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UNIVERSIDAD DEL AZUAY
FACULTAD DE CIENCIA Y TECNOLOGÍA
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Análisis y Diseño Estructural y Costos de un Proyecto de un Edificio de Cuatro Plantas en Cuenca, Ecuador

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AUTOR:

CHRISTIAN STEFANO BARZALLO SOLIS

DIRECTOR:

ING. CONTRERAS LOJANO DAVID RICARDO

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Agradezco a mis padres por siempre confiar en mí y no dejar que me diera por vencido, por siempre ayudarme, apoyarme y ser un pilar fundamental, a mi familia por siempre estar pendientes de mí, en especial a mi abuelita que siempre me llama a ver como estoy, y a mi abuelito que siempre fue y será mi mayor ejemplo a seguir, a mis amigos por estar ahí para mí, siendo un apoyo incondicional y ayudarme a pasar de lo mejor mi vida universitaria, a mi tutor de tesis el Ing. David Contreras el cual me ayudo y me apoyó a seguir adelante con la tesis aun teniendo tantos problemas con la misma, a todos mis profesores que fueron esenciales con su guía a lo largo de mi carrera universitaria, y a mis mascotitas los cuales siempre me ayudaron a mantenerme firme y muy amado a lo largo de todo este tiempo.

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Resumen

El propósito fundamental de esta investigación es abordar de manera integral todos los aspectos relacionados con este proyecto, desde el diseño estructural que asegure la estabilidad y durabilidad de la edificación en base a las solicitaciones requeridas y amparados en la vigente normativa. Asimismo, se llevará a cabo un análisis tentativo de los costos involucrados en la materialización del proyecto con el fin de proporcionar una visión completa de la viabilidad financiera del mismo. A lo largo de este trabajo, se va a examinar detalladamente los retos y oportunidades que se presentan en la planificación y ejecución de un proyecto de esta magnitud, teniendo en cuenta las particularidades de la zona y los estándares nacionales e internacionales de construcción. Además, se pretende ofrecer recomendaciones que puedan servir como guía para futuros proyectos similares en la zona, contribuyendo así al desarrollo urbano y al bienestar de la comunidad.

Palabras clave: Sismo, Funcionalidad, infraestructura, hormigón, acero de refuerzo, espectro elástico, cortante basal, análisis estructural, diagrama de interacción, idealización de las cargas.

Abstract

The primary purpose of this research is to comprehensively address all aspects related to this project, from the structural design that ensures the stability and durability of the building based on the required loads, in accordance with the current regulations. Additionally, a tentative cost analysis will be conducted to provide a complete overview of the project's financial feasibility. Throughout this work, the challenges and opportunities encountered in the planning and execution of a project of this magnitude will be thoroughly examined, taking into account the specific

characteristics of the area and both national and international construction standards. Furthermore, recommendations will be offered to serve as a guide for future similar projects in the region, thus contributing to urban development and the well-being of the community.

Keywords: Earthquake, Functionality, Infrastructure, Concrete, Reinforcing steel, Elastic spectrum, Base shear, Structural analysis, Interaction diagram, Load idealization.

Introducción

En el contexto de un mundo en constante evolución, el desarrollo urbano se ha convertido en un tema de gran relevancia en la actualidad. La planificación y construcción de edificaciones, juega un papel crucial en la transformación de las ciudades, permitiendo la satisfacción de las necesidades habitacionales, comerciales y de servicios a la población. Este desarrollo constante puede generar una serie de problemas, como retrasos en la entrega de obras, construcciones que se vuelven inhabitables después de un sismo o falta de liquidez para culminar un proyecto. Por lo tanto, es importante cumplir con las diferentes disposiciones y normativas existentes para garantizar una correcta ejecución del plan de construcción.

> Ecuador se encuentra en la zona de mayor peligrosidad sísmica del mundo, de tal forma que los profesionales encargados del diseño estructural de edificaciones deben considerar la acción sísmica para la planificación de estructuras. Se debe tener en cuenta que un sismo no mata a las personas sino las edificaciones que colapsan ante un evento de gran magnitud, generalmente estas edificaciones no han sido diseñadas ni construidas respetando los procesos y normativas vigentes. (Viera Arroba, Quizanga Martínez, & Andino Carranco, 2020)

La seguridad y funcionalidad de las construcciones son aspectos esenciales que no solo garantizan la integridad de las edificaciones, sino que también impactan significativamente en la economía y el bienestar de una comunidad.

> La idea del desarrollo constructivo en el país no solo implica la construcción de infraestructura, esta idea debe venir acompañada de criterios que se deberían

> aplicar siempre, como la construcción de proyectos de calidad que garanticen unas buenas condiciones de vida. (Chávez Salgado, 2014).

En este contexto, el objeto de este estudio se enfoca en el análisis, diseño estructural, y costos asociados a un proyecto de edificación de cuatro plantas. Cabe destacar que el material del edificio que se analizará en este trabajo es de hormigón armado. En cuanto al uso de la estructura, este consistirá en un edificio de apartamentos. Con el incentivo de aplicar los conocimientos adquiridos en la carrera de ingeniería civil, se realizará el respectivo estudio y análisis haciendo uso de diferentes softwares como CYPECAD, ETABS y/o EXCEL con la finalidad de obtener resultados lo más aproximado a la realidad.

Antecedentes

> Ecuador se encuentra dentro del denominado Cinturón de Fuego del Pacífico, por lo que su actividad sísmica es alta, incluyendo eventos tales como el de 1906, que alcanzó una magnitud de 8.8 Mw, colocándolo dentro de los sismos más grandes de la historia. (Quinde Martinez & Reinoso Angulo, 2016).

