PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA (CAE) – EL REDENTOR, BLOQUE M. TRANSV. 30 # 57-50 SUR/ DIAG. 58 SUR # 28-19, BOGOTÁ (CUNDINAMARCA)

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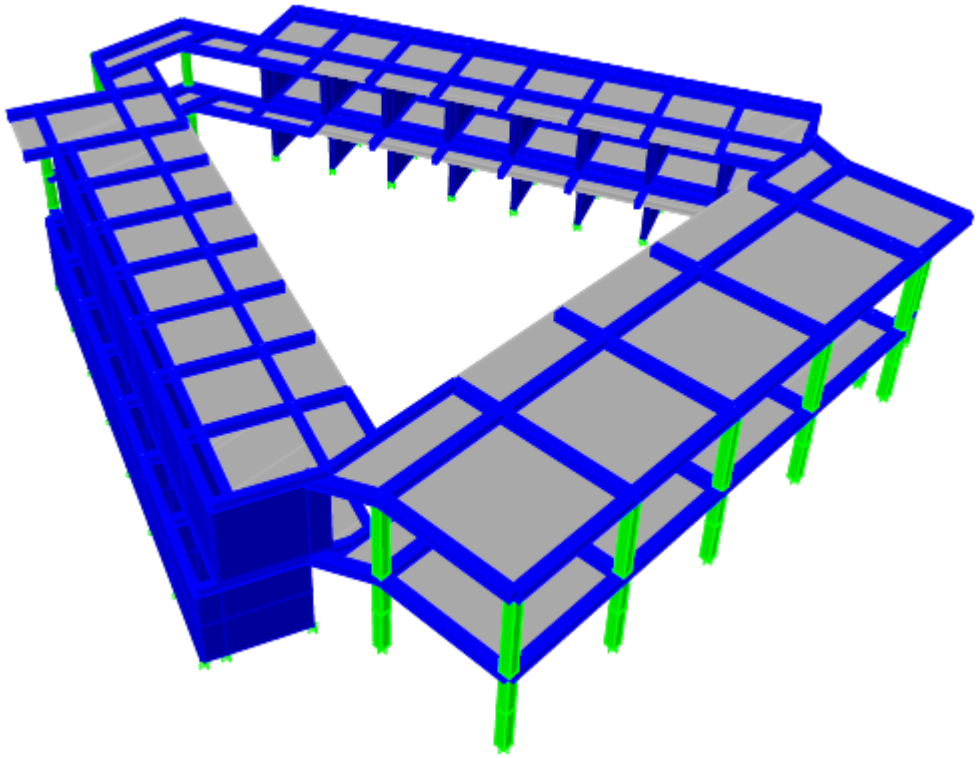


MEMORIAS DE ANÁLISIS Y DISEÑO ESTRUCTURAL

Bogotá D.C. SEPTIEMBRE DE 2014

1. DESCRIPCIÓN DEL PROYECTO

1.1. INTRODUCCIÓN

El presente documento contiene las memorias de análisis y diseño estructural correspondiente al proyecto **CENTRO DE ATENCIÓN ESPECIALIZADA (CAE) – EL REDENTOR, BLOQUE M**, ubicado en la **TRANSV. 30 # 57-50 SUR/ DIAG. 58 SUR # 28-19, BOGOTÁ (CUNDINAMARCA).**

1.2. DESCRIPCIÓN ARQUITECTÓNICA

El proyecto se encuentra ubicado en un lote de 21330m² de área aproximadamente, en el cual se contempla la construcción de diferentes bloques que funcionarán como un Centro de Atención Especializada (CAE).

1.3. PARÁMETROS UTILIZADOS PARA EL REFORZAMIENTO ESTRUCTURAL

El proyecto se soluciona mediante el diseño de una estructura aporticada, utilizando para el segundo piso y cubierta; placa maciza con un espesor de e=10cm, tal como se indica en los planos estructurales. Se manejan luces que varían entre 5.20 m y 2.55 m en los dos sentidos de la estructura.

Para el análisis se empleó el programa de computador ***ETABS v.9.7.4***, el cual tiene en cuenta los efectos de segundo orden. Las consideraciones sísmicas empleadas en el análisis estructural del proyecto son las siguientes:

- ✓ Método de análisis: ***Análisis Modal***
- ✓ Zona de amenaza sísmica: ***Intermedia***
- ✓ Zona de microzonificación sísmica: ***Aluvial-100***
- ✓ Capacidad de disipación de energía: ***Moderada***
- ✓ Coeficiente de disipación de energía: $R_0 = 4.00$

El coeficiente de disipación de energía se afecta por las irregularidades presentes en la geometría de cada estructura, las cuales se describen a continuación:

- ✓ Sistemas no Paralelos $\phi p = 0.90$
- ✓ Geométrica $\phi a = 0.90$

El valor final del coeficiente R es igual a **3.24**

Las cargas horizontales fueron distribuidas entre los diferentes pórticos en proporción a su rigidez y teniendo en cuenta los efectos de torsión.
El dimensionamiento dado a todos los elementos que intervienen en las estructuras satisfacen los requerimientos de solicitación ocasionados por las derivas presentes. Las cargas vivas de diseño son: **5.00 kN/m²** para pasillos, **2.00 KN/m^2** para cuartos, **1.80 KN/m^2** para cubierta.

Para la cimentación se siguieron las recomendaciones descritas en el respectivo estudio de suelos, que recomienda apoyar la estructura a -1.20 m del nivel actual del terreno mediante zapatas aisladas y cimentaciones corridas, según lo indicado en los planos estructurales. La capacidad portante de seguridad admisible del suelo es **0.22 MPa** y el tipo de suelo es **F**.

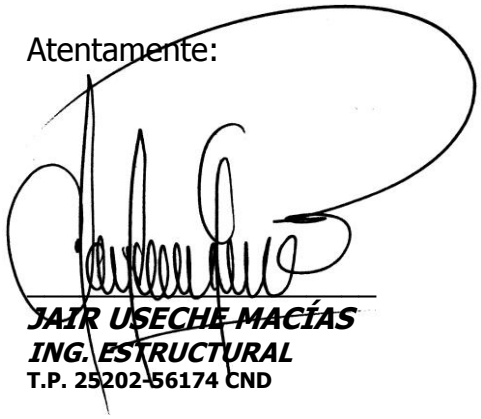
El diseño de todas las estructuras se realizó basado en la Norma Colombiana de Diseño y Construcción Sismo Resistente Ley 400 de 1997 (Modificada Ley 1229 de 2008) y Decreto 926 de Marzo de 2010, en el Decreto 523 de 2010 (Microzonificación Sísmica de Bogotá) y en el Reglamento para Concreto Estructural ACI 318S-08.

1.4. MATERIALES

Los materiales utilizados son:

Concreto	21.1 MPa para cimentación, vigas, columnas y placas.
Concreto	14 MPa (para concreto de limpieza).
Acero	para refuerzo fy = 420 MPa en todos los diámetros.

Atentamente:



JAIR USECHE MACÍAS
ING. ESTRUCTURAL
T.P. 25202-56174 CND

MEMORIAL DE RESPONSABILIDAD

Bogotá D.C. Septiembre de 2014

Señores
CURADURÍA URBANA
La Ciudad

Yo, **JAIR USECHE MACÍAS,** ingeniero civil con Matrícula Profesional Nº **25202-56174** de **CUNDINAMARCA,** debidamente registrado en el consejo profesional de Ingeniería y Arquitectura de Cundinamarca, presento los Cálculos y Diseños Estructurales elaborados de acuerdo a los requerimientos de la ***NORMA COLOMBIANA DE DISEÑO Y CONSTRUCCIÓN SISMO RESISTENTE LEY 400 DE 1997 (MODIFICADA LEY 1229 DE 2008) Y DECRETO 926 DE MARZO DE 2010***, para el proyecto **CENTRO DE ATENCIÓN ESPECIALIZADA (CAE) – EL REDENTOR, BLOQUE M.** ubicado en la **TRANSV. 30 # 57-50 SUR/ DIAG. 58 SUR # 28-19, BOGOTÁ (CUNDINAMARCA)*,*** declaro que asumo la responsabilidad por los perjuicios que causa de ellos puedan deducirse, exonerando a esta **CURADURIA URBANA** de cualquier responsabilidad.

Acepto y reconozco que la revisión efectuada por esta **CURADURÍA URBANA** no constituye una aprobación al Diseño Estructural, sino una verificación del cumplimiento de la **NORMA COLOMBIANA DE DISEÑO Y CONSTRUCCIÓN SISMO RESISTENTE**.
Atentamente,

JAIR USECHE MACÍAS
ING. ESTRUCTURAL
T.P. 25202-56174 CND

REPUBLICA DE COLOMBIA

Consejo Profesional Nacional de Ingeniería y Arquitectura

MATRICULA No. 2520256174CND

INGENIERO CIVIL

DE FECHA 27/07/95

APELLIDOS

USECHE MACIAS

NOMBRES

JAIR

C.C 19,428,425

UNIV. NACIONAL - BOGOTA

Presidente del Consejo

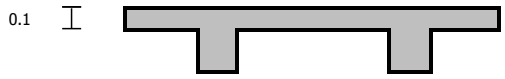
2. AVALÚO DE CARGAS

AVALÚO DE CARGAS

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADO EL REDENTOR, ALOJAMIENTO MUJERES

AVALUO DE CARGAS

1. PLACA MACIZA ENTREPISO (HABITACIONES)

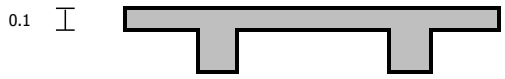


ALTURA DE PLACA	10 cm		
placa	0.20*24		2.40 kN/m²
Acabados	22x0.05		1.10 kN/m²
Muros divisorios			2.00 kN/m²
		CM	5.50 kN/m²
		CV	2.00 kN/m²
		CR	7.50 kN/m²

CU = 1.2x5.5+1.6x2 = 9.8 kN/m²

e=CM/24 0.229 m

1. PLACA MACIZA ENTREPISO (PASILLOS)

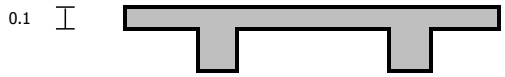


ALTURA DE PLACA	10 cm		
placa	0.10*24		2.40 kN/m²
Acabados	22x0.05		1.10 kN/m²
Muros divisorios			2.00 kN/m²
		CM	5.50 kN/m²
		CV	5.00 kN/m²
		CR	10.50 kN/m²

CU = 1.2x5.5+1.6x5 = 14.6 kN/m²

e=CM/24 0.229 m

1. PLACA MACIZA CUBIERTA



ALTURA DE PLACA	10 cm		
placa	0.10*24		2.40 kN/m²
Acabados	22x0.05		1.10 kN/m²
		CM	3.50 kN/m²
		CV	1.80 kN/m²
		CR	5.30 kN/m²

CU = 1.2x3.5+1.6x1.8 = ***7.1 kN/m²***

e=CM/24 0.146 m

3. ANÁLISIS SÍSMICO

ANÁLISIS SÍSMICO
COMPROBACIÓN DE DERIVAS

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA - EL REDENTOR, BLOQUE M, ALOJAMIENTOS MUJERES
ANÁLISIS SÍSMICO (ESPECTRO DE DISEÑO - CURVA DE DISEÑO)
MICROZONIFICACIÓN SÍSMICA DE BOGOTÁ D.C.

ZONA DE AMENAZA SÍSMICA
INTERMEDIA

ZONA DE MICROZONIFICACIÓN
ALUVIAL-100

EFECTOS LOCALES

Perfil de Suelo	**F**
Coeficiente Av	**0.20**

COEFICIENTE DE IMPORTANCIA

Grupo de Uso	**III**
Coeficiente de importancia III	**1.25**

VARIACIÓN COEFICIENTE DE CAPACIDAD DE DISIPACIÓN DE ENERGÍA

Ro: Coeficiente de capacidad de disipación de energía básico.
R: Coeficiente de capacidad de disipación de energía, para ser empleado en el diseño.
ϕ_a: Coeficiente de reducción de R causado por irregularidades en altura de la edificación.
ϕ_p: Coeficiente de reducción de R causado por irregularidades en planta de la edificación.
ϕ_r: Coeficiente de reducción de R causado por ausencia de redundancia en el sistema estructural de resistencia sísmica.

Ro	**4.00**
ϕ_p	**0.90**
ϕ_a	**0.90**
ϕ_r	**1.00**
ϕ	**1.00**
R	**3.24**

TIPO	DESCRIPCION	VALOR
5P	SISTEMAS NO PARALELOS	ϕ_P:0.90
3A	GEOMÉTRICA	ϕ_a: 0.90
	REDUNDANCIA	ϕ_r: 1.00
NA	UNIONES SOLDADAS	ϕ: 1.00

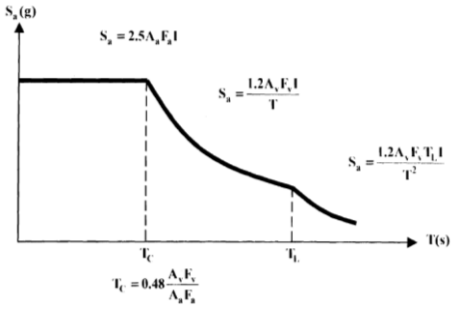
Para edificaciones clasificadas como irregulares el valor de **Ro** debe multiplicarse por ϕ_a, ϕ_p y por ϕ_r para obtener $\mathbf{R=\phi_a x \phi_p x \phi_r x Ro}$

ESPECTRO DE DISEÑO

Fa: Coeficiente de ampliación que afecta la aceleración en la zona de periodos cortos.
Fv: Coeficiente de ampliación que afecta la aceleración en la zona de periodos intermedios.
Sa: Aceleración espectral (g).
Aa: Aceleración horizontal pico efectiva de diseño. Aa=0.15g.
Ao: Aceleración horizontal pico efectiva del terreno en superficie (g).
Av: Aceleración que representa la velocidad horizontal pico efectiva de diseño. Av=0.20g.
T: Periodo de vibración del sistema elástico, en segundos.
Tc: Periodo corto, en segundos.
TL: Periodo largo, en segundos.

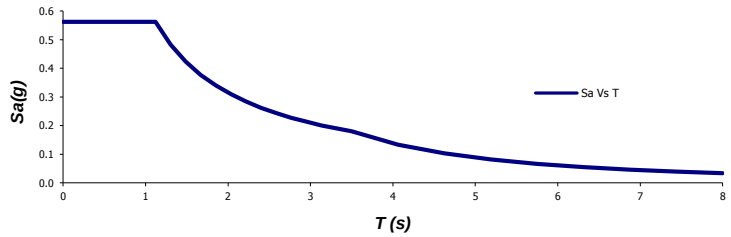
ALUVIAL-100		
T_C:	1.12	Seg
T_L:	3.50	Seg
Ao:	0.18	g
Aa:	0.15	g
Fa:	1.20	
Fv:	2.10	

Curva de diseño para un coeficiente de amortiguamiento de 5% del crítico

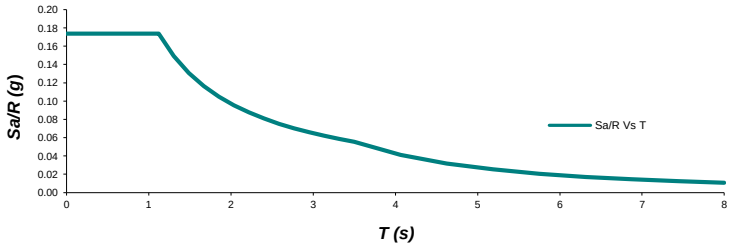


T	Sa	$Sa/R_{adoptado}$
(Seg)	**(%g)**	**(%g)**
0.00	0.563	0.174
0.16	0.563	0.174
0.32	0.563	0.174
0.48	0.563	0.174
0.64	0.563	0.174
0.80	0.563	0.174
0.96	0.563	0.174
1.12	0.563	0.174
1.30	0.483	0.149
1.49	0.424	0.131
1.67	0.377	0.116
1.85	0.340	0.105
2.04	0.310	0.096
2.22	0.284	0.088
2.40	0.262	0.081
2.58	0.244	0.075
2.77	0.228	0.070
2.95	0.214	0.066
3.13	0.201	0.062
3.32	0.190	0.059
3.50	0.180	0.056
4.06	0.134	0.041
4.63	0.103	0.032
5.19	0.082	0.025
5.75	0.067	0.021
6.31	0.055	0.017
6.88	0.047	0.014
7.44	0.040	0.012
8.00	0.034	0.011

Espectro Elástico de Diseño



Espectro Elástico de Diseño/R_{adop}



Sistema de resistencia Sísmica: Pórticos resistentes a momentos con Capacidad Moderada de Disipación de Energía (DMO).

Nota: El sistema de pórtico es un sistema estructural compuesto por un pórtico espacial, resistente a momentos, esencialmente completo, sin diagonales, que resiste todas las cargas verticales y las fuerzas horizontales.

MODELO MATEMÁTICO

Modelo Tridimensional con Diafragma Rígido: En este modelo los entrepisos se consideran diafragmas infinitamente rigidos en su propio plano. La masa de cada diafragma se considera concentrada en su centro de masa. Los efectos torsionales accidentales son incluidos haciendo ajustes en la localización de los centros de masa de los diafragmas.
Los efectos direccionales son tomados en cuenta a través de las componentes de los desplazamientos de los grados de libertad horizontales ortogonales del diafragma.

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA - EL REDENTOR, BLOQUE M, ALOJAMIENTOS MUJERES

ANÁLISIS SÍSMICO (ESPECTRO DE DISEÑO - CURVA DE UMBRAL DE DAÑO)

MICROZONIFICACIÓN SÍSMICA DE BOGOTÁ D.C.

ZONA DE AMENAZA SÍSMICA
INTERMEDIA

ZONA DE MICROZONIFICACIÓN
ALUVIAL-100

EFECTOS LOCALES

Perfil de Suelo	**F**
Coeficiente Ad	**0.06**

COEFICIENTE DE IMPORTANCIA

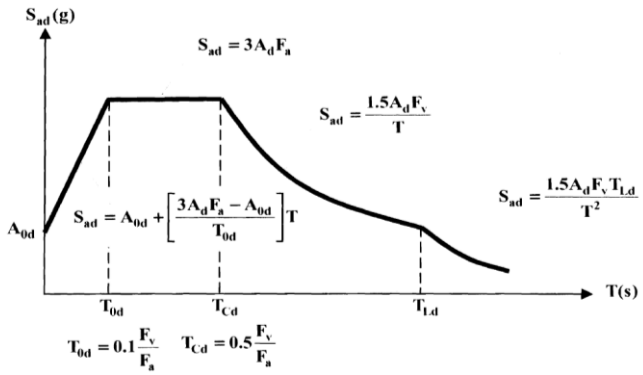
Grupo de Uso	**III**
Coeficiente de importancia I	**1.25**

ESPECTRO DE UMBRAL DE DAÑO

Fa: Coeficiente de ampliación que afecta la aceleración en la zona de periodos cortos.
Fv: Coeficiente de ampliación que afecta la aceleración en la zona de periodos intermedios.
Sad: Aceleración espectral de umbral de daño (g).
Ad: Aceleración horizontal pico efectiva de umbral de daño. Ad=0.06g.
Aod: Aceleración horizontal pico efectiva del terreno para umbral de daño en superficie (g).
T: Periodo de vibración del sistema elástico, en segundos.
T_{0d}: Periodo inicial de umbral de daño, en segundos.
T_{Cd}: Periodo corto de umbral de daño, en segundos.
T_{Ld}: Periodo largo de umbral de daño, en segundos.

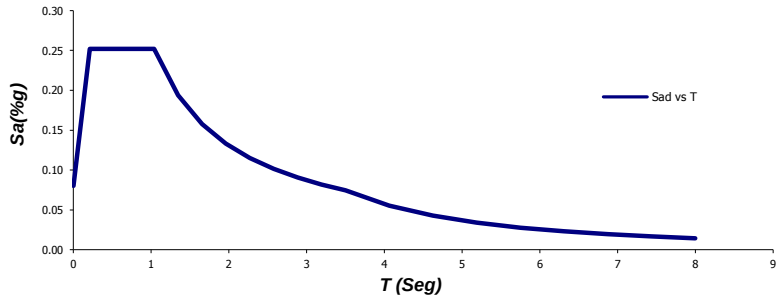
ALUVIAL-100		
T_{Cd}:	1.04	Seg
T_{Ld}:	3.50	Seg
T_{0d}:	0.21	Seg
Aod:	0.08	g
Fa:	1.40	
Fv:	2.90	

Curva de umbral de daño para un coeficiente de amortiguamiento de 2% del crítico.



T	Sad
(Seg)	(%g)
0.00	0.080
0.21	0.252
0.28	0.252
0.35	0.252
0.42	0.252
0.49	0.252
0.56	0.252
0.63	0.252
0.69	0.252
0.76	0.252
0.83	0.252
0.90	0.252
0.97	0.252
1.04	0.252
1.35	0.194
1.66	0.158
1.96	0.133
2.27	0.115
2.58	0.101
2.89	0.090
3.19	0.082
3.50	0.075
4.06	0.055
4.63	0.043
5.19	0.034
5.75	0.028
6.31	0.023
6.88	0.019
7.44	0.017
8.00	0.014

Espectro De Umbral De Daño



Sistema de resistencia Sísmica: Pórticos resistentes a momentos con Capacidad Moderada de Disipación de Energía (DMO).

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Los efectos direccionales son tomados en cuenta a través de las componentes de los desplazamientos de los grados de libertad horizontales ortogonales del diafragma.

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+5.45	1	COMDER1 MAX	0.00110	0.00040	0.00073	0.03	OK
N+5.45	1	COMDER1 MIN	-0.00110	-0.00040	0.00073	0.03	OK
N+5.45	1	COMDER2 MAX	0.00040	0.00040	0.00028	0.01	OK
N+5.45	1	COMDER2 MIN	-0.00040	-0.00040	0.00028	0.01	OK
N+2.70	1	COMDER1 MAX	0.00040	0.00020	0.00022	0.02	OK
N+2.70	1	COMDER1 MIN	-0.00040	-0.00020	0.00022	0.02	OK
N+2.70	1	COMDER2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	1	COMDER2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+1.375	1	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	1	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	1	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	1	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	1	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	1	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	1	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	1	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	2	COMDER1 MAX	0.00110	0.00030	0.00073	0.03	OK
N+5.45	2	COMDER1 MIN	-0.00110	-0.00030	0.00073	0.03	OK
N+5.45	2	COMDER2 MAX	0.00040	0.00030	0.00022	0.01	OK
N+5.45	2	COMDER2 MIN	-0.00040	-0.00030	0.00022	0.01	OK
N+2.70	2	COMDER1 MAX	0.00040	0.00010	0.00020	0.01	OK
N+2.70	2	COMDER1 MIN	-0.00040	-0.00010	0.00020	0.01	OK
N+2.70	2	COMDER2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	2	COMDER2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+1.375	2	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	2	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	2	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	2	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	2	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	2	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	2	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	2	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	3	COMDER1 MAX	0.00110	0.00020	0.00071	0.03	OK
N+5.45	3	COMDER1 MIN	-0.00110	-0.00020	0.00071	0.03	OK
N+5.45	3	COMDER2 MAX	0.00040	0.00030	0.00022	0.01	OK
N+5.45	3	COMDER2 MIN	-0.00040	-0.00030	0.00022	0.01	OK
N+2.70	3	COMDER1 MAX	0.00040	0.00010	0.00022	0.02	OK
N+2.70	3	COMDER1 MIN	-0.00040	-0.00010	0.00022	0.02	OK
N+2.70	3	COMDER2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	3	COMDER2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+1.375	3	COMDER1 MAX	0.00020	0.00000	0.00020	0.01	OK
N+1.375	3	COMDER1 MIN	-0.00020	0.00000	0.00020	0.01	OK
N+1.375	3	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	3	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	3	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	3	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	3	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	3	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	4	COMDER1 MAX	0.00110	0.00020	0.00071	0.03	OK
N+5.45	4	COMDER1 MIN	-0.00110	-0.00020	0.00071	0.03	OK
N+5.45	4	COMDER2 MAX	0.00040	0.00030	0.00022	0.01	OK
N+5.45	4	COMDER2 MIN	-0.00040	-0.00030	0.00022	0.01	OK
N+2.70	4	COMDER1 MAX	0.00040	0.00010	0.00022	0.02	OK
N+2.70	4	COMDER1 MIN	-0.00040	-0.00010	0.00022	0.02	OK
N+2.70	4	COMDER2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	4	COMDER2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+1.375	4	COMDER1 MAX	0.00020	0.00000	0.00020	0.01	OK
N+1.375	4	COMDER1 MIN	-0.00020	0.00000	0.00020	0.01	OK
N+1.375	4	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	4	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	4	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	4	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	4	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	4	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	5	COMDER1 MAX	0.00110	0.00030	0.00073	0.03	OK
N+5.45	5	COMDER1 MIN	-0.00110	-0.00030	0.00073	0.03	OK
N+5.45	5	COMDER2 MAX	0.00040	0.00030	0.00022	0.01	OK
N+5.45	5	COMDER2 MIN	-0.00040	-0.00030	0.00022	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	5	COMDER1 MAX	0.00040	0.00010	0.00020	0.01	OK
N+2.70	5	COMDER1 MIN	-0.00040	-0.00010	0.00020	0.01	OK
N+2.70	5	COMDER2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	5	COMDER2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+1.375	5	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	5	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	5	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	5	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	5	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	5	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	5	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	5	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	7	COMDER1 MAX	0.00110	0.00030	0.00073	0.03	OK
N+5.45	7	COMDER1 MIN	-0.00110	-0.00030	0.00073	0.03	OK
N+5.45	7	COMDER2 MAX	0.00040	0.00030	0.00022	0.01	OK
N+5.45	7	COMDER2 MIN	-0.00040	-0.00030	0.00022	0.01	OK
N+2.70	7	COMDER1 MAX	0.00040	0.00010	0.00020	0.01	OK
N+2.70	7	COMDER1 MIN	-0.00040	-0.00010	0.00020	0.01	OK
N+2.70	7	COMDER2 MAX	0.00020	0.00020	0.00010	0.01	OK
N+2.70	7	COMDER2 MIN	-0.00020	-0.00020	0.00010	0.01	OK
N+1.375	7	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	7	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	7	COMDER2 MAX	0.00010	0.00020	0.00022	0.02	OK
N+1.375	7	COMDER2 MIN	-0.00010	-0.00020	0.00022	0.02	OK
BASE	7	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	7	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	7	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	7	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	8	COMDER1 MAX	0.00110	0.00040	0.00073	0.03	OK
N+5.45	8	COMDER1 MIN	-0.00110	-0.00040	0.00073	0.03	OK
N+5.45	8	COMDER2 MAX	0.00040	0.00030	0.00022	0.01	OK
N+5.45	8	COMDER2 MIN	-0.00040	-0.00030	0.00022	0.01	OK
N+2.70	8	COMDER1 MAX	0.00040	0.00020	0.00022	0.02	OK
N+2.70	8	COMDER1 MIN	-0.00040	-0.00020	0.00022	0.02	OK
N+2.70	8	COMDER2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	8	COMDER2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+1.375	8	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	8	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	8	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	8	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	8	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	8	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	8	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	8	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	9	COMDER1 MAX	0.00100	0.00040	0.00063	0.02	OK
N+5.45	9	COMDER1 MIN	-0.00100	-0.00040	0.00063	0.02	OK
N+5.45	9	COMDER2 MAX	0.00040	0.00040	0.00036	0.01	OK
N+5.45	9	COMDER2 MIN	-0.00040	-0.00040	0.00036	0.01	OK
N+2.70	9	COMDER1 MAX	0.00040	0.00020	0.00022	0.02	OK
N+2.70	9	COMDER1 MIN	-0.00040	-0.00020	0.00022	0.02	OK
N+2.70	9	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	9	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	9	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	9	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	9	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	9	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	9	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	9	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	9	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	9	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	10	COMDER1 MAX	0.00100	0.00030	0.00063	0.02	OK
N+5.45	10	COMDER1 MIN	-0.00100	-0.00030	0.00063	0.02	OK
N+5.45	10	COMDER2 MAX	0.00040	0.00030	0.00032	0.01	OK
N+5.45	10	COMDER2 MIN	-0.00040	-0.00030	0.00032	0.01	OK
N+2.70	10	COMDER1 MAX	0.00040	0.00010	0.00020	0.01	OK
N+2.70	10	COMDER1 MIN	-0.00040	-0.00010	0.00020	0.01	OK
N+2.70	10	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	10	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	10	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	10	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	10	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	10	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	10	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	10	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	10	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	10	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	11	COMDER1 MAX	0.00100	0.00020	0.00061	0.02	OK
N+5.45	11	COMDER1 MIN	-0.00100	-0.00020	0.00061	0.02	OK
N+5.45	11	COMDER2 MAX	0.00040	0.00030	0.00032	0.01	OK
N+5.45	11	COMDER2 MIN	-0.00040	-0.00030	0.00032	0.01	OK
N+2.70	11	COMDER1 MAX	0.00040	0.00010	0.00022	0.02	OK
N+2.70	11	COMDER1 MIN	-0.00040	-0.00010	0.00022	0.02	OK
N+2.70	11	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	11	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	11	COMDER1 MAX	0.00020	0.00000	0.00020	0.01	OK
N+1.375	11	COMDER1 MIN	-0.00020	0.00000	0.00020	0.01	OK
N+1.375	11	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	11	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	11	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	11	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	11	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	11	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	12	COMDER1 MAX	0.00100	0.00020	0.00061	0.02	OK
N+5.45	12	COMDER1 MIN	-0.00100	-0.00020	0.00061	0.02	OK
N+5.45	12	COMDER2 MAX	0.00040	0.00030	0.00032	0.01	OK
N+5.45	12	COMDER2 MIN	-0.00040	-0.00030	0.00032	0.01	OK
N+2.70	12	COMDER1 MAX	0.00040	0.00010	0.00022	0.02	OK
N+2.70	12	COMDER1 MIN	-0.00040	-0.00010	0.00022	0.02	OK
N+2.70	12	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	12	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	12	COMDER1 MAX	0.00020	0.00000	0.00020	0.01	OK
N+1.375	12	COMDER1 MIN	-0.00020	0.00000	0.00020	0.01	OK
N+1.375	12	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	12	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	12	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	12	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	12	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	12	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	13	COMDER1 MAX	0.00100	0.00030	0.00063	0.02	OK
N+5.45	13	COMDER1 MIN	-0.00100	-0.00030	0.00063	0.02	OK
N+5.45	13	COMDER2 MAX	0.00040	0.00030	0.00032	0.01	OK
N+5.45	13	COMDER2 MIN	-0.00040	-0.00030	0.00032	0.01	OK
N+2.70	13	COMDER1 MAX	0.00040	0.00010	0.00020	0.01	OK
N+2.70	13	COMDER1 MIN	-0.00040	-0.00010	0.00020	0.01	OK
N+2.70	13	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	13	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	13	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	13	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	13	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	13	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	13	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	13	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	13	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	13	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	14	COMDER1 MAX	0.00100	0.00040	0.00063	0.02	OK
N+5.45	14	COMDER1 MIN	-0.00100	-0.00040	0.00063	0.02	OK
N+5.45	14	COMDER2 MAX	0.00040	0.00030	0.00032	0.01	OK
N+5.45	14	COMDER2 MIN	-0.00040	-0.00030	0.00032	0.01	OK
N+2.70	14	COMDER1 MAX	0.00040	0.00020	0.00022	0.02	OK
N+2.70	14	COMDER1 MIN	-0.00040	-0.00020	0.00022	0.02	OK
N+2.70	14	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	14	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	14	COMDER1 MAX	0.00020	0.00010	0.00022	0.02	OK
N+1.375	14	COMDER1 MIN	-0.00020	-0.00010	0.00022	0.02	OK
N+1.375	14	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	14	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	14	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	14	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	14	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	14	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	39	COMDER1 MAX	0.00090	0.00040	0.00054	0.02	OK
N+5.45	39	COMDER1 MIN	-0.00090	-0.00040	0.00054	0.02	OK
N+5.45	39	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	39	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	39	COMDER1 MAX	0.00040	0.00020	0.00032	0.02	OK
N+2.70	39	COMDER1 MIN	-0.00040	-0.00020	0.00032	0.02	OK
N+2.70	39	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	39	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	39	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	39	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	39	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	39	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	39	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	39	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	39	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	39	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	41	COMDER1 MAX	0.00040	0.00020	0.00032	0.02	OK
N+2.70	41	COMDER1 MIN	-0.00040	-0.00020	0.00032	0.02	OK
N+2.70	41	COMDER2 MAX	0.00010	0.00020	0.00000	0.00	OK
N+2.70	41	COMDER2 MIN	-0.00010	-0.00020	0.00000	0.00	OK
N+1.375	41	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	41	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	41	COMDER2 MAX	0.00010	0.00020	0.00022	0.02	OK
N+1.375	41	COMDER2 MIN	-0.00010	-0.00020	0.00022	0.02	OK
BASE	41	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	41	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	41	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	41	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	46	COMDER1 MAX	0.00090	0.00050	0.00067	0.02	OK
N+5.45	46	COMDER1 MIN	-0.00090	-0.00050	0.00067	0.02	OK
N+5.45	46	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	46	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	46	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	46	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	46	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	46	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	46	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	46	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	46	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	46	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	46	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	46	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	46	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	46	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	47	COMDER1 MAX	0.00090	0.00050	0.00067	0.02	OK
N+5.45	47	COMDER1 MIN	-0.00090	-0.00050	0.00067	0.02	OK
N+5.45	47	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	47	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	47	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	47	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	47	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	47	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	47	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	47	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	47	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	47	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	47	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	47	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	47	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	47	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	48	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	48	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	48	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	48	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	48	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	48	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	48	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	48	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	48	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	48	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	48	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	48	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	49	COMDER1 MAX	0.00030	0.00030	0.00028	0.02	OK
N+2.70	49	COMDER1 MIN	-0.00030	-0.00030	0.00028	0.02	OK
N+2.70	49	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	49	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	49	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	49	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	49	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	49	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	49	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	49	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	49	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	49	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	56	COMDER1 MAX	0.00090	0.00040	0.00063	0.02	OK
N+5.45	56	COMDER1 MIN	-0.00090	-0.00040	0.00063	0.02	OK
N+5.45	56	COMDER2 MAX	0.00030	0.00030	0.00022	0.01	OK
N+5.45	56	COMDER2 MIN	-0.00030	-0.00030	0.00022	0.01	OK
N+2.70	56	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	56	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	56	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	56	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	56	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	56	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	56	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	56	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	56	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	56	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	56	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	56	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	57	COMDER1 MAX	0.00090	0.00040	0.00063	0.02	OK
N+5.45	57	COMDER1 MIN	-0.00090	-0.00040	0.00063	0.02	OK
N+5.45	57	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	57	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	57	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	57	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	57	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	57	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	57	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	57	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	57	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	57	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	57	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	57	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	57	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	57	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	60	COMDER1 MAX	0.00080	0.00050	0.00058	0.02	OK
N+5.45	60	COMDER1 MIN	-0.00080	-0.00050	0.00058	0.02	OK
N+5.45	60	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	60	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	60	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	60	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	60	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	60	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	60	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	60	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	60	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	60	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	60	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	60	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	60	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	60	COMDER2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+5.45	61	COMDER1 MAX	0.00080	0.00050	0.00058	0.02	OK
N+5.45	61	COMDER1 MIN	-0.00080	-0.00050	0.00058	0.02	OK
N+5.45	61	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	61	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	61	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	61	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	61	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	61	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	61	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	61	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	61	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	61	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	61	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	61	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	61	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	61	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	62	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	62	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	62	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	62	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	62	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	62	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	62	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	62	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	62	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	62	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	62	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	62	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	63	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	63	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	63	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	63	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	63	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	63	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	63	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	63	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	63	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	63	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	63	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	63	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	70	COMDER1 MAX	0.00080	0.00040	0.00054	0.02	OK
N+5.45	70	COMDER1 MIN	-0.00080	-0.00040	0.00054	0.02	OK
N+5.45	70	COMDER2 MAX	0.00030	0.00030	0.00022	0.01	OK
N+5.45	70	COMDER2 MIN	-0.00030	-0.00030	0.00022	0.01	OK
N+2.70	70	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	70	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	70	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	70	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	70	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	70	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	70	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	70	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	70	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	70	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	70	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	70	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	71	COMDER1 MAX	0.00080	0.00040	0.00054	0.02	OK
N+5.45	71	COMDER1 MIN	-0.00080	-0.00040	0.00054	0.02	OK
N+5.45	71	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	71	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	71	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	71	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	71	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	71	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	71	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	71	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	71	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	71	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	71	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	71	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	71	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	71	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	74	COMDER1 MAX	0.00080	0.00040	0.00054	0.02	OK
N+5.45	74	COMDER1 MIN	-0.00080	-0.00040	0.00054	0.02	OK
N+5.45	74	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	74	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	74	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	74	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	74	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	74	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	74	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	74	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	74	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	74	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	74	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	74	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	74	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	74	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	75	COMDER1 MAX	0.00080	0.00050	0.00058	0.02	OK
N+5.45	75	COMDER1 MIN	-0.00080	-0.00050	0.00058	0.02	OK
N+5.45	75	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	75	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	75	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	75	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	75	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	75	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	75	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	75	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	75	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	75	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	75	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	75	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	75	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	75	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	76	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	76	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	76	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	76	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	76	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	76	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	76	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	76	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	76	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	76	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	76	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	76	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	77	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	77	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	77	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	77	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	77	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	77	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	77	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	77	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	77	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	77	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	77	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	77	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	86	COMDER1 MAX	0.00070	0.00030	0.00041	0.01	OK
N+5.45	86	COMDER1 MIN	-0.00070	-0.00030	0.00041	0.01	OK
N+5.45	86	COMDER2 MAX	0.00030	0.00030	0.00022	0.01	OK
N+5.45	86	COMDER2 MIN	-0.00030	-0.00030	0.00022	0.01	OK
N+2.70	86	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	86	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	86	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	86	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	86	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	86	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	86	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	86	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	86	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	86	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	86	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	86	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	87	COMDER1 MAX	0.00070	0.00040	0.00045	0.02	OK
N+5.45	87	COMDER1 MIN	-0.00070	-0.00040	0.00045	0.02	OK
N+5.45	87	COMDER2 MAX	0.00030	0.00040	0.00028	0.01	OK
N+5.45	87	COMDER2 MIN	-0.00030	-0.00040	0.00028	0.01	OK
N+2.70	87	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	87	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	87	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	87	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	87	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	87	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	87	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	87	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	87	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	87	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	87	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	87	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	90	COMDER1 MAX	0.00070	0.00040	0.00045	0.02	OK
N+5.45	90	COMDER1 MIN	-0.00070	-0.00040	0.00045	0.02	OK
N+5.45	90	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	90	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	90	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	90	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	90	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	90	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	90	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	90	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	90	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	90	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	90	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	90	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	90	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	90	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	91	COMDER1 MAX	0.00070	0.00040	0.00045	0.02	OK
N+5.45	91	COMDER1 MIN	-0.00070	-0.00040	0.00045	0.02	OK
N+5.45	91	COMDER2 MAX	0.00020	0.00040	0.00022	0.01	OK
N+5.45	91	COMDER2 MIN	-0.00020	-0.00040	0.00022	0.01	OK
N+2.70	91	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	91	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	91	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	91	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	91	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	91	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	91	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	91	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	91	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	91	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	91	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	91	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	92	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	92	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	92	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	92	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	92	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	92	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	92	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	92	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	92	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	92	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	92	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	92	COMDER2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	93	COMDER1 MAX	0.00030	0.00020	0.00022	0.02	OK
N+2.70	93	COMDER1 MIN	-0.00030	-0.00020	0.00022	0.02	OK
N+2.70	93	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	93	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	93	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	93	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	93	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	93	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	93	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	93	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	93	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	93	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	100	COMDER1 MAX	0.00070	0.00030	0.00054	0.02	OK
N+5.45	100	COMDER1 MIN	-0.00070	-0.00030	0.00054	0.02	OK
N+5.45	100	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	100	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	100	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	100	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	100	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	100	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	100	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	100	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	100	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	100	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	100	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	100	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	100	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	100	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	101	COMDER1 MAX	0.00070	0.00030	0.00051	0.02	OK
N+5.45	101	COMDER1 MIN	-0.00070	-0.00030	0.00051	0.02	OK
N+5.45	101	COMDER2 MAX	0.00020	0.00040	0.00022	0.01	OK
N+5.45	101	COMDER2 MIN	-0.00020	-0.00040	0.00022	0.01	OK
N+2.70	101	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	101	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	101	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	101	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	101	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	101	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	101	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	101	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	101	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	101	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	101	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	101	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	104	COMDER1 MAX	0.00060	0.00040	0.00045	0.02	OK
N+5.45	104	COMDER1 MIN	-0.00060	-0.00040	0.00045	0.02	OK
N+5.45	104	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	104	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	104	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	104	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	104	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	104	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	104	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	104	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	104	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	104	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	104	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	104	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	104	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	104	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	105	COMDER1 MAX	0.00060	0.00040	0.00045	0.02	OK
N+5.45	105	COMDER1 MIN	-0.00060	-0.00040	0.00045	0.02	OK
N+5.45	105	COMDER2 MAX	0.00020	0.00040	0.00022	0.01	OK
N+5.45	105	COMDER2 MIN	-0.00020	-0.00040	0.00022	0.01	OK
N+2.70	105	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	105	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	105	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	105	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	105	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	105	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	105	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	105	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	105	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	105	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	105	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	105	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	106	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	106	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	106	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	106	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	106	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	106	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	106	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	106	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	106	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	106	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	106	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	106	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	107	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	107	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	107	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	107	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	107	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	107	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	107	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	107	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	107	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	107	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	107	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	107	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	114	COMDER1 MAX	0.00060	0.00030	0.00045	0.02	OK
N+5.45	114	COMDER1 MIN	-0.00060	-0.00030	0.00045	0.02	OK
N+5.45	114	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	114	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	114	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	114	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	114	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	114	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	114	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	114	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	114	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	114	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	114	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	114	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	114	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	114	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	115	COMDER1 MAX	0.00060	0.00030	0.00045	0.02	OK
N+5.45	115	COMDER1 MIN	-0.00060	-0.00030	0.00045	0.02	OK
N+5.45	115	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	115	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	115	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	115	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	115	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	115	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	115	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	115	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	115	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	115	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	115	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	115	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	115	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	115	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	118	COMDER1 MAX	0.00060	0.00030	0.00041	0.01	OK
N+5.45	118	COMDER1 MIN	-0.00060	-0.00030	0.00041	0.01	OK
N+5.45	118	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	118	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	118	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	118	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	118	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	118	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	118	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	118	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	118	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	118	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	118	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	118	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	118	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	118	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	119	COMDER1 MAX	0.00060	0.00040	0.00045	0.02	OK
N+5.45	119	COMDER1 MIN	-0.00060	-0.00040	0.00045	0.02	OK
N+5.45	119	COMDER2 MAX	0.00020	0.00040	0.00022	0.01	OK
N+5.45	119	COMDER2 MIN	-0.00020	-0.00040	0.00022	0.01	OK
N+2.70	119	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	119	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	119	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	119	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	119	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	119	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	119	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	119	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	119	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	119	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	119	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	119	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	120	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	120	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	120	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	120	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	120	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	120	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	120	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	120	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	120	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	120	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	120	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	120	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	121	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	121	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	121	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	121	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	121	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	121	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	121	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	121	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	121	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	121	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	121	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	121	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	128	COMDER1 MAX	0.00050	0.00020	0.00032	0.01	OK
N+5.45	128	COMDER1 MIN	-0.00050	-0.00020	0.00032	0.01	OK
N+5.45	128	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	128	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	128	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	128	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	128	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	128	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	128	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	128	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	128	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	128	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	128	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	128	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	128	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	128	COMDER2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+5.45	129	COMDER1 MAX	0.00050	0.00030	0.00036	0.01	OK
N+5.45	129	COMDER1 MIN	-0.00050	-0.00030	0.00036	0.01	OK
N+5.45	129	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	129	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	129	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	129	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	129	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	129	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	129	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	129	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	129	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	129	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	129	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	129	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	129	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	129	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	132	COMDER1 MAX	0.00050	0.00030	0.00036	0.01	OK
N+5.45	132	COMDER1 MIN	-0.00050	-0.00030	0.00036	0.01	OK
N+5.45	132	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	132	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	132	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	132	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	132	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	132	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	132	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	132	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	132	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	132	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	132	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	132	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	132	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	132	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	133	COMDER1 MAX	0.00050	0.00040	0.00036	0.01	OK
N+5.45	133	COMDER1 MIN	-0.00050	-0.00040	0.00036	0.01	OK
N+5.45	133	COMDER2 MAX	0.00020	0.00040	0.00022	0.01	OK
N+5.45	133	COMDER2 MIN	-0.00020	-0.00040	0.00022	0.01	OK
N+2.70	133	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	133	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	133	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	133	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	133	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	133	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	133	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	133	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	133	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	133	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	133	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	133	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	134	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	134	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	134	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	134	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	134	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	134	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	134	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	134	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	134	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	134	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	134	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	134	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	135	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	135	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	135	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	135	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	135	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	135	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	135	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	135	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	135	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	135	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	135	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	135	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	144	COMDER1 MAX	0.00050	0.00020	0.00032	0.01	OK
N+5.45	144	COMDER1 MIN	-0.00050	-0.00020	0.00032	0.01	OK
N+5.45	144	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	144	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	144	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	144	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	144	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	144	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	144	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	144	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	144	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	144	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	144	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	144	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	144	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	144	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	145	COMDER1 MAX	0.00050	0.00020	0.00032	0.01	OK
N+5.45	145	COMDER1 MIN	-0.00050	-0.00020	0.00032	0.01	OK
N+5.45	145	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	145	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	145	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	145	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	145	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	145	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	145	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	145	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	145	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	145	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	145	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	145	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	145	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	145	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	148	COMDER1 MAX	0.00040	0.00030	0.00028	0.01	OK
N+5.45	148	COMDER1 MIN	-0.00040	-0.00030	0.00028	0.01	OK
N+5.45	148	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	148	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	148	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	148	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	148	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	148	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	148	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	148	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	148	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	148	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	148	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	148	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	148	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	148	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	149	COMDER1 MAX	0.00040	0.00030	0.00028	0.01	OK
N+5.45	149	COMDER1 MIN	-0.00040	-0.00030	0.00028	0.01	OK
N+5.45	149	COMDER2 MAX	0.00020	0.00040	0.00022	0.01	OK
N+5.45	149	COMDER2 MIN	-0.00020	-0.00040	0.00022	0.01	OK
N+2.70	149	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	149	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	149	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	149	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	149	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	149	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	149	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	149	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	149	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	149	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	149	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	149	COMDER2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	150	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	150	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	150	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	150	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	150	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	150	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	150	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	150	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	150	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	150	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	150	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	150	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	151	COMDER1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+2.70	151	COMDER1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	151	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	151	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	151	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	151	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	151	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	151	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	151	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	151	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	151	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	151	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	158	COMDER1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	158	COMDER1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	158	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	158	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	158	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	158	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	158	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	158	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	158	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	158	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	158	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	158	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	158	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	158	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	158	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	158	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	159	COMDER1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	159	COMDER1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	159	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	159	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	159	COMDER1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	159	COMDER1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	159	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	159	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	159	COMDER1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	159	COMDER1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	159	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	159	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	159	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	159	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	159	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	159	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	161	COMDER1 MAX	0.00040	0.00030	0.00028	0.01	OK
N+5.45	161	COMDER1 MIN	-0.00040	-0.00030	0.00028	0.01	OK
N+5.45	161	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	161	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	161	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	161	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	161	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	161	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	161	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	161	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	161	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	161	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS MÁXIMAS

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **1.00** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	161	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	161	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	161	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	161	COMDER2 MIN	0.00000	0.00000	--	--	--
N+2.70	162	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	162	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	162	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	162	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	162	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	162	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	162	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	162	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	162	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	162	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	162	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	162	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	163	COMDER1 MAX	0.00040	0.00030	0.00028	0.01	OK
N+5.45	163	COMDER1 MIN	-0.00040	-0.00030	0.00028	0.01	OK
N+5.45	163	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	163	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	163	COMDER1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	163	COMDER1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	163	COMDER2 MAX	0.00010	0.00020	0.00010	0.01	OK
N+2.70	163	COMDER2 MIN	-0.00010	-0.00020	0.00010	0.01	OK
N+1.375	163	COMDER1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	163	COMDER1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	163	COMDER2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	163	COMDER2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
BASE	163	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	163	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	163	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	163	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	169	COMDER1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	169	COMDER1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	169	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	169	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	169	COMDER1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	169	COMDER1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	169	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	169	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	169	COMDER1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	169	COMDER1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	169	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	169	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	169	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	169	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	169	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	169	COMDER2 MIN	0.00000	0.00000	--	--	--
N+5.45	170	COMDER1 MAX	0.00040	0.00010	0.00020	0.01	OK
N+5.45	170	COMDER1 MIN	-0.00040	-0.00010	0.00020	0.01	OK
N+5.45	170	COMDER2 MAX	0.00020	0.00030	0.00014	0.01	OK
N+5.45	170	COMDER2 MIN	-0.00020	-0.00030	0.00014	0.01	OK
N+2.70	170	COMDER1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	170	COMDER1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	170	COMDER2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+2.70	170	COMDER2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+1.375	170	COMDER1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	170	COMDER1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	170	COMDER2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	170	COMDER2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	170	COMDER1 MAX	0.00000	0.00000	--	--	--
BASE	170	COMDER1 MIN	0.00000	0.00000	--	--	--
BASE	170	COMDER2 MAX	0.00000	0.00000	--	--	--
BASE	170	COMDER2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+5.45	1	COMDERUMB1 MAX	0.00060	0.00020	0.00041	0.01	OK
N+5.45	1	COMDERUMB1 MIN	-0.00060	-0.00020	0.00041	0.01	OK
N+5.45	1	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	1	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	1	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	1	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	1	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	1	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	1	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	1	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	1	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	1	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	1	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	1	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	1	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	1	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	2	COMDERUMB1 MAX	0.00060	0.00010	0.00040	0.01	OK
N+5.45	2	COMDERUMB1 MIN	-0.00060	-0.00010	0.00040	0.01	OK
N+5.45	2	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	2	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	2	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	2	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	2	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	2	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	2	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	2	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	2	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	2	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	2	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	2	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	2	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	2	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	3	COMDERUMB1 MAX	0.00060	0.00010	0.00041	0.01	OK
N+5.45	3	COMDERUMB1 MIN	-0.00060	-0.00010	0.00041	0.01	OK
N+5.45	3	COMDERUMB2 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	3	COMDERUMB2 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+2.70	3	COMDERUMB1 MAX	0.00020	0.00000	0.00010	0.01	OK
N+2.70	3	COMDERUMB1 MIN	-0.00020	0.00000	0.00010	0.01	OK
N+2.70	3	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	3	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	3	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	3	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	3	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	3	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	3	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	3	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	3	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	3	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	4	COMDERUMB1 MAX	0.00060	0.00010	0.00041	0.01	OK
N+5.45	4	COMDERUMB1 MIN	-0.00060	-0.00010	0.00041	0.01	OK
N+5.45	4	COMDERUMB2 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	4	COMDERUMB2 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+2.70	4	COMDERUMB1 MAX	0.00020	0.00000	0.00010	0.01	OK
N+2.70	4	COMDERUMB1 MIN	-0.00020	0.00000	0.00010	0.01	OK
N+2.70	4	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	4	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	4	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	4	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	4	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	4	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	4	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	4	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	4	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	4	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	5	COMDERUMB1 MAX	0.00060	0.00020	0.00041	0.01	OK
N+5.45	5	COMDERUMB1 MIN	-0.00060	-0.00020	0.00041	0.01	OK
N+5.45	5	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	5	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	5	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	5	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	5	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	5	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	5	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	5	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	5	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	5	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	5	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	5	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	5	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	5	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	7	COMDERUMB1 MAX	0.00060	0.00020	0.00041	0.01	OK
N+5.45	7	COMDERUMB1 MIN	-0.00060	-0.00020	0.00041	0.01	OK
N+5.45	7	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	7	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	7	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	7	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	7	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	7	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	7	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	7	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	7	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	7	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	7	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	7	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	7	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	7	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	8	COMDERUMB1 MAX	0.00060	0.00020	0.00041	0.01	OK
N+5.45	8	COMDERUMB1 MIN	-0.00060	-0.00020	0.00041	0.01	OK
N+5.45	8	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	8	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	8	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	8	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	8	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	8	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	8	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	8	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	8	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	8	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	8	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	8	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	8	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	8	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	9	COMDERUMB1 MAX	0.00050	0.00020	0.00032	0.01	OK
N+5.45	9	COMDERUMB1 MIN	-0.00050	-0.00020	0.00032	0.01	OK
N+5.45	9	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	9	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	9	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	9	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	9	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	9	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	9	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	9	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	9	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	9	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	9	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	9	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	9	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	9	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	10	COMDERUMB1 MAX	0.00050	0.00010	0.00030	0.01	OK
N+5.45	10	COMDERUMB1 MIN	-0.00050	-0.00010	0.00030	0.01	OK
N+5.45	10	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	10	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	10	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	10	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	10	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	10	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	10	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	10	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	10	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	10	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	10	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	10	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	10	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	10	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	11	COMDERUMB1 MAX	0.00050	0.00010	0.00032	0.01	OK
N+5.45	11	COMDERUMB1 MIN	-0.00050	-0.00010	0.00032	0.01	OK
N+5.45	11	COMDERUMB2 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	11	COMDERUMB2 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+2.70	11	COMDERUMB1 MAX	0.00020	0.00000	0.00010	0.01	OK
N+2.70	11	COMDERUMB1 MIN	-0.00020	0.00000	0.00010	0.01	OK
N+2.70	11	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	11	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	11	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	11	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	11	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	11	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	11	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	11	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	11	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	11	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	12	COMDERUMB1 MAX	0.00050	0.00010	0.00032	0.01	OK
N+5.45	12	COMDERUMB1 MIN	-0.00050	-0.00010	0.00032	0.01	OK
N+5.45	12	COMDERUMB2 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	12	COMDERUMB2 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+2.70	12	COMDERUMB1 MAX	0.00020	0.00000	0.00010	0.01	OK
N+2.70	12	COMDERUMB1 MIN	-0.00020	0.00000	0.00010	0.01	OK
N+2.70	12	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	12	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	12	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	12	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	12	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	12	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	12	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	12	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	12	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	12	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	13	COMDERUMB1 MAX	0.00050	0.00020	0.00032	0.01	OK
N+5.45	13	COMDERUMB1 MIN	-0.00050	-0.00020	0.00032	0.01	OK
N+5.45	13	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	13	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	13	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	13	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	13	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	13	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	13	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	13	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	13	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	13	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	13	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	13	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	13	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	13	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	14	COMDERUMB1 MAX	0.00050	0.00020	0.00032	0.01	OK
N+5.45	14	COMDERUMB1 MIN	-0.00050	-0.00020	0.00032	0.01	OK
N+5.45	14	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	14	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	14	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	14	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	14	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	14	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	14	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	14	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	14	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	14	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	14	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	14	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	14	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	14	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	39	COMDERUMB1 MAX	0.00050	0.00020	0.00032	0.01	OK
N+5.45	39	COMDERUMB1 MIN	-0.00050	-0.00020	0.00032	0.01	OK
N+5.45	39	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	39	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	39	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	39	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	39	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	39	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	39	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	39	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	39	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	39	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	39	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	39	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	39	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	39	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	41	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	41	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	41	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	41	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	41	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	41	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	41	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	41	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	41	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	41	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	41	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	41	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	46	COMDERUMB1 MAX	0.00050	0.00030	0.00036	0.01	OK
N+5.45	46	COMDERUMB1 MIN	-0.00050	-0.00030	0.00036	0.01	OK
N+5.45	46	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	46	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	46	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	46	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	46	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	46	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	46	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	46	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	46	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	46	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	46	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	46	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	46	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	46	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	47	COMDERUMB1 MAX	0.00050	0.00030	0.00036	0.01	OK
N+5.45	47	COMDERUMB1 MIN	-0.00050	-0.00030	0.00036	0.01	OK
N+5.45	47	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	47	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	47	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	47	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	47	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	47	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	47	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	47	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	47	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	47	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	47	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	47	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	47	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	47	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	48	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	48	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	48	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	48	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	48	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	48	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	48	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	48	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	48	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	48	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	48	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	48	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	49	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	49	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	49	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	49	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	49	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	49	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	49	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	49	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	49	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	49	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	49	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	49	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	56	COMDERUMB1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	56	COMDERUMB1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	56	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	56	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	56	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	56	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	56	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	56	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	56	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	56	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	56	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	56	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	56	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	56	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	56	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	56	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	57	COMDERUMB1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	57	COMDERUMB1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	57	COMDERUMB2 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	57	COMDERUMB2 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+2.70	57	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	57	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	57	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	57	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	57	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	57	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	57	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	57	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	57	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	57	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	57	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	57	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	60	COMDERUMB1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	60	COMDERUMB1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	60	COMDERUMB2 MAX	0.00010	0.00020	0.00010	0.00	OK
N+5.45	60	COMDERUMB2 MIN	-0.00010	-0.00020	0.00010	0.00	OK
N+2.70	60	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	60	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	60	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	60	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	60	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	60	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	60	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	60	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	60	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	60	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	60	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	60	COMDERUMB2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+5.45	61	COMDERUMB1 MAX	0.00040	0.00030	0.00028	0.01	OK
N+5.45	61	COMDERUMB1 MIN	-0.00040	-0.00030	0.00028	0.01	OK
N+5.45	61	COMDERUMB2 MAX	0.00010	0.00020	0.00010	0.00	OK
N+5.45	61	COMDERUMB2 MIN	-0.00010	-0.00020	0.00010	0.00	OK
N+2.70	61	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	61	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	61	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	61	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	61	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	61	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	61	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	61	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	61	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	61	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	61	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	61	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	62	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	62	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	62	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	62	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	62	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	62	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	62	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	62	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	62	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	62	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	62	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	62	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	63	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.01	OK
N+2.70	63	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.01	OK
N+2.70	63	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	63	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	63	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+1.375	63	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	63	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	63	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	63	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	63	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	63	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	63	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	70	COMDERUMB1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	70	COMDERUMB1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	70	COMDERUMB2 MAX	0.00010	0.00020	0.00010	0.00	OK
N+5.45	70	COMDERUMB2 MIN	-0.00010	-0.00020	0.00010	0.00	OK
N+2.70	70	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	70	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	70	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	70	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	70	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	70	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	70	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	70	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	70	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	70	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	70	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	70	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	71	COMDERUMB1 MAX	0.00040	0.00020	0.00022	0.01	OK
N+5.45	71	COMDERUMB1 MIN	-0.00040	-0.00020	0.00022	0.01	OK
N+5.45	71	COMDERUMB2 MAX	0.00010	0.00020	0.00010	0.00	OK
N+5.45	71	COMDERUMB2 MIN	-0.00010	-0.00020	0.00010	0.00	OK
N+2.70	71	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+2.70	71	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+2.70	71	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	71	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	71	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	71	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	71	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	71	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	71	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	71	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	71	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	71	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	74	COMDERUMB1 MAX	0.00040	0.00020	0.00032	0.01	OK
N+5.45	74	COMDERUMB1 MIN	-0.00040	-0.00020	0.00032	0.01	OK
N+5.45	74	COMDERUMB2 MAX	0.00010	0.00020	0.00010	0.00	OK
N+5.45	74	COMDERUMB2 MIN	-0.00010	-0.00020	0.00010	0.00	OK
N+2.70	74	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	74	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	74	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	74	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	74	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	74	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	74	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	74	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	74	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	74	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	74	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	74	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	75	COMDERUMB1 MAX	0.00040	0.00020	0.00032	0.01	OK
N+5.45	75	COMDERUMB1 MIN	-0.00040	-0.00020	0.00032	0.01	OK
N+5.45	75	COMDERUMB2 MAX	0.00010	0.00020	0.00010	0.00	OK
N+5.45	75	COMDERUMB2 MIN	-0.00010	-0.00020	0.00010	0.00	OK
N+2.70	75	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	75	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	75	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	75	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	75	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	75	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	75	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	75	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	75	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	75	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	75	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	75	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	76	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	76	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	76	COMDERUMB2 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	76	COMDERUMB2 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+1.375	76	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	76	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	76	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	76	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	76	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	76	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	76	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	76	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	77	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	77	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	77	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	77	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+1.375	77	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	77	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	77	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	77	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	77	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	77	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	77	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	77	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	86	COMDERUMB1 MAX	0.00040	0.00020	0.00032	0.01	OK
N+5.45	86	COMDERUMB1 MIN	-0.00040	-0.00020	0.00032	0.01	OK
N+5.45	86	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	86	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	86	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	86	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	86	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	86	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	86	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	86	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	86	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	86	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	86	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	86	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	86	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	86	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	87	COMDERUMB1 MAX	0.00040	0.00020	0.00032	0.01	OK
N+5.45	87	COMDERUMB1 MIN	-0.00040	-0.00020	0.00032	0.01	OK
N+5.45	87	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	87	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	87	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	87	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	87	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	87	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	87	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	87	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	87	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	87	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	87	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	87	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	87	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	87	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	90	COMDERUMB1 MAX	0.00040	0.00020	0.00032	0.01	OK
N+5.45	90	COMDERUMB1 MIN	-0.00040	-0.00020	0.00032	0.01	OK
N+5.45	90	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	90	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	90	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	90	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	90	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	90	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	90	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	90	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	90	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	90	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	90	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	90	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	90	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	90	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	91	COMDERUMB1 MAX	0.00040	0.00020	0.00032	0.01	OK
N+5.45	91	COMDERUMB1 MIN	-0.00040	-0.00020	0.00032	0.01	OK
N+5.45	91	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	91	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	91	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	91	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	91	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	91	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	91	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	91	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	91	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	91	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	91	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	91	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	91	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	91	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	92	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	92	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	92	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	92	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	92	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	92	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	92	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	92	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	92	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	92	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	92	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	92	COMDERUMB2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	93	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	93	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	93	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	93	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	93	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	93	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	93	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	93	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	93	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	93	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	93	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	93	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	100	COMDERUMB1 MAX	0.00030	0.00020	0.00022	0.01	OK
N+5.45	100	COMDERUMB1 MIN	-0.00030	-0.00020	0.00022	0.01	OK
N+5.45	100	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	100	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	100	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	100	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	100	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	100	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	100	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	100	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	100	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	100	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	100	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	100	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	100	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	100	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	101	COMDERUMB1 MAX	0.00030	0.00020	0.00022	0.01	OK
N+5.45	101	COMDERUMB1 MIN	-0.00030	-0.00020	0.00022	0.01	OK
N+5.45	101	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	101	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	101	COMDERUMB1 MAX	0.00010	0.00010	0.00010	0.01	OK
N+2.70	101	COMDERUMB1 MIN	-0.00010	-0.00010	0.00010	0.01	OK
N+2.70	101	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	101	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	101	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+1.375	101	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+1.375	101	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	101	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	101	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	101	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	101	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	101	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	104	COMDERUMB1 MAX	0.00030	0.00020	0.00022	0.01	OK
N+5.45	104	COMDERUMB1 MIN	-0.00030	-0.00020	0.00022	0.01	OK
N+5.45	104	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	104	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	104	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	104	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	104	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	104	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	104	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	104	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	104	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	104	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	104	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	104	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	104	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	104	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	105	COMDERUMB1 MAX	0.00030	0.00020	0.00022	0.01	OK
N+5.45	105	COMDERUMB1 MIN	-0.00030	-0.00020	0.00022	0.01	OK
N+5.45	105	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	105	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	105	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	105	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	105	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	105	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+1.375	105	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	105	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	105	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	105	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	105	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	105	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	105	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	105	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	106	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	106	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	106	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	106	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	106	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	106	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	106	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	106	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	106	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	106	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	106	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	106	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	107	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	107	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	107	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	107	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	107	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	107	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	107	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	107	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	107	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	107	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	107	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	107	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	114	COMDERUMB1 MAX	0.00030	0.00010	0.00020	0.01	OK
N+5.45	114	COMDERUMB1 MIN	-0.00030	-0.00010	0.00020	0.01	OK
N+5.45	114	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	114	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	114	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	114	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	114	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	114	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	114	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	114	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	114	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	114	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	114	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	114	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	114	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	114	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	115	COMDERUMB1 MAX	0.00030	0.00020	0.00022	0.01	OK
N+5.45	115	COMDERUMB1 MIN	-0.00030	-0.00020	0.00022	0.01	OK
N+5.45	115	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	115	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	115	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	115	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	115	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	115	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	115	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	115	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	115	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	115	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	115	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	115	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	115	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	115	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	118	COMDERUMB1 MAX	0.00030	0.00020	0.00022	0.01	OK
N+5.45	118	COMDERUMB1 MIN	-0.00030	-0.00020	0.00022	0.01	OK
N+5.45	118	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	118	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	118	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	118	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	118	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	118	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	118	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	118	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	118	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	118	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	118	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	118	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	118	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	118	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	119	COMDERUMB1 MAX	0.00030	0.00020	0.00022	0.01	OK
N+5.45	119	COMDERUMB1 MIN	-0.00030	-0.00020	0.00022	0.01	OK
N+5.45	119	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	119	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	119	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	119	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	119	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	119	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	119	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	119	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	119	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	119	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	119	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	119	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	119	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	119	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	120	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	120	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	120	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	120	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	120	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	120	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	120	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	120	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	120	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	120	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	120	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	120	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	121	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	121	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	121	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	121	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	121	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	121	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	121	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	121	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	121	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	121	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	121	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	121	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	128	COMDERUMB1 MAX	0.00030	0.00010	0.00020	0.01	OK
N+5.45	128	COMDERUMB1 MIN	-0.00030	-0.00010	0.00020	0.01	OK
N+5.45	128	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.00	OK
N+5.45	128	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.00	OK
N+2.70	128	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	128	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	128	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	128	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	128	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	128	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	128	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	128	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	128	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	128	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	128	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	128	COMDERUMB2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+5.45	129	COMDERUMB1 MAX	0.00030	0.00010	0.00020	0.01	OK
N+5.45	129	COMDERUMB1 MIN	-0.00030	-0.00010	0.00020	0.01	OK
N+5.45	129	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	129	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	129	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	129	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	129	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	129	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	129	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	129	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	129	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	129	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	129	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	129	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	129	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	129	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	132	COMDERUMB1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	132	COMDERUMB1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+5.45	132	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	132	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	132	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	132	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	132	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	132	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	132	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	132	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	132	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	132	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	132	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	132	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	132	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	132	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	133	COMDERUMB1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	133	COMDERUMB1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+5.45	133	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	133	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	133	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	133	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	133	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	133	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	133	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	133	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	133	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	133	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	133	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	133	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	133	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	133	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	134	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	134	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	134	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	134	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	134	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	134	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	134	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	134	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	134	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	134	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	134	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	134	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	135	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	135	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	135	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	135	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	135	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	135	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	135	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	135	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	135	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	135	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	135	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	135	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	144	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	144	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+5.45	144	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.00	OK
N+5.45	144	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.00	OK
N+2.70	144	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	144	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	144	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	144	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	144	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	144	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	144	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	144	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	144	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	144	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	144	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	144	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	145	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	145	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+5.45	145	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	145	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	145	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	145	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	145	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	145	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	145	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	145	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	145	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	145	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	145	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	145	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	145	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	145	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	148	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	148	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+5.45	148	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	148	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	148	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	148	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	148	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	148	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	148	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	148	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	148	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	148	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	148	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	148	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	148	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	148	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	149	COMDERUMB1 MAX	0.00020	0.00020	0.00014	0.01	OK
N+5.45	149	COMDERUMB1 MIN	-0.00020	-0.00020	0.00014	0.01	OK
N+5.45	149	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	149	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	149	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	149	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	149	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	149	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	149	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	149	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	149	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	149	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	149	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	149	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	149	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	149	COMDERUMB2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
N+2.70	150	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	150	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	150	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	150	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	150	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	150	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	150	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	150	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	150	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	150	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	150	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	150	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	151	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	151	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	151	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	151	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	151	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	151	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	151	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	151	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	151	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	151	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	151	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	151	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	158	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+5.45	158	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+5.45	158	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.00	OK
N+5.45	158	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.00	OK
N+2.70	158	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+2.70	158	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+2.70	158	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	158	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	158	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	158	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	158	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	158	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	158	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	158	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	158	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	158	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	159	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+5.45	159	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+5.45	159	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.00	OK
N+5.45	159	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.00	OK
N+2.70	159	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+2.70	159	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+2.70	159	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	159	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	159	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	159	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	159	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	159	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	159	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	159	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	159	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	159	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	161	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	161	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+5.45	161	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.00	OK
N+5.45	161	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.00	OK
N+2.70	161	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	161	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	161	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	161	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	161	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	161	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	161	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	161	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK

PROYECTO: CAE EL REDENTOR

CÁLCULO DE DERIVAS UMBRAL

ALTURA DE N+5.45	**2.75**	**m**
ALTURA DE N+2.70	**1.38**	**m**
ALTURA DE N+1.375	**1.38**	**m**

Deriva Máxima Permitida **0.40** **%**

Nivel	Punto	COMBINACIÓN DE CARGA	DESPLAZAMIENTOS FUERZA SÍSMICA		Deriva Δ	Deriva Δ	Observación
			Desplazamiento X	Desplazamiento Y	*m*	*%*	
BASE	161	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	161	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	161	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	161	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+2.70	162	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	162	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	162	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	162	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	162	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	162	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	162	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	162	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	162	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	162	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	162	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	162	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	163	COMDERUMB1 MAX	0.00020	0.00010	0.00010	0.00	OK
N+5.45	163	COMDERUMB1 MIN	-0.00020	-0.00010	0.00010	0.00	OK
N+5.45	163	COMDERUMB2 MAX	0.00010	0.00020	0.00014	0.01	OK
N+5.45	163	COMDERUMB2 MIN	-0.00010	-0.00020	0.00014	0.01	OK
N+2.70	163	COMDERUMB1 MAX	0.00010	0.00010	0.00014	0.01	OK
N+2.70	163	COMDERUMB1 MIN	-0.00010	-0.00010	0.00014	0.01	OK
N+2.70	163	COMDERUMB2 MAX	0.00000	0.00010	0.00000	0.00	OK
N+2.70	163	COMDERUMB2 MIN	0.00000	-0.00010	0.00000	0.00	OK
N+1.375	163	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	163	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	163	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+1.375	163	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
BASE	163	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	163	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	163	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	163	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	169	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+5.45	169	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+5.45	169	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.00	OK
N+5.45	169	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.00	OK
N+2.70	169	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+2.70	169	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+2.70	169	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	169	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	169	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	169	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	169	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	169	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	169	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	169	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	169	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	169	COMDERUMB2 MIN	0.00000	0.00000	--	--	--
N+5.45	170	COMDERUMB1 MAX	0.00020	0.00010	0.00014	0.01	OK
N+5.45	170	COMDERUMB1 MIN	-0.00020	-0.00010	0.00014	0.01	OK
N+5.45	170	COMDERUMB2 MAX	0.00010	0.00010	0.00010	0.00	OK
N+5.45	170	COMDERUMB2 MIN	-0.00010	-0.00010	0.00010	0.00	OK
N+2.70	170	COMDERUMB1 MAX	0.00010	0.00000	0.00010	0.01	OK
N+2.70	170	COMDERUMB1 MIN	-0.00010	0.00000	0.00010	0.01	OK
N+2.70	170	COMDERUMB2 MAX	0.00000	0.00010	0.00010	0.01	OK
N+2.70	170	COMDERUMB2 MIN	0.00000	-0.00010	0.00010	0.01	OK
N+1.375	170	COMDERUMB1 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	170	COMDERUMB1 MIN	0.00000	0.00000	0.00000	0.00	OK
N+1.375	170	COMDERUMB2 MAX	0.00000	0.00000	0.00000	0.00	OK
N+1.375	170	COMDERUMB2 MIN	0.00000	0.00000	0.00000	0.00	OK
BASE	170	COMDERUMB1 MAX	0.00000	0.00000	--	--	--
BASE	170	COMDERUMB1 MIN	0.00000	0.00000	--	--	--
BASE	170	COMDERUMB2 MAX	0.00000	0.00000	--	--	--
BASE	170	COMDERUMB2 MIN	0.00000	0.00000	--	--	--

PROYECTO: CAE EL REDENTOR
CALCULO DEL CORTANTE BASAL DE LA ESTRUCTURA (ESPECTRO DE DISEÑO)
MICROZONIFICACIÓN SÍSMICA DE BOGOTÁ D.C.

CALCULO DEL CORTANTE BASAL DE LA ESTRUCTURA

$H_{edificio}$=	5.47	m	
Tipo de Perfil:	F		
Aa =	0.15		
Av =	0.20		
Fa =	1.20		
Fv =	2.10		
T_c =	1.12	Seg	
C_t =	0.049		
α =	0.75		
T_a =	0.18	Seg	
C_u =	1.25		
$C_u T_a$ =	0.22	Seg	
$T_{modelación\ estructural}$ =	0.04	Seg	
ΔT =	N. A.		
$T_{adoptado}$ =	0.04	Seg	
S_a =	0.563		S_a obtenido del espectro de diseño
g =	9.81	m/s^2	
M =	554.75	Ton	Masa obtenida del modelo
V_s =	3063.93	kN	
90% Vs =	2757.53	kN	Cortante basal para comparación de acuerdo a A.5.4.5 NSR-10

MODELO INICIAL
Response Espectrum Base Reactions

Spec	Mode	Dir	F1	F2	F3	M1	M2	M3
SISDERX	All	All	1941.99	213.9	0	860.607	8354.874	27739.13
SISDERY	All	All	213.9	2612.15	0	10673.054	928.809	47270.336

PORCENTAJE PARA REVISIÓN DE CORTANTE BASAL DE ACUERDO A A.5.4.5 NSR-10: 90.0 %

	F1	F2	Total	Factor	g corregido	
$V_{s(x)}$=	1941.99	213.9	1953.73	1.411	13.846	Se aplica en SISMO X
$V_{s(y)}$=	213.9	2612.15	2620.89	1.052	10.321	Se aplica en SISMO Y

MODELO CORREGIDO
Response Espectrum Base Reactions

Spec	Mode	Dir	F1	F2	F3	M1	M2	M3
SISDERX	All	All	2740.96	301.9	0	1214.676	11792.211	39151.478
SISDERY	All	All	225.04	2748.21	0	11229.011	977.19	49732.634

	F1	F2	Total	90% Vs
$V_{s(x)}$=	2740.96	301.9	**2757.54**	**2757.53**
$V_{s(y)}$=	225.04	2748.21	**2757.41**	**2757.53**

PROYECTO: CAE EL REDENTOR
CALCULO DEL CORTANTE BASAL DE LA ESTRUCTURA (ESPECTRO DE UMBRAL DE DAÑO)
MICROZONIFICACIÓN SÍSMICA DE BOGOTÁ D.C.

CALCULO DEL CORTANTE BASAL DE LA ESTRUCTURA

$H_{edificio}$=	5.47	m	
Tipo de Perfil:	F		
Ad =	0.06		
Fv =	2.10		
C_t =	0.049		
α =	0.75		
T_a =	0.18	Seg	
C_u =	1.25		
$C_u T_a$ =	0.22	Seg	
$T_{modelación\ estructural}$ =	0.04	Seg	
ΔT =	N. A.		
$T_{adoptado}$ =	0.04	Seg	
S_a =	0.252		S_a obtenido del espectro de diseño
g =	9.81	m/s^2	
M =	554.75	Ton	Masa obtenida del modelo
V_s =	1371.42	kN	
100% Vs =	1371.42	kN	Cortante basal para comparación de acuerdo a A.5.4.5 NSR-10

MODELO INICIAL
Response Espectrum Base Reactions

Spec	Mode	Dir	F1	F2	F3	M1	M2	M3
UMBRALX	All	All	430.79	41.25	0	166.406	1882.858	6066.84
UMBRALY	All	All	41.25	511.54	0	2090.843	179.769	9255.945

PORCENTAJE PARA REVISIÓN DE CORTANTE BASAL DE ACUERDO A A.5.4.5 NSR-10: 100.0 %

	F1	F2	Total	Factor		g corregido
$V_{s(x)}$=	430.79	41.25	432.76	3.169	31.088	Se aplica en SISMO X
$V_{s(y)}$=	41.25	511.54	513.20	2.672	26.215	Se aplica en SISMO Y

PROYECTO: CAE EL REDENTOR
CALCULO DEL CORTANTE BASAL DE LA ESTRUCTURA (ESPECTRO DE UMBRAL DE DAÑO)
MICROZONIFICACIÓN SÍSMICA DE BOGOTÁ D.C.

MODELO CORREGIDO
Response Espectrum Base Reactions

Spec	Mode	Dir	F1	F2	F3	M1	M2	M3
UMBRALX	All	All	1365.18	130.72	0	527.343	5966.799	19225.885
UMBRALY	All	All	110.23	1366.98	0	5587.305	480.393	24734.414

	F1	F2	Total	100% Vs
$V_{s(x)}$=	1365.18	130.72	**1371.42**	**1371.42**
$V_{s(y)}$=	110.23	1366.98	**1371.42**	**1371.42**

4. DISEÑO DE CIMENTACIÓN

DISEÑO DE CIMENTACIÓN

CARGAS A CIMENTACIÓN

CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M

Story	Point	Load	FX	FY	FZ	MX	MY	MZ
BASE	1	CIMEN	3.110	3.270	84.990	-2.995	2.814	0.000
BASE	2	CIMEN	-0.100	5.720	153.620	-5.207	-0.074	0.000
BASE	3	CIMEN	0.220	5.620	152.770	-5.113	0.209	0.000
BASE	4	CIMEN	1.970	5.270	171.450	-4.801	1.784	0.000
BASE	5	CIMEN	-5.660	-1.540	95.440	1.340	-5.085	0.000
BASE	7	CIMEN	0.060	1.000	39.680	-0.943	-0.479	-0.053
BASE	8	CIMEN	-2.500	-0.360	41.570	0.265	-1.516	-0.057
BASE	9	CIMEN	1.530	-2.810	116.510	2.483	1.390	0.000
BASE	10	CIMEN	1.840	-1.020	266.640	0.864	1.670	0.000
BASE	11	CIMEN	0.140	1.380	269.690	-1.294	0.140	0.000
BASE	12	CIMEN	2.600	2.380	300.370	-2.193	2.358	0.000
BASE	13	CIMEN	-5.960	5.060	232.390	-4.611	-5.354	0.000
BASE	14	CIMEN	-0.590	0.730	52.900	-0.713	-0.518	0.000
BASE	159	CIMEN	7.670	-1.440	146.590	1.241	6.935	0.000
BASE	163	CIMEN	-0.500	-0.360	33.500	-0.080	-0.300	0.024
BASE	169	CIMEN	2.680	-3.800	83.770	3.369	2.437	0.000
BASE	170	CIMEN	-2.630	-4.530	90.430	4.032	-2.357	0.000

DISEÑO VIGAS DE AMARRE

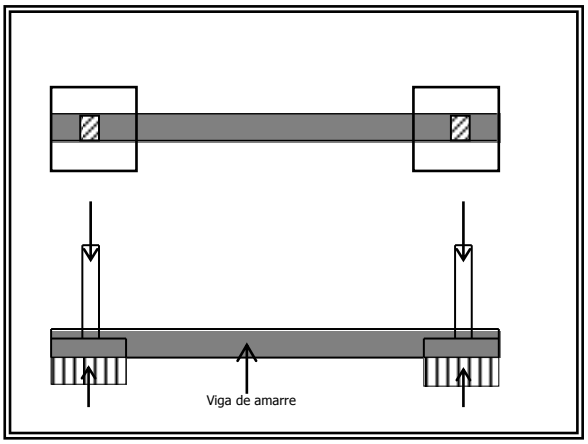
CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M

VIGA DE AMARRE TIPO

f'c = **21.1** MPa
fy = **420** MPa

b = **0.30** m
h = **0.40** m

Pmáx = 300.37 kN



De acuerdo a el numeral A.3.6.4.2
de la NSR-10 tenemos:

Aa = ***0.15***
Paxial = 0.25*Aa*Pmáx
Paxial = *11.3* kN

DISEÑO A TENSIÓN

As = 1.7*11.263875/(0.90*420)
As = **0.51** cm^2

DISEÑO A COMPRESIÓN

P com = 1.7*11.263875
P com = *19.1* kN

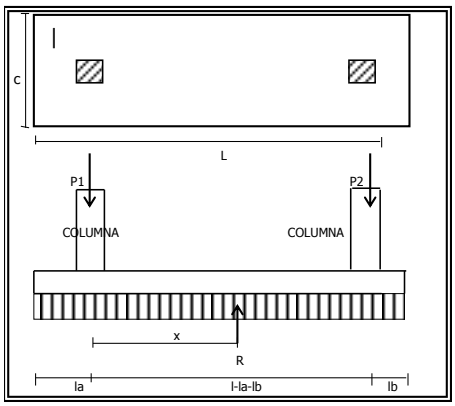
Para esta carga la sección requiere cuantía mínima:

As = 0.00333*0.3*0.35
As = **3.50** cm^2

Se suministra un refuerzo constituido por 3#4 arriba y abajo (como refuerzo mínimo).

DISEÑO DE ZAPATA COMBINADA
CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M
ZAPATA TIPO 1 - Cantidad: 1

Columna			Materiales			Esfuerzo Admisible		
b_1 =	30	cm.	f'c =	21.1	MPa	σ =	0.22	MPa
t_1 =	30	cm.	fy =	420	MPa			
b_2 =	30	cm.						
t_2 =	30	cm.						



Predimensionamiento

c =	1.00	m.
la =	0.43	m.
lb=	0.04	m.
l-la-lb =	0.93	m.
l =	1.40	m.

Cargas

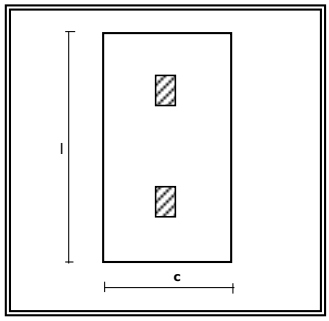
Pu_1 =	95.4	kN
Pu_2 =	39.7	kN
Pp (13%) =	17.57	kN
Σ P =	152.69	kN

$$\text{Area necesaria} = \frac{\Sigma P}{\sigma} = \frac{152.69}{0.220} = 0.69 \text{ m}^2.$$

Centro de gravedad: X= 0.27 m
l = 1.40 m
c= 0.50 m

Asumimos l= **1.40** m
c= **1.00** m
entonces el σ_{neto}= 0.097 MPa **OK**

ZAPATA



M dir(x)

$M=\sigma*l*(c/2-bv/2)^2/2$ =		8.28	kN.m
Mu=1.5xM	$Mu_{(x)}$=	12.41	kN.m
	Cuantia $_{(x)}$ =	0.0020	
	As $_{(x)}$ =	6.44	cm²
	A var=	1.29	cm²
	s=	0.33	m
	No. var=	5	
	Armadura $_{(x)}$:	8#413c./0.2	Transversales

Datos

σ =	0.097	MPa
l =	1.40	m
c =	1.00	m
H =	0.30	m
d =	0.23	m
h =	0.30	m

M dir(y)

$M=\sigma*c*(Máx(la:lb))^2/2$ =		8.79	kN.m
Mu=1.5xM	$Mu_{(y)}$=	13.19	kN.m
	Cuantia $_{(y)}$ =	0.0020	
	As $_{(y)}$ =	4.60	cm²
	A var=	1.29	cm²
	s=	0.30	m
	No. var=	4	
	Armadura $_{(y)}$:	6#417c./0.2	Longitudinales

Chequeo por cortante:

$$vu = \frac{Vu}{b * d}$$

Vu dir(x) = σneto*l*(c-bv)/2 = **47.29** kN
Vu dir(y) = σneto*c*[Máx(la, lb)] = **41.20** kN

Vu = 1.50* Vu dir(x) = **70.94** kN
Vu = 1.50* Vu dir(y) = **61.80** kN

vu dir(x)= **0.220** MPa **OK**
vu dir(y)= **0.269** MPa **OK**
ϕvc= **0.574** MPa

Chequeo por transmisión de esfuerzos

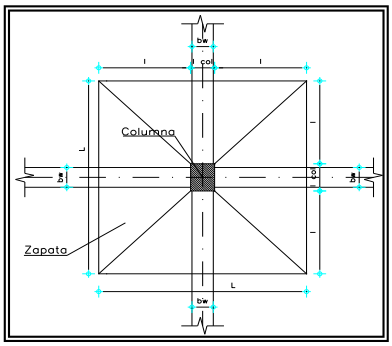
$$\sigma b = \frac{1.5xMáx(P_1:P_2)}{b*t}$$

σb= 1.591 MPa
ϕσc= 22.155 MPa **OK**

DISEÑO DE ZAPATAS CONCENTRICAS
CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M
ZAPATA TIPO 2 (5 Und).

Columna	**b =**	30	cm	**f'c =**	21.1	MPa	**σ =**	0.220	MPa
	t =	30	cm	**fy =**	420	MPa			

PREDIMENSIONAMIENTO



L =	1.000	m		***Cargas***		
lcol =	0.300	m	**Mu=**	0	kN*m	
l =	0.350	m	**Pu =**	171.45	kN	
			Pp (10%) =	17	kN	
			Σ P =	189	kN	

Area necesaria = $\frac{\Sigma P}{\sigma} = \frac{188.60}{0.220} =$ 0.86 m²

e =	0.00	m			
L =	0.926	m	*Aproximamos =*	1.00	m

Carga de diseño = $\frac{Pu}{A\ real} = \frac{171.45}{1.000} =$ 0.171 MPa

Esfuerzos			
σmáx=	0.189	MPa	OK
σmin=	0.189	MPa	OK

DISEÑO DE ZAPATA CONCENTRICA

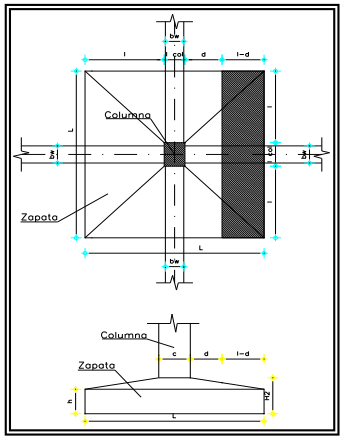
FLEXIÓN

	M borde de la columna =	11.55	kN*m
Mu =	1,7 * M borde de la columna =	19.64	kN*m

Con el criterio de calcular el refuerzo por metro lineal utilizamos una altura efectiva igual a: **d=** 0.23 m

Cuantia = 0.002
As = 4.60 cm²/m
Armadura: 6#413c./0.20
en ambos sentidos

CORTANTE



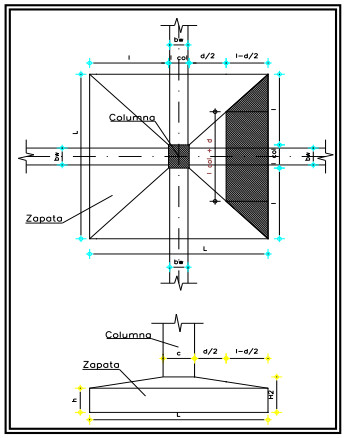
a. En una dirección (d)

L =	1.00	m	**H =**	0.30	m
l =	0.35	m	**h =**	0.30	m
l - d =	0.12	m	**H-h =**	0.00	m

V (d) =	22.63	kN
Vu (d)=	1.7*V(d)	
Vu (d) =	38.47	kN
h´=	0.23	m

$\upsilon v = \frac{Vu}{L * h'} =$ 0.167 MPa

ϕvc = 0.57 MPa **OK**



b. En dos direcciones (d/2)

ZAPATA TIPO 2 (5 Und).

L =	1.000	m	**H =**	0.30	m
d/2 =	0.115	m	**h =**	0.30	m
l - d/2 =	0.235	m	**H-h =**	0.00	m

V (d/2) =	33.9	kN
Vu (d/2) =	1.5*V(d)	
Vu (d/2) =	50.9	kN
d_1 =	0.23	m

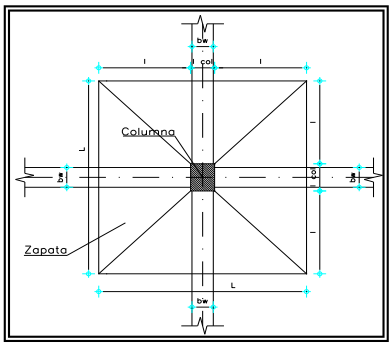
$$\nu u = \frac{Vu}{bo \times d_1} = 0.417 \text{ MPa}$$

ϕvc= 1.15 MPa **OK**

DISEÑO DE ZAPATAS CONCENTRICAS
CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M
ZAPATA TIPO 3 (4 Und).

Columna	**b =**	30	cm		**f'c =**	21.1	MPa		**σ =**	0.220	MPa
	t =	30	cm		**fy =**	420	MPa				

PREDIMENSIONAMIENTO



L =	1.300	m		***Cargas***	
lcol =	0.300	m	**Mu=**	0	kN*m
l =	0.500	m	**Pu =**	300.37	kN
			Pp (10%) =	30	kN
			Σ P =	330	kN

Area necesaria = $\frac{\Sigma P}{\sigma} = \frac{330.41}{0.220} =$ 1.50 m²

e =	0.00	m			
L =	1.225	m	*Aproximamos =*	1.30	m

Carga de diseño = $\frac{Pu}{A\ real} = \frac{300.37}{1.690} =$ 0.178 MPa

Esfuerzos			
σmáx=	0.196	MPa	OK
σmin=	0.196	MPa	OK

DISEÑO DE ZAPATA CONCENTRICA

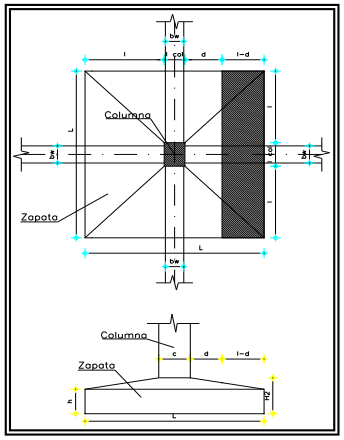
FLEXIÓN

	M borde de la columna =	24.44	kN*m
Mu =	1,7 * M borde de la columna =	41.55	kN*m

Con el criterio de calcular el refuerzo por metro lineal utilizamos una altura efectiva igual a:

d=	0.23	m
Cuantia =	0.002	
As =	4.60	cm²/m
Armadura:	7#416c./0.20	
	en ambos sentidos	

CORTANTE



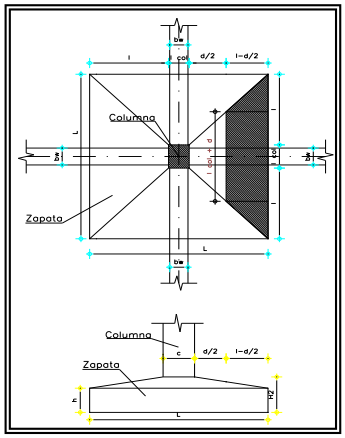
a. En una dirección (d)

L =	1.30	m		**H =**	0.30	m
l =	0.50	m		**h =**	0.30	m
l - d =	0.27	m		**H-h =**	0.00	m

V (d) =	68.62	kN
Vu (d)=	1.7*V(d)	
Vu (d) =	116.66	kN
h´=	0.23	m

$\upsilon v = \frac{Vu}{L * h'} =$ 0.390 MPa

ϕvc = 0.57 MPa **OK**



b. En dos direcciones (d/2)

ZAPATA TIPO 3 (4 Und).

L =	1.300	m	**H =**	0.30	m
d/2 =	0.115	m	**h =**	0.30	m
l - d/2 =	0.385	m	**H-h =**	0.00	m

V (d/2) =	68.9	kN
Vu (d/2) =	1.5*V(d)	
Vu (d/2) =	103.3	kN
d_1 =	0.23	m

$$\nu u = \frac{Vu}{bo \times d_1} = 0.847 \text{ MPa}$$

ϕvc= 1.15 MPa **OK**

DISEÑO DE ZAPATAS CONCENTRICAS

CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M

ZAPATA TIPO 4 (6 ud).

Columna

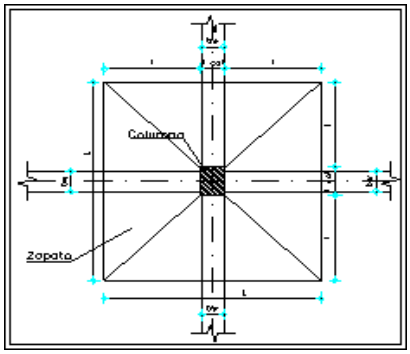
Ø = 35 cm

f'c = 21.1 MPa

fy = 420 MPa

σ = 0.220 MPa

PREDIMENSIONAMIENTO



L = 1.000 m

lcol = 0.350 m

l = 0.325 m

Cargas

Mu=	0	kN*m
Pu =	146.59	kN
Pp (10%) =	15	kN
Σ P =	161	kN

Area necesaria = $\frac{\Sigma P}{\sigma} = \frac{161.25}{0.220} =$ 0.73 m²

e = 0.00 m

L = 0.856 m

Aproximamos = 1.00 m

Carga de diseño = $\frac{Pu}{A\ real} = \frac{146.59}{1.000} =$ 0.147 MPa

Esfuerzos

σmáx=	0.161	MPa	OK
σmin=	0.161	MPa	OK

DISEÑO DE ZAPATA CONCENTRICA

FLEXIÓN

M borde de la columna = 8.52 kN*m

Mu = 1,7 * M borde de la columna = 14.48 kN*m

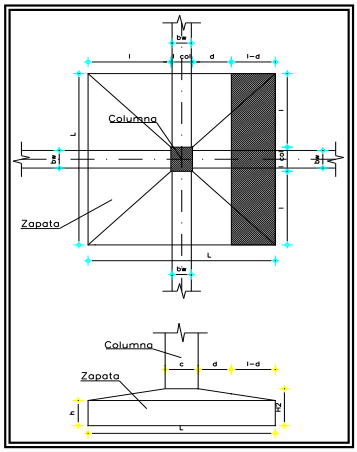
Con el criterio de calcular el refuerzo por metro lineal utilizamos una altura efectiva igual a: **d=** 0.23 m

Cuantia = 0.002

As = 4.60 cm²/m

Armadura: 6#413c./0.2 en ambos sentidos

CORTANTE



a. En una dirección (d)

L = 1.00 m

l = 0.33 m

l - d = 0.10 m

H = 0.30 m

h = 0.30 m

H-h = 0.00 m

V (d) = 15.32 kN

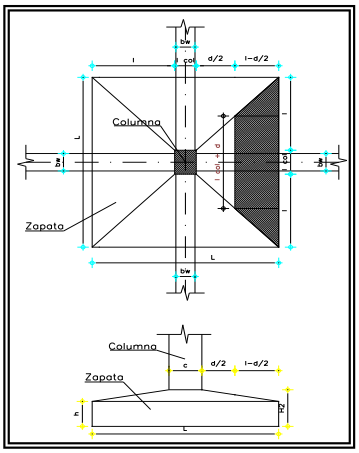
Vu (d)= 1.7*V(d)

Vu (d) = 26.04 kN

h´= 0.23 m

$\upsilon v = \frac{Vu}{L * h'} =$ 0.113 MPa

ϕvc = 0.57 MPa **OK**



b. En dos direcciones (d/2)

ZAPATA TIPO 4 (6 ud).

L =	1.000	m	**H =**	0.30	m
d/2 =	0.115	m	**h =**	0.30	m
l - d/2 =	0.210	m	**H-h =**	0.00	m

V (d/2) =	26.8	kN
Vu (d/2) =	1.5*V(d)	
Vu (d/2) =	40.1	kN
d_1 =	0.23	m

$$\nu u = \frac{Vu}{bo \times d_1} = 0.301 \text{ MPa}$$

$\phi\nu c$= 1.15 MPa **OK**

Diseños & Estructuras

DISEÑO DE CIMENTACION CORRIDA PARA MUROS
PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M

Esfuerzo admisible: **0.22** MPa
f'c: **21.1** MPa
fy: **420** MPa

										CHEQUEO DE CORTANTE			DISEÑO DE FLEXIÓN				
MURO	CIMIENTO EXCÉNTRICO?	Longitud (m)	Carga Axial (P_u) kN	Ancho requerido (m)	Ancho escojido (m)	Esfuerzo real MPa	Comparación Esfuerzo	Ancho de viga de amarre (m)	Altura de cimiento (m)	Cortante Actuante kN	Cortante Resistente kN	Comparación Cortante	Momento Flector kN.m	Cuantia requerida por metro lineal	As/m cm^2/m	ϕ Varilla cm^2	Separación requerida (m)
P1	NO	2.55	88.84	0.17	0.70	0.055	Ok!	0.30	0.30	10.95	373.22	Ok!	1.09	0.00200	5.00	1.29	0.26
P2	NO	2.55	95.81	0.19	0.70	0.059	Ok!	0.30	0.30	11.81	373.22	Ok!	1.18	0.00200	5.00	1.29	0.26
P3	NO	2.55	96.35	0.19	0.70	0.059	Ok!	0.30	0.30	11.87	373.22	Ok!	1.19	0.00200	5.00	1.29	0.26
P4	NO	2.55	96.37	0.19	0.70	0.059	Ok!	0.30	0.30	11.88	373.22	Ok!	1.19	0.00200	5.00	1.29	0.26
P5	NO	2.55	96.43	0.19	0.70	0.059	Ok!	0.30	0.30	11.88	373.22	Ok!	1.19	0.00200	5.00	1.29	0.26
P6	NO	2.55	98.19	0.19	0.70	0.061	Ok!	0.30	0.30	12.10	373.22	Ok!	1.21	0.00200	5.00	1.29	0.26
P7	NO	2.55	112.37	0.22	0.70	0.069	Ok!	0.30	0.30	13.85	373.22	Ok!	1.38	0.00200	5.00	1.29	0.26
P8	NO	2.55	101.10	0.20	0.70	0.062	Ok!	0.30	0.30	12.46	373.22	Ok!	1.25	0.00200	5.00	1.29	0.26
P9	NO	2.55	91.36	0.18	0.70	0.056	Ok!	0.30	0.30	11.26	373.22	Ok!	1.13	0.00200	5.00	1.29	0.26
P10	NO	2.55	89.94	0.18	0.70	0.055	Ok!	0.30	0.30	11.08	373.22	Ok!	1.11	0.00200	5.00	1.29	0.26
P11	NO	2.55	89.62	0.18	0.70	0.055	Ok!	0.30	0.30	11.05	373.22	Ok!	1.10	0.00200	5.00	1.29	0.26
P12	NO	2.55	89.28	0.18	0.70	0.055	Ok!	0.30	0.30	11.00	373.22	Ok!	1.10	0.00200	5.00	1.29	0.26
P13	NO	2.55	88.63	0.17	0.70	0.055	Ok!	0.30	0.30	10.92	373.22	Ok!	1.09	0.00200	5.00	1.29	0.26
P14	NO	2.55	86.64	0.17	0.70	0.053	Ok!	0.30	0.30	10.68	373.22	Ok!	1.07	0.00200	5.00	1.29	0.26
P15	NO	2.55	75.25	0.15	0.70	0.046	Ok!	0.30	0.30	9.27	373.22	Ok!	0.93	0.00200	5.00	1.29	0.26
P31	NO	0.60	23.52	0.20	0.70	0.062	Ok!	0.30	0.30	12.32	373.22	Ok!	1.23	0.00200	5.00	1.29	0.26
P32	NO	2.40	167.12	0.35	0.70	0.109	Ok!	0.30	0.30	21.89	373.22	Ok!	2.19	0.00200	5.00	1.29	0.26
P34	NO	0.60	26.28	0.22	0.70	0.069	Ok!	0.30	0.30	13.77	373.22	Ok!	1.38	0.00200	5.00	1.29	0.26
P35	NO	2.40	184.72	0.38	0.70	0.121	Ok!	0.30	0.30	24.19	373.22	Ok!	2.42	0.00200	5.00	1.29	0.26
P37	NO	0.60	26.47	0.22	0.70	0.069	Ok!	0.30	0.30	13.86	373.22	Ok!	1.39	0.00200	5.00	1.29	0.26
P38	NO	2.40	186.73	0.39	0.70	0.122	Ok!	0.30	0.30	24.45	373.22	Ok!	2.45	0.00200	5.00	1.29	0.26
P40	NO	0.60	26.54	0.22	0.70	0.070	Ok!	0.30	0.30	13.90	373.22	Ok!	1.39	0.00200	5.00	1.29	0.26
P41	NO	2.40	187.73	0.39	0.70	0.123	Ok!	0.30	0.30	24.58	373.22	Ok!	2.46	0.00200	5.00	1.29	0.26
P43	NO	0.60	26.55	0.22	0.70	0.070	Ok!	0.30	0.30	13.91	373.22	Ok!	1.39	0.00200	5.00	1.29	0.26
P44	NO	2.40	188.35	0.39	0.70	0.123	Ok!	0.30	0.30	24.67	373.22	Ok!	2.47	0.00200	5.00	1.29	0.26
P46	NO	0.60	26.55	0.22	0.70	0.070	Ok!	0.30	0.30	13.91	373.22	Ok!	1.39	0.00200	5.00	1.29	0.26
P47	NO	2.40	188.27	0.39	0.70	0.123	Ok!	0.30	0.30	24.65	373.22	Ok!	2.47	0.00200	5.00	1.29	0.26
P49	NO	0.60	27.57	0.23	0.70	0.072	Ok!	0.30	0.30	14.44	373.22	Ok!	1.44	0.00200	5.00	1.29	0.26
P50	NO	2.40	196.87	0.41	0.70	0.129	Ok!	0.30	0.30	25.78	373.22	Ok!	2.58	0.00200	5.00	1.29	0.26
P52	NO	0.60	31.67	0.26	0.70	0.083	Ok!	0.30	0.30	16.59	373.22	Ok!	1.66	0.00200	5.00	1.29	0.26
P53	NO	2.40	182.84	0.38	0.70	0.120	Ok!	0.30	0.30	23.94	373.22	Ok!	2.39	0.00200	5.00	1.29	0.26
P55	NO	0.60	28.74	0.24	0.70	0.075	Ok!	0.30	0.30	15.06	373.22	Ok!	1.51	0.00200	5.00	1.29	0.26
P56	NO	2.40	181.81	0.38	0.70	0.119	Ok!	0.30	0.30	23.81	373.22	Ok!	2.38	0.00200	5.00	1.29	0.26
P58	NO	0.60	26.40	0.22	0.70	0.069	Ok!	0.30	0.30	13.83	373.22	Ok!	1.38	0.00200	5.00	1.29	0.26
P59	NO	2.40	201.16	0.42	0.70	0.132	Ok!	0.30	0.30	26.34	373.22	Ok!	2.63	0.00200	5.00	1.29	0.26
P61	NO	0.60	25.65	0.21	0.70	0.067	Ok!	0.30	0.30	13.44	373.22	Ok!	1.34	0.00200	5.00	1.29	0.26
P62	NO	2.40	195.01	0.41	0.70	0.128	Ok!	0.30	0.30	25.54	373.22	Ok!	2.55	0.00200	5.00	1.29	0.26
P64	NO	0.60	25.63	0.21	0.70	0.067	Ok!	0.30	0.30	13.43	373.22	Ok!	1.34	0.00200	5.00	1.29	0.26
P65	NO	2.40	195.79	0.41	0.70	0.128	Ok!	0.30	0.30	25.64	373.22	Ok!	2.56	0.00200	5.00	1.29	0.26
P67	NO	0.60	25.59	0.21	0.70	0.067	Ok!	0.30	0.30	13.40	373.22	Ok!	1.34	0.00200	5.00	1.29	0.26
P68	NO	2.40	195.88	0.41	0.70	0.128	Ok!	0.30	0.30	25.65	373.22	Ok!	2.57	0.00200	5.00	1.29	0.26
P70	NO	0.60	25.50	0.21	0.70	0.067	Ok!	0.30	0.30	13.36	373.22	Ok!	1.34	0.00200	5.00	1.29	0.26
P71	NO	2.40	195.90	0.41	0.70	0.128	Ok!	0.30	0.30	25.65	373.22	Ok!	2.57	0.00200	5.00	1.29	0.26
P73	NO	0.60	25.31	0.21	0.70	0.066	Ok!	0.30	0.30	13.26	373.22	Ok!	1.33	0.00200	5.00	1.29	0.26
P74	NO	2.40	195.17	0.41	0.70	0.128	Ok!	0.30	0.30	25.56	373.22	Ok!	2.56	0.00200	5.00	1.29	0.26
P76	NO	0.60	24.60	0.20	0.70	0.064	Ok!	0.30	0.30	12.88	373.22	Ok!	1.29	0.00200	5.00	1.29	0.26
P77	NO	2.40	190.59	0.40	0.70	0.125	Ok!	0.30	0.30	24.96	373.22	Ok!	2.50	0.00200	5.00	1.29	0.26
P79	NO	0.60	20.30	0.17	0.70	0.053	Ok!	0.30	0.30	10.63	373.22	Ok!	1.06	0.00200	5.00	1.29	0.26
P80	NO	2.40	171.00	0.36	0.70	0.112	Ok!	0.30	0.30	22.39	373.22	Ok!	2.24	0.00200	5.00	1.29	0.26

5. DISEÑO DE VIGAS, MUROS Y COLUMNAS

DISEÑO DE VIGAS, MUROS Y COLUMNAS

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

V-113M/N+1.375

B=0.25 H=0.30 L=2.70		
Mu=-1.90 As=2.03		Mu=-2.79 As=2.03
	Mu=1.23 As=2.03	
Vu=-3.60	Vu=0.92	Vu=4.19

V-117M/N+1.375

B=0.25 H=0.30 L=2.70		
Mu=-1.78 As=2.03		Mu=-1.74 As=2.03
	Mu=1.24 As=2.03	
Vu=-3.71	Vu=-0.36	Vu=3.73

V-101M/N+2.70

B=0.25 H=0.30 L=3.72		
Mu=-12.81 As=2.03		Mu=-12.89 As=2.03
	Mu=12.37 As=2.03	
Vu=-22.78	Vu=0.14	Vu=22.68

V-102M/N+2.70

B=0.25 H=0.30 L=5.11		
Mu=-21.16 As=2.35		Mu=-20.86 As=2.32
	Mu=29.79 As=3.37	
Vu=-37.44	Vu=0.09	Vu=37.07

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

V-103M/N+2.70

B=0.25 H=0.30 L=2.35			B=0.25 H=0.30 L=1.23		
Mu=-0.00 As=2.03		Mu=-16.03 As=2.03	Mu=-54.84 As=6.50		Mu=-0.00 As=2.03
	Mu=0.00 As=2.03			Mu=0.00 As=2.03	
Vu=4.39	Vu=7.33	Vu=10.27	Vu=-48.14	Vu=-38.59	Vu=-29.03

V-104M/N+2.70

B=0.15 H=0.30 L=1.80			B=0.15 H=0.30 L=3.00		
Mu=-9.25 As=2.67		Mu=-9.25 As=2.67	Mu=-4.45 As=1.22		Mu=-1.11 As=1.22
	Mu=9.25 As=1.22			Mu=1.83 As=1.22	
Vu=30.22	Vu=40.67	Vu=1.14	Vu=-8.77	Vu=3.31	Vu=8.44

V-105M/N+2.70

B=0.15 H=0.30 L=3.00			B=0.15 H=0.30 L=1.80		
Mu=-1.07 As=1.22		Mu=-4.28 As=1.22	Mu=-7.40 As=2.08		Mu=-7.40 As=2.08
	Mu=1.87 As=1.22			Mu=7.40 As=1.22	
Vu=-7.70	Vu=-3.40	Vu=8.69	Vu=-0.35	Vu=-32.27	Vu=-20.87

V-106M/N+2.70

B=0.15 H=0.30 L=1.80			B=0.15 H=0.30 L=3.00		
Mu=-6.06 As=1.68		Mu=-6.06 As=1.68	Mu=-7.80 As=1.22		Mu=-1.95 As=1.22
	Mu=6.06 As=1.22			Mu=3.53 As=1.22	
Vu=17.08	Vu=27.44	Vu=1.50	Vu=-15.76	Vu=6.46	Vu=15.56

V-107M/N+2.70

B=0.15 H=0.30 L=3.00			B=0.15 H=0.30 L=1.80		
Mu=-1.95 As=1.22		Mu=-7.80 As=1.22	Mu=-6.06 As=1.68		Mu=-6.06 As=1.68
	Mu=3.54 As=1.22			Mu=6.06 As=1.22	
Vu=-14.30	Vu=-6.46	Vu=15.76	Vu=-1.48	Vu=-27.44	Vu=-17.08

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

V-108M/N+2.70

B=0.15 H=0.30 L=3.00			B=0.15 H=0.30 L=1.66		
Mu=-1.10 As=1.22		Mu=-4.39 As=1.22	Mu=-6.59 As=1.83		Mu=-6.59 As=1.83
	Mu=1.88 As=1.22			Mu=6.59 As=1.22	
Vu=-7.63	Vu=-3.32	Vu=8.76	Vu=0.00	Vu=0.87	Vu=-50.31

V-109M/N+2.70

B=0.15 H=0.30 L=1.58			B=0.15 H=0.30 L=3.00		
Mu=-4.91 As=1.34		Mu=-4.91 As=1.34	Mu=-0.70 As=1.22		Mu=-0.70 As=1.22
	Mu=4.91 As=1.22			Mu=1.59 As=1.22	
Vu=42.94	Vu=-1.64	Vu=1.64	Vu=-0.17	Vu=6.78	Vu=3.53

V-110M/N+2.70

B=0.15 H=0.30 L=4.61		
Mu=-4.70 As=1.22		Mu=-7.10 As=1.22
	Mu=11.22 As=1.43	
Vu=10.28	Vu=-18.16	Vu=18.16

V-111M/N+2.70

B=0.15 H=0.30 L=3.28		
Mu=-3.05 As=1.22		Mu=-3.05 As=1.22
	Mu=3.05 As=1.22	
Vu=-9.13	Vu=17.87	Vu=-7.53

V-112M/N+2.70

B=0.30 H=0.30 L=4.02			B=0.30 H=0.30 L=4.00			B=0.30 H=0.30 L=4.20		
Mu=-34.24 As=3.86		Mu=-39.86 As=4.53	Mu=-40.45 As=4.60		Mu=-38.46 As=4.36	Mu=-41.01 As=4.67		Mu=-47.27 As=5.44
	Mu=24.50 As=2.72			Mu=20.99 As=2.44			Mu=23.43 As=2.60	
Vu=-46.26	Vu=1.55	Vu=47.88	Vu=-46.52	Vu=-0.72	Vu=45.60	Vu=-47.91	Vu=1.54	Vu=50.69

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

B=0.30 H=0.30 L=4.94			B=0.30 H=0.30 L=2.70		
Mu=-63.02		Mu=-57.32	Mu=-19.67		Mu=-4.92
As=7.44		As=6.70	As=2.44		As=2.44
	Mu=37.63			Mu=4.92	
	As=4.26			As=2.44	
Vu=-62.81	Vu=-1.16	Vu=60.64	Vu=-20.67	Vu=-5.17	Vu=11.50

V-114M/N+2.70

B=0.30 H=0.30 L=4.02			B=0.30 H=0.30 L=4.00			B=0.30 H=0.30 L=4.20		
Mu=-20.34		Mu=-26.15	Mu=-24.55		Mu=-24.40	Mu=-25.81		Mu=-30.35
As=2.44		As=2.91	As=2.73		As=2.71	As=2.87		As=3.40
	Mu=15.81			Mu=13.95			Mu=15.36	
	As=2.44			As=2.44			As=2.44	
Vu=-27.15	Vu=1.66	Vu=29.84	Vu=-28.24	Vu=-0.43	Vu=28.17	Vu=-29.48	Vu=1.28	Vu=31.49

B=0.30 H=0.30 L=4.94		
Mu=-41.60		Mu=-35.73
As=4.74		As=4.04
	Mu=26.06	
	As=2.90	
Vu=-40.35	Vu=-1.36	Vu=38.11

V-115M/N+2.70

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.79		Mu=-0.82	Mu=-0.90		Mu=-0.79	Mu=-0.87		Mu=-0.79
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.43			Mu=0.40			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.92	Vu=0.09	Vu=1.94	Vu=-1.96	Vu=-0.14	Vu=1.89	Vu=-1.95	Vu=-0.13	Vu=1.90

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.87		Mu=-0.79	Mu=-0.87		Mu=-0.80	Mu=-0.87		Mu=-0.82
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.41			Mu=0.41			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.95	Vu=-0.13	Vu=1.90	Vu=-1.95	Vu=-0.13	Vu=1.90	Vu=-1.95	Vu=-0.14	Vu=1.90

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

B=0.15 H=0.30 L=2.40		
Mu=-0.86 As=1.22		Mu=-0.75 As=1.22
	Mu=0.43 As=1.22	
Vu=-1.97	Vu=-0.11	Vu=1.88

V-116M/N+2.70

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-4.95 As=1.22		Mu=-4.86 As=1.22	Mu=-4.95 As=1.22		Mu=-4.87 As=1.22	Mu=-4.97 As=1.22		Mu=-4.86 As=1.22
	Mu=2.88 As=1.22			Mu=2.88 As=1.22			Mu=2.87 As=1.22	
Vu=-9.62	Vu=-0.06	Vu=9.55	Vu=-9.62	Vu=-0.08	Vu=9.55	Vu=-9.63	Vu=-0.09	Vu=9.54

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-4.97 As=1.22		Mu=-4.86 As=1.22	Mu=-4.97 As=1.22		Mu=-4.86 As=1.22	Mu=-4.97 As=1.22		Mu=-4.85 As=1.22
	Mu=2.87 As=1.22			Mu=2.87 As=1.22			Mu=2.88 As=1.22	
Vu=-9.63	Vu=-0.09	Vu=9.54	Vu=-9.63	Vu=-0.09	Vu=9.54	Vu=-9.64	Vu=-0.09	Vu=9.54

B=0.15 H=0.30 L=2.40		
Mu=-4.95 As=1.22		Mu=-4.83 As=1.22
	Mu=2.89 As=1.22	
Vu=-9.64	Vu=-0.07	Vu=9.54

V-118M/N+2.70

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-3.86 As=1.22		Mu=-7.36 As=1.22	Mu=-6.93 As=1.22		Mu=-6.26 As=1.22	Mu=-6.49 As=1.22		Mu=-6.39 As=1.22
	Mu=4.57 As=1.22			Mu=3.53 As=1.22			Mu=3.68 As=1.22	
Vu=-10.43	Vu=1.42	Vu=14.53	Vu=-13.15	Vu=-0.32	Vu=12.63	Vu=-12.93	Vu=-0.13	Vu=12.85

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.56		Mu=-6.38	Mu=-6.56		Mu=-6.36	Mu=-6.50		Mu=-6.52
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.66			Mu=3.67			Mu=3.62	
	As=1.22			As=1.22			As=1.22	
Vu=-12.96	Vu=-0.16	Vu=12.82	Vu=-12.97	Vu=-0.16	Vu=12.81	Vu=-12.88	Vu=0.10	Vu=12.90

B=0.15 H=0.30 L=2.40		
Mu=-6.87		Mu=-5.46
As=1.22		As=1.22
	Mu=3.96	
	As=1.22	
Vu=-13.44	Vu=-0.59	Vu=12.34

V-119M/N+2.70

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-1.66		Mu=-7.84	Mu=-7.97		Mu=-6.09	Mu=-6.28		Mu=-6.60
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=5.23			Mu=2.96			Mu=3.55	
	As=1.22			As=1.22			As=1.22	
Vu=-10.58	Vu=10.58	Vu=13.03	Vu=-14.24	Vu=-0.74	Vu=12.76	Vu=-13.37	Vu=0.12	Vu=13.62

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.61		Mu=-6.50	Mu=-6.55		Mu=-6.49	Mu=-6.52		Mu=-6.64
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.43			Mu=3.47			Mu=3.41	
	As=1.22			As=1.22			As=1.22	
Vu=-13.54	Vu=-0.05	Vu=13.46	Vu=-13.52	Vu=-0.04	Vu=13.47	Vu=-13.45	Vu=0.07	Vu=13.54

B=0.15 H=0.30 L=2.40		
Mu=-6.69		Mu=-6.02
As=1.22		As=1.22
	Mu=3.64	
	As=1.22	
Vu=-13.76	Vu=-0.27	Vu=13.23

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

V-120M/N+2.70

B=0.25 H=0.30 L=2.70			B=0.25 H=0.30 L=2.75		
Mu=-8.63 As=2.03		Mu=-11.44 As=2.03	Mu=-17.94 As=2.03		Mu=-17.47 As=2.03
	Mu=3.24 As=2.03			Mu=15.23 As=2.10	
Vu=-14.27	Vu=0.97	Vu=16.26	Vu=-27.78	Vu=-14.21	Vu=34.35

V-121M/N+2.70

B=0.15 H=0.30 L=2.29		
Mu=-0.00 As=1.22		Mu=-0.87 As=1.22
	Mu=6.71 As=1.22	
Vu=-9.69	Vu=1.82	Vu=9.49

V-122M/N+2.70

B=0.15 H=0.30 L=2.70			B=0.15 H=0.30 L=1.89		
Mu=-2.75 As=1.22		Mu=-7.69 As=1.22	Mu=-8.44 As=1.22		Mu=-0.00 As=1.22
	Mu=7.11 As=1.22			Mu=2.29 As=1.22	
Vu=-12.33	Vu=1.70	Vu=15.65	Vu=-13.38	Vu=-4.39	Vu=2.74

V-123M/N+2.70

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.72		
Mu=-20.38 As=2.44		Mu=-22.42 As=2.48	Mu=-11.68 As=2.44		Mu=-2.96 As=2.44
	Mu=15.80 As=2.44			Mu=2.92 As=2.44	
Vu=-27.15	Vu=0.53	Vu=28.11	Vu=12.53	Vu=5.11	Vu=9.55

V-124M/N+2.70

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.20		
Mu=-34.57 As=3.90		Mu=-48.35 As=5.57	Mu=-58.35 As=6.83		Mu=-0.00 As=2.44
	Mu=27.08 As=3.02			Mu=0.00 As=2.44	
Vu=-46.51	Vu=3.24	Vu=53.00	Vu=-52.82	Vu=-44.42	Vu=-36.02

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

V-125M/N+2.70

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.20		
Mu=-34.11 As=3.84		Mu=-49.35 As=5.69	Mu=-60.84 As=7.16		Mu=-0.00 As=2.44
	Mu=26.82 As=2.99			Mu=0.00 As=2.44	
Vu=-46.17	Vu=3.59	Vu=53.34	Vu=-53.47	Vu=-45.07	Vu=-36.67

V-126M/N+2.70

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.20		
Mu=-33.83 As=3.81		Mu=-50.49 As=5.84	Mu=-67.11 As=7.98		Mu=-0.00 As=2.44
	Mu=26.39 As=2.94			Mu=0.00 As=2.44	
Vu=-45.84	Vu=3.92	Vu=53.67	Vu=-58.11	Vu=-49.71	Vu=-41.31

V-127M/N+2.70

B=0.30 H=0.30 L=0.63			B=0.30 H=0.30 L=3.02			B=0.30 H=0.30 L=1.20		
Mu=-0.06 As=2.44		Mu=-5.05 As=2.44	Mu=-12.07 As=2.44		Mu=-22.00 As=2.44	Mu=-51.47 As=5.96		Mu=-0.00 As=2.44
	Mu=0.00 As=2.44			Mu=7.03 As=2.44			Mu=0.00 As=2.44	
Vu=3.99	Vu=6.11	Vu=10.09	Vu=-25.01	Vu=5.81	Vu=23.63	Vu=-48.42	Vu=-40.02	Vu=-31.62

V-128M/N+2.70

B=0.30 H=0.30 L=1.84		
Mu=-2.36 As=2.44		Mu=-3.91 As=2.44
	Mu=1.95 As=2.44	
Vu=-6.50	Vu=6.50	Vu=3.22

V-129M/N+2.70

B=0.15 H=0.30 L=2.31			B=0.15 H=0.30 L=2.40		
Mu=-0.00 As=1.22		Mu=-11.41 As=1.27	Mu=-10.76 As=1.22		Mu=-1.12 As=1.22
	Mu=4.00 As=1.22			Mu=2.15 As=1.22	
Vu=-3.65	Vu=5.65	Vu=16.24	Vu=-13.98	Vu=-3.78	Vu=6.41

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

V-130M/N+2.70

B=0.15 H=0.30 L=2.26		
Mu=-0.48 As=1.22		Mu=-0.00 As=1.22
	Mu=6.46 As=1.22	
Vu=-8.95	Vu=-1.43	Vu=10.07

V-131M/N+2.70

B=0.25 H=0.30 L=3.30			B=0.25 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-21.79 As=2.43		Mu=-17.88 As=2.03	Mu=-15.65 As=2.03		Mu=-4.12 As=2.03	Mu=-5.70 As=1.22		Mu=-6.79 As=1.22
	Mu=16.16 As=2.99			Mu=3.91 As=2.03			Mu=3.74 As=1.22	
Vu=-39.68	Vu=9.67	Vu=26.75	Vu=-19.12	Vu=-4.52	Vu=10.08	Vu=-13.06	Vu=0.43	Vu=13.93

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.68 As=1.22		Mu=-6.50 As=1.22	Mu=-6.49 As=1.22		Mu=-6.55 As=1.22	Mu=-6.51 As=1.22		Mu=-6.59 As=1.22
	Mu=3.40 As=1.22			Mu=3.47 As=1.22			Mu=3.44 As=1.22	
Vu=-13.56	Vu=-0.07	Vu=13.43	Vu=-13.47	Vu=0.04	Vu=13.52	Vu=-13.46	Vu=0.04	Vu=13.53

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.59 As=1.22		Mu=-6.32 As=1.22	Mu=-6.16 As=1.22		Mu=-7.73 As=1.22	Mu=-7.92 As=1.22		Mu=-1.94 As=1.22
	Mu=3.53 As=1.22			Mu=3.05 As=1.22			Mu=5.06 As=1.22	
Vu=-13.60	Vu=-0.10	Vu=13.39	Vu=-12.88	Vu=0.62	Vu=14.11	Vu=-17.33	Vu=-1.86	Vu=10.37

V-132M/N+2.70

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-5.37 As=1.22		Mu=-7.03 As=1.22	Mu=-6.42 As=1.22		Mu=-6.49 As=1.22	Mu=-6.42 As=1.22		Mu=-6.52 As=1.22
	Mu=3.93 As=1.22			Mu=3.67 As=1.22			Mu=3.66 As=1.22	
Vu=-12.24	Vu=0.67	Vu=13.54	Vu=-12.87	Vu=0.09	Vu=12.92	Vu=-12.85	Vu=0.11	Vu=12.93

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.39		Mu=-6.53	Mu=-6.40		Mu=-6.53	Mu=-6.41		Mu=-6.50
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.67			Mu=3.66			Mu=3.68	
	As=1.22			As=1.22			As=1.22	
Vu=-12.84	Vu=0.13	Vu=12.94	Vu=-12.84	Vu=0.13	Vu=12.94	Vu=-12.86	Vu=0.11	Vu=12.92

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.34		Mu=-6.74	Mu=-6.94		Mu=-4.92
As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.59			Mu=4.20	
	As=1.22			As=1.22	
Vu=-12.74	Vu=0.21	Vu=13.04	Vu=-13.69	Vu=-0.86	Vu=12.10

V-133M/N+2.70

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-4.88		Mu=-4.92	Mu=-4.86		Mu=-4.96	Mu=-4.88		Mu=-4.95
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.89			Mu=2.88			Mu=2.87	
	As=1.22			As=1.22			As=1.22	
Vu=-9.57	Vu=0.03	Vu=9.61	Vu=-9.54	Vu=0.07	Vu=9.63	Vu=-9.55	Vu=0.06	Vu=9.62

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-4.88		Mu=-4.95	Mu=-4.88		Mu=-4.95	Mu=-4.87		Mu=-4.96
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.87			Mu=2.87			Mu=2.87	
	As=1.22			As=1.22			As=1.22	
Vu=-9.55	Vu=0.06	Vu=9.62	Vu=-9.55	Vu=0.06	Vu=9.62	Vu=-9.55	Vu=0.06	Vu=9.62

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-4.88		Mu=-4.94	Mu=-4.87		Mu=-4.94
As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.88			Mu=2.88	
	As=1.22			As=1.22	
Vu=-9.56	Vu=0.05	Vu=9.61	Vu=-9.56	Vu=0.04	Vu=9.62

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

V-134M/N+2.70

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.76		Mu=-0.85	Mu=-0.80		Mu=-0.84	Mu=-0.80		Mu=-0.84
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.43			Mu=0.41			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.89	Vu=0.09	Vu=1.96	Vu=-1.91	Vu=0.12	Vu=1.95	Vu=-1.91	Vu=0.10	Vu=1.95

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.80		Mu=-0.84	Mu=-0.80		Mu=-0.84	Mu=-0.80		Mu=-0.84
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.41			Mu=0.41			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.91	Vu=0.11	Vu=1.95	Vu=-1.91	Vu=0.11	Vu=1.95	Vu=-1.91	Vu=0.11	Vu=1.95

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.79		Mu=-0.86	Mu=-0.82		Mu=-0.79
As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.41			Mu=0.43	
	As=1.22			As=1.22	
Vu=-1.90	Vu=0.12	Vu=1.95	Vu=-1.94	Vu=-0.08	Vu=1.92

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

V-201M/N+5.45

B=0.25 H=0.30 L=0.90			B=0.25 H=0.30 L=2.30			B=0.25 H=0.30 L=1.53		
Mu=-0.00		Mu=-6.30	Mu=-3.06		Mu=-15.31	Mu=-37.52		Mu=-0.00
As=2.03		As=2.03	As=2.03		As=2.03	As=4.41		As=2.03
	Mu=0.00			Mu=3.06			Mu=0.00	
	As=2.03			As=2.03			As=2.03	
Vu=4.34	Vu=6.31	Vu=8.27	Vu=-4.96	Vu=4.55	Vu=14.05	Vu=-29.64	Vu=-22.19	Vu=-14.68

V-202M/N+5.45

B=0.15 H=0.30 L=0.93			B=0.15 H=0.30 L=3.00			B=0.15 H=0.30 L=1.50		
Mu=-0.00		Mu=-5.87	Mu=-0.55		Mu=-0.55	Mu=-27.70		Mu=-0.33
As=1.22		As=1.22	As=1.22		As=1.22	As=3.33		As=1.22
	Mu=0.00			Mu=2.11			Mu=0.00	
	As=1.22			As=1.22			As=1.22	
Vu=4.34	Vu=5.87	Vu=7.41	Vu=-0.64	Vu=10.12	Vu=0.50	Vu=-24.25	Vu=-17.95	Vu=-12.99

V-203M/N+5.45

B=0.15 H=0.30 L=1.50			B=0.15 H=0.30 L=3.00		
Mu=-0.00		Mu=-21.78	Mu=-0.52		Mu=-0.52
As=1.22		As=2.55	As=1.22		As=1.22
	Mu=0.00			Mu=2.16	
	As=1.22			As=1.22	
Vu=9.56	Vu=14.52	Vu=19.48	Vu=-1.25	Vu=8.45	Vu=0.39

V-204M/N+5.45

B=0.15 H=0.30 L=3.00			B=0.15 H=0.30 L=1.50		
Mu=-0.86		Mu=-0.86	Mu=-21.78		Mu=-0.00
As=1.22		As=1.22	As=2.55		As=1.22
	Mu=2.16			Mu=0.00	
	As=1.22			As=1.22	
Vu=-0.39	Vu=-8.46	Vu=1.25	Vu=-19.48	Vu=-14.52	Vu=-9.56

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

V-205M/N+5.45

B=0.15 H=0.30 L=3.00		
Mu=-0.10 As=1.22		Mu=-0.07 As=1.22
	Mu=0.22 As=1.22	
Vu=-0.38	Vu=1.28	Vu=0.06

V-206M/N+5.45

B=0.15 H=0.30 L=3.00		
Mu=-0.06 As=1.22		Mu=-0.11 As=1.22
	Mu=0.20 As=1.22	
Vu=-0.12	Vu=-1.36	Vu=0.39

V-207M/N+5.45

B=0.15 H=0.30 L=4.67		
Mu=-2.45 As=1.38		Mu=-2.45 As=1.22
	Mu=2.95 As=1.22	
Vu=14.88	Vu=-1.30	Vu=2.87

V-208M/N+5.45

B=0.15 H=0.30 L=3.40		
Mu=-1.39 As=1.22		Mu=-1.39 As=1.22
	Mu=1.39 As=1.22	
Vu=-2.22	Vu=6.14	Vu=-8.02

V-209M/N+5.45

B=0.30 H=0.30 L=4.02			B=0.30 H=0.30 L=4.00			B=0.30 H=0.30 L=4.20		
Mu=-21.15 As=2.44		Mu=-28.38 As=3.22	Mu=-27.76 As=3.14		Mu=-26.81 As=3.03	Mu=-27.95 As=3.17		Mu=-33.82 As=3.88
	Mu=17.73 As=2.44			Mu=14.67 As=2.44			Mu=16.05 As=2.44	
Vu=-31.01	Vu=1.79	Vu=33.74	Vu=-32.08	Vu=-0.42	Vu=31.64	Vu=-32.83	Vu=1.39	Vu=35.44

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

B=0.30 H=0.30 L=4.94			B=0.30 H=0.30 L=2.70		
Mu=-43.40		Mu=-39.03	Mu=-19.48		Mu=-6.82
As=5.08		As=4.52	As=2.44		As=2.44
	Mu=26.92			Mu=4.32	
	As=3.04			As=2.44	
Vu=-43.67	Vu=-0.89	Vu=42.01	Vu=-22.47	Vu=-4.29	Vu=14.63

V-210M/N+5.45

B=0.30 H=0.30 L=4.02			B=0.30 H=0.30 L=4.00			B=0.30 H=0.30 L=4.20		
Mu=-13.58		Mu=-20.56	Mu=-19.31		Mu=-18.63	Mu=-19.50		Mu=-23.87
As=2.44		As=2.44	As=2.44		As=2.44	As=2.44		As=2.68
	Mu=12.85			Mu=10.49			Mu=11.55	
	As=2.44			As=2.44			As=2.44	
Vu=-20.55	Vu=1.77	Vu=23.78	Vu=-22.10	Vu=-0.43	Vu=21.79	Vu=-22.69	Vu=1.14	Vu=24.63

B=0.30 H=0.30 L=4.94			B=0.30 H=0.30 L=2.70		
Mu=-30.63		Mu=-28.65	Mu=-14.46		Mu=-1.79
As=3.49		As=3.25	As=2.44		As=2.44
	Mu=19.63			Mu=3.16	
	As=2.44			As=2.44	
Vu=-30.63	Vu=-0.52	Vu=29.88	Vu=-16.31	Vu=-4.28	Vu=7.74

V-211M/N+5.45

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.84		Mu=-0.80	Mu=-0.87		Mu=-0.77	Mu=-0.86		Mu=-0.78
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.41			Mu=0.41			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.95	Vu=-0.05	Vu=1.91	Vu=-1.97	Vu=-0.10	Vu=1.89	Vu=-1.96	Vu=-0.09	Vu=1.90

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.86		Mu=-0.78	Mu=-0.86		Mu=-0.77	Mu=-0.85		Mu=-0.78
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.41			Mu=0.41			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.96	Vu=-0.09	Vu=1.89	Vu=-1.96	Vu=-0.09	Vu=1.89	Vu=-1.95	Vu=-0.08	Vu=1.90

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

B=0.15 H=0.30 L=2.40			B=0.25 H=0.30 L=2.70		
Mu=-0.85		Mu=-0.82	Mu=-10.60		Mu=-4.89
As=1.22		As=1.22	As=2.03		As=2.03
	Mu=0.39			Mu=5.82	
	As=1.22			As=2.03	
Vu=-1.94	Vu=-0.04	Vu=1.92	Vu=-17.12	Vu=-1.94	Vu=13.25

V-212M/N+5.45

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-3.45		Mu=-4.70	Mu=-3.90		Mu=-3.65	Mu=-3.85		Mu=-3.67
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.51			Mu=2.17			Mu=2.19	
	As=1.22			As=1.22			As=1.22	
Vu=-6.78	Vu=-1.59	Vu=9.78	Vu=-7.51	Vu=-0.16	Vu=7.31	Vu=-7.48	Vu=-0.14	Vu=7.34

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-3.85		Mu=-3.67	Mu=-3.85		Mu=-3.67	Mu=-3.85		Mu=-3.65
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.18			Mu=2.19			Mu=2.19	
	As=1.22			As=1.22			As=1.22	
Vu=-7.48	Vu=-0.14	Vu=7.34	Vu=-7.48	Vu=-0.14	Vu=7.34	Vu=-7.49	Vu=-0.14	Vu=7.33

B=0.15 H=0.30 L=2.40		
Mu=-3.56		Mu=-4.31
As=1.22		As=1.22
	Mu=2.01	
	As=1.22	
Vu=-7.11	Vu=0.30	Vu=7.70

V-213M/N+5.45

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-2.73		Mu=-7.84	Mu=-7.28		Mu=-5.87	Mu=-6.07		Mu=-6.23
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=5.72			Mu=3.19			Mu=3.62	
	As=1.22			As=1.22			As=1.22	
Vu=-23.24	Vu=4.55	Vu=13.81	Vu=-12.74	Vu=-0.55	Vu=11.64	Vu=-12.13	Vu=0.09	Vu=12.26

