.787	1663.452
FY	Mode 1	U2	4.90	0.07	0.00	-0.322	21.576	-26.556
FY	Mode 2	U2	-17.30	139.50	0.00	-613.790	-76.132	876.832
FY	Mode 3	U2	11.86	175.63	0.00	-772.782	52.199	1577.196
FY	All	All	17.34	258.24	0.00	1136.278	76.318	2040.856

CENTERS OF CUMULATIVE MASS & CEMTERS OF RIGIDITY

STORY LEVEL	DIAPHRAGM NAME	/----------CENTER OF MASS----------//--CENTER OF RIGIDITY--/ MASS	ORDINATE-X	ORDINATE-Y	ORDINATE-X	ORDINATE-Y
CBT	D1	7.678E+01	7.497	5.019	8.680	4.947

STORY FORCES

STORY	LOAD	LOCATION	P	VX	VY	T	MX	MY
CBT	FX	Top	1.207E-11	3.045E+02	1.606E+01	1.790E+03	9.990E-11	8.372E-11
		Bottom	1.207E-11	3.045E+02	1.606E+01	1.790E+03	7.066E+01	1.340E+03
CBT	FY	Top	4.012E-11	1.734E+01	2.582E+02	2.371E+03	4.430E-10	2.622E-10
		Bottom	4.012E-11	1.734E+01	2.582E+02	2.371E+03	1.136E+03	7.632E+01
CBT	EX	Top	1.023E-11	1.415E+02	5.555E+01	9.733E+02	1.052E-10	6.811E-11
		Bottom	1.023E-11	1.415E+02	5.555E+01	9.733E+02	2.444E+02	6.228E+02
CBT	EY	Top	2.856E-11	4.420E+01	1.835E+02	1.705E+03	3.151E-10	1.868E-10
		Bottom	2.856E-11	4.420E+01	1.835E+02	1.705E+03	8.076E+02	1.945E+02

R E S P O N S E S P E C T R U M A C C E L E R A T I O N S
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	DAMP-RATIO	SPEC-FACTOR	U1	U2	U3
FX	Mode 1	0.345538	0.050000	1.000000	2.940000	0.000000	0.000000
FX	Mode 2	0.284675	0.050000	1.000000	2.879926	0.000000	0.000000
FX	Mode 3	0.247297	0.050000	1.000000	2.733406	0.000000	0.000000
FY	Mode 1	0.345538	0.050000	1.000000	0.000000	3.175200	0.000000
FY	Mode 2	0.284675	0.050000	1.000000	0.000000	3.110320	0.000000
FY	Mode 3	0.247297	0.050000	1.000000	0.000000	2.952078	0.000000

R E S P O N S E S P E C T R U M M O D A L A M P L I T U D E S
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	U1	U2	U3
FX	Mode 1	0.345538	-0.090417	0.000000	0.000000
FX	Mode 2	0.284675	0.004911	0.000000	0.000000
FX	Mode 3	0.247297	-0.002206	0.000000	0.000000
FY	Mode 1	0.345538	0.000000	-0.001458	0.000000
FY	Mode 2	0.284675	0.000000	-0.042759	0.000000
FY	Mode 3	0.247297	0.000000	-0.035273	0.000000

R E S P O N S E S P E C T R U M B A S E R E A C T I O N S
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	DIR	F1	F2	F3	M1	M2	M3
FX	Mode 1	U1	304.01	4.54	0.00	-19.978	1337.661	-1646.403
FX	Mode 2	U1	1.99	-16.02	0.00	70.493	8.744	-100.703
FX	Mode 3	U1	0.74	10.98	0.00	-48.332	3.265	98.643
FX	All	All	304.50	16.06	0.00	70.665	1339.787	1663.452
FY	Mode 1	U2	4.90	0.07	0.00	-0.322	21.576	-26.556
FY	Mode 2	U2	-17.30	139.50	0.00	-613.790	-76.132	876.832
FY	Mode 3	U2	11.86	175.63	0.00	-772.782	52.199	1577.196
FY	All	All	17.34	258.24	0.00	1136.278	76.318	2040.856

C E N T E R S O F C U M U L A T I V E M A S S & C E N T E R S O F R I G I D I T Y

STORY LEVEL	DIAPHRAGM NAME	CENTER OF MASS MASS	CENTER OF MASS ORDINATE-X	CENTER OF MASS ORDINATE-Y	CENTER OF RIGIDITY ORDINATE-X	CENTER OF RIGIDITY ORDINATE-Y
CBT	D1	7.678E+01	7.497	5.019	8.680	4.947

S T O R Y F O R C E S

STORY	LOAD	LOCATION	P	VX	VY	T	MX	MY
CBT	FX	Top	1.207E-11	3.045E+02	1.606E+01	1.790E+03	9.990E-11	8.372E-11
		Bottom	1.207E-11	3.045E+02	1.606E+01	1.790E+03	7.066E+01	1.340E+03
CBT	FY	Top	4.012E-11	1.734E+01	2.582E+02	2.371E+03	4.430E-10	2.622E-10
		Bottom	4.012E-11	1.734E+01	2.582E+02	2.371E+03	1.136E+03	7.632E+01
CBT	EX	Top	1.023E-11	1.415E+02	5.555E+01	9.733E+02	1.052E-10	6.811E-11
		Bottom	1.023E-11	1.415E+02	5.555E+01	9.733E+02	2.444E+02	6.228E+02
CBT	EY	Top	2.856E-11	4.420E+01	1.835E+02	1.705E+03	3.151E-10	1.868E-10
		Bottom	2.856E-11	4.420E+01	1.835E+02	1.705E+03	8.076E+02	1.945E+02

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L O A D I N G C O M B I N A T I O N S

COMBO	CDMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DRV2X	ADD	D	Combo	0.6000
		FX	Spectra	1.0000
DRV2Y	ADD	D	Combo	0.6000
		FY	Spectra	1.0000

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P O I N T D I S P L A C E M E N T S

STORY	POINT	LOAD	UX	UY	UZ	RX	RY	RZ
CBT	7	FX	8.2464	1.1538	0.0266	0.00026	0.00107	0.00012
CBT	7	FY	2.7701	6.2800	0.0175	0.00133	0.00032	0.00046
CBT	7	DRv2X Max	8.0072	1.6914	-0.0515	-0.00018	0.00119	0.00011
CBT	7	DRV2X Min	-8.4857	-0.6161	-0.1048	-0.00069	-0.00094	-0.00014
CBT	7	ORv2Y Max	2.5308	6.8176	-0.0607	0.00090	0.00044	0.00045
CBT	7	ORv2Y Min	-3.0093	-5.7423	-0.0957	-0.00177	-0.00019	-0.00048
CBT	22	FX	9.1823	1.1538	0.0250	0.00021	0.00109	0.00012
CBT	22	FY	1.2509	6.2800	0.0200	0.00133	0.00010	0.00046
CBT	22	DRV2X Max	9.0701	1.6914	-0.0759	0.00027	0.00125	0.00011
CBT	22	DRV2X Min	-9.2945	-0.6161	-0.1258	-0.00016	-0.00093	-0.00014
CBT	22	DRV2Y Max	1.1387	6.8176	-0.0809	0.00138	0.00026	0.00045
CBT	22	DRV2Y Min	-1.3631	-5.7423	-0.1209	-0.00127	0.00006	-0.00048
CBT	9	FX	8.2464	0.4494	0.0049	0.00034	0.00098	0.00012
CBT	9	FY	2.7701	4.3319	0.0186	0.00091	0.00031	0.00046
CBT	9	ORv2X Max	8.0072	0.8118	-0.0673	-0.00003	0.00072	0.00011
CBT	9	DRv2X Min	-8.4857	-0.0869	-0.0771	-0.00072	-0.00124	-0.00014
CBT	9	ORV2Y Max	2.5308	4.6943	-0.0536	0.00053	0.00005	0.00045
CBT	9	DRV2Y Min	-3.0093	-3.9695	-0.0908	-0.00128	-0.00058	-0.00048
CBT	25	FX	9.1823	0.7652	0.0686	0.00010	0.00064	0.00012
CBT	25	FY	1.2509	4.7791	0.0359	0.00084	0.00006	0.00046
CBT	25	DRV2X Max	9.0701	1.0860	-0.0085	0.00011	0.00067	0.00011
CBT	25	DRV2X Min	-9.2945	-0.4444	-0.1458	-0.00009	-0.00062	-0.00014
CBT	25	DRV2Y Max	1.1387	5.1000	-0.0412	0.00085	0.00008	0.00045
CBT	25	DRV2Y Min	-1.3631	-4.4583	-0.1131	-0.00082	-0.00004	-0.00048
BASE	7	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRv2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	ORV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	ORV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	ORV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	ORV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	Fx	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000

	Nivel	hx Piso m	Deriva Max mm	U1 mm	U2 mm	Deriva mm	
			ANALISIS EN X. Combinacion: DRV2X = 0.6Ldt + Fx				
COL EJE A-4	Point	7					
	CBT	4.40	17.60	6.01	1.69	8.16	Verificacion con A 6 4 de NSR10
	BASE			0.00	0.00		
COL EJE A-2	Point	9					
	CBT	4.40	17.60	8.01	0.81	8.05	Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-4	Point	22					
	CBT	4.40	17.60	9.07	1.69	9.23	Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-1	Point	25					
	CBT	4.40	17.60	9.07	1.09	9.13	Cumple, Ok
	BASE			0.00	0.00		
			ANALISIS EN Y. Combinacion: DRV2Y = 0.6Ldt + Fy				
COL EJE A-4	Point	7					
	CBT	4.40	17.60	2.53	6.82	7.27	Cumple, Ok
	BASE			0.00	0.00		
COL EJE A-2	Point	9					
	CBT	4.40	17.60	2.53	4.69	5.33	Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-4	Point	22					
	CBT	4.40	17.60	1.14	6.82	6.91	Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-1	Point	25					
	CBT	4.40	17.60	1.14	5.10	5.2	Cumple, Ok
	BASE			0.00	0.00		

Cumple, Ok

8.1.9. Zona Intermedia

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S T A T I C L O A D C A S E S

STATIC CASE	CASE TYPE	AUTO LAT LOAD	SELF WT MULTIPLIER	NOTIONAL FACTOR	NOTIONAL DIRECTION
PP	DEAD	N/A	1.0000		
DL	DEAD	N/A	0.0000		
LR	LIVE	N/A	0.0000		
G	SNOW	N/A	0.0000		

R E S P O N S E S P E C T R U M C A S E S

RESP SPEC CASE: FX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SD	9.8000
U2	----	N/A
UZ	----	N/A

RESP SPEC CASE: FY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	----	N/A
U2	SD	10.584
UZ	----	N/A

M A S S S O U R C E D A T A

MASS FROM	LATERAL MASS ONLY	LUMP MASS AT STORIES
Masses & LoaYes	Yes	

M A S S S O U R C E L O A D S

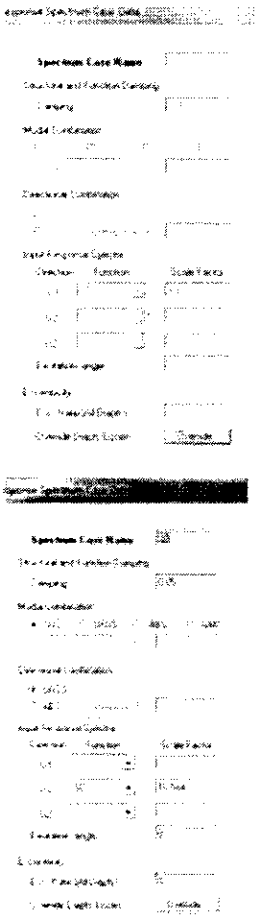
LOAD	MULTIPLIER
DL	1.0000

D I A P H R A G M M A S S D A T A

STORY	DIAPHRAGM	MASS-X	MASS-Y	MMI	X-M	Y-M
CBT	D1	7.678E+01	7.678E+01	3.693E+03	7.497	5.019

A S S E M B L E D P O I N T M A S S E S

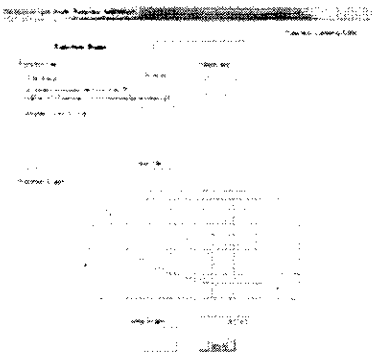
STORY	POINT	UX	UY	UZ	RX	RY	RZ
CBT	All	1.044E+02	1.044E+02	0.000E+00	0.000E+00	0.000E+00	3.693E+03
BASE	All	6.338E+00	6.338E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Totals	All	1.107E+02	1.107E+02	0.000E+00	0.000E+00	0.000E+00	3.693E+03



RESPONSE SPECTRUM FUNCTION - FROM FILE

FUNCTION NAME: SD

PERIOD	ACCEL
0.0000	0.0600
0.1000	0.1100
0.2000	0.1600
0.3000	0.1800
0.4000	0.1800
0.5000	0.1800
0.6000	0.1700
0.7000	0.1400
0.8000	0.1300
0.9000	0.1100
1.0000	0.1000
1.5000	0.0700
2.0000	0.0500
2.5000	0.0400
3.0000	0.0300
3.5000	0.0300
4.0000	0.0300
4.5000	0.0200
5.0000	0.0200



MODE SHAPES

STORY	DIAPHRAGM	MODE	UX	UY	UZ	RX	RY	RZ
CBT	D1	Mode 1	2.9740E-04	9.2331E-02	0.00000	0.00000	0.00000	-1.6015E-03
CBT	D1	Mode 2	9.3189E-02	-1.9661E-03	0.00000	0.00000	0.00000	-1.2606E-03
CBT	D1	Mode 3	9.5250E-03	1.6270E-02	0.00000	0.00000	0.00000	1.2145E-02

MODAL PERIODS AND FREQUENCIES

MODE NUMBER	PERIOD (TIME)	FREQUENCY (CYCLES/TIME)	CIRCULAR FREQ (RADIANS/TIME)
Mode 1	0.39397	2.53828	15.94850
Mode 2	0.31179	3.20730	20.15204
Mode 3	0.30340	3.29598	20.70926

MODAL PARTICIPATION FACTORS

MODE	UX	UY	UZ	RX	RY	RZ
Mode 1	-0.0312	-10.5837	0.0000	46.5685	-0.1372	10.9105
Mode 2	-10.6169	0.1746	0.0000	-0.7681	-46.7146	8.3446
Mode 3	-1.1059	-1.3775	0.0000	6.0608	-4.8661	-80.0298

MODAL PARTICIPATING MASS RATIOS

MODE NUMBER	X-TRANS %MASS <SUM>	Y-TRANS %MASS <SUM>	Z-TRANS %MASS <SUM>	RX-ROTN %MASS <SUM>	RY-ROTN %MASS <SUM>	RZ-ROTN %MASS <SUM>
Mode 1	0.00 < 0>	98.31 < 98>	0.00 < 0>	98.31 < 98>	0.00 < 0>	1.81 < 2>
Mode 2	98.93 < 99>	0.03 < 98>	0.00 < 0>	0.03 < 98>	98.93 < 99>	1.06 < 3>
Mode 3	1.07 <100>	1.67 <100>	0.00 < 0>	1.67 <100>	1.07 <100>	97.14 <100>

MODAL LOAD PARTICIPATION RATIOS
(STATIC AND DYNAMIC RATIOS ARE IN PERCENT)

TYPE	LOAD	ACCEL	STORY	LINK	DOF	STATIC	DYNAMIC
Load	PP					0.0000	0.0000
Load	DL					0.0000	0.0000
Load	LR					0.0000	0.0000
Load	G					0.0000	0.0000
Accel		UX				100.0000	100.0000
Accel		UY				100.0000	100.0000
Accel		UZ				0.0000	0.0000
Accel		RX				100.0000	100.0000
Accel		RY				100.0000	100.0000
Accel		RZ				103.3867	100.0000

RESPONSE SPECTRUM ACCELERATIONS
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	DAMP-RATIO	SPEC-FACTOR	U1	U2	U3
FX	Mode 1	0.393967	0.050000	1.000000	1.764000	0.000000	0.000000
FX	Mode 2	0.311789	0.050000	1.000000	1.764000	0.000000	0.000000
FX	Mode 3	0.303400	0.050000	1.000000	1.764000	0.000000	0.000000
FY	Mode 1	0.393967	0.050000	1.000000	0.000000	1.764000	0.000000
FY	Mode 2	0.311789	0.050000	1.000000	0.000000	1.764000	0.000000
FY	Mode 3	0.303400	0.050000	1.000000	0.000000	1.764000	0.000000

RESPONSE SPECTRUM MODAL AMPLITUDES
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	U1	U2	U3
FX	Mode 1	0.393967	0.000216	0.000000	0.000000
FX	Mode 2	0.311789	0.046117	0.000000	0.000000
FX	Mode 3	0.303400	0.004549	0.000000	0.000000
FY	Mode 1	0.393967	0.000000	0.073400	0.000000
FY	Mode 2	0.311789	0.000000	-0.000758	0.000000
FY	Mode 3	0.303400	0.000000	0.005666	0.000000

RESPONSE SPECTRUM BASE REACTIONS
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	DIR	F1	F2	F3	M1	M2	M3
FX	Mode 1	U1	182.41	2.72	0.00	-11.987	802.596	-987.842
FX	Mode 2	U1	1.20	-9.65	0.00	42.443	5.264	-60.632
FX	Mode 3	U1	0.45	6.67	0.00	-29.365	1.983	59.931
FX	All	All	182.70	9.69	0.00	42.640	803.878	998.094
FY	Mode 1	U2	2.94	0.04	0.00	-0.193	12.946	-15.934
FY	Mode 2	U2	-10.42	83.99	0.00	-369.554	-45.838	527.928
FY	Mode 3	U2	7.21	106.71	0.00	-469.510	31.714	958.238
FY	All	All	10.47	156.31	0.00	687.780	46.051	1236.683

CENTERS OF CUMULATIVE MASS & CENTERS OF RIGIDITY

STORY LEVEL	DIAPHRAGM NAME	CENTER OF MASS MASS	CENTER OF MASS ORDINATE-X	CENTER OF MASS ORDINATE-Y	CENTER OF RIGIDITY ORDINATE-X	CENTER OF RIGIDITY ORDINATE-Y
CBT	D1	8.245E+01	3.56	9.09	3.88	9.03

STORY FORCES

STORY	LOAD	LOCATION	P	VX	VY	T	MX	MY
CBT	DIS2X Max	Top	1.494E+03	1.043E+02	2.272E+01	9.551E+02	1.357E+04	-4.746E+03
		Bottom	1.643E+03	1.043E+02	2.272E+01	9.551E+02	1.501E+04	-4.862E+03
CBT	DIS2X Min	Top	1.494E+03	-1.043E+02	-2.272E+01	-9.551E+02	1.357E+04	-4.746E+03
		Bottom	1.643E+03	-1.043E+02	-2.272E+01	-9.551E+02	1.481E+04	-5.780E+03
CBT	DIS2Y Max	Top	1.494E+03	3.130E+01	7.570E+01	3.455E+02	1.357E+04	-4.746E+03
		Bottom	1.643E+03	3.130E+01	7.570E+01	3.455E+02	1.524E+04	-5.183E+03
CBT	DIS2Y Min	Top	1.494E+03	-3.130E+01	-7.570E+01	-3.455E+02	1.357E+04	-4.746E+03
		Bottom	1.643E+03	-3.130E+01	-7.570E+01	-3.455E+02	1.458E+04	-5.458E+03
CBT	DIS3X Max	Top	9.664E+02	1.043E+02	2.272E+01	9.551E+02	8.769E+03	-3.086E+03
		Bottom	1.078E+03	1.043E+02	2.272E+01	9.551E+02	9.877E+03	-3.058E+03
CBT	DIS3X Min	Top	9.664E+02	-1.043E+02	-2.272E+01	-9.551E+02	8.769E+03	-3.086E+03
		Bottom	1.078E+03	-1.043E+02	-2.272E+01	-9.551E+02	9.677E+03	-3.976E+03
CBT	DIS3Y Max	Top	9.664E+02	3.130E+01	7.570E+01	3.455E+02	8.769E+03	-3.086E+03
		Bottom	1.078E+03	3.130E+01	7.570E+01	3.455E+02	1.011E+04	-3.379E+03
CBT	DIS3Y Min	Top	9.664E+02	-3.130E+01	-7.570E+01	-3.455E+02	8.769E+03	-3.086E+03
		Bottom	1.078E+03	-3.130E+01	-7.570E+01	-3.455E+02	9.444E+03	-3.655E+03

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
DRV2X	ADD	D	Combo	0.6000
		FX	Spectra	1.0000
DRV2Y	ADD	D	Combo	0.6000
		FY	Spectra	1.0000

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P O I N T D I S P L A C E M E N T S

STORY	POINT	LOAD	UX	UY	UZ	RX	RY	RZ
CBT	7	FX	4.9481	0.6929	0.0160	0.00015	0.00064	0.00007
CBT	7	FY	1.6717	3.7812	0.0106	0.00080	0.00019	0.00028
CBT	7	DRV2X Max	4.7089	1.2305	-0.0622	-0.00028	0.00076	0.00006
CBT	7	DRV2X Min	-5.1874	-0.1552	-0.0942	-0.00059	-0.00052	-0.00009
CBT	7	DRV2Y Max	1.4324	4.3189	-0.0676	0.00037	0.00031	0.00026
CBT	7	DRV2Y Min	-1.9109	-3.2436	-0.0887	-0.00124	-0.00007	-0.00029
CBT	22	FX	5.5093	0.6929	0.0150	0.00013	0.00065	0.00007
CBT	22	FY	0.7551	3.7812	0.0120	0.00080	0.00006	0.00028
CBT	22	DRV2X Max	5.3971	1.2305	-0.0859	0.00018	0.00081	0.00006
CBT	22	DRV2X Min	-5.6215	-0.1552	-0.1158	-0.00007	-0.00049	-0.00009
CBT	22	DRV2Y Max	0.6429	4.3189	-0.0888	0.00086	0.00022	0.00026
CBT	22	DRV2Y Min	-0.8673	-3.2436	-0.1129	-0.00074	0.00010	-0.00029
CBT	9	FX	4.9481	0.2704	0.0029	0.00021	0.00059	0.00007
CBT	9	FY	1.6717	2.6297	0.0112	0.00055	0.00019	0.00028
CBT	9	DRV2X Max	4.7089	0.6329	-0.0693	-0.00017	0.00033	0.00006
CBT	9	DRV2X Min	-5.1874	0.0920	-0.0751	-0.00058	-0.00085	-0.00009
CBT	9	DRV2Y Max	1.4324	2.9921	-0.0610	0.00018	-0.00007	0.00026
CBT	9	DRV2Y Min	-1.9109	-2.2672	-0.0834	-0.00092	-0.00045	-0.00029
CBT	16	FX	5.1746	0.4600	0.0212	0.00007	0.00073	0.00007
CBT	16	FY	0.6878	2.9042	0.0212	0.00044	0.00010	0.00028
CBT	16	DRV2X Max	4.9872	0.7808	-0.0414	-0.00016	0.00026	0.00006
CBT	16	DRV2X Min	-5.3620	-0.1391	-0.0837	-0.00031	-0.00119	-0.00009
CBT	16	DRV2Y Max	0.5004	3.2251	-0.0414	0.00020	-0.00036	0.00026
CBT	16	DRV2Y Min	-0.8752	-2.5834	-0.0837	-0.00067	-0.00057	-0.00029
CBT	25	FX	5.5093	0.4600	0.0412	0.00006	0.00039	0.00007
CBT	25	FY	0.7551	2.9042	0.0218	0.00051	0.00004	0.00028
CBT	25	DRV2X Max	5.3971	0.7808	-0.0360	0.00007	0.00041	0.00006
CBT	25	DRV2X Min	-5.6215	-0.1391	-0.1184	-0.00005	-0.00036	-0.00009
CBT	25	DRV2Y Max	0.6429	3.2251	-0.0554	0.00052	0.00006	0.00026
CBT	25	DRV2Y Min	-0.8673	-2.5834	-0.0990	-0.00050	-0.00002	-0.00029
BASE	7	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000

	Nivel	hx Piso m	Deriva Max mm	U1 mm	U2 mm	Deriva mm	Verificación con A.6.4 de NSR10
			ANALISIS EN X. Combinacion: DRV2X = 0.6Ldt + Fx				
COL EJE A-4	Point 7						
	CBT		17.60	4.71	1.23	4.87	
		4.40					Cumple, Ok
	BASE			0.00	0.00		
COL EJE A-2	Point 9						
	CBT		17.60	4.71	0.63	4.75	
		4.40					Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-4	Point 22						
	CBT		17.60	5.40	1.23	5.54	
		4.40					Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-1	Point 25						
	CBT		17.60	5.40	0.78	5.45	
		4.40					Cumple, Ok
	BASE			0.00	0.00		
			ANALISIS EN Y. Combinacion: DRV2Y = 0.6Ldt + Fy				
COL EJE A-4	Point 7						
	CBT		17.60	1.43	4.32	4.55	
		4.40					Cumple, Ok
	BASE			0.00	0.00		
COL EJE A-2	Point 9						
	CBT		17.60	1.43	2.99	3.32	
		4.40					Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-4	Point 22						
	CBT		17.60	0.64	4.32	4.37	
		4.40					Cumple, Ok
	BASE			0.00	0.00		
COL EJE C-1	Point 25						
	CBT		17.60	0.64	3.23	3.29	
		4.40					Cumple, Ok
	BASE			0.00	0.00		

8.1.10. Zona Baja

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S T A T I C L O A D C A S E S

STATIC CASE	CASE TYPE	AUTO LAT LOAD	SELF WT MULTIPLIER	NOTIONAL FACTOR	NOTIONAL DIRECTION
PP	DEAD	N/A	1.0000		
DL	DEAD	N/A	0.0000		
LR	LIVE	N/A	0.0000		
G	SNOW	N/A	0.0000		

R E S P O N S E S P E C T R U M C A S E S

RESP SPEC CASE: FX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	SD	9.8000
U2	----	N/A
UZ	----	N/A

RESP SPEC CASE: FY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
CQC	SRSS	0.0500	0.0000	0.0000

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	----	N/A
U2	SD	10.584
UZ	----	N/A

M A S S S O U R C E D A T A

MASS FROM	LATERAL MASS DNLY	LUMP MASS AT STORIES
Masses & LoaYes	Yes	

M A S S S O U R C E L O A D S

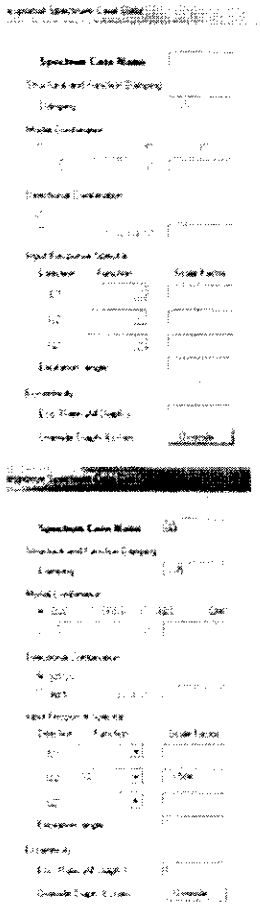
LOAD	MULTIPLIER
DL	1.0000

D I A P H R A G M M A S S D A T A

STORY	DIAPHRAGM	MASS-X	MASS-Y	MMI	X-M	Y-M
CBT	D1	7.678E+01	7.678E+01	3.693E+03	7.497	5.019

A S S E M B L E D P O I N T M A S S E S

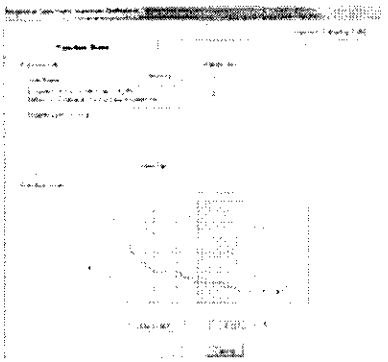
STORY	POINT	UX	UY	UZ	RX	RY	RZ
CBT	All	1.044E+02	1.044E+02	0.000E+00	0.000E+00	0.000E+00	3.693E+03
BASE	All	6.338E+00	6.338E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Totals	All	1.107E+02	1.107E+02	0.000E+00	0.000E+00	0.000E+00	3.693E+03



RESPONSE SPECTRUM FUNCTION - FROM FILE

FUNCTION NAME: SD

PERIOD	ACCEL
0.0000	0.0300
0.1000	0.0500
0.2000	0.0800
0.3000	0.0900
0.4000	0.0900
0.5000	0.0900
0.6000	0.0800
0.7000	0.0700
0.8000	0.0600
0.9000	0.0600
1.0000	0.0500
1.5000	0.0300
2.0000	0.0300
2.5000	0.0200
3.0000	0.0200
3.5000	0.0100
4.0000	0.0100
4.5000	0.0100
5.0000	0.0100



MODE SHAPES

STORY	DIAPHRAGM	MODE	UX	UY	UZ	RX	RY	RZ
CBT	D1	Mode 1	2.9740E-04	9.2331E-02	0.00000	0.00000	0.00000	-1.6015E-03
CBT	D1	Mode 2	9.3189E-02	-1.9661E-03	0.00000	0.00000	0.00000	-1.2606E-03
CBT	D1	Mode 3	9.5250E-03	1.6270E-02	0.00000	0.00000	0.00000	1.2145E-02

MODAL PERIODS AND FREQUENCIES

MODE NUMBER	PERIOD (TIME)	FREQUENCY (CYCLES/TIME)	CIRCULAR FREQ (RADIANS/TIME)
Mode 1	0.39397	2.53828	15.94850
Mode 2	0.31179	3.20730	20.15204
Mode 3	0.30340	3.29598	20.70926

MODAL PARTICIPATION FACTORS

MODE	UX	UY	UZ	RX	RY	RZ
Mode 1	-0.0312	-10.5837	0.0000	46.5685	-0.1372	10.9105
Mode 2	-10.6169	0.1746	0.0000	-0.7681	-46.7146	8.3446
Mode 3	-1.1059	-1.3775	0.0000	6.0608	-4.8661	-80.0298

MODAL PARTICIPATING MASS RATIOS

MODE NUMBER	X-TRANS %MASS <SUM>	Y-TRANS %MASS <SUM>	Z-TRANS %MASS <SUM>	RX-ROTN %MASS <SUM>	RY-ROTN %MASS <SUM>	RZ-ROTN %MASS <SUM>
Mode 1	0.00 < 0>	98.31 < 98>	0.00 < 0>	98.31 < 98>	0.00 < 0>	1.81 < 2>
Mode 2	98.93 < 99>	0.03 < 98>	0.00 < 0>	0.03 < 98>	98.93 < 99>	1.06 < 3>
Mode 3	1.07 <100>	1.67 <100>	0.00 < 0>	1.67 <100>	1.07 <100>	97.14 <100>

MODAL LOAD PARTICIPATION RATIOS
(STATIC AND DYNAMIC RATIOS ARE IN PERCENT)

TYPE	LOAD	ACCEL	STORY	LINK	DOF	STATIC	DYNAMIC
Load	PP					0.0000	0.0000
Load	DL					0.0000	0.0000
Load	LR					0.0000	0.0000
Load	G					0.0000	0.0000
Accel		UX				100.0000	100.0000
Accel		UY				100.0000	100.0000
Accel		UZ				0.0000	0.0000
Accel		RX				100.0000	100.0000
Accel		RY				100.0000	100.0000
Accel		RZ				103.3867	100.0000

RESPONSE SPECTRUM ACCELERATIONS
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	DAMP-RATIO	SPEC-FACTOR	U1	U2	U3
FX	Mode 1	0.345538	0.050000	1.000000	0.882000	0.000000	0.000000
FX	Mode 2	0.284675	0.050000	1.000000	0.866981	0.000000	0.000000
FX	Mode 3	0.247297	0.050000	1.000000	0.830351	0.000000	0.000000
FY	Mode 1	0.345538	0.050000	1.000000	0.000000	0.952560	0.000000
FY	Mode 2	0.284675	0.050000	1.000000	0.000000	0.936340	0.000000
FY	Mode 3	0.247297	0.050000	1.000000	0.000000	0.896780	0.000000

RESPONSE SPECTRUM MODAL AMPLITUDES
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	PERIOD	U1	U2	U3
FX	Mode 1	0.393967	0.108152	0.000000	0.000000
FX	Mode 2	0.311789	23.058447	0.000000	0.000000
FX	Mode 3	0.303400	2.274386	0.000000	0.000000
FY	Mode 1	0.393967	0.000000	36.700206	0.000000
FY	Mode 2	0.311789	0.000000	-0.379153	0.000000
FY	Mode 3	0.303400	0.000000	2.832811	0.000000

RESPONSE SPECTRUM BASE REACTIONS
(IN RESPONSE SPECTRUM LOCAL COORDINATES)

SPEC	MODE	DIR	F1	F2	F3	M1	M2	M3
FX	Mode 1	U1	91.20	1.36	0.00	-5.993	401.298	-493.921
FX	Mode 2	U1	0.60	-4.82	0.00	21.221	2.632	-30.316
FX	Mode 3	U1	0.23	3.34	0.00	-14.682	0.992	29.966
FX	All	All	91.35	4.85	0.00	21.320	401.939	499.047
FY	Mode 1	U2	1.47	0.02	0.00	-0.097	6.473	-7.967
FY	Mode 2	U2	-5.21	41.99	0.00	-184.777	-22.919	263.964
FY	Mode 3	U2	3.60	53.35	0.00	-234.755	15.857	479.119
FY	All	All	5.23	78.16	0.00	343.890	23.026	618.342

CENTERS OF CUMULATIVE MASS & CENTERS OF RIGIDITY

STORY LEVEL	DIAPHRAGM NAME	/----------CENTER OF MASS----------//--CENTER OF RIGIDITY--/ MASS	ORDINATE-X	ORDINATE-Y	DRDINATE-X	DRDINATE-Y
CBT	D1	8.245E+01	3564.84	9085.85	3884.66	9026.17

STORY FORCES

STORY	LOAD	LOCATION	P	VX	VY	T	MX	MY
CBT	FX	Top	3.623E-12	9.135E+01	4.845E+00	5.369E+02	2.998E-11	2.512E-11
		Bottom	3.623E-12	9.135E+01	4.845E+00	5.369E+02	2.132E+01	4.019E+02
CBT	FY	Top	1.212E-11	5.233E+00	7.816E+01	7.203E+02	1.338E-10	7.949E-11
		Bottom	1.212E-11	5.233E+00	7.816E+01	7.203E+02	3.439E+02	2.303E+01
CBT	EX	Top	2.065E-11	3.046E+02	1.100E+02	2.060E+03	2.101E-10	1.395E-10
		Bottom	2.065E-11	3.046E+02	1.100E+02	2.060E+03	4.842E+02	1.340E+03
CBT	EY	Top	5.592E-11	9.443E+01	3.626E+02	3.442E+03	6.166E-10	3.725E-10
		Bottom	5.592E-11	9.443E+01	3.626E+02	3.442E+03	1.596E+03	4.155E+02

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L O A D I N G C O M B I N A T I O N S

CDMBD	COMBD TYPE	CASE	CASE TYPE	SCALE FACTOR
DRV2X	ADD	D	Combo	0.6000
		FX	Spectra	1.0000
DRV2Y	ADD	D	Combo	0.6000
		FY	Spectra	1.0000

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P O I N T D I S P L A C E M E N T S

STORY	POINT	LOAD	UX	UY	UZ	RX	RY	RZ
CBT	7	FX	2.4741	0.3464	0.0080	0.00008	0.00032	0.00004
CBT	7	FY	0.8358	1.8906	0.0053	0.00040	0.00010	0.00014
CBT	7	DRV2X Max	2.2348	0.8841	-0.0702	-0.00036	0.00044	0.00002
CBT	7	DRV2X Min	-2.7133	0.1912	-0.0862	-0.00051	-0.00020	-0.00005
CBT	7	DRV2Y Max	0.5966	2.4283	-0.0729	-0.00003	0.00022	0.00012
CBT	7	DRV2Y Min	-1.0751	-1.3530	-0.0834	-0.00084	0.00003	-0.00015
CBT	22	FX	2.7546	0.3464	0.0075	0.00006	0.00033	0.00004
CBT	22	FY	0.3776	1.8906	0.0060	0.00040	0.00003	0.00014
CBT	22	DRV2X Max	2.6424	0.8841	-0.0934	0.00012	0.00049	0.00002
CBT	22	DRV2X Min	-2.8668	0.1912	-0.1084	-0.00001	-0.00017	-0.00005
CBT	22	DRV2Y Max	0.2654	2.4283	-0.0948	0.00046	0.00019	0.00012
CBT	22	DRV2Y Min	-0.4898	-1.3530	-0.1069	-0.00034	0.00013	-0.00015
CBT	9	FX	2.4741	0.1352	0.0015	0.00010	0.00029	0.00004
CBT	9	FY	0.8358	1.3148	0.0056	0.00028	0.00009	0.00014
CBT	9	DRV2X Max	2.2348	0.4977	-0.0707	-0.00027	0.00003	0.00002
CBT	9	DRV2X Min	-2.7133	0.2272	-0.0737	-0.00048	-0.00056	-0.00005
CBT	9	DRV2Y Max	0.5966	1.6773	-0.0666	-0.00010	-0.00017	0.00012
CBT	9	DRV2Y Min	-1.0751	-0.9524	-0.0778	-0.00065	-0.00036	-0.00015
CBT	16	FX	2.5873	0.2300	0.0106	0.00004	0.00036	0.00004
CBT	16	FY	0.3439	1.4521	0.0106	0.00022	0.00005	0.00014
CBT	16	DRV2X Max	2.3999	0.5508	-0.0520	-0.00020	-0.00010	0.00002
CBT	16	DRV2X Min	-2.7747	0.0908	-0.0732	-0.00027	-0.00083	-0.00005
CBT	16	DRV2Y Max	0.1565	1.7729	-0.0520	-0.00001	-0.00041	0.00012
CBT	16	DRV2Y Min	-0.5313	-1.1313	-0.0731	-0.00045	-0.00052	-0.00015
CBT	25	FX	2.7546	0.2300	0.0206	0.00003	0.00019	0.00004
CBT	25	FY	0.3776	1.4521	0.0109	0.00025	0.00002	0.00014
CBT	25	DRV2X Max	2.6424	0.5508	-0.0566	0.00004	0.00022	0.00002
CBT	25	DRV2X Min	-2.8668	0.0908	-0.0978	-0.00002	-0.00017	-0.00005
CBT	25	DRV2Y Max	0.2654	1.7729	-0.0663	0.00027	0.00004	0.00012
CBT	25	DRV2Y Min	-0.4898	-1.1313	-0.0881	-0.00024	0.00000	-0.00015
BASE	7	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	7	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	22	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	9	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2x Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	16	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	FX	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	FY	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2X Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2X Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2Y Max	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000
BASE	25	DRV2Y Min	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000

Nivel	hx. Piso m	Deriva Max mm	U1 mm	U2 mm	Deriva mm	Verificación con A.6.4 de NSR10
ANALISIS EN X. Combinacion: DRV2X = 0.6Ldt + Fx						
Point	7					
COL EJE A-4 CBT	4.40	17.60	2.23	0.88	2.40	Cumple, Ok
BASE			0.00	0.00		
Point	22					
COL EJE A-2 CBT	4.40	17.60	2.64	0.88	2.79	Cumple, Ok
BASE			0.00	0.00		
Point	24					
COL EJE C-4 CBT	4.40	17.60	2.64	0.50	2.69	Cumple, Ok
BASE			0.00	0.00		
Point	25					
COL EJE C-1 CBT	4.40	17.60	2.64	0.55	2.70	Cumple, Ok
BASE			0.00	0.00		
ANALISIS EN Y. Combinacion: DRV2Y = 0.6Ldt + Fy						
Point	7					
COL EJE A-4 CBT	4.40	17.60	0.60	2.43	2.50	Cumple, Ok
BASE			0.00	0.00		
Point	22					
COL EJE A-2 CBT	4.40	17.60	0.27	2.43	2.44	Cumple, Ok
BASE			0.00	0.00		
Point	24					
COL EJE C-4 CBT	4.40	17.60	0.27	1.88	1.70	Cumple, Ok
BASE			0.00	0.00		
Point	25					
COL EJE C-1 CBT	4.40	17.60	0.27	1.77	1.79	Cumple, Ok
BASE			0.00	0.00		

9. ANALISIS y DISEÑO CIMENTACION

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Table: Advanced Modeling Options

2DOnly	RigDiaTop	NoOffsets
No	No	Yes

Table: Automatic Slab Mesh Options

MeshOpt	Localize	Merge	MaxSize mm
Rectangular	Yes	Yes	500.00

Table: Beam PropertieS 01 - General

Beam	Type	Color
S35x45	Rectangular	Cyan

Table: Beam Properties 02 - Rectangular Beam

Beam	MatProp	Depth mm	WidthTop mm	WidthBot mm
S35x45	f'c 24.5Mpa	450.00	350.00	350.00

Table: Beam Properties 06 - Design Data

Beam	MatRebarL	MatRebarS	FlngWOpt	CoverTop mm	CoverBot mm	NODesign
S35x45	CSA-G30.18Gr400	CSA-G30.18Gr400	Analysis Property	50.00	50.00	No

Table: Column Properties 01 - General

Column	Type	Color
COL1	Rectangular	Cyan

Table: Column Properties 02 - Rectangular

Column	MatProp	SecDim2 mm	SecDim3 mm	AutoRigid	AutoDrop	IncludeCap
COL1	f'c 24.5Mpa	600.00	300.00	No	No	No

Table: Coordinate systems

Coordsys	Type	DrigingX m	OrigingY m	RotAngle Degrees
GLOBAL	Cartesian	0.00	0.00	0.00

Table: Cracking Analysis Reinforcement

ReinfOpt	MinReinfT	MinReinfC	UserModRup
FE Design	0.001800	0.000000	No

Table: Design Preferences 01 - Resistance Factors

PhiTen	PhiComp	PhiShear
0.900000	0.650000	0.750000

Table: Design Preferences 02 - Rebar Cover - Slabs

CoverTop mm	CoverBot mm	BarSize	InnerLayer	PTCGSTop mm	PTCGSBotExt mm	PTCGSBotInt mm	SlabType
50.00	50.00	#4	B	25.00	40.00	25.00	Two Way

Table: Design Preferences 03 - Rebar Cover - Beams

CoverTop mm	CoverBot mm	BarSizeF	BarSizeS	PTCGSTop mm	PTCGSBot mm
50.00	50.00	#5	#3	50.00	50.00

Table: Load Cases 01 - General

LoadCase	Type	DesignOpt	DesignType
PP	LinStatic	Auto	DEAD
DL	LinStatic	Auto	DEAD
LR	LinStatic	Auto	LIVE
G	LinStatic	Auto	SNOW
Ex	LinStatic	Auto	QUAKE
Ey	LinStatic	Auto	QUAKE

Table: Load Cases 02 - Static

LoadCase	InitialCond	AType
PP	Zero	Linear
DL	Zero	Linear
LR	Zero	Linear
G	Zero	Linear
Ex	Zero	Linear
Ey	Zero	Linear

Table: Load Cases 06 - Loads Applied

LoadCase	LoadPat	SF
PP	PP	1.000000
DL	DL	1.000000
LR	LR	1.000000
G	G	1.000000
Ex	Ex	1.000000
Ey	Ey	1.000000