Ecuador también ha sufrido eventos sísmicos como el sismo del 16 de abril de 2016 con una magnitud de 7.8 Mw o el evento del 18 de marzo de 2023 con una magnitud de 6.7 Mw causando, en todos estos eventos, fallecidos y daños en edificaciones. Cuenca es una zona perteneciente al sur de Ecuador que tiene una alta probabilidad de ser afectada por sismos de gran magnitud, por esta razón es importante diseñar una estructura que siga una normativa establecida para evitar cualquier tipo de riesgo para los usuarios cuando se produzcan eventos similares como los mencionados.

A lo largo de los años, se han realizado diversas investigaciones y estudios en el ámbito de la ingeniería estructural sentando las bases para abordar este proyecto. Estos estudios se han recopilado convirtiéndose en normativas, las cuales podemos usar hoy en día para garantizar la seguridad tanto de la estructura como de los ocupantes que tendría la misma. Las normativas de construcción han evolucionado para adaptarse a las condiciones geográficas y sísmicas del país, lo que resulta crucial en una región propensa a la actividad sísmica. Actualmente, nuestro país se rige por la NEC-2015, y aunque estudios demuestran que las normativas de países vecinos poseen mejores resultados estructurales que la de nuestro país, será la que utilizaremos para abordar este trabajo.

La ciudad de Cuenca, por su parte, es conocida por su valor arquitectónico y patrimonio cultural, lo que ha llevado a un enfoque especial en la conservación y restauración de edificaciones históricas. Sin embargo, se pudo observar como el mencionado sismo del 18 de marzo del 2023 logro afectar a estructuras como a un edificio del centro histórico, dejando una fachada en malas condiciones, o como el edificio de la Facultad de Ciencia y Tecnología de la Universidad del Azuay, dejando daños graves y obligándolo a ser restaurado casi en su totalidad para su uso.

En cuanto a los costos y presupuestos en proyectos de construcción, se han desarrollado diversas metodologías, herramientas y softwares para estimar y controlar los gastos a lo largo del ciclo de vida de un edificio. Estas investigaciones han contribuido al desarrollo de prácticas de gestión financiera eficientes y al mejoramiento de la rentabilidad de los proyectos.

Estos antecedentes reflejan la importancia de abordar de manera integral tanto el análisis y diseño estructural como el estudio hidrosanitario y el cálculo de los costos. Considerando estos avances en el campo de diseño estructural, este estudio se propone a contribuir al conocimiento existente y ofrecer orientación específica para el proyecto en cuestión, aprovechando las lecciones

aprendidas de investigaciones previas y cumpliendo la normativa vigente para el diseño y construcción de edificaciones modernas.

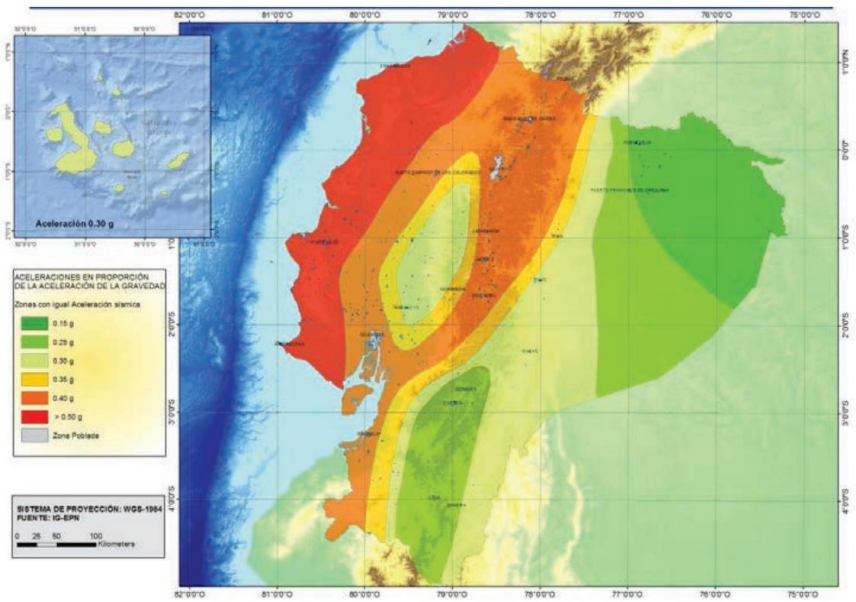
Problemática

Uno de los principales problemas para las estructuras, que todo profesional debería tomar en cuenta tanto al momento del diseño como de la construcción, son los terremotos. Indicado anteriormente, Ecuador está ubicado en una zona altamente sísmica, por lo que está propensa a sufrir daños estructurales debido a los golpes de energía que libera el roce de las placas de Nazca y Sudamericana, siendo un completo peligro para las vidas humanas que habitan o hacen uso de las estructuras.

> En el Ecuador y en muchos otros países, existen construcciones informales, en las cuales no ha participado un profesional ni en la fase de diseño ni en la fase de construcción, con lo cual dichas construcciones no cumplen las normas de diseño sismo resistente, lo cual eleva el nivel de vulnerabilidad sísmica y son más propensos a sufrir daños. (Ministerio de Desarrollo Urbano y Vivienda, 2015).