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.29		Mu=-6.16	Mu=-6.24		Mu=-6.21	Mu=-6.30		Mu=-6.01
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.54			Mu=3.54			Mu=3.61	
	As=1.22			As=1.22			As=1.22	
Vu=-12.24	Vu=-0.08	Vu=12.14	Vu=-12.20	Vu=-0.04	Vu=12.18	Vu=-12.31	Vu=-0.14	Vu=12.07

B=0.15 H=0.30 L=2.40			B=0.25 H=0.30 L=2.70			B=0.25 H=0.30 L=2.75		
Mu=-6.03		Mu=-6.92	Mu=-9.08		Mu=-9.31	Mu=-12.70		Mu=-12.19
As=1.22		As=1.22	As=2.03		As=2.03	As=2.03		As=2.03
	Mu=3.29			Mu=5.76			Mu=9.92	
	As=1.22			As=2.03			As=2.03	
Vu=-11.84	Vu=0.35	Vu=12.54	Vu=-15.99	Vu=0.31	Vu=16.14	Vu=-18.48	Vu=-9.87	Vu=22.06

V-214M/N+5.45

B=0.15 H=0.30 L=1.90		
Mu=-0.00		Mu=-0.08
As=1.22		As=1.22
	Mu=3.60	
	As=1.22	
Vu=-3.85	Vu=1.12	Vu=5.44

V-215M/N+5.45

B=0.15 H=0.30 L=2.70			B=0.15 H=0.30 L=1.98		
Mu=-1.60		Mu=-1.09	Mu=-1.10		Mu=-1.10
As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.38			Mu=2.12	
	As=1.22			As=1.22	
Vu=-8.21	Vu=-5.86	Vu=-0.69	Vu=-1.48	Vu=-5.72	Vu=4.26

V-216M/N+5.45

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.70		
Mu=-13.56		Mu=-17.51	Mu=-10.44		Mu=-2.09
As=2.44		As=2.44	As=2.44		As=2.44
	Mu=12.99			Mu=2.09	
	As=2.44			As=2.44	
Vu=-20.58	Vu=0.93	Vu=22.44	Vu=9.96	Vu=9.96	Vu=11.50

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

V-217M/N+5.45

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.45		
Mu=-22.10		Mu=-39.40	Mu=-46.15		Mu=-0.00
As=2.47		As=4.57	As=5.43		As=2.44
	Mu=20.45			Mu=0.00	
	As=2.44			As=2.44	
Vu=-33.44	Vu=4.07	Vu=41.58	Vu=-36.66	Vu=-30.06	Vu=-12.39

V-218M/N+5.45

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.45		
Mu=-22.42		Mu=-37.91	Mu=-43.19		Mu=-0.00
As=2.51		As=4.38	As=5.05		As=2.44
	Mu=21.03			Mu=0.00	
	As=2.44			As=2.44	
Vu=-33.87	Vu=3.64	Vu=41.16	Vu=-33.60	Vu=-27.00	Vu=-20.39

V-219M/N+5.45

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.45		
Mu=-21.98		Mu=-38.67	Mu=-47.46		Mu=-0.00
As=2.46		As=4.48	As=5.61		As=2.44
	Mu=20.87			Mu=0.00	
	As=2.44			As=2.44	
Vu=-33.59	Vu=3.93	Vu=41.44	Vu=-36.27	Vu=-29.66	Vu=-23.06

V-220M/N+5.45

B=0.30 H=0.30 L=3.95			B=0.30 H=0.30 L=1.45		
Mu=-20.24		Mu=-35.17	Mu=-41.68		Mu=-0.00
As=2.44		As=4.04	As=4.86		As=2.44
	Mu=20.24			Mu=0.00	
	As=2.44			As=2.44	
Vu=-32.67	Vu=7.18	Vu=39.70	Vu=-34.36	Vu=-27.76	Vu=-14.34

V-221M/N+5.45

B=0.30 H=0.30 L=0.90			B=0.30 H=0.30 L=2.97			B=0.30 H=0.30 L=1.85		
Mu=-0.00		Mu=-6.43	Mu=-10.02		Mu=-8.24	Mu=-6.90		Mu=-1.38
As=2.44		As=2.44	As=2.44		As=2.44	As=2.44		As=2.44
	Mu=0.00			Mu=7.08			Mu=1.38	
	As=2.44			As=2.44			As=2.44	
Vu=7.74	Vu=9.71	Vu=13.20	Vu=-20.28	Vu=0.63	Vu=14.63	Vu=-8.58	Vu=-2.79	Vu=-3.75

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

V-222M/N+5.45

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.00		Mu=-0.00	Mu=-1.49		Mu=-1.49
As=1.22		As=1.22	As=1.22		As=1.22
	Mu=4.03			Mu=1.49	
	As=1.22			As=1.22	
Vu=-1.98	Vu=-0.37	Vu=3.81	Vu=4.88	Vu=-7.95	Vu=3.63

V-223M/N+5.45

B=0.15 H=0.30 L=1.87		
Mu=-0.02		Mu=-0.00
As=1.22		As=1.22
	Mu=3.78	
	As=1.22	
Vu=-5.54	Vu=-1.32	Vu=3.55

V-224M/N+5.45

B=0.25 H=0.30 L=3.25			B=0.25 H=0.30 L=2.35			B=0.15 H=0.30 L=2.40		
Mu=-15.07		Mu=-11.45	Mu=-9.40		Mu=-5.16	Mu=-5.73		Mu=-6.37
As=2.03		As=2.03	As=2.03		As=2.03	As=1.22		As=1.22
	Mu=10.56			Mu=2.48			Mu=3.72	
	As=2.03			As=2.03			As=1.22	
Vu=-25.65	Vu=5.53	Vu=17.15	Vu=-13.86	Vu=-1.66	Vu=10.53	Vu=-11.94	Vu=0.27	Vu=12.44

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.27		Mu=-6.22	Mu=-6.17		Mu=-6.24	Mu=-6.18		Mu=-6.27
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.52			Mu=3.56			Mu=3.54	
	As=1.22			As=1.22			As=1.22	
Vu=-12.21	Vu=-0.05	Vu=12.17	Vu=-12.17	Vu=0.05	Vu=12.22	Vu=-12.16	Vu=0.06	Vu=12.23

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-6.24		Mu=-6.07	Mu=-5.90		Mu=-7.21	Mu=-7.86		Mu=-2.60
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=3.61			Mu=3.21			Mu=5.68	
	As=1.22			As=1.22			As=1.22	
Vu=-12.26	Vu=-0.09	Vu=12.12	Vu=-11.68	Vu=0.52	Vu=12.70	Vu=-14.51	Vu=-4.55	Vu=22.72

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

V-225M/N+5.45

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-3.95		Mu=-3.71	Mu=-3.68		Mu=-3.82	Mu=-3.70		Mu=-3.82
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.11			Mu=2.19			Mu=2.18	
	As=1.22			As=1.22			As=1.22	
Vu=-7.50	Vu=-0.13	Vu=7.32	Vu=-7.35	Vu=0.10	Vu=7.46	Vu=-7.36	Vu=0.10	Vu=7.46

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-3.70		Mu=-3.82	Mu=-3.70		Mu=-3.82	Mu=-3.70		Mu=-3.82
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.19			Mu=2.18			Mu=2.19	
	As=1.22			As=1.22			As=1.22	
Vu=-7.36	Vu=0.10	Vu=7.46	Vu=-7.36	Vu=0.10	Vu=7.46	Vu=-7.36	Vu=0.10	Vu=7.46

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-3.68		Mu=-3.87	Mu=-4.65		Mu=-3.57
As=1.22		As=1.22	As=1.22		As=1.22
	Mu=2.17			Mu=2.48	
	As=1.22			As=1.22	
Vu=-7.33	Vu=0.12	Vu=7.49	Vu=-9.70	Vu=1.67	Vu=6.85

V-226M/N+5.45

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.79		Mu=-0.84	Mu=-0.80		Mu=-0.84	Mu=-0.79		Mu=-0.85
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.42			Mu=0.41			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.91	Vu=0.04	Vu=1.95	Vu=-1.91	Vu=0.06	Vu=1.95	Vu=-1.91	Vu=0.07	Vu=1.95

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.79		Mu=-0.85	Mu=-0.79		Mu=-0.85	Mu=-0.79		Mu=-0.84
As=1.22		As=1.22	As=1.22		As=1.22	As=1.22		As=1.22
	Mu=0.41			Mu=0.41			Mu=0.41	
	As=1.22			As=1.22			As=1.22	
Vu=-1.91	Vu=0.06	Vu=1.95	Vu=-1.91	Vu=0.06	Vu=1.95	Vu=-1.91	Vu=0.06	Vu=1.95

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA, (CUND)

B=0.15 H=0.30 L=2.40			B=0.15 H=0.30 L=2.40		
Mu=-0.79 As=1.22		Mu=-0.85 As=1.22	Mu=-0.80 As=1.22		Mu=-0.83 As=1.22
	Mu=0.41 As=1.22			Mu=0.41 As=1.22	
Vu=-1.90	Vu=0.07	Vu=1.95	Vu=-1.92	Vu=0.04	Vu=1.94

V-227M/N+5.45

B=0.25 H=0.30 L=3.72		
Mu=-7.94 As=2.03		Mu=-7.97 As=2.03
	Mu=6.59 As=2.03	
Vu=-13.32	Vu=0.15	Vu=13.27

V-228M/N+5.45

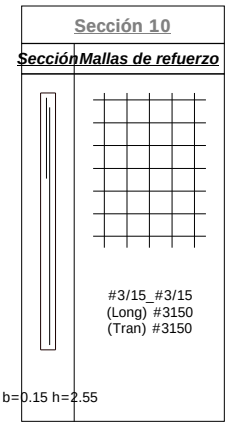
B=0.25 H=0.30 L=5.11		
Mu=-14.06 As=2.03		Mu=-14.02 As=2.03
	Mu=20.16 As=2.27	
Vu=-24.87	Vu=0.97	Vu=23.64

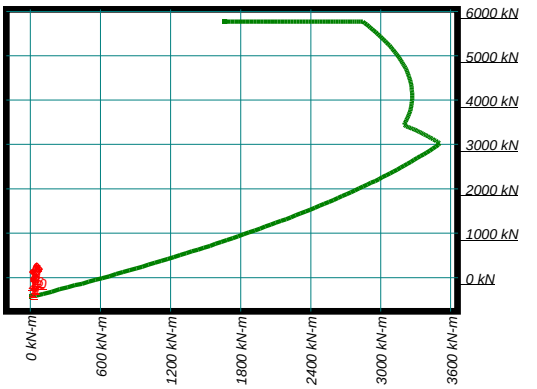
V-229M/N+5.45

B=0.15 H=0.30 L=1.50			B=0.15 H=0.30 L=3.00		
Mu=-0.00 As=1.22		Mu=-38.14 As=4.85	Mu=-0.60 As=1.22		Mu=-0.33 As=1.22
	Mu=0.00 As=1.22			Mu=1.26 As=1.22	
Vu=20.36	Vu=25.96	Vu=31.66	Vu=-1.39	Vu=-5.49	Vu=0.62

Pantalla P7 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =46.2 kN En el vano 1 Combinación 7 [vu=0.15Mpa Øvc=1.07Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.02Mpa En el vano 1 Combinación 4 [Momento =55.5 kN-m Axial =261.4 kN C=0.19m]

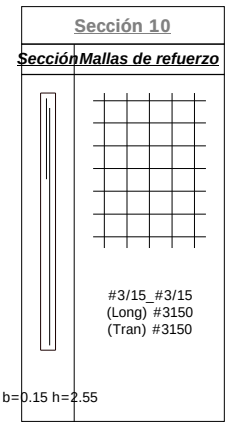


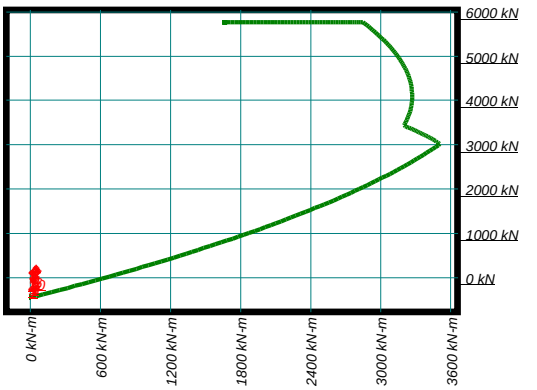


N	Mu	Pu	C
1	1.9	12.3	0.2
2	2.3	13.1	0.2
3	2.5	-3.4	0.1
4	5.5	26.1	0.2
5	3.9	6.0	0.1
6	7.9	18.2	0.2
7	2.9	-7.3	0.1
8	4.7	21.9	0.2
9	4.6	1.8	0.1
10	7.0	14.0	0.2

Pantalla P6 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =96.0 kN En el vano 1 Combinación 6 [vu=0.31Mpa Øvc=1.18Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.87Mpa En el vano 1 Combinación 4 [Momento =48.4 kN-m Axial =219.8 kN C=0.17m]

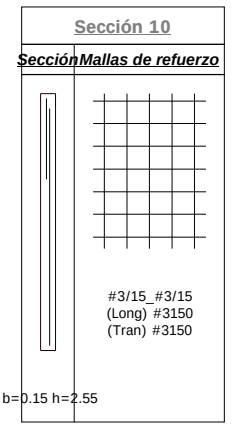


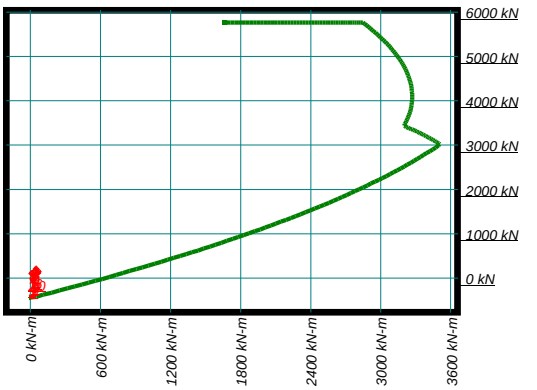


N	Mu	Pu	C
1	1.4	10.9	0.1
2	1.7	11.3	0.1
3	2.0	-2.3	0.1
4	4.8	22.0	0.2
5	3.8	5.8	0.1
6	6.7	15.4	0.2
7	2.6	-5.5	0.1
8	4.2	18.4	0.2
9	4.4	2.2	0.1
10	6.1	11.8	0.2

Pantalla P5 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =97.3 kN En el vano 1 Combinación 6 [vu=0.32Mpa Øvc=1.18Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.84Mpa En el vano 1 Combinación 4 [Momento =48.8 kN-m Axial =207.1 kN C=0.17m]

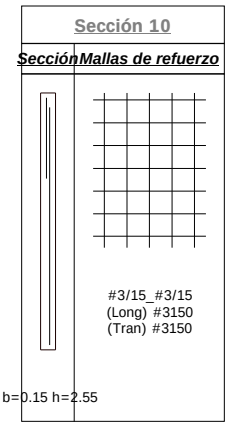


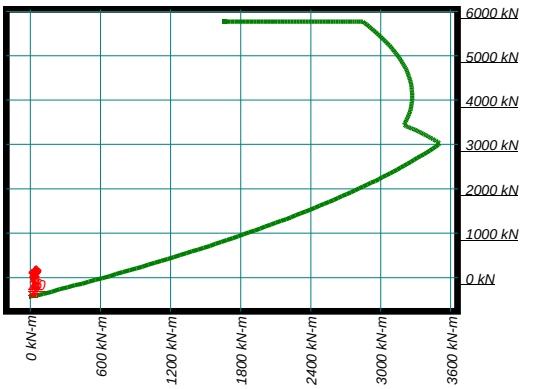


N	Mu	Pu	C
1	1.3	10.8	0.1
2	1.6	11.1	0.1
3	2.0	-1.4	0.1
4	4.9	20.7	0.2
5	3.9	5.8	0.1
6	6.8	15.0	0.2
7	2.6	-4.5	0.1
8	4.3	17.2	0.2
9	4.5	2.4	0.1
10	6.2	11.5	0.1

Pantalla P4 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =97.7 kN En el vano 1 Combinación 6 [vu=0.32Mpa Øvc=1.18Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.81Mpa En el vano 1 Combinación 4 [Momento =48.9 kN-m Axial =196.7 kN C=0.16m]

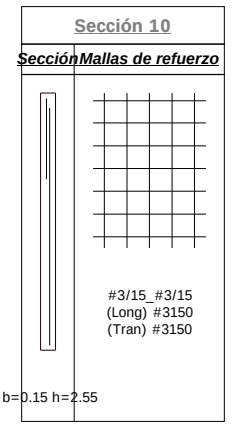


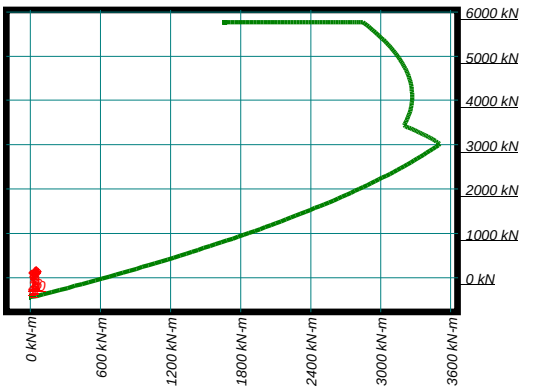


N	Mu	Pu	C
1	1.3	10.8	0.1
2	1.7	11.1	0.1
3	2.0	1.1	0.1
4	4.9	19.7	0.2
5	3.9	6.3	0.1
6	6.8	14.5	0.2
7	2.6	-3.5	0.1
8	4.3	16.2	0.2
9	4.5	2.8	0.1
10	6.2	11.1	0.1

Pantalla P3 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =97.4 kN En el vano 1 Combinación 6 [vu=0.32Mpa Øvc=1.18Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.79Mpa En el vano 1 Combinación 4 [Momento =48.8 kN-m Axial =186.7 kN C=0.16m]

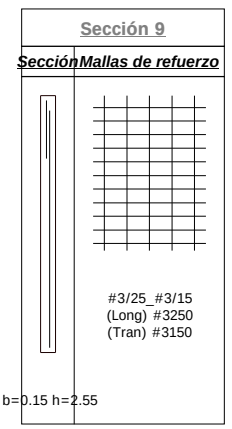


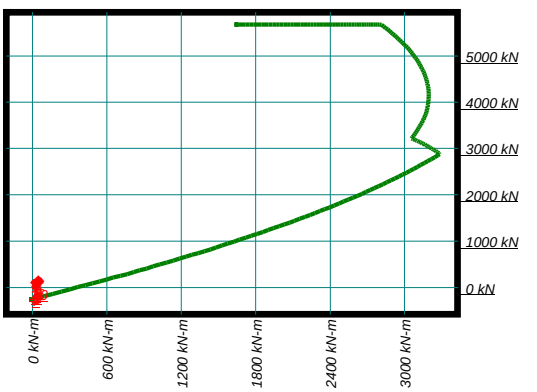


N	Mu	Pu	C
1	1.3	10.8	0.1
2	1.7	11.1	0.1
3	2.0	2.1	0.1
4	4.9	18.7	0.2
5	3.9	6.7	0.1
6	6.8	14.1	0.2
7	2.6	-2.5	0.1
8	4.3	15.2	0.2
9	4.5	3.2	0.1
10	6.2	10.7	0.1

Pantalla P2 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =96.8 kN En el vano 1 Combinación 6 [vu=0.32Mpa Øvc=1.18Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.78Mpa En el vano 1 Combinación 6 [Momento =66.7 kN-m Axial =139.8 kN C=0.11m]

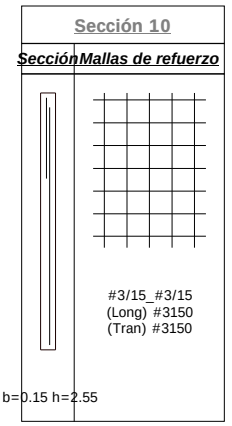


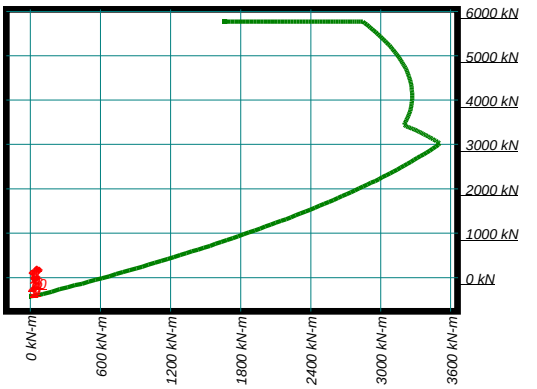


N	Mu	Pu	C
1	1.3	10.7	0.1
2	1.6	11.0	0.1
3	2.0	2.8	0.1
4	4.8	17.9	0.1
5	3.9	6.7	0.1
6	6.7	14.0	0.1
7	2.6	-1.8	0.1
8	4.3	14.4	0.1
9	4.4	3.2	0.1
10	6.1	10.5	0.1

Pantalla P1 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =56.9 kN En el vano 1 Combinación 9 [vu=0.19Mpa Øvc=1.10Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.90Mpa En el vano 1 Combinación 6 [Momento =74.8 kN-m Axial =169.4 kN C=0.16m]

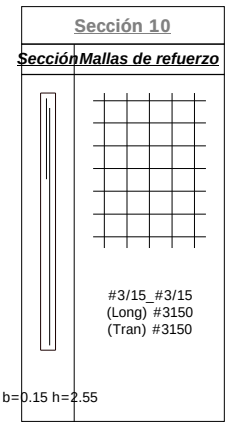


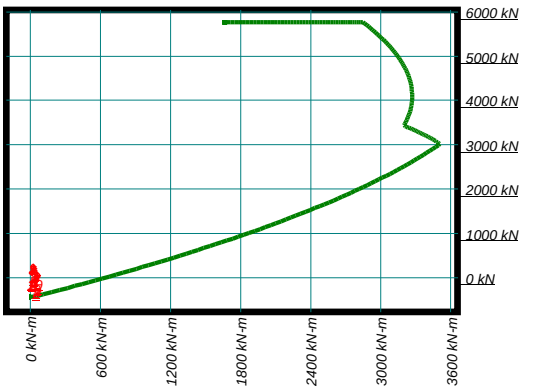


N	Mu	Pu	C
1	1.6	10.1	0.1
2	1.9	10.2	0.1
3	2.8	-1.4	0.1
4	5.4	19.1	0.2
5	4.9	2.3	0.1
6	7.5	16.9	0.2
7	3.3	-4.2	0.1
8	4.8	16.0	0.2
9	5.4	-2.0	0.1
10	6.9	13.8	0.2

Pantalla P8 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =58.7 kN En el vano 1 Combinación 3 [vu=0.19Mpa Øvc=1.09Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.80Mpa En el vano 1 Combinación 4 [Momento =25.7 kN-m Axial =246.3 kN C=0.19m]

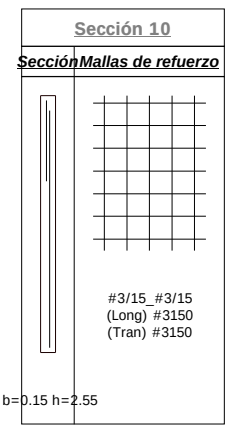


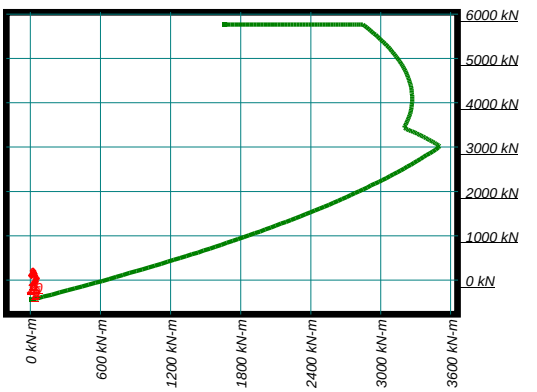


N	Mu	Pu	C
1	1.4	11.0	0.1
2	1.7	11.3	0.1
3	5.0	-4.9	0.1
4	2.6	24.6	0.2
5	6.3	5.0	0.1
6	3.3	16.2	0.2
7	4.4	-8.1	0.1
8	2.8	21.1	0.2
9	5.6	1.5	0.1
10	3.8	12.7	0.2

Pantalla P9 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =61.5 kN En el vano 1 Combinación 3 [vu=0.20Mpa Øvc=1.09Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.68Mpa En el vano 1 Combinación 4 [Momento =21.8 kN-m Axial =209.5 kN C=0.17m]

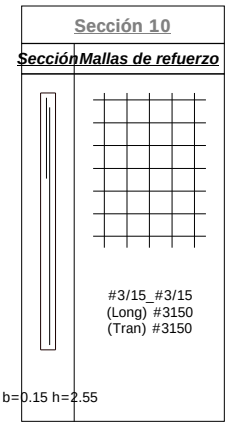


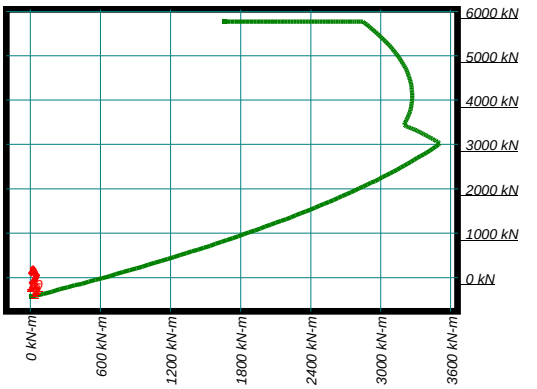


N	Mu	Pu	C
1	1.0	10.2	0.1
2	1.2	10.2	0.1
3	4.3	-3.2	0.1
4	2.2	21.0	0.2
5	5.3	4.8	0.1
6	3.2	14.5	0.2
7	3.8	-5.9	0.1
8	2.6	17.8	0.2
9	4.9	1.7	0.1
10	3.7	11.4	0.1

Pantalla P10 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =76.7 kN En el vano 1 Combinación 5 [vu=0.25Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.65Mpa En el vano 1 Combinación 4 [Momento =22.0 kN-m Axial =197.2 kN C=0.16m]

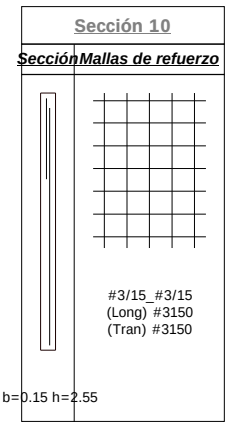


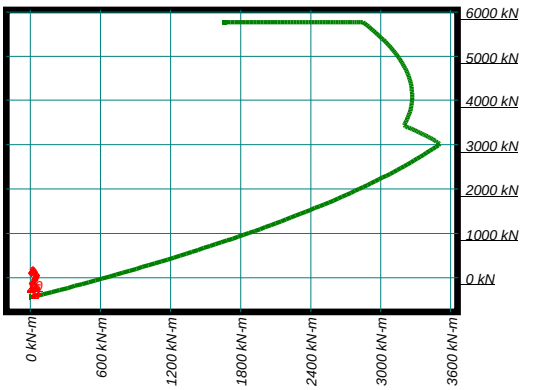


N	Mu	Pu	C
1	0.9	10.0	0.1
2	1.2	10.0	0.1
3	4.3	-2.2	0.1
4	2.2	19.7	0.2
5	5.4	4.8	0.1
6	3.3	14.2	0.2
7	3.9	-4.9	0.1
8	2.6	16.7	0.2
9	4.9	1.8	0.1
10	3.7	11.1	0.1

Pantalla P11 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =77.0 kN En el vano 1 Combinación 5 [vu=0.25Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.62Mpa En el vano 1 Combinación 4 [Momento =22.0 kN-m Axial =187.0 kN C=0.16m]

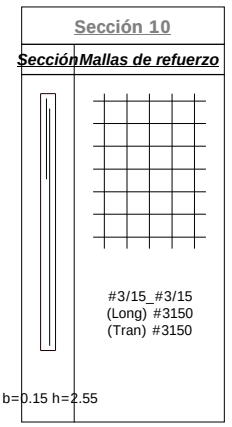


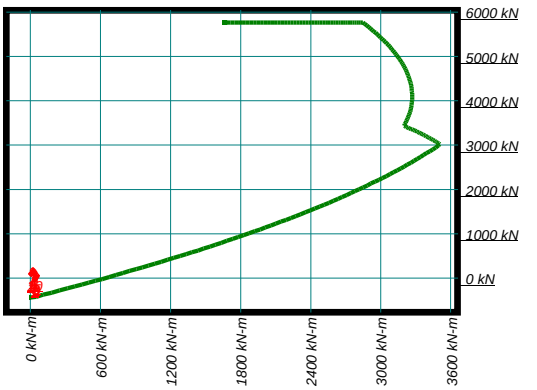


N	Mu	Pu	C
1	1.0	10.0	0.1
2	1.2	10.0	0.1
3	4.3	-1.3	0.1
4	2.2	18.7	0.2
5	5.4	5.1	0.1
6	3.3	13.9	0.2
7	3.9	-3.9	0.1
8	2.6	15.7	0.2
9	4.9	2.0	0.1
10	3.7	10.9	0.1

Pantalla P12 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =77.0 kN En el vano 1 Combinación 5 [vu=0.25Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.60Mpa En el vano 1 Combinación 4 [Momento =22.0 kN-m Axial =176.9 kN C=0.16m]

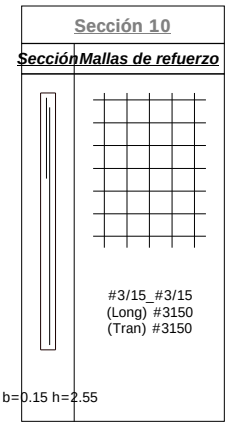


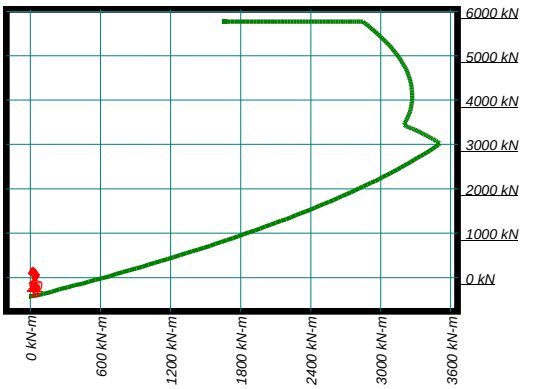


N	Mu	Pu	C
1	1.0	10.0	0.1
2	1.2	10.0	0.1
3	4.3	1.2	0.1
4	2.2	17.7	0.2
5	5.4	5.3	0.1
6	3.3	13.6	0.2
7	3.9	-3.0	0.1
8	2.6	14.7	0.2
9	4.9	2.3	0.1
10	3.7	10.6	0.1

Pantalla P13 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =76.6 kN En el vano 1 Combinación 5 [vu=0.25Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.57Mpa En el vano 1 Combinación 4 [Momento =21.9 kN-m Axial =166.9 kN C=0.16m]

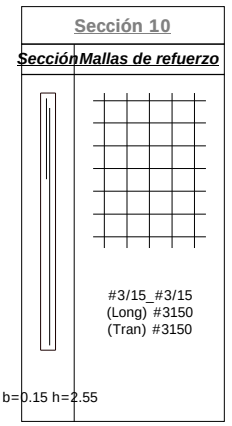


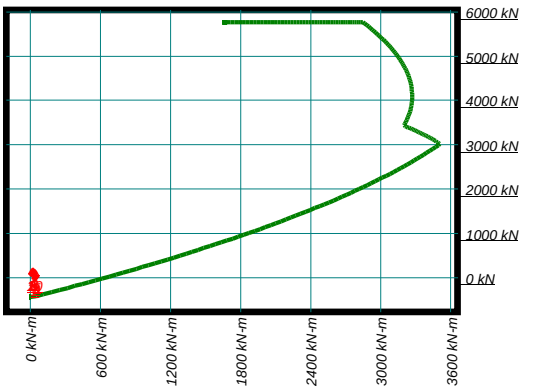


N	Mu	Pu	C
1	1.0	9.9	0.1
2	1.2	9.9	0.1
3	4.3	2.1	0.1
4	2.2	16.7	0.2
5	5.4	5.5	0.1
6	3.3	13.3	0.2
7	3.9	-2.1	0.1
8	2.6	13.7	0.2
9	4.9	2.5	0.1
10	3.7	10.3	0.1

Pantalla P14 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =76.1 kN En el vano 1 Combinación 5 [vu=0.25Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.55Mpa En el vano 1 Combinación 4 [Momento =22.2 kN-m Axial =157.3 kN C=0.15m]

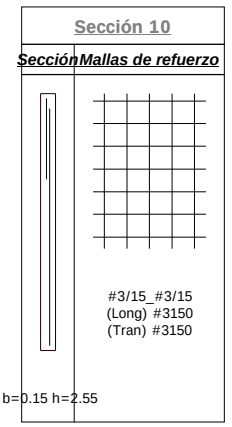


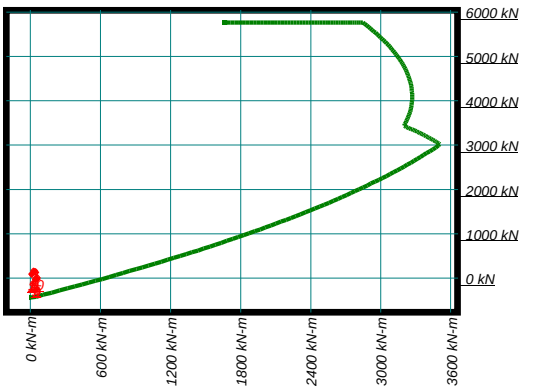


N	Mu	Pu	C
1	0.9	9.8	0.1
2	1.2	9.7	0.1
3	4.2	2.6	0.1
4	2.2	15.7	0.2
5	5.3	5.3	0.1
6	3.3	13.1	0.2
7	3.8	-1.4	0.1
8	2.6	12.8	0.2
9	4.8	2.4	0.1
10	3.7	10.2	0.1

Pantalla P15 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =58.0 kN En el vano 1 Combinación 9 [vu=0.19Mpa Øvc=1.10Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.66Mpa En el vano 1 Combinación 6 [Momento =41.4 kN-m Axial =153.8 kN C=0.15m]

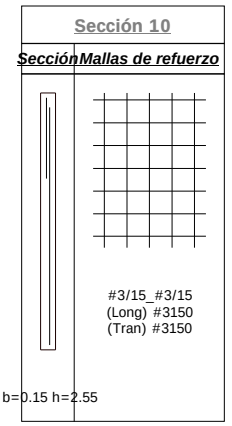


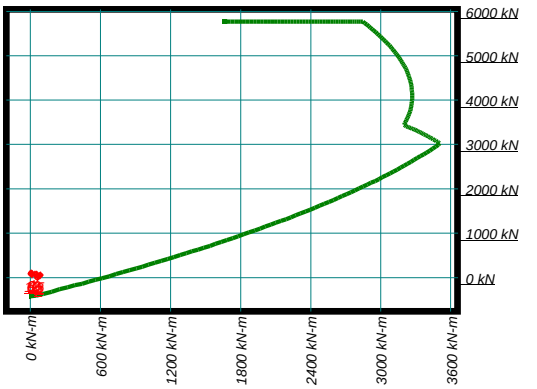


N	Mu	Pu	C
1	1.2	9.1	0.1
2	1.5	8.7	0.1
3	4.6	-1.3	0.1
4	2.8	16.2	0.2
5	6.0	1.4	0.1
6	4.1	15.4	0.2
7	4.2	-3.1	0.1
8	3.3	13.7	0.2
9	5.5	-2.3	0.1
10	4.6	12.9	0.2

Pantalla P23 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =.4 kN En el vano 1 Combinación 6 [vu=0.00Mpa Øvc=0.23Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.66Mpa En el vano 1 Combinación 5 [Momento =84.2 kN-m Axial =55.9 kN C=0.13m]

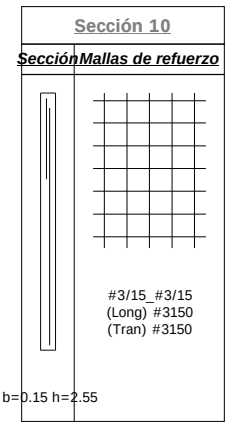


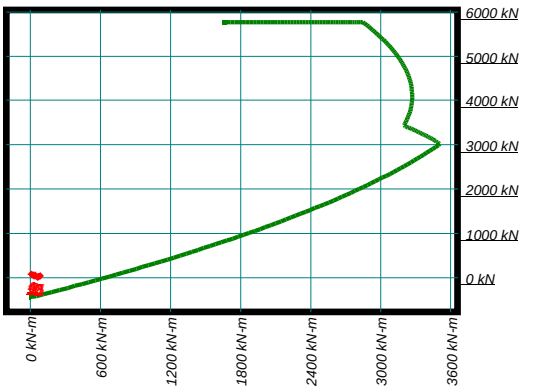


N	Mu	Pu	C
1	3.9	7.0	0.1
2	5.1	7.7	0.1
3	8.0	3.7	0.1
4	0.9	10.4	0.1
5	8.4	5.6	0.1
6	0.4	8.5	0.1
7	6.0	-1.2	0.1
8	1.0	7.9	0.1
9	6.5	3.1	0.1
10	1.5	6.0	0.1

Pantalla P24 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =62.4 kN En el vano 1 Combinación 5 [vu=0.20Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.65Mpa En el vano 1 Combinación 5 [Momento =85.7 kN-m Axial =48.6 kN C=0.13m]

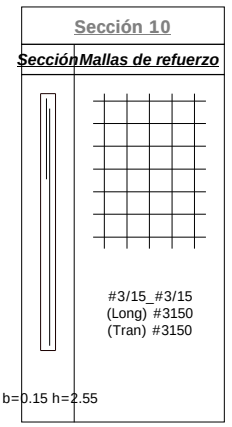


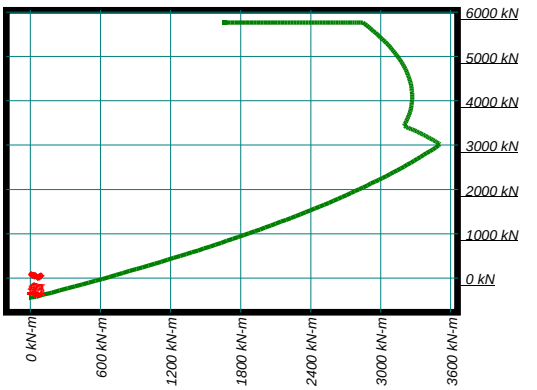


N	Mu	Pu	C
1	2.9	5.9	0.1
2	4.0	6.2	0.1
3	7.7	3.2	0.1
4	0.8	8.4	0.1
5	8.6	4.9	0.1
6	1.7	6.7	0.1
7	6.1	1.2	0.1
8	2.4	6.4	0.1
9	7.0	2.9	0.1
10	3.3	4.7	0.1

Pantalla P25 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =66.2 kN En el vano 1 Combinación 5 [vu=0.22Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.69Mpa En el vano 1 Combinación 5 [Momento =91.1 kN-m Axial =50.7 kN C=0.13m]

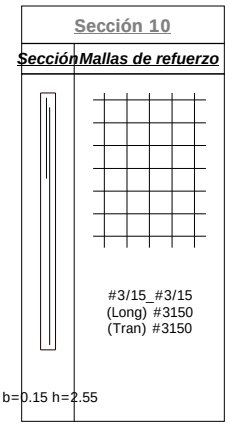


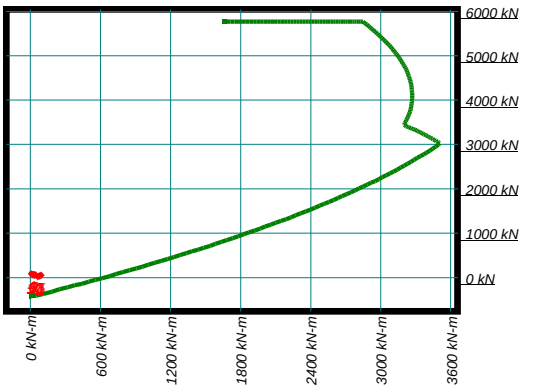


N	Mu	Pu	C
1	3.0	6.1	0.1
2	4.2	6.4	0.1
3	8.0	3.5	0.1
4	0.8	8.3	0.1
5	9.1	5.1	0.1
6	1.9	6.8	0.1
7	6.4	1.5	0.1
8	2.5	6.3	0.1
9	7.4	3.0	0.1
10	3.6	4.7	0.1

Pantalla P26 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =66.9 kN En el vano 1 Combinación 5 [vu=0.22Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.70Mpa En el vano 1 Combinación 5 [Momento =92.0 kN-m Axial =51.1 kN C=0.13m]

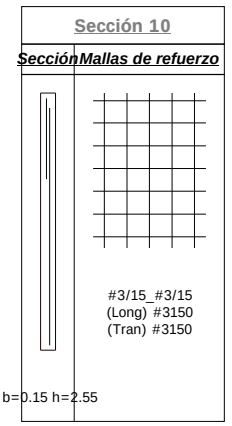


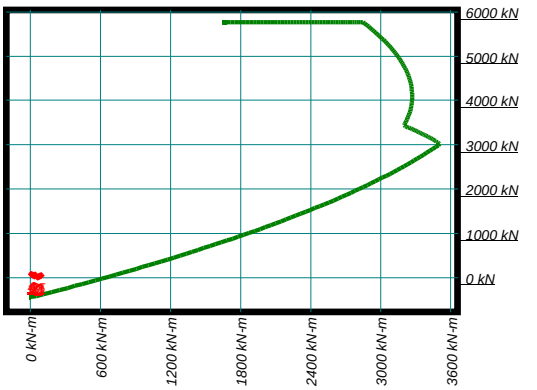


N	Mu	Pu	C
1	3.0	6.0	0.1
2	4.2	6.3	0.1
3	8.1	3.7	0.1
4	0.9	8.1	0.1
5	9.2	5.1	0.1
6	2.0	6.7	0.1
7	6.4	1.7	0.1
8	2.6	6.1	0.1
9	7.5	3.1	0.1
10	3.7	4.7	0.1

Pantalla P27 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =66.8 kN En el vano 1 Combinación 5 [vu=0.22Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.70Mpa En el vano 1 Combinación 5 [Momento =91.8 kN-m Axial =51.5 kN C=0.13m]

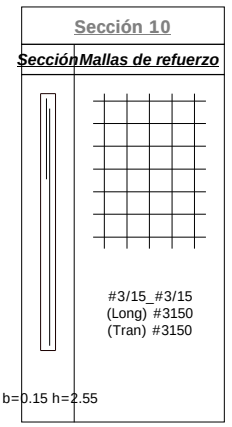


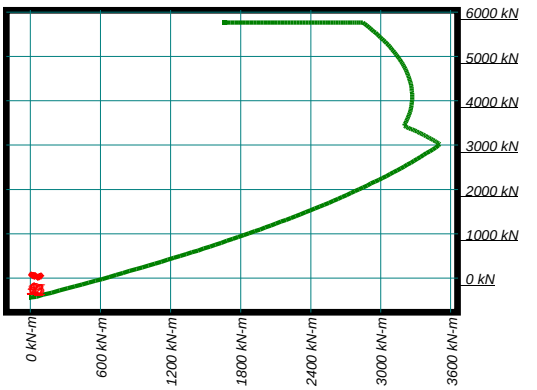


N	Mu	Pu	C
1	3.0	6.0	0.1
2	4.2	6.3	0.1
3	8.1	3.9	0.1
4	0.9	7.9	0.1
5	9.2	5.2	0.1
6	2.0	6.6	0.1
7	6.4	1.9	0.1
8	2.6	5.9	0.1
9	7.5	3.1	0.1
10	3.7	4.6	0.1

Pantalla P28 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =65.3 kN En el vano 1 Combinación 5 [vu=0.21Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.69Mpa En el vano 1 Combinación 5 [Momento =90.0 kN-m Axial =51.6 kN C=0.13m]

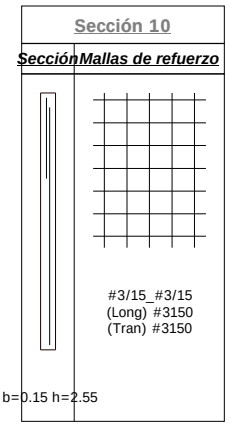


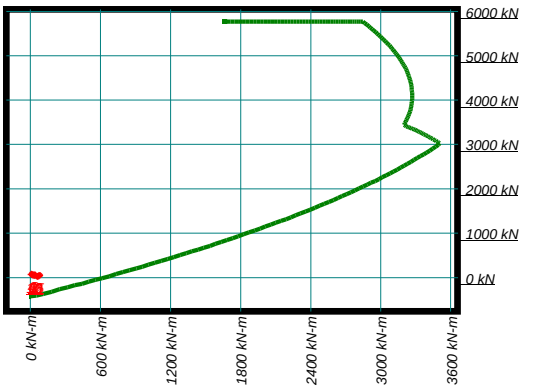


N	Mu	Pu	C
1	2.9	6.0	0.1
2	4.1	6.3	0.1
3	7.9	4.1	0.1
4	0.9	7.7	0.1
5	9.0	5.2	0.1
6	2.0	6.6	0.1
7	6.3	2.1	0.1
8	2.5	5.6	0.1
9	7.4	3.2	0.1
10	3.6	4.6	0.1

Pantalla P29 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =58.7 kN En el vano 1 Combinación 5 [vu=0.19Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.63Mpa En el vano 1 Combinación 5 [Momento =82.2 kN-m Axial =48.0 kN C=0.13m]

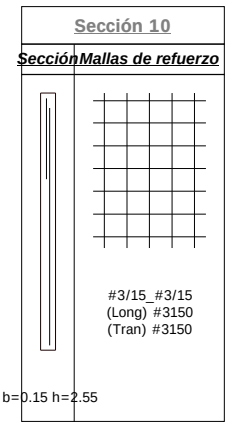


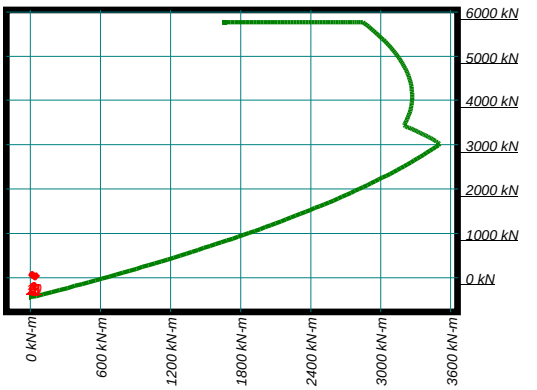


N	Mu	Pu	C
1	2.7	5.8	0.1
2	3.8	6.0	0.1
3	7.3	3.9	0.1
4	0.8	7.2	0.1
5	8.2	4.8	0.1
6	1.8	6.4	0.1
7	5.7	2.0	0.1
8	2.3	5.4	0.1
9	6.7	2.9	0.1
10	3.3	4.5	0.1

Pantalla P30 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =39.3 kN En el vano 1 Combinación 5 [vu=0.13Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.45Mpa En el vano 1 Combinación 5 [Momento =52.6 kN-m Axial =48.0 kN C=0.13m]

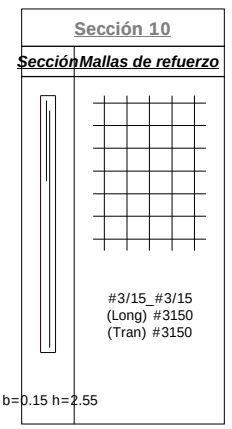


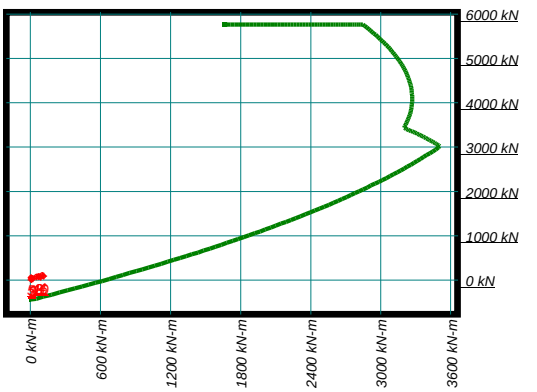


N	Mu	Pu	C
1	1.2	6.1	0.1
2	2.0	6.5	0.1
3	4.7	4.1	0.1
4	1.4	8.0	0.1
5	5.3	4.8	0.1
6	2.0	7.2	0.1
7	3.8	2.0	0.1
8	2.3	5.9	0.1
9	4.4	2.7	0.1
10	2.9	5.1	0.1

Pantalla P22 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =1.3 kN En el vano 1 Combinación 5 [vu=0.00Mpa Øvc=0.24Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.94Mpa En el vano 1 Combinación 6 [Momento =113.0 kN-m Axial =92.7 kN C=0.14m]

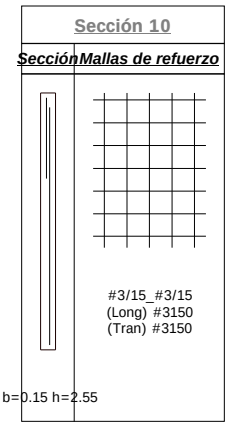


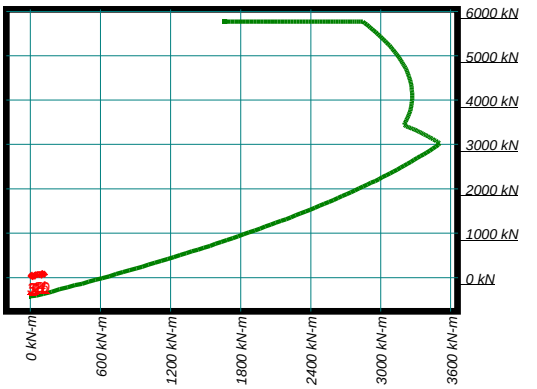


N	Mu	Pu	C
1	5.2	7.5	0.1
2	6.9	8.2	0.1
3	1.8	4.1	0.1
4	10.1	10.9	0.1
5	0.6	5.7	0.1
6	11.3	9.3	0.1
7	0.8	1.4	0.1
8	7.5	8.2	0.1
9	2.0	3.0	0.1
10	8.7	6.6	0.1

Pantalla P21 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =88.2 kN En el vano 1 Combinación 6 [vu=0.29Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.93Mpa En el vano 1 Combinación 6 [Momento =121.3 kN-m Axial =71.8 kN C=0.13m]

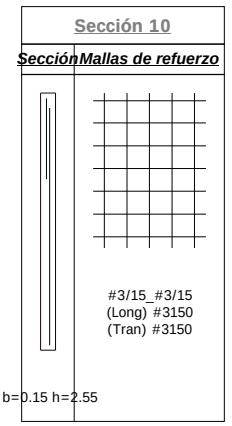


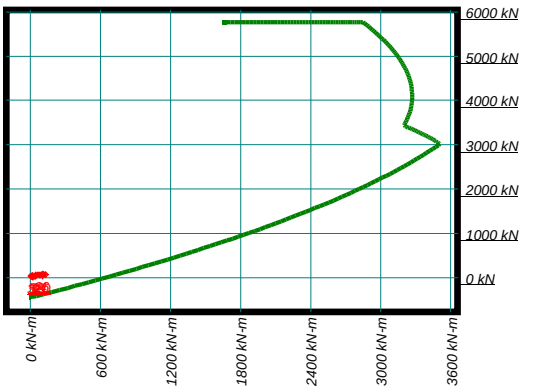


N	Mu	Pu	C
1	4.5	6.2	0.1
2	6.2	6.6	0.1
3	0.5	3.5	0.1
4	10.2	8.8	0.1
5	1.5	5.1	0.1
6	12.1	7.2	0.1
7	2.0	1.3	0.1
8	7.8	6.6	0.1
9	3.9	2.9	0.1
10	9.7	5.0	0.1

Pantalla P20 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =93.8 kN En el vano 1 Combinación 6 [vu=0.31Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.98Mpa En el vano 1 Combinación 6 [Momento =129.0 kN-m Axial =71.0 kN C=0.13m]

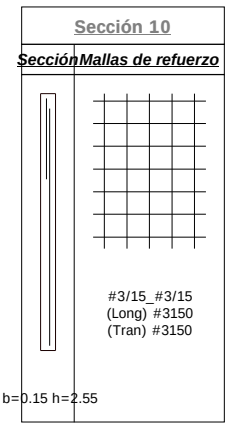


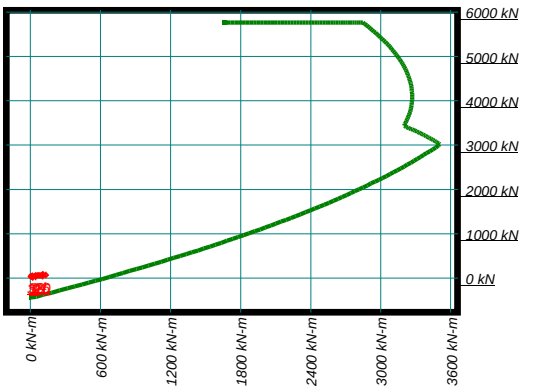


N	Mu	Pu	C
1	4.8	6.3	0.1
2	6.5	6.7	0.1
3	0.5	3.8	0.1
4	10.7	8.7	0.1
5	1.7	5.4	0.1
6	12.9	7.1	0.1
7	2.0	1.6	0.1
8	8.2	6.5	0.1
9	4.2	3.2	0.1
10	10.4	4.9	0.1

Pantalla P19 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =94.7 kN En el vano 1 Combinación 6 [vu=0.31Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.98Mpa En el vano 1 Combinación 6 [Momento =130.1 kN-m Axial =70.0 kN C=0.13m]

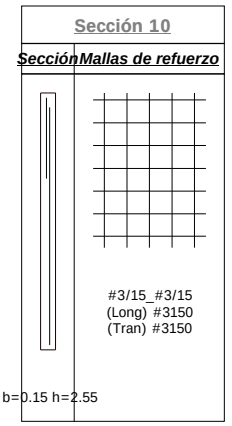


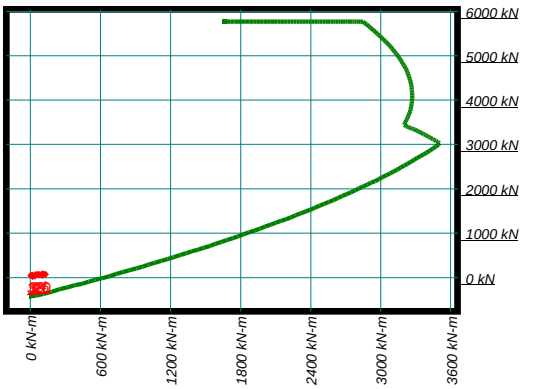


N	Mu	Pu	C
1	4.8	6.3	0.1
2	6.5	6.7	0.1
3	0.5	4.0	0.1
4	10.8	8.4	0.1
5	1.8	5.5	0.1
6	13.0	7.0	0.1
7	2.0	1.9	0.1
8	8.2	6.2	0.1
9	4.3	3.3	0.1
10	10.5	4.8	0.1

Pantalla P18 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =93.3 kN En el vano 1 Combinación 6 [vu=0.31Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.97Mpa En el vano 1 Combinación 6 [Momento =128.4 kN-m Axial =69.3 kN C=0.13m]

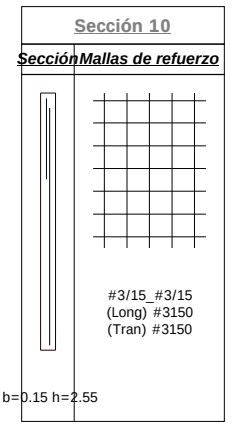


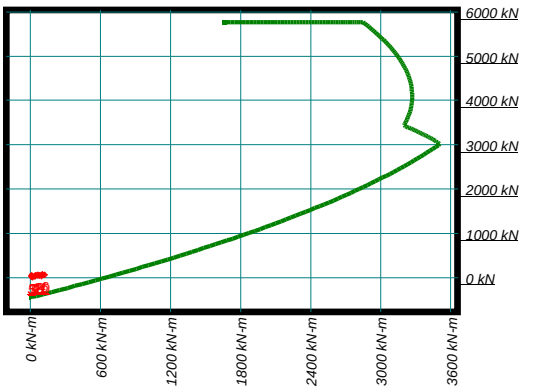


N	Mu	Pu	C
1	4.7	6.3	0.1
2	6.5	6.7	0.1
3	0.5	4.2	0.1
4	10.6	8.2	0.1
5	1.7	5.5	0.1
6	12.8	6.9	0.1
7	2.0	2.0	0.1
8	8.1	6.0	0.1
9	4.2	3.4	0.1
10	10.3	4.7	0.1

Pantalla P17 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =86.4 kN En el vano 1 Combinación 6 [vu=0.28Mpa Øvc=1.14Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.92Mpa En el vano 1 Combinación 6 [Momento =121.0 kN-m Axial =66.1 kN C=0.13m]

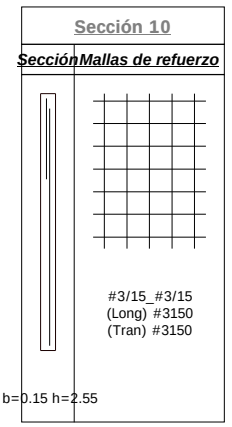


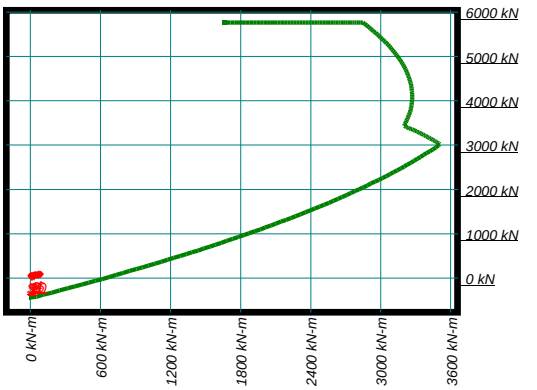


N	Mu	Pu	C
1	4.6	5.9	0.1
2	6.3	6.3	0.1
3	0.8	3.9	0.1
4	10.0	7.7	0.1
5	1.2	5.0	0.1
6	12.1	6.6	0.1
7	1.6	1.9	0.1
8	7.6	5.7	0.1
9	3.7	3.0	0.1
10	9.6	4.6	0.1

Pantalla P16 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =.7 kN En el vano 1 Combinación 5 [vu=0.00Mpa Øvc=0.23Mpa Øvs=0.99Mpa]
Esfuerzo flexión=0.77Mpa En el vano 1 Combinación 6 [Momento =87.6 kN-m Axial =87.9 kN C=0.14m]

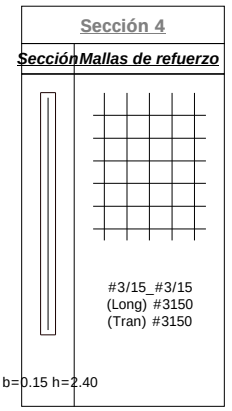


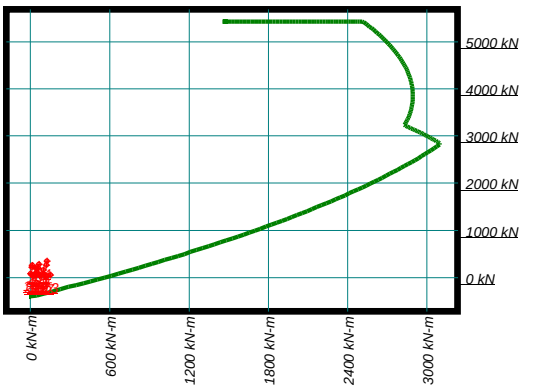


N	Mu	Pu	C
1	3.1	7.3	0.1
2	4.5	8.1	0.1
3	0.4	5.1	0.1
4	7.3	9.7	0.1
5	1.1	6.0	0.1
6	8.8	8.8	0.1
7	1.5	2.4	0.1
8	5.4	7.0	0.1
9	3.0	3.3	0.1
10	6.9	6.1	0.1

Pantalla P59 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =7.3 kN En el vano 1 Combinación 6 [vu=0.03Mpa Øvc=0.40Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.83Mpa En el vano 1 Combinación 4 [Momento =125.1 kN-m Axial =346.8 kN C=0.20m]

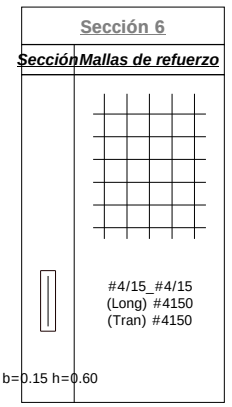


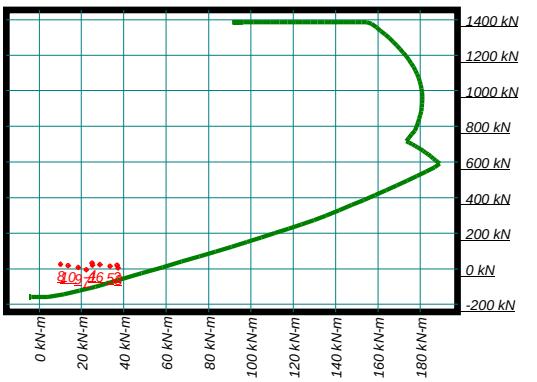


N	Mu	Pu	C
1	1.2	21.9	0.2
2	1.5	25.9	0.2
3	9.9	16.0	0.1
4	12.5	34.7	0.2
5	4.0	19.7	0.2
6	6.6	27.7	0.2
7	10.4	6.9	0.1
8	12.0	26.5	0.2
9	4.5	10.6	0.1
10	6.0	19.5	0.2
11	6.3	6.6	0.1
12	8.7	7.2	0.1
13	15.1	5.2	0.1
14	0.2	8.1	0.1
15	10.3	6.0	0.1

Pantalla P60 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =27.0 kN En el vano 1 Combinación 3 [vu=0.38Mpa Øvc=0.66Mpa Øvs=1.78Mpa]
Esfuerzo flexión=4.32Mpa En el vano 1 Combinación 2 [Momento =36.8 kN-m Axial =20.2 kN C=0.05m]

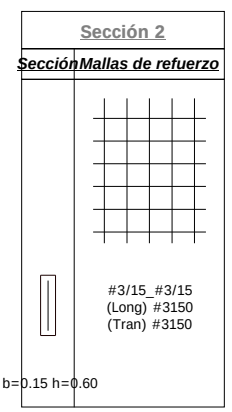


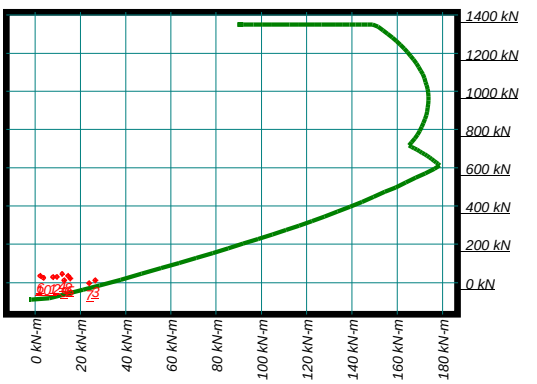


N	Mu	Pu	C
1	2.5	2.0	0.0
2	3.7	2.0	0.0
3	3.7	0.6	0.0
4	2.5	3.2	0.0
5	3.4	1.4	0.0
6	2.9	2.4	0.0
7	2.2	-0.5	0.0
8	1.0	2.6	0.0
9	1.9	0.8	0.0
10	1.4	1.8	0.0

Pantalla P58 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =37.1 kN En el vano 1 Combinación 7 [vu=0.51Mpa Øvc=1.10Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.09Mpa En el vano 1 Combinación 3 [Momento =26.7 kN-m Axial =10.7 kN C=0.03m]

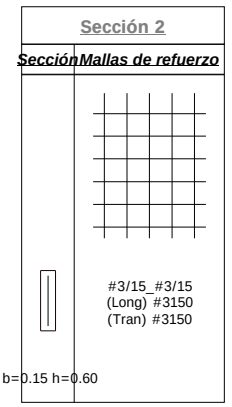


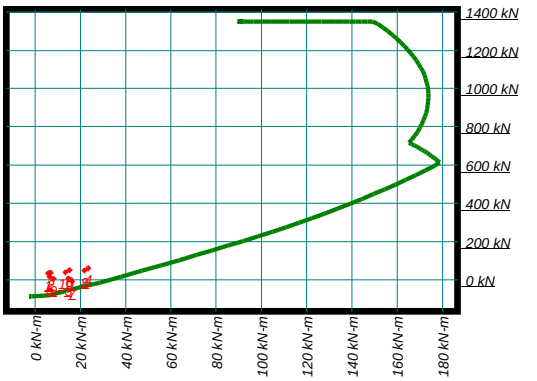


N	Mu	Pu	C
1	0.8	2.8	0.0
2	1.0	3.0	0.0
3	2.7	1.1	0.0
4	1.2	4.5	0.0
5	1.6	2.1	0.0
6	0.2	3.5	0.0
7	2.4	-0.3	0.0
8	1.5	3.6	0.0
9	1.3	1.2	0.0
10	0.4	2.5	0.0

Pantalla P52 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =23.0 kN En el vano 1 Combinación 7 [vu=0.32Mpa Øvc=0.58Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.30Mpa En el vano 1 Combinación 4 [Momento =23.6 kN-m Axial =60.8 kN C=0.04m]

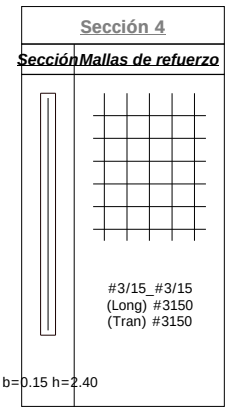


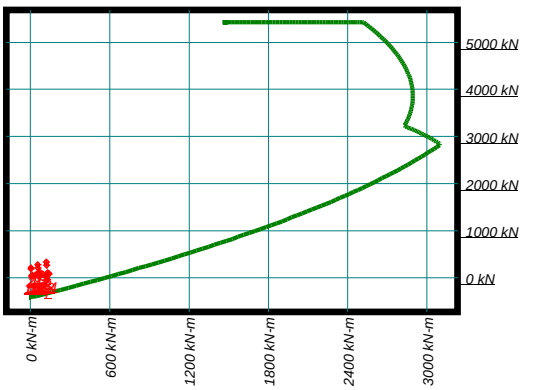


N	Mu	Pu	C
1	0.6	3.4	0.0
2	0.7	3.7	0.0
3	1.5	0.7	0.0
4	2.4	6.1	0.0
5	0.6	1.7	0.0
6	1.5	5.1	0.0
7	1.6	-0.8	0.0
8	2.2	4.9	0.0
9	0.8	0.5	0.0
10	1.4	3.9	0.0

Pantalla P53 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =87.2 kN En el vano 2 Combinación 4 [vu=0.30Mpa Øvc=1.15Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.78Mpa En el vano 1 Combinación 4 [Momento =121.2 kN-m Axial =336.4 kN C=0.20m]

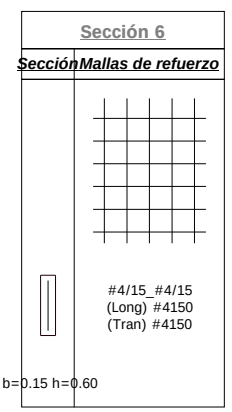


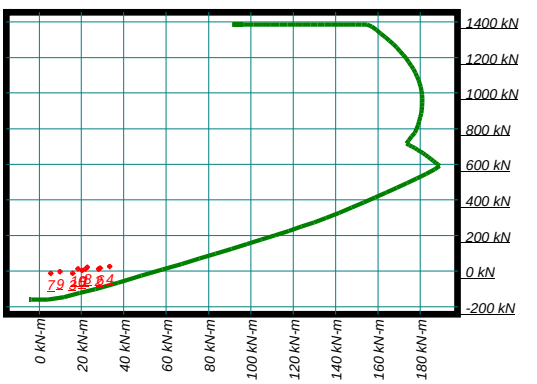


N	Mu	Pu	C
1	0.5	19.1	0.2
2	0.5	21.5	0.2
3	13.1	11.0	0.1
4	12.1	33.6	0.2
5	6.6	13.7	0.1
6	5.6	28.4	0.2
7	12.9	-3.9	0.1
8	12.3	26.8	0.2
9	6.4	6.3	0.1
10	5.8	21.6	0.2
11	4.8	7.3	0.1
12	6.0	7.8	0.1
13	3.7	5.9	0.1
14	14.2	8.5	0.1
15	1.3	5.9	0.1

Pantalla P54 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =23.8 kN En el vano 1 Combinación 4 [vu=0.33Mpa Øvc=1.09Mpa Øvs=1.78Mpa]
Esfuerzo flexión=3.98Mpa En el vano 1 Combinación 4 [Momento =33.3 kN-m Axial =25.0 kN C=0.05m]

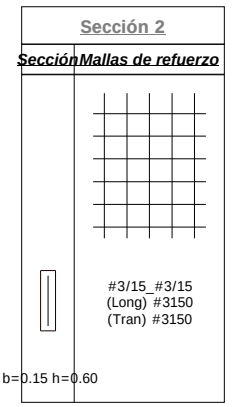


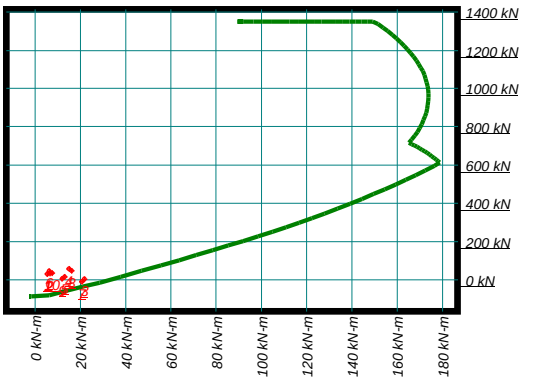


N	Mu	Pu	C
1	2.2	1.2	0.0
2	2.8	1.1	0.0
3	1.6	-1.1	0.0
4	3.3	2.5	0.0
5	2.0	0.4	0.0
6	2.9	1.6	0.0
7	0.5	-1.2	0.0
8	2.3	2.2	0.0
9	1.0	-0.4	0.0
10	1.8	1.3	0.0

Pantalla P55 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =31.4 kN En el vano 1 Combinación 7 [vu=0.44Mpa Øvc=1.09Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.47Mpa En el vano 1 Combinación 3 [Momento =21.9 kN-m Axial =2.9 kN C=0.03m]

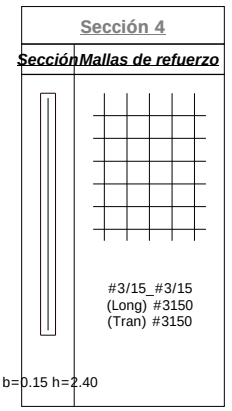


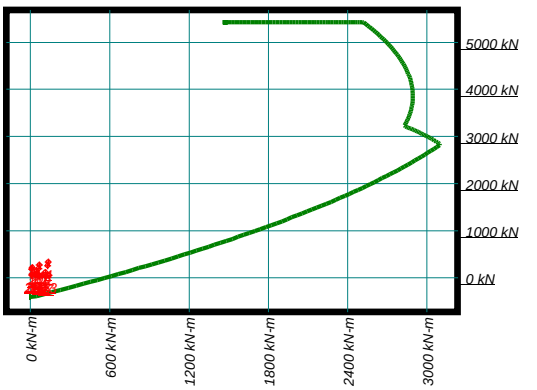


N	Mu	Pu	C
1	0.5	3.1	0.0
2	0.7	3.3	0.0
3	2.2	0.3	0.0
4	1.5	5.7	0.0
5	1.3	1.5	0.0
6	0.6	4.5	0.0
7	2.1	-1.0	0.0
8	1.6	4.7	0.0
9	1.2	0.5	0.0
10	0.7	3.4	0.0

Pantalla P56 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =20.7 kN En el vano 1 Combinación 6 [vu=0.07Mpa Øvc=1.04Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.86Mpa En el vano 1 Combinación 4 [Momento =134.0 kN-m Axial =333.2 kN C=0.20m]

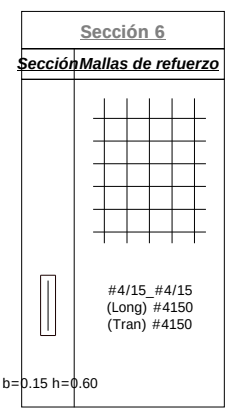


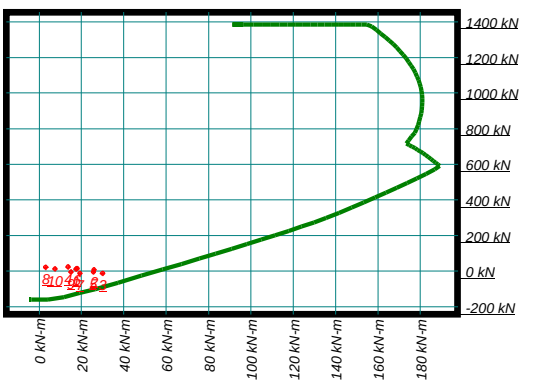


N	Mu	Pu	C
1	1.0	18.8	0.2
2	1.4	22.1	0.2
3	11.2	11.8	0.1
4	13.4	33.3	0.2
5	4.5	14.8	0.1
6	6.7	27.5	0.2
7	11.7	4.0	0.1
8	12.9	26.0	0.2
9	4.9	7.0	0.1
10	6.2	20.2	0.2
11	4.3	6.8	0.1
12	5.9	7.3	0.1
13	13.8	5.6	0.1
14	3.7	8.0	0.1
15	8.9	5.8	0.1

Pantalla P57 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =21.3 kN En el vano 1 Combinación 3 [vu=0.30Mpa Øvc=1.07Mpa Øvs=1.78Mpa]
Esfuerzo flexión=3.18Mpa En el vano 1 Combinación 3 [Momento =29.9 kN-m Axial =-12.8 kN C=0.04m]

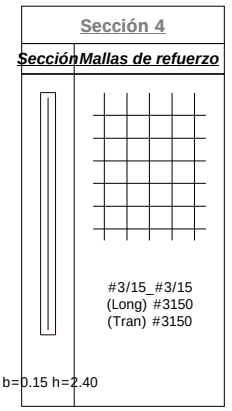


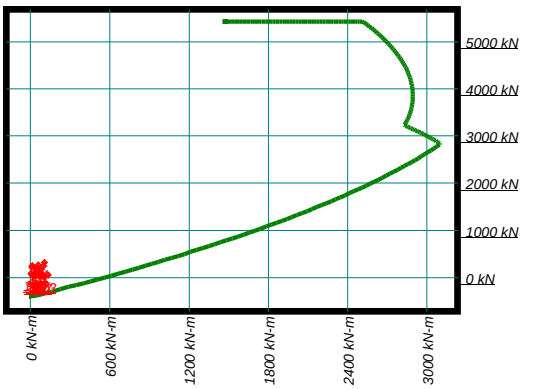


N	Mu	Pu	C
1	1.7	1.2	0.0
2	2.6	0.8	0.0
3	3.0	-1.3	0.0
4	1.4	2.3	0.0
5	2.6	-0.4	0.0
6	1.8	1.5	0.0
7	1.9	-1.2	0.0
8	0.3	2.2	0.0
9	1.5	-0.4	0.0
10	0.7	1.3	0.0

Pantalla P65 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =5.1 kN En el vano 1 Combinación 6 [vu=0.02Mpa Øvc=0.35Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.62Mpa En el vano 1 Combinación 4 [Momento =105.4 kN-m Axial =318.9 kN C=0.19m]

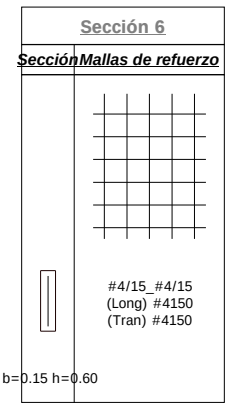


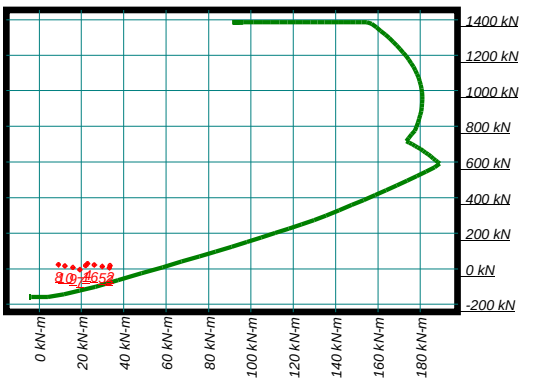


N	Mu	Pu	C
1	1.2	21.3	0.2
2	1.5	25.1	0.2
3	7.9	16.5	0.1
4	10.5	31.9	0.2
5	3.3	20.0	0.2
6	6.0	26.0	0.2
7	8.4	7.7	0.1
8	10.0	23.9	0.2
9	3.9	11.1	0.1
10	5.5	18.1	0.2
11	5.7	6.6	0.1
12	8.1	7.2	0.1
13	13.4	5.5	0.1
14	0.4	7.8	0.1
15	9.3	6.2	0.1

Pantalla P66 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =23.9 kN En el vano 1 Combinación 3 [vu=0.33Mpa Øvc=0.65Mpa Øvs=1.78Mpa]
Esfuerzo flexión=3.93Mpa En el vano 1 Combinación 2 [Momento =33.5 kN-m Axial =18.5 kN C=0.05m]

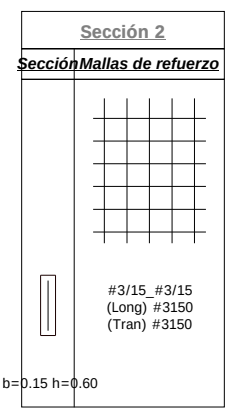


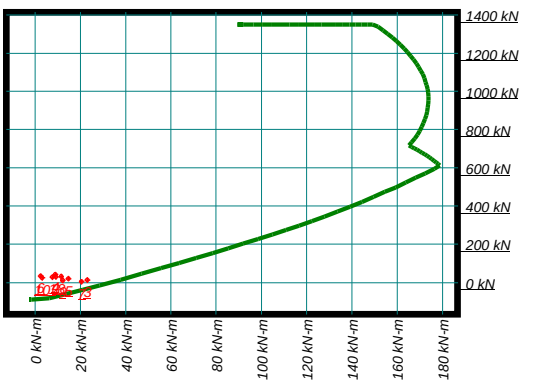


N	Mu	Pu	C
1	2.2	1.9	0.0
2	3.3	1.8	0.0
3	3.3	0.6	0.0
4	2.3	2.9	0.0
5	3.0	1.4	0.0
6	2.6	2.2	0.0
7	1.9	-0.4	0.0
8	0.9	2.3	0.0
9	1.6	0.8	0.0
10	1.2	1.6	0.0

Pantalla P64 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =3.4 kN En el vano 1 Combinación 10 [vu=0.05Mpa Øvc=0.30Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.72Mpa En el vano 1 Combinación 3 [Momento =23.2 kN-m Axial =13.2 kN C=0.03m]

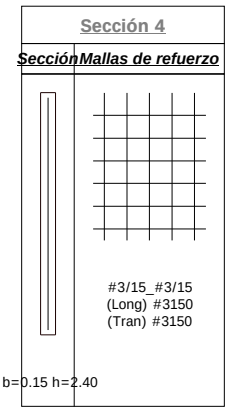


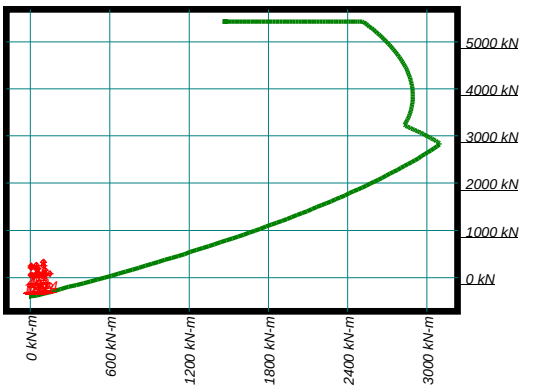


N	Mu	Pu	C
1	0.8	2.8	0.0
2	0.9	2.9	0.0
3	2.3	1.3	0.0
4	0.9	4.1	0.0
5	1.5	2.1	0.0
6	0.2	3.4	0.0
7	2.1	0.4	0.0
8	1.2	3.2	0.0
9	1.2	1.1	0.0
10	0.3	2.4	0.0

Pantalla P47 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =6.0 kN En el vano 1 Combinación 5 [vu=0.02Mpa Øvc=0.38Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.57Mpa En el vano 1 Combinación 4 [Momento =97.4 kN-m Axial =321.6 kN C=0.19m]

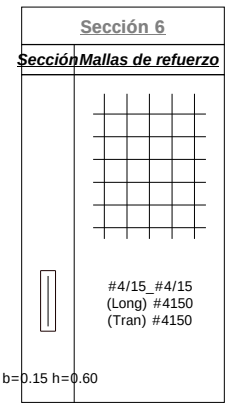


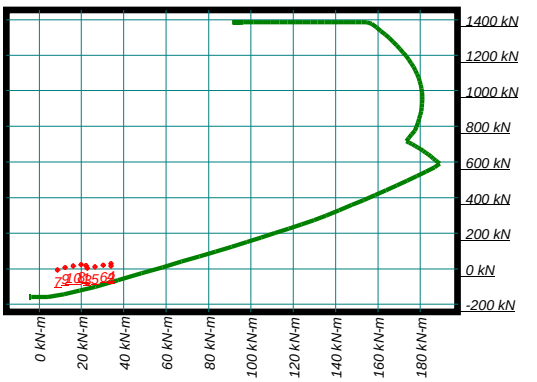


N	Mu	Pu	C
1	0.7	20.8	0.2
2	0.7	24.3	0.2
3	11.0	15.2	0.1
4	9.7	32.2	0.2
5	5.7	19.1	0.2
6	4.4	25.4	0.2
7	10.8	6.7	0.1
8	10.0	24.7	0.2
9	5.5	10.6	0.1
10	4.7	18.0	0.2
11	6.3	6.5	0.1
12	9.0	7.0	0.1
13	0.6	5.2	0.1
14	14.7	7.8	0.1
15	5.2	6.0	0.1

Pantalla P48 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.5 kN En el vano 1 Combinación 2 [vu=0.34Mpa Øvc=0.49Mpa Øvs=1.78Mpa]
Esfuerzo flexión=4.09Mpa En el vano 1 Combinación 4 [Momento =33.9 kN-m Axial =28.2 kN C=0.05m]

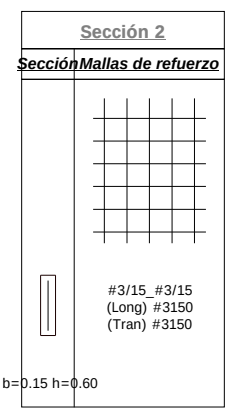


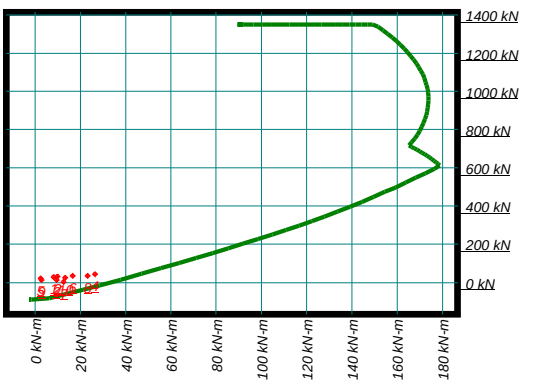


N	Mu	Pu	C
1	2.2	1.8	0.0
2	3.4	1.7	0.0
3	2.3	0.4	0.0
4	3.4	2.8	0.0
5	2.6	1.2	0.0
6	3.0	2.0	0.0
7	0.9	-0.6	0.0
8	2.0	2.4	0.0
9	1.2	0.7	0.0
10	1.6	1.6	0.0

Pantalla P46 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =2.8 kN En el vano 1 Combinación 9 [vu=0.04Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.43Mpa En el vano 1 Combinación 4 [Momento =26.5 kN-m Axial =43.9 kN C=0.04m]

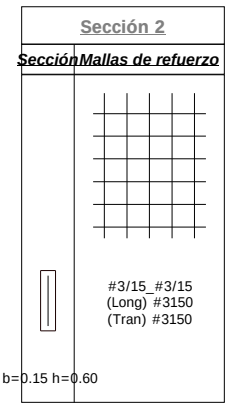


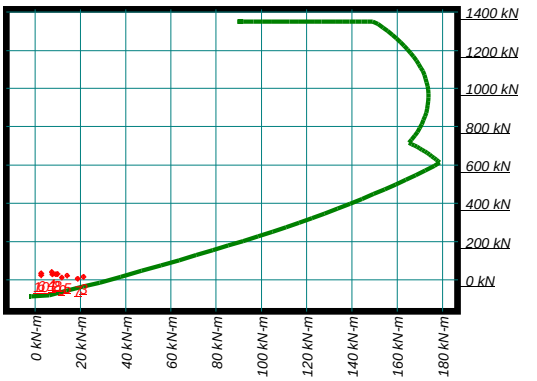


N	Mu	Pu	C
1	0.8	2.9	0.0
2	1.0	3.1	0.0
3	0.9	1.3	0.0
4	2.7	4.4	0.0
5	0.2	2.2	0.0
6	1.7	3.5	0.0
7	1.3	0.3	0.0
8	2.3	3.4	0.0
9	0.3	1.2	0.0
10	1.3	2.5	0.0

Pantalla P67 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =2.8 kN En el vano 1 Combinación 10 [vu=0.04Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.55Mpa En el vano 1 Combinación 3 [Momento =21.5 kN-m Axial =14.5 kN C=0.03m]

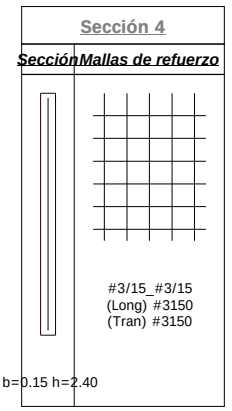


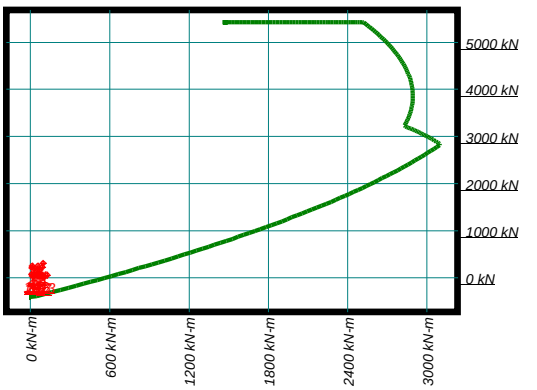


N	Mu	Pu	C
1	0.8	2.8	0.0
2	0.9	2.9	0.0
3	2.1	1.5	0.0
4	0.7	4.0	0.0
5	1.4	2.1	0.0
6	0.3	3.3	0.0
7	1.9	0.5	0.0
8	1.0	3.0	0.0
9	1.2	1.2	0.0
10	0.3	2.4	0.0

Pantalla P68 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =3.5 kN En el vano 1 Combinación 6 [vu=0.01Mpa Øvc=0.31Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.52Mpa En el vano 1 Combinación 4 [Momento =95.8 kN-m Axial =307.6 kN C=0.19m]

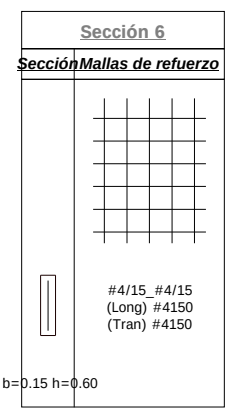


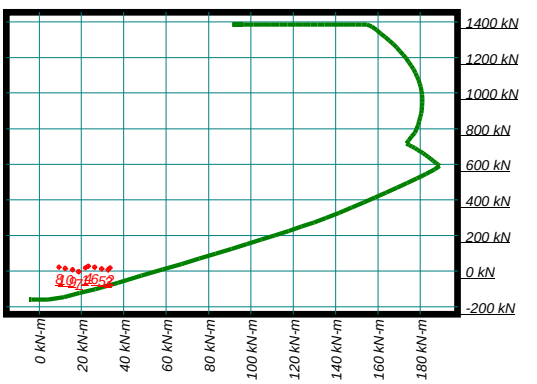


N	Mu	Pu	C
1	1.2	21.3	0.2
2	1.5	25.1	0.2
3	6.9	17.1	0.2
4	9.6	30.8	0.2
5	3.0	20.2	0.2
6	5.7	25.7	0.2
7	7.4	8.3	0.1
8	9.0	22.8	0.2
9	3.6	11.3	0.1
10	5.2	17.7	0.2
11	5.7	6.6	0.1
12	8.0	7.2	0.1
13	12.8	5.6	0.1
14	1.0	7.7	0.1
15	9.0	6.2	0.1

Pantalla P69 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =23.5 kN En el vano 1 Combinación 3 [vu=0.33Mpa Øvc=0.63Mpa Øvs=1.78Mpa]
Esfuerzo flexión=3.92Mpa En el vano 1 Combinación 2 [Momento =33.4 kN-m Axial =18.5 kN C=0.05m]

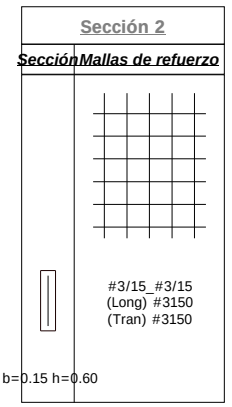


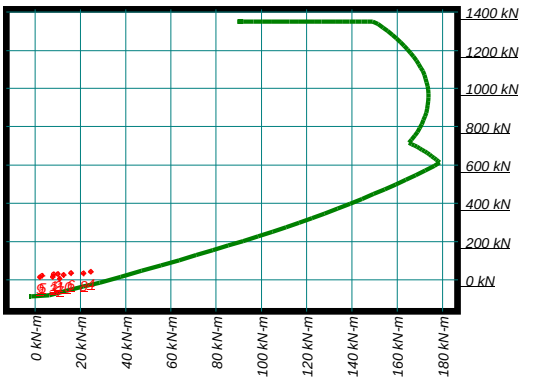


N	Mu	Pu	C
1	2.2	1.9	0.0
2	3.3	1.8	0.0
3	3.3	0.7	0.0
4	2.3	2.8	0.0
5	3.0	1.4	0.0
6	2.6	2.1	0.0
7	1.9	-0.3	0.0
8	0.9	2.2	0.0
9	1.6	0.8	0.0
10	1.2	1.6	0.0

Pantalla P43 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =1.9 kN En el vano 1 Combinación 9 [vu=0.03Mpa Øvc=0.26Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.22Mpa En el vano 1 Combinación 4 [Momento =24.7 kN-m Axial =42.5 kN C=0.04m]

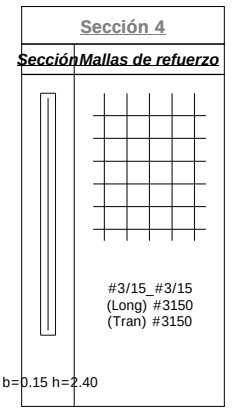


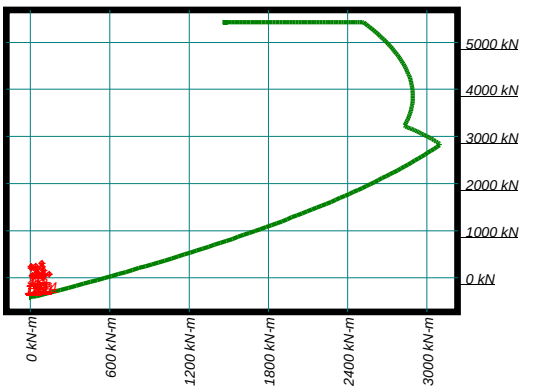


N	Mu	Pu	C
1	0.8	2.9	0.0
2	1.0	3.1	0.0
3	0.8	1.4	0.0
4	2.5	4.2	0.0
5	0.3	2.2	0.0
6	1.6	3.5	0.0
7	1.1	0.4	0.0
8	2.1	3.3	0.0
9	0.2	1.3	0.0
10	1.3	2.5	0.0

Pantalla P44 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =2.4 kN En el vano 1 Combinación 5 [vu=0.01Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.46Mpa En el vano 1 Combinación 4 [Momento =87.1 kN-m Axial =309.4 kN C=0.19m]

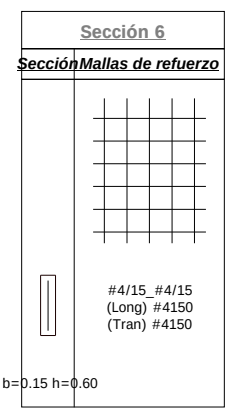


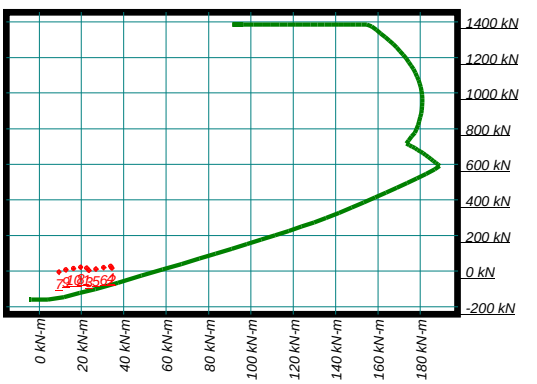


N	Mu	Pu	C
1	0.6	20.8	0.2
2	0.7	24.3	0.2
3	10.0	15.9	0.1
4	8.7	30.9	0.2
5	5.2	19.5	0.2
6	3.9	24.8	0.2
7	9.8	7.4	0.1
8	8.9	23.5	0.2
9	5.0	11.0	0.1
10	4.2	17.3	0.2
11	6.4	6.5	0.1
12	9.2	7.0	0.1
13	1.3	5.3	0.1
14	14.3	7.6	0.1
15	5.5	6.1	0.1

Pantalla P45 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.8 kN En el vano 1 Combinación 2 [vu=0.34Mpa Øvc=0.49Mpa Øvs=1.78Mpa]
Esfuerzo flexión=4.06Mpa En el vano 1 Combinación 4 [Momento =33.8 kN-m Axial =27.2 kN C=0.05m]

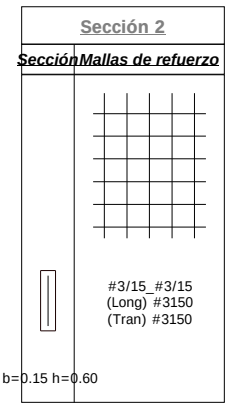


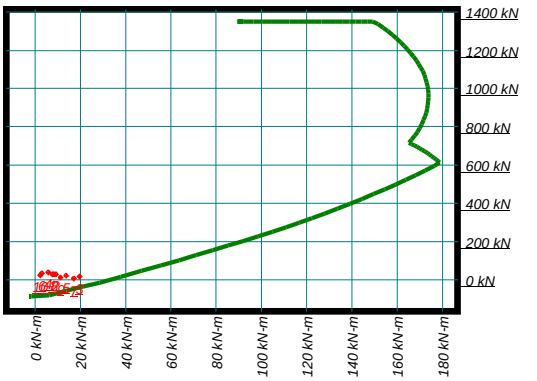


N	Mu	Pu	C
1	2.3	1.8	0.0
2	3.4	1.7	0.0
3	2.4	0.5	0.0
4	3.4	2.7	0.0
5	2.7	1.2	0.0
6	3.1	2.0	0.0
7	0.9	-0.5	0.0
8	2.0	2.2	0.0
9	1.3	0.7	0.0
10	1.6	1.5	0.0

Pantalla P70 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =2.2 kN En el vano 1 Combinación 10 [vu=0.03Mpa Øvc=0.27Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.37Mpa En el vano 1 Combinación 3 [Momento =19.8 kN-m Axial =15.8 kN C=0.04m]

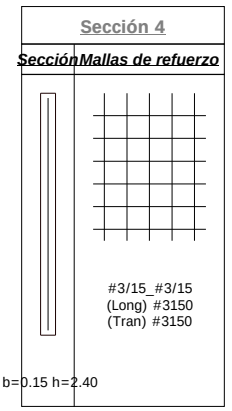


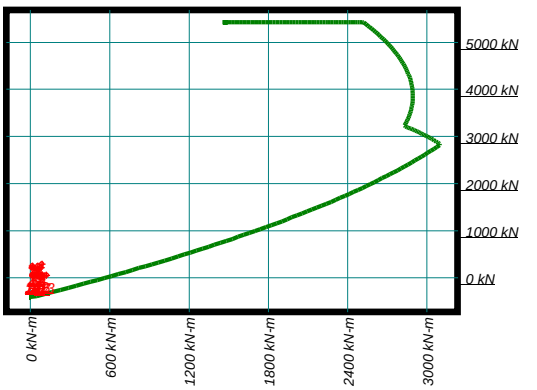


N	Mu	Pu	C
1	0.8	2.8	0.0
2	0.9	2.9	0.0
3	2.0	1.6	0.0
4	0.6	3.8	0.0
5	1.4	2.1	0.0
6	0.3	3.3	0.0
7	1.7	0.7	0.0
8	0.8	2.9	0.0
9	1.1	1.2	0.0
10	0.2	2.4	0.0

Pantalla P71 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =2.6 kN En el vano 1 Combinación 6 [vu=0.01Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.42Mpa En el vano 1 Combinación 4 [Momento =86.4 kN-m Axial =296.3 kN C=0.19m]

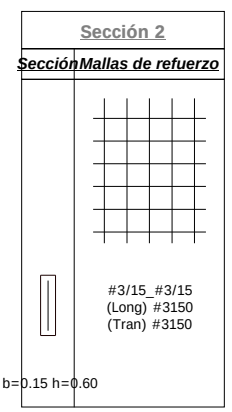


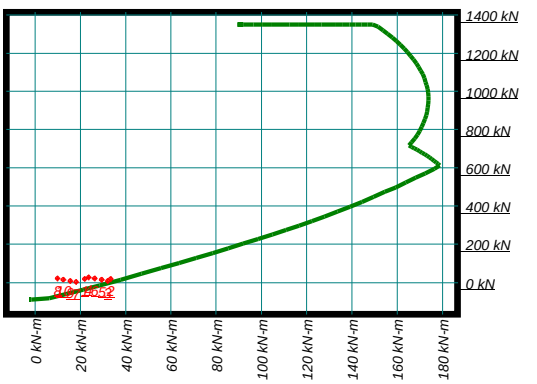


N	Mu	Pu	C
1	1.3	21.3	0.2
2	1.5	25.1	0.2
3	5.9	17.7	0.2
4	8.6	29.6	0.2
5	2.8	20.4	0.2
6	5.5	25.3	0.2
7	6.5	8.9	0.1
8	8.1	21.7	0.2
9	3.3	11.5	0.1
10	4.9	17.4	0.2
11	5.7	6.6	0.1
12	8.0	7.2	0.1
13	12.1	5.7	0.1
14	1.6	7.6	0.1
15	8.8	6.3	0.1

Pantalla P72 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.1 kN En el vano 1 Combinación 2 [vu=0.33Mpa Øvc=0.49Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.92Mpa En el vano 1 Combinación 2 [Momento =33.4 kN-m Axial =18.5 kN C=0.04m]

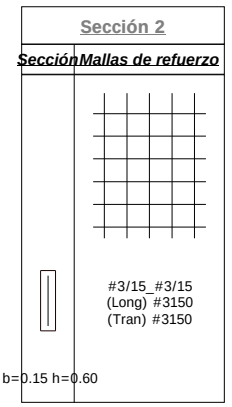


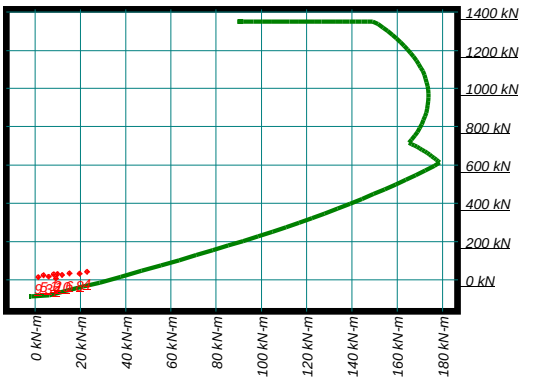


N	Mu	Pu	C
1	2.2	1.9	0.0
2	3.3	1.9	0.0
3	3.2	0.9	0.0
4	2.4	2.7	0.0
5	2.9	1.4	0.0
6	2.6	2.1	0.0
7	1.8	0.3	0.0
8	1.0	2.1	0.0
9	1.6	0.9	0.0
10	1.3	1.5	0.0

Pantalla P40 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =1.0 kN En el vano 1 Combinación 9 [vu=0.01Mpa Øvc=0.24Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.01Mpa En el vano 1 Combinación 4 [Momento =23.0 kN-m Axial =41.0 kN C=0.04m]

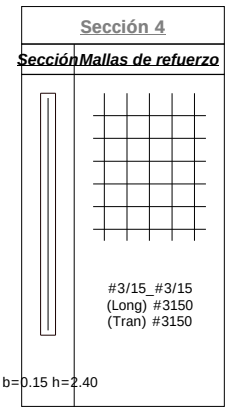


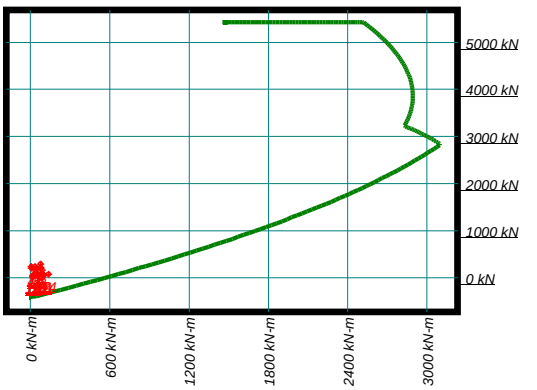


N	Mu	Pu	C
1	0.8	2.9	0.0
2	1.0	3.1	0.0
3	0.6	1.6	0.0
4	2.3	4.1	0.0
5	0.4	2.3	0.0
6	1.5	3.4	0.0
7	0.9	0.6	0.0
8	2.0	3.1	0.0
9	0.1	1.3	0.0
10	1.2	2.4	0.0

Pantalla P41 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =3.7 kN En el vano 1 Combinación 5 [vu=0.01Mpa Øvc=0.32Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.36Mpa En el vano 1 Combinación 4 [Momento =77.0 kN-m Axial =296.6 kN C=0.19m]

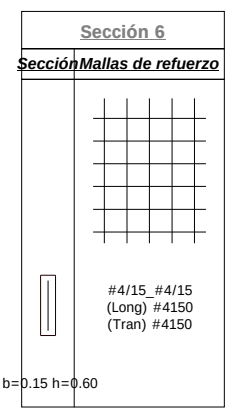


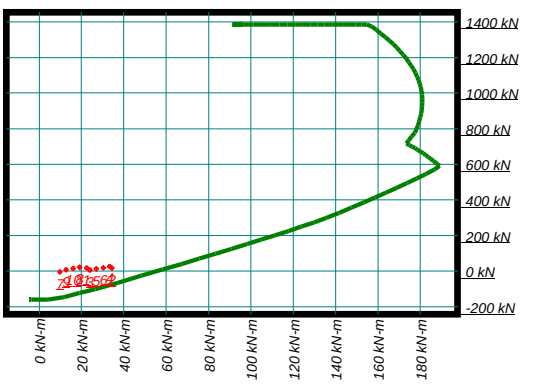


N	Mu	Pu	C
1	0.6	20.7	0.2
2	0.7	24.3	0.2
3	8.9	16.5	0.1
4	7.7	29.7	0.2
5	4.7	19.7	0.2
6	3.5	24.1	0.2
7	8.7	8.0	0.1
8	7.9	22.2	0.2
9	4.5	11.2	0.1
10	3.7	16.7	0.1
11	6.4	6.5	0.1
12	9.2	7.0	0.1
13	1.9	5.4	0.1
14	13.7	7.5	0.1
15	5.7	6.1	0.1

Pantalla P42 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.7 kN En el vano 1 Combinación 2 [vu=0.34Mpa Øvc=0.49Mpa Øvs=1.78Mpa]
Esfuerzo flexión=4.00Mpa En el vano 1 Combinación 2 [Momento =34.3 kN-m Axial =16.5 kN C=0.05m]

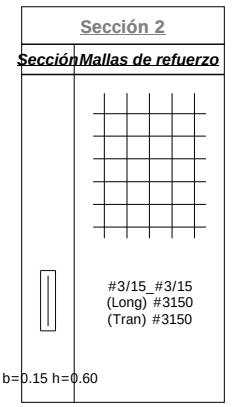


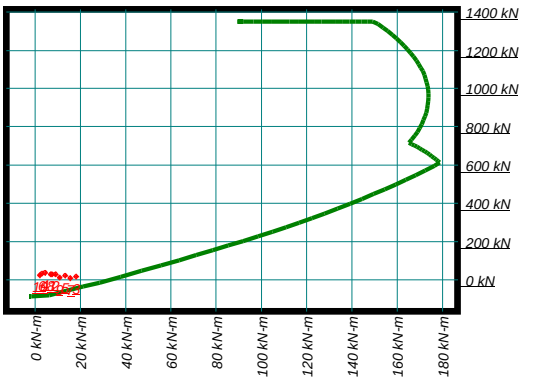


N	Mu	Pu	C
1	2.3	1.8	0.0
2	3.4	1.6	0.0
3	2.4	0.6	0.0
4	3.3	2.6	0.0
5	2.7	1.2	0.0
6	3.0	1.9	0.0
7	1.0	-0.4	0.0
8	1.9	2.1	0.0
9	1.3	0.8	0.0
10	1.6	1.5	0.0

Pantalla P73 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =1.9 kN En el vano 1 Combinación 10 [vu=0.03Mpa Øvc=0.27Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.20Mpa En el vano 1 Combinación 3 [Momento =18.1 kN-m Axial =17.0 kN C=0.04m]

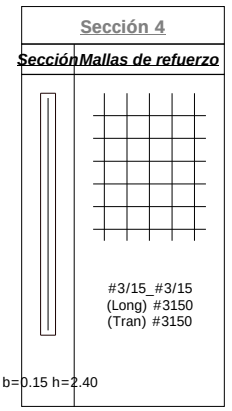


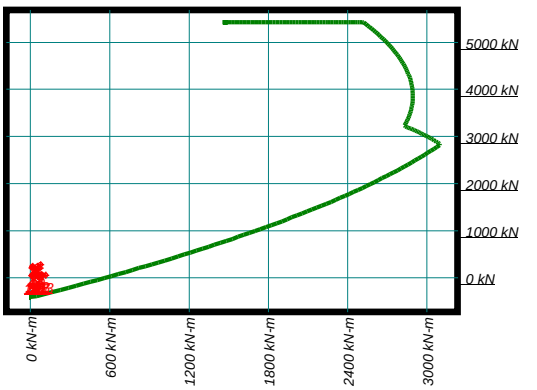


N	Mu	Pu	C
1	0.8	2.7	0.0
2	0.9	2.9	0.0
3	1.8	1.7	0.0
4	0.4	3.7	0.0
5	1.3	2.1	0.0
6	0.3	3.2	0.0
7	1.6	0.8	0.0
8	0.7	2.8	0.0
9	1.1	1.2	0.0
10	0.2	2.3	0.0

Pantalla P74 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =2.5 kN En el vano 1 Combinación 6 [vu=0.01Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.33Mpa En el vano 1 Combinación 4 [Momento =77.5 kN-m Axial =284.2 kN C=0.18m]

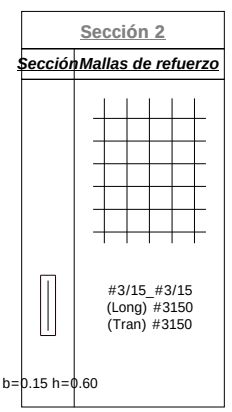


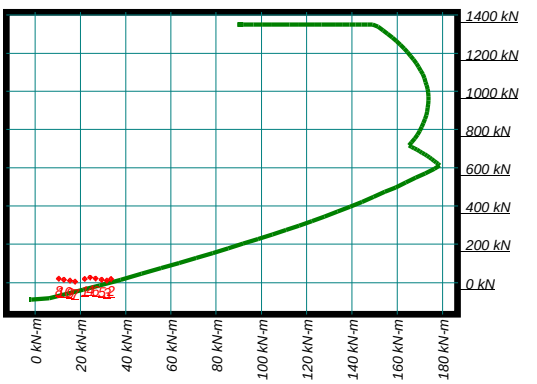


N	Mu	Pu	C
1	1.3	21.3	0.2
2	1.5	25.0	0.2
3	5.0	18.3	0.2
4	7.7	28.4	0.2
5	2.5	20.6	0.2
6	5.2	24.8	0.2
7	5.6	9.5	0.1
8	7.2	20.5	0.2
9	3.1	11.8	0.1
10	4.7	16.9	0.2
11	5.7	6.6	0.1
12	8.1	7.2	0.1
13	11.6	5.8	0.1
14	2.2	7.4	0.1
15	8.6	6.3	0.1

Pantalla P75 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.2 kN En el vano 1 Combinación 2 [vu=0.34Mpa Øvc=0.49Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.94Mpa En el vano 1 Combinación 2 [Momento =33.6 kN-m Axial =18.5 kN C=0.04m]

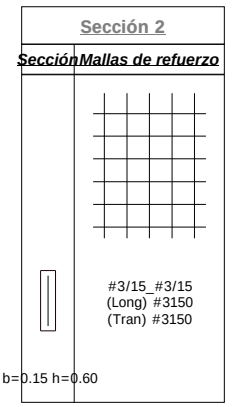


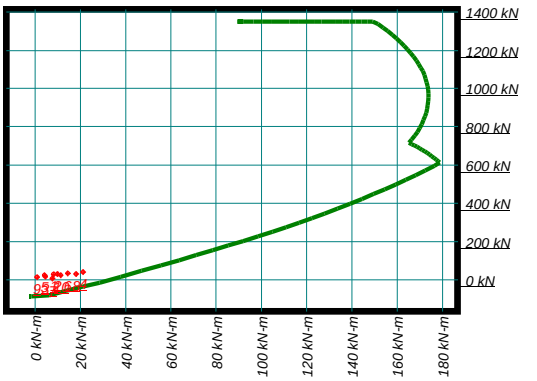


N	Mu	Pu	C
1	2.2	1.9	0.0
2	3.4	1.9	0.0
3	3.2	1.0	0.0
4	2.4	2.6	0.0
5	2.9	1.5	0.0
6	2.7	2.1	0.0
7	1.8	0.4	0.0
8	1.1	2.0	0.0
9	1.6	0.9	0.0
10	1.3	1.5	0.0

Pantalla P37 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =4.8 kN En el vano 1 Combinación 3 [vu=0.07Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.81Mpa En el vano 1 Combinación 4 [Momento =21.3 kN-m Axial =39.5 kN C=0.04m]

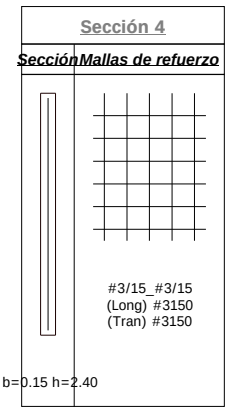


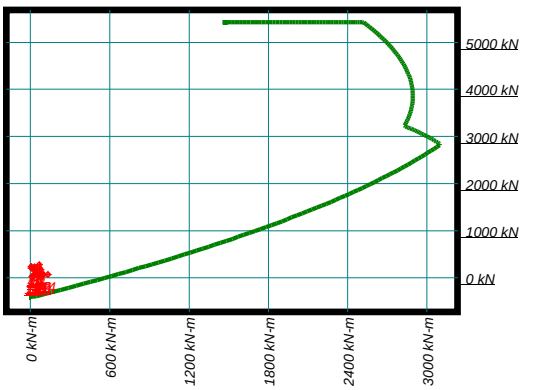


N	Mu	Pu	C
1	0.8	2.9	0.0
2	1.0	3.1	0.0
3	0.4	1.7	0.0
4	2.1	4.0	0.0
5	0.4	2.3	0.0
6	1.5	3.4	0.0
7	0.8	0.7	0.0
8	1.8	3.0	0.0
9	0.1	1.3	0.0
10	1.1	2.4	0.0

Pantalla P38 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =.6 kN En el vano 2 Combinación 7 [vu=0.00Mpa Øvc=0.23Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.25Mpa En el vano 1 Combinación 4 [Momento =67.1 kN-m Axial =283.0 kN C=0.18m]

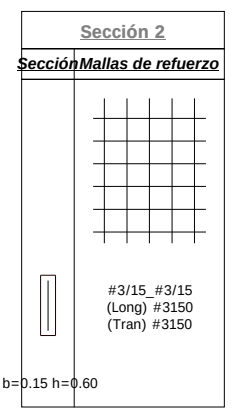


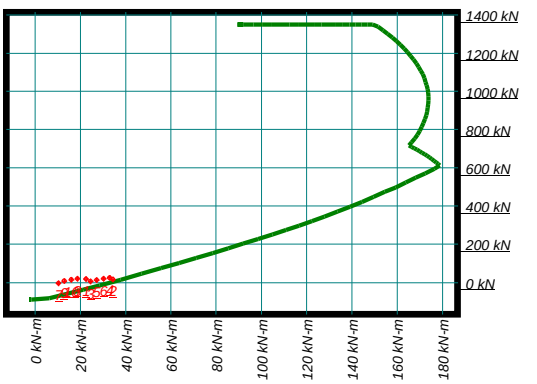


N	Mu	Pu	C
1	0.6	20.6	0.2
2	0.6	24.1	0.2
3	7.9	17.1	0.2
4	6.7	28.3	0.2
5	4.2	20.0	0.2
6	3.0	23.4	0.2
7	7.7	8.6	0.1
8	6.9	20.9	0.2
9	4.0	11.6	0.1
10	3.2	16.0	0.1
11	6.5	6.5	0.1
12	9.2	7.0	0.1
13	2.6	5.5	0.1
14	13.1	7.4	0.1
15	6.0	6.1	0.1

Pantalla P39 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.8 kN En el vano 1 Combinación 2 [vu=0.34Mpa Øvc=0.49Mpa Øvs=0.99Mpa]
Esfuerzo flexión=4.01Mpa En el vano 1 Combinación 2 [Momento =34.4 kN-m Axial =16.5 kN C=0.04m]

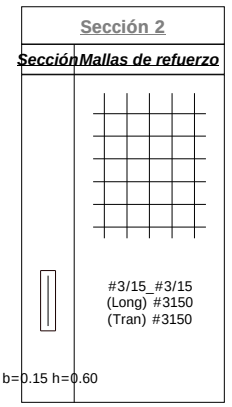


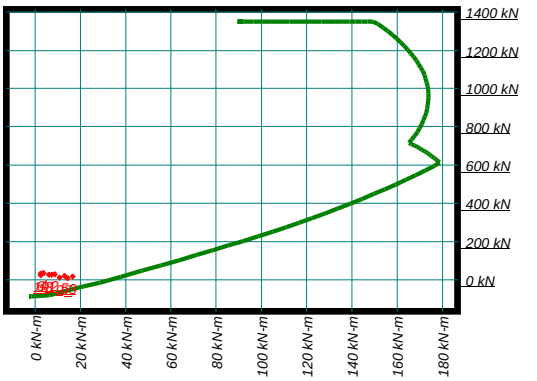


N	Mu	Pu	C
1	2.3	1.7	0.0
2	3.4	1.6	0.0
3	2.5	0.7	0.0
4	3.3	2.5	0.0
5	2.7	1.3	0.0
6	3.0	1.9	0.0
7	1.0	-0.3	0.0
8	1.9	2.0	0.0
9	1.3	0.8	0.0
10	1.6	1.4	0.0

Pantalla P76 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =2.6 kN En el vano 1 Combinación 10 [vu=0.04Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.03Mpa En el vano 1 Combinación 3 [Momento =16.6 kN-m Axial =16.7 kN C=0.04m]

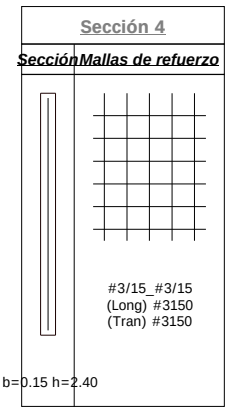


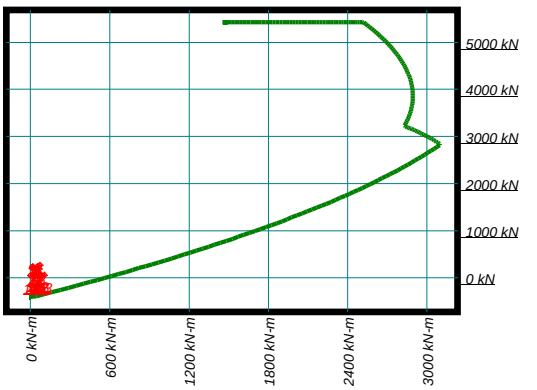


N	Mu	Pu	C
1	0.7	2.7	0.0
2	0.9	2.8	0.0
3	1.7	1.7	0.0
4	0.4	3.5	0.0
5	1.3	2.0	0.0
6	0.2	3.2	0.0
7	1.4	0.8	0.0
8	0.6	2.7	0.0
9	1.1	1.1	0.0
10	0.3	2.4	0.0

Pantalla P77 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =3.6 kN En el vano 1 Combinación 6 [vu=0.01Mpa Øvc=0.31Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.24Mpa En el vano 1 Combinación 4 [Momento =71.7 kN-m Axial =267.8 kN C=0.18m]

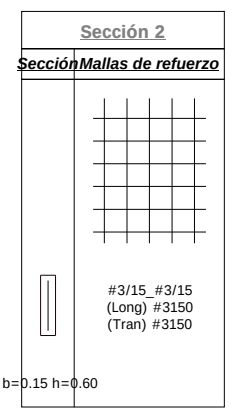


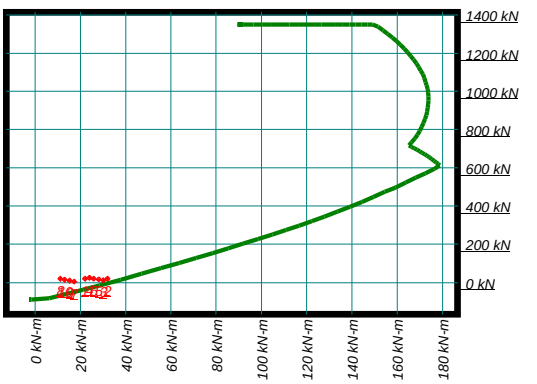


N	Mu	Pu	C
1	1.3	20.8	0.2
2	1.5	24.1	0.2
3	4.4	18.4	0.2
4	7.2	26.8	0.2
5	2.5	20.4	0.2
6	5.3	23.7	0.2
7	5.0	10.0	0.1
8	6.6	19.2	0.2
9	3.1	12.1	0.1
10	4.7	16.2	0.1
11	5.7	6.4	0.1
12	7.7	6.8	0.1
13	10.6	5.6	0.1
14	2.7	7.0	0.1
15	8.1	6.0	0.1

Pantalla P78 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =23.1 kN En el vano 1 Combinación 2 [vu=0.32Mpa Øvc=0.49Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.77Mpa En el vano 1 Combinación 2 [Momento =32.0 kN-m Axial =19.1 kN C=0.04m]

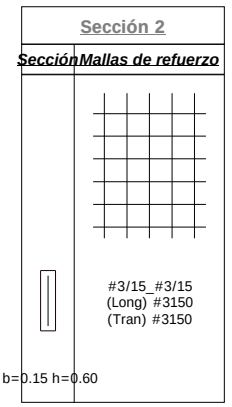


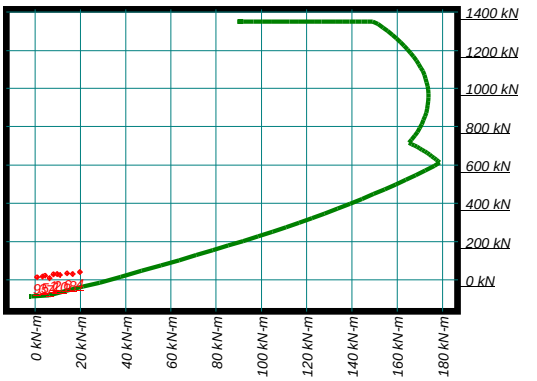


N	Mu	Pu	C
1	2.2	1.9	0.0
2	3.2	1.9	0.0
3	3.0	1.1	0.0
4	2.4	2.5	0.0
5	2.8	1.6	0.0
6	2.6	2.1	0.0
7	1.7	0.5	0.0
8	1.1	1.9	0.0
9	1.5	1.0	0.0
10	1.3	1.5	0.0

Pantalla P34 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =3.2 kN En el vano 1 Combinación 3 [vu=0.04Mpa Øvc=0.26Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.64Mpa En el vano 1 Combinación 4 [Momento =19.8 kN-m Axial =39.5 kN C=0.04m]

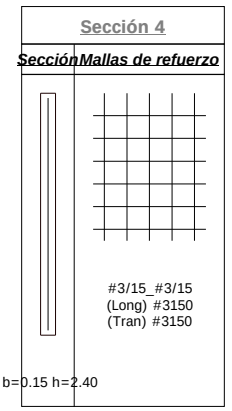


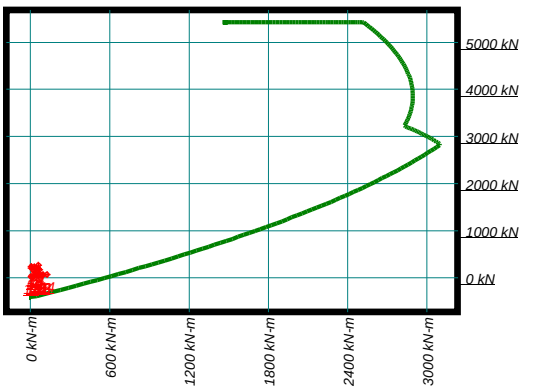


N	Mu	Pu	C
1	0.8	2.8	0.0
2	1.0	3.0	0.0
3	0.3	1.7	0.0
4	2.0	4.0	0.0
5	0.4	2.2	0.0
6	1.4	3.4	0.0
7	0.6	0.7	0.0
8	1.7	3.0	0.0
9	0.1	1.2	0.0
10	1.1	2.4	0.0

Pantalla P35 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =10.3 kN En el vano 1 Combinación 3 [vu=0.04Mpa Øvc=0.47Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.15Mpa En el vano 1 Combinación 4 [Momento =59.5 kN-m Axial =264.9 kN C=0.18m]

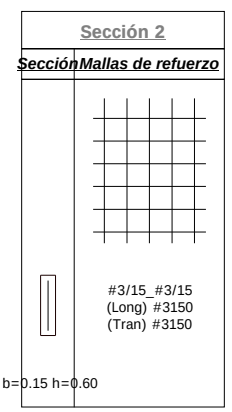


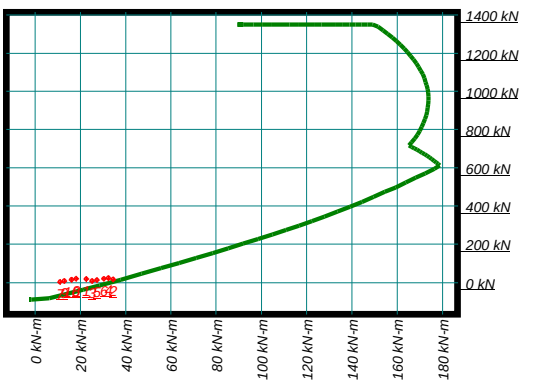


N	Mu	Pu	C
1	0.6	20.4	0.2
2	0.6	23.8	0.2
3	6.9	17.6	0.2
4	6.0	26.5	0.2
5	3.7	19.7	0.2
6	2.8	23.1	0.2
7	6.7	9.2	0.1
8	6.1	19.2	0.2
9	3.5	11.4	0.1
10	2.9	14.8	0.1
11	6.5	6.1	0.1
12	9.3	6.5	0.1
13	3.3	5.2	0.1
14	12.5	6.8	0.1
15	6.1	5.5	0.1

Pantalla P36 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.9 kN En el vano 1 Combinación 2 [vu=0.35Mpa Øvc=0.49Mpa Øvs=0.99Mpa]
Esfuerzo flexión=4.02Mpa En el vano 1 Combinación 2 [Momento =34.5 kN-m Axial =16.5 kN C=0.04m]

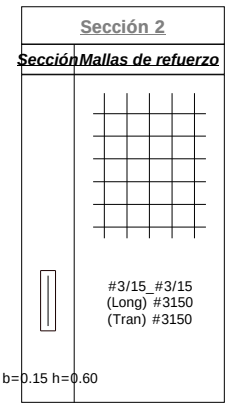


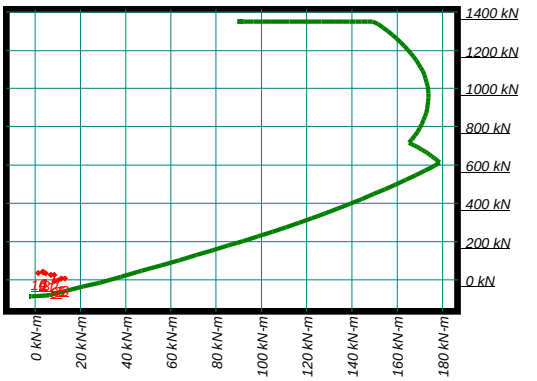


N	Mu	Pu	C
1	2.3	1.7	0.0
2	3.5	1.6	0.0
3	2.5	0.8	0.0
4	3.2	2.4	0.0
5	2.7	1.3	0.0
6	3.0	1.9	0.0
7	1.1	0.3	0.0
8	1.8	1.9	0.0
9	1.3	0.8	0.0
10	1.6	1.4	0.0

Pantalla P79 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =19.3 kN En el vano 1 Combinación 3 [vu=0.27Mpa Øvc=1.12Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.55Mpa En el vano 1 Combinación 3 [Momento =13.2 kN-m Axial =6.9 kN C=0.03m]

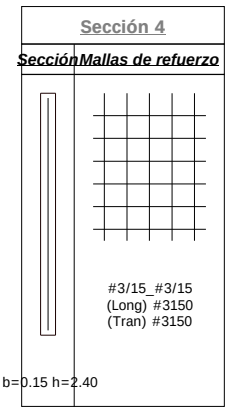


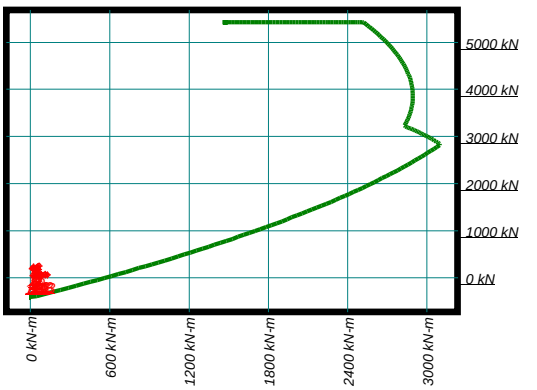


N	Mu	Pu	C
1	0.7	2.5	0.0
2	0.9	2.5	0.0
3	1.3	0.7	0.0
4	0.3	4.0	0.0
5	1.2	0.7	0.0
6	0.4	4.2	0.0
7	1.0	-0.3	0.0
8	0.5	3.3	0.0
9	0.9	-0.5	0.0
10	0.1	3.4	0.0

Pantalla P80 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =6.4 kN En el vano 1 Combinación 4 [vu=0.02Mpa Øvc=0.33Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.15Mpa En el vano 1 Combinación 4 [Momento =65.6 kN-m Axial =251.1 kN C=0.18m]

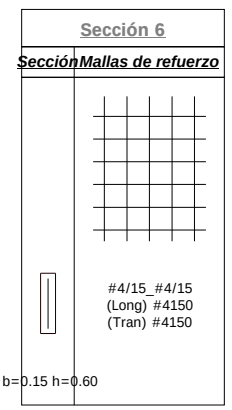


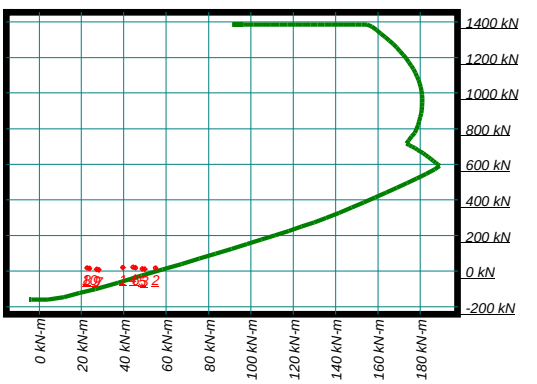


N	Mu	Pu	C
1	1.5	19.7	0.2
2	2.4	23.0	0.2
3	4.1	17.3	0.2
4	6.6	25.1	0.2
5	2.8	18.3	0.2
6	5.3	23.1	0.2
7	4.6	9.2	0.1
8	6.1	17.7	0.2
9	3.3	10.2	0.1
10	4.8	15.1	0.1
11	8.1	7.2	0.1
12	11.0	7.6	0.1
13	12.8	6.4	0.1
14	6.2	7.8	0.1
15	11.1	6.3	0.1

Pantalla P81 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =39.6 kN En el vano 1 Combinación 2 [vu=0.55Mpa Øvc=0.49Mpa Øvs=1.78Mpa]
Esfuerzo flexión=6.30Mpa En el vano 1 Combinación 2 [Momento =55.0 kN-m Axial =16.3 kN C=0.05m]

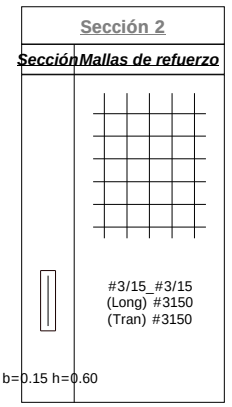


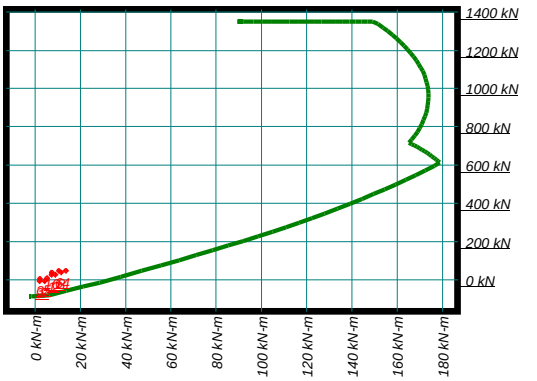


N	Mu	Pu	C
1	4.0	2.0	0.0
2	5.5	1.6	0.0
3	5.0	1.1	0.0
4	4.4	2.2	0.0
5	4.9	1.4	0.0
6	4.5	1.9	0.0
7	2.8	0.7	0.0
8	2.3	1.9	0.0
9	2.7	1.0	0.0
10	2.4	1.5	0.0

Pantalla P31 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =5.5 kN En el vano 1 Combinación 7 [vu=0.08Mpa Øvc=0.35Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.03Mpa En el vano 1 Combinación 4 [Momento =13.7 kN-m Axial =46.0 kN C=0.04m]

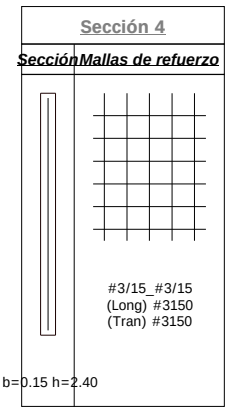


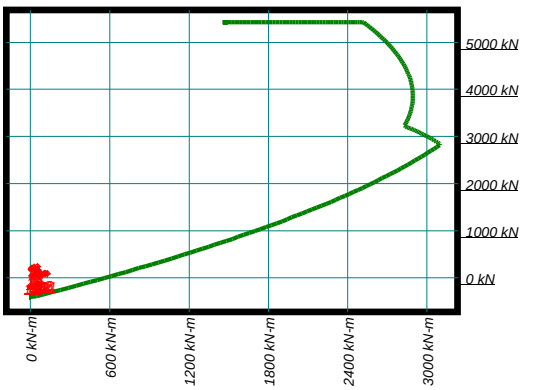


N	Mu	Pu	C
1	0.7	2.6	0.0
2	0.9	2.7	0.0
3	0.2	0.5	0.0
4	1.4	4.6	0.0
5	0.5	0.8	0.0
6	1.1	4.6	0.0
7	0.4	-0.7	0.0
8	1.2	3.8	0.0
9	0.2	-0.7	0.0
10	0.7	3.8	0.0

Pantalla P32 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =1.6 kN En el vano 1 Combinación 9 [vu=0.01Mpa Øvc=0.27Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.13Mpa En el vano 2 Combinación 4 [Momento =127.2 kN-m Axial =87.7 kN C=0.14m]

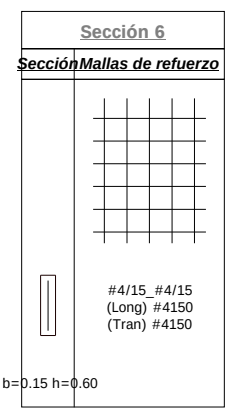


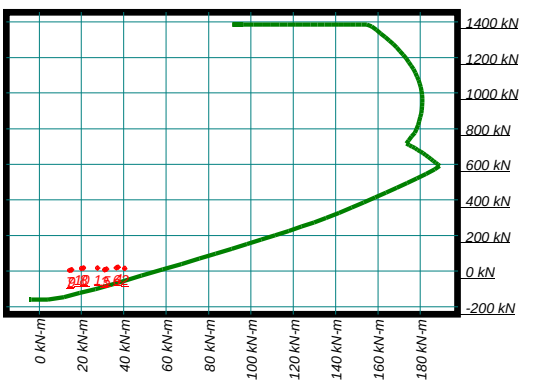


N	Mu	Pu	C
1	0.5	17.8	0.2
2	1.0	20.8	0.2
3	6.1	14.9	0.1
4	5.4	23.9	0.2
5	3.4	15.1	0.1
6	2.6	22.4	0.2
7	6.0	7.5	0.1
8	5.5	17.3	0.2
9	3.2	7.8	0.1
10	2.8	15.4	0.1
11	7.3	7.9	0.1
12	10.3	8.8	0.1
13	4.9	7.3	0.1
14	12.7	8.8	0.1
15	6.4	7.0	0.1

Pantalla P33 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =29.0 kN En el vano 1 Combinación 2 [vu=0.40Mpa Øvc=0.49Mpa Øvs=1.78Mpa]
Esfuerzo flexión=4.66Mpa En el vano 1 Combinación 2 [Momento =40.4 kN-m Axial =15.4 kN C=0.05m]

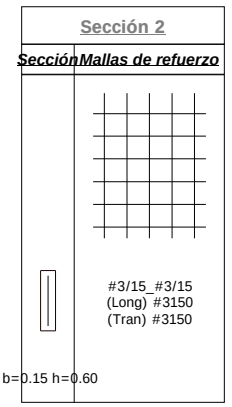


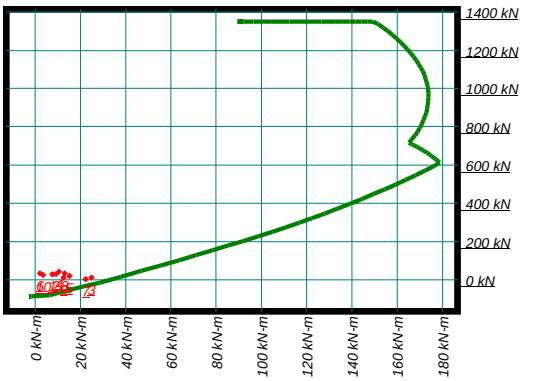


N	Mu	Pu	C
1	2.8	1.7	0.0
2	4.0	1.5	0.0
3	3.1	0.8	0.0
4	3.7	2.2	0.0
5	3.2	1.1	0.0
6	3.6	1.9	0.0
7	1.5	0.4	0.0
8	2.1	1.8	0.0
9	1.5	0.7	0.0
10	2.0	1.5	0.0

Pantalla P61 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =39.1 kN En el vano 1 Combinación 3 [vu=0.54Mpa Øvc=1.13Mpa Øvs=0.99Mpa]
Esfuerzo flexión=2.90Mpa En el vano 1 Combinación 3 [Momento =24.9 kN-m Axial =11.8 kN C=0.03m]

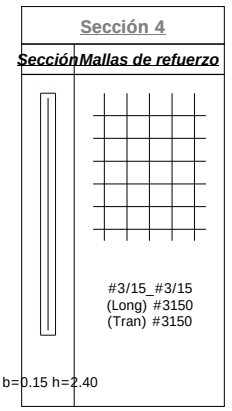


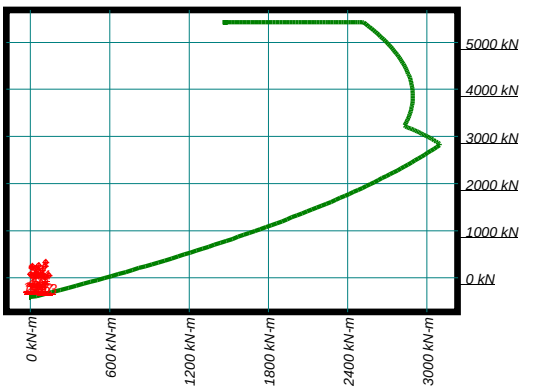


N	Mu	Pu	C
1	0.8	2.8	0.0
2	0.9	2.9	0.0
3	2.5	1.2	0.0
4	1.1	4.3	0.0
5	1.5	2.0	0.0
6	0.2	3.4	0.0
7	2.2	0.2	0.0
8	1.3	3.3	0.0
9	1.3	1.1	0.0
10	0.4	2.5	0.0

Pantalla P62 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =6.9 kN En el vano 1 Combinación 6 [vu=0.02Mpa Øvc=0.41Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.71Mpa En el vano 1 Combinación 4 [Momento =115.1 kN-m Axial =329.5 kN C=0.19m]

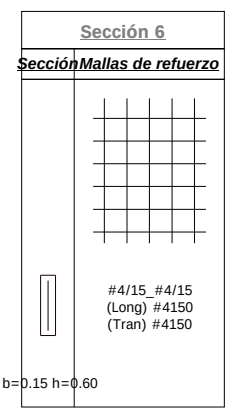


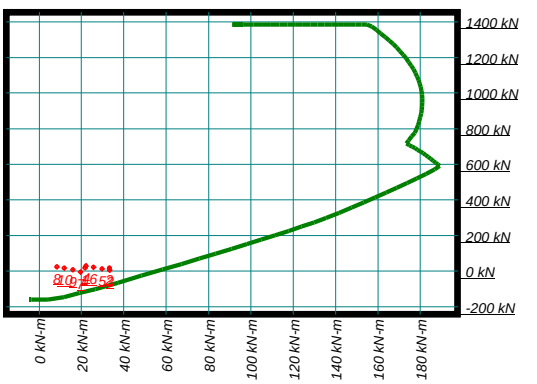


N	Mu	Pu	C
1	1.2	21.3	0.2
2	1.5	25.0	0.2
3	8.9	15.9	0.1
4	11.5	33.0	0.2
5	3.7	19.6	0.2
6	6.3	26.4	0.2
7	9.4	7.1	0.1
8	11.0	25.0	0.2
9	4.2	10.8	0.1
10	5.7	18.4	0.2
11	5.7	6.6	0.1
12	8.0	7.2	0.1
13	13.9	5.3	0.1
14	0.3	7.9	0.1
15	9.4	6.1	0.1

Pantalla P63 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =24.1 kN En el vano 1 Combinación 3 [vu=0.33Mpa Øvc=0.67Mpa Øvs=1.78Mpa]
Esfuerzo flexión=3.89Mpa En el vano 1 Combinación 2 [Momento =33.2 kN-m Axial =18.4 kN C=0.05m]

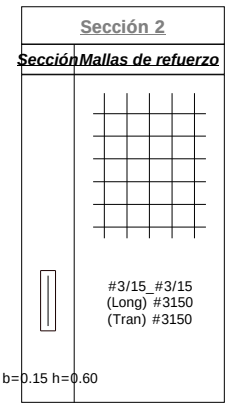


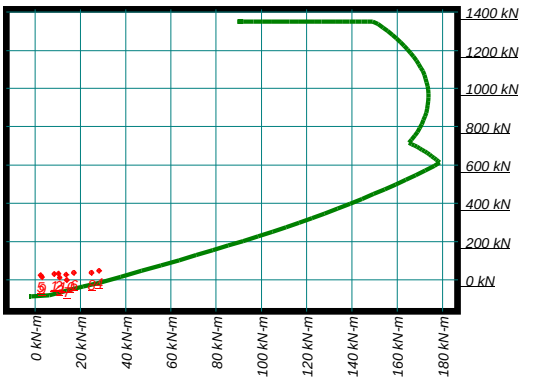


N	Mu	Pu	C
1	2.2	1.9	0.0
2	3.3	1.8	0.0
3	3.3	0.5	0.0
4	2.2	3.0	0.0
5	3.0	1.3	0.0
6	2.6	2.2	0.0
7	2.0	-0.6	0.0
8	0.8	2.4	0.0
9	1.6	0.8	0.0
10	1.2	1.6	0.0

Pantalla P49 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =3.0 kN En el vano 1 Combinación 9 [vu=0.04Mpa Øvc=0.28Mpa Øvs=0.99Mpa]
Esfuerzo flexión=3.67Mpa En el vano 1 Combinación 4 [Momento =28.3 kN-m Axial =46.9 kN C=0.04m]

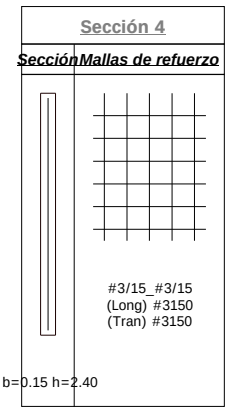


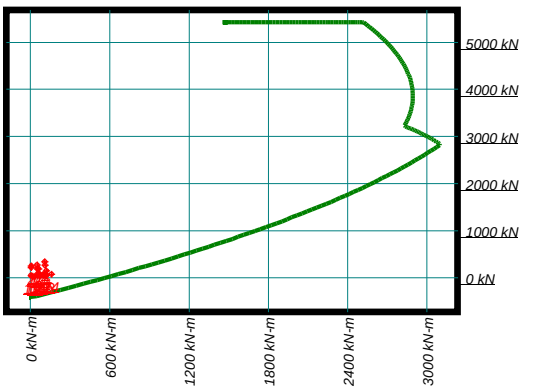


N	Mu	Pu	C
1	0.9	3.0	0.0
2	1.0	3.2	0.0
3	1.1	1.2	0.0
4	2.8	4.7	0.0
5	0.2	2.3	0.0
6	1.7	3.6	0.0
7	1.4	-0.2	0.0
8	2.5	3.7	0.0
9	0.3	1.3	0.0
10	1.4	2.6	0.0

Pantalla P50 (Vanos 1 a 2) F'c= 35Mpa

Cortante de Diseño =8.1 kN En el vano 1 Combinación 5 [vu=0.03Mpa Øvc=0.42Mpa Øvs=0.99Mpa]
Esfuerzo flexión=1.70Mpa En el vano 1 Combinación 4 [Momento =107.8 kN-m Axial =342.7 kN C=0.20m]

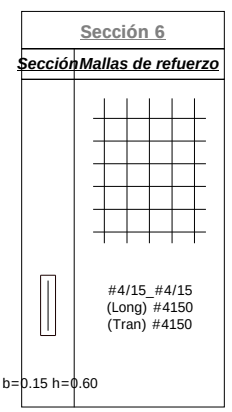


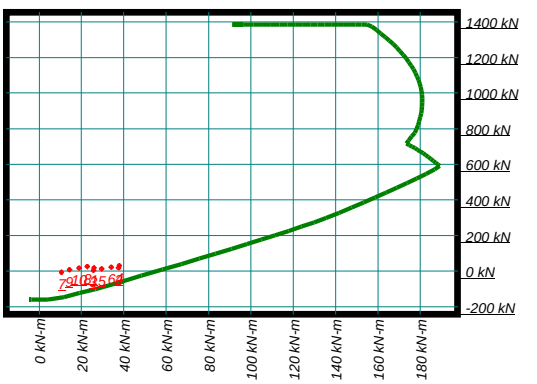


N	Mu	Pu	C
1	0.7	21.7	0.2
2	0.7	25.4	0.2
3	12.1	15.4	0.1
4	10.8	34.3	0.2
5	6.3	19.1	0.2
6	4.9	27.4	0.2
7	11.9	6.6	0.1
8	11.0	26.5	0.2
9	6.1	10.2	0.1
10	5.2	19.6	0.2
11	6.9	6.6	0.1
12	9.6	7.1	0.1
13	0.5	5.1	0.1
14	15.8	8.0	0.1
15	5.5	5.9	0.1

Pantalla P51 (Vanos 1 a 1) F'c= 35Mpa

Cortante de Diseño =27.1 kN En el vano 1 Combinación 2 [vu=0.38Mpa Øvc=0.49Mpa Øvs=1.78Mpa]
Esfuerzo flexión=4.55Mpa En el vano 1 Combinación 4 [Momento =37.9 kN-m Axial =30.9 kN C=0.05m]





N	Mu	Pu	C
1	2.6	1.9	0.0
2	3.7	1.9	0.0
3	2.6	0.5	0.0
4	3.8	3.1	0.0
5	3.0	1.3	0.0
6	3.4	2.2	0.0
7	1.1	-0.6	0.0
8	2.3	2.5	0.0
9	1.4	0.8	0.0
10	1.9	1.7	0.0

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

Columna B-13

Nivel	H Libre	Losa	B	H	M1	M2	P	V1	V2	Cuantia	m/mr	Rap	Ras
N+5.45					-4.44	-2.79				5/#5 (1.0%)	0.16		
	2.45	.30	.35	Circ			-34.10	2.52	1.19			0	0
					2.49	0.17				5/#5 (1.0%)	0.08		
N+2.70					0.47	1.88				5/#5 (1.0%)	0.06		
	1.08	.30	.35	Circ			-32.12	1.41	1.85			0	0
					1.24	1.53				5/#5 (1.0%)	0.06		
N+1.375					-1.56	-1.97				5/#5 (1.0%)	0.08		
	1.08	.30	.35	Circ			-40.30	2.30	2.53			0	0
		1.20			1.36	1.66				5/#5 (1.0%)	0.07		

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

Columnas F-14, H-14, E-13, K-3

Nivel	H Libre	Losa	B	H	M1	M2	P	V1	V2	Cuantia	m/mr	Rap	Ras
N+5.45					9.91	-14.19				5/#5 (1.0%)	0.52		
	2.45	.30	.35	Circ			-43.00	7.25	10.33			0	0
					-10.02	14.22				5/#5 (1.0%)	0.52		
N+2.70					6.80	-9.68				5/#5 (1.0%)	0.30		
	2.45	.30	.35	Circ			-109.35	3.69	5.20			0	0
		1.20			-3.36	4.62				5/#5 (1.0%)	0.15		

Columnas C-1, C-3, D-1, D-3, G-1, G-3, I-1, I-3, J-1, J-3

Nivel	H Libre	Losa	B	H	M1	M2	P	V1	V2	Cuantia	m/mr	Rap	Ras
N+5.45					13.94	14.10				8/#4 (1.1%)	0.46		
	2.45	.30	.30	.30			-48.26	9.59	9.77			0	0
					-12.42	-12.77				8/#4 (1.1%)	0.41		
N+2.70					7.35	7.67				8/#4 (1.1%)	0.24		
	2.45	.30	.30	.30			-108.54	4.31	4.43			0	0
		1.20			-4.33	-4.13				8/#4 (1.1%)	0.13		

Columna J-2

Nivel	H Libre	Losa	B	H	M1	M2	P	V1	V2	Cuantia	m/mr	Rap	Ras
N+2.70					-5.33	3.31				8/#4 (1.1%)	0.14		
	1.08	.30	.30	.30			-38.97	4.67	3.14			0	0
					-0.18	0.46				8/#4 (1.1%)	0.08		
N+1.375					0.94	2.04				8/#4 (1.1%)	0.05		
	1.08	.30	.30	.30			-45.64	1.65	3.56			0	0
		1.20			0.03	-2.90				8/#4 (1.1%)	0.06		

PROYECTO: CAE - REDENTOR, BLOQUE M, BOGOTA (CUND)

Columna K-2

Nivel	H Libre	Losa	B	H	M1	M2	P	V1	V2	Cuantia	m/mr	Rap	Ras
N+5.45					-1.74	3.58				5/#5 (1.0%)	0.12		
	3.83	.30	.35	Circ			-44.90	1.63	1.68			0	0
					-1.48	-0.94				5/#5 (1.0%)	0.05		
N+1.375					-3.07	-1.02				5/#5 (1.0%)	0.09		
	1.08	.30	.35	Circ			-49.74	4.53	2.12			0	0
		1.20			3.25	1.28				5/#5 (1.0%)	0.10		

DISEÑO DE ELEMENTOS COMPLEMENTARIOS

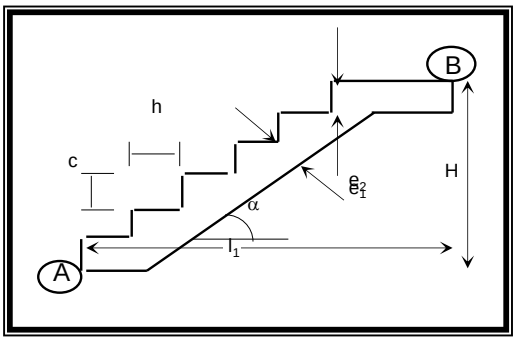
PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M

DISEÑO DE ESCALERA TIPO

Diseño Tramos Inclinados

El diseño se realiza para el tramo inclinado de la escalera mas largo.