Table: Load Patterns

LoadPat	Type	SelfWtMult
PP	DEAD	1.000000
DL	DEAD	0.000000
LR	LIVE	0.000000
G	SNOW	0.000000
Ex	QUAKE	0.000000
Ey	QUAKE	0.000000

Table: Load Combinations, Part 1 of 2

Combo	Load	SF	Type	DSStrength	DSServInit	OSServNorm	DSServLong	AutoDesign
O	PP	1.000000	Linear Add	No	No	No	No	No
D	DL	1.000000						
srv1a	D	1.000000	Linear Add	No	No	No	No	No
srv1a	LR	1.000000						
srv1b	D	1.000000	Linear Add	No	ND	No	No	No
srv1b	G	1.000000						
srv2x	D	1.000000	Linear Add	No	No	No	No	No
srv2x	Ex	0.700000						
srv2y	D	1.000000	Linear Add	No	No	No	No	No
srv2y	Ey	0.700000						
srv3Xa	D	1.000000	Linear Add	No	No	No	No	No
srv3Xa	Ex	0.525000						
srv3Xa	LR	0.750000						
srv3Xb	O	1.000000	Linear Add	No	No	No	No	No
srv3Xb	Ex	0.525000						
srv3Xb	G	0.750000						
srv4Ya	D	1.000000	Linear Add	No	No	No	No	No
srv4Ya	Ey	0.525000						
srv4Ya	LR	0.750000						
srv4Yb	O	1.000000	Linear Add	No	No	No	No	No
srv4Yb	Ey	0.525000						
srv4Yb	G	0.750000						
srv5X	O	0.600000	Linear Add	No	No	No	No	No
srv5X	Ex	0.700000						
srv5Y	D	0.600000	Linear Add	No	No	No	No	No
srv5Y	Ey	0.700000						
Envol.-SRV	srv1a	1.000000	Envelope	No	No	Yes	No	No
Envol.-SRV	srv1b	1.000000						
Envol.-SRV	srv2x	1.000000						
Envol.-SRV	srv2y	1.000000						
Envol.-SRV	srv3Xa	1.000000						
Envol.-SRV	srv3Xb	1.000000						
Envol.-SRV	srv4Ya	1.000000						
Envol.-SRV	srv4Yb	1.000000						
Envol.-SRV	srv5Y	1.000000						
dis1a	O	1.200000	Linear Add	No	No	No	No	No
dis1a	LR	1.600000						
dis1b	O	1.200000	Linear Add	No	No	No	No	No

Table: Load Combinations, Part 1 of 2

Combo	Load	SF	Type	DSStrength	DSServInit	DSServNorm	DSServLong	AutoDesign
dis1b	G	1.600000						
dis2X	D	1.200000	Linear Add	No	No	No	No	No
dis2X	Ex	1.000000						
dis2Y	D	1.200000	Linear Add	No	No	No	No	No
dis2Y	Ey	1.000000						
dis3X	D	0.900000	Linear Add	No	No	No	No	No
dis3X	Ex	1.000000						
dis3Y	D	0.900000	Linear Add	No	No	No	No	No
dis3Y	Ey	1.000000						
Envol.-DIS	dis1a	1.000000	Envelope	Yes	No	No	No	No
Envol.-DIS	dis1b	1.000000						
Envol.-DIS	dis2X	1.000000						
Envol.-DIS	dis2Y	1.000000						
Envol.-DIS	dis3X	1.000000						
Envol.-DIS	dis3Y	1.000000						

Table: Material Properties 03 - Concrete

Material	E N/mm2	U	A 1/C	UnitWt kN/m3	Fc N/mm2	LtWtConc
f'c 24.5Mpa	23263.80	0.200000	9.9000E-06	2.3563E+01	24.50	No

Table: Material Properties 04 - Rebar

Material	E N/mm2	UnitWt kN/m3	Fy N/mm2	Fu N/mm2
CSA-G30.18Gr400	200000.00	7.6973E+01	400.00	500.00

Table: Program Control, Part 2 of 2

StHtBelow m	ConcCode
0.00	ACI 318-08

Table: Reinforcing Bar Sizes

RebarID	Area Cm2	Diameter mm
#2	0.32	6.35
#3	0.71	9.53
#4	1.29	12.70
#5	2.00	15.88
#6	2.84	19.05
#7	3.87	22.23
#8	5.10	25.40
#9	6.45	28.65
#10	8.19	32.26
#11	10.06	35.81
#14	14.52	43.00
#18	25.81	57.33

Table: Slab Properties 01 - General

Slab	Type	Color
ZPT	Footing	16744576

Table: Slab Properties 02 - Solid Slabs

Slab	Type	MatProp	Thickness mm	Ortho
ZPT	Footing	f'c 24.5Mpa	350.00	No

Table: Soil Properties

Soil	Subgrade kN/m3	Color
SOIL_AB	3.2000E+04	DarkYellow
SOIL_CD	1.6000E+04	4227200
SOIL_E	8.0000E+03	4227200

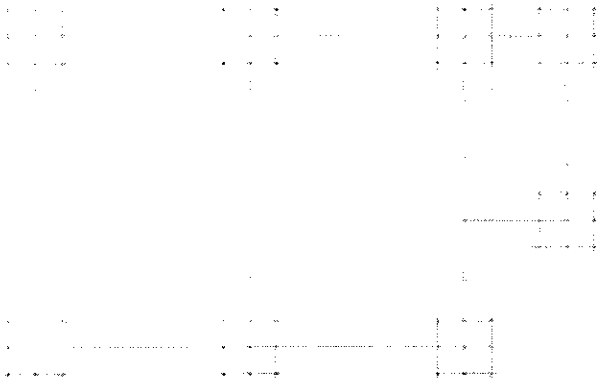
Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
1	Yes	Yes	No	No	No	No
2	Yes	Yes	No	No	No	No
3	Yes	Yes	No	No	No	No
4	Yes	Yes	No	No	No	No
5	Yes	Yes	No	No	No	No
6	Yes	Yes	No	No	No	No
10	Yes	Yes	No	No	No	No
11	Yes	Yes	No	No	No	No
12	Yes	Yes	No	No	No	No
13	Yes	Yes	No	No	No	No
14	Yes	Yes	No	No	No	No
15	Yes	Yes	No	No	No	No
17	Yes	Yes	No	No	No	No
18	Yes	Yes	No	No	No	No
19	Yes	Yes	No	No	No	No
20	Yes	Yes	No	No	No	No
21	Yes	Yes	No	No	No	No
26	Yes	Yes	No	No	No	No
27	Yes	Yes	No	No	No	No
28	Yes	Yes	No	No	No	No
29	Yes	Yes	No	No	No	No
30	Yes	Yes	No	No	No	No
31	Yes	Yes	No	No	No	No
32	Yes	Yes	No	No	No	No
33	Yes	Yes	No	No	No	No
34	Yes	Yes	No	No	No	No
35	Yes	Yes	No	No	No	No
36	Yes	Yes	No	No	No	No
37	Yes	Yes	No	No	No	No
38	Yes	Yes	No	No	No	No
39	Yes	Yes	No	No	No	No
40	Yes	Yes	No	No	No	No

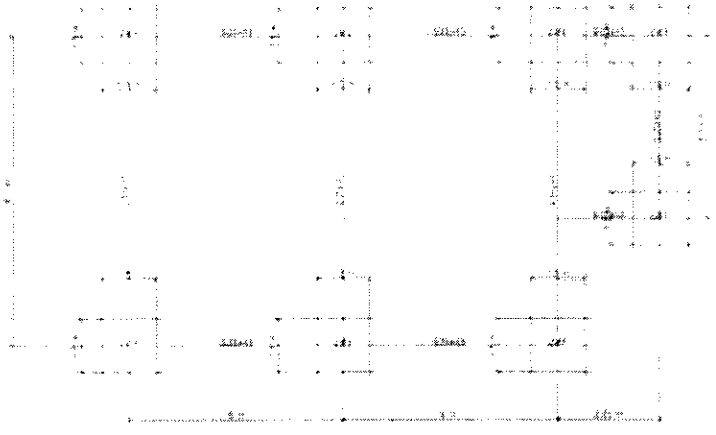
9.1. Zona alta

9.1.1. Suelo Tipo AB /CD

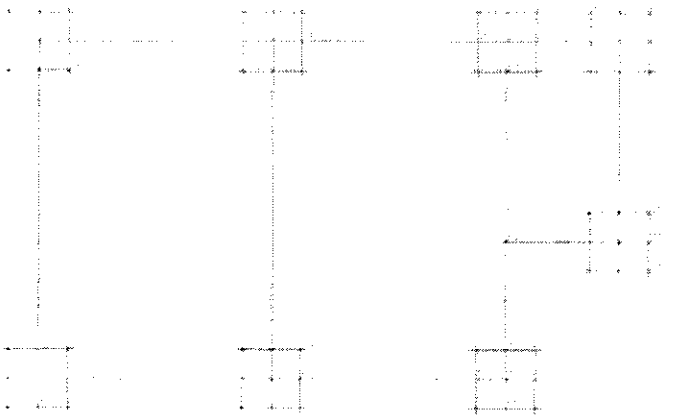
9.1.1.1. Modelo Matemático



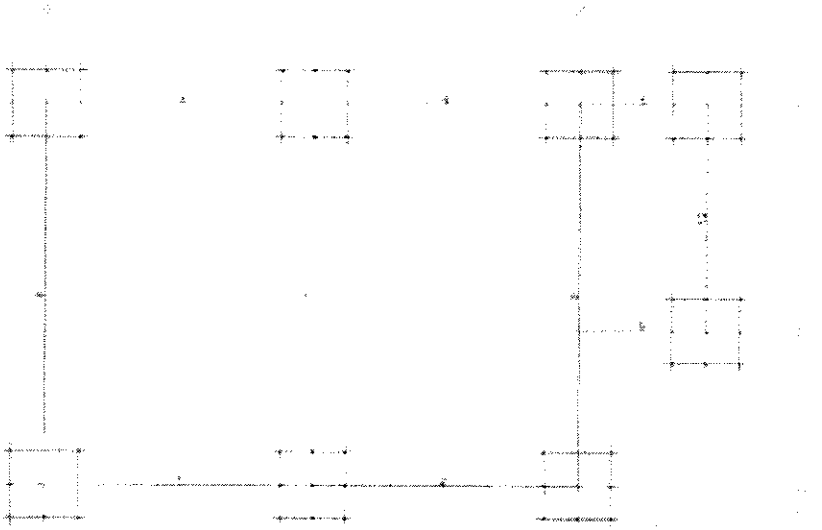
Planta Cimentación AB



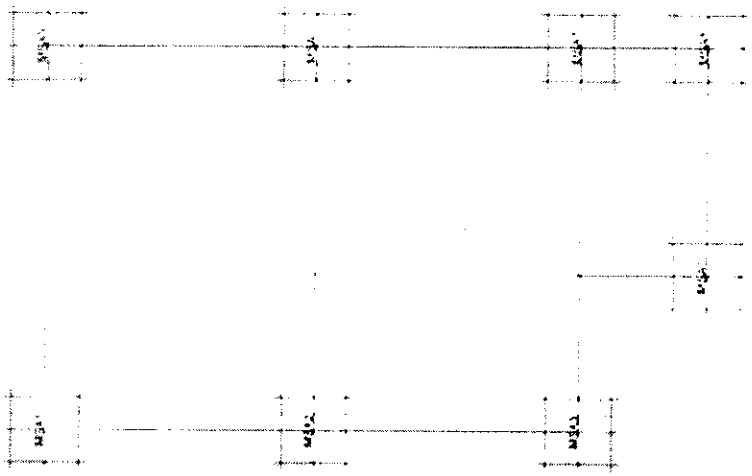
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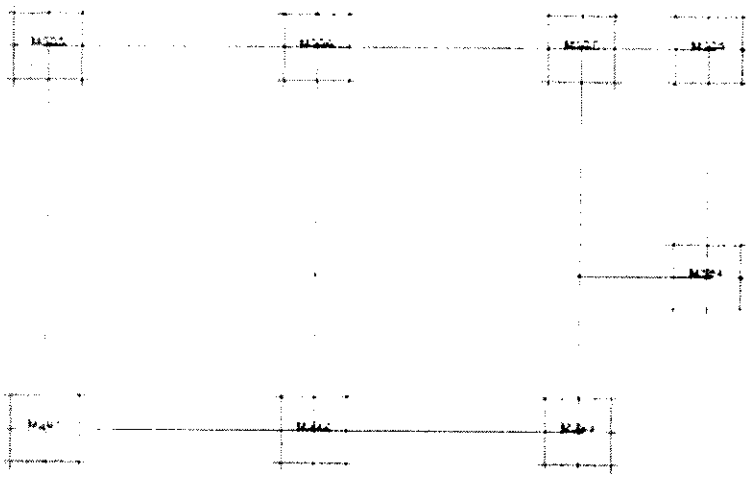
Numeración Nudos



Numeración Elementos



Identificación Strip A



Identificación Strip B

9.1.1.2. Coordenadas, asignaciones

Table: Grid Lines

CoordSys	AxisDir	GridID	Ordinate m	Visible	BubbleLoc	GridColor	BubbleSize mm	HideAll
GLOBAL	X	4	0.00	Yes	End	10461087	1000.00	No
GLOBAL	X	3	6.00	Yes	End			
GLOBAL	X	2	12.00	Yes	End			
GLOBAL	X	1	14.85	Yes	End			
GLOBAL	Y	A	0.00	Yes	End			
GLOBAL	Y	B	3.55	Yes	End			
GLOBAL	Y	C	8.70	Yes	End			

Table: Object Geometry SUELO AB - Areas 01 - General, Part 1 of 2

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	2250000.00	Slab
2	4	5	6	10	11	No	2250000.00	Slab
3	4	12	13	14	15	No	2250000.00	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	21	26	27	28	No	2250000.00	Slab
6	4	29	30	31	32	No	2250000.00	Slab
7	4	33	34	35	36	No	2250000.00	Slab
8	4	37	38	39	40	No	2250000.00	Slab

Table: Object Geometry SUELO CD - Areas 01 - General, Part 1 of 2

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	2250000.00	Slab
2	4	5	6	10	11	No	2250000.00	Slab
3	4	12	13	14	15	No	2250000.00	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	21	26	27	28	No	2250000.00	Slab
6	4	29	30	31	32	No	2250000.00	Slab
7	4	33	34	35	36	No	2250000.00	Slab
8	4	76	77	78	79	No	2560000.00	Slab

Table: Object Geometry SUELO AB - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	41	0.00	-0.75			0.75	0.75
MSA1	42	0.00	0.75	0.75	0.75		
MSA2	43	6.00	-0.75			0.75	0.75
MSA2	44	6.00	0.75	0.75	0.75		
MSA3	45	12.00	-0.75			0.75	0.75
MSA3	46	12.00	0.75	0.75	0.75		
MSA4	47	14.85	2.80			0.75	0.75
MSA4	48	14.85	4.30	0.75	0.75		
MSA5	49	0.00	7.95			0.75	0.75
MSA5	50	0.00	9.45	0.75	0.75		
MSA6	51	6.00	7.95			0.75	0.75
MSA6	52	6.00	9.45	0.75	0.75		
MSA7	53	12.00	7.95			0.75	0.75
MSA7	54	12.00	9.45	0.75	0.75		
MSA8	55	14.85	7.95			0.75	0.75
MSA8	56	14.85	9.45	0.75	0.75		
MSB1	57	-0.75	0.00			0.75	0.75
MSB1	58	0.75	0.00	0.75	0.75		
MSB2	59	5.25	0.00			0.75	0.75
MSB2	60	6.75	0.00	0.75	0.75		
MSB3	61	11.25	0.00			0.75	0.75
MSB3	62	12.75	0.00	0.75	0.75		
MSB4	63	14.10	3.55			0.75	0.75
MSB4	64	15.60	3.55	0.75	0.75		
MSB5	65	-0.75	8.70			0.75	0.75
MSB5	66	0.75	8.70	0.75	0.75		
MSB6	67	5.25	8.70			0.75	0.75
MSB6	68	6.75	8.70	0.75	0.75		
MSB7	69	11.25	8.70			0.75	0.75
MSB7	70	12.75	8.70	0.75	0.75		
MSB8	71	14.10	8.70			0.75	0.75
MSB8	72	15.60	8.70	0.75	0.75		

Table: Object Geometry SUELO CD - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	41	0.00	-0.75			0.75	0.75
MSA1	42	0.00	0.75	0.75	0.75		
MSA2	43	6.00	-0.75			0.75	0.75
MSA2	44	6.00	0.75	0.75	0.75		
MSA3	45	12.00	-0.75			0.75	0.75
MSA3	46	12.00	0.75	0.75	0.75		
MSA4	47	14.85	2.80			0.75	0.75
MSA4	48	14.85	4.30	0.75	0.75		
MSA5	49	0.00	7.95			0.75	0.75
MSA5	50	0.00	9.45	0.75	0.75		
MSA6	51	6.00	7.95			0.75	0.75
MSA6	52	6.00	9.45	0.75	0.75		
MSA7	53	12.00	7.95			0.75	0.75
MSA7	54	12.00	9.45	0.75	0.75		
MSA8	80	14.85	7.90			0.80	0.80
MSA8	81	14.85	9.50	0.80	0.80		
MSB1	57	-0.75	0.00			0.75	0.75
MSB1	58	0.75	0.00	0.75	0.75		
MSB2	59	5.25	0.00			0.75	0.75
MSB2	60	6.75	0.00	0.75	0.75		
MSB3	61	11.25	0.00			0.75	0.75
MSB3	62	12.75	0.00	0.75	0.75		
MSB4	63	14.10	3.55			0.75	0.75
MSB4	64	15.60	3.55	0.75	0.75		
MSB5	65	-0.75	8.70			0.75	0.75
MSB5	66	0.75	8.70	0.75	0.75		
MSB6	67	5.25	8.70			0.75	0.75
MSB6	68	6.75	8.70	0.75	0.75		
MSB7	69	11.25	8.70			0.75	0.75
MSB7	70	12.75	8.70	0.75	0.75		
MSB8	82	14.05	8.70			0.80	0.80
MSB8	83	15.65	8.70	0.80	0.80		

Table: Object Geometry - Dimension Lines, Part 1 of 2

AlignType	GlobalX1 m	GlobalY1 m	GlobalX2 m	GlobalY2 m	GlobalX3 m	GlobalY3 m	GlobalX4 m	GlobalY4 m
Parallel	0.00	0.00	0.00	8.70	-3.20	0.00	-3.20	8.70
Parallel	0.00	0.00	6.00	0.00	0.00	-2.10	6.00	-2.10
Parallel	6.00	0.00	12.00	0.00	6.00	-2.10	12.00	-2.10
Parallel	14.85	3.55	14.85	8.70	16.13	3.55	16.13	8.70
Parallel	12.00	0.00	14.85	0.00	12.00	-2.10	14.85	-2.10
Parallel	-0.75	-0.75	-0.75	0.75	-1.31	-0.75	-1.31	0.75
Parallel	-0.75	7.95	-0.75	9.45	-1.31	7.95	-1.31	9.45
Parallel	5.25	-0.75	5.25	0.75	4.15	-0.75	4.15	0.75
Parallel	5.25	7.95	5.25	9.45	4.15	7.95	4.15	9.45
Parallel	11.25	-0.75	11.25	0.75	10.35	-0.75	10.35	0.75
Parallel	11.25	7.95	11.25	9.45	10.35	7.95	10.35	9.45
Parallel	14.10	2.80	14.10	4.30	13.50	2.80	13.50	4.30
Parallel	14.10	7.95	14.10	9.45	13.50	7.95	13.50	9.45
Parallel	-0.75	0.75	0.75	0.75	-0.75	1.86	0.75	1.86
Parallel	5.25	0.75	6.75	0.75	5.25	1.86	6.75	1.86
Parallel	11.25	0.75	12.75	0.75	11.25	1.86	12.75	1.86
Parallel	14.10	4.30	15.60	4.30	14.10	5.09	15.60	5.09
Parallel	-0.75	7.95	0.75	7.95	-0.75	7.19	0.75	7.19
Parallel	5.25	7.95	6.75	7.95	5.25	7.19	6.75	7.19
Parallel	11.25	7.95	12.75	7.95	11.25	7.19	12.75	7.19
Parallel	14.10	7.95	15.60	7.95	14.10	7.19	15.60	7.19

Table: Object Geometry - Lines 01 - General

Line	PointI	PointJ	LineType	CurveType	Length m
1	7	8	Beam	Straight	6.00
2	8	9	Beam	Straight	6.00
3	22	23	Beam	Straight	6.00
4	23	24	Beam	Straight	6.00
5	24	25	Beam	Straight	2.85
6	7	22	Beam	Straight	8.70
7	8	23	Beam	Straight	8.70
8	9	24	Beam	Straight	8.70
9	73	16	Beam	Straight	2.85
10	16	25	Beam	Straight	5.15

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
1	-0.75	-0.75	0.00	No
2	0.75	-0.75	0.00	No
3	0.75	0.75	0.00	No
4	-0.75	0.75	0.00	No
5	5.25	-0.75	0.00	No

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
6	6.75	-0.75	0.00	No
7	0.00	0.00	0.00	Yes
8	6.00	0.00	0.00	Yes
9	12.00	0.00	0.00	Yes
10	6.75	0.75	0.00	No
11	5.25	0.75	0.00	No
12	11.25	-0.75	0.00	No
13	12.75	-0.75	0.00	No

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
14	12.75	0.75	0.00	No
15	11.25	0.75	0.00	No
16	14.85	3.55	0.00	Yes
17	14.10	2.80	0.00	No
18	15.60	2.80	0.00	No
19	15.60	4.30	0.00	No
20	14.10	4.30	0.00	No
21	-0.75	7.95	0.00	No
22	0.00	8.70	0.00	Yes
23	6.00	8.70	0.00	Yes
24	12.00	8.70	0.00	Yes
25	14.85	8.70	0.00	Yes
26	0.75	7.95	0.00	No
27	0.75	9.45	0.00	No
28	-0.75	9.45	0.00	No
29	5.25	7.95	0.00	No
30	6.75	7.95	0.00	No
31	6.75	9.45	0.00	No
32	5.25	9.45	0.00	No
33	11.25	7.95	0.00	No
34	12.75	7.95	0.00	No
35	12.75	9.45	0.00	No
36	11.25	9.45	0.00	No
37	14.10	7.95	0.00	No
38	15.60	7.95	0.00	No
39	15.60	9.45	0.00	No
40	14.10	9.45	0.00	No
41	0.00	-0.75	0.00	No
42	0.00	0.75	0.00	No
43	6.00	-0.75	0.00	No
44	6.00	0.75	0.00	No
45	12.00	-0.75	0.00	No
46	12.00	0.75	0.00	No
47	14.85	2.80	0.00	No
48	14.85	4.30	0.00	No
49	0.00	7.95	0.00	No
50	0.00	9.45	0.00	No
51	6.00	7.95	0.00	No
52	6.00	9.45	0.00	No
53	12.00	7.95	0.00	No
54	12.00	9.45	0.00	No
55	14.85	7.95	0.00	No
56	14.85	9.45	0.00	No
57	-0.75	0.00	0.00	No
58	0.75	0.00	0.00	No
59	5.25	0.00	0.00	No
60	6.75	0.00	0.00	No
61	11.25	0.00	0.00	No
62	12.75	0.00	0.00	No
63	14.10	3.55	0.00	No
64	15.60	3.55	0.00	No
65	-0.75	8.70	0.00	No
66	0.75	8.70	0.00	No
67	5.25	8.70	0.00	No
68	6.75	8.70	0.00	No
69	11.25	8.70	0.00	No
70	12.75	8.70	0.00	No
71	14.10	8.70	0.00	No
72	15.60	8.70	0.00	No
73	12.00	3.55	0.00	No

Table: Beam Property Assignments

Line	BeamProp
1	S35x45
2	S35x45
3	S35x45
4	S35x45
5	S35x45
6	S35x45
7	S35x45
8	S35x45
9	S35x45
10	S35x45

Table: Slab Property Assignments

Area	SlabProp
1	ZPT
2	ZPT
3	ZPT
4	ZPT
5	ZPT
6	ZPT
7	ZPT
8	ZPT

Table: Soil Property Assignments SUELD AB

Area	SoilProp
1	SOIL_AB
2	SDIL_AB
3	SDIL_AB
4	SDIL_AB
5	SOIL_AB
6	SDIL_AB
7	SDIL_AB
8	SOIL_AB

Table: Soil Property Assignments SUELD CD

Area	SoilProp
1	SDIL_CD
2	SDIL_CD
3	SDIL_CD
4	SDIL_CD
5	SDIL_CD
6	SOIL_CD
7	SDIL_CD
8	SDIL_CD

9.1.1.3. Cargas, combinaciones, asignación de cargas SUELO AB

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	Fx kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-13.90	-9.62	10.32	-24.50	-30.48	-0.71	300.00
7	Ey	-8.51	-29.92	10.36	-75.96	-18.41	-2.06	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-18.08	-6.54	2.58	-16.99	-36.44	-0.71	300.00
8	Ey	-10.70	-21.22	8.44	-55.24	-21.53	-2.06	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-14.41	-7.31	3.71	-17.04	-31.21	-0.71	300.00
9	Ey	-8.63	-22.14	10.81	-55.59	-18.59	-2.06	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-13.82	-9.95	14.47	-22.60	-30.75	-0.71	300.00
16	Ey	-5.39	-31.56	20.95	-71.59	-11.60	-2.06	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-15.89	-9.97	9.86	-24.98	-34.40	-0.71	300.00
22	Ey	-6.07	-30.13	11.60	-76.26	-12.94	-2.06	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-19.05	-6.48	5.88	-16.90	-38.91	-0.71	300.00
23	Ey	-7.01	-21.25	8.98	-55.27	-14.28	-2.06	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-20.30	-7.49	26.72	-17.84	-40.68	-0.71	300.00
24	Ey	-7.45	-21.77	13.00	-55.11	-14.90	-2.06	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-18.55	-9.28	26.23	-21.64	-38.19	-0.71	300.00
25	Ey	-6.97	-28.68	22.51	-67.52	-14.22	-2.06	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.1.1.4. Cargas, combinaciones, asignación de cargas SUELO CD

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	Fx kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-17.98	-11.53	13.27	-29.37	-39.42	-0.87	300.00
7	Ey	-10.30	-35.40	12.35	-89.87	-22.29	-2.43	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-23.39	-7.78	3.06	-20.20	-47.12	-0.87	300.00
8	Ey	-12.97	-25.11	9.99	-65.34	-26.10	-2.43	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-18.63	-8.80	4.49	-20.24	-40.36	-0.87	300.00
9	Ey	-10.46	-26.20	12.79	-65.75	-22.52	-2.43	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-17.90	-11.88	18.46	-27.00	-39.82	-0.87	300.00
16	Ey	-6.74	-37.34	24.87	-84.69	-14.56	-2.43	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-20.58	-12.00	12.65	-30.02	-44.56	-0.87	300.00
22	Ey	-7.61	-35.65	13.81	-90.22	-16.24	-2.43	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-24.68	-7.69	7.49	-20.06	-50.40	-0.87	300.00
23	Ey	-8.82	-25.13	10.65	-65.38	-17.98	-2.43	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-26.29	-9.07	34.59	-21.39	-52.70	-0.87	300.00
24	Ey	-9.37	-25.76	15.95	-65.19	-18.77	-2.43	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-24.03	-11.13	33.82	-25.92	-49.47	-0.87	300.00
25	Ey	-8.75	-33.92	26.93	-79.87	-17.87	-2.43	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.1.1.5. Esfuerzos sobre el suelo AB

Table: Soil Pressures - Enveloping Summary

Panel	OutputItem	SurfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-43.65	Envol.-SRV	Combination	0.38	0.38
1	MinPress	-121.78	Envol.-SRV	Combination	5.25	0.75
2	MaxPress	-44.71	Envol.-SRV	Combination	0.38	8.33
2	MinPress	-131.55	Envol.-SRV	Combination	5.63	8.33
3	MaxPress	-40.85	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-121.10	Envol.-SRV	Combination	6.00	0.75
4	MaxPress	-59.36	Envol.-SRV	Combination	11.63	8.33
4	MinPress	-131.64	Envol.-SRV	Combination	6.38	8.33
5	MaxPress	-22.44	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-89.78	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-35.18	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-117.88	Envol.-SRV	Combination	12.00	8.70

Table: Soil Pressures - Summary

Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-43.65	-121.78	0.38	0.38	5.25	0.75
2	Envol.-SRV	Combination	-44.71	-131.55	0.38	8.33	5.63	8.33
3	Envol.-SRV	Combination	-40.85	-121.10	11.63	0.38	6.00	0.75
4	Envol.-SRV	Combination	-59.36	-131.64	11.63	8.33	6.38	8.33
5	Envol.-SRV	Combination	-22.44	-89.78	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-35.18	-117.88	14.48	3.93	12.00	8.70

Capacidad admisible de suelo AB, $_{adm}$ = 400 kN/m² > Soil Pressures Max/Min => Ok

9.1.1.6. Esfuerzos sobre el suelo CD

Table: Soil Pressures - Enveloping Summary

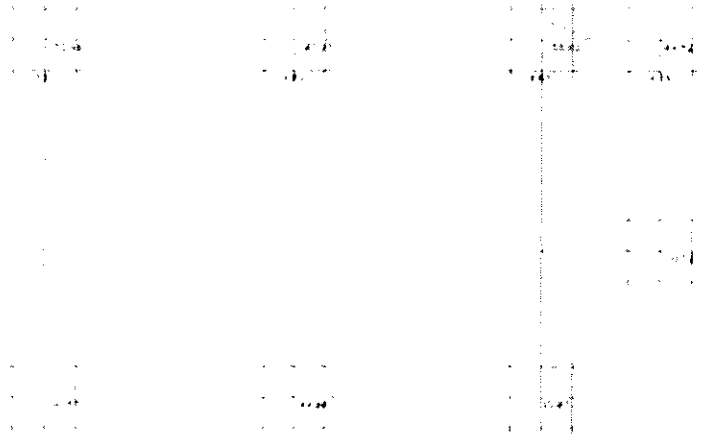
Panel	OutputItem	SurfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-43.72	Envol.-SRV	Combination	0.38	0.38
1	MinPress	-113.75	Envol.-SRV	Combination	5.25	0.75
2	MaxPress	-52.54	Envol.-SRV	Combination	0.38	8.33
2	MinPress	-128.59	Envol.-SRV	Combination	5.63	8.33
3	MaxPress	-40.18	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-113.31	Envol.-SRV	Combination	6.00	0.75
4	MaxPress	-63.16	Envol.-SRV	Combination	11.63	8.33
4	MinPress	-129.59	Envol.-SRV	Combination	6.38	8.33
5	MaxPress	-25.04	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-84.49	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-33.87	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-117.07	Envol.-SRV	Combination	12.00	8.70

Table: Soil Pressures - Summary

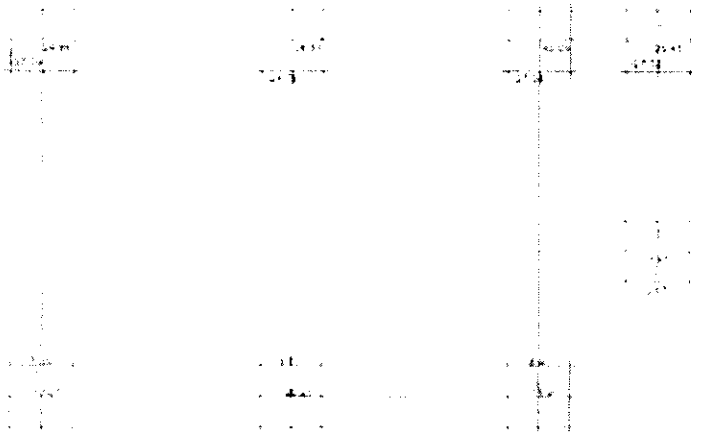
Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-43.72	-113.75	0.38	0.38	5.25	0.75
2	Envol.-SRV	Combination	-52.54	-128.59	0.38	8.33	5.63	8.33
3	Envol.-SRV	Combination	-40.18	-113.31	11.63	0.38	6.00	0.75
4	Envol.-SRV	Combination	-63.16	-129.59	11.63	8.33	6.38	8.33
5	Envol.-SRV	Combination	-25.04	-84.49	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-33.87	-117.07	14.48	3.93	12.00	8.70

Capacidad admisible de suelo O, $_{adm}$ = 150 kN/m² > Soil Pressures Max/Min => OK

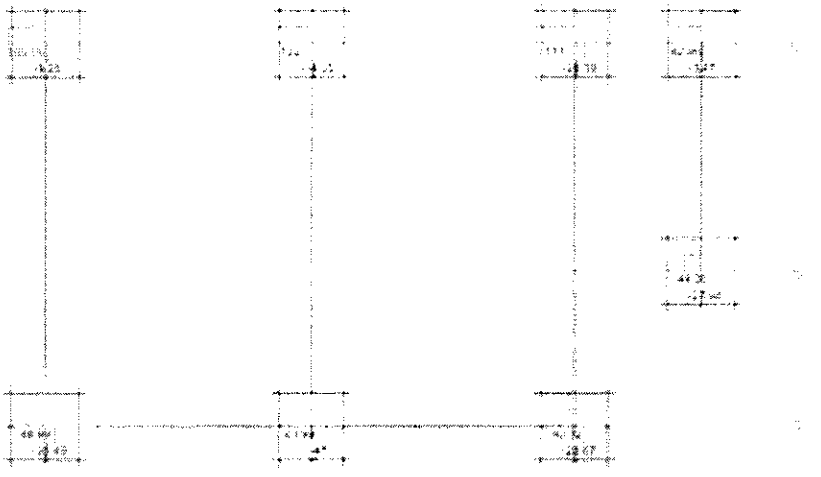
9.1.1.7. Resultados, diseño elementos



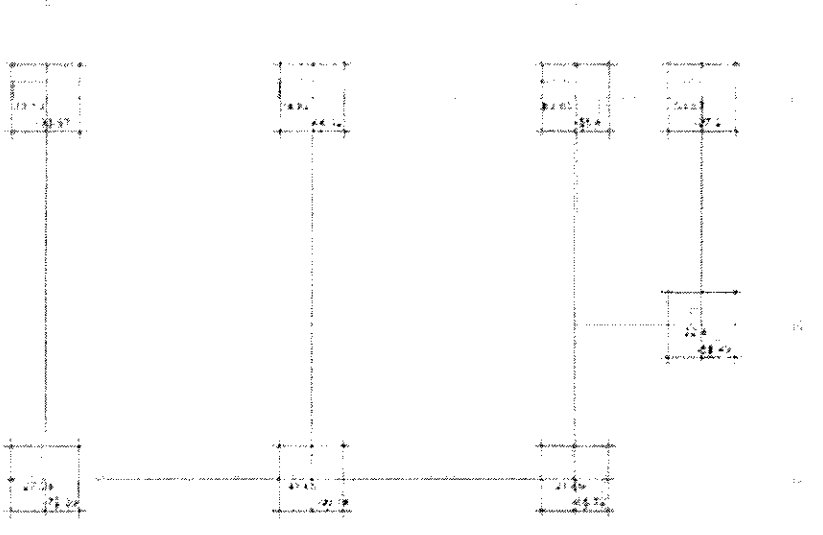
Zapatas - Strip A, Mmax (kN-m)



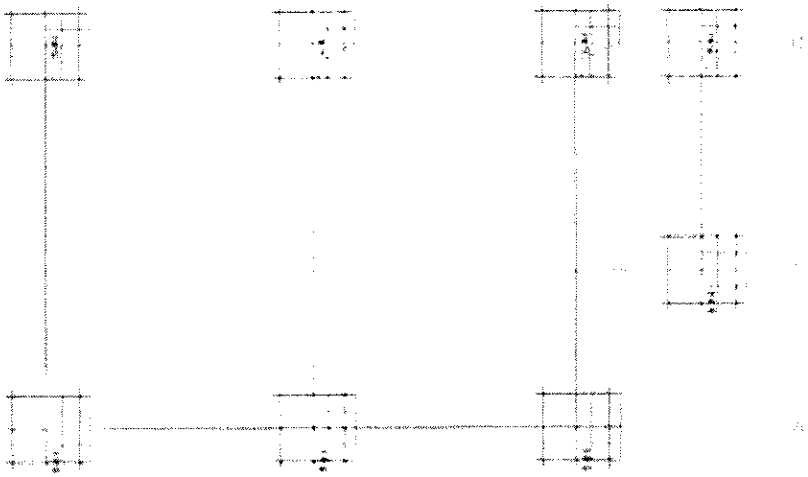
Zapatas - Strip A, Mmin (kN-m)



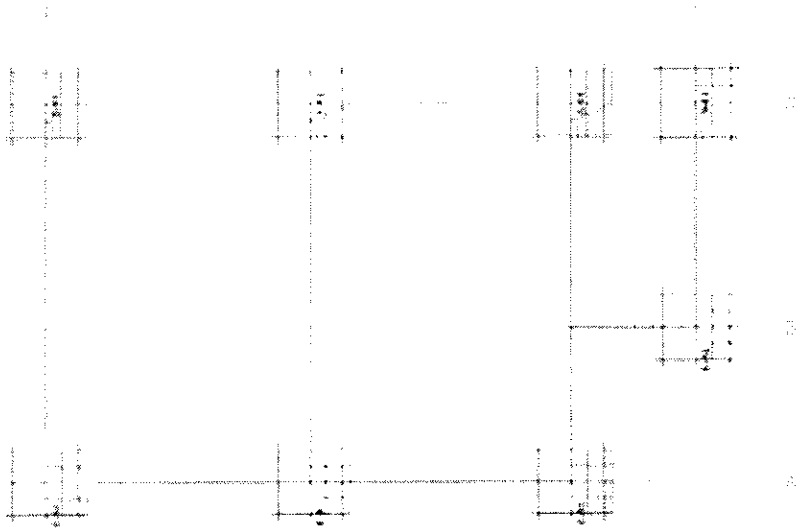
Zapatas - Strip A, Vmax (kN)



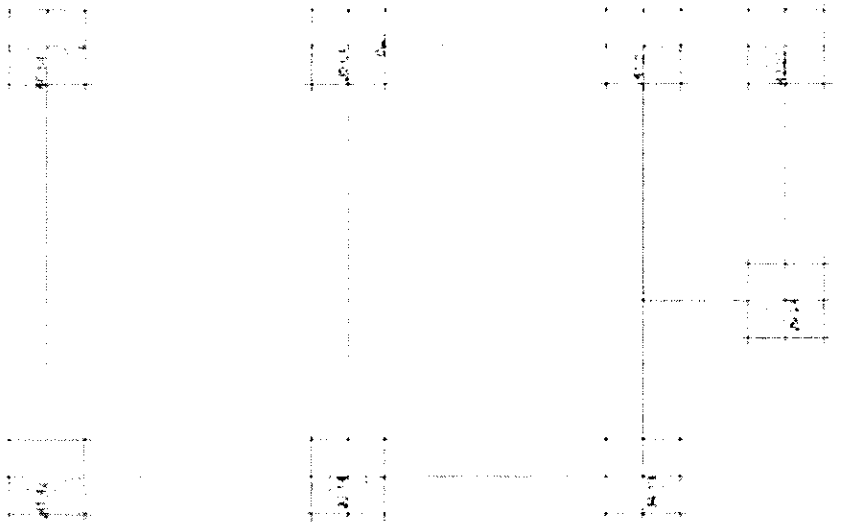
Zapatas - Strip A, Vmin (kN)



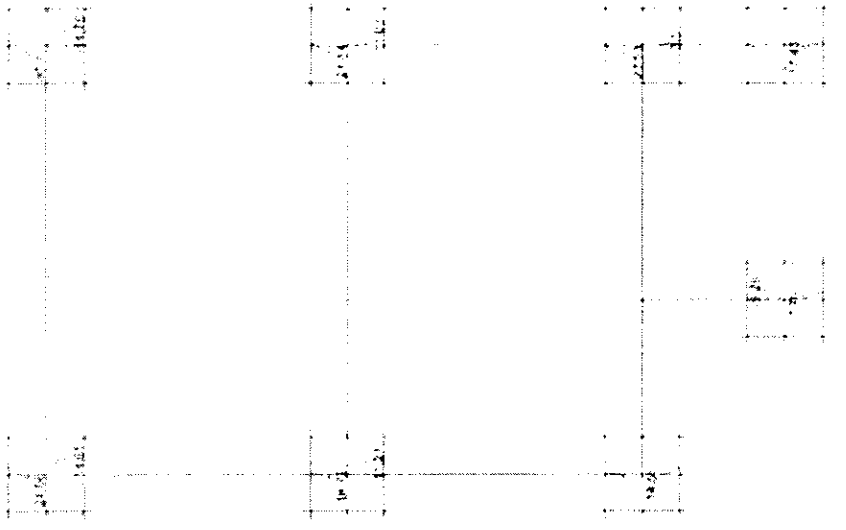
Zapatas SUELO AB - Strip A, Acero de Refuerzo



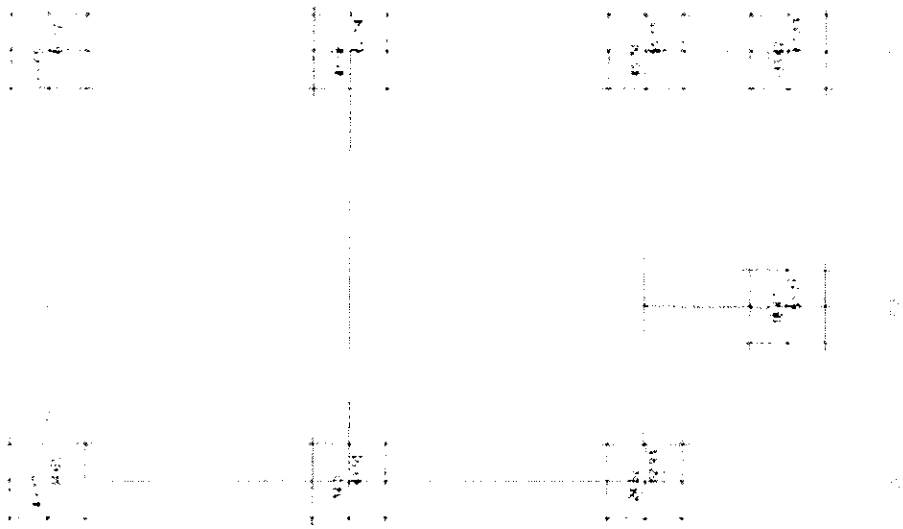
Zapatas SUELO CD - Strip A, Acero de Refuerzo



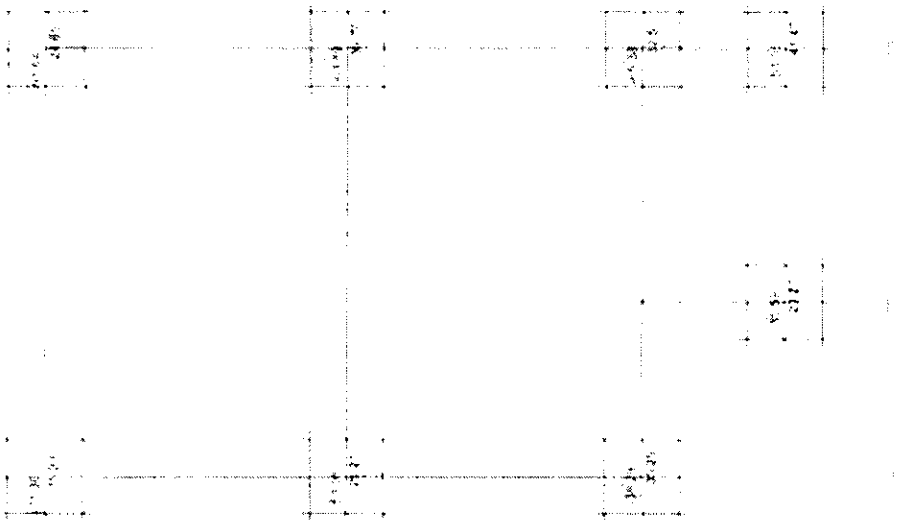
Zapatas - Strip B, Mmax (kN-m)