Debido a que no existe actualmente una base de datos que permita conocer con exactitud la ocurrencia de estas liberaciones de energía, se recurre a métodos y análisis probabilistas para simular las intensidades y frecuencias de posibles eventos sísmicos que se pueden dar en el futuro, logrando de esta manera conocer el comportamiento sísmico de la zona. Ya que como podemos observar en el pasado, varios de estos eventos han provocado tanto la pérdida de vidas humanas, como pérdidas económicas.

Figura 1. Ecuador, zonas sísmicas para propósitos de diseño y valor del factor de zona Z



Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

Cuenca, reconocida también por su riqueza histórica, ha experimentado un crecimiento poblacional constante en los últimos años. Esto ha generado una gran demanda de espacios residenciales y comerciales dando lugar a un aumento significativo en la construcción de edificios. En este contexto, la planificación y ejecución de proyectos de construcción se han vuelto tareas fundamentales para garantizar la seguridad y eficiencia de las estructuras edificadas.

Justificación

Ecuador esta propensa a sufrir las reacciones de varios tipos de sismos al estar establecido sobre una zona sismotectónica desfavorable. Por esta razón, cada estructura debe poseer un análisis sismorresistente previo a su construcción, y aunque algunas zonas del país son menos riesgosas que otras, todas las estructuras deben ser sometidas a estos estudios y cumplir con las normativas

vigentes de seguridad sísmica para evitar el colapso total de la estructura, de esta manera se trata de fomentar el cumplimiento de los Objetivos de Desarrollo Sostenible N°9, que implican el desarrollo de infraestructuras fiables, sostenibles y resilientes, y el ODS N°11 que trata de "reducir significativamente el número de muertes causadas por los desastres, incluidos los relacionados con el agua, y de personas afectadas por ellos, y reducir considerablemente las pérdidas económicas directas provocadas por los desastres" (Instituto nacional de estadistica y censos).

> Cuando se diseña infraestructura tomando en cuenta las normas sismo-resistentes y se fiscaliza debidamente su ejecución, los daños que se presentan frente a un sismo son bastante menores respecto a aquellas construcciones que no toman en cuenta el diseño sismo-resistente (Ministerio de Desarrollo Urbano y Vivienda, 2015).

Por otro lado, dentro de la constitución en el artículo 66, índice 2, indica que el derecho de una vida digna implica la disponibilidad de agua potable y de saneamiento entre otros servicios sociales. Con esta finalidad, y la de cumplir con el ODS N°6, que es la de garantizar la disponibilidad de agua y el saneamiento, se propone el diseño hidrosanitario del edificio.

La construcción de un edificio funcional, además de generar fuentes de empleo, contribuye al desarrollo tanto económico como social de la zona, ya que el crecimiento poblacional de Cuenca demanda una mejor planificación urbana que sea capaz de satisfacer las necesidades habitacionales, pues es el caso del edificio que será objeto para el presente estudio, el cual tiene un uso tanto residencial como comercial.

En conclusión, este proyecto tiene como finalidad contribuir al desarrollo urbano, garantizar la estabilidad de la edificación ante sismos, garantizar la seguridad de los ocupantes y promover la eficiencia en la construcción y operación del edificio y un análisis de los costos que

implica la materialización de la infraestructura. Este trabajo trata de ofrecer, en base a los conocimientos y las prácticas próximas a desarrollar, recomendaciones y directrices que puedan servir como referencia para proyectos similares en la región, ya que cumplir con las regulaciones y normativas de construcción es una obligación fundamental.

Objetivos

Objetivo General

El objetivo general de este estudio es realizar un análisis y un diseño estructural, así como el estudio hidrosanitario detallado y los costos asociados, para el desarrollo exitoso de un edificio de cuatro plantas ubicado en Cuenca, Ecuador.

Objetivos específicos

- Recopilar información necesaria y relevante de documentos y normativas relacionados a estudios estructurales.
- Realizar un análisis de las condiciones geotécnicas del sitio de construcción para comprender los desafíos y requerimientos específicos de la ubicación.
- Realizar el modelado de la estructura mediante el uso de programas comerciales BIM, como ETABS.
- Realizar el análisis y diseño estructural cumpliendo con las normativas de construcción vigentes en el país.
- Evaluar la vulnerabilidad sísmica de la estructura.
- Realizar una estimación detallada de los costos asociados, considerando materiales, mano de obra, equipamiento y gastos generales.

1. CAPÍTULO 1

1.1. Análisis estructural

"El análisis sísmico de una estructura es el estudio de su comportamiento frente a posibles movimientos telúricos, obteniendo la respuesta en fuerzas producidas en los distintos elementos del edificio y sus desplazamientos." (Hernández Pinedo, 2012). Por esta razón es necesario llevar a cabo un análisis detallado donde se consideren cargas de diseño, combinaciones de cargas, dimensionamiento de elementos, modos de vibrar, diseño de elementos estructuras, diseño de cimentaciones, etc. para lograr con éxito una estructura estable, resistente y funcional.

> La gran mayoría de las edificaciones que presentan daños graves o que colapsan frente a un sismo severo, se debe a la falla de uno o más elementos estructurales cuya resistencia y ductilidad no fueron los necesarios para soportar la acción sísmica (Ministerio de Desarrollo Urbano y Vivienda, 2015).

Un componente importante para el diseño de cualquier estructura es tener en cuenta la carga sísmica, sobre todo para el presente trabajo, debido a que:

> El peligro sísmico en Ecuador está regido principalmente por dos tipos de fuentes sísmicas: subducción (interplaca e intraplaca), y de tipo corticales (superficiales). En cada una de estas fuentes se lleva a cabo un proceso de acumulación y liberación de energía independiente del que ocurre en las demás fuentes (Quinde Martinez & Reinoso Angulo, 2016).