Geometría de la losa



l_1 =	**2.10**	m	fy =	**420**	MPa
H =	**1.35**	m	f'c =	**21.1**	MPa
c =	**17.3**	cm	h =	**29**	cm

Espesor escogido: **15** **cm**

Pendiente α = h/l1 : 32.735 °

Cargas

Peso propio de la losa	0.15x100x24/cos24.44º	4.28	kN/m²
Peso propio de peldaños	1/2x(0.18x0.28)/0.28x24	2.08	kN/m²
Acabado peldaños	0.04x(0.18+0.28)/0.28x22	1.40	kN/m²
Afinado Inferior	0.02x22/cos24.44º	0.52	kN/m²
Sobrecarga		3.00	kN/m²
		14.74	**kN/m²**

CU = ***14.74*** **kN/m²**

Diseño Tramo Inclinado

Momentos en tramo A-B. M= **8.13** kN-m

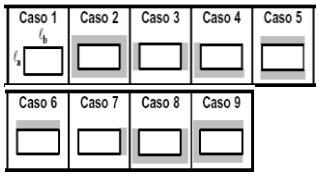
Cuantía: 0.0020 Asmín = 2.4 cm²/m

As 3.00 cm²/m *Colocar 1#4 c/.20 longitudinalmente*

Colocar 1#4 c/.20 transversalmente

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTÁ D.C.
DISEÑO PLACA MACIZA ENTREPISO

El diseño de la placa maciza se realiza de acuerdo con lo establecido en C.13.9 de la NSR - 10



Geometría de la losa

la =	**3.95**	m	fy =	**420**	MPa
lb =	**4.94**	m	f'c =	**21.1**	MPa
Relación m =	**0.8**				

Espesor escogido: **0.10** **m**

Cargas

Peso propio de la losa	0.1x1.0x24	2.40	kN/m²
Acabados	0.05x22	1.10	kN/m²
Muros Divisorios		2.00	kN/m²
Carga Muerta Total		5.50	kN/m²
Carga Viva		2.00	kN/m²
Carga Última		9.80	kN/m²

Tipo de soporte CASO Nº 4

DISEÑO A MOMENTO FLECTOR

Coeficientes para momento positivo por carga muerta y viva:

C_{aD} =	0.039
C_{bD} =	0.016
C_{av} =	0.048
C_{bV} =	0.020

Mu_a =	**4.84**	kN.m	*Cuantía:*	0.0021	*As =*	2.10	cm²/m
Mu_b =	**3.12**	kN.m	*Cuantía:*	0.0018	*As =*	1.80	cm²/m

Coeficientes para momento negativo por carga última:

C_a =	0.071	Mu_a =	**10.86**	kN.m	*Cuantía:*	0.0049	*As =*	4.87	cm²/m
C_b =	0.029	Mu_b =	**6.94**	kN.m	*Cuantía:*	0.0030	*As =*	3.04	cm²/m

Distribución de refuerzo:
Colocar malla electrosoldada diámetro 9.5mm c./.15 longitudinalmente y transversalmente

REVISIÓN A CORTANTE

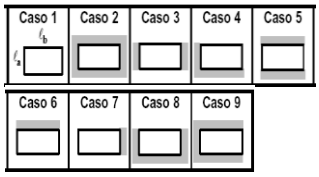
Coeficientes de relación de carga en las dos direcciones para cortante:

W_a =	0.71
W_b =	0.29

$\phi v c$ =	**0.574**	**MPa**	
$\phi v u_a$ =	**0.172**	**MPa**	**OK**
$\phi v u_b$ =	**0.056**	**MPa**	**OK**

DISEÑO PLACA MACIZA (ZONA CUARTOS)

El diseño de la placa maciza se realiza de acuerdo con lo establecido en C.13.9 de la NSR - 10



Geometría de la losa

la =	**2.10**	m	fy =	**420**	MPa
lb =	**2.40**	m	f'c =	**21.1**	MPa
Relación m =	**0.875**				

Espesor escogido: **0.10** **m**

Cargas

Peso propio de la losa	0.1x1.0x24	2.40	kN/m²
Acabados	0.05x22	1.10	kN/m²
Carga Muerta Total		3.50	kN/m²
Carga Viva		2.00	kN/m²
Carga Última		7.40	kN/m²

Tipo de soporte CASO Nº 4

DISEÑO A MOMENTO FLECTOR

Coeficientes para momento positivo por carga muerta y viva:

C_{aD} =	0.035						
C_{bD} =	0.021						
C_{aV} =	0.041						
C_{bV} =	0.025						
Mu_a =	**0.90**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m
Mu_b =	**0.70**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m

Coeficientes para momento negativo por carga última:

C_a =	0.063	Mu_a =	**2.06**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m
C_b =	0.037	Mu_b =	**1.58**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m

Distribución de refuerzo:
Colocar malla electrosoldada diámetro 5.0mm c./.15 longitudinalmente y transversalmente

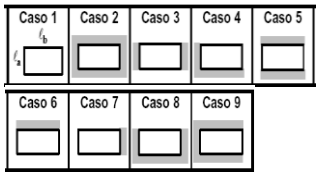
REVISIÓN A CORTANTE

Coeficientes de relación de carga en las dos direcciones para cortante:

W_a =	0.63		
W_b =	0.37		
$\phi v C$ =	**0.574**	**MPa**	
$\phi v u_a$ =	**0.056**	**MPa**	**OK**
$\phi v u_b$ =	**0.029**	**MPa**	**OK**

DISEÑO PLACA MACIZA CUBIERTA (ZONA 1)

El diseño de la placa maciza se realiza de acuerdo con lo establecido en C.13.9 de la NSR - 10



Geometría de la losa

la =	**4.05**	m	fy =	**420**	MPa
lb =	**4.94**	m	f'c =	**21.1**	MPa
Relación m =	**0.82**				

Espesor escogido: **0.10** **m**

Cargas

Peso propio de la losa	0.1x1.0x24	2.40	kN/m²
Acabados	0.05x22	1.10	kN/m²
Carga Muerta Total		3.50	kN/m²
Carga Viva		1.80	kN/m²
Carga Última		7.08	kN/m²

Tipo de soporte CASO Nº 8

DISEÑO A MOMENTO FLECTOR

Coeficientes para momento positivo por carga muerta y viva:

C_{aD} =	0.031
C_{bD} =	0.016
C_{aV} =	0.042
C_{bV} =	0.025

Mu_a =	**3.13**	kN.m	*Cuantía:*	0.0018	*As =*	1.80	cm²/m
Mu_b =	**2.59**	kN.m	*Cuantía:*	0.0018	*As =*	1.80	cm²/m

Coeficientes para momento negativo por carga última:

C_a =	0.052	Mu_a =	**6.31**	kN.m	*Cuantía:*	0.0028	*As =*	2.76 cm²/m
C_b =	0.044	Mu_b =	**7.86**	kN.m	*Cuantía:*	0.0035	*As =*	3.47 cm²/m

Distribución de refuerzo:
Colocar malla electrosoldada diámetro 8.5mm c./.15 longitudinalmente y transversalmente

REVISIÓN A CORTANTE

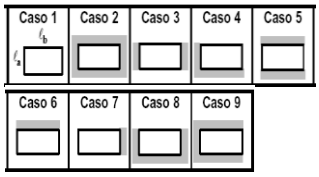
Coeficientes de relación de carga en las dos direcciones para cortante:

W_a =	0.52
W_b =	0.48

$\phi v C$ =	**0.574**	**MPa**	
$\phi v u_a$ =	**0.024**	**MPa**	**OK**
$\phi v u_b$ =	**0.018**	**MPa**	**OK**

DISEÑO PLACA MACIZA CUBIERTA (ZONA 2)

El diseño de la placa maciza se realiza de acuerdo con lo establecido en C.13.9 de la NSR - 10



Geometría de la losa

la =	**2.10**	m	fy =	**420**	MPa
lb =	**2.40**	m	f'c =	**21.1**	MPa
Relación m =	**0.875**				

Espesor escogido: **0.10** **m**

Cargas

Peso propio de la losa	0.1x1.0x24	2.40	kN/m²
Acabados	0.05x22	1.10	kN/m²
Carga Muerta Total		3.50	kN/m²
Carga Viva		1.80	kN/m²
Carga Última		7.08	kN/m²

Tipo de soporte CASO Nº 4

DISEÑO A MOMENTO FLECTOR

Coeficientes para momento positivo por carga muerta y viva:

C_{aD} =	0.035						
C_{bD} =	0.021						
C_{aV} =	0.041						
C_{bV} =	0.025						
Mu_a =	**0.90**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m
Mu_b =	**0.70**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m

Coeficientes para momento negativo por carga última:

C_a =	0.063	Mu_a =	**2.06**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m
C_b =	0.037	Mu_b =	**1.58**	kN.m	*Cuantía:*	0.0018	*As =*	1.26	cm²/m

Distribución de refuerzo:
Colocar malla electrosoldada diámetro 5.0mm c./.15 longitudinalmente y transversalmente

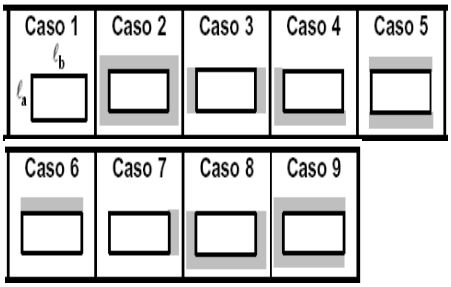
REVISIÓN A CORTANTE

Coeficientes de relación de carga en las dos direcciones para cortante:

W_a =	0.63		
W_b =	0.37		
$\phi v c$ =	**0.574**	**MPa**	
$\phi v u_a$ =	**0.056**	**MPa**	**OK**
$\phi v u_b$ =	**0.029**	**MPa**	**OK**

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M
DISEÑO PLACA MACIZA (EN UNA DIRECCION) - ZONA CORREDORES

El diseño de la placa maciza, se realiza de acuerdo con lo establecido en C.13.9 de las NSR - 10



Geometría de la losa

la =	**1.10**	m	fy =	**420**	MPa
lb =	**4.94**	m	f'c =	**21.1**	MPa
Relación m =	**0.223**				

h = l/20 (0.4+Fy/700) =	0.06	m
Espesor escogido:	**0.10**	**m**

Teniendo en cuenta que la relación m es menor de 0.5, la placa maciza trabaja en una dirección

Cargas

Peso propio de la losa	0.1x1.0x24	2.40	kN/m²
Impermeabilización	0.05x22	1.10	kN/m²
Muros divisorios		2.00	kN/m²
Carga Muerta Total		5.50	kN/m²
Carga Viva		5.00	kN/m²
Carga Última		14.60	kN/m²

DISEÑO A MOMENTO FLECTOR

Mu_a =	**2.21**	kN.m	*Cuantía:*	0.0020	*As =*	2.00 cm²/m	***Transversal***
			Cuantía:	0.0018	*As =*	1.80 cm²/m	***Longitudinal***

Distribución de refuerzo:

Colocar malla electrosoldada diámetro 6.5mm c./.15 longitudinalmente y Transversalmente

REVISIÓN A CORTANTE

R=	8.03	**kN**	
ϕvc =	**0.574**	**MPa**	
ϕvu =	**0.115**	**MPa**	**OK**

7. DISEÑO DE ELEMENTOS NO ESTRUCTURALES

DISEÑO DE ELEMENTOS NO ESTRUCTURALES

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M
DISEÑO DE ELEMENTOS NO ESTRUCTURALES

Units: kN*m

STORY DATA

Story	Height	Elevation	SimilarTo
N+5.45	2.75	5.45	None
N+2.70	1.375	2.7	None
N+1.375	1.375	1.325	None
BASE	0	-0.05	None

CENTER MASS RIGIDITY

Story	Diaphragm	MassX	MassY	XCM	YCM	CumMassX	CumMassY
N+5.45	D1	178.6292	178.6292	19.085	13.04	178.6292	178.6292
N+2.70	D1	270.7858	270.7858	19.163	14.113	449.4149	449.4149

XCCM	YCCM	XCR	YCR
19.085	13.04	19.632	22.666
19.132	13.687	19.561	18.324

STORY SHEARS

Story	Load	Loc	P	VX	VY	T	MX	MY
N+5.45	SISDISX	Top	0	540.08	51.28	7144.04	0	0
N+5.45	SISDISX	Bottom	0	540.08	51.28	7144.04	141.025	1485.215
N+5.45	SISDISY	Top	0	44.1	448.9	8154.875	0	0
N+5.45	SISDISY	Bottom	0	44.1	448.9	8154.875	1234.468	121.276
N+2.70	SISDISX	Top	0	821.66	88.69	11860.369	141.025	1485.216
N+2.70	SISDISX	Bottom	0	821.66	88.69	11860.369	255.504	2551.058
N+2.70	SISDISY	Top	0	66.37	813.52	14975.909	1234.468	121.276
N+2.70	SISDISY	Bottom	0	66.37	813.52	14975.909	2345.872	211.094
N+1.375	SISDISX	Top	0	846.16	93.4	12335.544	255.504	2551.058
N+1.375	SISDISX	Bottom	0	846.16	93.4	12335.544	380.377	3682.106
N+1.375	SISDISY	Top	0	69.63	848.28	15582.852	2345.872	211.094
N+1.375	SISDISY	Bottom	0	69.63	848.28	15582.852	3508.635	305.827

$$F_p = \frac{a_x a_p}{R_p} g M_p \geq \frac{A_a I}{2} g M_p \qquad a_x = \frac{C_{vx} V_s}{m_x g} \leq 2.5 A_a \qquad C_{vx} = \frac{m_x h_x^k}{\sum_{i=1}^{n} (m_i h_i^k)}$$

$$V_s = S_a g M$$

g:	9.81	m/s^2
Sa:	0.563	s

Grupo de uso	III
Grado de desemp	SUPERIOR

Grupo de Uso	Grado de desempeño
IV	SUPERIOR
III	SUPERIOR
II	BUENO
I	BAJO

Grado de desempeño de los elemer SUPERIOR

ANALISIS DE CARGAS PARA MUROS

Espesor de mur	0.15	m
Espesor de pañete en	0	m
Densidad de mampo	13	kN/m3
Densidad mortero de	21	kN/m3
Altura Fachac	2.70	m
Carga	5.265	kN/m
Descripción	mamposteria reforzada, separada lateralmente de la estructura, apoyada arriba y abajo	
ap:	1.0	
Rp:	6	

ANALISIS DE CARGAS PARA ANTEPECHOS

Espesor de mur	0.12	m
Espesor de pañete en	0	m
Densidad de mampo	13	kN/m3
Densidad mortero de	21	kN/m3
Altura Antepec	1	m
Carga	1.56	kN/m
Descripción	mamposteria reforzada, separada lateralmente de la estructura, apoyada solo abajo	
ap:	2.5	
Rp:	6	

Sección de vigas ve	0.12x0.25	m
f'c =	21.1	MPa
fy =	420	MPa

DISEÑO PARA MUROS

Story	*Fx*	*Wx*	*ax*	*ap*	*Rp*	*Fp*	*M*	*V*
N+5.45	540.08	1752.35	0.308	1.0	6	0.270	0.246	0.365
N+2.70	821.66	2656.41	0.309	1.0	6	0.271	0.247	0.366

	Sección Vigas V.			*As. (cm2)*		*Separación column.*		*Fl. 1/4"*
Story	*b*	*d*	*ρ*	*neces.*	*ubicado*	*S max*	*S escogida*	*S estribos*
N+5.45	0.12	0.21	0.00011	0.028	1.29	46.11	46.10	0.188
N+2.70	0.12	0.21	0.00011	0.028	1.29	45.94	45.90	0.188

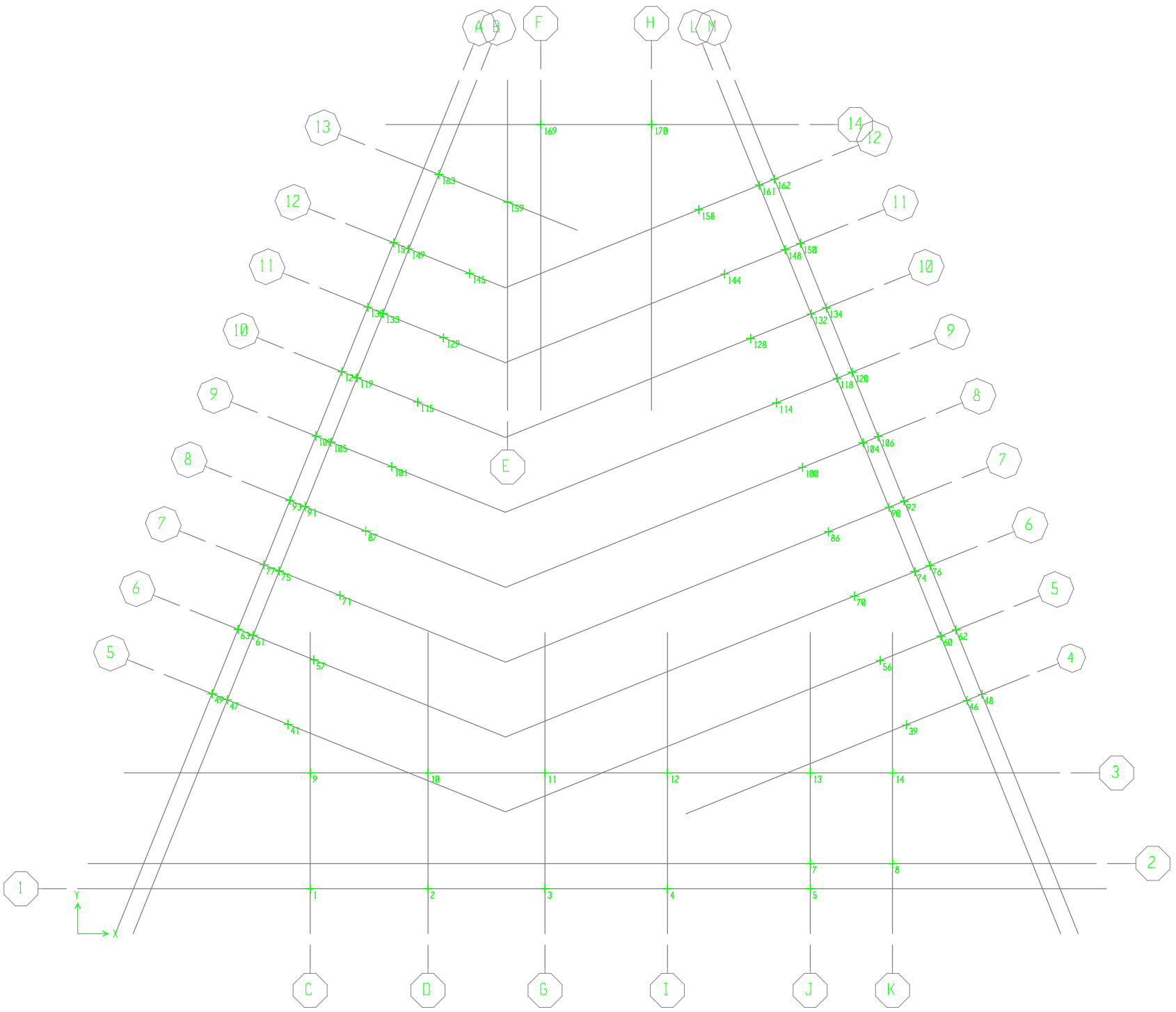
DISEÑO PARA ANTEPECHOS

Story	*Fx*	*Wx*	*ax*	*ap*	*Rp*	*Fp*	*M*	*V*
N+5.45	540.08	1752.35	0.308	2.5	6	0.676	0.616	0.913
N+2.70	821.66	2656.41	0.309	2.5	6	0.679	0.618	0.916

	Sección columneta			*As. (cm2)*		*Separación column.*		*Fl. 1/4"*
Story	*b*	*d*	*ρ*	*neces.*	*ubicado*	*S max*	*S escogida*	*S estribos*
N+5.45	0.12	0.21	0.00028	0.07	0.71	10.13	10.10	0.188
N+2.70	0.12	0.21	0.00028	0.07	0.71	10.09	10.10	0.188

8. ANEXOS DE COMPUTADOR

ANEXOS DE COMPUTADOR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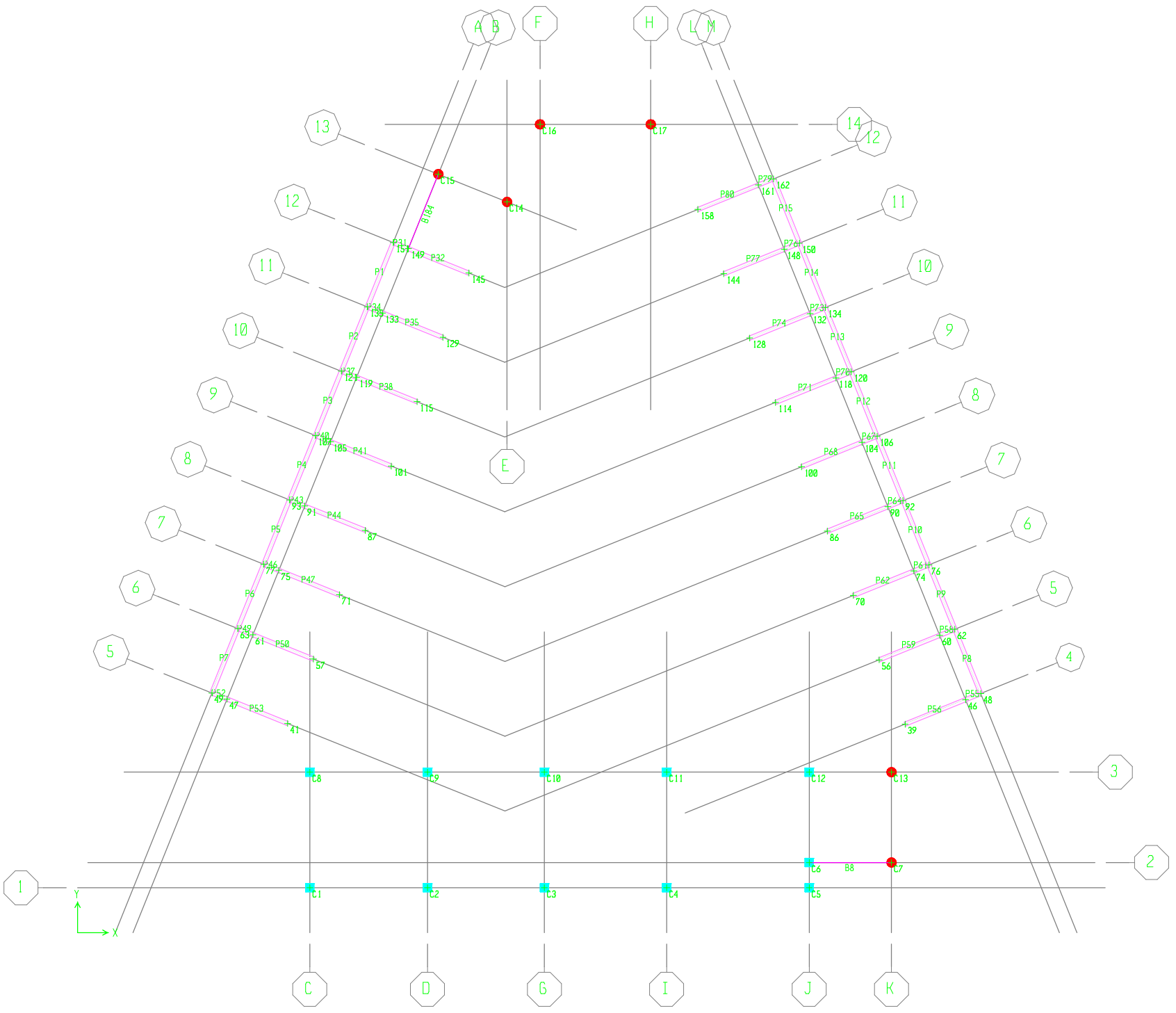
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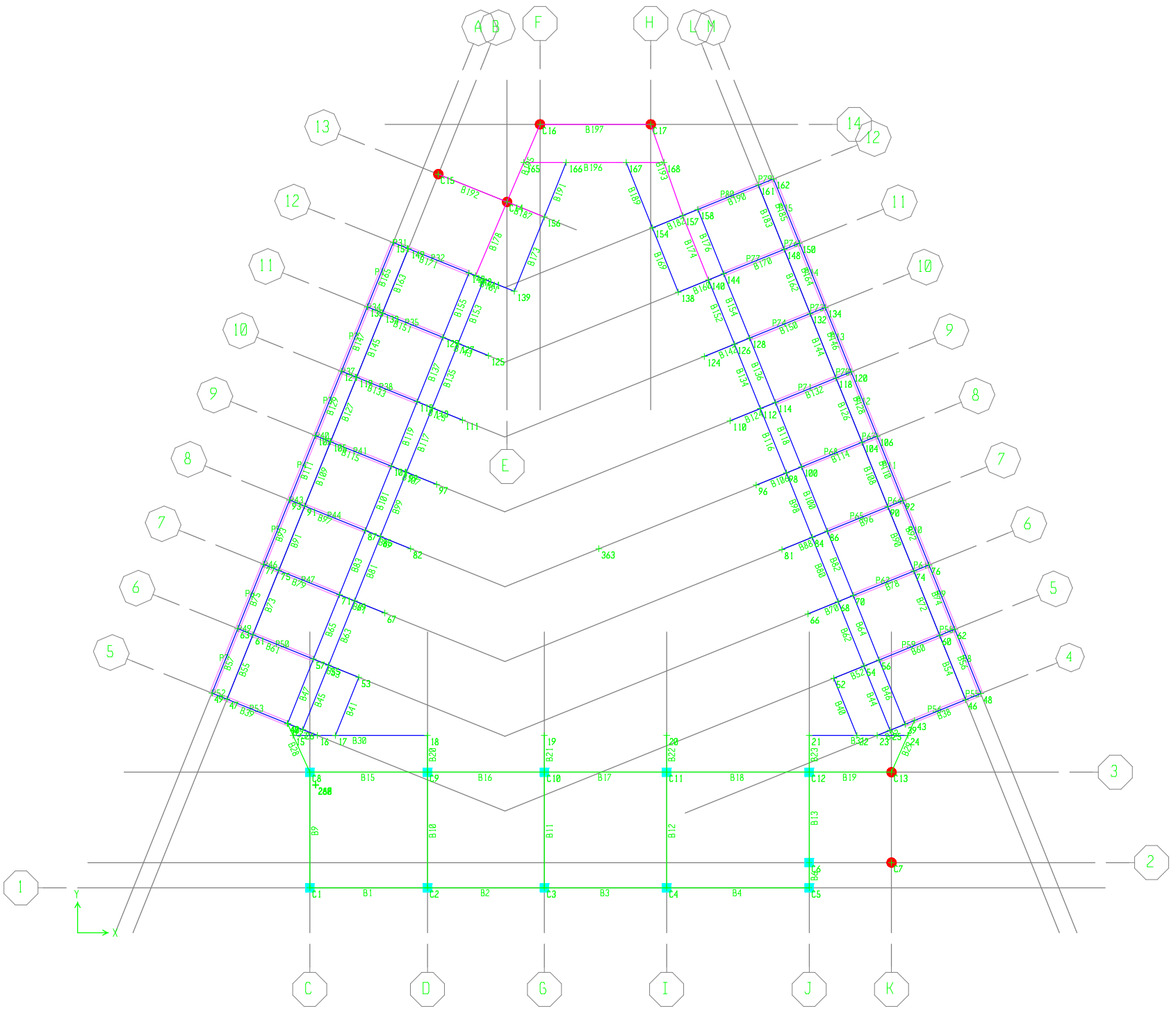
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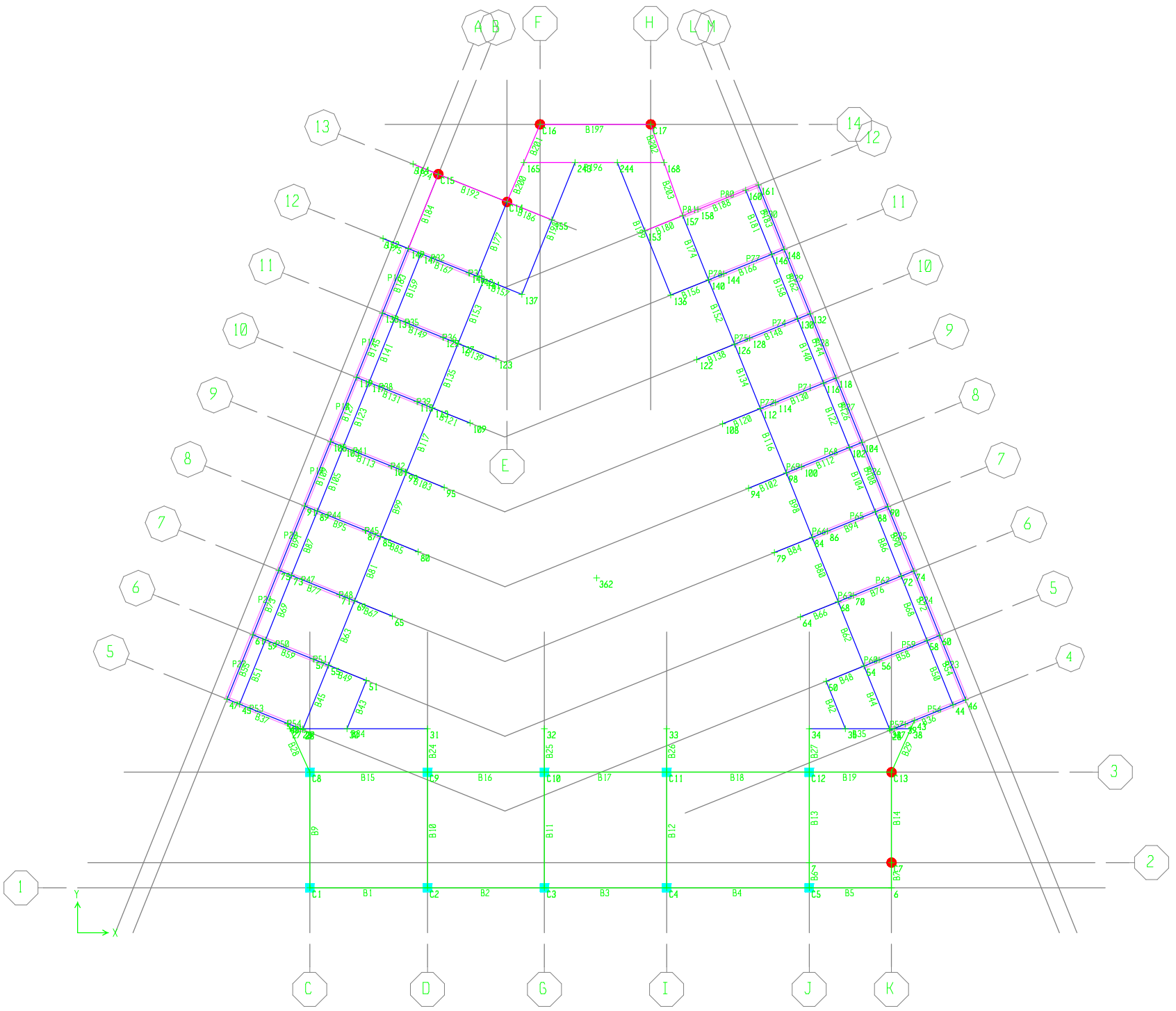
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ETABS v9.7.4 File:MODELO CAE ALOJAMIENTO MUJERES DOS PISOS Units:KN-m septiembre 9, 2014 10:38 PAGE 1

S T O R Y D A T A

STORY	SIMILAR TO	HEIGHT	ELEVATION
N+5.45	None	2.750	5.450
N+2.70	None	1.375	2.700
N+1.375	None	1.375	1.325
BASE	None		-0.050

ETABS v9.7.4 File:MODELO CAE ALOJAMIENTO MUJERES DOS PISOS Units:KN-m septiembre 9, 2014 10:38 PAGE 2

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	General	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	G	1	Primary	No	Start	(0.000,1.650)-(37.777,1.650)
GLOBAL	G	4	Primary	No	End	(22.339,4.398)-(34.943,9.491)
GLOBAL	G	C	Primary	No	Start	(8.538,0.000)-(8.538,11.060)
GLOBAL	G	D	Primary	No	Start	(12.862,0.000)-(12.862,11.060)
GLOBAL	G	G	Primary	No	Start	(17.162,0.000)-(17.162,11.060)
GLOBAL	G	I	Primary	No	Start	(21.656,0.000)-(21.657,11.060)
GLOBAL	G	J	Primary	No	Start	(26.898,0.000)-(26.898,11.060)
GLOBAL	G	B	Primary	No	End	(2.035,0.000)-(14.653,31.339)
GLOBAL	G	3	Primary	No	End	(1.713,5.901)-(36.065,5.901)
GLOBAL	G	13	Primary	No	Start	(10.941,28.817)-(18.342,25.837)
GLOBAL	G	K	Primary	No	Start	(29.923,0.000)-(29.923,11.060)
GLOBAL	G	14	Primary	No	End	(11.302,29.714)-(26.477,29.714)
GLOBAL	G	2	Primary	No	End	(0.377,2.577)-(37.399,2.577)
GLOBAL	G	F	Primary	No	End	(17.004,19.217)-(17.004,31.339)
GLOBAL	G	H	Primary	No	End	(21.072,19.218)-(21.072,31.339)
GLOBAL	G	A	Primary	No	End	(1.385,-0.010)-(14.003,31.329)
GLOBAL	G	M	Primary	No	Start	(24.125,31.339)-(36.743,0.000)
GLOBAL	G	L	Primary	No	Start	(23.478,31.339)-(36.096,0.000)
GLOBAL	G	7	Primary	No	End	(15.711,9.971)-(32.086,16.587)
GLOBAL	G	7	Primary	No	Start	(5.077,14.253)-(15.711,9.971)
GLOBAL	G	8	Primary	No	End	(15.709,12.721)-(31.133,18.953)
GLOBAL	G	8	Primary	No	Start	(6.029,16.619)-(15.709,12.721)
GLOBAL	G	9	Primary	No	End	(15.708,15.471)-(30.181,21.318)
GLOBAL	G	9	Primary	No	Start	(6.982,18.984)-(15.708,15.471)
GLOBAL	G	10	Primary	No	End	(15.706,18.220)-(29.228,23.684)
GLOBAL	G	10	Primary	No	Start	(7.934,21.349)-(15.706,18.220)
GLOBAL	G	11	Primary	No	End	(15.704,20.970)-(28.276,26.049)
GLOBAL	G	11	Primary	No	Start	(8.886,23.715)-(15.704,20.970)
GLOBAL	G	12	Primary	No	End	(15.703,23.719)-(27.323,28.415)
GLOBAL	G	12	Primary	No	Start	(9.839,26.080)-(15.703,23.719)
GLOBAL	G	6	Primary	No	End	(15.713,7.222)-(33.038,14.222)
GLOBAL	G	6	Primary	No	Start	(4.124,11.888)-(15.713,7.222)
GLOBAL	G	5	Primary	No	End	(15.714,4.472)-(33.990,11.857)
GLOBAL	G	5	Primary	No	Start	(3.172,9.522)-(15.714,4.472)
GLOBAL	G	E	Primary	No	End	(15.788,31.339)-(15.788,19.218)

ETABS v9.7.4 File:MODELO CAE ALOJAMIENTO MUJERES DOS PISOS Units:KN-m septiembre 9, 2014 10:38 PAGE 3

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

POINT	X	Y	DZ-BELOW
1	8.538	1.650	0.000
2	12.862	1.650	0.000
3	17.162	1.650	0.000
4	21.656	1.650	0.000
5	26.898	1.650	0.000
6	29.923	1.650	0.000
7	26.898	2.577	0.000
8	29.923	2.577	0.000
9	8.538	5.901	0.000
10	12.862	5.901	0.000

11	17.162	5.901	0.000
12	21.656	5.901	0.000
13	26.898	5.901	0.000
14	29.923	5.901	0.000
15	7.923	7.250	0.000
16	8.814	7.250	0.000
17	9.482	7.250	0.000
18	12.862	7.251	0.000
19	17.162	7.251	0.000
20	21.656	7.250	0.000
21	26.898	7.251	0.000
22	28.649	7.251	0.000
23	29.397	7.251	0.000
24	30.524	7.251	0.000
25	29.866	7.440	0.000
26	8.276	7.467	0.000
27	7.809	7.501	0.000
28	8.193	7.501	0.000
29	8.289	7.501	0.000
30	9.906	7.501	0.000
31	12.862	7.501	0.000
32	17.162	7.501	0.000
33	21.656	7.501	0.000
34	26.898	7.501	0.000
35	28.225	7.501	0.000
36	29.842	7.501	0.000
37	30.016	7.501	0.000
38	30.636	7.501	0.000
39	30.423	7.665	0.000
40	7.722	7.690	0.000
41	7.719	7.691	0.000
42	7.721	7.694	0.000
43	30.772	7.806	0.000
44	32.184	8.377	0.000
45	5.957	8.401	0.000
46	32.648	8.564	0.000
47	5.493	8.588	0.000
48	33.204	8.789	0.000
49	4.937	8.812	0.000
50	27.523	9.243	0.000
51	10.620	9.272	0.000
52	27.801	9.356	0.000
53	10.342	9.384	0.000
54	28.914	9.805	0.000
55	9.228	9.833	0.000
56	29.470	10.030	0.000
57	8.672	10.057	0.000
58	31.232	10.742	0.000
59	6.909	10.766	0.000
60	31.696	10.929	0.000
61	6.445	10.953	0.000
62	32.252	11.154	0.000
63	5.889	11.177	0.000
64	26.571	11.609	0.000
65	11.572	11.638	0.000
66	26.849	11.721	0.000
67	11.294	11.750	0.000
68	27.962	12.171	0.000
69	10.181	12.198	0.000
70	28.518	12.396	0.000
71	9.624	12.422	0.000
72	30.280	13.107	0.000
73	7.861	13.132	0.000
74	30.743	13.295	0.000
75	7.398	13.319	0.000
76	31.299	13.520	0.000
77	6.841	13.543	0.000
79	25.618	13.974	0.000
80	12.524	14.003	0.000
81	25.897	14.087	0.000
82	12.246	14.115	0.000
84	27.009	14.536	0.000
85	11.133	14.564	0.000
86	27.566	14.761	0.000
87	10.577	14.787	0.000
88	29.327	15.473	0.000
89	8.814	15.497	0.000
90	29.791	15.660	0.000

91	8.350	15.684	0.000
92	30.347	15.885	0.000
93	7.794	15.908	0.000
94	24.666	16.340	0.000
95	13.477	16.369	0.000
96	24.944	16.452	0.000
97	13.199	16.481	0.000
98	26.057	16.902	0.000
99	12.085	16.929	0.000
100	26.613	17.127	0.000
101	11.529	17.153	0.000
102	28.375	17.838	0.000
103	9.766	17.863	0.000
104	28.838	18.026	0.000
105	9.302	18.049	0.000
106	29.395	18.250	0.000
107	8.746	18.273	0.000
108	23.714	18.705	0.000
109	14.429	18.734	0.000
110	23.992	18.818	0.000
111	14.151	18.846	0.000
112	25.104	19.267	0.000
113	13.038	19.294	0.000
114	25.661	19.492	0.000
115	12.482	19.518	0.000
116	27.422	20.204	0.000
117	10.719	20.228	0.000
118	27.886	20.391	0.000
119	10.255	20.415	0.000
120	28.442	20.616	0.000
121	9.699	20.639	0.000
122	22.761	21.071	0.000
123	15.382	21.100	0.000
124	23.039	21.183	0.000
125	15.104	21.212	0.000
126	24.152	21.633	0.000
127	13.990	21.660	0.000
128	24.708	21.857	0.000
129	13.434	21.884	0.000
130	26.470	22.569	0.000
131	11.671	22.594	0.000
132	26.933	22.757	0.000
133	11.207	22.780	0.000
134	27.490	22.981	0.000
135	10.651	23.004	0.000
136	21.809	23.436	0.000
137	16.334	23.465	0.000
138	22.087	23.549	0.000
139	16.056	23.577	0.000
140	23.200	23.998	0.000
141	14.943	24.025	0.000
142	14.683	24.130	0.000
143	14.630	24.151	0.000
144	23.756	24.223	0.000
145	14.386	24.249	0.000
146	25.517	24.935	0.000
147	12.624	24.959	0.000
148	25.981	25.122	0.000
149	12.160	25.146	0.000
150	26.537	25.347	0.000
151	11.603	25.370	0.000
152	11.232	25.519	0.000
153	20.856	25.802	0.000
154	21.134	25.914	0.000
155	17.436	26.202	0.000
156	17.158	26.314	0.000
157	22.247	26.364	0.000
158	22.803	26.588	0.000
159	15.788	26.865	0.000
160	24.565	27.300	0.000
161	25.029	27.488	0.000
162	25.585	27.712	0.000
163	13.262	27.883	0.000
164	12.334	28.256	0.000
165	16.406	28.314	0.000
166	17.963	28.314	0.000
167	20.168	28.314	0.000
168	21.563	28.314	0.000

169	17.004	29.714	0.000
170	21.072	29.714	0.000
243	18.286	28.314	0.000
244	19.845	28.314	0.000
267	8.751	5.433	0.000
268	8.752	5.430	0.000
280	8.750	5.430	0.000

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	1	1	Below
C2	2	2	Below
C3	3	3	Below
C4	4	4	Below
C5	5	5	Below
C6	7	7	Below
C7	8	8	Below
C8	9	9	Below
C9	10	10	Below
C10	11	11	Below
C11	12	12	Below
C12	13	13	Below
C13	14	14	Below
C14	159	159	Below
C15	163	163	Below
C16	169	169	Below
C17	170	170	Below

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	5	6
B6	5	7
B7	6	8
B8	7	8
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B19	13	14
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B21	11	19
B22	12	20
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B24	10	31
B25	11	32
B26	12	33
B27	13	34
B28	40	9
B29	14	43
B30	15	18
B31	21	24
B32	23	39
B33	41	16
B34	27	31
B35	34	38
B36	25	46
B37	47	26
B38	39	48
B39	49	41
B40	52	22

B41	17	53
B42	50	35
B43	30	51
B44	54	25
B45	26	55
B46	56	39
B47	41	57
B48	50	54
B49	55	51
B50	58	44
B51	45	59
B52	52	56
B53	57	53
B54	60	46
B55	47	61
B56	62	48
B57	49	63
B58	54	60
B59	61	55
B60	56	62
B61	63	57
B62	68	54
B63	55	69
B64	70	56
B65	57	71
B66	64	68
B67	69	65
B68	72	58
B69	59	73
B70	66	70
B71	71	67
B72	74	60
B73	61	75
B74	76	62
B75	63	77
B76	68	74
B77	75	69
B78	70	76
B79	77	71
B80	84	68
B81	69	85
B82	86	70
B83	71	87
B84	79	84
B85	85	80
B86	88	72
B87	73	89
B88	81	86
B89	87	82
B90	90	74
B91	75	91
B92	92	76
B93	77	93
B94	84	90
B95	91	85
B96	86	92
B97	93	87
B98	98	84
B99	85	99
B100	100	86
B101	87	101
B102	94	98
B103	99	95
B104	102	88
B105	89	103
B106	96	100
B107	101	97
B108	104	90
B109	91	105
B110	106	92
B111	93	107
B112	98	104
B113	105	99
B114	100	106
B115	107	101
B116	112	98
B117	99	113
B118	114	100

B119	101	115
B120	108	112
B121	113	109
B122	116	102
B123	103	117
B124	110	114
B125	115	111
B126	118	104
B127	105	119
B128	120	106
B129	107	121
B130	112	118
B131	119	113
B132	114	120
B133	121	115
B134	126	112
B135	113	127
B136	128	114
B137	115	129
B138	122	126
B139	127	123
B140	130	116
B141	117	131
B142	124	128
B143	129	125
B144	132	118
B145	119	133
B146	134	120
B147	121	135
B148	126	132
B149	133	127
B150	128	134
B151	135	129
B152	140	126
B153	127	141
B154	144	128
B155	129	145
B156	136	140
B157	141	137
B158	146	130
B159	131	147
B160	138	144
B161	145	139
B162	148	132
B163	133	149
B164	150	134
B165	135	151
B166	140	148
B167	149	141
B169	154	138
B170	144	150
B171	151	145
B173	139	156
B174	157	140
B175	152	149
B176	158	144
B177	142	159
B178	143	159
B180	153	157
B181	160	146
B182	154	158
B183	161	148
B184	149	163
B185	162	150
B186	159	155
B187	159	156
B188	157	161
B189	167	154
B190	158	162
B191	156	166
B192	163	159
B193	170	157
B194	164	163
B195	159	169
B196	165	168
B197	169	170
B198	137	243
B199	244	136

B200	159	165
B201	165	169
B202	170	168
B203	168	157

W A L L C O N N E C T I V I T Y D A T A

WALL	POINT 1	POINT 2	POINT 3	POINT 4	PT1 STORY	PT2 STORY	PT3 STORY	PT4 STORY
W1	39	25	25	39	Below	Below	Same	Same
W2	41	26	26	40	Below	Below	Same	Same
W3	46	39	39	46	Below	Below	Same	Same
W4	47	41	40	47	Below	Below	Same	Same
W5	47	41	41	47	Below	Below	Same	Same
W6	48	46	46	48	Below	Below	Same	Same
W7	49	47	47	49	Below	Below	Same	Same
W8	46	60	60	46	Below	Below	Same	Same
W9	47	61	61	47	Below	Below	Same	Same
W10	56	54	54	56	Below	Below	Same	Same
W11	57	55	55	57	Below	Below	Same	Same
W12	48	62	62	48	Below	Below	Same	Same
W13	49	63	63	49	Below	Below	Same	Same
W14	60	56	56	60	Below	Below	Same	Same
W15	61	57	57	61	Below	Below	Same	Same
W16	62	60	60	62	Below	Below	Same	Same
W17	63	61	61	63	Below	Below	Same	Same
W18	60	74	74	60	Below	Below	Same	Same
W19	61	75	75	61	Below	Below	Same	Same
W20	70	68	68	70	Below	Below	Same	Same
W21	71	69	69	71	Below	Below	Same	Same
W22	62	76	76	62	Below	Below	Same	Same
W23	63	77	77	63	Below	Below	Same	Same
W24	74	70	70	74	Below	Below	Same	Same
W25	75	71	71	75	Below	Below	Same	Same
W26	76	74	74	76	Below	Below	Same	Same
W27	77	75	75	77	Below	Below	Same	Same
W28	74	90	90	74	Below	Below	Same	Same
W29	75	91	91	75	Below	Below	Same	Same
W30	86	84	84	86	Below	Below	Same	Same
W31	87	85	85	87	Below	Below	Same	Same
W32	76	92	92	76	Below	Below	Same	Same
W33	77	93	93	77	Below	Below	Same	Same
W34	90	86	86	90	Below	Below	Same	Same
W35	91	87	87	91	Below	Below	Same	Same
W36	92	90	90	92	Below	Below	Same	Same
W37	93	91	91	93	Below	Below	Same	Same
W38	90	104	104	90	Below	Below	Same	Same
W39	91	105	105	91	Below	Below	Same	Same
W40	100	98	98	100	Below	Below	Same	Same
W41	101	99	99	101	Below	Below	Same	Same
W42	92	106	106	92	Below	Below	Same	Same
W43	93	107	107	93	Below	Below	Same	Same
W44	104	100	100	104	Below	Below	Same	Same
W45	105	101	101	105	Below	Below	Same	Same
W46	106	104	104	106	Below	Below	Same	Same
W47	107	105	105	107	Below	Below	Same	Same
W48	104	118	118	104	Below	Below	Same	Same
W49	105	119	119	105	Below	Below	Same	Same
W50	114	112	112	114	Below	Below	Same	Same
W51	115	113	113	115	Below	Below	Same	Same
W52	106	120	120	106	Below	Below	Same	Same
W53	107	121	121	107	Below	Below	Same	Same
W54	118	114	114	118	Below	Below	Same	Same
W55	119	115	115	119	Below	Below	Same	Same
W56	120	118	118	120	Below	Below	Same	Same
W57	121	119	119	121	Below	Below	Same	Same
W58	118	132	132	118	Below	Below	Same	Same
W59	119	133	133	119	Below	Below	Same	Same
W60	128	126	126	128	Below	Below	Same	Same
W61	129	127	127	129	Below	Below	Same	Same
W62	120	134	134	120	Below	Below	Same	Same
W63	121	135	135	121	Below	Below	Same	Same
W64	132	128	128	132	Below	Below	Same	Same
W65	133	129	129	133	Below	Below	Same	Same
W66	134	132	132	134	Below	Below	Same	Same
W67	135	133	133	135	Below	Below	Same	Same

W68	132	148	148	132	Below	Below	Same	Same
W69	133	149	149	133	Below	Below	Same	Same
W70	144	140	140	144	Below	Below	Same	Same
W71	145	141	141	145	Below	Below	Same	Same
W72	134	150	150	134	Below	Below	Same	Same
W73	135	151	151	135	Below	Below	Same	Same
W74	148	144	144	148	Below	Below	Same	Same
W75	149	145	145	149	Below	Below	Same	Same
W76	150	148	148	150	Below	Below	Same	Same
W77	151	149	149	151	Below	Below	Same	Same
W78	148	161	161	148	Below	Below	Same	Same
W79	158	157	157	158	Below	Below	Same	Same
W80	150	162	162	150	Below	Below	Same	Same
W81	161	158	158	161	Below	Below	Same	Same
W82	162	161	161	162	Below	Below	Same	Same

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

FLOOR	POINT	POINT	POINT	POINT
F1	4	12	13	7
	5			
F2	1	9	10	2
F3	2	10	11	3
F4	3	11	12	4
F5	4	12	13	5
F6	5	13	14	6
F8	10	18	19	11
F9	11	19	20	12
F10	12	20	21	13
F11	13	21	24	14
F12	10	31	32	11
F13	11	32	33	12
F14	12	33	34	13
F15	13	14	38	37
	25	36	34	
F16	10	31	29	26
	28	27	9	
F18	23	43	24	
F19	42	41	40	
F20	52	54	25	23
	22			
F22	35	50	54	36
F23	29	55	51	30
F24	57	42	40	26
	55			
F25	39	56	54	25
F28	56	39	46	60
F29	47	41	57	61
F30	50	64	68	54
F31	55	69	65	51
F32	52	66	68	54
F33	69	55	53	67
F34	56	70	68	54
F35	71	57	55	69
F36	54	68	72	58
F37	59	73	69	55
F38	70	56	60	74
F39	57	71	75	61
F40	64	79	84	68
F41	69	85	80	65
F42	66	81	84	68
F43	69	85	82	67
F44	70	86	84	68
F45	87	71	69	85
F46	68	84	88	72
F47	73	89	85	69
F48	86	70	74	90
F49	71	87	91	75
F50	79	94	98	84
F51	85	99	95	80
F52	81	96	98	84
F53	85	99	97	82
F54	86	100	98	84
F55	101	87	85	99
F56	84	98	102	88

F57	89	103	99	85
F58	100	86	90	104
F59	87	101	105	91
F60	98	112	108	94
F61	99	113	109	95
F62	96	110	112	98
F63	99	113	111	97
F64	112	98	100	114
F65	101	115	113	99
F67	103	117	113	99
F68	104	118	114	100
F69	101	115	119	105
F71	113	127	123	109
F72	110	124	126	112
F73	113	127	125	111
F74	126	112	114	128
F75	129	115	113	127
F76	126	112	116	130
F77	117	131	127	113
F78	118	132	128	114
F79	115	129	133	119
F80	122	136	140	126
F81	141	127	123	137
F82	124	138	140	126
F83	127	141	139	125
F84	140	126	128	144
F85	145	129	127	141
F86	126	140	146	130
F88	132	148	144	128
F89	129	145	149	133
F90	136	153	157	140
F91	138	154	157	140
F92	159	142	137	155
F93	139	143	159	156
F94	144	158	157	140
F95	140	157	160	146
F96	158	144	148	161
F98	152	164	163	149
F99	154	167	168	157
F100	159	165	166	156
F101	165	169	170	168
F102	159	155	243	165
F103	244	168	157	153
F104	169	165	243	244
	168	170		
F132	268	267	280	
F135	55	53	17	16
	26			
F136	15	16	17	18
	10	9		
F148	40	15	16	
F152	112	116	102	98
F153	112	108	122	126
F154	159	142	145	147
	149	163		
F155	147	131	129	127
	141	145		
F156	37	43	38	
F162	28	40	27	
F167	29	28	40	45
	59	57	55	
F168	29	26	28	
F169	54	56	58	44
	43	39	37	36
F170	37	25	36	

R I G I D D I A P H R A G M P O I N T C O N N E C T I V I T Y D A T A

STORY	DIAPHRAGM	POINT	POINT	POINT	POINT	POINT
N+5.45	D1	163	159	1	9	2
		10	3	11	4	12
		5	13	7	8	14
		60	46	74	90	104
		118	132	148	161	61
		47	75	91	105	119

		133	149	25	54	68
		84	98	112	126	140
		157	26	55	69	85
		99	113	127	141	147
		45	131	117	103	89
		73	59	160	44	146
		130	116	102	88	72
		58	31	32	33	34
		6	43	40	142	164
		152	27	38	109	95
		80	65	51	123	137
		155	50	64	79	94
		108	122	136	153	30
		35	29	28	36	37
N+2.70	D1	169	170	163	159	1
		9	2	10	3	11
		4	12	5	13	7
		8	14	63	49	77
		93	107	121	135	151
		41	57	71	87	101
		115	129	145	56	62
		70	76	86	92	114
		120	100	106	128	134
		144	150	158	162	39
		48	46	60	74	90
		104	118	132	148	161
		47	61	75	91	105
		119	133	149	25	54
		68	84	98	112	126
		157	26	55	69	85
		99	113	127	141	140
		18	19	20	21	43
		40	15	16	24	23
		165	139	125	111	97
		82	67	53	52	66
		81	96	124	138	154
		17	22	167	166	156
		110	168	143	42	

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

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

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
N+5.45	D1	1.786E+02	1.786E+02	2.271E+04	19.085	13.040
N+2.70	D1	2.708E+02	2.708E+02	3.473E+04	19.163	14.113

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
N+5.45	39	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	56	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	57	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	70	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	71	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	86	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	87	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	100	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	101	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	114	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	115	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	128	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	129	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00

N+5.45	144	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	145	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	158	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	165	1.608E+00	1.608E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	168	1.686E+00	1.686E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	169	1.364E+00	1.364E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	170	1.361E+00	1.361E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	243	5.959E-01	5.959E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	244	6.265E-01	6.265E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	366	1.786E+02	1.786E+02	0.000E+00	0.000E+00	0.000E+00	2.271E+04
N+5.45	(394)	6.601E-01	6.601E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	(395)	6.722E-01	6.722E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	(396)	4.853E-01	4.853E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	(397)	4.734E-01	4.734E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	(398)	4.850E-01	4.850E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	(399)	4.823E-01	4.823E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	(400)	4.847E-01	4.847E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	(401)	4.797E-01	4.797E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	267	9.199E-03	9.199E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	268	2.701E-01	2.701E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	280	8.232E-05	8.232E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	367	2.708E+02	2.708E+02	0.000E+00	0.000E+00	0.000E+00	3.473E+04
N+2.70	(402)	3.938E-01	3.938E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(403)	3.695E-01	3.695E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(404)	9.198E-03	9.198E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(405)	2.246E+00	2.246E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(406)	2.516E+00	2.516E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(407)	2.032E-01	2.032E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(408)	1.903E-01	1.903E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(409)	1.346E-02	1.346E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(410)	3.940E-01	3.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+2.70	(411)	3.732E-01	3.732E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	1	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	2	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	3	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	4	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	5	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	7	5.693E-01	5.693E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	8	5.898E-01	5.898E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	9	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	10	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	11	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	12	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	13	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	14	3.175E-01	3.175E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	39	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	41	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	46	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	47	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	48	7.796E-01	7.796E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	49	7.795E-01	7.795E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	56	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	57	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	60	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	61	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	62	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	63	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	70	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	71	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	74	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	75	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	76	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	77	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	86	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	87	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	90	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	91	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	92	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	93	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	100	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	101	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	104	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	105	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	106	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	107	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	114	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	115	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	118	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00

N+1.375	119	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	120	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	121	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	128	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	129	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	132	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	133	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	134	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	135	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	144	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	145	5.941E-01	5.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	148	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	149	1.008E+00	1.008E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	150	1.411E+00	1.411E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	151	7.795E-01	7.795E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	158	5.940E-01	5.940E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	159	3.175E-01	3.175E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	161	7.425E-01	7.425E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	162	7.796E-01	7.796E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	163	5.830E-01	5.830E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	169	3.175E-01	3.175E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+1.375	170	3.175E-01	3.175E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	1	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	2	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	3	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	4	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	5	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	7	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	8	1.587E-01	1.587E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	9	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	10	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	11	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	12	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	13	1.485E-01	1.485E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	14	1.587E-01	1.587E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	39	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	41	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	46	3.712E-01	3.712E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	47	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	48	3.898E-01	3.898E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	49	3.898E-01	3.898E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	56	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	57	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	60	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	61	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	62	7.054E-01	7.054E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	63	7.053E-01	7.053E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	70	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	71	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	74	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	75	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	76	7.054E-01	7.054E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	77	7.053E-01	7.053E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	86	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	87	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	90	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	91	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	92	7.054E-01	7.054E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	93	7.053E-01	7.053E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	100	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	101	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	104	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	105	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	106	7.054E-01	7.054E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	107	7.053E-01	7.053E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	114	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	115	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	118	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	119	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	120	7.054E-01	7.054E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	121	7.053E-01	7.053E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	128	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	129	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	132	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	133	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	134	7.054E-01	7.054E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	135	7.053E-01	7.053E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	144	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00

BASE	145	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	148	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	149	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	150	7.054E-01	7.054E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	151	3.898E-01	3.898E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	158	2.970E-01	2.970E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	159	1.587E-01	1.587E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	161	3.713E-01	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	162	3.898E-01	3.898E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	163	1.587E-01	1.587E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	169	1.587E-01	1.587E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	170	1.587E-01	1.587E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
N+5.45	All	2.020E+02	2.020E+02	0.000E+00	0.000E+00	0.000E+00	2.271E+04
N+2.70	All	2.778E+02	2.778E+02	0.000E+00	0.000E+00	0.000E+00	3.473E+04
N+1.375	All	5.043E+01	5.043E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
BASE	All	2.468E+01	2.468E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Totals	All	5.548E+02	5.548E+02	0.000E+00	0.000E+00	0.000E+00	5.745E+04

G R O U P M A S S D A T A

GROUP NAME	SELF MASS	SELF WEIGHT	TOTAL MASS-X	TOTAL MASS-Y	TOTAL MASS-Z
ALL	554.8493	5548.493	554.8493	554.8493	0.0000

M A T E R I A L L I S T B Y E L E M E N T T Y P E

ELEMENT TYPE	MATERIAL	TOTAL MASS tons	NUMBER PIECES	NUMBER STUDS
Column	CONC21	20.49	50	
Beam	CONC21	95.14	251	0
Wall	CONC21	180.89		
Floor	CONC21	269.96		

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

SECTION	ELEMENT TYPE	NUMBER PIECES	TOTAL LENGTH meters	TOTAL MASS tons	NUMBER STUDS
VIG15X30	Beam	184	464.881	51.20	0
VIG30X30	Column	5	3.600	0.40	
VIG30X30	Beam	45	149.179	32.86	0
COL30X30	Column	32	57.750	12.72	
COL35	Column	18	33.000	7.77	
VIG25X30	Beam	22	60.374	11.08	0
SD	Column	1	1.600	0.29	
MURO15	Wall			180.20	
PASILLOS	Floor			51.82	
HABITACION	Floor			108.05	
CUBESCALE	Floor			110.09	

M A T E R I A L L I S T B Y S T O R Y

STORY	ELEMENT TYPE	MATERIAL	TOTAL WEIGHT tons	FLOOR AREA m2	UNIT WEIGHT kg/m2	NUMBER PIECES	NUMBER STUDS
N+5.45	Column	CONC21	9.94	308.114	32.2679	16	
N+5.45	Beam	CONC21	45.84	308.114	148.7839	119	0
N+5.45	Wall	CONC21	90.10	308.114	292.4223		
N+5.45	Floor	CONC21	110.09	308.114	357.3086		
N+2.70	Column	CONC21	5.27	285.263	18.4881	17	
N+2.70	Beam	CONC21	48.20	285.263	168.9573	130	0
N+2.70	Wall	CONC21	45.05	285.263	157.9236		
N+2.70	Floor	CONC21	159.87	285.263	560.4360		

N+1.375	Column	CONC21	5.27	0.000	17		
N+1.375	Beam	CONC21	1.10	0.000	2	0	
N+1.375	Wall	CONC21	45.05	0.000			
SUM	Column	CONC21	20.49	593.377	34.5314	50	
SUM	Beam	CONC21	95.14	593.377	160.3306	251	0
SUM	Wall	CONC21	180.20	593.377	303.6837		
SUM	Floor	CONC21	269.96	593.377	454.9610		
TOTAL	All	All	565.79	593.377	953.5066	301	0

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	POISSON'S RATIO	THERMAL COEFF	SHEAR MODULUS
STEEL	Iso	Steel	All	199947978.80	0.3000	1.1700E-05	76903068.77
CONC	Iso	Concrete	All	24821128.402	0.2000	9.9000E-06	10342136.834
OTHER	Iso	None	All	199947978.80	0.3000	1.1700E-05	76903068.77
CONC28	Iso	Concrete	All	24870062.000	0.2000	9.9000E-06	10362525.833
CONC21	Iso	Concrete	All	21538000.000	0.2000	9.9000E-06	8974166.667

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
CONC	2.4007E+00	2.3562E+01
OTHER	7.8271E+00	7.6820E+01
CONC28	2.4000E+00	2.4000E+01
CONC21	2.4000E+00	2.4000E+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
CONC	No	27579.032	413685.473	413685.473	N/A
CONC28	No	28000.000	420000.000	420000.000	N/A
CONC21	No	21000.000	420000.000	420000.000	N/A

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
W12X120	STEEL	W12X120		
VIG15X30	CONC21	Rectangular		Yes
VIG30X30	CONC21	Rectangular		Yes
COL30X30	CONC21	Rectangular	Yes	
COL35	CONC21	Circle	Yes	
VIG25X30	CONC21	Rectangular		Yes
SD	CONC21	SD Section		
SDCIRC	CONC21	SD Section		

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
W12X120	0.3327	0.3124	0.0282	0.0180	0.3124	0.0282
VIG15X30	0.3000	0.1500	0.0000	0.0000	0.0000	0.0000

VIG30X30	0.3000	0.3000	0.0000	0.0000	0.0000	0.0000
COL30X30	0.3000	0.3000	0.0000	0.0000	0.0000	0.0000
COL35	0.3500	0.3500	0.0000	0.0000	0.3500	0.0000
VIG25X30	0.3000	0.2500	0.0000	0.0000	0.0000	0.0000
SD	0.3000	0.3000	0.0000	0.0000	0.0000	0.0000
SDCIRC	0.3500	0.3500	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

	SECTION	TORSIONAL	MOMENTS OF INERTIA		SHEAR AREAS	
FRAME SECTION NAME	AREA	CONSTANT	I33	I22	A2	A3
W12X120	0.0228	0.0000	0.0004	0.0001	0.0060	0.0147
VIG15X30	0.0450	0.0002	0.0003	0.0001	0.0375	0.0375
VIG30X30	0.0900	0.0011	0.0007	0.0007	0.0750	0.0750
COL30X30	0.0900	0.0011	0.0007	0.0007	0.0750	0.0750
COL35	0.0962	0.0015	0.0007	0.0007	0.0866	0.0866
VIG25X30	0.0750	0.0008	0.0006	0.0004	0.0625	0.0625
SD	0.0900	0.0011	0.0007	0.0007	0.0750	0.0750
SDCIRC	0.0962	0.0014	0.0007	0.0007	0.0856	0.0856

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

	SECTION MODULI		PLASTIC MODULI		RADIUS OF GYRATION	
FRAME SECTION NAME	S33	S22	Z33	Z22	R33	R22
W12X120	0.0027	0.0009	0.0030	0.0014	0.1398	0.0794
VIG15X30	0.0023	0.0011	0.0034	0.0017	0.0866	0.0433
VIG30X30	0.0045	0.0045	0.0068	0.0068	0.0866	0.0866
COL30X30	0.0045	0.0045	0.0068	0.0068	0.0866	0.0866
COL35	0.0042	0.0042	0.0071	0.0071	0.0875	0.0875
VIG25X30	0.0038	0.0031	0.0056	0.0047	0.0866	0.0722
SD	0.0045	0.0045	0.0068	0.0068	0.0866	0.0866
SDCIRC	0.0042	0.0042	0.0070	0.0070	0.0875	0.0875

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

FRAME SECTION NAME	TOTAL WEIGHT	TOTAL MASS
W12X120	0.0000	0.0000
VIG15X30	505.9592	50.5959
VIG30X30	322.2263	32.2226
COL30X30	124.7400	12.4740
COL35	76.1993	7.6199
VIG25X30	111.5523	11.1552
SD	0.0000	0.0000
SDCIRC	0.0000	0.0000

C O N C R E T E C O L U M N D A T A

	REINF CONFIGURATION		REINF	NUM BARS	NUM BARS	BAR
FRAME SECTION NAME	LONGIT	LATERAL	SIZE/TYPE	3DIR/2DIR	CIRCULAR	COVER
COL30X30	Rectangular	Ties	#8/Design	3/3	N/A	0.0500
COL35	Circular	Ties	#8/Design	N/A	8	0.0500

C O N C R E T E B E A M D A T A

FRAME SECTION NAME	TOP COVER	BOT COVER	TOP LEFT AREA	TOP RIGHT AREA	BOT LEFT AREA	BOT RIGHT AREA
VIG15X30	0.0500	0.0500	0.000	0.000	0.000	0.000
VIG30X30	0.0500	0.0500	0.000	0.000	0.000	0.000
VIG25X30	0.0500	0.0500	0.000	0.000	0.000	0.000

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

SHELL	MATERIAL	SHELL	LOAD DIST	MEMBRANE	BENDING	TOTAL	TOTAL

SECTION	NAME	TYPE	ONE WAY	THICK	THICK	WEIGHT	MASS
DECK1	CONC	Membrane	No	0.0889	0.0889	0.0000	0.0000
MURO15	CONC21	Shell-Thin	No	0.1500	0.1500	1767.1476	176.7148
PASILLOS	CONC21	Membrane	No	0.2290	0.2290	508.2119	50.8212
HABITACION	CONC21	Membrane	No	0.2290	0.2290	1059.5919	105.9592
CUBESCALE	CONC21	Membrane	No	0.1460	0.1460	1079.6321	107.9632

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

DECK SECTION	DECK TYPE	SLAB MATERIAL	DECK MATERIAL	DECK SHEAR THICK	DECK UNIT WT
DECK1	Filled	CONC	N/A	N/A	1.1012E-01

D E C K S E C T I O N S H E A R S T U D D A T A

DECK SECTION	STUD DIAM	STUD HEIGHT	STUD FU
DECK1	0.0191	0.1524	448159.263

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

DECK SECTION	SLAB DEPTH	RIB DEPTH	RIB WIDTH	RIB SPACING
DECK1	0.0889	0.0762	0.1524	0.3048

L I N K P R O P E R T Y D A T A

LINK: NLPR1
TYPE: Damper

MASS	WEIGHT	INERTIA 1	INERTIA 2	INERTIA 3	P-D M2I	P-D M2J	P-D M3I	P-D M3J
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DOF	KE	CE	DJ	K	C	C EXP
U1	0.0000	0.0000	N/A	---	---	---

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

****
SECTION NAME: SD
****

BASIC SECTION DATA

SECTION TYPE	DESIGN TYPE	DESIGN OR CHECK	BASE MATERIAL	NUMBER SHAPES
Frame	None	Check	CONC21	1

RECTANGULAR SHAPE DATA

SHAPE ID	MATERIAL	REINF	X CENTER	Y CENTER	ROTATION	DEPTH	WIDTH
Shape 1	CONC21	Yes	0.0000	0.0000	0.0000	0.3000	0.3000

SHAPE ID	CORNER/EDGE	CORNER BAR	EDGE BAR	EDGE SPACING	EDGE COVER
Shape 1	1, typical	#4	#4	0.1500	0.0500

****
SECTION NAME: SDCIRC
****

BASIC SECTION DATA

SECTION TYPE	DESIGN TYPE	DESIGN OR CHECK	BASE MATERIAL	NUMBER SHAPES
Frame	None	Check	CONC21	1

CIRCLE SHAPE DATA

SHAPE ID	MATERIAL	REINF	X CENTER	Y CENTER	DIAMETER
Shape 1	CONC21	Yes	0.0000	0.0000	0.3500

SHAPE ID	BAR SIZE	NUM BARS	STARTANGLE	COVER
Shape 1	#5	5	0.0000	0.0500

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

PIER LABEL	STORY LEVEL	MATERIAL NAME	ANGLE	NUM OBJS AREA/LINE	WIDTH BOTTOM	THICK BOTTOM	WIDTH TOP	THICK TOP
P16	N+5.45	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P17	N+5.45	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P18	N+5.45	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P19	N+5.45	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P20	N+5.45	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P21	N+5.45	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P22	N+5.45	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P23	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P24	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P25	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P26	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P27	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P28	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P29	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P30	N+5.45	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P32	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P33	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P35	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P36	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P38	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P39	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P41	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P42	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P44	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500

P45	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P47	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P48	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P50	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P51	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P53	N+5.45	CONC21	-21.93	1/0	2.400	0.1500	2.403	0.1500
P54	N+5.45	CONC21	-21.93	1/0	0.600	0.1500	0.597	0.1500
P56	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P57	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P59	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P60	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P62	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P63	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P65	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P66	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P68	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P69	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P71	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P72	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P74	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P75	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P77	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P78	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P80	N+5.45	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P81	N+5.45	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P1	N+2.70	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P2	N+2.70	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P3	N+2.70	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P4	N+2.70	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P5	N+2.70	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P6	N+2.70	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P7	N+2.70	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P8	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P9	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P10	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P11	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P12	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P13	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P14	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500

P15	N+2.70	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P31	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P32	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P34	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P35	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P37	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P38	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P40	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P41	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P43	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P44	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P46	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P47	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P49	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P50	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P52	N+2.70	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P53	N+2.70	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P55	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P56	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P58	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P59	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P61	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P62	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P64	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P65	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P67	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P68	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P70	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P71	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P73	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P74	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P76	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P77	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P79	N+2.70	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P80	N+2.70	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P1	N+1.375	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P2	N+1.375	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P3	N+1.375	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P4	N+1.375	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500

P5	N+1.375	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P6	N+1.375	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P7	N+1.375	CONC21	68.07	1/0	2.550	0.1500	2.550	0.1500
P8	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P9	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P10	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P11	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P12	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P13	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P14	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P15	N+1.375	CONC21	-68.07	1/0	2.550	0.1500	2.550	0.1500
P31	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P32	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P34	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P35	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P37	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P38	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P40	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P41	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P43	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P44	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P46	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P47	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P49	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P50	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P52	N+1.375	CONC21	-21.93	1/0	0.600	0.1500	0.600	0.1500
P53	N+1.375	CONC21	-21.93	1/0	2.400	0.1500	2.400	0.1500
P55	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P56	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P58	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P59	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P61	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P62	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P64	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P65	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P67	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P68	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P70	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P71	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500

P73	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P74	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P76	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P77	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500
P79	N+1.375	CONC21	22.00	1/0	0.600	0.1500	0.600	0.1500
P80	N+1.375	CONC21	22.00	1/0	2.400	0.1500	2.400	0.1500

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

PIER LABEL	STORY LEVEL	CENTROID BOTTOM X	CENTROID BOTTOM Y	CENTROID BOTTOM Z	CENTROID TOP X	CENTROID TOP Y	CENTROID TOP Z
P16	N+5.45	11.684	23.963	2.700	11.684	23.963	5.450
P17	N+5.45	10.731	21.598	2.700	10.731	21.598	5.450
P18	N+5.45	9.779	19.232	2.700	9.779	19.232	5.450
P19	N+5.45	8.826	16.867	2.700	8.826	16.867	5.450
P20	N+5.45	7.874	14.501	2.700	7.874	14.501	5.450
P21	N+5.45	6.921	12.136	2.700	6.921	12.136	5.450
P22	N+5.45	5.969	9.770	2.700	5.969	9.770	5.450
P23	N+5.45	32.172	9.747	2.700	32.172	9.747	5.450
P24	N+5.45	31.219	12.112	2.700	31.219	12.112	5.450
P25	N+5.45	30.267	14.477	2.700	30.267	14.477	5.450
P26	N+5.45	29.315	16.843	2.700	29.315	16.843	5.450
P27	N+5.45	28.362	19.208	2.700	28.362	19.208	5.450
P28	N+5.45	27.410	21.574	2.700	27.410	21.574	5.450
P29	N+5.45	26.457	23.939	2.700	26.457	23.939	5.450
P30	N+5.45	25.505	26.305	2.700	25.505	26.305	5.450
P32	N+5.45	13.273	24.698	2.700	13.273	24.698	5.450
P33	N+5.45	14.664	24.137	2.700	14.664	24.137	5.450
P35	N+5.45	12.321	22.332	2.700	12.321	22.332	5.450
P36	N+5.45	13.712	21.772	2.700	13.712	21.772	5.450
P38	N+5.45	11.368	19.967	2.700	11.368	19.967	5.450
P39	N+5.45	12.760	19.406	2.700	12.760	19.406	5.450
P41	N+5.45	10.416	17.601	2.700	10.416	17.601	5.450
P42	N+5.45	11.807	17.041	2.700	11.807	17.041	5.450
P44	N+5.45	9.463	15.236	2.700	9.463	15.236	5.450
P45	N+5.45	10.855	14.675	2.700	10.855	14.675	5.450
P47	N+5.45	8.511	12.870	2.700	8.511	12.870	5.450
P48	N+5.45	9.902	12.310	2.700	9.902	12.310	5.450
P50	N+5.45	7.559	10.505	2.700	7.559	10.505	5.450
P51	N+5.45	8.950	9.945	2.700	8.950	9.945	5.450

P53	N+5.45	6.606	8.139	2.700	6.608	8.139	5.450
P54	N+5.45	7.998	7.579	2.700	7.999	7.579	5.450
P56	N+5.45	31.535	8.114	2.700	31.535	8.114	5.450
P57	N+5.45	30.145	7.552	2.700	30.145	7.552	5.450
P59	N+5.45	30.583	10.480	2.700	30.583	10.480	5.450
P60	N+5.45	29.192	9.918	2.700	29.192	9.918	5.450
P62	N+5.45	29.631	12.845	2.700	29.631	12.845	5.450
P63	N+5.45	28.240	12.283	2.700	28.240	12.283	5.450
P65	N+5.45	28.678	15.211	2.700	28.678	15.211	5.450
P66	N+5.45	27.287	14.649	2.700	27.287	14.649	5.450
P68	N+5.45	27.726	17.576	2.700	27.726	17.576	5.450
P69	N+5.45	26.335	17.014	2.700	26.335	17.014	5.450
P71	N+5.45	26.773	19.942	2.700	26.773	19.942	5.450
P72	N+5.45	25.382	19.380	2.700	25.382	19.380	5.450
P74	N+5.45	25.821	22.307	2.700	25.821	22.307	5.450
P75	N+5.45	24.430	21.745	2.700	24.430	21.745	5.450
P77	N+5.45	24.868	24.673	2.700	24.868	24.673	5.450
P78	N+5.45	23.478	24.111	2.700	23.478	24.111	5.450
P80	N+5.45	23.916	27.038	2.700	23.916	27.038	5.450
P81	N+5.45	22.525	26.476	2.700	22.525	26.476	5.450
P1	N+2.70	11.127	24.187	1.325	11.127	24.187	2.700
P2	N+2.70	10.175	21.822	1.325	10.175	21.822	2.700
P3	N+2.70	9.222	19.456	1.325	9.222	19.456	2.700
P4	N+2.70	8.270	17.091	1.325	8.270	17.091	2.700
P5	N+2.70	7.318	14.725	1.325	7.318	14.725	2.700
P6	N+2.70	6.365	12.360	1.325	6.365	12.360	2.700
P7	N+2.70	5.413	9.994	1.325	5.413	9.994	2.700
P8	N+2.70	32.728	9.971	1.325	32.728	9.971	2.700
P9	N+2.70	31.776	12.337	1.325	31.776	12.337	2.700
P10	N+2.70	30.823	14.702	1.325	30.823	14.702	2.700
P11	N+2.70	29.871	17.068	1.325	29.871	17.068	2.700
P12	N+2.70	28.918	19.433	1.325	28.918	19.433	2.700
P13	N+2.70	27.966	21.799	1.325	27.966	21.799	2.700
P14	N+2.70	27.014	24.164	1.325	27.014	24.164	2.700
P15	N+2.70	26.061	26.530	1.325	26.061	26.530	2.700
P31	N+2.70	11.882	25.258	1.325	11.882	25.258	2.700
P32	N+2.70	13.273	24.698	1.325	13.273	24.698	2.700
P34	N+2.70	10.929	22.892	1.325	10.929	22.892	2.700
P35	N+2.70	12.321	22.332	1.325	12.321	22.332	2.700

P37	N+2.70	9.977	20.527	1.325	9.977	20.527	2.700
P38	N+2.70	11.368	19.967	1.325	11.368	19.967	2.700
P40	N+2.70	9.024	18.161	1.325	9.024	18.161	2.700
P41	N+2.70	10.416	17.601	1.325	10.416	17.601	2.700
P43	N+2.70	8.072	15.796	1.325	8.072	15.796	2.700
P44	N+2.70	9.463	15.236	1.325	9.463	15.236	2.700
P46	N+2.70	7.120	13.431	1.325	7.120	13.431	2.700
P47	N+2.70	8.511	12.870	1.325	8.511	12.870	2.700
P49	N+2.70	6.167	11.065	1.325	6.167	11.065	2.700
P50	N+2.70	7.559	10.505	1.325	7.559	10.505	2.700
P52	N+2.70	5.215	8.700	1.325	5.215	8.700	2.700
P53	N+2.70	6.606	8.139	1.325	6.606	8.139	2.700
P55	N+2.70	32.926	8.676	1.325	32.926	8.676	2.700
P56	N+2.70	31.535	8.114	1.325	31.535	8.114	2.700
P58	N+2.70	31.974	11.042	1.325	31.974	11.042	2.700
P59	N+2.70	30.583	10.480	1.325	30.583	10.480	2.700
P61	N+2.70	31.021	13.407	1.325	31.021	13.407	2.700
P62	N+2.70	29.631	12.845	1.325	29.631	12.845	2.700
P64	N+2.70	30.069	15.773	1.325	30.069	15.773	2.700
P65	N+2.70	28.678	15.211	1.325	28.678	15.211	2.700
P67	N+2.70	29.116	18.138	1.325	29.116	18.138	2.700
P68	N+2.70	27.726	17.576	1.325	27.726	17.576	2.700
P70	N+2.70	28.164	20.504	1.325	28.164	20.504	2.700
P71	N+2.70	26.773	19.942	1.325	26.773	19.942	2.700
P73	N+2.70	27.212	22.869	1.325	27.212	22.869	2.700
P74	N+2.70	25.821	22.307	1.325	25.821	22.307	2.700
P76	N+2.70	26.259	25.234	1.325	26.259	25.234	2.700
P77	N+2.70	24.868	24.673	1.325	24.868	24.673	2.700
P79	N+2.70	25.307	27.600	1.325	25.307	27.600	2.700
P80	N+2.70	23.916	27.038	1.325	23.916	27.038	2.700
P1	N+1.375	11.127	24.187	-0.050	11.127	24.187	1.325
P2	N+1.375	10.175	21.822	-0.050	10.175	21.822	1.325
P3	N+1.375	9.222	19.456	-0.050	9.222	19.456	1.325
P4	N+1.375	8.270	17.091	-0.050	8.270	17.091	1.325
P5	N+1.375	7.318	14.725	-0.050	7.318	14.725	1.325
P6	N+1.375	6.365	12.360	-0.050	6.365	12.360	1.325
P7	N+1.375	5.413	9.994	-0.050	5.413	9.994	1.325
P8	N+1.375	32.728	9.971	-0.050	32.728	9.971	1.325
P9	N+1.375	31.776	12.337	-0.050	31.776	12.337	1.325

P10	N+1.375	30.823	14.702	-0.050	30.823	14.702	1.325
P11	N+1.375	29.871	17.068	-0.050	29.871	17.068	1.325
P12	N+1.375	28.918	19.433	-0.050	28.918	19.433	1.325
P13	N+1.375	27.966	21.799	-0.050	27.966	21.799	1.325
P14	N+1.375	27.014	24.164	-0.050	27.014	24.164	1.325
P15	N+1.375	26.061	26.530	-0.050	26.061	26.530	1.325
P31	N+1.375	11.882	25.258	-0.050	11.882	25.258	1.325
P32	N+1.375	13.273	24.698	-0.050	13.273	24.698	1.325
P34	N+1.375	10.929	22.892	-0.050	10.929	22.892	1.325
P35	N+1.375	12.321	22.332	-0.050	12.321	22.332	1.325
P37	N+1.375	9.977	20.527	-0.050	9.977	20.527	1.325
P38	N+1.375	11.368	19.967	-0.050	11.368	19.967	1.325
P40	N+1.375	9.024	18.161	-0.050	9.024	18.161	1.325
P41	N+1.375	10.416	17.601	-0.050	10.416	17.601	1.325
P43	N+1.375	8.072	15.796	-0.050	8.072	15.796	1.325
P44	N+1.375	9.463	15.236	-0.050	9.463	15.236	1.325
P46	N+1.375	7.120	13.431	-0.050	7.120	13.431	1.325
P47	N+1.375	8.511	12.870	-0.050	8.511	12.870	1.325
P49	N+1.375	6.167	11.065	-0.050	6.167	11.065	1.325
P50	N+1.375	7.559	10.505	-0.050	7.559	10.505	1.325
P52	N+1.375	5.215	8.700	-0.050	5.215	8.700	1.325
P53	N+1.375	6.606	8.139	-0.050	6.606	8.139	1.325
P55	N+1.375	32.926	8.676	-0.050	32.926	8.676	1.325
P56	N+1.375	31.535	8.114	-0.050	31.535	8.114	1.325
P58	N+1.375	31.974	11.042	-0.050	31.974	11.042	1.325
P59	N+1.375	30.583	10.480	-0.050	30.583	10.480	1.325
P61	N+1.375	31.021	13.407	-0.050	31.021	13.407	1.325
P62	N+1.375	29.631	12.845	-0.050	29.631	12.845	1.325
P64	N+1.375	30.069	15.773	-0.050	30.069	15.773	1.325
P65	N+1.375	28.678	15.211	-0.050	28.678	15.211	1.325
P67	N+1.375	29.116	18.138	-0.050	29.116	18.138	1.325
P68	N+1.375	27.726	17.576	-0.050	27.726	17.576	1.325
P70	N+1.375	28.164	20.504	-0.050	28.164	20.504	1.325
P71	N+1.375	26.773	19.942	-0.050	26.773	19.942	1.325
P73	N+1.375	27.212	22.869	-0.050	27.212	22.869	1.325
P74	N+1.375	25.821	22.307	-0.050	25.821	22.307	1.325
P76	N+1.375	26.259	25.234	-0.050	26.259	25.234	1.325
P77	N+1.375	24.868	24.673	-0.050	24.868	24.673	1.325
P79	N+1.375	25.307	27.600	-0.050	25.307	27.600	1.325

P80	N+1.375	23.916	27.038	-0.050	23.916	27.038	1.325

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
MUERTA	DEAD	N/A	1.0000		
VIVA	LIVE	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: SISDISX

BASIC RESPONSE SPECTRUM DATA

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

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	DISENO	13.8460
U2	----	N/A
UZ	----	N/A

RESP SPEC CASE: SISDISY

BASIC RESPONSE SPECTRUM DATA

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

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	----	N/A
U2	DISENO	10.3210
UZ	----	N/A

RESP SPEC CASE: SISDERX

BASIC RESPONSE SPECTRUM DATA

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

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	DERIVAS	13.8460
U2	----	N/A
UZ	----	N/A

RESP SPEC CASE: SISDERY

BASIC RESPONSE SPECTRUM DATA

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

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	----	N/A
U2	DERIVAS	10.3210
UZ	----	N/A

RESP SPEC CASE: UMBRALX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
SRSS	SRSS	0.0200	0.0000	0.0500

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	UMBRAL	31.0880
U2	----	N/A
UZ	----	N/A

RESP SPEC CASE: UMBRALY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
SRSS	SRSS	0.0200	0.0000	0.0500

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	----	N/A
U2	UMBRAL	26.2150
UZ	----	N/A

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
COMDIS1	ADD	MUERTA	Static	1.4000
COMDIS2	ADD	MUERTA	Static	1.2000
		VIVA	Static	1.6000
COMDIS3	ADD	MUERTA	Static	1.2000
		VIVA	Static	1.0000
		SISDISX	Spectra	1.0000
		SISDISY	Spectra	0.3000
COMDIS4	ADD	MUERTA	Static	1.2000
		VIVA	Static	1.0000
		SISDISX	Spectra	0.3000
		SISDISY	Spectra	1.0000
COMDIS5	ADD	MUERTA	Static	0.9000
		SISDISX	Spectra	1.0000
		SISDISY	Spectra	0.3000
COMDIS6	ADD	MUERTA	Static	0.9000
		SISDISX	Spectra	0.3000
		SISDISY	Spectra	1.0000
ENVOLVENTE	ENVE	COMDIS1	Combo	1.0000
		COMDIS2	Combo	1.0000

		COMDIS3	Combo	1.0000
		COMDIS4	Combo	1.0000
		COMDIS5	Combo	1.0000
		COMDIS6	Combo	1.0000
CIMEN	ADD	MUERTA	Static	1.0000
		VIVA	Static	1.0000
COMDER1	ADD	SISDERX	Spectra	1.0000
		SISDERY	Spectra	0.3000
COMDER2	ADD	SISDERX	Spectra	0.3000
		SISDERY	Spectra	1.0000
COMDERUMB1	ADD	UMBRALX	Spectra	1.0000
		UMBRALY	Spectra	0.3000
COMDERUMB2	ADD	UMBRALX	Spectra	0.3000
		UMBRALY	Spectra	1.0000

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: DERIVAS

FILE NAME: c:\users\gerencia\desktop\proyectos laura\dye14-20xx - redentor\modelo\derivas.txt
DATA TYPE: Period vs Acceleration
NUMBER OF HEADER LINES = 0

PERIOD	ACCEL
0.0000	0.5625
0.1600	0.5625
0.3200	0.5625
0.4800	0.5625
0.6400	0.5625
0.8000	0.5625
0.9600	0.5625
1.1200	0.5625
1.3031	0.4835
1.4862	0.4239
1.6692	0.3774
1.8523	0.3401
2.0354	0.3095
2.2185	0.2840
2.4015	0.2623
2.5846	0.2438
2.7677	0.2276
2.9508	0.2135
3.1338	0.2010
3.3169	0.1899
3.5000	0.1800
4.0625	0.1336
4.6250	0.1031
5.1875	0.0819
5.7500	0.0667
6.3125	0.0553
6.8750	0.0467
7.4375	0.0399
8.0000	0.0345

FUNCTION NAME: DISENO

FILE NAME: c:\users\gerencia\desktop\proyectos laura\dye14-20xx - redentor\modelo\diseño.txt
DATA TYPE: Period vs Acceleration
NUMBER OF HEADER LINES = 0

PERIOD	ACCEL
0.0000	0.1736
0.1600	0.1736
0.3200	0.1736
0.4800	0.1736
0.6400	0.1736
0.8000	0.1736
0.9600	0.1736
1.1200	0.1736
1.3031	0.1492
1.4862	0.1308

1.6692	0.1165
1.8523	0.1050
2.0354	0.0955
2.2185	0.0876
2.4015	0.0810
2.5846	0.0752
2.7677	0.0703
2.9508	0.0659
3.1338	0.0620
3.3169	0.0586
3.5000	0.0556
4.0625	0.0412
4.6250	0.0318
5.1875	0.0253
5.7500	0.0206
6.3125	0.0171
6.8750	0.0144
7.4375	0.0123
8.0000	0.0106

FUNCTION NAME: UMBRAL

FILE NAME: c:\users\gerencia\desktop\proyectos laura\dye14-20xx - redentor\modelo\umbral.txt
DATA TYPE: Period vs Acceleration
NUMBER OF HEADER LINES = 0

PERIOD	ACCEL
0.0000	0.0800
0.2100	0.2520
0.2792	0.2520
0.3483	0.2520
0.4175	0.2520
0.4867	0.2520
0.5558	0.2520
0.6250	0.2520
0.6942	0.2520
0.7633	0.2520
0.8325	0.2520
0.9017	0.2520
0.9708	0.2520
1.0400	0.2520
1.3475	0.1937
1.6550	0.1577
1.9625	0.1330
2.2700	0.1150
2.5775	0.1013
2.8850	0.0905
3.1925	0.0818
3.5000	0.0746
4.0625	0.0554
4.6250	0.0427
5.1875	0.0339
5.7500	0.0276
6.3125	0.0229
6.8750	0.0193
7.4375	0.0165
8.0000	0.0143

R I G I D D I A P H R A G M A S S I G N M E N T S T O P O I N T O B J E C T S

STORY	DIAPHRAGM	POINT	POINT	POINT	POINT	POINT
N+5.45	D1	163	159	1	9	2
N+5.45	D1	10	3	11	4	12
N+5.45	D1	5	13	7	8	14
N+5.45	D1	60	46	74	90	104
N+5.45	D1	118	132	148	161	61
N+5.45	D1	47	75	91	105	119
N+5.45	D1	133	149	25	54	68
N+5.45	D1	84	98	112	126	140
N+5.45	D1	157	26	55	69	85
N+5.45	D1	99	113	127	141	147
N+5.45	D1	45	131	117	103	89

N+5.45	D1	73	59	160	44	146
N+5.45	D1	130	116	102	88	72
N+5.45	D1	58	31	32	33	34
N+5.45	D1	6	43	40	142	164
N+5.45	D1	152	27	38	109	95
N+5.45	D1	80	65	51	123	137
N+5.45	D1	155	50	64	79	94
N+5.45	D1	108	122	136	153	30
N+5.45	D1	35	29	28	36	37
N+2.70	D1	169	170	163	159	1
N+2.70	D1	9	2	10	3	11
N+2.70	D1	4	12	5	13	7
N+2.70	D1	8	14	63	49	77
N+2.70	D1	93	107	121	135	151
N+2.70	D1	41	57	71	87	101
N+2.70	D1	115	129	145	56	62
N+2.70	D1	70	76	86	92	114
N+2.70	D1	120	100	106	128	134
N+2.70	D1	144	150	158	162	39
N+2.70	D1	48	46	60	74	90
N+2.70	D1	104	118	132	148	161
N+2.70	D1	47	61	75	91	105
N+2.70	D1	119	133	149	25	54
N+2.70	D1	68	84	98	112	126
N+2.70	D1	157	26	55	69	85
N+2.70	D1	99	113	127	141	140
N+2.70	D1	18	19	20	21	43
N+2.70	D1	40	15	16	24	23
N+2.70	D1	165	139	125	111	97
N+2.70	D1	82	67	53	52	66
N+2.70	D1	81	96	124	138	154
N+2.70	D1	17	22	167	166	156
N+2.70	D1	110	168	143	42	

S U P P O R T (R E S T R A I N T) D A T A

		RESTRAINED DOF's					
STORY	POINT	UX	UY	UZ	RX	RY	RZ
BASE	1	Yes	Yes	Yes	Yes	Yes	Yes
BASE	2	Yes	Yes	Yes	Yes	Yes	Yes
BASE	3	Yes	Yes	Yes	Yes	Yes	Yes
BASE	4	Yes	Yes	Yes	Yes	Yes	Yes
BASE	5	Yes	Yes	Yes	Yes	Yes	Yes
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	10	Yes	Yes	Yes	Yes	Yes	Yes
BASE	11	Yes	Yes	Yes	Yes	Yes	Yes
BASE	12	Yes	Yes	Yes	Yes	Yes	Yes
BASE	13	Yes	Yes	Yes	Yes	Yes	Yes
BASE	14	Yes	Yes	Yes	Yes	Yes	Yes
BASE	39	Yes	Yes	Yes	Yes	Yes	Yes
BASE	41	Yes	Yes	Yes	Yes	Yes	Yes
BASE	46	Yes	Yes	Yes	Yes	Yes	Yes
BASE	47	Yes	Yes	Yes	Yes	Yes	Yes
BASE	48	Yes	Yes	Yes	Yes	Yes	Yes
BASE	49	Yes	Yes	Yes	Yes	Yes	Yes
BASE	56	Yes	Yes	Yes	Yes	Yes	Yes
BASE	57	Yes	Yes	Yes	Yes	Yes	Yes
BASE	60	Yes	Yes	Yes	Yes	Yes	Yes
BASE	61	Yes	Yes	Yes	Yes	Yes	Yes
BASE	62	Yes	Yes	Yes	Yes	Yes	Yes
BASE	63	Yes	Yes	Yes	Yes	Yes	Yes
BASE	70	Yes	Yes	Yes	Yes	Yes	Yes
BASE	71	Yes	Yes	Yes	Yes	Yes	Yes
BASE	74	Yes	Yes	Yes	Yes	Yes	Yes
BASE	75	Yes	Yes	Yes	Yes	Yes	Yes
BASE	76	Yes	Yes	Yes	Yes	Yes	Yes
BASE	77	Yes	Yes	Yes	Yes	Yes	Yes
BASE	86	Yes	Yes	Yes	Yes	Yes	Yes
BASE	87	Yes	Yes	Yes	Yes	Yes	Yes
BASE	90	Yes	Yes	Yes	Yes	Yes	Yes
BASE	91	Yes	Yes	Yes	Yes	Yes	Yes
BASE	92	Yes	Yes	Yes	Yes	Yes	Yes
BASE	93	Yes	Yes	Yes	Yes	Yes	Yes

BASE	100	Yes	Yes	Yes	Yes	Yes	Yes
BASE	101	Yes	Yes	Yes	Yes	Yes	Yes
BASE	104	Yes	Yes	Yes	Yes	Yes	Yes
BASE	105	Yes	Yes	Yes	Yes	Yes	Yes
BASE	106	Yes	Yes	Yes	Yes	Yes	Yes
BASE	107	Yes	Yes	Yes	Yes	Yes	Yes
BASE	114	Yes	Yes	Yes	Yes	Yes	Yes
BASE	115	Yes	Yes	Yes	Yes	Yes	Yes
BASE	118	Yes	Yes	Yes	Yes	Yes	Yes
BASE	119	Yes	Yes	Yes	Yes	Yes	Yes
BASE	120	Yes	Yes	Yes	Yes	Yes	Yes
BASE	121	Yes	Yes	Yes	Yes	Yes	Yes
BASE	128	Yes	Yes	Yes	Yes	Yes	Yes
BASE	129	Yes	Yes	Yes	Yes	Yes	Yes
BASE	132	Yes	Yes	Yes	Yes	Yes	Yes
BASE	133	Yes	Yes	Yes	Yes	Yes	Yes
BASE	134	Yes	Yes	Yes	Yes	Yes	Yes
BASE	135	Yes	Yes	Yes	Yes	Yes	Yes
BASE	144	Yes	Yes	Yes	Yes	Yes	Yes
BASE	145	Yes	Yes	Yes	Yes	Yes	Yes
BASE	148	Yes	Yes	Yes	Yes	Yes	Yes
BASE	149	Yes	Yes	Yes	Yes	Yes	Yes
BASE	150	Yes	Yes	Yes	Yes	Yes	Yes
BASE	151	Yes	Yes	Yes	Yes	Yes	Yes
BASE	158	Yes	Yes	Yes	Yes	Yes	Yes
BASE	159	Yes	Yes	Yes	Yes	Yes	Yes
BASE	161	Yes	Yes	Yes	Yes	Yes	Yes
BASE	162	Yes	Yes	Yes	Yes	Yes	Yes
BASE	163	Yes	Yes	Yes	Yes	Yes	Yes
BASE	169	Yes	Yes	Yes	Yes	Yes	Yes
BASE	170	Yes	Yes	Yes	Yes	Yes	Yes

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
N+5.45	C1	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C2	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C3	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C4	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C5	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C7	Column	Circle	None	COL35	Conc Frame	COL35
N+5.45	C8	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C9	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C10	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C11	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C12	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+5.45	C13	Column	Circle	None	COL35	Conc Frame	COL35
N+5.45	C14	Column	Circle	None	COL35	Conc Frame	COL35
N+5.45	C15	Column	Circle	None	COL35	Conc Frame	COL35
N+5.45	C16	Column	Circle	None	COL35	Conc Frame	COL35
N+5.45	C17	Column	Circle	None	COL35	Conc Frame	COL35
N+2.70	C1	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C2	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C3	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C4	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C5	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C6	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C7	Column	Circle	None	COL35	Conc Frame	COL35
N+2.70	C8	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C9	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C10	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C11	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C12	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+2.70	C13	Column	Circle	None	COL35	Conc Frame	COL35
N+2.70	C14	Column	Circle	None	COL35	Conc Frame	COL35
N+2.70	C15	Column	Circle	None	COL35	Conc Frame	COL35
N+2.70	C16	Column	Circle	None	COL35	Conc Frame	COL35
N+2.70	C17	Column	Circle	None	COL35	Conc Frame	COL35
N+1.375	C1	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C2	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C3	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C4	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C5	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C6	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30

N+1.375	C7	Column	Circle	None	COL35	Conc Frame	COL35
N+1.375	C8	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C9	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C10	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C11	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C12	Column	Rectangular	None	COL30X30	Conc Frame	COL30X30
N+1.375	C13	Column	Circle	None	COL35	Conc Frame	COL35
N+1.375	C14	Column	Circle	None	COL35	Conc Frame	COL35
N+1.375	C15	Column	Circle	None	COL35	Conc Frame	COL35
N+1.375	C16	Column	Circle	None	COL35	Conc Frame	COL35
N+1.375	C17	Column	Circle	None	COL35	Conc Frame	COL35
N+5.45	B1	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B2	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B3	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B4	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B5	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B6	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B7	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B9	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B10	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B11	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B12	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B13	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B14	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B15	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B16	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B17	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B18	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B19	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B24	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B25	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B26	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B27	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B28	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B29	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+5.45	B34	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B35	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B36	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B37	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B42	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B43	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B44	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B45	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B48	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B49	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B50	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B51	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B54	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B55	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B58	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B59	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B62	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B63	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B66	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B67	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B68	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B69	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B72	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B73	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B76	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B77	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B80	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B81	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B84	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B85	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B86	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B87	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B90	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B91	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B94	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B95	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B98	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B99	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B102	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B103	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B104	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B105	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B108	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30

N+5.45	B109	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B112	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B113	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B116	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B117	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B120	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B121	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B122	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B123	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B126	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B127	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B130	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B131	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B134	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B135	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B138	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B139	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B140	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B141	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B144	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B145	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B148	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B149	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B152	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B153	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B156	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B157	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B158	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B159	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B162	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B163	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B166	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B167	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B174	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B175	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B177	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B180	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B181	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B183	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B184	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B186	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B188	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B192	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B194	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B196	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B197	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B198	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B199	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+5.45	B200	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B201	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B202	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+5.45	B203	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B1	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B2	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B3	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B4	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B6	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B9	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B10	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B11	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B12	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B13	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B15	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B16	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B17	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B18	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B19	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B20	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B21	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B22	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B23	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B28	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B29	Beam	Rectangular	None	VIG30X30	Conc Frame	VIG30X30
N+2.70	B30	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B31	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B32	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B33	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B38	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30

N+2.70	B39	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B40	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B41	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B44	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B45	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B46	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B47	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B52	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B53	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B54	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B55	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B56	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B57	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B60	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B61	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B62	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B63	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B64	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B65	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B70	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
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N+2.70	B72	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B73	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B74	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B75	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B78	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B79	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B80	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B81	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B82	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B83	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B88	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B89	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B90	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B91	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B92	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B93	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B96	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B97	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B98	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B99	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B100	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B101	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B106	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B107	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B108	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B109	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B110	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B111	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B114	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B115	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B116	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B117	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B118	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B119	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B124	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B125	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B126	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B127	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B128	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B129	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B132	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B133	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B134	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B135	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B136	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B137	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B142	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B143	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B144	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B145	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B146	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B147	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B150	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B151	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B152	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B153	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B154	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30

N+2.70	B155	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B160	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B161	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B162	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B163	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B164	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B165	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B169	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B170	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B171	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B173	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B174	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B176	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B178	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B182	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B183	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B185	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B187	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B189	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B190	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B191	Beam	Rectangular	None	VIG15X30	Conc Frame	VIG15X30
N+2.70	B192	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B193	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B195	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B196	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+2.70	B197	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+1.375	B8	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30
N+1.375	B184	Beam	Rectangular	None	VIG25X30	Conc Frame	VIG25X30

C A R D I N A L P O I N T 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	CARDINAL POINT	MIRROR ABOUT 2	TRANSFORM STIFFNESS
N+5.45	C1	Column	10	No	No
N+5.45	C2	Column	10	No	No
N+5.45	C3	Column	10	No	No
N+5.45	C4	Column	10	No	No
N+5.45	C5	Column	10	No	No
N+5.45	C7	Column	10	No	No
N+5.45	C8	Column	10	No	No
N+5.45	C9	Column	10	No	No
N+5.45	C10	Column	10	No	No
N+5.45	C11	Column	10	No	No
N+5.45	C12	Column	10	No	No
N+5.45	C13	Column	10	No	No
N+5.45	C14	Column	10	No	No
N+5.45	C15	Column	10	No	No
N+5.45	C16	Column	10	No	No
N+5.45	C17	Column	10	No	No
N+2.70	C1	Column	10	No	No
N+2.70	C2	Column	10	No	No
N+2.70	C3	Column	10	No	No
N+2.70	C4	Column	10	No	No
N+2.70	C5	Column	10	No	No
N+2.70	C6	Column	10	No	No
N+2.70	C7	Column	10	No	No
N+2.70	C8	Column	10	No	No
N+2.70	C9	Column	10	No	No
N+2.70	C10	Column	10	No	No
N+2.70	C11	Column	10	No	No
N+2.70	C12	Column	10	No	No
N+2.70	C13	Column	10	No	No
N+2.70	C14	Column	10	No	No
N+2.70	C15	Column	10	No	No
N+2.70	C16	Column	10	No	No
N+2.70	C17	Column	10	No	No
N+1.375	C1	Column	10	No	No
N+1.375	C2	Column	10	No	No
N+1.375	C3	Column	10	No	No
N+1.375	C4	Column	10	No	No
N+1.375	C5	Column	10	No	No
N+1.375	C6	Column	10	No	No
N+1.375	C7	Column	10	No	No
N+1.375	C8	Column	10	No	No
N+1.375	C9	Column	10	No	No

N+1.375	C10	Column	10	No	No
N+1.375	C11	Column	10	No	No
N+1.375	C12	Column	10	No	No
N+1.375	C13	Column	10	No	No
N+1.375	C14	Column	10	No	No
N+1.375	C15	Column	10	No	No
N+1.375	C16	Column	10	No	No
N+1.375	C17	Column	10	No	No
N+5.45	B1	Beam	8	No	No
N+5.45	B2	Beam	8	No	No
N+5.45	B3	Beam	8	No	No
N+5.45	B4	Beam	8	No	No
N+5.45	B5	Beam	8	No	No
N+5.45	B6	Beam	8	No	No
N+5.45	B7	Beam	8	No	No
N+5.45	B9	Beam	8	No	No
N+5.45	B10	Beam	8	No	No
N+5.45	B11	Beam	8	No	No
N+5.45	B12	Beam	8	No	No
N+5.45	B13	Beam	8	No	No
N+5.45	B14	Beam	8	No	No
N+5.45	B15	Beam	8	No	No
N+5.45	B16	Beam	8	No	No
N+5.45	B17	Beam	8	No	No
N+5.45	B18	Beam	8	No	No
N+5.45	B19	Beam	8	No	No
N+5.45	B24	Beam	8	No	No
N+5.45	B25	Beam	8	No	No
N+5.45	B26	Beam	8	No	No
N+5.45	B27	Beam	8	No	No
N+5.45	B28	Beam	8	No	No
N+5.45	B29	Beam	8	No	No
N+5.45	B34	Beam	8	No	No
N+5.45	B35	Beam	8	No	No
N+5.45	B36	Beam	8	No	No
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N+5.45	B42	Beam	8	No	No
N+5.45	B43	Beam	8	No	No
N+5.45	B44	Beam	8	No	No
N+5.45	B45	Beam	8	No	No
N+5.45	B48	Beam	8	No	No
N+5.45	B49	Beam	8	No	No
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N+5.45	B55	Beam	8	No	No
N+5.45	B58	Beam	8	No	No
N+5.45	B59	Beam	8	No	No
N+5.45	B62	Beam	8	No	No
N+5.45	B63	Beam	8	No	No
N+5.45	B66	Beam	8	No	No
N+5.45	B67	Beam	8	No	No
N+5.45	B68	Beam	8	No	No
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N+5.45	B73	Beam	8	No	No
N+5.45	B76	Beam	8	No	No
N+5.45	B77	Beam	8	No	No
N+5.45	B80	Beam	8	No	No
N+5.45	B81	Beam	8	No	No
N+5.45	B84	Beam	8	No	No
N+5.45	B85	Beam	8	No	No
N+5.45	B86	Beam	8	No	No
N+5.45	B87	Beam	8	No	No
N+5.45	B90	Beam	8	No	No
N+5.45	B91	Beam	8	No	No
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N+5.45	B103	Beam	8	No	No
N+5.45	B104	Beam	8	No	No
N+5.45	B105	Beam	8	No	No
N+5.45	B108	Beam	8	No	No
N+5.45	B109	Beam	8	No	No
N+5.45	B112	Beam	8	No	No
N+5.45	B113	Beam	8	No	No

N+5.45	B116	Beam	8	No	No
N+5.45	B117	Beam	8	No	No
N+5.45	B120	Beam	8	No	No
N+5.45	B121	Beam	8	No	No
N+5.45	B122	Beam	8	No	No
N+5.45	B123	Beam	8	No	No
N+5.45	B126	Beam	8	No	No
N+5.45	B127	Beam	8	No	No
N+5.45	B130	Beam	8	No	No
N+5.45	B131	Beam	8	No	No
N+5.45	B134	Beam	8	No	No
N+5.45	B135	Beam	8	No	No
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N+5.45	B184	Beam	8	No	No
N+5.45	B186	Beam	8	No	No
N+5.45	B188	Beam	8	No	No
N+5.45	B192	Beam	8	No	No
N+5.45	B194	Beam	8	No	No
N+5.45	B196	Beam	8	No	No
N+5.45	B197	Beam	8	No	No
N+5.45	B198	Beam	8	No	No
N+5.45	B199	Beam	8	No	No
N+5.45	B200	Beam	8	No	No
N+5.45	B201	Beam	8	No	No
N+5.45	B202	Beam	8	No	No
N+5.45	B203	Beam	8	No	No
N+2.70	B1	Beam	8	No	No
N+2.70	B2	Beam	8	No	No
N+2.70	B3	Beam	8	No	No
N+2.70	B4	Beam	8	No	No
N+2.70	B6	Beam	8	No	No
N+2.70	B9	Beam	8	No	No
N+2.70	B10	Beam	8	No	No
N+2.70	B11	Beam	8	No	No
N+2.70	B12	Beam	8	No	No
N+2.70	B13	Beam	8	No	No
N+2.70	B15	Beam	8	No	No
N+2.70	B16	Beam	8	No	No
N+2.70	B17	Beam	8	No	No
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N+2.70	B23	Beam	8	No	No
N+2.70	B28	Beam	8	No	No
N+2.70	B29	Beam	8	No	No
N+2.70	B30	Beam	8	No	No
N+2.70	B31	Beam	8	No	No
N+2.70	B32	Beam	8	No	No
N+2.70	B33	Beam	8	No	No
N+2.70	B38	Beam	8	No	No
N+2.70	B39	Beam	8	No	No
N+2.70	B40	Beam	8	No	No
N+2.70	B41	Beam	8	No	No

N+2.70	B44	Beam	8	No	No
N+2.70	B45	Beam	8	No	No
N+2.70	B46	Beam	8	No	No
N+2.70	B47	Beam	8	No	No
N+2.70	B52	Beam	8	No	No
N+2.70	B53	Beam	8	No	No
N+2.70	B54	Beam	8	No	No
N+2.70	B55	Beam	8	No	No
N+2.70	B56	Beam	8	No	No
N+2.70	B57	Beam	8	No	No
N+2.70	B60	Beam	8	No	No
N+2.70	B61	Beam	8	No	No
N+2.70	B62	Beam	8	No	No
N+2.70	B63	Beam	8	No	No
N+2.70	B64	Beam	8	No	No
N+2.70	B65	Beam	8	No	No
N+2.70	B70	Beam	8	No	No
N+2.70	B71	Beam	8	No	No
N+2.70	B72	Beam	8	No	No
N+2.70	B73	Beam	8	No	No
N+2.70	B74	Beam	8	No	No
N+2.70	B75	Beam	8	No	No
N+2.70	B78	Beam	8	No	No
N+2.70	B79	Beam	8	No	No
N+2.70	B80	Beam	8	No	No
N+2.70	B81	Beam	8	No	No
N+2.70	B82	Beam	8	No	No
N+2.70	B83	Beam	8	No	No
N+2.70	B88	Beam	8	No	No
N+2.70	B89	Beam	8	No	No
N+2.70	B90	Beam	8	No	No
N+2.70	B91	Beam	8	No	No
N+2.70	B92	Beam	8	No	No
N+2.70	B93	Beam	8	No	No
N+2.70	B96	Beam	8	No	No
N+2.70	B97	Beam	8	No	No
N+2.70	B98	Beam	8	No	No
N+2.70	B99	Beam	8	No	No
N+2.70	B100	Beam	8	No	No
N+2.70	B101	Beam	8	No	No
N+2.70	B106	Beam	8	No	No
N+2.70	B107	Beam	8	No	No
N+2.70	B108	Beam	8	No	No
N+2.70	B109	Beam	8	No	No
N+2.70	B110	Beam	8	No	No
N+2.70	B111	Beam	8	No	No
N+2.70	B114	Beam	8	No	No
N+2.70	B115	Beam	8	No	No
N+2.70	B116	Beam	8	No	No
N+2.70	B117	Beam	8	No	No
N+2.70	B118	Beam	8	No	No
N+2.70	B119	Beam	8	No	No
N+2.70	B124	Beam	8	No	No
N+2.70	B125	Beam	8	No	No
N+2.70	B126	Beam	8	No	No
N+2.70	B127	Beam	8	No	No
N+2.70	B128	Beam	8	No	No
N+2.70	B129	Beam	8	No	No
N+2.70	B132	Beam	8	No	No
N+2.70	B133	Beam	8	No	No
N+2.70	B134	Beam	8	No	No
N+2.70	B135	Beam	8	No	No
N+2.70	B136	Beam	8	No	No
N+2.70	B137	Beam	8	No	No
N+2.70	B142	Beam	8	No	No
N+2.70	B143	Beam	8	No	No
N+2.70	B144	Beam	8	No	No
N+2.70	B145	Beam	8	No	No
N+2.70	B146	Beam	8	No	No
N+2.70	B147	Beam	8	No	No
N+2.70	B150	Beam	8	No	No
N+2.70	B151	Beam	8	No	No
N+2.70	B152	Beam	8	No	No
N+2.70	B153	Beam	8	No	No
N+2.70	B154	Beam	8	No	No
N+2.70	B155	Beam	8	No	No
N+2.70	B160	Beam	8	No	No
N+2.70	B161	Beam	8	No	No

N+2.70	B162	Beam	8	No	No
N+2.70	B163	Beam	8	No	No
N+2.70	B164	Beam	8	No	No
N+2.70	B165	Beam	8	No	No
N+2.70	B169	Beam	8	No	No
N+2.70	B170	Beam	8	No	No
N+2.70	B171	Beam	8	No	No
N+2.70	B173	Beam	8	No	No
N+2.70	B174	Beam	8	No	No
N+2.70	B176	Beam	8	No	No
N+2.70	B178	Beam	8	No	No
N+2.70	B182	Beam	8	No	No
N+2.70	B183	Beam	8	No	No
N+2.70	B185	Beam	8	No	No
N+2.70	B187	Beam	8	No	No
N+2.70	B189	Beam	8	No	No
N+2.70	B190	Beam	8	No	No
N+2.70	B191	Beam	8	No	No
N+2.70	B192	Beam	8	No	No
N+2.70	B193	Beam	8	No	No
N+2.70	B195	Beam	8	No	No
N+2.70	B196	Beam	8	No	No
N+2.70	B197	Beam	8	No	No
N+1.375	B8	Beam	8	No	No
N+1.375	B184	Beam	8	No	No

E N D O F F S E T (A L O N G L E N G T H) 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	OFFSET TYPE	I END OFFSET	J END OFFSET	RIGID ZONE FACTOR
N+5.45	C1	Column	User define	0.0000	0.0000	0.0000
N+5.45	C2	Column	User define	0.0000	0.0000	0.0000
N+5.45	C3	Column	User define	0.0000	0.0000	0.0000
N+5.45	C4	Column	User define	0.0000	0.0000	0.0000
N+5.45	C5	Column	User define	0.0000	0.0000	0.0000
N+5.45	C7	Column	User define	0.0000	0.0000	0.0000
N+5.45	C8	Column	User define	0.0000	0.0000	0.0000
N+5.45	C9	Column	User define	0.0000	0.0000	0.0000
N+5.45	C10	Column	User define	0.0000	0.0000	0.0000
N+5.45	C11	Column	User define	0.0000	0.0000	0.0000
N+5.45	C12	Column	User define	0.0000	0.0000	0.0000
N+5.45	C13	Column	User define	0.0000	0.0000	0.0000
N+5.45	C14	Column	User define	0.0000	0.0000	0.0000
N+5.45	C15	Column	User define	0.0000	0.0000	0.0000
N+5.45	C16	Column	User define	0.0000	0.0000	0.0000
N+5.45	C17	Column	User define	0.0000	0.0000	0.0000
N+2.70	C1	Column	User define	0.0000	0.0000	0.0000
N+2.70	C2	Column	User define	0.0000	0.0000	0.0000
N+2.70	C3	Column	User define	0.0000	0.0000	0.0000
N+2.70	C4	Column	User define	0.0000	0.0000	0.0000
N+2.70	C5	Column	User define	0.0000	0.0000	0.0000
N+2.70	C6	Column	User define	0.0000	0.0000	0.0000
N+2.70	C7	Column	User define	0.0000	0.0000	0.0000
N+2.70	C8	Column	User define	0.0000	0.0000	0.0000
N+2.70	C9	Column	User define	0.0000	0.0000	0.0000
N+2.70	C10	Column	User define	0.0000	0.0000	0.0000
N+2.70	C11	Column	User define	0.0000	0.0000	0.0000
N+2.70	C12	Column	User define	0.0000	0.0000	0.0000
N+2.70	C13	Column	User define	0.0000	0.0000	0.0000
N+2.70	C14	Column	User define	0.0000	0.0000	0.0000
N+2.70	C15	Column	User define	0.0000	0.0000	0.0000
N+2.70	C16	Column	User define	0.0000	0.0000	0.0000
N+2.70	C17	Column	User define	0.0000	0.0000	0.0000
N+1.375	C1	Column	User define	0.0000	0.0000	0.0000
N+1.375	C2	Column	User define	0.0000	0.0000	0.0000
N+1.375	C3	Column	User define	0.0000	0.0000	0.0000
N+1.375	C4	Column	User define	0.0000	0.0000	0.0000
N+1.375	C5	Column	User define	0.0000	0.0000	0.0000
N+1.375	C6	Column	User define	0.0000	0.0000	0.0000
N+1.375	C7	Column	User define	0.0000	0.0000	0.0000
N+1.375	C8	Column	User define	0.0000	0.0000	0.0000
N+1.375	C9	Column	User define	0.0000	0.0000	0.0000
N+1.375	C10	Column	User define	0.0000	0.0000	0.0000
N+1.375	C11	Column	User define	0.0000	0.0000	0.0000
N+1.375	C12	Column	User define	0.0000	0.0000	0.0000

N+1.375	C13	Column	User define	0.0000	0.0000	0.0000
N+1.375	C14	Column	User define	0.0000	0.0000	0.0000
N+1.375	C15	Column	User define	0.0000	0.0000	0.0000
N+1.375	C16	Column	User define	0.0000	0.0000	0.0000
N+1.375	C17	Column	User define	0.0000	0.0000	0.0000
N+5.45	B1	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B2	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B3	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B4	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B5	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B6	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B7	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B9	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B10	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B11	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B12	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B13	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B14	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B15	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B16	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B17	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B18	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B19	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B24	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B25	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B26	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B27	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B28	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B29	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B34	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B35	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B36	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B37	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B42	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B43	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B44	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B45	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B48	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B49	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B50	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B51	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B54	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B55	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B58	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B59	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B62	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B63	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B66	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B67	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B68	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B69	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B72	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B73	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B76	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B77	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B80	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B81	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B84	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B85	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B86	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B87	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B90	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B91	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B94	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B95	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B98	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B99	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B102	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B103	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B104	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B105	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B108	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B109	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B112	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B113	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B116	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B117	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B120	Beam	User define	0.0000	0.0000	0.0000

N+5.45	B121	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B122	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B123	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B126	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B127	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B130	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B131	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B134	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B135	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B138	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B139	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B140	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B141	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B144	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B145	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B148	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B149	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B152	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B153	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B156	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B157	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B158	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B159	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B162	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B163	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B166	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B167	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B174	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B175	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B177	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B180	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B181	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B183	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B184	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B186	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B188	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B192	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B194	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B196	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B197	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B198	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B199	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B200	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B201	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B202	Beam	User define	0.0000	0.0000	0.0000
N+5.45	B203	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B1	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B2	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B3	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B4	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B6	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B9	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B10	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B11	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B12	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B13	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B15	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B16	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B17	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B18	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B19	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B20	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B21	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B22	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B23	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B28	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B29	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B30	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B31	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B32	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B33	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B38	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B39	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B40	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B41	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B44	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B45	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B46	Beam	User define	0.0000	0.0000	0.0000