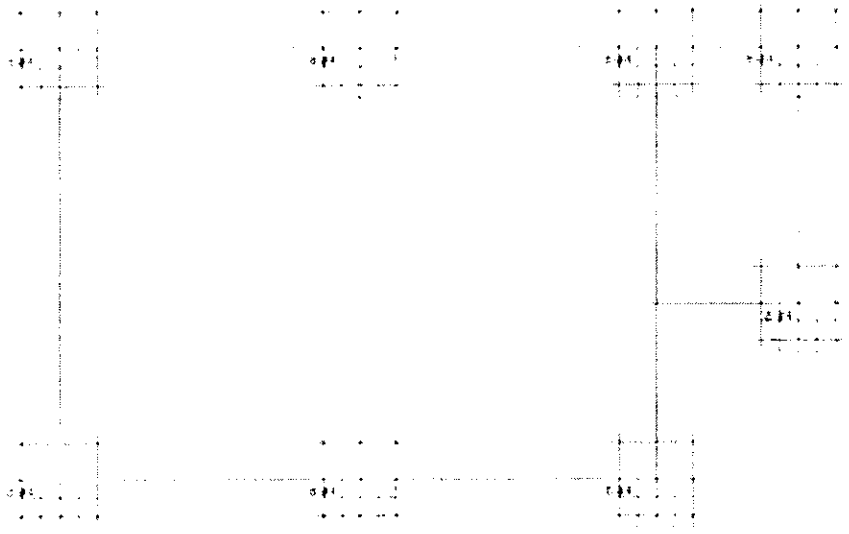
Zapatas - Strip B, Mmin (kN-m)



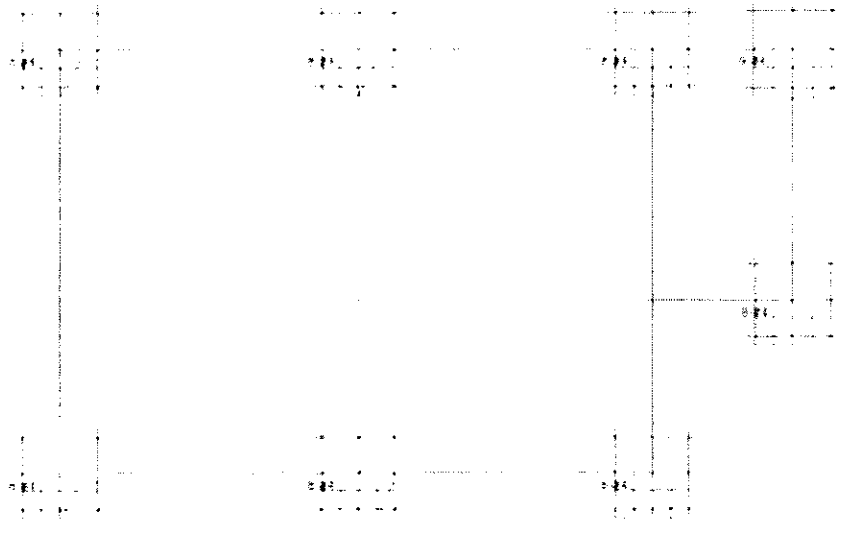
Zapatas - Strip B, Vmax (kN)



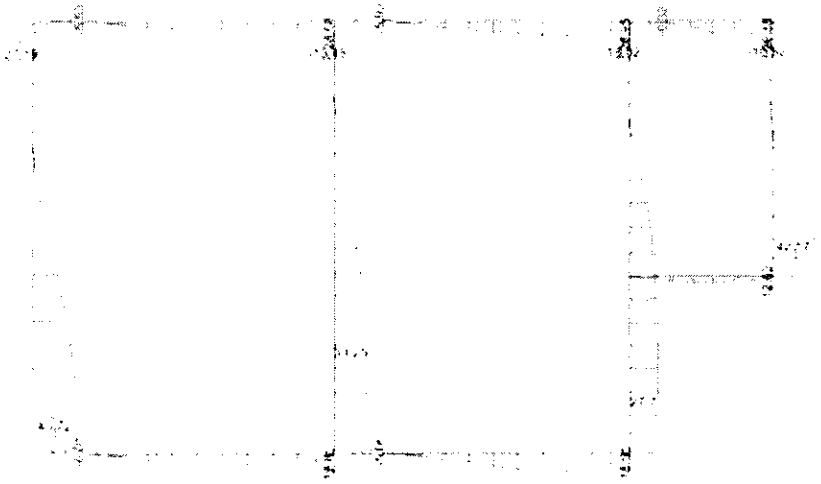
Zapatas - Strip B, Vmin (kN)



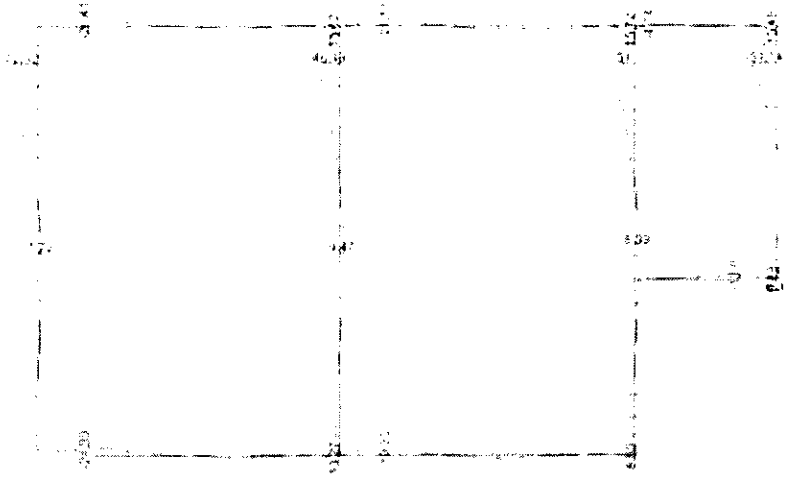
Zapatas SUELO AB - Strip B, Acero de Refuerzo



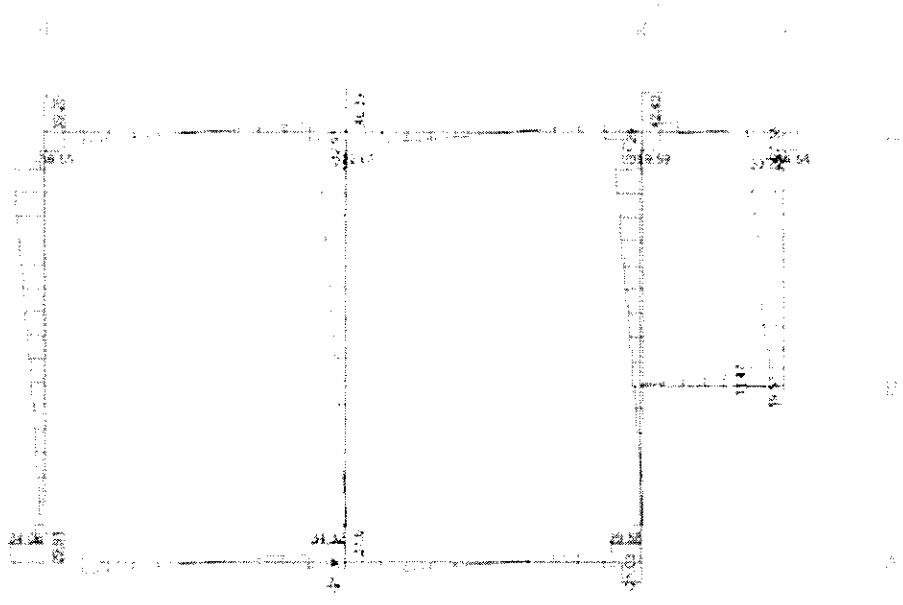
Zapatas SUELO CD - Strip B, Acero de Refuerzo



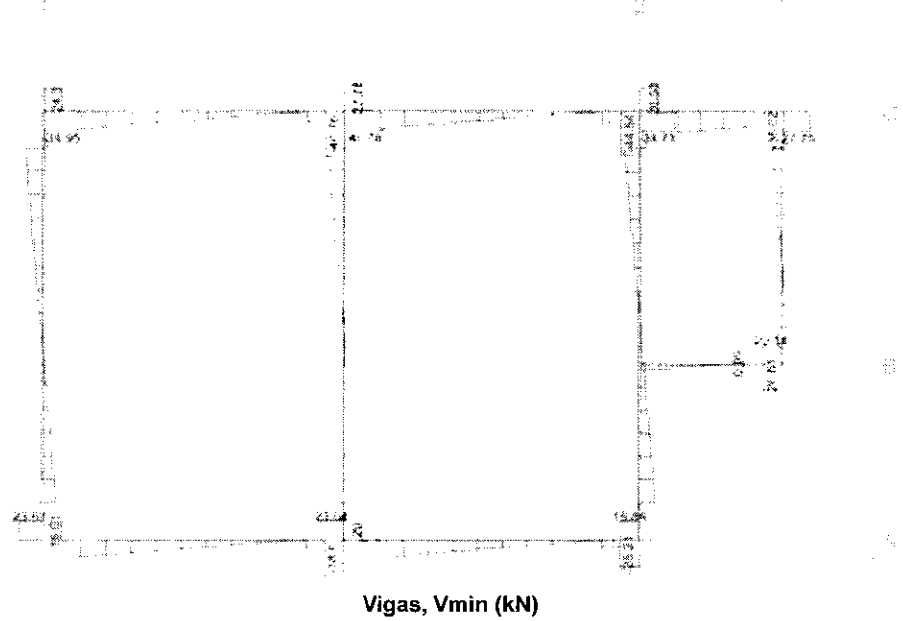
Vigas, Mmax (kN-m)



Vigas, Mmin (kN-m)



Vigas, Vmax (kN)



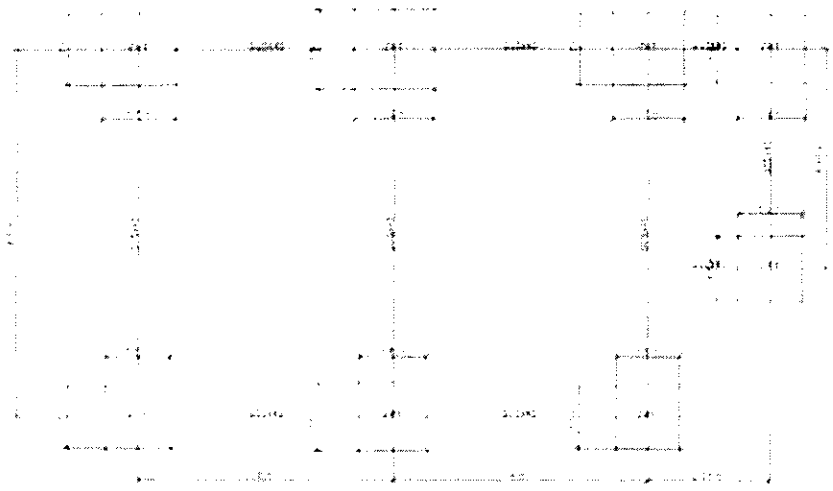
Vigas, Vmin (kN)



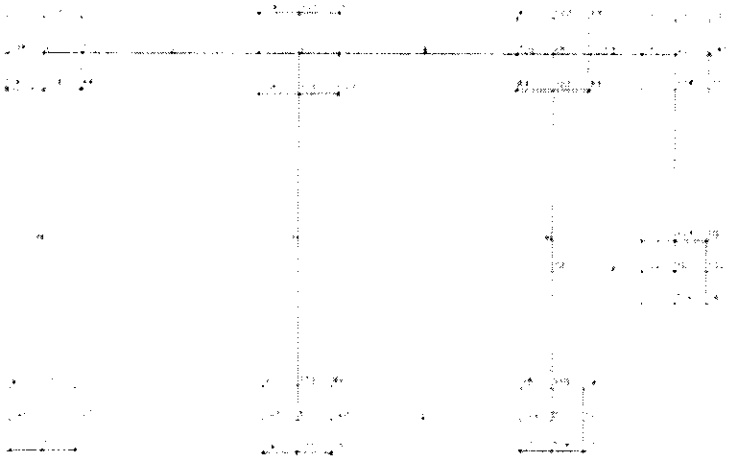
Vigas, Acero de refuerzo a flexion

9.1.2. Suelo Tipo E

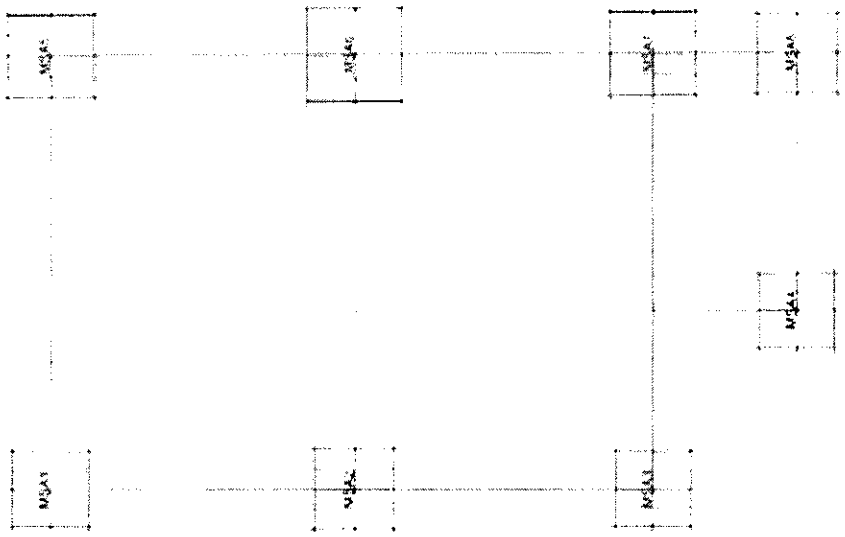
9.1.2.1. Modelo Matematico



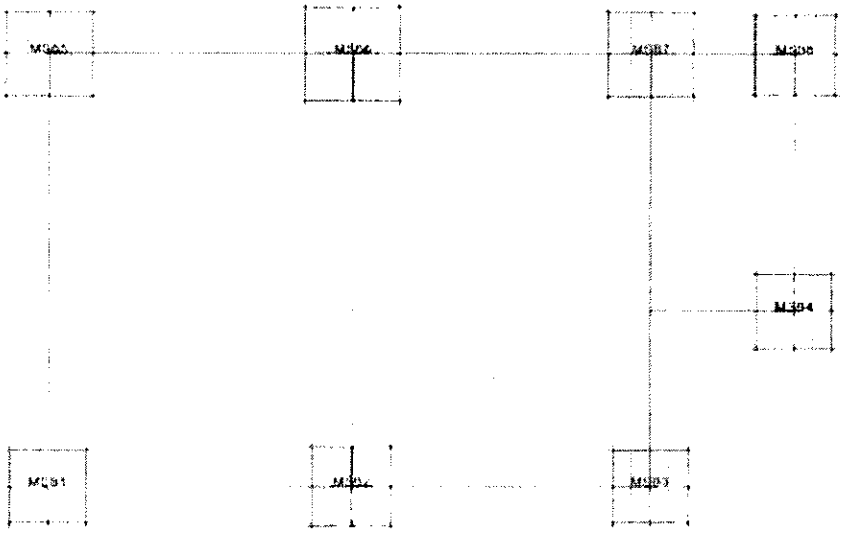
Planta Cimentacion



Numeracion Elementos y Nudos



Identificacion Strip A



Identificacion Strip B

9.1.2.2. Coordenadas, asignaciones

SAFE v12.3.2 7/3/13 8:37:59

Table: Coordinate Systems

CoordSys	Type	OriginGx m	OriginGy m	RotAngle Degrees
GLOBAL	Cartesian	0.00	0.00	0.00

Table: Grid Lines

CoordSys	AxisDir	GridID	Ordinate m	Visible	BubbleLoc	GridColor	BubbleSize mm	HideAll
GLOBAL	X	4	0.00	Yes	End	10461087	1000.00	No
GLOBAL	X	3	6.00	Yes	End			
GLOBAL	X	2	12.00	Yes	End			
GLOBAL	X	1	14.85	Yes	End			
GLOBAL	Y	A	0.00	Yes	End			
GLOBAL	Y	B	3.55	Yes	End			
GLOBAL	Y	C	8.70	Yes	End			

Table: Object Geometry - Areas 01 - General, Part 1 of 2

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	2250000.00	Slab
2	4	94	95	96	97	No	2560000.00	Slab
3	4	12	13	14	15	No	2250000.00	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	55	56	71	72	No	2B90000.0D	Slab
6	4	106	107	108	109	No	3610000.0D	Slab
7	4	B4	B5	86	B7	No	2B90000.0D	Slab
8	4	76	77	78	79	No	25600D0.00	Slab

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	110	0.00	-0.75			0.75	0.75
MSA1	111	0.00	0.75	0.75	0.75		
MSA2	112	6.00	-0.80			0.80	0.80
MSA2	113	6.00	0.80	0.80	0.80		
MSA3	114	12.00	-0.75			0.75	0.75
MSA3	115	12.00	0.75	0.75	0.75		
MSA4	116	14.85	2.80			0.75	0.75
MSA4	117	14.85	4.30	0.75	0.75		
MSA5	118	0.00	7.85			0.85	0.85
MSA5	119	0.00	9.55	0.85	0.85		
MSA6	120	6.00	7.75			0.95	0.95
MSA6	121	6.00	9.65	0.95	0.95		
MSA7	122	12.00	7.85			0.85	0.85
MSA7	123	12.00	9.55	0.85	0.85		
MSA8	124	14.85	7.90			0.80	0.80
MSA8	125	14.85	9.50	0.80	0.80		
MSB1	126	-0.75	0.00			0.75	0.75
MSB1	127	0.75	0.00	0.75	0.75		
MSB2	128	5.20	0.00			0.80	D.80
MSB2	129	6.80	0.00	0.80	0.80		
MSB3	130	11.25	0.00			0.75	0.75
MSB3	131	12.75	0.00	0.75	0.75		
MSB4	132	14.10	3.55			0.75	0.75
MSB4	133	15.60	3.55	0.75	0.75		
MSB5	134	-0.85	8.70			0.85	0.85
MSB5	135	0.85	8.70	0.85	0.85		

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSB6	136	5.05	8.70			0.95	0.95
MSB6	137	6.95	8.70	0.95	0.95		
MSB7	138	11.15	8.70			0.85	0.85
MSB7	139	12.85	8.70	0.85	0.85		
MSB8	140	14.05	8.70			0.80	0.80
MSB8	141	15.65	8.70	0.80	0.80		

Table: Object Geometry - Lines 01 - General

Line	PointI	PointJ	LineType	CurveType	Length m
1	7	8	Beam	Straight	6.00
2	8	9	Beam	Straight	6.00
3	22	23	Beam	Straight	6.00
4	23	24	Beam	Straight	6.00
5	24	25	Beam	Straight	2.85
6	7	22	Beam	Straight	8.70
7	8	23	Beam	Straight	8.70
8	9	24	Beam	Straight	8.70
9	73	16	Beam	Straight	2.85
10	16	25	Beam	Straight	5.15

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
1	-0.75	-0.75	0.00	No
2	0.75	-0.75	0.00	No
3	0.75	0.75	0.00	No
4	-0.75	0.75	0.00	No
7	0.00	0.00	0.00	Yes
8	6.00	0.00	0.00	Yes
9	12.00	0.00	0.00	Yes
12	11.25	-0.75	0.00	No
13	12.75	-0.75	0.00	No
14	12.75	0.75	0.00	No
15	11.25	0.75	0.00	No
16	14.85	3.55	0.00	Yes
17	14.10	2.80	0.00	No
18	15.60	2.80	0.00	No
19	15.60	4.30	0.00	No
20	14.10	4.30	0.00	No
22	0.00	8.70	0.00	Yes
23	6.00	8.70	0.00	Yes
24	12.00	8.70	0.00	Yes
25	14.85	8.70	0.00	Yes
55	-0.85	7.85	0.00	No
56	0.85	7.85	0.00	No
71	0.85	9.55	0.00	No
72	-0.85	9.55	0.00	No
73	12.00	3.55	0.00	No
76	14.05	7.90	0.00	No
77	15.65	7.90	0.00	No
78	15.65	9.50	0.00	No
79	14.05	9.50	0.00	No
84	11.15	7.85	0.00	No
85	12.85	7.85	0.00	No
86	12.85	9.55	0.00	No
87	11.15	9.55	0.00	No
94	5.20	-0.80	0.00	No
95	6.80	-0.80	0.00	No
96	6.80	0.80	0.00	No
97	5.20	0.80	0.00	No
106	5.05	7.75	0.00	No
107	6.95	7.75	0.00	No
108	6.95	9.65	0.00	No
109	5.05	9.65	0.00	No
110	0.00	-0.75	0.00	No
111	0.00	0.75	0.00	No
112	6.00	-0.80	0.00	No
113	6.00	0.80	0.00	No
114	12.00	-0.75	0.00	No
115	12.00	0.75	0.00	No
116	14.85	2.80	0.00	No
117	14.85	4.30	0.00	No
118	0.00	7.85	0.00	No
119	0.00	9.55	0.00	No
120	6.00	7.75	0.00	No
121	6.00	9.65	0.00	No
122	12.00	7.85	0.00	No
123	12.00	9.55	0.00	No
124	14.85	7.90	0.00	No
125	14.85	9.50	0.00	No
126	-0.75	0.00	0.00	No
127	0.75	0.00	0.00	No
128	5.20	0.00	0.00	No
129	6.80	0.00	0.00	No
130	11.25	0.00	0.00	No
131	12.75	0.00	0.00	No

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
132	14.10	3.55	0.00	No
133	15.60	3.55	0.00	No
134	-0.85	8.70	0.00	No
135	0.85	8.70	0.00	No
136	5.05	8.70	0.00	No
137	6.95	8.70	0.00	No
138	11.15	8.70	0.00	No
139	12.85	8.70	0.00	No
140	14.05	8.70	0.00	No
141	15.65	8.70	0.00	No

Table: Slab Property Assignments

Area	SlabProp
1	ZPT
2	ZPT
3	ZPT
4	ZPT
5	ZPT
6	ZPT
7	ZPT
8	ZPT

Table: Soil Property Assignments

Area	SoilProp
1	SOIL_E
2	SOIL_E
3	SOIL_E
4	SOIL_E
5	SOIL_E
6	SOIL_E
7	SOIL_E
8	SOIL_E

Table: Beam Property Assignments

Line	BeamProp
1	S35x45
2	S35x45
3	S35x45
4	S35x45
5	S35x45
6	S35x45
7	S35x45
8	S35x45
9	S35x45
10	S35x45

9.1.2.3. Cargas, combinaciones, asignación de cargas

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	Fx kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-31.71	-20.09	23.40	-51.19	-69.54	-1.51	300.00
7	Ey	-17.98	-61.56	21.51	-156.29	-38.93	-4.23	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-41.26	-13.54	5.33	-35.15	-83.13	-1.51	300.00
8	Ey	-22.65	-43.66	17.37	-113.63	-45.59	-4.23	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-32.87	-15.36	7.85	-35.22	-71.19	-1.51	300.00
9	Ey	-18.26	-45.56	22.25	-114.35	-39.34	-4.23	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-31.59	-20.69	32.51	-47.03	-70.27	-1.51	300.00
16	Ey	-11.83	-64.94	43.28	-147.29	-25.57	-4.23	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-36.31	-20.94	22.30	-52.35	-78.63	-1.51	300.00
22	Ey	-13.36	-62.00	24.03	-156.90	-28.53	-4.23	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-43.55	-13.38	13.19	-34.91	-88.94	-1.51	300.00
23	Ey	-15.50	-43.71	18.54	-113.70	-31.60	-4.23	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-46.39	-15.83	61.03	-37.30	-92.99	-1.51	300.00
24	Ey	-16.47	-44.81	27.91	-113.38	-32.98	-4.23	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-42.40	-19.40	59.65	-45.17	-87.29	-1.51	300.00
25	Ey	-15.37	-59.00	46.93	-138.92	-31.40	-4.23	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.1.2.4. Esfuerzos sobre el suelo

Table: Soil Pressures - Enveloping Summary

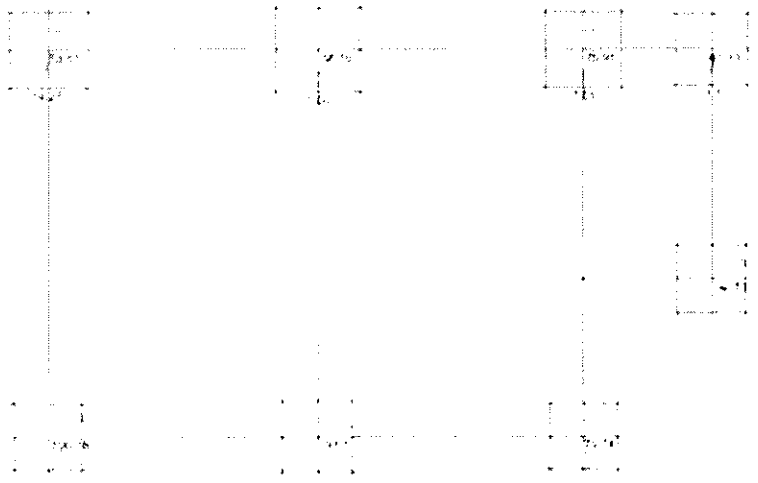
Panel	OutputItem	SurfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-42.13	Envol.-SRV	Combination	0.38	0.38
1	MinPress	-96.68	Envol.-SRV	Combination	5.20	0.80
2	MaxPress	-44.04	Envol.-SRV	Combination	0.43	8.28
2	MinPress	-87.41	Envol.-SRV	Combination	5.53	8.23
3	MaxPress	-38.57	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-96.23	Envol.-SRV	Combination	6.00	0.80
4	MaxPress	-48.94	Envol.-SRV	Combination	6.48	8.23
4	MinPress	-103.36	Envol.-SRV	Combination	11.15	8.28
5	MaxPress	-21.93	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-80.77	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-31.46	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-100.01	Envol.-SRV	Combination	12.00	8.28

Table: Soil Pressures - Summary

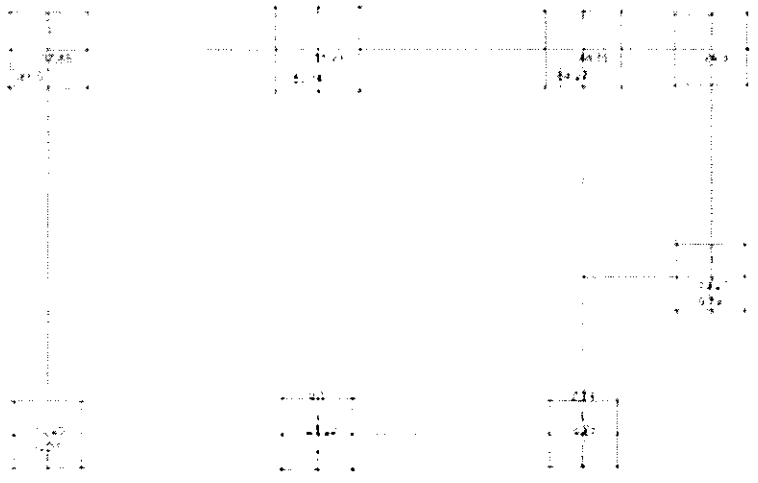
Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-42.13	-96.68	0.38	0.38	5.20	0.80
2	Envol.-SRV	Combination	-44.04	-87.41	0.43	8.28	5.53	8.23
3	Envol.-SRV	Combination	-38.57	-96.23	11.63	0.38	6.00	0.80
4	Envol.-SRV	Combination	-48.94	-103.36	6.48	8.23	11.15	8.28
5	Envol.-SRV	Combination	-21.93	-80.77	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-31.46	-100.01	14.48	3.93	12.00	8.28

Capacidad admisible de suelo E, σ_{adm} = 100 kN/m² > Soil Pressures Max/Min => OK

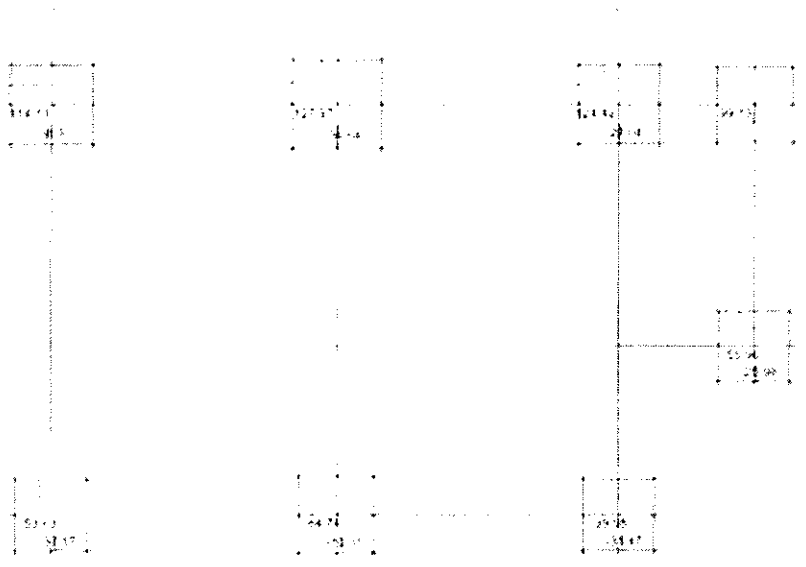
9.1.2.5. Resultados, diseño elementos



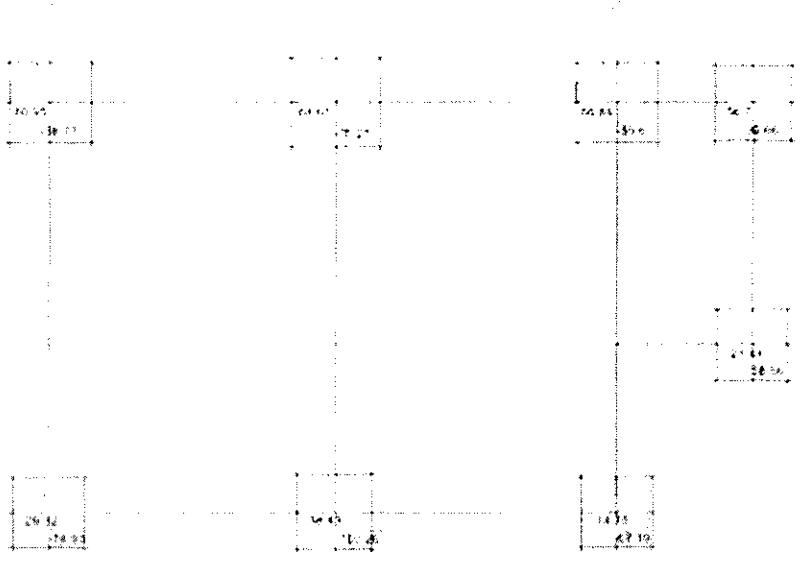
Zapatas - Strip A, Mmax (kN-m)



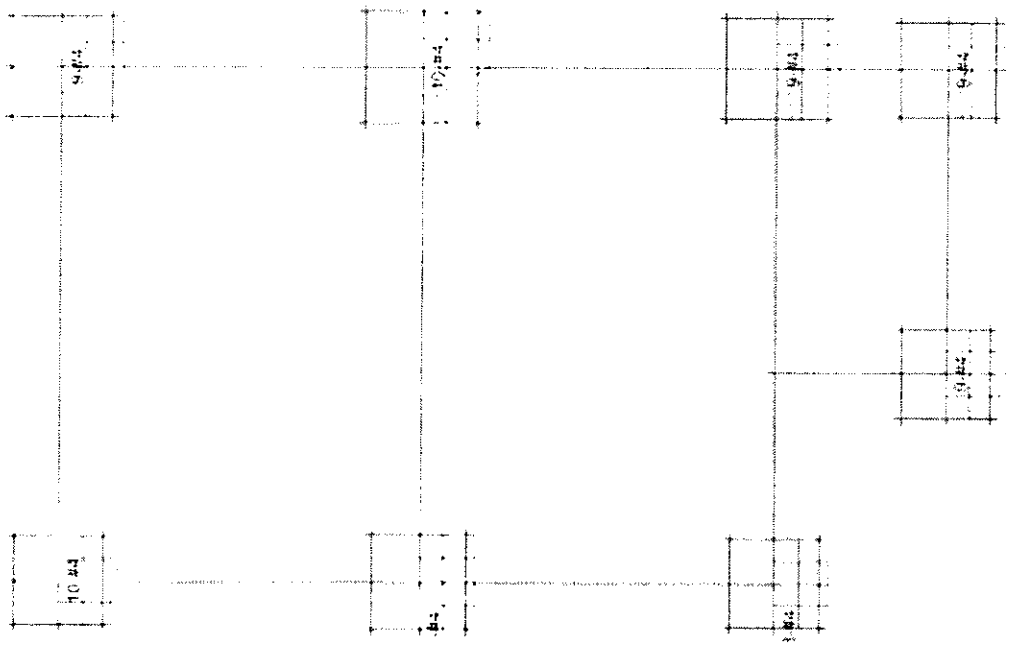
Zapatas - Strip A, Mmin (kN-m)



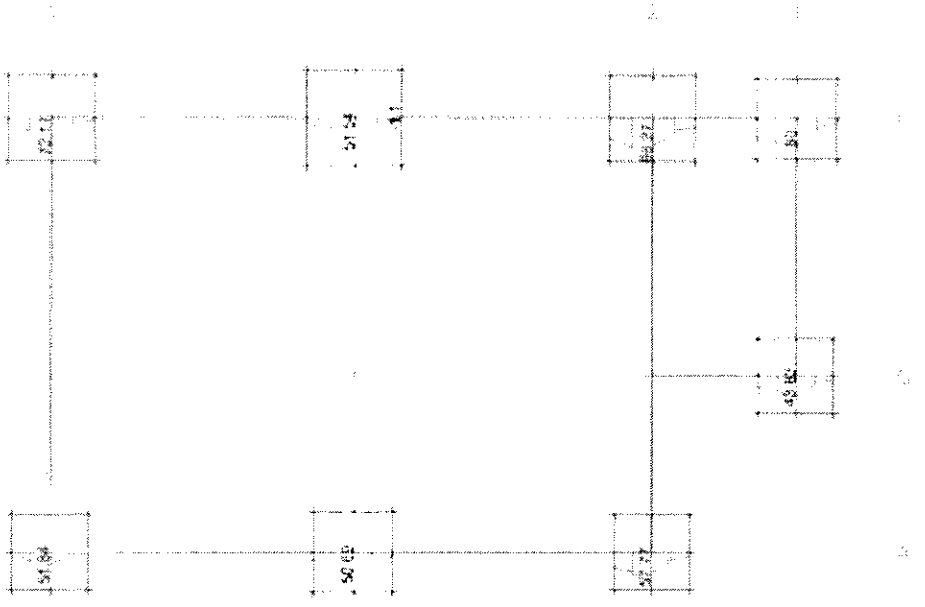
Zapatas - Strip A, Vmax (kN)



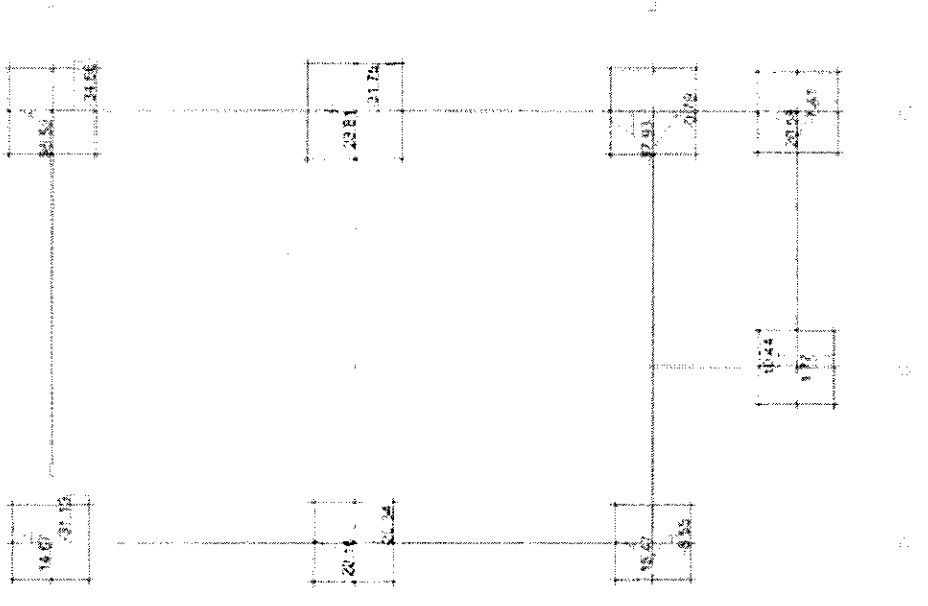
Zapatas - Strip A, Vmin (kN)



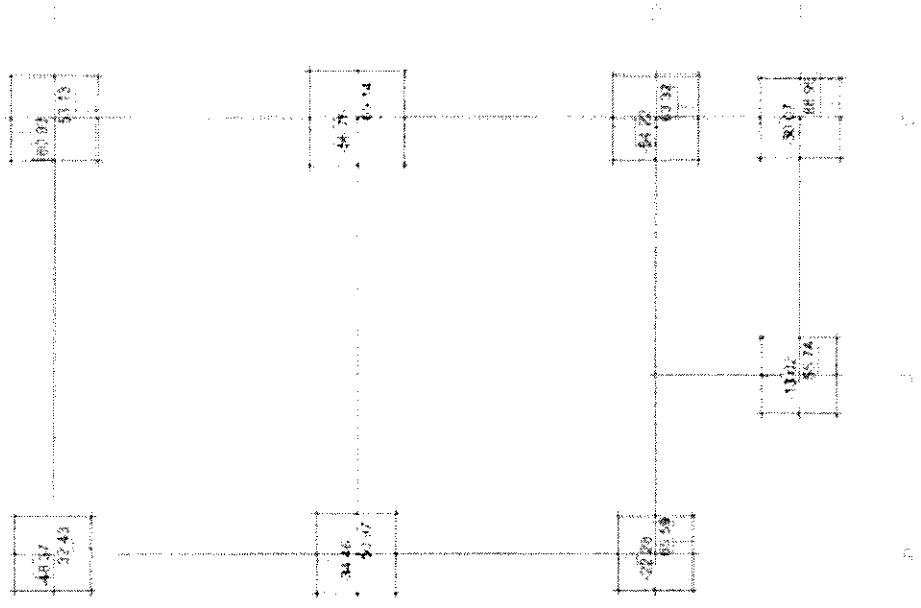
Zapatas - Strip A, Acero de Refuerzo



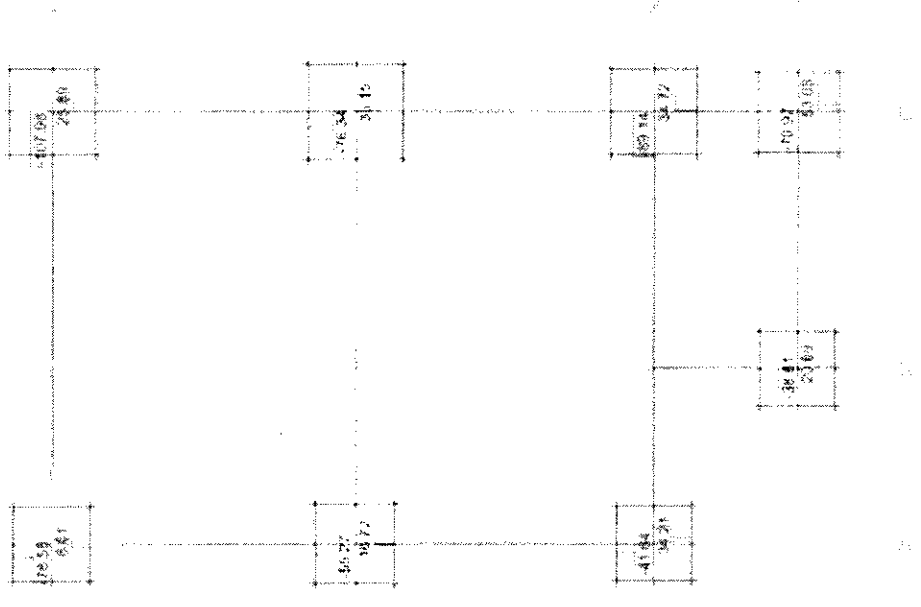
Zapatas - Strip B, Mmax (kN-m)



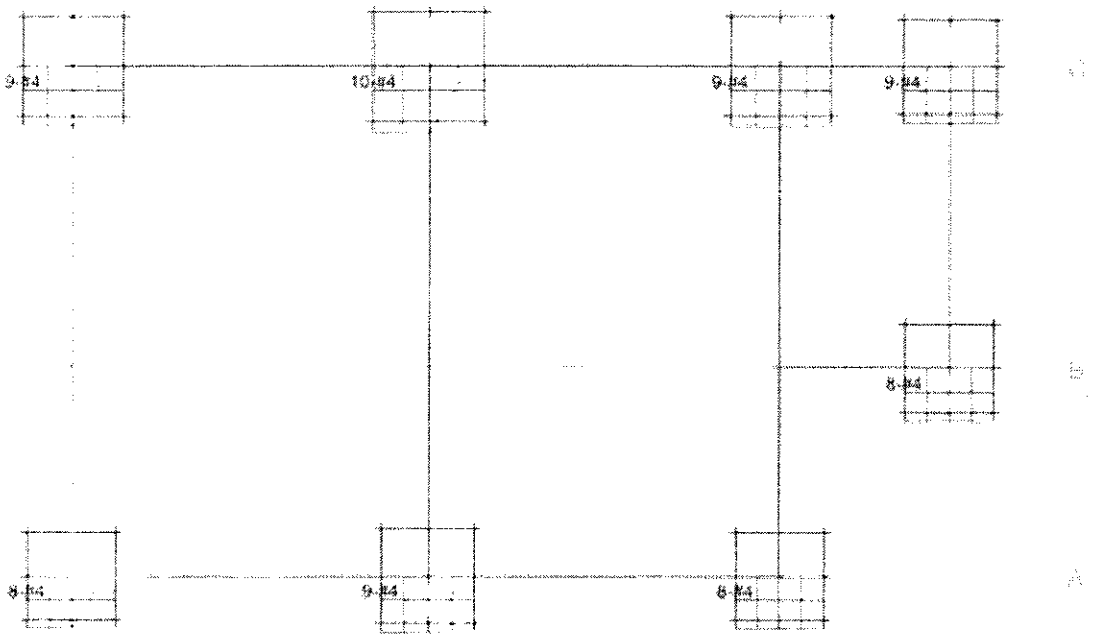
Zapatas - Strip B, Mmin (kN-m)