El punto de partida para el análisis estructural, es conocer la ubicación del proyecto y determinar las características del mismo; propiedades geométricas básicas, materiales a utilizar, el tipo de uso de las instalaciones del proyecto y la importancia de la misma.

Conociendo estos parámetros generales, y siguiendo los parámetros de la normativa NEC 15, se puede establecer la zona sísmica del edificio, la caracterización de peligrosidad sísmica, el valor de Z y las curvas de peligrosidad sísmica. Posteriormente se puede determinar las características geológicas en base al tipo de suelo y determinar el espectro correspondiente a la estructura. Por último, se aplica la metodología sismorresistente indicada en la Norma Ecuatoriana.

Los resultados obtenidos en el análisis serán necesarios para corroborar y complementar el diseño de los elementos de la estructura. Gracias a este análisis se logra interpretar el comportamiento de la estructura ante las cargas que sufriría la edificación.

Una vez que se han determinado todos los parámetros mencionados previamente, se idealiza el agrietamiento de las secciones de los elementos estructurales. Matemáticamente este procedimiento se realiza modificando el momento de inercia de las secciones. En columnas al 80% y en vigas al 50%.

1.1.1. Normativas y requisitos:

La parte del diseño y análisis de la estructura se lo realizará en base a los requisitos y códigos que indica la Norma Ecuatoriana de la Construcción NEC-15. Cabe destacar, que la aplicación de esta norma no garantiza que una edificación no sufra ningún tipo de daño ante un sismo de magnitud elevada. Sin embargo, los objetivos de la aplicación de esta norma son tres:

- Prevenir daños estructurales y no estructurales ante sismos de baja magnitud y frecuentes.
- Prevenir daños estructurales y no estructurales antes sismos de magnitud moderada y poco frecuentes
- Evitar el colapso de la estructura antes sismos de gran magnitud que pueden ocurrir pocas veces durante su vida útil.

1.1.2. Modelado de la estructura:

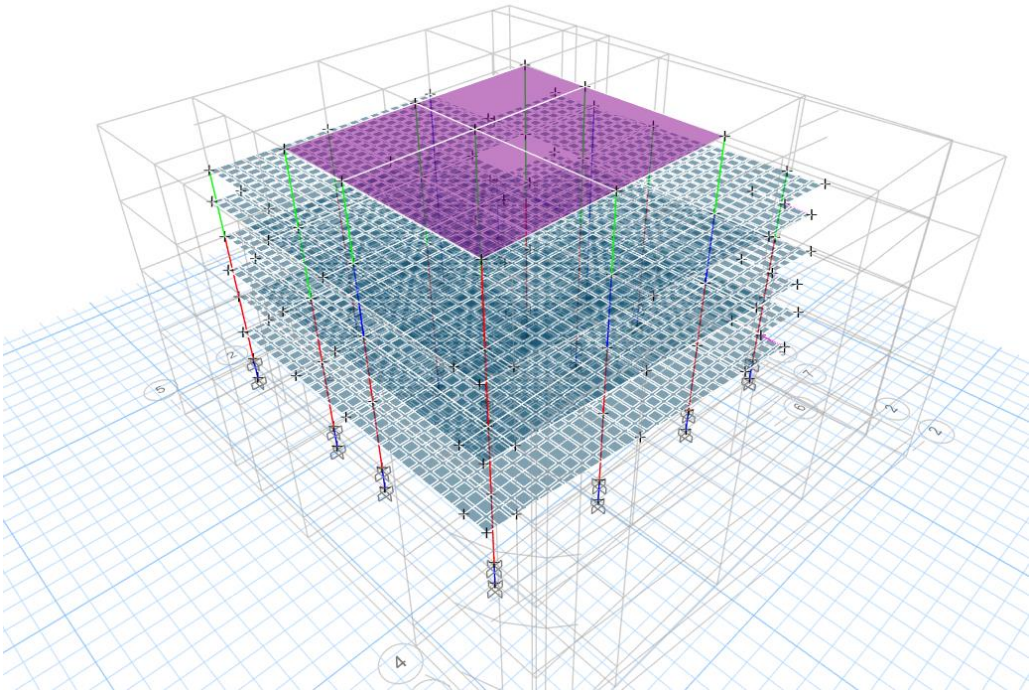
Mediante el uso de softwares se realizará el análisis estructural para modelar y analizar el comportamiento del edificio ante las diferentes solicitaciones impuestas, teniendo siempre en consideración la normativa de construcción y códigos sísmicos.

Para el modelado de la estructura se utilizará plataformas de diseño BIM, los cuales hoy en día son necesarios y factibles.

> Es posible verificar el aporte de la implementación de BIM al aumento de la precisión del presupuesto de construcción, soportado en la precisión que se logra en el cálculo de cantidades de obra, las facilidades del modelo BIM para, entre otros, la determinación de actividades de obra y la integración de la información del proyecto en una única base de dato. (Porras Díaz, etal, 2015)

El modelo matemático debe condensar todas las propiedades geométricas y mecánicas de los elementos que la componen y es importante aclarar que, en este apartado solo se definen los elementos del sistema resistente a cargas laterales (sismo). Sin embargo, esto no quiere decir que se suprimen los elementos no estructurales, como son las paredes de mampostería, los acabados, las instalaciones, etc. Estos elementos que también forman parte de la edificación, solamente aportan masa al modelo, misma que afecta el comportamiento de la estructura desde la raíz, modificando los períodos y formas de vibrar del sistema estructural. Entonces, se aclara que sería un error, considerarlos en primera instancia como elementos del sistema principal resistente, considerando su aporte de rigidez al sistema.