N+2.70	B47	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B52	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B53	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B54	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B55	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B56	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B57	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B60	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B61	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B62	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B63	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B64	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B65	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B70	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B71	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B72	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B73	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B74	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B75	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B78	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B79	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B80	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B81	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B82	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B83	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B88	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B89	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B90	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B91	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B92	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B93	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B96	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B97	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B98	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B99	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B100	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B101	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B106	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B107	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B108	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B109	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B110	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B111	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B114	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B115	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B116	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B117	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B118	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B119	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B124	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B125	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B126	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B127	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B128	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B129	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B132	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B133	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B134	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B135	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B136	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B137	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B142	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B143	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B144	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B145	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B146	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B147	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B150	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B151	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B152	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B153	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B154	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B155	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B160	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B161	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B162	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B163	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B164	Beam	User define	0.0000	0.0000	0.0000

N+2.70	B165	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B169	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B170	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B171	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B173	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B174	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B176	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B178	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B182	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B183	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B185	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B187	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B189	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B190	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B191	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B192	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B193	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B195	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B196	Beam	User define	0.0000	0.0000	0.0000
N+2.70	B197	Beam	User define	0.0000	0.0000	0.0000
N+1.375	B8	Beam	User define	0.0000	0.0000	0.0000
N+1.375	B184	Beam	User define	0.0000	0.0000	0.0000

O U T P U T S T A 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	MAX STATION SPACING	MIN NUMBER STATIONS
N+5.45	C1	Column	N/A	3
N+5.45	C2	Column	N/A	3
N+5.45	C3	Column	N/A	3
N+5.45	C4	Column	N/A	3
N+5.45	C5	Column	N/A	3
N+5.45	C7	Column	N/A	3
N+5.45	C8	Column	N/A	3
N+5.45	C9	Column	N/A	3
N+5.45	C10	Column	N/A	3
N+5.45	C11	Column	N/A	3
N+5.45	C12	Column	N/A	3
N+5.45	C13	Column	N/A	3
N+5.45	C14	Column	N/A	3
N+5.45	C15	Column	N/A	3
N+5.45	C16	Column	N/A	3
N+5.45	C17	Column	N/A	3
N+2.70	C1	Column	N/A	3
N+2.70	C2	Column	N/A	3
N+2.70	C3	Column	N/A	3
N+2.70	C4	Column	N/A	3
N+2.70	C5	Column	N/A	3
N+2.70	C6	Column	N/A	3
N+2.70	C7	Column	N/A	3
N+2.70	C8	Column	N/A	3
N+2.70	C9	Column	N/A	3
N+2.70	C10	Column	N/A	3
N+2.70	C11	Column	N/A	3
N+2.70	C12	Column	N/A	3
N+2.70	C13	Column	N/A	3
N+2.70	C14	Column	N/A	3
N+2.70	C15	Column	N/A	3
N+2.70	C16	Column	N/A	3
N+2.70	C17	Column	N/A	3
N+1.375	C1	Column	N/A	3
N+1.375	C2	Column	N/A	3
N+1.375	C3	Column	N/A	3
N+1.375	C4	Column	N/A	3
N+1.375	C5	Column	N/A	3
N+1.375	C6	Column	N/A	3
N+1.375	C7	Column	N/A	3
N+1.375	C8	Column	N/A	3
N+1.375	C9	Column	N/A	3
N+1.375	C10	Column	N/A	3
N+1.375	C11	Column	N/A	3
N+1.375	C12	Column	N/A	3
N+1.375	C13	Column	N/A	3
N+1.375	C14	Column	N/A	3
N+1.375	C15	Column	N/A	3

N+1.375	C16	Column	N/A	3
N+1.375	C17	Column	N/A	3
N+5.45	B1	Beam	N/A	3
N+5.45	B2	Beam	N/A	3
N+5.45	B3	Beam	N/A	3
N+5.45	B4	Beam	N/A	3
N+5.45	B5	Beam	N/A	3
N+5.45	B6	Beam	N/A	3
N+5.45	B7	Beam	N/A	3
N+5.45	B9	Beam	N/A	3
N+5.45	B10	Beam	N/A	3
N+5.45	B11	Beam	N/A	3
N+5.45	B12	Beam	N/A	3
N+5.45	B13	Beam	N/A	3
N+5.45	B14	Beam	N/A	3
N+5.45	B15	Beam	N/A	3
N+5.45	B16	Beam	N/A	3
N+5.45	B17	Beam	N/A	3
N+5.45	B18	Beam	N/A	3
N+5.45	B19	Beam	N/A	3
N+5.45	B24	Beam	N/A	3
N+5.45	B25	Beam	N/A	3
N+5.45	B26	Beam	N/A	3
N+5.45	B27	Beam	N/A	3
N+5.45	B28	Beam	N/A	3
N+5.45	B29	Beam	N/A	3
N+5.45	B34	Beam	N/A	3
N+5.45	B35	Beam	N/A	3
N+5.45	B36	Beam	N/A	3
N+5.45	B37	Beam	N/A	3
N+5.45	B42	Beam	N/A	3
N+5.45	B43	Beam	N/A	3
N+5.45	B44	Beam	N/A	3
N+5.45	B45	Beam	N/A	3
N+5.45	B48	Beam	N/A	3
N+5.45	B49	Beam	N/A	3
N+5.45	B50	Beam	N/A	3
N+5.45	B51	Beam	N/A	3
N+5.45	B54	Beam	N/A	3
N+5.45	B55	Beam	N/A	3
N+5.45	B58	Beam	N/A	3
N+5.45	B59	Beam	N/A	3
N+5.45	B62	Beam	N/A	3
N+5.45	B63	Beam	N/A	3
N+5.45	B66	Beam	N/A	3
N+5.45	B67	Beam	N/A	3
N+5.45	B68	Beam	N/A	3
N+5.45	B69	Beam	N/A	3
N+5.45	B72	Beam	N/A	3
N+5.45	B73	Beam	N/A	3
N+5.45	B76	Beam	N/A	3
N+5.45	B77	Beam	N/A	3
N+5.45	B80	Beam	N/A	3
N+5.45	B81	Beam	N/A	3
N+5.45	B84	Beam	N/A	3
N+5.45	B85	Beam	N/A	3
N+5.45	B86	Beam	N/A	3
N+5.45	B87	Beam	N/A	3
N+5.45	B90	Beam	N/A	3
N+5.45	B91	Beam	N/A	3
N+5.45	B94	Beam	N/A	3
N+5.45	B95	Beam	N/A	3
N+5.45	B98	Beam	N/A	3
N+5.45	B99	Beam	N/A	3
N+5.45	B102	Beam	N/A	3
N+5.45	B103	Beam	N/A	3
N+5.45	B104	Beam	N/A	3
N+5.45	B105	Beam	N/A	3
N+5.45	B108	Beam	N/A	3
N+5.45	B109	Beam	N/A	3
N+5.45	B112	Beam	N/A	3
N+5.45	B113	Beam	N/A	3
N+5.45	B116	Beam	N/A	3
N+5.45	B117	Beam	N/A	3
N+5.45	B120	Beam	N/A	3
N+5.45	B121	Beam	N/A	3
N+5.45	B122	Beam	N/A	3
N+5.45	B123	Beam	N/A	3

N+5.45	B126	Beam	N/A	3
N+5.45	B127	Beam	N/A	3
N+5.45	B130	Beam	N/A	3
N+5.45	B131	Beam	N/A	3
N+5.45	B134	Beam	N/A	3
N+5.45	B135	Beam	N/A	3
N+5.45	B138	Beam	N/A	3
N+5.45	B139	Beam	N/A	3
N+5.45	B140	Beam	N/A	3
N+5.45	B141	Beam	N/A	3
N+5.45	B144	Beam	N/A	3
N+5.45	B145	Beam	N/A	3
N+5.45	B148	Beam	N/A	3
N+5.45	B149	Beam	N/A	3
N+5.45	B152	Beam	N/A	3
N+5.45	B153	Beam	N/A	3
N+5.45	B156	Beam	N/A	3
N+5.45	B157	Beam	N/A	3
N+5.45	B158	Beam	N/A	3
N+5.45	B159	Beam	N/A	3
N+5.45	B162	Beam	N/A	3
N+5.45	B163	Beam	N/A	3
N+5.45	B166	Beam	N/A	3
N+5.45	B167	Beam	N/A	3
N+5.45	B174	Beam	N/A	3
N+5.45	B175	Beam	N/A	3
N+5.45	B177	Beam	N/A	3
N+5.45	B180	Beam	N/A	3
N+5.45	B181	Beam	N/A	3
N+5.45	B183	Beam	N/A	3
N+5.45	B184	Beam	N/A	3
N+5.45	B186	Beam	N/A	3
N+5.45	B188	Beam	N/A	3
N+5.45	B192	Beam	N/A	3
N+5.45	B194	Beam	N/A	3
N+5.45	B196	Beam	N/A	3
N+5.45	B197	Beam	N/A	3
N+5.45	B198	Beam	N/A	3
N+5.45	B199	Beam	N/A	3
N+5.45	B200	Beam	N/A	3
N+5.45	B201	Beam	N/A	3
N+5.45	B202	Beam	N/A	3
N+5.45	B203	Beam	N/A	3
N+2.70	B1	Beam	N/A	3
N+2.70	B2	Beam	N/A	3
N+2.70	B3	Beam	N/A	3
N+2.70	B4	Beam	N/A	3
N+2.70	B6	Beam	N/A	3
N+2.70	B9	Beam	N/A	3
N+2.70	B10	Beam	N/A	3
N+2.70	B11	Beam	N/A	3
N+2.70	B12	Beam	N/A	3
N+2.70	B13	Beam	N/A	3
N+2.70	B15	Beam	N/A	3
N+2.70	B16	Beam	N/A	3
N+2.70	B17	Beam	N/A	3
N+2.70	B18	Beam	N/A	3
N+2.70	B19	Beam	N/A	3
N+2.70	B20	Beam	N/A	3
N+2.70	B21	Beam	N/A	3
N+2.70	B22	Beam	N/A	3
N+2.70	B23	Beam	N/A	3
N+2.70	B28	Beam	N/A	3
N+2.70	B29	Beam	N/A	3
N+2.70	B30	Beam	N/A	3
N+2.70	B31	Beam	N/A	3
N+2.70	B32	Beam	N/A	3
N+2.70	B33	Beam	N/A	3
N+2.70	B38	Beam	N/A	3
N+2.70	B39	Beam	N/A	3
N+2.70	B40	Beam	N/A	3
N+2.70	B41	Beam	N/A	3
N+2.70	B44	Beam	N/A	3
N+2.70	B45	Beam	N/A	3
N+2.70	B46	Beam	N/A	3
N+2.70	B47	Beam	N/A	3
N+2.70	B52	Beam	N/A	3
N+2.70	B53	Beam	N/A	3

N+2.70	B54	Beam	N/A	3
N+2.70	B55	Beam	N/A	3
N+2.70	B56	Beam	N/A	3
N+2.70	B57	Beam	N/A	3
N+2.70	B60	Beam	N/A	3
N+2.70	B61	Beam	N/A	3
N+2.70	B62	Beam	N/A	3
N+2.70	B63	Beam	N/A	3
N+2.70	B64	Beam	N/A	3
N+2.70	B65	Beam	N/A	3
N+2.70	B70	Beam	N/A	3
N+2.70	B71	Beam	N/A	3
N+2.70	B72	Beam	N/A	3
N+2.70	B73	Beam	N/A	3
N+2.70	B74	Beam	N/A	3
N+2.70	B75	Beam	N/A	3
N+2.70	B78	Beam	N/A	3
N+2.70	B79	Beam	N/A	3
N+2.70	B80	Beam	N/A	3
N+2.70	B81	Beam	N/A	3
N+2.70	B82	Beam	N/A	3
N+2.70	B83	Beam	N/A	3
N+2.70	B88	Beam	N/A	3
N+2.70	B89	Beam	N/A	3
N+2.70	B90	Beam	N/A	3
N+2.70	B91	Beam	N/A	3
N+2.70	B92	Beam	N/A	3
N+2.70	B93	Beam	N/A	3
N+2.70	B96	Beam	N/A	3
N+2.70	B97	Beam	N/A	3
N+2.70	B98	Beam	N/A	3
N+2.70	B99	Beam	N/A	3
N+2.70	B100	Beam	N/A	3
N+2.70	B101	Beam	N/A	3
N+2.70	B106	Beam	N/A	3
N+2.70	B107	Beam	N/A	3
N+2.70	B108	Beam	N/A	3
N+2.70	B109	Beam	N/A	3
N+2.70	B110	Beam	N/A	3
N+2.70	B111	Beam	N/A	3
N+2.70	B114	Beam	N/A	3
N+2.70	B115	Beam	N/A	3
N+2.70	B116	Beam	N/A	3
N+2.70	B117	Beam	N/A	3
N+2.70	B118	Beam	N/A	3
N+2.70	B119	Beam	N/A	3
N+2.70	B124	Beam	N/A	3
N+2.70	B125	Beam	N/A	3
N+2.70	B126	Beam	N/A	3
N+2.70	B127	Beam	N/A	3
N+2.70	B128	Beam	N/A	3
N+2.70	B129	Beam	N/A	3
N+2.70	B132	Beam	N/A	3
N+2.70	B133	Beam	N/A	3
N+2.70	B134	Beam	N/A	3
N+2.70	B135	Beam	N/A	3
N+2.70	B136	Beam	N/A	3
N+2.70	B137	Beam	N/A	3
N+2.70	B142	Beam	N/A	3
N+2.70	B143	Beam	N/A	3
N+2.70	B144	Beam	N/A	3
N+2.70	B145	Beam	N/A	3
N+2.70	B146	Beam	N/A	3
N+2.70	B147	Beam	N/A	3
N+2.70	B150	Beam	N/A	3
N+2.70	B151	Beam	N/A	3
N+2.70	B152	Beam	N/A	3
N+2.70	B153	Beam	N/A	3
N+2.70	B154	Beam	N/A	3
N+2.70	B155	Beam	N/A	3
N+2.70	B160	Beam	N/A	3
N+2.70	B161	Beam	N/A	3
N+2.70	B162	Beam	N/A	3
N+2.70	B163	Beam	N/A	3
N+2.70	B164	Beam	N/A	3
N+2.70	B165	Beam	N/A	3
N+2.70	B169	Beam	N/A	3
N+2.70	B170	Beam	N/A	3

N+2.70	B171	Beam	N/A	3
N+2.70	B173	Beam	N/A	3
N+2.70	B174	Beam	N/A	3
N+2.70	B176	Beam	N/A	3
N+2.70	B178	Beam	N/A	3
N+2.70	B182	Beam	N/A	3
N+2.70	B183	Beam	N/A	3
N+2.70	B185	Beam	N/A	3
N+2.70	B187	Beam	N/A	3
N+2.70	B189	Beam	N/A	3
N+2.70	B190	Beam	N/A	3
N+2.70	B191	Beam	N/A	3
N+2.70	B192	Beam	N/A	3
N+2.70	B193	Beam	N/A	3
N+2.70	B195	Beam	N/A	3
N+2.70	B196	Beam	N/A	3
N+2.70	B197	Beam	N/A	3
N+1.375	B8	Beam	N/A	3
N+1.375	B184	Beam	N/A	3

L O C A L A X E S 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	LINE	LINETYPE	ANGLE
N+5.45	C1	Column	0.0000
N+5.45	C2	Column	0.0000
N+5.45	C3	Column	0.0000
N+5.45	C4	Column	0.0000
N+5.45	C5	Column	0.0000
N+5.45	C7	Column	0.0000
N+5.45	C8	Column	0.0000
N+5.45	C9	Column	0.0000
N+5.45	C10	Column	0.0000
N+5.45	C11	Column	0.0000
N+5.45	C12	Column	0.0000
N+5.45	C13	Column	0.0000
N+5.45	C14	Column	0.0000
N+5.45	C15	Column	0.0000
N+5.45	C16	Column	0.0000
N+5.45	C17	Column	0.0000
N+2.70	C1	Column	0.0000
N+2.70	C2	Column	0.0000
N+2.70	C3	Column	0.0000
N+2.70	C4	Column	0.0000
N+2.70	C5	Column	0.0000
N+2.70	C6	Column	0.0000
N+2.70	C7	Column	0.0000
N+2.70	C8	Column	0.0000
N+2.70	C9	Column	0.0000
N+2.70	C10	Column	0.0000
N+2.70	C11	Column	0.0000
N+2.70	C12	Column	0.0000
N+2.70	C13	Column	0.0000
N+2.70	C14	Column	0.0000
N+2.70	C15	Column	0.0000
N+2.70	C16	Column	0.0000
N+2.70	C17	Column	0.0000
N+1.375	C1	Column	0.0000
N+1.375	C2	Column	0.0000
N+1.375	C3	Column	0.0000
N+1.375	C4	Column	0.0000
N+1.375	C5	Column	0.0000
N+1.375	C6	Column	0.0000
N+1.375	C7	Column	0.0000
N+1.375	C8	Column	0.0000
N+1.375	C9	Column	0.0000
N+1.375	C10	Column	0.0000
N+1.375	C11	Column	0.0000
N+1.375	C12	Column	0.0000
N+1.375	C13	Column	0.0000
N+1.375	C14	Column	0.0000
N+1.375	C15	Column	0.0000
N+1.375	C16	Column	0.0000
N+1.375	C17	Column	0.0000
N+5.45	B1	Beam	0.0000
N+5.45	B2	Beam	0.0000

N+5.45	B3	Beam	0.0000
N+5.45	B4	Beam	0.0000
N+5.45	B5	Beam	0.0000
N+5.45	B6	Beam	0.0000
N+5.45	B7	Beam	0.0000
N+5.45	B9	Beam	0.0000
N+5.45	B10	Beam	0.0000
N+5.45	B11	Beam	0.0000
N+5.45	B12	Beam	0.0000
N+5.45	B13	Beam	0.0000
N+5.45	B14	Beam	0.0000
N+5.45	B15	Beam	0.0000
N+5.45	B16	Beam	0.0000
N+5.45	B17	Beam	0.0000
N+5.45	B18	Beam	0.0000
N+5.45	B19	Beam	0.0000
N+5.45	B24	Beam	0.0000
N+5.45	B25	Beam	0.0000
N+5.45	B26	Beam	0.0000
N+5.45	B27	Beam	0.0000
N+5.45	B28	Beam	0.0000
N+5.45	B29	Beam	0.0000
N+5.45	B34	Beam	0.0000
N+5.45	B35	Beam	0.0000
N+5.45	B36	Beam	0.0000
N+5.45	B37	Beam	0.0000
N+5.45	B42	Beam	0.0000
N+5.45	B43	Beam	0.0000
N+5.45	B44	Beam	0.0000
N+5.45	B45	Beam	0.0000
N+5.45	B48	Beam	0.0000
N+5.45	B49	Beam	0.0000
N+5.45	B50	Beam	0.0000
N+5.45	B51	Beam	0.0000
N+5.45	B54	Beam	0.0000
N+5.45	B55	Beam	0.0000
N+5.45	B58	Beam	0.0000
N+5.45	B59	Beam	0.0000
N+5.45	B62	Beam	0.0000
N+5.45	B63	Beam	0.0000
N+5.45	B66	Beam	0.0000
N+5.45	B67	Beam	0.0000
N+5.45	B68	Beam	0.0000
N+5.45	B69	Beam	0.0000
N+5.45	B72	Beam	0.0000
N+5.45	B73	Beam	0.0000
N+5.45	B76	Beam	0.0000
N+5.45	B77	Beam	0.0000
N+5.45	B80	Beam	0.0000
N+5.45	B81	Beam	0.0000
N+5.45	B84	Beam	0.0000
N+5.45	B85	Beam	0.0000
N+5.45	B86	Beam	0.0000
N+5.45	B87	Beam	0.0000
N+5.45	B90	Beam	0.0000
N+5.45	B91	Beam	0.0000
N+5.45	B94	Beam	0.0000
N+5.45	B95	Beam	0.0000
N+5.45	B98	Beam	0.0000
N+5.45	B99	Beam	0.0000
N+5.45	B102	Beam	0.0000
N+5.45	B103	Beam	0.0000
N+5.45	B104	Beam	0.0000
N+5.45	B105	Beam	0.0000
N+5.45	B108	Beam	0.0000
N+5.45	B109	Beam	0.0000
N+5.45	B112	Beam	0.0000
N+5.45	B113	Beam	0.0000
N+5.45	B116	Beam	0.0000
N+5.45	B117	Beam	0.0000
N+5.45	B120	Beam	0.0000
N+5.45	B121	Beam	0.0000
N+5.45	B122	Beam	0.0000
N+5.45	B123	Beam	0.0000
N+5.45	B126	Beam	0.0000
N+5.45	B127	Beam	0.0000
N+5.45	B130	Beam	0.0000
N+5.45	B131	Beam	0.0000

N+5.45	B134	Beam	0.0000
N+5.45	B135	Beam	0.0000
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N+5.45	B141	Beam	0.0000
N+5.45	B144	Beam	0.0000
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N+5.45	B149	Beam	0.0000
N+5.45	B152	Beam	0.0000
N+5.45	B153	Beam	0.0000
N+5.45	B156	Beam	0.0000
N+5.45	B157	Beam	0.0000
N+5.45	B158	Beam	0.0000
N+5.45	B159	Beam	0.0000
N+5.45	B162	Beam	0.0000
N+5.45	B163	Beam	0.0000
N+5.45	B166	Beam	0.0000
N+5.45	B167	Beam	0.0000
N+5.45	B174	Beam	0.0000
N+5.45	B175	Beam	0.0000
N+5.45	B177	Beam	0.0000
N+5.45	B180	Beam	0.0000
N+5.45	B181	Beam	0.0000
N+5.45	B183	Beam	0.0000
N+5.45	B184	Beam	0.0000
N+5.45	B186	Beam	0.0000
N+5.45	B188	Beam	0.0000
N+5.45	B192	Beam	0.0000
N+5.45	B194	Beam	0.0000
N+5.45	B196	Beam	0.0000
N+5.45	B197	Beam	0.0000
N+5.45	B198	Beam	0.0000
N+5.45	B199	Beam	0.0000
N+5.45	B200	Beam	0.0000
N+5.45	B201	Beam	0.0000
N+5.45	B202	Beam	0.0000
N+5.45	B203	Beam	0.0000
N+2.70	B1	Beam	0.0000
N+2.70	B2	Beam	0.0000
N+2.70	B3	Beam	0.0000
N+2.70	B4	Beam	0.0000
N+2.70	B6	Beam	0.0000
N+2.70	B9	Beam	0.0000
N+2.70	B10	Beam	0.0000
N+2.70	B11	Beam	0.0000
N+2.70	B12	Beam	0.0000
N+2.70	B13	Beam	0.0000
N+2.70	B15	Beam	0.0000
N+2.70	B16	Beam	0.0000
N+2.70	B17	Beam	0.0000
N+2.70	B18	Beam	0.0000
N+2.70	B19	Beam	0.0000
N+2.70	B20	Beam	0.0000
N+2.70	B21	Beam	0.0000
N+2.70	B22	Beam	0.0000
N+2.70	B23	Beam	0.0000
N+2.70	B28	Beam	0.0000
N+2.70	B29	Beam	0.0000
N+2.70	B30	Beam	0.0000
N+2.70	B31	Beam	0.0000
N+2.70	B32	Beam	0.0000
N+2.70	B33	Beam	0.0000
N+2.70	B38	Beam	0.0000
N+2.70	B39	Beam	0.0000
N+2.70	B40	Beam	0.0000
N+2.70	B41	Beam	0.0000
N+2.70	B44	Beam	0.0000
N+2.70	B45	Beam	0.0000
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N+2.70	B47	Beam	0.0000
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N+2.70	B56	Beam	0.0000
N+2.70	B57	Beam	0.0000

N+2.70	B60	Beam	0.0000
N+2.70	B61	Beam	0.0000
N+2.70	B62	Beam	0.0000
N+2.70	B63	Beam	0.0000
N+2.70	B64	Beam	0.0000
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N+2.70	B71	Beam	0.0000
N+2.70	B72	Beam	0.0000
N+2.70	B73	Beam	0.0000
N+2.70	B74	Beam	0.0000
N+2.70	B75	Beam	0.0000
N+2.70	B78	Beam	0.0000
N+2.70	B79	Beam	0.0000
N+2.70	B80	Beam	0.0000
N+2.70	B81	Beam	0.0000
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N+2.70	B89	Beam	0.0000
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N+2.70	B91	Beam	0.0000
N+2.70	B92	Beam	0.0000
N+2.70	B93	Beam	0.0000
N+2.70	B96	Beam	0.0000
N+2.70	B97	Beam	0.0000
N+2.70	B98	Beam	0.0000
N+2.70	B99	Beam	0.0000
N+2.70	B100	Beam	0.0000
N+2.70	B101	Beam	0.0000
N+2.70	B106	Beam	0.0000
N+2.70	B107	Beam	0.0000
N+2.70	B108	Beam	0.0000
N+2.70	B109	Beam	0.0000
N+2.70	B110	Beam	0.0000
N+2.70	B111	Beam	0.0000
N+2.70	B114	Beam	0.0000
N+2.70	B115	Beam	0.0000
N+2.70	B116	Beam	0.0000
N+2.70	B117	Beam	0.0000
N+2.70	B118	Beam	0.0000
N+2.70	B119	Beam	0.0000
N+2.70	B124	Beam	0.0000
N+2.70	B125	Beam	0.0000
N+2.70	B126	Beam	0.0000
N+2.70	B127	Beam	0.0000
N+2.70	B128	Beam	0.0000
N+2.70	B129	Beam	0.0000
N+2.70	B132	Beam	0.0000
N+2.70	B133	Beam	0.0000
N+2.70	B134	Beam	0.0000
N+2.70	B135	Beam	0.0000
N+2.70	B136	Beam	0.0000
N+2.70	B137	Beam	0.0000
N+2.70	B142	Beam	0.0000
N+2.70	B143	Beam	0.0000
N+2.70	B144	Beam	0.0000
N+2.70	B145	Beam	0.0000
N+2.70	B146	Beam	0.0000
N+2.70	B147	Beam	0.0000
N+2.70	B150	Beam	0.0000
N+2.70	B151	Beam	0.0000
N+2.70	B152	Beam	0.0000
N+2.70	B153	Beam	0.0000
N+2.70	B154	Beam	0.0000
N+2.70	B155	Beam	0.0000
N+2.70	B160	Beam	0.0000
N+2.70	B161	Beam	0.0000
N+2.70	B162	Beam	0.0000
N+2.70	B163	Beam	0.0000
N+2.70	B164	Beam	0.0000
N+2.70	B165	Beam	0.0000
N+2.70	B169	Beam	0.0000
N+2.70	B170	Beam	0.0000
N+2.70	B171	Beam	0.0000
N+2.70	B173	Beam	0.0000
N+2.70	B174	Beam	0.0000
N+2.70	B176	Beam	0.0000

N+2.70	B178	Beam	0.0000
N+2.70	B182	Beam	0.0000
N+2.70	B183	Beam	0.0000
N+2.70	B185	Beam	0.0000
N+2.70	B187	Beam	0.0000
N+2.70	B189	Beam	0.0000
N+2.70	B190	Beam	0.0000
N+2.70	B191	Beam	0.0000
N+2.70	B192	Beam	0.0000
N+2.70	B193	Beam	0.0000
N+2.70	B195	Beam	0.0000
N+2.70	B196	Beam	0.0000
N+2.70	B197	Beam	0.0000
N+1.375	B8	Beam	0.0000
N+1.375	B184	Beam	0.0000

L I N E A U T O M E S H A S S I G N M E N T S

STORY	LINE	LINETYPE	AUTOMESH
N+5.45	C1	Column	P/L/E
N+5.45	C2	Column	P/L/E
N+5.45	C3	Column	P/L/E
N+5.45	C4	Column	P/L/E
N+5.45	C5	Column	P/L/E
N+5.45	C7	Column	P/L/E
N+5.45	C8	Column	P/L/E
N+5.45	C9	Column	P/L/E
N+5.45	C10	Column	P/L/E
N+5.45	C11	Column	P/L/E
N+5.45	C12	Column	P/L/E
N+5.45	C13	Column	P/L/E
N+5.45	C14	Column	P/L/E
N+5.45	C15	Column	P/L/E
N+5.45	C16	Column	P/L/E
N+5.45	C17	Column	P/L/E
N+2.70	C1	Column	P/L/E
N+2.70	C2	Column	P/L/E
N+2.70	C3	Column	P/L/E
N+2.70	C4	Column	P/L/E
N+2.70	C5	Column	P/L/E
N+2.70	C6	Column	P/L/E
N+2.70	C7	Column	P/L/E
N+2.70	C8	Column	P/L/E
N+2.70	C9	Column	P/L/E
N+2.70	C10	Column	P/L/E
N+2.70	C11	Column	P/L/E
N+2.70	C12	Column	P/L/E
N+2.70	C13	Column	P/L/E
N+2.70	C14	Column	P/L/E
N+2.70	C15	Column	P/L/E
N+2.70	C16	Column	P/L/E
N+2.70	C17	Column	P/L/E
N+1.375	C1	Column	P/L/E
N+1.375	C2	Column	P/L/E
N+1.375	C3	Column	P/L/E
N+1.375	C4	Column	P/L/E
N+1.375	C5	Column	P/L/E
N+1.375	C6	Column	P/L/E
N+1.375	C7	Column	P/L/E
N+1.375	C8	Column	P/L/E
N+1.375	C9	Column	P/L/E
N+1.375	C10	Column	P/L/E
N+1.375	C11	Column	P/L/E
N+1.375	C12	Column	P/L/E
N+1.375	C13	Column	P/L/E
N+1.375	C14	Column	P/L/E
N+1.375	C15	Column	P/L/E
N+1.375	C16	Column	P/L/E
N+1.375	C17	Column	P/L/E
N+5.45	B1	Beam	P/L/E
N+5.45	B2	Beam	P/L/E
N+5.45	B3	Beam	P/L/E
N+5.45	B4	Beam	P/L/E
N+5.45	B5	Beam	P/L/E
N+5.45	B6	Beam	P/L/E

N+5.45	B7	Beam	P/L/E
N+5.45	B9	Beam	P/L/E
N+5.45	B10	Beam	P/L/E
N+5.45	B11	Beam	P/L/E
N+5.45	B12	Beam	P/L/E
N+5.45	B13	Beam	P/L/E
N+5.45	B14	Beam	P/L/E
N+5.45	B15	Beam	P/L/E
N+5.45	B16	Beam	P/L/E
N+5.45	B17	Beam	P/L/E
N+5.45	B18	Beam	P/L/E
N+5.45	B19	Beam	P/L/E
N+5.45	B24	Beam	P/L/E
N+5.45	B25	Beam	P/L/E
N+5.45	B26	Beam	P/L/E
N+5.45	B27	Beam	P/L/E
N+5.45	B28	Beam	P/L/E
N+5.45	B29	Beam	P/L/E
N+5.45	B34	Beam	P/L/E
N+5.45	B35	Beam	P/L/E
N+5.45	B36	Beam	P/L/E
N+5.45	B37	Beam	P/L/E
N+5.45	B42	Beam	P/L/E
N+5.45	B43	Beam	P/L/E
N+5.45	B44	Beam	P/L/E
N+5.45	B45	Beam	P/L/E
N+5.45	B48	Beam	P/L/E
N+5.45	B49	Beam	P/L/E
N+5.45	B50	Beam	P/L/E
N+5.45	B51	Beam	P/L/E
N+5.45	B54	Beam	P/L/E
N+5.45	B55	Beam	P/L/E
N+5.45	B58	Beam	P/L/E
N+5.45	B59	Beam	P/L/E
N+5.45	B62	Beam	P/L/E
N+5.45	B63	Beam	P/L/E
N+5.45	B66	Beam	P/L/E
N+5.45	B67	Beam	P/L/E
N+5.45	B68	Beam	P/L/E
N+5.45	B69	Beam	P/L/E
N+5.45	B72	Beam	P/L/E
N+5.45	B73	Beam	P/L/E
N+5.45	B76	Beam	P/L/E
N+5.45	B77	Beam	P/L/E
N+5.45	B80	Beam	P/L/E
N+5.45	B81	Beam	P/L/E
N+5.45	B84	Beam	P/L/E
N+5.45	B85	Beam	P/L/E
N+5.45	B86	Beam	P/L/E
N+5.45	B87	Beam	P/L/E
N+5.45	B90	Beam	P/L/E
N+5.45	B91	Beam	P/L/E
N+5.45	B94	Beam	P/L/E
N+5.45	B95	Beam	P/L/E
N+5.45	B98	Beam	P/L/E
N+5.45	B99	Beam	P/L/E
N+5.45	B102	Beam	P/L/E
N+5.45	B103	Beam	P/L/E
N+5.45	B104	Beam	P/L/E
N+5.45	B105	Beam	P/L/E
N+5.45	B108	Beam	P/L/E
N+5.45	B109	Beam	P/L/E
N+5.45	B112	Beam	P/L/E
N+5.45	B113	Beam	P/L/E
N+5.45	B116	Beam	P/L/E
N+5.45	B117	Beam	P/L/E
N+5.45	B120	Beam	P/L/E
N+5.45	B121	Beam	P/L/E
N+5.45	B122	Beam	P/L/E
N+5.45	B123	Beam	P/L/E
N+5.45	B126	Beam	P/L/E
N+5.45	B127	Beam	P/L/E
N+5.45	B130	Beam	P/L/E
N+5.45	B131	Beam	P/L/E
N+5.45	B134	Beam	P/L/E
N+5.45	B135	Beam	P/L/E
N+5.45	B138	Beam	P/L/E
N+5.45	B139	Beam	P/L/E

N+5.45	B140	Beam	P/L/E
N+5.45	B141	Beam	P/L/E
N+5.45	B144	Beam	P/L/E
N+5.45	B145	Beam	P/L/E
N+5.45	B148	Beam	P/L/E
N+5.45	B149	Beam	P/L/E
N+5.45	B152	Beam	P/L/E
N+5.45	B153	Beam	P/L/E
N+5.45	B156	Beam	P/L/E
N+5.45	B157	Beam	P/L/E
N+5.45	B158	Beam	P/L/E
N+5.45	B159	Beam	P/L/E
N+5.45	B162	Beam	P/L/E
N+5.45	B163	Beam	P/L/E
N+5.45	B166	Beam	P/L/E
N+5.45	B167	Beam	P/L/E
N+5.45	B174	Beam	P/L/E
N+5.45	B175	Beam	P/L/E
N+5.45	B177	Beam	P/L/E
N+5.45	B180	Beam	P/L/E
N+5.45	B181	Beam	P/L/E
N+5.45	B183	Beam	P/L/E
N+5.45	B184	Beam	P/L/E
N+5.45	B186	Beam	P/L/E
N+5.45	B188	Beam	P/L/E
N+5.45	B192	Beam	P/L/E
N+5.45	B194	Beam	P/L/E
N+5.45	B196	Beam	P/L/E
N+5.45	B197	Beam	P/L/E
N+5.45	B198	Beam	P/L/E
N+5.45	B199	Beam	P/L/E
N+5.45	B200	Beam	P/L/E
N+5.45	B201	Beam	P/L/E
N+5.45	B202	Beam	P/L/E
N+5.45	B203	Beam	P/L/E
N+2.70	B1	Beam	P/L/E
N+2.70	B2	Beam	P/L/E
N+2.70	B3	Beam	P/L/E
N+2.70	B4	Beam	P/L/E
N+2.70	B6	Beam	P/L/E
N+2.70	B9	Beam	P/L/E
N+2.70	B10	Beam	P/L/E
N+2.70	B11	Beam	P/L/E
N+2.70	B12	Beam	P/L/E
N+2.70	B13	Beam	P/L/E
N+2.70	B15	Beam	P/L/E
N+2.70	B16	Beam	P/L/E
N+2.70	B17	Beam	P/L/E
N+2.70	B18	Beam	P/L/E
N+2.70	B19	Beam	P/L/E
N+2.70	B20	Beam	P/L/E
N+2.70	B21	Beam	P/L/E
N+2.70	B22	Beam	P/L/E
N+2.70	B23	Beam	P/L/E
N+2.70	B28	Beam	P/L/E
N+2.70	B29	Beam	P/L/E
N+2.70	B30	Beam	P/L/E
N+2.70	B31	Beam	P/L/E
N+2.70	B32	Beam	P/L/E
N+2.70	B33	Beam	P/L/E
N+2.70	B38	Beam	P/L/E
N+2.70	B39	Beam	P/L/E
N+2.70	B40	Beam	P/L/E
N+2.70	B41	Beam	P/L/E
N+2.70	B44	Beam	P/L/E
N+2.70	B45	Beam	P/L/E
N+2.70	B46	Beam	P/L/E
N+2.70	B47	Beam	P/L/E
N+2.70	B52	Beam	P/L/E
N+2.70	B53	Beam	P/L/E
N+2.70	B54	Beam	P/L/E
N+2.70	B55	Beam	P/L/E
N+2.70	B56	Beam	P/L/E
N+2.70	B57	Beam	P/L/E
N+2.70	B60	Beam	P/L/E
N+2.70	B61	Beam	P/L/E
N+2.70	B62	Beam	P/L/E
N+2.70	B63	Beam	P/L/E

N+2.70	B64	Beam	P/L/E
N+2.70	B65	Beam	P/L/E
N+2.70	B70	Beam	P/L/E
N+2.70	B71	Beam	P/L/E
N+2.70	B72	Beam	P/L/E
N+2.70	B73	Beam	P/L/E
N+2.70	B74	Beam	P/L/E
N+2.70	B75	Beam	P/L/E
N+2.70	B78	Beam	P/L/E
N+2.70	B79	Beam	P/L/E
N+2.70	B80	Beam	P/L/E
N+2.70	B81	Beam	P/L/E
N+2.70	B82	Beam	P/L/E
N+2.70	B83	Beam	P/L/E
N+2.70	B88	Beam	P/L/E
N+2.70	B89	Beam	P/L/E
N+2.70	B90	Beam	P/L/E
N+2.70	B91	Beam	P/L/E
N+2.70	B92	Beam	P/L/E
N+2.70	B93	Beam	P/L/E
N+2.70	B96	Beam	P/L/E
N+2.70	B97	Beam	P/L/E
N+2.70	B98	Beam	P/L/E
N+2.70	B99	Beam	P/L/E
N+2.70	B100	Beam	P/L/E
N+2.70	B101	Beam	P/L/E
N+2.70	B106	Beam	P/L/E
N+2.70	B107	Beam	P/L/E
N+2.70	B108	Beam	P/L/E
N+2.70	B109	Beam	P/L/E
N+2.70	B110	Beam	P/L/E
N+2.70	B111	Beam	P/L/E
N+2.70	B114	Beam	P/L/E
N+2.70	B115	Beam	P/L/E
N+2.70	B116	Beam	P/L/E
N+2.70	B117	Beam	P/L/E
N+2.70	B118	Beam	P/L/E
N+2.70	B119	Beam	P/L/E
N+2.70	B124	Beam	P/L/E
N+2.70	B125	Beam	P/L/E
N+2.70	B126	Beam	P/L/E
N+2.70	B127	Beam	P/L/E
N+2.70	B128	Beam	P/L/E
N+2.70	B129	Beam	P/L/E
N+2.70	B132	Beam	P/L/E
N+2.70	B133	Beam	P/L/E
N+2.70	B134	Beam	P/L/E
N+2.70	B135	Beam	P/L/E
N+2.70	B136	Beam	P/L/E
N+2.70	B137	Beam	P/L/E
N+2.70	B142	Beam	P/L/E
N+2.70	B143	Beam	P/L/E
N+2.70	B144	Beam	P/L/E
N+2.70	B145	Beam	P/L/E
N+2.70	B146	Beam	P/L/E
N+2.70	B147	Beam	P/L/E
N+2.70	B150	Beam	P/L/E
N+2.70	B151	Beam	P/L/E
N+2.70	B152	Beam	P/L/E
N+2.70	B153	Beam	P/L/E
N+2.70	B154	Beam	P/L/E
N+2.70	B155	Beam	P/L/E
N+2.70	B160	Beam	P/L/E
N+2.70	B161	Beam	P/L/E
N+2.70	B162	Beam	P/L/E
N+2.70	B163	Beam	P/L/E
N+2.70	B164	Beam	P/L/E
N+2.70	B165	Beam	P/L/E
N+2.70	B169	Beam	P/L/E
N+2.70	B170	Beam	P/L/E
N+2.70	B171	Beam	P/L/E
N+2.70	B173	Beam	P/L/E
N+2.70	B174	Beam	P/L/E
N+2.70	B176	Beam	P/L/E
N+2.70	B178	Beam	P/L/E
N+2.70	B182	Beam	P/L/E
N+2.70	B183	Beam	P/L/E
N+2.70	B185	Beam	P/L/E

N+2.70	B187	Beam	P/L/E
N+2.70	B189	Beam	P/L/E
N+2.70	B190	Beam	P/L/E
N+2.70	B191	Beam	P/L/E
N+2.70	B192	Beam	P/L/E
N+2.70	B193	Beam	P/L/E
N+2.70	B195	Beam	P/L/E
N+2.70	B196	Beam	P/L/E
N+2.70	B197	Beam	P/L/E
N+1.375	B8	Beam	P/L/E
N+1.375	B184	Beam	P/L/E

W A L L , S L A B , D E C K & O P E N I N G A S S I G N M E N T S T O A R E A O B J E C T S

STORY LEVEL	AREA ID	AREA TYPE	SECTION TYPE	SECTION LABEL
N+5.45	W1	Wall	Wall	MURO15
N+5.45	W2	Wall	Wall	MURO15
N+5.45	W3	Wall	Wall	MURO15
N+5.45	W4	Wall	Wall	MURO15
N+5.45	W8	Wall	Wall	MURO15
N+5.45	W9	Wall	Wall	MURO15
N+5.45	W10	Wall	Wall	MURO15
N+5.45	W11	Wall	Wall	MURO15
N+5.45	W14	Wall	Wall	MURO15
N+5.45	W15	Wall	Wall	MURO15
N+5.45	W18	Wall	Wall	MURO15
N+5.45	W19	Wall	Wall	MURO15
N+5.45	W20	Wall	Wall	MURO15
N+5.45	W21	Wall	Wall	MURO15
N+5.45	W24	Wall	Wall	MURO15
N+5.45	W25	Wall	Wall	MURO15
N+5.45	W28	Wall	Wall	MURO15
N+5.45	W29	Wall	Wall	MURO15
N+5.45	W30	Wall	Wall	MURO15
N+5.45	W31	Wall	Wall	MURO15
N+5.45	W34	Wall	Wall	MURO15
N+5.45	W35	Wall	Wall	MURO15
N+5.45	W38	Wall	Wall	MURO15
N+5.45	W39	Wall	Wall	MURO15
N+5.45	W40	Wall	Wall	MURO15
N+5.45	W41	Wall	Wall	MURO15
N+5.45	W44	Wall	Wall	MURO15
N+5.45	W45	Wall	Wall	MURO15
N+5.45	W48	Wall	Wall	MURO15
N+5.45	W49	Wall	Wall	MURO15
N+5.45	W50	Wall	Wall	MURO15
N+5.45	W51	Wall	Wall	MURO15
N+5.45	W54	Wall	Wall	MURO15
N+5.45	W55	Wall	Wall	MURO15
N+5.45	W58	Wall	Wall	MURO15
N+5.45	W59	Wall	Wall	MURO15
N+5.45	W60	Wall	Wall	MURO15
N+5.45	W61	Wall	Wall	MURO15
N+5.45	W64	Wall	Wall	MURO15
N+5.45	W65	Wall	Wall	MURO15
N+5.45	W68	Wall	Wall	MURO15
N+5.45	W69	Wall	Wall	MURO15
N+5.45	W70	Wall	Wall	MURO15
N+5.45	W71	Wall	Wall	MURO15
N+5.45	W74	Wall	Wall	MURO15
N+5.45	W75	Wall	Wall	MURO15
N+5.45	W78	Wall	Wall	MURO15
N+5.45	W79	Wall	Wall	MURO15
N+5.45	W81	Wall	Wall	MURO15
N+2.70	W3	Wall	Wall	MURO15
N+2.70	W5	Wall	Wall	MURO15
N+2.70	W6	Wall	Wall	MURO15
N+2.70	W7	Wall	Wall	MURO15
N+2.70	W12	Wall	Wall	MURO15
N+2.70	W13	Wall	Wall	MURO15
N+2.70	W14	Wall	Wall	MURO15
N+2.70	W15	Wall	Wall	MURO15
N+2.70	W16	Wall	Wall	MURO15
N+2.70	W17	Wall	Wall	MURO15

N+2.70	W22	Wall	Wall	MURO15
N+2.70	W23	Wall	Wall	MURO15
N+2.70	W24	Wall	Wall	MURO15
N+2.70	W25	Wall	Wall	MURO15
N+2.70	W26	Wall	Wall	MURO15
N+2.70	W27	Wall	Wall	MURO15
N+2.70	W32	Wall	Wall	MURO15
N+2.70	W33	Wall	Wall	MURO15
N+2.70	W34	Wall	Wall	MURO15
N+2.70	W35	Wall	Wall	MURO15
N+2.70	W36	Wall	Wall	MURO15
N+2.70	W37	Wall	Wall	MURO15
N+2.70	W42	Wall	Wall	MURO15
N+2.70	W43	Wall	Wall	MURO15
N+2.70	W44	Wall	Wall	MURO15
N+2.70	W45	Wall	Wall	MURO15
N+2.70	W46	Wall	Wall	MURO15
N+2.70	W47	Wall	Wall	MURO15
N+2.70	W52	Wall	Wall	MURO15
N+2.70	W53	Wall	Wall	MURO15
N+2.70	W54	Wall	Wall	MURO15
N+2.70	W55	Wall	Wall	MURO15
N+2.70	W56	Wall	Wall	MURO15
N+2.70	W57	Wall	Wall	MURO15
N+2.70	W62	Wall	Wall	MURO15
N+2.70	W63	Wall	Wall	MURO15
N+2.70	W64	Wall	Wall	MURO15
N+2.70	W65	Wall	Wall	MURO15
N+2.70	W66	Wall	Wall	MURO15
N+2.70	W67	Wall	Wall	MURO15
N+2.70	W72	Wall	Wall	MURO15
N+2.70	W73	Wall	Wall	MURO15
N+2.70	W74	Wall	Wall	MURO15
N+2.70	W75	Wall	Wall	MURO15
N+2.70	W76	Wall	Wall	MURO15
N+2.70	W77	Wall	Wall	MURO15
N+2.70	W80	Wall	Wall	MURO15
N+2.70	W81	Wall	Wall	MURO15
N+2.70	W82	Wall	Wall	MURO15
N+1.375	W3	Wall	Wall	MURO15
N+1.375	W5	Wall	Wall	MURO15
N+1.375	W6	Wall	Wall	MURO15
N+1.375	W7	Wall	Wall	MURO15
N+1.375	W12	Wall	Wall	MURO15
N+1.375	W13	Wall	Wall	MURO15
N+1.375	W14	Wall	Wall	MURO15
N+1.375	W15	Wall	Wall	MURO15
N+1.375	W16	Wall	Wall	MURO15
N+1.375	W17	Wall	Wall	MURO15
N+1.375	W22	Wall	Wall	MURO15
N+1.375	W23	Wall	Wall	MURO15
N+1.375	W24	Wall	Wall	MURO15
N+1.375	W25	Wall	Wall	MURO15
N+1.375	W26	Wall	Wall	MURO15
N+1.375	W27	Wall	Wall	MURO15
N+1.375	W32	Wall	Wall	MURO15
N+1.375	W33	Wall	Wall	MURO15
N+1.375	W34	Wall	Wall	MURO15
N+1.375	W35	Wall	Wall	MURO15
N+1.375	W36	Wall	Wall	MURO15
N+1.375	W37	Wall	Wall	MURO15
N+1.375	W42	Wall	Wall	MURO15
N+1.375	W43	Wall	Wall	MURO15
N+1.375	W44	Wall	Wall	MURO15
N+1.375	W45	Wall	Wall	MURO15
N+1.375	W46	Wall	Wall	MURO15
N+1.375	W47	Wall	Wall	MURO15
N+1.375	W52	Wall	Wall	MURO15
N+1.375	W53	Wall	Wall	MURO15
N+1.375	W54	Wall	Wall	MURO15
N+1.375	W55	Wall	Wall	MURO15
N+1.375	W56	Wall	Wall	MURO15
N+1.375	W57	Wall	Wall	MURO15
N+1.375	W62	Wall	Wall	MURO15
N+1.375	W63	Wall	Wall	MURO15
N+1.375	W64	Wall	Wall	MURO15
N+1.375	W65	Wall	Wall	MURO15
N+1.375	W66	Wall	Wall	MURO15

N+1.375	W67	Wall	Wall	MURO15
N+1.375	W72	Wall	Wall	MURO15
N+1.375	W73	Wall	Wall	MURO15
N+1.375	W74	Wall	Wall	MURO15
N+1.375	W75	Wall	Wall	MURO15
N+1.375	W76	Wall	Wall	MURO15
N+1.375	W77	Wall	Wall	MURO15
N+1.375	W80	Wall	Wall	MURO15
N+1.375	W81	Wall	Wall	MURO15
N+1.375	W82	Wall	Wall	MURO15
N+5.45	F2	Floor	Slab	CUBESCALE
N+5.45	F3	Floor	Slab	CUBESCALE
N+5.45	F4	Floor	Slab	CUBESCALE
N+5.45	F5	Floor	Slab	CUBESCALE
N+5.45	F6	Floor	Slab	CUBESCALE
N+5.45	F12	Floor	Slab	CUBESCALE
N+5.45	F13	Floor	Slab	CUBESCALE
N+5.45	F14	Floor	Slab	CUBESCALE
N+5.45	F15	Floor	Slab	CUBESCALE
N+5.45	F16	Floor	Slab	CUBESCALE
N+5.45	F22	Floor	Slab	CUBESCALE
N+5.45	F23	Floor	Slab	CUBESCALE
N+5.45	F30	Floor	Slab	CUBESCALE
N+5.45	F31	Floor	Slab	CUBESCALE
N+5.45	F36	Floor	Slab	CUBESCALE
N+5.45	F37	Floor	Slab	CUBESCALE
N+5.45	F40	Floor	Slab	CUBESCALE
N+5.45	F41	Floor	Slab	CUBESCALE
N+5.45	F46	Floor	Slab	CUBESCALE
N+5.45	F47	Floor	Slab	CUBESCALE
N+5.45	F50	Floor	Slab	CUBESCALE
N+5.45	F51	Floor	Slab	CUBESCALE
N+5.45	F56	Floor	Slab	CUBESCALE
N+5.45	F57	Floor	Slab	CUBESCALE
N+5.45	F60	Floor	Slab	CUBESCALE
N+5.45	F61	Floor	Slab	CUBESCALE
N+5.45	F67	Floor	Slab	CUBESCALE
N+5.45	F71	Floor	Slab	CUBESCALE
N+5.45	F76	Floor	Slab	CUBESCALE
N+5.45	F77	Floor	Slab	CUBESCALE
N+5.45	F80	Floor	Slab	CUBESCALE
N+5.45	F81	Floor	Slab	CUBESCALE
N+5.45	F86	Floor	Slab	CUBESCALE
N+5.45	F90	Floor	Slab	CUBESCALE
N+5.45	F92	Floor	Slab	CUBESCALE
N+5.45	F95	Floor	Slab	CUBESCALE
N+5.45	F98	Floor	Slab	CUBESCALE
N+5.45	F102	Floor	Slab	CUBESCALE
N+5.45	F103	Floor	Slab	CUBESCALE
N+5.45	F104	Floor	Slab	CUBESCALE
N+5.45	F152	Floor	Slab	CUBESCALE
N+5.45	F153	Floor	Slab	CUBESCALE
N+5.45	F154	Floor	Slab	CUBESCALE
N+5.45	F155	Floor	Slab	CUBESCALE
N+5.45	F156	Floor	Slab	CUBESCALE
N+5.45	F162	Floor	Slab	CUBESCALE
N+5.45	F167	Floor	Slab	CUBESCALE
N+5.45	F168	Floor	Slab	CUBESCALE
N+5.45	F169	Floor	Slab	CUBESCALE
N+5.45	F170	Floor	Slab	CUBESCALE
N+2.70	F1	Floor	Slab	HABITACION
N+2.70	F2	Floor	Slab	HABITACION
N+2.70	F3	Floor	Slab	HABITACION
N+2.70	F4	Floor	Slab	HABITACION
N+2.70	F8	Floor	Slab	PASILLOS
N+2.70	F9	Floor	Slab	PASILLOS
N+2.70	F10	Floor	Slab	PASILLOS
N+2.70	F11	Floor	Slab	PASILLOS
N+2.70	F18	Floor	Slab	PASILLOS
N+2.70	F19	Floor	Slab	PASILLOS
N+2.70	F20	Floor	Slab	PASILLOS
N+2.70	F24	Floor	Slab	HABITACION
N+2.70	F25	Floor	Slab	HABITACION
N+2.70	F28	Floor	Slab	HABITACION
N+2.70	F29	Floor	Slab	HABITACION
N+2.70	F32	Floor	Slab	PASILLOS
N+2.70	F33	Floor	Slab	PASILLOS
N+2.70	F34	Floor	Slab	HABITACION

N+2.70	F35	Floor	Slab	HABITACION
N+2.70	F38	Floor	Slab	HABITACION
N+2.70	F39	Floor	Slab	HABITACION
N+2.70	F42	Floor	Slab	PASILLOS
N+2.70	F43	Floor	Slab	PASILLOS
N+2.70	F44	Floor	Slab	HABITACION
N+2.70	F45	Floor	Slab	HABITACION
N+2.70	F48	Floor	Slab	HABITACION
N+2.70	F49	Floor	Slab	HABITACION
N+2.70	F52	Floor	Slab	PASILLOS
N+2.70	F53	Floor	Slab	PASILLOS
N+2.70	F54	Floor	Slab	HABITACION
N+2.70	F55	Floor	Slab	HABITACION
N+2.70	F58	Floor	Slab	HABITACION
N+2.70	F59	Floor	Slab	HABITACION
N+2.70	F62	Floor	Slab	PASILLOS
N+2.70	F63	Floor	Slab	PASILLOS
N+2.70	F64	Floor	Slab	HABITACION
N+2.70	F65	Floor	Slab	HABITACION
N+2.70	F68	Floor	Slab	HABITACION
N+2.70	F69	Floor	Slab	HABITACION
N+2.70	F72	Floor	Slab	PASILLOS
N+2.70	F73	Floor	Slab	PASILLOS
N+2.70	F74	Floor	Slab	HABITACION
N+2.70	F75	Floor	Slab	HABITACION
N+2.70	F78	Floor	Slab	HABITACION
N+2.70	F79	Floor	Slab	HABITACION
N+2.70	F82	Floor	Slab	PASILLOS
N+2.70	F83	Floor	Slab	PASILLOS
N+2.70	F84	Floor	Slab	HABITACION
N+2.70	F85	Floor	Slab	HABITACION
N+2.70	F88	Floor	Slab	HABITACION
N+2.70	F89	Floor	Slab	HABITACION
N+2.70	F91	Floor	Slab	PASILLOS
N+2.70	F93	Floor	Slab	PASILLOS
N+2.70	F94	Floor	Slab	HABITACION
N+2.70	F96	Floor	Slab	HABITACION
N+2.70	F99	Floor	Slab	PASILLOS
N+2.70	F100	Floor	Slab	PASILLOS
N+2.70	F101	Floor	Slab	PASILLOS
N+2.70	F132	Floor	Slab	PASILLOS
N+2.70	F135	Floor	Slab	PASILLOS
N+2.70	F136	Floor	Slab	PASILLOS
N+2.70	F148	Floor	Slab	PASILLOS

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

STORY	AREA	AREA TYPE	ANGLE
N+5.45	W1	Wall	0.0000
N+5.45	W2	Wall	0.0000
N+5.45	W3	Wall	0.0000
N+5.45	W4	Wall	0.0000
N+5.45	W8	Wall	0.0000
N+5.45	W9	Wall	0.0000
N+5.45	W10	Wall	0.0000
N+5.45	W11	Wall	0.0000
N+5.45	W14	Wall	0.0000
N+5.45	W15	Wall	0.0000
N+5.45	W18	Wall	0.0000
N+5.45	W19	Wall	0.0000
N+5.45	W20	Wall	0.0000
N+5.45	W21	Wall	0.0000
N+5.45	W24	Wall	0.0000
N+5.45	W25	Wall	0.0000
N+5.45	W28	Wall	0.0000
N+5.45	W29	Wall	0.0000
N+5.45	W30	Wall	0.0000
N+5.45	W31	Wall	0.0000
N+5.45	W34	Wall	0.0000
N+5.45	W35	Wall	0.0000
N+5.45	W38	Wall	0.0000
N+5.45	W39	Wall	0.0000
N+5.45	W40	Wall	0.0000
N+5.45	W41	Wall	0.0000
N+5.45	W44	Wall	0.0000

N+5.45	W45	Wall	0.0000
N+5.45	W48	Wall	0.0000
N+5.45	W49	Wall	0.0000
N+5.45	W50	Wall	0.0000
N+5.45	W51	Wall	0.0000
N+5.45	W54	Wall	0.0000
N+5.45	W55	Wall	0.0000
N+5.45	W58	Wall	0.0000
N+5.45	W59	Wall	0.0000
N+5.45	W60	Wall	0.0000
N+5.45	W61	Wall	0.0000
N+5.45	W64	Wall	0.0000
N+5.45	W65	Wall	0.0000
N+5.45	W68	Wall	0.0000
N+5.45	W69	Wall	0.0000
N+5.45	W70	Wall	0.0000
N+5.45	W71	Wall	0.0000
N+5.45	W74	Wall	0.0000
N+5.45	W75	Wall	0.0000
N+5.45	W78	Wall	0.0000
N+5.45	W79	Wall	0.0000
N+5.45	W81	Wall	0.0000
N+2.70	W3	Wall	0.0000
N+2.70	W5	Wall	0.0000
N+2.70	W6	Wall	0.0000
N+2.70	W7	Wall	0.0000
N+2.70	W12	Wall	0.0000
N+2.70	W13	Wall	0.0000
N+2.70	W14	Wall	0.0000
N+2.70	W15	Wall	0.0000
N+2.70	W16	Wall	0.0000
N+2.70	W17	Wall	0.0000
N+2.70	W22	Wall	0.0000
N+2.70	W23	Wall	0.0000
N+2.70	W24	Wall	0.0000
N+2.70	W25	Wall	0.0000
N+2.70	W26	Wall	0.0000
N+2.70	W27	Wall	0.0000
N+2.70	W32	Wall	0.0000
N+2.70	W33	Wall	0.0000
N+2.70	W34	Wall	0.0000
N+2.70	W35	Wall	0.0000
N+2.70	W36	Wall	0.0000
N+2.70	W37	Wall	0.0000
N+2.70	W42	Wall	0.0000
N+2.70	W43	Wall	0.0000
N+2.70	W44	Wall	0.0000
N+2.70	W45	Wall	0.0000
N+2.70	W46	Wall	0.0000
N+2.70	W47	Wall	0.0000
N+2.70	W52	Wall	0.0000
N+2.70	W53	Wall	0.0000
N+2.70	W54	Wall	0.0000
N+2.70	W55	Wall	0.0000
N+2.70	W56	Wall	0.0000
N+2.70	W57	Wall	0.0000
N+2.70	W62	Wall	0.0000
N+2.70	W63	Wall	0.0000
N+2.70	W64	Wall	0.0000
N+2.70	W65	Wall	0.0000
N+2.70	W66	Wall	0.0000
N+2.70	W67	Wall	0.0000
N+2.70	W72	Wall	0.0000
N+2.70	W73	Wall	0.0000
N+2.70	W74	Wall	0.0000
N+2.70	W75	Wall	0.0000
N+2.70	W76	Wall	0.0000
N+2.70	W77	Wall	0.0000
N+2.70	W80	Wall	0.0000
N+2.70	W81	Wall	0.0000
N+2.70	W82	Wall	0.0000
N+1.375	W3	Wall	0.0000
N+1.375	W5	Wall	0.0000
N+1.375	W6	Wall	0.0000
N+1.375	W7	Wall	0.0000
N+1.375	W12	Wall	0.0000
N+1.375	W13	Wall	0.0000
N+1.375	W14	Wall	0.0000

N+1.375	W15	Wall	0.0000
N+1.375	W16	Wall	0.0000
N+1.375	W17	Wall	0.0000
N+1.375	W22	Wall	0.0000
N+1.375	W23	Wall	0.0000
N+1.375	W24	Wall	0.0000
N+1.375	W25	Wall	0.0000
N+1.375	W26	Wall	0.0000
N+1.375	W27	Wall	0.0000
N+1.375	W32	Wall	0.0000
N+1.375	W33	Wall	0.0000
N+1.375	W34	Wall	0.0000
N+1.375	W35	Wall	0.0000
N+1.375	W36	Wall	0.0000
N+1.375	W37	Wall	0.0000
N+1.375	W42	Wall	0.0000
N+1.375	W43	Wall	0.0000
N+1.375	W44	Wall	0.0000
N+1.375	W45	Wall	0.0000
N+1.375	W46	Wall	0.0000
N+1.375	W47	Wall	0.0000
N+1.375	W52	Wall	0.0000
N+1.375	W53	Wall	0.0000
N+1.375	W54	Wall	0.0000
N+1.375	W55	Wall	0.0000
N+1.375	W56	Wall	0.0000
N+1.375	W57	Wall	0.0000
N+1.375	W62	Wall	0.0000
N+1.375	W63	Wall	0.0000
N+1.375	W64	Wall	0.0000
N+1.375	W65	Wall	0.0000
N+1.375	W66	Wall	0.0000
N+1.375	W67	Wall	0.0000
N+1.375	W72	Wall	0.0000
N+1.375	W73	Wall	0.0000
N+1.375	W74	Wall	0.0000
N+1.375	W75	Wall	0.0000
N+1.375	W76	Wall	0.0000
N+1.375	W77	Wall	0.0000
N+1.375	W80	Wall	0.0000
N+1.375	W81	Wall	0.0000
N+1.375	W82	Wall	0.0000
N+5.45	F2	Floor	0.0000
N+5.45	F3	Floor	0.0000
N+5.45	F4	Floor	0.0000
N+5.45	F5	Floor	0.0000
N+5.45	F6	Floor	0.0000
N+5.45	F12	Floor	0.0000
N+5.45	F13	Floor	0.0000
N+5.45	F14	Floor	0.0000
N+5.45	F15	Floor	0.0000
N+5.45	F16	Floor	0.0000
N+5.45	F22	Floor	0.0000
N+5.45	F23	Floor	0.0000
N+5.45	F30	Floor	0.0000
N+5.45	F31	Floor	0.0000
N+5.45	F36	Floor	0.0000
N+5.45	F37	Floor	0.0000
N+5.45	F40	Floor	0.0000
N+5.45	F41	Floor	0.0000
N+5.45	F46	Floor	0.0000
N+5.45	F47	Floor	0.0000
N+5.45	F50	Floor	0.0000
N+5.45	F51	Floor	0.0000
N+5.45	F56	Floor	0.0000
N+5.45	F57	Floor	0.0000
N+5.45	F60	Floor	0.0000
N+5.45	F61	Floor	0.0000
N+5.45	F67	Floor	0.0000
N+5.45	F71	Floor	0.0000
N+5.45	F76	Floor	0.0000
N+5.45	F77	Floor	0.0000
N+5.45	F80	Floor	0.0000
N+5.45	F81	Floor	0.0000
N+5.45	F86	Floor	0.0000
N+5.45	F90	Floor	0.0000
N+5.45	F92	Floor	0.0000
N+5.45	F95	Floor	0.0000

N+5.45	F98	Floor	0.0000
N+5.45	F102	Floor	0.0000
N+5.45	F103	Floor	0.0000
N+5.45	F104	Floor	0.0000
N+5.45	F152	Floor	0.0000
N+5.45	F153	Floor	0.0000
N+5.45	F154	Floor	0.0000
N+5.45	F155	Floor	0.0000
N+5.45	F156	Floor	0.0000
N+5.45	F162	Floor	0.0000
N+5.45	F167	Floor	0.0000
N+5.45	F168	Floor	0.0000
N+5.45	F169	Floor	0.0000
N+5.45	F170	Floor	0.0000
N+2.70	F1	Floor	0.0000
N+2.70	F2	Floor	0.0000
N+2.70	F3	Floor	0.0000
N+2.70	F4	Floor	0.0000
N+2.70	F8	Floor	0.0000
N+2.70	F9	Floor	0.0000
N+2.70	F10	Floor	0.0000
N+2.70	F11	Floor	0.0000
N+2.70	F18	Floor	0.0000
N+2.70	F19	Floor	0.0000
N+2.70	F20	Floor	0.0000
N+2.70	F24	Floor	0.0000
N+2.70	F25	Floor	0.0000
N+2.70	F28	Floor	0.0000
N+2.70	F29	Floor	0.0000
N+2.70	F32	Floor	0.0000
N+2.70	F33	Floor	0.0000
N+2.70	F34	Floor	0.0000
N+2.70	F35	Floor	0.0000
N+2.70	F38	Floor	0.0000
N+2.70	F39	Floor	0.0000
N+2.70	F42	Floor	0.0000
N+2.70	F43	Floor	0.0000
N+2.70	F44	Floor	0.0000
N+2.70	F45	Floor	0.0000
N+2.70	F48	Floor	0.0000
N+2.70	F49	Floor	0.0000
N+2.70	F52	Floor	0.0000
N+2.70	F53	Floor	0.0000
N+2.70	F54	Floor	0.0000
N+2.70	F55	Floor	0.0000
N+2.70	F58	Floor	0.0000
N+2.70	F59	Floor	0.0000
N+2.70	F62	Floor	0.0000
N+2.70	F63	Floor	0.0000
N+2.70	F64	Floor	0.0000
N+2.70	F65	Floor	0.0000
N+2.70	F68	Floor	0.0000
N+2.70	F69	Floor	0.0000
N+2.70	F72	Floor	0.0000
N+2.70	F73	Floor	0.0000
N+2.70	F74	Floor	0.0000
N+2.70	F75	Floor	0.0000
N+2.70	F78	Floor	0.0000
N+2.70	F79	Floor	0.0000
N+2.70	F82	Floor	0.0000
N+2.70	F83	Floor	0.0000
N+2.70	F84	Floor	0.0000
N+2.70	F85	Floor	0.0000
N+2.70	F88	Floor	0.0000
N+2.70	F89	Floor	0.0000
N+2.70	F91	Floor	0.0000
N+2.70	F93	Floor	0.0000
N+2.70	F94	Floor	0.0000
N+2.70	F96	Floor	0.0000
N+2.70	F99	Floor	0.0000
N+2.70	F100	Floor	0.0000
N+2.70	F101	Floor	0.0000
N+2.70	F132	Floor	0.0000
N+2.70	F135	Floor	0.0000
N+2.70	F136	Floor	0.0000
N+2.70	F148	Floor	0.0000

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

STORY LEVEL	AREA ID	PIER LABEL	SPANDREL LABEL	SPANDREL STORY
N+5.45	W1	P57	None	N/A
N+5.45	W2	P54	None	N/A
N+5.45	W3	P56	None	N/A
N+5.45	W4	P53	None	N/A
N+5.45	W8	P23	None	N/A
N+5.45	W9	P22	None	N/A
N+5.45	W10	P60	None	N/A
N+5.45	W11	P51	None	N/A
N+5.45	W14	P59	None	N/A
N+5.45	W15	P50	None	N/A
N+5.45	W18	P24	None	N/A
N+5.45	W19	P21	None	N/A
N+5.45	W20	P63	None	N/A
N+5.45	W21	P48	None	N/A
N+5.45	W24	P62	None	N/A
N+5.45	W25	P47	None	N/A
N+5.45	W28	P25	None	N/A
N+5.45	W29	P20	None	N/A
N+5.45	W30	P66	None	N/A
N+5.45	W31	P45	None	N/A
N+5.45	W34	P65	None	N/A
N+5.45	W35	P44	None	N/A
N+5.45	W38	P26	None	N/A
N+5.45	W39	P19	None	N/A
N+5.45	W40	P69	None	N/A
N+5.45	W41	P42	None	N/A
N+5.45	W44	P68	None	N/A
N+5.45	W45	P41	None	N/A
N+5.45	W48	P27	None	N/A
N+5.45	W49	P18	None	N/A
N+5.45	W50	P72	None	N/A
N+5.45	W51	P39	None	N/A
N+5.45	W54	P71	None	N/A
N+5.45	W55	P38	None	N/A
N+5.45	W58	P28	None	N/A
N+5.45	W59	P17	None	N/A
N+5.45	W60	P75	None	N/A
N+5.45	W61	P36	None	N/A
N+5.45	W64	P74	None	N/A
N+5.45	W65	P35	None	N/A
N+5.45	W68	P29	None	N/A
N+5.45	W69	P16	None	N/A
N+5.45	W70	P78	None	N/A
N+5.45	W71	P33	None	N/A
N+5.45	W74	P77	None	N/A
N+5.45	W75	P32	None	N/A
N+5.45	W78	P30	None	N/A
N+5.45	W79	P81	None	N/A
N+5.45	W81	P80	None	N/A
N+2.70	W3	P56	None	N/A
N+2.70	W5	P53	None	N/A
N+2.70	W6	P55	None	N/A
N+2.70	W7	P52	None	N/A
N+2.70	W12	P8	None	N/A
N+2.70	W13	P7	None	N/A
N+2.70	W14	P59	None	N/A
N+2.70	W15	P50	None	N/A
N+2.70	W16	P58	None	N/A
N+2.70	W17	P49	None	N/A
N+2.70	W22	P9	None	N/A
N+2.70	W23	P6	None	N/A
N+2.70	W24	P62	None	N/A
N+2.70	W25	P47	None	N/A
N+2.70	W26	P61	None	N/A
N+2.70	W27	P46	None	N/A
N+2.70	W32	P10	None	N/A
N+2.70	W33	P5	None	N/A
N+2.70	W34	P65	None	N/A
N+2.70	W35	P44	None	N/A
N+2.70	W36	P64	None	N/A
N+2.70	W37	P43	None	N/A
N+2.70	W42	P11	None	N/A

N+2.70	W43	P4	None	N/A
N+2.70	W44	P68	None	N/A
N+2.70	W45	P41	None	N/A
N+2.70	W46	P67	None	N/A
N+2.70	W47	P40	None	N/A
N+2.70	W52	P12	None	N/A
N+2.70	W53	P3	None	N/A
N+2.70	W54	P71	None	N/A
N+2.70	W55	P38	None	N/A
N+2.70	W56	P70	None	N/A
N+2.70	W57	P37	None	N/A
N+2.70	W62	P13	None	N/A
N+2.70	W63	P2	None	N/A
N+2.70	W64	P74	None	N/A
N+2.70	W65	P35	None	N/A
N+2.70	W66	P73	None	N/A
N+2.70	W67	P34	None	N/A
N+2.70	W72	P14	None	N/A
N+2.70	W73	P1	None	N/A
N+2.70	W74	P77	None	N/A
N+2.70	W75	P32	None	N/A
N+2.70	W76	P76	None	N/A
N+2.70	W77	P31	None	N/A
N+2.70	W80	P15	None	N/A
N+2.70	W81	P80	None	N/A
N+2.70	W82	P79	None	N/A
N+1.375	W3	P56	None	N/A
N+1.375	W5	P53	None	N/A
N+1.375	W6	P55	None	N/A
N+1.375	W7	P52	None	N/A
N+1.375	W12	P8	None	N/A
N+1.375	W13	P7	None	N/A
N+1.375	W14	P59	None	N/A
N+1.375	W15	P50	None	N/A
N+1.375	W16	P58	None	N/A
N+1.375	W17	P49	None	N/A
N+1.375	W22	P9	None	N/A
N+1.375	W23	P6	None	N/A
N+1.375	W24	P62	None	N/A
N+1.375	W25	P47	None	N/A
N+1.375	W26	P61	None	N/A
N+1.375	W27	P46	None	N/A
N+1.375	W32	P10	None	N/A
N+1.375	W33	P5	None	N/A
N+1.375	W34	P65	None	N/A
N+1.375	W35	P44	None	N/A
N+1.375	W36	P64	None	N/A
N+1.375	W37	P43	None	N/A
N+1.375	W42	P11	None	N/A
N+1.375	W43	P4	None	N/A
N+1.375	W44	P68	None	N/A
N+1.375	W45	P41	None	N/A
N+1.375	W46	P67	None	N/A
N+1.375	W47	P40	None	N/A
N+1.375	W52	P12	None	N/A
N+1.375	W53	P3	None	N/A
N+1.375	W54	P71	None	N/A
N+1.375	W55	P38	None	N/A
N+1.375	W56	P70	None	N/A
N+1.375	W57	P37	None	N/A
N+1.375	W62	P13	None	N/A
N+1.375	W63	P2	None	N/A
N+1.375	W64	P74	None	N/A
N+1.375	W65	P35	None	N/A
N+1.375	W66	P73	None	N/A
N+1.375	W67	P34	None	N/A
N+1.375	W72	P14	None	N/A
N+1.375	W73	P1	None	N/A
N+1.375	W74	P77	None	N/A
N+1.375	W75	P32	None	N/A
N+1.375	W76	P76	None	N/A
N+1.375	W77	P31	None	N/A
N+1.375	W80	P15	None	N/A
N+1.375	W81	P80	None	N/A
N+1.375	W82	P79	None	N/A

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

STORY	AREA	MESH OPTION
N+5.45	F2	Auto Mesh
N+5.45	F3	Auto Mesh
N+5.45	F4	Auto Mesh
N+5.45	F5	Auto Mesh
N+5.45	F6	Auto Mesh
N+5.45	F12	Auto Mesh
N+5.45	F13	Auto Mesh
N+5.45	F14	Auto Mesh
N+5.45	F15	Auto Mesh
N+5.45	F16	Auto Mesh
N+5.45	F22	Auto Mesh
N+5.45	F23	Auto Mesh
N+5.45	F30	Auto Mesh
N+5.45	F31	Auto Mesh
N+5.45	F36	Auto Mesh
N+5.45	F37	Auto Mesh
N+5.45	F40	Auto Mesh
N+5.45	F41	Auto Mesh
N+5.45	F46	Auto Mesh
N+5.45	F47	Auto Mesh
N+5.45	F50	Auto Mesh
N+5.45	F51	Auto Mesh
N+5.45	F56	Auto Mesh
N+5.45	F57	Auto Mesh
N+5.45	F60	Auto Mesh
N+5.45	F61	Auto Mesh
N+5.45	F67	Auto Mesh
N+5.45	F71	Auto Mesh
N+5.45	F76	Auto Mesh
N+5.45	F77	Auto Mesh
N+5.45	F80	Auto Mesh
N+5.45	F81	Auto Mesh
N+5.45	F86	Auto Mesh
N+5.45	F90	Auto Mesh
N+5.45	F92	Auto Mesh
N+5.45	F95	Auto Mesh
N+5.45	F98	Auto Mesh
N+5.45	F102	Auto Mesh
N+5.45	F103	Auto Mesh
N+5.45	F104	Auto Mesh
N+5.45	F152	Auto Mesh
N+5.45	F153	Auto Mesh
N+5.45	F154	Auto Mesh
N+5.45	F155	Auto Mesh
N+5.45	F156	Auto Mesh
N+5.45	F162	Auto Mesh
N+5.45	F167	Auto Mesh
N+5.45	F168	Auto Mesh
N+5.45	F169	Auto Mesh
N+5.45	F170	Auto Mesh
N+2.70	F1	Auto Mesh
N+2.70	F2	Auto Mesh
N+2.70	F3	Auto Mesh
N+2.70	F4	Auto Mesh
N+2.70	F8	Auto Mesh
N+2.70	F9	Auto Mesh
N+2.70	F10	Auto Mesh
N+2.70	F11	Auto Mesh
N+2.70	F18	Auto Mesh
N+2.70	F19	Auto Mesh
N+2.70	F20	Auto Mesh
N+2.70	F24	Auto Mesh
N+2.70	F25	Auto Mesh
N+2.70	F28	Auto Mesh
N+2.70	F29	Auto Mesh
N+2.70	F32	Auto Mesh
N+2.70	F33	Auto Mesh
N+2.70	F34	Auto Mesh
N+2.70	F35	Auto Mesh
N+2.70	F38	Auto Mesh
N+2.70	F39	Auto Mesh
N+2.70	F42	Auto Mesh
N+2.70	F43	Auto Mesh
N+2.70	F44	Auto Mesh

N+2.70	F45	Auto Mesh
N+2.70	F48	Auto Mesh
N+2.70	F49	Auto Mesh
N+2.70	F52	Auto Mesh
N+2.70	F53	Auto Mesh
N+2.70	F54	Auto Mesh
N+2.70	F55	Auto Mesh
N+2.70	F58	Auto Mesh
N+2.70	F59	Auto Mesh
N+2.70	F62	Auto Mesh
N+2.70	F63	Auto Mesh
N+2.70	F64	Auto Mesh
N+2.70	F65	Auto Mesh
N+2.70	F68	Auto Mesh
N+2.70	F69	Auto Mesh
N+2.70	F72	Auto Mesh
N+2.70	F73	Auto Mesh
N+2.70	F74	Auto Mesh
N+2.70	F75	Auto Mesh
N+2.70	F78	Auto Mesh
N+2.70	F79	Auto Mesh
N+2.70	F82	Auto Mesh
N+2.70	F83	Auto Mesh
N+2.70	F84	Auto Mesh
N+2.70	F85	Auto Mesh
N+2.70	F88	Auto Mesh
N+2.70	F89	Auto Mesh
N+2.70	F91	Auto Mesh
N+2.70	F93	Auto Mesh
N+2.70	F94	Auto Mesh
N+2.70	F96	Auto Mesh
N+2.70	F99	Auto Mesh
N+2.70	F100	Auto Mesh
N+2.70	F101	Auto Mesh
N+2.70	F132	Auto Mesh
N+2.70	F135	Auto Mesh
N+2.70	F136	Auto Mesh
N+2.70	F148	Auto Mesh
N+5.45	W1	No Auto Mesh
N+5.45	W2	No Auto Mesh
N+5.45	W3	No Auto Mesh
N+5.45	W4	No Auto Mesh
N+5.45	W8	No Auto Mesh
N+5.45	W9	No Auto Mesh
N+5.45	W10	No Auto Mesh
N+5.45	W11	No Auto Mesh
N+5.45	W14	No Auto Mesh
N+5.45	W15	No Auto Mesh
N+5.45	W18	No Auto Mesh
N+5.45	W19	No Auto Mesh
N+5.45	W20	No Auto Mesh
N+5.45	W21	No Auto Mesh
N+5.45	W24	No Auto Mesh
N+5.45	W25	No Auto Mesh
N+5.45	W28	No Auto Mesh
N+5.45	W29	No Auto Mesh
N+5.45	W30	No Auto Mesh
N+5.45	W31	No Auto Mesh
N+5.45	W34	No Auto Mesh
N+5.45	W35	No Auto Mesh
N+5.45	W38	No Auto Mesh
N+5.45	W39	No Auto Mesh
N+5.45	W40	No Auto Mesh
N+5.45	W41	No Auto Mesh
N+5.45	W44	No Auto Mesh
N+5.45	W45	No Auto Mesh
N+5.45	W48	No Auto Mesh
N+5.45	W49	No Auto Mesh
N+5.45	W50	No Auto Mesh
N+5.45	W51	No Auto Mesh
N+5.45	W54	No Auto Mesh
N+5.45	W55	No Auto Mesh
N+5.45	W58	No Auto Mesh
N+5.45	W59	No Auto Mesh
N+5.45	W60	No Auto Mesh
N+5.45	W61	No Auto Mesh
N+5.45	W64	No Auto Mesh
N+5.45	W65	No Auto Mesh

N+5.45	W68	No Auto Mesh
N+5.45	W69	No Auto Mesh
N+5.45	W70	No Auto Mesh
N+5.45	W71	No Auto Mesh
N+5.45	W74	No Auto Mesh
N+5.45	W75	No Auto Mesh
N+5.45	W78	No Auto Mesh
N+5.45	W79	No Auto Mesh
N+5.45	W81	No Auto Mesh
N+2.70	W3	No Auto Mesh
N+2.70	W5	No Auto Mesh
N+2.70	W6	No Auto Mesh
N+2.70	W7	No Auto Mesh
N+2.70	W12	No Auto Mesh
N+2.70	W13	No Auto Mesh
N+2.70	W14	No Auto Mesh
N+2.70	W15	No Auto Mesh
N+2.70	W16	No Auto Mesh
N+2.70	W17	No Auto Mesh
N+2.70	W22	No Auto Mesh
N+2.70	W23	No Auto Mesh
N+2.70	W24	No Auto Mesh
N+2.70	W25	No Auto Mesh
N+2.70	W26	No Auto Mesh
N+2.70	W27	No Auto Mesh
N+2.70	W32	No Auto Mesh
N+2.70	W33	No Auto Mesh
N+2.70	W34	No Auto Mesh
N+2.70	W35	No Auto Mesh
N+2.70	W36	No Auto Mesh
N+2.70	W37	No Auto Mesh
N+2.70	W42	No Auto Mesh
N+2.70	W43	No Auto Mesh
N+2.70	W44	No Auto Mesh
N+2.70	W45	No Auto Mesh
N+2.70	W46	No Auto Mesh
N+2.70	W47	No Auto Mesh
N+2.70	W52	No Auto Mesh
N+2.70	W53	No Auto Mesh
N+2.70	W54	No Auto Mesh
N+2.70	W55	No Auto Mesh
N+2.70	W56	No Auto Mesh
N+2.70	W57	No Auto Mesh
N+2.70	W62	No Auto Mesh
N+2.70	W63	No Auto Mesh
N+2.70	W64	No Auto Mesh
N+2.70	W65	No Auto Mesh
N+2.70	W66	No Auto Mesh
N+2.70	W67	No Auto Mesh
N+2.70	W72	No Auto Mesh
N+2.70	W73	No Auto Mesh
N+2.70	W74	No Auto Mesh
N+2.70	W75	No Auto Mesh
N+2.70	W76	No Auto Mesh
N+2.70	W77	No Auto Mesh
N+2.70	W80	No Auto Mesh
N+2.70	W81	No Auto Mesh
N+2.70	W82	No Auto Mesh
N+1.375	W3	No Auto Mesh
N+1.375	W5	No Auto Mesh
N+1.375	W6	No Auto Mesh
N+1.375	W7	No Auto Mesh
N+1.375	W12	No Auto Mesh
N+1.375	W13	No Auto Mesh
N+1.375	W14	No Auto Mesh
N+1.375	W15	No Auto Mesh
N+1.375	W16	No Auto Mesh
N+1.375	W17	No Auto Mesh
N+1.375	W22	No Auto Mesh
N+1.375	W23	No Auto Mesh
N+1.375	W24	No Auto Mesh
N+1.375	W25	No Auto Mesh
N+1.375	W26	No Auto Mesh
N+1.375	W27	No Auto Mesh
N+1.375	W32	No Auto Mesh
N+1.375	W33	No Auto Mesh
N+1.375	W34	No Auto Mesh
N+1.375	W35	No Auto Mesh

N+1.375	W36	No Auto Mesh
N+1.375	W37	No Auto Mesh
N+1.375	W42	No Auto Mesh
N+1.375	W43	No Auto Mesh
N+1.375	W44	No Auto Mesh
N+1.375	W45	No Auto Mesh
N+1.375	W46	No Auto Mesh
N+1.375	W47	No Auto Mesh
N+1.375	W52	No Auto Mesh
N+1.375	W53	No Auto Mesh
N+1.375	W54	No Auto Mesh
N+1.375	W55	No Auto Mesh
N+1.375	W56	No Auto Mesh
N+1.375	W57	No Auto Mesh
N+1.375	W62	No Auto Mesh
N+1.375	W63	No Auto Mesh
N+1.375	W64	No Auto Mesh
N+1.375	W65	No Auto Mesh
N+1.375	W66	No Auto Mesh
N+1.375	W67	No Auto Mesh
N+1.375	W72	No Auto Mesh
N+1.375	W73	No Auto Mesh
N+1.375	W74	No Auto Mesh
N+1.375	W75	No Auto Mesh
N+1.375	W76	No Auto Mesh
N+1.375	W77	No Auto Mesh
N+1.375	W80	No Auto Mesh
N+1.375	W81	No Auto Mesh
N+1.375	W82	No Auto Mesh

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

CASE	STORY	AREA	AREATYPE	DIRECTION	LOAD
VIVA	N+5.45	F2	Floor	Gravity	1.8000
VIVA	N+5.45	F3	Floor	Gravity	1.8000
VIVA	N+5.45	F4	Floor	Gravity	1.8000
VIVA	N+5.45	F5	Floor	Gravity	1.8000
VIVA	N+5.45	F6	Floor	Gravity	1.8000
VIVA	N+5.45	F12	Floor	Gravity	1.8000
VIVA	N+5.45	F13	Floor	Gravity	1.8000
VIVA	N+5.45	F14	Floor	Gravity	1.8000
VIVA	N+5.45	F15	Floor	Gravity	1.8000
VIVA	N+5.45	F16	Floor	Gravity	1.8000
VIVA	N+5.45	F22	Floor	Gravity	1.8000
VIVA	N+5.45	F23	Floor	Gravity	1.8000
VIVA	N+5.45	F30	Floor	Gravity	1.8000
VIVA	N+5.45	F31	Floor	Gravity	1.8000
VIVA	N+5.45	F36	Floor	Gravity	1.8000
VIVA	N+5.45	F37	Floor	Gravity	1.8000
VIVA	N+5.45	F40	Floor	Gravity	1.8000
VIVA	N+5.45	F41	Floor	Gravity	1.8000
VIVA	N+5.45	F46	Floor	Gravity	1.8000
VIVA	N+5.45	F47	Floor	Gravity	1.8000
VIVA	N+5.45	F50	Floor	Gravity	1.8000
VIVA	N+5.45	F51	Floor	Gravity	1.8000
VIVA	N+5.45	F56	Floor	Gravity	1.8000
VIVA	N+5.45	F57	Floor	Gravity	1.8000
VIVA	N+5.45	F60	Floor	Gravity	1.8000
VIVA	N+5.45	F61	Floor	Gravity	1.8000
VIVA	N+5.45	F67	Floor	Gravity	1.8000
VIVA	N+5.45	F71	Floor	Gravity	1.8000
VIVA	N+5.45	F76	Floor	Gravity	1.8000
VIVA	N+5.45	F77	Floor	Gravity	1.8000
VIVA	N+5.45	F80	Floor	Gravity	1.8000
VIVA	N+5.45	F81	Floor	Gravity	1.8000
VIVA	N+5.45	F86	Floor	Gravity	1.8000
VIVA	N+5.45	F90	Floor	Gravity	1.8000
VIVA	N+5.45	F92	Floor	Gravity	1.8000
VIVA	N+5.45	F95	Floor	Gravity	1.8000
VIVA	N+5.45	F98	Floor	Gravity	1.8000
VIVA	N+5.45	F102	Floor	Gravity	1.8000
VIVA	N+5.45	F103	Floor	Gravity	1.8000
VIVA	N+5.45	F104	Floor	Gravity	1.8000
VIVA	N+5.45	F152	Floor	Gravity	1.8000
VIVA	N+5.45	F153	Floor	Gravity	1.8000

VIVA	N+5.45	F154	Floor	Gravity	1.8000
VIVA	N+5.45	F155	Floor	Gravity	1.8000
VIVA	N+5.45	F156	Floor	Gravity	1.8000
VIVA	N+5.45	F162	Floor	Gravity	1.8000
VIVA	N+5.45	F167	Floor	Gravity	1.8000
VIVA	N+5.45	F168	Floor	Gravity	1.8000
VIVA	N+5.45	F169	Floor	Gravity	1.8000
VIVA	N+5.45	F170	Floor	Gravity	1.8000
VIVA	N+2.70	F1	Floor	Gravity	2.0000
VIVA	N+2.70	F2	Floor	Gravity	2.0000
VIVA	N+2.70	F3	Floor	Gravity	2.0000
VIVA	N+2.70	F4	Floor	Gravity	2.0000
VIVA	N+2.70	F8	Floor	Gravity	5.0000
VIVA	N+2.70	F9	Floor	Gravity	5.0000
VIVA	N+2.70	F10	Floor	Gravity	5.0000
VIVA	N+2.70	F11	Floor	Gravity	5.0000
VIVA	N+2.70	F18	Floor	Gravity	5.0000
VIVA	N+2.70	F20	Floor	Gravity	5.0000
VIVA	N+2.70	F24	Floor	Gravity	2.0000
VIVA	N+2.70	F25	Floor	Gravity	2.0000
VIVA	N+2.70	F28	Floor	Gravity	2.0000
VIVA	N+2.70	F29	Floor	Gravity	2.0000
VIVA	N+2.70	F32	Floor	Gravity	5.0000
VIVA	N+2.70	F33	Floor	Gravity	5.0000
VIVA	N+2.70	F34	Floor	Gravity	2.0000
VIVA	N+2.70	F35	Floor	Gravity	2.0000
VIVA	N+2.70	F38	Floor	Gravity	2.0000
VIVA	N+2.70	F39	Floor	Gravity	2.0000
VIVA	N+2.70	F42	Floor	Gravity	5.0000
VIVA	N+2.70	F43	Floor	Gravity	5.0000
VIVA	N+2.70	F44	Floor	Gravity	2.0000
VIVA	N+2.70	F45	Floor	Gravity	2.0000
VIVA	N+2.70	F48	Floor	Gravity	2.0000
VIVA	N+2.70	F49	Floor	Gravity	2.0000
VIVA	N+2.70	F52	Floor	Gravity	5.0000
VIVA	N+2.70	F53	Floor	Gravity	5.0000
VIVA	N+2.70	F54	Floor	Gravity	2.0000
VIVA	N+2.70	F55	Floor	Gravity	2.0000
VIVA	N+2.70	F58	Floor	Gravity	2.0000
VIVA	N+2.70	F59	Floor	Gravity	2.0000
VIVA	N+2.70	F62	Floor	Gravity	5.0000
VIVA	N+2.70	F63	Floor	Gravity	5.0000
VIVA	N+2.70	F64	Floor	Gravity	2.0000
VIVA	N+2.70	F65	Floor	Gravity	2.0000
VIVA	N+2.70	F68	Floor	Gravity	2.0000
VIVA	N+2.70	F69	Floor	Gravity	2.0000
VIVA	N+2.70	F72	Floor	Gravity	5.0000
VIVA	N+2.70	F73	Floor	Gravity	5.0000
VIVA	N+2.70	F74	Floor	Gravity	2.0000
VIVA	N+2.70	F75	Floor	Gravity	2.0000
VIVA	N+2.70	F78	Floor	Gravity	2.0000
VIVA	N+2.70	F79	Floor	Gravity	2.0000
VIVA	N+2.70	F82	Floor	Gravity	5.0000
VIVA	N+2.70	F83	Floor	Gravity	5.0000
VIVA	N+2.70	F84	Floor	Gravity	2.0000
VIVA	N+2.70	F85	Floor	Gravity	2.0000
VIVA	N+2.70	F88	Floor	Gravity	2.0000
VIVA	N+2.70	F89	Floor	Gravity	2.0000
VIVA	N+2.70	F91	Floor	Gravity	5.0000
VIVA	N+2.70	F93	Floor	Gravity	5.0000
VIVA	N+2.70	F94	Floor	Gravity	2.0000
VIVA	N+2.70	F96	Floor	Gravity	2.0000
VIVA	N+2.70	F99	Floor	Gravity	5.0000
VIVA	N+2.70	F100	Floor	Gravity	5.0000
VIVA	N+2.70	F101	Floor	Gravity	5.0000
VIVA	N+2.70	F135	Floor	Gravity	5.0000
VIVA	N+2.70	F136	Floor	Gravity	1.8000
VIVA	N+2.70	F148	Floor	Gravity	1.8000

FUERZAS EN VIGAS

BEAM FORCES
UNID: kN-m

Story	Beam	Load	Loc	P	V2	T	M3
N+5.45	B1	ENVOLVENTE MAX	0	0	-10.41	-0.172	-6.154
N+5.45	B1	ENVOLVENTE MAX	4.324	0	23.78	-0.172	-9.754
N+5.45	B1	ENVOLVENTE MIN	0	0	-20.55	-0.541	-13.579
N+5.45	B1	ENVOLVENTE MIN	4.324	0	12.02	-0.541	-20.561
N+2.70	B1	ENVOLVENTE MAX	0	0	-14.4	-0.34	-9.944
N+2.70	B1	ENVOLVENTE MAX	4.324	0	29.44	-0.34	-13.193
N+2.70	B1	ENVOLVENTE MIN	0	0	-26.84	-0.67	-20.226
N+2.70	B1	ENVOLVENTE MIN	4.324	0	15.86	-0.67	-25.862
N+5.45	B2	ENVOLVENTE MAX	0	0	-11.24	-0.013	-9.188
N+5.45	B2	ENVOLVENTE MAX	4.3	0	21.79	-0.013	-8.863
N+5.45	B2	ENVOLVENTE MIN	0	0	-22.1	-0.1	-19.305
N+5.45	B2	ENVOLVENTE MIN	4.3	0	11.09	-0.1	-18.625
N+2.70	B2	ENVOLVENTE MAX	0	0	-15.19	0.046	-12.419
N+2.70	B2	ENVOLVENTE MAX	4.3	0	28.26	0.046	-12.465
N+2.70	B2	ENVOLVENTE MIN	0	0	-28.16	-0.038	-24.281
N+2.70	B2	ENVOLVENTE MIN	4.3	0	15.22	-0.038	-24.492
N+5.45	B3	ENVOLVENTE MAX	0	0	-11.55	-0.001	-9.304
N+5.45	B3	ENVOLVENTE MAX	4.494	0	24.63	-0.001	-11.352
N+5.45	B3	ENVOLVENTE MIN	0	0	-22.69	-0.043	-19.499
N+5.45	B3	ENVOLVENTE MIN	4.494	0	12.47	-0.043	-23.868
N+2.70	B3	ENVOLVENTE MAX	0	0	-15.9	0.104	-13.22
N+2.70	B3	ENVOLVENTE MAX	4.494	0	31.47	0.104	-15.648
N+2.70	B3	ENVOLVENTE MIN	0	0	-29.5	0.021	-25.874
N+2.70	B3	ENVOLVENTE MIN	4.494	0	16.99	0.021	-30.314
N+5.45	B4	ENVOLVENTE MAX	0	0	-15.48	-0.147	-14.804
N+5.45	B4	ENVOLVENTE MAX	5.241	0	29.88	-0.147	-14.039
N+5.45	B4	ENVOLVENTE MIN	0	0	-30.63	-0.268	-30.631
N+5.45	B4	ENVOLVENTE MIN	5.241	0	15.18	-0.268	-28.654
N+2.70	B4	ENVOLVENTE MAX	0	0	-21.78	1.526	-21.741
N+2.70	B4	ENVOLVENTE MAX	5.241	0	38.04	1.526	-18.199
N+2.70	B4	ENVOLVENTE MIN	0	0	-40.42	0.847	-41.775
N+2.70	B4	ENVOLVENTE MIN	5.241	0	20.48	0.847	-35.543
N+5.45	B5	ENVOLVENTE MAX	0	0	-8.39	2.809	-6.808
N+5.45	B5	ENVOLVENTE MAX	3.025	0	7.74	2.809	-0.313
N+5.45	B5	ENVOLVENTE MIN	0	0	-16.31	1.385	-14.46
N+5.45	B5	ENVOLVENTE MIN	3.025	0	3.98	1.385	-1.79
N+5.45	B6	ENVOLVENTE MAX	0	0	-15.91	-0.251	-9.524
N+5.45	B6	ENVOLVENTE MAX	0.928	0	-11.39	-0.251	7.066
N+5.45	B6	ENVOLVENTE MIN	0	0	-32.67	-0.54	-20.238
N+5.45	B6	ENVOLVENTE MIN	0.928	0	-24.17	-0.54	3.35
N+2.70	B6	ENVOLVENTE MAX	0	0	8.74	4.639	0.714
N+2.70	B6	ENVOLVENTE MAX	0.928	0	14.85	4.639	-5.148
N+2.70	B6	ENVOLVENTE MIN	0	0	3.82	2.455	-0.486
N+2.70	B6	ENVOLVENTE MIN	0.928	0	7.75	2.455	-10.042
N+5.45	B7	ENVOLVENTE MAX	0	0	7.74	1.79	2.809
N+5.45	B7	ENVOLVENTE MAX	0.928	0	13.2	1.79	-3.553
N+5.45	B7	ENVOLVENTE MIN	0	0	3.98	0.313	1.385
N+5.45	B7	ENVOLVENTE MIN	0.928	0	7.14	0.313	-6.431
N+1.375	B8	ENVOLVENTE MAX	0	-2.13	-1.64	-0.024	0.202
N+1.375	B8	ENVOLVENTE MAX	3.025	-2.13	4.18	-0.024	-0.33
N+1.375	B8	ENVOLVENTE MIN	0	-4.32	-3.62	-0.089	-1.869
N+1.375	B8	ENVOLVENTE MIN	3.025	-4.32	1.99	-0.089	-2.718
N+5.45	B9	ENVOLVENTE MAX	0	0	-10.76	0.359	-6.889
N+5.45	B9	ENVOLVENTE MAX	4.251	0	22.44	0.359	-8.647
N+5.45	B9	ENVOLVENTE MIN	0	0	-20.58	0.108	-13.564
N+5.45	B9	ENVOLVENTE MIN	4.251	0	11.65	0.108	-17.508
N+2.70	B9	ENVOLVENTE MAX	0	0.11	-14.49	-0.176	-10.432
N+2.70	B9	ENVOLVENTE MAX	3.781	0.11	18.48	-0.176	-2.678
N+2.70	B9	ENVOLVENTE MAX	3.781	0.84	41.01	-0.176	-2.678
N+2.70	B9	ENVOLVENTE MAX	3.783	0.84	41.02	-0.176	-2.739
N+2.70	B9	ENVOLVENTE MAX	3.783	0.85	41.03	-0.176	-2.739
N+2.70	B9	ENVOLVENTE MAX	4.251	0.85	42.72	-0.176	-13.156
N+2.70	B9	ENVOLVENTE MIN	0	-0.11	-26.32	-0.449	-19.763
N+2.70	B9	ENVOLVENTE MIN	3.781	-0.11	10.31	-0.449	-4.931
N+2.70	B9	ENVOLVENTE MIN	3.781	-0.84	21.69	-0.449	-4.931
N+2.70	B9	ENVOLVENTE MIN	3.783	-0.84	21.7	-0.449	-5.046
N+2.70	B9	ENVOLVENTE MIN	3.783	-0.85	21.7	-0.449	-5.046
N+2.70	B9	ENVOLVENTE MIN	4.251	-0.85	22.85	-0.449	-24.619
N+5.45	B10	ENVOLVENTE MAX	0	0	-16.26	-0.003	-10.503

N+5.45	B10	ENVOLVENTE MAX	4.251	0	41.58	-0.003	-19.278
N+5.45	B10	ENVOLVENTE MIN	0	0	-33.44	-0.07	-22.098
N+5.45	B10	ENVOLVENTE MIN	4.251	0	20.37	-0.07	-39.405
N+2.70	B10	ENVOLVENTE MAX	0	0.02	-24.98	0.582	-18.431
N+2.70	B10	ENVOLVENTE MAX	3.781	0.02	41.33	0.582	-7.908
N+2.70	B10	ENVOLVENTE MAX	3.781	0.15	72.89	0.582	-7.908
N+2.70	B10	ENVOLVENTE MAX	4.251	0.15	75.73	0.582	-25.98
N+2.70	B10	ENVOLVENTE MIN	0	-0.02	-46.63	0.168	-35.104
N+2.70	B10	ENVOLVENTE MIN	3.781	-0.02	21.55	0.168	-16.913
N+2.70	B10	ENVOLVENTE MIN	3.781	-0.15	37.48	0.168	-16.913
N+2.70	B10	ENVOLVENTE MIN	4.251	-0.15	39.22	0.168	-51.931
N+5.45	B11	ENVOLVENTE MAX	0	0	-16.45	0.034	-10.69
N+5.45	B11	ENVOLVENTE MAX	4.251	0	41.16	0.034	-18.613
N+5.45	B11	ENVOLVENTE MIN	0	0	-33.87	0.002	-22.42
N+5.45	B11	ENVOLVENTE MIN	4.251	0	20.18	0.002	-37.913
N+2.70	B11	ENVOLVENTE MAX	0	0	-25.21	0.007	-18.489
N+2.70	B11	ENVOLVENTE MAX	4.251	0	53.29	0.007	-23.317
N+2.70	B11	ENVOLVENTE MIN	0	0	-46.22	-0.034	-34.175
N+2.70	B11	ENVOLVENTE MIN	4.251	0	27.48	-0.034	-49.2
N+5.45	B12	ENVOLVENTE MAX	0	0	-16.31	0.19	-10.47
N+5.45	B12	ENVOLVENTE MAX	4.251	0	41.44	0.19	-18.993
N+5.45	B12	ENVOLVENTE MIN	0	0	-33.59	0.087	-21.984
N+5.45	B12	ENVOLVENTE MIN	4.251	0	20.32	0.087	-38.671
N+2.70	B12	ENVOLVENTE MAX	0	0	-25.12	0.195	-18.516
N+2.70	B12	ENVOLVENTE MAX	4.251	0	53.63	0.195	-23.749
N+2.70	B12	ENVOLVENTE MIN	0	0	-45.88	0.043	-34.005
N+2.70	B12	ENVOLVENTE MIN	4.251	0	27.58	0.043	-50.496
N+5.45	B13	ENVOLVENTE MAX	0	0	-11.39	-0.251	7.066
N+5.45	B13	ENVOLVENTE MAX	3.323	0	39.7	-0.251	-17.328
N+5.45	B13	ENVOLVENTE MIN	0	0	-24.17	-0.54	3.349
N+5.45	B13	ENVOLVENTE MIN	3.323	0	19.56	-0.54	-35.171
N+2.70	B13	ENVOLVENTE MAX	0	0	-14.25	-0.513	-7.1
N+2.70	B13	ENVOLVENTE MAX	3.323	0	23.68	-0.513	-9.766
N+2.70	B13	ENVOLVENTE MIN	0	0	-24.97	-1.462	-12.329
N+2.70	B13	ENVOLVENTE MIN	3.323	0	12.08	-1.462	-22.409
N+5.45	B14	ENVOLVENTE MAX	0	0	-10.33	-0.058	-5.193
N+5.45	B14	ENVOLVENTE MAX	3.323	0	14.63	-0.058	-3.99
N+5.45	B14	ENVOLVENTE MIN	0	0	-20.28	-0.277	-10.015
N+5.45	B14	ENVOLVENTE MIN	3.323	0	7.65	-0.277	-8.243
N+5.45	B15	ENVOLVENTE MAX	0	0	-15.17	-0.638	-9.795
N+5.45	B15	ENVOLVENTE MAX	4.324	0	33.74	-0.638	-13.396
N+5.45	B15	ENVOLVENTE MIN	0	0	-31.01	-1.265	-21.153
N+5.45	B15	ENVOLVENTE MIN	4.324	0	16.53	-1.265	-28.38
N+2.70	B15	ENVOLVENTE MAX	0	0	-12.11	-0.049	-7.864
N+2.70	B15	ENVOLVENTE MAX	4.324	0	23.23	-0.049	-10.115
N+2.70	B15	ENVOLVENTE MIN	0	0	-21.36	-0.564	-14.88
N+2.70	B15	ENVOLVENTE MIN	4.324	0	12.87	-0.564	-20.01
N+5.45	B16	ENVOLVENTE MAX	0	0	-15.71	0.306	-13.015
N+5.45	B16	ENVOLVENTE MAX	4.3	0	31.64	0.306	-12.637
N+5.45	B16	ENVOLVENTE MIN	0	0	-32.08	0.125	-27.756
N+5.45	B16	ENVOLVENTE MIN	4.3	0	15.56	0.125	-26.805
N+2.70	B16	ENVOLVENTE MAX	0	0	-20.94	-0.106	-16.398
N+2.70	B16	ENVOLVENTE MAX	4.3	0	47.16	-0.106	-18.022
N+2.70	B16	ENVOLVENTE MIN	0	0	-44.96	-0.763	-35.658
N+2.70	B16	ENVOLVENTE MIN	4.3	0	21.71	-0.763	-40.394
N+5.45	B17	ENVOLVENTE MAX	0	0	-16.08	-0.055	-13.122
N+5.45	B17	ENVOLVENTE MAX	4.494	0	35.44	-0.055	-15.908
N+5.45	B17	ENVOLVENTE MIN	0	0	-32.83	-0.139	-27.95
N+5.45	B17	ENVOLVENTE MIN	4.494	0	17.32	-0.139	-33.816
N+2.70	B17	ENVOLVENTE MAX	0	0	-22.25	-0.077	-18.629
N+2.70	B17	ENVOLVENTE MAX	4.494	0	50.55	-0.077	-21.339
N+2.70	B17	ENVOLVENTE MIN	0	0	-48.05	-0.283	-41.479
N+2.70	B17	ENVOLVENTE MIN	4.494	0	23.46	-0.283	-47.081
N+5.45	B18	ENVOLVENTE MAX	0	0	-21.37	0.436	-20.633
N+5.45	B18	ENVOLVENTE MAX	5.241	0	42.01	0.436	-18.608
N+5.45	B18	ENVOLVENTE MIN	0	0	-43.67	0.201	-43.404
N+5.45	B18	ENVOLVENTE MIN	5.241	0	20.57	0.201	-39.033
N+2.70	B18	ENVOLVENTE MAX	0	0	-29.39	-0.441	-29.032
N+2.70	B18	ENVOLVENTE MAX	5.241	0	60.6	-0.441	-26.334
N+2.70	B18	ENVOLVENTE MIN	0	0	-62.84	-0.703	-63.068
N+2.70	B18	ENVOLVENTE MIN	5.241	0	28.34	-0.703	-57.209
N+5.45	B19	ENVOLVENTE MAX	0	0	-10.91	0.541	-8.955
N+5.45	B19	ENVOLVENTE MAX	3.025	0	14.63	0.541	-2.563
N+5.45	B19	ENVOLVENTE MIN	0	0	-22.47	0.306	-19.48
N+5.45	B19	ENVOLVENTE MIN	3.025	0	7	0.306	-6.82
N+2.70	B19	ENVOLVENTE MAX	0	0	-8.57	1.886	-7.905

N+2.70	B19	ENVOLVENTE MAX	3.025	0	11.49	1.886	-0.811
N+2.70	B19	ENVOLVENTE MIN	0	0	-20.67	0.514	-19.698
N+2.70	B19	ENVOLVENTE MIN	3.025	0	4.23	0.514	-4.755
N+2.70	B20	ENVOLVENTE MAX	0	0	-20.41	-3.084	-22.242
N+2.70	B20	ENVOLVENTE MAX	1.35	0	-13.28	-3.084	1.113
N+2.70	B20	ENVOLVENTE MIN	0	0	-45.83	-6.333	-50.993
N+2.70	B20	ENVOLVENTE MIN	1.35	0	-31.36	-6.333	0.489
N+2.70	B21	ENVOLVENTE MAX	0	0	-19.56	0	-21.591
N+2.70	B21	ENVOLVENTE MAX	1.35	0	-12.43	0	0
N+2.70	B21	ENVOLVENTE MIN	0	0	-53.47	0	-60.843
N+2.70	B21	ENVOLVENTE MIN	1.35	0	-36.67	0	0
N+2.70	B22	ENVOLVENTE MAX	0	0	-21.13	0	-23.713
N+2.70	B22	ENVOLVENTE MAX	1.35	0	-14	0	0
N+2.70	B22	ENVOLVENTE MIN	0	0	-58.11	0	-67.105
N+2.70	B22	ENVOLVENTE MIN	1.35	0	-41.31	0	0
N+2.70	B23	ENVOLVENTE MAX	0	0	-18.01	1.306	-18.574
N+2.70	B23	ENVOLVENTE MAX	1.35	0	-10.88	1.306	2.624
N+2.70	B23	ENVOLVENTE MIN	0	0	-48.22	0.127	-51.131
N+2.70	B23	ENVOLVENTE MIN	1.35	0	-31.42	0.127	0.916
N+5.45	B24	ENVOLVENTE MAX	0	0	-18.09	1.244	-22.239
N+5.45	B24	ENVOLVENTE MAX	1.567	0	-11.09	1.244	1.228
N+5.45	B24	ENVOLVENTE MAX	1.567	0.16	-6.08	1.244	1.228
N+5.45	B24	ENVOLVENTE MAX	1.6	0.16	-6.02	1.244	1.643
N+5.45	B24	ENVOLVENTE MIN	0	0	-36.66	-0.01	-46.147
N+5.45	B24	ENVOLVENTE MIN	1.567	0	-23.72	-0.01	0.629
N+5.45	B24	ENVOLVENTE MIN	1.567	-0.16	-12.48	-0.01	0.629
N+5.45	B24	ENVOLVENTE MIN	1.6	-0.16	-12.39	-0.01	0.845
N+5.45	B25	ENVOLVENTE MAX	0	0	-16.22	0	-20.238
N+5.45	B25	ENVOLVENTE MAX	1.6	0	-9.08	0	0
N+5.45	B25	ENVOLVENTE MIN	0	0	-33.6	0	-43.193
N+5.45	B25	ENVOLVENTE MIN	1.6	0	-20.39	0	0
N+5.45	B26	ENVOLVENTE MAX	0	0	-17.41	0	-22.138
N+5.45	B26	ENVOLVENTE MAX	1.6	0	-10.26	0	0
N+5.45	B26	ENVOLVENTE MIN	0	0	-36.27	0	-47.463
N+5.45	B26	ENVOLVENTE MIN	1.6	0	-23.06	0	0
N+5.45	B27	ENVOLVENTE MAX	0	0	-16.52	-0.012	-19.383
N+5.45	B27	ENVOLVENTE MAX	1.54	0	-9.65	-0.012	1.557
N+5.45	B27	ENVOLVENTE MAX	1.54	0.1	-6.47	-0.012	1.557
N+5.45	B27	ENVOLVENTE MAX	1.6	0.1	-6.35	-0.012	2.429
N+5.45	B27	ENVOLVENTE MIN	0	0	-34.36	-1.131	-41.681
N+5.45	B27	ENVOLVENTE MIN	1.54	0	-21.65	-1.131	0.774
N+5.45	B27	ENVOLVENTE MIN	1.54	-0.1	-14.51	-1.131	0.774
N+5.45	B27	ENVOLVENTE MIN	1.6	-0.1	-14.34	-1.131	1.206
N+5.45	B28	ENVOLVENTE MAX	0	0	11.5	-0.664	1.942
N+5.45	B28	ENVOLVENTE MAX	0.208	0	12.13	-0.664	0.629
N+5.45	B28	ENVOLVENTE MAX	0.208	1.44	1.25	-0.571	0.19
N+5.45	B28	ENVOLVENTE MAX	0.245	1.44	1.32	-0.571	0.143
N+5.45	B28	ENVOLVENTE MAX	0.245	0.03	1.44	-0.571	0.143
N+5.45	B28	ENVOLVENTE MAX	1.967	0.03	9.96	-0.571	-2.678
N+5.45	B28	ENVOLVENTE MIN	0	0	4.41	-1.592	-1.225
N+5.45	B28	ENVOLVENTE MIN	0.208	0	4.85	-1.592	-3.169
N+5.45	B28	ENVOLVENTE MIN	0.208	-1.44	-3.56	-1.867	-5.198
N+5.45	B28	ENVOLVENTE MIN	0.245	-1.44	-3.46	-1.867	-5.069
N+5.45	B28	ENVOLVENTE MIN	0.245	-0.03	-3.25	-1.867	-5.069
N+5.45	B28	ENVOLVENTE MIN	1.967	-0.03	2.22	-1.867	-10.443
N+2.70	B28	ENVOLVENTE MAX	0	0	5.59	-0.819	1.211
N+2.70	B28	ENVOLVENTE MAX	0.483	0	7.39	-0.819	-0.609
N+2.70	B28	ENVOLVENTE MAX	0.483	0	2.95	1.817	0.679
N+2.70	B28	ENVOLVENTE MAX	1.967	0	10.87	1.817	-2.28
N+2.70	B28	ENVOLVENTE MIN	0	0	0.67	-2.119	-3.172
N+2.70	B28	ENVOLVENTE MIN	0.483	0	1.93	-2.119	-5.059
N+2.70	B28	ENVOLVENTE MIN	0.483	0	-3.04	0.522	-3.899
N+2.70	B28	ENVOLVENTE MIN	1.967	0	2.45	0.522	-10.071
N+5.45	B29	ENVOLVENTE MAX	0	0.04	-2.08	0.311	-1.153
N+5.45	B29	ENVOLVENTE MAX	1.685	0.04	3.65	0.311	0.736
N+5.45	B29	ENVOLVENTE MAX	1.685	0.98	4.25	0.311	0.736
N+5.45	B29	ENVOLVENTE MAX	1.751	0.98	4.43	0.311	0.759
N+5.45	B29	ENVOLVENTE MAX	1.751	0	-1.6	0.139	0.968
N+5.45	B29	ENVOLVENTE MAX	2.086	0	-0.85	0.139	1.736
N+5.45	B29	ENVOLVENTE MIN	0	-0.04	-8.58	-0.24	-6.896
N+5.45	B29	ENVOLVENTE MIN	1.685	-0.04	-0.73	-0.24	-2.939
N+5.45	B29	ENVOLVENTE MIN	1.685	-0.98	-0.42	-0.24	-2.939
N+5.45	B29	ENVOLVENTE MIN	1.751	-0.98	-0.29	-0.24	-3.226
N+5.45	B29	ENVOLVENTE MIN	1.751	0	-4.2	-0.423	-1.738
N+5.45	B29	ENVOLVENTE MIN	2.086	0	-3.11	-0.423	-1.077
N+2.70	B29	ENVOLVENTE MAX	0	0	0.16	0.141	2.175

N+2.70	B29	ENVOLVENTE MAX	1.478	0	8.09	0.141	0.483
N+2.70	B29	ENVOLVENTE MAX	1.478	0	1.21	0.413	0.246
N+2.70	B29	ENVOLVENTE MAX	2.086	0	3.21	0.413	0.116
N+2.70	B29	ENVOLVENTE MIN	0	0	-6.38	-0.475	-2.277
N+2.70	B29	ENVOLVENTE MIN	1.478	0	0.64	-0.475	-3.263
N+2.70	B29	ENVOLVENTE MIN	1.478	0	-1.5	-0.379	-2.729
N+2.70	B29	ENVOLVENTE MIN	2.086	0	0.99	-0.379	-3.935
N+2.70	B30	ENVOLVENTE MAX	0	0	7.93	0.157	-1.461
N+2.70	B30	ENVOLVENTE MAX	0.891	0	11.77	0.157	-5.019
N+2.70	B30	ENVOLVENTE MAX	0.891	0	-12.76	0.251	-6.062
N+2.70	B30	ENVOLVENTE MAX	1.212	0	-11.25	0.251	-2.208
N+2.70	B30	ENVOLVENTE MAX	1.212	0	-11.25	0.251	-2.208
N+2.70	B30	ENVOLVENTE MAX	1.56	0	-9.58	0.251	2.15
N+2.70	B30	ENVOLVENTE MAX	1.56	0	-5.67	-0.489	2.274
N+2.70	B30	ENVOLVENTE MAX	4.94	0	13.51	-0.489	-3.084
N+2.70	B30	ENVOLVENTE MIN	0	0	1.49	-0.118	-4.356
N+2.70	B30	ENVOLVENTE MIN	0.891	0	3.94	-0.118	-12.447
N+2.70	B30	ENVOLVENTE MIN	0.891	0	-26.79	-0.11	-13.958
N+2.70	B30	ENVOLVENTE MIN	1.212	0	-23.91	-0.11	-5.818
N+2.70	B30	ENVOLVENTE MIN	1.212	0	-23.91	-0.11	-5.818
N+2.70	B30	ENVOLVENTE MIN	1.56	0	-20.75	-0.11	0.498
N+2.70	B30	ENVOLVENTE MIN	1.56	0	-10.33	-1.113	0.285
N+2.70	B30	ENVOLVENTE MIN	4.94	0	7.23	-1.113	-6.333
N+2.70	B31	ENVOLVENTE MAX	0	0	-3.25	2.624	-0.127
N+2.70	B31	ENVOLVENTE MAX	1.751	0	7.27	2.624	3.055
N+2.70	B31	ENVOLVENTE MAX	1.751	0	17.29	0.654	2.812
N+2.70	B31	ENVOLVENTE MAX	2.5	0	26.61	0.654	-4.094
N+2.70	B31	ENVOLVENTE MAX	2.5	0	-4.98	0.355	-3.964
N+2.70	B31	ENVOLVENTE MAX	3.626	0	-1.34	0.355	0.664
N+2.70	B31	ENVOLVENTE MIN	0	0	-8.93	0.916	-1.306
N+2.70	B31	ENVOLVENTE MIN	1.751	0	1.87	0.916	0.678
N+2.70	B31	ENVOLVENTE MIN	1.751	0	5.91	0.225	0.681
N+2.70	B31	ENVOLVENTE MIN	2.5	0	9.47	0.225	-13.627
N+2.70	B31	ENVOLVENTE MIN	2.5	0	-16.63	0.066	-12.979
N+2.70	B31	ENVOLVENTE MIN	3.626	0	-7.67	0.066	-0.879
N+2.70	B32	ENVOLVENTE MAX	0	0	43.24	0.536	-0.026
N+2.70	B32	ENVOLVENTE MAX	0.506	0	44.55	0.536	-7.527
N+2.70	B32	ENVOLVENTE MAX	0.506	0	-0.36	1.016	-0.086
N+2.70	B32	ENVOLVENTE MAX	1.106	0	1.65	1.016	-0.106
N+2.70	B32	ENVOLVENTE MIN	0	0	14.45	0.042	-0.482
N+2.70	B32	ENVOLVENTE MIN	0.506	0	15.16	0.042	-22.688
N+2.70	B32	ENVOLVENTE MIN	0.506	0	-1.08	0.316	-0.247
N+2.70	B32	ENVOLVENTE MIN	1.106	0	0.64	0.316	-0.457
N+2.70	B33	ENVOLVENTE MAX	0	0	0	-0.224	-0.023
N+2.70	B33	ENVOLVENTE MAX	0.003	0	0	-0.224	-0.023
N+2.70	B33	ENVOLVENTE MAX	0.003	0	-0.32	-0.223	-0.081
N+2.70	B33	ENVOLVENTE MAX	0.6	0	0.7	-0.223	-0.081
N+2.70	B33	ENVOLVENTE MAX	0.6	0	-17.56	-0.093	-10.92
N+2.70	B33	ENVOLVENTE MAX	1.18	0	-16.7	-0.093	-0.642
N+2.70	B33	ENVOLVENTE MIN	0	0	0	-0.876	-0.411
N+2.70	B33	ENVOLVENTE MIN	0.003	0	0	-0.876	-0.411
N+2.70	B33	ENVOLVENTE MIN	0.003	0	-0.98	-0.876	-0.386
N+2.70	B33	ENVOLVENTE MIN	0.6	0	0.17	-0.876	-0.197
N+2.70	B33	ENVOLVENTE MIN	0.6	0	-39.93	-0.604	-24.146
N+2.70	B33	ENVOLVENTE MIN	1.18	0	-38.46	-0.604	-1.448
N+5.45	B34	ENVOLVENTE MAX	0	0	14.88	-0.506	1.369
N+5.45	B34	ENVOLVENTE MAX	0.384	0	15.49	-0.506	-1.521
N+5.45	B34	ENVOLVENTE MAX	0.384	0	1.05	-0.187	-3.691
N+5.45	B34	ENVOLVENTE MAX	0.481	0	1.23	-0.187	-3.76
N+5.45	B34	ENVOLVENTE MAX	0.481	0	-6.54	0.428	-6.286
N+5.45	B34	ENVOLVENTE MAX	2.098	0	-2.97	0.428	2.301
N+5.45	B34	ENVOLVENTE MAX	2.098	0	-0.94	-0.845	2.466
N+5.45	B34	ENVOLVENTE MAX	5.054	0	2.87	-0.845	1.244
N+5.45	B34	ENVOLVENTE MIN	0	0	3.6	-1.606	-0.052
N+5.45	B34	ENVOLVENTE MIN	0.384	0	4.04	-1.606	-4.469
N+5.45	B34	ENVOLVENTE MIN	0.384	0	0.66	-0.665	-7.642
N+5.45	B34	ENVOLVENTE MIN	0.481	0	0.77	-0.665	-7.723
N+5.45	B34	ENVOLVENTE MIN	0.481	0	-12.14	0.218	-12.549
N+5.45	B34	ENVOLVENTE MIN	2.098	0	-5.56	0.218	1.051
N+5.45	B34	ENVOLVENTE MIN	2.098	0	-1.9	-1.643	0.938
N+5.45	B34	ENVOLVENTE MIN	5.054	0	1.6	-1.643	-0.01
N+5.45	B35	ENVOLVENTE MAX	0	0	-0.75	2.429	1.131
N+5.45	B35	ENVOLVENTE MAX	1.327	0	0.74	2.429	2.019
N+5.45	B35	ENVOLVENTE MAX	1.327	0	3.8	-0.002	1.738
N+5.45	B35	ENVOLVENTE MAX	2.944	0	10.53	-0.002	-4.567
N+5.45	B35	ENVOLVENTE MAX	2.944	0	-1.02	0.925	-2.893

N+5.45	B35	ENVOLVENTE MAX	3.118	0	-0.79	0.925	-2.735
N+5.45	B35	ENVOLVENTE MAX	3.118	0	-2.1	1.064	-1.323
N+5.45	B35	ENVOLVENTE MAX	3.738	0	-1.34	1.064	1.27
N+5.45	B35	ENVOLVENTE MIN	0	0	-2.22	1.206	0.012
N+5.45	B35	ENVOLVENTE MIN	1.327	0	-0.34	1.206	0.828
N+5.45	B35	ENVOLVENTE MIN	1.327	0	1.62	-0.21	0.894
N+5.45	B35	ENVOLVENTE MIN	2.944	0	5.26	-0.21	-10.31
N+5.45	B35	ENVOLVENTE MIN	2.944	0	-2.39	0.348	-6.686
N+5.45	B35	ENVOLVENTE MIN	3.118	0	-2.05	0.348	-6.335
N+5.45	B35	ENVOLVENTE MIN	3.118	0	-9.12	0.341	-4.05
N+5.45	B35	ENVOLVENTE MIN	3.738	0	-8.02	0.341	-0.254
N+5.45	B36	ENVOLVENTE MAX	0	0	-0.07	1.46	0.007
N+5.45	B36	ENVOLVENTE MAX	0.161	0	0.15	1.46	0.006
N+5.45	B36	ENVOLVENTE MAX	0.161	0.76	-0.37	1.46	-0.042
N+5.45	B36	ENVOLVENTE MAX	0.6	0.76	0.99	1.46	-0.054
N+5.45	B36	ENVOLVENTE MAX	0.6	3.44	-0.4	0.138	0.055
N+5.45	B36	ENVOLVENTE MAX	0.976	3.44	0.72	0.138	0.044
N+5.45	B36	ENVOLVENTE MAX	0.976	0	-1.18	0.138	-0.246
N+5.45	B36	ENVOLVENTE MAX	2.5	0	1.49	0.138	-0.216
N+5.45	B36	ENVOLVENTE MAX	2.5	0	-0.2	0.14	0.036
N+5.45	B36	ENVOLVENTE MAX	3	0	0.39	0.14	0.048
N+5.45	B36	ENVOLVENTE MIN	0	0	-0.12	0.583	0.002
N+5.45	B36	ENVOLVENTE MIN	0.161	0	0.09	0.583	0.001
N+5.45	B36	ENVOLVENTE MIN	0.161	-2.95	-0.69	0.584	-0.083
N+5.45	B36	ENVOLVENTE MIN	0.6	-2.95	0.53	0.584	-0.115
N+5.45	B36	ENVOLVENTE MIN	0.6	-0.88	-0.77	0.003	-0.077
N+5.45	B36	ENVOLVENTE MIN	0.976	-0.88	0.37	0.003	-0.069
N+5.45	B36	ENVOLVENTE MIN	0.976	0	-2.08	0.002	-0.467
N+5.45	B36	ENVOLVENTE MIN	2.5	0	0.91	0.002	-0.432
N+5.45	B36	ENVOLVENTE MIN	2.5	0	-0.37	0.003	-0.087
N+5.45	B36	ENVOLVENTE MIN	3	0	0.22	0.003	-0.111
N+5.45	B37	ENVOLVENTE MAX	0	0	-0.22	-0.021	0.05
N+5.45	B37	ENVOLVENTE MAX	0.5	0	0.37	-0.021	0.036
N+5.45	B37	ENVOLVENTE MAX	0.5	0	-0.95	-0.019	-0.245
N+5.45	B37	ENVOLVENTE MAX	2.095	0	2.25	-0.019	-0.285
N+5.45	B37	ENVOLVENTE MAX	2.095	0	-0.29	-0.02	0.038
N+5.45	B37	ENVOLVENTE MAX	2.403	0	0.58	-0.02	0.043
N+5.45	B37	ENVOLVENTE MAX	2.403	0	-0.19	-0.513	-0.047
N+5.45	B37	ENVOLVENTE MAX	2.57	0	0.33	-0.513	-0.046
N+5.45	B37	ENVOLVENTE MAX	2.57	0	-0.39	-0.513	-0.038
N+5.45	B37	ENVOLVENTE MAX	2.911	0	0.4	-0.513	-0.026
N+5.45	B37	ENVOLVENTE MAX	2.911	0	-0.05	-0.513	0.019
N+5.45	B37	ENVOLVENTE MAX	3	0	0.06	-0.513	0.02
N+5.45	B37	ENVOLVENTE MIN	0	0	-0.38	-0.197	-0.103
N+5.45	B37	ENVOLVENTE MIN	0.5	0	0.21	-0.197	-0.084
N+5.45	B37	ENVOLVENTE MIN	0.5	0	-1.57	-0.195	-0.477
N+5.45	B37	ENVOLVENTE MIN	2.095	0	1.26	-0.195	-0.551
N+5.45	B37	ENVOLVENTE MIN	2.095	0	-0.56	-0.196	-0.081
N+5.45	B37	ENVOLVENTE MIN	2.403	0	0.3	-0.196	-0.087
N+5.45	B37	ENVOLVENTE MIN	2.403	0	-0.36	-1.267	-0.118
N+5.45	B37	ENVOLVENTE MIN	2.57	0	0.17	-1.267	-0.114
N+5.45	B37	ENVOLVENTE MIN	2.57	0	-0.72	-1.267	-0.085
N+5.45	B37	ENVOLVENTE MIN	2.911	0	0.23	-1.267	-0.058
N+5.45	B37	ENVOLVENTE MIN	2.911	0	-0.08	-1.267	0.004
N+5.45	B37	ENVOLVENTE MIN	3	0	0.04	-1.267	0.004
N+2.70	B38	ENVOLVENTE MAX	0	0	-0.09	0.145	0.042
N+2.70	B38	ENVOLVENTE MAX	0.116	0	0.17	0.145	0.042
N+2.70	B38	ENVOLVENTE MAX	0.116	0	-0.29	0.145	0.028
N+2.70	B38	ENVOLVENTE MAX	0.376	0	0.54	0.145	0.029
N+2.70	B38	ENVOLVENTE MAX	0.376	0	-4.94	0.145	-1.74
N+2.70	B38	ENVOLVENTE MAX	2.4	0	6.78	0.145	-1.49
N+2.70	B38	ENVOLVENTE MAX	2.4	0	2.74	0.015	1.368
N+2.70	B38	ENVOLVENTE MAX	3	0	3.52	0.015	0.2
N+2.70	B38	ENVOLVENTE MIN	0	0	-0.17	0.04	-0.248
N+2.70	B38	ENVOLVENTE MIN	0.116	0	0.09	0.04	-0.247
N+2.70	B38	ENVOLVENTE MIN	0.116	0	-0.54	0.041	-0.247
N+2.70	B38	ENVOLVENTE MIN	0.376	0	0.3	0.041	-0.235
N+2.70	B38	ENVOLVENTE MIN	0.376	0	-9.26	0.04	-3.443
N+2.70	B38	ENVOLVENTE MIN	2.4	0	3.7	0.04	-2.792
N+2.70	B38	ENVOLVENTE MIN	2.4	0	-1.6	-0.013	-0.587
N+2.70	B38	ENVOLVENTE MIN	3	0	-1.02	-0.013	-0.51
N+2.70	B39	ENVOLVENTE MAX	0	0	0.85	0.016	0.183
N+2.70	B39	ENVOLVENTE MAX	0.6	0	1.44	0.016	1.503
N+2.70	B39	ENVOLVENTE MAX	0.6	0	-4.62	-0.058	-2.15
N+2.70	B39	ENVOLVENTE MAX	3	0	8.73	-0.058	-2.223
N+2.70	B39	ENVOLVENTE MIN	0	0	-3.8	-0.014	-0.549

N+2.70	B39	ENVOLVENTE MIN	0.6	0	-3.02	-0.014	-0.513
N+2.70	B39	ENVOLVENTE MIN	0.6	0	-8.49	-0.198	-4.036
N+2.70	B39	ENVOLVENTE MIN	3	0	4.74	-0.198	-4.322
N+2.70	B40	ENVOLVENTE MAX	0	0.01	-3.62	-0.257	-0.156
N+2.70	B40	ENVOLVENTE MAX	2.065	0.01	6.1	-0.257	3.772
N+2.70	B40	ENVOLVENTE MAX	2.065	0.14	9.61	-0.257	3.772
N+2.70	B40	ENVOLVENTE MAX	2.27	0.14	10.02	-0.257	1.77
N+2.70	B40	ENVOLVENTE MIN	0	-0.01	-9	-0.88	-0.494
N+2.70	B40	ENVOLVENTE MIN	2.065	-0.01	2.51	-0.88	1.328
N+2.70	B40	ENVOLVENTE MIN	2.065	-0.14	3.7	-0.88	1.328
N+2.70	B40	ENVOLVENTE MIN	2.27	-0.14	3.95	-0.88	0.529
N+2.70	B41	ENVOLVENTE MAX	0	0.15	-3.91	0.614	1.046
N+2.70	B41	ENVOLVENTE MAX	0.234	0.15	-3.62	0.614	3.208
N+2.70	B41	ENVOLVENTE MAX	0.234	0.02	-2.41	0.614	3.208
N+2.70	B41	ENVOLVENTE MAX	2.3	0.02	8.76	0.614	-0.305
N+2.70	B41	ENVOLVENTE MIN	0	-0.15	-10.42	0.035	0.655
N+2.70	B41	ENVOLVENTE MIN	0.234	-0.15	-9.93	0.035	1.533
N+2.70	B41	ENVOLVENTE MIN	0.234	-0.02	-6.36	0.035	1.533
N+2.70	B41	ENVOLVENTE MIN	2.3	-0.02	3.81	0.035	-0.549
N+5.45	B42	ENVOLVENTE MAX	0	0	-2.83	-0.449	0.151
N+5.45	B42	ENVOLVENTE MAX	1.879	0	3.55	-0.449	2.326
N+5.45	B42	ENVOLVENTE MIN	0	0	-5.54	-1.125	-0.016
N+5.45	B42	ENVOLVENTE MIN	1.879	0	1.78	-1.125	1.058
N+5.45	B43	ENVOLVENTE MAX	0	0	-1.91	0.883	1.875
N+5.45	B43	ENVOLVENTE MAX	1.91	0	5.44	0.883	0.027
N+5.45	B43	ENVOLVENTE MIN	0	0	-3.85	0.321	0.956
N+5.45	B43	ENVOLVENTE MIN	1.91	0	2.86	0.321	-0.075
N+5.45	B44	ENVOLVENTE MAX	0	0.05	-6.98	0.076	-3.692
N+5.45	B44	ENVOLVENTE MAX	1.54	0.05	-1.02	0.076	6.594
N+5.45	B44	ENVOLVENTE MAX	1.54	0.09	5.13	0.076	6.594
N+5.45	B44	ENVOLVENTE MAX	2.485	0.09	9.9	0.076	-0.098
N+5.45	B44	ENVOLVENTE MAX	2.485	0	22.62	-1.646	-0.399
N+5.45	B44	ENVOLVENTE MAX	2.55	0	22.72	-1.646	-1.118
N+5.45	B44	ENVOLVENTE MIN	0	-0.05	-14.51	0.038	-7.864
N+5.45	B44	ENVOLVENTE MIN	1.54	-0.05	-2.49	0.038	3.072
N+5.45	B44	ENVOLVENTE MIN	1.54	-0.09	2.15	0.038	3.072
N+5.45	B44	ENVOLVENTE MIN	2.485	-0.09	4.65	0.038	-0.802
N+5.45	B44	ENVOLVENTE MIN	2.485	0	10.93	-3.687	-1.122
N+5.45	B44	ENVOLVENTE MIN	2.55	0	11	-3.687	-2.6
N+2.70	B44	ENVOLVENTE MAX	0	0.06	-7.22	0.003	-3.278
N+2.70	B44	ENVOLVENTE MAX	0.485	0.06	-5.77	0.003	-0.113
N+2.70	B44	ENVOLVENTE MAX	0.485	0.01	-4.43	0.003	-0.113
N+2.70	B44	ENVOLVENTE MAX	2.399	0.01	9.96	0.003	-0.095
N+2.70	B44	ENVOLVENTE MAX	2.399	0.01	9.96	0.003	-0.095
N+2.70	B44	ENVOLVENTE MAX	2.55	0.01	10.37	0.003	-0.759
N+2.70	B44	ENVOLVENTE MIN	0	-0.06	-17.33	-0.002	-7.916
N+2.70	B44	ENVOLVENTE MIN	0.485	-0.06	-14.3	-0.002	-0.227
N+2.70	B44	ENVOLVENTE MIN	0.485	-0.01	-10.35	-0.002	-0.227
N+2.70	B44	ENVOLVENTE MIN	2.399	-0.01	4.28	-0.002	-0.432
N+2.70	B44	ENVOLVENTE MIN	2.399	-0.01	4.28	-0.002	-0.432
N+2.70	B44	ENVOLVENTE MIN	2.55	-0.01	4.52	-0.002	-1.932
N+5.45	B45	ENVOLVENTE MAX	0	0	-12.05	4.825	-1.115
N+5.45	B45	ENVOLVENTE MAX	0.036	0	-12.01	4.825	-0.683
N+5.45	B45	ENVOLVENTE MAX	0.036	0.06	-4.7	-0.028	-0.116
N+5.45	B45	ENVOLVENTE MAX	0.108	0.06	-4.61	-0.028	0.219
N+5.45	B45	ENVOLVENTE MAX	0.108	0.1	-4.61	-0.028	0.219
N+5.45	B45	ENVOLVENTE MAX	1.007	0.1	-2.11	-0.028	6.636
N+5.45	B45	ENVOLVENTE MAX	1.007	0.06	2.45	-0.028	6.636
N+5.45	B45	ENVOLVENTE MAX	2.549	0.06	14.52	-0.028	-3.644
N+5.45	B45	ENVOLVENTE MAX	2.549	0.04	11.84	-0.028	-3.646
N+5.45	B45	ENVOLVENTE MAX	2.55	0.04	11.84	-0.028	-3.654
N+5.45	B45	ENVOLVENTE MIN	0	0	-23.24	2.464	-2.726
N+5.45	B45	ENVOLVENTE MIN	0.036	0	-23.18	2.464	-1.892
N+5.45	B45	ENVOLVENTE MIN	0.036	-0.06	-10.12	-0.053	-1.182
N+5.45	B45	ENVOLVENTE MIN	0.108	-0.06	-9.99	-0.053	-0.544
N+5.45	B45	ENVOLVENTE MIN	0.108	-0.1	-9.99	-0.053	-0.544
N+5.45	B45	ENVOLVENTE MIN	1.007	-0.1	-5.18	-0.053	3.045
N+5.45	B45	ENVOLVENTE MIN	1.007	-0.06	0.95	-0.053	3.045
N+5.45	B45	ENVOLVENTE MIN	2.549	-0.06	6.94	-0.053	-7.822
N+5.45	B45	ENVOLVENTE MIN	2.549	-0.04	5.62	-0.053	-7.825
N+5.45	B45	ENVOLVENTE MIN	2.55	-0.04	5.62	-0.053	-7.842
N+2.70	B45	ENVOLVENTE MAX	0	0.04	-4.64	0.002	-0.664
N+2.70	B45	ENVOLVENTE MAX	0.24	0.04	-4.19	0.002	0.625
N+2.70	B45	ENVOLVENTE MAX	0.24	0.09	-4.13	0.002	0.625
N+2.70	B45	ENVOLVENTE MAX	0.244	0.09	-4.12	0.002	0.658
N+2.70	B45	ENVOLVENTE MAX	0.244	0.02	-3.85	0.002	0.658