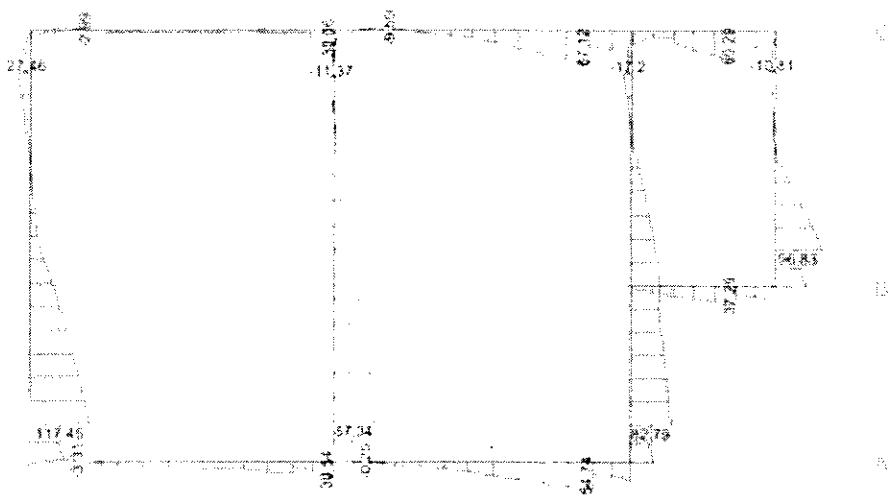
Zapatas - Strip B, Vmax (kN)



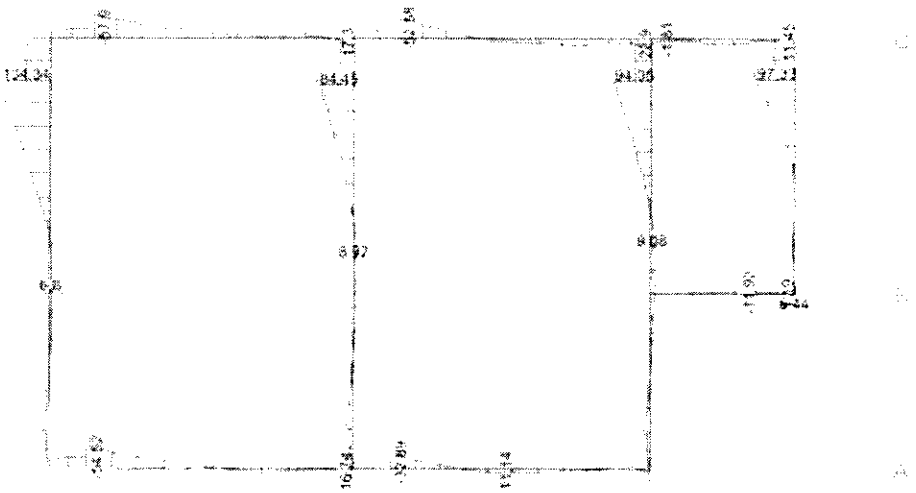
Zapatas - Strip B, Vmin (kN)



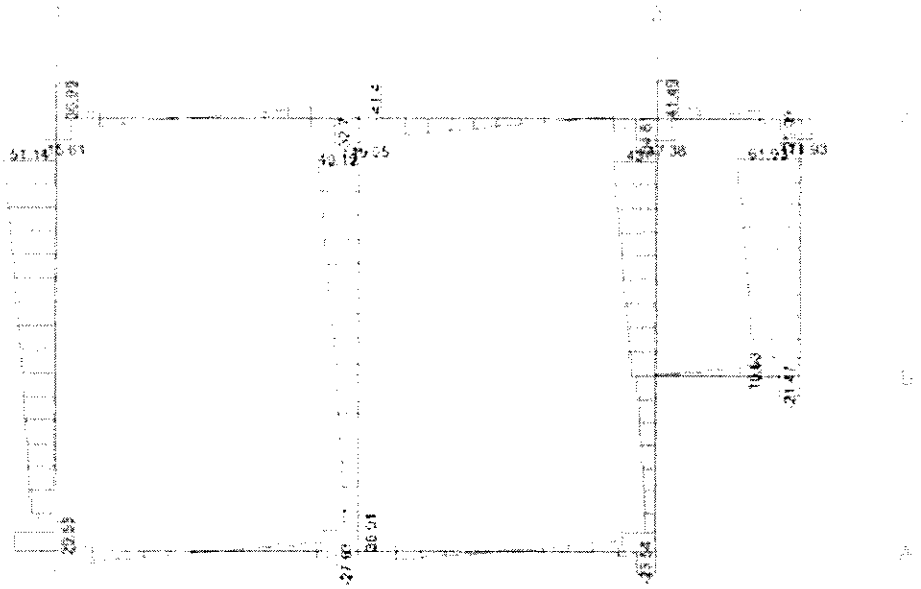
Zapatas - Strip B, Acero de Refuerzo



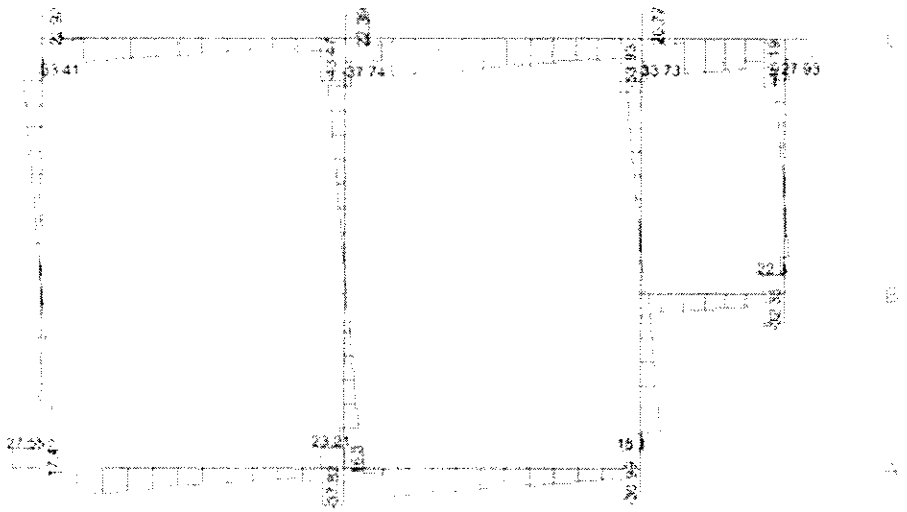
Vigas, Mmax (kN-m)



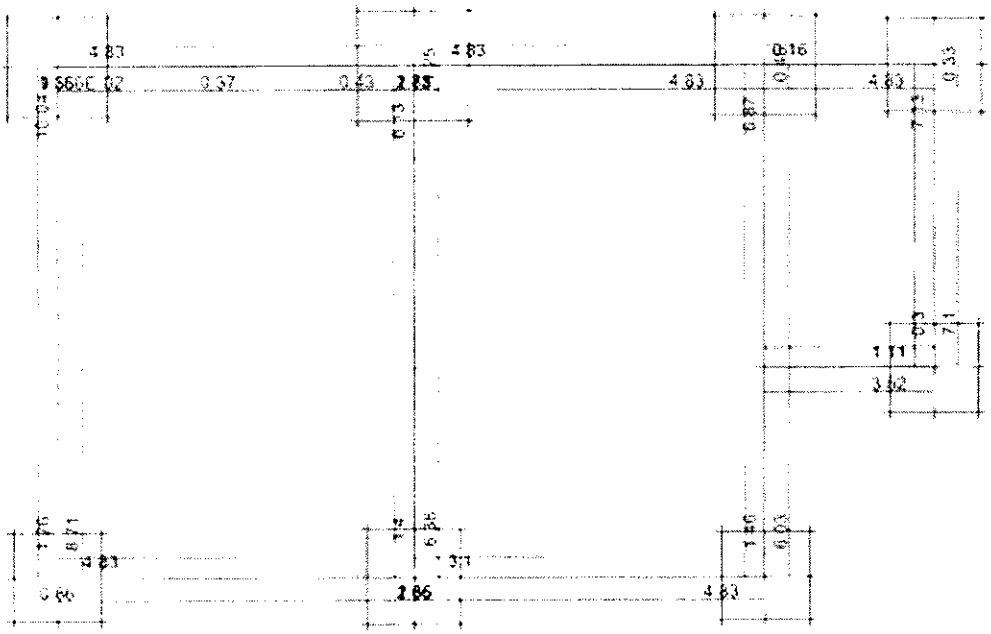
Vigas, Mmin (k N-m)



Vigas, Vmax (kN)



Vigas, Vmin (kN)

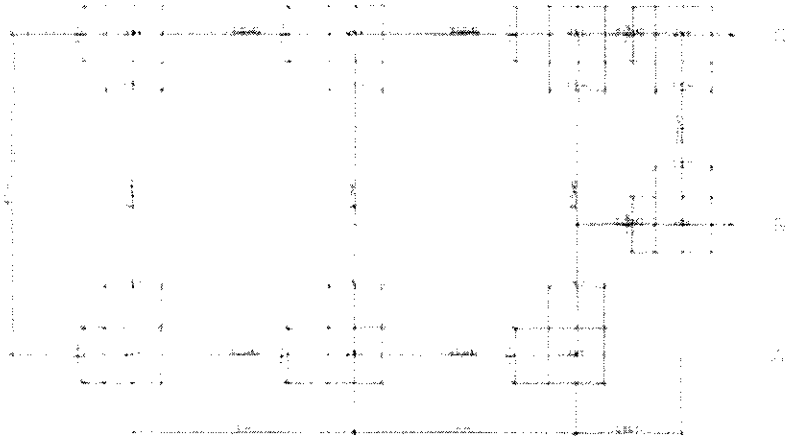


Vigas, Acero de refuerzo a flexion

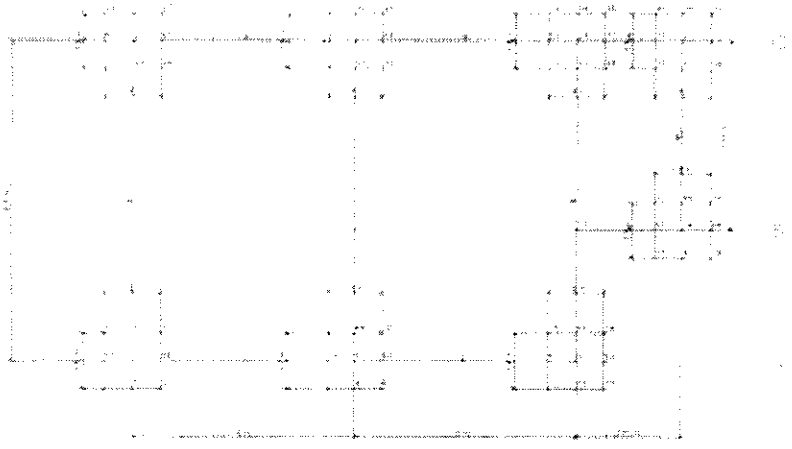
9.2. Zona Intermedia

9.2.1. Suelo Tipo AB

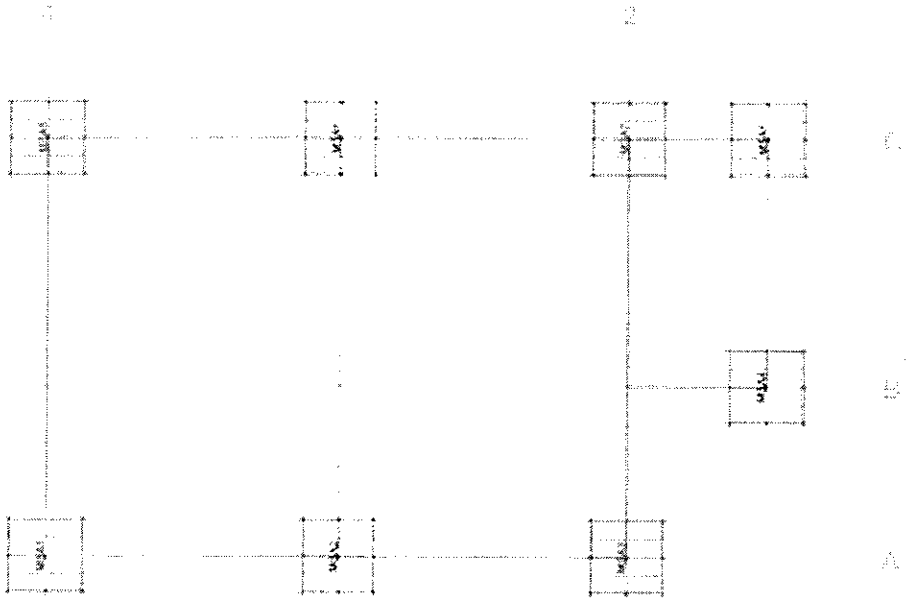
9.2.1.1. Modelo Matematico



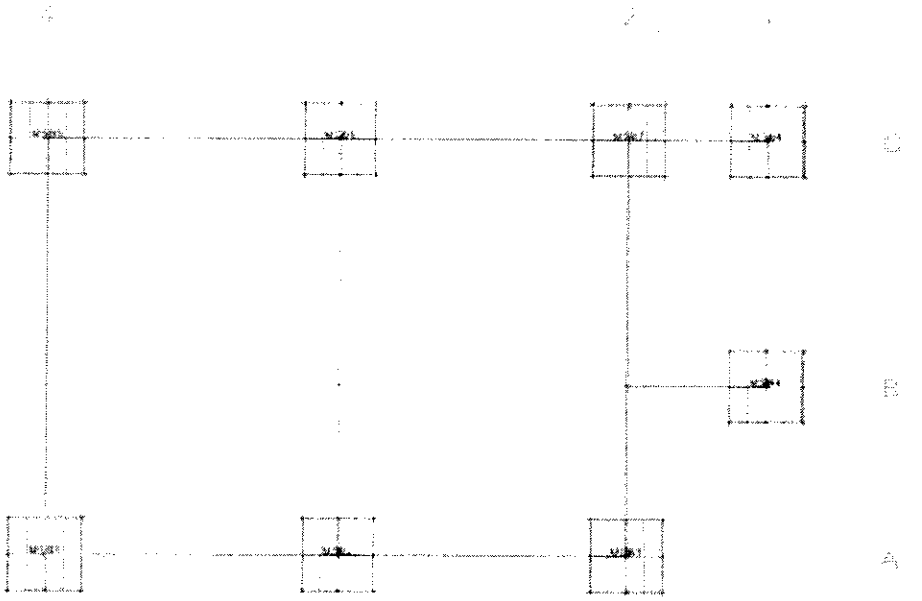
Planta Cimentacion



Numeracion Nudos y elementos



Identificacion Strip A



Identificacion Strip B

9.2.1.2. Coordenadas, asignaciones

SAFE v12.3.2 7/3/13 10:37:33

Table: Coordinate Systems

CoordSys	Type	OriginGx m	OriginGy m	RotAngle Degrees
GLOBAL	Cartesian	0.00	0.00	0.00

Table: Grid Lines

CoordSys	AxisDir	GridID	Ordinate m	Visible	BubbleLoc	GridColor	BubbleSize mm	HideAll
GLOBAL	X	4	0.00	Yes	End	10461087	1000.00	No
GLOBAL	X	3	6.00	Yes	End			
GLOBAL	X	2	12.00	Yes	End			
GLOBAL	X	1	14.85	Yes	End			
GLOBAL	Y	A	0.00	Yes	End			
GLOBAL	Y	B	3.55	Yes	End			
GLOBAL	Y	C	8.70	Yes	End			

Table: Object Geometry - Areas 01 - General, Part 1 of 2

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	225000D.00	Slab
2	4	5	6	10	11	No	225000D.00	Slab
3	4	12	13	14	15	No	2250000.D0	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	21	26	27	28	No	2250000.00	Slab
6	4	29	30	31	32	No	2250000.00	Slab
7	4	33	34	35	36	No	2250000.D0	Slab
8	4	37	38	39	40	No	2250000.D0	Slab

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	41	0.00	-0.75			0.75	0.75
MSA1	42	0.00	0.75	0.75	0.75		
MSA2	43	6.00	-0.75			0.75	0.75
MSA2	44	6.00	0.75	0.75	0.75		
MSA3	45	12.00	-0.75			0.75	0.75
MSA3	46	12.00	0.75	0.75	0.75		
MSA4	47	14.85	2.80			0.75	0.75
MSA4	48	14.85	4.30	0.75	0.75		
MSA5	49	0.00	7.95			0.75	0.75
MSA5	50	0.00	9.45	0.75	0.75		
MSA6	51	6.00	7.95			0.75	0.75
MSA6	52	6.00	9.45	0.75	0.75		
MSA7	53	12.00	7.95			0.75	0.75
MSA7	54	12.00	9.45	0.75	0.75		
MSA8	55	14.85	7.95			0.75	0.75
MSA8	56	14.85	9.45	0.75	0.75		
MSB1	57	-0.75	0.00			0.75	0.75
MSB1	58	0.75	0.00	0.75	0.75		
MSB2	59	5.25	0.00			0.75	0.75
MSB2	60	6.75	0.00	0.75	0.75		
MSB3	61	11.25	0.00			0.75	0.75
MSB3	62	12.75	0.00	0.75	0.75		
MSB4	63	14.10	3.55			0.75	0.75
MSB4	64	15.60	3.55	0.75	0.75		
MSB5	65	-0.75	8.70			0.75	0.75
MSB5	66	0.75	8.70	0.75	0.75		

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSB6	67	5.25	8.70			0.75	0.75
MSB6	68	6.75	8.70	0.75	0.75		
MSB7	69	11.25	8.70			0.75	0.75
MSB7	70	12.75	8.70	0.75	0.75		
MSB8	71	14.10	8.70			0.75	0.75
MSB8	72	15.60	8.70	0.75	0.75		

Table: Object Geometry - Dimension Lines, Part 1 of 2

AlignType	GlobalX1 m	GlobalY1 m	GlobalX2 m	GlobalY2 m	GlobalX3 m	GlobalY3 m	GlobalX4 m	GlobalY4 m
Parallel	0.00	0.00	0.00	8.70	-3.20	0.00	-3.20	8.70
Parallel	0.00	0.00	6.00	0.00	0.00	-2.10	6.00	-2.10
Parallel	6.00	0.00	12.00	0.00	6.00	-2.10	12.00	-2.10
Parallel	14.85	3.55	14.85	8.70	16.13	3.55	16.13	8.70
Parallel	12.00	0.00	14.85	0.00	12.00	-2.10	14.85	-2.10
Parallel	-0.75	-0.75	-0.75	0.75	-1.31	-0.75	-1.31	0.75
Parallel	-0.75	7.95	-0.75	9.45	-1.31	7.95	-1.31	9.45
Parallel	5.25	-0.75	5.25	0.75	4.15	-0.75	4.15	0.75
Parallel	5.25	7.95	5.25	9.45	4.15	7.95	4.15	9.45
Parallel	11.25	-0.75	11.25	0.75	10.35	-0.75	10.35	0.75
Parallel	11.25	7.95	11.25	9.45	10.35	7.95	10.35	9.45
Parallel	14.10	2.80	14.10	4.30	13.50	2.80	13.50	4.30
Parallel	14.10	7.95	14.10	9.45	13.50	7.95	13.50	9.45
Parallel	-0.75	0.75	0.75	0.75	-0.75	1.86	0.75	1.86
Parallel	5.25	0.75	6.75	0.75	5.25	1.86	6.75	1.86
Parallel	11.25	0.75	12.75	0.75	11.25	1.86	12.75	1.86
Parallel	14.10	4.30	15.60	4.30	14.10	5.09	15.60	5.09
Parallel	-0.75	7.95	0.75	7.95	-0.75	7.19	0.75	7.19
Parallel	5.25	7.95	6.75	7.95	5.25	7.19	6.75	7.19
Parallel	11.25	7.95	12.75	7.95	11.25	7.19	12.75	7.19
Parallel	14.10	7.95	15.60	7.95	14.10	7.19	15.60	7.19

Table: Object Geometry - Lines 01 - General

Line	PointI	PointJ	LineType	CurveType	Length m
1	7	8	Beam	Straight	6.00
2	8	9	Beam	Straight	6.00
3	22	23	Beam	Straight	6.00
4	23	24	Beam	Straight	6.00
5	24	25	Beam	Straight	2.85
6	7	22	Beam	Straight	8.70
7	8	23	Beam	Straight	8.70
8	9	24	Beam	Straight	8.70
9	73	16	Beam	Straight	2.85
10	16	25	Beam	Straight	5.15

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
1	-0.75	-0.75	0.00	No
2	0.75	-0.75	0.00	No
3	0.75	0.75	0.00	No
4	-0.75	0.75	0.00	No
5	5.25	-0.75	0.00	No
6	6.75	-0.75	0.00	No
7	0.00	0.00	0.00	Yes
8	6.00	0.00	0.00	Yes
9	12.00	0.00	0.00	Yes
10	6.75	0.75	0.00	No
11	5.25	0.75	0.00	No
12	11.25	-0.75	0.00	No
13	12.75	-0.75	0.00	No
14	12.75	0.75	0.00	No
15	11.25	0.75	0.00	No
16	14.85	3.55	0.00	Yes
17	14.10	2.80	0.00	No
18	15.60	2.80	0.00	No
19	15.60	4.30	0.00	No
20	14.10	4.30	0.00	No
21	-0.75	7.95	0.00	No
22	0.00	8.70	0.00	Yes
23	6.00	8.70	0.00	Yes

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
24	12.00	8.70	0.00	Yes
25	14.85	8.70	0.00	Yes
26	0.75	7.95	0.00	No
27	0.75	9.45	0.00	No
28	-0.75	9.45	0.00	No
29	5.25	7.95	0.00	No
30	6.75	7.95	0.00	No
31	6.75	9.45	0.00	No
32	5.25	9.45	0.00	No
33	11.25	7.95	0.00	No
34	12.75	7.95	0.00	No
35	12.75	9.45	0.00	No
36	11.25	9.45	0.00	No
37	14.10	7.95	0.00	No
38	15.60	7.95	0.00	No
39	15.60	9.45	0.00	No
40	14.10	9.45	0.00	No
41	0.00	-0.75	0.00	No
42	0.00	0.75	0.00	No
43	6.00	-0.75	0.00	No
44	6.00	0.75	0.00	No
45	12.00	-0.75	0.00	No
46	12.00	0.75	0.00	No
47	14.85	2.80	0.00	No
48	14.85	4.30	0.00	No
49	0.00	7.95	0.00	No
50	0.00	9.45	0.00	No
51	6.00	7.95	0.00	No
52	6.00	9.45	0.00	No
53	12.00	7.95	0.00	No
54	12.00	9.45	0.00	No
55	14.85	7.95	0.00	No
56	14.85	9.45	0.00	No
57	-0.75	0.00	0.00	No
58	0.75	0.00	0.00	No
59	5.25	0.00	0.00	No
60	6.75	0.00	0.00	No
61	11.25	0.00	0.00	No
62	12.75	0.00	0.00	No
63	14.10	3.55	0.00	No
64	15.60	3.55	0.00	No
65	-0.75	8.70	0.00	No
66	0.75	8.70	0.00	No
67	5.25	8.70	0.00	No
68	6.75	8.70	0.00	No
69	11.25	8.70	0.00	No
70	12.75	8.70	0.00	No
71	14.10	8.70	0.00	No
72	15.60	8.70	0.00	No
73	12.00	3.55	0.00	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
1	Yes	Yes	No	No	No	No
2	Yes	Yes	No	No	No	No
3	Yes	Yes	No	No	No	No
4	Yes	Yes	No	No	No	No
5	Yes	Yes	No	No	No	No
6	Yes	Yes	No	No	No	No
10	Yes	Yes	No	No	No	No
11	Yes	Yes	No	No	No	No
12	Yes	Yes	No	No	No	No
13	Yes	Yes	No	No	No	No
14	Yes	Yes	No	No	No	No
15	Yes	Yes	No	No	No	No
17	Yes	Yes	No	No	No	No
18	Yes	Yes	No	No	No	No
19	Yes	Yes	No	No	No	No
20	Yes	Yes	No	No	No	No
21	Yes	Yes	No	No	No	No
26	Yes	Yes	No	No	No	No
27	Yes	Yes	No	No	No	No
28	Yes	Yes	No	No	No	No
29	Yes	Yes	No	No	No	No
30	Yes	Yes	No	No	No	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
31	Yes	Yes	No	No	No	No
32	Yes	Yes	No	No	No	No
33	Yes	Yes	No	No	No	No
34	Yes	Yes	No	No	No	No
35	Yes	Yes	No	No	No	No
36	Yes	Yes	No	No	No	No
37	Yes	Yes	No	No	No	No
38	Yes	Yes	No	No	No	No
39	Yes	Yes	No	No	No	No
40	Yes	Yes	No	No	No	No

Table: Beam Property Assignments

Line	BeamProp
1	S35x45
2	S35x45
3	S35x45
4	S35x45
5	S35x45
6	S35x45
7	S35x45
8	S35x45
9	S35x45
10	S35x45

Table: Slab Property Assignments

Area	SlabProp
1	ZPT
2	ZPT
3	ZPT
4	ZPT
5	ZPT
6	ZPT
7	ZPT
8	ZPT

Table: Soil Property Assignments

Area	SoilProp
1	SOIL_AB
2	SOIL_AB
3	SOIL_AB
4	SOIL_AB
5	SOIL_AB
6	SOIL_AB
7	SOIL_AB
8	SOIL_AB

9.2.1.3. Cargas, asignación de cargas

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	FX kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-7.22	-5.39	5.39	-13.71	-15.84	-0.40	300.00
7	Ey	-4.72	-16.93	5.82	-42.97	-10.21	-1.16	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-9.39	-3.68	1.46	-9.57	-18.93	-0.40	300.00
8	Ey	-5.93	-12.01	4.78	-31.25	-11.93	-1.16	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-7.49	-4.08	2.06	-9.60	-16.21	-0.40	300.00
9	Ey	-4.79	-12.52	6.12	-31.45	-10.30	-1.16	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-7.17	-5.59	7.63	-12.69	-15.94	-0.40	300.00
16	Ey	-2.90	-17.85	11.82	-40.50	-6.22	-1.16	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-8.24	-5.56	5.17	-13.94	-17.84	-0.40	300.00
22	Ey	-3.26	-17.04	6.53	-43.13	-6.94	-1.16	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-9.88	-3.66	3.11	-9.53	-20.18	-0.40	300.00
23	Ey	-3.75	-12.02	5.07	-31.27	-7.64	-1.16	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-10.52	-4.15	13.87	-9.97	-21.09	-0.40	300.00
24	Ey	-3.98	-12.32	7.13	-31.17	-7.97	-1.16	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-9.62	-5.19	13.67	-12.12	-19.80	-0.40	300.00
25	Ey	-3.74	-16.22	12.62	-38.19	-7.61	-1.16	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.2.1.4. Esfuerzos sobre el suelo

9.2.1.4.1. Suelo Tipo

Table: Soil Pressures - Enveloping Summary

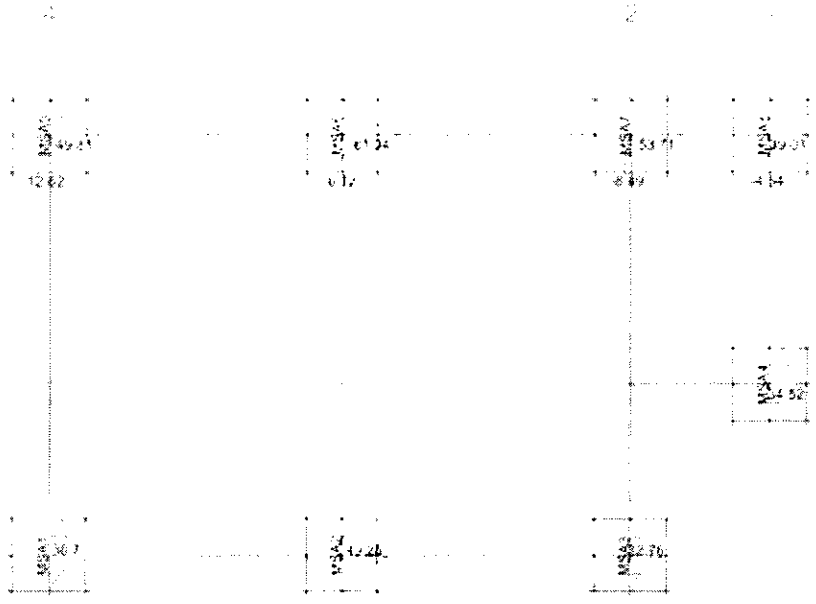
Panel	OutputItem	SurfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-44.14	Envol.-SRV	Combination	0.00	0.38
1	MinPress	-117.71	Envol.-SRV	Combination	5.25	0.75
2	MaxPress	-48.63	Envol.-SRV	Combination	0.00	8.33
2	MinPress	-131.55	Envol.-SRV	Combination	5.63	8.33
3	MaxPress	-41.09	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-117.32	Envol.-SRV	Combination	6.00	0.75
4	MaxPress	-59.68	Envol.-SRV	Combination	11.63	8.33
4	MinPress	-131.64	Envol.-SRV	Combination	6.38	8.33
5	MaxPress	-27.62	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-84.35	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-35.68	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-112.80	Envol.-SRV	Combination	12.00	8.70

Table: Soil Pressures - Summary

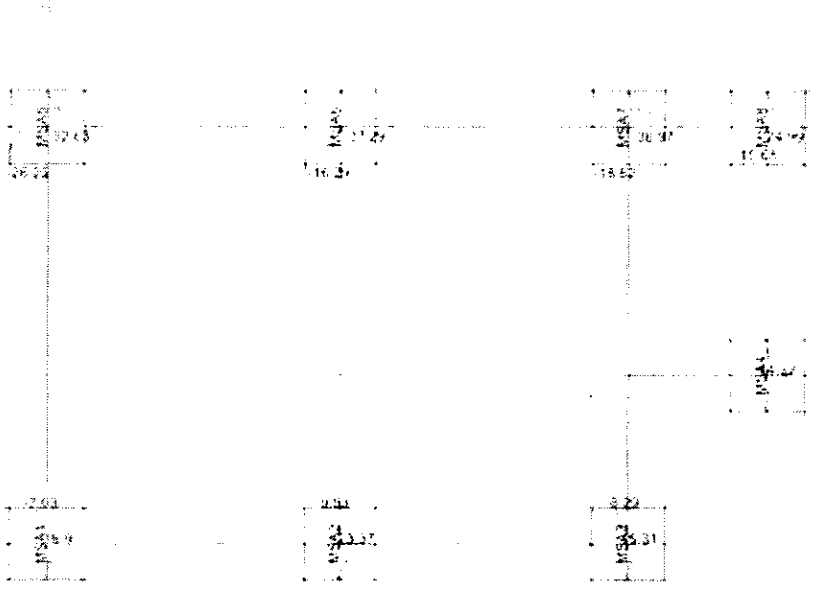
Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-44.14	-117.71	0.00	0.38	5.25	0.75
2	Envol.-SRV	Combination	-48.63	-131.55	0.00	8.33	5.63	8.33
3	Envol.-SRV	Combination	-41.09	-117.32	11.63	0.38	6.00	0.75
4	Envol.-SRV	Combination	-59.68	-131.64	11.63	8.33	6.38	8.33
5	Envol.-SRV	Combination	-27.62	-84.35	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-35.68	-112.80	14.48	3.93	12.00	8.70

Capacidad admisible de suelo AB, $_{adm}$ = 200 kN/m² > Soil Pressures Max/Min => oK

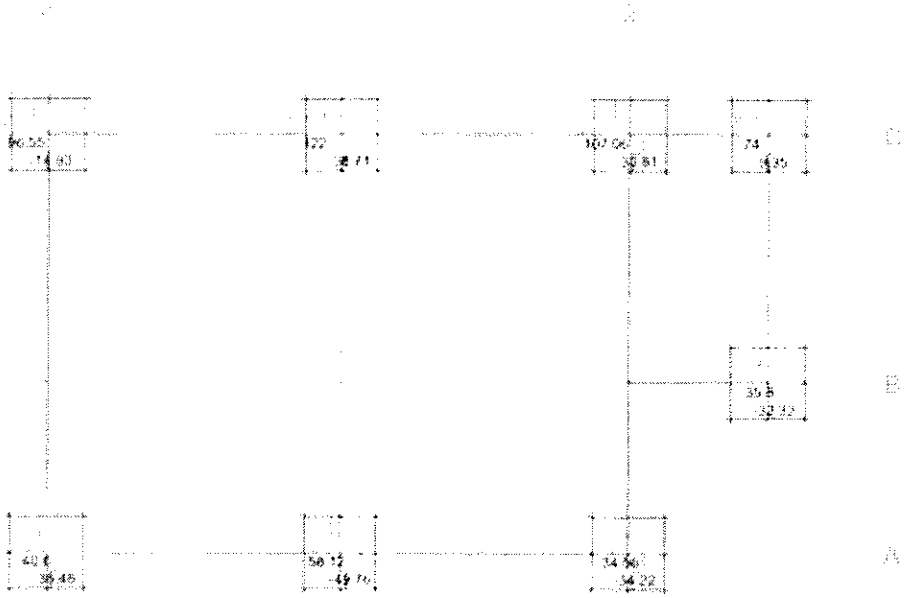
9.2.1.5. Resultados, diseño elementos



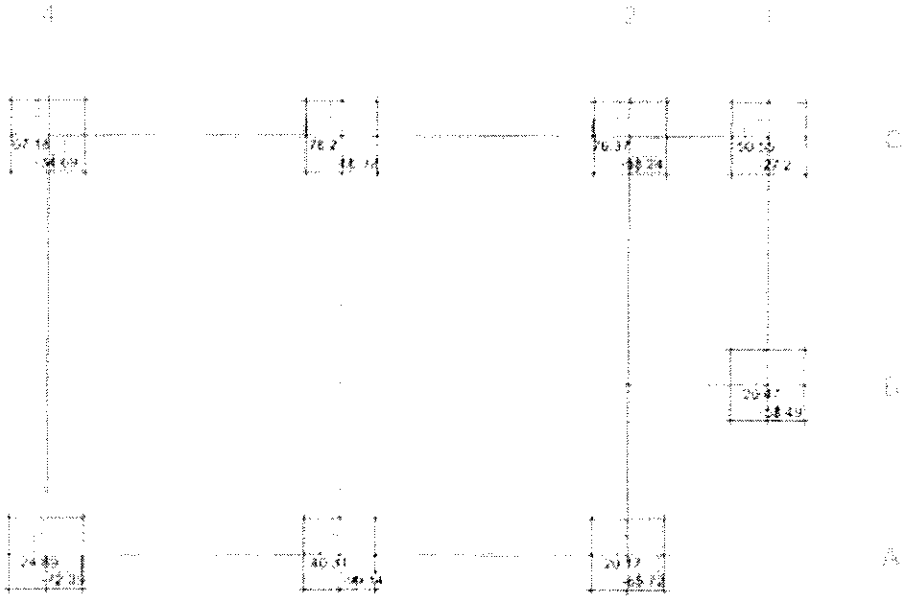
Zapatas - Strip A, Mmax (kN-m)



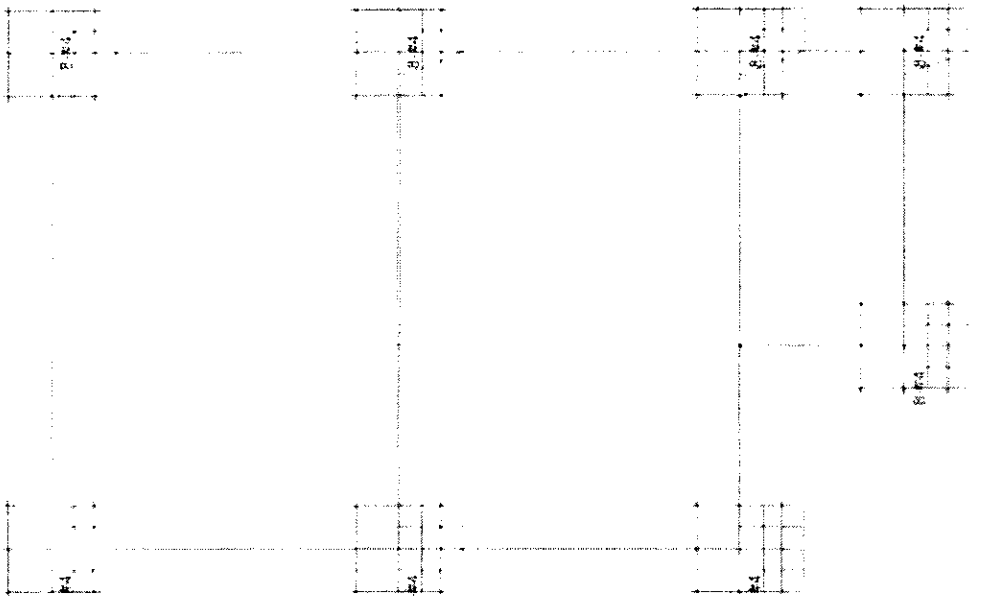
Zapatas - Strip A, Mmin (kN-m)



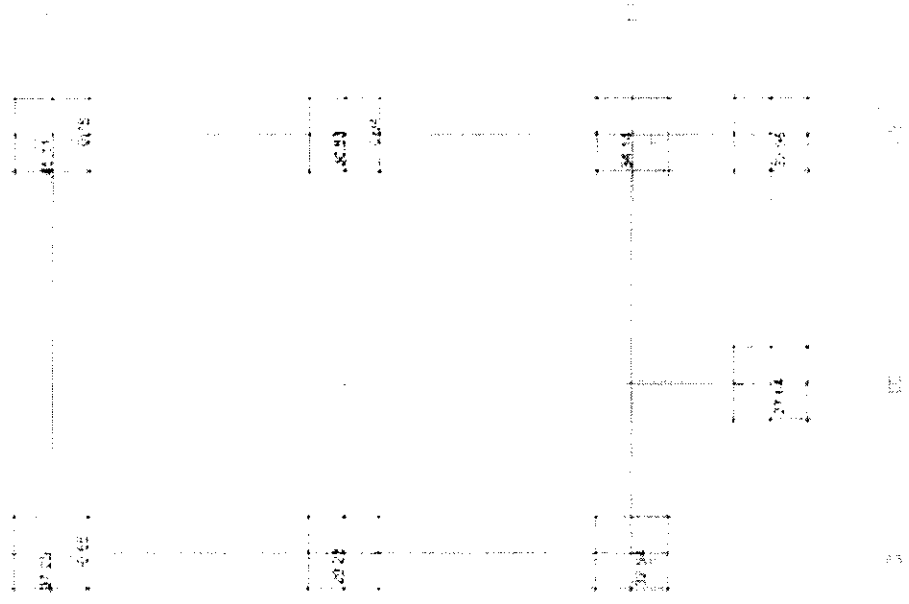
Zapatas - Strip A, Vmax (kN)



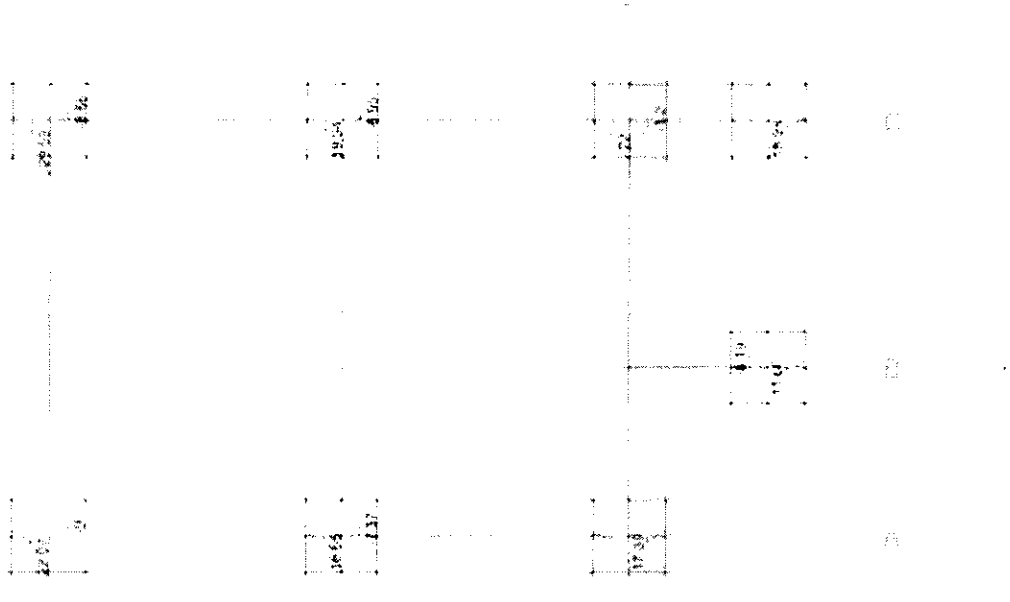
Zapatas - Strip A, Vmin (kN)



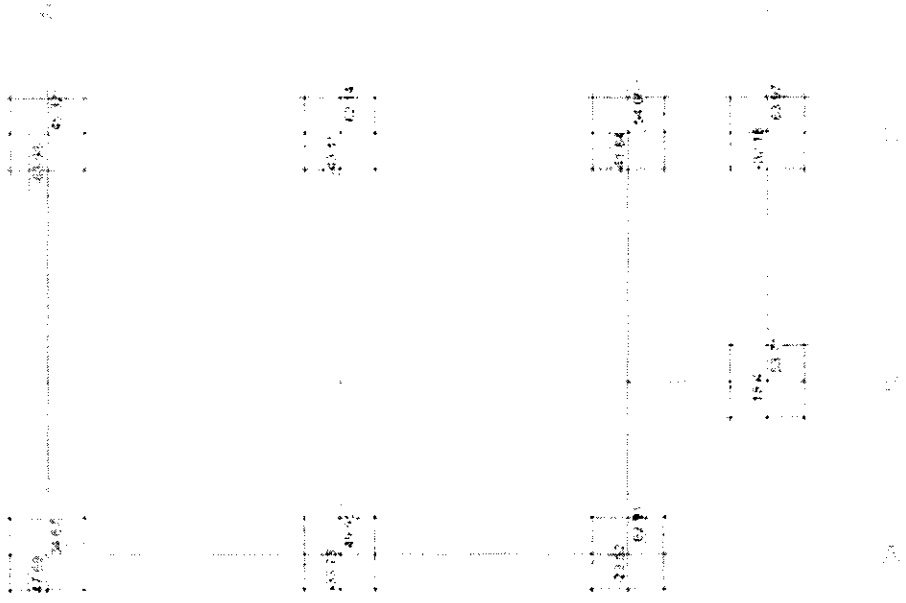
Zapatas - Strip A, Acero de Refuerzo



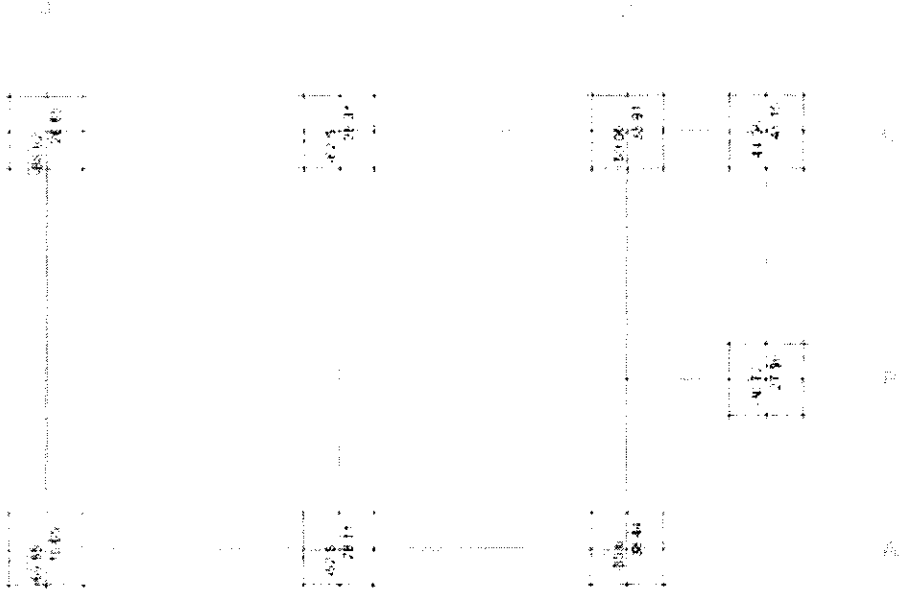
Zapatas - Strip B, Mmax (kN-m)