Figura 2. Modelo del edificio en Etabs

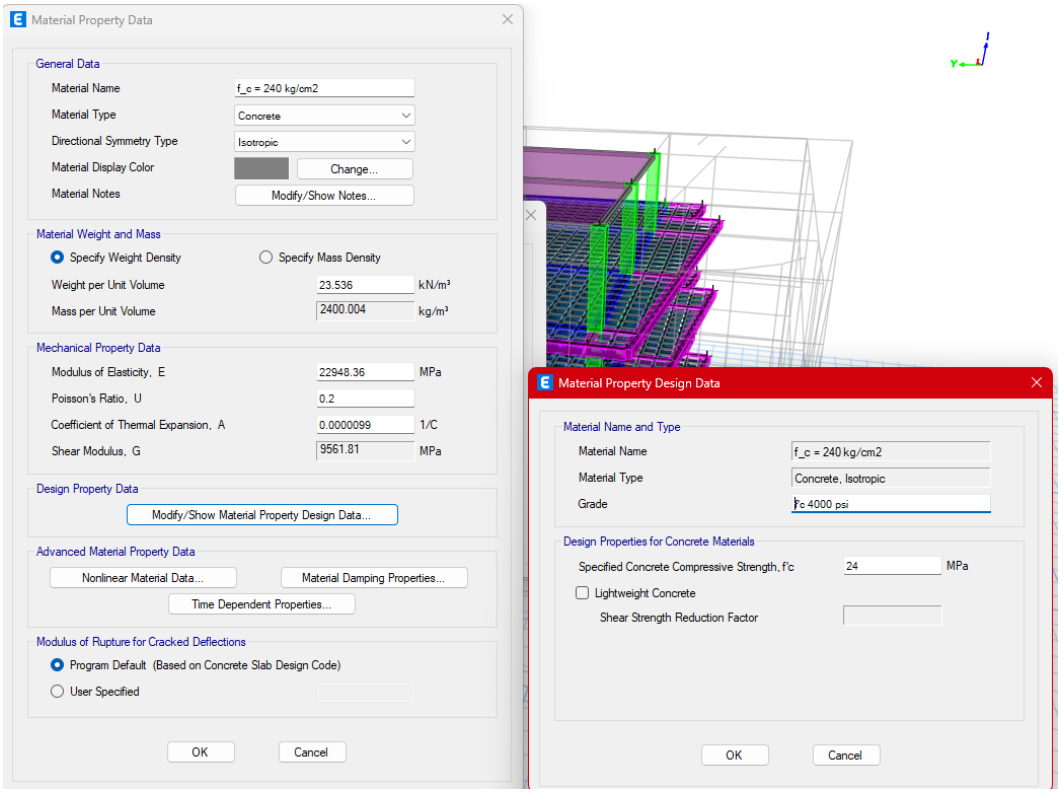


1.1.3. Materiales

El primer paso para realizar el modelo matemático, es definir los materiales que intervienen dentro del sistema estructural, considerando la interacción de hormigón con su respectiva resistencia a la compresión y el acero de refuerzo.

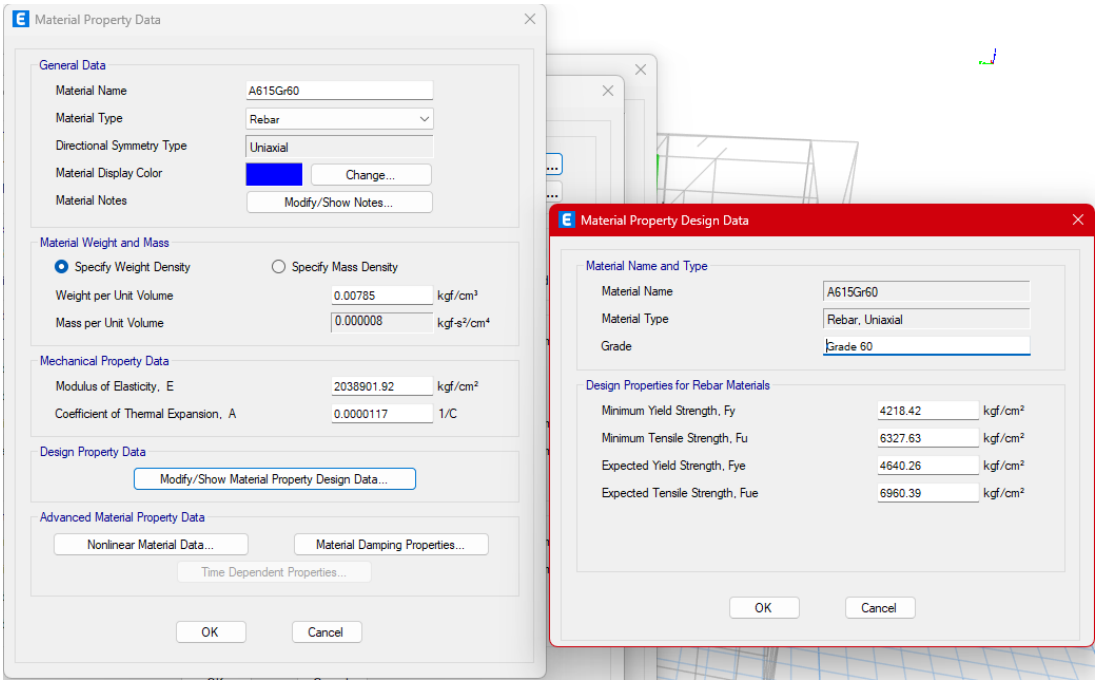
Sobre el hormigón empleado en los elementos estructurales, este debe cumplir una resistencia a la compresión f'c = 24 MPa. A continuación, se indican los parámetros correspondientes a este material, ingresados en el software.