N+2.70	B45	ENVOLVENTE MAX	2.067	0.02	10.42	0.002	-0.098
N+2.70	B45	ENVOLVENTE MAX	2.067	0.08	14.37	0.002	-0.098
N+2.70	B45	ENVOLVENTE MAX	2.548	0.08	17.17	0.002	-3.228
N+2.70	B45	ENVOLVENTE MAX	2.548	0.05	12.97	0.002	-3.229
N+2.70	B45	ENVOLVENTE MAX	2.55	0.05	12.97	0.002	-3.239
N+2.70	B45	ENVOLVENTE MIN	0	-0.04	-10.66	-0.005	-1.876
N+2.70	B45	ENVOLVENTE MIN	0.24	-0.04	-9.83	-0.005	0.177
N+2.70	B45	ENVOLVENTE MIN	0.24	-0.09	-9.69	-0.005	0.177
N+2.70	B45	ENVOLVENTE MIN	0.244	-0.09	-9.68	-0.005	0.194
N+2.70	B45	ENVOLVENTE MIN	0.244	-0.02	-9.14	-0.005	0.194
N+2.70	B45	ENVOLVENTE MIN	2.067	-0.02	4.46	-0.005	-0.236
N+2.70	B45	ENVOLVENTE MIN	2.067	-0.08	5.8	-0.005	-0.236
N+2.70	B45	ENVOLVENTE MIN	2.548	-0.08	7.13	-0.005	-7.852
N+2.70	B45	ENVOLVENTE MIN	2.548	-0.05	5.39	-0.005	-7.856
N+2.70	B45	ENVOLVENTE MIN	2.55	-0.05	5.39	-0.005	-7.877
N+2.70	B46	ENVOLVENTE MAX	0	0	-7.11	0.004	-3.525
N+2.70	B46	ENVOLVENTE MAX	2.55	0	12.1	0.004	-2.374
N+2.70	B46	ENVOLVENTE MIN	0	0	-13.69	-0.002	-6.936
N+2.70	B46	ENVOLVENTE MIN	2.55	0	6.35	-0.002	-4.91
N+2.70	B47	ENVOLVENTE MAX	0	0	-5.09	0.002	-1.937
N+2.70	B47	ENVOLVENTE MAX	0.003	0	-5.09	0.002	-1.922
N+2.70	B47	ENVOLVENTE MAX	0.003	0	-6.02	0.002	-1.92
N+2.70	B47	ENVOLVENTE MAX	2.309	0	12.79	0.002	-1.887
N+2.70	B47	ENVOLVENTE MAX	2.309	0.02	13.38	0.002	-1.887
N+2.70	B47	ENVOLVENTE MAX	2.55	0.02	14.21	0.002	-3.606
N+2.70	B47	ENVOLVENTE MIN	0	0	-9.82	-0.005	-4.34
N+2.70	B47	ENVOLVENTE MIN	0.003	0	-9.81	-0.005	-4.312
N+2.70	B47	ENVOLVENTE MIN	0.003	0	-11.61	-0.005	-4.309
N+2.70	B47	ENVOLVENTE MIN	2.309	0	6.55	-0.005	-3.796
N+2.70	B47	ENVOLVENTE MIN	2.309	-0.02	6.85	-0.005	-3.796
N+2.70	B47	ENVOLVENTE MIN	2.55	-0.02	7.35	-0.005	-7.136
N+5.45	B48	ENVOLVENTE MAX	0	0	10.32	0.149	1.125
N+5.45	B48	ENVOLVENTE MAX	1.5	0	20.23	0.149	-10.536
N+5.45	B48	ENVOLVENTE MIN	0	0	4.95	-0.017	0.449
N+5.45	B48	ENVOLVENTE MIN	1.5	0	9.96	-0.017	-21.787
N+5.45	B49	ENVOLVENTE MAX	0	0	-10	0.075	-10.769
N+5.45	B49	ENVOLVENTE MAX	1.5	0	-4.99	0.075	0.883
N+5.45	B49	ENVOLVENTE MIN	0	0	-20.13	-0.027	-21.881
N+5.45	B49	ENVOLVENTE MIN	1.5	0	-10.22	-0.027	0.321
N+5.45	B50	ENVOLVENTE MAX	0	0.14	-4.75	0.001	-2.221
N+5.45	B50	ENVOLVENTE MAX	1.01	0.14	-2.44	0.001	2.81
N+5.45	B50	ENVOLVENTE MAX	1.01	0.09	0.95	0.001	2.81
N+5.45	B50	ENVOLVENTE MAX	2.55	0.09	6.85	0.001	-1.677
N+5.45	B50	ENVOLVENTE MIN	0	-0.14	-9.7	-0.012	-4.65
N+5.45	B50	ENVOLVENTE MIN	1.01	-0.14	-5.41	-0.012	1.329
N+5.45	B50	ENVOLVENTE MIN	1.01	-0.09	0.25	-0.012	1.329
N+5.45	B50	ENVOLVENTE MIN	2.55	-0.09	3.48	-0.012	-3.571
N+5.45	B51	ENVOLVENTE MAX	0	0.11	-3.44	0.013	-1.6
N+5.45	B51	ENVOLVENTE MAX	1.543	0.11	-0.19	0.013	2.824
N+5.45	B51	ENVOLVENTE MAX	1.543	0.17	5.5	0.013	2.824
N+5.45	B51	ENVOLVENTE MAX	2.55	0.17	9.78	0.013	-2.241
N+5.45	B51	ENVOLVENTE MIN	0	-0.11	-6.78	0	-3.447
N+5.45	B51	ENVOLVENTE MIN	1.543	-0.11	-0.86	0	1.33
N+5.45	B51	ENVOLVENTE MIN	1.543	-0.17	2.48	0	1.33
N+5.45	B51	ENVOLVENTE MIN	2.55	-0.17	4.78	0	-4.698
N+2.70	B52	ENVOLVENTE MAX	0	0	20.67	-0.157	0.88
N+2.70	B52	ENVOLVENTE MAX	1.2	0	28.89	-0.157	-10.689
N+2.70	B52	ENVOLVENTE MAX	1.2	0	-0.46	-0.112	-0.118
N+2.70	B52	ENVOLVENTE MAX	1.8	0	1.54	-0.112	-0.116
N+2.70	B52	ENVOLVENTE MIN	0	0	7.57	-0.495	0.257
N+2.70	B52	ENVOLVENTE MIN	1.2	0	11	-0.495	-28.758
N+2.70	B52	ENVOLVENTE MIN	1.2	0	-1.13	-0.329	-0.293
N+2.70	B52	ENVOLVENTE MIN	1.8	0	0.68	-0.329	-0.459
N+2.70	B53	ENVOLVENTE MAX	0	0	-0.51	0.313	-0.094
N+2.70	B53	ENVOLVENTE MAX	0.6	0	0.85	0.313	-0.102
N+2.70	B53	ENVOLVENTE MAX	0.6	0	-11.19	0.549	-11.197
N+2.70	B53	ENVOLVENTE MAX	1.8	0	-7.76	0.549	0.614
N+2.70	B53	ENVOLVENTE MIN	0	0	-1.25	0.115	-0.416
N+2.70	B53	ENVOLVENTE MIN	0.6	0	0.3	0.115	-0.254
N+2.70	B53	ENVOLVENTE MIN	0.6	0	-28.65	0.305	-28.749
N+2.70	B53	ENVOLVENTE MIN	1.8	0	-20.43	0.305	0.035
N+5.45	B54	ENVOLVENTE MAX	0	0	-1.21	0.001	-0.485
N+5.45	B54	ENVOLVENTE MAX	2.55	0	1.94	0.001	-0.501
N+5.45	B54	ENVOLVENTE MIN	0	0	-1.92	-0.011	-0.803
N+5.45	B54	ENVOLVENTE MIN	2.55	0	1.22	-0.011	-0.829
N+2.70	B54	ENVOLVENTE MAX	0	0	-5.21	0.002	-2.604

N+2.70	B54	ENVOLVENTE MAX	2.55	0	9.62	0.002	-2.63
N+2.70	B54	ENVOLVENTE MIN	0	0	-9.56	-0.011	-4.87
N+2.70	B54	ENVOLVENTE MIN	2.55	0	5.24	-0.011	-4.937
N+5.45	B55	ENVOLVENTE MAX	0	0	-1.22	0.012	-0.5
N+5.45	B55	ENVOLVENTE MAX	2.55	0	1.91	0.012	-0.475
N+5.45	B55	ENVOLVENTE MIN	0	0	-1.95	0	-0.842
N+5.45	B55	ENVOLVENTE MIN	2.55	0	1.2	0	-0.795
N+2.70	B55	ENVOLVENTE MAX	0	0	-5.23	0.011	-2.625
N+2.70	B55	ENVOLVENTE MAX	2.55	0	9.55	0.011	-2.589
N+2.70	B55	ENVOLVENTE MIN	0	0	-9.62	-0.001	-4.952
N+2.70	B55	ENVOLVENTE MIN	2.55	0	5.2	-0.001	-4.858
N+2.70	B56	ENVOLVENTE MAX	0	0	-1.17	0.003	-0.441
N+2.70	B56	ENVOLVENTE MAX	2.55	0	1.92	0.003	-0.408
N+2.70	B56	ENVOLVENTE MIN	0	0	-1.94	-0.02	-0.82
N+2.70	B56	ENVOLVENTE MIN	2.55	0	1.16	-0.02	-0.788
N+2.70	B57	ENVOLVENTE MAX	0	0	-1.15	0.02	-0.393
N+2.70	B57	ENVOLVENTE MAX	2.55	0	1.94	0.02	-0.421
N+2.70	B57	ENVOLVENTE MIN	0	0	-1.92	-0.002	-0.794
N+2.70	B57	ENVOLVENTE MIN	2.55	0	1.16	-0.002	-0.818
N+5.45	B58	ENVOLVENTE MAX	0	0.22	-0.48	-0.096	-0.121
N+5.45	B58	ENVOLVENTE MAX	0.6	0.22	1.42	-0.096	-0.122
N+5.45	B58	ENVOLVENTE MAX	0.6	1.58	-1.32	-0.006	-0.119
N+5.45	B58	ENVOLVENTE MAX	1.269	1.58	3.45	-0.006	-0.152
N+5.45	B58	ENVOLVENTE MAX	1.269	0.6	-2.74	-0.006	-0.503
N+5.45	B58	ENVOLVENTE MAX	2.5	0.6	3.08	-0.006	-0.365
N+5.45	B58	ENVOLVENTE MAX	2.5	0	-0.21	-0.006	0.031
N+5.45	B58	ENVOLVENTE MAX	3	0	0.38	-0.006	0.043
N+5.45	B58	ENVOLVENTE MIN	0	-2.99	-0.89	-0.255	-0.235
N+5.45	B58	ENVOLVENTE MIN	0.6	-2.99	0.75	-0.255	-0.242
N+5.45	B58	ENVOLVENTE MIN	0.6	-0.12	-2.73	-0.025	-0.344
N+5.45	B58	ENVOLVENTE MIN	1.269	-0.12	1.63	-0.025	-0.352
N+5.45	B58	ENVOLVENTE MIN	1.269	-0.04	-5.71	-0.025	-1.036
N+5.45	B58	ENVOLVENTE MIN	2.5	-0.04	1.56	-0.025	-0.802
N+5.45	B58	ENVOLVENTE MIN	2.5	0	-0.37	-0.025	-0.091
N+5.45	B58	ENVOLVENTE MIN	3	0	0.22	-0.025	-0.112
N+5.45	B59	ENVOLVENTE MAX	0	0	-0.22	0.029	0.039
N+5.45	B59	ENVOLVENTE MAX	0.5	0	0.37	0.029	0.028
N+5.45	B59	ENVOLVENTE MAX	0.5	0.63	-1.27	0.029	-0.254
N+5.45	B59	ENVOLVENTE MAX	1.585	0.63	4.62	0.029	-0.363
N+5.45	B59	ENVOLVENTE MAX	1.585	1.52	-2.07	0.029	-0.259
N+5.45	B59	ENVOLVENTE MAX	2.4	1.52	3.47	0.029	-0.205
N+5.45	B59	ENVOLVENTE MAX	2.4	0.15	-0.74	0.269	-0.121
N+5.45	B59	ENVOLVENTE MAX	3	0.15	0.89	0.269	-0.122
N+5.45	B59	ENVOLVENTE MIN	0	0	-0.39	0.006	-0.118
N+5.45	B59	ENVOLVENTE MIN	0.5	0	0.21	0.006	-0.097
N+5.45	B59	ENVOLVENTE MIN	0.5	-0.03	-2.5	0.005	-0.578
N+5.45	B59	ENVOLVENTE MIN	1.585	-0.03	2.23	0.005	-0.732
N+5.45	B59	ENVOLVENTE MIN	1.585	-0.07	-4.38	0.005	-0.56
N+5.45	B59	ENVOLVENTE MIN	2.4	-0.07	1.67	0.005	-0.504
N+5.45	B59	ENVOLVENTE MIN	2.4	-3.2	-1.42	0.099	-0.241
N+5.45	B59	ENVOLVENTE MIN	3	-3.2	0.48	0.099	-0.235
N+2.70	B60	ENVOLVENTE MAX	0	0	-8.3	-0.004	-3.979
N+2.70	B60	ENVOLVENTE MAX	2.4	0	15.56	-0.004	-3.94
N+2.70	B60	ENVOLVENTE MAX	2.4	0	3.97	0.02	1.876
N+2.70	B60	ENVOLVENTE MAX	3	0	4.75	0.02	0.237
N+2.70	B60	ENVOLVENTE MIN	0	0	-15.76	-0.025	-7.802
N+2.70	B60	ENVOLVENTE MIN	2.4	0	8.22	-0.025	-7.571
N+2.70	B60	ENVOLVENTE MIN	2.4	0	-1.75	-0.009	-0.644
N+2.70	B60	ENVOLVENTE MIN	3	0	-1.17	-0.009	-0.745
N+2.70	B61	ENVOLVENTE MAX	0	0	1.03	0.012	0.212
N+2.70	B61	ENVOLVENTE MAX	0.6	0	1.61	0.012	2.023
N+2.70	B61	ENVOLVENTE MAX	0.6	0	-8.22	0.032	-3.937
N+2.70	B61	ENVOLVENTE MAX	3	0	15.76	0.032	-3.979
N+2.70	B61	ENVOLVENTE MIN	0	0	-5.07	-0.021	-0.788
N+2.70	B61	ENVOLVENTE MIN	0.6	0	-4.29	-0.021	-0.584
N+2.70	B61	ENVOLVENTE MIN	0.6	0	-15.57	0.007	-7.566
N+2.70	B61	ENVOLVENTE MIN	3	0	8.3	0.007	-7.796
N+5.45	B62	ENVOLVENTE MAX	0	0	-5.65	0.008	-2.792
N+5.45	B62	ENVOLVENTE MAX	2.55	0	12.7	0.008	-3.438
N+5.45	B62	ENVOLVENTE MIN	0	0	-11.68	-0.002	-5.9
N+5.45	B62	ENVOLVENTE MIN	2.55	0	6.16	-0.002	-7.207
N+2.70	B62	ENVOLVENTE MAX	0	0	-5.54	0.005	-2.588
N+2.70	B62	ENVOLVENTE MAX	2.55	0	14.12	0.005	-3.222
N+2.70	B62	ENVOLVENTE MIN	0	0	-12.87	-0.004	-6.155
N+2.70	B62	ENVOLVENTE MIN	2.55	0	6.04	-0.004	-7.741
N+5.45	B63	ENVOLVENTE MAX	0	0	-6.18	0.002	-3.472

N+5.45	B63	ENVOLVENTE MAX	2.55	0	11.64	0.002	-2.768
N+5.45	B63	ENVOLVENTE MIN	0	0	-12.74	-0.008	-7.276
N+5.45	B63	ENVOLVENTE MIN	2.55	0	5.62	-0.008	-5.869
N+2.70	B63	ENVOLVENTE MAX	0	0	-6.07	0.003	-3.291
N+2.70	B63	ENVOLVENTE MAX	2.55	0	12.86	0.003	-2.562
N+2.70	B63	ENVOLVENTE MIN	0	0	-14.14	-0.006	-7.776
N+2.70	B63	ENVOLVENTE MIN	2.55	0	5.49	-0.006	-6.142
N+2.70	B64	ENVOLVENTE MAX	0	0	-6.77	0.005	-3.286
N+2.70	B64	ENVOLVENTE MAX	2.55	0	13.05	0.005	-3.462
N+2.70	B64	ENVOLVENTE MIN	0	0	-12.74	-0.004	-6.342
N+2.70	B64	ENVOLVENTE MIN	2.55	0	6.91	-0.004	-6.744
N+2.70	B65	ENVOLVENTE MAX	0	0	-6.92	0.003	-3.487
N+2.70	B65	ENVOLVENTE MAX	2.55	0	12.67	0.003	-3.228
N+2.70	B65	ENVOLVENTE MIN	0	0	-13.11	-0.005	-6.84
N+2.70	B65	ENVOLVENTE MIN	2.55	0	6.71	-0.005	-6.288
N+5.45	B66	ENVOLVENTE MAX	0	0	9.56	0	0
N+5.45	B66	ENVOLVENTE MAX	1.5	0	19.48	0	-10.14
N+5.45	B66	ENVOLVENTE MIN	0	0	4.26	0	0
N+5.45	B66	ENVOLVENTE MIN	1.5	0	9.26	0	-21.782
N+5.45	B67	ENVOLVENTE MAX	0	0	-9.26	0	-10.14
N+5.45	B67	ENVOLVENTE MAX	1.5	0	-4.26	0	0
N+5.45	B67	ENVOLVENTE MIN	0	0	-19.48	0	-21.782
N+5.45	B67	ENVOLVENTE MIN	1.5	0	-9.56	0	0
N+5.45	B68	ENVOLVENTE MAX	0	0	-3.71	0.005	-1.779
N+5.45	B68	ENVOLVENTE MAX	2.55	0	7.49	0.005	-1.862
N+5.45	B68	ENVOLVENTE MIN	0	0	-7.33	-0.004	-3.68
N+5.45	B68	ENVOLVENTE MIN	2.55	0	3.78	-0.004	-3.872
N+5.45	B69	ENVOLVENTE MAX	0	0	-3.77	0.004	-1.856
N+5.45	B69	ENVOLVENTE MAX	2.55	0	7.31	0.004	-1.746
N+5.45	B69	ENVOLVENTE MIN	0	0	-7.51	-0.005	-3.904
N+5.45	B69	ENVOLVENTE MIN	2.55	0	3.68	-0.005	-3.65
N+2.70	B70	ENVOLVENTE MAX	0	0	17.08	0	0
N+2.70	B70	ENVOLVENTE MAX	1.2	0	29.14	0	-9.781
N+2.70	B70	ENVOLVENTE MAX	1.2	0	-0.47	0.083	-0.115
N+2.70	B70	ENVOLVENTE MAX	1.8	0	1.52	0.083	-0.116
N+2.70	B70	ENVOLVENTE MIN	0	0	5.79	0	0
N+2.70	B70	ENVOLVENTE MIN	1.2	0	10.52	0	-27.73
N+2.70	B70	ENVOLVENTE MIN	1.2	0	-1.12	0.015	-0.29
N+2.70	B70	ENVOLVENTE MIN	1.8	0	0.69	0.015	-0.444
N+2.70	B71	ENVOLVENTE MAX	0	0	-0.68	-0.014	-0.111
N+2.70	B71	ENVOLVENTE MAX	0.6	0	1.14	-0.014	-0.116
N+2.70	B71	ENVOLVENTE MAX	0.6	0	-10.52	0	-9.787
N+2.70	B71	ENVOLVENTE MAX	1.8	0	-5.79	0	0
N+2.70	B71	ENVOLVENTE MIN	0	0	-1.5	-0.092	-0.434
N+2.70	B71	ENVOLVENTE MIN	0.6	0	0.48	-0.092	-0.292
N+2.70	B71	ENVOLVENTE MIN	0.6	0	-29.15	0	-27.746
N+2.70	B71	ENVOLVENTE MIN	1.8	0	-17.08	0	0
N+5.45	B72	ENVOLVENTE MAX	0	0	-1.18	0.005	-0.463
N+5.45	B72	ENVOLVENTE MAX	2.55	0	1.95	0.005	-0.494
N+5.45	B72	ENVOLVENTE MIN	0	0	-1.9	-0.004	-0.791
N+5.45	B72	ENVOLVENTE MIN	2.55	0	1.22	-0.004	-0.853
N+2.70	B72	ENVOLVENTE MAX	0	0	-5.19	0.004	-2.592
N+2.70	B72	ENVOLVENTE MAX	2.55	0	9.61	0.004	-2.609
N+2.70	B72	ENVOLVENTE MIN	0	0	-9.56	-0.003	-4.883
N+2.70	B72	ENVOLVENTE MIN	2.55	0	5.22	-0.003	-4.939
N+5.45	B73	ENVOLVENTE MAX	0	0	-1.21	0.004	-0.488
N+5.45	B73	ENVOLVENTE MAX	2.55	0	1.89	0.004	-0.437
N+5.45	B73	ENVOLVENTE MIN	0	0	-1.97	-0.005	-0.871
N+5.45	B73	ENVOLVENTE MIN	2.55	0	1.16	-0.005	-0.775
N+2.70	B73	ENVOLVENTE MAX	0	0	-5.21	0.003	-2.603
N+2.70	B73	ENVOLVENTE MAX	2.55	0	9.55	0.003	-2.567
N+2.70	B73	ENVOLVENTE MIN	0	0	-9.62	-0.004	-4.96
N+2.70	B73	ENVOLVENTE MIN	2.55	0	5.18	-0.004	-4.864
N+2.70	B74	ENVOLVENTE MAX	0	0	-1.13	0.003	-0.401
N+2.70	B74	ENVOLVENTE MAX	2.55	0	1.95	0.003	-0.43
N+2.70	B74	ENVOLVENTE MIN	0	0	-1.9	-0.002	-0.793
N+2.70	B74	ENVOLVENTE MIN	2.55	0	1.17	-0.002	-0.859
N+2.70	B75	ENVOLVENTE MAX	0	0	-1.15	0.002	-0.411
N+2.70	B75	ENVOLVENTE MAX	2.55	0	1.89	0.002	-0.368
N+2.70	B75	ENVOLVENTE MIN	0	0	-1.96	-0.004	-0.902
N+2.70	B75	ENVOLVENTE MIN	2.55	0	1.11	-0.004	-0.797
N+5.45	B76	ENVOLVENTE MAX	0	0.19	-0.64	0.106	-0.139
N+5.45	B76	ENVOLVENTE MAX	0.6	0.19	2.08	0.106	-0.137
N+5.45	B76	ENVOLVENTE MAX	0.6	0.68	-6.3	0.005	-1.989
N+5.45	B76	ENVOLVENTE MAX	2.5	0.68	8.65	0.005	-1.628
N+5.45	B76	ENVOLVENTE MAX	2.5	0	-0.21	0.005	0.028

N+5.45	B76	ENVOLVENTE MAX	3	0	0.39	0.005	0.037
N+5.45	B76	ENVOLVENTE MIN	0	-2.15	-1.25	0.006	-0.287
N+5.45	B76	ENVOLVENTE MIN	0.6	-2.15	1.04	0.006	-0.278
N+5.45	B76	ENVOLVENTE MIN	0.6	-0.06	-13.41	-0.011	-4.293
N+5.45	B76	ENVOLVENTE MIN	2.5	-0.06	4.17	-0.011	-3.481
N+5.45	B76	ENVOLVENTE MIN	2.5	0	-0.37	-0.011	-0.085
N+5.45	B76	ENVOLVENTE MIN	3	0	0.22	-0.011	-0.107
N+5.45	B77	ENVOLVENTE MAX	0	0	-0.23	0.015	0.034
N+5.45	B77	ENVOLVENTE MAX	0.5	0	0.36	0.015	0.025
N+5.45	B77	ENVOLVENTE MAX	0.5	0.72	-4.17	0.016	-1.631
N+5.45	B77	ENVOLVENTE MAX	2.4	0.72	13.4	0.016	-1.987
N+5.45	B77	ENVOLVENTE MAX	2.4	0.14	-1.04	-0.008	-0.136
N+5.45	B77	ENVOLVENTE MAX	3	0.14	1.25	-0.008	-0.139
N+5.45	B77	ENVOLVENTE MIN	0	0	-0.39	-0.005	-0.115
N+5.45	B77	ENVOLVENTE MIN	0.5	0	0.21	-0.005	-0.092
N+5.45	B77	ENVOLVENTE MIN	0.5	-0.04	-8.66	-0.006	-3.489
N+5.45	B77	ENVOLVENTE MIN	2.4	-0.04	6.3	-0.006	-4.286
N+5.45	B77	ENVOLVENTE MIN	2.4	-2.27	-2.07	-0.127	-0.277
N+5.45	B77	ENVOLVENTE MIN	3	-2.27	0.64	-0.127	-0.286
N+2.70	B78	ENVOLVENTE MAX	0	0	-8.3	0.005	-3.987
N+2.70	B78	ENVOLVENTE MAX	2.4	0	15.56	0.005	-3.945
N+2.70	B78	ENVOLVENTE MAX	2.4	0	3.78	0.009	1.788
N+2.70	B78	ENVOLVENTE MAX	3	0	4.56	0.009	0.202
N+2.70	B78	ENVOLVENTE MIN	0	0	-15.76	-0.003	-7.806
N+2.70	B78	ENVOLVENTE MIN	2.4	0	8.22	-0.003	-7.566
N+2.70	B78	ENVOLVENTE MIN	2.4	0	-1.53	-0.013	-0.545
N+2.70	B78	ENVOLVENTE MIN	3	0	-0.95	-0.013	-0.717
N+2.70	B79	ENVOLVENTE MAX	0	0	0.8	0.017	0.181
N+2.70	B79	ENVOLVENTE MAX	0.6	0	1.38	0.017	1.911
N+2.70	B79	ENVOLVENTE MAX	0.6	0	-8.22	0.004	-3.944
N+2.70	B79	ENVOLVENTE MAX	3	0	15.76	0.004	-3.984
N+2.70	B79	ENVOLVENTE MIN	0	0	-4.83	-0.01	-0.759
N+2.70	B79	ENVOLVENTE MIN	0.6	0	-4.05	-0.01	-0.479
N+2.70	B79	ENVOLVENTE MIN	0.6	0	-15.57	-0.007	-7.564
N+2.70	B79	ENVOLVENTE MIN	3	0	8.3	-0.007	-7.799
N+5.45	B80	ENVOLVENTE MAX	0	0	-5.94	0.004	-2.959
N+5.45	B80	ENVOLVENTE MAX	2.55	0	12.12	0.004	-2.867
N+5.45	B80	ENVOLVENTE MIN	0	0	-12.26	-0.005	-6.241
N+5.45	B80	ENVOLVENTE MIN	2.55	0	5.87	-0.005	-6.065
N+2.70	B80	ENVOLVENTE MAX	0	0	-5.82	0.004	-2.759
N+2.70	B80	ENVOLVENTE MAX	2.55	0	13.39	0.004	-2.655
N+2.70	B80	ENVOLVENTE MIN	0	0	-13.6	-0.005	-6.589
N+2.70	B80	ENVOLVENTE MIN	2.55	0	5.74	-0.005	-6.322
N+5.45	B81	ENVOLVENTE MAX	0	0	-5.86	0.004	-2.859
N+5.45	B81	ENVOLVENTE MAX	2.55	0	12.26	0.004	-2.95
N+5.45	B81	ENVOLVENTE MIN	0	0	-12.13	-0.004	-6.067
N+5.45	B81	ENVOLVENTE MIN	2.55	0	5.93	-0.004	-6.234
N+2.70	B81	ENVOLVENTE MAX	0	0	-5.74	0.004	-2.64
N+2.70	B81	ENVOLVENTE MAX	2.55	0	13.6	0.004	-2.756
N+2.70	B81	ENVOLVENTE MIN	0	0	-13.39	-0.004	-6.322
N+2.70	B81	ENVOLVENTE MIN	2.55	0	5.83	-0.004	-6.584
N+2.70	B82	ENVOLVENTE MAX	0	0	-6.82	0.004	-3.309
N+2.70	B82	ENVOLVENTE MAX	2.55	0	12.92	0.004	-3.354
N+2.70	B82	ENVOLVENTE MIN	0	0	-12.86	-0.004	-6.411
N+2.70	B82	ENVOLVENTE MIN	2.55	0	6.85	-0.004	-6.495
N+2.70	B83	ENVOLVENTE MAX	0	0	-6.84	0.004	-3.331
N+2.70	B83	ENVOLVENTE MAX	2.55	0	12.84	0.004	-3.266
N+2.70	B83	ENVOLVENTE MIN	0	0	-12.94	-0.004	-6.513
N+2.70	B83	ENVOLVENTE MIN	2.55	0	6.79	-0.004	-6.386
N+5.45	B84	ENVOLVENTE MAX	0	0	9.56	0	0
N+5.45	B84	ENVOLVENTE MAX	1.5	0	19.48	0	-10.14
N+5.45	B84	ENVOLVENTE MIN	0	0	4.26	0	0
N+5.45	B84	ENVOLVENTE MIN	1.5	0	9.26	0	-21.782
N+5.45	B85	ENVOLVENTE MAX	0	0	-9.26	0	-10.14
N+5.45	B85	ENVOLVENTE MAX	1.5	0	-4.26	0	0
N+5.45	B85	ENVOLVENTE MIN	0	0	-19.48	0	-21.782
N+5.45	B85	ENVOLVENTE MIN	1.5	0	-9.56	0	0
N+5.45	B86	ENVOLVENTE MAX	0	0	-3.72	0.004	-1.784
N+5.45	B86	ENVOLVENTE MAX	2.55	0	7.46	0.004	-1.835
N+5.45	B86	ENVOLVENTE MIN	0	0	-7.36	-0.005	-3.699
N+5.45	B86	ENVOLVENTE MIN	2.55	0	3.76	-0.005	-3.818
N+5.45	B87	ENVOLVENTE MAX	0	0	-3.76	0.004	-1.83
N+5.45	B87	ENVOLVENTE MAX	2.55	0	7.34	0.004	-1.748
N+5.45	B87	ENVOLVENTE MIN	0	0	-7.48	-0.004	-3.85
N+5.45	B87	ENVOLVENTE MIN	2.55	0	3.69	-0.004	-3.668
N+2.70	B88	ENVOLVENTE MAX	0	0	17.08	0	0

N+2.70	B88	ENVOLVENTE MAX	1.2	0	29.14	0	-9.782
N+2.70	B88	ENVOLVENTE MAX	1.2	0	-0.49	0.018	-0.116
N+2.70	B88	ENVOLVENTE MAX	1.8	0	1.51	0.018	-0.123
N+2.70	B88	ENVOLVENTE MIN	0	0	5.79	0	0
N+2.70	B88	ENVOLVENTE MIN	1.2	0	10.52	0	-27.73
N+2.70	B88	ENVOLVENTE MIN	1.2	0	-1.1	-0.021	-0.289
N+2.70	B88	ENVOLVENTE MIN	1.8	0	0.7	-0.021	-0.439
N+2.70	B89	ENVOLVENTE MAX	0	0	-0.69	0.023	-0.118
N+2.70	B89	ENVOLVENTE MAX	0.6	0	1.12	0.023	-0.117
N+2.70	B89	ENVOLVENTE MAX	0.6	0	-10.52	0	-9.787
N+2.70	B89	ENVOLVENTE MAX	1.8	0	-5.79	0	0
N+2.70	B89	ENVOLVENTE MIN	0	0	-1.49	-0.025	-0.429
N+2.70	B89	ENVOLVENTE MIN	0.6	0	0.49	-0.025	-0.291
N+2.70	B89	ENVOLVENTE MIN	0.6	0	-29.15	0	-27.746
N+2.70	B89	ENVOLVENTE MIN	1.8	0	-17.08	0	0
N+5.45	B90	ENVOLVENTE MAX	0	0	-1.19	0.004	-0.461
N+5.45	B90	ENVOLVENTE MAX	2.55	0	1.95	0.004	-0.491
N+5.45	B90	ENVOLVENTE MIN	0	0	-1.91	-0.005	-0.794
N+5.45	B90	ENVOLVENTE MIN	2.55	0	1.21	-0.005	-0.844
N+2.70	B90	ENVOLVENTE MAX	0	0	-5.19	0.003	-2.585
N+2.70	B90	ENVOLVENTE MAX	2.55	0	9.62	0.003	-2.621
N+2.70	B90	ENVOLVENTE MIN	0	0	-9.55	-0.003	-4.874
N+2.70	B90	ENVOLVENTE MIN	2.55	0	5.22	-0.003	-4.957
N+5.45	B91	ENVOLVENTE MAX	0	0	-1.21	0.005	-0.486
N+5.45	B91	ENVOLVENTE MAX	2.55	0	1.9	0.005	-0.435
N+5.45	B91	ENVOLVENTE MIN	0	0	-1.96	-0.004	-0.861
N+5.45	B91	ENVOLVENTE MIN	2.55	0	1.17	-0.004	-0.777
N+2.70	B91	ENVOLVENTE MAX	0	0	-5.22	0.003	-2.615
N+2.70	B91	ENVOLVENTE MAX	2.55	0	9.54	0.003	-2.558
N+2.70	B91	ENVOLVENTE MIN	0	0	-9.63	-0.003	-4.977
N+2.70	B91	ENVOLVENTE MIN	2.55	0	5.17	-0.003	-4.854
N+2.70	B92	ENVOLVENTE MAX	0	0	-1.14	0.002	-0.405
N+2.70	B92	ENVOLVENTE MAX	2.55	0	1.95	0.002	-0.435
N+2.70	B92	ENVOLVENTE MIN	0	0	-1.91	-0.001	-0.796
N+2.70	B92	ENVOLVENTE MIN	2.55	0	1.17	-0.001	-0.842
N+2.70	B93	ENVOLVENTE MAX	0	0	-1.15	0.002	-0.416
N+2.70	B93	ENVOLVENTE MAX	2.55	0	1.9	0.002	-0.373
N+2.70	B93	ENVOLVENTE MIN	0	0	-1.95	-0.002	-0.87
N+2.70	B93	ENVOLVENTE MIN	2.55	0	1.12	-0.002	-0.797
N+5.45	B94	ENVOLVENTE MAX	0	0.11	-0.64	0.048	-0.139
N+5.45	B94	ENVOLVENTE MAX	0.6	0.11	2.08	0.048	-0.138
N+5.45	B94	ENVOLVENTE MAX	0.6	0.66	-6.3	0.005	-1.993
N+5.45	B94	ENVOLVENTE MAX	2.5	0.66	8.65	0.005	-1.631
N+5.45	B94	ENVOLVENTE MAX	2.5	0	-0.21	0.005	0.023
N+5.45	B94	ENVOLVENTE MAX	3	0	0.39	0.005	0.032
N+5.45	B94	ENVOLVENTE MIN	0	-2.1	-1.25	-0.028	-0.286
N+5.45	B94	ENVOLVENTE MIN	0.6	-2.1	1.05	-0.028	-0.279
N+5.45	B94	ENVOLVENTE MIN	0.6	-0.03	-13.4	-0.013	-4.292
N+5.45	B94	ENVOLVENTE MIN	2.5	-0.03	4.17	-0.013	-3.481
N+5.45	B94	ENVOLVENTE MIN	2.5	0	-0.37	-0.013	-0.081
N+5.45	B94	ENVOLVENTE MIN	3	0	0.23	-0.013	-0.102
N+5.45	B95	ENVOLVENTE MAX	0	0	-0.23	0.017	0.028
N+5.45	B95	ENVOLVENTE MAX	0.5	0	0.36	0.017	0.02
N+5.45	B95	ENVOLVENTE MAX	0.5	0.7	-4.18	0.017	-1.635
N+5.45	B95	ENVOLVENTE MAX	2.4	0.7	13.4	0.017	-1.99
N+5.45	B95	ENVOLVENTE MAX	2.4	0.05	-1.04	0.029	-0.137
N+5.45	B95	ENVOLVENTE MAX	3	0.05	1.25	0.029	-0.139
N+5.45	B95	ENVOLVENTE MIN	0	0	-0.39	-0.005	-0.111
N+5.45	B95	ENVOLVENTE MIN	0.5	0	0.21	-0.005	-0.088
N+5.45	B95	ENVOLVENTE MIN	0.5	-0.02	-8.66	-0.005	-3.489
N+5.45	B95	ENVOLVENTE MIN	2.4	-0.02	6.3	-0.005	-4.285
N+5.45	B95	ENVOLVENTE MIN	2.4	-2.23	-2.07	-0.066	-0.277
N+5.45	B95	ENVOLVENTE MIN	3	-2.23	0.64	-0.066	-0.286
N+2.70	B96	ENVOLVENTE MAX	0	0	-8.31	0.003	-3.994
N+2.70	B96	ENVOLVENTE MAX	2.4	0	15.56	0.003	-3.949
N+2.70	B96	ENVOLVENTE MAX	2.4	0	3.54	0.011	1.684
N+2.70	B96	ENVOLVENTE MAX	3	0	4.32	0.011	0.166
N+2.70	B96	ENVOLVENTE MIN	0	0	-15.76	-0.006	-7.806
N+2.70	B96	ENVOLVENTE MIN	2.4	0	8.22	-0.006	-7.568
N+2.70	B96	ENVOLVENTE MIN	2.4	0	-1.33	-0.013	-0.458
N+2.70	B96	ENVOLVENTE MIN	3	0	-0.75	-0.013	-0.677
N+2.70	B97	ENVOLVENTE MAX	0	0	0.6	0.016	0.145
N+2.70	B97	ENVOLVENTE MAX	0.6	0	1.18	0.016	1.805
N+2.70	B97	ENVOLVENTE MAX	0.6	0	-8.22	0.008	-3.949
N+2.70	B97	ENVOLVENTE MAX	3	0	15.76	0.008	-3.992
N+2.70	B97	ENVOLVENTE MIN	0	0	-4.59	-0.012	-0.719

N+2.70	B97	ENVOLVENTE MIN	0.6	0	-3.82	-0.012	-0.391
N+2.70	B97	ENVOLVENTE MIN	0.6	0	-15.57	-0.005	-7.567
N+2.70	B97	ENVOLVENTE MIN	3	0	8.31	-0.005	-7.797
N+5.45	B98	ENVOLVENTE MAX	0	0	-5.89	0.004	-2.929
N+5.45	B98	ENVOLVENTE MAX	2.55	0	12.23	0.004	-2.972
N+5.45	B98	ENVOLVENTE MIN	0	0	-12.16	-0.004	-6.181
N+5.45	B98	ENVOLVENTE MIN	2.55	0	5.92	-0.004	-6.273
N+2.70	B98	ENVOLVENTE MAX	0	0	-5.77	0.004	-2.727
N+2.70	B98	ENVOLVENTE MAX	2.55	0	13.53	0.004	-2.763
N+2.70	B98	ENVOLVENTE MIN	0	0	-13.46	-0.004	-6.509
N+2.70	B98	ENVOLVENTE MIN	2.55	0	5.8	-0.004	-6.594
N+5.45	B99	ENVOLVENTE MAX	0	0	-5.92	0.004	-2.975
N+5.45	B99	ENVOLVENTE MAX	2.55	0	12.14	0.004	-2.909
N+5.45	B99	ENVOLVENTE MIN	0	0	-12.24	-0.005	-6.291
N+5.45	B99	ENVOLVENTE MIN	2.55	0	5.87	-0.005	-6.157
N+2.70	B99	ENVOLVENTE MAX	0	0	-5.8	0.004	-2.764
N+2.70	B99	ENVOLVENTE MAX	2.55	0	13.46	0.004	-2.72
N+2.70	B99	ENVOLVENTE MIN	0	0	-13.54	-0.004	-6.602
N+2.70	B99	ENVOLVENTE MIN	2.55	0	5.76	-0.004	-6.502
N+2.70	B100	ENVOLVENTE MAX	0	0	-6.81	0.004	-3.296
N+2.70	B100	ENVOLVENTE MAX	2.55	0	12.94	0.004	-3.362
N+2.70	B100	ENVOLVENTE MIN	0	0	-12.84	-0.004	-6.401
N+2.70	B100	ENVOLVENTE MIN	2.55	0	6.85	-0.004	-6.533
N+2.70	B101	ENVOLVENTE MAX	0	0	-6.85	0.004	-3.348
N+2.70	B101	ENVOLVENTE MAX	2.55	0	12.82	0.004	-3.263
N+2.70	B101	ENVOLVENTE MIN	0	0	-12.96	-0.004	-6.56
N+2.70	B101	ENVOLVENTE MIN	2.55	0	6.78	-0.004	-6.375
N+5.45	B102	ENVOLVENTE MAX	0	0	9.56	0	0
N+5.45	B102	ENVOLVENTE MAX	1.5	0	19.48	0	-10.14
N+5.45	B102	ENVOLVENTE MIN	0	0	4.26	0	0
N+5.45	B102	ENVOLVENTE MIN	1.5	0	9.26	0	-21.783
N+5.45	B103	ENVOLVENTE MAX	0	0	-9.26	0	-10.14
N+5.45	B103	ENVOLVENTE MAX	1.5	0	-4.26	0	0
N+5.45	B103	ENVOLVENTE MIN	0	0	-19.48	0	-21.782
N+5.45	B103	ENVOLVENTE MIN	1.5	0	-9.56	0	0
N+5.45	B104	ENVOLVENTE MAX	0	0	-3.72	0.004	-1.783
N+5.45	B104	ENVOLVENTE MAX	2.55	0	7.46	0.004	-1.839
N+5.45	B104	ENVOLVENTE MIN	0	0	-7.36	-0.004	-3.699
N+5.45	B104	ENVOLVENTE MIN	2.55	0	3.76	-0.004	-3.822
N+5.45	B105	ENVOLVENTE MAX	0	0	-3.76	0.004	-1.834
N+5.45	B105	ENVOLVENTE MAX	2.55	0	7.34	0.004	-1.746
N+5.45	B105	ENVOLVENTE MIN	0	0	-7.48	-0.004	-3.854
N+5.45	B105	ENVOLVENTE MIN	2.55	0	3.69	-0.004	-3.667
N+2.70	B106	ENVOLVENTE MAX	0	0	17.08	0	0
N+2.70	B106	ENVOLVENTE MAX	1.2	0	29.14	0	-9.782
N+2.70	B106	ENVOLVENTE MAX	1.2	0	-0.5	0.033	-0.117
N+2.70	B106	ENVOLVENTE MAX	1.8	0	1.51	0.033	-0.13
N+2.70	B106	ENVOLVENTE MIN	0	0	5.79	0	0
N+2.70	B106	ENVOLVENTE MIN	1.2	0	10.52	0	-27.731
N+2.70	B106	ENVOLVENTE MIN	1.2	0	-1.09	-0.014	-0.289
N+2.70	B106	ENVOLVENTE MIN	1.8	0	0.72	-0.014	-0.433
N+2.70	B107	ENVOLVENTE MAX	0	0	-0.71	0.014	-0.124
N+2.70	B107	ENVOLVENTE MAX	0.6	0	1.11	0.014	-0.118
N+2.70	B107	ENVOLVENTE MAX	0.6	0	-10.52	0	-9.787
N+2.70	B107	ENVOLVENTE MAX	1.8	0	-5.79	0	0
N+2.70	B107	ENVOLVENTE MIN	0	0	-1.48	-0.037	-0.421
N+2.70	B107	ENVOLVENTE MIN	0.6	0	0.51	-0.037	-0.291
N+2.70	B107	ENVOLVENTE MIN	0.6	0	-29.15	0	-27.746
N+2.70	B107	ENVOLVENTE MIN	1.8	0	-17.08	0	0
N+5.45	B108	ENVOLVENTE MAX	0	0	-1.19	0.004	-0.461
N+5.45	B108	ENVOLVENTE MAX	2.55	0	1.95	0.004	-0.494
N+5.45	B108	ENVOLVENTE MIN	0	0	-1.91	-0.005	-0.793
N+5.45	B108	ENVOLVENTE MIN	2.55	0	1.21	-0.005	-0.845
N+2.70	B108	ENVOLVENTE MAX	0	0	-5.19	0.003	-2.585
N+2.70	B108	ENVOLVENTE MAX	2.55	0	9.62	0.003	-2.62
N+2.70	B108	ENVOLVENTE MIN	0	0	-9.55	-0.003	-4.875
N+2.70	B108	ENVOLVENTE MIN	2.55	0	5.22	-0.003	-4.953
N+5.45	B109	ENVOLVENTE MAX	0	0	-1.21	0.004	-0.488
N+5.45	B109	ENVOLVENTE MAX	2.55	0	1.89	0.004	-0.434
N+5.45	B109	ENVOLVENTE MIN	0	0	-1.96	-0.005	-0.862
N+5.45	B109	ENVOLVENTE MIN	2.55	0	1.17	-0.005	-0.777
N+2.70	B109	ENVOLVENTE MAX	0	0	-5.21	0.003	-2.614
N+2.70	B109	ENVOLVENTE MAX	2.55	0	9.54	0.003	-2.558
N+2.70	B109	ENVOLVENTE MIN	0	0	-9.63	-0.003	-4.974
N+2.70	B109	ENVOLVENTE MIN	2.55	0	5.17	-0.003	-4.855
N+2.70	B110	ENVOLVENTE MAX	0	0	-1.14	0.002	-0.405

N+2.70	B110	ENVOLVENTE MAX	2.55	0	1.95	0.002	-0.436
N+2.70	B110	ENVOLVENTE MIN	0	0	-1.91	-0.002	-0.796
N+2.70	B110	ENVOLVENTE MIN	2.55	0	1.17	-0.002	-0.843
N+2.70	B111	ENVOLVENTE MAX	0	0	-1.15	0.002	-0.417
N+2.70	B111	ENVOLVENTE MAX	2.55	0	1.9	0.002	-0.373
N+2.70	B111	ENVOLVENTE MIN	0	0	-1.95	-0.002	-0.871
N+2.70	B111	ENVOLVENTE MIN	2.55	0	1.12	-0.002	-0.797
N+5.45	B112	ENVOLVENTE MAX	0	0.04	-0.64	0.06	-0.139
N+5.45	B112	ENVOLVENTE MAX	0.6	0.04	2.08	0.06	-0.139
N+5.45	B112	ENVOLVENTE MAX	0.6	0.64	-6.31	0.005	-1.998
N+5.45	B112	ENVOLVENTE MAX	2.5	0.64	8.65	0.005	-1.635
N+5.45	B112	ENVOLVENTE MAX	2.5	0	-0.21	0.005	0.019
N+5.45	B112	ENVOLVENTE MAX	3	0	0.39	0.005	0.027
N+5.45	B112	ENVOLVENTE MIN	0	-2.02	-1.25	-0.021	-0.286
N+5.45	B112	ENVOLVENTE MIN	0.6	-2.02	1.05	-0.021	-0.279
N+5.45	B112	ENVOLVENTE MIN	0.6	-0.01	-13.4	-0.013	-4.292
N+5.45	B112	ENVOLVENTE MIN	2.5	-0.01	4.18	-0.013	-3.481
N+5.45	B112	ENVOLVENTE MIN	2.5	0	-0.37	-0.012	-0.077
N+5.45	B112	ENVOLVENTE MIN	3	0	0.23	-0.012	-0.096
N+5.45	B113	ENVOLVENTE MAX	0	0	-0.23	0.017	0.022
N+5.45	B113	ENVOLVENTE MAX	0.5	0	0.36	0.017	0.016
N+5.45	B113	ENVOLVENTE MAX	0.5	0.68	-4.18	0.017	-1.638
N+5.45	B113	ENVOLVENTE MAX	2.4	0.68	13.4	0.017	-1.995
N+5.45	B113	ENVOLVENTE MAX	2.4	-0.02	-1.05	0.023	-0.138
N+5.45	B113	ENVOLVENTE MAX	3	-0.02	1.25	0.023	-0.139
N+5.45	B113	ENVOLVENTE MIN	0	0	-0.39	-0.005	-0.105
N+5.45	B113	ENVOLVENTE MIN	0.5	0	0.21	-0.005	-0.084
N+5.45	B113	ENVOLVENTE MIN	0.5	0.01	-8.66	-0.005	-3.489
N+5.45	B113	ENVOLVENTE MIN	2.4	0.01	6.3	-0.005	-4.285
N+5.45	B113	ENVOLVENTE MIN	2.4	-2.15	-2.07	-0.076	-0.277
N+5.45	B113	ENVOLVENTE MIN	3	-2.15	0.64	-0.076	-0.286
N+2.70	B114	ENVOLVENTE MAX	0	0	-8.31	0.004	-4.002
N+2.70	B114	ENVOLVENTE MAX	2.4	0	15.56	0.004	-3.951
N+2.70	B114	ENVOLVENTE MAX	2.4	0	3.33	0.011	1.592
N+2.70	B114	ENVOLVENTE MAX	3	0	4.11	0.011	0.131
N+2.70	B114	ENVOLVENTE MIN	0	0	-15.76	-0.006	-7.806
N+2.70	B114	ENVOLVENTE MIN	2.4	0	8.22	-0.006	-7.568
N+2.70	B114	ENVOLVENTE MIN	2.4	0	-1.13	-0.013	-0.372
N+2.70	B114	ENVOLVENTE MIN	3	0	-0.54	-0.013	-0.639
N+2.70	B115	ENVOLVENTE MAX	0	0	0.39	0.016	0.108
N+2.70	B115	ENVOLVENTE MAX	0.6	0	0.97	0.016	1.717
N+2.70	B115	ENVOLVENTE MAX	0.6	0	-8.23	0.006	-3.95
N+2.70	B115	ENVOLVENTE MAX	3	0	15.76	0.006	-3.999
N+2.70	B115	ENVOLVENTE MIN	0	0	-4.39	-0.012	-0.682
N+2.70	B115	ENVOLVENTE MIN	0.6	0	-3.61	-0.012	-0.303
N+2.70	B115	ENVOLVENTE MIN	0.6	0	-15.57	-0.004	-7.567
N+2.70	B115	ENVOLVENTE MIN	3	0	8.31	-0.004	-7.797
N+5.45	B116	ENVOLVENTE MAX	0	0	-5.89	0.004	-2.922
N+5.45	B116	ENVOLVENTE MAX	2.55	0	12.22	0.004	-2.957
N+5.45	B116	ENVOLVENTE MIN	0	0	-12.17	-0.004	-6.173
N+5.45	B116	ENVOLVENTE MIN	2.55	0	5.92	-0.004	-6.24
N+2.70	B116	ENVOLVENTE MAX	0	0	-5.78	0.004	-2.727
N+2.70	B116	ENVOLVENTE MAX	2.55	0	13.52	0.004	-2.744
N+2.70	B116	ENVOLVENTE MIN	0	0	-13.48	-0.004	-6.502
N+2.70	B116	ENVOLVENTE MIN	2.55	0	5.79	-0.004	-6.548
N+5.45	B117	ENVOLVENTE MAX	0	0	-5.9	0.004	-2.948
N+5.45	B117	ENVOLVENTE MAX	2.55	0	12.18	0.004	-2.94
N+5.45	B117	ENVOLVENTE MIN	0	0	-12.2	-0.004	-6.236
N+5.45	B117	ENVOLVENTE MIN	2.55	0	5.89	-0.004	-6.212
N+2.70	B117	ENVOLVENTE MAX	0	0	-5.79	0.004	-2.745
N+2.70	B117	ENVOLVENTE MAX	2.55	0	13.47	0.004	-2.717
N+2.70	B117	ENVOLVENTE MIN	0	0	-13.52	-0.004	-6.554
N+2.70	B117	ENVOLVENTE MIN	2.55	0	5.77	-0.004	-6.496
N+2.70	B118	ENVOLVENTE MAX	0	0	-6.81	0.004	-3.306
N+2.70	B118	ENVOLVENTE MAX	2.55	0	12.94	0.004	-3.357
N+2.70	B118	ENVOLVENTE MIN	0	0	-12.85	-0.004	-6.406
N+2.70	B118	ENVOLVENTE MIN	2.55	0	6.85	-0.004	-6.526
N+2.70	B119	ENVOLVENTE MAX	0	0	-6.86	0.004	-3.361
N+2.70	B119	ENVOLVENTE MAX	2.55	0	12.81	0.004	-3.262
N+2.70	B119	ENVOLVENTE MIN	0	0	-12.97	-0.004	-6.559
N+2.70	B119	ENVOLVENTE MIN	2.55	0	6.78	-0.004	-6.357
N+5.45	B120	ENVOLVENTE MAX	0	0	9.56	0	0
N+5.45	B120	ENVOLVENTE MAX	1.489	0	19.46	0	-10.034
N+5.45	B120	ENVOLVENTE MAX	1.489	0	19.31	0	-10.035
N+5.45	B120	ENVOLVENTE MAX	1.5	0	19.33	0	-10.14
N+5.45	B120	ENVOLVENTE MIN	0	0	4.26	0	0

N+5.45	B120	ENVOLVENTE MIN	1.489	0	9.25	0	-21.56
N+5.45	B120	ENVOLVENTE MIN	1.489	0	9.18	0	-21.56
N+5.45	B120	ENVOLVENTE MIN	1.5	0	9.19	0	-21.782
N+5.45	B121	ENVOLVENTE MAX	0	0	-9.26	0	-10.14
N+5.45	B121	ENVOLVENTE MAX	1.5	0	-4.26	0	0
N+5.45	B121	ENVOLVENTE MIN	0	0	-19.48	0	-21.782
N+5.45	B121	ENVOLVENTE MIN	1.5	0	-9.56	0	0
N+5.45	B122	ENVOLVENTE MAX	0	0	-3.72	0.004	-1.782
N+5.45	B122	ENVOLVENTE MAX	2.55	0	7.46	0.004	-1.839
N+5.45	B122	ENVOLVENTE MIN	0	0	-7.36	-0.004	-3.698
N+5.45	B122	ENVOLVENTE MIN	2.55	0	3.76	-0.004	-3.822
N+5.45	B123	ENVOLVENTE MAX	0	0	-3.76	0.004	-1.834
N+5.45	B123	ENVOLVENTE MAX	2.55	0	7.34	0.004	-1.745
N+5.45	B123	ENVOLVENTE MIN	0	0	-7.48	-0.004	-3.852
N+5.45	B123	ENVOLVENTE MIN	2.55	0	3.69	-0.004	-3.666
N+2.70	B124	ENVOLVENTE MAX	0	0	17.08	0	0
N+2.70	B124	ENVOLVENTE MAX	1.2	0	29.14	0	-9.782
N+2.70	B124	ENVOLVENTE MAX	1.2	0	-0.51	0.021	-0.118
N+2.70	B124	ENVOLVENTE MAX	1.8	0	1.51	0.021	-0.137
N+2.70	B124	ENVOLVENTE MIN	0	0	5.79	0	0
N+2.70	B124	ENVOLVENTE MIN	1.2	0	10.52	0	-27.73
N+2.70	B124	ENVOLVENTE MIN	1.2	0	-1.07	-0.016	-0.289
N+2.70	B124	ENVOLVENTE MIN	1.8	0	0.73	-0.016	-0.432
N+2.70	B125	ENVOLVENTE MAX	0	0	-0.72	0.014	-0.131
N+2.70	B125	ENVOLVENTE MAX	0.6	0	1.1	0.014	-0.119
N+2.70	B125	ENVOLVENTE MAX	0.6	0	-10.52	0	-9.787
N+2.70	B125	ENVOLVENTE MAX	1.8	0	-5.79	0	0
N+2.70	B125	ENVOLVENTE MIN	0	0	-1.48	-0.032	-0.418
N+2.70	B125	ENVOLVENTE MIN	0.6	0	0.52	-0.032	-0.292
N+2.70	B125	ENVOLVENTE MIN	0.6	0	-29.15	0	-27.746
N+2.70	B125	ENVOLVENTE MIN	1.8	0	-17.08	0	0
N+5.45	B126	ENVOLVENTE MAX	0	0	-1.19	0.004	-0.46
N+5.45	B126	ENVOLVENTE MAX	2.55	0	1.95	0.004	-0.494
N+5.45	B126	ENVOLVENTE MIN	0	0	-1.91	-0.005	-0.793
N+5.45	B126	ENVOLVENTE MIN	2.55	0	1.21	-0.005	-0.845
N+2.70	B126	ENVOLVENTE MAX	0	0	-5.19	0.003	-2.585
N+2.70	B126	ENVOLVENTE MAX	2.55	0	9.62	0.003	-2.621
N+2.70	B126	ENVOLVENTE MIN	0	0	-9.55	-0.003	-4.875
N+2.70	B126	ENVOLVENTE MIN	2.55	0	5.22	-0.003	-4.954
N+5.45	B127	ENVOLVENTE MAX	0	0	-1.21	0.004	-0.49
N+5.45	B127	ENVOLVENTE MAX	2.55	0	1.89	0.004	-0.429
N+5.45	B127	ENVOLVENTE MIN	0	0	-1.96	-0.004	-0.863
N+5.45	B127	ENVOLVENTE MIN	2.55	0	1.16	-0.004	-0.773
N+2.70	B127	ENVOLVENTE MAX	0	0	-5.21	0.003	-2.614
N+2.70	B127	ENVOLVENTE MAX	2.55	0	9.54	0.003	-2.558
N+2.70	B127	ENVOLVENTE MIN	0	0	-9.63	-0.003	-4.972
N+2.70	B127	ENVOLVENTE MIN	2.55	0	5.17	-0.003	-4.858
N+2.70	B128	ENVOLVENTE MAX	0	0	-1.14	0.002	-0.405
N+2.70	B128	ENVOLVENTE MAX	2.55	0	1.95	0.002	-0.436
N+2.70	B128	ENVOLVENTE MIN	0	0	-1.91	-0.002	-0.796
N+2.70	B128	ENVOLVENTE MIN	2.55	0	1.17	-0.002	-0.843
N+2.70	B129	ENVOLVENTE MAX	0	0	-1.15	0.002	-0.416
N+2.70	B129	ENVOLVENTE MAX	2.55	0	1.9	0.002	-0.374
N+2.70	B129	ENVOLVENTE MIN	0	0	-1.95	-0.003	-0.87
N+2.70	B129	ENVOLVENTE MIN	2.55	0	1.12	-0.003	-0.797
N+5.45	B130	ENVOLVENTE MAX	0	-0.03	-0.65	0.052	-0.139
N+5.45	B130	ENVOLVENTE MAX	0.6	-0.03	2.08	0.052	-0.14
N+5.45	B130	ENVOLVENTE MAX	0.6	0.61	-6.31	0.005	-2.003
N+5.45	B130	ENVOLVENTE MAX	2.5	0.61	8.65	0.005	-1.638
N+5.45	B130	ENVOLVENTE MAX	2.5	0	-0.22	0.005	0.015
N+5.45	B130	ENVOLVENTE MAX	3	0	0.39	0.005	0.021
N+5.45	B130	ENVOLVENTE MIN	0	-1.94	-1.25	-0.026	-0.286
N+5.45	B130	ENVOLVENTE MIN	0.6	-1.94	1.05	-0.026	-0.279
N+5.45	B130	ENVOLVENTE MIN	0.6	0.01	-13.41	-0.013	-4.292
N+5.45	B130	ENVOLVENTE MIN	2.5	0.01	4.18	-0.013	-3.481
N+5.45	B130	ENVOLVENTE MIN	2.5	0	-0.37	-0.013	-0.072
N+5.45	B130	ENVOLVENTE MIN	3	0	0.23	-0.013	-0.091
N+5.45	B131	ENVOLVENTE MAX	0	0	-0.23	0.015	0.016
N+5.45	B131	ENVOLVENTE MAX	0.5	0	0.36	0.015	0.011
N+5.45	B131	ENVOLVENTE MAX	0.5	0.66	-4.18	0.015	-1.642
N+5.45	B131	ENVOLVENTE MAX	2.4	0.66	13.4	0.015	-1.999
N+5.45	B131	ENVOLVENTE MAX	2.4	-0.1	-1.05	0.02	-0.139
N+5.45	B131	ENVOLVENTE MAX	3	-0.1	1.25	0.02	-0.139
N+5.45	B131	ENVOLVENTE MIN	0	0	-0.39	-0.006	-0.1
N+5.45	B131	ENVOLVENTE MIN	0.5	0	0.21	-0.006	-0.08
N+5.45	B131	ENVOLVENTE MIN	0.5	0.03	-8.66	-0.006	-3.49

N+5.45	B131	ENVOLVENTE MIN	2.4	0.03	6.31	-0.006	-4.284
N+5.45	B131	ENVOLVENTE MIN	2.4	-2.09	-2.07	-0.081	-0.277
N+5.45	B131	ENVOLVENTE MIN	3	-2.09	0.65	-0.081	-0.286
N+2.70	B132	ENVOLVENTE MAX	0	0	-8.31	0.004	-4.009
N+2.70	B132	ENVOLVENTE MAX	2.4	0	15.56	0.004	-3.952
N+2.70	B132	ENVOLVENTE MAX	2.4	0	3.11	0.011	1.498
N+2.70	B132	ENVOLVENTE MAX	3	0	3.89	0.011	0.097
N+2.70	B132	ENVOLVENTE MIN	0	0	-15.76	-0.005	-7.806
N+2.70	B132	ENVOLVENTE MIN	2.4	0	8.23	-0.005	-7.569
N+2.70	B132	ENVOLVENTE MIN	2.4	0	-0.93	-0.013	-0.289
N+2.70	B132	ENVOLVENTE MIN	3	0	-0.35	-0.013	-0.601
N+2.70	B133	ENVOLVENTE MAX	0	0	0.24	0.014	0.079
N+2.70	B133	ENVOLVENTE MAX	0.6	0	0.82	0.014	1.637
N+2.70	B133	ENVOLVENTE MAX	0.6	0	-8.23	0.007	-3.952
N+2.70	B133	ENVOLVENTE MAX	3	0	15.76	0.007	-4.006
N+2.70	B133	ENVOLVENTE MIN	0	0	-4.2	-0.011	-0.648
N+2.70	B133	ENVOLVENTE MIN	0.6	0	-3.42	-0.011	-0.237
N+2.70	B133	ENVOLVENTE MIN	0.6	0	-15.57	-0.002	-7.569
N+2.70	B133	ENVOLVENTE MIN	3	0	8.31	-0.002	-7.795
N+5.45	B134	ENVOLVENTE MAX	0	0	-5.92	0.004	-2.987
N+5.45	B134	ENVOLVENTE MAX	2.55	0	12.17	0.004	-2.941
N+5.45	B134	ENVOLVENTE MIN	0	0	-12.21	-0.005	-6.274
N+5.45	B134	ENVOLVENTE MIN	2.55	0	5.88	-0.005	-6.215
N+2.70	B134	ENVOLVENTE MAX	0	0	-5.79	0.004	-2.76
N+2.70	B134	ENVOLVENTE MAX	2.55	0	13.46	0.004	-2.738
N+2.70	B134	ENVOLVENTE MIN	0	0	-13.53	-0.005	-6.62
N+2.70	B134	ENVOLVENTE MIN	2.55	0	5.78	-0.005	-6.519
N+5.45	B135	ENVOLVENTE MAX	0	0	-5.95	0.004	-2.981
N+5.45	B135	ENVOLVENTE MAX	2.55	0	12.07	0.004	-2.819
N+5.45	B135	ENVOLVENTE MIN	0	0	-12.31	-0.004	-6.305
N+5.45	B135	ENVOLVENTE MIN	2.55	0	5.83	-0.004	-6.005
N+2.70	B135	ENVOLVENTE MAX	0	0	-5.76	0.004	-2.732
N+2.70	B135	ENVOLVENTE MAX	2.55	0	13.52	0.004	-2.75
N+2.70	B135	ENVOLVENTE MIN	0	0	-13.48	-0.004	-6.536
N+2.70	B135	ENVOLVENTE MIN	2.55	0	5.79	-0.004	-6.586
N+2.70	B136	ENVOLVENTE MAX	0	0	-6.81	0.004	-3.29
N+2.70	B136	ENVOLVENTE MAX	2.55	0	12.95	0.004	-3.374
N+2.70	B136	ENVOLVENTE MIN	0	0	-12.83	-0.004	-6.376
N+2.70	B136	ENVOLVENTE MIN	2.55	0	6.87	-0.004	-6.538
N+2.70	B137	ENVOLVENTE MAX	0	0	-6.82	0.004	-3.342
N+2.70	B137	ENVOLVENTE MAX	2.55	0	12.88	0.004	-3.351
N+2.70	B137	ENVOLVENTE MIN	0	0	-12.9	-0.004	-6.513
N+2.70	B137	ENVOLVENTE MIN	2.55	0	6.83	-0.004	-6.483
N+5.45	B138	ENVOLVENTE MAX	0	0	9.56	0	0
N+5.45	B138	ENVOLVENTE MAX	1.5	0	19.48	0	-10.14
N+5.45	B138	ENVOLVENTE MIN	0	0	4.26	0	0
N+5.45	B138	ENVOLVENTE MIN	1.5	0	9.26	0	-21.782
N+5.45	B139	ENVOLVENTE MAX	0	0	-9.26	0	-10.141
N+5.45	B139	ENVOLVENTE MAX	1.5	0	-4.26	0	0
N+5.45	B139	ENVOLVENTE MIN	0	0	-19.48	0	-21.783
N+5.45	B139	ENVOLVENTE MIN	1.5	0	-9.56	0	0
N+5.45	B140	ENVOLVENTE MAX	0	0	-3.72	0.004	-1.784
N+5.45	B140	ENVOLVENTE MAX	2.55	0	7.46	0.004	-1.838
N+5.45	B140	ENVOLVENTE MIN	0	0	-7.36	-0.004	-3.699
N+5.45	B140	ENVOLVENTE MIN	2.55	0	3.76	-0.004	-3.82
N+5.45	B141	ENVOLVENTE MAX	0	0	-3.76	0.005	-1.84
N+5.45	B141	ENVOLVENTE MAX	2.55	0	7.33	0.005	-1.736
N+5.45	B141	ENVOLVENTE MIN	0	0	-7.49	-0.003	-3.852
N+5.45	B141	ENVOLVENTE MIN	2.55	0	3.69	-0.003	-3.653
N+2.70	B142	ENVOLVENTE MAX	0	0	17.08	0	0
N+2.70	B142	ENVOLVENTE MAX	1.2	0	29.14	0	-9.781
N+2.70	B142	ENVOLVENTE MAX	1.2	0	-0.52	0.062	-0.119
N+2.70	B142	ENVOLVENTE MAX	1.8	0	1.51	0.062	-0.144
N+2.70	B142	ENVOLVENTE MIN	0	0	5.79	0	0
N+2.70	B142	ENVOLVENTE MIN	1.2	0	10.52	0	-27.73
N+2.70	B142	ENVOLVENTE MIN	1.2	0	-1.06	0.004	-0.289
N+2.70	B142	ENVOLVENTE MIN	1.8	0	0.74	0.004	-0.433
N+2.70	B143	ENVOLVENTE MAX	0	0	-0.73	0.019	-0.138
N+2.70	B143	ENVOLVENTE MAX	0.6	0	1.08	0.019	-0.121
N+2.70	B143	ENVOLVENTE MAX	0.6	0	-10.52	0	-9.787
N+2.70	B143	ENVOLVENTE MAX	1.8	0	-5.79	0	0
N+2.70	B143	ENVOLVENTE MIN	0	0	-1.48	-0.017	-0.418
N+2.70	B143	ENVOLVENTE MIN	0.6	0	0.54	-0.017	-0.292
N+2.70	B143	ENVOLVENTE MIN	0.6	0	-29.15	0	-27.747
N+2.70	B143	ENVOLVENTE MIN	1.8	0	-17.08	0	0
N+5.45	B144	ENVOLVENTE MAX	0	0	-1.19	0.004	-0.457

N+5.45	B144	ENVOLVENTE MAX	2.55	0	1.95	0.004	-0.495
N+5.45	B144	ENVOLVENTE MIN	0	0	-1.91	-0.005	-0.791
N+5.45	B144	ENVOLVENTE MIN	2.55	0	1.21	-0.005	-0.845
N+2.70	B144	ENVOLVENTE MAX	0	0	-5.19	0.003	-2.584
N+2.70	B144	ENVOLVENTE MAX	2.55	0	9.62	0.003	-2.62
N+2.70	B144	ENVOLVENTE MIN	0	0	-9.55	-0.003	-4.876
N+2.70	B144	ENVOLVENTE MIN	2.55	0	5.22	-0.003	-4.952
N+5.45	B145	ENVOLVENTE MAX	0	0	-1.2	0.005	-0.489
N+5.45	B145	ENVOLVENTE MAX	2.55	0	1.9	0.005	-0.431
N+5.45	B145	ENVOLVENTE MIN	0	0	-1.95	-0.004	-0.853
N+5.45	B145	ENVOLVENTE MIN	2.55	0	1.17	-0.004	-0.784
N+2.70	B145	ENVOLVENTE MAX	0	0	-5.22	0.003	-2.621
N+2.70	B145	ENVOLVENTE MAX	2.55	0	9.53	0.003	-2.547
N+2.70	B145	ENVOLVENTE MIN	0	0	-9.64	-0.004	-4.977
N+2.70	B145	ENVOLVENTE MIN	2.55	0	5.17	-0.004	-4.843
N+2.70	B146	ENVOLVENTE MAX	0	0	-1.14	0.002	-0.405
N+2.70	B146	ENVOLVENTE MAX	2.55	0	1.95	0.002	-0.435
N+2.70	B146	ENVOLVENTE MIN	0	0	-1.91	-0.002	-0.795
N+2.70	B146	ENVOLVENTE MIN	2.55	0	1.17	-0.002	-0.843
N+2.70	B147	ENVOLVENTE MAX	0	0	-1.14	0.003	-0.411
N+2.70	B147	ENVOLVENTE MAX	2.55	0	1.9	0.003	-0.35
N+2.70	B147	ENVOLVENTE MIN	0	0	-1.95	-0.004	-0.877
N+2.70	B147	ENVOLVENTE MIN	2.55	0	1.11	-0.004	-0.821
N+5.45	B148	ENVOLVENTE MAX	0	-0.11	-0.65	0.079	-0.139
N+5.45	B148	ENVOLVENTE MAX	0.6	-0.11	2.08	0.079	-0.141
N+5.45	B148	ENVOLVENTE MAX	0.6	0.59	-6.32	0.006	-2.008
N+5.45	B148	ENVOLVENTE MAX	2.5	0.59	8.65	0.006	-1.641
N+5.45	B148	ENVOLVENTE MAX	2.5	0	-0.22	0.006	0.01
N+5.45	B148	ENVOLVENTE MAX	3	0	0.39	0.006	0.016
N+5.45	B148	ENVOLVENTE MIN	0	-1.88	-1.25	-0.008	-0.286
N+5.45	B148	ENVOLVENTE MIN	0.6	-1.88	1.05	-0.008	-0.279
N+5.45	B148	ENVOLVENTE MIN	0.6	0.04	-13.4	-0.01	-4.291
N+5.45	B148	ENVOLVENTE MIN	2.5	0.04	4.18	-0.01	-3.481
N+5.45	B148	ENVOLVENTE MIN	2.5	0	-0.37	-0.01	-0.068
N+5.45	B148	ENVOLVENTE MIN	3	0	0.23	-0.01	-0.085
N+5.45	B149	ENVOLVENTE MAX	0	0	-0.24	0.023	0.008
N+5.45	B149	ENVOLVENTE MAX	0.5	0	0.36	0.023	0.005
N+5.45	B149	ENVOLVENTE MAX	0.5	0.63	-4.19	0.023	-1.646
N+5.45	B149	ENVOLVENTE MAX	2.4	0.63	13.39	0.023	-2.001
N+5.45	B149	ENVOLVENTE MAX	2.4	-0.19	-1.04	0.027	-0.138
N+5.45	B149	ENVOLVENTE MAX	3	-0.19	1.26	0.027	-0.14
N+5.45	B149	ENVOLVENTE MIN	0	0	-0.39	0.002	-0.098
N+5.45	B149	ENVOLVENTE MIN	0.5	0	0.22	0.002	-0.077
N+5.45	B149	ENVOLVENTE MIN	0.5	0.06	-8.66	0.001	-3.492
N+5.45	B149	ENVOLVENTE MIN	2.4	0.06	6.31	0.001	-4.277
N+5.45	B149	ENVOLVENTE MIN	2.4	-2.01	-2.06	-0.047	-0.272
N+5.45	B149	ENVOLVENTE MIN	3	-2.01	0.65	-0.047	-0.287
N+2.70	B150	ENVOLVENTE MAX	0	0	-8.31	0.001	-4.017
N+2.70	B150	ENVOLVENTE MAX	2.4	0	15.56	0.001	-3.954
N+2.70	B150	ENVOLVENTE MAX	2.4	0	2.9	0.01	1.408
N+2.70	B150	ENVOLVENTE MAX	3	0	3.68	0.01	0.069
N+2.70	B150	ENVOLVENTE MIN	0	0	-15.76	-0.007	-7.805
N+2.70	B150	ENVOLVENTE MIN	2.4	0	8.23	-0.007	-7.571
N+2.70	B150	ENVOLVENTE MIN	2.4	0	-0.78	-0.012	-0.224
N+2.70	B150	ENVOLVENTE MIN	3	0	-0.2	-0.012	-0.565
N+2.70	B151	ENVOLVENTE MAX	0	0	0.16	0.025	0.06
N+2.70	B151	ENVOLVENTE MAX	0.6	0	0.75	0.025	1.575
N+2.70	B151	ENVOLVENTE MAX	0.6	0	-8.24	-0.002	-3.946
N+2.70	B151	ENVOLVENTE MAX	3	0	15.76	-0.002	-4.015
N+2.70	B151	ENVOLVENTE MIN	0	0	-4.03	-0.012	-0.612
N+2.70	B151	ENVOLVENTE MIN	0.6	0	-3.26	-0.012	-0.213
N+2.70	B151	ENVOLVENTE MIN	0.6	0	-15.57	-0.012	-7.572
N+2.70	B151	ENVOLVENTE MIN	3	0	8.31	-0.012	-7.794
N+5.45	B152	ENVOLVENTE MAX	0	0	-5.75	0.005	-2.641
N+5.45	B152	ENVOLVENTE MAX	2.55	0	12.44	0.005	-3.036
N+5.45	B152	ENVOLVENTE MIN	0	0	-11.94	-0.004	-5.727
N+5.45	B152	ENVOLVENTE MIN	2.55	0	6.05	-0.004	-6.372
N+2.70	B152	ENVOLVENTE MAX	0	0	-5.68	0.006	-2.547
N+2.70	B152	ENVOLVENTE MAX	2.55	0	13.81	0.006	-2.799
N+2.70	B152	ENVOLVENTE MIN	0	0	-13.19	-0.004	-5.939
N+2.70	B152	ENVOLVENTE MIN	2.55	0	5.87	-0.004	-6.727
N+5.45	B153	ENVOLVENTE MAX	0	0	-5.73	0.005	-2.868
N+5.45	B153	ENVOLVENTE MAX	2.55	0	12.54	0.005	-3.281
N+5.45	B153	ENVOLVENTE MIN	0	0	-11.84	-0.002	-6.026
N+5.45	B153	ENVOLVENTE MIN	2.55	0	6.08	-0.002	-6.921
N+2.70	B153	ENVOLVENTE MAX	0	0	-5.85	0.01	-2.791

N+2.70	B153	ENVOLVENTE MAX	2.55	0	13.35	0.01	-2.533
N+2.70	B153	ENVOLVENTE MIN	0	0	-13.64	-0.001	-6.624
N+2.70	B153	ENVOLVENTE MIN	2.55	0	5.69	-0.001	-6.252
N+2.70	B154	ENVOLVENTE MAX	0	0	-6.9	0.005	-3.458
N+2.70	B154	ENVOLVENTE MAX	2.55	0	12.81	0.005	-3.319
N+2.70	B154	ENVOLVENTE MIN	0	0	-12.98	-0.004	-6.631
N+2.70	B154	ENVOLVENTE MIN	2.55	0	6.79	-0.004	-6.424
N+2.70	B155	ENVOLVENTE MAX	0	0	-7.14	0.009	-3.569
N+2.70	B155	ENVOLVENTE MAX	2.55	0	12.45	0.009	-2.789
N+2.70	B155	ENVOLVENTE MIN	0	0	-13.33	-0.002	-6.796
N+2.70	B155	ENVOLVENTE MIN	2.55	0	6.54	-0.002	-5.668
N+5.45	B156	ENVOLVENTE MAX	0	0	8.42	0.38	-0.163
N+5.45	B156	ENVOLVENTE MAX	1.5	0	18.33	0.38	-9.999
N+5.45	B156	ENVOLVENTE MIN	0	0	4.04	0.221	-0.271
N+5.45	B156	ENVOLVENTE MIN	1.5	0	9.05	0.221	-20.314
N+5.45	B157	ENVOLVENTE MAX	0	0	-11.97	-0.833	-13.714
N+5.45	B157	ENVOLVENTE MAX	1.5	0	-6.37	-0.833	-0.203
N+5.45	B157	ENVOLVENTE MIN	0	0	-24.25	-1.602	-27.698
N+5.45	B157	ENVOLVENTE MIN	1.5	0	-12.99	-1.602	-0.329
N+5.45	B158	ENVOLVENTE MAX	0	0	-3.71	0.004	-1.766
N+5.45	B158	ENVOLVENTE MAX	2.55	0	7.46	0.004	-1.846
N+5.45	B158	ENVOLVENTE MIN	0	0	-7.35	-0.004	-3.684
N+5.45	B158	ENVOLVENTE MIN	2.55	0	3.77	-0.004	-3.817
N+5.45	B159	ENVOLVENTE MAX	0	0	-3.62	0.001	-1.739
N+5.45	B159	ENVOLVENTE MAX	2.55	0	7.7	0.001	-2.099
N+5.45	B159	ENVOLVENTE MIN	0	0	-7.11	-0.007	-3.561
N+5.45	B159	ENVOLVENTE MIN	2.55	0	3.9	-0.007	-4.314
N+2.70	B160	ENVOLVENTE MAX	0	0	15.12	1.086	-0.38
N+2.70	B160	ENVOLVENTE MAX	1.2	0	27.18	1.086	-9.929
N+2.70	B160	ENVOLVENTE MAX	1.2	0	-0.55	-0.087	-0.124
N+2.70	B160	ENVOLVENTE MAX	1.8	0	1.48	-0.087	-0.149
N+2.70	B160	ENVOLVENTE MIN	0	0	5.58	0.44	-0.89
N+2.70	B160	ENVOLVENTE MIN	1.2	0	10.3	0.44	-26.267
N+2.70	B160	ENVOLVENTE MIN	1.2	0	-1.06	-0.267	-0.284
N+2.70	B160	ENVOLVENTE MIN	1.8	0	0.75	-0.267	-0.412
N+2.70	B161	ENVOLVENTE MAX	0	0	-0.18	-0.09	-0.07
N+2.70	B161	ENVOLVENTE MAX	0.262	0	0.35	-0.09	-0.072
N+2.70	B161	ENVOLVENTE MAX	0.262	0	-0.43	-0.088	-0.093
N+2.70	B161	ENVOLVENTE MAX	0.6	0	0.87	-0.088	-0.078
N+2.70	B161	ENVOLVENTE MAX	0.6	0	-13.33	-1.046	-12.706
N+2.70	B161	ENVOLVENTE MAX	1.8	0	-7.76	-1.046	-0.33
N+2.70	B161	ENVOLVENTE MIN	0	0	-0.35	-0.21	-0.295
N+2.70	B161	ENVOLVENTE MIN	0.262	0	0.19	-0.21	-0.28
N+2.70	B161	ENVOLVENTE MIN	0.262	0	-0.93	-0.205	-0.251
N+2.70	B161	ENVOLVENTE MIN	0.6	0	0.36	-0.205	-0.224
N+2.70	B161	ENVOLVENTE MIN	0.6	0	-35.45	-2.676	-33.764
N+2.70	B161	ENVOLVENTE MIN	1.8	0	-20.91	-2.676	-0.776
N+5.45	B162	ENVOLVENTE MAX	0	0	-1.19	0.004	-0.456
N+5.45	B162	ENVOLVENTE MAX	2.55	0	1.95	0.004	-0.495
N+5.45	B162	ENVOLVENTE MIN	0	0	-1.91	-0.004	-0.796
N+5.45	B162	ENVOLVENTE MIN	2.55	0	1.21	-0.004	-0.84
N+2.70	B162	ENVOLVENTE MAX	0	0	-5.19	0.004	-2.576
N+2.70	B162	ENVOLVENTE MAX	2.55	0	9.62	0.004	-2.624
N+2.70	B162	ENVOLVENTE MIN	0	0	-9.55	-0.003	-4.867
N+2.70	B162	ENVOLVENTE MIN	2.55	0	5.22	-0.003	-4.953
N+5.45	B163	ENVOLVENTE MAX	0	0	-1.22	0.001	-0.522
N+5.45	B163	ENVOLVENTE MAX	2.55	0	1.92	0.001	-0.497
N+5.45	B163	ENVOLVENTE MIN	0	0	-1.94	-0.009	-0.849
N+5.45	B163	ENVOLVENTE MIN	2.55	0	1.21	-0.009	-0.823
N+2.70	B163	ENVOLVENTE MAX	0	0	-5.24	0.001	-2.641
N+2.70	B163	ENVOLVENTE MAX	2.55	0	9.54	0.001	-2.57
N+2.70	B163	ENVOLVENTE MIN	0	0	-9.64	-0.004	-4.957
N+2.70	B163	ENVOLVENTE MIN	2.55	0	5.19	-0.004	-4.825
N+2.70	B164	ENVOLVENTE MAX	0	0	-1.14	0.005	-0.387
N+2.70	B164	ENVOLVENTE MAX	2.55	0	1.94	0.005	-0.43
N+2.70	B164	ENVOLVENTE MIN	0	0	-1.91	-0.002	-0.804
N+2.70	B164	ENVOLVENTE MIN	2.55	0	1.16	-0.002	-0.842
N+2.70	B165	ENVOLVENTE MAX	0	0	-1.2	-0.002	-0.466
N+2.70	B165	ENVOLVENTE MAX	2.55	0	1.88	-0.002	-0.389
N+2.70	B165	ENVOLVENTE MIN	0	0	-1.97	-0.014	-0.859
N+2.70	B165	ENVOLVENTE MIN	2.55	0	1.14	-0.014	-0.746
N+5.45	B166	ENVOLVENTE MAX	0	-0.18	-0.65	-0.029	-0.14
N+5.45	B166	ENVOLVENTE MAX	0.6	-0.18	2.08	-0.029	-0.138
N+5.45	B166	ENVOLVENTE MAX	0.6	0.54	-6.32	-0.004	-2.01
N+5.45	B166	ENVOLVENTE MAX	2.5	0.54	8.65	-0.004	-1.645
N+5.45	B166	ENVOLVENTE MAX	2.5	0	-0.22	-0.004	0.006

N+5.45	B166	ENVOLVENTE MAX	3	0	0.39	-0.004	0.009
N+5.45	B166	ENVOLVENTE MIN	0	-1.72	-1.25	-0.125	-0.278
N+5.45	B166	ENVOLVENTE MIN	0.6	-1.72	1.05	-0.125	-0.271
N+5.45	B166	ENVOLVENTE MIN	0.6	0.06	-13.4	-0.02	-4.289
N+5.45	B166	ENVOLVENTE MIN	2.5	0.06	4.19	-0.02	-3.48
N+5.45	B166	ENVOLVENTE MIN	2.5	0	-0.37	-0.02	-0.062
N+5.45	B166	ENVOLVENTE MIN	3	0	0.24	-0.02	-0.078
N+5.45	B167	ENVOLVENTE MAX	0	0	-0.37	-0.095	-0.032
N+5.45	B167	ENVOLVENTE MAX	0.5	0	0.9	-0.095	-0.036
N+5.45	B167	ENVOLVENTE MAX	0.5	0.15	-5.08	-0.097	-1.78
N+5.45	B167	ENVOLVENTE MAX	2.319	0.15	12.76	-0.097	-1.914
N+5.45	B167	ENVOLVENTE MAX	2.319	1.31	-0.17	-0.096	0.051
N+5.45	B167	ENVOLVENTE MAX	2.4	1.31	0.33	-0.096	0.051
N+5.45	B167	ENVOLVENTE MAX	2.4	-0.46	-0.02	0.612	-0.046
N+5.45	B167	ENVOLVENTE MAX	2.409	-0.46	0.03	0.612	-0.046
N+5.45	B167	ENVOLVENTE MAX	2.409	-0.21	-0.47	0.61	-0.079
N+5.45	B167	ENVOLVENTE MAX	2.72	-0.21	0.78	0.61	-0.084
N+5.45	B167	ENVOLVENTE MAX	2.72	0	-0.24	0.615	-0.09
N+5.45	B167	ENVOLVENTE MAX	3	0	0.5	0.615	-0.094
N+5.45	B167	ENVOLVENTE MIN	0	0	-0.64	-0.209	-0.145
N+5.45	B167	ENVOLVENTE MIN	0.5	0	0.49	-0.209	-0.131
N+5.45	B167	ENVOLVENTE MIN	0.5	0.03	-10.68	-0.212	-3.796
N+5.45	B167	ENVOLVENTE MIN	2.319	0.03	6.02	-0.212	-4.076
N+5.45	B167	ENVOLVENTE MIN	2.319	0.24	-0.35	-0.211	-0.033
N+5.45	B167	ENVOLVENTE MIN	2.4	0.24	0.16	-0.211	-0.033
N+5.45	B167	ENVOLVENTE MIN	2.4	-2.52	-0.03	0.248	-0.094
N+5.45	B167	ENVOLVENTE MIN	2.409	-2.52	0.02	0.248	-0.094
N+5.45	B167	ENVOLVENTE MIN	2.409	-1.15	-0.93	0.246	-0.151
N+5.45	B167	ENVOLVENTE MIN	2.72	-1.15	0.39	0.246	-0.163
N+5.45	B167	ENVOLVENTE MIN	2.72	0	-0.42	0.249	-0.179
N+5.45	B167	ENVOLVENTE MIN	3	0	0.27	0.249	-0.191
N+2.70	B169	ENVOLVENTE MAX	0	0	-5.53	-0.381	-4.005
N+2.70	B169	ENVOLVENTE MAX	2.55	0	6.58	-0.381	-0.44
N+2.70	B169	ENVOLVENTE MIN	0	0	-13.81	-0.892	-10.299
N+2.70	B169	ENVOLVENTE MIN	2.55	0	2.68	-0.892	-1.085
N+2.70	B170	ENVOLVENTE MAX	0	0	-8.31	0.02	-4.026
N+2.70	B170	ENVOLVENTE MAX	2.4	0	15.57	0.02	-3.951
N+2.70	B170	ENVOLVENTE MAX	2.4	0	2.64	0.011	1.301
N+2.70	B170	ENVOLVENTE MAX	3	0	3.42	0.011	0.054
N+2.70	B170	ENVOLVENTE MIN	0	0	-15.75	0.008	-7.793
N+2.70	B170	ENVOLVENTE MIN	2.4	0	8.23	0.008	-7.578
N+2.70	B170	ENVOLVENTE MIN	2.4	0	-0.73	-0.022	-0.207
N+2.70	B170	ENVOLVENTE MIN	3	0	-0.14	-0.022	-0.517
N+2.70	B171	ENVOLVENTE MAX	0	0	0.01	0.028	0.018
N+2.70	B171	ENVOLVENTE MAX	0.6	0	0.59	0.028	0.939
N+2.70	B171	ENVOLVENTE MAX	0.6	0	-4.68	0.062	-2.193
N+2.70	B171	ENVOLVENTE MAX	3	0	8.68	0.062	-2.235
N+2.70	B171	ENVOLVENTE MIN	0	0	-2.54	-0.007	-0.355
N+2.70	B171	ENVOLVENTE MIN	0.6	0	-1.77	-0.007	-0.164
N+2.70	B171	ENVOLVENTE MIN	0.6	0	-8.54	0.033	-4.096
N+2.70	B171	ENVOLVENTE MIN	3	0	4.73	0.033	-4.275
N+2.70	B173	ENVOLVENTE MAX	0	0	-4.87	0.776	-1.046
N+2.70	B173	ENVOLVENTE MAX	2.95	0	15.61	0.776	-2.871
N+2.70	B173	ENVOLVENTE MIN	0	0	-12.37	0.33	-2.676
N+2.70	B173	ENVOLVENTE MIN	2.95	0	6.13	0.33	-7.492
N+5.45	B174	ENVOLVENTE MAX	0	0	-6.9	-0.008	-4.819
N+5.45	B174	ENVOLVENTE MAX	2.55	0	10.53	-0.008	-2.33
N+5.45	B174	ENVOLVENTE MIN	0	0	-13.86	-0.022	-9.405
N+5.45	B174	ENVOLVENTE MIN	2.55	0	4.91	-0.022	-5.161
N+2.70	B174	ENVOLVENTE MAX	0	0	-8.19	-0.019	-5.974
N+2.70	B174	ENVOLVENTE MAX	2.55	0	10.7	-0.019	-1.963
N+2.70	B174	ENVOLVENTE MIN	0	0	-18.5	-0.087	-14.365
N+2.70	B174	ENVOLVENTE MIN	2.55	0	4.98	-0.087	-4.422
N+5.45	B175	ENVOLVENTE MAX	0	0	4.34	0	0
N+5.45	B175	ENVOLVENTE MAX	1	0	7.41	0	-2.812
N+5.45	B175	ENVOLVENTE MIN	0	0	1.93	0	0
N+5.45	B175	ENVOLVENTE MIN	1	0	3.69	0	-5.873
N+2.70	B176	ENVOLVENTE MAX	0	0	-6.24	-0.002	-2.238
N+2.70	B176	ENVOLVENTE MAX	2.55	0	13.97	-0.002	-3.805
N+2.70	B176	ENVOLVENTE MIN	0	0	-11.82	-0.017	-4.545
N+2.70	B176	ENVOLVENTE MIN	2.55	0	7.45	-0.017	-7.288
N+5.45	B177	ENVOLVENTE MAX	0	0	-7.42	0.546	-3.969
N+5.45	B177	ENVOLVENTE MAX	2.95	0	16.14	0.546	-4.401
N+5.45	B177	ENVOLVENTE MIN	0	0	-15.99	0.291	-9.077
N+5.45	B177	ENVOLVENTE MIN	2.95	0	7.72	0.291	-9.305
N+2.70	B178	ENVOLVENTE MAX	0	0	-6.33	1.925	-3.828

N+2.70	B178	ENVOLVENTE MAX	2.951	0	15.47	1.925	-3.494
N+2.70	B178	ENVOLVENTE MIN	0	0	-15.07	0.677	-9.343
N+2.70	B178	ENVOLVENTE MIN	2.951	0	6.17	0.677	-9.811
N+5.45	B180	ENVOLVENTE MAX	0	0	20.36	0.824	0.855
N+5.45	B180	ENVOLVENTE MAX	1.5	0	31.66	0.824	-19.83
N+5.45	B180	ENVOLVENTE MIN	0	0	10.54	0.4	0.481
N+5.45	B180	ENVOLVENTE MIN	1.5	0	16.56	0.4	-38.136
N+5.45	B181	ENVOLVENTE MAX	0	0	-3.84	0.002	-1.983
N+5.45	B181	ENVOLVENTE MAX	2.55	0	7.32	0.002	-1.804
N+5.45	B181	ENVOLVENTE MIN	0	0	-7.5	-0.006	-3.952
N+5.45	B181	ENVOLVENTE MIN	2.55	0	3.7	-0.006	-3.71
N+2.70	B182	ENVOLVENTE MAX	0	0	29.65	0.647	1.409
N+2.70	B182	ENVOLVENTE MAX	1.2	0	41.84	0.647	-16.506
N+2.70	B182	ENVOLVENTE MAX	1.2	0	-0.36	2.144	-0.159
N+2.70	B182	ENVOLVENTE MAX	1.8	0	1.04	2.144	-0.181
N+2.70	B182	ENVOLVENTE MIN	0	0	11.87	0.272	0.59
N+2.70	B182	ENVOLVENTE MIN	1.2	0	16.64	0.272	-41.461
N+2.70	B182	ENVOLVENTE MIN	1.2	0	-0.68	0.916	-0.373
N+2.70	B182	ENVOLVENTE MIN	1.8	0	0.53	0.916	-0.497
N+5.45	B183	ENVOLVENTE MAX	0	0	-1.21	0.003	-0.48
N+5.45	B183	ENVOLVENTE MAX	2.55	0	1.95	0.003	-0.522
N+5.45	B183	ENVOLVENTE MIN	0	0	-1.91	-0.006	-0.786
N+5.45	B183	ENVOLVENTE MIN	2.55	0	1.24	-0.006	-0.839
N+2.70	B183	ENVOLVENTE MAX	0	0	-5.21	0.003	-2.603
N+2.70	B183	ENVOLVENTE MAX	2.55	0	9.62	0.003	-2.64
N+2.70	B183	ENVOLVENTE MIN	0	0	-9.56	-0.002	-4.868
N+2.70	B183	ENVOLVENTE MIN	2.55	0	5.24	-0.002	-4.934
N+5.45	B184	ENVOLVENTE MAX	0	0	-8.49	-0.138	-4.971
N+5.45	B184	ENVOLVENTE MAX	2.95	0	13.25	-0.138	-2.174
N+5.45	B184	ENVOLVENTE MIN	0	0	-17.12	-0.323	-10.605
N+5.45	B184	ENVOLVENTE MIN	2.95	0	6.55	-0.323	-4.892
N+1.375	B184	ENVOLVENTE MAX	0	-0.26	-2.04	0.023	-0.469
N+1.375	B184	ENVOLVENTE MAX	2.95	-0.26	3.75	0.023	-0.485
N+1.375	B184	ENVOLVENTE MIN	0	-1.58	-3.69	-0.031	-1.767
N+1.375	B184	ENVOLVENTE MIN	2.95	-1.58	2.07	-0.031	-1.795
N+2.70	B185	ENVOLVENTE MAX	0	0	-1.16	0.012	-0.416
N+2.70	B185	ENVOLVENTE MAX	2.55	0	1.96	0.012	-0.479
N+2.70	B185	ENVOLVENTE MIN	0	0	-1.89	0.001	-0.757
N+2.70	B185	ENVOLVENTE MIN	2.55	0	1.21	0.001	-0.85
N+5.45	B186	ENVOLVENTE MAX	0	0	-15.38	0.003	-19.343
N+5.45	B186	ENVOLVENTE MAX	1.777	0	-7.55	0.003	1.864
N+5.45	B186	ENVOLVENTE MIN	0	0	-29.64	-0.146	-37.521
N+5.45	B186	ENVOLVENTE MIN	1.777	0	-14.68	-0.146	1.01
N+2.70	B187	ENVOLVENTE MAX	0	0	-19.32	-0.351	-21.959
N+2.70	B187	ENVOLVENTE MAX	1.477	0	-11.53	-0.351	2.019
N+2.70	B187	ENVOLVENTE MIN	0	0	-47.9	-0.816	-54.618
N+2.70	B187	ENVOLVENTE MIN	1.477	0	-28.8	-0.816	0.801
N+5.45	B188	ENVOLVENTE MAX	0	-1.78	-0.77	2.47	-0.319
N+5.45	B188	ENVOLVENTE MAX	0.6	-1.78	1.18	2.47	-0.241
N+5.45	B188	ENVOLVENTE MAX	0.6	2.01	-4.24	0.352	-1.389
N+5.45	B188	ENVOLVENTE MAX	2.5	2.01	5.75	0.352	-1.162
N+5.45	B188	ENVOLVENTE MAX	2.5	0	-0.39	0.345	-0.012
N+5.45	B188	ENVOLVENTE MAX	3	0	0.62	0.345	0.001
N+5.45	B188	ENVOLVENTE MIN	0	-6.38	-1.39	1.257	-0.597
N+5.45	B188	ENVOLVENTE MIN	0.6	-6.38	0.73	1.257	-0.408
N+5.45	B188	ENVOLVENTE MIN	0.6	0.56	-8.15	0.218	-2.652
N+5.45	B188	ENVOLVENTE MIN	2.5	0.56	3.12	0.218	-2.226
N+5.45	B188	ENVOLVENTE MIN	2.5	0	-0.64	0.214	-0.112
N+5.45	B188	ENVOLVENTE MIN	3	0	0.38	0.214	-0.124
N+2.70	B189	ENVOLVENTE MAX	0	0	-1.66	0.517	3.296
N+2.70	B189	ENVOLVENTE MAX	2.587	0	15.85	0.517	-4.278
N+2.70	B189	ENVOLVENTE MIN	0	0	-4.04	0.189	1.279
N+2.70	B189	ENVOLVENTE MIN	2.587	0	6.34	0.189	-10.948
N+2.70	B190	ENVOLVENTE MAX	0	0	-4.75	-0.081	-2.271
N+2.70	B190	ENVOLVENTE MAX	2.4	0	8.5	-0.081	-2.197
N+2.70	B190	ENVOLVENTE MAX	2.4	0	1.31	0.012	0.731
N+2.70	B190	ENVOLVENTE MAX	3	0	2.09	0.012	0.021
N+2.70	B190	ENVOLVENTE MIN	0	0	-8.72	-0.146	-4.352
N+2.70	B190	ENVOLVENTE MIN	2.4	0	4.67	-0.146	-4.092
N+2.70	B190	ENVOLVENTE MIN	2.4	0	-0.59	-0.016	-0.162
N+2.70	B190	ENVOLVENTE MIN	3	0	0	-0.016	-0.294
N+2.70	B191	ENVOLVENTE MAX	0	0	-5.35	-0.457	-3.331
N+2.70	B191	ENVOLVENTE MAX	2.156	0	2.93	-0.457	1.86
N+2.70	B191	ENVOLVENTE MIN	0	0	-13.19	-1.244	-8.308
N+2.70	B191	ENVOLVENTE MIN	2.156	0	1.18	-1.244	0.761
N+5.45	B192	ENVOLVENTE MAX	0	0	-2.2	-0.352	-0.947

N+5.45	B192	ENVOLVENTE MAX	2.723	0	14.05	-0.352	-8.183
N+5.45	B192	ENVOLVENTE MIN	0	0	-4.96	-0.649	-2.923
N+5.45	B192	ENVOLVENTE MIN	2.723	0	7.49	-0.649	-15.305
N+2.70	B192	ENVOLVENTE MAX	0	0	3.4	-0.048	3.27
N+2.70	B192	ENVOLVENTE MAX	2.723	0	9.29	-0.048	-5.212
N+2.70	B192	ENVOLVENTE MIN	0	0	-0.18	-0.292	0.292
N+2.70	B192	ENVOLVENTE MIN	2.723	0	4.23	-0.292	-14.01
N+2.70	B193	ENVOLVENTE MAX	0	0	-17.4	10.822	-10.848
N+2.70	B193	ENVOLVENTE MAX	1.484	0	-12.43	10.822	26.547
N+2.70	B193	ENVOLVENTE MAX	1.484	0	6.8	-3.575	16.884
N+2.70	B193	ENVOLVENTE MAX	3.55	0	25.38	-3.575	-7.013
N+2.70	B193	ENVOLVENTE MIN	0	0	-41.4	4.396	-26.256
N+2.70	B193	ENVOLVENTE MIN	1.484	0	-30.62	4.396	10.887
N+2.70	B193	ENVOLVENTE MIN	1.484	0	2.6	-8.972	6.927
N+2.70	B193	ENVOLVENTE MIN	3.55	0	10.73	-8.972	-16.886
N+5.45	B194	ENVOLVENTE MAX	0	0	4.34	0	0
N+5.45	B194	ENVOLVENTE MAX	1	0	8.27	0	-3.136
N+5.45	B194	ENVOLVENTE MIN	0	0	1.93	0	0
N+5.45	B194	ENVOLVENTE MIN	1	0	4.34	0	-6.305
N+2.70	B195	ENVOLVENTE MAX	0	0	-11	8.802	-6.944
N+2.70	B195	ENVOLVENTE MAX	1.575	0	-4.98	8.802	14.134
N+2.70	B195	ENVOLVENTE MAX	1.575	0	24.82	-4.415	24.274
N+2.70	B195	ENVOLVENTE MAX	3.097	0	35.88	-4.415	-8.707
N+2.70	B195	ENVOLVENTE MIN	0	0	-26.5	3.589	-17.386
N+2.70	B195	ENVOLVENTE MIN	1.575	0	-12.86	3.589	5.819
N+2.70	B195	ENVOLVENTE MIN	1.575	0	9.96	-10.994	10.004
N+2.70	B195	ENVOLVENTE MIN	3.097	0	15.06	-10.994	-21.146
N+5.45	B196	ENVOLVENTE MAX	0	0.71	-13.08	-0.147	-7.238
N+5.45	B196	ENVOLVENTE MAX	1.88	0.71	-4.45	-0.147	17.928
N+5.45	B196	ENVOLVENTE MAX	1.88	1.8	-2.09	-0.666	19.099
N+5.45	B196	ENVOLVENTE MAX	3.439	1.8	7.09	-0.666	16.695
N+5.45	B196	ENVOLVENTE MAX	3.439	1.61	9.07	1.393	14.902
N+5.45	B196	ENVOLVENTE MAX	5.157	1.61	23.64	1.393	-7.289
N+5.45	B196	ENVOLVENTE MIN	0	0.21	-24.87	-0.242	-14.059
N+5.45	B196	ENVOLVENTE MIN	1.88	0.21	-8.26	-0.242	9.511
N+5.45	B196	ENVOLVENTE MIN	1.88	-0.72	-4	-1.452	10.153
N+5.45	B196	ENVOLVENTE MIN	3.439	-0.72	3.75	-1.452	8.829
N+5.45	B196	ENVOLVENTE MIN	3.439	-0.51	4.87	0.791	7.84
N+5.45	B196	ENVOLVENTE MIN	5.157	-0.51	12.48	0.791	-14.02
N+2.70	B196	ENVOLVENTE MAX	0	0	-15.3	-0.676	-9
N+2.70	B196	ENVOLVENTE MAX	1.557	0	-6.42	-0.676	20.729
N+2.70	B196	ENVOLVENTE MAX	1.557	0	-5.16	-0.014	22.577
N+2.70	B196	ENVOLVENTE MAX	3.762	0	14.67	-0.014	20.313
N+2.70	B196	ENVOLVENTE MAX	3.762	0	18.71	2.569	18.602
N+2.70	B196	ENVOLVENTE MAX	5.157	0	37.42	2.569	-8.838
N+2.70	B196	ENVOLVENTE MIN	0	0	-37.67	-1.556	-22.188
N+2.70	B196	ENVOLVENTE MIN	1.557	0	-15.55	-1.556	8.268
N+2.70	B196	ENVOLVENTE MIN	1.557	0	-12.62	-0.308	9.03
N+2.70	B196	ENVOLVENTE MIN	3.762	0	5.93	-0.308	8.178
N+2.70	B196	ENVOLVENTE MIN	3.762	0	7.69	1.071	7.472
N+2.70	B196	ENVOLVENTE MIN	5.157	0	15.27	1.071	-21.876
N+5.45	B197	ENVOLVENTE MAX	0	-1.61	-7.13	0.114	-3.895
N+5.45	B197	ENVOLVENTE MAX	4.069	-1.61	13.27	0.114	-3.95
N+5.45	B197	ENVOLVENTE MIN	0	-3.48	-13.32	0.04	-7.942
N+5.45	B197	ENVOLVENTE MIN	4.069	-3.48	7.12	0.04	-7.971
N+2.70	B197	ENVOLVENTE MAX	0	0	-9.4	0.14	-5.968
N+2.70	B197	ENVOLVENTE MAX	4.069	0	22.61	0.14	-5.854
N+2.70	B197	ENVOLVENTE MIN	0	0	-22.85	0.036	-15.015
N+2.70	B197	ENVOLVENTE MIN	4.069	0	9.3	0.036	-14.821
N+5.45	B198	ENVOLVENTE MAX	0	0	-4.24	0.329	-0.833
N+5.45	B198	ENVOLVENTE MAX	2.95	0	8.6	0.329	-0.933
N+5.45	B198	ENVOLVENTE MAX	2.95	0.54	-3.14	-0.791	-1.056
N+5.45	B198	ENVOLVENTE MAX	5.227	0.54	4.26	-0.791	-0.24
N+5.45	B198	ENVOLVENTE MIN	0	0	-8.21	0.203	-1.602
N+5.45	B198	ENVOLVENTE MIN	2.95	0	4.34	0.203	-2.174
N+5.45	B198	ENVOLVENTE MIN	2.95	-0.45	-6.08	-1.549	-2.247
N+5.45	B198	ENVOLVENTE MIN	5.227	-0.45	2.28	-1.549	-0.712
N+5.45	B199	ENVOLVENTE MAX	0	0.57	-0.99	0.601	3.309
N+5.45	B199	ENVOLVENTE MAX	2.708	0.57	11.12	0.601	-4.213
N+5.45	B199	ENVOLVENTE MAX	2.708	0	-4.78	-0.163	-3.812
N+5.45	B199	ENVOLVENTE MAX	5.258	0	3.63	-0.163	-0.221
N+5.45	B199	ENVOLVENTE MIN	0	-0.87	-1.98	0.296	1.728
N+5.45	B199	ENVOLVENTE MIN	2.708	-0.87	5.76	0.296	-8.345
N+5.45	B199	ENVOLVENTE MIN	2.708	0	-9.24	-0.271	-7.52
N+5.45	B199	ENVOLVENTE MIN	5.258	0	1.91	-0.271	-0.38
N+5.45	B200	ENVOLVENTE MAX	0	3.72	-10.02	5.509	-6.6

N+5.45	B200	ENVOLVENTE MAX	1.575	3.72	-5.15	5.509	9.919
N+5.45	B200	ENVOLVENTE MIN	0	-8.4	-18.48	2.833	-12.701
N+5.45	B200	ENVOLVENTE MIN	1.575	-8.4	-9.87	2.833	5.471
N+5.45	B201	ENVOLVENTE MAX	0	2.17	15	-3.758	15.634
N+5.45	B201	ENVOLVENTE MAX	1.522	2.17	22.06	-3.758	-6.292
N+5.45	B201	ENVOLVENTE MIN	0	-1.4	7.77	-7.338	8.465
N+5.45	B201	ENVOLVENTE MIN	1.522	-1.4	11.92	-7.338	-12.193
N+5.45	B202	ENVOLVENTE MAX	0	0.91	-13.86	6.74	-7.767
N+5.45	B202	ENVOLVENTE MAX	1.484	0.91	-9.82	6.74	17.577
N+5.45	B202	ENVOLVENTE MIN	0	-1.07	-25.65	3.445	-15.073
N+5.45	B202	ENVOLVENTE MIN	1.484	-1.07	-18.77	3.445	9.543
N+5.45	B203	ENVOLVENTE MAX	0	2.6	4.87	-3.159	11.624
N+5.45	B203	ENVOLVENTE MAX	2.067	2.6	17.15	-3.159	-5.89
N+5.45	B203	ENVOLVENTE MIN	0	-8.12	2.44	-6.029	6.355
N+5.45	B203	ENVOLVENTE MIN	2.067	-8.12	9.27	-6.029	-11.447

FUERZAS EN COLUMNAS

COLUMN FORCES
UNID: kN-m

Story	Column	Load	Loc	P	V2	V3	T	M2	M3
N+5.45	C1	ENVOLVENTE MAX	0	-26.51	-4.4	-4.99	0.023	-6.643	-5.828
N+5.45	C1	ENVOLVENTE MAX	2.75	-21.17	-4.4	-4.99	0.023	14.105	13.937
N+5.45	C1	ENVOLVENTE MIN	0	-48.26	-9.59	-9.77	-0.022	-12.766	-12.423
N+5.45	C1	ENVOLVENTE MIN	2.75	-41.13	-9.59	-9.77	-0.022	7.063	6.264
N+2.70	C1	ENVOLVENTE MAX	0	-58.19	-1.81	-1.91	0.017	2.079	2.023
N+2.70	C1	ENVOLVENTE MAX	1.375	-55.52	-1.81	-1.91	0.017	7.667	7.354
N+2.70	C1	ENVOLVENTE MIN	0	-104.98	-4.03	-4.22	-0.016	0.732	0.725
N+2.70	C1	ENVOLVENTE MIN	1.375	-101.42	-4.03	-4.22	-0.016	4.01	3.802
N+1.375	C1	ENVOLVENTE MAX	0	-60.87	-1.53	-1.71	0.017	-1.474	-0.945
N+1.375	C1	ENVOLVENTE MAX	1.375	-58.19	-1.53	-1.71	0.017	2.079	2.023
N+1.375	C1	ENVOLVENTE MIN	0	-108.54	-4.31	-4.43	-0.016	-4.147	-4.333
N+1.375	C1	ENVOLVENTE MIN	1.375	-104.98	-4.31	-4.43	-0.016	0.732	0.725
N+5.45	C2	ENVOLVENTE MAX	0	-45.47	1.65	-7.66	0.023	-10.716	1.984
N+5.45	C2	ENVOLVENTE MAX	2.75	-40.13	1.65	-7.66	0.023	21.657	0.706
N+5.45	C2	ENVOLVENTE MIN	0	-86.45	-0.55	-15.47	-0.022	-20.892	-0.799
N+5.45	C2	ENVOLVENTE MIN	2.75	-79.32	-0.55	-15.47	-0.022	10.341	-2.541
N+2.70	C2	ENVOLVENTE MAX	0	-105.02	0.69	-3.71	0.017	3.412	0.224
N+2.70	C2	ENVOLVENTE MAX	1.375	-102.35	0.69	-3.71	0.017	13.502	0.401
N+2.70	C2	ENVOLVENTE MIN	0	-194.24	-0.47	-7.34	-0.016	1.605	-0.344
N+2.70	C2	ENVOLVENTE MIN	1.375	-190.68	-0.47	-7.34	-0.016	7.248	-0.817
N+1.375	C2	ENVOLVENTE MAX	0	-107.69	0.95	-3.54	0.017	-3.105	1.301
N+1.375	C2	ENVOLVENTE MAX	1.375	-105.02	0.95	-3.54	0.017	3.412	0.224
N+1.375	C2	ENVOLVENTE MIN	0	-197.8	-0.74	-7.34	-0.016	-6.678	-1.126
N+1.375	C2	ENVOLVENTE MIN	1.375	-194.24	-0.74	-7.34	-0.016	1.605	-0.344
N+5.45	C3	ENVOLVENTE MAX	0	-45.04	0.59	-7.89	0.023	-10.992	0.767
N+5.45	C3	ENVOLVENTE MAX	2.75	-39.69	0.59	-7.89	0.023	22.351	2.114
N+5.45	C3	ENVOLVENTE MIN	0	-85.47	-1.48	-15.75	-0.022	-20.965	-1.962
N+5.45	C3	ENVOLVENTE MIN	2.75	-78.34	-1.48	-15.75	-0.022	10.676	-0.862
N+2.70	C3	ENVOLVENTE MAX	0	-104.82	0.41	-3.82	0.017	3.324	0.402
N+2.70	C3	ENVOLVENTE MAX	1.375	-102.15	0.41	-3.82	0.017	13.156	1.016
N+2.70	C3	ENVOLVENTE MIN	0	-193.01	-0.82	-7.15	-0.016	1.668	-0.229
N+2.70	C3	ENVOLVENTE MIN	1.375	-189.44	-0.82	-7.15	-0.016	7.364	-0.283
N+1.375	C3	ENVOLVENTE MAX	0	-107.49	0.68	-3.67	0.017	-3.207	1.052
N+1.375	C3	ENVOLVENTE MAX	1.375	-104.82	0.68	-3.67	0.017	3.324	0.402
N+1.375	C3	ENVOLVENTE MIN	0	-196.57	-1.09	-7.15	-0.016	-6.508	-1.438
N+1.375	C3	ENVOLVENTE MIN	1.375	-193.01	-1.09	-7.15	-0.016	1.668	-0.229
N+5.45	C4	ENVOLVENTE MAX	0	-50.1	-1.68	-7.75	0.023	-10.659	-2.437
N+5.45	C4	ENVOLVENTE MAX	2.75	-44.75	-1.68	-7.75	0.023	22.219	7.317
N+5.45	C4	ENVOLVENTE MIN	0	-95.98	-5.33	-15.45	-0.022	-20.257	-7.346
N+5.45	C4	ENVOLVENTE MIN	2.75	-88.85	-5.33	-15.45	-0.022	10.623	2.182
N+2.70	C4	ENVOLVENTE MAX	0	-117.4	-0.82	-3.64	0.017	3.109	1.349
N+2.70	C4	ENVOLVENTE MAX	1.375	-114.73	-0.82	-3.64	0.017	12.315	4.747
N+2.70	C4	ENVOLVENTE MIN	0	-217.31	-2.83	-6.7	-0.016	1.604	0.361
N+2.70	C4	ENVOLVENTE MIN	1.375	-213.74	-2.83	-6.7	-0.016	6.97	1.978
N+1.375	C4	ENVOLVENTE MAX	0	-120.07	-0.55	-3.48	0.017	-3.039	-0.052
N+1.375	C4	ENVOLVENTE MAX	1.375	-117.4	-0.55	-3.48	0.017	3.109	1.349
N+1.375	C4	ENVOLVENTE MIN	0	-220.87	-3.1	-6.7	-0.016	-6.119	-3.253
N+1.375	C4	ENVOLVENTE MIN	1.375	-217.31	-3.1	-6.7	-0.016	1.604	0.361
N+5.45	C5	ENVOLVENTE MAX	0	-45.26	11.7	-3.68	0.023	-2.26	17.43
N+5.45	C5	ENVOLVENTE MAX	2.75	-39.92	11.7	-3.68	0.023	17.163	-6.197
N+5.45	C5	ENVOLVENTE MIN	0	-85.98	5.31	-8.24	-0.022	-5.498	8.406
N+5.45	C5	ENVOLVENTE MIN	2.75	-78.86	5.31	-8.24	-0.022	7.866	-14.734

N+2.70	C5	ENVOLVENTE MAX	0	-62.72	7.28	2.05	0.017	-0.335	-1.501
N+2.70	C5	ENVOLVENTE MAX	1.375	-60.05	7.28	2.05	0.017	-1.542	-7.167
N+2.70	C5	ENVOLVENTE MIN	0	-119.55	3.62	0.71	-0.016	-1.06	-3.509
N+2.70	C5	ENVOLVENTE MIN	1.375	-115.99	3.62	0.71	-0.016	-3.805	-13.474
N+1.375	C5	ENVOLVENTE MAX	0	-65.39	7.28	2.23	0.017	2.117	6.889
N+1.375	C5	ENVOLVENTE MAX	1.375	-62.72	7.28	2.23	0.017	-0.335	-1.501
N+1.375	C5	ENVOLVENTE MIN	0	-123.11	3.31	0.53	-0.016	0.28	2.578
N+1.375	C5	ENVOLVENTE MIN	1.375	-119.55	3.31	0.53	-0.016	-1.06	-3.509
N+2.70	C6	ENVOLVENTE MAX	0	-25.01	4.67	1	0.047	1.954	0.774
N+2.70	C6	ENVOLVENTE MAX	1.375	-22.33	4.67	1	0.047	3.309	-2.984
N+2.70	C6	ENVOLVENTE MIN	0	-43.19	1.26	-3.14	-0.148	-1.195	-1.25
N+2.70	C6	ENVOLVENTE MIN	1.375	-39.62	1.26	-3.14	-0.148	0.389	-6.1
N+1.375	C6	ENVOLVENTE MAX	0	-30.07	1.38	1.56	0.144	1.031	1.902
N+1.375	C6	ENVOLVENTE MAX	1.375	-27.39	1.38	1.56	0.144	2.038	1.431
N+1.375	C6	ENVOLVENTE MIN	0	-49.7	-1.65	-3.56	-0.042	-2.905	-1.092
N+1.375	C6	ENVOLVENTE MIN	1.375	-46.14	-1.65	-3.56	-0.042	-1.166	-0.239
N+5.45	C7	ENVOLVENTE MAX	0	-23.19	1.12	-0.45	0.03	0.04	1.055
N+5.45	C7	ENVOLVENTE MAX	2.75	-17.47	1.12	-0.45	0.03	3.584	-0.373
N+5.45	C7	ENVOLVENTE MIN	0	-41.09	0.23	-1.68	-0.029	-1.326	0.227
N+5.45	C7	ENVOLVENTE MIN	2.75	-33.47	0.23	-1.68	-0.029	1.129	-2.066
N+2.70	C7	ENVOLVENTE MAX	0	-26.05	0.22	1.6	0.051	1.001	0.818
N+2.70	C7	ENVOLVENTE MAX	1.375	-23.19	0.22	1.6	0.051	0.04	1.055
N+2.70	C7	ENVOLVENTE MIN	0	-44.9	-1.63	-0.87	-0.159	-1.277	-1.484
N+2.70	C7	ENVOLVENTE MIN	1.375	-41.09	-1.63	-0.87	-0.159	-1.326	0.227
N+1.375	C7	ENVOLVENTE MAX	0	-30.91	4.53	2.12	0.154	1.641	3.251
N+1.375	C7	ENVOLVENTE MAX	1.375	-28.05	4.53	2.12	0.154	0.971	-0.648
N+1.375	C7	ENVOLVENTE MIN	0	-52.29	0.26	-1.53	-0.045	-1.212	-0.38
N+1.375	C7	ENVOLVENTE MIN	1.375	-48.48	0.26	-1.53	-0.045	-1.361	-3.066
N+5.45	C8	ENVOLVENTE MAX	0	-34.94	-3.88	6.75	0.023	9.616	-4.3
N+5.45	C8	ENVOLVENTE MAX	2.75	-29.6	-3.88	6.75	0.023	-2.592	15.146
N+5.45	C8	ENVOLVENTE MIN	0	-69.11	-9.18	2.17	-0.022	3.372	-10.088
N+5.45	C8	ENVOLVENTE MIN	2.75	-61.98	-9.18	2.17	-0.022	-8.949	6.373
N+2.70	C8	ENVOLVENTE MAX	0	-76.19	-0.68	3.89	0.017	-0.704	1.143
N+2.70	C8	ENVOLVENTE MAX	1.375	-73.52	-0.68	3.89	0.017	-2.72	3.8
N+2.70	C8	ENVOLVENTE MIN	0	-145.74	-2.32	1.32	-0.016	-1.861	0.258
N+2.70	C8	ENVOLVENTE MIN	1.375	-142.18	-2.32	1.32	-0.016	-7.005	1.726
N+1.375	C8	ENVOLVENTE MAX	0	-78.86	-0.44	4.08	0.017	3.794	-0.04
N+1.375	C8	ENVOLVENTE MAX	1.375	-76.19	-0.44	4.08	0.017	-0.704	1.143
N+1.375	C8	ENVOLVENTE MIN	0	-149.3	-2.56	1.13	-0.016	0.802	-2.684
N+1.375	C8	ENVOLVENTE MIN	1.375	-145.74	-2.56	1.13	-0.016	-1.861	0.258
N+5.45	C9	ENVOLVENTE MAX	0	-76.63	0.58	-0.21	0.023	1.418	0.161
N+5.45	C9	ENVOLVENTE MAX	2.75	-71.28	0.58	-0.21	0.023	5.17	1.717
N+5.45	C9	ENVOLVENTE MIN	0	-151.19	-2.18	-2.29	-0.022	-1.134	-4.283
N+5.45	C9	ENVOLVENTE MIN	2.75	-144.06	-2.18	-2.29	-0.022	1.878	-1.434
N+2.70	C9	ENVOLVENTE MAX	0	-173.62	-0.24	2.27	0.017	-0.382	1.211
N+2.70	C9	ENVOLVENTE MAX	1.375	-170.94	-0.24	2.27	0.017	-1.874	4.77
N+2.70	C9	ENVOLVENTE MIN	0	-344.51	-2.59	0.91	-0.016	-1.13	0.106
N+2.70	C9	ENVOLVENTE MIN	1.375	-340.94	-2.59	0.91	-0.016	-4.253	0.876
N+1.375	C9	ENVOLVENTE MAX	0	-176.29	0	2.27	0.017	1.992	0.37
N+1.375	C9	ENVOLVENTE MAX	1.375	-173.62	0	2.27	0.017	-0.382	1.211
N+1.375	C9	ENVOLVENTE MIN	0	-348.07	-2.81	0.74	-0.016	0.506	-2.928
N+1.375	C9	ENVOLVENTE MIN	1.375	-344.51	-2.81	0.74	-0.016	-1.13	0.106
N+5.45	C10	ENVOLVENTE MAX	0	-73.89	0.46	-0.4	0.023	0.623	0.641
N+5.45	C10	ENVOLVENTE MAX	2.75	-68.55	0.46	-0.4	0.023	5.725	2.096
N+5.45	C10	ENVOLVENTE MIN	0	-146.36	-1.4	-4.42	-0.022	-6.436	-1.768
N+5.45	C10	ENVOLVENTE MIN	2.75	-139.23	-1.4	-4.42	-0.022	1.565	-0.638
N+2.70	C10	ENVOLVENTE MAX	0	-168.24	0.38	1.34	0.017	1.163	0.342
N+2.70	C10	ENVOLVENTE MAX	1.375	-165.57	0.38	1.34	0.017	4.727	0.771
N+2.70	C10	ENVOLVENTE MIN	0	-351.89	-0.66	-2.59	-0.016	-0.705	-0.227
N+2.70	C10	ENVOLVENTE MIN	1.375	-348.33	-0.66	-2.59	-0.016	-2.535	-0.264
N+1.375	C10	ENVOLVENTE MAX	0	-170.92	0.61	1.34	0.017	1.301	0.923
N+1.375	C10	ENVOLVENTE MAX	1.375	-168.24	0.61	1.34	0.017	1.163	0.342
N+1.375	C10	ENVOLVENTE MIN	0	-355.46	-0.9	-2.59	-0.016	-2.401	-1.201
N+1.375	C10	ENVOLVENTE MIN	1.375	-351.89	-0.9	-2.59	-0.016	-0.705	-0.227
N+5.45	C11	ENVOLVENTE MAX	0	-82.13	-2.52	-1.2	0.023	-0.69	-3.497
N+5.45	C11	ENVOLVENTE MAX	2.75	-76.79	-2.52	-1.2	0.023	8.217	9.399
N+5.45	C11	ENVOLVENTE MIN	0	-163.95	-6.85	-6.48	-0.022	-9.597	-9.446
N+5.45	C11	ENVOLVENTE MIN	2.75	-156.82	-6.85	-6.48	-0.022	2.594	3.42
N+2.70	C11	ENVOLVENTE MAX	0	-186.89	-1.16	0.62	0.017	1.819	1.667
N+2.70	C11	ENVOLVENTE MAX	1.375	-184.22	-1.16	0.62	0.017	7.282	6.347
N+2.70	C11	ENVOLVENTE MIN	0	-392.64	-3.44	-3.97	-0.016	-0.397	0.49
N+2.70	C11	ENVOLVENTE MIN	1.375	-389.08	-3.44	-3.97	-0.016	-1.137	2.569
N+1.375	C11	ENVOLVENTE MAX	0	-189.57	-0.92	0.8	0.017	0.82	-0.459
N+1.375	C11	ENVOLVENTE MAX	1.375	-186.89	-0.92	0.8	0.017	1.819	1.667
N+1.375	C11	ENVOLVENTE MIN	0	-396.2	-3.67	-3.97	-0.016	-3.645	-3.701
N+1.375	C11	ENVOLVENTE MIN	1.375	-392.64	-3.67	-3.97	-0.016	-0.397	0.49

N+5.45	C12	ENVOLVENTE MAX	0	-73.32	14.8	-2.03	0.023	-3.734	20.793
N+5.45	C12	ENVOLVENTE MAX	2.75	-67.97	14.8	-2.03	0.023	6.441	-8.036
N+5.45	C12	ENVOLVENTE MIN	0	-145.65	6.02	-7.13	-0.022	-13.173	8.519
N+5.45	C12	ENVOLVENTE MIN	2.75	-138.52	6.02	-7.13	-0.022	1.859	-19.896
N+2.70	C12	ENVOLVENTE MAX	0	-143.66	7.88	-1.86	0.017	3.314	-1.508
N+2.70	C12	ENVOLVENTE MAX	1.375	-140.99	7.88	-1.86	0.017	13.11	-6.234
N+2.70	C12	ENVOLVENTE MIN	0	-302.39	3.13	-7.12	-0.016	0.822	-3.752
N+2.70	C12	ENVOLVENTE MIN	1.375	-298.83	3.13	-7.12	-0.016	3.646	-14.587
N+1.375	C12	ENVOLVENTE MAX	0	-146.33	7.88	-1.71	0.017	-1.427	7.215
N+1.375	C12	ENVOLVENTE MAX	1.375	-143.66	7.88	-1.71	0.017	3.314	-1.508
N+1.375	C12	ENVOLVENTE MIN	0	-305.96	2.9	-7.12	-0.016	-6.482	2.219
N+1.375	C12	ENVOLVENTE MIN	1.375	-302.39	2.9	-7.12	-0.016	0.822	-3.752
N+5.45	C13	ENVOLVENTE MAX	0	-23.46	3.17	1.75	0.03	1.333	3.843
N+5.45	C13	ENVOLVENTE MAX	2.75	-17.75	3.17	1.75	0.03	0.228	-0.796
N+5.45	C13	ENVOLVENTE MIN	0	-44.18	0.37	-0.54	-0.029	-1.385	0.227
N+5.45	C13	ENVOLVENTE MIN	2.75	-36.56	0.37	-0.54	-0.029	-3.615	-4.862
N+2.70	C13	ENVOLVENTE MAX	0	-31.7	1.2	0.16	0.022	0.564	0.151
N+2.70	C13	ENVOLVENTE MAX	1.375	-28.84	1.2	0.16	0.022	2.264	-0.002
N+2.70	C13	ENVOLVENTE MIN	0	-63.98	-0.26	-1.39	-0.021	-0.074	-0.618
N+2.70	C13	ENVOLVENTE MIN	1.375	-60.17	-0.26	-1.39	-0.021	-0.077	-1.758
N+1.375	C13	ENVOLVENTE MAX	0	-34.56	1.45	0.34	0.022	0.458	1.71
N+1.375	C13	ENVOLVENTE MAX	1.375	-31.7	1.45	0.34	0.022	0.564	0.151
N+1.375	C13	ENVOLVENTE MIN	0	-67.79	-0.51	-1.58	-0.021	-1.665	-0.885
N+1.375	C13	ENVOLVENTE MIN	1.375	-63.98	-0.51	-1.58	-0.021	-0.074	-0.618
N+5.45	C14	ENVOLVENTE MAX	0	-46.44	-8.81	5.22	0.03	6.617	-11.533
N+5.45	C14	ENVOLVENTE MAX	2.75	-40.73	-8.81	5.22	0.03	-3.233	26.454
N+5.45	C14	ENVOLVENTE MIN	0	-85.94	-19.71	2.07	-0.029	2.448	-27.745
N+5.45	C14	ENVOLVENTE MIN	2.75	-78.32	-19.71	2.07	-0.029	-7.736	12.69
N+2.70	C14	ENVOLVENTE MAX	0	-90.29	-3.63	2.01	0.022	-0.099	4.955
N+2.70	C14	ENVOLVENTE MAX	1.375	-87.43	-3.63	2.01	0.022	-0.882	19.421
N+2.70	C14	ENVOLVENTE MIN	0	-188.9	-10.52	0.31	-0.021	-1.059	1.628
N+2.70	C14	ENVOLVENTE MIN	1.375	-185.09	-10.52	0.31	-0.021	-3.791	7.013
N+1.375	C14	ENVOLVENTE MAX	0	-93.15	-3.47	2.12	0.022	2.005	-3.016
N+1.375	C14	ENVOLVENTE MAX	1.375	-90.29	-3.47	2.12	0.022	-0.099	4.955
N+1.375	C14	ENVOLVENTE MIN	0	-192.71	-10.52	0.12	-0.021	-0.092	-9.512
N+1.375	C14	ENVOLVENTE MIN	1.375	-188.9	-10.52	0.12	-0.021	-1.059	1.628
N+5.45	C15	ENVOLVENTE MAX	0	-18.86	2.52	1.19	0.03	0.648	2.491
N+5.45	C15	ENVOLVENTE MAX	2.75	-13.15	2.52	1.19	0.03	-1.009	-1.947
N+5.45	C15	ENVOLVENTE MIN	0	-34.1	0.91	0.31	-0.029	-0.262	0.513
N+5.45	C15	ENVOLVENTE MIN	2.75	-26.48	0.91	0.31	-0.029	-2.787	-4.44
N+2.70	C15	ENVOLVENTE MAX	0	-21.22	1.41	1.08	0.092	1.658	1.241
N+2.70	C15	ENVOLVENTE MAX	1.375	-18.37	1.41	1.08	0.092	1.885	0.841
N+2.70	C15	ENVOLVENTE MIN	0	-34.51	-1.31	-1.85	-0.058	-0.8	-1.069
N+2.70	C15	ENVOLVENTE MIN	1.375	-30.7	-1.31	-1.85	-0.058	0.043	-0.803
N+1.375	C15	ENVOLVENTE MAX	0	-26.33	2.3	2.53	0.055	1.662	1.618
N+1.375	C15	ENVOLVENTE MAX	1.375	-23.47	2.3	2.53	0.055	0.706	0.892
N+1.375	C15	ENVOLVENTE MIN	0	-42.38	-1.54	-1.59	-0.088	-1.631	-1.253
N+1.375	C15	ENVOLVENTE MIN	1.375	-37.93	-1.54	-1.59	-0.088	-1.967	-1.564
N+5.45	C16	ENVOLVENTE MAX	0	-24.82	-3.23	10.33	0.006	14.222	-4.071
N+5.45	C16	ENVOLVENTE MAX	2.75	-19.11	-3.23	10.33	0.006	-7.344	9.906
N+5.45	C16	ENVOLVENTE MIN	0	-43	-7.25	4.98	-0.073	6.346	-10.024
N+5.45	C16	ENVOLVENTE MIN	2.75	-35.38	-7.25	4.98	-0.073	-14.191	4.798
N+2.70	C16	ENVOLVENTE MAX	0	-52.3	-1.13	5.2	0.022	-0.811	1.723
N+2.70	C16	ENVOLVENTE MAX	1.375	-49.44	-1.13	5.2	0.022	-3.437	6.802
N+2.70	C16	ENVOLVENTE MIN	0	-105.54	-3.69	1.74	-0.021	-2.532	0.446
N+2.70	C16	ENVOLVENTE MIN	1.375	-101.73	-3.69	1.74	-0.021	-9.682	2.311
N+1.375	C16	ENVOLVENTE MAX	0	-55.16	-0.96	5.2	0.022	4.617	-0.756
N+1.375	C16	ENVOLVENTE MAX	1.375	-52.3	-0.96	5.2	0.022	-0.811	1.723
N+1.375	C16	ENVOLVENTE MIN	0	-109.35	-3.69	1.54	-0.021	1.184	-3.356
N+1.375	C16	ENVOLVENTE MIN	1.375	-105.54	-3.69	1.54	-0.021	-2.532	0.446
N+5.45	C17	ENVOLVENTE MAX	0	-26.89	6.9	12.01	0.079	16.683	9.621
N+5.45	C17	ENVOLVENTE MAX	2.75	-21.17	6.9	12.01	0.079	-8.441	-4.483
N+5.45	C17	ENVOLVENTE MIN	0	-46.54	3.04	5.76	-0.011	7.384	3.877
N+5.45	C17	ENVOLVENTE MIN	2.75	-38.92	3.04	5.76	-0.011	-16.358	-9.344
N+2.70	C17	ENVOLVENTE MAX	0	-56.66	3.63	6.2	0.022	-1.026	-0.425
N+2.70	C17	ENVOLVENTE MAX	1.375	-53.8	3.63	6.2	0.022	-4.205	-2.293
N+2.70	C17	ENVOLVENTE MIN	0	-114.36	1.06	2.18	-0.021	-3.006	-1.74
N+2.70	C17	ENVOLVENTE MIN	1.375	-110.55	1.06	2.18	-0.021	-11.534	-6.725
N+1.375	C17	ENVOLVENTE MAX	0	-59.51	3.63	6.2	0.022	5.523	3.245
N+1.375	C17	ENVOLVENTE MAX	1.375	-56.66	3.63	6.2	0.022	-1.026	-0.425
N+1.375	C17	ENVOLVENTE MIN	0	-118.17	0.9	1.98	-0.021	1.593	0.694
N+1.375	C17	ENVOLVENTE MIN	1.375	-114.36	0.9	1.98	-0.021	-3.006	-1.74