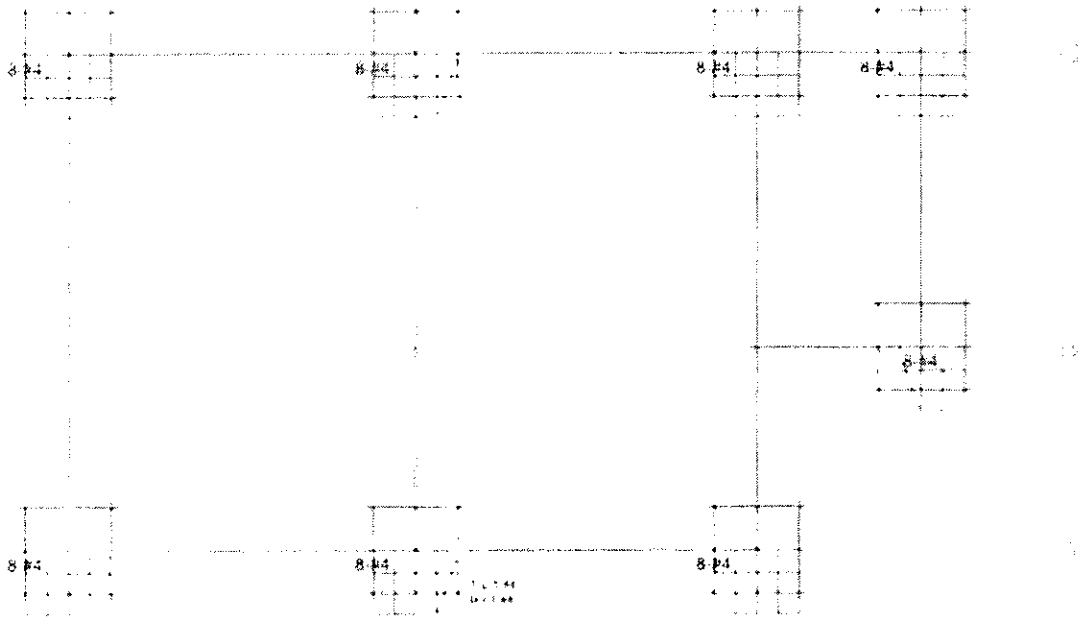
Zapatas - Strip B, Mmin (kN-m)



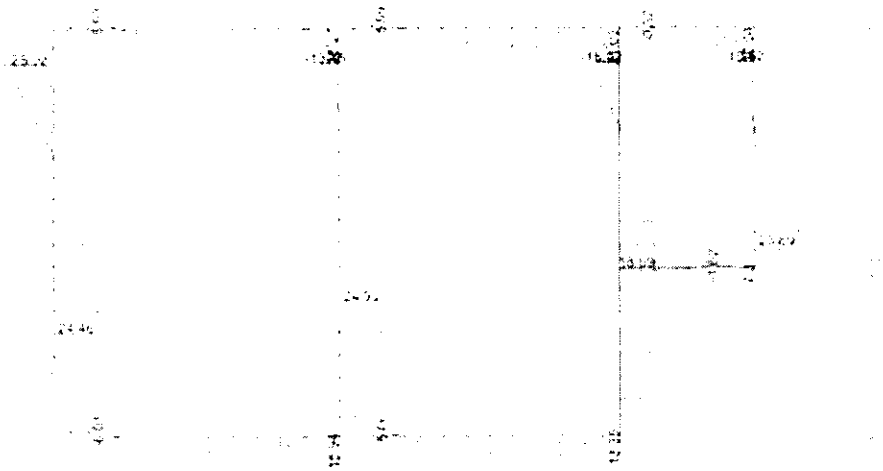
Zapatas - Strip B, Vmax (kN)



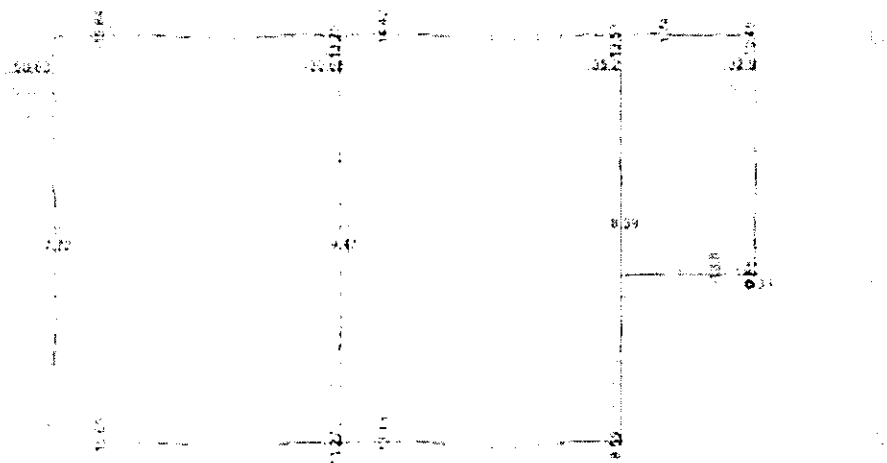
Zapatas - Strip B, Vmin (kN)



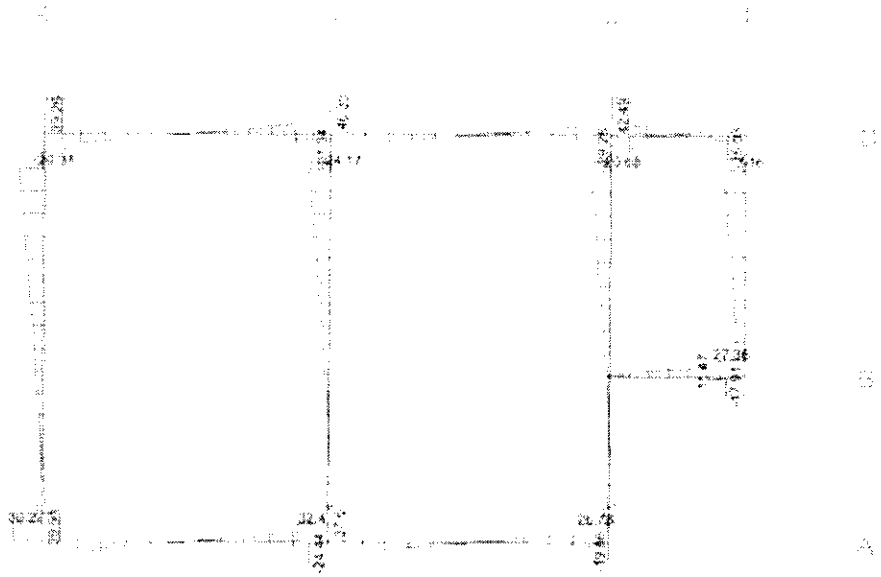
Zapatas - Strip B, Acero de Refuerzo



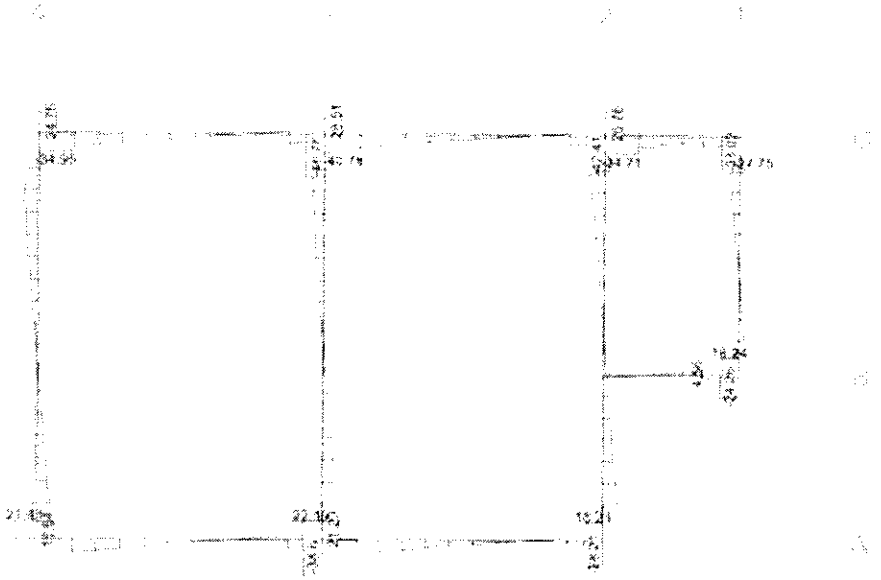
Vigas, Mmax (kN-m)



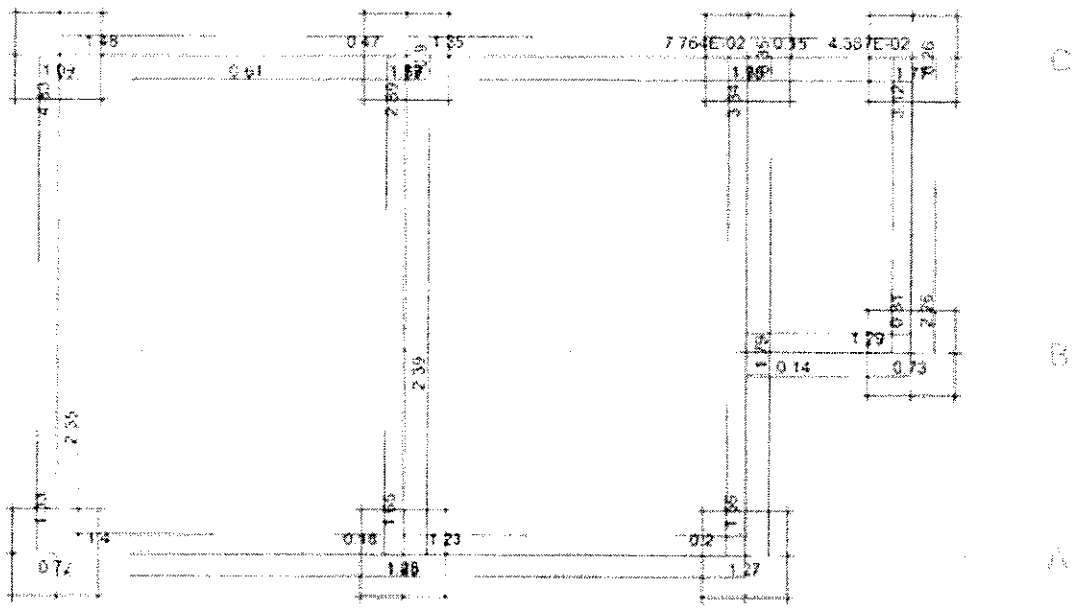
Vigas, Mmin (kN-m)



Vigas, Vmax (kN)



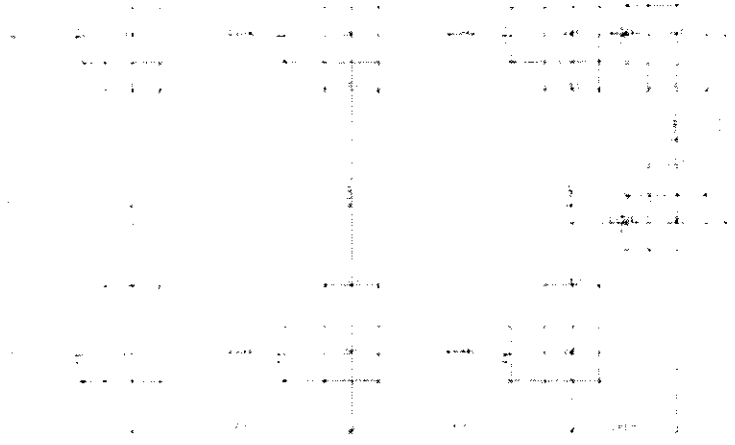
Vigas, Vmin (kN)



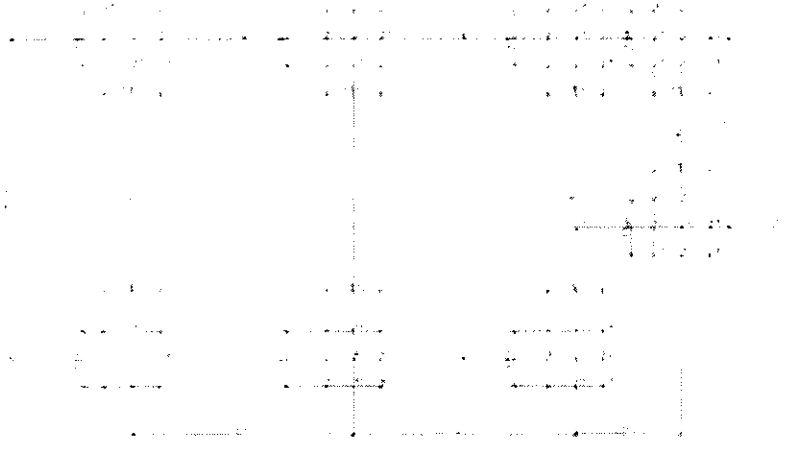
Vigas, Acero de refuerzo a flexion

9.2.2. Suelo Tipo CD

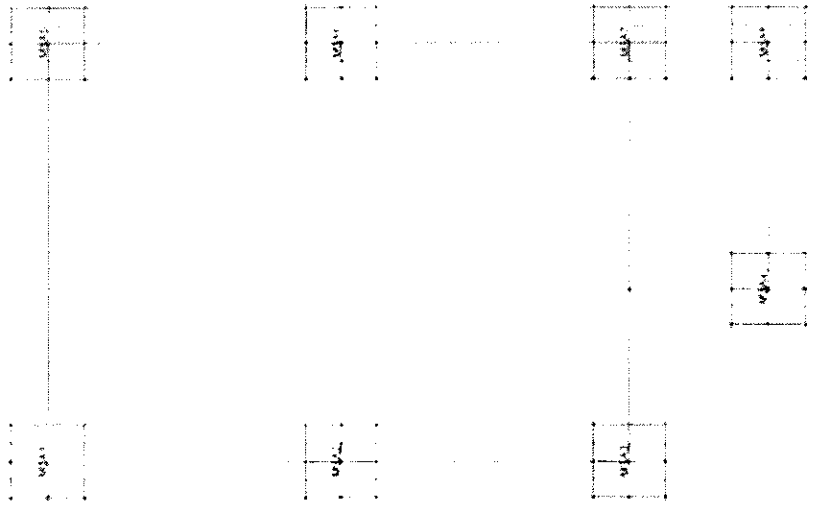
9.2.2.1. Modelo Matematico



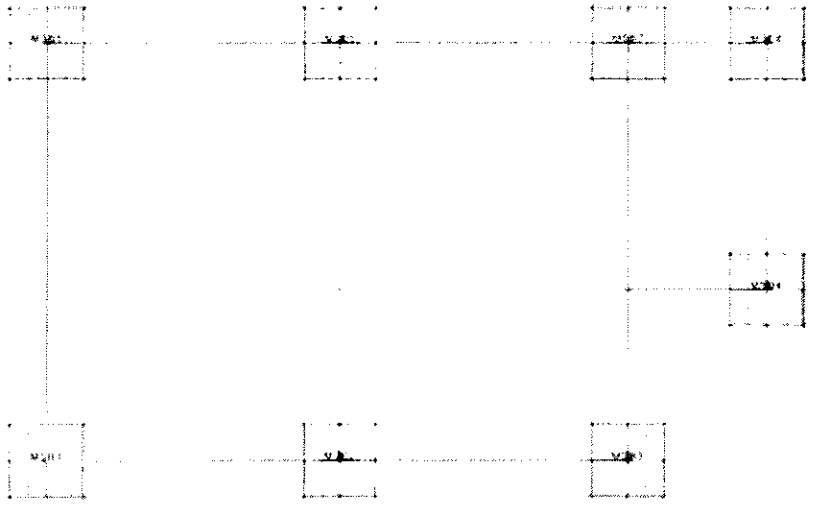
Planta Cimentacion



Numeracion Nudos y elementos



Identificacion Strip A



Identificacion Strip B

9.2.2.2. Coordenadas, asignaciones

SAFE v12.3.2 7/3/13 11:20:41

Table: Coordinate Systems

CoordSys	Type	OriginGx m	OriginGy m	RotAngle Degrees
GLOBAL	Cartesian	0.00	0.00	0.00

Table: Grid Lines

CoordSys	AxisDir	GridID	Ordinate m	Visible	BubbleLoc	GridColor	BubbleSize mm	HideAll
GLOBAL	X	4	0.00	Yes	End	10461087	1000.00	No
GLOBAL	X	3	6.00	Yes	End			
GLOBAL	X	2	12.00	Yes	End			
GLOBAL	X	1	14.85	Yes	End			
GLOBAL	Y	A	0.00	Yes	End			
GLOBAL	Y	B	3.55	Yes	End			
GLOBAL	Y	C	8.70	Yes	End			

Table: Object Geometry - Areas 01 - General, Part 1 of 2

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	2250000.00	Slab
2	4	5	6	10	11	No	2250000.00	Slab
3	4	12	13	14	15	No	2250000.00	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	21	26	27	28	No	2250000.00	Slab
6	4	29	30	31	32	No	2250000.00	Slab
7	4	33	34	35	36	No	2250000.00	Slab
8	4	76	77	78	79	No	2560000.00	Slab

Table: Dbject Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	41	0.00	-0.75			0.75	0.75
MSA1	42	0.00	0.75	0.75	0.75		
MSA2	43	6.00	-0.75			0.75	0.75
MSA2	44	6.00	0.75	0.75	0.75		
MSA3	45	12.00	-0.75			0.75	0.75
MSA3	46	12.00	0.75	0.75	0.75		
MSA4	47	14.85	2.80			0.75	0.75
MSA4	48	14.85	4.30	0.75	0.75		
MSA5	49	0.00	7.95			0.75	0.75
MSA5	50	0.00	9.45	0.75	0.75		
MSA6	51	6.00	7.95			0.75	0.75
MSA6	52	6.00	9.45	0.75	0.75		
MSA7	53	12.00	7.95			0.75	0.75
MSA7	54	12.00	9.45	0.75	0.75		
MSA8	80	14.85	7.90			0.80	0.80
MSA8	81	14.85	9.50	0.80	0.80		
MSB1	57	-0.75	0.00			0.75	0.75
MSB1	58	0.75	0.00	0.75	0.75		
MSB2	59	5.25	0.00			0.75	0.75
MSB2	60	6.75	0.00	0.75	0.75		
MSB3	61	11.25	0.00			0.75	0.75
MSB3	62	12.75	0.00	0.75	0.75		
MSB4	63	14.10	3.55			0.75	0.75
MSB4	64	15.60	3.55	0.75	0.75		
MSB5	65	-0.75	8.70			0.75	0.75
MSB5	66	0.75	8.70	0.75	0.75		

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSB6	67	5.25	8.70			0.75	0.75
MSB6	68	6.75	8.70	0.75	0.75		
MSB7	69	11.25	8.70			0.75	0.75
MSB7	70	12.75	8.70	0.75	0.75		
MSB8	82	14.05	8.70			0.80	0.80
MSB8	83	15.65	8.70	0.80	0.80		

Table: Object Geometry - Dimension Lines, Part 1 of 2

AlignType	GlobalX1 m	GlobalY1 m	GlobalX2 m	GlobalY2 m	GlobalX3 m	GlobalY3 m	GlobalX4 m	GlobalY4 m
Parallel	1.110E-16	0.00	1.110E-16	8.70	-3.20	0.00	-3.20	8.70
Parallel	1.110E-16	0.00	6.00	0.00	0.00	-2.10	6.00	-2.10
Parallel	6.00	0.00	12.00	0.00	6.00	-2.10	12.00	-2.10
Parallel	14.85	3.55	14.85	8.70	16.13	3.55	16.13	8.70
Parallel	12.00	0.00	14.85	0.00	12.00	-2.10	14.85	-2.10
Parallel	-0.75	-0.75	-0.75	0.75	-1.31	-0.75	-1.31	0.75
Parallel	-0.75	7.95	-0.75	9.45	-1.31	7.95	-1.31	9.45
Parallel	5.25	-0.75	5.25	0.75	4.15	-0.75	4.15	0.75
Parallel	5.25	7.95	5.25	9.45	4.15	7.95	4.15	9.45
Parallel	11.25	-0.75	11.25	0.75	10.35	-0.75	10.35	0.75
Parallel	11.25	7.95	11.25	9.45	10.35	7.95	10.35	9.45
Parallel	14.10	2.80	14.10	4.30	13.50	2.80	13.50	4.30
Parallel	-0.75	0.75	0.75	0.75	-0.75	1.86	0.75	1.86
Parallel	5.25	0.75	6.75	0.75	5.25	1.86	6.75	1.86
Parallel	11.25	0.75	12.75	0.75	11.25	1.86	12.75	1.86
Parallel	14.10	4.30	15.60	4.30	14.10	5.09	15.60	5.09
Parallel	-0.75	7.95	0.75	7.95	-0.75	7.19	0.75	7.19
Parallel	5.25	7.95	6.75	7.95	5.25	7.19	6.75	7.19
Parallel	11.25	7.95	12.75	7.95	11.25	7.19	12.75	7.19
Parallel	14.05	7.90	14.05	9.50	13.50	7.90	13.50	9.50
Parallel	14.05	7.90	15.65	7.90	14.05	7.19	15.65	7.19

Table: Object Geometry - Lines 01 - General

Line	PointI	PointJ	LineType	CurveType	Length m
1	7	8	Beam	Straight	6.00
2	8	9	Beam	Straight	6.00
3	22	23	Beam	Straight	6.00
4	23	24	Beam	Straight	6.00
5	24	25	Beam	Straight	2.85
6	7	22	Beam	Straight	8.70
7	8	23	Beam	Straight	8.70
8	9	24	Beam	Straight	8.70
9	73	16	Beam	Straight	2.85
10	16	25	Beam	Straight	5.15

Table: object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
1	-0.75	-0.75	0.00	No
2	0.75	-0.75	0.00	No
3	0.75	0.75	0.00	No
4	-0.75	0.75	0.00	No
5	5.25	-0.75	0.00	No
6	6.75	-0.75	0.00	No
7	0.00	0.00	0.00	Yes
8	6.00	0.00	0.00	Yes
9	12.00	0.00	0.00	Yes
10	6.75	0.75	0.00	No
11	5.25	0.75	0.00	No
12	11.25	-0.75	0.00	No
13	12.75	-0.75	0.00	No
14	12.75	0.75	0.00	No
15	11.25	0.75	0.00	No
16	14.85	3.55	0.00	Yes
17	14.10	2.80	0.00	No
18	15.60	2.80	0.00	No
19	15.60	4.30	0.00	No
20	14.10	4.30	0.00	No
21	-0.75	7.95	0.00	No
22	0.00	8.70	0.00	Yes

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
23	6.00	8.70	0.00	Yes
24	12.00	8.70	0.00	Yes
25	14.85	8.70	0.00	Yes
26	0.75	7.95	0.00	No
27	0.75	9.45	0.00	No
28	-0.75	9.45	0.00	No
29	5.25	7.95	0.00	No
30	6.75	7.95	0.00	No
31	6.75	9.45	0.00	No
32	5.25	9.45	0.00	No
33	11.25	7.95	0.00	No
34	12.75	7.95	0.00	No
35	12.75	9.45	0.00	No
36	11.25	9.45	0.00	No
41	0.00	-0.75	0.00	No
42	0.00	0.75	0.00	No
43	6.00	-0.75	0.00	No
44	6.00	0.75	0.00	No
45	12.00	-0.75	0.00	No
46	12.00	0.75	0.00	No
47	14.85	2.80	0.00	No
48	14.85	4.30	0.00	No
49	0.00	7.95	0.00	No
50	0.00	9.45	0.00	No
51	6.00	7.95	0.00	No
52	6.00	9.45	0.00	No
53	12.00	7.95	0.00	No
54	12.00	9.45	0.00	No
57	-0.75	0.00	0.00	No
58	0.75	0.00	0.00	No
59	5.25	0.00	0.00	No
60	6.75	0.00	0.00	No
61	11.25	0.00	0.00	No
62	12.75	0.00	0.00	No
63	14.10	3.55	0.00	No
64	15.60	3.55	0.00	No
65	-0.75	8.70	0.00	No
66	0.75	8.70	0.00	No
67	5.25	8.70	0.00	No
68	6.75	8.70	0.00	No
69	11.25	8.70	0.00	No
70	12.75	8.70	0.00	No
73	12.00	3.55	0.00	No
76	14.05	7.90	0.00	No
77	15.65	7.90	0.00	No
78	15.65	9.50	0.00	No
79	14.05	9.50	0.00	No
80	14.85	7.90	0.00	No
81	14.85	9.50	0.00	No
82	14.05	8.70	0.00	No
83	15.65	8.70	0.00	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
1	Yes	Yes	No	No	No	No
2	Yes	Yes	No	No	No	No
3	Yes	Yes	No	No	No	No
4	Yes	Yes	No	No	No	No
5	Yes	Yes	No	No	No	No
6	Yes	Yes	No	No	No	No
10	Yes	Yes	No	No	No	No
11	Yes	Yes	No	No	No	No
12	Yes	Yes	No	No	No	No
13	Yes	Yes	No	No	No	No
14	Yes	Yes	No	No	No	No
15	Yes	Yes	No	No	No	No
17	Yes	Yes	No	No	No	No
18	Yes	Yes	No	No	No	No
19	Yes	Yes	No	No	No	No
20	Yes	Yes	No	No	No	No
21	Yes	Yes	No	No	No	No
26	Yes	Yes	No	No	No	No
27	Yes	Yes	No	No	No	No
28	Yes	Yes	No	No	No	No
29	Yes	Yes	No	No	No	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
30	Yes	Yes	No	No	No	No
31	Yes	Yes	No	No	No	No
32	Yes	Yes	No	No	No	No
33	Yes	Yes	No	No	No	No
34	Yes	Yes	No	No	No	No
35	Yes	Yes	No	No	No	No
36	Yes	Yes	No	No	No	No
76	Yes	Yes	No	No	No	No
77	Yes	Yes	No	No	No	No
78	Yes	Yes	No	No	No	No
79	Yes	Yes	No	No	No	No

Table: Beam Property Assignments

Line	BeamProp
1	S30x40
2	S30x40
3	S30x40
4	S30x40
5	S30x40
6	S30x40
7	S30x40
8	S30x40
9	S30x40
10	S30x40

Table: Slab Property Assignments

Area	SlabProp
1	ZPT
2	ZPT
3	ZPT
4	ZPT
5	ZPT
6	ZPT
7	ZPT
8	ZPT

Table: Soil Property Assignments

Area	SoilProp
1	SOIL_CD
2	SOIL_CD
3	SOIL_CD
4	SOIL_CD
5	SOIL_CD
6	SOIL_CD
7	SOIL_CD
8	SOIL_CD

9.2.2.3. Cargas, asignación de cargas

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	Fx kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-11.72	-8.37	8.72	-21.31	-25.70	-0.62	300.00
7	Ey	-7.37	-26.16	9.03	-66.41	-15.96	-1.80	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-15.24	-5.71	2.25	-14.83	-30.72	-0.62	300.00
8	Ey	-9.27	-18.56	7.38	-48.29	-18.65	-1.80	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-12.15	-6.35	3.22	-14.87	-26.31	-0.62	300.00
9	Ey	-7.48	-19.36	9.45	-48.60	-16.11	-1.80	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-11.65	-8.67	12.27	-19.69	-25.90	-0.62	300.00
16	Ey	-4.61	-27.59	18.29	-62.59	-9.91	-1.80	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-13.38	-8.66	8.34	-21.71	-28.98	-0.62	300.00
22	Ey	-5.19	-26.34	10.12	-66.67	-11.05	-1.80	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-16.05	-5.66	5.00	-14.75	-32.78	-0.62	300.00
23	Ey	-5.98	-18.58	7.84	-48.32	-12.18	-1.80	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-17.10	-6.49	22.52	-15.51	-34.27	-0.62	300.00
24	Ey	-6.35	-19.04	11.21	-48.18	-12.71	-1.80	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-15.63	-8.07	22.14	-18.84	-32.17	-0.62	300.00
25	Ey	-5.95	-25.07	19.60	-59.03	-12.14	-1.80	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.2.2.4. Esfuerzos sobre el suelo

9.2.2.4.1. Suelo Tipo

Table: Soil Pressures - Enveloping Summary

Panel	OutputItem	SurfPress kN/m2	outputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-41.89	Envol.-SRV	Combination	0.38	0.38
1	MinPress	-109.11	Envol.-SRV	Combination	5.25	0.75
2	MaxPress	-44.17	Envol.-SRV	Combination	0.38	8.33
2	MinPress	-122.12	Envol.-SRV	Combination	5.63	8.33
3	MaxPress	-38.97	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-108.47	Envol.-SRV	Combination	6.00	0.75
4	MaxPress	-55.34	Envol.-SRV	Combination	11.63	8.33
4	MinPress	-123.20	Envol.-SRV	Combination	6.38	8.33
5	MaxPress	-25.44	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-78.67	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-33.55	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-110.39	Envol.-SRV	Combination	12.00	8.70

Table: Soil Pressures - Summary

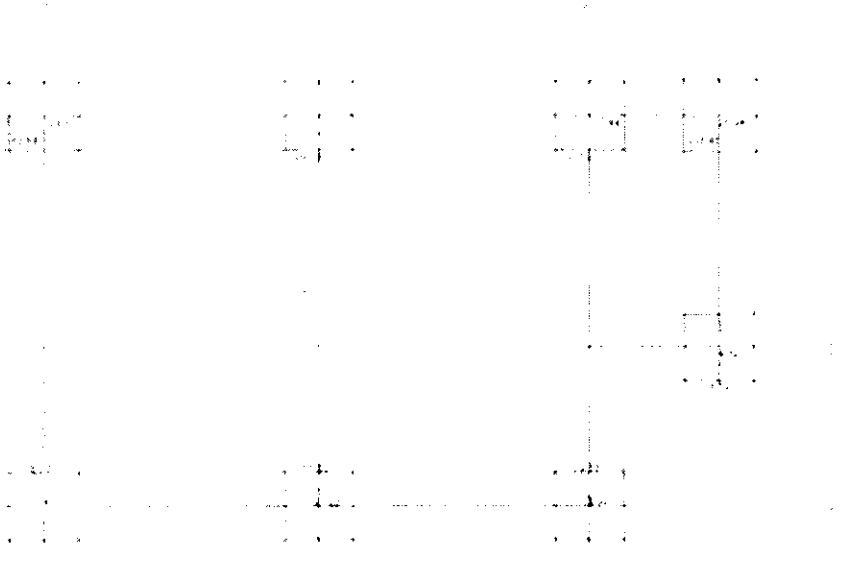
Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-41.89	-109.11	0.38	0.38	5.25	0.75
2	Envol.-SRV	Combination	-44.17	-122.12	0.38	8.33	5.63	8.33
3	Envol.-SRV	Combination	-38.97	-108.47	11.63	0.38	6.00	0.75
4	Envol.-SRV	Combination	-55.34	-123.20	11.63	8.33	6.38	8.33
5	Envol.-SRV	Combination	-25.44	-78.67	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-33.55	-110.39	14.48	3.93	12.00	8.70

Capacidad admisible de suelo AB, σ_{adm} = 150 kN/m² > Soil Pressures Max/Min => OK

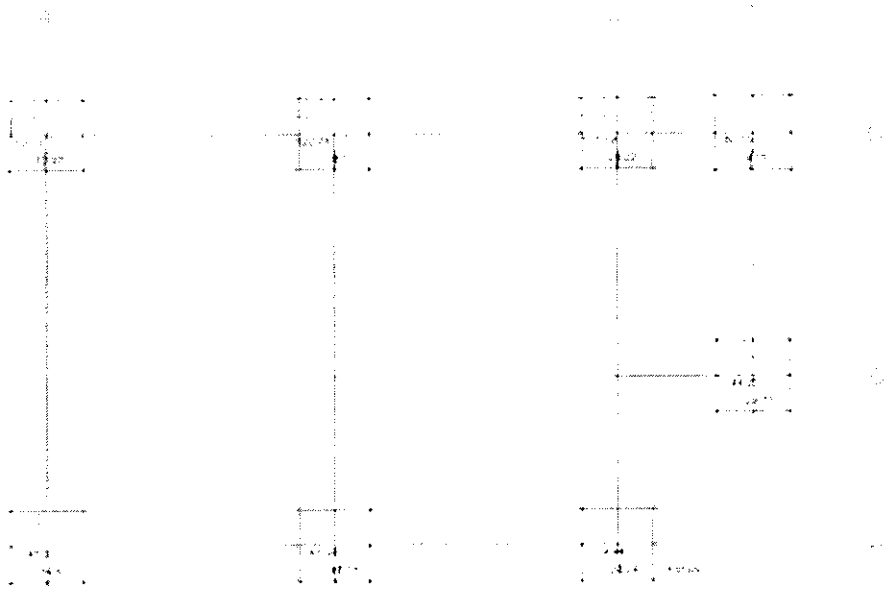
9.2.2.5. Resultados, diseño elementos



Zapatas - Strip A, Mmax (kN-m)



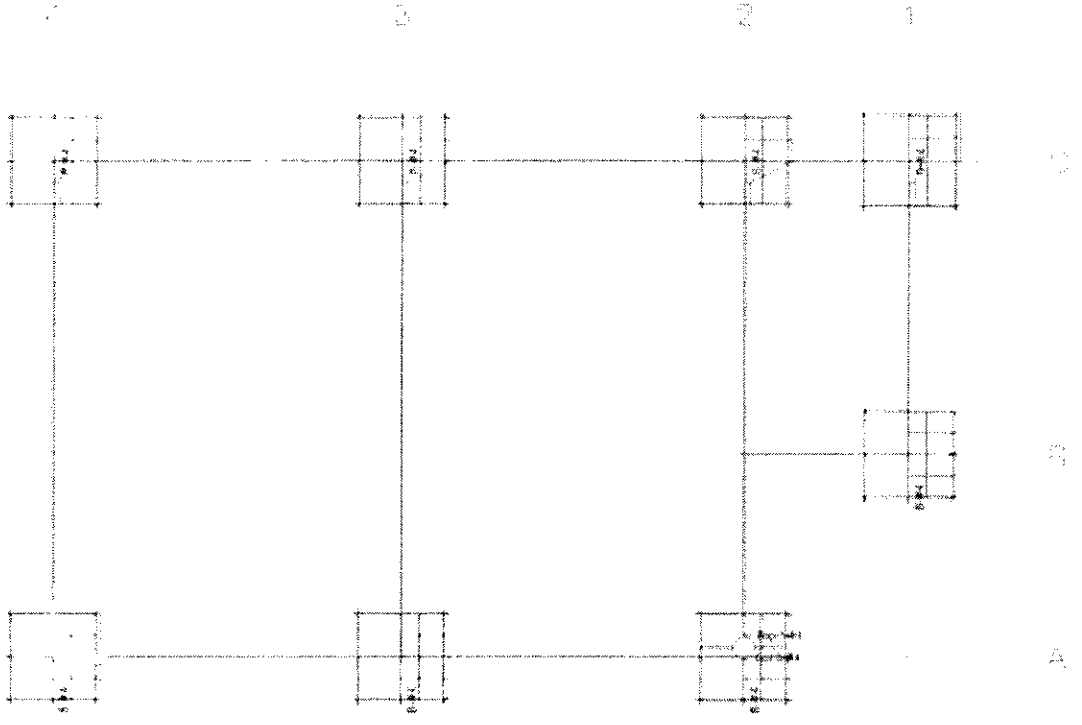
Zapatas - Strip A, Mmin (kN-m)



Zapatas - Strip A, Vmax (kN)



Zapatas - Strip A, Vmin (kN)



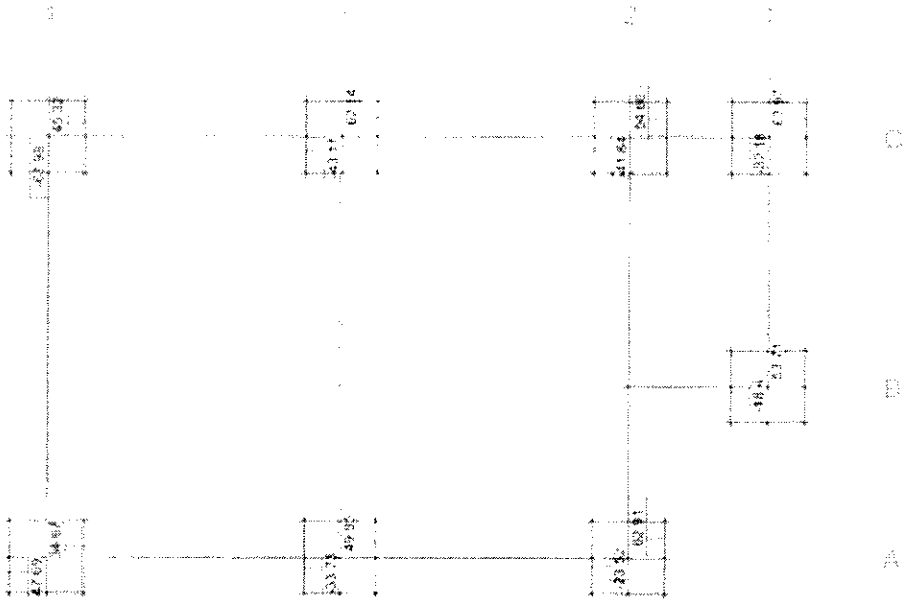
Zapatas - Strip A, Acero de Refuerzo



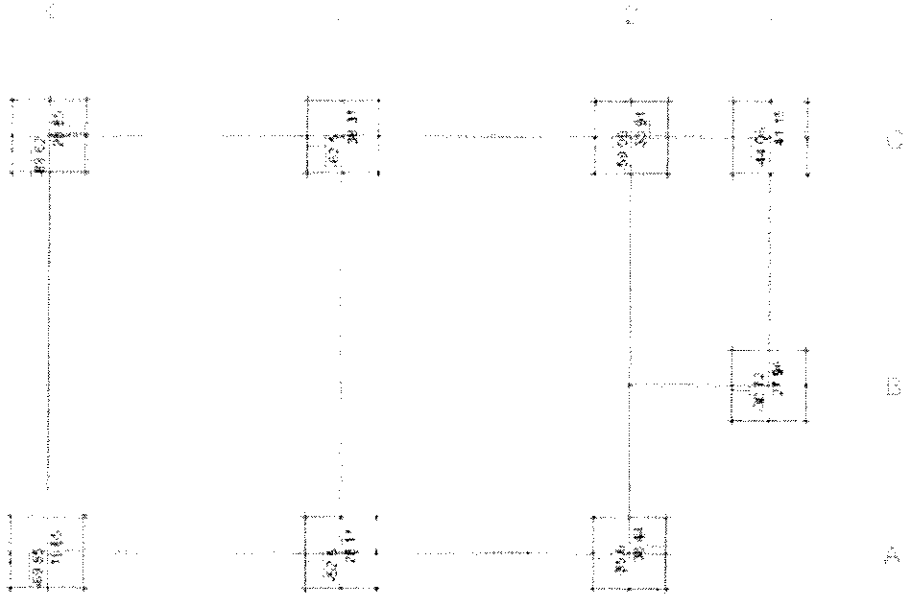
Zapatas - Strip B, Mmax (kN-m)



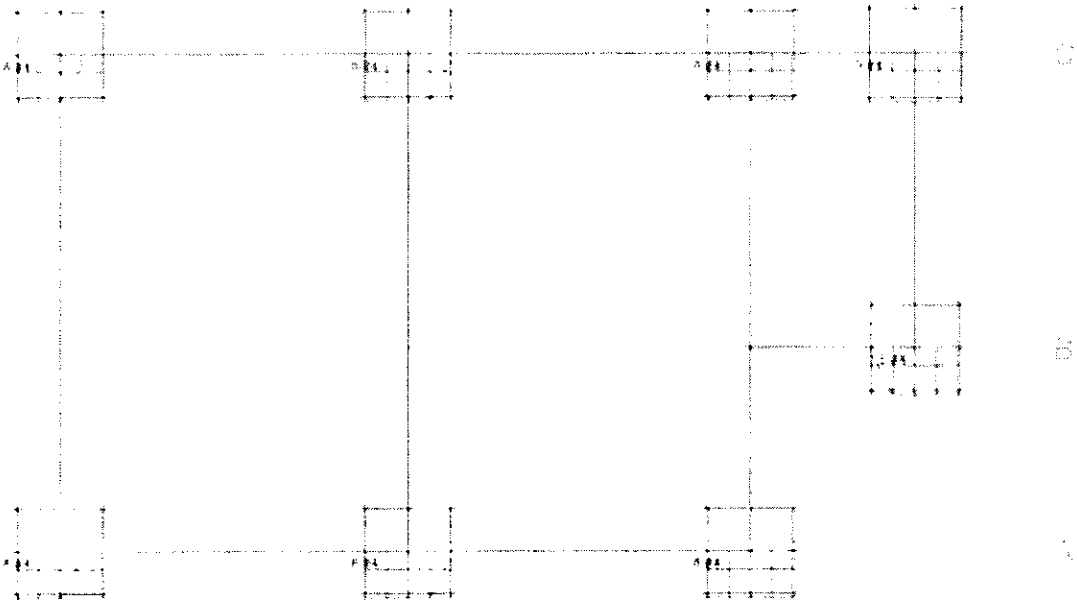
Zapatas - Strip B, Mmin (kN-m)



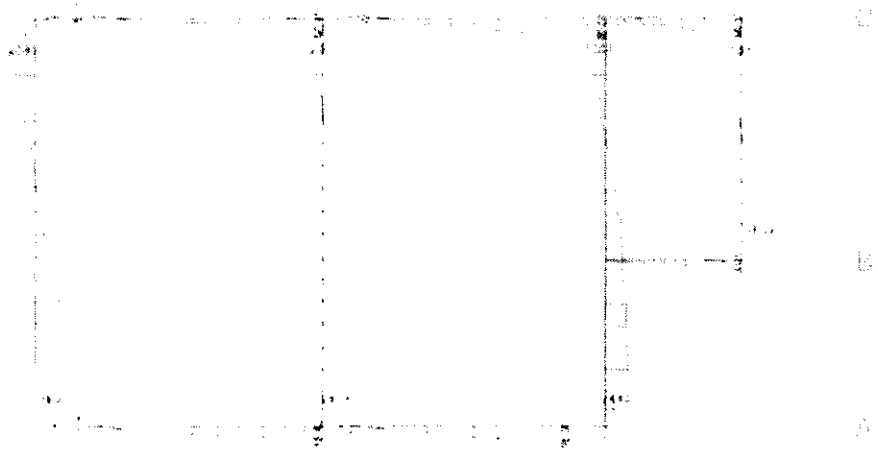
Zapatas - Strip B, Vmax (kN)