Figura 3. Parámetros del Hormigón utilizado en Etabs



Las barras de acero de refuerzo de acero para los elementos estructurales deben cumplir la normativa ASTM A706, deben tener un módulo de elasticidad igual a 2038901 kg/cm2 y esfuerzo de fluencia fy mayor o igual a 4200 kg/cm2.

Figura 4. Parámetros de las barras ingresadas en Etabs



1.1.4. Conectividad de los elementos

A partir de los planos arquitectónicos, se define la ubicación y cota de los diferentes elementos estructurales. El proceso de realizar el modelo propiamente consiste en trazar todos los elementos como son vigas y columnas, y conectarlos adecuadamente.

1.1.5. Cargas o acciones sobre la estructura

Una vez definida la ubicación y conexión de los diferentes elementos, se aplica a estos, la idealización de las respectivas cargas que actuarán durante la vida útil y el correcto funcionamiento de la estructura. Las cargas que se utilizan en este proyecto son las siguientes:

- Carga muerta (CM):

Esta carga representa el peso propio de cada elemento de la estructura, como son vigas, viguetas, columnas y losa. Es importante aclarar que la herramienta computacional se encarga de

calcular estos valores, en función de las propiedades asignadas a cada elemento, como se indica más adelante.

Adicionalmente al peso de los elementos estructurales, se deben definir los efectos producidos por las sobrecargas debidas a los elementos no estructurales que también forman parte del proyecto, estas son debidas a los acabados, cielo raso, instalaciones y paredes.

- Carga viva (CV):

Para representar las cargas impuestas a la estructura durante todo el funcionamiento de la edificación, se analiza el tipo de uso que se dará a las instalaciones. En este caso, los entrepisos están destinados a residencias, motivo por el cual, se define una carga de 2.00 kN/m², según la norma NEC-cargas no sísmicas. Para las áreas ocupadas por losas de escaleras y espacios comunes, se define una carga de 4.00 kN/m², tal como establece la norma NEC-cargas no sísmicas. Finalmente, en el caso de las cubiertas, se asigna una carga de 0.70 kN/m², siguiendo lo establecido en la norma NEC-cargas no sísmicas.

- Carga sísmica (CS):

Con respecto a la carga sísmica, esta se aplica en base al espectro de respuesta de aceleraciones. La carga sísmica corresponde a un porcentaje de las masas o cargas muertas aplicada a la estructura como fuerzas laterales. Por este motivo es importante definir todas las masas que intervienen en el sistema y el tipo de uso, ya que la carga viva definida previamente, puede llegar a ser considerada como un peso o masa adicional si el tipo de uso así lo requiere. La carga sísmica aplicada a la edificación se define más adelante, en un apartado completo y detallado del proceso.

1.1.6. Combinaciones de Carga

Los elementos estructurales deben diseñarse para las condiciones de resistencia y servicio especificadas por la normativa. Se empleará el diseño por resistencia última, por cuanto se mayora

las cargas de servicio por factores de seguridad según las combinaciones establecidas en la normativa ecuatoriana vigente, y quedan definidas las siguientes:

- Cu1 = 1.4CM
- Cu2 = 1.2CM + 1.6CV + 0.5CVc
- Cu3 = 1.2CM + 1.6CVc+ 1CV
- Cu4 = 1.2CM + 1.0CV ± (1.0CSx ± 0.3CSy)
- Cu5 = 1.2CM + 1.0CV ± (1.0CSy ± 0.3CSx)
- Cu6 = 0.9CM ± (1.0CSx ± 0.3CSy)
- Cu7 = 0.9CM ± (1.0CSy ± 0.3CSx)

Para el análisis a servicio se consideró las siguientes combinaciones:

- Cs1 = CM
- Cs2 = CM + CV +CVc

En donde, Cu es la carga última o de diseño, Cs indica la carga de servicio.

CM corresponde a la carga muerta o permanente.

CV es la carga viva o debida al tipo de uso.

CVc es la carga viva en la cubierta.

CSx la carga debida al sismo en dirección X.

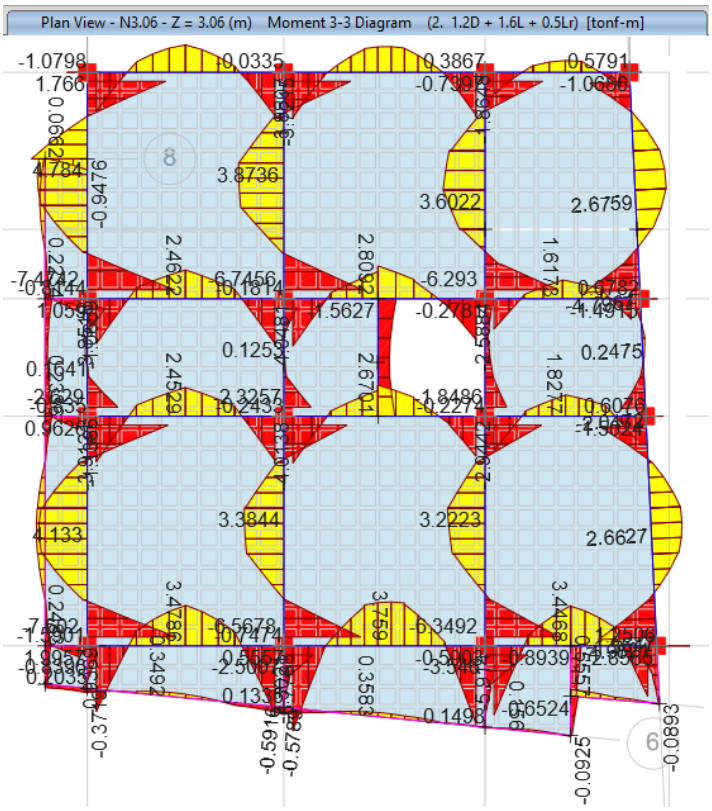
CSy la carga debida al sismo en dirección Y.