9. VERIFICACIONES

VERIFICACIONES

VERIFICACIONES DE CORTANTE PARA VIGAS
C.21.3.3.1 (a)
C.21.3.3.1 (b)

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

COMDIS3 = 1.2C.M.+1.0C.V.+1.0Ex+0.3Ey
COMDIS4 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3Ey
COMDIS5 = 1.2C.M.+1.0C.V.+1.0Ex+0.3(-Ey)
COMDIS6 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3(-Ey)
COMDIS7 = 1.2C.M.+1.0C.V.+0.3Ex+1.0Ey
COMDIS8 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0Ey
COMDIS9 = 1.2C.M.+1.0C.V.+0.3Ex+1.0(-Ey)
COMDIS10 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0(-Ey)
COMDIS11 = 0.9C.M.+1.0Ex+0.3Ey
COMDIS12 = 0.9C.M.+1.0(-Ex)+0.3Ey
COMDIS13 = 0.9C.M.+1.0Ex+0.3(-Ey)
COMDIS14 = 0.9C.M.+1.0(-Ex)+0.3(-Ey)
COMDIS15 = 0.9C.M.+0.3Ex+1.0Ey
COMDIS16 = 0.9C.M.+0.3(-Ex)+1.0Ey
COMDIS17 = 0.9C.M.+0.3Ex+1.0(-Ey)
COMDIS18 = 0.9C.M.+0.3(-Ex)+1.0(-Ey)

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			M3						Mn (kN.m)															
	ELEMENTO												Combinaciones para resistencias nominales a momento															
	No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
N+5.45	B1	0.000	4.324	VIG30X30	0.30	0.25	-7.772	-2.658	2.681	0.139	-2.681	-0.139	11.304	12.644	11.325	12.665	11.749	12.151	11.818	12.220	6.314	7.655	6.335	7.675	6.759	7.161	6.828	7.231
	B1	4.324					-11.641	-4.120	2.306	0.119	-2.306	-0.119	17.504	18.657	17.522	18.675	17.887	18.232	17.946	18.292	9.891	11.044	9.909	11.062	10.274	10.620	10.334	10.680
N+2.70	B1	0.000	4.324	VIG30X30	0.30	0.25	-12.189	-3.499	3.261	0.216	-3.261	-0.216	17.294	18.925	17.327	18.957	17.827	18.316	17.935	18.424	10.139	11.769	10.171	11.802	10.672	11.161	10.780	11.269
	B1	4.324					-15.695	-4.393	2.961	0.196	-2.961	-0.196	22.472	23.953	22.501	23.982	22.956	23.400	23.054	23.498	13.371	14.851	13.400	14.880	13.854	14.299	13.952	14.397
N+5.45	B2	0.000	4.300	VIG30X30	0.30	0.25	-10.918	-3.877	2.034	0.105	-2.034	-0.105	16.462	17.479	16.478	17.495	16.800	17.105	16.852	17.157	9.310	10.327	9.326	10.343	9.647	9.953	9.700	10.005
	B2	4.300					-10.573	-3.711	2.083	0.107	-2.083	-0.107	15.870	16.911	15.886	16.927	16.216	16.528	16.269	16.582	8.987	10.028	9.003	10.044	9.333	9.645	9.386	9.699
N+2.70	B2	0.000	4.300	VIG30X30	0.30	0.25	-14.757	-4.108	2.741	0.182	-2.741	-0.182	21.118	22.488	21.145	22.515	21.565	21.976	21.656	22.067	12.582	13.953	12.610	13.980	13.030	13.441	13.121	13.532
	B2	4.300					-14.820	-4.193	2.775	0.185	-2.775	-0.185	21.269	22.657	21.297	22.685	21.723	22.139	21.815	22.231	12.630	14.018	12.658	14.046	13.084	13.500	13.176	13.592
N+5.45	B3	0.000	4.494	VIG30X30	0.30	0.25	-11.070	-3.885	2.101	0.108	-2.101	-0.108	16.636	17.686	16.652	17.702	16.984	17.300	17.038	17.354	9.430	10.480	9.446	10.496	9.778	10.094	9.832	10.148
	B3	4.494					-13.367	-4.892	2.166	0.112	-2.166	-0.112	20.383	21.466	20.399	21.482	20.742	21.067	20.798	21.123	11.480	12.563	11.497	12.580	11.840	12.165	11.896	12.221
N+2.70	B3	0.000	4.494	VIG30X30	0.30	0.25	-15.629	-4.450	2.686	0.180	-2.686	-0.180	22.520	23.863	22.547	23.890	22.958	23.361	23.048	23.451	13.381	14.724	13.408	14.751	13.820	14.223	13.910	14.313
	B3	4.494					-18.326	-5.202	2.686	0.178	-2.686	-0.178	26.508	27.851	26.535	27.878	26.947	27.350	27.036	27.439	15.809	17.152	15.835	17.178	16.247	16.650	16.336	16.739
N+5.45	B4	0.000	5.241	VIG30X30	0.30	0.25	-17.076	-6.337	1.803	0.093	-1.803	-0.093	26.370	27.272	26.384	27.286	26.670	26.940	26.716	26.987	14.911	15.812	14.925	15.826	15.210	15.480	15.256	15.527
	B4	5.241					-16.183	-5.772	1.675	0.089	-1.675	-0.089	24.766	25.604	24.780	25.617	25.044	25.295	25.088	25.339	14.139	14.977	14.153	14.990	14.417	14.668	14.461	14.713
N+2.70	B4	0.000	5.241	VIG30X30	0.30	0.25	-25.097	-7.287	2.689	0.178	-2.689	-0.178	36.718	38.062	36.745	38.089	37.157	37.561	37.246	37.650	21.902	23.246	21.928	23.273	22.341	22.744	22.430	22.833
	B4	5.241					-21.294	-6.244	3.066	0.205	-3.066	-0.205	31.015	32.548	31.046	32.579	31.516	31.976	31.618	32.078	18.383	19.916	18.413	19.946	18.883	19.343	18.986	19.446
N+5.45	B5	0.000	3.025	VIG30X30	0.30	0.25	-8.281	-2.827	2.043	0.150	-2.043	-0.150	12.242	13.264	12.265	13.286	12.573	12.880	12.648	12.955	6.931	7.952	6.953	7.975	7.262	7.569	7.337	7.644
	B5	3.025					-0.864	-0.289	1.474	0.099	-1.474	-0.099	0.950	1.687	0.965	1.702	1.191	1.412	1.240	1.461	0.402	1.139	0.417	1.154	0.642	0.863	0.692	0.913
N+5.45	B6	0.000	0.928	VIG30X30	0.30	0.25	-10.738	-4.595	0.350	0.346	-0.350	-0.346	17.367	17.542	17.419	17.594	17.368	17.420	17.541	17.593	9.551	9.726	9.603	9.778	9.551	9.604	9.724	9.777
	B6	0.928					3.850	1.529	0.308	0.217	-0.308	-0.217	6.242	6.088	6.210	6.056	6.226	6.180	6.118	6.072	3.558	3.404	3.526	3.372	3.542	3.496	3.434	3.388
N+2.70	B6	0.000	0.928	VIG30X30	0.30	0.25	0.246	-0.289	1.210	1.233	-1.210	-1.233	0.401	0.204	0.216	0.389	0.405	0.224	0.211	0.393	0.616	0.011	0.431	0.174	0.620	0.439	0.004	0.178
	B6	0.928					-6.591	-1.333	1.060	2.221	-1.060	-2.221	8.811	9.341	9.144	9.674	8.607	8.766	9.718	9.877	5.500	6.030	5.833	6.363	5.297	5.456	6.408	6.567
N+5.45	B7	0.000	0.928	VIG30X30	0.30	0.25	1.590	0.563	0.136	0.048	-0.136	-0.048	2.509	2.441	2.501	2.433	2.493	2.473	2.469	2.449	1.469	1.401	1.461	1.393	1.453	1.433	1.429	1.409
	B7	0.928					-4.281	-0.808	0.944	0.098	-0.944	-0.098	5.702	6.174	5.717	6.189	5.850	5.992	5.899	6.041	3.610	4.082	3.624	4.096	3.758	3.899	3.807	3.948
N+1.375	B8	0.000	3.025	VIG25X30	0.25	0.25	-0.847	0.110	3.042	0.266	-3.042	-0.266	0.126	1.647	0.166	1.687	0.612	1.068	0.745	1.201	0.018	1.503	0.022	1.543	0.468	0.924	0.601	1.057
	B8	3.025					-1.429	-0.047	3.017	0.268	-3.017	-0.268	0.987	2.496	1.028	2.536	1.469	1.921	1.603	2.055	0.512	2.020	0.552	2.060	0.993	1.445	1.127	1.579
N+5.45	B9	0.000	4.251	VIG30X30	0.30	0.25	-7.803	-2.625	0.330	0.333	-0.330	-0.333	11.881	12.046	11.931	12.096	11.881	11.930	12.047	12.097	6.915	7.080	6.965	7.130	6.915	6.964	7.081	7.131
	B9	4.251					-9.915	-3.506	0.846	0.164	-0.846	-0.164	15.180	15.603	15.205	15.628	15.300	15.426	15.382	15.508	8.700	9.123	8.724	9.147	8.819	8.946	8.901	9.028
N+2.70	B9	0.000	4.251	VIG30X30	0.30	0.25	-11.935	-3.401	0.642	0.809	-0.642	-0.809	17.502	17.823	17.623	17.944	17.473	17.569	17.877	17.973	10.520	10.841	10.642	10.963	10.491	10.587	10.896	10.992
	B9	4.251					-14.850	-4.249	0.308	0.585	-0.308	-0.585	21.948	22.102	22.036	22.190	21.900	21.946	22.192	22.238	13.244	13.398	13.332	13.486	13.196	13.242	13.488	13.534
N+5.45	B10	0.000	4.251	VIG30X30	0.30	0.25	-11.841	-4.930	0.385	0.384	-0.385	-0.384	19.014	19.207	19.072	19.264	19.014	19.072	19.206	19.264	10.532	10.724	10.589	10.782	10.532	10.590	10.724	10.782
	B10	4.251					-21.549	-8.467	0.110	0.343	-0.110	-0.343	34.273	34.328	34.324	34.379	34.232	34.248	34.403	34.420	19.341	19.396	19.392	19.447	19.300	19.317	19.472	19.488
N+2.70	B10	0.000	4.251	VIG30X30	0.30	0.25	-20.836	-6.313	0.599	0.863	-0.599	-0.863	31.102	31.401	31.231	31.531	31.056	31.145	31.487	31.577	18.538	18.837	18.667	18.967	18.492	18.582	18.923	19.013
	B10	4.251					-29.203	-10.555	0.483	0.835	-0.483	-0.835	45.415	45.657	45.540	45.782	45.354	45.426	45.771	45.844	26.099	26.341	26.225	26.466	26.038	26.110	26.455	26.528
N+5.45	B11	0.000	4.251	VIG30X30	0.30	0.25	-12.022	-4.996	0.175	0.368	-0.175	-0.368	19.351	19.439	19.406	19.494	19.317	19.344	19.501	19.528	10.748	10.836	10.804	10.891	10.715	10.741	10.899	10.925
	B11	4.251					-20.823	-8.079	0.157	0.365	-0.157	-0.365	33.000	33.078	33.055	33.133	32.964	32.987	33.146	33.170	18.674	18.753	18.729	18.807	18.638	18.661	18.820	18.844
N+2.70	B11	0.000	4.251	VIG30X30	0.30	0.25	-20.850	-5.722	0.264	0.816	-0.264	-0.816	30.615	30.747	30.737	30.869	30.518	30.558	30.926	30.966	18.638	18.770	18.760	18.892	18.541	18.581	18.949	18.989
	B11	4.251					-26.215	-11.089	0.263	0.816	-0.263	-0.816	42.420	42.552	42.542	42.674	42.323	42.363	42.731	42.771	23.467	23.598	23.589	23.720	23.370	23.409	23.778	23.817
N+5.45	B12	0.000	4.251	VIG30X30	0.30	0.25	-11.773	-4.911	0.183	0.352	-0.183	-0.352	18.966	19.058	19.019	19.111	18.937	18.964	19.113	19.140	10.524	10.615	10.576	10.668	10.494	10.521	10.670	10.697
	B12	4.251					-21.238	-8.241	0.153	0.345	-0.153	-0.345	33.662	33.739	33.714	33.791	33.629	33.652	33.801	33.824	19.050	19.127	19.102	19.178	19.016	19.039	19.189	19.212
N+2.70	B12	0.000	4.251	VIG30X30	0.30	0.25	-20.866	-5.604	0.267	0.772	-0.267	-0.772	30.519	30.652	30.634	30.768	30.430	30.470	30.816	30.856	18.655	18.788	18.771	18.904	18.566	18.606	18.952	18.992
	B12	4.251					-26.680	-11.550	0.258	0.775	-0.258	-0.775	43.443	43.572	43.560	43.689	43.353	43.392	43.740	43.779	23.889	24.018	24.006	24.135	23.799	23.838	24.186	24.225
N+5.45	B13	0.000	3.323	VIG30X30	0.30	0.25	3.850	1.529	0.308	0.217	-0.308	-0.217	6.242	6.088	6.210	6.056	6.226	6.180	6.118	6.072	3.558	3.404	3.526	3.372	3.542	3.496	3.434	3.388
	B13	3.323					-19.359	-7.463	0.206	0.246	-0.206	-0.246	30.624	30.727	30.661	30.764	30.617	30.648	30.740	30.771	17.353	17.456	17.390	17.493	17.346	17.377	17.469	17.500
N+2.70	B13	0.000	3.323	VIG30X30	0.30	0.25	-8.271	-1.502	0.424	0.988	-0.424	-0.988	11.247	11.459	11.395	11.607	11.148	11.212	11.642	11.706	7.264	7.476	7.412	7.624	7.165	7.229	7.659	7.723
	B13	3.323					-11.136	-5.654	0.300	0.738	-0.300	-0.738	18.887	19.037	18.998	19.148	18.810	18.855	19.179	19.224	9.892	10.042	10.003	10.153	9.815	9.860	10.184	10.229
N+5.45	B14	0.000	3.323	VIG30X30	0.30	0.25	-5.919	-1.820	0.165	0.386	-0.165	-0.386	8.853	8.935	8.911	8.993	8.814	8.839	9.007	9.032	5.257	5.339	5.315	5.397	5.218	5.243	5.411	5.436
	B14	3.323					-4.739	-1.598	0.836	0.182	-0.836	-0.182	7.062	7.480	7.089	7.507	7.177	7.302	7.268	7.393	4.042	4.460	4.070	4.488	4.157	4.282	4.248	4.373
N+5.45	B15	0.000	4.324	VIG30X30	0.30	0.25	-11.568	-4.544	1.944	0.178	-1.944	-0.178	17.926	18.898	17.953	18.925	18.235	18.527	18.324	18.616	9.912	10.884	9.939	10.911	10.221	10.513	10.310	10.602
	B15	4.324					-15.496	-6.115	1.746	0.123	-1.746	-0.123	24.264	25.137	24.283	25.156	24.549	24.810	24.610	24.872	13.501	14.374	13.519	14.392	13.785	14.047	13.846	14.108
N+2.70	B15	0.000	4.324	VIG30X30	0.30	0.25	-9.594	-2.105	2.436	0.198	-2.436	-0.198	12.994	14.212	13.024	14.242	13.386	13.751	13.485	13.850	8.011	9.229	8.040	9.258	8.402	8.768	8.501	8.867
	B15	4.324					-12.047	-3.471	2.308	0.158	-2.308	-0.158	17.339	18.493	17.362	18.516	17.715	18.061	17.794	18.140	10.253	11.407	10.277	11.431	10.630	10.976	10.709	11.055
N+5.45	B16	0.000	4.300	VIG30X30	0.30	0.25	-15.027	-6.078	1.620	0.092	-1.620	-0.092	23.699	24.509	23.712	24.522	23.966	24.209	24.012	24.255	13.112	13.922	13.126	13.936	13.380	13.623	13.426	13.669
	B16	4.300					-14.664	-5.755	1.789	0.094	-1.789	-0.094	22.898	23.792	22.912	23.806	23.194	23.462	23.241	23.509	12.743	13.638	12.757	13.652	13.040	13.308	13.087	13.355
N+2.70	B16	0.000	4.300	VIG30X30	0.30	0.25	-19.006	-8.031	2.250	0.138	-2.250	-0.138	30.265	31.390	30.286	31.411	30.635	30.972	30.704	31.041	16.533	17.658	16.553	17.678	16.902	17.240	16.971	17.309
	B16	4.300					-20.855	-9.605	2.378	0.142	-2.378	-0.142	34.026	35.215	34.047	35.236	34.417	34.774	34.488	34.845	18.164	19.353	18.186	19.375	18.556	18.912	18.627	18.983
N+5.45	B17	0.000	4.494	VIG30X30	0.30	0.25	-15.240	-6.039	1.894	0.097	-1.894	-0.097	23.846	24.793	23.861	24.808	24.161	24.445	24.209	24.493	13.235	14.182	13.250	14.197	13.550	13.834	13.598	13.882
	B17	4.494					-18.352	-7.371	1.942	0.100	-1.942	-0.100	28.900	29.871	28.915	29.886	29.223	29.514	29.273	29.564	16.024	16.995	16.039	17.010	16.346	16.637	16.396	16.687

YECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

V_a	$V_m = M_{ni} + M_{nr} / l_n$															
	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
(kN)	(kN)															
20.54	6.662	7.239	6.671	7.248	6.854	7.027	6.883	7.056	3.748	4.324	3.757	4.333	3.939	4.112	3.969	4.142
23.76																
26.82	9.197	9.916	9.211	9.930	9.432	9.648	9.479	9.695	5.437	6.156	5.451	6.171	5.672	5.888	5.720	5.936
29.45																
22.10	7.519	7.998	7.526	8.005	7.678	7.822	7.703	7.846	4.255	4.734	4.262	4.741	4.414	4.558	4.439	4.582
21.78																
28.16	9.857	10.499	9.870	10.512	10.067	10.259	10.110	10.302	5.863	6.505	5.876	6.518	6.073	6.265	6.116	6.308
28.26																
22.69	8.237	8.712	8.245	8.719	8.395	8.537	8.419	8.562	4.653	5.128	4.660	5.135	4.810	4.953	4.835	4.977
24.64																
29.50	10.910	11.507	10.922	11.519	11.105	11.284	11.145	11.324	6.495	7.093	6.507	7.105	6.690	6.870	6.730	6.910
31.47																
30.63	9.757	10.089	9.762	10.094	9.867	9.967	9.884	9.984	5.543	5.875	5.548	5.880	5.653	5.752	5.670	5.770
29.87																
40.42	12.924	13.473	12.935	13.484	13.103	13.268	13.140	13.304	7.686	8.235	7.697	8.246	7.866	8.030	7.902	8.067
38.03																
16.32	4.361	4.942	4.373	4.955	4.550	4.724	4.591	4.766	2.424	3.005	2.436	3.018	2.613	2.787	2.654	2.829
7.75																
32.67	25.441	25.464	25.462	25.485	25.425	25.432	25.494	25.501	14.126	14.149	14.147	14.170	14.110	14.116	14.179	14.186
24.16																
8.04	9.927	10.285	10.086	10.843	9.712	9.688	10.700	11.067	6.591	6.510	6.751	7.044	6.377	6.352	6.909	7.268
14.66																
7.75	8.847	9.283	8.856	9.291	8.990	9.121	9.017	9.148	5.472	5.907	5.480	5.916	5.615	5.746	5.642	5.773
13.19																
2.96	0.368	1.370	0.395	1.396	0.688	0.988	0.776	1.076	0.175	1.165	0.190	1.191	0.483	0.783	0.571	0.872
3.58																
20.59	6.366	6.504	6.383	6.522	6.394	6.435	6.452	6.494	3.673	3.812	3.691	3.829	3.701	3.743	3.760	3.801
22.43																
26.31	9.280	9.392	9.329	9.441	9.262	9.295	9.426	9.459	5.590	5.702	5.640	5.751	5.572	5.606	5.736	5.770
42.72																
33.44	12.535	12.593	12.561	12.619	12.526	12.543	12.611	12.629	7.027	7.085	7.053	7.111	7.018	7.035	7.103	7.121
41.58																
46.64	18.000	18.127	18.060	18.187	17.974	18.013	18.174	18.212	10.500	10.628	10.560	10.688	10.475	10.513	10.675	10.713
75.74																
33.88	12.315	12.354	12.341	12.380	12.298	12.310	12.385	12.396	6.921	6.960	6.947	6.986	6.905	6.917	6.991	7.003
41.16																
46.21	17.181	17.243	17.238	17.300	17.135	17.154	17.327	17.346	9.905	9.967	9.962	10.024	9.859	9.878	10.051	10.070
53.30																
33.59	12.380	12.420	12.405	12.444	12.366	12.377	12.447	12.459	6.957	6.996	6.981	7.021	6.942	6.954	7.024	7.036
41.44																
45.88	17.399	17.460	17.453	17.515	17.357	17.375	17.539	17.557	10.008	10.070	10.063	10.124	9.966	9.984	10.148	10.166
53.62																
24.16	11.094	11.079	11.096	11.080	11.087	11.083	11.092	11.087	6.293	6.278	6.294	6.279	6.286	6.281	6.290	6.286
39.70																
24.97	9.068	9.177	9.146	9.255	9.016	9.048	9.275	9.308	5.163	5.272	5.241	5.350	5.110	5.143	5.370	5.402
23.69																
20.28	4.789	4.940	4.815	4.966	4.812	4.857	4.898	4.943	2.798	2.949	2.824	2.975	2.821	2.866	2.907	2.952
14.62																
31.02	9.757	10.184	9.768	10.194	9.894	10.023	9.929	10.057	5.415	5.841	5.425	5.852	5.552	5.680	5.587	5.715
33.75																
21.36	7.015	7.563	7.027	7.576	7.193	7.357	7.234	7.398	4.224	4.772	4.236	4.785	4.402	4.566	4.443	4.607
23.23																
32.08	10.836	11.233	10.843	11.239	10.967	11.086	10.989	11.108	6.013	6.409	6.019	6.416	6.144	6.263	6.166	6.285
31.63																
44.96	14.951	15.490	14.961	15.499	15.128	15.290	15.161	15.322	8.069	8.607	8.079	8.617	8.246	8.407	8.279	8.440
47.16																
32.83	11.737	12.164	11.744	12.170	11.879	12.007	11.901	12.029	6.511	6.937	6.517	6.944	6.652	6.780	6.674	6.802
35.44																

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = **21.1** MPa
fy = **420** MPa
Φ Cortante = **0.75**
Estribos Φ = **9.5** mm
Av = **71** mm^2
R= **4.00**

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

Vu **= Vm + Vg**																	Vu_{max}	S	ΦVs	ΦVc	ΦVn	ΦVn > Vu_{max}
COMBDIS3	**COMBDIS4**	**COMBDIS5**	**COMBDIS6**	**COMBDIS7**	**COMBDIS8**	**COMBDIS9**	**COMBDIS10**	**COMBDIS11**	**COMBDIS12**	**COMBDIS13**	**COMBDIS14**	**COMBDIS15**	**COMBDIS16**	**COMBDIS17**	**COMBDIS18**		(kN)	(m)	(kN)	(kN)	(kN)	
								(kN)														
27.206	27.783	27.215	27.792	27.398	27.571	27.427	27.600	24.292	24.868	24.301	24.877	24.483	24.656	24.513	24.686		27.8	**0.06**	178.92	43.06	221.98	**OK**
23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764	23.764							
36.021	36.740	36.035	36.754	36.256	36.472	36.303	36.519	32.261	32.980	32.275	32.995	32.496	32.712	32.544	32.760		36.8	**0.06**	178.92	43.06	221.98	**OK**
29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452	29.452							
29.623	30.102	29.630	30.109	29.782	29.926	29.807	29.950	26.359	26.838	26.366	26.845	26.518	26.662	26.543	26.686		30.1	**0.06**	178.92	43.06	221.98	**OK**
21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784	21.784							
38.013	38.655	38.026	38.668	38.223	38.415	38.266	38.458	34.019	34.661	34.032	34.674	34.229	34.421	34.272	34.464		38.7	**0.06**	178.92	43.06	221.98	**OK**
28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256	28.256							
30.925	31.400	30.933	31.407	31.083	31.225	31.107	31.250	27.341	27.816	27.348	27.823	27.498	27.641	27.523	27.665		31.4	**0.06**	178.92	43.06	221.98	**OK**
24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644	24.644							
40.410	41.007	40.422	41.019	40.605	40.784	40.645	40.824	35.995	36.593	36.007	36.605	36.190	36.370	36.230	36.410		41.0	**0.06**	178.92	43.06	221.98	**OK**
31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468	31.468							
40.385	40.717	40.390	40.722	40.495	40.595	40.512	40.612	36.171	36.503	36.176	36.508	36.281	36.380	36.298	36.398		40.7	**0.06**	178.92	43.06	221.98	**OK**
29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868	29.868							
53.344	53.893	53.355	53.904	53.523	53.688	53.560	53.724	48.106	48.655	48.117	48.666	48.286	48.450	48.322	48.487		53.9	**0.06**	178.92	43.06	221.98	**OK**
38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028	38.028							
20.677	21.258	20.689	21.271	20.866	21.040	20.907	21.082	18.740	19.321	18.752	19.334	18.929	19.103	18.970	19.145		21.3	**0.06**	178.92	43.06	221.98	**OK**
7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748	7.748							
58.109	58.132	58.130	58.153	58.093	58.100	58.162	58.169	46.794	46.817	46.815	46.838	46.778	46.784	46.847	46.854		58.2	**0.06**	178.92	43.06	221.98	**OK**
24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164	24.164							
17.967	18.325	18.126	18.883	17.752	17.728	18.740	19.107	14.631	14.550	14.791	15.084	14.417	14.392	14.949	15.308		19.1	**0.06**	178.92	43.06	221.98	**OK**
14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660	14.660							
16.595	17.031	16.604	17.039	16.738	16.869	16.765	16.896	13.220	13.655	13.228	13.664	13.363	13.494	13.390	13.521		17.0	**0.06**	178.92	43.06	221.98	**OK**
13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192	13.192							
3.324	4.326	3.351	4.352	3.644	3.944	3.732	4.032	3.131	4.121	3.146	4.147	3.439	3.739	3.527	3.828		4.4	**0.06**	178.92	35.89	214.81	**OK**
3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584	3.584							
26.954	27.092	26.971	27.110	26.982	27.023	27.040	27.082	24.261	24.400	24.279	24.417	24.289	24.331	24.348	24.389		27.1	**0.06**	178.92	43.06	221.98	**OK**
22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432	22.432							
35.592	35.704	35.641	35.753	35.574	35.607	35.738	35.771	31.902	32.014	31.952	32.063	31.884	31.918	32.048	32.082		42.7	**0.06**	178.92	43.06	221.98	**OK**
42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720	42.720							
45.971	46.029	45.997	46.055	45.962	45.979	46.047	46.065	40.463	40.521	40.489	40.547	40.454	40.471	40.539	40.557		46.1	**0.06**	178.92	43.06	221.98	**OK**
41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576	41.576							
64.640	64.767	64.700	64.827	64.614	64.653	64.814	64.852	57.140	57.268	57.200	57.328	57.115	57.153	57.315	57.353		75.7	**0.06**	178.92	43.06	221.98	**OK**
75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736	75.736							
46.191	46.230	46.217	46.256	46.174	46.186	46.261	46.272	40.797	40.836	40.823	40.862	40.781	40.793	40.867	40.879		46.3	**0.06**	178.92	43.06	221.98	**OK**
41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164	41.164							
63.393	63.455	63.450	63.512	63.347	63.366	63.539	63.558	56.117	56.179	56.174	56.236	56.071	56.090	56.263	56.282		63.6	**0.06**	178.92	43.06	221.98	**OK**
53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296	53.296							
45.968	46.008	45.993	46.032	45.954	45.965	46.035	46.047	40.545	40.584	40.569	40.609	40.530	40.542	40.612	40.624		46.0	**0.06**	178.92	43.06	221.98	**OK**
41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436	41.436							
63.283	63.344	63.337	63.399	63.241	63.259	63.423	63.441	55.892	55.954	55.947	56.008	55.850	55.868	56.032	56.050		63.4	**0.06**	178.92	43.06	221.98	**OK**
53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624	53.624							
35.258	35.243	35.260	35.244	35.251	35.247	35.256	35.251	30.457	30.442	30.458	30.443	30.450	30.445	30.454	30.450		39.7	**0.06**	178.92	43.06	221.98	**OK**
39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700	39.700							
34.036	34.145	34.114	34.223	33.984	34.016	34.243	34.276	30.131	30.240	30.209	30.318	30.078	30.111	30.338	30.370		34.3	**0.06**	178.92	43.06	221.98	**OK**
23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688	23.688							
25.069	25.220	25.095	25.246	25.092	25.137	25.178	25.223	23.078	23.229	23.104	23.255	23.101	23.146	23.187	23.232		25.2	**0.06**	178.92	43.06	221.98	**OK**
14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624	14.624							
40.781	41.208	40.792	41.218	40.918	41.047	40.953	41.081	36.439	36.865	36.449	36.876	36.576	36.704	36.611	36.739		41.2	**0.06**	178.92	43.06	221.98	**OK**
33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748	33.748							
28.375	28.923	28.387	28.936	28.553	28.717	28.594	28.758	25.584	26.132	25.596	26.145	25.762	25.926	25.803	25.967		28.9	**0.06**	178.92	43.06	221.98	**OK**
23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232	23.232							
42.912	43.309	42.919	43.315	43.043	43.162	43.065	43.184	38.089	38.485	38.095	38.492	38.220	38.339	38.242	38.361		43.3	**0.06**	178.92	43.06	221.98	**OK**
31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632	31.632							
59.911	60.450	59.921	60.459	60.088	60.250	60.121	60.282	53.029	53.567	53.039	53.577	53.206	53.367	53.239	53.400		60.5	**0.06**	178.92	43.06	221.98	**OK**
47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160	47.160							
44.569	44.996	44.576	45.002	44.711	44.839	44.733	44.861	39.343	39.769	39.349	39.776	39.484	39.612	39.506	39.634		45.0	**0.06**	178.92	43.06	221.98	**OK**
35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444	35.444							

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

COMDIS3 = 1.2C.M.+1.0C.V.+1.0Ex+0.3Ey
COMDIS4 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3Ey
COMDIS5 = 1.2C.M.+1.0C.V.+1.0Ex+0.3(-Ey)
COMDIS6 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3(-Ey)
COMDIS7 = 1.2C.M.+1.0C.V.+0.3Ex+1.0Ey
COMDIS8 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0Ey
COMDIS9 = 1.2C.M.+1.0C.V.+0.3Ex+1.0(-Ey)
COMDIS10 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0(-Ey)
COMDIS11 = 0.9C.M.+1.0Ex+0.3Ey
COMDIS12 = 0.9C.M.+1.0(-Ex)+0.3Ey
COMDIS13 = 0.9C.M.+1.0Ex+0.3(-Ey)
COMDIS14 = 0.9C.M.+1.0(-Ex)+0.3(-Ey)
COMDIS15 = 0.9C.M.+0.3Ex+1.0Ey
COMDIS16 = 0.9C.M.+0.3(-Ex)+1.0Ey
COMDIS17 = 0.9C.M.+0.3Ex+1.0(-Ey)
COMDIS18 = 0.9C.M.+0.3(-Ex)+1.0(-Ey)

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			M3						Mn (kN.m)															
	ELEMENTO												Combinaciones para resistencias nominales a momento															
	No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
N+2.70	B17	0.000	4.494	VIG30X30	0.30	0.25	-21.543	-9.767	2.420	0.142	-2.420	-0.142	35.003	36.213	35.024	36.234	35.402	35.765	35.473	35.836	18.773	19.983	18.794	20.004	19.172	19.535	19.243	19.606
	B17	4.494					-24.568	-10.999	2.458	0.144	-2.458	-0.144	39.855	41.084	39.877	41.106	40.260	40.629	40.332	40.701	21.486	22.715	21.508	22.737	21.891	22.260	21.963	22.332
N+5.45	B18	0.000	5.241	VIG30X30	0.30	0.25	-23.460	-9.532	1.535	0.076	-1.535	-0.076	37.295	38.062	37.306	38.073	37.550	37.780	37.588	37.818	20.725	21.492	20.736	21.503	20.980	21.210	21.018	21.248
	B18	5.241					-21.129	-8.549	1.304	0.064	-1.304	-0.064	33.573	34.225	33.583	34.235	33.790	33.986	33.822	34.018	18.685	19.337	18.695	19.347	18.902	19.098	18.934	19.130
N+2.70	B18	0.000	5.241	VIG30X30	0.30	0.25	-32.959	-14.698	2.008	0.122	-2.008	-0.122	53.738	54.742	53.756	54.760	54.068	54.369	54.129	54.430	29.152	30.156	29.170	30.174	29.482	29.780	29.543	29.844
	B18	5.241					-29.900	-13.331	1.831	0.119	-1.831	-0.119	48.744	49.660	48.762	49.678	49.044	49.319	49.103	49.378	26.443	27.359	26.461	27.377	26.743	27.018	26.802	27.077
N+5.45	B19	0.000	3.025	VIG30X30	0.30	0.25	-10.718	-4.136	2.207	0.110	-2.207	-0.110	16.438	17.541	16.454	17.558	16.805	17.136	16.860	17.191	9.086	10.190	9.103	10.206	9.453	9.784	9.508	9.839
	B19	3.025					-3.755	-1.446	2.603	0.146	-2.603	-0.146	5.290	6.592	5.312	6.614	5.720	6.111	5.793	6.184	2.718	4.019	2.740	4.041	3.148	3.538	3.221	3.611
N+2.70	B19	0.000	3.025	VIG30X30	0.30	0.25	-9.848	-4.925	3.038	0.219	-3.038	-0.219	15.967	17.486	16.000	17.519	16.460	16.916	16.570	17.025	8.087	9.606	8.120	9.639	8.581	9.036	8.690	9.146
	B19	3.025					-2.050	-1.260	3.273	0.257	-3.273	-0.257	2.882	4.519	2.921	4.558	3.410	3.901	3.539	4.030	1.007	2.644	1.046	2.683	1.535	2.026	1.664	2.155
N+2.70	B20	0.000	1.350	VIG30X30	0.30	0.25	-25.129	-13.024	1.152	0.197	-1.152	-0.197	42.876	43.452	42.906	43.482	43.043	43.216	43.142	43.314	22.313	22.889	22.343	22.919	22.480	22.653	22.579	22.752
	B20	1.350					0.552	0.282	0.012	0.022	-0.012	-0.022	0.949	0.943	0.946	0.940	0.951	0.949	0.940	0.938	0.501	0.495	0.498	0.492	0.503	0.501	0.492	0.490
N+2.70	B21	0.000	1.350	VIG30X30	0.30	0.25	-23.990	-20.034	0.000	0.000	0.000	0.000	48.822	48.822	48.822	48.822	48.822	48.822	48.822	48.822	21.591	21.591	21.591	21.591	21.591	21.591	21.591	21.591
	B21	1.350					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+2.70	B22	0.000	1.350	VIG30X30	0.30	0.25	-26.348	-22.180	0.000	0.000	0.000	0.000	53.798	53.798	53.798	53.798	53.798	53.798	53.798	53.798	23.713	23.713	23.713	23.713	23.713	23.713	23.713	23.713
	B22	1.350					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+2.70	B23	0.000	1.350	VIG30X30	0.30	0.25	-21.602	-15.755	2.668	0.480	-2.668	-0.480	40.974	42.308	41.046	42.380	41.357	41.758	41.597	41.998	18.739	20.073	18.811	20.145	19.122	19.522	19.362	19.762
	B23	1.350					1.032	0.866	0.033	0.031	-0.033	-0.031	2.115	2.098	2.110	2.094	2.115	2.110	2.099	2.094	0.939	0.923	0.935	0.918	0.939	0.934	0.924	0.919
N+5.45	B24	0.000	1.600	VIG30X30	0.30	0.25	-25.139	-9.988	1.203	0.160	-1.203	-0.160	39.842	40.444	39.866	40.468	40.025	40.205	40.105	40.285	22.312	22.914	22.336	22.938	22.495	22.675	22.575	22.755
	B24	1.600					0.942	0.320	0.004	0.009	-0.004	-0.009	1.452	1.450	1.451	1.449	1.453	1.452	1.448	1.448	0.849	0.847	0.848	0.846	0.850	0.850	0.846	0.845
N+5.45	B25	0.000	1.600	VIG30X30	0.30	0.25	-22.486	-10.131	0.000	0.000	0.000	0.000	37.114	37.114	37.114	37.114	37.114	37.114	37.114	37.114	20.237	20.237	20.237	20.237	20.237	20.237	20.237	20.237
	B25	1.600					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B26	0.000	1.600	VIG30X30	0.30	0.25	-24.598	-11.216	0.000	0.000	0.000	0.000	40.734	40.734	40.734	40.734	40.734	40.734	40.734	40.734	22.138	22.138	22.138	22.138	22.138	22.138	22.138	22.138
	B26	1.600					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B27	0.000	1.600	VIG30X30	0.30	0.25	-22.423	-9.234	2.477	0.360	-2.477	-0.360	35.495	36.734	35.549	36.788	35.866	36.237	36.046	36.417	19.534	20.773	19.588	20.827	19.905	20.276	20.085	20.456
	B27	1.600					1.351	0.505	0.027	0.016	-0.027	-0.016	2.134	2.121	2.132	2.118	2.132	2.128	2.124	2.120	1.224	1.210	1.221	1.208	1.222	1.218	1.214	1.210
N+5.45	B28	0.000	1.967	VIG30X30	0.30	0.25	0.204	0.287	4.256	1.032	-4.256	-1.032	1.673	0.455	1.518	0.610	1.109	0.471	0.593	0.045	1.325	0.803	1.170	0.958	0.761	0.122	0.245	0.394
	B28	1.967					-5.260	-2.074	6.259	1.350	-6.259	-1.350	6.720	9.850	6.923	10.052	7.579	8.518	8.254	9.193	3.068	6.198	3.271	6.400	3.927	4.866	4.602	5.541
N+2.70	B28	0.000	1.967	VIG30X30	0.30	0.25	-0.907	-0.057	6.119	1.497	-6.119	-1.497	0.497	2.563	0.272	2.787	0.312	1.230	1.061	1.979	0.826	2.234	0.601	2.458	0.017	0.901	0.732	1.649
	B28	1.967					-5.393	-1.027	7.727	2.033	-7.727	-2.033	5.414	9.278	5.719	9.583	6.411	7.570	7.427	8.586	2.769	6.633	3.074	6.938	3.766	4.925	4.782	5.941
N+5.45	B29	0.000	2.086	VIG30X30	0.30	0.25	-3.280	-1.162	5.500	1.093	-5.500	-1.093	3.641	6.391	3.805	6.555	4.412	5.237	4.959	5.784	1.495	4.245	1.659	4.409	2.266	3.091	2.813	3.638
	B29	2.086					0.169	0.304	3.734	0.827	-3.734	-0.827	1.502	0.365	1.378	0.489	0.994	0.434	0.580	0.020	1.148	0.719	1.024	0.843	0.639	0.079	0.225	0.335
N+2.70	B29	0.000	2.086	VIG30X30	0.30	0.25	-0.094	0.095	6.558	1.823	-6.558	-1.823	1.758	1.521	1.485	1.794	0.930	0.054	0.018	0.965	1.692	1.587	1.418	1.861	0.863	0.121	0.049	1.032
	B29	2.086					-1.685	-0.281	4.931	1.191	-4.931	-1.191	0.981	3.446	1.160	3.625	1.635	2.375	2.231	2.971	0.194	2.660	0.373	2.839	0.849	1.589	1.444	2.184
N+2.70	B30	0.000	4.940	VIG15X30	0.15	0.25	-2.347	-0.889	1.967	0.472	-1.967	-0.472	3.178	4.162	3.249	4.233	3.440	3.735	3.676	3.971	1.585	2.569	1.656	2.639	1.847	2.142	2.083	2.378
	B30	4.940					-3.894	-1.038	1.303	0.201	-1.303	-0.201	5.370	6.021	5.400	6.052	5.563	5.758	5.663	5.859	3.164	3.815	3.194	3.845	3.357	3.552	3.457	3.653
N+2.70	B31	0.000	3.626	VIG15X30	0.15	0.25	-0.752	0.145	1.697	0.279	-1.697	-0.279	0.312	1.161	0.354	1.203	0.560	0.815	0.700	0.954	0.232	1.080	0.273	1.122	0.480	0.734	0.619	0.874
	B31	3.626					-0.037	-0.137	2.113	0.491	-2.113	-0.491	0.384	0.673	0.310	0.746	0.100	0.217	0.146	0.463	0.532	0.525	0.458	0.598	0.248	0.069	0.002	0.315
N+2.70	B32	0.000	1.106	VIG15X30	0.15	0.25	-0.062	-0.255	0.085	0.040	-0.085	-0.040	0.305	0.348	0.311	0.354	0.313	0.326	0.333	0.346	0.032	0.074	0.038	0.080	0.039	0.052	0.059	0.072
	B32	1.106					-0.213	-0.115	0.265	0.046	-0.265	-0.046	0.301	0.433	0.308	0.440	0.339	0.379	0.362	0.402	0.122	0.255	0.129	0.261	0.160	0.200	0.183	0.223
N+2.70	B33	0.000	1.180	VIG15X30	0.15	0.25	-0.173	-0.071	0.407	0.073	-0.407	-0.073	0.171	0.375	0.182	0.386	0.230	0.291	0.266	0.327	0.048	0.252	0.059	0.263	0.107	0.168	0.143	0.204
	B33	1.180					-0.903	-0.194	0.510	0.143	-0.510	-0.143	1.139	1.394	1.161	1.416	1.204	1.280	1.275	1.352	0.674	0.929	0.696	0.951	0.739	0.815	0.810	0.887
N+5.45	B34	0.000	5.054	VIG15X30	0.15	0.25	0.543	0.177	1.646	0.351	-1.646	-0.351	1.266	0.443	1.214	0.391	1.040	0.793	0.864	0.617	0.927	0.104	0.874	0.051	0.700	0.453	0.524	0.278
	B34	5.054					0.369	0.460	1.065	0.138	-1.065	-0.138	1.179	0.647	1.159	0.626	1.017	0.857	0.948	0.788	0.609	0.076	0.588	0.056	0.446	0.287	0.377	0.218
N+5.45	B35	0.000	3.738	VIG15X30	0.15	0.25	0.438	0.224	1.187	0.168	-1.187	-0.168	1.059	0.465	1.034	0.440	0.881	0.703	0.797	0.619	0.704	0.110	0.678	0.085	0.525	0.347	0.441	0.263
	B35	3.738					0.430	0.113	1.965	0.374	-1.965	-0.374	1.148	0.166	1.092	0.110	0.870	0.575	0.683	0.388	0.906	0.076	0.850	0.132	0.628	0.333	0.441	0.146
N+5.45	B36	0.000	3.000	VIG15X30	0.15	0.25	0.005	0.000	0.004	0.004	-0.004	-0.004	0.007	0.005	0.007	0.005	0.007	0.007	0.005	0.005	0.006	0.004	0.005	0.003	0.006	0.005	0.004	0.003
	B36	3.000					-0.028	-0.004	0.223	0.044	-0.223	-0.044	0.021	0.090	0.015	0.097	0.010	0.043	0.032	0.065	0.034	0.078	0.027	0.084	0.003	0.031	0.019	0.053
N+5.45	B37	0.000	3.000	VIG15X30	0.15	0.25	-0.025	0.000	0.220	0.046	-0.220	-0.046	0.028	0.082	0.022	0.088	0.002	0.035	0.025	0.058	0.036	0.074	0.029	0.081	0.006	0.028	0.018	0.051
	B37	3.000					0.009	0.006	0.010	0.007	-0.010	-0.007	0.020	0.015	0.019	0.014	0.019	0.018	0.016	0.014	0.011	0.006	0.010	0.005	0.011	0.009	0.007	0.006
N+2.70	B38	0.000	3.000	VIG15X30	0.15	0.25	-0.071	-0.058	0.317	0.081	-0.317	-0.081	0.058	0.216	0.070	0.229	0.099	0.147	0.140	0.187	0.021	0.137	0.009	0.149	0.020	0.067	0.060	0.108
	B38	3.000					-0.139	-0.019	1.009	0.144	-1.009	-0.144	0.077	0.427	0.056	0.449	0.074	0.225	0.146	0.297	0.138	0.367	0.116	0.388	0.013	0.165	0.085	0.237
N+2.70	B39	0.000	3.000	VIG15X30	0.15	0.25	-0.160	-0.031	1.016	0.140	-1.016	-0.140	0.042	0.467	0.021	0.488	0.112	0.264	0.182	0.334	0.121	0.388	0.100	0.409	0.033	0.185	0.103	0.255
	B39	3.000					-2.589	-0.759	0.319	0.094	-0.319	-0.094	3.779	3.939	3.793	3.953	3.818	3.866	3.865	3.913	2.243	2.403	2.257	2.417	2.283	2.331	2.330	2.378
N+2.70	B40	0.000	2.270	VIG15X30	0.15	0.25	-0.216	-0.147	0.115	0.024	-0.115	-0.024	0.376	0.433	0.379	0.437	0.392	0.409	0.404	0.421	0.164	0.221	0.167	0.225	0.180	0.197	0.192	0.209
	B40	2.270					0.654	0.616	0.172	0.063	-0.172	-0.063	1.449	1.363	1.439	1.353	1.429	1.404	1.398	1.372	0.636	0.550	0.627	0.541	0.617	0.591	0.586	0.560
N+2.70	B41	0.000	2.300	VIG15X30	0.15	0.25	0.747	-0.039	0.052	0.017	-0.052	-0.017	0.872	0.846	0.869	0.843	0.866	0.858	0.857	0.849	0.687	0.661	0.684	0.658	0.680	0.673	0.672	0.664
	B41	2.300					-0.366	-0.069	0.073	0.015	-0.073	-0.015	0.489	0.525	0.491	0.528	0.499	0.510	0.506	0.517	0.310	0.347	0.312	0.349	0.320	0.331	0.328	0.339
N+5.45	B42	0.000	1.879	VIG15X30	0.15	0.25	0.044	0.043	0.170	0.031	-0.170	-0.031	0.141	0.056	0.136	0.051	0.116	0.091	0.101	0.075	0.084	0.001	0.080	0.005	0.060	0.035	0.045	0.019
	B42	1.879					1.305	0.475	0.356	0.073	-0.356	-0.073	2.135	1.957	2.125	1.947	2.086	2.033	2.049	1.996	1.269	1.091	1.258	1.080	1.219	1.166	1.183	1.130
N+5.45	B43	0.000	1.910	VIG15X30	0.15	0.25	1.141	0.316	0.217	0.043	-0.217	-0.043	1.743	1.634	1.736	1.628	1.712	1.680	1.691	1.658	1.084	0.976	1.078	0.969	1.054	1.021	1.032	1.000
	B43	1.910					-0.041	0.039	0.114	0.022	-0.114	-0.022	0.020	0.037	0.017	0.040	0.004	0.013	0.007	0.024	0.007	0.064	0.010	0.067	0.023	0.040	0.034	0.051
N+5.45	B44	0.000	2.550	VIG15X30	0.15	0.25	-4.203	-1.763	0.281	0.051	-0.281	-0.051	6.733	6.873	6.740	6.881	6.773	6.815	6.798	6.840	3.709	3.849	3.716	3.857	3.749	3.791	3.774	3.817
	B44	2.550					-1.426	-0.556	0.526	0.036	-0.526	-0.036	2.133	2.396	2.138	2.401	2.219	2.298	2.237	2.316	1.149	1.412	1.155	1.418	1.235	1.314	1.253	1.332
N+2.70	B44	0.000	2.550	VIG15X30	0.15	0.25	-3.689	-2.181	0.126	0.033	-0.126	-0.033	6.574	6.637	6.579	6.642	6.590	6.609	6.607	6.626	3.286	3.349	3.291	3.354	3.302	3.321	3.319	3.338
	B44	2.550					-0.955	-0.491	0.309	0.050	-0.309	-0.050	1.556	1.711	1.564	1.718	1.601	1.648	1.626	1.673	0.779	0.933	0.786	0.941	0.824	0.870	0.849	0.895
N+5.45	B45	0.000	2.550	VIG15X30	0.15	0.25	-1.494	-0.583	0.730	0.045	-0.730	-0.045	2.190	2.555	2.197	2.562	2.310	2.419	2.332	2.442	1.159	1.524	1.165	1.530	1.279	1.388	1.301	1.411
	B45	2.550					-4.193	-1.757	0.370	0.054	-0.370	-0.054	6.692	6.877	6.700	6.885	6.747	6.803	6.774	6.830	3.677	3.862	3.685	3.870	3.732	3.788	3.759	3.815
N+2.70	B45	0.000	2.550	VIG15X30	0.15	0.25	-0.880	-0.513	0.396	0.057	-0.396	-0.057	1.466	1.664	1.474	1.672	1.525	1.584	1.554	1.613	0.689	0.887	0.697	0.895	0.748	0.807	0.777	0.836
	B45	2.550					-3.648	-2.188	0.131	0.040	-0.131	-0.040	6.530	6.595	6.536	6.601	6.546	6.565	6.566	6.585	3.247	3.313	3.253	3.319	3.263	3.283	3.283	3.303
N+2.70	B46	0.000	2.550	VIG15X30	0.15	0.25	-4.075	-1.279	0.416	0.153	-0.416	-0.153	6.054	6.262	6.076	6.284	6.100	6.162	6.176	6.238	3.552	3.760	3.575	3.783	3.598	3.660	3.675	3.737
	B46	2.550					-2.997	-0.821	1.011	0.127	-1.011	-0.127	4.155	4.661	4.174	4.680	4.310	4.461	4.373	4.525	2.435	2.941	2.454	2.960	2.590	2.741	2.653	2.805
N+2.70	B47	0.000	2.550	VIG15X30	0.15	0.25	-2.628	-0.741	1.330	0.198	-1.330	-0.198	3.547	4.212	3.577	4.242	3.745	3.945	3.844	4.044	2.018	2.683	2.048	2.713	2.216	2.415	2.315	2.514
	B47	2.550					-4.207	-1.305	0.518	0.219	-0.518	-0.219	6.207	6.466	6.240	6.499	6.260	6.338	6.369	6.447	3.640	3.899	3.673	3.932	3.693	3.770	3.802	3.880
N+5.45	B48	0.000	1.500	VIG15X30	0.15	0.25	0.610	0.245	0.313	0.043	-0.313	-0.043	1.058	0.902	1.052	0.896	1.011	0.964	0.990	0.943	0.630	0.474	0.624	0.468	0.583	0.536	0.562	0.515
	B48	1.500					-11.971	-4.639	0.733	0.125	-0.733	-0.125	18.812	19.178	18.830	19.197	18.918	19.028	18.980	19.090	10.581	10.948	10.600	10.967	10.688	10.798	10.750	10.860
N+5.45	B49	0.000	1.500	VIG15X30	0.15	0.25	-12.145	-4.567	0.501	0.081	-0.501	-0.081	19.010	19.260	19.022	19.272	19.083	19.158	19.124	19.199	10.799	11.050	10.811	11.062	10.873	10.948	10.913	10.988
	B49	1.500					0.442	0.221	0.240	0.030	-0.240	-0.030	0.814	0.694	0.809	0.689	0.777	0.741	0.762	0.726	0.460	0.340	0.456	0.336	0.423	0.387	0.408	0.372
N+5.45	B50	0.000	2.550	VIG15X30	0.15	0.25	-2.535	-1.005	0.170	0.090	-0.170	-0.090	3.998	4.083	4.011	4.096	4.012	4.037	4.057	4.082	2.232	2.317	2.246	2.331	2.246	2.272	2.291	2.317
	B50	2.550					-2.000	-0.732	0.374	0.078	-0.374	-0.078	3.033	3.220	3.044	3.231	3.084	3.141	3.123	3.180	1.701	1.888	1.712	1.899	1.752	1.809	1.791	1.848
N+5.45	B51	0.000	2.550	VIG15X30	0.15	0.25	-1.933	-0.705	0.422	0.099	-0.422	-0.099	2.912	3.123	2.927	3.138	2.968	3.032	3.018	3.081	1.627	1.838	1.642	1.853	1.683	1.747	1.733	1.796

YECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

V_a	$V_m = M_{ni} + M_{nr} / l_n$															
	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
(kN)	(kN)															
48.06	16.657	17.200	16.667	17.210	16.836	16.999	16.868	17.031	8.958	9.501	8.968	9.511	9.137	9.300	9.169	9.332
50.54																
43.68	13.522	13.793	13.526	13.797	13.612	13.693	13.625	13.706	7.520	7.790	7.524	7.794	7.610	7.691	7.623	7.704
42.00																
62.84	19.554	19.920	19.561	19.927	19.674	19.784	19.697	19.807	10.608	10.974	10.615	10.981	10.728	10.838	10.751	10.861
60.61																
22.47	7.183	7.978	7.195	7.991	7.446	7.685	7.489	7.727	3.902	4.697	3.915	4.710	4.166	4.404	4.208	4.446
14.62																
20.68	6.231	7.274	6.255	7.298	6.569	6.882	6.647	6.960	3.007	4.050	3.030	4.073	3.344	3.657	3.423	3.736
11.50																
45.83	32.463	32.885	32.482	32.905	32.588	32.715	32.653	32.780	16.900	17.322	16.919	17.342	17.025	17.152	17.090	17.216
31.37																
53.47	36.164	36.164	36.164	36.164	36.164	36.164	36.164	36.164	15.993	15.993	15.993	15.993	15.993	15.993	15.993	15.993
36.67																
58.11	39.850	39.850	39.850	39.850	39.850	39.850	39.850	39.850	17.565	17.565	17.565	17.565	17.565	17.565	17.565	17.565
41.31																
48.22	31.918	32.894	31.968	32.944	32.201	32.494	32.368	32.661	14.576	15.552	14.626	15.602	14.860	15.153	15.026	15.319
31.41																
36.66	25.809	26.184	25.823	26.198	25.923	26.036	25.971	26.083	14.476	14.851	14.490	14.865	14.591	14.703	14.638	14.750
12.39																
33.59	23.196	23.196	23.196	23.196	23.196	23.196	23.196	23.196	12.648	12.648	12.648	12.648	12.648	12.648	12.648	12.648
20.38																
36.26	25.459	25.459	25.459	25.459	25.459	25.459	25.459	25.459	13.836	13.836	13.836	13.836	13.836	13.836	13.836	13.836
23.06																
34.35	23.518	24.284	23.551	24.316	23.749	23.978	23.856	24.086	12.974	13.740	13.006	13.772	13.204	13.434	13.312	13.541
14.33																
11.50	4.267	5.239	4.291	5.420	4.417	4.570	4.498	4.697	2.233	3.559	2.258	3.741	2.383	2.536	2.464	3.017
8.52																
5.40	3.005	6.020	3.046	6.289	3.418	4.474	4.315	5.371	1.828	4.508	1.869	4.777	1.923	2.962	2.803	3.859
8.39																
7.30	2.466	3.239	2.485	3.377	2.591	2.718	2.655	2.782	1.267	2.380	1.286	2.518	1.393	1.520	1.456	1.904
3.12																
4.51	1.313	2.381	1.268	2.598	1.230	1.164	1.078	1.887	0.904	2.036	0.859	2.253	0.821	0.819	0.716	1.542
2.03																
7.47	1.730	2.061	1.751	2.082	1.822	1.922	1.891	1.990	0.961	1.292	0.982	1.313	1.053	1.153	1.121	1.221
13.51																
8.92	0.192	0.506	0.183	0.538	0.182	0.285	0.233	0.391	0.211	0.443	0.202	0.474	0.201	0.222	0.171	0.328
7.66																
43.23	0.548	0.706	0.560	0.718	0.590	0.637	0.629	0.676	0.139	0.297	0.150	0.309	0.181	0.228	0.219	0.267
1.65																
0.00	1.111	1.499	1.138	1.527	1.215	1.331	1.306	1.423	0.613	1.001	0.640	1.029	0.717	0.833	0.808	0.925
38.46																
13.19	0.484	0.216	0.469	0.201	0.407	0.327	0.359	0.278	0.304	0.036	0.289	0.021	0.227	0.146	0.178	0.098
2.48																
1.75	0.590	0.169	0.569	0.147	0.468	0.342	0.396	0.269	0.431	0.050	0.409	0.058	0.308	0.182	0.236	0.109
6.75																
0.10	0.010	0.032	0.007	0.034	0.006	0.017	0.012	0.023	0.013	0.027	0.011	0.029	0.003	0.012	0.008	0.019
0.35																
0.32	0.016	0.032	0.013	0.034	0.007	0.018	0.014	0.024	0.016	0.027	0.013	0.029	0.005	0.012	0.008	0.019
0.06																
0.17	0.045	0.215	0.042	0.226	0.058	0.124	0.095	0.162	0.053	0.168	0.042	0.179	0.011	0.077	0.049	0.115
1.56																
1.92	1.274	1.468	1.271	1.480	1.310	1.377	1.349	1.416	0.788	0.930	0.786	0.942	0.772	0.839	0.811	0.878
8.72																
9.00	0.804	0.791	0.801	0.788	0.802	0.798	0.794	0.790	0.353	0.340	0.350	0.337	0.351	0.347	0.343	0.339
10.02																
10.42	0.592	0.596	0.591	0.596	0.593	0.595	0.593	0.594	0.433	0.438	0.433	0.438	0.435	0.436	0.435	0.436
8.77																
5.54	1.211	1.071	1.203	1.063	1.172	1.130	1.144	1.102	0.720	0.581	0.712	0.578	0.681	0.639	0.653	0.611
3.55																
3.86	0.923	0.875	0.918	0.873	0.898	0.886	0.889	0.881	0.571	0.544	0.570	0.543	0.564	0.556	0.558	0.550
5.44																
14.50	3.477	3.635	3.482	3.640	3.526	3.574	3.543	3.591	1.905	2.063	1.910	2.068	1.954	2.002	1.972	2.019
22.73																
17.33	3.188	3.273	3.193	3.278	3.212	3.238	3.229	3.254	1.594	1.679	1.599	1.684	1.618	1.644	1.634	1.660
10.37																
23.24	3.483	3.699	3.489	3.705	3.552	3.617	3.571	3.636	1.896	2.112	1.902	2.118	1.965	2.030	1.985	2.049
11.85																
10.66	3.136	3.239	3.141	3.245	3.165	3.196	3.184	3.215	1.544	1.647	1.549	1.653	1.573	1.604	1.592	1.623
12.98																
13.68	4.003	4.283	4.020	4.300	4.082	4.166	4.137	4.221	2.348	2.628	2.364	2.644	2.427	2.511	2.481	2.565
12.09																
9.81	3.825	4.188	3.850	4.212	3.924	4.032	4.005	4.114	2.219	2.581	2.243	2.606	2.317	2.426	2.399	2.508
14.21																
10.32	13.247	13.387	13.255	13.395	13.286	13.328	13.313	13.355	7.475	7.615	7.483	7.623	7.514	7.556	7.541	7.583
20.24																
20.12	13.216	13.303	13.221	13.308	13.240	13.266	13.257	13.283	7.506	7.593	7.511	7.598	7.531	7.557	7.548	7.574
10.22																
9.70	2.757	2.864	2.767	2.874	2.783	2.815	2.816	2.848	1.542	1.649	1.552	1.659	1.568	1.600	1.601	1.633
6.85																
6.79	2.725	2.843	2.737	2.855	2.751	2.787	2.793	2.829	1.522	1.640	1.534	1.653	1.548	1.584	1.590	1.626

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

***Vu* = Vm + Vg**																	Vu_{max}	S	ΦVs	ΦVc	ΦVn	ΦVn > Vu_{max}
COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18						
(kN)																	(kN)	(m)	(kN)	(kN)	(kN)	
64.713	65.256	64.723	65.266	64.892	65.055	64.924	65.087	57.014	57.557	57.024	57.567	57.193	57.356	57.225	57.388		65.3	**0.06**	178.92	43.06	221.98	**OK**
50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540	50.540							
57.198	57.469	57.202	57.473	57.288	57.369	57.301	57.382	51.196	51.466	51.200	51.470	51.286	51.367	51.299	51.380		57.5	**0.06**	178.92	43.06	221.98	**OK**
42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000							
82.390	82.756	82.397	82.763	82.510	82.620	82.533	82.643	73.444	73.810	73.451	73.817	73.564	73.674	73.587	73.697		82.8	**0.06**	178.92	43.06	221.98	**OK**
60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612	60.612							
29.651	30.446	29.663	30.459	29.914	30.153	29.957	30.195	26.370	27.165	26.383	27.178	26.634	26.872	26.676	26.914		30.5	**0.06**	178.92	43.06	221.98	**OK**
14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620	14.620							
26.911	27.954	26.935	27.978	27.249	27.562	27.327	27.640	23.687	24.730	23.710	24.753	24.024	24.337	24.103	24.416		28.0	**0.06**	178.92	43.06	221.98	**OK**
11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504	11.504							
78.295	78.717	78.314	78.737	78.420	78.547	78.485	78.612	62.732	63.154	62.751	63.174	62.857	62.984	62.922	63.048		78.7	**0.06**	178.92	43.06	221.98	**OK**
31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368							
89.632	89.632	89.632	89.632	89.632	89.632	89.632	89.632	69.461	69.461	69.461	69.461	69.461	69.461	69.461	69.461		89.6	**0.06**	178.92	43.06	221.98	**OK**
36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668	36.668							
97.962	97.962	97.962	97.962	97.962	97.962	97.962	97.962	75.677	75.677	75.677	75.677	75.677	75.677	75.677	75.677		98.0	**0.06**	178.92	43.06	221.98	**OK**
41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312	41.312							
80.138	81.114	80.188	81.164	80.421	80.714	80.588	80.881	62.796	63.772	62.846	63.822	63.080	63.373	63.246	63.539		81.2	**0.06**	178.92	43.06	221.98	**OK**
31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408	31.408							
62.465	62.840	62.479	62.854	62.579	62.692	62.627	62.739	51.132	51.507	51.146	51.521	51.247	51.359	51.294	51.406		62.9	**0.06**	178.92	43.06	221.98	**OK**
12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388	12.388							
56.788	56.788	56.788	56.788	56.788	56.788	56.788	56.788	46.240	46.240	46.240	46.240	46.240	46.240	46.240	46.240		56.8	**0.06**	178.92	43.06	221.98	**OK**
20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384	20.384							
61.723	61.723	61.723	61.723	61.723	61.723	61.723	61.723	50.100	50.100	50.100	50.100	50.100	50.100	50.100	50.100		61.7	**0.06**	178.92	43.06	221.98	**OK**
23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056	23.056							
57.870	58.636	57.903	58.668	58.101	58.330	58.208	58.438	47.326	48.092	47.358	48.124	47.556	47.786	47.664	47.893		58.7	**0.06**	178.92	43.06	221.98	**OK**
14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332	14.332							
15.771	16.743	15.795	16.924	15.921	16.074	16.002	16.201	13.737	15.063	13.762	15.245	13.887	14.040	13.968	14.521		16.9	**0.06**	178.92	43.06	221.98	**OK**
8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516	8.516							
8.405	11.420	8.446	11.689	8.818	9.874	9.715	10.771	7.228	9.908	7.269	10.177	7.323	8.362	8.203	9.259		11.7	**0.06**	178.92	43.06	221.98	**OK**
8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392	8.392							
9.762	10.535	9.781	10.673	9.887	10.014	9.951	10.078	8.563	9.676	8.582	9.814	8.689	8.816	8.752	9.200		10.7	**0.06**	178.92	43.06	221.98	**OK**
3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116	3.116							
5.821	6.889	5.776	7.106	5.738	5.672	5.586	6.395	5.412	6.544	5.367	6.761	5.329	5.327	5.224	6.050		7.1	**0.06**	178.92	43.06	221.98	**OK**
2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032	2.032							
9.202	9.533	9.223	9.554	9.294	9.394	9.363	9.462	8.433	8.764	8.454	8.785	8.525	8.625	8.593	8.693		13.5	**0.06**	178.92	21.53	200.45	**OK**
13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512							
9.116	9.430	9.107	9.462	9.106	9.209	9.157	9.315	9.135	9.367	9.126	9.398	9.125	9.146	9.095	9.252		9.5	**0.06**	178.92	21.53	200.45	**OK**
7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660	7.660							
43.780	43.938	43.792	43.950	43.822	43.869	43.861	43.908	43.371	43.529	43.382	43.541	43.413	43.460	43.451	43.499		43.9	**0.06**	178.92	21.53	200.45	**OK**
1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652	1.652							
1.111	1.499	1.138	1.527	1.215	1.331	1.306	1.423	0.613	1.001	0.640	1.029	0.717	0.833	0.808	0.925		38.5	**0.06**	178.92	21.53	200.45	**OK**
38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464	38.464							
13.676	13.408	13.661	13.393	13.599	13.519	13.551	13.470	13.496	13.228	13.481	13.213	13.419	13.338	13.370	13.290		13.7	**0.06**	178.92	21.53	200.45	**OK**
2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476	2.476							
2.338	1.917	2.317	1.895	2.216	2.090	2.144	2.017	2.179	1.798	2.157	1.806	2.056	1.930	1.984	1.857		6.7	**0.06**	178.92	21.53	200.45	**OK**
6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748	6.748							
0.106	0.128	0.103	0.130	0.102	0.113	0.108	0.119	0.109	0.123	0.107	0.125	0.099	0.108	0.104	0.115		0.4	**0.06**	178.92	21.53	200.45	**OK**
0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352							
0.340	0.356	0.337	0.358	0.331	0.342	0.338	0.348	0.340	0.351	0.337	0.353	0.329	0.336	0.332	0.343		0.4	**0.06**	178.92	21.53	200.45	**OK**
0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060							
0.213	0.383	0.210	0.394	0.226	0.292	0.263	0.330	0.221	0.336	0.210	0.347	0.179	0.245	0.217	0.283		1.6	**0.06**	178.92	21.53	200.45	**OK**
1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564	1.564							
3.190	3.384	3.187	3.396	3.226	3.293	3.265	3.332	2.704	2.846	2.702	2.858	2.688	2.755	2.727	2.794		8.7	**0.06**	178.92	21.53	200.45	**OK**
8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720	8.720							
9.800	9.787	9.797	9.784	9.798	9.794	9.790	9.786	9.349	9.336	9.346	9.333	9.347	9.343	9.339	9.335		10.0	**0.06**	178.92	21.53	200.45	**OK**
10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016	10.016							
11.012	11.016	11.011	11.016	11.013	11.015	11.013	11.014	10.853	10.858	10.853	10.858	10.855	10.856	10.855	10.856		11.0	**0.06**	178.92	21.53	200.45	**OK**
8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768	8.768							
6.747	6.607	6.739	6.599	6.708	6.666	6.680	6.638	6.256	6.117	6.248	6.114	6.217	6.175	6.189	6.147		6.7	**0.06**	178.92	21.53	200.45	**OK**
3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552	3.552							
4.783	4.735	4.778	4.733	4.758	4.746	4.749	4.741	4.431	4.404	4.430	4.403	4.424	4.416	4.418	4.410		5.4	**0.06**	178.92	21.53	200.45	**OK**
5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436	5.436							
17.977	18.135	17.982	18.140	18.026	18.074	18.043	18.091	16.405	16.563	16.410	16.568	16.454	16.502	16.472	16.519		22.7	**0.06**	178.92	21.53	200.45	**OK**
22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728	22.728							
20.516	20.601	20.521	20.606	20.540	20.566	20.557	20.582	18.922	19.007	18.927	19.012	18.946	18.972	18.962	18.988		20.6	**0.06**	178.92	21.53	200.45	**OK**
10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368	10.368							
26.719	26.935	26.725	26.941	26.788	26.853	26.807	26.872	25.132	25.348	25.138	25.354	25.201	25.266	25.221	25.285		26.9	**0.06**	178.92	21.53	200.45	**OK**
11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848	11.848							
13.796	13.899	13.801	13.905	13.825	13.856	13.844	13.875	12.204	12.307	12.209	12.313	12.233	12.264	12.252	12.283		13.9	**0.06**	178.92	21.53	200.45	**OK**
12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976	12.976							
17.687	17.967	17.704	17.984	17.766	17.850	17.821	17.905	16.032	16.312	16.048	16.328	16.111	16.195	16.165	16.249		18.0	**0.06**	178.92	21.53	200.45	**OK**
12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088	12.088							
13.637	14.000	13.662	14.024	13.736	13.844	13.817	13.926	12.031	12.393	12.055	12.418	12.129	12.238	12.211	12.320		14.2	**0.06**	178.92	21.53	200.45	**OK**
14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212	14.212							
23.563	23.703	23.571	23.711	23.602	23.644	23.629	23.671	17.791	17.931	17.799	17.939	17.830	17.872	17.857	17.899		23.7	**0.06**	178.92	21.53	200.45	**OK**
20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236	20.236							
33.340	33.427	33.345	33.432	33.364	33.390	33.381	33.407	27.630	27.717	27.635	27.722	27.655	27.681	27.672	27.698		33.4	**0.06**	178.92	21.53	200.45	**OK**
10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220	10.220							
12.453	12.560	12.463	12.570	12.479	12.511	12.512	12.544	11.238	11.345	11.248	11.355	11.264	11.296	11.297	11.329		12.6	**0.06**	178.92	21.53	200.45	**OK**
6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852	6.852							
9.513	9.631	9.525	9.643	9.539	9.575	9.581	9.617	8.310	8.428	8.322	8.441	8.336	8.372	8.378	8.414		9.8	**0.06**	178.92	21.53	200.45	**OK**

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ $_{Cortante}$ **=** 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

COMDIS3 = 1.2C.M.+1.0C.V.+1.0Ex+0.3Ey
COMDIS4 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3Ey
COMDIS5 = 1.2C.M.+1.0C.V.+1.0Ex+0.3(-Ey)
COMDIS6 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3(-Ey)
COMDIS7 = 1.2C.M.+1.0C.V.+0.3Ex+1.0Ey
COMDIS8 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0Ey
COMDIS9 = 1.2C.M.+1.0C.V.+0.3Ex+1.0(-Ey)
COMDIS10 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0(-Ey)
COMDIS11 = 0.9C.M.+1.0Ex+0.3Ey
COMDIS12 = 0.9C.M.+1.0(-Ex)+0.3Ey
COMDIS13 = 0.9C.M.+1.0Ex+0.3(-Ey)
COMDIS14 = 0.9C.M.+1.0(-Ex)+0.3(-Ey)
COMDIS15 = 0.9C.M.+0.3Ex+1.0Ey
COMDIS16 = 0.9C.M.+0.3(-Ex)+1.0Ey
COMDIS17 = 0.9C.M.+0.3Ex+1.0(-Ey)
COMDIS18 = 0.9C.M.+0.3(-Ex)+1.0(-Ey)

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			M3						Mn (kN.m)															
	ELEMENTO												Combinaciones para resistencias nominales a momento															
	No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
	B51	2.550					-2.564	-1.013	0.181	0.115	-0.181	-0.115	4.036	4.126	4.053	4.144	4.047	4.075	4.105	4.132	2.254	2.344	2.271	2.361	2.265	2.292	2.323	2.350
N+2.70	B52	0.000	1.800	VIG15X30	0.15	0.25	0.377	0.267	0.254	0.042	-0.254	-0.042	0.786	0.659	0.780	0.653	0.749	0.711	0.728	0.690	0.406	0.279	0.400	0.273	0.369	0.331	0.348	0.310
	B52	1.800					-0.222	-0.108	0.265	0.024	-0.265	-0.024	0.306	0.439	0.310	0.442	0.349	0.388	0.361	0.400	0.132	0.264	0.135	0.268	0.174	0.214	0.186	0.226
N+2.70	B53	0.000	1.800	VIG15X30	0.15	0.25	-0.198	-0.094	0.268	0.018	-0.268	-0.018	0.263	0.397	0.266	0.400	0.307	0.347	0.316	0.356	0.110	0.244	0.113	0.247	0.154	0.194	0.163	0.203
	B53	1.800					0.101	0.308	0.172	0.026	-0.172	-0.026	0.474	0.388	0.470	0.394	0.449	0.423	0.436	0.410	0.136	0.050	0.132	0.046	0.110	0.085	0.097	0.072
N+5.45	B54	0.000	2.550	VIG15X30	0.15	0.25	-0.574	0.005	0.086	0.055	-0.086	-0.055	0.658	0.701	0.666	0.709	0.664	0.677	0.691	0.704	0.491	0.534	0.499	0.542	0.496	0.509	0.524	0.537
	B54	2.550					-0.592	-0.005	0.081	0.076	-0.081	-0.076	0.689	0.730	0.701	0.741	0.690	0.702	0.728	0.740	0.507	0.547	0.518	0.559	0.508	0.520	0.546	0.558
N+2.70	B54	0.000	2.550	VIG15X30	0.15	0.25	-2.924	-0.850	0.068	0.069	-0.068	-0.069	4.337	4.371	4.347	4.381	4.336	4.347	4.371	4.381	2.609	2.643	2.620	2.654	2.609	2.619	2.644	2.654
	B54	2.550					-2.959	-0.866	0.076	0.086	-0.076	-0.086	4.391	4.429	4.404	4.442	4.390	4.401	4.433	4.444	2.638	2.676	2.651	2.689	2.636	2.647	2.679	2.690
N+5.45	B55	0.000	2.550	VIG15X30	0.15	0.25	-0.601	-0.009	0.093	0.105	-0.093	-0.105	0.699	0.746	0.715	0.761	0.697	0.711	0.749	0.763	0.510	0.556	0.526	0.572	0.508	0.522	0.560	0.574
	B55	2.550					-0.568	0.009	0.095	0.075	-0.095	-0.075	0.643	0.691	0.654	0.702	0.647	0.661	0.684	0.698	0.482	0.529	0.493	0.541	0.485	0.500	0.523	0.537
N+2.70	B55	0.000	2.550	VIG15X30	0.15	0.25	-2.967	-0.870	0.089	0.120	-0.089	-0.120	4.399	4.444	4.417	4.462	4.394	4.407	4.454	4.467	2.639	2.684	2.657	2.702	2.634	2.647	2.694	2.707
	B55	2.550					-2.918	-0.848	0.078	0.098	-0.078	-0.098	4.323	4.362	4.337	4.376	4.319	4.331	4.368	4.380	2.599	2.638	2.614	2.653	2.596	2.608	2.645	2.657
N+2.70	B56	0.000	2.550	VIG15X30	0.15	0.25	-0.586	0.003	0.211	0.214	-0.211	-0.214	0.631	0.737	0.664	0.769	0.631	0.663	0.738	0.770	0.459	0.564	0.491	0.596	0.458	0.490	0.565	0.597
	B56	2.550					-0.563	-0.002	0.253	0.231	-0.253	-0.231	0.597	0.724	0.632	0.758	0.601	0.639	0.716	0.754	0.426	0.553	0.461	0.587	0.430	0.468	0.545	0.583
N+2.70	B57	0.000	2.550	VIG15X30	0.15	0.25	-0.565	-0.002	0.266	0.292	-0.266	-0.292	0.592	0.725	0.635	0.768	0.587	0.627	0.733	0.773	0.420	0.553	0.464	0.597	0.416	0.455	0.562	0.601
	B57	2.550					-0.584	0.003	0.222	0.272	-0.222	-0.272	0.622	0.733	0.663	0.774	0.613	0.646	0.749	0.782	0.450	0.561	0.491	0.602	0.441	0.474	0.577	0.610
N+5.45	B58	0.000	3.000	VIG15X30	0.15	0.25	-0.135	-0.045	0.001	0.001	-0.001	-0.001	0.207	0.207	0.207	0.207	0.207	0.207	0.207	0.207	0.121	0.122	0.121	0.122	0.121	0.121	0.122	0.122
	B58	3.000					-0.030	-0.007	0.220	0.018	-0.220	-0.018	0.013	0.097	0.011	0.099	0.022	0.055	0.031	0.064	0.029	0.081	0.027	0.083	0.006	0.039	0.015	0.048
N+5.45	B59	0.000	3.000	VIG15X30	0.15	0.25	-0.033	-0.009	0.221	0.012	-0.221	-0.012	0.008	0.103	0.006	0.105	0.029	0.062	0.035	0.068	0.026	0.084	0.025	0.086	0.010	0.043	0.016	0.049
	B59	3.000					-0.137	-0.044	0.001	0.001	-0.001	-0.001	0.208	0.209	0.208	0.209	0.208	0.208	0.209	0.209	0.123	0.123	0.123	0.124	0.123	0.123	0.123	0.124
N+2.70	B60	0.000	3.000	VIG15X30	0.15	0.25	-4.521	-1.485	0.275	0.046	-0.275	-0.046	6.838	6.976	6.845	6.982	6.878	6.919	6.901	6.942	3.997	4.134	4.004	4.141	4.037	4.078	4.060	4.101
	B60	3.000					-0.225	-0.036	1.391	0.110	-1.391	-0.110	0.050	0.646	0.034	0.662	0.174	0.383	0.229	0.438	0.154	0.542	0.137	0.559	0.071	0.279	0.126	0.334
N+2.70	B61	0.000	3.000	VIG15X30	0.15	0.25	-0.251	-0.050	1.394	0.079	-1.394	-0.079	0.003	0.694	0.009	0.706	0.227	0.436	0.266	0.476	0.129	0.568	0.117	0.580	0.102	0.311	0.141	0.350
	B61	3.000					-4.522	-1.481	0.280	0.048	-0.280	-0.048	6.834	6.974	6.841	6.981	6.874	6.916	6.898	6.940	3.996	4.136	4.003	4.143	4.037	4.079	4.061	4.103
N+5.45	B62	0.000	2.550	VIG15X30	0.15	0.25	-3.139	-1.333	0.074	0.085	-0.074	-0.085	5.075	5.112	5.088	5.125	5.073	5.084	5.116	5.127	2.800	2.837	2.813	2.850	2.798	2.809	2.841	2.852
	B62	2.550					-3.862	-1.608	0.075	0.099	-0.075	-0.099	6.216	6.254	6.231	6.269	6.212	6.223	6.262	6.273	3.450	3.487	3.464	3.502	3.445	3.457	3.495	3.506
N+2.70	B62	0.000	2.550	VIG15X30	0.15	0.25	-2.899	-1.673	0.051	0.051	-0.051	-0.051	5.135	5.161	5.143	5.168	5.135	5.143	5.161	5.168	2.593	2.618	2.600	2.626	2.593	2.600	2.618	2.626
	B62	2.550					-3.606	-2.134	0.056	0.060	-0.056	-0.060	6.443	6.471	6.452	6.480	6.442	6.450	6.472	6.480	3.227	3.255	3.236	3.264	3.226	3.235	3.256	3.265
N+5.45	B63	0.000	2.550	VIG15X30	0.15	0.25	-3.913	-1.613	0.067	0.142	-0.067	-0.142	6.281	6.315	6.303	6.336	6.268	6.278	6.339	6.349	3.494	3.528	3.516	3.549	3.481	3.491	3.552	3.562
	B63	2.550					-3.119	-1.329	0.044	0.112	-0.044	-0.112	5.052	5.074	5.069	5.091	5.041	5.047	5.097	5.103	2.788	2.810	2.805	2.827	2.776	2.782	2.832	2.838
N+2.70	B63	0.000	2.550	VIG15X30	0.15	0.25	-3.689	-2.093	0.028	0.085	-0.028	-0.085	6.506	6.520	6.519	6.533	6.496	6.501	6.539	6.543	3.307	3.321	3.319	3.333	3.297	3.301	3.339	3.343
	B63	2.550					-2.873	-1.684	0.035	0.067	-0.035	-0.067	5.118	5.135	5.128	5.145	5.112	5.117	5.146	5.151	2.572	2.589	2.582	2.599	2.566	2.572	2.600	2.605
N+2.70	B64	0.000	2.550	VIG15X30	0.15	0.25	-3.756	-1.147	0.158	0.258	-0.158	-0.258	5.595	5.674	5.634	5.713	5.578	5.602	5.707	5.731	3.322	3.401	3.360	3.439	3.304	3.328	3.433	3.457
	B64	2.550					-3.955	-1.248	0.156	0.270	-0.156	-0.270	5.935	6.013	5.975	6.053	5.915	5.938	6.050	6.073	3.500	3.578	3.541	3.619	3.480	3.504	3.615	3.639
N+2.70	B65	0.000	2.550	VIG15X30	0.15	0.25	-4.021	-1.259	0.167	0.375	-0.167	-0.375	6.014	6.098	6.071	6.154	5.978	6.003	6.165	6.190	3.549	3.633	3.605	3.689	3.513	3.538	3.700	3.725
	B65	2.550					-3.723	-1.138	0.126	0.360	-0.126	-0.360	5.547	5.610	5.601	5.664	5.506	5.525	5.686	5.705	3.292	3.355	3.346	3.409	3.251	3.270	3.431	3.450
N+5.45	B66	0.000	1.500	VIG15X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B66	1.500					-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
N+5.45	B67	0.000	1.500	VIG15X30	0.15	0.25	-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
	B67	1.500					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B68	0.000	2.550	VIG15X30	0.15	0.25	-2.056	-0.758	0.113	0.199	-0.113	-0.199	3.182	3.239	3.212	3.268	3.167	3.184	3.266	3.283	1.807	1.864	1.837	1.894	1.792	1.809	1.892	1.909
	B68	2.550					-2.157	-0.802	0.129	0.219	-0.129	-0.219	3.342	3.406	3.375	3.439	3.326	3.345	3.435	3.455	1.893	1.957	1.925	1.990	1.877	1.896	1.986	2.006
N+5.45	B69	0.000	2.550	VIG15X30	0.15	0.25	-2.174	-0.810	0.110	0.294	-0.110	-0.294	3.369	3.424	3.413	3.468	3.337	3.354	3.484	3.501	1.907	1.962	1.951	2.006	1.875	1.891	2.022	2.038
	B69	2.550					-2.041	-0.751	0.098	0.266	-0.098	-0.266	3.156	3.205	3.196	3.245	3.126	3.141	3.259	3.274	1.792	1.841	1.832	1.881	1.763	1.778	1.896	1.911
N+2.70	B70	0.000	1.800	VIG15X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B70	1.800					-0.216	-0.107	0.249	0.018	-0.249	-0.018	0.303	0.427	0.305	0.430	0.343	0.380	0.352	0.389	0.131	0.255	0.134	0.258	0.171	0.209	0.180	0.218
N+2.70	B71	0.000	1.800	VIG15X30	0.15	0.25	-0.210	-0.104	0.250	0.013	-0.250	-0.013	0.293	0.418	0.294	0.419	0.334	0.372	0.341	0.378	0.126	0.251	0.127	0.252	0.167	0.205	0.174	0.211
	B71	1.800					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B72	0.000	2.550	VIG15X30	0.15	0.25	-0.565	0.010	0.084	0.123	-0.084	-0.123	0.638	0.680	0.656	0.698	0.631	0.644	0.692	0.705	0.478	0.520	0.497	0.539	0.471	0.484	0.533	0.546
	B72	2.550					-0.609	-0.012	0.095	0.148	-0.095	-0.148	0.708	0.755	0.730	0.778	0.699	0.713	0.773	0.787	0.513	0.561	0.535	0.583	0.504	0.518	0.578	0.592
N+2.70	B72	0.000	2.550	VIG15X30	0.15	0.25	-2.933	-0.852	0.089	0.129	-0.089	-0.129	4.340	4.384	4.359	4.404	4.333	4.346	4.397	4.411	2.608	2.652	2.627	2.672	2.601	2.614	2.665	2.679
	B72	2.550					-2.960	-0.867	0.098	0.148	-0.098	-0.148	4.383	4.432	4.406	4.455	4.375	4.389	4.449	4.463	2.628	2.677	2.651	2.700	2.620	2.634	2.694	2.708
N+5.45	B73	0.000	2.550	VIG15X30	0.15	0.25	-0.622	-0.016	0.095	0.206	-0.095	-0.206	0.723	0.771	0.754	0.802	0.704	0.718	0.807	0.821	0.521	0.568	0.552	0.599	0.501	0.515	0.604	0.618
	B73	2.550					-0.554	0.014	0.088	0.171	-0.088	-0.171	0.616	0.660	0.642	0.686	0.601	0.615	0.687	0.700	0.464	0.508	0.489	0.533	0.449	0.462	0.535	0.548
N+2.70	B73	0.000	2.550	VIG15X30	0.15	0.25	-2.971	-0.872	0.101	0.202	-0.101	-0.202	4.397	4.447	4.427	4.478	4.379	4.394	4.480	4.495	2.634	2.684	2.664	2.714	2.616	2.631	2.717	2.732
	B73	2.550					-2.923	-0.848	0.095	0.177	-0.095	-0.177	4.319	4.366	4.345	4.393	4.304	4.318	4.393	4.407	2.594	2.641	2.620	2.668	2.579	2.594	2.668	2.682
N+2.70	B74	0.000	2.550	VIG15X30	0.15	0.25	-0.567	0.006	0.177	0.300	-0.177	-0.300	0.608	0.696	0.653	0.741	0.586	0.613	0.736	0.763	0.444	0.532	0.489	0.577	0.422	0.449	0.572	0.599
	B74	2.550					-0.610	-0.007	0.188	0.330	-0.188	-0.330	0.667	0.761	0.717	0.811	0.642	0.671	0.807	0.836	0.477	0.571	0.527	0.621	0.452	0.481	0.617	0.646
N+2.70	B75	0.000	2.550	VIG15X30	0.15	0.25	-0.620	-0.011	0.164	0.427	-0.164	-0.427	0.682	0.764	0.746	0.828	0.636	0.661	0.849	0.874	0.485	0.567	0.549	0.631	0.439	0.464	0.652	0.677
	B75	2.550					-0.559	0.009	0.165	0.387	-0.165	-0.387	0.592	0.674	0.650	0.732	0.553	0.577	0.746	0.771	0.433	0.515	0.491	0.573	0.394	0.419	0.587	0.612
N+5.45	B76	0.000	3.000	VIG15X30	0.15	0.25	-0.156	-0.062	0.005	0.000	-0.005	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.142	0.139	0.142	0.140	0.141	0.140	0.141
	B76	3.000					-0.030	-0.007	0.204	0.013	-0.204	-0.013	0.009	0.093	0.007	0.095	0.024	0.055	0.031	0.062	0.025	0.077	0.023	0.079	0.008	0.039	0.015	0.046
N+5.45	B77	0.000	3.000	VIG15X30	0.15	0.25	-0.034	-0.010	0.205	0.011	-0.205	-0.011	0.001	0.101	0.000	0.103	0.033	0.063	0.038	0.069	0.021	0.081	0.020	0.083	0.012	0.043	0.018	0.049
	B77	3.000					-0.156	-0.062	0.005	0.000	-0.005	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.142	0.139	0.142	0.140	0.141	0.140	0.141
N+2.70	B78	0.000	3.000	VIG15X30	0.15	0.25	-4.522	-1.487	0.259	0.031	-0.259	-0.031	6.846	6.976	6.851	6.980	6.886	6.925	6.902	6.941	4.003	4.132	4.007	4.137	4.043	4.081	4.058	4.097
	B78	3.000					-0.229	-0.035	1.277	0.149	-1.277	-0.149	0.021	0.618	0.002	0.640	0.177	0.368	0.251	0.443	0.124	0.514	0.102	0.537	0.073	0.265	0.148	0.339
N+2.70	B79	0.000	3.000	VIG15X30	0.15	0.25	-0.252	-0.049	1.286	0.117	-1.286	-0.117	0.021	0.664	0.039	0.682	0.226	0.419	0.284	0.477	0.103	0.540	0.086	0.557	0.101	0.294	0.160	0.353
	B79	3.000					-4.519	-1.485	0.261	0.025	-0.261	-0.025	6.841	6.971	6.844	6.975	6.882	6.921	6.894	6.934	4.000	4.130	4.004	4.134	4.041	4.080	4.054	4.093
N+5.45	B80	0.000	2.550	VIG15X30	0.15	0.25	-3.327	-1.405	0.085	0.090	-0.085	-0.090	5.369	5.412	5.383	5.425	5.369	5.381	5.414	5.426	2.966	3.009	2.980	3.022	2.965	2.978	3.010	3.023
	B80	2.550					-3.227	-1.370	0.088	0.093	-0.088	-0.093	5.213	5.257	5.227	5.271	5.213	5.226	5.259	5.272	2.875	2.919	2.889	2.933	2.874	2.888	2.921	2.934
N+2.70	B80	0.000	2.550	VIG15X30	0.15	0.25	-3.090	-1.800	0.052	0.056	-0.052	-0.056	5.491	5.517	5.499	5.525	5.490	5.498	5.518	5.526	2.764	2.790	2.772	2.798	2.763	2.771	2.791	2.799
	B80	2.550					-2.975	-1.719	0.055	0.058	-0.055	-0.058	5.271	5.298	5.280	5.307	5.270	5.279	5.299	5.308	2.659	2.687	2.668	2.696	2.659	2.667	2.688	2.696
N+5.45	B81	0.000	2.550	VIG15X30	0.15	0.25	-3.226	-1.373	0.092	0.116	-0.092	-0.116	5.213	5.259	5.230	5.276	5.208	5.222	5.266	5.280	2.872	2.918	2.889	2.935	2.868	2.881	2.926	2.939
	B81	2.550					-3.324	-1.403	0.078	0.114	-0.078	-0.114	5.364	5.403	5.381	5.420	5.357	5.369	5.414	5.426	2.964	3.003	2.981	3.020	2.957	2.969	3.014	3.026
N+2.70	B81	0.000	2.550	VIG15X30	0.15	0.25	-2.963	-1.729	0.055	0.073	-0.055	-0.073	5.265	5.293	5.276	5.304	5.262	5.270	5.299	5.307	2.647	2.675	2.658	2.686	2.644	2.653	2.681	2.689
	B81	2.550					-3.091	-1.797	0.047	0.070	-0.047	-0.070	5.489	5.513	5.500	5.523	5.485	5.492	5.520	5.527	2.765	2.788	2.775	2.799	2.761	2.768	2.796	2.803
N+2.70	B82	0.000	2.550	VIG15X30	0.15	0.25	-3.789	-1.165	0.185	0.274	-0.185	-0.274	5.645	5.738	5.686	5.779	5.629	5.657	5.766	5.794	3.343	3.436	3.384	3.477	3.328	3.355	3.465	3.492
	B82	2.550					-3.838	-1.181	0.185	0.269	-0.185	-0.269	5.720	5.813	5.761	5.853	5.705	5.733	5.840	5.868	3.388	3.480	3.428	3.521	3.373	3.401	3.508	3.535
N+2.70	B83	0.000	2.550	VIG15X30	0.15	0.25	-3.846	-1.186	0.155	0.376	-0.155	-0.376	5.734	5.812	5.791	5.868	5.696	5.719	5.884	5.907	3.394	3.472	3.451	3.528	3.356	3.379	3.544	3.567
	B83	2.550					-3.776	-1.159	0.148	0.383	-0.148	-0.383	5.624	5.698	5.682	5.756	5.583	5.606	5.775	5.797	3.333	3.407	3.390	3.464	3.292	3.314	3.483	3.505

YECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

V_a	$V_m = M_{ni} + M_{nr} / l_n$															
	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
(kN)	(kN)															
9.78																
20.66	0.607	0.610	0.605	0.608	0.610	0.611	0.605	0.606	0.299	0.302	0.297	0.300	0.302	0.302	0.297	0.297
1.51																
1.18	0.410	0.436	0.409	0.436	0.420	0.428	0.418	0.426	0.137	0.163	0.136	0.163	0.147	0.155	0.144	0.152
20.42																
1.64	0.528	0.561	0.536	0.569	0.531	0.541	0.557	0.566	0.391	0.424	0.399	0.432	0.394	0.404	0.419	0.429
1.66																
9.55	3.423	3.451	3.432	3.460	3.422	3.430	3.452	3.461	2.058	2.086	2.067	2.095	2.057	2.065	2.087	2.096
9.62																
1.68	0.526	0.563	0.537	0.574	0.527	0.538	0.562	0.573	0.389	0.426	0.399	0.436	0.389	0.400	0.425	0.436
1.62																
9.63	3.420	3.453	3.433	3.466	3.417	3.427	3.460	3.469	2.054	2.087	2.067	2.100	2.051	2.061	2.094	2.103
9.55																
1.67	0.482	0.573	0.508	0.599	0.483	0.510	0.570	0.598	0.347	0.438	0.373	0.464	0.348	0.376	0.436	0.463
1.64																
1.64	0.476	0.572	0.509	0.605	0.471	0.499	0.581	0.610	0.341	0.437	0.374	0.470	0.336	0.365	0.446	0.475
1.66																
0.88	0.073	0.101	0.072	0.102	0.076	0.087	0.079	0.090	0.050	0.067	0.049	0.068	0.042	0.053	0.046	0.057
0.34																
0.35	0.072	0.104	0.071	0.104	0.079	0.090	0.081	0.092	0.050	0.069	0.049	0.070	0.044	0.055	0.047	0.058
0.90																
15.77	2.296	2.540	2.293	2.548	2.351	2.434	2.377	2.460	1.383	1.559	1.380	1.567	1.369	1.452	1.395	1.478
2.27																
2.63	2.279	2.556	2.283	2.562	2.367	2.451	2.388	2.472	1.375	1.568	1.373	1.575	1.379	1.463	1.401	1.484
15.77																
11.68	4.428	4.457	4.439	4.468	4.426	4.434	4.462	4.470	2.451	2.480	2.462	2.491	2.449	2.457	2.485	2.493
12.71																
12.88	4.540	4.561	4.547	4.568	4.540	4.546	4.562	4.568	2.282	2.303	2.289	2.310	2.282	2.288	2.304	2.310
14.11																
12.74	4.445	4.466	4.459	4.481	4.435	4.441	4.485	4.491	2.464	2.485	2.478	2.500	2.454	2.460	2.504	2.510
11.65																
14.14	4.559	4.571	4.567	4.580	4.552	4.556	4.582	4.586	2.305	2.318	2.314	2.327	2.299	2.303	2.329	2.333
12.86																
12.75	4.522	4.583	4.553	4.614	4.507	4.525	4.610	4.629	2.675	2.737	2.706	2.768	2.661	2.679	2.764	2.783
13.04																
13.10	4.534	4.591	4.577	4.635	4.504	4.521	4.648	4.665	2.683	2.740	2.726	2.784	2.653	2.670	2.797	2.814
12.68																
9.56	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
19.47																
19.47	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
9.56																
7.32	2.558	2.606	2.583	2.630	2.546	2.560	2.628	2.642	1.451	1.498	1.476	1.523	1.439	1.453	1.521	1.535
7.48																
7.52	2.559	2.600	2.592	2.633	2.535	2.547	2.644	2.657	1.451	1.492	1.484	1.525	1.427	1.439	1.536	1.549
7.31																
17.08	0.168	0.237	0.170	0.239	0.191	0.211	0.196	0.216	0.073	0.142	0.074	0.143	0.095	0.116	0.100	0.121
1.51																
1.48	0.163	0.232	0.164	0.233	0.186	0.206	0.189	0.210	0.070	0.139	0.071	0.140	0.093	0.114	0.096	0.117
17.08																
1.62	0.528	0.563	0.544	0.579	0.521	0.532	0.575	0.585	0.389	0.424	0.405	0.440	0.383	0.393	0.436	0.446
1.68																
9.56	3.421	3.457	3.437	3.474	3.415	3.426	3.469	3.480	2.053	2.090	2.070	2.106	2.047	2.058	2.102	2.113
9.62																
1.70	0.525	0.561	0.547	0.583	0.512	0.523	0.586	0.597	0.386	0.422	0.408	0.444	0.373	0.383	0.447	0.457
1.60																
9.63	3.418	3.456	3.440	3.479	3.405	3.417	3.480	3.491	2.050	2.088	2.072	2.111	2.037	2.049	2.112	2.123
9.55																
1.62	0.500	0.572	0.537	0.609	0.482	0.503	0.605	0.627	0.361	0.433	0.398	0.470	0.343	0.364	0.466	0.488
1.68																
1.70	0.499	0.564	0.547	0.612	0.466	0.485	0.626	0.645	0.360	0.424	0.408	0.472	0.327	0.346	0.486	0.506
1.60																
1.24	0.086	0.114	0.085	0.115	0.091	0.102	0.093	0.104	0.055	0.073	0.054	0.074	0.049	0.060	0.052	0.062
0.35																
0.35	0.083	0.117	0.083	0.118	0.094	0.104	0.096	0.106	0.054	0.074	0.053	0.075	0.051	0.061	0.053	0.063
1.24																
15.77	2.289	2.531	2.284	2.540	2.354	2.431	2.384	2.461	1.376	1.549	1.370	1.558	1.372	1.449	1.402	1.479
2.28																
2.62	2.287	2.545	2.294	2.552	2.369	2.447	2.393	2.470	1.368	1.557	1.363	1.564	1.381	1.458	1.404	1.482
15.77																
12.26	4.150	4.184	4.161	4.195	4.149	4.160	4.185	4.196	2.291	2.325	2.302	2.336	2.290	2.300	2.326	2.336
12.12																
13.60	4.220	4.241	4.227	4.248	4.220	4.226	4.242	4.248	2.127	2.148	2.133	2.154	2.126	2.133	2.149	2.155
13.39																
12.13	4.148	4.181	4.161	4.194	4.143	4.153	4.189	4.199	2.288	2.322	2.302	2.335	2.284	2.294	2.329	2.339
12.26																
13.39	4.217	4.237	4.226	4.246	4.215	4.221	4.243	4.249	2.123	2.143	2.131	2.151	2.120	2.126	2.148	2.154
13.61																
12.87	4.457	4.529	4.489	4.561	4.445	4.467	4.552	4.573	2.640	2.712	2.672	2.744	2.628	2.650	2.734	2.756
12.92																
12.95	4.454	4.514	4.499	4.558	4.423	4.441	4.572	4.590	2.638	2.698	2.683	2.742	2.607	2.625	2.756	2.773
12.83																

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

***Vu* = Vm + Vg**																	Vu_{max}	S	ΦVs	ΦVc	ΦVn	ΦVn > Vu_{max}
COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18		(kN)	(m)	(kN)	(kN)	(kN)	
								(kN)														
9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776	9.776						
21.271	21.274	21.269	21.272	21.274	21.275	21.269	21.270	20.963	20.966	20.961	20.964	20.966	20.966	20.961	20.961		21.3	**0.06**	178.92	21.53	200.45	**OK**
1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512							
1.594	1.620	1.593	1.620	1.604	1.612	1.602	1.610	1.321	1.347	1.320	1.347	1.331	1.339	1.328	1.336		20.4	**0.06**	178.92	21.53	200.45	**OK**
20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420	20.420							
2.172	2.205	2.180	2.213	2.175	2.185	2.201	2.210	2.035	2.068	2.043	2.076	2.038	2.048	2.063	2.073		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656							
12.971	12.999	12.980	13.008	12.970	12.978	13.000	13.009	11.606	11.634	11.615	11.643	11.605	11.613	11.635	11.644		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616							
2.210	2.247	2.221	2.258	2.211	2.222	2.246	2.257	2.073	2.110	2.083	2.120	2.073	2.084	2.109	2.120		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616							
13.048	13.081	13.061	13.094	13.045	13.055	13.088	13.097	11.682	11.715	11.695	11.728	11.679	11.689	11.722	11.731		13.1	**0.06**	178.92	21.53	200.45	**OK**
9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548							
2.150	2.241	2.176	2.267	2.151	2.178	2.238	2.266	2.015	2.106	2.041	2.132	2.016	2.044	2.104	2.131		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644							
2.120	2.216	2.153	2.249	2.115	2.143	2.225	2.254	1.985	2.081	2.018	2.114	1.980	2.009	2.090	2.119		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656							
0.957	0.985	0.956	0.986	0.960	0.971	0.963	0.974	0.934	0.951	0.933	0.952	0.926	0.937	0.930	0.941		1.0	**0.06**	178.92	21.53	200.45	**OK**
0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340							
0.424	0.456	0.423	0.456	0.431	0.442	0.433	0.444	0.402	0.421	0.401	0.422	0.396	0.407	0.399	0.410		0.9	**0.06**	178.92	21.53	200.45	**OK**
0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896	0.896							
18.064	18.308	18.061	18.316	18.119	18.202	18.145	18.228	17.151	17.327	17.148	17.335	17.137	17.220	17.163	17.246		18.3	**0.06**	178.92	21.53	200.45	**OK**
2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272	2.272							
4.911	5.188	4.915	5.194	4.999	5.083	5.020	5.104	4.007	4.200	4.005	4.207	4.011	4.095	4.033	4.116		15.8	**0.06**	178.92	21.53	200.45	**OK**
15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768							
16.112	16.141	16.123	16.152	16.110	16.118	16.146	16.154	14.135	14.164	14.146	14.175	14.133	14.141	14.169	14.177		16.2	**0.06**	178.92	21.53	200.45	**OK**
12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708	12.708							
17.416	17.437	17.423	17.444	17.416	17.422	17.438	17.444	15.158	15.179	15.165	15.186	15.158	15.164	15.180	15.186		17.4	**0.06**	178.92	21.53	200.45	**OK**
14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112	14.112							
17.189	17.210	17.203	17.225	17.179	17.185	17.229	17.235	15.208	15.229	15.222	15.244	15.198	15.204	15.248	15.254		17.2	**0.06**	178.92	21.53	200.45	**OK**
11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648	11.648							
18.699	18.711	18.707	18.720	18.692	18.696	18.722	18.726	16.445	16.458	16.454	16.467	16.439	16.443	16.469	16.473		18.7	**0.06**	178.92	21.53	200.45	**OK**
12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860	12.860							
17.270	17.331	17.301	17.362	17.255	17.273	17.358	17.377	15.423	15.485	15.454	15.516	15.409	15.427	15.512	15.531		17.4	**0.06**	178.92	21.53	200.45	**OK**
13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040	13.040							
17.638	17.695	17.681	17.739	17.608	17.625	17.752	17.769	15.787	15.844	15.830	15.888	15.757	15.774	15.901	15.918		17.8	**0.06**	178.92	21.53	200.45	**OK**
12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684	12.684							
22.020	22.020	22.020	22.020	22.020	22.020	22.020	22.020	16.324	16.324	16.324	16.324	16.324	16.324	16.324	16.324		22.0	**0.06**	178.92	21.53	200.45	**OK**
19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468							
31.924	31.924	31.924	31.924	31.924	31.924	31.924	31.924	26.228	26.228	26.228	26.228	26.228	26.228	26.228	26.228		31.9	**0.06**	178.92	21.53	200.45	**OK**
9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564							
9.878	9.926	9.903	9.950	9.866	9.880	9.948	9.962	8.771	8.818	8.796	8.843	8.759	8.773	8.841	8.855		10.0	**0.06**	178.92	21.53	200.45	**OK**
7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480							
10.079	10.120	10.112	10.153	10.055	10.067	10.164	10.177	8.971	9.012	9.004	9.045	8.947	8.959	9.056	9.069		10.2	**0.06**	178.92	21.53	200.45	**OK**
7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308	7.308							
17.244	17.313	17.246	17.315	17.267	17.287	17.272	17.292	17.149	17.218	17.150	17.219	17.171	17.192	17.176	17.197		17.3	**0.06**	178.92	21.53	200.45	**OK**
1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512							
1.647	1.716	1.648	1.717	1.670	1.690	1.673	1.694	1.554	1.623	1.555	1.624	1.577	1.598	1.580	1.601		17.1	**0.06**	178.92	21.53	200.45	**OK**
17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076							
2.144	2.179	2.160	2.195	2.137	2.148	2.191	2.201	2.005	2.040	2.021	2.056	1.999	2.009	2.052	2.062		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
12.981	13.017	12.997	13.034	12.975	12.986	13.029	13.040	11.613	11.650	11.630	11.666	11.607	11.618	11.662	11.673		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616							
2.221	2.257	2.243	2.279	2.208	2.219	2.282	2.293	2.082	2.118	2.104	2.140	2.069	2.079	2.143	2.153		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604							
13.046	13.084	13.068	13.107	13.033	13.045	13.108	13.119	11.678	11.716	11.700	11.739	11.665	11.677	11.740	11.751		13.1	**0.06**	178.92	21.53	200.45	**OK**
9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548							
2.116	2.188	2.153	2.225	2.098	2.119	2.221	2.243	1.977	2.049	2.014	2.086	1.959	1.980	2.082	2.104		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
2.195	2.260	2.243	2.308	2.162	2.181	2.322	2.341	2.056	2.120	2.104	2.168	2.023	2.042	2.182	2.202		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604							
1.330	1.358	1.329	1.359	1.335	1.346	1.337	1.348	1.299	1.317	1.298	1.318	1.293	1.304	1.296	1.306		1.4	**0.06**	178.92	21.53	200.45	**OK**
0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352							
0.435	0.469	0.435	0.470	0.446	0.456	0.448	0.458	0.406	0.426	0.405	0.427	0.403	0.413	0.405	0.415		1.2	**0.06**	178.92	21.53	200.45	**OK**
1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244							
18.057	18.299	18.052	18.308	18.122	18.199	18.152	18.229	17.144	17.317	17.138	17.326	17.140	17.217	17.170	17.247		18.3	**0.06**	178.92	21.53	200.45	**OK**
2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280	2.280							
4.903	5.161	4.910	5.168	4.985	5.063	5.009	5.086	3.984	4.173	3.979	4.180	3.997	4.074	4.020	4.098		15.8	**0.06**	178.92	21.53	200.45	**OK**
15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768							
16.410	16.444	16.421	16.455	16.409	16.420	16.445	16.456	14.551	14.585	14.562	14.596	14.550	14.560	14.586	14.596		16.5	**0.06**	178.92	21.53	200.45	**OK**
12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116	12.116							
17.816	17.837	17.823	17.844	17.816	17.822	17.838	17.844	15.723	15.744	15.729	15.750	15.722	15.729	15.745	15.751		17.8	**0.06**	178.92	21.53	200.45	**OK**
13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392	13.392							
16.280	16.313	16.293	16.326	16.275	16.285	16.321	16.331	14.420	14.454	14.434	14.467	14.416	14.426	14.461	14.471		16.3	**0.06**	178.92	21.53	200.45	**OK**
12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260	12.260							
17.609	17.629	17.618	17.638	17.607	17.613	17.635	17.641	15.515	15.535	15.523	15.543	15.512	15.518	15.540	15.546		17.6	**0.06**	178.92	21.53	200.45	**OK**
13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608	13.608							
17.325	17.397	17.357	17.429	17.313	17.335	17.420	17.441	15.508	15.580	15.540	15.612	15.496	15.518	15.602	15.624		17.4	**0.06**	178.92	21.53	200.45	**OK**
12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920	12.920							
17.402	17.462	17.447	17.506	17.371	17.389	17.520	17.538	15.586	15.646	15.631	15.690	15.555	15.573	15.704	15.721		17.5	**0.06**	178.92	21.53	200.45	**OK**
12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828	12.828							

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

COMDIS3 = 1.2C.M.+1.0C.V.+1.0Ex+0.3Ey
COMDIS4 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3Ey
COMDIS5 = 1.2C.M.+1.0C.V.+1.0Ex+0.3(-Ey)
COMDIS6 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3(-Ey)
COMDIS7 = 1.2C.M.+1.0C.V.+0.3Ex+1.0Ey
COMDIS8 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0Ey
COMDIS9 = 1.2C.M.+1.0C.V.+0.3Ex+1.0(-Ey)
COMDIS10 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0(-Ey)
COMDIS11 = 0.9C.M.+1.0Ex+0.3Ey
COMDIS12 = 0.9C.M.+1.0(-Ex)+0.3Ey
COMDIS13 = 0.9C.M.+1.0Ex+0.3(-Ey)
COMDIS14 = 0.9C.M.+1.0(-Ex)+0.3(-Ey)
COMDIS15 = 0.9C.M.+0.3Ex+1.0Ey
COMDIS16 = 0.9C.M.+0.3(-Ex)+1.0Ey
COMDIS17 = 0.9C.M.+0.3Ex+1.0(-Ey)
COMDIS18 = 0.9C.M.+0.3(-Ex)+1.0(-Ey)

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			M3						Mn (kN.m)														
	ELEMENTO												Combinaciones para resistencias nominales a momento														
	No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
N+5.45	B84	0.000	1.500	VIG1S1X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B84	1.500					-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
N+5.45	B85	0.000	1.500	VIG1S1X30	0.15	0.25	-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
	B85	1.500					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B86	0.000	2.550	VIG1S1X30	0.15	0.25	-2.067	-0.762	0.121	0.211	-0.121	-0.211	3.196	3.257	3.228	3.288	3.181	3.199	3.286	3.304	1.814	1.875	1.846	1.906	1.798	1.817	1.904	1.922
	B86	2.550					-2.126	-0.792	0.123	0.216	-0.123	-0.216	3.296	3.358	3.329	3.390	3.280	3.298	3.388	3.406	1.866	1.928	1.899	1.960	1.850	1.869	1.958	1.977
N+5.45	B87	0.000	2.550	VIG1S1X30	0.15	0.25	-2.143	-0.798	0.107	0.288	-0.107	-0.288	3.321	3.375	3.364	3.418	3.290	3.306	3.434	3.450	1.880	1.934	1.924	1.977	1.849	1.865	1.993	2.009
	B87	2.550					-2.050	-0.755	0.105	0.282	-0.105	-0.282	3.168	3.220	3.210	3.262	3.137	3.152	3.278	3.293	1.798	1.850	1.840	1.892	1.767	1.782	1.908	1.923
N+2.70	B88	0.000	1.800	VIG1S1X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B88	1.800					-0.217	-0.108	0.228	0.016	-0.228	-0.016	0.310	0.424	0.313	0.427	0.347	0.382	0.355	0.390	0.137	0.251	0.140	0.254	0.174	0.208	0.182	0.216
N+2.70	B89	0.000	1.800	VIG1S1X30	0.15	0.25	-0.211	-0.104	0.228	0.013	-0.228	-0.013	0.299	0.413	0.301	0.415	0.337	0.371	0.343	0.378	0.132	0.246	0.134	0.248	0.170	0.204	0.176	0.210
	B89	1.800					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B90	0.000	2.550	VIG1S1X30	0.15	0.25	-0.567	0.009	0.089	0.132	-0.089	-0.132	0.639	0.684	0.659	0.704	0.632	0.645	0.698	0.711	0.478	0.523	0.498	0.542	0.471	0.484	0.537	0.550
	B90	2.550					-0.603	-0.009	0.092	0.138	-0.092	-0.138	0.699	0.745	0.720	0.766	0.691	0.705	0.760	0.774	0.509	0.555	0.530	0.576	0.501	0.515	0.570	0.584
N+2.70	B90	0.000	2.550	VIG1S1X30	0.15	0.25	-2.928	-0.850	0.090	0.137	-0.090	-0.137	4.331	4.376	4.351	4.396	4.323	4.336	4.391	4.405	2.602	2.647	2.623	2.668	2.594	2.608	2.663	2.676
	B90	2.550					-2.970	-0.870	0.092	0.141	-0.092	-0.141	4.400	4.446	4.422	4.468	4.392	4.406	4.462	4.476	2.639	2.685	2.661	2.707	2.631	2.645	2.701	2.715
N+5.45	B91	0.000	2.550	VIG1S1X30	0.15	0.25	-0.615	-0.013	0.095	0.190	-0.095	-0.190	0.713	0.761	0.742	0.789	0.696	0.711	0.791	0.806	0.516	0.563	0.544	0.592	0.499	0.513	0.594	0.608
	B91	2.550					-0.555	0.013	0.093	0.182	-0.093	-0.182	0.616	0.663	0.643	0.690	0.601	0.614	0.692	0.705	0.463	0.509	0.490	0.536	0.447	0.461	0.538	0.552
N+2.70	B91	0.000	2.550	VIG1S1X30	0.15	0.25	-2.982	-0.874	0.094	0.195	-0.094	-0.195	4.414	4.461	4.444	4.491	4.397	4.411	4.494	4.508	2.646	2.693	2.675	2.722	2.628	2.642	2.726	2.740
	B91	2.550					-2.917	-0.846	0.094	0.189	-0.094	-0.189	4.309	4.356	4.337	4.384	4.292	4.306	4.387	4.401	2.588	2.635	2.616	2.663	2.571	2.585	2.666	2.680
N+2.70	B92	0.000	2.550	VIG1S1X30	0.15	0.25	-0.568	0.006	0.178	0.292	-0.178	-0.292	0.609	0.698	0.653	0.742	0.589	0.616	0.735	0.762	0.445	0.534	0.489	0.578	0.425	0.452	0.571	0.598
	B92	2.550					-0.602	-0.006	0.178	0.291	-0.178	-0.291	0.662	0.751	0.706	0.795	0.642	0.669	0.788	0.815	0.475	0.564	0.519	0.608	0.456	0.482	0.601	0.628
N+2.70	B93	0.000	2.550	VIG1S1X30	0.15	0.25	-0.609	-0.008	0.172	0.376	-0.172	-0.376	0.668	0.754	0.724	0.810	0.632	0.658	0.820	0.846	0.477	0.563	0.533	0.619	0.441	0.467	0.629	0.655
	B93	2.550					-0.561	0.008	0.170	0.376	-0.170	-0.376	0.595	0.680	0.651	0.736	0.558	0.584	0.746	0.772	0.434	0.519	0.491	0.576	0.398	0.424	0.586	0.612
N+5.45	B94	0.000	3.000	VIG1S1X30	0.15	0.25	-0.156	-0.062	0.004	0.000	-0.004	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.141	0.139	0.141	0.140	0.141	0.140	0.141
	B94	3.000					-0.030	-0.007	0.187	0.013	-0.187	-0.013	0.005	0.089	0.003	0.091	0.026	0.054	0.032	0.060	0.021	0.073	0.019	0.075	0.010	0.038	0.016	0.044
N+5.45	B95	0.000	3.000	VIG1S1X30	0.15	0.25	-0.035	-0.010	0.188	0.011	-0.188	-0.011	0.004	0.098	0.006	0.100	0.035	0.063	0.041	0.069	0.016	0.078	0.015	0.079	0.015	0.043	0.020	0.048
	B95	3.000					-0.156	-0.062	0.004	0.000	-0.004	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.141	0.139	0.141	0.140	0.141	0.140	0.141
N+2.70	B96	0.000	3.000	VIG1S1X30	0.15	0.25	-4.522	-1.487	0.237	0.027	-0.237	-0.027	6.852	6.971	6.856	6.975	6.889	6.924	6.902	6.938	4.009	4.127	4.013	4.131	4.045	4.081	4.059	4.094
	B96	3.000					-0.227	-0.034	1.150	0.166	-1.150	-0.166	0.006	0.581	0.031	0.606	0.179	0.351	0.262	0.434	0.096	0.479	0.071	0.504	0.077	0.249	0.160	0.332
N+2.70	B97	0.000	3.000	VIG1S1X30	0.15	0.25	-0.251	-0.048	1.162	0.126	-1.162	-0.126	0.049	0.630	0.068	0.649	0.231	0.405	0.294	0.468	0.074	0.507	0.055	0.526	0.107	0.282	0.170	0.345
	B97	3.000					-4.519	-1.484	0.239	0.018	-0.239	-0.018	6.846	6.965	6.848	6.968	6.884	6.920	6.893	6.929	4.006	4.126	4.009	4.128	4.045	4.081	4.054	4.090
N+5.45	B98	0.000	2.550	VIG1S1X30	0.15	0.25	-3.295	-1.392	0.084	0.092	-0.084	-0.092	5.318	5.360	5.332	5.374	5.317	5.329	5.363	5.375	2.938	2.980	2.951	2.993	2.936	2.949	2.982	2.995
	B98	2.550					-3.343	-1.414	0.084	0.092	-0.084	-0.092	5.398	5.440	5.412	5.454	5.396	5.409	5.442	5.455	2.981	3.023	2.995	3.037	2.979	2.992	3.025	3.038
N+2.70	B98	0.000	2.550	VIG1S1X30	0.15	0.25	-3.055	-1.777	0.054	0.057	-0.054	-0.057	5.425	5.452	5.434	5.461	5.425	5.433	5.453	5.461	2.732	2.759	2.740	2.767	2.731	2.739	2.760	2.768
	B98	2.550					-3.095	-1.800	0.052	0.057	-0.052	-0.057	5.497	5.523	5.505	5.531	5.496	5.504	5.524	5.532	2.768	2.794	2.777	2.803	2.767	2.775	2.796	2.804
N+5.45	B99	0.000	2.550	VIG1S1X30	0.15	0.25	-3.353	-1.417	0.072	0.117	-0.072	-0.117	5.414	5.450	5.431	5.467	5.406	5.417	5.464	5.475	2.991	3.027	3.008	3.044	2.983	2.994	3.042	3.052
	B99	2.550					-3.281	-1.387	0.074	0.118	-0.074	-0.118	5.297	5.334	5.315	5.352	5.289	5.300	5.348	5.359	2.926	2.963	2.943	2.980	2.918	2.929	2.977	2.988
N+2.70	B99	0.000	2.550	VIG1S1X30	0.15	0.25	-3.101	-1.800	0.045	0.073	-0.045	-0.073	5.504	5.527	5.515	5.538	5.500	5.506	5.536	5.543	2.774	2.797	2.785	2.808	2.769	2.776	2.806	2.813
	B99	2.550					-3.051	-1.775	0.047	0.073	-0.047	-0.073	5.419	5.442	5.430	5.453	5.414	5.421	5.451	5.458	2.729	2.752	2.740	2.763	2.724	2.731	2.761	2.768
N+2.70	B100	0.000	2.550	VIG1S1X30	0.15	0.25	-3.785	-1.162	0.210	0.295	-0.210	-0.295	5.629	5.734	5.674	5.779	5.615	5.646	5.762	5.794	3.332	3.437	3.376	3.481	3.317	3.349	3.465	3.496
	B100	2.550					-3.854	-1.193	0.190	0.290	-0.190	-0.290	5.749	5.844	5.792	5.887	5.731	5.760	5.876	5.905	3.399	3.494	3.443	3.538	3.382	3.410	3.527	3.555
N+2.70	B101	0.000	2.550	VIG1S1X30	0.15	0.25	-3.869	-1.198	0.160	0.386	-0.160	-0.386	5.772	5.852	5.830	5.910	5.732	5.756	5.925	5.949	3.413	3.493	3.471	3.551	3.374	3.398	3.567	3.591
	B101	2.550					-3.771	-1.156	0.152	0.378	-0.152	-0.378	5.615	5.691	5.672	5.748	5.575	5.598	5.764	5.787	3.328	3.404	3.384	3.460	3.288	3.311	3.477	3.500
N+5.45	B102	0.000	1.500	VIG1S1X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B102	1.500					-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
N+5.45	B103	0.000	1.500	VIG1S1X30	0.15	0.25	-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
	B103	1.500					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B104	0.000	2.550	VIG1S1X30	0.15	0.25	-2.067	-0.762	0.122	0.213	-0.122	-0.213	3.196	3.257	3.228	3.289	3.180	3.198	3.287	3.305	1.814	1.875	1.846	1.907	1.798	1.816	1.904	1.923
	B104	2.550					-2.129	-0.792	0.123	0.214	-0.123	-0.214	3.300	3.362	3.332	3.394	3.284	3.303	3.391	3.410	1.869	1.931	1.901	1.963	1.853	1.872	1.960	1.979
N+5.45	B105	0.000	2.550	VIG1S1X30	0.15	0.25	-2.146	-0.799	0.106	0.286	-0.106	-0.286	3.326	3.379	3.369	3.422	3.295	3.311	3.438	3.454	1.883	1.936	1.926	1.979	1.852	1.868	1.995	2.011
	B105	2.550					-2.049	-0.755	0.106	0.286	-0.106	-0.286	3.166	3.219	3.209	3.262	3.134	3.150	3.277	3.293	1.796	1.849	1.839	1.892	1.765	1.781	1.908	1.924
N+2.70	B106	0.000	1.800	VIG1S1X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B106	1.800					-0.217	-0.107	0.206	0.015	-0.206	-0.015	0.315	0.418	0.317	0.420	0.348	0.379	0.356	0.387	0.143	0.246	0.145	0.248	0.176	0.207	0.184	0.215
N+2.70	B107	0.000	1.800	VIG1S1X30	0.15	0.25	-0.211	-0.104	0.207	0.012	-0.207	-0.012	0.305	0.408	0.306	0.410	0.339	0.370	0.345	0.376	0.137	0.241	0.139	0.243	0.171	0.202	0.177	0.208
	B107	1.800					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B108	0.000	2.550	VIG1S1X30	0.15	0.25	-0.567	0.009	0.089	0.133	-0.089	-0.133	0.639	0.684	0.659	0.704	0.631	0.645	0.698	0.711	0.478	0.523	0.498	0.543	0.470	0.484	0.537	0.550
	B108	2.550					-0.604	-0.009	0.090	0.134	-0.090	-0.134	0.701	0.746	0.721	0.766	0.694	0.707	0.761	0.774	0.511	0.556	0.531	0.576	0.503	0.517	0.570	0.584
N+2.70	B108	0.000	2.550	VIG1S1X30	0.15	0.25	-2.929	-0.850	0.091	0.138	-0.091	-0.138	4.332	4.377	4.352	4.398	4.323	4.337	4.392	4.406	2.603	2.649	2.624	2.669	2.595	2.608	2.664	2.677
	B108	2.550					-2.968	-0.870	0.091	0.139	-0.091	-0.139	4.398	4.444	4.419	4.465	4.390	4.404	4.460	4.473	2.638	2.684	2.659	2.704	2.630	2.643	2.699	2.713
N+5.45	B109	0.000	2.550	VIG1S1X30	0.15	0.25	-0.616	-0.013	0.093	0.185	-0.093	-0.185	0.715	0.762	0.743	0.789	0.699	0.713	0.791	0.805	0.517	0.564	0.545	0.592	0.501	0.515	0.594	0.608
	B109	2.550					-0.555	0.013	0.094	0.185	-0.094	-0.185	0.616	0.663	0.643	0.690	0.600	0.614	0.692	0.706	0.462	0.509	0.490	0.537	0.446	0.460	0.539	0.553
N+2.70	B109	0.000	2.550	VIG1S1X30	0.15	0.25	-2.980	-0.874	0.095	0.191	-0.095	-0.191	4.412	4.459	4.441	4.488	4.395	4.409	4.491	4.505	2.644	2.691	2.673	2.720	2.627	2.641	2.723	2.737
	B109	2.550					-2.917	-0.846	0.095	0.191	-0.095	-0.191	4.308	4.356	4.337	4.384	4.292	4.306	4.387	4.401	2.587	2.635	2.616	2.663	2.570	2.585	2.666	2.680
N+2.70	B110	0.000	2.550	VIG1S1X30	0.15	0.25	-0.568	0.006	0.178	0.292	-0.178	-0.292	0.609	0.698	0.653	0.742	0.589	0.616	0.735	0.762	0.445	0.534	0.489	0.578	0.425	0.452	0.571	0.598
	B110	2.550					-0.602	-0.006	0.178	0.292	-0.178	-0.292	0.662	0.751	0.706	0.795	0.642	0.669	0.788	0.815	0.475	0.564	0.519	0.608	0.455	0.482	0.601	0.628
N+2.70	B111	0.000	2.550	VIG1S1X30	0.15	0.25	-0.609	-0.008	0.170	0.375	-0.170	-0.375	0.668	0.753	0.724	0.809	0.632	0.658	0.820	0.845	0.477	0.562	0.534	0.619	0.442	0.467	0.629	0.655
	B111	2.550					-0.561	0.008	0.170	0.375	-0.170	-0.375	0.595	0.680	0.651	0.736	0.559	0.584	0.746	0.772	0.434	0.519	0.491	0.576	0.398	0.424	0.586	0.611
N+5.45	B112	0.000	3.000	VIG1S1X30	0.15	0.25	-0.156	-0.062	0.004	0.000	-0.004	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.141	0.139	0.141	0.140	0.141	0.140	0.141
	B112	3.000					-0.030	-0.007	0.169	0.012	-0.169	-0.012	0.000	0.084	0.002	0.086	0.027	0.053	0.033	0.059	0.016	0.068	0.014	0.070	0.011	0.037	0.017	0.043
N+5.45	B113	0.000	3.000	VIG1S1X30	0.15	0.25	-0.035	-0.010	0.170	0.010	-0.170	-0.010	0.009	0.094	0.010	0.095	0.037	0.062	0.042	0.067	0.012	0.073	0.010	0.075	0.016	0.042	0.021	0.047
	B113	3.000					-0.156	-0.062	0.004	0.000	-0.004	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.141	0.139	0.141	0.140	0.141	0.140	0.141
N+2.70	B114	0.000	3.000	VIG1S1X30	0.15	0.25	-4.522	-1.487	0.214	0.026	-0.214	-0.026	6.858	6.965	6.862	6.969	6.891	6.923	6.904	6.936	4.014	4.121	4.018	4.125	4.047	4.079	4.060	4.092
	B114	3.000					-0.226	-0.034	1.032	0.169	-1.032	-0.169	0.035	0.551	0.060	0.576	0.186	0.340	0.270	0.425	0.067	0.449	0.042	0.474	0.084	0.239	0.168	0.323
N+2.70	B115	0.000	3.000	VIG1S1X30	0.15	0.25	-0.250	-0.048	1.046	0.119	-1.046	-0.119	0.078	0.601	0.095	0.618	0.240	0.397	0.299	0.456	0.045	0.478	0.028	0.495	0.117	0.274	0.176	0.333
	B115	3.000					-4.518	-1.484	0.215	0.014	-0.215	-0.014	6.851	6.958	6.853	6.960	6.886	6.918	6.893	6.925	4.011	4.119	4.014	4.121	4.047	4.079	4.054	4.086
N+5.45	B116	0.000	2.550	VIG1S1X30	0.15	0.25	-3.287	-1.393	0.086	0.092	-0.086	-0.092	5.309	5.352	5.323	5.366	5.308	5.321	5.354	5.367	2.930	2.973	2.944	2.987	2.929	2.942	2.975	2.988
	B116	2.550					-3.325	-1.406	0.085	0.092	-0.085	-0.092	5.368	5.410	5.382	5.424	5.367	5.379	5.413	5.425	2.964	3.007	2.978	3.021	2.963	2.976	3.009	3.022
N+2.70	B116	0.000	2.550	VIG1S1X30	0.15	0.25	-3.055	-1.773	0.053	0.057	-0.053	-0.057	5.421	5.448	5.430	5.457	5.421	5.429	5.449	5.457	2.732	2.758	2.741	2.767	2.731	2.739	2.760	2.768
	B116	2.550					-3.074	-1.787	0.055	0.057	-0.055	-0.057	5.458	5.485	5.466	5.494	5.457	5.466	5.486	5.494	2.749	2.776	2.757	2.785	2.748	2.756	2.777	2.785
N+5.45	B117	0.000	2.550	VIG1S1X30	0.15	0.25	-3.322	-1.407	0.072	0.113	-0.072	-0.113	5.367	5.403	5.384	5.420	5.360	5.371	5.416	5.427	2.963	2.999	2.980	3.016	2.956	2.967	3.013	3.023

YECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

V_g	$V_m = M_{ni} + M_{nr} / l_n$															
	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
(kN)	(kN)															
9.56	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
19.47																
19.47	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
9.56																
7.36	2.546	2.594	2.571	2.619	2.534	2.548	2.617	2.632	1.443	1.491	1.469	1.516	1.431	1.445	1.515	1.529
7.45																
7.48	2.545	2.586	2.578	2.620	2.520	2.533	2.632	2.644	1.442	1.484	1.476	1.517	1.418	1.430	1.530	1.542
7.35																
17.08	0.172	0.236	0.174	0.237	0.193	0.212	0.197	0.216	0.076	0.140	0.078	0.141	0.097	0.116	0.101	0.120
1.51																
1.48	0.166	0.230	0.167	0.231	0.187	0.206	0.191	0.210	0.073	0.137	0.074	0.138	0.094	0.113	0.098	0.117
17.08																
1.62	0.525	0.560	0.541	0.576	0.519	0.529	0.572	0.582	0.387	0.423	0.403	0.439	0.381	0.392	0.434	0.445
1.68																
9.55	3.424	3.460	3.440	3.476	3.417	3.428	3.472	3.483	2.056	2.091	2.072	2.108	2.049	2.060	2.104	2.114
9.63																
1.70	0.521	0.558	0.543	0.580	0.509	0.520	0.582	0.593	0.384	0.420	0.405	0.442	0.371	0.382	0.444	0.455
1.60																
9.63	3.421	3.458	3.443	3.480	3.407	3.418	3.483	3.494	2.052	2.089	2.075	2.112	2.039	2.050	2.114	2.125
9.54																
1.63	0.499	0.568	0.533	0.603	0.483	0.504	0.597	0.618	0.361	0.431	0.395	0.465	0.345	0.366	0.460	0.481
1.67																
1.70	0.495	0.562	0.539	0.606	0.467	0.487	0.614	0.634	0.357	0.424	0.402	0.469	0.329	0.349	0.477	0.497
1.62																
1.24	0.084	0.113	0.084	0.114	0.092	0.101	0.094	0.103	0.053	0.071	0.053	0.072	0.050	0.059	0.052	0.062
0.35																
0.35	0.084	0.116	0.085	0.117	0.095	0.104	0.097	0.106	0.052	0.073	0.051	0.074	0.052	0.061	0.053	0.063
1.24																
15.77	2.286	2.517	2.296	2.527	2.356	2.425	2.388	2.457	1.368	1.535	1.361	1.545	1.374	1.443	1.406	1.475
2.24																
2.59	2.298	2.532	2.306	2.539	2.372	2.442	2.396	2.466	1.360	1.544	1.355	1.551	1.384	1.454	1.408	1.478
15.77																
12.16	4.202	4.235	4.213	4.246	4.201	4.211	4.237	4.247	2.321	2.354	2.332	2.365	2.320	2.330	2.356	2.366
12.24																
13.46	4.283	4.304	4.290	4.311	4.283	4.289	4.305	4.311	2.157	2.178	2.164	2.184	2.156	2.163	2.179	2.185
13.53																
12.25	4.200	4.229	4.214	4.243	4.194	4.203	4.240	4.249	2.320	2.349	2.334	2.363	2.314	2.323	2.360	2.369
12.14																
13.54	4.284	4.302	4.292	4.310	4.280	4.285	4.309	4.314	2.158	2.176	2.167	2.185	2.154	2.160	2.183	2.188
13.46																
12.84	4.462	4.540	4.496	4.575	4.449	4.473	4.564	4.587	2.640	2.718	2.674	2.753	2.627	2.651	2.742	2.765
12.95																
12.96	4.465	4.527	4.510	4.571	4.434	4.453	4.584	4.603	2.643	2.705	2.688	2.750	2.612	2.631	2.762	2.781
12.82																
9.56	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
19.48																
19.47	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
9.56																
7.36	2.547	2.595	2.573	2.621	2.535	2.549	2.619	2.633	1.444	1.492	1.469	1.518	1.432	1.446	1.516	1.530
7.47																
7.48	2.546	2.587	2.580	2.621	2.521	2.534	2.633	2.646	1.443	1.485	1.477	1.518	1.418	1.431	1.530	1.543
7.35																
17.08	0.175	0.232	0.176	0.233	0.193	0.211	0.198	0.215	0.079	0.136	0.081	0.138	0.098	0.115	0.102	0.119
1.51																
1.48	0.169	0.227	0.170	0.228	0.188	0.205	0.191	0.209	0.076	0.134	0.077	0.135	0.095	0.112	0.099	0.116
17.08																
1.62	0.526	0.561	0.541	0.576	0.520	0.530	0.572	0.583	0.388	0.423	0.404	0.439	0.382	0.392	0.434	0.445
1.68																
9.55	3.424	3.459	3.440	3.476	3.417	3.428	3.471	3.482	2.055	2.091	2.072	2.107	2.049	2.059	2.103	2.114
9.63																
1.70	0.522	0.559	0.544	0.580	0.509	0.520	0.582	0.593	0.384	0.421	0.406	0.443	0.372	0.383	0.444	0.455
1.60																
9.63	3.420	3.457	3.442	3.479	3.407	3.418	3.481	3.493	2.051	2.089	2.074	2.111	2.038	2.049	2.113	2.124
9.54																
1.63	0.499	0.568	0.533	0.603	0.483	0.504	0.597	0.618	0.361	0.431	0.395	0.465	0.345	0.366	0.460	0.481
1.67																
1.70	0.495	0.562	0.539	0.606	0.467	0.487	0.614	0.634	0.358	0.424	0.402	0.468	0.329	0.349	0.476	0.496
1.62																
1.24	0.083	0.112	0.083	0.112	0.092	0.101	0.094	0.103	0.052	0.070	0.051	0.071	0.050	0.059	0.052	0.061
0.35																
0.35	0.086	0.115	0.086	0.115	0.095	0.104	0.097	0.106	0.050	0.072	0.050	0.072	0.052	0.061	0.054	0.062
1.24																
15.77	2.297	2.505	2.307	2.515	2.359	2.421	2.391	2.454	1.361	1.523	1.353	1.533	1.377	1.439	1.410	1.472
2.24																
2.59	2.309	2.520	2.316	2.526	2.375	2.438	2.397	2.460	1.352	1.532	1.347	1.539	1.388	1.451	1.410	1.473
15.77																
12.16	4.187	4.221	4.198	4.231	4.186	4.196	4.222	4.232	2.311	2.345	2.322	2.356	2.311	2.321	2.347	2.357
12.21																
13.47	4.266	4.288	4.273	4.294	4.266	4.272	4.288	4.295	2.149	2.170	2.156	2.177	2.149	2.155	2.171	2.178
13.53																
12.20	4.202	4.229	4.216	4.242	4.196	4.204	4.241	4.249	2.322	2.349	2.335	2.362	2.315	2.324	2.360	2.368