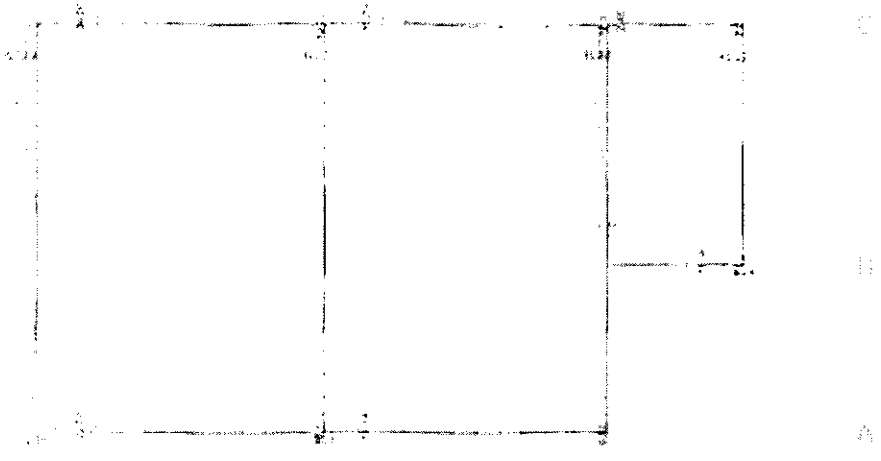
Zapatas - Strip B, Vmin (kN)



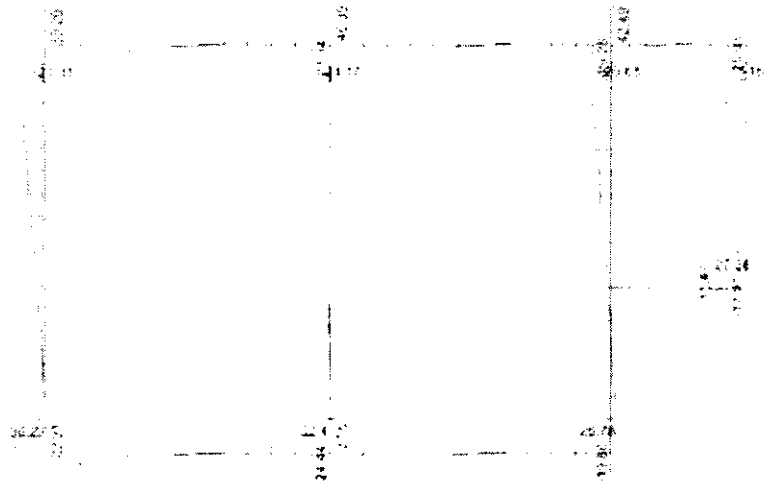
Zapatas - Strip B, Acero de Refuerzo



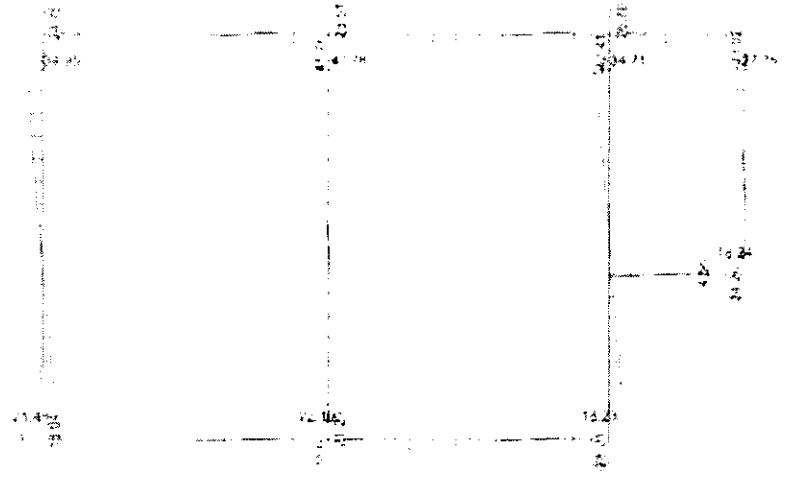
Vigas, Mmax (kN-m)



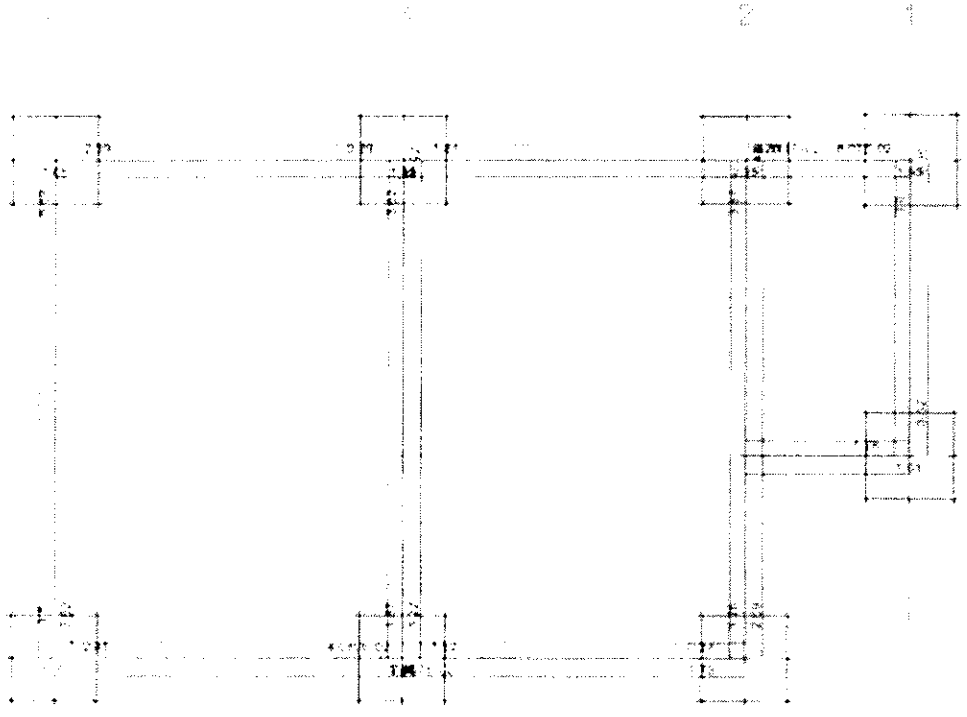
Vigas, Mmin (kN-m)



Vigas, Vmax (kN)



Vigas, Vmin (kN)



Vigas, Acero de refuerzo a flexion

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9.2.3. Suelo Tipo E

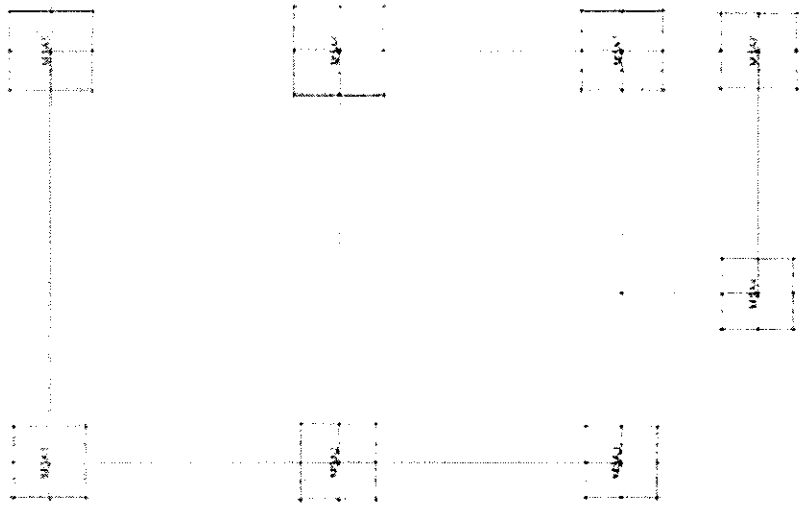
9.2.3.1. Modelo Matematico



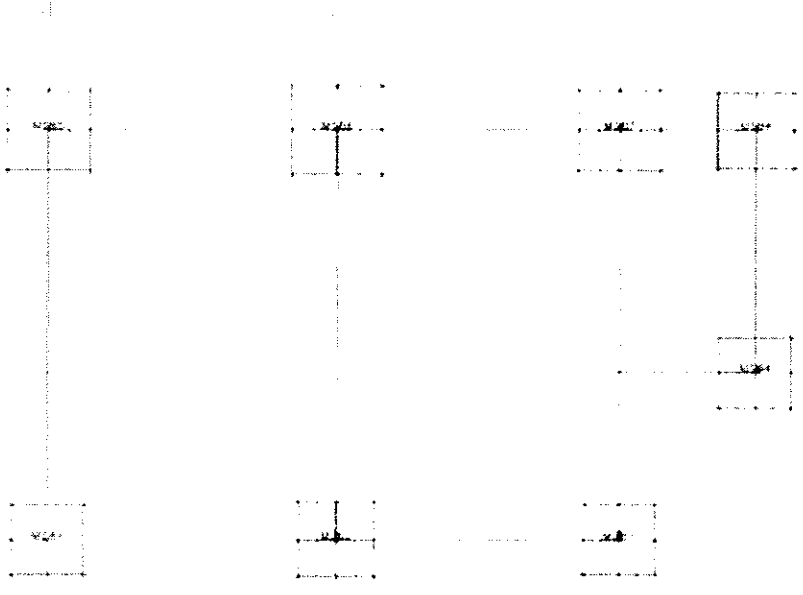
Planta Cimentacion



Numeracion Nudos y elementos



Identificacion Strip A



Identificacion Strip B

9.2.3.2. Coordenadas, asignaciones

SAFE v12.3.2 7/3/13 11:38:54

Table: Coordinate Systems

CoordSys	Type	OriginGx m	OriginGy m	RotAngle Degrees
GLOBAL	Cartesian	0.00	0.00	0.00

Table: Grid Lines

CoordSys	AxisDir	GridID	Ordinate m	Visible	BubbleLoc	GridColor	BubbleSize mm	HideAll
GLOBAL	X	4	0.00	Yes	End	10461087	1000.00	No
GLOBAL	X	3	6.00	Yes	End			
GLOBAL	X	2	12.00	Yes	End			
GLOBAL	X	1	14.85	Yes	End			
GLOBAL	Y	A	0.00	Yes	End			
GLOBAL	Y	B	3.55	Yes	End			
GLOBAL	Y	C	8.70	Yes	End			

Table: Object Geometry - Areas 01 - General, Part 1 of 2

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	22500D0.00	Slab
2	4	94	95	96	97	No	256000D.00	Slab
3	4	12	13	14	15	No	225000D.00	Slab
4	4	17	1B	19	20	No	2250000.00	Slab
5	4	55	56	71	72	No	2B9000D.00	Slab
6	4	106	107	108	1D9	No	36100D0.00	Slab
7	4	84	85	86	87	No	2890000.00	Slab
B	4	76	77	78	79	No	25600D0.00	Slab

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	110	0.00	-0.75			0.75	0.75
MSA1	111	0.00	0.75	0.75	0.75		
MSA2	112	6.00	-0.80			0.80	0.80
MSA2	113	6.00	0.80	0.80	0.80		
MSA3	114	12.00	-0.75			0.75	0.75
MSA3	115	12.00	0.75	0.75	0.75		
MSA4	116	14.85	2.80			0.75	0.75
MSA4	117	14.85	4.30	0.75	0.75		
MSA5	118	0.00	7.85			0.85	0.85
MSA5	119	0.00	9.55	0.85	0.85		
MSA6	120	6.00	7.75			0.95	0.95
MSA6	121	6.00	9.65	0.95	0.95		
MSA7	122	12.00	7.85			0.85	0.85
MSA7	123	12.00	9.55	0.85	0.85		
MSA8	124	14.85	7.90			0.80	0.80
MSA8	125	14.85	9.50	0.80	0.80		
MSB1	126	-0.75	0.00			0.75	0.75
MSB1	127	0.75	0.00	0.75	0.75		
MSB2	128	5.20	0.00			0.80	0.80
MSB2	129	6.80	0.00	0.80	0.80		
MSB3	130	11.25	0.00			0.75	0.75
MSB3	131	12.75	0.00	0.75	0.75		
MSB4	132	14.10	3.55			0.75	0.75
MSB4	133	15.60	3.55	0.75	0.75		
MSB5	134	-0.85	8.70			0.85	0.85
MSB5	135	0.85	8.70	0.85	0.85		
MSB6	136	5.05	8.70			0.95	0.95

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSB6	137	6.95	8.70	0.95	0.95		
MSB7	138	11.15	8.70			0.85	0.85
MSB7	139	12.85	8.70	0.85	0.85		
MSB8	140	14.05	8.70			0.80	0.80
MSB8	141	15.65	8.70	0.80	0.80		

Table: Object Geometry - Lines 01 - General

Line	PointI	PointJ	LineType	CurveType	Length m
1	7	8	Beam	Straight	6.00
2	8	9	Beam	Straight	6.00
3	22	23	Beam	Straight	6.00
4	23	24	Beam	Straight	6.00
5	24	25	Beam	Straight	2.85
6	7	22	Beam	Straight	8.70
7	8	23	Beam	Straight	8.70
8	9	24	Beam	Straight	8.70
9	73	16	Beam	Straight	2.85
10	16	25	Beam	Straight	5.15

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
1	-0.75	-0.75	0.00	No
2	0.75	-0.75	0.00	No
3	0.75	0.75	0.00	No
4	-0.75	0.75	0.00	No
7	0.00	0.00	0.00	Yes
8	6.00	0.00	0.00	Yes
9	12.00	0.00	0.00	Yes
12	11.25	-0.75	0.00	No
13	12.75	-0.75	0.00	No
14	12.75	0.75	0.00	No
15	11.25	0.75	0.00	No
16	14.85	3.55	0.00	Yes
17	14.10	2.80	0.00	No
18	15.60	2.80	0.00	No
19	15.60	4.30	0.00	No
20	14.10	4.30	0.00	No
22	0.00	8.70	0.00	Yes
23	6.00	8.70	0.00	Yes
24	12.00	8.70	0.00	Yes
25	14.85	8.70	0.00	Yes
55	-0.85	7.85	0.00	No
56	0.85	7.85	0.00	No
71	0.85	9.55	0.00	No
72	-0.85	9.55	0.00	No
73	12.00	3.55	0.00	No
76	14.05	7.90	0.00	No
77	15.65	7.90	0.00	No
78	15.65	9.50	0.00	No
79	14.05	9.50	0.00	No
84	11.15	7.85	0.00	No
85	12.85	7.85	0.00	No
86	12.85	9.55	0.00	No
87	11.15	9.55	0.00	No
94	5.20	-0.80	0.00	No
95	6.80	-0.80	0.00	No
96	6.80	0.80	0.00	No
97	5.20	0.80	0.00	No
106	5.05	7.75	0.00	No
107	6.95	7.75	0.00	No
108	6.95	9.65	0.00	No
109	5.05	9.65	0.00	No
110	0.00	-0.75	0.00	No
111	0.00	0.75	0.00	No
112	6.00	-0.80	0.00	No
113	6.00	0.80	0.00	No
114	12.00	-0.75	0.00	No
115	12.00	0.75	0.00	No
116	14.85	2.80	0.00	No
117	14.85	4.30	0.00	No
118	0.00	7.85	0.00	No

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
119	0.00	9.55	0.00	No
120	6.00	7.75	0.00	No
121	6.00	9.65	0.00	No
122	12.00	7.85	0.00	No
123	12.00	9.55	0.00	No
124	14.85	7.90	0.00	No
125	14.85	9.50	0.00	No
126	-0.75	0.00	0.00	No
127	0.75	0.00	0.00	No
128	5.20	0.00	0.00	No
129	6.80	0.00	0.00	No
130	11.25	0.00	0.00	No
131	12.75	0.00	0.00	No
132	14.10	3.55	0.00	No
133	15.60	3.55	0.00	No
134	-0.85	8.70	0.00	No
135	0.85	8.70	0.00	No
136	5.05	8.70	0.00	No
137	6.95	8.70	0.00	No
138	11.15	8.70	0.00	No
139	12.85	8.70	0.00	No
140	14.05	8.70	0.00	No
141	15.65	8.70	0.00	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
1	Yes	Yes	No	No	No	No
2	Yes	Yes	No	No	No	No
3	Yes	Yes	No	No	No	No
4	Yes	Yes	No	No	No	No
12	Yes	Yes	No	No	No	No
13	Yes	Yes	No	No	No	No
14	Yes	Yes	No	No	No	No
15	Yes	Yes	No	No	No	No
17	Yes	Yes	No	No	No	No
18	Yes	Yes	No	No	No	No
19	Yes	Yes	No	No	No	No
20	Yes	Yes	No	No	No	No
55	Yes	Yes	No	No	No	No
56	Yes	Yes	No	No	No	No
71	Yes	Yes	No	No	No	No
72	Yes	Yes	No	No	No	No
76	Yes	Yes	No	No	No	No
77	Yes	Yes	No	No	No	No
78	Yes	Yes	No	No	No	No
79	Yes	Yes	No	No	No	No
84	Yes	Yes	No	No	No	No
85	Yes	Yes	No	No	No	No
86	Yes	Yes	No	No	No	No
87	Yes	Yes	No	No	No	No
94	Yes	Yes	No	No	No	No
95	Yes	Yes	No	No	No	No
96	Yes	Yes	No	No	No	No
97	Yes	Yes	No	No	No	No
106	Yes	Yes	No	No	No	No
107	Yes	Yes	No	No	No	No
108	Yes	Yes	No	No	No	No
109	Yes	Yes	No	No	No	No

Table: Beam Property Assignments

Line	BeamProp
1	S30x40
2	S30x40
3	S30x40
4	S30x40
5	S30x40
6	S30x40
7	S30x40
8	S30x40
9	S30x40
10	S30x40

Table: Slab Property Assignments

Area	SlabProp
1	ZPT
2	ZPT
3	ZPT
4	ZPT
5	ZPT
6	ZPT
7	ZPT
8	ZPT

Table: Soil Property Assignments

Area	SoilProp
1	SOIL_E
2	SOIL_E
3	SOIL_E
4	SOIL_E
5	SOIL_E
6	SOIL_E
7	SOIL_E
8	SOIL_E

9.2.3.3. Cargas, combinaciones, asignación de cargas

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	Fx kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	xDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-18.03	-12.81	13.40	-32.62	-39.53	-0.95	300.00
7	Ey	-11.29	-40.01	13.81	-101.57	-24.43	-2.75	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-23.45	-8.73	3.45	-22.68	-47.25	-0.95	300.00
8	Ey	-14.19	-28.38	11.29	-73.86	-28.57	-2.75	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-18.69	-9.73	4.93	-22.75	-40.47	-0.95	300.00
9	Ey	-11.46	-29.61	14.46	-74.33	-24.67	-2.75	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-17.92	-13.26	18.86	-30.13	-39.85	-0.95	300.00
16	Ey	-7.08	-42.20	27.99	-95.73	-15.21	-2.75	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-20.59	-13.26	12.83	-33.23	-44.58	-0.95	300.00
22	Ey	-7.96	-40.29	15.49	-101.96	-16.96	-2.75	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-24.69	-8.66	7.68	-22.57	-50.43	-0.95	300.00
23	Ey	-9.18	-28.41	12.00	-73.90	-18.70	-2.75	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-26.30	-9.94	34.64	-23.75	-52.72	-0.95	300.00
24	Ey	-9.75	-29.11	17.19	-73.68	-19.52	-2.75	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-24.04	-12.35	34.06	-28.83	-49.49	-0.95	300.00
25	Ey	-9.13	-38.34	30.00	-90.28	-18.63	-2.75	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

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9.2.3.4. Esfuerzos sobre el suelo

Table: Soil Pressures - Enveloping Summary

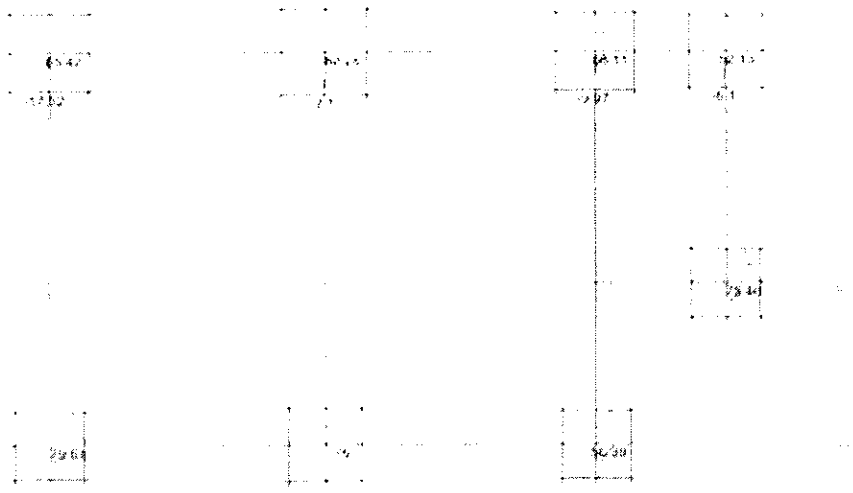
Panel	OutputItem	surfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-40.66	Envol.-SRv	Combination	0.38	0.38
1	MinPress	-92.80	Envol.-SRV	Combination	5.20	0.80
2	MaxPress	-37.19	Envol.-SRV	Combination	0.43	8.28
2	MinPress	-82.46	Envol.-SRV	Combination	5.53	8.23
3	MaxPress	-37.97	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-92.34	Envol.-SRV	Combination	6.00	0.80
4	MaxPress	-44.12	Envol.-SRV	Combination	6.48	8.23
4	MinPress	-93.17	Envol.-SRV	Combination	11.15	8.70
5	MaxPress	-24.42	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-76.23	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-32.07	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-90.43	Envol.-SRV	Combination	12.00	8.70

Table: Soil Pressures - Summary

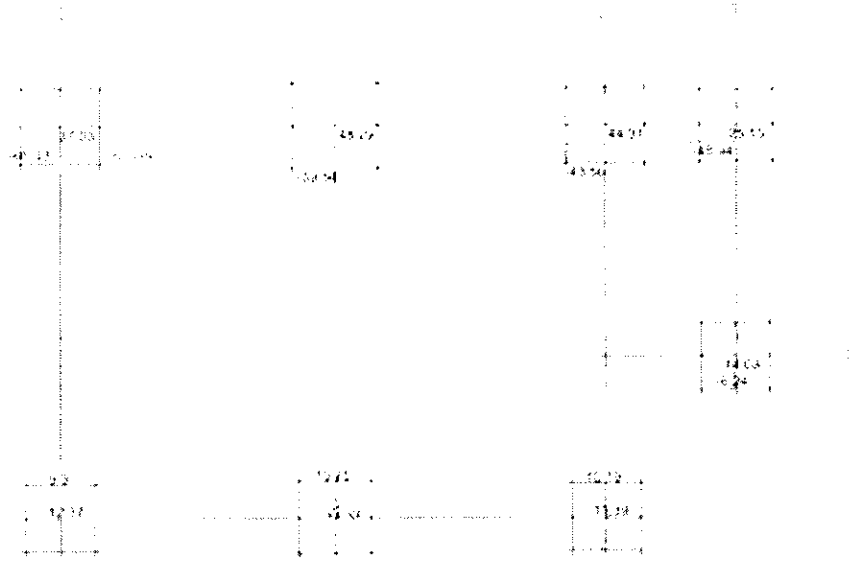
Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRv	Combination	-40.66	-92.80	0.38	0.38	5.20	0.80
2	Envol.-SRV	Combination	-37.19	-82.46	0.43	8.28	5.53	8.23
3	Envol.-SRV	Combination	-37.97	-92.34	11.63	0.38	6.00	0.80
4	Envol.-SRV	Combination	-44.12	-93.17	6.48	8.23	11.15	8.70
5	Envol.-SRV	Combination	-24.42	-76.23	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-32.07	-90.43	14.48	3.93	12.00	8.70

Capacidad admisible de suelo E, σ_{adm} = 100 kN/m² > Soil Pressures Max/Min => OK

9.2.3.5. Resultados, diseño elementos



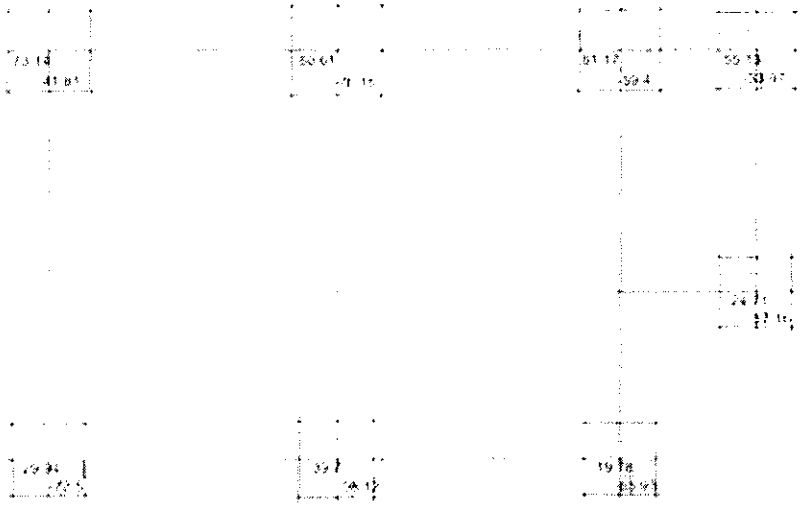
Zapatas - Strip A, Mmax (kN-m)



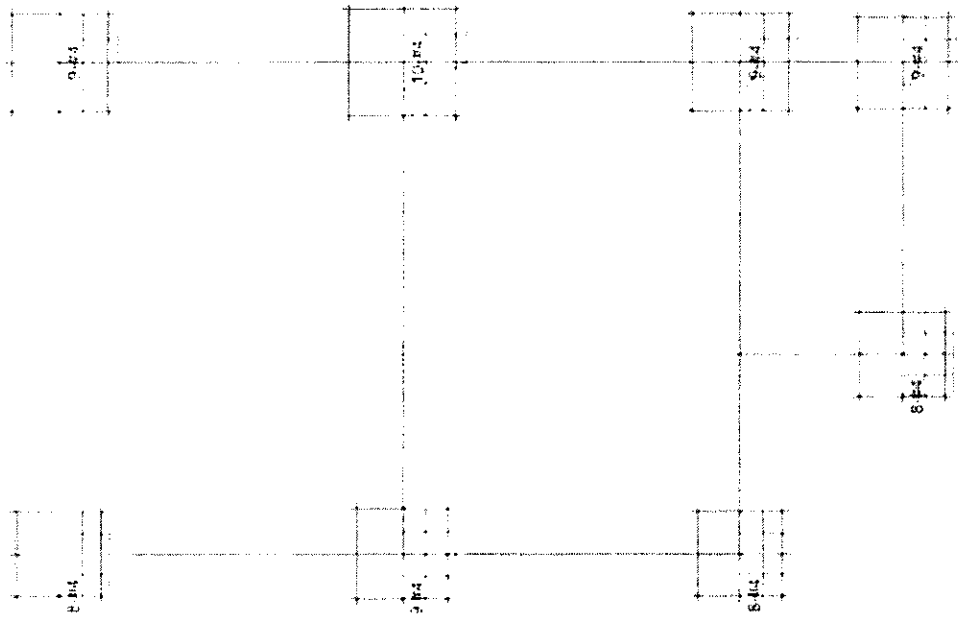
Zapatas - Strip A, Mmin (kN-m)



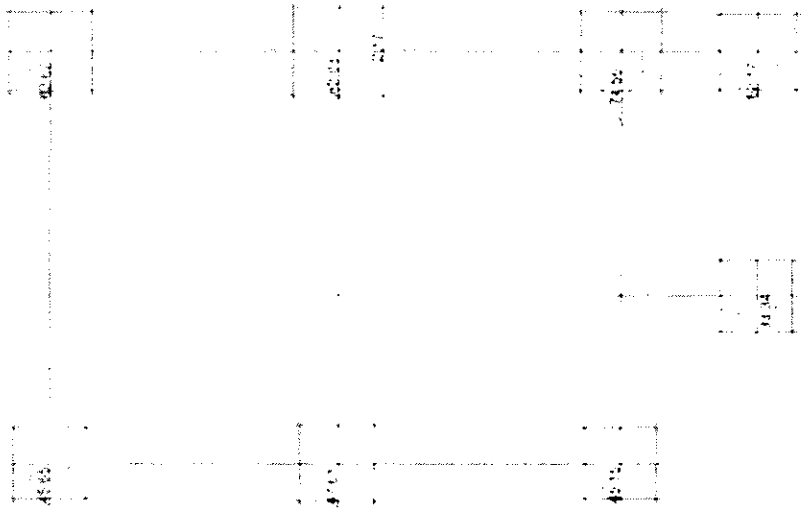
Zapatas - Strip A, Vmax (kN)



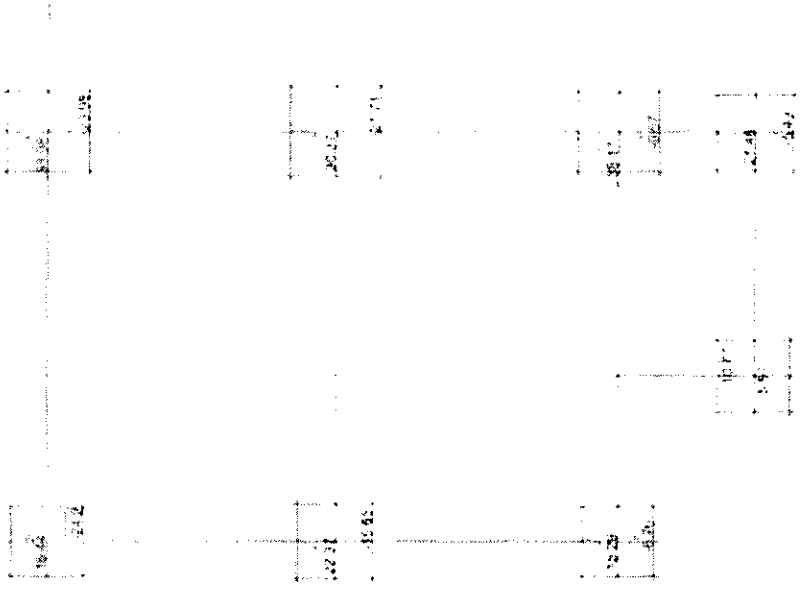
Zapatas - Strip A, Vmin (kN)



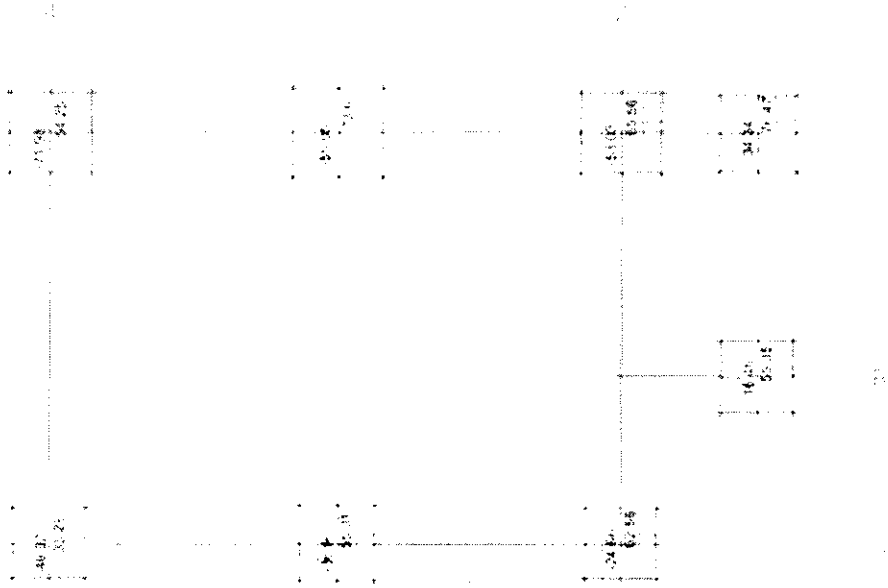
Zapatas - Strip A, Acero de Refuerzo



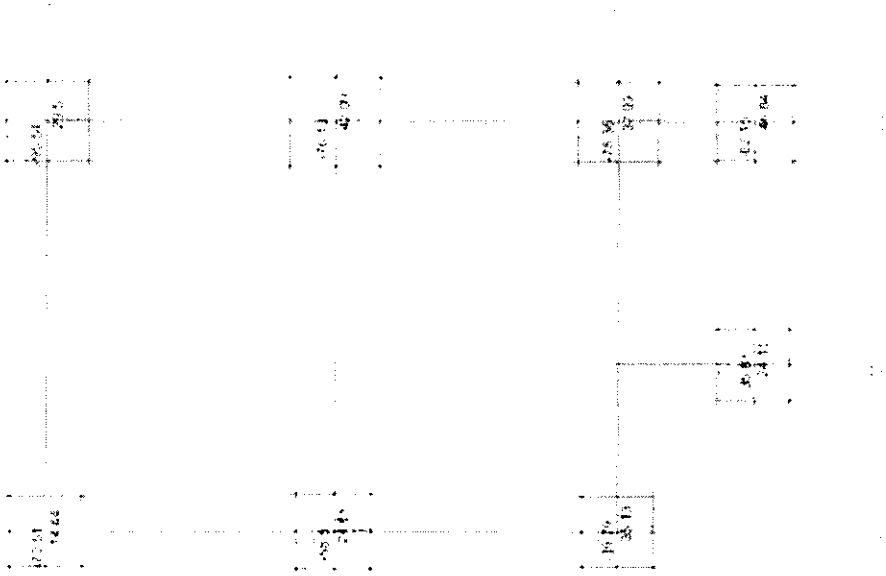
Zapatas - Strip B, Mmax (kN-m)



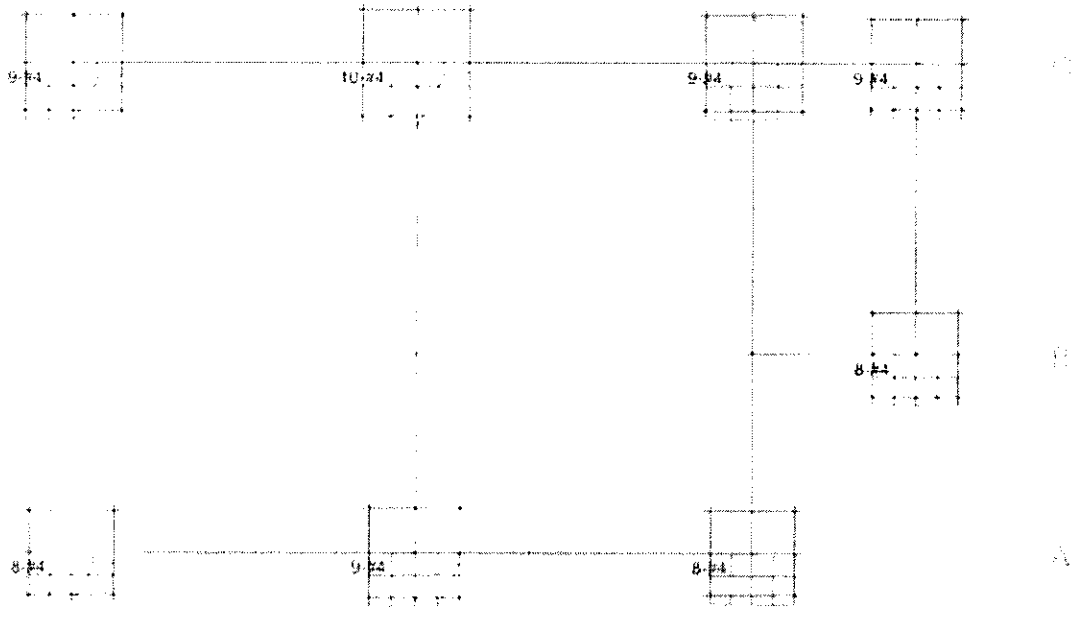
Zapatas - Strip B, Mmin (kN-m)



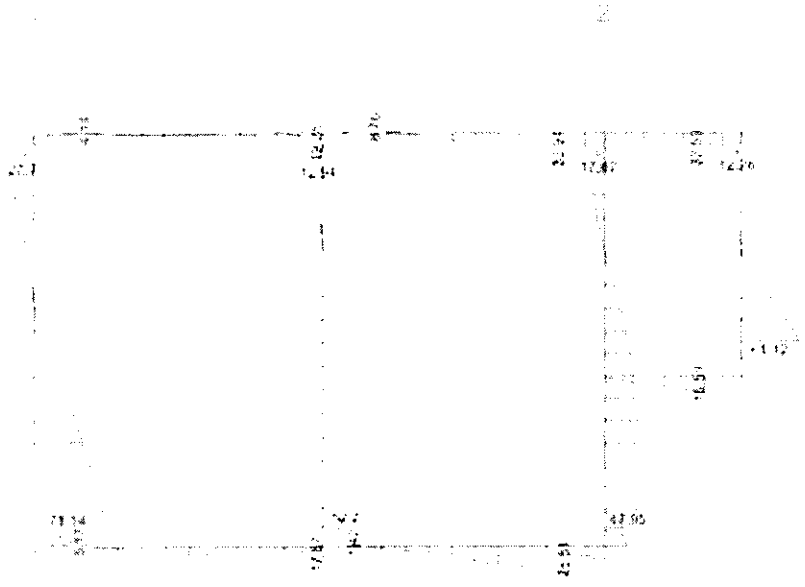
Zapatas - Strip B, Vmax (kN)



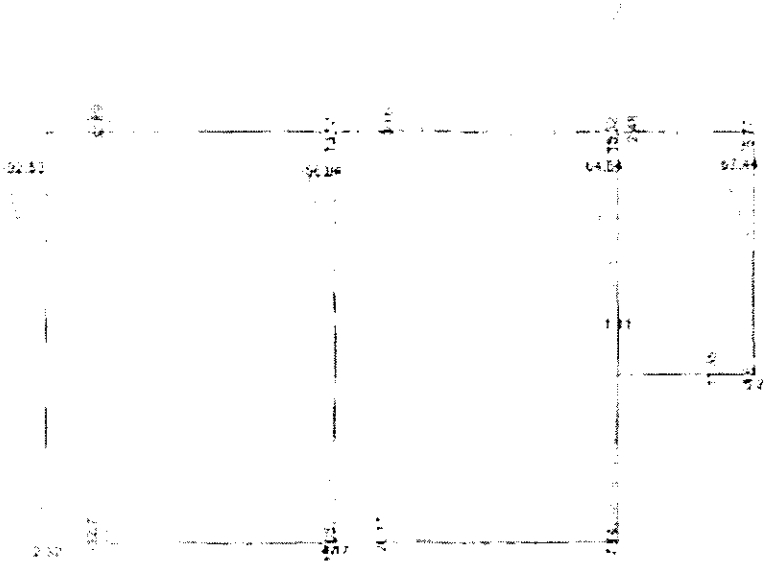
Zapatas - Strip B, Vmin (kN)



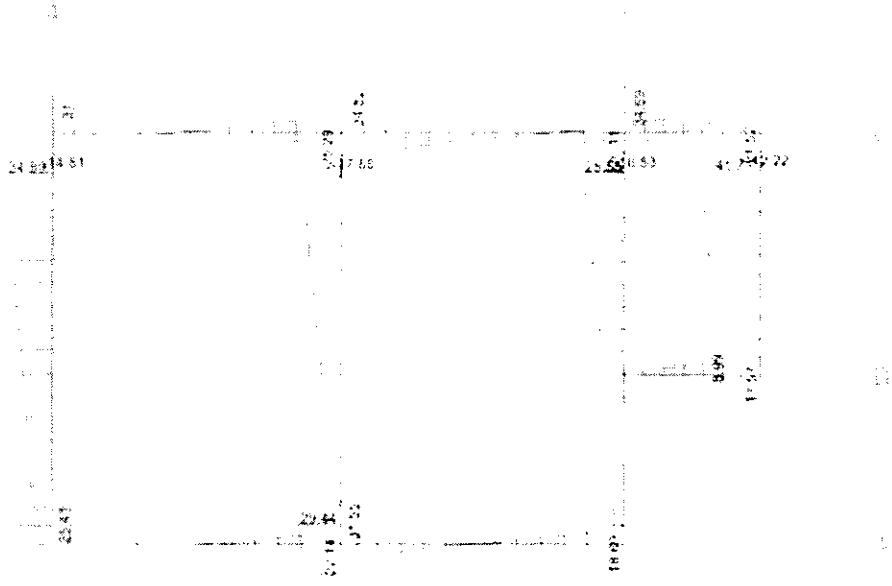
Zapatas - Strip B, Acero de Refuerzo



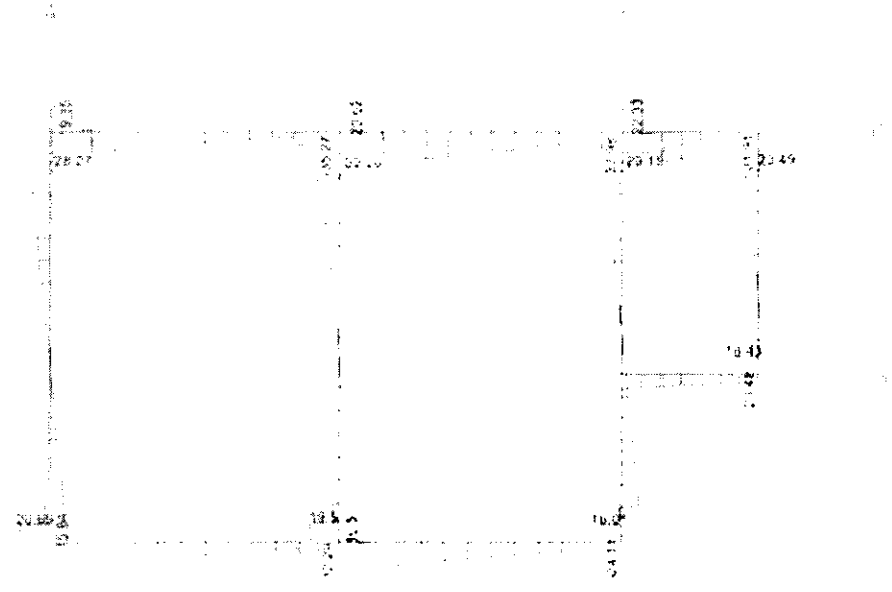
Vigas, Mmax (kN-m)



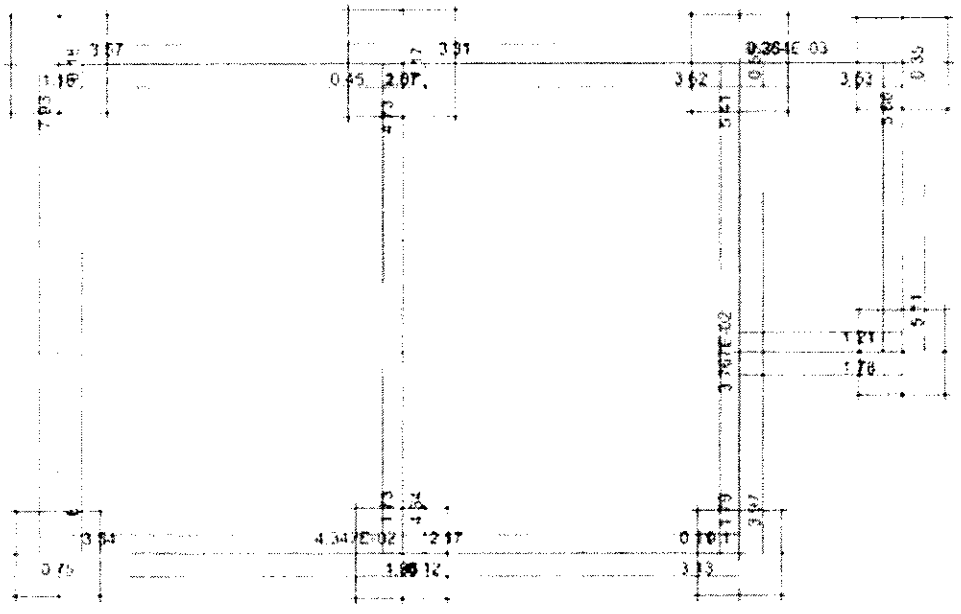
Vigas, Mmin (kN-m)