1.1.7. Secciones geométricas

Al conocer las cargas impuestas, su distribución espacial y las respectivas combinaciones, se conocen los efectos que se producen en los elementos estructurales. Por ejemplo, la distribución de momentos en las vigas, o las cargas axiales que se aplican a las columnas.

El modelo matemático simplifica la obtención de estos resultados, tal como se ejemplifica a continuación para la combinación de carga: 1.2CM + 1.6CV + 0.5CVc.

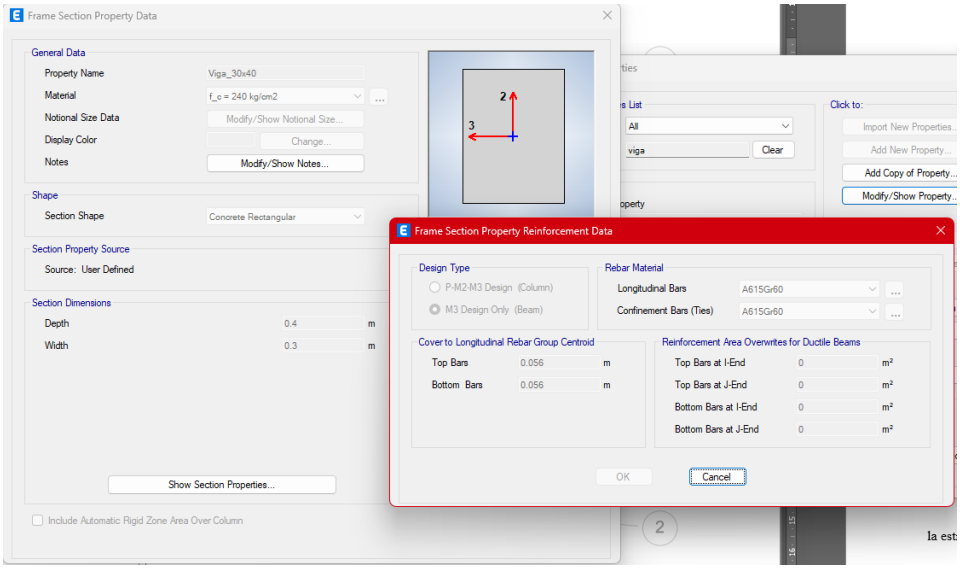
Figura 5. Distribucion de momentos en las vigas por Etabs



A partir de estos diagramas de momentos, se puede pre-diseñar la sección de las vigas de la estructura. Además, se puede verificar que se cumplan los criterios establecidos en el ACI-318 para considerar deflexiones en vigas.

La sección ingresada para las vigas de la estructura es la siguiente:

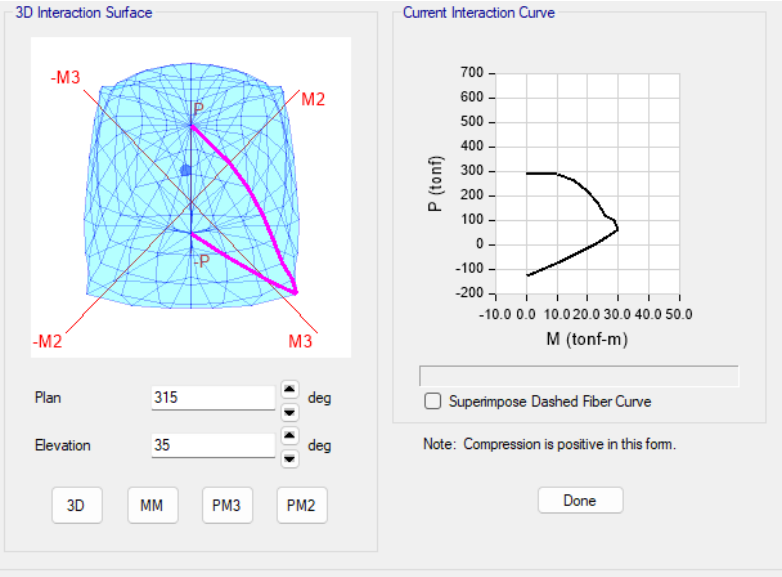
Figura 6. Sección de las vigas ingresada en Etabs



En esta imagen se puede apreciar las dimensiones de peralte y espesor del elemento, además de que se evidencia la utilización de los materiales previamente definidos.