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

***Vu* = Vm + Vg**																	Vu_{max}	S	ΦVs	ΦVc	ΦVn	ΦVn > Vu_{max}
COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18							
(kN)																	(kN)	(m)	(kN)	(kN)	(kN)	
22.020	22.020	22.020	22.020	22.020	22.020	22.020	22.020	16.324	16.324	16.324	16.324	16.324	16.324	16.324	16.324		22.0	**0.06**	178.92	21.53	200.45	**OK**
19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468							
31.924	31.924	31.924	31.924	31.924	31.924	31.924	31.924	26.228	26.228	26.228	26.228	26.228	26.228	26.228	26.228		31.9	**0.06**	178.92	21.53	200.45	**OK**
9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564							
9.906	9.954	9.931	9.979	9.894	9.908	9.977	9.992	8.803	8.851	8.829	8.876	8.791	8.805	8.875	8.889		10.0	**0.06**	178.92	21.53	200.45	**OK**
7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452	7.452							
10.025	10.066	10.058	10.100	10.000	10.013	10.112	10.124	8.922	8.964	8.956	8.997	8.898	8.910	9.010	9.022		10.1	**0.06**	178.92	21.53	200.45	**OK**
7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348							
17.248	17.312	17.250	17.313	17.269	17.288	17.273	17.292	17.152	17.216	17.154	17.217	17.173	17.192	17.177	17.196		17.3	**0.06**	178.92	21.53	200.45	**OK**
1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512							
1.650	1.714	1.651	1.715	1.671	1.690	1.675	1.694	1.557	1.621	1.558	1.622	1.578	1.597	1.582	1.601		17.1	**0.06**	178.92	21.53	200.45	**OK**
17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076							
2.141	2.176	2.157	2.192	2.135	2.145	2.188	2.198	2.003	2.039	2.019	2.055	1.997	2.008	2.050	2.061		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
12.972	13.008	12.988	13.024	12.965	12.976	13.020	13.031	11.604	11.639	11.620	11.656	11.597	11.608	11.652	11.662		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628							
2.217	2.254	2.239	2.276	2.205	2.216	2.278	2.289	2.080	2.116	2.101	2.138	2.067	2.078	2.140	2.151		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604							
13.049	13.086	13.071	13.108	13.035	13.046	13.111	13.122	11.680	11.717	11.703	11.740	11.667	11.678	11.742	11.753		13.1	**0.06**	178.92	21.53	200.45	**OK**
9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536							
2.131	2.200	2.165	2.235	2.115	2.136	2.229	2.250	1.993	2.063	2.027	2.097	1.977	1.998	2.092	2.113		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668							
2.191	2.258	2.235	2.302	2.163	2.183	2.310	2.330	2.053	2.120	2.098	2.165	2.025	2.045	2.173	2.193		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616							
1.328	1.357	1.328	1.358	1.336	1.345	1.338	1.347	1.297	1.315	1.297	1.316	1.294	1.303	1.296	1.306		1.4	**0.06**	178.92	21.53	200.45	**OK**
0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352							
0.436	0.468	0.437	0.469	0.447	0.456	0.449	0.458	0.404	0.425	0.403	0.426	0.404	0.413	0.405	0.415		1.2	**0.06**	178.92	21.53	200.45	**OK**
1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244							
18.054	18.285	18.064	18.295	18.124	18.193	18.156	18.225	17.136	17.303	17.129	17.313	17.142	17.211	17.174	17.243		18.3	**0.06**	178.92	21.53	200.45	**OK**
2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240							
4.890	5.124	4.898	5.131	4.964	5.034	4.988	5.058	3.952	4.136	3.947	4.143	3.976	4.046	4.000	4.070		15.8	**0.06**	178.92	21.53	200.45	**OK**
15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768							
16.358	16.391	16.369	16.402	16.357	16.367	16.393	16.403	14.477	14.510	14.488	14.521	14.476	14.486	14.512	14.522		16.4	**0.06**	178.92	21.53	200.45	**OK**
12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236	12.236							
17.743	17.764	17.750	17.771	17.743	17.749	17.765	17.771	15.617	15.638	15.624	15.644	15.616	15.623	15.639	15.645		17.8	**0.06**	178.92	21.53	200.45	**OK**
13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528							
16.448	16.477	16.462	16.491	16.442	16.451	16.488	16.497	14.568	14.597	14.582	14.611	14.562	14.571	14.608	14.617		16.5	**0.06**	178.92	21.53	200.45	**OK**
12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144	12.144							
17.824	17.842	17.832	17.850	17.820	17.825	17.849	17.854	15.698	15.716	15.707	15.725	15.694	15.700	15.723	15.728		17.9	**0.06**	178.92	21.53	200.45	**OK**
13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460	13.460							
17.302	17.380	17.336	17.415	17.289	17.313	17.404	17.427	15.480	15.558	15.514	15.593	15.467	15.491	15.582	15.605		17.4	**0.06**	178.92	21.53	200.45	**OK**
12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948							
17.425	17.487	17.470	17.531	17.394	17.413	17.544	17.563	15.603	15.665	15.648	15.710	15.572	15.591	15.722	15.741		17.6	**0.06**	178.92	21.53	200.45	**OK**
12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816							
22.020	22.020	22.020	22.020	22.020	22.020	22.020	22.020	16.324	16.324	16.324	16.324	16.324	16.324	16.324	16.324		22.0	**0.06**	178.92	21.53	200.45	**OK**
19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484	19.484							
31.924	31.924	31.924	31.924	31.924	31.924	31.924	31.924	26.228	26.228	26.228	26.228	26.228	26.228	26.228	26.228		31.9	**0.06**	178.92	21.53	200.45	**OK**
9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564							
9.907	9.955	9.933	9.981	9.895	9.909	9.979	9.993	8.804	8.852	8.829	8.878	8.792	8.806	8.876	8.890		10.0	**0.06**	178.92	21.53	200.45	**OK**
7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468							
10.026	10.067	10.060	10.101	10.001	10.014	10.113	10.126	8.923	8.965	8.957	8.998	8.898	8.911	9.010	9.023		10.1	**0.06**	178.92	21.53	200.45	**OK**
7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348							
17.251	17.308	17.252	17.309	17.269	17.287	17.274	17.291	17.155	17.212	17.157	17.214	17.174	17.191	17.178	17.195		17.3	**0.06**	178.92	21.53	200.45	**OK**
1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512							
1.653	1.711	1.654	1.712	1.672	1.689	1.675	1.693	1.560	1.618	1.561	1.619	1.579	1.596	1.583	1.600		17.1	**0.06**	178.92	21.53	200.45	**OK**
17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076							
2.142	2.177	2.157	2.192	2.136	2.146	2.188	2.199	2.004	2.039	2.020	2.055	1.998	2.008	2.050	2.061		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
12.972	13.007	12.988	13.024	12.965	12.976	13.019	13.030	11.603	11.639	11.620	11.655	11.597	11.607	11.651	11.662		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628							
2.218	2.255	2.240	2.276	2.205	2.216	2.278	2.289	2.080	2.117	2.102	2.139	2.068	2.079	2.140	2.151		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604							
13.048	13.085	13.070	13.107	13.035	13.046	13.109	13.121	11.679	11.717	11.702	11.739	11.666	11.677	11.741	11.752		13.1	**0.06**	178.92	21.53	200.45	**OK**
9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536							
2.131	2.200	2.165	2.235	2.115	2.136	2.229	2.250	1.993	2.063	2.027	2.097	1.977	1.998	2.092	2.113		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668							
2.191	2.258	2.235	2.302	2.163	2.183	2.310	2.330	2.054	2.120	2.098	2.164	2.025	2.045	2.172	2.192		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616							
1.327	1.356	1.327	1.356	1.336	1.345	1.338	1.347	1.296	1.314	1.295	1.315	1.294	1.303	1.296	1.305		1.4	**0.06**	178.92	21.53	200.45	**OK**
0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352							
0.438	0.467	0.438	0.467	0.447	0.456	0.449	0.458	0.402	0.424	0.402	0.424	0.404	0.413	0.406	0.414		1.2	**0.06**	178.92	21.53	200.45	**OK**
1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244							
18.065	18.273	18.075	18.283	18.127	18.189	18.159	18.222	17.129	17.291	17.121	17.301	17.145	17.207	17.178	17.240		18.3	**0.06**	178.92	21.53	200.45	**OK**
2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240	2.240							
4.901	5.112	4.908	5.118	4.967	5.030	4.989	5.052	3.944	4.124	3.939	4.131	3.980	4.043	4.002	4.065		15.8	**0.06**	178.92	21.53	200.45	**OK**
15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768							
16.343	16.377	16.354	16.387	16.342	16.352	16.378	16.388	14.467	14.501	14.478	14.512	14.467	14.477	14.503	14.513		16.4	**0.06**	178.92	21.53	200.45	**OK**
12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208	12.208							
17.738	17.760	17.745	17.766	17.738	17.744	17.760	17.767	15.621	15.642	15.628	15.649	15.621	15.627	15.643	15.650		17.8	**0.06**	178.92	21.53	200.45	**OK**
13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528	13.528							
16.398	16.425	16.412	16.438	16.392	16.400	16.437	16.445	14.518	14.545	14.531	14.558	14.511	14.520	14.556	14.564		16.4	**0.06**	178.92	21.53	200.45	**OK**

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

COMDIS3 = 1.2C.M.+1.0C.V.+1.0Ex+0.3Ey
COMDIS4 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3Ey
COMDIS5 = 1.2C.M.+1.0C.V.+1.0Ex+0.3(-Ey)
COMDIS6 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3(-Ey)
COMDIS7 = 1.2C.M.+1.0C.V.+0.3Ex+1.0Ey
COMDIS8 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0Ey
COMDIS9 = 1.2C.M.+1.0C.V.+0.3Ex+1.0(-Ey)
COMDIS10 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0(-Ey)
COMDIS11 = 0.9C.M.+1.0Ex+0.3Ey
COMDIS12 = 0.9C.M.+1.0(-Ex)+0.3Ey
COMDIS13 = 0.9C.M.+1.0Ex+0.3(-Ey)
COMDIS14 = 0.9C.M.+1.0(-Ex)+0.3(-Ey)
COMDIS15 = 0.9C.M.+0.3Ex+1.0Ey
COMDIS16 = 0.9C.M.+0.3(-Ex)+1.0Ey
COMDIS17 = 0.9C.M.+0.3Ex+1.0(-Ey)
COMDIS18 = 0.9C.M.+0.3(-Ex)+1.0(-Ey)

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			M3						Mn (kN.m)															
	ELEMENTO												Combinaciones para resistencias nominales a momento															
	No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
	B117	2.550					-3.313	-1.398	0.065	0.114	-0.065	-0.114	5.349	5.381	5.366	5.398	5.340	5.350	5.397	5.407	2.957	2.989	2.974	3.007	2.948	2.958	3.005	3.015
N+2.70	B117	0.000	2.550	VIG15X30	0.15	0.25	-3.078	-1.787	0.043	0.068	-0.043	-0.068	5.465	5.486	5.475	5.496	5.460	5.467	5.494	5.501	2.754	2.776	2.765	2.786	2.750	2.756	2.784	2.790
	B117	2.550					-3.045	-1.776	0.036	0.068	-0.036	-0.068	5.416	5.434	5.426	5.444	5.410	5.416	5.444	5.450	2.726	2.744	2.737	2.755	2.721	2.726	2.755	2.760
N+2.70	B118	0.000	2.550	VIG15X30	0.15	0.25	-3.789	-1.162	0.186	0.282	-0.186	-0.282	5.641	5.734	5.683	5.776	5.624	5.652	5.765	5.793	3.342	3.435	3.385	3.478	3.326	3.354	3.467	3.495
	B118	2.550					-3.851	-1.190	0.206	0.289	-0.206	-0.289	5.738	5.841	5.781	5.884	5.724	5.754	5.868	5.899	3.393	3.496	3.436	3.539	3.378	3.409	3.523	3.554
N+2.70	B119	0.000	2.550	VIG15X30	0.15	0.25	-3.870	-1.197	0.135	0.356	-0.135	-0.356	5.781	5.848	5.834	5.901	5.742	5.762	5.920	5.940	3.423	3.490	3.476	3.543	3.384	3.404	3.562	3.582
	B119	2.550					-3.758	-1.155	0.139	0.347	-0.139	-0.347	5.604	5.673	5.656	5.725	5.567	5.588	5.741	5.762	3.321	3.391	3.373	3.443	3.285	3.306	3.459	3.479
N+5.45	B120	0.000	1.500	VIG15X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B120	1.500					-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
N+5.45	B121	0.000	1.500	VIG15X30	0.15	0.25	-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
	B121	1.500					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B122	0.000	2.550	VIG15X30	0.15	0.25	-2.066	-0.762	0.123	0.214	-0.123	-0.214	3.194	3.256	3.227	3.288	3.178	3.197	3.285	3.304	1.813	1.874	1.845	1.906	1.797	1.815	1.904	1.922
	B122	2.550					-2.129	-0.792	0.122	0.213	-0.122	-0.213	3.300	3.361	3.332	3.393	3.284	3.303	3.391	3.409	1.870	1.931	1.902	1.963	1.854	1.872	1.960	1.979
N+5.45	B123	0.000	2.550	VIG15X30	0.15	0.25	-2.145	-0.799	0.105	0.282	-0.105	-0.282	3.326	3.378	3.368	3.420	3.295	3.310	3.436	3.451	1.883	1.936	1.925	1.978	1.852	1.868	1.993	2.009
	B123	2.550					-2.049	-0.755	0.107	0.289	-0.107	-0.289	3.165	3.219	3.209	3.262	3.134	3.150	3.278	3.294	1.796	1.849	1.839	1.893	1.764	1.780	1.908	1.924
N+2.70	B124	0.000	1.800	VIG15X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B124	1.800					-0.217	-0.107	0.185	0.014	-0.185	-0.014	0.320	0.413	0.322	0.415	0.350	0.378	0.357	0.385	0.148	0.241	0.150	0.243	0.178	0.206	0.185	0.213
N+2.70	B125	0.000	1.800	VIG15X30	0.15	0.25	-0.210	-0.104	0.184	0.013	-0.184	-0.013	0.309	0.401	0.311	0.403	0.339	0.367	0.345	0.373	0.142	0.234	0.144	0.236	0.172	0.200	0.178	0.206
	B125	1.800					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B126	0.000	2.550	VIG15X30	0.15	0.25	-0.567	0.009	0.090	0.134	-0.090	-0.134	0.639	0.684	0.659	0.704	0.631	0.645	0.698	0.712	0.478	0.523	0.498	0.543	0.470	0.484	0.537	0.551
	B126	2.550					-0.604	-0.009	0.089	0.133	-0.089	-0.133	0.702	0.746	0.722	0.766	0.694	0.707	0.760	0.774	0.511	0.556	0.531	0.576	0.504	0.517	0.570	0.584
N+2.70	B126	0.000	2.550	VIG15X30	0.15	0.25	-2.929	-0.850	0.091	0.139	-0.091	-0.139	4.332	4.377	4.352	4.398	4.323	4.337	4.393	4.406	2.603	2.648	2.624	2.669	2.595	2.608	2.664	2.678
	B126	2.550					-2.968	-0.870	0.091	0.138	-0.091	-0.138	4.399	4.444	4.419	4.465	4.390	4.404	4.459	4.473	2.638	2.684	2.659	2.704	2.630	2.644	2.699	2.713
N+5.45	B127	0.000	2.550	VIG15X30	0.15	0.25	-0.616	-0.014	0.092	0.182	-0.092	-0.182	0.717	0.763	0.744	0.790	0.701	0.715	0.792	0.806	0.518	0.564	0.545	0.591	0.502	0.516	0.593	0.607
	B127	2.550					-0.552	0.015	0.096	0.191	-0.096	-0.191	0.609	0.657	0.638	0.686	0.592	0.607	0.688	0.702	0.458	0.506	0.487	0.535	0.442	0.456	0.537	0.552
N+2.70	B127	0.000	2.550	VIG15X30	0.15	0.25	-2.978	-0.873	0.094	0.189	-0.094	-0.189	4.409	4.456	4.437	4.484	4.392	4.406	4.487	4.501	2.643	2.690	2.671	2.718	2.626	2.640	2.720	2.735
	B127	2.550					-2.919	-0.847	0.098	0.195	-0.098	-0.195	4.311	4.360	4.340	4.389	4.294	4.308	4.391	4.406	2.588	2.637	2.617	2.666	2.571	2.586	2.669	2.683
N+2.70	B128	0.000	2.550	VIG15X30	0.15	0.25	-0.568	0.006	0.178	0.291	-0.178	-0.291	0.609	0.698	0.653	0.742	0.590	0.616	0.735	0.762	0.445	0.534	0.489	0.578	0.425	0.452	0.571	0.597
	B128	2.550					-0.602	-0.006	0.177	0.292	-0.177	-0.292	0.662	0.751	0.706	0.795	0.642	0.669	0.788	0.815	0.476	0.564	0.519	0.608	0.456	0.482	0.602	0.628
N+2.70	B129	0.000	2.550	VIG15X30	0.15	0.25	-0.609	-0.008	0.170	0.376	-0.170	-0.376	0.668	0.753	0.725	0.810	0.632	0.658	0.820	0.846	0.477	0.562	0.534	0.619	0.441	0.467	0.629	0.655
	B129	2.550					-0.561	0.008	0.169	0.375	-0.169	-0.375	0.595	0.679	0.651	0.736	0.559	0.584	0.746	0.772	0.435	0.519	0.491	0.575	0.398	0.424	0.586	0.611
N+5.45	B130	0.000	3.000	VIG15X30	0.15	0.25	-0.156	-0.062	0.004	0.000	-0.004	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.141	0.139	0.141	0.140	0.141	0.140	0.141
	B130	3.000					-0.030	-0.007	0.152	0.011	-0.152	-0.011	0.004	0.080	0.006	0.082	0.029	0.052	0.034	0.057	0.012	0.064	0.010	0.066	0.013	0.036	0.018	0.041
N+5.45	B131	0.000	3.000	VIG15X30	0.15	0.25	-0.035	-0.010	0.152	0.010	-0.152	-0.010	0.013	0.089	0.015	0.091	0.038	0.061	0.043	0.066	0.007	0.069	0.006	0.070	0.018	0.040	0.023	0.045
	B131	3.000					-0.156	-0.062	0.004	0.000	-0.004	0.000	0.248	0.250	0.248	0.250	0.249	0.250	0.249	0.250	0.139	0.141	0.139	0.141	0.140	0.141	0.140	0.141
N+2.70	B132	0.000	3.000	VIG15X30	0.15	0.25	-4.522	-1.487	0.190	0.025	-0.190	-0.025	6.864	6.959	6.868	6.963	6.893	6.921	6.905	6.934	4.020	4.115	4.024	4.119	4.049	4.078	4.062	4.090
	B132	3.000					-0.224	-0.034	0.916	0.172	-0.916	-0.172	0.061	0.519	0.087	0.545	0.191	0.329	0.277	0.415	0.040	0.418	0.015	0.444	0.090	0.227	0.176	0.313
N+2.70	B133	0.000	3.000	VIG15X30	0.15	0.25	-0.249	-0.047	0.943	0.132	-0.943	-0.132	0.100	0.572	0.120	0.591	0.242	0.384	0.308	0.450	0.022	0.450	0.002	0.470	0.120	0.262	0.186	0.328
	B133	3.000					-4.517	-1.484	0.189	0.009	-0.189	-0.009	6.856	6.951	6.858	6.952	6.888	6.916	6.892	6.921	4.017	4.112	4.019	4.113	4.049	4.077	4.053	4.082
N+5.45	B134	0.000	2.550	VIG15X30	0.15	0.25	-3.359	-1.402	0.077	0.092	-0.077	-0.092	5.407	5.445	5.420	5.459	5.404	5.416	5.450	5.462	2.997	3.035	3.011	3.049	2.994	3.006	3.040	3.052
	B134	2.550					-3.307	-1.404	0.083	0.090	-0.083	-0.090	5.345	5.386	5.358	5.400	5.344	5.356	5.389	5.401	2.949	2.990	2.962	3.004	2.948	2.960	2.993	3.005
N+2.70	B134	0.000	2.550	VIG15X30	0.15	0.25	-3.091	-1.819	0.046	0.057	-0.046	-0.057	5.512	5.535	5.521	5.544	5.511	5.517	5.539	5.546	2.766	2.789	2.775	2.798	2.764	2.771	2.793	2.800
	B134	2.550					-3.066	-1.775	0.051	0.055	-0.051	-0.055	5.437	5.463	5.446	5.471	5.437	5.444	5.464	5.472	2.743	2.768	2.751	2.776	2.742	2.749	2.769	2.777
N+5.45	B135	0.000	2.550	VIG15X30	0.15	0.25	-3.360	-1.420	0.090	0.113	-0.090	-0.113	5.421	5.466	5.438	5.483	5.417	5.431	5.474	5.487	2.993	3.038	3.010	3.055	2.989	3.003	3.046	3.059
	B135	2.550					-3.195	-1.357	0.119	0.147	-0.119	-0.147	5.150	5.210	5.172	5.232	5.145	5.163	5.219	5.237	2.835	2.894	2.857	2.916	2.830	2.848	2.903	2.921
N+2.70	B135	0.000	2.550	VIG15X30	0.15	0.25	-3.066	-1.785	0.061	0.071	-0.061	-0.071	5.444	5.474	5.454	5.485	5.442	5.451	5.477	5.487	2.739	2.769	2.749	2.780	2.737	2.746	2.773	2.782
	B135	2.550					-3.101	-1.790	0.092	0.105	-0.092	-0.105	5.480	5.526	5.496	5.542	5.478	5.492	5.531	5.544	2.760	2.806	2.776	2.822	2.758	2.772	2.810	2.824
N+2.70	B136	0.000	2.550	VIG15X30	0.15	0.25	-3.765	-1.161	0.175	0.266	-0.175	-0.266	5.615	5.703	5.655	5.743	5.599	5.626	5.732	5.759	3.325	3.412	3.365	3.452	3.309	3.335	3.442	3.468
	B136	2.550					-3.859	-1.192	0.180	0.268	-0.180	-0.268	5.758	5.848	5.798	5.888	5.742	5.769	5.876	5.903	3.408	3.498	3.448	3.538	3.393	3.420	3.527	3.554
N+2.70	B137	0.000	2.550	VIG15X30	0.15	0.25	-3.836	-1.194	0.136	0.317	-0.136	-0.317	5.739	5.807	5.787	5.855	5.708	5.728	5.866	5.887	3.395	3.463	3.442	3.510	3.363	3.383	3.521	3.542
	B137	2.550					-3.850	-1.164	0.150	0.324	-0.150	-0.324	5.722	5.797	5.771	5.846	5.692	5.714	5.854	5.876	3.403	3.478	3.452	3.527	3.373	3.395	3.535	3.557
N+5.45	B138	0.000	1.500	VIG15X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B138	1.500					-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
N+5.45	B139	0.000	1.500	VIG15X30	0.15	0.25	-11.267	-5.164	0.000	0.000	0.000	0.000	18.684	18.684	18.684	18.684	18.684	18.684	18.684	18.684	10.140	10.140	10.140	10.140	10.140	10.140	10.140	10.140
	B139	1.500					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B140	0.000	2.550	VIG15X30	0.15	0.25	-2.069	-0.761	0.123	0.216	-0.123	-0.216	3.197	3.258	3.229	3.291	3.181	3.199	3.289	3.307	1.815	1.877	1.848	1.909	1.799	1.817	1.907	1.925
	B140	2.550					-2.127	-0.792	0.122	0.211	-0.122	-0.211	3.298	3.359	3.330	3.391	3.283	3.301	3.388	3.406	1.868	1.929	1.900	1.961	1.852	1.871	1.958	1.976
N+5.45	B141	0.000	2.550	VIG15X30	0.15	0.25	-2.145	-0.798	0.101	0.262	-0.101	-0.262	3.327	3.378	3.366	3.417	3.299	3.314	3.430	3.445	1.886	1.936	1.925	1.975	1.857	1.873	1.988	2.004
	B141	2.550					-2.041	-0.753	0.110	0.292	-0.110	-0.292	3.153	3.208	3.197	3.252	3.121	3.137	3.267	3.283	1.788	1.843	1.831	1.886	1.756	1.772	1.902	1.918
N+2.70	B142	0.000	1.800	VIG15X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B142	1.800					-0.217	-0.108	0.163	0.012	-0.163	-0.012	0.327	0.408	0.329	0.410	0.353	0.378	0.359	0.384	0.154	0.235	0.155	0.237	0.180	0.205	0.186	0.211
N+2.70	B143	0.000	1.800	VIG15X30	0.15	0.25	-0.210	-0.104	0.158	0.022	-0.158	-0.022	0.315	0.394	0.318	0.397	0.339	0.362	0.350	0.373	0.148	0.227	0.151	0.230	0.172	0.195	0.183	0.206
	B143	1.800					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N+5.45	B144	0.000	2.550	VIG15X30	0.15	0.25	-0.565	0.010	0.092	0.139	-0.092	-0.139	0.635	0.681	0.655	0.701	0.626	0.640	0.696	0.710	0.475	0.521	0.496	0.542	0.467	0.481	0.536	0.550
	B144	2.550					-0.604	-0.009	0.088	0.131	-0.088	-0.131	0.702	0.746	0.722	0.766	0.694	0.708	0.760	0.773	0.512	0.556	0.531	0.575	0.504	0.517	0.570	0.583
N+2.70	B144	0.000	2.550	VIG15X30	0.15	0.25	-2.929	-0.851	0.094	0.141	-0.094	-0.141	4.332	4.379	4.353	4.400	4.324	4.338	4.394	4.408	2.602	2.649	2.623	2.670	2.594	2.608	2.664	2.678
	B144	2.550					-2.968	-0.869	0.090	0.137	-0.090	-0.137	4.398	4.443	4.418	4.463	4.390	4.403	4.458	4.472	2.638	2.683	2.659	2.704	2.630	2.644	2.699	2.712
N+5.45	B145	0.000	2.550	VIG15X30	0.15	0.25	-0.609	-0.011	0.087	0.168	-0.087	-0.168	0.707	0.751	0.733	0.776	0.693	0.706	0.777	0.790	0.514	0.557	0.539	0.582	0.500	0.513	0.584	0.597
	B145	2.550					-0.560	0.011	0.110	0.205	-0.110	-0.205	0.618	0.673	0.649	0.704	0.602	0.618	0.704	0.721	0.461	0.516	0.492	0.547	0.445	0.461	0.547	0.564
N+2.70	B145	0.000	2.550	VIG15X30	0.15	0.25	-2.982	-0.875	0.085	0.177	-0.085	-0.177	4.419	4.461	4.445	4.488	4.403	4.416	4.491	4.504	2.649	2.692	2.676	2.718	2.633	2.646	2.722	2.734
	B145	2.550					-2.910	-0.844	0.098	0.205	-0.098	-0.205	4.296	4.345	4.327	4.376	4.277	4.292	4.380	4.395	2.579	2.628	2.610	2.659	2.560	2.575	2.663	2.678
N+2.70	B146	0.000	2.550	VIG15X30	0.15	0.25	-0.568	0.006	0.177	0.291	-0.177	-0.291	0.610	0.698	0.653	0.742	0.590	0.616	0.735	0.762	0.445	0.534	0.489	0.577	0.425	0.452	0.571	0.597
	B146	2.550					-0.602	-0.006	0.177	0.292	-0.177	-0.292	0.662	0.751	0.706	0.795	0.642	0.669	0.788	0.815	0.476	0.564	0.519	0.608	0.456	0.482	0.602	0.628
N+2.70	B147	0.000	2.550	VIG15X30	0.15	0.25	-0.609	-0.009	0.179	0.390	-0.179	-0.390	0.666	0.755	0.724	0.814	0.629	0.656	0.824	0.851	0.474	0.564	0.533	0.622	0.437	0.464	0.632	0.659
	B147	2.550					-0.562	0.010	0.211	0.442	-0.211	-0.442	0.579	0.684	0.645	0.750	0.538	0.570	0.759	0.791	0.420	0.525	0.486	0.592	0.379	0.411	0.600	0.632
N+5.45	B148	0.000	3.000	VIG15X30	0.15	0.25	-0.156	-0.062	0.003	0.001	-0.003	-0.001	0.248	0.250	0.249	0.250	0.249	0.249	0.249	0.250	0.140	0.141	0.140	0.141	0.140	0.140	0.140	0.141
	B148	3.000					-0.030	-0.007	0.134	0.010	-0.134	-0.010	0.009	0.076	0.010	0.077	0.030	0.051	0.035	0.056	0.007	0.060	0.006	0.061	0.014	0.035	0.019	0.040
N+5.45	B149	0.000	3.000	VIG15X30	0.15	0.25	-0.037	-0.011	0.131	0.016	-0.131	-0.016	0.021	0.087	0.024	0.089	0.042	0.061	0.050	0.069	0.001	0.065	0.002	0.067	0.019	0.039	0.027	0.047
	B149	3.000					-0.156	-0.062	0.003	0.001	-0.003	-0.001	0.248	0.250	0.249	0.250	0.249	0.249	0.249	0.250	0.140	0.141	0.140	0.141	0.140	0.140	0.140	0.141
N+2.70	B150	0.000	3.000	VIG15X30	0.15	0.25	-4.522	-1.487	0.165	0.020	-0.165	-0.020	6.871	6.953	6.874	6.956	6.896	6.921	6.906	6.931	4.027	4.110	4.030	4.113	4.052	4.077	4.062	4.087
	B150	3.000					-0.221	-0.032	0.810	0.194	-0.810	-0.194	0.080	0.485	0.109	0.514	0.188	0.309	0.285	0.406	0.018	0.387	0.011	0.416	0.090	0.211	0.187	0.308

YECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

V_a	$V_m = M_{ni} + M_{nr} / l_n$															
	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
(kN)	(kN)															
12.18																
13.51	4.267	4.282	4.275	4.290	4.263	4.268	4.290	4.294	2.149	2.165	2.157	2.173	2.145	2.150	2.172	2.177
13.48																
12.84	4.462	4.539	4.496	4.573	4.450	4.473	4.562	4.585	2.641	2.718	2.675	2.752	2.629	2.652	2.741	2.764
12.95																
12.97	4.464	4.518	4.506	4.560	4.435	4.451	4.573	4.589	2.645	2.698	2.686	2.740	2.615	2.631	2.753	2.769
12.82																
9.56	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
19.32																
19.47	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
9.56																
7.36	2.547	2.595	2.572	2.620	2.534	2.549	2.618	2.633	1.444	1.492	1.469	1.517	1.432	1.446	1.515	1.530
7.47																
7.48	2.545	2.587	2.579	2.621	2.521	2.533	2.633	2.645	1.443	1.484	1.476	1.518	1.418	1.430	1.530	1.542
7.35																
17.08	0.178	0.229	0.179	0.230	0.194	0.210	0.198	0.214	0.082	0.134	0.083	0.135	0.099	0.114	0.103	0.118
1.51																
1.48	0.172	0.223	0.173	0.224	0.188	0.204	0.192	0.207	0.079	0.130	0.080	0.131	0.096	0.111	0.099	0.114
17.08																
1.62	0.526	0.561	0.541	0.576	0.520	0.530	0.572	0.583	0.388	0.423	0.404	0.439	0.382	0.392	0.434	0.445
1.68																
9.55	3.424	3.459	3.440	3.476	3.417	3.428	3.471	3.482	2.055	2.091	2.072	2.107	2.049	2.059	2.103	2.114
9.63																
1.70	0.520	0.557	0.542	0.579	0.507	0.518	0.580	0.591	0.383	0.420	0.405	0.442	0.370	0.381	0.443	0.454
1.60																
9.63	3.419	3.457	3.442	3.480	3.406	3.418	3.482	3.493	2.051	2.089	2.074	2.111	2.038	2.049	2.113	2.125
9.55																
1.63	0.499	0.568	0.533	0.603	0.483	0.504	0.597	0.618	0.361	0.431	0.395	0.465	0.345	0.366	0.460	0.481
1.67																
1.70	0.495	0.562	0.539	0.606	0.467	0.487	0.614	0.634	0.358	0.424	0.402	0.468	0.329	0.349	0.477	0.497
1.62																
1.24	0.084	0.110	0.085	0.111	0.093	0.100	0.094	0.102	0.050	0.069	0.050	0.069	0.051	0.059	0.053	0.061
0.35																
0.35	0.087	0.113	0.088	0.114	0.096	0.103	0.097	0.105	0.049	0.070	0.048	0.071	0.053	0.060	0.054	0.062
1.24																
15.77	2.308	2.493	2.318	2.502	2.361	2.417	2.394	2.449	1.354	1.511	1.346	1.521	1.380	1.435	1.413	1.468
2.23																
2.56	2.319	2.508	2.326	2.515	2.377	2.433	2.400	2.457	1.346	1.521	1.340	1.528	1.390	1.446	1.413	1.470
15.77																
12.22	4.216	4.248	4.227	4.258	4.215	4.224	4.250	4.260	2.332	2.363	2.342	2.374	2.330	2.340	2.366	2.375
12.17																
13.54	4.294	4.313	4.301	4.320	4.293	4.299	4.315	4.321	2.160	2.179	2.167	2.186	2.159	2.165	2.181	2.187
13.46																
12.30	4.146	4.187	4.161	4.202	4.142	4.154	4.193	4.205	2.285	2.326	2.301	2.342	2.282	2.294	2.333	2.345
12.06																
13.48	4.284	4.314	4.294	4.324	4.282	4.291	4.317	4.326	2.156	2.186	2.167	2.197	2.155	2.164	2.189	2.198
13.51																
12.83	4.460	4.530	4.491	4.561	4.448	4.469	4.552	4.573	2.640	2.710	2.672	2.741	2.628	2.649	2.733	2.754
12.96																
12.91	4.495	4.551	4.532	4.589	4.470	4.487	4.596	4.613	2.666	2.722	2.704	2.760	2.641	2.658	2.767	2.784
12.88																
9.56	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
19.47																
19.48	12.456	12.456	12.456	12.456	12.456	12.456	12.456	12.456	6.760	6.760	6.760	6.760	6.760	6.760	6.760	6.760
9.56																
7.36	2.547	2.595	2.572	2.620	2.535	2.549	2.618	2.633	1.444	1.492	1.469	1.518	1.432	1.446	1.516	1.530
7.47																
7.49	2.541	2.583	2.574	2.615	2.518	2.530	2.626	2.639	1.440	1.482	1.473	1.514	1.417	1.429	1.526	1.538
7.32																
17.08	0.182	0.227	0.183	0.228	0.196	0.210	0.200	0.213	0.085	0.131	0.086	0.132	0.100	0.114	0.103	0.117
1.51																
1.48	0.175	0.219	0.177	0.221	0.188	0.201	0.194	0.207	0.082	0.126	0.084	0.128	0.095	0.109	0.101	0.115
17.08																
1.62	0.524	0.559	0.540	0.575	0.518	0.529	0.571	0.581	0.387	0.422	0.403	0.438	0.381	0.391	0.434	0.444
1.68																
9.55	3.423	3.459	3.440	3.476	3.417	3.428	3.471	3.482	2.055	2.091	2.071	2.108	2.049	2.059	2.103	2.114
9.63																
1.70	0.520	0.558	0.542	0.580	0.508	0.519	0.581	0.592	0.382	0.421	0.404	0.443	0.370	0.382	0.443	0.455
1.62																
9.64	3.418	3.454	3.440	3.476	3.404	3.415	3.479	3.490	2.050	2.086	2.073	2.109	2.037	2.047	2.112	2.122
9.54																
1.63	0.499	0.568	0.533	0.602	0.483	0.504	0.597	0.618	0.361	0.431	0.395	0.465	0.345	0.366	0.460	0.481
1.67																
1.70	0.488	0.564	0.537	0.613	0.458	0.481	0.621	0.644	0.351	0.427	0.400	0.476	0.320	0.343	0.483	0.506
1.62																
1.24	0.086	0.109	0.086	0.109	0.093	0.100	0.095	0.102	0.049	0.067	0.048	0.067	0.051	0.058	0.053	0.060
0.35																
0.35	0.090	0.112	0.091	0.113	0.097	0.103	0.100	0.106	0.047	0.069	0.047	0.069	0.053	0.060	0.056	0.063
1.27																
15.77	2.317	2.479	2.328	2.490	2.361	2.410	2.397	2.446	1.348	1.499	1.347	1.510	1.381	1.429	1.416	1.465
2.19																

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

***Vu* = Vm + Vg**																	Vu_{max}	S	ΦVs	ΦVc	ΦVn	ΦVn > Vu_{max}
COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18		(kN)	(m)	(kN)	(kN)	(kN)	
12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180	12.180						
17.779	17.794	17.787	17.802	17.775	17.780	17.802	17.806	15.661	15.677	15.669	15.685	15.657	15.662	15.684	15.689		17.8	**0.06**	178.92	21.53	200.45	**OK**
13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476	13.476							
17.302	17.329	17.336	17.413	17.290	17.313	17.402	17.425	15.481	15.558	15.515	15.592	15.469	15.492	15.581	15.604		17.4	**0.06**	178.92	21.53	200.45	**OK**
12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948	12.948							
17.436	17.490	17.478	17.532	17.407	17.423	17.545	17.561	15.617	15.670	15.658	15.712	15.587	15.603	15.725	15.741		17.6	**0.06**	178.92	21.53	200.45	**OK**
12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816	12.816							
22.020	22.020	22.020	22.020	22.020	22.020	22.020	22.020	16.324	16.324	16.324	16.324	16.324	16.324	16.324	16.324		22.0	**0.06**	178.92	21.53	200.45	**OK**
19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324	19.324							
31.924	31.924	31.924	31.924	31.924	31.924	31.924	31.924	26.228	26.228	26.228	26.228	26.228	26.228	26.228	26.228		31.9	**0.06**	178.92	21.53	200.45	**OK**
9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564							
9.907	9.955	9.932	9.980	9.894	9.909	9.978	9.993	8.804	8.852	8.829	8.877	8.792	8.806	8.875	8.890		10.0	**0.06**	178.92	21.53	200.45	**OK**
7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468							
10.025	10.067	10.059	10.101	10.001	10.013	10.113	10.125	8.923	8.964	8.956	8.998	8.898	8.910	9.010	9.022		10.1	**0.06**	178.92	21.53	200.45	**OK**
7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348							
17.254	17.305	17.255	17.306	17.270	17.286	17.274	17.290	17.158	17.210	17.159	17.211	17.175	17.190	17.179	17.194		17.3	**0.06**	178.92	21.53	200.45	**OK**
1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512							
1.656	1.707	1.657	1.708	1.672	1.688	1.676	1.691	1.563	1.614	1.564	1.615	1.580	1.595	1.583	1.598		17.1	**0.06**	178.92	21.53	200.45	**OK**
17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076							
2.142	2.177	2.157	2.192	2.136	2.146	2.188	2.199	2.004	2.039	2.020	2.055	1.998	2.008	2.050	2.061		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
12.972	13.007	12.988	13.024	12.965	12.976	13.019	13.030	11.603	11.639	11.620	11.655	11.597	11.607	11.651	11.662		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628							
2.216	2.253	2.238	2.275	2.203	2.214	2.276	2.287	2.079	2.116	2.101	2.138	2.066	2.077	2.139	2.150		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604							
13.047	13.085	13.070	13.108	13.034	13.046	13.110	13.121	11.679	11.717	11.702	11.739	11.666	11.677	11.741	11.753		13.1	**0.06**	178.92	21.53	200.45	**OK**
9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548	9.548							
2.131	2.200	2.165	2.235	2.115	2.136	2.229	2.250	1.993	2.063	2.027	2.097	1.977	1.998	2.092	2.113		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668							
2.191	2.258	2.235	2.302	2.163	2.183	2.310	2.330	2.054	2.120	2.098	2.164	2.025	2.045	2.173	2.193		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616							
1.328	1.354	1.329	1.355	1.337	1.344	1.338	1.346	1.294	1.313	1.294	1.313	1.295	1.303	1.297	1.305		1.4	**0.06**	178.92	21.53	200.45	**OK**
0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352							
0.439	0.465	0.440	0.466	0.448	0.455	0.449	0.457	0.401	0.422	0.400	0.423	0.405	0.412	0.406	0.414		1.2	**0.06**	178.92	21.53	200.45	**OK**
1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244							
18.076	18.261	18.086	18.270	18.129	18.185	18.162	18.217	17.122	17.279	17.114	17.289	17.148	17.203	17.181	17.236		18.3	**0.06**	178.92	21.53	200.45	**OK**
2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228	2.228							
4.883	5.072	4.890	5.079	4.941	4.997	4.964	5.021	3.910	4.085	3.904	4.092	3.954	4.010	3.977	4.034		15.8	**0.06**	178.92	21.53	200.45	**OK**
15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768							
16.436	16.468	16.447	16.478	16.435	16.444	16.470	16.480	14.552	14.583	14.562	14.594	14.550	14.560	14.586	14.595		16.5	**0.06**	178.92	21.53	200.45	**OK**
12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172	12.172							
17.838	17.857	17.845	17.864	17.837	17.843	17.859	17.865	15.704	15.723	15.711	15.730	15.703	15.709	15.725	15.731		17.9	**0.06**	178.92	21.53	200.45	**OK**
13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456	13.456							
16.446	16.487	16.461	16.502	16.442	16.454	16.493	16.505	14.585	14.626	14.601	14.642	14.582	14.594	14.633	14.645		16.5	**0.06**	178.92	21.53	200.45	**OK**
12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064	12.064							
17.760	17.790	17.770	17.800	17.758	17.767	17.793	17.802	15.632	15.662	15.643	15.673	15.631	15.640	15.665	15.674		17.8	**0.06**	178.92	21.53	200.45	**OK**
13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512	13.512							
17.288	17.358	17.319	17.389	17.276	17.297	17.380	17.401	15.468	15.538	15.500	15.569	15.456	15.477	15.561	15.582		17.4	**0.06**	178.92	21.53	200.45	**OK**
12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960	12.960							
17.407	17.463	17.444	17.501	17.382	17.399	17.508	17.525	15.578	15.634	15.616	15.672	15.553	15.570	15.679	15.696		17.5	**0.06**	178.92	21.53	200.45	**OK**
12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876	12.876							
22.020	22.020	22.020	22.020	22.020	22.020	22.020	22.020	16.324	16.324	16.324	16.324	16.324	16.324	16.324	16.324		22.0	**0.06**	178.92	21.53	200.45	**OK**
19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468	19.468							
31.940	31.940	31.940	31.940	31.940	31.940	31.940	31.940	26.244	26.244	26.244	26.244	26.244	26.244	26.244	26.244		31.9	**0.06**	178.92	21.53	200.45	**OK**
9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564	9.564							
9.907	9.955	9.932	9.980	9.895	9.909	9.978	9.993	8.804	8.852	8.829	8.878	8.792	8.806	8.876	8.890		10.0	**0.06**	178.92	21.53	200.45	**OK**
7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468	7.468							
10.033	10.075	10.066	10.107	10.010	10.022	10.118	10.131	8.932	8.974	8.965	9.006	8.909	8.921	9.018	9.030		10.1	**0.06**	178.92	21.53	200.45	**OK**
7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320	7.320							
17.258	17.303	17.259	17.304	17.272	17.286	17.276	17.289	17.161	17.207	17.162	17.208	17.176	17.190	17.179	17.193		17.3	**0.06**	178.92	21.53	200.45	**OK**
1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512							
1.659	1.703	1.661	1.705	1.672	1.685	1.678	1.691	1.566	1.610	1.568	1.612	1.579	1.593	1.585	1.599		17.1	**0.06**	178.92	21.53	200.45	**OK**
17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076	17.076							
2.140	2.175	2.156	2.191	2.134	2.145	2.187	2.197	2.003	2.038	2.019	2.054	1.997	2.007	2.050	2.060		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
12.971	13.007	12.988	13.024	12.965	12.976	13.019	13.030	11.603	11.639	11.619	11.656	11.597	11.607	11.651	11.662		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628							
2.216	2.254	2.238	2.276	2.204	2.215	2.277	2.288	2.078	2.117	2.100	2.139	2.066	2.078	2.139	2.151		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616							
13.058	13.094	13.080	13.116	13.044	13.055	13.119	13.130	11.690	11.726	11.713	11.749	11.677	11.687	11.752	11.762		13.1	**0.06**	178.92	21.53	200.45	**OK**
9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536							
2.131	2.200	2.165	2.234	2.115	2.136	2.229	2.250	1.993	2.063	2.027	2.097	1.977	1.998	2.092	2.113		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668	1.668							
2.184	2.260	2.233	2.309	2.154	2.177	2.317	2.340	2.047	2.123	2.096	2.172	2.016	2.039	2.179	2.202		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.616							
1.330	1.353	1.330	1.353	1.337	1.344	1.339	1.346	1.293	1.311	1.292	1.311	1.295	1.302	1.297	1.304		1.4	**0.06**	178.92	21.53	200.45	**OK**
0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352							
0.442	0.464	0.443	0.465	0.449	0.455	0.452	0.458	0.399	0.421	0.399	0.421	0.405	0.412	0.408	0.415		1.3	**0.06**	178.92	21.53	200.45	**OK**
1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272	1.272							
18.085	18.247	18.096	18.258	18.129	18.178	18.165	18.214	17.116	17.267	17.115	17.278	17.149	17.197	17.184	17.233		18.3	**0.06**	178.92	21.53	200.45	**OK**
2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188	2.188							

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

COMDIS3 = 1.2C.M.+1.0C.V.+1.0Ex+0.3Ey
COMDIS4 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3Ey
COMDIS5 = 1.2C.M.+1.0C.V.+1.0Ex+0.3(-Ey)
COMDIS6 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3(-Ey)
COMDIS7 = 1.2C.M.+1.0C.V.+0.3Ex+1.0Ey
COMDIS8 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0Ey
COMDIS9 = 1.2C.M.+1.0C.V.+0.3Ex+1.0(-Ey)
COMDIS10 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0(-Ey)
COMDIS11 = 0.9C.M.+1.0Ex+0.3Ey
COMDIS12 = 0.9C.M.+1.0(-Ex)+0.3Ey
COMDIS13 = 0.9C.M.+1.0Ex+0.3(-Ey)
COMDIS14 = 0.9C.M.+1.0(-Ex)+0.3(-Ey)
COMDIS15 = 0.9C.M.+0.3Ex+1.0Ey
COMDIS16 = 0.9C.M.+0.3(-Ex)+1.0Ey
COMDIS17 = 0.9C.M.+0.3Ex+1.0(-Ey)
COMDIS18 = 0.9C.M.+0.3(-Ex)+1.0(-Ey)

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			M3						Mn (kN.m)															
													Combinaciones para resistencias nominales a momento															
	ELEMENTO No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
N+2.70	B151	0.000	3.000	VIG15X30	0.15	0.25	-0.241	-0.046	0.847	0.171	-0.847	-0.171	0.111	0.534	0.136	0.560	0.229	0.356	0.314	0.441	0.008	0.416	0.018	0.441	0.111	0.238	0.196	0.323
	B151	3.000					-4.516	-1.484	0.155	0.023	-0.155	-0.023	6.863	6.940	6.866	6.944	6.886	6.909	6.897	6.921	4.024	4.101	4.027	4.105	4.047	4.070	4.059	4.082
N+5.45	B152	0.000	2.550	VIG15X30	0.15	0.25	-2.988	-1.338	0.124	0.105	-0.124	-0.105	4.885	4.947	4.900	4.962	4.888	4.907	4.941	4.959	2.650	2.712	2.666	2.728	2.654	2.672	2.706	2.725
	B152	2.550					-3.415	-1.421	0.097	0.086	-0.097	-0.086	5.488	5.537	5.501	5.550	5.490	5.505	5.533	5.548	3.043	3.091	3.056	3.104	3.045	3.059	3.088	3.102
N+2.70	B152	0.000	2.550	VIG15X30	0.15	0.25	-2.868	-1.561	0.089	0.073	-0.089	-0.073	4.975	5.019	4.986	5.030	4.978	4.991	5.014	5.028	2.553	2.598	2.564	2.609	2.556	2.570	2.593	2.606
	B152	2.550					-3.137	-1.852	0.063	0.054	-0.063	-0.054	5.597	5.628	5.605	5.636	5.598	5.608	5.625	5.635	2.804	2.835	2.812	2.843	2.805	2.815	2.832	2.842
N+5.45	B153	0.000	2.550	VIG15X30	0.15	0.25	-3.206	-1.362	0.025	0.047	-0.025	-0.047	5.199	5.212	5.206	5.219	5.196	5.199	5.219	5.223	2.876	2.888	2.883	2.895	2.872	2.876	2.895	2.899
	B153	2.550					-3.708	-1.544	0.172	0.035	-0.172	-0.035	5.948	6.034	5.953	6.039	5.972	5.998	5.989	6.015	3.292	3.378	3.297	3.383	3.316	3.341	3.333	3.359
N+2.70	B153	0.000	2.550	VIG15X30	0.15	0.25	-3.117	-1.802	0.040	0.020	-0.040	-0.020	5.531	5.551	5.534	5.554	5.534	5.540	5.544	5.550	2.794	2.814	2.797	2.817	2.797	2.803	2.807	2.813
	B153	2.550					-2.895	-1.737	0.214	0.063	-0.214	-0.063	5.153	5.260	5.162	5.269	5.179	5.211	5.211	5.243	2.547	2.654	2.557	2.664	2.574	2.606	2.605	2.637
N+2.70	B154	0.000	2.550	VIG15X30	0.15	0.25	-3.943	-1.187	0.174	0.241	-0.174	-0.241	5.857	5.944	5.893	5.980	5.845	5.871	5.966	5.992	3.487	3.574	3.523	3.610	3.475	3.502	3.596	3.622
	B154	2.550					-3.788	-1.174	0.173	0.240	-0.173	-0.240	5.658	5.745	5.694	5.781	5.647	5.673	5.767	5.793	3.348	3.434	3.384	3.470	3.336	3.362	3.456	3.482
N+2.70	B155	0.000	2.550	VIG15X30	0.15	0.25	-4.062	-1.201	0.119	0.244	-0.119	-0.244	6.027	6.087	6.064	6.123	6.005	6.023	6.127	6.145	3.608	3.667	3.644	3.704	3.586	3.604	3.708	3.726
	B155	2.550					-3.214	-1.132	0.109	0.304	-0.109	-0.304	4.939	4.993	4.984	5.039	4.905	4.921	5.057	5.073	2.843	2.897	2.888	2.943	2.808	2.825	2.960	2.977
N+5.45	B156	0.000	1.500	VIG15X30	0.15	0.25	-0.193	-0.013	0.035	0.005	-0.035	-0.005	0.235	0.253	0.236	0.254	0.241	0.246	0.243	0.248	0.165	0.182	0.165	0.183	0.170	0.175	0.172	0.178
	B156	1.500					-11.139	-4.342	0.075	0.031	-0.075	-0.031	17.688	17.725	17.692	17.730	17.695	17.707	17.711	17.722	10.004	10.042	10.009	10.046	10.012	10.023	10.027	10.038
N+5.45	B157	0.000	1.500	VIG15X30	0.15	0.25	-15.304	-5.833	0.189	0.016	-0.189	-0.016	24.149	24.244	24.152	24.246	24.180	24.208	24.188	24.216	13.725	13.820	13.728	13.822	13.755	13.784	13.763	13.792
	B157	1.500					-0.235	-0.021	0.027	0.004	-0.027	-0.004	0.296	0.309	0.297	0.310	0.300	0.304	0.302	0.306	0.204	0.218	0.205	0.219	0.208	0.213	0.210	0.215
N+5.45	B158	0.000	2.550	VIG15X30	0.15	0.25	-2.050	-0.766	0.125	0.218	-0.125	-0.218	3.178	3.241	3.211	3.274	3.162	3.181	3.271	3.290	1.797	1.860	1.830	1.893	1.781	1.800	1.890	1.909
	B158	2.550					-2.130	-0.788	0.117	0.195	-0.117	-0.195	3.300	3.359	3.329	3.388	3.286	3.304	3.384	3.402	1.873	1.932	1.902	1.961	1.859	1.877	1.957	1.975
N+5.45	B159	0.000	2.550	VIG15X30	0.15	0.25	-1.991	-0.732	0.078	0.147	-0.078	-0.147	3.091	3.130	3.113	3.152	3.079	3.090	3.152	3.164	1.761	1.800	1.783	1.822	1.749	1.761	1.823	1.835
	B159	2.550					-2.392	-0.902	0.057	0.156	-0.057	-0.156	3.746	3.775	3.770	3.798	3.729	3.738	3.807	3.816	2.127	2.155	2.150	2.179	2.110	2.118	2.188	2.196
N+2.70	B160	0.000	1.800	VIG15X30	0.15	0.25	-0.435	-0.231	0.035	0.003	-0.035	-0.003	0.744	0.762	0.744	0.762	0.750	0.755	0.751	0.756	0.383	0.400	0.383	0.400	0.388	0.393	0.390	0.395
	B160	1.800					-0.214	-0.097	0.138	0.009	-0.138	-0.009	0.319	0.388	0.320	0.389	0.341	0.362	0.346	0.366	0.157	0.226	0.159	0.228	0.180	0.201	0.185	0.205
N+2.70	B161	0.000	1.800	VIG15X30	0.15	0.25	-0.129	-0.088	0.131	0.058	-0.131	-0.058	0.206	0.271	0.214	0.280	0.218	0.238	0.247	0.267	0.079	0.145	0.088	0.153	0.092	0.111	0.121	0.140
	B161	1.800					-0.376	-0.203	0.025	0.003	-0.025	-0.003	0.648	0.660	0.648	0.661	0.652	0.655	0.653	0.657	0.332	0.344	0.332	0.345	0.336	0.340	0.337	0.341
N+5.45	B162	0.000	2.550	VIG15X30	0.15	0.25	-0.568	0.007	0.103	0.148	-0.103	-0.148	0.638	0.689	0.660	0.711	0.630	0.645	0.704	0.719	0.474	0.526	0.497	0.548	0.466	0.482	0.540	0.556
	B162	2.550					-0.600	-0.007	0.083	0.120	-0.083	-0.120	0.697	0.739	0.715	0.757	0.691	0.703	0.751	0.763	0.510	0.552	0.528	0.570	0.504	0.516	0.564	0.576
N+2.70	B162	0.000	2.550	VIG15X30	0.15	0.25	-2.924	-0.849	0.095	0.150	-0.095	-0.150	4.323	4.370	4.345	4.393	4.313	4.327	4.388	4.402	2.597	2.644	2.619	2.667	2.587	2.601	2.662	2.676
	B162	2.550					-2.968	-0.869	0.083	0.128	-0.083	-0.128	4.400	4.442	4.419	4.461	4.392	4.405	4.456	4.469	2.641	2.682	2.660	2.702	2.633	2.645	2.697	2.709
N+5.45	B163	0.000	2.550	VIG15X30	0.15	0.25	-0.606	-0.011	0.034	0.068	-0.034	-0.068	0.725	0.742	0.735	0.752	0.719	0.724	0.753	0.758	0.532	0.549	0.542	0.559	0.526	0.531	0.560	0.565
	B163	2.550					-0.588	0.001	0.043	0.092	-0.043	-0.092	0.687	0.708	0.701	0.722	0.678	0.685	0.724	0.731	0.512	0.533	0.525	0.547	0.503	0.509	0.549	0.555
N+2.70	B163	0.000	2.550	VIG15X30	0.15	0.25	-2.969	-0.871	0.047	0.089	-0.047	-0.089	4.415	4.439	4.429	4.452	4.408	4.415	4.453	4.460	2.654	2.677	2.667	2.691	2.646	2.653	2.691	2.698
	B163	2.550					-2.901	-0.840	0.057	0.116	-0.057	-0.116	4.298	4.327	4.316	4.344	4.288	4.296	4.346	4.354	2.588	2.616	2.605	2.634	2.578	2.586	2.636	2.644
N+2.70	B164	0.000	2.550	VIG15X30	0.15	0.25	-0.571	0.007	0.208	0.348	-0.208	-0.348	0.600	0.704	0.652	0.756	0.576	0.607	0.750	0.781	0.436	0.540	0.488	0.592	0.411	0.443	0.585	0.617
	B164	2.550					-0.601	-0.006	0.184	0.304	-0.184	-0.304	0.658	0.750	0.704	0.796	0.637	0.665	0.789	0.817	0.472	0.564	0.518	0.610	0.451	0.479	0.603	0.631
N+2.70	B165	0.000	2.550	VIG15X30	0.15	0.25	-0.613	-0.006	0.109	0.245	-0.109	-0.245	0.696	0.750	0.733	0.787	0.672	0.689	0.795	0.811	0.506	0.561	0.543	0.597	0.482	0.499	0.605	0.621
	B165	2.550					-0.533	0.008	0.120	0.259	-0.120	-0.259	0.582	0.642	0.621	0.681	0.558	0.576	0.687	0.705	0.430	0.490	0.469	0.529	0.406	0.424	0.535	0.553
N+5.45	B166	0.000	3.000	VIG15X30	0.15	0.25	-0.156	-0.056	0.003	0.001	-0.003	-0.001	0.242	0.244	0.243	0.244	0.243	0.243	0.243	0.244	0.140	0.141	0.140	0.141	0.140	0.140	0.140	0.141
	B166	3.000					-0.030	-0.006	0.114	0.008	-0.114	-0.008	0.013	0.070	0.014	0.071	0.031	0.049	0.035	0.053	0.002	0.055	0.001	0.056	0.016	0.034	0.020	0.038
N+5.45	B167	0.000	3.000	VIG15X30	0.15	0.25	-0.071	-0.028	0.090	0.047	-0.090	-0.047	0.087	0.132	0.094	0.139	0.095	0.108	0.118	0.132	0.038	0.083	0.045	0.090	0.045	0.059	0.069	0.082

YECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

V_a	$V_m = M_{ni} + M_{nr} / l_n$															
	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
(kN)	(kN)															
2.52	2.324	2.491	2.334	2.501	2.372	2.422	2.404	2.454	1.344	1.506	1.348	1.515	1.386	1.436	1.418	1.468
15.77																
11.94	4.068	4.111	4.079	4.122	4.070	4.083	4.107	4.120	2.233	2.276	2.244	2.287	2.235	2.248	2.272	2.285
12.45																
13.19	4.146	4.175	4.153	4.183	4.147	4.156	4.172	4.181	2.101	2.131	2.108	2.138	2.102	2.111	2.127	2.136
13.80																
11.84	4.372	4.410	4.376	4.415	4.379	4.391	4.396	4.407	2.419	2.457	2.423	2.462	2.426	2.438	2.442	2.454
12.55																
13.64	4.190	4.239	4.195	4.244	4.201	4.216	4.218	4.233	2.095	2.144	2.099	2.149	2.106	2.121	2.123	2.137
13.34																
12.98	4.516	4.584	4.544	4.612	4.507	4.527	4.601	4.621	2.680	2.748	2.709	2.777	2.671	2.692	2.766	2.786
12.81																
13.34	4.300	4.345	4.333	4.377	4.278	4.292	4.386	4.399	2.530	2.574	2.562	2.606	2.508	2.521	2.615	2.628
12.45																
8.42	11.949	11.985	11.952	11.989	11.957	11.968	11.969	11.980	6.779	6.816	6.783	6.819	6.788	6.799	6.800	6.811
18.34																
24.25	16.297	16.369	16.299	16.371	16.320	16.341	16.326	16.348	9.286	9.358	9.288	9.360	9.309	9.331	9.316	9.338
12.98																
7.35	2.541	2.588	2.565	2.612	2.529	2.543	2.610	2.624	1.439	1.487	1.464	1.511	1.428	1.442	1.509	1.523
7.46																
7.12	2.681	2.708	2.699	2.726	2.670	2.678	2.729	2.737	1.525	1.551	1.543	1.569	1.513	1.521	1.573	1.581
7.70																
15.11	0.590	0.638	0.591	0.639	0.606	0.620	0.609	0.624	0.300	0.348	0.301	0.349	0.316	0.330	0.319	0.333
1.48																
0.34	0.474	0.517	0.479	0.523	0.483	0.496	0.500	0.513	0.228	0.272	0.233	0.277	0.238	0.251	0.254	0.267
20.92																
1.62	0.524	0.560	0.539	0.576	0.518	0.529	0.570	0.581	0.386	0.423	0.402	0.438	0.380	0.391	0.433	0.444
1.68																
9.55	3.421	3.456	3.437	3.472	3.414	3.424	3.468	3.479	2.054	2.089	2.070	2.105	2.047	2.058	2.102	2.112
9.63																
1.66	0.554	0.569	0.563	0.578	0.548	0.552	0.579	0.584	0.409	0.424	0.419	0.434	0.403	0.408	0.435	0.439
1.64																
9.64	3.417	3.438	3.429	3.450	3.410	3.416	3.450	3.456	2.056	2.076	2.068	2.088	2.049	2.055	2.089	2.095
9.54																
1.63	0.494	0.570	0.532	0.609	0.476	0.499	0.604	0.627	0.356	0.433	0.394	0.471	0.338	0.361	0.466	0.489
1.68																
1.71	0.501	0.546	0.531	0.576	0.482	0.496	0.581	0.595	0.367	0.412	0.397	0.442	0.348	0.362	0.447	0.461
1.60																
1.26	0.085	0.105	0.086	0.105	0.091	0.097	0.093	0.099	0.047	0.065	0.047	0.066	0.052	0.058	0.054	0.059
0.35																
0.63	0.084	0.100	0.087	0.103	0.087	0.092	0.095	0.100	0.044	0.060	0.047	0.062	0.047	0.051	0.055	0.060

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

***Vu* = Vm + Vg**																	Vu_{max}	S	ΦVs	ΦVc	ΦVn	ΦVn > Vu_{max}
COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18						
(kN)																	(kN)	(m)	(kN)	(kN)	(kN)	
4.840	5.007	4.850	5.017	4.888	4.938	4.920	4.970	3.860	4.022	3.864	4.031	3.902	3.952	3.934	3.984		15.8	**0.06**	178.92	21.53	200.45	**OK**
15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768	15.768							
16.012	16.055	16.023	16.066	16.014	16.027	16.051	16.064	14.177	14.220	14.188	14.231	14.179	14.192	14.216	14.229		16.1	**0.06**	178.92	21.53	200.45	**OK**
12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448	12.448							
17.338	17.367	17.345	17.375	17.339	17.348	17.364	17.373	15.293	15.323	15.300	15.330	15.294	15.301	15.319	15.328		17.4	**0.06**	178.92	21.53	200.45	**OK**
13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796	13.796							
16.216	16.254	16.220	16.259	16.223	16.235	16.240	16.251	14.263	14.301	14.267	14.306	14.270	14.282	14.286	14.298		16.3	**0.06**	178.92	21.53	200.45	**OK**
12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548	12.548							
17.834	17.883	17.839	17.888	17.845	17.860	17.862	17.877	15.739	15.788	15.743	15.793	15.750	15.765	15.767	15.781		17.9	**0.06**	178.92	21.53	200.45	**OK**
13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344	13.344							
17.496	17.564	17.524	17.592	17.487	17.507	17.581	17.601	15.660	15.728	15.689	15.757	15.651	15.672	15.746	15.766		17.6	**0.06**	178.92	21.53	200.45	**OK**
12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808	12.808							
17.636	17.681	17.669	17.713	17.614	17.628	17.722	17.735	15.866	15.910	15.898	15.942	15.844	15.857	15.951	15.964		17.7	**0.06**	178.92	21.53	200.45	**OK**
12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452	12.452							
20.365	20.401	20.368	20.405	20.373	20.384	20.385	20.396	15.195	15.232	15.199	15.235	15.204	15.215	15.216	15.227		20.4	**0.06**	178.92	21.53	200.45	**OK**
18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336	18.336							
40.545	40.617	40.547	40.619	40.568	40.589	40.574	40.596	33.534	33.606	33.536	33.608	33.557	33.579	33.564	33.586		40.6	**0.06**	178.92	21.53	200.45	**OK**
12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980	12.980							
9.889	9.936	9.913	9.960	9.877	9.891	9.958	9.972	8.787	8.835	8.812	8.859	8.776	8.790	8.857	8.871		10.0	**0.06**	178.92	21.53	200.45	**OK**
7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464	7.464							
9.805	9.832	9.823	9.850	9.794	9.802	9.853	9.861	8.649	8.675	8.667	8.693	8.637	8.645	8.697	8.705		9.9	**0.06**	178.92	21.53	200.45	**OK**
7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704	7.704							
15.702	15.750	15.703	15.751	15.718	15.732	15.721	15.736	15.412	15.460	15.413	15.461	15.428	15.442	15.431	15.445		15.8	**0.06**	178.92	21.53	200.45	**OK**
1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484	1.484							
0.814	0.857	0.819	0.863	0.823	0.836	0.840	0.853	0.568	0.612	0.573	0.617	0.578	0.591	0.594	0.607		20.9	**0.06**	178.92	21.53	200.45	**OK**
20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920	20.920							
2.140	2.176	2.155	2.192	2.134	2.145	2.186	2.197	2.002	2.039	2.018	2.054	1.996	2.007	2.049	2.060		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
12.969	13.004	12.985	13.020	12.962	12.972	13.016	13.027	11.602	11.637	11.618	11.653	11.595	11.606	11.650	11.660		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628	9.628							
2.210	2.225	2.219	2.234	2.204	2.208	2.235	2.240	2.065	2.080	2.075	2.090	2.059	2.064	2.091	2.095		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644	1.644							
13.057	13.078	13.069	13.090	13.050	13.056	13.090	13.096	11.696	11.716	11.708	11.728	11.689	11.695	11.729	11.735		13.1	**0.06**	178.92	21.53	200.45	**OK**
9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536	9.536							
2.122	2.198	2.160	2.237	2.104	2.127	2.232	2.255	1.984	2.061	2.022	2.099	1.966	1.989	2.094	2.117		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
2.209	2.254	2.239	2.284	2.190	2.204	2.289	2.303	2.075	2.120	2.105	2.150	2.056	2.070	2.155	2.169		2.3	**0.06**	178.92	21.53	200.45	**OK**
1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604							
1.341	1.361	1.342	1.361	1.347	1.353	1.349	1.355	1.303	1.321	1.303	1.322	1.308	1.314	1.310	1.315		1.4	**0.06**	178.92	21.53	200.45	**OK**
0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352							
0.716	0.732	0.719	0.735	0.719	0.724	0.727	0.732	0.676	0.692	0.679	0.694	0.679	0.683	0.687	0.692		0.7	**0.06**	178.92	21.53	200.45	**OK**

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

COMDIS3 = 1.2C.M.+1.0C.V.+1.0Ex+0.3Ey
COMDIS4 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3Ey
COMDIS5 = 1.2C.M.+1.0C.V.+1.0Ex+0.3(-Ey)
COMDIS6 = 1.2C.M.+1.0C.V.+1.0(-Ex)+0.3(-Ey)
COMDIS7 = 1.2C.M.+1.0C.V.+0.3Ex+1.0Ey
COMDIS8 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0Ey
COMDIS9 = 1.2C.M.+1.0C.V.+0.3Ex+1.0(-Ey)
COMDIS10 = 1.2C.M.+1.0C.V.+0.3(-Ex)+1.0(-Ey)
COMDIS11 = 0.9C.M.+1.0Ex+0.3Ey
COMDIS12 = 0.9C.M.+1.0(-Ex)+0.3Ey
COMDIS13 = 0.9C.M.+1.0Ex+0.3(-Ey)
COMDIS14 = 0.9C.M.+1.0(-Ex)+0.3(-Ey)
COMDIS15 = 0.9C.M.+0.3Ex+1.0Ey
COMDIS16 = 0.9C.M.+0.3(-Ex)+1.0Ey
COMDIS17 = 0.9C.M.+0.3Ex+1.0(-Ey)
COMDIS18 = 0.9C.M.+0.3(-Ex)+1.0(-Ey)

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			M3						Mn (kN.m)															
	ELEMENTO												Combinaciones para resistencias nominales a momento															
	No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
	B167	3.000					-0.106	-0.040	0.004	0.003	-0.004	-0.003	0.166	0.168	0.166	0.168	0.166	0.167	0.168	0.168	0.094	0.096	0.095	0.097	0.094	0.095	0.096	0.096
N+2.70	B169	0.000	2.550	VIG15X30	0.15	0.25	-4.531	-3.039	0.224	0.043	-0.224	-0.043	8.417	8.529	8.423	8.535	8.449	8.482	8.470	8.504	4.019	4.131	4.025	4.137	4.050	4.084	4.072	4.105
	B169	2.550					-0.495	-0.307	0.018	0.004	-0.018	-0.004	0.896	0.905	0.897	0.906	0.899	0.901	0.901	0.903	0.441	0.450	0.441	0.450	0.443	0.446	0.445	0.448
N+2.70	B170	0.000	3.000	VIG15X30	0.15	0.25	-4.520	-1.480	0.135	0.008	-0.135	-0.008	6.870	6.937	6.871	6.938	6.892	6.912	6.896	6.916	4.034	4.101	4.035	4.102	4.056	4.076	4.060	4.080
	B170	3.000					-0.207	-0.028	0.708	0.232	-0.708	-0.232	0.082	0.436	0.117	0.471	0.165	0.272	0.281	0.388	0.008	0.346	0.027	0.381	0.075	0.181	0.191	0.297
N+2.70	B171	0.000	3.000	VIG15X30	0.15	0.25	-0.149	-0.023	0.484	0.036	-0.484	-0.036	0.078	0.320	0.084	0.326	0.157	0.229	0.175	0.247	0.010	0.252	0.016	0.258	0.089	0.161	0.107	0.179
	B171	3.000					-2.538	-0.768	0.137	0.072	-0.137	-0.072	3.774	3.842	3.785	3.853	3.785	3.806	3.821	3.842	2.245	2.313	2.255	2.324	2.256	2.276	2.292	2.312
N+2.70	B173	0.000	2.950	VIG15X30	0.15	0.25	-1.187	-0.782	0.071	0.012	-0.071	-0.012	2.188	2.223	2.190	2.225	2.198	2.209	2.204	2.215	1.050	1.085	1.051	1.087	1.060	1.071	1.066	1.077
	B173	2.950					-3.263	-2.235	0.198	0.053	-0.198	-0.053	6.097	6.196	6.105	6.204	6.123	6.152	6.149	6.179	2.883	2.982	2.891	2.990	2.909	2.938	2.935	2.965
N+5.45	B174	0.000	2.550	VIG15X30	0.15	0.25	-5.421	-1.813	0.165	0.091	-0.165	-0.091	8.270	8.353	8.284	8.366	8.283	8.308	8.329	8.353	4.831	4.913	4.844	4.927	4.844	4.869	4.889	4.914
	B174	2.550					-2.613	-1.266	0.034	0.060	-0.034	-0.060	4.389	4.406	4.398	4.415	4.384	4.389	4.414	4.419	2.339	2.356	2.348	2.365	2.334	2.339	2.364	2.369
N+2.70	B174	0.000	2.550	VIG25X30	0.25	0.25	-6.745	-3.920	0.290	0.067	-0.290	-0.067	11.936	12.081	11.947	12.092	11.976	12.019	12.009	12.053	5.993	6.138	6.003	6.148	6.032	6.076	6.066	6.109
	B174	2.550					-2.203	-1.112	0.053	0.033	-0.053	-0.033	3.740	3.766	3.745	3.771	3.743	3.751	3.760	3.768	1.967	1.993	1.972	1.998	1.970	1.978	1.987	1.995
N+5.45	B175	0.000	1.000	VIG15X30	0.15	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B175	1.000					-3.124	-1.328	0.000	0.000	0.000	0.000	5.077	5.077	5.077	5.077	5.077	5.077	5.077	5.077	2.812	2.812	2.812	2.812	2.812	2.812	2.812	2.812
N+2.70	B176	0.000	2.550	VIG15X30	0.15	0.25	-2.598	-0.892	0.221	0.257	-0.221	-0.257	3.935	4.046	3.974	4.084	3.929	3.962	4.057	4.090	2.264	2.374	2.302	2.413	2.257	2.291	2.386	2.419
	B176	2.550					-4.318	-1.317	0.178	0.210	-0.178	-0.210	6.438	6.527	6.470	6.559	6.433	6.459	6.538	6.564	3.826	3.915	3.857	3.946	3.820	3.847	3.925	3.952
N+5.45	B177	0.000	2.950	VIG15X30	0.15	0.25	-4.668	-2.172	0.652	0.342	-0.652	-0.342	7.585	7.911	7.636	7.962	7.639	7.737	7.810	7.908	4.013	4.339	4.064	4.390	4.067	4.165	4.238	4.336
	B177	2.950					-5.163	-1.944	0.704	0.299	-0.704	-0.299	7.941	8.293	7.986	8.338	8.012	8.118	8.162	8.267	4.448	4.800	4.493	4.845	4.519	4.625	4.669	4.774
N+2.70	B178	0.000	2.951	VIG25X30	0.25	0.25	-4.616	-2.378	0.889	0.561	-0.889	-0.561	7.653	8.097	7.737	8.182	7.710	7.844	7.991	8.124	3.890	4.335	3.974	4.419	3.947	4.081	4.228	4.361
	B178	2.951					-4.301	-2.906	1.019	0.681	-1.019	-0.681	7.761	8.271	7.864	8.373	7.821	7.973	8.161	8.314	3.565	4.075	3.667	4.177	3.624	3.777	3.965	4.118
N+5.45	B180	0.000	1.500	VIG25X30	0.25	0.25	0.538	0.130	0.007	0.009	-0.007	-0.009	0.778	0.775	0.777	0.773	0.778	0.777	0.774	0.773	0.487	0.483	0.485	0.482	0.487	0.486	0.482	0.481
	B180	1.500					-22.196	-7.188	0.444	0.103	-0.444	-0.103	33.704	33.926	33.720	33.942	33.764	33.831	33.816	33.882	19.858	20.080	19.873	20.095	19.917	19.984	19.969	20.035
N+5.45	B181	0.000	2.550	VIG15X30	0.15	0.25	-2.250	-0.782	0.071	0.116	-0.071	-0.116	3.456	3.491	3.473	3.508	3.448	3.458	3.506	3.516	1.999	2.034	2.016	2.051	1.991	2.001	2.049	2.059
	B181	2.550					-2.051	-0.781	0.091	0.108	-0.091	-0.108	3.211	3.257	3.228	3.273	3.208	3.222	3.262	3.276	1.815	1.861	1.831	1.877	1.812	1.826	1.866	1.880
N+2.70	B182	0.000	1.800	VIG15X30	0.15	0.25	0.660	0.386	0.007	0.012	-0.007	-0.012	1.181	1.177	1.179	1.175	1.182	1.180	1.176	1.174	0.597	0.593	0.595	0.591	0.598	0.596	0.592	0.590
	B182	1.800					-0.240	-0.130	0.107	0.030	-0.107	-0.030	0.389	0.443	0.394	0.447	0.402	0.419	0.417	0.434	0.187	0.241	0.192	0.245	0.200	0.217	0.215	0.232
N+5.45	B183	0.000	2.550	VIG15X30	0.15	0.25	-0.562	0.010	0.049	0.068	-0.049	-0.068	0.647	0.672	0.657	0.682	0.644	0.651	0.678	0.685	0.488	0.513	0.499	0.523	0.485	0.492	0.519	0.526
	B183	2.550					-0.599	-0.008	0.037	0.046	-0.037	-0.046	0.714	0.733	0.721	0.740	0.713	0.718	0.736	0.741	0.526	0.545	0.533	0.552	0.525	0.530	0.548	0.553
N+2.70	B183	0.000	2.550	VIG15X30	0.15	0.25	-2.924	-0.849	0.055	0.077	-0.055	-0.077	4.338	4.366	4.350	4.377	4.334	4.343	4.373	4.381	2.612	2.640	2.624	2.651	2.608	2.616	2.647	2.655
	B183	2.550					-2.958	-0.865	0.047	0.058	-0.047	-0.058	4.399	4.422	4.407	4.431	4.397	4.404	4.426	4.433	2.646	2.670	2.655	2.678	2.644	2.651	2.673	2.680
N+5.45	B184	0.000	2.950	VIG25X30	0.25	0.25	-5.901	-2.202	0.708	0.890	-0.708	-0.890	9.039	9.393	9.173	9.527	9.008	9.114	9.453	9.559	5.067	5.421	5.201	5.555	5.035	5.142	5.480	5.587
	B184	2.950					-2.730	-1.010	0.551	0.752	-0.551	-0.752	4.092	4.367	4.205	4.480	4.057	4.139	4.433	4.515	2.263	2.538	2.376	2.651	2.228	2.310	2.604	2.686
N+1.375	B184	0.000	2.950	VIG25X30	0.25	0.25	-1.051	-0.029	0.574	1.374	-0.574	-1.374	1.044	1.331	1.250	1.537	0.904	0.990	1.591	1.677	0.699	0.986	0.905	1.192	0.559	0.645	1.246	1.332
	B184	2.950					-1.111	0.052	0.619	1.481	-0.619	-1.481	1.015	1.325	1.238	1.547	0.865	0.957	1.605	1.698	0.734	1.044	0.956	1.266	0.583	0.676	1.324	1.417
N+2.70	B185	0.000	2.550	VIG15X30	0.15	0.25	-0.540	0.005	0.142	0.185	-0.142	-0.185	0.594	0.665	0.621	0.692	0.586	0.607	0.679	0.700	0.437	0.508	0.464	0.535	0.429	0.450	0.522	0.543
	B185	2.550					-0.607	-0.003	0.129	0.180	-0.129	-0.180	0.686	0.750	0.713	0.777	0.677	0.696	0.767	0.786	0.501	0.565	0.528	0.592	0.492	0.511	0.582	0.601
N+5.45	B186	0.000	1.777	VIG25X30	0.25	0.25	-21.515	-7.314	0.047	0.054	-0.047	-0.054	33.116	33.140	33.124	33.148	33.115	33.122	33.142	33.149	19.348	19.371	19.356	19.379	19.346	19.354	19.373	19.381
	B186	1.777					1.133	0.315	0.031	0.005	-0.031	-0.005	1.683	1.667	1.682	1.666	1.678	1.674	1.676	1.671	1.028	1.012	1.027	1.012	1.023	1.019	1.021	1.016
N+2.70	B187	0.000	1.477	VIG25X30	0.25	0.25	-24.436	-15.810	0.087	0.068	-0.087	-0.068	45.106	45.150	45.117	45.160	45.110	45.123	45.144	45.157	21.966	22.009	21.976	22.019	21.969	21.982	22.003	22.016
	B187	1.477					0.904	0.584	0.037	0.008	-0.037	-0.008	1.679	1.660	1.677	1.659	1.674	1.668	1.670	1.664	0.823	0.805	0.822	0.804	0.818	0.813	0.814	0.809
N+5.45	B188	0.000	3.000	VIG25X30	0.25	0.25	-0.356	-0.106	0.003	0.002	-0.003	-0.002	0.532	0.534	0.533	0.534	0.532	0.533	0.533	0.534	0.320	0.321	0.320	0.321	0.320	0.320	0.321	0.321
	B188	3.000					-0.049	-0.019	0.134	0.047	-0.134	-0.047	0.041	0.108	0.048	0.115	0.056	0.076	0.080	0.100	0.007	0.074	0.014	0.081	0.022	0.042	0.046	0.066
N+2.70	B189	0.000	2.587	VIG15X30	0.15	0.25	1.498	0.937	0.216	0.025	-0.216	-0.025	2.790	2.682	2.787	2.679	2.757	2.725	2.745	2.712	1.404	1.296	1.400	1.292	1.371	1.338	1.358	1.326
	B189	2.587					-4.850	-3.205	0.266	0.047	-0.266	-0.047	8.955	9.088	8.962	9.095	8.993	9.033	9.017	9.057	4.295	4.428	4.302	4.435	4.333	4.373	4.357	4.397
N+2.70	B190	0.000	3.000	VIG15X30	0.15	0.25	-2.569	-0.793	0.123	0.035	-0.123	-0.035	3.842	3.904	3.848	3.909	3.858	3.876	3.875	3.894	2.279	2.340	2.284	2.345	2.294	2.313	2.312	2.330
	B190	3.000					-0.126	-0.009	0.409	0.085	-0.409	-0.085	0.052	0.256	0.064	0.269	0.108	0.170	0.151	0.212	0.005	0.209	0.018	0.222	0.061	0.123	0.104	0.165
N+2.70	B191	0.000	2.156	VIG15X30	0.15	0.25	-3.737	-2.390	0.050	0.090	-0.050	-0.090	6.855	6.880	6.869	6.894	6.848	6.856	6.893	6.901	3.344	3.369	3.358	3.383	3.337	3.345	3.382	3.390
	B191	2.156					0.927	0.468	0.231	0.024	-0.231	-0.024	1.640	1.524	1.636	1.521	1.604	1.569	1.592	1.557	0.894	0.778	0.890	0.775	0.858	0.823	0.846	0.811
N+5.45	B192	0.000	2.723	VIG25X30	0.25	0.25	-1.499	-0.703	1.226	0.258	-1.226	-0.258	2.176	2.789	2.215	2.828	2.345	2.529	2.474	2.658	1.023	1.636	1.062	1.675	1.193	1.377	1.322	1.506
	B192	2.723					-9.498	-2.442	1.150	0.108	-1.150	-0.108	13.544	14.119	13.560	14.135	13.726	13.899	13.780	13.953	8.253	8.828	8.269	8.844	8.435	8.607	8.489	8.661
N+2.70	B192	0.000	2.723	VIG25X30	0.25	0.25	0.920	1.353	1.451	0.955	-1.451	-0.955	2.891	2.166	2.748	2.023	2.805	2.587	2.327	2.109	1.262	0.537	1.119	0.394	1.176	0.958	0.698	0.480
	B192	2.723					-6.319	-4.017	1.416	0.414	-1.416	-0.414	11.215	11.923	11.277	11.985	11.390	11.603	11.597	11.810	5.302	6.010	5.364	6.072	5.477	5.690	5.684	5.897
N+2.70	B193	0.000	3.550	VIG25X30	0.25	0.25	-12.369	-7.133	0.785	0.451	-0.785	-0.451	21.746	22.138	21.813	22.206	21.804	21.922	22.030	22.147	10.902	11.295	10.970	11.362	10.960	11.078	11.186	11.304
	B193	3.550					-7.989	-4.562	0.517	0.185	-0.517	-0.185	14.006	14.264	14.033	14.292	14.064	14.141	14.156	14.234	7.047	7.305	7.075	7.333	7.105	7.183	7.198	7.275
N+5.45	B194	0.000	1.000	VIG25X30	0.25	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	B194	1.000					-3.484	-1.328	0.000	0.000	0.000	0.000	5.509	5.509	5.509	5.509	5.509	5.509	5.509	5.509	3.136	3.136	3.136	3.136	3.136	3.136	3.136	3.136
N+2.70	B195	0.000	3.097	VIG25X30	0.25	0.25	-8.019	-4.852	0.281	0.801	-0.281	-0.801	14.344	14.485	14.465	14.605	14.253	14.296	14.654	14.696	7.087	7.227	7.207	7.347	6.996	7.038	7.396	7.438
	B195	3.097					-10.015	-5.705	0.283	0.907	-0.283	-0.907	17.584	17.726	17.720	17.862	17.475	17.517	17.929	17.971	8.875	9.016	9.011	9.152	8.766	8.808	9.219	9.261
N+5.45	B196	0.000	5.157	VIG25X30	0.25	0.25	-8.150	-2.674	0.307	0.024	-0.307	-0.024	12.375	12.529	12.379	12.533	12.425	12.471	12.437	12.483	7.256	7.410	7.260	7.414	7.306	7.352	7.318	7.364
	B196	5.157					-8.178	-2.629	0.210	0.072	-0.210	-0.072	12.385	12.490	12.396	12.501	12.409	12.440	12.445	12.476	7.302	7.407	7.313	7.418	7.326	7.358	7.362	7.394
N+2.70	B196	0.000	5.157	VIG25X30	0.25	0.25	-10.115	-6.281	0.321	0.051	-0.321	-0.051	18.335	18.495	18.343	18.503	18.382	18.430	18.408	18.456	9.019	9.180	9.027	9.188	9.067	9.115	9.092	9.140
	B196	5.157					-9.913	-6.237	0.239	0.109	-0.239	-0.109	18.065	18.184	18.081	18.201	18.087	18.123	18.142	18.178	8.854	8.973	8.870	8.990	8.877	8.912	8.931	8.967
N+5.45	B197	0.000	4.069	VIG25X30	0.25	0.25	-4.630	-1.491	0.834	0.156	-0.834	-0.156	6.827	7.244	6.850	7.267	6.945	7.071	7.023	7.149	3.947	4.364	3.970	4.387	4.065	4.191	4.143	4.269
	B197	4.069					-4.686	-1.467	0.816	0.176	-0.816	-0.176	6.873	7.281	6.899	7.307	6.985	7.107	7.073	7.195	4.000	4.408	4.027	4.435	4.112	4.235	4.200	4.323
N+2.70	B197	0.000	4.069	VIG25X30	0.25	0.25	-6.991	-4.141	0.977	0.239	-0.977	-0.239	12.268	12.757	12.304	12.792	12.397	12.544	12.517	12.663	6.030	6.518	6.066	6.554	6.159	6.305	6.278	6.425
	B197	4.069					-6.863	-4.116	0.964	0.270	-0.964	-0.270	12.090	12.572	12.131	12.613	12.212	12.356	12.347	12.491	5.915	6.397	5.956	6.438	6.037	6.182	6.172	6.317
N+5.45	B198	0.000	5.227	VIG15X30	0.15	0.25	-0.956	-0.284	0.084	0.015	-0.084	-0.015	1.409	1.451	1.411	1.453	1.421	1.434	1.429	1.441	0.838	0.880	0.841	0.883	0.850	0.863	0.858	0.870
	B198	5.227					-0.371	-0.167	0.291	0.037	-0.291	-0.037	0.537	0.682	0.542	0.688	0.581	0.625	0.600	0.643	0.258	0.404	0.264	0.409	0.303	0.346	0.321	0.365
N+5.45	B199	0.000	5.258	VIG15X30	0.15	0.25	2.022	0.552	0.279	0.051	-0.279	-0.051	3.052	2.912	3.044	2.905	3.012	2.970	2.987	2.945	1.893	1.754	1.886	1.746	1.853	1.812	1.828	1.786
	B199	5.258					-0.254	-0.047	0.024	0.005	-0.024	-0.005	0.345	0.357	0.346	0.358	0.349	0.352	0.351	0.355	0.222	0.234	0.223	0.235	0.226	0.229	0.228	0.232
N+5.45	B200	0.000	1.575	VIG25X30	0.25	0.25	-7.467	-2.338	0.127	0.353	-0.127	-0.353	11.240	11.304	11.293	11.357	11.201	11.220	11.377	11.396	6.662	6.726	6.715	6.779	6.623	6.642	6.799	6.818
	B200	1.575					6.106	1.620	0.063	0.060	-0.063	-0.060	8.967	8.936	8.958	8.927	8.967	8.957	8.937	8.927	5.516	5.484	5.507	5.475	5.515	5.506	5.485	5.476
N+5.45	B201	0.000	1.522	VIG25X30	0.25	0.25	9.465	2.673	0.160	0.044	-0.160	-0.044	14.074	13.994	14.068	13.988	14.054	14.030	14.032	14.008	8.562	8.482	8.555	8.475	8.542	8.518	8.520	8.496
	B201	1.522					-7.156	-2.253	0.157	0.437	-0.157	-0.437	10.768	10.847	10.834	10.912	10.719	10.743	10.938	10.961	6.368	6.447	6.434	6.512	6.319	6.343	6.538	6.561
N+5.45	B202	0.000	1.484	VIG25X30	0.25	0.25	-8.895	-2.749	0.704	0.227	-0.704	-0.227	13.230	13.582	13.264	13.616	13.313	13.419	13.427	13.533	7.812	8.164	7.847	8.199	7.896	8.002	8.009	8.115
	B202	1.484					10.670	2.983	0.178	0.049	-0.178	-0.049	15.835	15.746	15.828	15.739	15.813	15.786	15.788	15.761	9.651	9.562	9.644	9.555	9.629	9.602	9.604	9.577
N+5.45	B203	0.000	2.067	VIG25X30	0.25	0.25	7.120	1.925	0.149	0.075	-0.149	-0.075	10.512	10.437	10.501	10.426	10.499	10.477	10.461	10.439	6.451	6.376	6.440	6.365	6.438	6.416	6.400	6.378
	B203	2.067					-6.741	-2.099	0.522	0.171	-0.522	-0.171	10.045	10.306	10.071	10.332	10.106	10.185	10.192	10.270	5.924	6.185	5.949	6.210	5.985	6.063	6.071	6.149

YECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

V_a	$V_m = M_{ni} + M_{nr} / l_n$																
	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18
(kN)	(kN)															
0.50																
13.82	3.652	3.700	3.655	3.702	3.666	3.680	3.675	3.689	1.749	1.796	1.752	1.799	1.762	1.776	1.771	1.786
6.57																
15.74	2.317	2.458	2.329	2.470	2.352	2.395	2.392	2.435	1.347	1.482	1.354	1.494	1.377	1.419	1.417	1.459
2.05																
1.59	1.284	1.388	1.289	1.393	1.314	1.345	1.332	1.363	0.752	0.855	0.757	0.861	0.782	0.813	0.800	0.831
8.67																
12.37	2.808	2.854	2.812	2.857	2.821	2.834	2.832	2.845	1.333	1.379	1.336	1.382	1.345	1.359	1.356	1.370
15.62																
13.85	4.964	5.003	4.973	5.012	4.968	4.979	4.997	5.009	2.812	2.851	2.820	2.859	2.815	2.827	2.844	2.856
10.52																
18.50	6.148	6.215	6.153	6.221	6.164	6.184	6.184	6.204	3.122	3.189	3.127	3.195	3.138	3.158	3.158	3.178
10.70																
4.34	5.077	5.077	5.077	5.077	5.077	5.077	5.077	5.077	2.812	2.812	2.812	2.812	2.812	2.812	2.812	2.812
7.40																
11.82	4.068	4.146	4.095	4.174	4.063	4.087	4.155	4.178	2.388	2.466	2.416	2.494	2.383	2.407	2.475	2.498
13.97																
15.99	5.263	5.493	5.296	5.526	5.306	5.374	5.414	5.483	2.868	3.098	2.901	3.131	2.910	2.979	3.019	3.088
16.14																
15.06	5.223	5.547	5.287	5.610	5.263	5.360	5.473	5.570	2.526	2.850	2.589	2.913	2.566	2.663	2.776	2.873
15.46																
20.36	22.988	23.134	22.998	23.143	23.028	23.072	23.060	23.103	13.563	13.709	13.572	13.718	13.603	13.647	13.634	13.678
31.67																
7.50	2.614	2.646	2.628	2.659	2.610	2.620	2.654	2.664	1.496	1.527	1.509	1.540	1.491	1.501	1.535	1.545
7.32																
29.66	0.872	0.900	0.874	0.901	0.880	0.888	0.885	0.893	0.435	0.463	0.437	0.465	0.443	0.452	0.448	0.457
1.03																
1.62	0.534	0.551	0.540	0.557	0.532	0.537	0.554	0.559	0.398	0.415	0.405	0.422	0.396	0.401	0.418	0.423
1.68																
9.55	3.426	3.446	3.434	3.454	3.424	3.430	3.450	3.456	2.062	2.082	2.070	2.090	2.060	2.066	2.086	2.092
9.62																
17.12	4.451	4.665	4.535	4.748	4.429	4.493	4.707	4.771	2.485	2.698	2.568	2.782	2.462	2.526	2.740	2.804
13.26																
3.20	0.698	0.900	0.843	1.045	0.599	0.660	1.083	1.144	0.486	0.688	0.631	0.833	0.387	0.448	0.871	0.932
3.17																
1.62	0.502	0.555	0.523	0.576	0.495	0.511	0.567	0.583	0.368	0.421	0.389	0.442	0.361	0.377	0.433	0.449
1.68																
29.64	19.583	19.587	19.587	19.592	19.580	19.581	19.594	19.595	11.466	11.471	11.470	11.475	11.463	11.464	11.477	11.478
14.68																
47.90	31.676	31.693	31.682	31.699	31.675	31.680	31.695	31.700	15.429	15.446	15.435	15.452	15.428	15.433	15.448	15.453
28.79																
1.39	0.191	0.214	0.193	0.216	0.196	0.203	0.204	0.211	0.109	0.132	0.111	0.134	0.114	0.121	0.122	0.129
0.54																
4.04	4.540	4.550	4.541	4.551	4.542	4.545	4.546	4.549	2.203	2.213	2.204	2.214	2.205	2.208	2.209	2.212
15.84																
8.73	1.298	1.387	1.304	1.393	1.322	1.349	1.342	1.369	0.761	0.850	0.767	0.856	0.785	0.812	0.805	0.832
1.23																
13.19	3.940	3.898	3.945	3.903	3.920	3.908	3.935	3.923	1.966	1.924	1.970	1.928	1.946	1.933	1.961	1.948
2.93																
4.96	5.773	6.209	5.793	6.229	5.902	6.033	5.969	6.100	3.406	3.843	3.427	3.863	3.536	3.667	3.603	3.734
14.05																
3.40	5.180	5.174	5.151	5.144	5.213	5.211	5.114	5.112	2.411	2.404	2.381	2.375	2.443	2.441	2.344	2.342
9.28																
41.39	10.071	10.254	10.098	10.281	10.104	10.159	10.193	10.248	5.056	5.239	5.083	5.266	5.089	5.144	5.178	5.233
25.38																
4.34	5.509	5.509	5.509	5.509	5.509	5.509	5.509	5.509	3.136	3.136	3.136	3.136	3.136	3.136	3.136	3.136
8.26																
26.50	10.310	10.401	10.392	10.483	10.245	10.272	10.521	10.548	5.154	5.245	5.237	5.328	5.089	5.117	5.365	5.392
35.88																
24.86	4.801	4.851	4.804	4.854	4.816	4.831	4.825	4.840	2.823	2.873	2.826	2.876	2.837	2.852	2.847	2.862
23.63																
37.67	7.058	7.113	7.063	7.117	7.072	7.088	7.087	7.104	3.466	3.520	3.470	3.525	3.479	3.496	3.495	3.511
37.42																
13.33	3.367	3.570	3.379	3.582	3.424	3.484	3.464	3.525	1.953	2.156	1.965	2.168	2.010	2.071	2.051	2.111
13.27																
22.85	5.986	6.225	6.005	6.244	6.048	6.119	6.110	6.182	2.936	3.174	2.954	3.193	2.997	3.069	3.060	3.131
22.61																
8.21	0.372	0.408	0.374	0.410	0.383	0.394	0.388	0.399	0.210	0.246	0.211	0.247	0.221	0.231	0.226	0.236
4.26																
1.98	0.646	0.622	0.645	0.621	0.639	0.632	0.635	0.628	0.402	0.378	0.401	0.377	0.395	0.388	0.391	0.384
3.64																
18.48	12.830	12.851	12.858	12.878	12.805	12.811	12.898	12.904	7.732	7.752	7.760	7.780	7.706	7.713	7.799	7.806
9.86																
15.00	16.322	16.321	16.361	16.360	16.277	16.276	16.406	16.406	9.810	9.809	9.848	9.847	9.764	9.764	9.893	9.893
22.06																
25.64	19.586	19.763	19.604	19.781	19.627	19.680	19.687	19.740	11.768	11.945	11.786	11.963	11.809	11.862	11.869	11.922
18.77																
4.86	9.945	10.035	9.952	10.042	9.969	9.996	9.992	10.019	5.987	6.077	5.994	6.084	6.010	6.037	6.033	6.060
17.14																

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a)

f'c = 21.1 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

Mn = Momentos nominales de la viga en cada extremo restringido de la luz libre.
Vg = Cortante calculado para cargas gravitacionales mayoradas.
Vm = Cortante debido a flexion en curvatura inversa.
Vu = Vm + Vg

***Vu* = Vm + Vg**																	Vu_{max}	S	ΦVs	ΦVc	ΦVn	ΦVn > Vu_{max}
COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18		(kN)	(m)	(kN)	(kN)	(kN)	
0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504	0.504						
17.468	17.516	17.471	17.518	17.482	17.496	17.491	17.505	15.565	15.612	15.568	15.615	15.578	15.592	15.587	15.602		17.5	**0.06**	178.92	21.53	200.45	**OK**
6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572	6.572							
18.057	18.198	18.069	18.210	18.092	18.135	18.132	18.175	17.087	17.222	17.094	17.234	17.117	17.159	17.157	17.199		18.2	**0.06**	178.92	21.53	200.45	**OK**
2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048	2.048							
2.876	2.980	2.881	2.985	2.906	2.937	2.924	2.955	2.344	2.447	2.349	2.453	2.374	2.405	2.392	2.423		8.7	**0.06**	178.92	21.53	200.45	**OK**
8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672	8.672							
15.176	15.222	15.180	15.225	15.189	15.202	15.200	15.213	13.701	13.747	13.704	13.750	13.713	13.727	13.724	13.738		15.6	**0.06**	178.92	21.53	200.45	**OK**
15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616	15.616							
18.816	18.855	18.825	18.864	18.820	18.831	18.849	18.861	16.664	16.703	16.672	16.711	16.667	16.679	16.696	16.708		18.9	**0.06**	178.92	21.53	200.45	**OK**
10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524	10.524							
24.648	24.715	24.653	24.721	24.664	24.684	24.684	24.704	21.622	21.689	21.627	21.695	21.638	21.658	21.658	21.678		24.7	**0.06**	178.92	35.89	214.81	**OK**
10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696	10.696							
9.417	9.417	9.417	9.417	9.417	9.417	9.417	9.417	7.152	7.152	7.152	7.152	7.152	7.152	7.152	7.152		9.4	**0.06**	178.92	21.53	200.45	**OK**
7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400	7.400							
15.888	15.966	15.915	15.994	15.883	15.907	15.975	15.998	14.208	14.286	14.236	14.314	14.203	14.227	14.295	14.318		16.0	**0.06**	178.92	21.53	200.45	**OK**
13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968	13.968							
21.251	21.481	21.284	21.514	21.294	21.362	21.402	21.471	18.856	19.086	18.889	19.119	18.898	18.967	19.007	19.076		21.5	**0.06**	178.92	21.53	200.45	**OK**
16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144	16.144							
20.287	20.611	20.351	20.674	20.327	20.424	20.537	20.634	17.590	17.914	17.653	17.977	17.630	17.727	17.840	17.937		20.7	**0.06**	178.92	35.89	214.81	**OK**
15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460	15.460							
43.348	43.494	43.358	43.503	43.388	43.432	43.420	43.463	33.923	34.069	33.932	34.078	33.963	34.007	33.994	34.038		43.5	**0.06**	178.92	35.89	214.81	**OK**
31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668	31.668							
10.110	10.142	10.124	10.155	10.106	10.116	10.150	10.160	8.992	9.023	9.005	9.036	8.987	8.997	9.031	9.041		10.2	**0.06**	178.92	21.53	200.45	**OK**
7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316	7.316							
30.532	30.560	30.534	30.561	30.540	30.548	30.545	30.553	30.095	30.123	30.097	30.125	30.103	30.112	30.108	30.117		30.6	**0.06**	178.92	21.53	200.45	**OK**
1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032							
2.150	2.167	2.156	2.173	2.148	2.153	2.170	2.175	2.014	2.031	2.021	2.038	2.012	2.017	2.034	2.039		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684							
12.974	12.994	12.982	13.002	12.972	12.978	12.998	13.004	11.610	11.630	11.618	11.638	11.608	11.614	11.634	11.640		13.0	**0.06**	178.92	21.53	200.45	**OK**
9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616	9.616							
21.575	21.789	21.659	21.872	21.553	21.617	21.831	21.895	19.609	19.822	19.692	19.906	19.586	19.650	19.864	19.928		21.9	**0.06**	178.92	35.89	214.81	**OK**
13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264	13.264							
3.902	4.104	4.047	4.249	3.803	3.864	4.287	4.348	3.690	3.892	3.835	4.037	3.591	3.652	4.075	4.136		4.3	**0.06**	178.92	35.89	214.81	**OK**
3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168	3.168							
2.122	2.175	2.143	2.196	2.115	2.131	2.187	2.203	1.988	2.041	2.009	2.062	1.981	1.997	2.053	2.069		2.2	**0.06**	178.92	21.53	200.45	**OK**
1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680	1.680							
49.227	49.231	49.231	49.236	49.224	49.225	49.238	49.239	41.110	41.115	41.114	41.119	41.107	41.108	41.121	41.122		49.2	**0.06**	178.92	35.89	214.81	**OK**
14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676	14.676							
79.580	79.597	79.586	79.603	79.579	79.584	79.599	79.604	63.333	63.350	63.339	63.356	63.332	63.337	63.352	63.357		79.6	**0.06**	178.92	35.89	214.81	**OK**
28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788	28.788							
1.583	1.606	1.585	1.608	1.588	1.595	1.596	1.603	1.501	1.524	1.503	1.526	1.506	1.513	1.514	1.521		1.6	**0.06**	178.92	35.89	214.81	**OK**
0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544	0.544							
8.576	8.586	8.577	8.587	8.578	8.581	8.582	8.585	6.239	6.249	6.240	6.250	6.241	6.244	6.245	6.248		15.8	**0.06**	178.92	21.53	200.45	**OK**
15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844	15.844							
10.026	10.115	10.032	10.121	10.050	10.077	10.070	10.097	9.489	9.578	9.495	9.584	9.513	9.540	9.533	9.560		10.1	**0.06**	178.92	21.53	200.45	**OK**
1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228							
17.128	17.086	17.133	17.091	17.108	17.096	17.123	17.111	15.154	15.112	15.158	15.116	15.134	15.121	15.149	15.136		17.1	**0.06**	178.92	21.53	200.45	**OK**
2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932	2.932							
10.733	11.169	10.753	11.189	10.862	10.993	10.929	11.060	8.366	8.803	8.387	8.823	8.496	8.627	8.563	8.694		14.1	**0.06**	178.92	35.89	214.81	**OK**
14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052	14.052							
8.584	8.578	8.555	8.548	8.617	8.615	8.518	8.516	5.815	5.808	5.785	5.779	5.847	5.845	5.748	5.746		9.3	**0.06**	178.92	35.89	214.81	**OK**
9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284	9.284							
51.463	51.646	51.490	51.673	51.496	51.551	51.585	51.640	46.448	46.631	46.475	46.658	46.481	46.536	46.570	46.625		51.7	**0.06**	178.92	35.89	214.81	**OK**
25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384	25.384							
9.849	9.849	9.849	9.849	9.849	9.849	9.849	9.849	7.476	7.476	7.476	7.476	7.476	7.476	7.476	7.476		9.8	**0.06**	178.92	35.89	214.81	**OK**
8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264	8.264							
36.806	36.897	36.888	36.979	36.741	36.768	37.017	37.044	31.650	31.741	31.733	31.824	31.585	31.613	31.861	31.888		37.0	**0.06**	178.92	35.89	214.81	**OK**
35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880	35.880							
29.665	29.715	29.668	29.718	29.680	29.695	29.689	29.704	27.687	27.737	27.690	27.740	27.701	27.716	27.711	27.726		29.7	**0.06**	178.92	35.89	214.81	**OK**
23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632	23.632							
44.730	44.785	44.735	44.789	44.744	44.760	44.759	44.776	41.138	41.192	41.142	41.197	41.151	41.168	41.167	41.183		44.8	**0.06**	178.92	35.89	214.81	**OK**
37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416	37.416							
16.699	16.902	16.711	16.914	16.756	16.816	16.796	16.857	15.285	15.488	15.297	15.500	15.342	15.403	15.383	15.443		16.9	**0.06**	178.92	35.89	214.81	**OK**
13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272	13.272							
28.838	29.077	28.857	29.096	28.900	28.971	28.962	29.034	25.788	26.026	25.806	26.045	25.849	25.921	25.912	25.983		29.1	**0.06**	178.92	35.89	214.81	**OK**
22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612	22.612							
8.584	8.620	8.586	8.622	8.595	8.606	8.600	8.611	8.422	8.458	8.423	8.459	8.433	8.443	8.438	8.448		8.6	**0.06**	178.92	21.53	200.45	**OK**
4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264	4.264							
2.622	2.598	2.621	2.597	2.615	2.608	2.611	2.604	2.378	2.354	2.377	2.353	2.371	2.364	2.367	2.360		3.6	**0.06**	178.92	21.53	200.45	**OK**
3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636	3.636							
31.314	31.335	31.342	31.362	31.289	31.295	31.382	31.388	26.216	26.236	26.244	26.264	26.190	26.197	26.283	26.290		31.4	**0.06**	178.92	35.89	214.81	**OK**
9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864	9.864							
31.322	31.321	31.361	31.360	31.277	31.276	31.406	31.406	24.810	24.809	24.848	24.847	24.764	24.764	24.893	24.893		31.4	**0.06**	178.92	35.89	214.81	**OK**
22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056	22.056							
45.230	45.407	45.248	45.425	45.271	45.324	45.331	45.384	37.412	37.589	37.430	37.607	37.453	37.506	37.513	37.566		45.4	**0.06**	178.92	35.89	214.81	**OK**
18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768	18.768							
14.809	14.899	14.816	14.906	14.833	14.860	14.856	14.883	10.851	10.941	10.858	10.948	10.874	10.901	10.897	10.924		17.1	**0.06**	178.92	35.89	214.81	**OK**
17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144	17.144							

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b)

f'c = 21.0 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

2VE = Cortante maximo obtenido de las combinaciones de carga de diseño que incluyan E, considerando E, como el doble del prescrito por el reglamento general legalmente adoptado para diseño sismico vigente.

COMDIS3 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS4 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3Ey)))
COMDIS5 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS6 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS7 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS8 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS9 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS10 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))
COMDIS11 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS12 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3Ey))
COMDIS13 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS14 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS15 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS16 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS17 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS17 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			V2						$2V_E$ Combinaciones de carga de diseño para el doble del cortante donde se incluya E															$2V_{Emax}$	S	ΦVs	ΦVc	ΦVn	ΦVn > $2V_{Emax}$
	ELEMENTO						C.M.	C.V.	SISMO X	SISMO Y	-SISMO X	-SISMO Y																					
	No.	(m)	(m)	SECCION	b (m)	d (m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18	(kN)	(m)	(kN)	(kN)	(kN)	
N+5.45	B1	0	4.324	VIG30X30	0.30	0.25	-11.96	-3.87	2.3	0.12	-2.3	-0.12	17.638	18.788	17.656	18.806	18.020	18.365	18.080	18.425	10.180	11.330	10.198	11.348	10.562	10.907	10.622	10.967	21.6	**0.06**	178.92	42.96	221.88	OK
	B1	4.324					13.75	4.54	2.3	0.12	-2.3	-0.12	21.624	20.474	21.606	20.456	21.243	20.898	21.183	20.838	12.959	11.809	12.941	11.791	12.578	12.233	12.518	12.173						
N+2.70	B1	0	4.324	VIG30X30	0.30	0.25	-16.5	-4.39	2.88	0.2	-2.88	-0.2	23.455	24.895	23.485	24.925	23.924	24.356	24.024	24.456	14.115	15.555	14.145	15.585	14.584	15.016	14.684	15.116	27.3	**0.06**	178.92	42.96	221.88	OK
	B1	4.324					18.13	4.81	2.88	0.2	-2.88	-0.2	27.301	25.861	27.271	25.831	26.832	26.400	26.732	26.300	17.052	15.612	17.022	15.582	16.583	16.151	16.483	16.051						
N+5.45	B2	0	4.3	VIG30X30	0.30	0.25	-12.82	-4.2	1.92	0.1	-1.92	-0.1	19.097	20.057	19.112	20.072	19.415	19.703	19.465	19.753	11.051	12.011	11.066	12.026	11.369	11.657	11.419	11.707	20.1	**0.06**	178.92	42.96	221.88	OK
	B2	4.3					12.66	4.12	1.92	0.1	-1.92	-0.1	19.800	18.840	19.785	18.825	19.481	19.193	19.431	19.143	11.882	10.922	11.867	10.907	11.563	11.275	11.513	11.225						
N+2.70	B2	0	4.3	VIG30X30	0.30	0.25	-17.33	-4.6	2.56	0.18	-2.56	-0.18	24.743	26.023	24.770	26.050	25.159	25.543	25.249	25.633	14.944	16.224	14.971	16.251	15.360	15.744	15.450	15.834	26.1	**0.06**	178.92	42.96	221.88	OK
	B2	4.3					17.36	4.64	2.56	0.18	-2.56	-0.18	26.126	24.846	26.099	24.819	25.709	25.325	25.619	25.235	16.278	14.998	16.251	14.971	15.861	15.477	15.771	15.387						
N+5.45	B3	0	4.494	VIG30X30	0.30	0.25	-13.16	-4.31	1.9	0.1	-1.9	-0.1	19.620	20.570	19.635	20.585	19.935	20.220	19.985	20.270	11.362	12.312	11.377	12.327	11.677	11.962	11.727	12.012	22.3	**0.06**	178.92	42.96	221.88	OK
	B3	4.494					14.19	4.76	1.9	0.1	-1.9	-0.1	22.271	21.321	22.256	21.306	21.956	21.671	21.906	21.621	13.254	12.304	13.239	12.289	12.939	12.654	12.889	12.604						
N+2.70	B3	0	4.494	VIG30X30	0.30	0.25	-18.09	-4.87	2.4	0.16	-2.4	-0.16	25.966	27.166	25.990	27.190	26.358	26.718	26.438	26.798	15.669	16.869	15.693	16.893	16.061	16.421	16.141	16.501	29.0	**0.06**	178.92	42.96	221.88	OK
	B3	4.494					19.29	5.2	2.4	0.16	-2.4	-0.16	28.960	27.760	28.936	27.736	28.568	28.208	28.488	28.128	17.973	16.773	17.949	16.749	17.581	17.221	17.501	17.141						
N+5.45	B4	0	5.241	VIG30X30	0.30	0.25	-17.43	-6.07	1.32	0.06	-1.32	-0.06	26.652	27.312	26.661	27.321	26.872	27.070	26.902	27.100	15.353	16.013	15.362	16.022	15.573	15.771	15.603	15.801	27.3	**0.06**	178.92	42.96	221.88	OK
	B4	5.241					17.09	5.85	1.32	0.06	-1.32	-0.06	26.693	26.033	26.684	26.024	26.472	26.274	26.442	26.244	15.716	15.056	15.707	15.047	15.495	15.297	15.465	15.267						
N+2.70	B4	0	5.241	VIG30X30	0.30	0.25	-24.59	-6.82	2.2	0.14	-2.2	-0.14	35.768	36.868	35.789	36.889	36.128	36.458	36.198	36.528	21.571	22.671	21.592	22.692	21.931	22.261	22.001	22.331	36.9	**0.06**	178.92	42.96	221.88	OK
	B4	5.241					23.13	6.42	2.2	0.14	-2.2	-0.14	34.737	33.637	34.716	33.616	34.376	34.046	34.306	33.976	21.378	20.278	21.357	20.257	21.017	20.687	20.947	20.617						
N+5.45	B5	0	3.025	VIG30X30	0.30	0.25	-9.73	-2.9	2.32	0.16	-2.32	-0.16	13.984	15.144	14.008	15.168	14.362	14.710	14.442	14.790	8.165	9.325	8.189	9.349	8.543	8.891	8.623	8.971	15.2	**0.06**	178.92	42.96	221.88	OK
	B5	3.025					4.83	1.22	2.32	0.16	-2.32	-0.16	7.608	6.448	7.584	6.424	7.230	6.882	7.150	6.802	4.939	3.779	4.915	3.755	4.561	4.213	4.481	4.133						
N+5.45	B6	0	0.928	VIG30X30	0.30	0.25	-17.73	-7.12	0.12	0.28	-0.12	-0.28	28.345	28.405	28.387	28.447	28.317	28.335	28.457	28.475	15.906	15.966	15.948	16.008	15.878	15.896	16.018	16.036	28.5	**0.06**	178.92	42.96	221.88	OK
	B6	0.928					-12.71	-5.57	0.12	0.28	-0.12	-0.28	20.771	20.831	20.813	20.873	20.743	20.761	20.883	20.901	11.388	11.448	11.430	11.490	11.360	11.378	11.500	11.518						
N+2.70	B6	0	0.928	VIG30X30	0.30	0.25	5.58	0.84	4.44	6.5	-4.44	-6.5	9.134	6.914	8.159	5.939	9.494	8.828	6.244	5.578	6.620	4.400	5.645	3.425	6.980	6.314	3.730	3.064	15.6	**0.06**	178.92	42.96	221.88	OK
	B6	0.928					9.95	1.7	4.44	6.5	-4.44	-6.5	15.238	13.018	14.263	12.043	15.598	14.932	12.348	11.682	10.553	8.333	9.578	7.358	10.913	10.247	7.663	6.997						
N+5.45	B7	0	0.928	VIG30X30	0.30	0.25	4.83	1.22	2.32	0.16	-2.32	-0.16	7.608	6.448	7.584	6.424	7.230	6.882	7.150	6.802	4.939	3.779	4.915	3.755	4.561	4.213	4.481	4.133	12.6	**0.06**	178.92	42.96	221.88	OK
	B7	0.928					8.34	1.99	2.32	0.16	-2.32	-0.16	12.590	11.430	12.566	11.406	12.212	11.864	12.132	11.784	8.098	6.938	8.074	6.914	7.720	7.372	7.640	7.292						
N+1.375	B8	0	3.025	VIG25X30	0.25	0.25	-2.53	0.05	4	0.36	-4	-0.36	1.959	3.959	2.013	4.013	2.596	3.196	2.776	3.376	1.250	3.250	1.304	3.304	1.887	2.487	2.067	2.667	4.6	**0.06**	178.92	35.80	214.72	OK
	B8	3.025					2.92	0.05	4	0.36	-4	-0.36	4.581	2.581	4.527	2.527	3.944	3.344	3.764	3.164	3.655	1.655	3.601	1.601	3.018	2.418	2.838	2.238						
N+5.45	B9	0	4.251	VIG30X30	0.30	0.25	-12.01	-3.86	0.26	0.22	-0.26	-0.22	18.191	18.321	18.224	18.354	18.198	18.237	18.308	18.347	10.728	10.858	10.761	10.891	10.735	10.774	10.845	10.884	20.0	**0.06**	178.92	42.96	221.88	OK
	B9	4.251					13	4.27	0.26	0.22	-0.26	-0.22	19.952	19.822	19.919	19.789	19.945	19.906	19.835	19.796	11.782	11.652	11.749	11.619	11.775	11.736	11.665	11.626						
N+2.70	B9	0	4.251	VIG30X30	0.30	0.25	-16.22	-4.28	0.28	0.66	-0.28	-0.66	23.625	23.765	23.724	23.864	23.558	23.600	23.888	23.930	14.479	14.619	14.578	14.718	14.412	14.454	14.742	14.784	38.4	**0.06**	178.92	42.96	221.88	OK
	B9	4.251					25.52	7.56	0.28	0.66	-0.28	-0.66	38.304	38.164	38.205	38.065	38.370	38.328	38.040	37.998	23.088	22.948	22.989	22.849	23.154	23.112	22.824	22.782						
N+5.45	B10	0	4.251	VIG30X30	0.30	0.25	-18.13	-7.3	0.22	0.34	-0.22	-0.34	28.976	29.086	29.027	29.137	28.955	28.988	29.125	29.158	16.237	16.347	16.288	16.398	16.216	16.249	16.386	16.419	36.3	**0.06**	178.92	42.96	221.88	OK
	B10	4.251					22.7	8.96	0.22	0.34	-0.22	-0.34	36.281	36.171	36.230	36.120	36.302	36.269	36.132	36.099	20.511	20.401	20.460	20.350	20.532	20.499	20.362	20.329						
N+2.70	B10	0	4.251	VIG30X30	0.30	0.25	-27.92	-8.21	0.5	0.8	-0.5	-0.8	41.529	41.779	41.649	41.899	41.477	41.552	41.877	41.952	24.943	25.193	25.063	25.313	24.891	24.966	25.291	25.366	67.3	**0.06**	178.92	42.96	221.88	OK
	B10	4.251					43.74	14.53	0.5	0.8	-0.5	-0.8	67.203	66.953	67.083	66.833	67.256	67.181	66.856	66.781	39.551	39.301	39.431	39.181	39.604	39.529	39.204	39.129						
N+5.45	B11	0	4.251	VIG30X30	0.30	0.25	-18.35	-7.41	0.16	0.34	-0.16	-0.34	29.365	29.445	29.416	29.496	29.333	29.357	29.503	29.527	16.450	16.530	16.501	16.581	16.418	16.442	16.588	16.612	35.9	**0.06**	178.92	42.96	221.88	OK
	B11	4.251					22.49	8.86	0.16	0.34	-0.16	-0.34	35.914	35.834	35.863	35.783	35.945	35.921	35.775	35.751	20.307	20.227	20.256	20.176	20.338	20.314	20.168	20.144						
N+2.70	B11	0	4.251	VIG30X30	0.30	0.25	-28.15	-7.77	0.24	0.76	-0.24	-0.76	41.433	41.553	41.547	41.667	41.342	41.378	41.722	41.758	25.218	25.338	25.332	25.452	25.127	25.163	25.507	25.543	47.3	**0.06**	178.92	42.96	221.88	OK
	B11	4.251					30.68	10.3	0.24	0.76	-0.24	-0.76	47.233	47.113	47.119	46.999	47.324	47.288	46.944	46.908	27.729	27.609	27.615	27.495	27.820	27.784	27.440	27.404						
N+5.45	B12	0	4.251	VIG30X30	0.30	0.25	-18.19	-7.35	0.16	0.32	-0.16	-0.32	29.114	29.194	29.162	29.242	29.086	29.110	29.246	29.270	16.307	16.387	16.355	16.435	16.279	16.303	16.439	16.463	36.2	**0.06**	178.92	42.96	221.88	OK
	B12	4.251					22.65	8.91	0.16	0.32	-0.16	-0.32	36.154	36.074	36.106	36.026	36.182	36.158	36.022	35.998	20.449	20.369	20.401	20.321	20.477	20.453	20.317	20.293						
N+2.70	B12	0	4.251	VIG30X30	0.30	0.25	-28.05	-7.64	0.24	0.72	-0.24	-0.72	41.186	41.306	41.294	41.414	41.102	41.138	41.462	41.498	25.131	25.251	25.239	25.359	25.047	25.083	25.407	25.443	47.6	**0.06**	178.92	42.96	221.88	OK
	B12	4.251					30.78	10.43	0.24	0.72	-0.24	-0.72	47.480	47.360	47.372	47.252	47.564	47.528	47.204	47.168	27.816	27.696	27.708	27.588	27.900	27.864	27.540	27.504						
N+5.45	B13	0	3.323	VIG30X30	0.30	0.25	-12.71	-5.57	0.12	0.28	-0.12	-0.28	20.771	20.831	20.813	20.873	20.743	20.761	20.883	20.901	11.388	11.448	11.430	11.490	11.360	11.378	11.500	11.518	34.7	**0.06**	178.92	42.96	221.88	OK
	B13	3.323					21.79	8.47	0.12	0.28	-0.12	-0.28	34.669	34.609	34.627	34.567	34.697	34.679	34.557	34.539	19.662	19.602	19.620	19.560	19.690	19.672	19.550	19.532						
N+2.70	B13	0	3.323	VIG30X30	0.30	0.25	-16.02	-3.59	0.42	1	-0.42	-1	22.634	22.844	22.784	22.994	22.533	22.596	23.033	23.096	14.238	14.448	14.388	14.598	14.137	14.200	14.637	14.700	23.1	**0.06**	178.92	42.96	221.88	OK
	B13	3.323					13.62	4.59	0.42	1	-0.42	-1	21.114	20.904	20.964	20.754	21.216	21.153	20.716	20.653	12.438	12.228	12.288	12.078	12.540	12.477	12.040	11.977						
N+5.45	B14	0	3.323	VIG30X30	0.30	0.25	-11.58	-3.99	0.5	0.32	-0.5	-0.32	17.737	17.987	17.785	18.035	17.769	17.844	17.929	18.004	10.273	10.523	10.321	10.571	10.305	10.380	10.465	10.540	18.0	**0.06**	178.92	42.96	221.88	OK
	B14	3.323					8.6	2.69	0.5	0.32	-0.5	-0.32	13.159	12.909	13.111	12.861	13.128	13.053	12.968	12.893	7.889	7.639	7.841	7.591	7.858	7.783	7.698	7.623						
N+5.45	B15	0	4.324	VIG30X30	0.30	0.25	-17.16	-6.52	1.7	0.14	-1.7	-0.14	26.677	27.527	26.698	27.548	26.950	27.205	27.020	27.275	15.009	15.859	15.030	15.880	15.282	15.537	15.352	15.607	29.9	**0.06**	178.92	42.96	221.88	OK
	B15	4.324					18.67	7.09	1.7	0.14	-1.7	-0.14	29.930	29.080	29.909	29.059	29.657	29.402	29.587	29.332	17.239	16.389	17.218	16.368	16.966	16.711	16.896	16.641						
N+2.70	B15	0	4.324	VIG30X30	0.30	0.25	-13.84	-2.97	2.2	0.16	-2.2	-0.16	19.016	20.116	19.040	20.140	19.373	19.703	19.453	19.783	11.894	12.994	11.918	13.018	12.251	12.581	12.331	12.661	21.7	**0.06**	178.92	42.96	221.88	OK
	B15	4.324					14.68	3.51	2.2	0.16	-2.2	-0.16	21.688	20.588	21.664	20.564	21.331	21.001	21.251	20.921	13.774	12.674	13.750	12.650	13.417	13.087	13.337	13.007						
N+5.45	B16	0	4.3	VIG30X30	0.30	0.25	-17.73	-6.75	1.58	0.08	-1.58	-0.08	27.625	28.415	27.637	28.427	27.888	28.125	27.928	28.165	15.556	16.346	15.568	16.358	15.819	16.056	15.859	16.096	28.4	**0.06**	178.92	42.96	221.88	OK
	B16	4.3					17.56	6.6	1.58	0.08	-1.58	-0.08	28.073	27.283	28.061	27.271	27.811	27.574	27.771	27.534	16.205	15.415	16.193	15.403	15.943	15.706	15.903	15.666						
N+2.70	B16	0	4.3	VIG30X30	0.30	0.25	-23.64	-10.37	2.16	0.12	-2.16	-0.12	38.189	39.269	38.207	39.287	38.546	38.870	38.606	38.930	20.727	21.807	20.745	21.825	21.084	21.408	21.144	21.468	41.0	**0.06**	178.92	42.96	221.88	OK
	B16	4.3					24.5	11.1	2.16	0.12	-2.16	-0.12	41.049	39.969	41.031	39.951	40.692	40.368	40.632	40.308	22.599	21.519	22.581	21.501	22.242	21.918	22.182	21.858						
N+5.45	B17	0	4.494	VIG30X30	0.30	0.25	-18.16	-6.9	1.7	0.08	-1.7	-0.08	28.261	29.111	28.273	29.123	28.545	28.800	28.585	28.840	15.913	16.763	15.925	16.775	16.197	16.452	16.237	16.492	31.4	**0.06**	178.92	42.96	221.88	OK
	B17	4.494					19.55	7.49	1.7	0.08	-1.7	-0.08	31.381	30.531	31.369	30.519	31.098	30.843	31.058	30.803	18.026	17.176	18.014	17.164	17.743	17.488	17.703	17.448						
N+2.70	B17	0	4.494	VIG30X30	0.30	0.25	-25.1	-11.21	2.18	0.12	-2.18	-0.12	40.776	41.866	40.794	41.884	41.137	41.464	41.197	41.524	22.036	23.126	22.054	23.144	22.397	22.724	22.457	22.784	44.0	**0.06**	178.92	42.96	221.88	OK
	B17	4.494					26.45	11.75	2.18	0.12	-2.18	-0.12	44.044	42.954	44.026	42.936	43.684	43.357	43.624	43.297	24.359	23.269	24.341	23.251	23.999	23.672	23.939	23.612						
N+5.45	B18	0	5.241	VIG30X30	0.30	0.25	-23.93	-9.35	1.08	0.06	-1.08	-0.06	37.792	38.332	37.801	38.341	37.970	38.132	38.000	38.162	21.263	21.803	21.272	21.812	21.441	21.603	21.471	21.633	38.3	**0.06**	178.92	42.96	221.88	OK
	B18	5.241					23.04	8.97	1.08	0.06	-1.08	-0.06	36.893	36.353	36.884	36.344	36.714	36.552	36.684	36.522	21.011	20.471	21.002	20.462	20.832	20.670	20.802	20.640						
N+2.70	B18	0	5.241	VIG30X30	0.30	0.25	-32.91	-14.59	1.46	0.1	-1.46	-0.1	53.710	54.440	53.725	54.455	53.948	54.167	53.998	54.217	29.247	29.977	29.262	29.992	29.485	29.704	29.535	29.754	54.5	**0.06**	178.92	42.96	221.88	OK
	B18	5.241					31.75	14.07	1.46	0.1	-1.46	-0.1	52.543	51.813	52.528	51.798	52.305	52.086	52.255	52.036	28.948	28.218	28.933	28.203	28.710	28.491	28.660	28.441						
N+5.45	B19	0	3.025	VIG30X30	0.30	0.25	-12.67	-4.54	3.18	0.16	-3.18	-0.16	18.937	20.527	18.961	20.551	19.466	19.943	19.546	20.023	10.596	12.186	10.620	12.210	11.125	11.602	11.205	11.682	20.6	**0.06**	178.92	42.96	221.88	OK
	B19	3.025					8.33	2.89	3.18	0.16	-3.18	-0.16	13.693	12.103	13.669	12.079	13.165	12.688	13.085	12.608	8.304	6.714	8.280	6.690	7.776	7.299	7.696	7.219						

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b)

f'c = 21.0 MPa
fy = 420 MPa
$\Phi_{Cortante}$ = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

2VE = Cortante maximo obtenido de las combinaciones de carga de diseño que incluyan E, considerando E, como el doble del prescrito por el reglamento general legalmente adoptado para diseño sismico vigente.