Vigas, Vmax (kN)



Vigas, Vmin (kN)



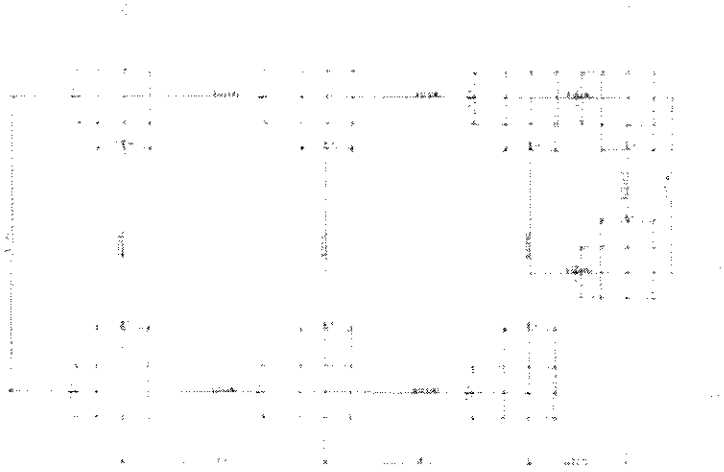
Vigas, Acero de refuerzo a flexion

1,03

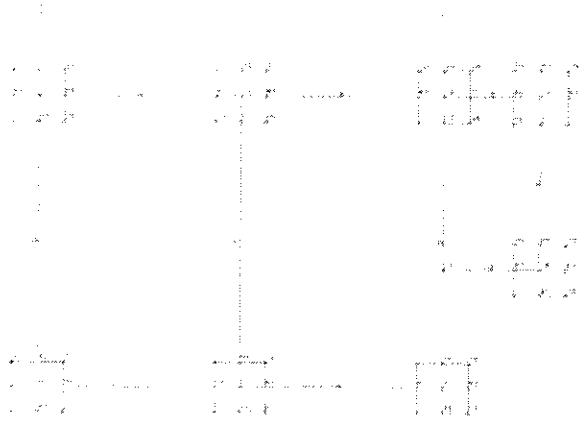
9.3. Zona Baja

9.3.1. Suelo Tipo AB / CD

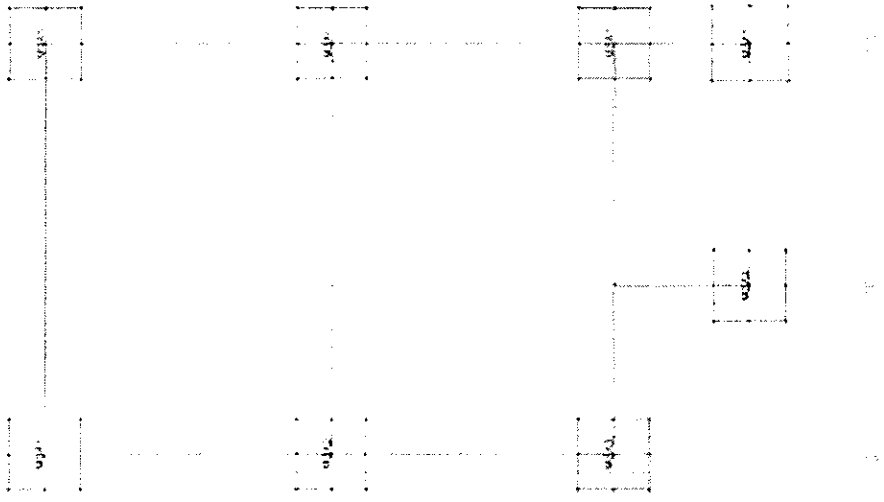
9.3.1.1. Modelo Matematico



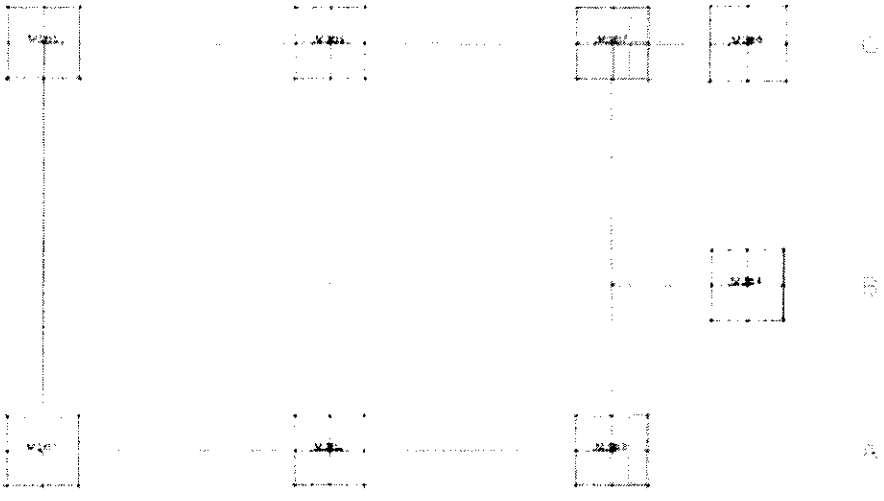
Planta Cimentacion



Numeracion Nudos y Lineas



Identificacion Strip A



Identificacion Strip B

9.3.1.2. Coordenadas, asignaciones

SAFE v12.3.2 7/3/13 12:30:35

Table: Coordinate Systems

CoordSys	Type	OriginGx m	OriginGy m	RotAngle Degrees
GLOBAL	Cartesian	0.00	0.00	0.00

Table: Grid Lines

CoordSys	AxisDir	GridID	Ordinate m	Visible	BubbleLoc	GridColor	BubbleSize mm	HideAll
GLOBAL	X	4	0.00	Yes	End	10461087	1000.00	No
GLOBAL	X	3	6.00	Yes	End			
GLOBAL	X	2	12.00	Yes	End			
GLOBAL	X	1	14.85	Yes	End			
GLOBAL	Y	A	0.00	Yes	End			
GLOBAL	Y	B	3.55	Yes	End			
GLOBAL	Y	C	8.70	Yes	End			

Table: Object Geometry - Areas 01 - General, Part 1 of 2 SUELO AB

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	2250000.00	Slab
2	4	5	6	10	11	No	2250000.00	Slab
3	4	12	13	14	15	No	2250000.00	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	21	26	27	28	No	2250000.00	Slab
6	4	29	30	31	32	No	2250000.00	Slab
7	4	33	34	35	36	No	2250000.00	Slab
8	4	37	38	39	40	No	2250000.00	Slab

Table: Object Geometry - Areas 01 - General, Part 1 of 2 SUELO CD

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	2250000.00	Slab
2	4	5	6	10	11	No	2250000.00	Slab
3	4	12	13	14	15	No	2250000.00	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	21	26	27	28	No	2250000.00	Slab
6	4	29	30	31	32	No	2250000.00	Slab
7	4	33	34	35	36	No	2250000.00	Slab
8	4	76	77	78	79	No	2560000.00	Slab

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	41	0.00	-0.75			0.75	0.75
MSA1	42	0.00	0.75	0.75	0.75		
MSA2	43	6.00	-0.75			0.75	0.75
MSA2	44	6.00	0.75	0.75	0.75		
MSA3	45	12.00	-0.75			0.75	0.75
MSA3	46	12.00	0.75	0.75	0.75		
MSA4	47	14.85	2.80			0.75	0.75
MSA4	48	14.85	4.30	0.75	0.75		
MSA5	49	0.00	7.95			0.75	0.75
MSA5	50	0.00	9.45	0.75	0.75		
MSA6	51	6.00	7.95			0.75	0.75
MSA6	52	6.00	9.45	0.75	0.75		
MSA7	53	12.00	7.95			0.75	0.75
MSA7	54	12.00	9.45	0.75	0.75		
MSA8	55	14.85	7.95			0.75	0.75
MSA8	56	14.85	9.45	0.75	0.75		
MSB1	57	-0.75	0.00			0.75	0.75
MSB1	58	0.75	0.00	0.75	0.75		
MSB2	59	5.25	0.00			0.75	0.75
MSB2	60	6.75	0.00	0.75	0.75		
MSB3	61	11.25	0.00			0.75	0.75
MSB3	62	12.75	0.00	0.75	0.75		

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m	m
	MSB4	63	14.10	3.55			0.75	0.75
	MSB4	64	15.60	3.55	0.75	0.75		
	MSB5	65	-0.75	8.70			0.75	0.75
	MSB5	66	0.75	8.70	0.75	0.75		
	MSB6	67	5.25	8.70			0.75	0.75
	MSB6	68	6.75	8.70	0.75	0.75		
	MSB7	69	11.25	8.70			0.75	0.75
	MSB7	70	12.75	8.70	0.75	0.75		
	MSB8	71	14.10	8.70			0.75	0.75
	MSB8	72	15.60	8.70	0.75	0.75		

Table: object Geometry - Lines 01 - General

Line	PointI	PointJ	LineType	CurveType	Length m
1	7	8	Beam	Straight	6.00
2	8	9	Beam	Straight	6.00
3	22	23	Beam	Straight	6.00
4	23	24	Beam	Straight	6.00
5	24	25	Beam	Straight	2.85
6	7	22	Beam	Straight	8.70
7	8	23	Beam	Straight	8.70
8	9	24	Beam	Straight	8.70
9	73	16	Beam	Straight	2.85
10	16	25	Beam	Straight	5.15

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
1	-0.75	-0.75	0.00	No
2	0.75	-0.75	0.00	No
3	0.75	0.75	0.00	No
4	-0.75	0.75	0.00	No
5	5.25	-0.75	0.00	No
6	6.75	-0.75	0.00	No
7	0.00	0.00	0.00	Yes
8	6.00	0.00	0.00	Yes
9	12.00	0.00	0.00	Yes
10	6.75	0.75	0.00	No
11	5.25	0.75	0.00	No
12	11.25	-0.75	0.00	No
13	12.75	-0.75	0.00	No
14	12.75	0.75	0.00	No
15	11.25	0.75	0.00	No
16	14.85	3.55	0.00	Yes
17	14.10	2.80	0.00	No
18	15.60	2.80	0.00	No
19	15.60	4.30	0.00	No
20	14.10	4.30	0.00	No
21	-0.75	7.95	0.00	No
22	0.00	8.70	0.00	Yes
23	6.00	8.70	0.00	Yes
24	12.00	8.70	0.00	Yes
25	14.85	8.70	0.00	Yes
26	0.75	7.95	0.00	No
27	0.75	9.45	0.00	No
28	-0.75	9.45	0.00	No
29	5.25	7.95	0.00	No
30	6.75	7.95	0.00	No
31	6.75	9.45	0.00	No
32	5.25	9.45	0.00	No
33	11.25	7.95	0.00	No
34	12.75	7.95	0.00	No
35	12.75	9.45	0.00	No
36	11.25	9.45	0.00	No
37	14.10	7.95	0.00	No
38	15.60	7.95	0.00	No
39	15.60	9.45	0.00	No
40	14.10	9.45	0.00	No
41	0.00	-0.75	0.00	No
42	0.00	0.75	0.00	No
43	6.00	-0.75	0.00	No
44	6.00	0.75	0.00	No
45	12.00	-0.75	0.00	No
46	12.00	0.75	0.00	No
47	14.85	2.80	0.00	No
48	14.85	4.30	0.00	No

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
49	0.00	7.95	0.00	No
50	0.00	9.45	0.00	No
51	6.00	7.95	0.00	No
52	6.00	9.45	0.00	No
53	12.00	7.95	0.00	No
54	12.00	9.45	0.00	No
55	14.85	7.95	0.00	No
56	14.85	9.45	0.00	No
57	-0.75	0.00	0.00	No
58	0.75	0.00	0.00	No
59	5.25	0.00	0.00	No
60	6.75	0.00	0.00	No
61	11.25	0.00	0.00	No
62	12.75	0.00	0.00	No
63	14.10	3.55	0.00	No
64	15.60	3.55	0.00	No
65	-0.75	8.70	0.00	No
66	0.75	8.70	0.00	No
67	5.25	8.70	0.00	No
68	6.75	8.70	0.00	No
69	11.25	8.70	0.00	No
70	12.75	8.70	0.00	No
71	14.10	8.70	0.00	No
72	15.60	8.70	0.00	No
73	12.00	3.55	0.00	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
1	Yes	Yes	No	No	No	No
2	Yes	Yes	No	No	No	No
3	Yes	Yes	No	No	No	No
4	Yes	Yes	No	No	No	No
5	Yes	Yes	No	No	No	No
6	Yes	Yes	No	No	No	No
10	Yes	Yes	No	No	No	No
11	Yes	Yes	No	No	No	No
12	Yes	Yes	No	No	No	No
13	Yes	Yes	No	No	No	No
14	Yes	Yes	No	No	No	No
15	Yes	Yes	No	No	No	No
17	Yes	Yes	No	No	No	No
18	Yes	Yes	No	No	No	No
19	Yes	Yes	No	No	No	No
20	Yes	Yes	No	No	No	No
21	Yes	Yes	No	No	No	No
26	Yes	Yes	No	No	No	No
27	Yes	Yes	No	No	No	No
28	Yes	Yes	No	No	No	No
29	Yes	Yes	No	No	No	No
30	Yes	Yes	No	No	No	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
31	Yes	Yes	No	No	No	No
32	Yes	Yes	No	No	No	No
33	Yes	Yes	No	No	No	No
34	Yes	Yes	No	No	No	No
35	Yes	Yes	No	No	No	No
36	Yes	Yes	No	No	No	No
37	Yes	Yes	No	No	No	No
38	Yes	Yes	No	No	No	No
39	Yes	Yes	No	No	No	No
40	Yes	Yes	No	No	No	No

Table: Beam Property Assignments

Line	BeamProp
1	S30x40
2	S30x40
3	S30x40
4	S30x40
5	S30x40
6	S30x40
7	S30x40
8	S30x40
9	S30x40
10	S30x40

Table: Slab Property Assignments

Area	SlabProp
1	ZPT
2	ZPT
3	ZPT
4	ZPT
5	ZPT
6	ZPT
7	ZPT
8	ZPT

Table: Soil Property Assignments

Area	SoilProp
1	SOIL_AB
2	SOIL_AB
3	SOIL_AB
4	SOIL_AB
5	SOIL_AB
6	SOIL_AB
7	SOIL_AB
8	SOIL_AB

9.3.1.3. Cargas, asignación de cargas SUELO AB

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	FX kN	FY kN	Fgrav kN	MX kN-m	MY kN-m	MZ kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-11.63	-7.51	8.59	-19.13	-25.51	-0.56	300.00
7	Ey	-6.70	-23.09	8.05	-58.61	-14.51	-1.59	300.00
7	OL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-15.13	-5.07	2.00	-13.17	-30.49	-0.56	300.00
8	Ey	-8.44	-16.37	6.51	-42.61	-16.98	-1.59	300.00
8	OL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-12.06	-5.73	2.92	-13.19	-26.12	-0.56	300.00
9	Ey	-6.81	-17.08	8.34	-42.88	-14.66	-1.59	300.00
9	OL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-11.59	-7.74	11.96	-17.59	-25.77	-0.56	300.00
16	Ey	-4.37	-24.35	16.21	-55.23	-9.44	-1.59	300.00
16	OL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-13.31	-7.82	8.19	-19.55	-28.83	-0.56	300.00
22	Ey	-4.93	-23.25	9.00	-58.84	-10.54	-1.59	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-15.97	-5.01	4.86	-13.08	-32.61	-0.56	300.00
23	Ey	-5.72	-16.39	6.95	-42.64	-11.66	-1.59	300.00
23	OL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-17.01	-5.90	22.38	-13.93	-34.10	-0.56	300.00
24	Ey	-6.08	-16.80	10.37	-42.52	-12.17	-1.59	300.00
24	OL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-15.55	-7.25	21.90	-16.88	-32.01	-0.56	300.00
25	Ey	-5.68	-22.12	17.55	-52.09	-11.59	-1.59	300.00
25	OL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.3.1.4. Cargas, asignación de cargas SUELO CD

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	Fx kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-17.98	-11.53	13.27	-29.37	-39.42	-0.87	300.00
7	Ey	-10.30	-35.40	12.35	-89.87	-22.29	-2.43	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-23.39	-7.78	3.06	-20.20	-47.12	-0.87	300.00
8	Ey	-12.97	-25.11	9.99	-65.34	-26.10	-2.43	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-18.63	-8.80	4.49	-20.24	-40.36	-0.87	300.00
9	Ey	-10.46	-26.20	12.79	-65.75	-22.52	-2.43	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-17.90	-11.88	18.46	-27.00	-39.82	-0.87	300.00
16	Ey	-6.74	-37.34	24.87	-84.69	-14.56	-2.43	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-20.58	-12.00	12.65	-30.02	-44.56	-0.87	300.00
22	Ey	-7.61	-35.65	13.81	-90.22	-16.24	-2.43	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-24.68	-7.69	7.49	-20.06	-50.40	-0.87	300.00
23	Ey	-8.82	-25.13	10.65	-65.38	-17.98	-2.43	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-26.29	-9.07	34.59	-21.39	-52.70	-0.87	300.00
24	Ey	-9.37	-25.76	15.95	-65.19	-18.77	-2.43	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-24.03	-11.13	33.82	-25.92	-49.47	-0.87	300.00
25	Ey	-8.75	-33.92	26.93	-79.87	-17.87	-2.43	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.3.1.5. Esfuerzos sobre el suelo AB

Table: Soil Pressures - Envelopping Summary

Panel	OutputItem	SurfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-41.26	Envol.-SRV	Combination	0.38	0.38
1	MinPress	-116.16	Envol.-SRV	Combination	5.25	0.75
2	MaxPress	-34.83	Envol.-SRV	Combination	0.38	8.33
2	MinPress	-123.49	Envol.-SRV	Combination	5.63	8.33
3	MaxPress	-39.64	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-115.02	Envol.-SRV	Combination	6.00	0.75
4	MaxPress	-51.07	Envol.-SRV	Combination	11.63	8.33
4	MinPress	-123.57	Envol.-SRV	Combination	6.00	8.33
5	MaxPress	-22.37	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-83.68	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-34.59	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-113.17	Envol.-SRV	Combination	12.00	8.70

Table: Soil Pressures - Summary

Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-41.26	-116.16	0.38	0.38	5.25	0.75
2	Envol.-SRV	Combination	-34.83	-123.49	0.38	8.33	5.63	8.33
3	Envol.-SRV	Combination	-39.64	-115.02	11.63	0.38	6.00	0.75
4	Envol.-SRV	Combination	-51.07	-123.57	11.63	8.33	6.00	8.33
5	Envol.-SRV	Combination	-22.37	-83.68	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-34.59	-113.17	14.48	3.93	12.00	8.70

Capacidad admisible de suelo AB, $_{adm}$ = 400 kN/m² > Soil Pressures Max/Min => OK

9.3.1.6. Esfuerzos sobre el suelo CD

Table: Soil Pressures - Enveloping Summary

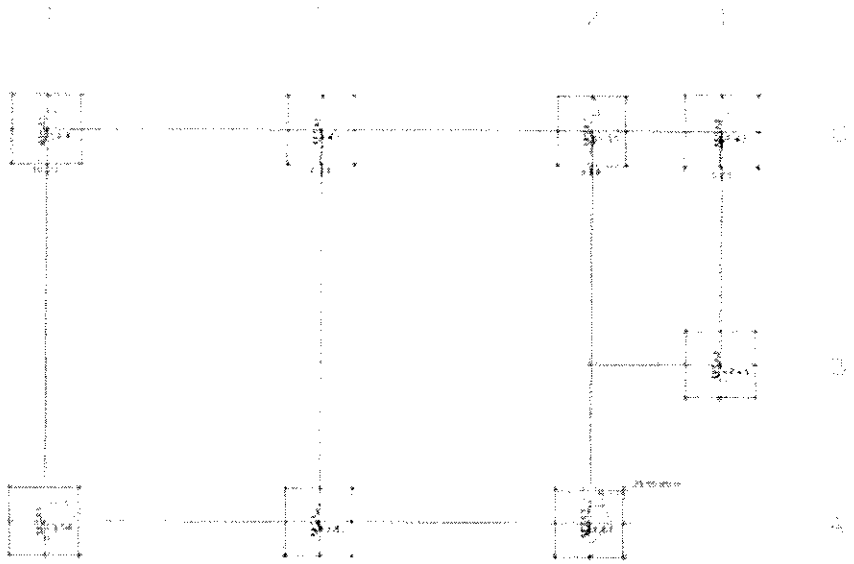
Panel	OutputItem	SurfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-41.03	Envol.-SRV	Combination	0.38	0.38
1	MinPress	-111.46	Envol.-SRV	Combination	5.25	0.75
2	MaxPress	-41.70	Envol.-SRV	Combination	0.38	8.33
2	MinPress	-122.40	Envol.-SRV	Combination	5.63	8.70
3	MaxPress	-38.74	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-110.70	Envol.-SRV	Combination	6.00	0.75
4	MaxPress	-56.04	Envol.-SRV	Combination	11.63	8.33
4	MinPress	-123.20	Envol.-SRV	Combination	6.38	8.33
5	MaxPress	-22.25	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-82.27	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-33.08	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-114.94	Envol.-SRV	Combination	12.00	8.70

Table: Soil Pressures - Summary

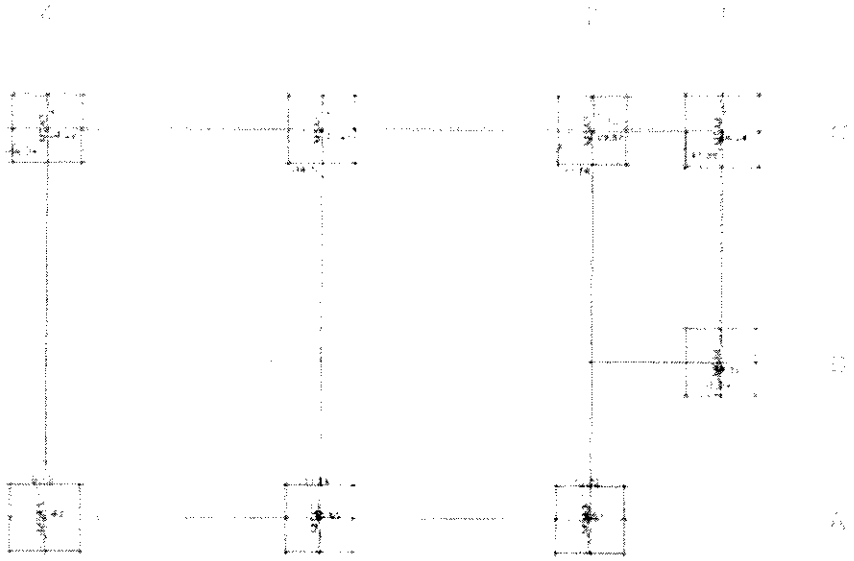
Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-41.03	-111.46	0.38	0.38	5.25	0.75
2	Envol.-SRV	Combination	-41.70	-122.40	0.38	8.33	5.63	8.70
3	Envol.-SRV	Combination	-38.74	-110.70	11.63	0.38	6.00	0.75
4	Envol.-SRV	Combination	-56.04	-123.20	11.63	8.33	6.38	8.33
5	Envol.-SRV	Combination	-22.25	-82.27	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-33.08	-114.94	14.48	3.93	12.00	8.70

Capacidad admisible de suelo AB, σ_{adm} = 150 kN/m² > Soil Pressures Max/Min => OK

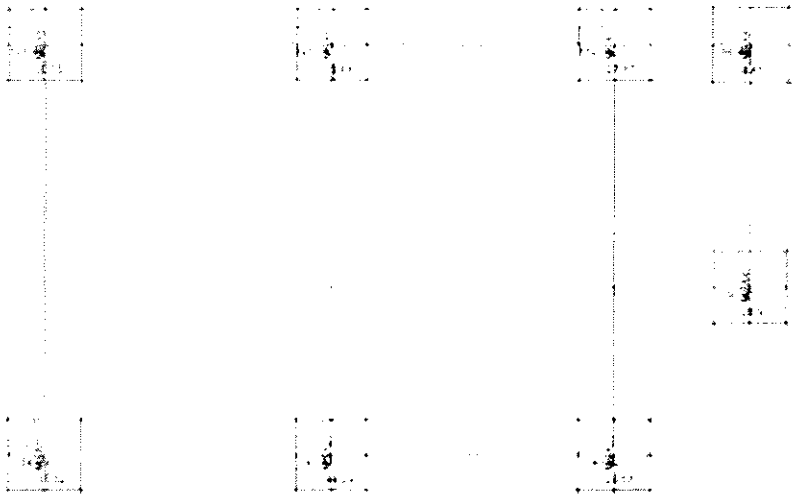
9.3.1.7. Resultados, diseño elementos



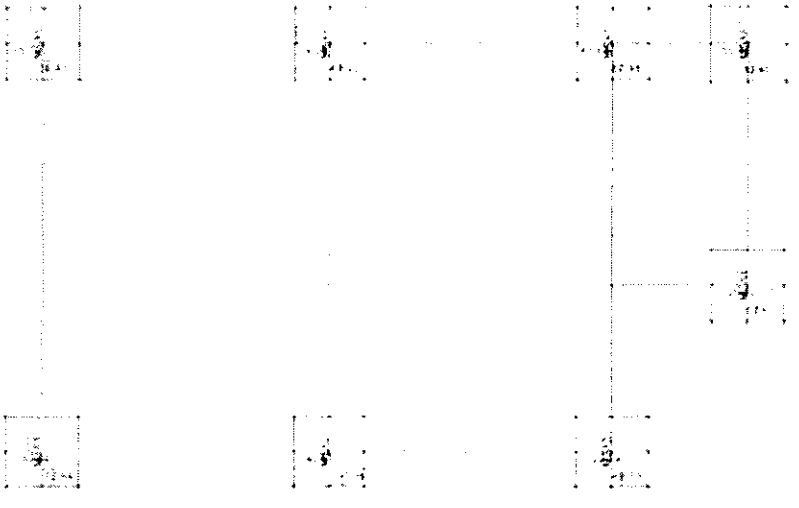
Zapatas - Strip A, Mmax (kN-m)



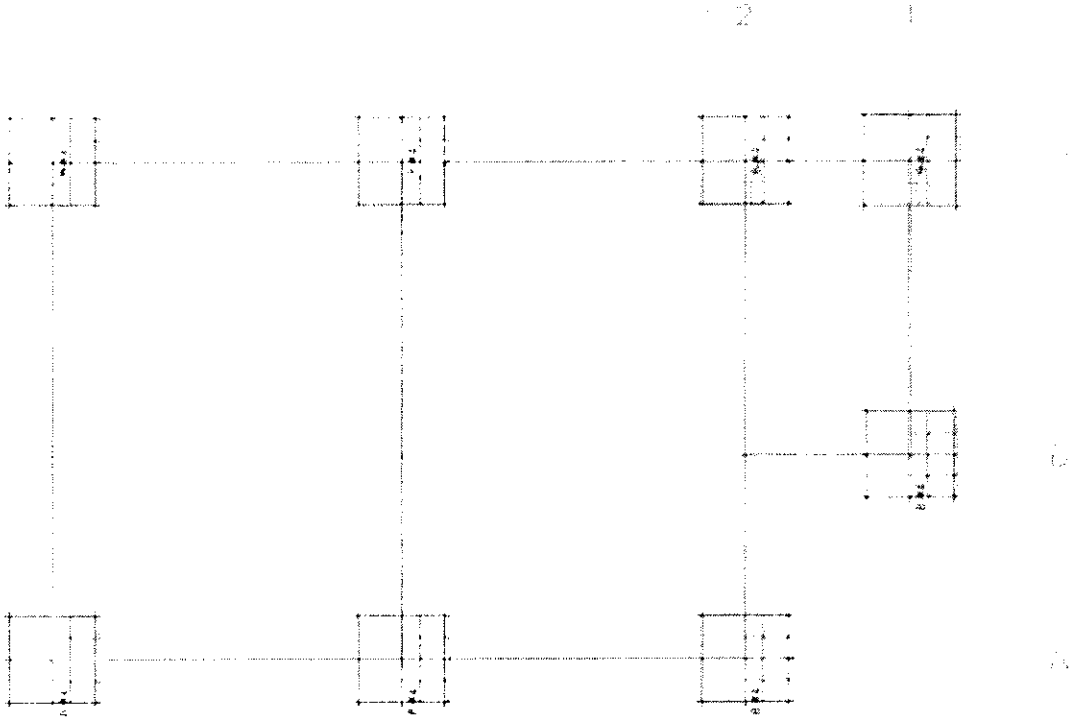
Zapatas - Strip A, Mmin (kN-m)



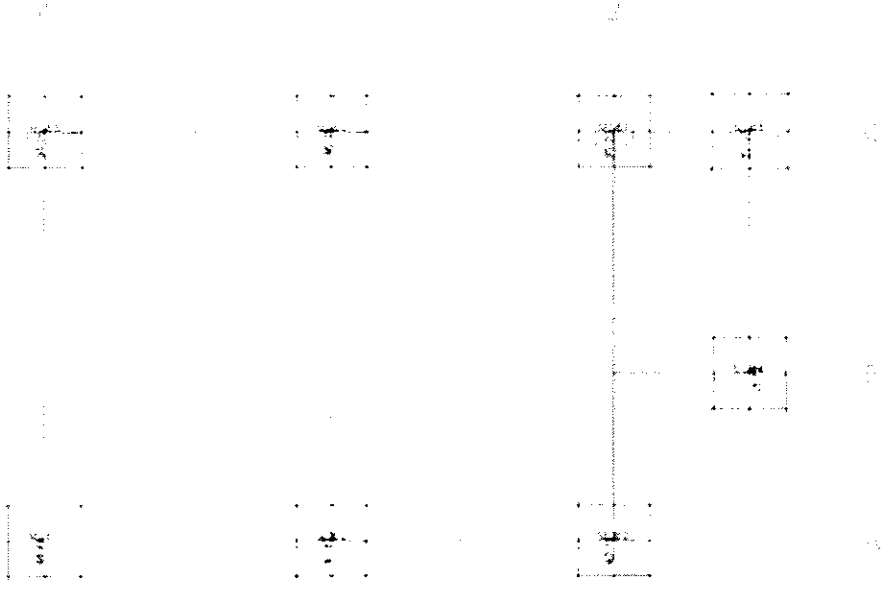
Zapatas - Strip A, Vmax (kN)



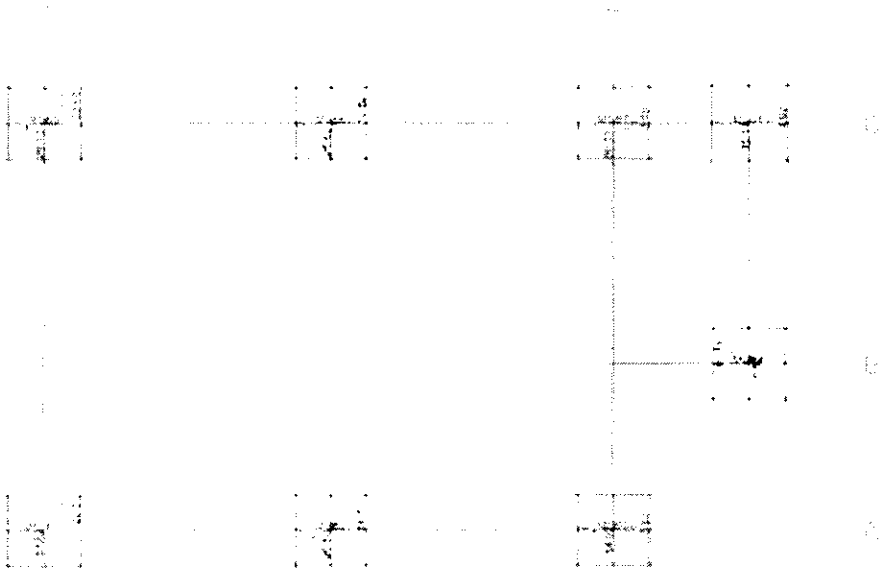
Zapatas - Strip A, Vmin (kN)



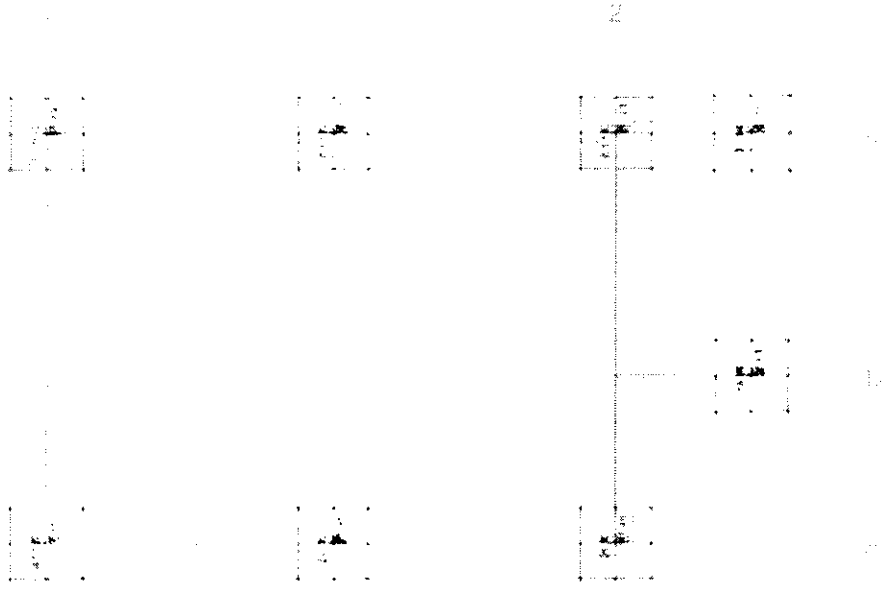
Zapatas - Strip A, Acero de Refuerzo



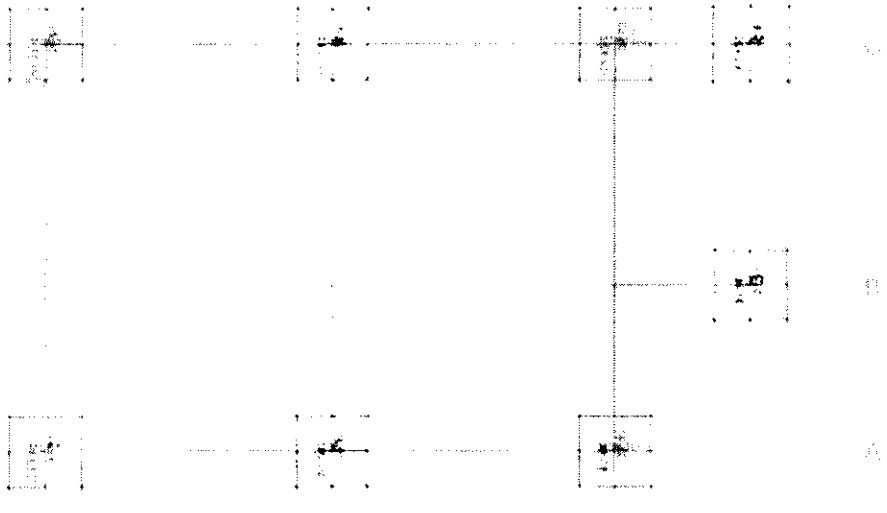
Zapatas - Strip B, Mmax (kN-m)



Zapatas - Strip B, Mmin (kN-m)

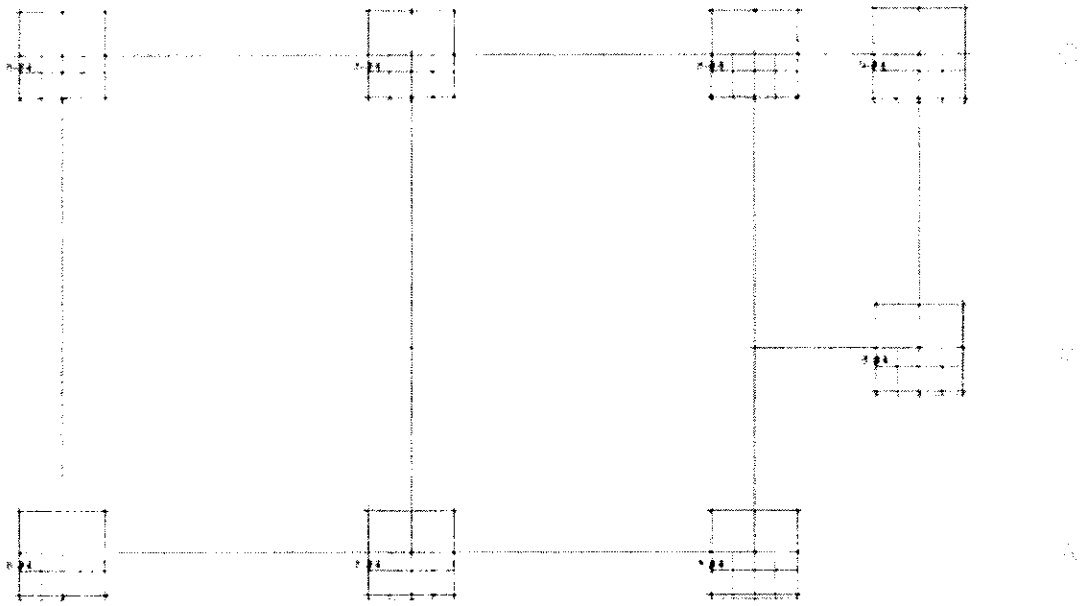


Zapatas - Strip B, Vmax (kN)

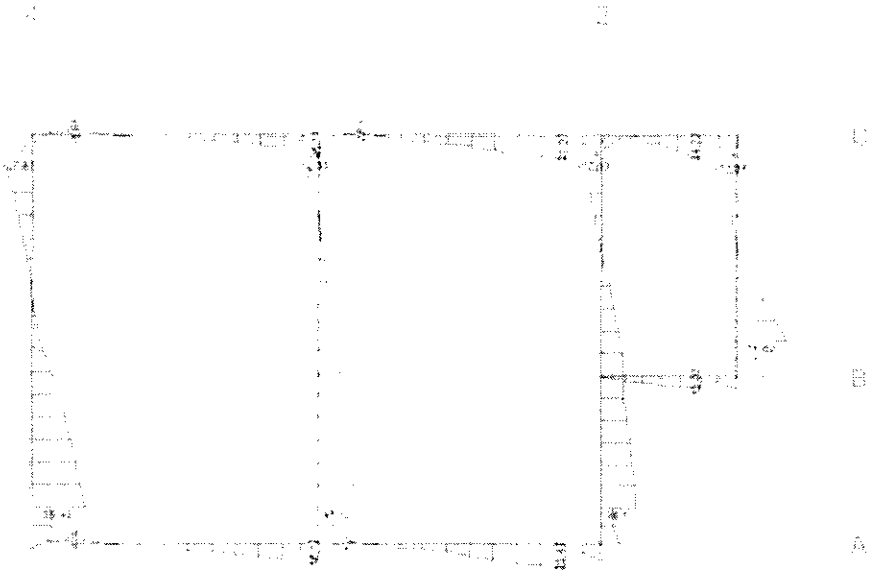


Zapatas - Strip B, Vmin (kN)

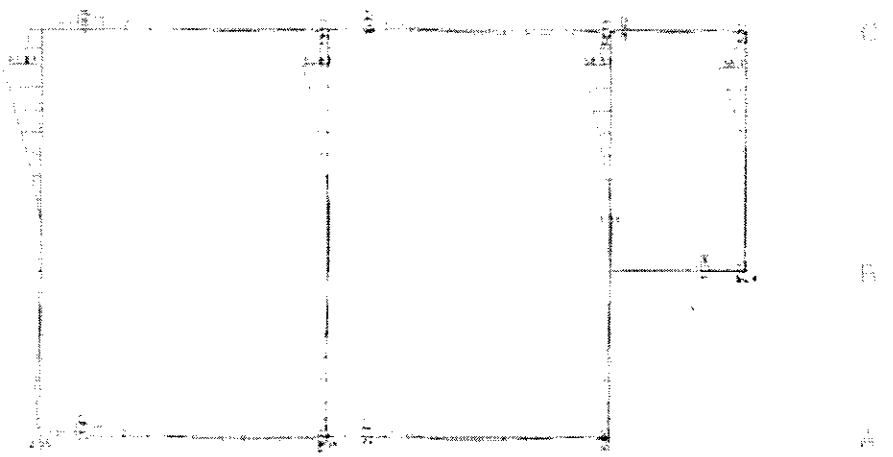
1.080



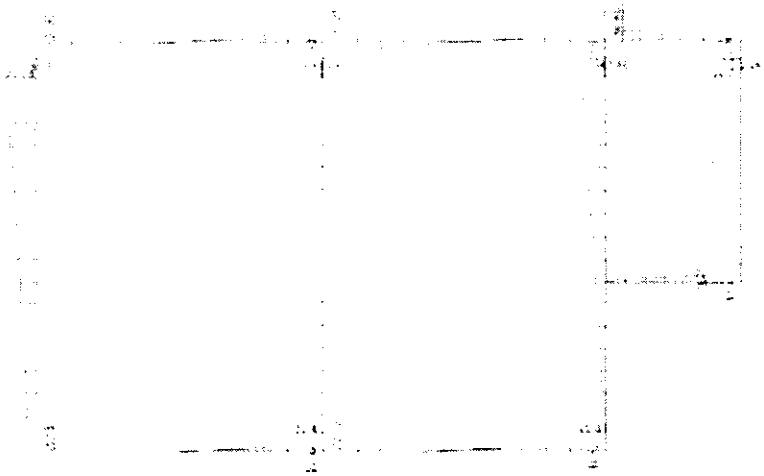
Zapatas - Strip B, Acero de Refuerzo



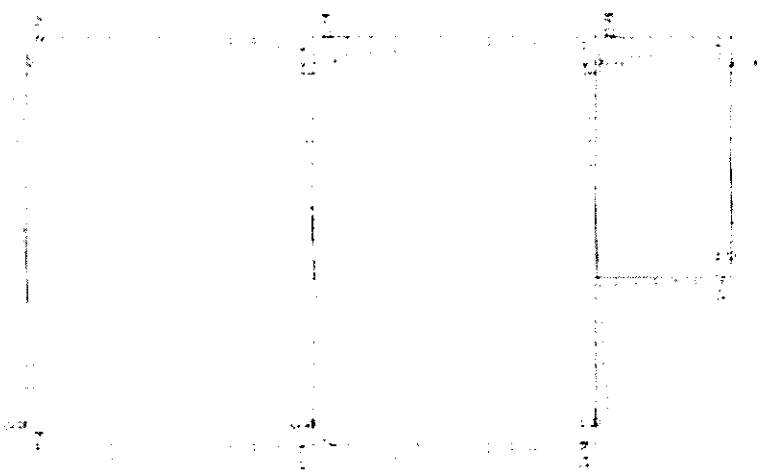
Vigas, Mmax (kN-m)