COMDIS3 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS4 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3Ey)))
COMDIS5 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3(-Ey))
COMDIS6 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS7 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS8 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS9 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS10 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))
COMDIS11 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS12 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3Ey))
COMDIS13 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3(-Ey))
COMDIS14 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS15 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS16 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS17 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0(-Ey))
COMDIS17 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))

NIVEL	VIGA ELEMENTO No.	LOC. (m)	LONG. (m)	PROPIEDADES DEL ELEMENTO SECCION	b (m)	d (m)	V2 C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	$2V_E$ Combinaciones de carga de diseño para el doble del cortante donde se incluya E COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18	$2V_{E max}$ (kN)	S (m)	ΦVs (kN)	ΦVc (kN)	ΦVn (kN)	ΦVn > $2V_{Emax}$
N+2.70	B19	0	3.025	VIG30X30	0.30	0.25	-10.26	-5.23	4.18	0.32	-4.18	-0.32	16.473	18.563	16.521	18.611	17.149	17.776	17.309	17.936	8.165	10.255	8.213	10.303	8.841	9.468	9.001	9.628	18.6	0.06	178.92	42.96	221.88	OK
	B19	3.025					5.44	3.11	4.18	0.32	-4.18	-0.32	10.707	8.617	10.659	8.569	10.032	9.405	9.872	9.245	5.965	3.875	5.917	3.827	5.290	4.663	5.130	4.503						
N+2.70	B20	0	1.35	VIG30X30	0.30	0.25	-22.98	-11.41	1.7	0.26	-1.7	-0.26	38.542	39.392	38.581	39.431	38.794	39.049	38.924	39.179	20.238	21.088	20.277	21.127	20.490	20.745	20.620	20.875	39.4	0.06	178.92	42.96	221.88	OK
	B20	1.35					-15.06	-8.31	1.7	0.26	-1.7	-0.26	25.938	26.788	25.977	26.827	26.190	26.445	26.320	26.575	13.110	13.960	13.149	13.999	13.362	13.617	13.492	13.747						
N+2.70	B21	0	1.35	VIG30X30	0.30	0.25	-21.73	-17.12	0	0	0	0	43.196	43.196	43.196	43.196	43.196	43.196	43.196	43.196	19.557	19.557	19.557	19.557	19.557	19.557	19.557	19.557	43.2	0.06	178.92	42.96	221.88	OK
	B21	1.35					-13.81	-12.56	0	0	0	0	29.132	29.132	29.132	29.132	29.132	29.132	29.132	29.132	12.429	12.429	12.429	12.429	12.429	12.429	12.429	12.429						
N+2.70	B22	0	1.35	VIG30X30	0.30	0.25	-23.48	-18.71	0	0	0	0	46.886	46.886	46.886	46.886	46.886	46.886	46.886	46.886	21.132	21.132	21.132	21.132	21.132	21.132	21.132	21.132	46.9	0.06	178.92	42.96	221.88	OK
	B22	1.35					-15.56	-14.15	0	0	0	0	32.822	32.822	32.822	32.822	32.822	32.822	32.822	32.822	14.004	14.004	14.004	14.004	14.004	14.004	14.004	14.004						
N+2.70	B23	0	1.35	VIG30X30	0.30	0.25	-20.73	-14.59	4	0.66	-4	-0.66	38.417	40.417	38.516	40.516	39.001	39.601	39.331	39.931	17.608	19.608	17.707	19.707	18.192	18.792	18.522	19.122	40.5	0.06	178.92	42.96	221.88	OK
	B23	1.35					-12.8	-10.03	4	0.66	-4	-0.66	24.341	26.341	24.440	26.440	24.925	25.525	25.255	25.855	10.471	12.471	10.570	12.570	11.055	11.655	11.385	11.985						
N+5.45	B24	0	1.6	VIG30X30	0.30	0.25	-20.36	-7.64	1.5	0.18	-1.5	-0.18	31.684	32.434	31.711	32.461	31.915	32.140	32.005	32.230	17.936	18.686	17.963	18.713	18.167	18.392	18.257	18.482	32.5	0.06	178.92	42.96	221.88	OK
	B24	1.6					-6.95	-2.53	1.5	0.18	-1.5	-0.18	10.482	11.232	10.509	11.259	10.713	10.938	10.803	11.028	5.867	6.617	5.894	6.644	6.098	6.323	6.188	6.413						
N+5.45	B25	0	1.6	VIG30X30	0.30	0.25	-18.02	-7.48	0	0	0	0	29.104	29.104	29.104	29.104	29.104	29.104	29.104	29.104	16.218	16.218	16.218	16.218	16.218	16.218	16.218	16.218	29.1	0.06	178.92	42.96	221.88	OK
	B25	1.6					-10.08	-5.18	0	0	0	0	17.276	17.276	17.276	17.276	17.276	17.276	17.276	17.276	9.072	9.072	9.072	9.072	9.072	9.072	9.072	9.072						
N+5.45	B26	0	1.6	VIG30X30	0.30	0.25	-19.34	-8.16	0	0	0	0	31.368	31.368	31.368	31.368	31.368	31.368	31.368	31.368	17.406	17.406	17.406	17.406	17.406	17.406	17.406	17.406	31.4	0.06	178.92	42.96	221.88	OK
	B26	1.6					-11.4	-5.86	0	0	0	0	19.540	19.540	19.540	19.540	19.540	19.540	19.540	19.540	10.260	10.260	10.260	10.260	10.260	10.260	10.260	10.260						
N+5.45	B27	0	1.6	VIG30X30	0.30	0.25	-18.92	-7.28	3.12	0.44	-3.12	-0.44	29.171	30.731	29.237	30.797	29.640	30.108	29.860	30.328	16.215	17.775	16.281	17.841	16.684	17.152	16.904	17.372	30.8	0.06	178.92	42.96	221.88	OK
	B27	1.6					-7.61	-3.25	3.12	0.44	-3.12	-0.44	11.569	13.129	11.635	13.195	12.038	12.506	12.258	12.726	6.036	7.596	6.102	7.662	6.505	6.973	6.725	7.193						
N+5.45	B28	0	1.967	VIG30X30	0.30	0.25	5.88	2.78	5.56	0.4	-5.56	-0.4	11.256	8.476	11.196	8.416	10.353	9.519	10.153	9.319	6.712	3.932	6.652	3.872	5.809	4.975	5.609	4.775	11.4	0.06	178.92	42.96	221.88	OK
	B28	1.967					5.07	1.52	14.28	3.06	-14.28	-3.06	11.404	4.264	10.945	3.805	9.440	7.298	7.910	5.768	8.363	1.223	7.904	0.764	6.399	4.257	4.869	2.727						
N+2.70	B28	0	1.967	VIG30X30	0.30	0.25	2.14	1.77	7.46	2.26	-7.46	-2.26	6.373	2.643	6.034	2.304	5.463	4.344	4.333	3.214	3.961	0.231	3.622	0.109	3.051	1.932	1.921	0.802	12.7	0.06	178.92	42.96	221.88	OK
	B28	1.967					5.98	0.76	17.68	4.34	-17.68	-4.34	12.682	3.842	12.031	3.191	10.347	7.695	8.177	5.525	10.128	1.288	9.477	0.637	7.793	5.141	5.623	2.971						
N+5.45	B29	0	2.086	VIG30X30	0.30	0.25	-4.52	-1.17	12.14	2.42	-12.14	-2.42	3.378	9.448	3.741	9.811	5.079	6.900	6.289	8.110	0.851	6.922	1.215	7.285	2.553	4.374	3.763	5.584	9.8	0.06	178.92	42.96	221.88	OK
	B29	2.086					-1.09	-1.13	0.76	0.26	-0.76	-0.26	2.229	2.609	2.268	2.648	2.316	2.430	2.446	2.560	0.772	1.152	0.811	1.191	0.859	0.973	0.989	1.103						
N+2.70	B29	0	2.086	VIG30X30	0.30	0.25	-2.53	-0.92	14.66	3.64	-14.66	-3.64	0.018	7.348	0.564	7.894	1.947	4.146	3.767	5.966	1.661	5.669	1.115	6.215	0.268	2.467	2.088	4.287	7.9	0.06	178.92	42.96	221.88	OK
	B29	2.086					2.16	-0.35	5.66	1.84	-5.66	-1.84	3.795	0.965	3.519	0.689	3.127	2.278	2.207	1.358	3.497	0.667	3.221	0.391	2.829	1.980	1.909	1.060						
N+2.70	B30	0	4.94	VIG15X30	0.15	0.25	3.52	2.03	10.24	2.08	-10.24	-2.08	8.970	3.850	8.658	3.538	7.542	6.006	6.502	4.966	5.884	0.764	5.572	0.452	4.456	2.920	3.416	1.880	12.6	0.06	178.92	21.48	200.40	OK
	B30	4.94					8.34	2.19	1.7	0.26	-1.7	-0.26	12.643	11.793	12.604	11.754	12.391	12.136	12.261	12.006	7.951	7.101	7.912	7.062	7.699	7.444	7.569	7.314						
N+2.70	B31	0	3.626	VIG15X30	0.15	0.25	-4.33	-2.33	4	0.66	-4	-0.66	6.477	8.477	6.576	8.576	7.061	7.661	7.391	7.991	2.848	4.848	2.947	4.947	3.432	4.032	3.762	4.362	8.6	0.06	178.92	21.48	200.40	OK
	B31	3.626					-3.13	-2.44	9	1.8	-9	-1.8	3.811	8.311	4.081	8.581	5.071	6.421	5.971	7.321	0.432	4.932	0.702	5.202	1.692	3.042	2.592	3.942						
N+2.70	B32	0	1.106	VIG15X30	0.15	0.25	18.36	13.25	12.76	2.4	-12.76	-2.4	38.652	32.272	38.292	31.912	36.839	34.925	35.639	33.725	19.894	13.514	19.534	13.154	18.081	16.167	16.881	14.967	38.7	0.06	178.92	21.48	200.40	OK
	B32	1.106					0.91	0.35	1.12	0.2	-1.12	-0.2	1.737	1.177	1.707	1.147	1.576	1.408	1.476	1.308	1.114	0.554	1.084	0.524	0.953	0.785	0.853	0.685						
N+2.70	B33	0	1.18	VIG15X30	0.15	0.25	0	0	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36.5	0.06	178.92	21.48	200.40	OK
	B33	1.18					-20.72	-8.5	11.9	2.32	-11.9	-2.32	30.215	36.165	30.563	36.513	31.892	33.677	33.052	34.837	15.499	21.449	15.847	21.797	17.176	18.961	18.336	20.121						
N+5.45	B34	0	5.054	VIG15X30	0.15	0.25	7.58	2.56	19.84	3.44	-19.84	-3.44	16.874	6.954	16.358	6.438	14.004	11.028	12.284	9.308	12.040	2.120	11.524	1.604	9.170	6.194	7.450	4.474	16.9	0.06	178.92	21.48	200.40	OK
	B34	5.054					2.05	0.01	1.5	0.18	-1.5	-0.18	2.859	2.109	2.832	2.082	2.628	2.403	2.538	2.313	2.234	1.484	2.207	1.457	2.003	1.778	1.913	1.688						
N+5.45	B35	0	3.738	VIG15X30	0.15	0.25	-1.39	-0.05	3.12	0.44	-3.12	-0.44	0.905	2.465	0.971	2.531	1.374	1.842	1.594	2.062	0.438	1.998	0.504	2.064	0.907	1.375	1.127	1.595	9.3	0.06	178.92	21.48	200.40	OK
	B35	3.738					-3.81	-1.36	12.88	2.18	-12.88	-2.18	2.549	8.989	2.876	9.316	4.421	6.353	5.511	7.443	0.046	6.486	0.373	6.813	1.918	3.850	3.008	4.940						
N+5.45	B36	0	3	VIG15X30	0.15	0.25	-0.08	0	0.02	0.02	-0.02	-0.02	0.090	0.100	0.093	0.103	0.090	0.093	0.100	0.103	0.066	0.076	0.069	0.079	0.066	0.069	0.076	0.079	0.4	0.06	178.92	21.48	200.40	OK
	B36	3					0.28	0.01	0.18	0.04	-0.18	-0.04	0.394	0.304	0.388	0.298	0.370	0.343	0.350	0.323	0.300	0.210	0.294	0.204	0.276	0.249	0.256	0.229						
N+5.45	B37	0	3	VIG15X30	0.15	0.25	-0.27	0	0.18	0.04	-0.18	-0.04	0.276	0.366	0.282	0.372	0.301	0.328	0.321	0.348	0.195	0.285	0.201	0.291	0.220	0.247	0.240	0.267	0.4	0.06	178.92	21.48	200.40	OK
	B37	3					0.05	0	0	0	0	0	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045						
N+2.70	B38	0	3	VIG15X30	0.15	0.25	-0.1	-0.03	0.02	0	-0.02	0	0.145	0.155	0.145	0.155	0.149	0.152	0.149	0.152	0.085	0.095	0.085	0.095	0.089	0.092	0.089	0.092	4.8	0.06	178.92	21.48	200.40	OK
	B38	3					1.13	0.13	12.84	1.08	-12.84	-1.08	4.777	1.643	4.615	1.805	2.719	0.793	2.179	0.253	4.308	2.112	4.146	2.274	2.250	0.324	1.710	0.216						
N+2.70	B39	0	3	VIG15X30	0.15	0.25	-1.29	-0.23	12.84	0.76	-12.84	-0.76	1.489	4.931	1.375	5.045	0.625	2.551	1.005	2.931	2.106	4.314	1.992	4.428	0.008	1.934	0.388	2.314	7.9	0.06	178.92	21.48	200.40	OK
	B39	3					5.32	1.46	0.3	0.16	-0.3	-0.16	7.931	7.781	7.907	7.757	7.907	7.862	7.827	7.782	4.875	4.725	4.851	4.701	4.851	4.806	4.771	4.726						
N+2.70	B40	0	2.27	VIG15X30	0.15	0.25	-4.07	-2.57	0.26	0.08	-0.26	-0.08	7.383	7.513	7.395	7.525	7.415	7.454	7.455	7.494	3.592	3.722	3.604	3.734	3.624	3.663	3.664	3.703	8.3	0.06	178.92	21.48	200.40	OK
	B40	2.27					4.44	2.93	0.26	0.08	-0.26	-0.08	8.329	8.199	8.317	8.187	8.298	8.259	8.258	8.219	4.067	3.937	4.055	3.925	4.036	3.997	3.996	3.957						
N+2.70	B41	0	2.3	VIG15X30	0.15	0.25	-4.35	-3.25	0.02	0.02	-0.02	-0.02	8.464	8.474	8.467	8.477	8.464	8.467	8.474	8.477	3.909	3.919	3.912	3.922	3.909	3.912	3.919	3.922	8.5	0.06	178.92	21.48	200.40	OK
	B41	2.3					4.24	2.3	0.02	0.02	-0.02	-0.02	7.395	7.385	7.392	7.382	7.395	7.392	7.385	7.382	3.823	3.813	3.820	3.810	3.823	3.820	3.813	3.810						
N+5.45	B42	0	1.879	VIG15X30	0.15	0.25	-3.24	-1.03	0.56	0.1	-0.56	-0.1	4.771	5.051	4.786	5.066	4.851	4.935	4.901	4.985	2.769	3.049	2.784	3.064	2.849	2.933	2.899	2.983	5.1	0.06	178.92	21.48	200.40	OK
	B42	1.879					2.08	0.66	0.56	0.1	-0.56	-0.1	3.304	3.024	3.289	3.009	3.223	3.139	3.173	3.089	2.020	1.740	2.005	1.725	1.939	1.855	1.889	1.805						
N+5.45	B43	0	1.91	VIG15X30	0.15	0.25	-2.19	-0.77	0.34	0.06	-0.34	-0.06	3.309	3.479	3.318	3.488	3.358	3.409	3.388	3.439	1.882	2.052	1.891	2.061	1.931	1.982	1.961	2.012	4.9	0.06	178.92	21.48	200.40	OK
	B43	1.91					3.25	0.96	0.34	0.06	-0.34	-0.06	4.950	4.780	4.941	4.771	4.901	4.850	4.871	4.820	3.015	2.845	3.006	2.836	2.966	2.915	2.936	2.885						
N+5.45	B44	0	2.55	VIG15X30	0.15	0.25	-7.87	-3.16	0.7	0.08	-0.7	-0.08	12.423	12.773	12.435	12.785	12.532	12.637	12.572	12.677	6.902	7.252	6.914	7.264	7.011	7.116	7.051	7.156	21.5	0.06	178.92	21.48	200.40	OK
	B44	2.55					13.18	4.32	5.34	0.74	-5.34	-0.74	21.527	18.857	21.416	18.746	20.722	19.921	20.352	19.551	13.253	10.583	13.142	10.472	12.448	11.647	12.078	11.277						
N+2.70	B44	0	2.55	VIG15X30	0.15	0.25	-8.08	-4.77	0.34	0.06	-0.34	-0.06	14.377	14.547	14.386	14.556	14.426	14.477	14.456	14.507	7.183	7.353	7.192	7.362	7.232	7.283	7.262	7.313	14.6	0.06	178.92	21.48	200.40	OK
	B44	2.55					5.08	2.67	0.34	0.06	-0.34	-0.06	8.856	8.686	8.847	8.677	8.807	8.756	8.777	8.726	4.662	4.492	4.653	4.483	4.613	4.562	4.583	4.532						
N+5.45	B45	0	2.55	VIG15X30	0.15	0.25	-13.79	-4.18	2.28	0.2	-2.28	-0.2	20.143	21.283	20.173	21.313	20.507	20.849	20.607	20.949	11.826	12.966	11.856	12.996	12.190	12.532	12.290	12.632	21.3	0.06	178.92	21.48	200.40	OK
	B45	2.55					6.38	2.62	0.78	0.06	-0.78	-0.06	10.476	10.086	10.467	10.077	10.350	10.233	10.320	10.203	5.942	5.552	5.933	5.543	5.816	5.699	5.786	5.669						
N+2.70	B45	0	2.55	VIG15X30	0.15	0.25	-5.23	-2.74	0.42	0.08	-0.42	-0.08	8.905	9.115	8.917	9.127	8.965	9.028	9.005	9.068	4.596	4.806	4.608	4.818	4.656	4.719	4.696	4.759	10.9	0.06	178.92	21.48	200.40	OK
	B45	2.55					6.04	3.58	0.32	0.06	-0.32	-0.06	10.913	10.753	10.904	10.744	10.867	10.819	10.837	10.789	5.521	5.361	5.512	5.352	5.475	5.427	5.445	5.397						
N+2.70	B46	0	2.55	VIG15X30	0.15	0.25	-8.11	-2.47	1.12	0.22	-1.12	-0.22	11.906	12.466	11.939	12.499	12.063	12.231	12.173	12.341	7.003	7.563	7.036	7.596	7.160	7.328	7.270	7.438	12.5	0.06	178.92	21.48	200.40	OK
	B46	2.55					7.26	2.11	1.12	0.22	-1.12	-0.22	11.119	10.559	11.086	10.526	10.961	10.793	10.851	10.683	6.831	6.271	6.798	6.238	6.673	6.505	6.563	6.395						
N+2.70	B47	0	2.55	VIG15X30	0.15	0.25	-5.87	-1.73	1.18	0.26	-1.18	-0.26	8.460	9.050	8.499	9.089	8.621	8.798	8.751	8.928	4.969	5.559	5.008	5.598	5.130	5.307	5.260	5.437	13.1	0.06	178.92	21.48	200.40	OK
	B47	2.55					8.43	2.56	1.44	0.32	-1.44	-0.32	13.060	12.340	13.012	12.292	12.864	12.648	12.704	12.488	7.971	7.251	7.923	7.203	7.775	7.559	7.615	7.399						
N+5.45	B48	0	1.5	VIG15X30	0.15	0.25	5.61	2.24	0.56	0.1	-0.56	-0.1	9.120	8.840	9.105	8.825	9.039	8.955	8.989	8.905	5.197	4.917	5.182	4.902	5.116	5.032	5.066	4.982	17.8	0.06	178.92	21.48	200.40	OK
	B48	1.5					11.17	4.27	0.56	0.1	-0.56	-0.1	17.822	17.542	17.807	17.527	17.741	17.657	17.691	17.607	10.201	9.921	10.186	9.906	10.120	10.036	10.070	9.986						
N+5.45	B49	0	1.5	VIG15X30	0.15	0.25	-11.17	-4.2	0.34	0.06	-0.34	-0.06	17.515	17.685	17.524	17.694	17.564	17.615	17.594	17.645	9.964	10.134	9.973	10.143	10.013	10.064	10.043	10.094	17.7	0.06	178.92	21.48	200.40	OK
	B49	1.5					-5.61	-2.18	0.34	0.06	-0.34	-0.06	8.823	8.993	8.832	9.002	8.872	8.923	8.902	8.953	4.960	5.130	4.969	5.139	5.009	5.060	5.039	5.090						
N+5.45	B50	0	2.55	VIG15X30	0.15	0.25	-5.36	-2.04	0.42	0.14	-0.42	-0.14	8.357	8.567	8.378	8.588	8.406	8.469	8.476	8.539	4.709	4.919	4.730	4.940	4.758	4.821	4.828	4.891	8.6	0.06	178.92	21.48	200.40	OK
	B50	2.55					3.95	1.32	0.42	0.14	-0.42	-0.14	6.176	5.966	6.155	5.945	6.127	6.064	6.057	5.994	3.671	3.461	3.650	3.440	3.622	3.559	3.552	3.489						
N+5.45	B51	0	2.55	VIG15X30	0.15	0.25	-3.91	-1.31	0.48	0.16	-0.48	-0.16	5.870	6.110	5.894	6.134	5.926	5.998	6.006	6.078	3.387	3.627	3.411	3.651	3.443	3.515	3.523	3.595	8.7	0.06	178.92	21.48	200.40	OK
	B51	2.55					5.4	2.06	0.48	0.16	-0.48	-0.16	8.672	8.432	8.648	8.408	8.616	8.544	8.536	8.464	4.992	4.752	4.968	4.728	4.936	4.864	4.856	4.784						
N+2.70	B52	0	1.8	VIG15X30	0.15	0.25	8.46	6.57	0.26	0.08	-0.26	-0.08	16.793	16.663	16.781	16.651	16.762	16.723	16.722	16.683	7.685	7.555	7.673	7.543	7.654	7.615	7.614	7.575	16.8	0.06	178.92	21.48	200.40	OK
	B52	1.8					0.94	0.24	1.06	0.1	-1.06	-0.1	1.641	1.111	1.626	1.096	1.473	1.314	1.423	1.264	1.119	0.589	1.104	0.574	0.951	0.792	0.901	0.742						
N+2.70	B53	0	1.8	VIG15X30	0.15	0.25	-0.76	-0.17	1.06	0.08	-1.06	-0.08	0.811	1.341	0.823	1.353	0.983	1.142	1.023	1.182	0.413	0.943	0.425	0.955	0.585	0.744	0.625	0.784	16.7	0.06	178.92	21.48	200.40	OK
	B53	1.8					-8.63	-6.29	0.02	0.02	-0.02	-0.02	16.640	16.650	16.643	16.653	16.640	16.643	16.650	16.653	7.761	7.771	7.764	7.774	7.761	7.764	7.771	7.774						
N+5.45	B54	0	2.55	VIG15X30	0.15	0.25	-1.37	0	0.14	0.1	-0.14	-0.1	1.602	1.672	1.617	1.687	1.609	1.630	1.659	1.680	1.191	1.261	1.206	1.276	1.198	1.219	1.248	1.269	1.7	0.06	178.92	21.48	200.40	OK
	B54	2.55					1.38	0	0.14	0.1	-0.14	-0.1	1.699	1.629	1.684	1.614	1.692	1.671	1.642	1.621	1.285	1.215	1.270	1.200	1.278	1.257	1.228	1.207						
N+2.70	B54	0	2.55	VIG15X30	0.15	0.25	-5.81	-1.61	0.12	0.12	-0.12	-0.12	8.543	8.603	8.561	8.621	8.543	8.561	8.603	8.621	5.190	5.250	5.208	5.268	5.190	5.208	5.250	5.268	8.7	0.06	178.92	21.48	200.40	OK
	B54	2.55					5.84	1.63	0.12	0.12	-0.12	-0.12	8.677	8.617	8.659	8.599	8.677	8.659	8.617	8.599	5.295	5.235	5.277	5.217	5.295	5.277	5.235	5.217						
N+5.45	B55	0	2.55	VIG15X30	0.15	0.25	-1.39	-0.01	0.14	0.14	-0.14	-0.14	1.633	1.703	1.654	1.724	1.633	1.654	1.703	1.724	1.206	1.276	1.227	1.297	1.206	1.227	1.276	1.297	1.7	0.06	178.92	21.48	200.40	OK
	B55	2.55					1.36	-0.01	0.14	0.14	-0.14	-0.14	1.668	1.598	1.647	1.577	1.668	1.647	1.598	1.577	1.270	1.200	1.249	1.179	1.270	1.249	1.200	1.179						
N+2.70	B55	0	2.55	VIG15X30	0.15	0.25	-5.85	-1.63	0.14	0.18	-0.14	-0.18	8.602	8.672	8.629	8.699	8.595	8.616	8.685	8.706	5.217	5.287	5.244	5.314	5.210	5.231	5.300	5.321	8.7	0.06	178.92	21.48	200.40	OK
	B55	2.55					5.81	1.61	0.14	0.18	-0.14	-0.18	8.631	8.561	8.604	8.534	8.638	8.617	8.548	8.527	5.278	5.208	5.251	5.181	5.285	5.264	5.195	5.174						
N+2.70	B56	0	2.55	VIG15X30	0.15	0.25	-1.39	0	0.36	0.34	-0.36	-0.34	1.553	1.733	1.604	1.784	1.556	1.610	1.726	1.780	1.136	1.316	1.187	1.367	1.139	1.193	1.309	1.363	1.8	0.06	178.92	21.48	200.40	OK
	B56	2.55					1.37	0	0.36	0.34	-0.36	-0.34	1.760	1.580	1.709	1.529	1.756	1.702	1.586	1.532	1.349	1.169	1.298	1.118	1.345	1.291	1.175	1.121						
N+2.70	B57	0	2.55	VIG15X30	0.15	0.25	-1.37	0	0.38	0.44	-0.38	-0.44	1.516	1.706	1.582	1.772	1.506	1.563	1.726	1.783	1.105	1.295	1.171	1.361	1.095	1.152	1.315	1.372	1.8	0.06	178.92	21.48	200.40	OK
	B57	2.55					1.38	0	0.38	0.44	-0.38	-0.44	1.784	1.594	1.718	1.528	1.795	1.738	1.575	1.518	1.370	1.180	1.304	1.114	1.381	1.324	1.161	1.104						

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b)

f'c = **21.0** MPa
fy = **420** MPa
$\Phi_{Cortante}$ = **0.75**
Estribos Φ = **9.5** mm
Av = **71** mm^2
R= **4.00**

2VE = Cortante maximo obtenido de las combinaciones de carga de diseño que incluyan E, considerando E, como el doble del prescrito por el reglamento general legalmente adoptado para diseño sismico vigente.

COMDIS3 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS4 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3Ey)))
COMDIS5 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS6 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS7 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS8 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS9 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS10 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))
COMDIS11 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS12 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3Ey))
COMDIS13 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS14 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS15 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS16 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS17 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS17 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			V2						$2V_E$ Combinaciones de carga de diseño para el doble del cortante donde se incluya E																$2V_{E max}$	S	ΦVs	ΦVc	ΦVn	ΦVn > $2V_{Emax}$
	ELEMENTO No.	(m)	(m)	SECCION	b (m)	d (m)	C.M. (KN.m)	C.V. (KN.m)	SISMO X (KN.m)	SISMO Y (KN.m)	-SISMO X (KN.m)	-SISMO Y (KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18	(kN)	(m)	(kN)	(kN)	(kN)	
N+5.45	B58	0	3	VIG15X30	0.15	0.25	-0.55	-0.14	0.12	0.02	-0.12	-0.02	0.769	0.829	0.772	0.832	0.786	0.804	0.796	0.814	0.464	0.524	0.467	0.527	0.481	0.499	0.491	0.509	0.8	0.06	178.92	21.48	200.40	OK
	B58	3					0.27	0.01	0.18	0.02	-0.18	-0.02	0.381	0.291	0.378	0.288	0.353	0.326	0.343	0.316	0.290	0.200	0.287	0.197	0.262	0.235	0.252	0.225						
N+5.45	B59	0	3	VIG15X30	0.15	0.25	-0.28	-0.01	0.18	0.02	-0.18	-0.02	0.300	0.390	0.303	0.393	0.328	0.355	0.338	0.365	0.206	0.296	0.209	0.299	0.234	0.261	0.244	0.271	0.8	0.06	178.92	21.48	200.40	OK
	B59	3					0.56	0.14	0.12	0.02	-0.12	-0.02	0.844	0.784	0.841	0.781	0.826	0.808	0.816	0.798	0.536	0.476	0.533	0.473	0.518	0.500	0.508	0.490						
N+2.70	B60	0	3	VIG15X30	0.15	0.25	-9.26	-2.91	0.18	0.08	-0.18	-0.08	13.971	14.061	13.983	14.073	13.989	14.016	14.029	14.056	8.283	8.373	8.295	8.385	8.301	8.328	8.341	8.368	14.1	0.06	178.92	21.48	200.40	OK
	B60	3					1.6	0.22	16.66	0.78	-16.66	-0.78	6.364	1.967	6.247	2.084	3.585	1.086	3.195	0.696	5.664	2.667	5.547	2.784	2.885	0.386	2.495	0.004						
N+2.70	B61	0	3	VIG15X30	0.15	0.25	-1.78	-0.31	16.64	1.18	-16.64	-1.18	1.803	6.518	1.626	6.695	0.903	3.399	1.493	3.989	2.647	5.674	2.470	5.851	0.059	2.555	0.649	3.145	14.1	0.06	178.92	21.48	200.40	OK
	B61	3					9.26	2.91	0.18	0.1	-0.18	-0.1	14.075	13.985	14.060	13.970	14.061	14.034	14.011	13.984	8.387	8.297	8.372	8.282	8.373	8.346	8.323	8.296						
N+5.45	B62	0	2.55	VIG15X30	0.15	0.25	-6.31	-2.57	0.12	0.14	-0.12	-0.14	10.102	10.162	10.123	10.183	10.098	10.116	10.168	10.186	5.639	5.699	5.660	5.720	5.635	5.653	5.705	5.723	11.1	0.06	178.92	21.48	200.40	OK
	B62	2.55					6.87	2.79	0.12	0.14	-0.12	-0.14	11.075	11.015	11.054	10.994	11.078	11.060	11.008	10.990	6.224	6.164	6.203	6.143	6.227	6.209	6.157	6.139						
N+2.70	B62	0	2.55	VIG15X30	0.15	0.25	-6.17	-3.42	0.08	0.08	-0.08	-0.08	10.798	10.838	10.810	10.850	10.798	10.810	10.838	10.850	5.527	5.567	5.539	5.579	5.527	5.539	5.567	5.579	11.9	0.06	178.92	21.48	200.40	OK
	B62	2.55					6.72	3.78	0.08	0.08	-0.08	-0.08	11.870	11.830	11.858	11.818	11.870	11.858	11.830	11.818	6.074	6.034	6.062	6.022	6.074	6.062	6.034	6.022						
N+5.45	B63	0	2.55	VIG15X30	0.15	0.25	-6.9	-2.79	0.06	0.2	-0.06	-0.2	11.040	11.070	11.070	11.100	11.016	11.025	11.116	11.125	6.180	6.210	6.210	6.240	6.156	6.165	6.256	6.265	11.1	0.06	178.92	21.48	200.40	OK
	B63	2.55					6.28	2.57	0.06	0.2	-0.06	-0.2	10.136	10.106	10.106	10.076	10.161	10.152	10.061	10.052	5.682	5.652	5.652	5.622	5.707	5.698	5.607	5.598						
N+2.70	B63	0	2.55	VIG15X30	0.15	0.25	-6.77	-3.76	0.04	0.12	-0.04	-0.12	11.865	11.885	11.883	11.903	11.851	11.857	11.911	11.917	6.074	6.094	6.092	6.112	6.060	6.066	6.120	6.126	11.9	0.06	178.92	21.48	200.40	OK
	B63	2.55					6.13	3.44	0.04	0.12	-0.04	-0.12	10.815	10.795	10.797	10.777	10.829	10.823	10.769	10.763	5.536	5.516	5.518	5.498	5.550	5.544	5.490	5.484						
N+2.70	B64	0	2.55	VIG15X30	0.15	0.25	-7.61	-2.26	0.24	0.42	-0.24	-0.42	11.301	11.421	11.364	11.484	11.269	11.305	11.479	11.515	6.758	6.878	6.821	6.941	6.726	6.762	6.936	6.972	11.8	0.06	178.92	21.48	200.40	OK
	B64	2.55					7.76	2.33	0.24	0.42	-0.24	-0.42	11.734	11.614	11.671	11.551	11.765	11.729	11.555	11.519	7.076	6.956	7.013	6.893	7.107	7.071	6.897	6.861						
N+2.70	B65	0	2.55	VIG15X30	0.15	0.25	-7.8	-2.34	0.2	0.58	-0.2	-0.58	11.607	11.707	11.694	11.794	11.540	11.570	11.830	11.860	6.927	7.027	7.014	7.114	6.860	6.890	7.150	7.180	11.9	0.06	178.92	21.48	200.40	OK
	B65	2.55					7.57	2.25	0.2	0.58	-0.2	-0.58	11.428	11.328	11.341	11.241	11.494	11.464	11.204	11.174	6.907	6.807	6.820	6.720	6.973	6.943	6.683	6.653						
N+5.45	B66	0	1.5	VIG15X30	0.15	0.25	4.73	2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257	16.8	0.06	178.92	21.48	200.40	OK
	B66	1.5					10.29	4.45	0	0	0	0	16.798	16.798	16.798	16.798	16.798	16.798	16.798	16.798	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261						
N+5.45	B67	0	1.5	VIG15X30	0.15	0.25	-10.29	-4.45	0	0	0	0	16.798	16.798	16.798	16.798	16.798	16.798	16.798	16.798	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261	16.8	0.06	178.92	21.48	200.40	OK
	B67	1.5					-4.73	-2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257						
N+5.45	B68	0	2.55	VIG15X30	0.15	0.25	-4.18	-1.44	0.18	0.32	-0.18	-0.32	6.387	6.477	6.435	6.525	6.363	6.390	6.523	6.550	3.693	3.783	3.741	3.831	3.669	3.696	3.829	3.856	6.7	0.06	178.92	21.48	200.40	OK
	B68	2.55					4.26	1.48	0.18	0.32	-0.18	-0.32	6.661	6.571	6.613	6.523	6.686	6.659	6.526	6.499	3.903	3.813	3.855	3.765	3.928	3.901	3.768	3.741						
N+5.45	B69	0	2.55	VIG15X30	0.15	0.25	-4.28	-1.49	0.16	0.44	-0.16	-0.44	6.553	6.633	6.619	6.699	6.504	6.528	6.724	6.748	3.779	3.859	3.845	3.925	3.730	3.754	3.950	3.974	6.7	0.06	178.92	21.48	200.40	OK
	B69	2.55					4.17	1.44	0.16	0.44	-0.16	-0.44	6.517	6.437	6.451	6.371	6.566	6.542	6.346	6.322	3.826	3.746	3.760	3.680	3.875	3.851	3.655	3.631						
N+2.70	B70	0	1.8	VIG15X30	0.15	0.25	6.43	5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787	13.6	0.06	178.92	21.48	200.40	OK
	B70	1.8					0.94	0.24	0.98	0.06	-0.98	-0.06	1.618	1.128	1.609	1.119	1.457	1.310	1.427	1.280	1.096	0.606	1.087	0.597	0.935	0.788	0.905	0.758						
N+2.70	B71	0	1.8	VIG15X30	0.15	0.25	-0.93	-0.23	1	0.04	-1	-0.04	1.093	1.593	1.099	1.599	1.261	1.411	1.281	1.431	0.584	1.084	0.590	1.090	0.752	0.902	0.772	0.922	13.6	0.06	178.92	21.48	200.40	OK
	B71	1.8					-6.43	-5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787						
N+5.45	B72	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.14	0.22	-0.14	-0.22	1.571	1.641	1.604	1.674	1.557	1.578	1.667	1.688	1.173	1.243	1.206	1.276	1.159	1.180	1.269	1.290	1.7	0.06	178.92	21.48	200.40	OK
	B72	2.55					1.39	0.01	0.14	0.22	-0.14	-0.22	1.730	1.660	1.697	1.627	1.744	1.723	1.634	1.613	1.303	1.233	1.270	1.200	1.317	1.296	1.207	1.186						
N+2.70	B72	0	2.55	VIG15X30	0.15	0.25	-5.82	-1.61	0.14	0.22	-0.14	-0.22	8.543	8.613	8.576	8.646	8.529	8.550	8.639	8.660	5.187	5.257	5.220	5.290	5.173	5.194	5.283	5.304	8.7	0.06	178.92	21.48	200.40	OK
	B72	2.55					5.84	1.63	0.14	0.22	-0.14	-0.22	8.690	8.620	8.657	8.587	8.704	8.683	8.594	8.573	5.308	5.238	5.275	5.205	5.322	5.301	5.212	5.191						
N+5.45	B73	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.14	0.3	-0.14	-0.3	1.633	1.703	1.678	1.748	1.605	1.626	1.755	1.776	1.203	1.273	1.248	1.318	1.175	1.196	1.325	1.346	1.8	0.06	178.92	21.48	200.40	OK
	B73	2.55					1.35	-0.01	0.14	0.3	-0.14	-0.3	1.668	1.598	1.623	1.553	1.696	1.675	1.546	1.525	1.273	1.203	1.228	1.158	1.301	1.280	1.151	1.130						
N+2.70	B73	0	2.55	VIG15X30	0.15	0.25	-5.85	-1.63	0.16	0.3	-0.16	-0.3	8.588	8.668	8.633	8.713	8.563	8.587	8.713	8.737	5.203	5.283	5.248	5.328	5.178	5.202	5.328	5.352	8.7	0.06	178.92	21.48	200.40	OK
	B73	2.55					5.81	1.61	0.16	0.3	-0.16	-0.3	8.645	8.565	8.600	8.520	8.669	8.645	8.519	8.495	5.292	5.212	5.247	5.167	5.316	5.292	5.166	5.142						
N+2.70	B74	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.28	0.5	-0.28	-0.5	1.515	1.655	1.590	1.730	1.476	1.518	1.726	1.768	1.117	1.257	1.192	1.332	1.078	1.120	1.328	1.370	1.8	0.06	178.92	21.48	200.40	OK
	B74	2.55					1.39	0.01	0.28	0.5	-0.28	-0.5	1.786	1.646	1.711	1.571	1.824	1.782	1.574	1.532	1.359	1.219	1.284	1.144	1.397	1.355	1.147	1.105						
N+2.70	B75	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.26	0.64	-0.26	-0.64	1.577	1.707	1.673	1.803	1.511	1.550	1.831	1.870	1.147	1.277	1.243	1.373	1.081	1.120	1.401	1.440	1.9	0.06	178.92	21.48	200.40	OK
	B75	2.55					1.35	-0.01	0.26	0.64	-0.26	-0.64	1.723	1.593	1.627	1.497	1.790	1.751	1.470	1.431	1.328	1.198	1.232	1.102	1.395	1.356	1.075	1.036						
N+5.45	B76	0	3	VIG15X30	0.15	0.25	-0.73	-0.23	0.1	0	-0.1	0	1.081	1.131	1.081	1.131	1.099	1.114	1.099	1.114	0.632	0.682	0.632	0.682	0.650	0.665	0.650	0.665	1.1	0.06	178.92	21.48	200.40	OK
	B76	3					0.28	0.01	0.16	0.02	-0.16	-0.02	0.388	0.308	0.385	0.305	0.363	0.339	0.353	0.329	0.294	0.214	0.291	0.211	0.269	0.245	0.259	0.235						
N+5.45	B77	0	3	VIG15X30	0.15	0.25	-0.28	-0.01	0.16	0	-0.16	0	0.306	0.386	0.306	0.386	0.334	0.358	0.334	0.358	0.212	0.292	0.212	0.292	0.240	0.264	0.240	0.264	1.1	0.06	178.92	21.48	200.40	OK
	B77	3					0.73	0.23	0.1	0	-0.1	0	1.131	1.081	1.131	1.081	1.114	1.099	1.114	1.099	0.682	0.632	0.682	0.632	0.665	0.650	0.665	0.650						
N+2.70	B78	0	3	VIG15X30	0.15	0.25	-9.26	-2.91	0.18	0.04	-0.18	-0.04	13.974	14.064	13.980	14.070	13.999	14.026	14.019	14.046	8.286	8.376	8.292	8.382	8.311	8.338	8.331	8.358	14.1	0.06	178.92	21.48	200.40	OK
	B78	3					1.62	0.21	15.24	1.26	-15.24	-1.26	6.059	1.562	5.870	1.751	3.612	1.326	2.982	0.696	5.363	2.258	5.174	2.447	2.916	0.630	2.286	0.000						
N+2.70	B79	0	3	VIG15X30	0.15	0.25	-1.78	-0.3	15.3	0.78	-15.3	-0.78	1.448	6.203	1.331	6.320	1.094	3.389	1.484	3.779	2.282	5.369	2.165	5.486	0.260	2.555	0.650	2.945	14.1	0.06	178.92	21.48	200.40	OK
	B79	3					9.26	2.91	0.18	0.04	-0.18	-0.04	14.070	13.980	14.064	13.974	14.046	14.019	14.026	13.999	8.382	8.292	8.376	8.286	8.358	8.331	8.338	8.311						
N+5.45	B80	0	2.55	VIG15X30	0.15	0.25	-6.63	-2.69	0.14	0.14	-0.14	-0.14	10.601	10.671	10.622	10.692	10.601	10.622	10.671	10.692	5.922	5.992	5.943	6.013	5.922	5.943	5.992	6.013	10.7	0.06	178.92	21.48	200.40	OK
	B80	2.55					6.55	2.66	0.14	0.14	-0.14	-0.14	10.566	10.496	10.545	10.475	10.566	10.545	10.496	10.475	5.941	5.871	5.920	5.850	5.941	5.920	5.871	5.850						
N+2.70	B80	0	2.55	VIG15X30	0.15	0.25	-6.49	-3.63	0.08	0.08	-0.08	-0.08	11.392	11.432	11.404	11.444	11.392	11.404	11.432	11.444	5.815	5.855	5.827	5.867	5.815	5.827	5.855	5.867	11.4	0.06	178.92	21.48	200.40	OK
	B80	2.55					6.4	3.57	0.08	0.08	-0.08	-0.08	11.276	11.236	11.264	11.224	11.276	11.264	11.236	11.224	5.786	5.746	5.774	5.734	5.786	5.774	5.746	5.734						
N+5.45	B81	0	2.55	VIG15X30	0.15	0.25	-6.55	-2.67	0.14	0.18	-0.14	-0.18	10.482	10.552	10.509	10.579	10.475	10.496	10.565	10.586	5.847	5.917	5.874	5.944	5.840	5.861	5.930	5.951	10.7	0.06	178.92	21.48	200.40	OK
	B81	2.55					6.63	2.69	0.14	0.18	-0.14	-0.18	10.695	10.625	10.668	10.598	10.702	10.681	10.612	10.591	6.016	5.946	5.989	5.919	6.023	6.002	5.933	5.912						
N+2.70	B81	0	2.55	VIG15X30	0.15	0.25	-6.4	-3.57	0.08	0.12	-0.08	-0.12	11.221	11.261	11.239	11.279	11.214	11.226	11.274	11.286	5.731	5.771	5.749	5.789	5.724	5.736	5.784	5.796	11.5	0.06	178.92	21.48	200.40	OK
	B81	2.55					6.5	3.63	0.08	0.12	-0.08	-0.12	11.459	11.419	11.441	11.401	11.466	11.454	11.406	11.394	5.879	5.839	5.861	5.821	5.886	5.874	5.826	5.814						
N+2.70	B82	0	2.55	VIG15X30	0.15	0.25	-7.67	-2.29	0.28	0.42	-0.28	-0.42	11.393	11.533	11.456	11.596	11.368	11.410	11.578	11.620	6.802	6.942	6.865	7.005	6.777	6.819	6.987	7.029	11.7	0.06	178.92	21.48	200.40	OK
	B82	2.55					7.7	2.3	0.28	0.42	-0.28	-0.42	11.642	11.502	11.579	11.439	11.666	11.624	11.456	11.414	7.032	6.892	6.969	6.829	7.056	7.014	6.846	6.804						
N+2.70	B83	0	2.55	VIG15X30	0.15	0.25	-7.71	-2.31	0.24	0.6	-0.24	-0.6	11.457	11.577	11.547	11.667	11.394	11.430	11.694	11.730	6.834	6.954	6.924	7.044	6.771	6.807	7.071	7.107	11.7	0.06	178.92	21.48	200.40	OK
	B83	2.55					7.65	2.28	0.24	0.6	-0.24	-0.6	11.565	11.445	11.475	11.355	11.628	11.592	11.328	11.292	6.990	6.870	6.900	6.780	7.053	7.017	6.753	6.717						
N+5.45	B84	0	1.5	VIG15X30	0.15	0.25	4.73	2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257	16.8	0.06	178.92	21.48	200.40	OK
	B84	1.5					10.29	4.45	0	0	0	0	16.798	16.798	16.798	16.798	16.798	16.798	16.798	16.798	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261						
N+5.45	B85	0	1.5	VIG15X30	0.15	0.25	-10.29	-4.45	0	0	0	0	16.798	16.798	16.798	16.798	16.798	16.798	16.798	16.798	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261	16.8	0.06	178.92	21.48	200.40	OK
	B85	1.5					-4.73	-2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257						
N+5.45	B86	0	2.55	VIG15X30	0.15	0.25	-4.2	-1.45	0.2	0.34	-0.2	-0.34	6.415	6.515	6.466	6.566	6.390	6.420	6.560	6.590	3.705	3.805	3.756	3.856	3.680	3.710	3.850	3.880	6.7	0.06	178.92	21.48	200.40	OK
	B86	2.55					4.25	1.47	0.2	0.34	-0.2	-0.34	6.646	6.546	6.595	6.495	6.670	6.640	6.500	6.470	3.901	3.801	3.850	3.750	3.925	3.895	3.755	3.725						
N+5.45	B87	0	2.55	VIG15X30	0.15	0.25	-4.26	-1.48	0.16	0.44	-0.16	-0.44	6.519	6.599	6.585	6.665	6.470	6.494	6.690	6.714	3.761	3.841	3.827	3.907	3.712	3.736	3.932	3.956	6.7	0.06	178.92	21.48	200.40	OK
	B87	2.55					4.19	1.45	0.16	0.44	-0.16	-0.44	6.551	6.471	6.485	6.405	6.600	6.576	6.380	6.356	3.844	3.764	3.778	3.698	3.893	3.869	3.673	3.649						
N+2.70	B88	0	1.8	VIG15X30	0.15	0.25	6.43	5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787	13.6	0.06	178.92	21.48	200.40	OK
	B88	1.8					0.94	0.24	0.9	0.06	-0.9	-0.06	1.598	1.148	1.589	1.139	1.451	1.316	1.421	1.286	1.076	0.626	1.067	0.617	0.929	0.794	0.899	0.764						
N+2.70	B89	0	1.8	VIG15X30	0.15	0.25	-0.93	-0.23	0.9	0.04	-0.9	-0.04	1.118	1.568	1.124	1.574	1.269	1.404	1.289	1.424	0.609	1.059	0.615	1.065	0.760	0.895	0.780	0.915	13.6	0.06	178.92	21.48	200.40	OK
	B89	1.8					-6.43	-5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787						
N+5.45	B90	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.14	0.22	-0.14	-0.22	1.571	1.641	1.604	1.674	1.557	1.578	1.667	1.688	1.173	1.243	1.206	1.276	1.159	1.180	1.269	1.290	1.7	0.06	178.92	21.48	200.40	OK
	B90	2.55					1.39	0.01	0.14	0.22	-0.14	-0.22	1.730	1.660	1.697	1.627	1.744	1.723	1.634	1.613	1.303	1.233	1.270	1.200	1.317	1.296	1.207	1.186						
N+2.70	B90	0	2.55	VIG15X30	0.15	0.25	-5.81	-1.61	0.14	0.22	-0.14	-0.22	8.531	8.601	8.564	8.634	8.517	8.538	8.627	8.648	5.178	5.248	5.211	5.281	5.164	5.185	5.274	5.295	8.7	0.06	178.92	21.48	200.40	OK
	B90	2.55					5.85	1.63	0.14	0.22	-0.14	-0.22	8.702	8.632	8.669	8.599	8.716	8.695	8.606	8.585	5.317	5.247	5.284	5.214	5.331	5.310	5.221	5.200						
N+5.45	B91	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.14	0.3	-0.14	-0.3	1.633	1.703	1.678	1.748	1.605	1.626	1.755	1.776	1.203	1.273	1.248	1.318	1.175	1.196	1.325	1.346	1.8	0.06	178.92	21.48	200.40	OK
	B91	2.55					1.35	-0.01	0.14	0.3	-0.14	-0.3	1.668	1.598	1.623	1.553	1.696	1.675	1.546	1.525	1.273	1.203	1.228	1.158	1.301	1.280	1.151	1.130						
N+2.70	B91	0	2.55	VIG15X30	0.15	0.25	-5.85	-1.63	0.14	0.3	-0.14	-0.3	8.593	8.663	8.638	8.708	8.565	8.586	8.715	8.736	5.208	5.278	5.253	5.323	5.180	5.201	5.330	5.351	8.7	0.06	178.92	21.48	200.40	OK
	B91	2.55					5.8	1.61	0.14	0.3	-0.14	-0.3	8.628	8.558	8.583	8.513	8.656	8.635	8.506	8.485	5.278	5.208	5.233	5.163	5.306	5.285	5.156	5.135						
N+2.70	B92	0	2.55	VIG15X30	0.15	0.25	-1.36	0	0.28	0.46	-0.28	-0.46	1.528	1.668	1.597	1.737	1.496	1.538	1.726	1.768	1.120	1.260	1.189	1.329	1.088	1.130	1.318	1.360	1.8	0.06	178.92	21.48	200.40	OK
	B92	2.55					1.39	0	0.28	0.46	-0.28	-0.46	1.773	1.633	1.704	1.564	1.804	1.762	1.574	1.532	1.356	1.216	1.287	1.147	1.387	1.345	1.157	1.115						
N+2.70	B93	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.26	0.58	-0.26	-0.58	1.582	1.712	1.669	1.799	1.526	1.565	1.816	1.855	1.152	1.282	1.239	1.369	1.096	1.135	1.386	1.425	1.9	0.06	178.92	21.48	200.40	OK
	B93	2.55					1.36	-0.01	0.26	0.58	-0.26	-0.58	1.731	1.601	1.644	1.514	1.787	1.748	1.497	1.458	1.333	1.203	1.246	1.116	1.389	1.350	1.099	1.060						
N+5.45	B94	0	3	VIG15X30	0.15	0.25	-0.73	-0.23	0.1	0	-0.1	0	1.081	1.131	1.081	1.131	1.099	1.114	1.099	1.114	0.632	0.682	0.632	0.682	0.650	0.665	0.650	0.665	1.1	0.06	178.92	21.48	200.40	OK
	B94	3					0.28	0.01	0.16	0.02	-0.16	-0.02	0.388	0.308	0.385	0.305	0.363	0.339	0.353	0.329	0.294	0.214	0.291	0.211	0.269	0.245	0.259	0.235						

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b)

f'c = 21.0 MPa
fy = 420 MPa
$\Phi_{Cortante}$ = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

2VE = Cortante maximo obtenido de las combinaciones de carga de diseño que incluyan E, considerando E, como el doble del prescrito por el reglamento general legalmente adoptado para diseño sismico vigente.

COMDIS3 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS4 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3Ey)))
COMDIS5 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS6 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS7 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS8 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS9 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS10 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))
COMDIS11 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS12 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3Ey))
COMDIS13 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS14 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS15 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS16 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS17 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS17 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			V2						$2V_E$																$2V_{E max}$	S	ΦVs	ΦVc	ΦVn	$ΦVn > 2V_{Emax}$
	ELEMENTO			SECCION	b	d	C.M.	C.V.	SISMO X	SISMO Y	-SISMO X	-SISMO Y	Combinaciones de carga de diseño para el doble del cortante donde se incluya E																					
	No.	(m)	(m)		(m)	(m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18	(kN)	(m)	(kN)	(kN)	(kN)	
N+5.45	B95	0	3	VIG15X30	0.15	0.25	-0.28	-0.01	0.16	0	-0.16	0	0.306	0.386	0.306	0.386	0.334	0.358	0.334	0.358	0.212	0.292	0.212	0.292	0.240	0.264	0.240	0.264	1.1	0.06	178.92	21.48	200.40	OK
	B95	3					0.73	0.23	0.1	0	-0.1	0	1.131	1.081	1.131	1.081	1.114	1.099	1.114	1.099	0.682	0.632	0.682	0.632	0.665	0.650	0.665	0.650						
N+2.70	B96	0	3	VIG15X30	0.15	0.25	-9.26	-2.91	0.16	0.04	-0.16	-0.04	13.979	14.059	13.985	14.065	14.000	14.024	14.020	14.044	8.291	8.371	8.297	8.377	8.312	8.336	8.332	8.356	14.1	0.06	178.92	21.48	200.40	OK
	B96	3					1.6	0.2	13.76	1.48	-13.76	-1.48	5.671	1.209	5.449	1.431	3.522	1.458	2.782	0.718	4.991	1.889	4.769	2.111	2.842	0.778	2.102	0.038						
N+2.70	B97	0	3	VIG15X30	0.15	0.25	-1.76	-0.3	13.86	0.92	-13.86	-0.92	1.122	5.808	0.984	5.946	1.143	3.222	1.603	3.682	1.950	4.980	1.812	5.118	0.315	2.394	0.775	2.854	14.1	0.06	178.92	21.48	200.40	OK
	B97	3					9.26	2.91	0.16	0.02	-0.16	-0.02	14.064	13.984	14.061	13.981	14.039	14.015	14.029	14.005	8.376	8.296	8.373	8.293	8.351	8.327	8.341	8.317						
N+5.45	B98	0	2.55	VIG15X30	0.15	0.25	-6.57	-2.67	0.14	0.14	-0.14	-0.14	10.509	10.579	10.530	10.600	10.509	10.530	10.579	10.600	5.868	5.938	5.889	5.959	5.868	5.889	5.938	5.959	10.7	0.06	178.92	21.48	200.40	OK
	B98	2.55					6.61	2.69	0.14	0.14	-0.14	-0.14	10.668	10.598	10.647	10.577	10.668	10.647	10.598	10.577	5.995	5.925	5.974	5.904	5.995	5.974	5.925	5.904						
N+2.70	B98	0	2.55	VIG15X30	0.15	0.25	-6.43	-3.59	0.08	0.08	-0.08	-0.08	11.280	11.320	11.292	11.332	11.280	11.292	11.320	11.332	5.761	5.801	5.773	5.813	5.761	5.773	5.801	5.813	11.4	0.06	178.92	21.48	200.40	OK
	B98	2.55					6.46	3.61	0.08	0.08	-0.08	-0.08	11.388	11.348	11.376	11.336	11.388	11.376	11.348	11.336	5.840	5.800	5.828	5.788	5.840	5.828	5.800	5.788						
N+5.45	B99	0	2.55	VIG15X30	0.15	0.25	-6.62	-2.69	0.12	0.18	-0.12	-0.18	10.591	10.651	10.618	10.678	10.580	10.598	10.670	10.688	5.915	5.975	5.942	6.002	5.904	5.922	5.994	6.012	10.7	0.06	178.92	21.48	200.40	OK
	B99	2.55					6.56	2.67	0.12	0.18	-0.12	-0.18	10.586	10.526	10.559	10.499	10.596	10.578	10.506	10.488	5.948	5.888	5.921	5.861	5.958	5.940	5.868	5.850						
N+2.70	B99	0	2.55	VIG15X30	0.15	0.25	-6.47	-3.61	0.08	0.12	-0.08	-0.12	11.345	11.385	11.363	11.403	11.338	11.350	11.398	11.410	5.794	5.834	5.812	5.852	5.787	5.799	5.847	5.859	11.4	0.06	178.92	21.48	200.40	OK
	B99	2.55					6.43	3.59	0.08	0.12	-0.08	-0.12	11.335	11.295	11.317	11.277	11.342	11.330	11.282	11.270	5.816	5.776	5.798	5.758	5.823	5.811	5.763	5.751						
N+2.70	B100	0	2.55	VIG15X30	0.15	0.25	-7.66	-2.28	0.3	0.46	-0.3	-0.46	11.363	11.513	11.432	11.582	11.335	11.380	11.565	11.610	6.785	6.935	6.854	7.004	6.757	6.802	6.987	7.032	11.7	0.06	178.92	21.48	200.40	OK
	B100	2.55					7.71	2.31	0.3	0.46	-0.3	-0.46	11.672	11.522	11.603	11.453	11.700	11.655	11.470	11.425	7.049	6.899	6.980	6.830	7.077	7.032	6.847	6.802						
N+2.70	B101	0	2.55	VIG15X30	0.15	0.25	-7.72	-2.31	0.24	0.6	-0.24	-0.6	11.469	11.589	11.559	11.679	11.406	11.442	11.706	11.742	6.843	6.963	6.933	7.053	6.780	6.816	7.080	7.116	11.7	0.06	178.92	21.48	200.40	OK
	B101	2.55					7.64	2.28	0.24	0.6	-0.24	-0.6	11.553	11.433	11.463	11.343	11.616	11.580	11.316	11.280	6.981	6.861	6.891	6.771	7.044	7.008	6.744	6.708						
N+5.45	B102	0	1.5	VIG15X30	0.15	0.25	4.73	2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257	16.8	0.06	178.92	21.48	200.40	OK
	B102	1.5					10.29	4.46	0	0	0	0	16.808	16.808	16.808	16.808	16.808	16.808	16.808	16.808	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261						
N+5.45	B103	0	1.5	VIG15X30	0.15	0.25	-10.29	-4.45	0	0	0	0	16.798	16.798	16.798	16.798	16.798	16.798	16.798	16.798	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261	16.8	0.06	178.92	21.48	200.40	OK
	B103	1.5					-4.73	-2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257						
N+5.45	B104	0	2.55	VIG15X30	0.15	0.25	-4.2	-1.45	0.2	0.34	-0.2	-0.34	6.415	6.515	6.466	6.566	6.390	6.420	6.560	6.590	3.705	3.805	3.756	3.856	3.680	3.710	3.850	3.880	6.7	0.06	178.92	21.48	200.40	OK
	B104	2.55					4.25	1.48	0.2	0.34	-0.2	-0.34	6.656	6.556	6.605	6.505	6.680	6.650	6.510	6.480	3.901	3.801	3.850	3.750	3.925	3.895	3.755	3.725						
N+5.45	B105	0	2.55	VIG15X30	0.15	0.25	-4.26	-1.48	0.16	0.44	-0.16	-0.44	6.519	6.599	6.585	6.665	6.470	6.494	6.690	6.714	3.761	3.841	3.827	3.907	3.712	3.736	3.932	3.956	6.7	0.06	178.92	21.48	200.40	OK
	B105	2.55					4.19	1.45	0.16	0.44	-0.16	-0.44	6.551	6.471	6.485	6.405	6.600	6.576	6.380	6.356	3.844	3.764	3.778	3.698	3.893	3.869	3.673	3.649						
N+2.70	B106	0	1.8	VIG15X30	0.15	0.25	6.43	5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787	13.6	0.06	178.92	21.48	200.40	OK
	B106	1.8					0.94	0.24	0.82	0.06	-0.82	-0.06	1.578	1.168	1.569	1.159	1.445	1.322	1.415	1.292	1.056	0.646	1.047	0.637	0.923	0.800	0.893	0.770						
N+2.70	B107	0	1.8	VIG15X30	0.15	0.25	-0.93	-0.23	0.82	0.04	-0.82	-0.04	1.138	1.548	1.144	1.554	1.275	1.398	1.295	1.418	0.629	1.039	0.635	1.045	0.766	0.889	0.786	0.909	13.6	0.06	178.92	21.48	200.40	OK
	B107	1.8					-6.43	-5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787						
N+5.45	B108	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.14	0.2	-0.14	-0.2	1.572	1.642	1.602	1.672	1.562	1.583	1.662	1.683	1.174	1.244	1.204	1.274	1.164	1.185	1.264	1.285	1.7	0.06	178.92	21.48	200.40	OK
	B108	2.55					1.39	0.01	0.14	0.2	-0.14	-0.2	1.728	1.658	1.698	1.628	1.739	1.718	1.639	1.618	1.301	1.231	1.271	1.201	1.312	1.291	1.212	1.191						
N+2.70	B108	0	2.55	VIG15X30	0.15	0.25	-5.81	-1.61	0.14	0.22	-0.14	-0.22	8.531	8.601	8.564	8.634	8.517	8.538	8.627	8.648	5.178	5.248	5.211	5.281	5.164	5.185	5.274	5.295	8.7	0.06	178.92	21.48	200.40	OK
	B108	2.55					5.85	1.63	0.14	0.22	-0.14	-0.22	8.702	8.632	8.669	8.599	8.716	8.695	8.606	8.585	5.317	5.247	5.284	5.214	5.331	5.310	5.221	5.200						
N+5.45	B109	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.14	0.3	-0.14	-0.3	1.633	1.703	1.678	1.748	1.605	1.626	1.755	1.776	1.203	1.273	1.248	1.318	1.175	1.196	1.325	1.346	1.8	0.06	178.92	21.48	200.40	OK
	B109	2.55					1.35	-0.01	0.14	0.3	-0.14	-0.3	1.668	1.598	1.623	1.553	1.696	1.675	1.546	1.525	1.273	1.203	1.228	1.158	1.301	1.280	1.151	1.130						
N+2.70	B109	0	2.55	VIG15X30	0.15	0.25	-5.85	-1.63	0.14	0.3	-0.14	-0.3	8.593	8.663	8.638	8.708	8.565	8.586	8.715	8.736	5.208	5.278	5.253	5.323	5.180	5.201	5.330	5.351	8.7	0.06	178.92	21.48	200.40	OK
	B109	2.55					5.8	1.61	0.14	0.3	-0.14	-0.3	8.628	8.558	8.583	8.513	8.656	8.635	8.506	8.485	5.278	5.208	5.233	5.163	5.306	5.285	5.156	5.135						
N+2.70	B110	0	2.55	VIG15X30	0.15	0.25	-1.36	0	0.28	0.46	-0.28	-0.46	1.528	1.668	1.597	1.737	1.496	1.538	1.726	1.768	1.120	1.260	1.189	1.329	1.088	1.130	1.318	1.360	1.8	0.06	178.92	21.48	200.40	OK
	B110	2.55					1.39	0	0.28	0.46	-0.28	-0.46	1.773	1.633	1.704	1.564	1.804	1.762	1.574	1.532	1.356	1.216	1.287	1.147	1.387	1.345	1.157	1.115						
N+2.70	B111	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.26	0.58	-0.26	-0.58	1.582	1.712	1.669	1.799	1.526	1.565	1.816	1.855	1.152	1.282	1.239	1.369	1.096	1.135	1.386	1.425	1.9	0.06	178.92	21.48	200.40	OK
	B111	2.55					1.36	-0.01	0.26	0.58	-0.26	-0.58	1.731	1.601	1.644	1.514	1.787	1.748	1.497	1.458	1.333	1.203	1.246	1.116	1.389	1.350	1.099	1.060						
N+5.45	B112	0	3	VIG15X30	0.15	0.25	-0.73	-0.23	0.08	0	-0.08	0	1.086	1.126	1.086	1.126	1.100	1.112	1.100	1.112	0.637	0.677	0.637	0.677	0.651	0.663	0.651	0.663	1.1	0.06	178.92	21.48	200.40	OK
	B112	3					0.28	0.01	0.14	0	-0.14	0	0.381	0.311	0.381	0.311	0.357	0.336	0.357	0.336	0.287	0.217	0.287	0.217	0.263	0.242	0.263	0.242						
N+5.45	B113	0	3	VIG15X30	0.15	0.25	-0.28	-0.01	0.14	0	-0.14	0	0.311	0.381	0.311	0.381	0.336	0.357	0.336	0.357	0.217	0.287	0.217	0.287	0.242	0.263	0.242	0.263	1.1	0.06	178.92	21.48	200.40	OK
	B113	3					0.73	0.23	0.08	0	-0.08	0	1.126	1.086	1.126	1.086	1.112	1.100	1.112	1.100	0.677	0.637	0.677	0.637	0.663	0.651	0.663	0.651						
N+2.70	B114	0	3	VIG15X30	0.15	0.25	-9.26	-2.91	0.14	0.04	-0.14	-0.04	13.984	14.054	13.990	14.060	14.002	14.023	14.022	14.043	8.296	8.366	8.302	8.372	8.314	8.335	8.334	8.355	14.1	0.06	178.92	21.48	200.40	OK
	B114	3					1.6	0.2	12.4	1.5	-12.4	-1.5	5.333	0.868	5.108	1.093	3.425	1.565	2.675	0.815	4.653	1.548	4.428	1.773	2.745	0.885	1.995	0.135						
N+2.70	B115	0	3	VIG15X30	0.15	0.25	-1.76	-0.3	12.54	0.9	-12.54	-0.9	0.791	5.480	0.656	5.615	1.247	3.128	1.697	3.578	1.619	4.652	1.484	4.787	0.419	2.300	0.869	2.750	14.1	0.06	178.92	21.48	200.40	OK
	B115	3					9.26	2.91	0.14	0.02	-0.14	-0.02	14.059	13.989	14.056	13.986	14.038	14.017	14.028	14.007	8.371	8.301	8.368	8.298	8.350	8.329	8.340	8.319						
N+5.45	B116	0	2.55	VIG15X30	0.15	0.25	-6.57	-2.67	0.14	0.14	-0.14	-0.14	10.509	10.579	10.530	10.600	10.509	10.530	10.579	10.600	5.868	5.938	5.889	5.959	5.868	5.889	5.938	5.959	10.6	0.06	178.92	21.48	200.40	OK
	B116	2.55					6.6	2.68	0.14	0.14	-0.14	-0.14	10.646	10.576	10.625	10.555	10.646	10.625	10.576	10.555	5.986	5.916	5.965	5.895	5.986	5.965	5.916	5.895						
N+2.70	B116	0	2.55	VIG15X30	0.15	0.25	-6.44	-3.59	0.08	0.08	-0.08	-0.08	11.292	11.332	11.304	11.344	11.292	11.304	11.332	11.344	5.770	5.810	5.782	5.822	5.770	5.782	5.810	5.822	11.4	0.06	178.92	21.48	200.40	OK
	B116	2.55					6.46	3.61	0.08	0.08	-0.08	-0.08	11.388	11.348	11.376	11.336	11.388	11.376	11.348	11.336	5.840	5.800	5.828	5.788	5.840	5.828	5.800	5.788						
N+5.45	B117	0	2.55	VIG15X30	0.15	0.25	-6.59	-2.68	0.1	0.18	-0.1	-0.18	10.550	10.600	10.577	10.627	10.536	10.551	10.626	10.641	5.893	5.943	5.920	5.970	5.879	5.894	5.969	5.984	10.6	0.06	178.92	21.48	200.40	OK
	B117	2.55					6.59	2.67	0.1	0.18	-0.1	-0.18	10.617	10.567	10.590	10.540	10.631	10.616	10.541	10.526	5.970	5.920	5.943	5.893	5.984	5.969	5.894	5.879						
N+2.70	B117	0	2.55	VIG15X30	0.15	0.25	-6.46	-3.6	0.06	0.1	-0.06	-0.1	11.330	11.360	11.345	11.375	11.323	11.332	11.373	11.382	5.792	5.822	5.807	5.837	5.785	5.794	5.835	5.844	11.4	0.06	178.92	21.48	200.40	OK
	B117	2.55					6.43	3.6	0.06	0.1	-0.06	-0.1	11.339	11.309	11.324	11.294	11.346	11.337	11.296	11.287	5.810	5.780	5.795	5.765	5.817	5.808	5.767	5.758						
N+2.70	B118	0	2.55	VIG15X30	0.15	0.25	-7.66	-2.28	0.3	0.44	-0.3	-0.44	11.364	11.514	11.430	11.580	11.340	11.385	11.560	11.605	6.786	6.936	6.852	7.002	6.762	6.807	6.982	7.027	11.7	0.06	178.92	21.48	200.40	OK
	B118	2.55					7.71	2.31	0.3	0.44	-0.3	-0.44	11.670	11.520	11.604	11.454	11.695	11.650	11.475	11.430	7.047	6.897	6.981	6.831	7.072	7.027	6.852	6.807						
N+2.70	B119	0	2.55	VIG15X30	0.15	0.25	-7.73	-2.31	0.22	0.56	-0.22	-0.56	11.489	11.599	11.573	11.683	11.430	11.463	11.710	11.743	6.860	6.970	6.944	7.054	6.801	6.834	7.081	7.114	11.7	0.06	178.92	21.48	200.40	OK
	B119	2.55					7.64	2.28	0.22	0.56	-0.22	-0.56	11.545	11.435	11.461	11.351	11.605	11.572	11.325	11.292	6.973	6.863	6.889	6.779	7.033	7.000	6.753	6.720						
N+5.45	B120	0	1.5	VIG15X30	0.15	0.25	4.73	2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257	16.7	0.06	178.92	21.48	200.40	OK
	B120	1.5					10.21	4.42	0	0	0	0	16.672	16.672	16.672	16.672	16.672	16.672	16.672	16.672	9.189	9.189	9.189	9.189	9.189	9.189	9.189	9.189						
N+5.45	B121	0	1.5	VIG15X30	0.15	0.25	-10.29	-4.45	0	0	0	0	16.798	16.798	16.798	16.798	16.798	16.798	16.798	16.798	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261	16.8	0.06	178.92	21.48	200.40	OK
	B121	1.5					-4.73	-2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257						
N+5.45	B122	0	2.55	VIG15X30	0.15	0.25	-4.2	-1.45	0.2	0.34	-0.2	-0.34	6.415	6.515	6.466	6.566	6.390	6.420	6.560	6.590	3.705	3.805	3.756	3.856	3.680	3.710	3.850	3.880	6.7	0.06	178.92	21.48	200.40	OK
	B122	2.55					4.25	1.48	0.2	0.34	-0.2	-0.34	6.656	6.556	6.605	6.505	6.680	6.650	6.510	6.480	3.901	3.801	3.850	3.750	3.925	3.895	3.755	3.725						
N+5.45	B123	0	2.55	VIG15X30	0.15	0.25	-4.26	-1.48	0.16	0.44	-0.16	-0.44	6.519	6.599	6.585	6.665	6.470	6.494	6.690	6.714	3.761	3.841	3.827	3.907	3.712	3.736	3.932	3.956	6.7	0.06	178.92	21.48	200.40	OK
	B123	2.55					4.19	1.45	0.16	0.44	-0.16	-0.44	6.551	6.471	6.485	6.405	6.600	6.576	6.380	6.356	3.844	3.764	3.778	3.698	3.893	3.869	3.673	3.649						
N+2.70	B124	0	1.8	VIG15X30	0.15	0.25	6.43	5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787	13.6	0.06	178.92	21.48	200.40	OK
	B124	1.8					0.94	0.24	0.74	0.06	-0.74	-0.06	1.558	1.188	1.549	1.179	1.439	1.328	1.409	1.298	1.036	0.666	1.027	0.657	0.917	0.806	0.887	0.776						
N+2.70	B125	0	1.8	VIG15X30	0.15	0.25	-0.93	-0.23	0.74	0.06	-0.74	-0.06	1.157	1.527	1.166	1.536	1.276	1.387	1.306	1.417	0.648	1.018	0.657	1.027	0.767	0.878	0.797	0.908	13.6	0.06	178.92	21.48	200.40	OK
	B125	1.8					-6.43	-5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787						
N+5.45	B126	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.14	0.2	-0.14	-0.2	1.572	1.642	1.602	1.672	1.562	1.583	1.662	1.683	1.174	1.244	1.204	1.274	1.164	1.185	1.264	1.285	1.7	0.06	178.92	21.48	200.40	OK
	B126	2.55					1.39	0.01	0.14	0.2	-0.14	-0.2	1.728	1.658	1.698	1.628	1.739	1.718	1.639	1.618	1.301	1.231	1.271	1.201	1.312	1.291	1.212	1.191						
N+2.70	B126	0	2.55	VIG15X30	0.15	0.25	-5.81	-1.61	0.14	0.22	-0.14	-0.22	8.531	8.601	8.564	8.634	8.517	8.538	8.627	8.648	5.178	5.248	5.211	5.281	5.164	5.185	5.274	5.295	8.7	0.06	178.92	21.48	200.40	OK
	B126	2.55					5.85	1.63	0.14	0.22	-0.14	-0.22	8.702	8.632	8.669	8.599	8.716	8.695	8.606	8.585	5.317	5.247	5.284	5.214	5.331	5.310	5.221	5.200						
N+5.45	B127	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.14	0.3	-0.14	-0.3	1.633	1.703	1.678	1.748	1.605	1.626	1.755	1.776	1.203	1.273	1.248	1.318	1.175	1.196	1.325	1.346	1.8	0.06	178.92	21.48	200.40	OK
	B127	2.55					1.35	-0.01	0.14	0.3	-0.14	-0.3	1.668	1.598	1.623	1.553	1.696	1.675	1.546	1.525	1.273	1.203	1.228	1.158	1.301	1.280	1.151	1.130						
N+2.70	B127	0	2.55	VIG15X30	0.15	0.25	-5.85	-1.63	0.16	0.3	-0.16	-0.3	8.588	8.668	8.633	8.713	8.563	8.587	8.713	8.737	5.203	5.283	5.248	5.328	5.178	5.202	5.328	5.352	8.7	0.06	178.92	21.48	200.40	OK
	B127	2.55					5.81	1.61	0.16	0.3	-0.16	-0.3	8.645	8.565	8.600	8.520	8.669	8.645	8.519	8.495	5.292	5.212	5.247	5.167	5.316	5.292	5.166	5.142						
N+2.70	B128	0	2.55	VIG15X30	0.15	0.25	-1.36	0	0.28	0.46	-0.28	-0.46	1.528	1.668	1.597	1.737	1.496	1.538	1.726	1.768	1.120	1.260	1.189	1.329	1.088	1.130	1.318	1.360	1.8	0.06	178.92	21.48	200.40	OK
	B128	2.55					1.39	0	0.28	0.46	-0.28	-0.46	1.773	1.633	1.704	1.564	1.804	1.762	1.574	1.532	1.356	1.216	1.287	1.147	1.387	1.345	1.157	1.115						
N+2.70	B129	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.26	0.58	-0.26	-0.58	1.582	1.712	1.669	1.799	1.526	1.565	1.816	1.855	1.152	1.282	1.239	1.369	1.096	1.135	1.386	1.425	1.9	0.06	178.92	21.48	200.40	OK
	B129	2.55					1.36	-0.01	0.26	0.58	-0.26	-0.58	1.731	1.601	1.644	1.514	1.787	1.748	1.497	1.458	1.333	1.203	1.246	1.116	1.389	1.350	1.099	1.060						
N+5.45	B130	0	3	VIG15X30	0.15	0.25	-0.73	-0.23	0.08	0	-0.08	0	1.086	1.126	1.086	1.126	1.100	1.112	1.100	1.112	0.637	0.677	0.637	0.677	0.651	0.663	0.651	0.663	1.1	0.06	178.92	21.48	200.40	OK
	B130	3					0.28	0.01	0.12	0	-0.12	0	0.376	0.316	0.376	0.316	0.355	0.337	0.355	0.337	0.282	0.222	0.282	0.222	0.261	0.243	0.261	0.243						
N+5.45	B131	0	3	VIG15X30	0.15	0.25	-0.28	-0.01	0.12	0	-0.12	0	0.316	0.376	0.316	0.376	0.337	0.355	0.337	0.355	0.222	0.282	0.222	0.282	0.243	0.261	0.243	0.261	1.1	0.06	178.92	21.48	200.40	OK
	B131	3					0.73	0.23	0.08	0.02	-0.08	-0.02	1.128	1.088	1.125	1.085	1.117	1.105	1.107	1.095	0.679	0.639	0.676	0.636	0.668	0.656	0.658	0.646						

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b)

f'c = **21.0** MPa
fy = **420** MPa
$\Phi_{Cortante}$ = **0.75**
Estribos Φ = **9.5** mm
Av = **71** mm^2
R= **4.00**

2VE = Cortante maximo obtenido de las combinaciones de carga de diseño que incluyan E, considerando E, como el doble del prescrito por el reglamento general legalmente adoptado para diseño sismico vigente.

COMDIS3 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS4 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3Ey)))
COMDIS5 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS6 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS7 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS8 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS9 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS10 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))
COMDIS11 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS12 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3Ey))
COMDIS13 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS14 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS15 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS16 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS17 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS17 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			V2						$2V_E$																$2V_{E\,max}$	S	ΦVs	ΦVc	ΦVn	ΦVn > $2V_{Emax}$
	ELEMENTO			SECCION	b	d	C.M.	C.V.	SISMO X	SISMO Y	-SISMO X	-SISMO Y	Combinaciones de carga de diseño para el doble del cortante donde se incluya E																					
	No.	(m)	(m)		(m)	(m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18	(kN)	(m)	(kN)	(kN)	(kN)	
N+2.70	B132	0	3	VIG15X30	0.15	0.25	-9.26	-2.91	0.12	0.02	-0.12	-0.02	13.991	14.051	13.994	14.054	14.008	14.026	14.018	14.036	8.303	8.363	8.306	8.366	8.320	8.338	8.330	8.348	14.1	**0.06**	178.92	21.48	200.40	**OK**
	B132	3					1.59	0.2	11.06	1.54	-11.06	-1.54	4.989	0.542	4.758	0.773	3.323	1.664	2.553	0.894	4.312	1.219	4.081	1.450	2.646	0.987	1.876	0.217						
N+2.70	B133	0	3	VIG15X30	0.15	0.25	-1.75	-0.29	11.38	1.14	-11.38	-1.14	0.541	5.150	0.370	5.321	1.252	2.959	1.822	3.529	1.356	4.335	1.185	4.506	0.437	2.144	1.007	2.714	14.1	**0.06**	178.92	21.48	200.40	**OK**
	B133	3					9.26	2.91	0.12	0	-0.12	0	14.052	13.992	14.052	13.992	14.031	14.013	14.031	14.013	8.364	8.304	8.364	8.304	8.343	8.325	8.343	8.325						
N+5.45	B134	0	2.55	VIG15X30	0.15	0.25	-6.61	-2.68	0.12	0.14	-0.12	-0.14	10.572	10.632	10.593	10.653	10.568	10.586	10.638	10.656	5.909	5.969	5.930	5.990	5.905	5.923	5.975	5.993	10.7	**0.06**	178.92	21.48	200.40	**OK**
	B134	2.55					6.57	2.68	0.12	0.14	-0.12	-0.14	10.605	10.545	10.584	10.524	10.608	10.590	10.538	10.520	5.954	5.894	5.933	5.873	5.957	5.939	5.887	5.869						
N+2.70	B134	0	2.55	VIG15X30	0.15	0.25	-6.46	-3.62	0.08	0.08	-0.08	-0.08	11.346	11.386	11.358	11.398	11.346	11.358	11.386	11.398	5.788	5.828	5.800	5.840	5.788	5.800	5.828	5.840	11.4	**0.06**	178.92	21.48	200.40	**OK**
	B134	2.55					6.44	3.58	0.08	0.08	-0.08	-0.08	11.334	11.294	11.322	11.282	11.334	11.322	11.294	11.282	5.822	5.782	5.810	5.770	5.822	5.810	5.782	5.770						
N+5.45	B135	0	2.55	VIG15X30	0.15	0.25	-6.65	-2.7	0.16	0.2	-0.16	-0.2	10.625	10.705	10.655	10.735	10.618	10.642	10.718	10.742	5.930	6.010	5.960	6.040	5.923	5.947	6.023	6.047	10.7	**0.06**	178.92	21.48	200.40	**OK**
	B135	2.55					6.52	2.65	0.16	0.2	-0.16	-0.2	10.529	10.449	10.499	10.419	10.536	10.512	10.436	10.412	5.923	5.843	5.893	5.813	5.930	5.906	5.830	5.806						
N+2.70	B135	0	2.55	VIG15X30	0.15	0.25	-6.43	-3.6	0.12	0.14	-0.12	-0.14	11.276	11.336	11.297	11.357	11.272	11.290	11.342	11.360	5.747	5.807	5.768	5.828	5.743	5.761	5.813	5.831	11.4	**0.06**	178.92	21.48	200.40	**OK**
	B135	2.55					6.46	3.6	0.12	0.14	-0.12	-0.14	11.393	11.333	11.372	11.312	11.396	11.378	11.326	11.308	5.855	5.795	5.834	5.774	5.858	5.840	5.788	5.770						
N+2.70	B136	0	2.55	VIG15X30	0.15	0.25	-7.65	-2.28	0.28	0.42	-0.28	-0.42	11.359	11.499	11.422	11.562	11.334	11.376	11.544	11.586	6.784	6.924	6.847	6.987	6.759	6.801	6.969	7.011	11.7	**0.06**	178.92	21.48	200.40	**OK**
	B136	2.55					7.72	2.31	0.28	0.42	-0.28	-0.42	11.676	11.536	11.613	11.473	11.700	11.658	11.490	11.448	7.050	6.910	6.987	6.847	7.074	7.032	6.864	6.822						
N+2.70	B137	0	2.55	VIG15X30	0.15	0.25	-7.68	-2.31	0.22	0.5	-0.22	-0.5	11.434	11.544	11.509	11.619	11.385	11.418	11.635	11.668	6.820	6.930	6.895	7.005	6.771	6.804	7.021	7.054	11.7	**0.06**	178.92	21.48	200.40	**OK**
	B137	2.55					7.69	2.28	0.22	0.5	-0.22	-0.5	11.601	11.491	11.526	11.416	11.650	11.617	11.400	11.367	7.014	6.904	6.939	6.829	7.063	7.030	6.813	6.780						
N+5.45	B138	0	1.5	VIG15X30	0.15	0.25	4.73	2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257	16.8	**0.06**	178.92	21.48	200.40	**OK**
	B138	1.5					10.29	4.45	0	0	0	0	16.798	16.798	16.798	16.798	16.798	16.798	16.798	16.798	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261						
N+5.45	B139	0	1.5	VIG15X30	0.15	0.25	-10.29	-4.46	0	0	0	0	16.808	16.808	16.808	16.808	16.808	16.808	16.808	16.808	9.261	9.261	9.261	9.261	9.261	9.261	9.261	9.261	16.8	**0.06**	178.92	21.48	200.40	**OK**
	B139	1.5					-4.73	-2.43	0	0	0	0	8.106	8.106	8.106	8.106	8.106	8.106	8.106	8.106	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257						
N+5.45	B140	0	2.55	VIG15X30	0.15	0.25	-4.2	-1.45	0.2	0.34	-0.2	-0.34	6.415	6.515	6.466	6.566	6.390	6.420	6.560	6.590	3.705	3.805	3.756	3.856	3.680	3.710	3.850	3.880	6.7	**0.06**	178.92	21.48	200.40	**OK**
	B140	2.55					4.25	1.48	0.2	0.34	-0.2	-0.34	6.656	6.556	6.605	6.505	6.680	6.650	6.510	6.480	3.901	3.801	3.850	3.750	3.925	3.895	3.755	3.725						
N+5.45	B141	0	2.55	VIG15X30	0.15	0.25	-4.27	-1.48	0.16	0.44	-0.16	-0.44	6.531	6.611	6.597	6.677	6.482	6.506	6.702	6.726	3.770	3.850	3.836	3.916	3.721	3.745	3.941	3.965	6.7	**0.06**	178.92	21.48	200.40	**OK**
	B141	2.55					4.18	1.44	0.16	0.44	-0.16	-0.44	6.529	6.449	6.463	6.383	6.578	6.554	6.358	6.334	3.835	3.755	3.769	3.689	3.884	3.860	3.664	3.640						
N+2.70	B142	0	1.8	VIG15X30	0.15	0.25	6.43	5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787	13.6	**0.06**	178.92	21.48	200.40	**OK**
	B142	1.8					0.94	0.24	0.64	0.04	-0.64	-0.04	1.531	1.211	1.525	1.205	1.426	1.330	1.406	1.310	1.009	0.689	1.003	0.683	0.904	0.808	0.884	0.788						
N+2.70	B143	0	1.8	VIG15X30	0.15	0.25	-0.93	-0.23	0.62	0.08	-0.62	-0.08	1.185	1.495	1.197	1.507	1.280	1.373	1.320	1.413	0.676	0.986	0.688	0.998	0.771	0.864	0.811	0.904	13.6	**0.06**	178.92	21.48	200.40	**OK**
	B143	1.8					-6.43	-5.85	0	0	0	0	13.566	13.566	13.566	13.566	13.566	13.566	13.566	13.566	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.787						
N+5.45	B144	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.14	0.22	-0.14	-0.22	1.571	1.641	1.604	1.674	1.557	1.578	1.667	1.688	1.173	1.243	1.206	1.276	1.159	1.180	1.269	1.290	1.7	**0.06**	178.92	21.48	200.40	**OK**
	B144	2.55					1.39	0.01	0.14	0.22	-0.14	-0.22	1.730	1.660	1.697	1.627	1.744	1.723	1.634	1.613	1.303	1.233	1.270	1.200	1.317	1.296	1.207	1.186						
N+2.70	B144	0	2.55	VIG15X30	0.15	0.25	-5.81	-1.61	0.14	0.22	-0.14	-0.22	8.531	8.601	8.564	8.634	8.517	8.538	8.627	8.648	5.178	5.248	5.211	5.281	5.164	5.185	5.274	5.295	8.7	**0.06**	178.92	21.48	200.40	**OK**
	B144	2.55					5.85	1.63	0.14	0.22	-0.14	-0.22	8.702	8.632	8.669	8.599	8.716	8.695	8.606	8.585	5.317	5.247	5.284	5.214	5.331	5.310	5.221	5.200						
N+5.45	B145	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.16	0.3	-0.16	-0.3	1.628	1.708	1.673	1.753	1.603	1.627	1.753	1.777	1.198	1.278	1.243	1.323	1.173	1.197	1.323	1.347	1.8	**0.06**	178.92	21.48	200.40	**OK**
	B145	2.55					1.36	-0.01	0.16	0.3	-0.16	-0.3	1.685	1.605	1.640	1.560	1.709	1.685	1.559	1.535	1.287	1.207	1.242	1.162	1.311	1.287	1.161	1.137						
N+2.70	B145	0	2.55	VIG15X30	0.15	0.25	-5.86	-1.63	0.14	0.3	-0.14	-0.3	8.605	8.675	8.650	8.720	8.577	8.598	8.727	8.748	5.217	5.287	5.262	5.332	5.189	5.210	5.339	5.360	8.7	**0.06**	178.92	21.48	200.40	**OK**
	B145	2.55					5.8	1.61	0.14	0.3	-0.14	-0.3	8.628	8.558	8.583	8.513	8.656	8.635	8.506	8.485	5.278	5.208	5.233	5.163	5.306	5.285	5.156	5.135						
N+2.70	B146	0	2.55	VIG15X30	0.15	0.25	-1.36	0	0.28	0.46	-0.28	-0.46	1.528	1.668	1.597	1.737	1.496	1.538	1.726	1.768	1.120	1.260	1.189	1.329	1.088	1.130	1.318	1.360	1.8	**0.06**	178.92	21.48	200.40	**OK**
	B146	2.55					1.39	0	0.28	0.46	-0.28	-0.46	1.773	1.633	1.704	1.564	1.804	1.762	1.574	1.532	1.356	1.216	1.287	1.147	1.387	1.345	1.157	1.115						
N+2.70	B147	0	2.55	VIG15X30	0.15	0.25	-1.4	-0.01	0.3	0.66	-0.3	-0.66	1.566	1.716	1.665	1.815	1.503	1.548	1.833	1.878	1.136	1.286	1.235	1.385	1.073	1.118	1.403	1.448	1.9	**0.06**	178.92	21.48	200.40	**OK**
	B147	2.55					1.36	-0.01	0.3	0.66	-0.3	-0.66	1.747	1.597	1.648	1.498	1.810	1.765	1.480	1.435	1.349	1.199	1.250	1.100	1.412	1.367	1.082	1.037						
N+5.45	B148	0	3	VIG15X30	0.15	0.25	-0.73	-0.23	0.06	0	-0.06	0	1.091	1.121	1.091	1.121	1.102	1.111	1.102	1.111	0.642	0.672	0.642	0.672	0.653	0.662	0.653	0.662	1.1	**0.06**	178.92	21.48	200.40	**OK**
	B148	3					0.28	0.01	0.1	0	-0.1	0	0.371	0.321	0.371	0.321	0.354	0.339	0.354	0.339	0.277	0.227	0.277	0.227	0.260	0.245	0.260	0.245						
N+5.45	B149	0	3	VIG15X30	0.15	0.25	-0.28	-0.01	0.1	0.02	-0.1	-0.02	0.320	0.370	0.323	0.373	0.334	0.349	0.344	0.359	0.226	0.276	0.229	0.279	0.240	0.255	0.250	0.265	1.1	**0.06**	178.92	21.48	200.40	**OK**
	B149	3					0.74	0.24	0.06	0.04	-0.06	-0.04	1.146	1.116	1.140	1.110	1.143	1.134	1.123	1.114	0.684	0.654	0.678	0.648	0.681	0.672	0.661	0.652						
N+2.70	B150	0	3	VIG15X30	0.15	0.25	-9.26	-2.91	0.1	0.02	-0.1	-0.02	13.996	14.046	13.999	14.049	14.010	14.025	14.020	14.035	8.308	8.358	8.311	8.361	8.322	8.337	8.332	8.347	14.0	**0.06**	178.92	21.48	200.40	**OK**
	B150	3					1.57	0.19	9.86	1.82	-9.86	-1.82	4.676	0.255	4.403	0.528	3.269	1.790	2.359	0.880	4.015	0.916	3.742	1.189	2.608	1.129	1.698	0.219						
N+2.70	B151	0	3	VIG15X30	0.15	0.25	-1.71	-0.29	10.44	1.92	-10.44	-1.92	0.412	4.808	0.124	5.096	1.079	2.645	2.039	3.605	1.215	4.005	0.927	4.293	0.276	1.842	1.236	2.802	14.1	**0.06**	178.92	21.48	200.40	**OK**
	B151	3					9.26	2.91	0.1	0.04	-0.1	-0.04	14.050	14.000	14.044	13.994	14.040	14.025	14.020	14.005	8.362	8.312	8.356	8.306	8.352	8.337	8.332	8.317						
N+5.45	B152	0	2.55	VIG15X30	0.15	0.25	-6.42	-2.65	0.18	0.14	-0.18	-0.14	10.299	10.389	10.320	10.410	10.306	10.333	10.376	10.403	5.723	5.813	5.744	5.834	5.730	5.757	5.800	5.827	10.9	**0.06**	178.92	21.48	200.40	**OK**
	B152	2.55					6.76	2.71	0.18	0.14	-0.18	-0.14	10.878	10.788	10.857	10.767	10.871	10.844	10.801	10.774	6.140	6.050	6.119	6.029	6.133	6.106	6.063	6.036						
N+2.70	B152	0	2.55	VIG15X30	0.15	0.25	-6.34	-3.49	0.12	0.1	-0.12	-0.1	11.061	11.121	11.076	11.136	11.064	11.082	11.114	11.132	5.669	5.729	5.684	5.744	5.672	5.690	5.722	5.740	11.6	**0.06**	178.92	21.48	200.40	**OK**
	B152	2.55					6.55	3.71	0.12	0.1	-0.12	-0.1	11.608	11.548	11.593	11.533	11.604	11.586	11.554	11.536	5.933	5.873	5.918	5.858	5.929	5.911	5.879	5.861						
N+5.45	B153	0	2.55	VIG15X30	0.15	0.25	-6.39	-2.61	0.14	0.06	-0.14	-0.06	10.239	10.309	10.248	10.318	10.253	10.274	10.283	10.304	5.712	5.782	5.721	5.791	5.726	5.747	5.756	5.777	10.9	**0.06**	178.92	21.48	200.40	**OK**
	B153	2.55					6.79	2.75	0.14	0.06	-0.14	-0.06	10.938	10.868	10.929	10.859	10.924	10.903	10.894	10.873	6.151	6.081	6.142	6.072	6.137	6.116	6.107	6.086						
N+2.70	B153	0	2.55	VIG15X30	0.15	0.25	-6.53	-3.63	0.2	0.06	-0.2	-0.06	11.412	11.512	11.421	11.521	11.436	11.466	11.466	11.496	5.823	5.923	5.832	5.932	5.847	5.877	5.877	5.907	11.5	**0.06**	178.92	21.48	200.40	**OK**
	B153	2.55					6.36	3.57	0.2	0.06	-0.2	-0.06	11.257	11.157	11.248	11.148	11.232	11.202	11.202	11.172	5.779	5.679	5.770	5.670	5.754	5.724	5.724	5.694						
N+2.70	B154	0	2.55	VIG15X30	0.15	0.25	-7.75	-2.3	0.26	0.38	-0.26	-0.38	11.507	11.637	11.564	11.694	11.486	11.525	11.676	11.715	6.882	7.012	6.939	7.069	6.861	6.900	7.051	7.090	11.7	**0.06**	178.92	21.48	200.40	**OK**
	B154	2.55					7.62	2.29	0.26	0.38	-0.26	-0.38	11.528	11.398	11.471	11.341	11.549	11.510	11.359	11.320	6.952	6.822	6.895	6.765	6.973	6.934	6.783	6.744						
N+2.70	B155	0	2.55	VIG15X30	0.15	0.25	-8.02	-2.32	0.16	0.42	-0.16	-0.42	11.873	11.953	11.936	12.016	11.827	11.851	12.037	12.061	7.147	7.227	7.210	7.290	7.101	7.125	7.311	7.335	12.1	**0.06**	178.92	21.48	200.40	**OK**
	B155	2.55					7.35	2.27	0.16	0.42	-0.16	-0.42	11.162	11.082	11.099	11.019	11.207	11.183	10.997	10.973	6.687	6.607	6.624	6.544	6.732	6.708	6.522	6.498						
N+5.45	B156	0	1.5	VIG15X30	0.15	0.25	4.52	1.87	0.14	0.04	-0.14	-0.04	7.332	7.262	7.326	7.256	7.315	7.294	7.295	7.274	4.106	4.036	4.100	4.030	4.089	4.068	4.069	4.048	16.0	**0.06**	178.92	21.48	200.40	**OK**
	B156	1.5					10.08	3.9	0.14	0.04	-0.14	-0.04	16.034	15.964	16.028	15.958	16.017	15.996	15.997	15.976	9.110	9.040	9.104	9.034	9.093	9.072	9.073	9.052						
N+5.45	B157	0	1.5	VIG15X30	0.15	0.25	-13.34	-5.15	0.22	0.02	-0.22	-0.02	21.102	21.212	21.105	21.215	21.137	21.170	21.147	21.180	11.950	12.060	11.953	12.063	11.985	12.018	11.995	12.028	21.2	**0.06**	178.92	21.48	200.40	**OK**
	B157	1.5					-7.11	-2.78	0.22	0.02	-0.22	-0.02	11.256	11.366	11.259	11.369	11.291	11.324	11.301	11.334	6.343	6.453	6.346	6.456	6.378	6.411	6.388	6.421						
N+5.45	B158	0	2.55	VIG15X30	0.15	0.25	-4.19	-1.45	0.2	0.32	-0.2	-0.32	6.404	6.504	6.452	6.552	6.383	6.413	6.543	6.573	3.697	3.797	3.745	3.845	3.676	3.706	3.836	3.866	6.7	**0.06**	178.92	21.48	200.40	**OK**
	B158	2.55					4.26	1.47	0.2	0.32	-0.2	-0.32	6.656	6.556	6.608	6.508	6.677	6.647	6.517	6.487	3.908	3.808	3.860	3.760	3.929	3.899	3.769	3.739						
N+5.45	B159	0	2.55	VIG15X30	0.15	0.25	-4.07	-1.4	0.1	0.24	-0.1	-0.24	6.241	6.291	6.277	6.327	6.217	6.232	6.337	6.352	3.620	3.670	3.656	3.706	3.596	3.611	3.716	3.731	6.9	**0.06**	178.92	21.48	200.40	**OK**
	B159	2.55					4.38	1.53	0.1	0.24	-0.1	-0.24	6.829	6.779	6.793	6.743	6.854	6.839	6.734	6.719	3.985	3.935	3.949	3.899	4.010	3.995	3.890	3.875						
N+2.70	B160	0	1.8	VIG15X30	0.15	0.25	6.22	4.78	0.16	0.04	-0.16	-0.04	12.287	12.207	12.281	12.201	12.266	12.242	12.246	12.222	5.641	5.561	5.635	5.555	5.620	5.596	5.600	5.576	12.3	**0.06**	178.92	21.48	200.40	**OK**
	B160	1.8					0.93	0.23	0.54	0.04	-0.54	-0.04	1.484	1.214	1.478	1.208	1.397	1.316	1.377	1.296	0.975	0.705	0.969	0.699	0.888	0.807	0.868	0.787						
N+2.70	B161	0	1.8	VIG15X30	0.15	0.25	-0.23	-0.04	0.18	0.08	-0.18	-0.08	0.265	0.355	0.277	0.367	0.283	0.310	0.323	0.350	0.156	0.246	0.168	0.258	0.174	0.201	0.214	0.241	17.0	**0.06**	178.92	21.48	200.40	**OK**
	B161	1.8					-8.66	-6.58	0.18	0.04	-0.18	-0.04	16.924	17.014	16.930	17.020	16.949	16.976	16.969	16.996	7.746	7.836	7.752	7.842	7.771	7.798	7.791	7.818						
N+5.45	B162	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.14	0.22	-0.14	-0.22	1.571	1.641	1.604	1.674	1.557	1.578	1.667	1.688	1.173	1.243	1.206	1.276	1.159	1.180	1.269	1.290	1.7	**0.06**	178.92	21.48	200.40	**OK**
	B162	2.55					1.39	0.01	0.14	0.22	-0.14	-0.22	1.730	1.660	1.697	1.627	1.744	1.723	1.634	1.613	1.303	1.233	1.270	1.200	1.317	1.296	1.207	1.186						
N+2.70	B162	0	2.55	VIG15X30	0.15	0.25	-5.81	-1.61	0.14	0.22	-0.14	-0.22	8.531	8.601	8.564	8.634	8.517	8.538	8.627	8.648	5.178	5.248	5.211	5.281	5.164	5.185	5.274	5.295	8.7	**0.06**	178.92	21.48	200.40	**OK**
	B162	2.55					5.85	1.63	0.14	0.22	-0.14	-0.22	8.702	8.632	8.669	8.599	8.716	8.695	8.606	8.585	5.317	5.247	5.284	5.214	5.331	5.310	5.221	5.200						
N+5.45	B163	0	2.55	VIG15X30	0.15	0.25	-1.38	0	0.06	0.12	-0.06	-0.12	1.632	1.662	1.650	1.680	1.622	1.631	1.682	1.691	1.218	1.248	1.236	1.266	1.208	1.217	1.268	1.277	1.7	**0.06**	178.92	21.48	200.40	**OK**
	B163	2.55					1.37	0	0.06	0.12	-0.06	-0.12	1.668	1.638	1.650	1.620	1.679	1.670	1.619	1.610	1.257	1.227	1.239	1.209	1.268	1.259	1.208	1.199						
N+2.70	B163	0	2.55	VIG15X30	0.15	0.25	-5.86	-1.63	0.08	0.16	-0.08	-0.16	8.630	8.670	8.654	8.694	8.616	8.628	8.696	8.708	5.242	5.282	5.266	5.306	5.228	5.240	5.308	5.320	8.7	**0.06**	178.92	21.48	200.40	**OK**
	B163	2.55					5.8	1.61	0.08	0.16	-0.08	-0.16	8.602	8.562	8.578	8.538	8.616	8.604	8.536	8.524	5.252	5.212	5.228	5.188	5.266	5.254	5.186	5.174						
N+2.70	B164	0	2.55	VIG15X30	0.15	0.25	-1.37	0.01	0.3	0.52	-0.3	-0.52	1.520	1.670	1.598	1.748	1.482	1.527	1.742	1.787	1.119	1.269	1.197	1.347	1.081	1.126	1.341	1.386	1.8	**0.06**	178.92	21.48	200.40	**OK**
	B164	2.55					1.39	0.01	0.3	0.52	-0.3	-0.52	1.792	1.642	1.714	1.564	1.831	1.786	1.571	1.526	1.365	1.215	1.287	1.137	1.404	1.359	1.144	1.099						
N+2.70	B165	0	2.55	VIG15X30	0.15	0.25	-1.41	-0.01	0.18	0.4	-0.18	-0.4	1.627	1.717	1.687	1.777	1.589	1.616	1.789	1.816	1.194	1.284	1.254	1.344	1.156	1.183	1.356	1.383	1.8	**0.06**	178.92	21.48	200.40	**OK**
	B165	2.55					1.35	-0.01	0.18	0.4	-0.18	-0.4	1.685	1.595	1.625	1.535	1.724	1.697	1.524	1.497	1.290	1.200	1.230	1.140	1.329	1.302	1.129	1.102						
N+5.45	B166	0	3	VIG15X30	0.15	0.25	-0.74	-0.23	0.06	0.02	-0.06	-0.02	1.102	1.132	1.105	1.135	1.109	1.118	1.119	1.128	0.650	0.680	0.653	0.683	0.657	0.666	0.667	0.676	1.1	**0.06**	178.92	21.48	200.40	**OK**
	B166	3					0.28	0.01	0.1	0	-0.1	0	0.371	0.321	0.371	0.321	0.354	0.339	0.354	0.339	0.277	0.227	0.277	0.227	0.260	0.245	0.260	0.245						
N+5.45	B167	0	3	VIG15X30	0.15	0.25	-0.42	-0.08	0.08	0.04	-0.08	-0.04	0.561	0.601	0.567	0.607	0.568	0.580	0.588	0.600	0.355	0.395	0.361	0.401	0.362	0.374	0.382	0.394	0.6	**0.06**	178.92	21.48	200.40	**OK**
	B167	3					0.3	0.09	0.02	0.04	-0.02	-0.04	0.458	0.448	0.452	0.442	0.462	0.459	0.442	0.439	0.278	0.268	0.272	0.262	0.282	0.279	0.262	0.259						
N+2.70	B169	0	2.55	VIG15X30	0.15	0.25	-6.18	-4	0.16	0.04	-0.16	-0.04	11.373	11.453	11.379	11.459	11.394	11.418	11.414	11.438	5.519	5.599	5.525	5.605	5.540	5.564	5.560	5.584	11.5	**0.06**	178.92	21.48	200.40	**OK**
	B169	2.55					3.01	1.85	0.16	0.04	-0.16	-0.04	5.505	5.425	5.499	5.419	5.484	5.460	5.464	5.440	2.752	2.672	2.746	2.666	2.731	2.707	2.711	2.687						

PROYECTO: CENTRO DE ATENCION ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTA D.C.
RESISTENCIA A CORTANTE PARA VIGAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b)

f'c = 21.0 MPa
fy = 420 MPa
Φ Cortante = 0.75
Estribos Φ = 9.5 mm
Av = 71 mm^2
R= 4.00

2VE = Cortante maximo obtenido de las combinaciones de carga de diseño que incluyan E, considerando E, como el doble del prescrito por el reglamento general legalmente adoptado para diseño sismico vigente.

COMDIS3 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS4 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3Ey))
COMDIS5 = 1.2C.M.+1.0C.V.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS6 = 1.2C.M.+1.0C.V.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS7 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS8 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS9 = 1.2C.M.+1.0C.V.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS10 = 1.2C.M.+1.0C.V.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))
COMDIS11 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3Ey))
COMDIS12 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3Ey))
COMDIS13 = 0.9C.M.+(2*(1.0Ex))+(2*(0.3(-Ey)))
COMDIS14 = 0.9C.M.+(2*(1.0(-Ex)))+(2*(0.3(-Ey)))
COMDIS15 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0Ey))
COMDIS16 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0Ey))
COMDIS17 = 0.9C.M.+(2*(0.3Ex))+(2*(1.0(-Ey)))
COMDIS17 = 0.9C.M.+(2*(0.3(-Ex)))+(2*(1.0(-Ey)))

NIVEL	VIGA	LOC.	LONG.	PROPIEDADES DEL ELEMENTO			V2						$2V_E$ Combinaciones de carga de diseño para el doble del cortante donde se incluya E																$2V_{Emax}$	S	ΦVs	ΦVc	ΦVn	ΦVn > $2V_{Emax}$
	ELEMENTO						C.M.	C.V.	SISMO X	SISMO Y	-SISMO X	-SISMO Y																						
	No.	(m)	(m)	SECCION	b (m)	d (m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	(KN.m)	COMBDIS3	COMBDIS4	COMBDIS5	COMBDIS6	COMBDIS7	COMBDIS8	COMBDIS9	COMBDIS10	COMBDIS11	COMBDIS12	COMBDIS13	COMBDIS14	COMBDIS15	COMBDIS16	COMBDIS17	COMBDIS18	(kN)	(m)	(kN)	(kN)	(kN)	
N+2.70	B170	0	3	VIG15X30	0.15	0.25	-9.25	-2.9	0.08	0.02	-0.08	-0.02	13.979	14.019	13.982	14.022	13.989	14.001	13.999	14.011	8.304	8.344	8.307	8.347	8.314	8.326	8.324	8.336	14.0	0.06	178.92	21.48	200.40	OK
	B170	3					1.48	0.17	8.8	2.46	-8.8	-2.46	4.331	0.070	3.962	0.439	3.221	1.901	1.991	0.671	3.717	0.684	3.348	1.053	2.607	1.287	1.377	0.057						
N+2.70	B171	0	3	VIG15X30	0.15	0.25	-1.14	-0.14	6.54	0.6	-6.54	-0.6	0.172	3.098	0.082	3.188	0.868	1.849	1.168	2.149	0.654	2.616	0.564	2.706	0.386	1.367	0.686	1.667	7.8	0.06	178.92	21.48	200.40	OK
	B171	3					5.28	1.46	0.12	0.12	-0.12	-0.12	7.835	7.775	7.817	7.757	7.835	7.817	7.775	7.757	4.791	4.731	4.773	4.713	4.791	4.773	4.731	4.713						
N+2.70	B173	0	2.95	VIG15X30	0.15	0.25	-5.44	-3.65	0.18	0.04	-0.18	-0.04	10.130	10.220	10.136	10.226	10.155	10.182	10.175	10.202	4.848	4.938	4.854	4.944	4.873	4.900	4.893	4.920	12.9	0.06	178.92	21.48	200.40	OK
	B173	2.95					6.84	4.63	0.18	0.04	-0.18	-0.04	12.886	12.796	12.880	12.790	12.862	12.835	12.842	12.815	6.204	6.114	6.198	6.108	6.180	6.153	6.160	6.133						
N+5.45	B174	0	2.55	VIG15X30	0.15	0.25	-7.69	-2.89	0.14	0.12	-0.14	-0.12	12.074	12.144	12.092	12.162	12.078	12.099	12.138	12.159	6.877	6.947	6.895	6.965	6.881	6.902	6.941	6.962	12.2	0.06	178.92	21.48	200.40	OK
	B174	2.55					5.49	2.46	0.14	0.12	-0.14	-0.12	9.092	9.022	9.074	9.004	9.089	9.068	9.029	9.008	4.985	4.915	4.967	4.897	4.982	4.961	4.922	4.901						
N+2.70	B174	0	2.55	VIG25X30	0.25	0.25	-9.15	-4.7	0.26	0.08	-0.26	-0.08	15.609	15.739	15.621	15.751	15.641	15.680	15.681	15.720	8.164	8.294	8.176	8.306	8.196	8.235	8.236	8.275	15.8	0.06	178.92	35.80	214.72	OK
	B174	2.55					5.58	2.5	0.26	0.08	-0.26	-0.08	9.267	9.137	9.255	9.125	9.236	9.197	9.196	9.157	5.093	4.963	5.081	4.951	5.062	5.023	5.022	4.983						
N+5.45	B175	0	1	VIG15X30	0.15	0.25	2.15	1.1	0	0	0	0	3.680	3.680	3.680	3.680	3.680	3.680	3.680	3.680	1.935	1.935	1.935	1.935	1.935	1.935	1.935	1.935	6.5	0.06	178.92	21.48	200.40	OK
	B175	1					4.1	1.55	0	0	0	0	6.470	6.470	6.470	6.470	6.470	6.470	6.470	6.470	3.690	3.690	3.690	3.690	3.690	3.690	3.690	3.690						
N+2.70	B176	0	2.55	VIG15X30	0.15	0.25	-7.01	-2.13	0.3	0.36	-0.3	-0.36	10.440	10.590	10.494	10.644	10.430	10.475	10.610	10.655	6.207	6.357	6.261	6.411	6.197	6.242	6.377	6.422	12.6	0.06	178.92	21.48	200.40	OK
	B176	2.55					8.36	2.46	0.3	0.36	-0.3	-0.36	12.594	12.444	12.540	12.390	12.605	12.560	12.425	12.380	7.626	7.476	7.572	7.422	7.637	7.592	7.457	7.412						
N+5.45	B177	0	2.95	VIG15X30	0.15	0.25	-8.43	-3.67	0.92	0.44	-0.92	-0.44	13.523	13.983	13.589	14.049	13.607	13.745	13.827	13.965	7.324	7.784	7.390	7.850	7.408	7.546	7.628	7.766	14.3	0.06	178.92	21.48	200.40	OK
	B177	2.95					8.76	3.52	0.92	0.44	-0.92	-0.44	14.295	13.835	14.229	13.769	14.211	14.073	13.991	13.853	8.147	7.687	8.081	7.621	8.063	7.925	7.843	7.705						
N+2.70	B178	0	2.951	VIG25X30	0.25	0.25	-7.3	-3.94	1.3	0.84	-1.3	-0.84	12.312	12.962	12.438	13.088	12.393	12.588	12.813	13.008	6.182	6.832	6.308	6.958	6.263	6.458	6.683	6.878	13.3	0.06	178.92	35.80	214.72	OK
	B178	2.951					7.11	4.33	1.3	0.84	-1.3	-0.84	13.250	12.600	13.124	12.474	13.170	12.975	12.750	12.555	6.787	6.137	6.661	6.011	6.707	6.512	6.287	6.092						
N+5.45	B180	0	1.5	VIG25X30	0.25	0.25	11.82	3.86	0.58	0.12	-0.58	-0.12	18.198	17.908	18.180	17.890	18.118	18.031	18.058	17.971	10.792	10.502	10.774	10.484	10.712	10.625	10.652	10.565	28.3	0.06	178.92	35.80	214.72	OK
	B180	1.5					18.51	5.91	0.58	0.12	-0.58	-0.12	28.276	27.986	28.258	27.968	28.196	28.109	28.136	28.049	16.813	16.523	16.795	16.505	16.733	16.646	16.673	16.586						
N+5.45	B181	0	2.55	VIG15X30	0.15	0.25	-4.3	-1.46	0.12	0.18	-0.12	-0.18	6.577	6.637	6.604	6.664	6.566	6.584	6.656	6.674	3.827	3.887	3.854	3.914	3.816	3.834	3.906	3.924	6.7	0.06	178.92	21.48	200.40	OK
	B181	2.55					4.15	1.46	0.12	0.18	-0.12	-0.18	6.484	6.424	6.457	6.397	6.494	6.476	6.404	6.386	3.779	3.719	3.752	3.692	3.789	3.771	3.699	3.681						
N+2.70	B182	0	1.8	VIG15X30	0.15	0.25	13.29	8.57	0.54	0.1	-0.54	-0.1	24.661	24.391	24.646	24.376	24.584	24.503	24.534	24.453	12.104	11.834	12.089	11.819	12.027	11.946	11.977	11.896	24.7	0.06	178.92	21.48	200.40	OK
	B182	1.8					0.66	0.15	0.44	0.12	-0.44	-0.12	1.061	0.841	1.043	0.823	1.005	0.939	0.945	0.879	0.713	0.493	0.695	0.475	0.657	0.591	0.597	0.531						
N+5.45	B183	0	2.55	VIG15X30	0.15	0.25	-1.36	0.01	0.06	0.08	-0.06	-0.08	1.601	1.631	1.613	1.643	1.598	1.607	1.638	1.647	1.203	1.233	1.215	1.245	1.200	1.209	1.240	1.249	1.7	0.06	178.92	21.48	200.40	OK
	B183	2.55					1.39	0.01	0.06	0.08	-0.06	-0.08	1.699	1.669	1.687	1.657	1.703	1.694	1.663	1.654	1.272	1.242	1.260	1.230	1.276	1.267	1.236	1.227						
N+2.70	B183	0	2.55	VIG15X30	0.15	0.25	-5.81	-1.61	0.08	0.1	-0.08	-0.1	8.555	8.595	8.570	8.610	8.551	8.563	8.601	8.613	5.202	5.242	5.217	5.257	5.198	5.210	5.248	5.260	8.7	0.06	178.92	21.48	200.40	OK
	B183	2.55					5.84	1.63	0.08	0.1	-0.08	-0.1	8.666	8.626	8.651	8.611	8.669	8.657	8.619	8.607	5.284	5.244	5.269	5.229	5.287	5.275	5.237	5.225						
N+5.45	B184	0	2.95	VIG25X30	0.25	0.25	-9.67	-3.45	0.86	1.1	-0.86	-1.1	14.757	15.187	14.922	15.352	14.715	14.844	15.265	15.394	8.406	8.836	8.571	9.001	8.364	8.493	8.914	9.043	15.4	0.06	178.92	35.80	214.72	OK
	B184	2.95					7.52	2.65	0.86	1.1	-0.86	-1.1	11.972	11.542	11.807	11.377	12.014	11.885	11.464	11.335	7.066	6.636	6.901	6.471	7.108	6.979	6.558	6.429						
N+1.375	B184	0	2.95	VIG25X30	0.25	0.25	-2.63	-0.03	0.8	1.94	-0.8	-1.94	2.841	3.241	3.132	3.532	2.641	2.761	3.611	3.731	2.022	2.422	2.313	2.713	1.822	1.942	2.792	2.912	3.7	0.06	178.92	35.80	214.72	OK
	B184	2.95					2.68	-0.03	0.8	1.94	-0.8	-1.94	3.532	3.132	3.241	2.841	3.731	3.611	2.761	2.641	2.758	2.358	2.467	2.067	2.957	2.837	1.987	1.867						
N+2.70	B185	0	2.55	VIG15X30	0.15	0.25	-1.35	0	0.22	0.28	-0.22	-0.28	1.544	1.654	1.586	1.696	1.534	1.567	1.674	1.707	1.139	1.249	1.181	1.291	1.129	1.162	1.269	1.302	1.8	0.06	178.92	21.48	200.40	OK
	B185	2.55					1.4	0	0.22	0.28	-0.22	-0.28	1.756	1.646	1.714	1.604	1.767	1.734	1.627	1.594	1.336	1.226	1.294	1.184	1.347	1.314	1.207	1.174						
N+5.45	B186	0	1.777	VIG25X30	0.25	0.25	-17.09	-5.71	0.02	0.06	-0.02	-0.06	26.209	26.219	26.218	26.228	26.202	26.205	26.232	26.235	15.372	15.382	15.381	15.391	15.365	15.368	15.395	15.398	26.2	0.06	178.92	35.80	214.72	OK
	B186	1.777					-8.39	-2.88	0.02	0.06	-0.02	-0.06	12.939	12.949	12.948	12.958	12.932	12.935	12.962	12.965	7.542	7.552	7.551	7.561	7.535	7.538	7.565	7.568						
N+2.70	B187	0	1.477	VIG25X30	0.25	0.25	-21.48	-13.83	0.08	0.08	-0.08	-0.08	39.580	39.620	39.592	39.632	39.580	39.592	39.620	39.632	19.306	19.346	19.318	19.358	19.306	19.318	19.346	19.358	39.6	0.06	178.92	35.80	214.72	OK
	B187	1.477					-12.83	-8.37	0.08	0.08	-0.08	-0.08	23.740	23.780	23.752	23.792	23.740	23.752	23.780	23.792	11.521	11.561	11.533	11.573	11.521	11.533	11.561	11.573						
N+5.45	B188	0	3	VIG25X30	0.25	0.25	-0.88	-0.21	0.08	0.1	-0.08	-0.1	1.239	1.279	1.254	1.294	1.235	1.247	1.285	1.297	0.765	0.805	0.780	0.820	0.761	0.773	0.811	0.823	1.3	0.06	178.92	35.80	214.72	OK
	B188	3					0.44	0.01	0.1	0.06	-0.1	-0.06	0.568	0.518	0.559	0.509	0.561	0.546	0.531	0.516	0.426	0.376	0.417	0.367	0.419	0.404	0.389	0.374						
N+2.70	B189	0	2.587	VIG15X30	0.15	0.25	-1.91	-1.09	0.38	0.06	-0.38	-0.06	3.283	3.473	3.292	3.482	3.339	3.396	3.369	3.426	1.620	1.810	1.629	1.819	1.676	1.733	1.706	1.763	13.2	0.06	178.92	21.48	200.40	OK
	B189	2.587					7.11	4.57	0.38	0.06	-0.38	-0.06	13.202	13.012	13.193	13.003	13.146	13.089	13.116	13.059	6.499	6.309	6.490	6.300	6.443	6.386	6.413	6.356						
N+2.70	B190	0	3	VIG15X30	0.15	0.25	-5.3	-1.48	0.12	0.06	-0.12	-0.06	7.806	7.866	7.815	7.875	7.816	7.834	7.846	7.864	4.736	4.796	4.745	4.805	4.746	4.764	4.776	4.794	7.9	0.06	178.92	21.48	200.40	OK
	B190	3					0.97	0.04	5.42	0.92	-5.42	-0.92	2.628	0.082	2.490	0.220	1.841	1.028	1.381	0.568	2.297	0.413	2.159	0.551	1.510	0.697	1.050	0.237						
N+2.70	B191	0	2.156	VIG15X30	0.15	0.25	-5.99	-3.75	0.22	0.1	-0.22	-0.1	10.876	10.986	10.891	11.001	10.897	10.930	10.947	10.980	5.329	5.439	5.344	5.454	5.350	5.383	5.400	5.433	11.0	0.06	178.92	21.48	200.40	OK
	B191	2.156					1.35	0.82	0.22	0.1	-0.22	-0.1	2.503	2.393	2.488	2.378	2.482	2.449	2.432	2.399	1.278	1.168	1.263	1.153	1.257	1.224	1.207	1.174						
N+5.45	B192	0	2.723	VIG25X30	0.25	0.25	-2.76	-1.03	1.74	0.26	-1.74	-0.26	3.888	4.758	3.927	4.797	4.147	4.408	4.277	4.538	2.030	2.900	2.069	2.939	2.289	2.550	2.419	2.680	13.1	0.06	178.92	35.80	214.72	OK
	B192	2.723					8.63	2.31	1.74	0.26	-1.74	-0.26	13.121	12.251	13.082	12.212	12.862	12.601	12.732	12.471	8.222	7.352	8.183	7.313	7.963	7.702	7.833	7.572						
N+2.70	B192	0	2.723	VIG25X30	0.25	0.25	0.21	1.97	2.1	1	-2.1	-1	2.822	1.772	2.672	1.622	2.630	2.315	2.130	1.815	0.789	0.261	0.639	0.411	0.597	0.282	0.097	0.219	8.7	0.06	178.92	35.80	214.72	OK
	B192	2.723					5.11	1.97	2.1	1	-2.1	-1	8.702	7.652	8.552	7.502	8.510	8.195	8.010	7.695	5.199	4.149	5.049	3.999	5.007	4.692	4.507	4.192						
N+2.70	B193	0	3.55	VIG25X30	0.25	0.25	-19.48	-11.26	0.72	0.38	-0.72	-0.38	34.428	34.788	34.485	34.845	34.487	34.595	34.677	34.785	17.324	17.684	17.381	17.741	17.383	17.491	17.573	17.681	34.8	0.06	178.92	35.80	214.72	OK
	B193	3.55					12.06	6.82	0.7	0.36	-0.7	-0.36	21.494	21.144	21.440	21.090	21.435	21.330	21.255	21.150	11.056	10.706	11.002	10.652	10.997	10.892	10.817	10.712						
N+5.45	B194	0	1	VIG25X30	0.25	0.25	2.15	1.1	0	0	0	0	3.680	3.680	3.680	3.680	3.680	3.680	3.680	3.680	1.935	1.935	1.935	1.935	1.935	1.935	1.935	1.935	7.3	0.06	178.92	35.80	214.72	OK
	B194	1					4.82	1.55	0	0	0	0	7.334	7.334	7.334	7.334	7.334	7.334	7.334	7.334	4.338	4.338	4.338	4.338	4.338	4.338	4.338	4.338						
N+2.70	B195	0	3.097	VIG25X30	0.25	0.25	-12.44	-7.23	0.36	1.12	-0.36	-1.12	21.984	22.164	22.152	22.332	21.851	21.905	22.411	22.465	11.022	11.202	11.190	11.370	10.889	10.943	11.449	11.503	30.4	0.06	178.92	35.80	214.72	OK
	B195	3.097					16.94	9.72	0.4	1.14	-0.4	-1.14	30.234	30.034	30.063	29.863	30.363	30.303	29.793	29.733	15.432	15.232	15.261	15.061	15.561	15.501	14.991	14.931						
N+5.45	B196	0	5.157	VIG25X30	0.25	0.25	-14.56	-4.62	0.16	0.02	-0.16	-0.02	22.051	22.131	22.054	22.134	22.075	22.099	22.085	22.109	13.063	13.143	13.066	13.146	13.087	13.111	13.097	13.121	22.1	0.06	178.92	35.80	214.72	OK
	B196	5.157					13.88	4.36	0.06	0.02	-0.06	-0.02	21.033	21.003	21.030	21.000	21.026	21.017	21.016	21.007	12.509	12.479	12.506	12.476	12.502	12.492	12.492	12.483						
N+2.70	B196	0	5.157	VIG25X30	0.25	0.25	-17.02	-10.78	0.14	0.04	-0.14	-0.04	31.166	31.236	31.172	31.242	31.184	31.205	31.204	31.225	15.280	15.350	15.286	15.356	15.298	15.319	15.318	15.339	31.2	0.06	178.92	35.80	214.72	OK
	B196	5.157					16.98	10.65	0.04	0.04	-0.04	-0.04	31.039	31.019	31.033	31.013	31.039	31.033	31.019	31.013	15.295	15.275	15.289	15.269	15.295	15.289	15.275	15.269						
N+5.45	B197	0	4.069	VIG25X30	0.25	0.25	-8.07	-2.28	0.82	0.16	-0.82	-0.16	11.747	12.157	11.771	12.181	11.863	11.986	11.943	12.066	7.046	7.456	7.070	7.480	7.162	7.285	7.242	7.365	12.2	0.06	178.92	35.80	214.72	OK
	B197	4.069					8.06	2.25	0.82	0.16	-0.82	-0.16	12.139	11.729	12.115	11.705	12.024	11.901	11.944	11.821	7.471	7.061	7.447	7.037	7.356	7.233	7.276	7.153						
N+2.70	B197	0	4.069	VIG25X30	0.25	0.25	-10.63	-6.31	0.96	0.24	-0.96	-0.24	18.808	19.288	18.844	19.324	18.934	19.078	19.054	19.198	9.309	9.789	9.345	9.825	9.435	9.579	9.555	9.699	19.3	0.06	178.92	35.80	214.72	OK
	B197	4.069					10.51	6.25	0.96	0.24	-0.96	-0.24	19.120	18.640	19.084	18.604	18.994	18.850	18.874	18.730	9.717	9.237	9.681	9.201	9.591	9.447	9.471	9.327						
N+5.45	B198	0	5.227	VIG15X30	0.15	0.25	-4.75	-1.57	0.22	0.02	-0.22	-0.02	7.214	7.324	7.217	7.327	7.249	7.282	7.259	7.292	4.219	4.329	4.222	4.332	4.254	4.287	4.264	4.297	7.3	0.06	178.92	21.48	200.40	OK
	B198	5.227					2.58	0.73	0.22	0.06	-0.22	-0.06	3.886	3.776	3.877	3.767	3.858	3.825	3.828	3.795	2.382	2.272	2.373	2.263	2.354	2.321	2.324	2.291						
N+5.45	B199	0	5.258	VIG15X30	0.15	0.25	-1.18	-0.35	0.44	0.08	-0.44	-0.08	1.650	1.870	1.662	1.882	1.713	1.779	1.753	1.819	0.946	1.166	0.958	1.178	1.009	1.075	1.049	1.115	3.3	0.06	178.92	21.48	200.40	OK
	B199	5.258					2.15	0.66	0.14	0.04	-0.14	-0.04	3.278	3.208	3.272	3.202	3.261	3.240	3.241	3.220	1.973	1.903	1.967	1.897	1.956	1.935	1.936	1.915						
N+5.45	B200	0	1.575	VIG25X30	0.25	0.25	-11.23	-3.13	0.18	0.52	-0.18	-0.52	16.522	16.612	16.600	16.690	16.463	16.490	16.723	16.750	10.023	10.113	10.101	10.191	9.964	9.991	10.224	10.251	16.7	0.06	178.92	35.80	214.72	OK
	B200	1.575					-5.82	-1.8	0.18	0.52	-0.18	-0.52	8.700	8.790	8.778	8.868	8.641	8.668	8.901	8.928	5.154	5.244	5.232	5.322	5.095	5.122	5.355	5.382						
N+5.45	B201	0	1.522	VIG25X30	0.25	0.25	8.74	2.82	0.24	0.52	-0.24	-0.52	13.407	13.287	13.329	13.209	13.456	13.420	13.196	13.160	7.965	7.845	7.887	7.767	8.014	7.978	7.754	7.718	19.9	0.06	178.92	35.80	214.72	OK
	B201	1.522					13.34	3.78	0.24	0.52	-0.24	-0.52	19.887	19.767	19.809	19.689	19.936	19.900	19.676	19.640	12.105	11.985	12.027	11.907	12.154	12.118	11.894	11.858						
N+5.45	B202	0	1.484	VIG25X30	0.25	0.25	-15.53	-4.38	0.72	0.24	-0.72	-0.24	22.818	23.178	22.854	23.214	22.902	23.010	23.022	23.130	13.779	14.139	13.815	14.175	13.863	13.971	13.983	14.091	23.2	0.06	178.92	35.80	214.72	OK
	B202	1.484					-11.04	-3.45	0.72	0.24	-0.72	-0.24	16.500	16.860	16.536	16.896	16.584	16.692	16.704	16.812	9.738	10.098	9.774	10.134	9.822	9.930	9.942	10.050						
N+5.45	B203	0	2.067	VIG25X30	0.25	0.25	2.84	0.91	0.64	0.24	-0.64	-0.24	4.496	4.176	4.460	4.140	4.426	4.330	4.306	4.210	2.734	2.414	2.698	2.378	2.664	2.568	2.544	2.448	15.6	0.06	178.92	35.80	214.72	OK
	B203	2.067					10.42	2.9	0.64	0.24	-0.64	-0.24	15.582	15.262	15.546	15.226	15.512	15.416	15.392	15.296	9.556	9.236	9.520	9.200	9.486	9.390	9.366	9.270						

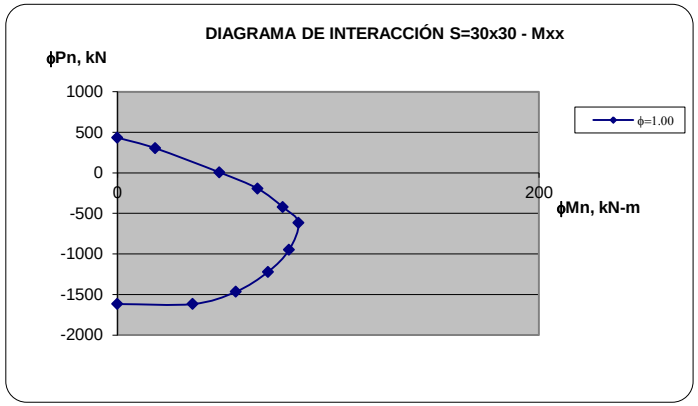
VERIFICACIONES DE CORTANTE PARA COLUMNAS
C.21.3.3.2 (a)
C.21.3.3.2 (b)

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADO-EL REDENTOR, BLOQUE M, BOGOTA (CUND.)
RESISTENCIA A CORTANTE PARA COLUMNAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a) - COLUMNAS S=30X30 8#4

f'c =	**21.1**	MPa	**Estribos Φ =**	**9.5**	mm
fy =	**420**	MPa	**Av =**	**71**	mm^2
$\Phi_{Cortante}$ =	**0.75**		**Cantidad de ramas =**	**3**	
bx =	**0.30**	m	**S =**	**0.15**	m
by =	**0.30**	m	**Recub. =**	**0.05**	m
Lcol =	**2.45**	m			

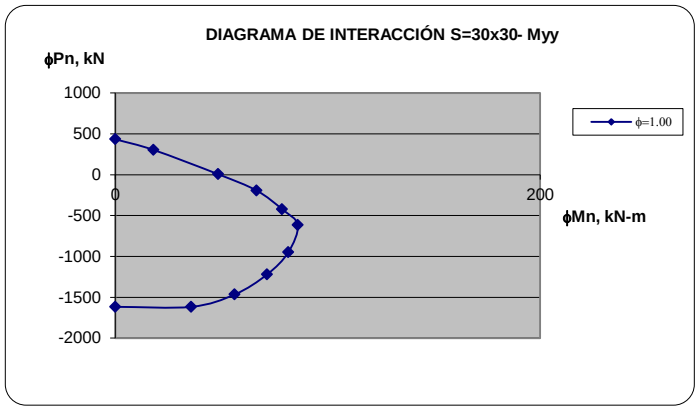
C.21.3.3.2(a) El cortante ΦVn no debe ser menor que la suma del cortante debido a flexión en curvatura inversa asociado con el desarrollo de los momentos nominales de la columna en cada extremo restringido de la longitud libre.

DATOS PARA LOS DIAGRAMAS DE ITERACCIÓN			
No.	**Curve 1**	**0. degrees**	
	P	**M3**	**M2**
1	-1617.00	0.00	0.00
2	-1617.00	35.74	0.00
3	-1466.00	56.17	0.00
4	-1221.00	71.43	0.00
5	-949.41	81.44	0.00
6	-616.48	85.89	0.00
7	-422.69	78.49	0.00
8	-193.53	66.48	0.00
9	6.10	48.38	0.00
10	303.09	17.98	0.00
11	433.55	0.00	0.00



P_{ua} =	-342.88	**kN**
P_{ub} =	-339.31	**kN**
ΦM_{na} =	74.30	**kN-m**
ΦM_{nb} =	74.12	**kN-m**
$V_{umáx}$ =	60.58	**kN**
ΦV_s =	111.83	**kN**
ΦV_c =	43.06	**kN**
ΦV_n =	154.89	**kN**
$\Phi V_n > V_{umáx}$ =	OK	

DATOS PARA LOS DIAGRAMAS DE ITERACCIÓN			
No.	**Curve 7**	**90. degrees**	
	P	**M3**	**M2**
1	-1617.00	0.00	0.00
2	-1617.00	0.00	35.74
3	-1466.00	0.00	56.17
4	-1221.00	0.00	71.43
5	-949.41	0.00	81.44
6	-616.48	0.00	85.89
7	-422.69	0.00	78.49
8	-193.53	0.00	66.48
9	6.10	0.00	48.38
10	303.09	0.00	17.98
11	433.55	0.00	0.00



P_{ua} =	-342.82	**kN**
P_{ub} =	-339.25	**kN**
ΦM_{na} =	74.30	**kN-m**
ΦM_{nb} =	74.11	**kN-m**
$V_{umáx}$ =	60.58	**kN**
ΦV_s =	111.83	**kN**
ΦV_c =	43.06	**kN**
ΦV_n =	154.89	**kN**
$\Phi V_n > V_{umáx}$ =	OK	

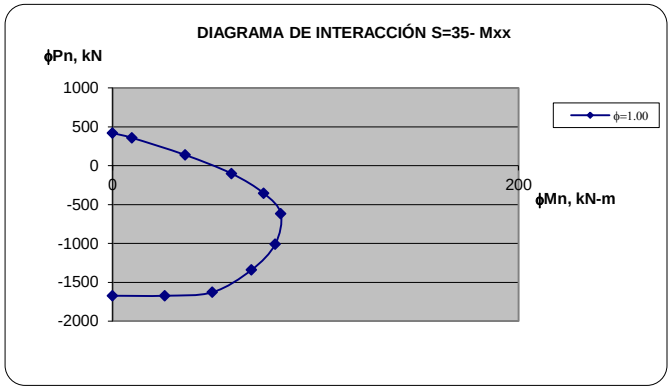
PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTÁ D.C.

RESISTENCIA A CORTANTE PARA COLUMNAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (a) - COLUMNAS S =35 5#5

f'c =	**21.1**	MPa	**Estribos Φ =**	**9.5**	mm
fy =	**420**	MPa	**Av =**	**71**	mm^2
$\Phi_{Cortante}$ =	**0.75**		**Cantidad de ramas =**	**2**	
bx =	**0.35**	m	**S =**	**0.15**	m
by =	**0.35**	m	**Recub. =**	**0.05**	m
Lcol =	**2.45**	m			

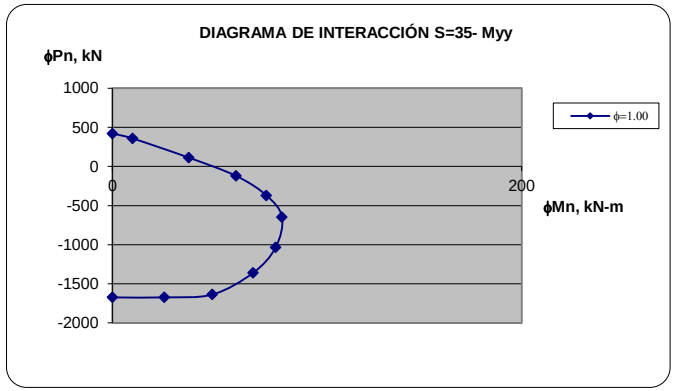
C.21.3.3.2(a) El cortante ΦVn no debe ser menor que la suma del cortante debido a flexión en curvatura inversa asociado con el desarrollo de los momentos nominales de la columna en cada extremo restringido de la longitud libre.

DATOS PARA LOS DIAGRAMAS DE ITERACCIÓN			
No.	**Curve 1**	**0. degrees**	
	P	**M3**	**M2**
1	-1673.00	0.00	0.00
2	-1673.00	25.80	0.46
3	-1628.00	49.21	0.29
4	-1342.00	68.39	0.47
5	-1009.00	80.14	0.24
6	-617.92	82.87	-0.21
7	-355.08	74.50	-0.81
8	-100.76	58.60	2.86
9	138.97	35.77	-1.87
10	358.89	9.62	0.00
11	420.00	0.00	0.00



P_{ua} =	-168.46	**kN**
P_{ub} =	-164.65	**kN**
ΦM_{na} =	62.83	**kN-m**
ΦM_{nb} =	62.59	**kN-m**
$V_{umáx}$ =	51.19	**kN**
ΦV_s =	89.46	**kN**
ΦV_c =	60.29	**kN**
ΦV_n =	149.75	**kN**
$\Phi V_n > V_{umáx}$ =	OK	

DATOS PARA LOS DIAGRAMAS DE ITERACCIÓN			
No.	**Curve 7**	**90. degrees**	
	P	**M3**	**M2**
1	-1673.00	0.00	0.00
2	-1673.00	0.00	25.40
3	-1636.00	0.00	48.84
4	-1359.00	0.00	68.78
5	-1033.00	0.00	79.81
6	-647.55	0.00	82.89
7	-370.63	0.00	75.28
8	-121.08	0.00	60.40
9	111.65	0.00	37.35
10	356.97	0.00	9.90
11	420.00	0.00	0.00



P_{ua} =	-167.95	**kN**
P_{ub} =	-164.14	**kN**
ΦM_{na} =	63.20	**kN-m**
ΦM_{nb} =	62.97	**kN-m**
$V_{umáx}$ =	51.50	**kN**
ΦV_s =	89.46	**kN**
ΦV_c =	60.29	**kN**
ΦV_n =	149.75	**kN**
$\Phi V_n > V_{umáx}$ =	OK	

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZDO-EL REDENTOR, BLOQUE M, BOGOTÁ, (CUND)
RESISTENCIA A CORTANTE PARA COLUMNAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b) - COLUMNAS S=30x30

f'c =	**21.1**	MPa	**Estribos Φ =**	**9.5**	mm
fy =	**420**	MPa	**Av =**	**71**	mm^2
$\Phi_{Cortante}$ =	**0.75**		**Cantidad de ramas =**	**3**	
bx =	**0.30**	m	**S =**	**0.15**	m
by =	**0.30**	m	**Ω_o=**	**3.00**	
			Recub. =	**0.05**	m

C.21.3.3.2(b) El cortante ΦVn no debe ser menor que el cortante maximo obtenido de las combinaciones de carga de diseño que incluyan E, con E incrementado por medio de Ωo.

Para cortante V2

Ω_o*$V_{umáx}$ =	44.40	**kN**
ΦV_s =	111.83	**kN**
ΦV_c =	43.06	**kN**
ΦV_n =	154.89	**kN**
ΦV_n > Ω_o*$V_{umáx}$ =	OK	

Para cortante V3

Ω_o*$V_{umáx}$ =	47.25	**kN**
ΦV_s =	111.83	**kN**
ΦV_c =	43.06	**kN**
ΦV_n =	154.89	**kN**
ΦV_n > Ω_o*$V_{umáx}$ =	OK	

PROYECTO: CENTRO DE ATENCIÓN ESPECIALIZADA - CAE EL REDENTOR - BLOQUE M, DIAGONAL 58 SUR No 28-19 - TRANSV. 30 No 57 - 5O SUR, BOGOTÁ D.C.

RESISTENCIA A CORTANTE PARA COLUMNAS
CHEQUEO PARA LA CONDICIÓN DESCRITA EN C.21.3.3 (b) - COLUMNAS S=35

f'c =	**21.1**	MPa	**Estribos Φ =**	**9.5**	mm	C.21.3.3.2(b) El cortante ΦVn no debe ser menor que el cortante maximo obtenido de las combinaciones de carga de diseño
fy =	**420**	MPa	**Av =**	**71**	mm^2	que incluyan E, con E incrementado por medio de Ωo.
Φ Cortante =	**0.75**		**Cantidad de ramas =**	**2**		
bx =	**0.35**	m	**S =**	**0.15**	m	
by =	**0.35**	m	**Ω_o=**	**3.00**		
			Recub. =	**0.05**	m	

Para cortante V2

Ω_o*$V_{umáx}$ =	59.13	**kN**
ΦV_s =	89.46	**kN**
ΦV_c =	60.29	**kN**
ΦV_n =	149.75	**kN**
ΦV_n > Ω_o*$V_{umáx}$ =	OK	

Para cortante V3

Ω_o*$V_{umáx}$ =	36.03	**kN**
ΦV_s =	89.46	**kN**
ΦV_c =	60.29	**kN**
ΦV_n =	149.75	**kN**
ΦV_n > Ω_o*$V_{umáx}$ =	OK	