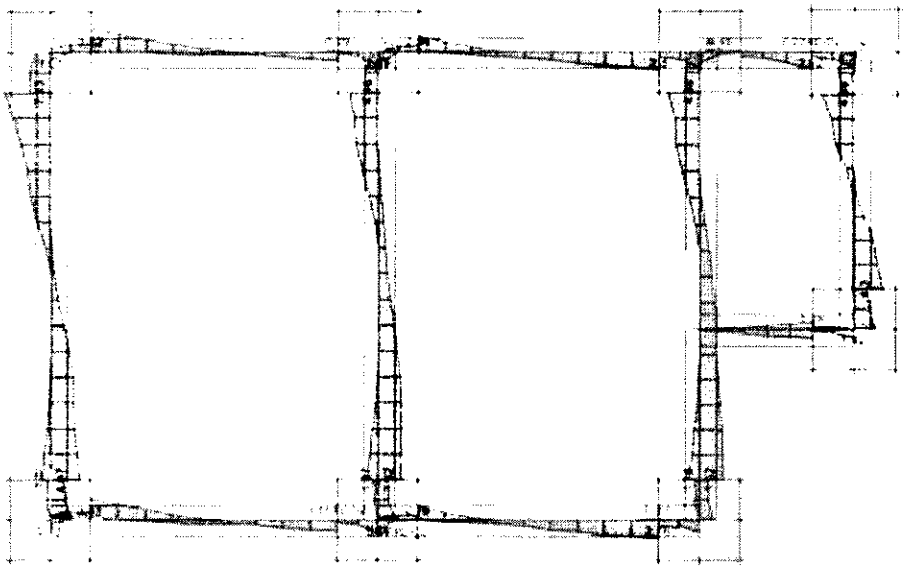
Vigas, Mmin (kN-m)



Vigas, Vmax (kN)



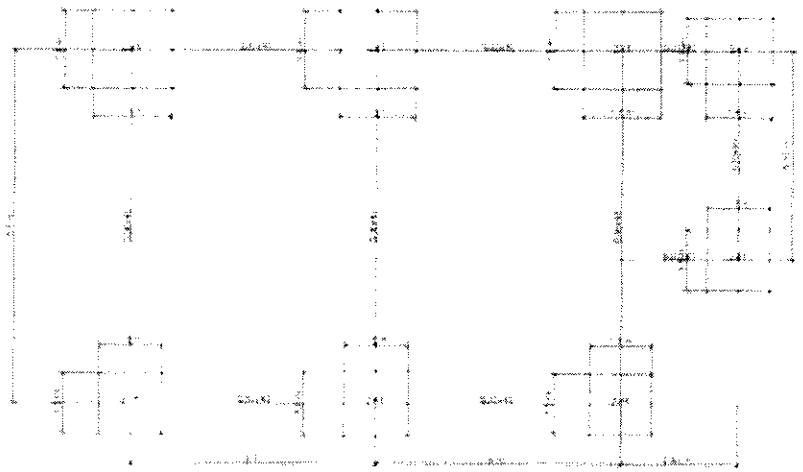
Vigas, Vmin (kN)



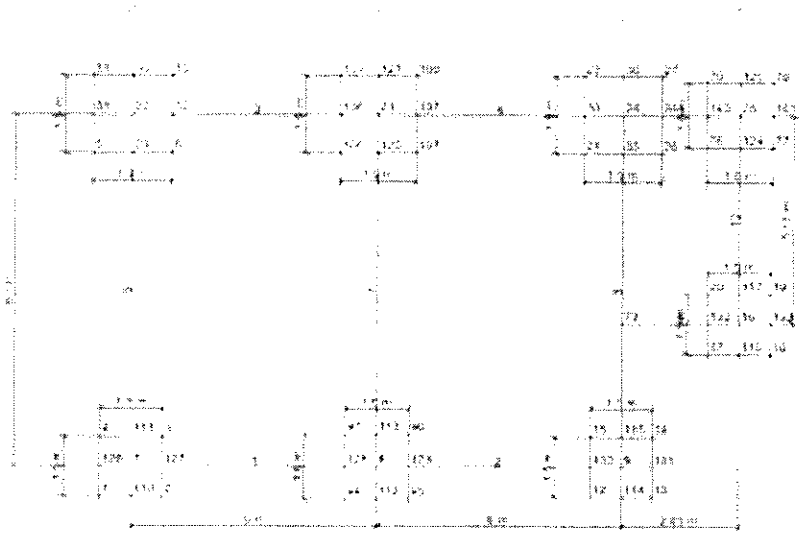
Vigas, Acero de refuerzo a flexion

9.3.2. Suelo Tipo E

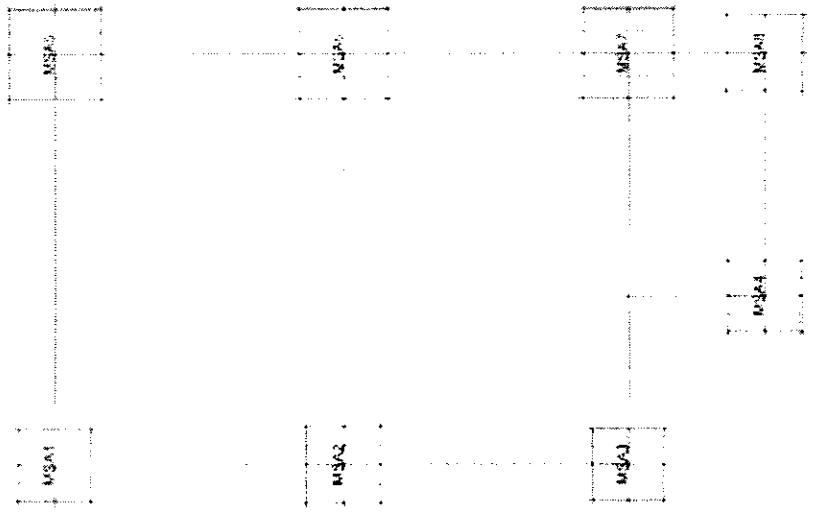
9.3.2.1. Modelo Matematico



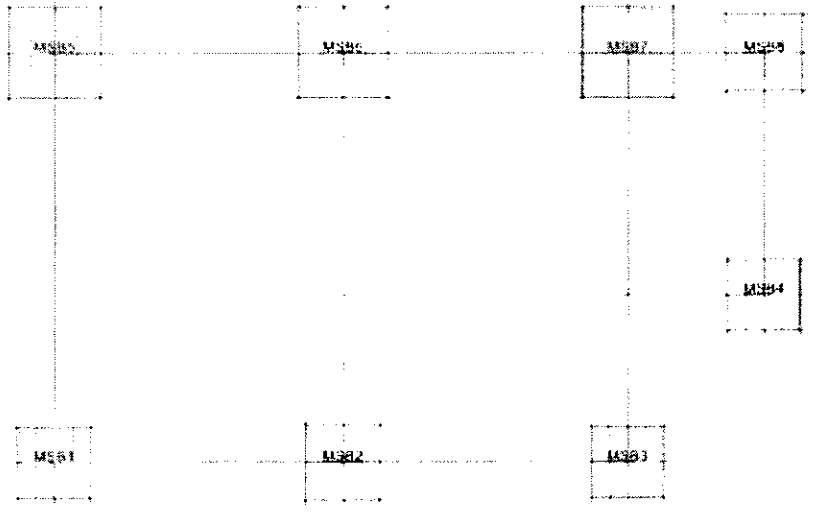
Planta Cimentacion



Numeracion Nudos y Elementos



Identificacion Strip A



Identificacion Strip B

9.3.2.2. Coordenadas, asignaciones

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Table: Coordinate Systems

CoordSys	Type	OriginGx m	OriginGy m	RotAngle Degrees
GLOBAL	Cartesian	0.00	0.00	0.00

Table: Grid Lines

CoordSys	AxisDir	GridID	Ordinate m	Visible	BubbleLoc	GridColor	BubbleSize mm	HideAll
GLOBAL	X	4	0.00	Yes	End	10461087	1000.00	No
GLOBAL	X	3	6.00	Yes	End			
GLOBAL	X	2	12.00	Yes	End			
GLOBAL	X	1	14.85	Yes	End			
GLOBAL	Y	A	0.00	Yes	End			
GLOBAL	Y	B	3.55	Yes	End			
GLOBAL	Y	C	8.70	Yes	End			

Table: Object Geometry - Areas 01 - General, Part 1 of 2

Area	NumPoints	Point1	Point2	Point3	Point4	Auto	TotalArea mm2	AreaType
1	4	1	2	3	4	No	2250000.00	Slab
2	4	94	95	96	97	No	2560000.00	Slab
3	4	12	13	14	15	No	2250000.00	Slab
4	4	17	18	19	20	No	2250000.00	Slab
5	4	5	6	10	11	No	3610000.00	Slab
6	4	106	107	108	109	No	3610000.00	Slab
7	4	21	26	27	28	No	3610000.00	Slab
8	4	76	77	78	79	No	2560000.00	Slab

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSA1	110	0.00	-0.75			0.75	0.75
MSA1	111	0.00	0.75	0.75	0.75		
MSA2	112	6.00	-0.80			0.80	0.80
MSA2	113	6.00	0.80	0.80	0.80		
MSA3	114	12.00	-0.75			0.75	0.75
MSA3	115	12.00	0.75	0.75	0.75		
MSA4	116	14.85	2.80			0.75	0.75
MSA4	117	14.85	4.30	0.75	0.75		
MSA5	29	0.00	7.75			0.95	0.95
MSA5	30	0.00	9.65	0.95	0.95		
MSA6	120	6.00	7.75			0.95	0.95
MSA6	121	6.00	9.65	0.95	0.95		
MSA7	35	12.00	7.75			0.95	0.95
MSA7	36	12.00	9.65	0.95	0.95		
MSA8	124	14.85	7.90			0.80	0.80
MSA8	125	14.85	9.50	0.80	0.80		
MSB1	126	-0.75	0.00			0.75	0.75
MSB1	127	0.75	0.00	0.75	0.75		
MSB2	128	5.20	0.00			0.80	0.80
MSB2	129	6.80	0.00	0.80	0.80		
MSB3	130	11.25	0.00			0.75	0.75
MSB3	131	12.75	0.00	0.75	0.75		
MSB4	132	14.10	3.55			0.75	0.75
MSB4	133	15.60	3.55	0.75	0.75		
MSB5	31	-0.95	8.70			0.95	0.95
MSB5	32	0.95	8.70	0.95	0.95		

Table: Object Geometry - Design Strips

Strip	Point	GlobalX m	GlobalY m	WBLeft m	WBRight m	WALeft m	WARight m
MSB6	136	5.05	8.70			0.95	0.95
MSB6	137	6.95	8.70	0.95	0.95		
MSB7	33	11.05	8.70			0.95	0.95
MSB7	34	12.95	8.70	0.95	0.95		
MSB8	140	14.05	8.70			0.80	0.80
MSB8	141	15.65	8.70	0.80	0.80		

Table: Object Geometry - Lines 01 - General

Line	PointI	PointJ	LineType	CurveType	Length m
1	7	8	Beam	Straight	6.00
2	8	9	Beam	Straight	6.00
3	22	23	Beam	Straight	6.00
4	23	24	Beam	Straight	6.00
5	24	25	Beam	Straight	2.85
6	7	22	Beam	Straight	8.70
7	8	23	Beam	Straight	8.70
8	9	24	Beam	Straight	8.70
9	73	16	Beam	Straight	2.85
10	16	25	Beam	Straight	5.15

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
1	-0.75	-0.75	0.00	No
2	0.75	-0.75	0.00	No
3	0.75	0.75	0.00	No
4	-0.75	0.75	0.00	No
5	-0.95	7.75	0.00	No
6	0.95	7.75	0.00	No
7	0.00	0.00	0.00	Yes
8	6.00	0.00	0.00	Yes
9	12.00	0.00	0.00	Yes
10	0.95	9.65	0.00	No
11	-0.95	9.65	0.00	No
12	11.25	-0.75	0.00	No
13	12.75	-0.75	0.00	No
14	12.75	0.75	0.00	No
15	11.25	0.75	0.00	No
16	14.85	3.55	0.00	Yes
17	14.10	2.80	0.00	No
18	15.60	2.80	0.00	No
19	15.60	4.30	0.00	No
20	14.10	4.30	0.00	No
21	11.05	7.75	0.00	No
22	0.00	8.70	0.00	Yes
23	6.00	8.70	0.00	Yes
24	12.00	8.70	0.00	Yes
25	14.85	8.70	0.00	Yes
26	12.95	7.75	0.00	No
27	12.95	9.65	0.00	No
28	11.05	9.65	0.00	No
29	0.00	7.75	0.00	No
30	0.00	9.65	0.00	No
31	-0.95	8.70	0.00	No
32	0.95	8.70	0.00	No
33	11.05	8.70	0.00	No
34	12.95	8.70	0.00	No
35	12.00	7.75	0.00	No
36	12.00	9.65	0.00	No
73	12.00	3.55	0.00	No
76	14.05	7.90	0.00	No
77	15.65	7.90	0.00	No
78	15.65	9.50	0.00	No
79	14.05	9.50	0.00	No
94	5.20	-0.80	0.00	No
95	6.80	-0.80	0.00	No
96	6.80	0.80	0.00	No
97	5.20	0.80	0.00	No
106	5.05	7.75	0.00	No
107	6.95	7.75	0.00	No
108	6.95	9.65	0.00	No
109	5.05	9.65	0.00	No

Table: Object Geometry - Point Coordinates

Point	GlobalX m	GlobalY m	GlobalZ m	SpecialPt
110	0.00	-0.75	0.00	No
111	0.00	0.75	0.00	No
112	6.00	-0.80	0.00	No
113	6.00	0.80	0.00	No
114	12.00	-0.75	0.00	No
115	12.00	0.75	0.00	No
116	14.85	2.80	0.00	No
117	14.85	4.30	0.00	No
120	6.00	7.75	0.00	No
121	6.00	9.65	0.00	No
124	14.85	7.90	0.00	No
125	14.85	9.50	0.00	No
126	-0.75	0.00	0.00	No
127	0.75	0.00	0.00	No
128	5.20	0.00	0.00	No
129	6.80	0.00	0.00	No
130	11.25	0.00	0.00	No
131	12.75	0.00	0.00	No
132	14.10	3.55	0.00	No
133	15.60	3.55	0.00	No
136	5.05	8.70	0.00	No
137	6.95	8.70	0.00	No
140	14.05	8.70	0.00	No
141	15.65	8.70	0.00	No

Table: Point Restraint Assignments

Point	Ux	Uy	Uz	Rx	Ry	Rz
1	Yes	Yes	No	No	No	No
2	Yes	Yes	No	No	No	No
3	Yes	Yes	No	No	No	No
4	Yes	Yes	No	No	No	No
5	Yes	Yes	No	No	No	No
6	Yes	Yes	No	No	No	No
10	Yes	Yes	No	No	No	No
11	Yes	Yes	No	No	No	No
12	Yes	Yes	No	No	No	No
13	Yes	Yes	No	No	No	No
14	Yes	Yes	No	No	No	No
15	Yes	Yes	No	No	No	No
17	Yes	Yes	No	No	No	No
18	Yes	Yes	No	No	No	No
19	Yes	Yes	No	No	No	No
20	Yes	Yes	No	No	No	No
21	Yes	Yes	No	No	No	No
26	Yes	Yes	No	No	No	No
27	Yes	Yes	No	No	No	No
28	Yes	Yes	No	No	No	No
76	Yes	Yes	No	No	No	No
77	Yes	Yes	No	No	No	No
78	Yes	Yes	No	No	No	No
79	Yes	Yes	No	No	No	No
94	Yes	Yes	No	No	No	No
95	Yes	Yes	No	No	No	No
96	Yes	Yes	No	No	No	No
97	Yes	Yes	No	No	No	No
106	Yes	Yes	No	No	No	No
107	Yes	Yes	No	No	No	No
108	Yes	Yes	No	No	No	No
109	Yes	Yes	No	No	No	No

Table: Beam Property Assignments

Line	BeamProp
1	S30x40
2	S30x40
3	S30x40
4	S30x40
5	S30x40
6	S30x40
7	S30x40
8	S30x40
9	S30x40
10	S30x40

Table: Slab Property Assignments

Area	SlabProp
1	ZPT
2	ZPT
3	ZPT
4	ZPT
5	ZPT
6	ZPT
7	ZPT
8	ZPT

Table: Soil Property Assignments

Area	SoilProp
1	SOIL_E
2	SOIL_E
3	SOIL_E
4	SOIL_E
5	SOIL_E
6	SOIL_E
7	SOIL_E
8	SOIL_E

9.3.2.3. Cargas, asignación de cargas

Table: Load Assignments - Point Loads, Part 1 of 2

Point	LoadPat	Fx kN	Fy kN	Fgrav kN	Mx kN-m	My kN-m	Mz kN-m	XDim mm
7	LR	-0.38	-2.56	14.00	2.55	-0.79	-2.900E-02	300.00
7	G	-0.28	-5.17	13.20	7.18	-0.62	-6.000E-03	300.00
7	Ex	-31.71	-20.09	23.40	-51.19	-69.54	-1.51	300.00
7	Ey	-17.98	-61.56	21.51	-156.29	-38.93	-4.23	300.00
7	DL	-4.99	-13.21	118.24	11.31	-8.28	-0.16	300.00
8	LR	-0.50	-3.17	19.00	3.63	-0.97	-2.900E-02	300.00
8	G	-0.42	-9.86	26.25	13.82	-0.81	-6.000E-03	300.00
8	Ex	-41.26	-13.54	5.33	-35.15	-83.13	-1.51	300.00
8	Ey	-22.65	-43.66	17.37	-113.63	-45.59	-4.23	300.00
8	DL	-2.31	-8.32	151.22	5.62	-4.45	-0.16	300.00
9	LR	0.10	-2.65	12.11	3.11	-0.12	-2.900E-02	300.00
9	G	-9.000E-02	-4.13	10.81	5.80	-0.36	-6.000E-03	300.00
9	Ex	-32.87	-15.36	7.85	-35.22	-71.19	-1.51	300.00
9	Ey	-18.26	-45.56	22.25	-114.35	-39.34	-4.23	300.00
9	DL	3.74	-13.86	109.80	14.60	4.16	-0.16	300.00
16	LR	1.65	-1.51	11.96	1.61	2.15	-2.900E-02	300.00
16	G	1.79	-0.49	3.41	0.69	2.34	-6.000E-03	300.00
16	Ex	-31.59	-20.69	32.51	-47.03	-70.27	-1.51	300.00
16	Ey	-11.83	-64.94	43.28	-147.29	-25.57	-4.23	300.00
16	DL	8.87	-6.30	96.18	4.52	11.72	-0.16	300.00
22	LR	-0.39	3.16	19.01	-5.50	-0.70	-2.900E-02	300.00
22	G	-0.22	5.46	13.06	-7.79	-0.52	-6.000E-03	300.00
22	Ex	-36.31	-20.94	22.30	-52.35	-78.63	-1.51	300.00
22	Ey	-13.36	-62.00	24.03	-156.90	-28.53	-4.23	300.00
22	DL	-4.68	16.92	150.29	-31.12	-7.21	-0.16	300.00
23	LR	-0.22	2.33	26.75	-4.12	-0.45	-2.900E-02	300.00
23	G	-0.35	9.70	26.46	-13.72	-0.70	-6.000E-03	300.00
23	Ex	-43.55	-13.38	13.19	-34.91	-88.94	-1.51	300.00
23	Ey	-15.50	-43.71	18.54	-113.70	-31.60	-4.23	300.00
23	DL	-0.61	4.28	192.79	-12.13	-1.42	-0.16	300.00
24	LR	-6.000E-02	2.70	23.85	-4.43	-0.23	-2.900E-02	300.00
24	G	-0.25	3.93	12.27	-5.55	-0.56	-6.000E-03	300.00
24	Ex	-46.39	-15.83	61.03	-37.30	-92.99	-1.51	300.00
24	Ey	-16.47	-44.81	27.91	-113.38	-32.98	-4.23	300.00
24	DL	1.53	11.76	172.55	-21.47	1.63	-0.16	300.00
25	LR	-0.20	1.71	14.52	-2.93	-0.42	-2.900E-02	300.00
25	G	-0.18	0.55	-1.06	-0.78	-0.45	-6.000E-03	300.00
25	Ex	-42.40	-19.40	59.65	-45.17	-87.29	-1.51	300.00
25	Ey	-15.37	-59.00	46.93	-138.92	-31.40	-4.23	300.00
25	DL	-1.54	8.73	116.83	-16.64	-2.75	-0.16	300.00

9.3.2.4. Esfuerzos sobre el suelo

Table: Soil Pressures - Enveloping Summary

Panel	OutputItem	SurfPress kN/m2	OutputCase	CaseType	GlobalX m	GlobalY m
1	MaxPress	-39.60	Envol.-SRV	Combination	0.38	0.38
1	MinPress	-95.76	Envol.-SRV	Combination	5.20	0.80
2	MaxPress	-30.21	Envol.-SRV	Combination	0.48	8.23
2	MinPress	-81.00	Envol.-SRV	Combination	5.53	8.70
3	MaxPress	-37.25	Envol.-SRV	Combination	11.63	0.38
3	MinPress	-95.16	Envol.-SRV	Combination	6.00	0.80
4	MaxPress	-40.63	Envol.-SRV	Combination	6.48	8.23
4	MinPress	-88.29	Envol.-SRV	Combination	11.05	8.23
5	MaxPress	-19.29	Envol.-SRV	Combination	14.48	3.18
5	MinPress	-79.35	Envol.-SRV	Combination	12.00	0.75
6	MaxPress	-30.61	Envol.-SRV	Combination	14.48	3.93
6	MinPress	-85.86	Envol.-SRV	Combination	12.00	8.23

Table: Soil Pressures - Summary

Panel	OutputCase	CaseType	MaxPress kN/m2	MinPress kN/m2	GlobalXMax m	GlobalYMax m	GlobalXMin m	GlobalYMin m
1	Envol.-SRV	Combination	-39.60	-95.76	0.38	0.38	5.20	0.80
2	Envol.-SRV	Combination	-30.21	-81.00	0.48	8.23	5.53	8.70
3	Envol.-SRV	Combination	-37.25	-95.16	11.63	0.38	6.00	0.80
4	Envol.-SRV	Combination	-40.63	-88.29	6.48	8.23	11.05	8.23
5	Envol.-SRV	Combination	-19.29	-79.35	14.48	3.18	12.00	0.75
6	Envol.-SRV	Combination	-30.61	-85.86	14.48	3.93	12.00	8.23

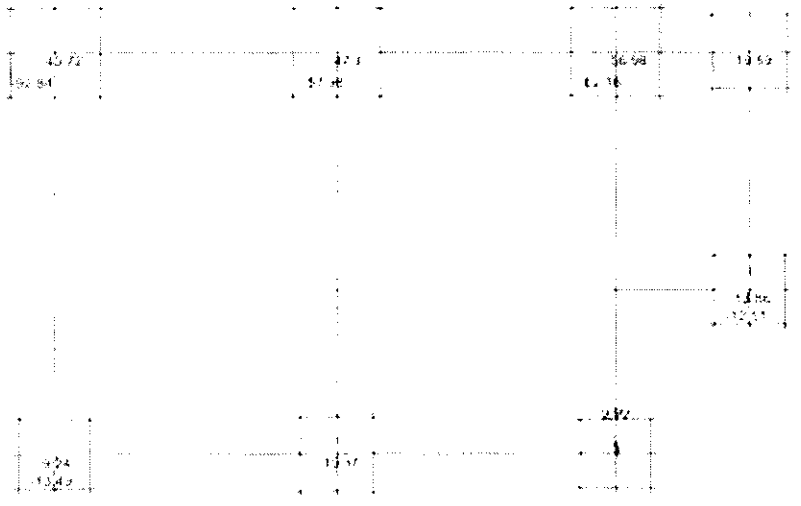
Capacidad admisible de suelo CD, $_{adm}$ = 100 kN/m² > Soil Pressures Max/Min => OK

1.060

9.3.2.5. Resultados, diseño elementos

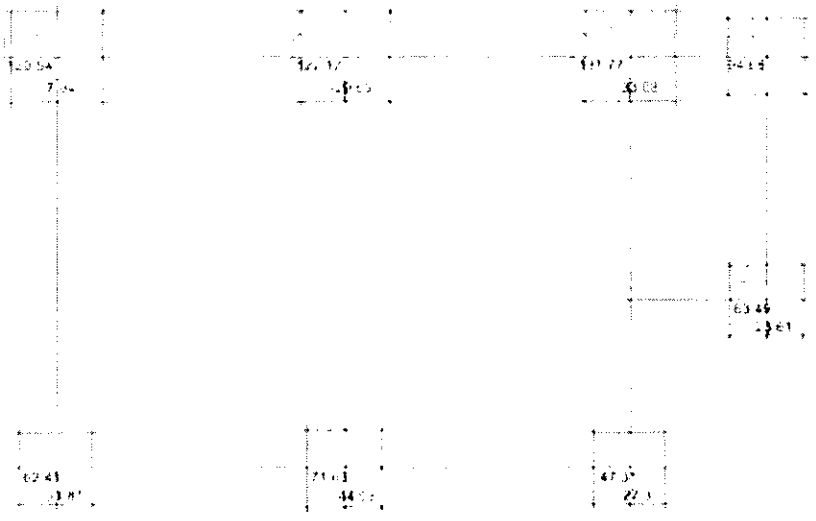


Zapatas - Strip A, Mmax (kN-m)

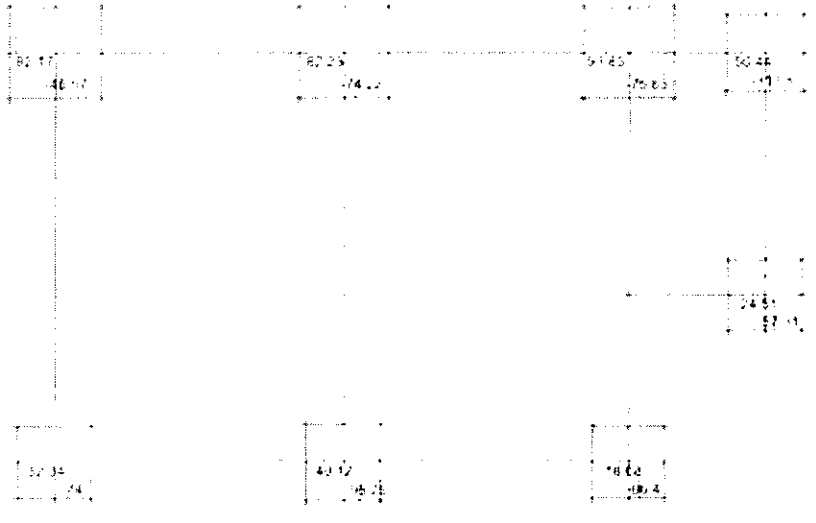


Zapatas - Strip A, Mmin (kN-m)

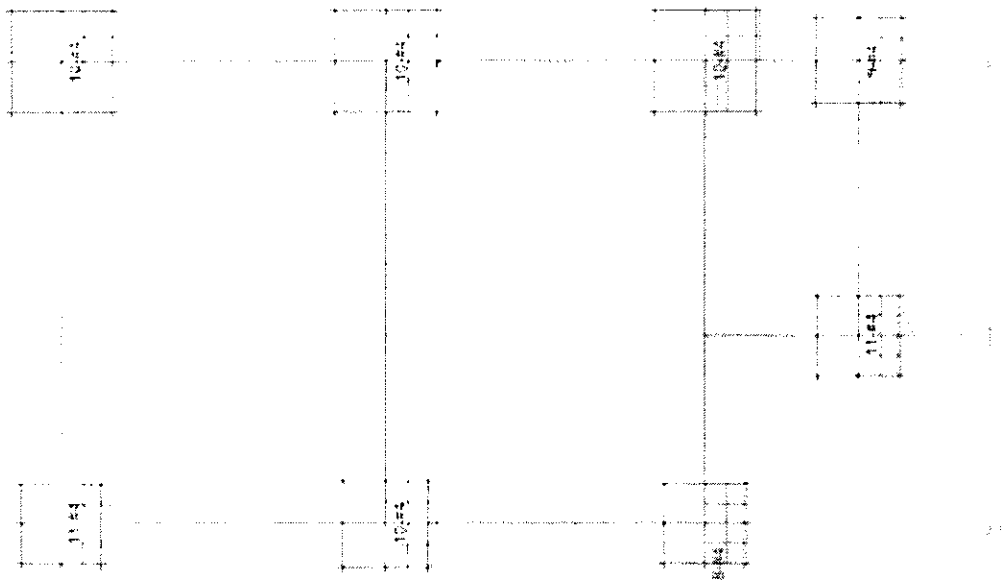
1.06



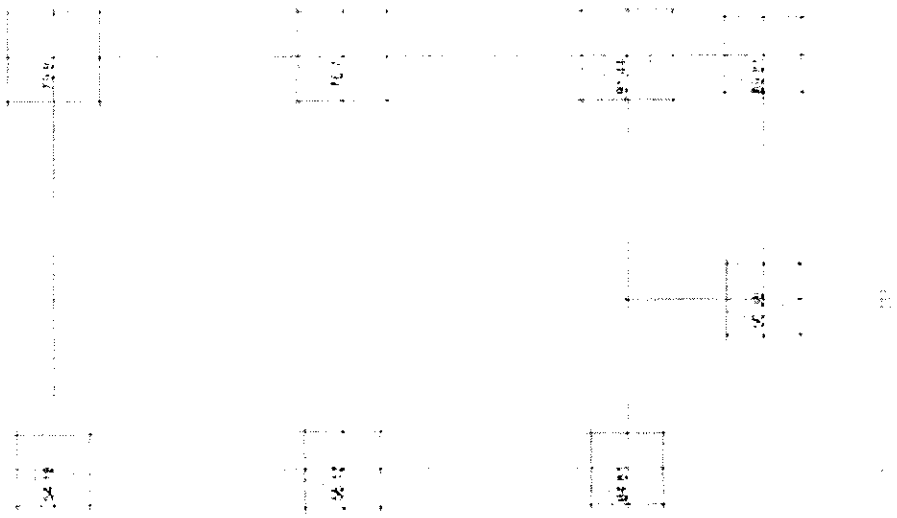
Zapatas - Strip A, Vmax (kN)



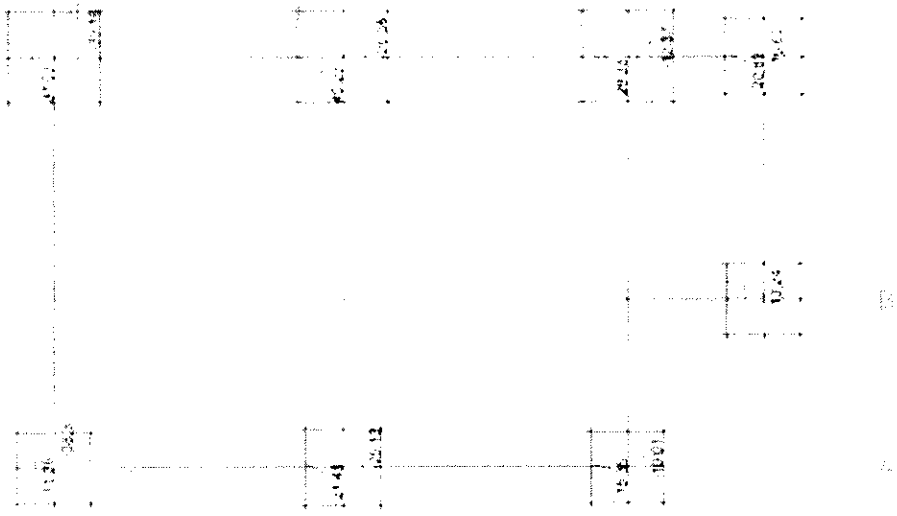
Zapatas - Strip A, Vmin (kN)



Zapatas - Strip A, Acero de Refuerzo



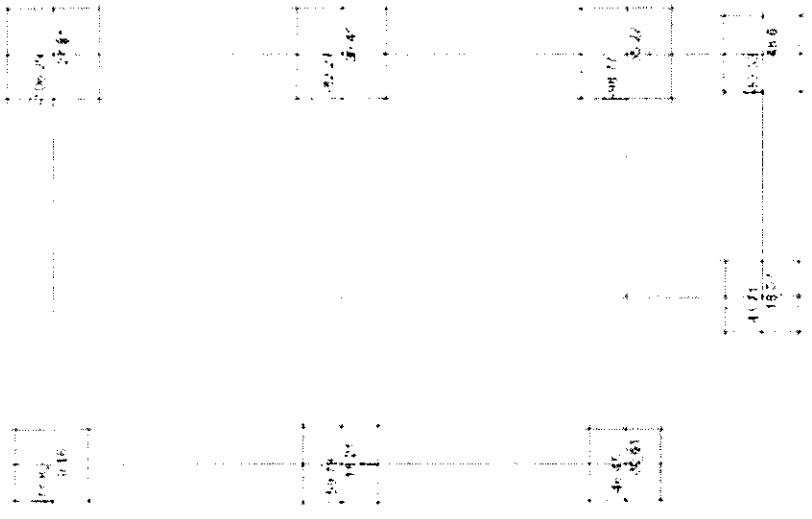
Zapatas - Strip B, Mmax (kN-m)



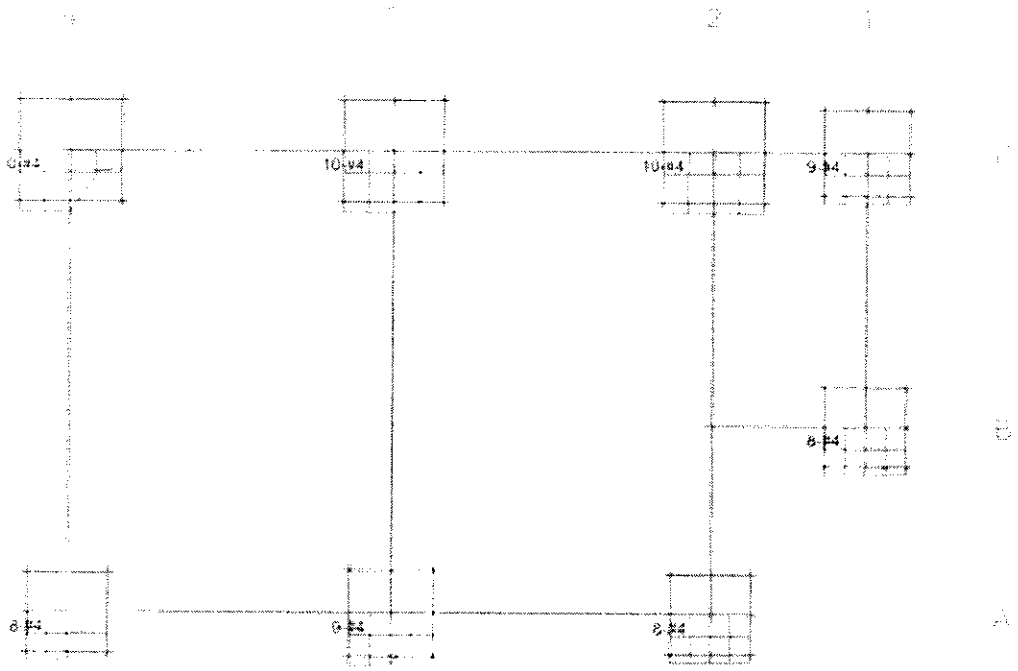
Zapatas - Strip B, Mmin (kN-m)



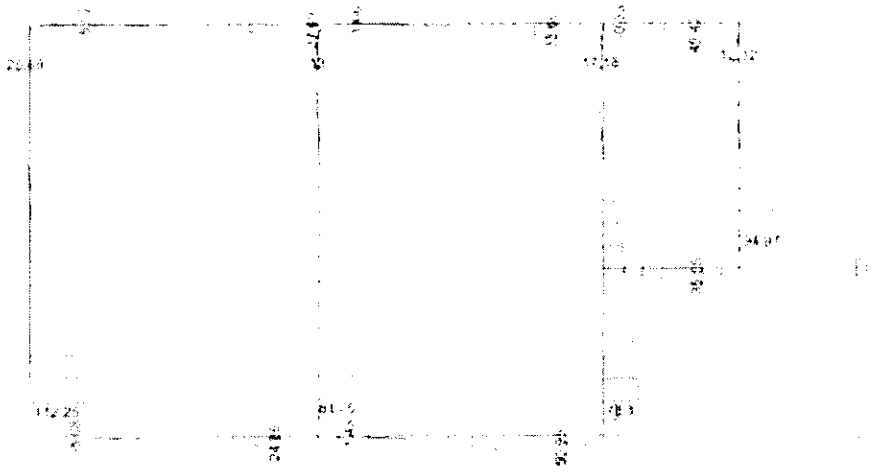
Zapatas - Strip B, Vmax (kN)



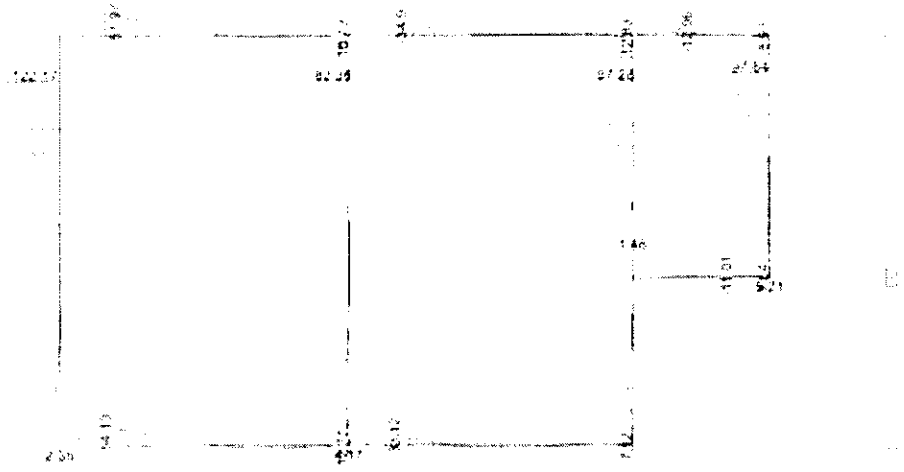
Zapatas - Strip B, Vmin (kN)



Zapatas - Strip B, Acero de Refuerzo

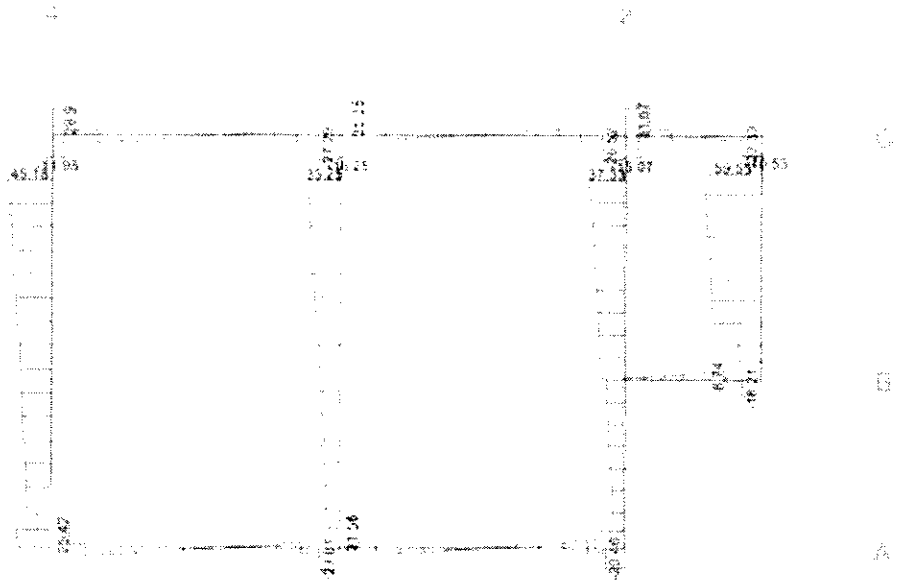


Vigas, Mmax (kN-m)

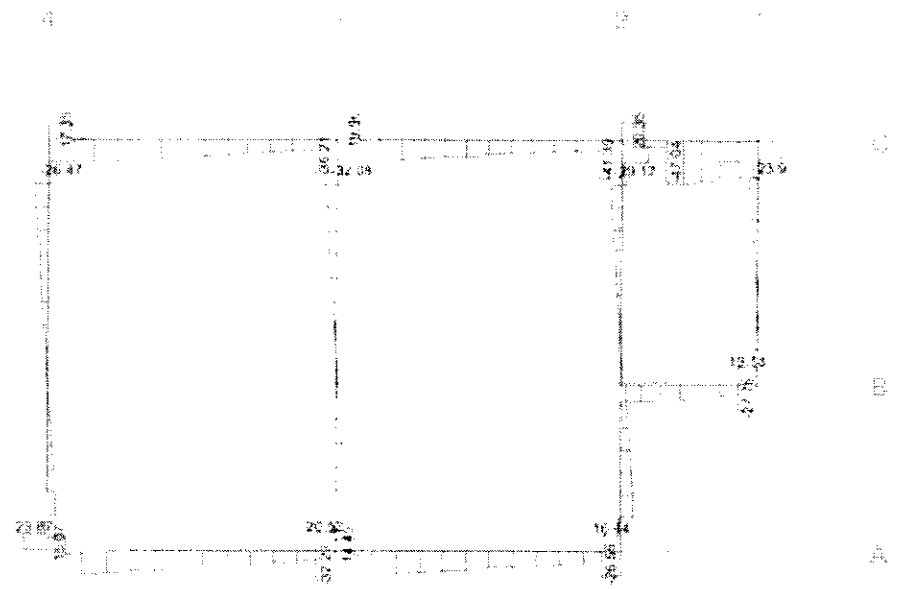


Vigas, Mmin (kN-m)

1.067

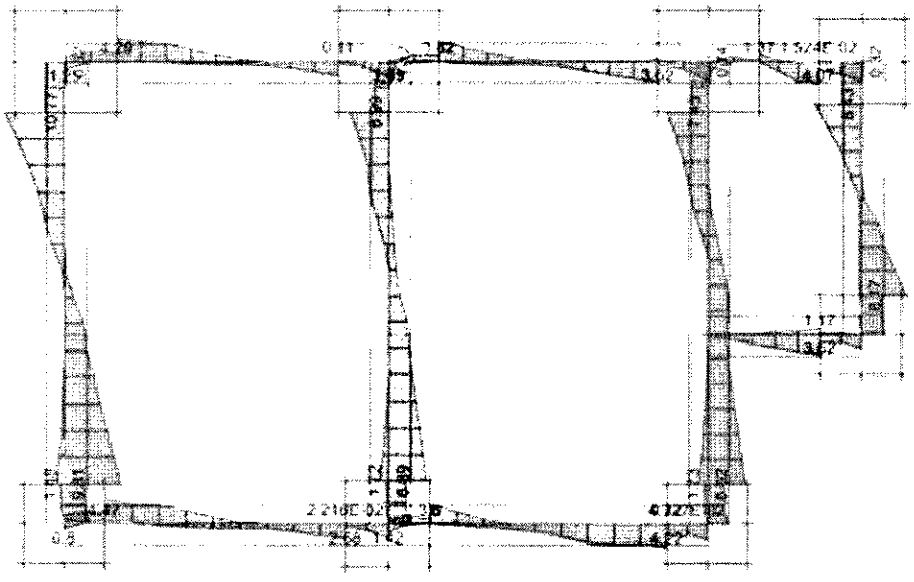


Vigas, Vmax (kN)



Vigas, Vmin (kN)

1,068



Vigas, Acero de refuerzo a flexion