De igual manera se realiza el dimensionamiento de los elementos columna, en base a cada una de las combinaciones de carga, analizando los efectos simultáneos de las cargas axiales y los momentos flectores en cada columna. Nuevamente, la herramienta computacional facilita este procedimiento debido a que nos muestra de manera sencilla el diagrama de interacción de las secciones definidas para las columnas, tal como se muestra a continuación:

Figura 7. Diagrama de interacción de columnas en Etabs



1.1.8. Idealización de la carga Sísmica:

Al igual que se analizan los parámetros de ubicación del proyecto y de tipo de uso, la normativa NEC establece que, para el análisis de la carga sísmica, se debe considerar la regularidad o irregularidad de la edificación. De esta manera, la Tabla 13 de la norma, muestra los diferentes tipos de irregularidades en planta que puede poseer la estructura. Debido a que la estructura posee irregularidades en planta. Los factores correspondientes quedan de la siguiente manera:

Factor de Irregularidad en Planta: $\Phi P = 0.81$.

Factor de Irregularidad en Elevación: $\Phi E = 1.0$

En base a estos parámetros y siguiendo las especificaciones de la normativa NEC, se define el espectro de aceleraciones para la edificación en cuestión:

Tabla 1. Diseño del espectro en Excel

DISEÑO SEGÚN NORMA NEC		
Factor z	Tabla 1	0.25
Tipo de suelo	Tabla 2	D
Categ. de edificio	Tabla 6	Otras
Factor de Importancia I	Tabla 6	1
Factor Red. Sísmica R	Tabla 15	8
Localización	rra, Esmeraldas, Galapa	
Factor Fa	Tabla 3	1.4
Factor Fd	Tabla 4	1.45
Factor Fs	Tabla 5	1.06
To=0.1*Fs*(Fd/Fa)	pag. 35	0.1098
Tc=0.55*Fs*(Fd/Fa)	pag. 34	0.6038
TL=2.4*Fd	pag. 34	3.48
η	pag. 34	2.48
Ct	pag. 62	0.055
α	pag. 62	0.9
Altura edificio hn	en metros	11.160
Ta - Método 1	pag. 62	0.482
Ta max	seg	0.627
r	pag. 34	1.500
Sa	pag. 35	0.868
k	pag. 70	1.000
Øp	Tabla 13	0.810
Øe	Tabla 14	1.000

- Zona sísmica

El sitio donde será establecido el edificio determinará el valor de Z, siendo parte de una de las 6 zonas sísmicas del Ecuador y ayudando de esta manera a determinar la caracterización de peligrosidad sísmica.

Tabla 2. Valores del factor Z en función de la zona sísmica adoptada

Zona sísmica	I	II	III	IV	V	VI
Valor factor Z	0.15	0.25	0.30	0.35	0.40	≥ 0.50
Caracterización del peligro sísmico	Intermedia	Alta	Alta	Alta	Alta	Muy alta

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

La ciudad de Cuenca se encuentra en la zona sísmica tipo II por lo que el valor de z es 0.25.

- Tipos de perfiles de suelos para el diseño sísmico

Se considero un suelo de tipo D para este proyecto

Tabla 3. Tipos de suelos

Tipo de perfil	Descripción	Definición
	Perfiles de suelos muy densos o roca blanda, que cumplan con cualquiera de los dos criterios	N ≥ 50.0 S_u ≥ 100 KPa
D	Perfiles de suelos rígidos que cumplan con el criterio de velocidad de la onda de cortante, o	360 m/s > V_s ≥ 180 m/s
	Perfiles de suelos rígidos que cumplan cualquiera de las dos condiciones	50 > N ≥ 15.0 100 kPa > S_u ≥ 50 kPa

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

- Coeficientes de perfil de suelo Fa, Fd y Fs

Fa es el coeficiente de amplificación de suelo en la zona de periodo cortó, y el valor que tomamos ya que optamos por un suelo de tipo D es 1.4.

Tabla 4. Tipo de suelo y Factores de sitio Fa

Tipo de perfil del subsuelo	Zona sísmica y factor Z					
	I	II	III	IV	V	VI
	0.15	0.25	0.30	0.35	0.40	≥0.5
A	0.9	0.9	0.9	0.9	0.9	0.9
B	1	1	1	1	1	1
C	1.4	1.3	1.25	1.23	1.2	1.18
D	1.6	1.4	1.3	1.25	1.2	1.12
E	1.8	1.4	1.25	1.1	1.0	0.85
F	Véase Tabla 2 : Clasificación de los perfiles de suelo y la sección 10.5.4					

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

Fd es la amplificación de las ordenadas del espectro elástico de respuesta de desplazamientos para diseño en roca, y para el caso de nuestro proyecto va a ser 1.45.

Tabla 5. Tipo de suelo y Factores de sitio Fd

Tipo de perfil del subsuelo	Zona sísmica y factor Z					
	I	II	III	IV	V	VI
	0.15	0.25	0.30	0.35	0.40	≥0.5
A	0.9	0.9	0.9	0.9	0.9	0.9
B	1	1	1	1	1	1
C	1.36	1.28	1.19	1.15	1.11	1.06
D	1.62	1.45	1.36	1.28	1.19	1.11
E	2.1	1.75	1.7	1.65	1.6	1.5
F	Véase Tabla 2 : Clasificación de los perfiles de suelo y 10.6.4					

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

Fs en el caso de nuestro proyecto va a ser 1.06, y este.

Considera el comportamiento no lineal de los suelos, s, la degradación del período del sitio que depende de la intensidad y contenido de frecuencia de la

excitación sísmica y los desplazamientos relativos del suelo, para los espectros de aceleraciones y desplazamientos. (Valencia, Capítulos de la NEC (Norma Ecuatoriana de la Construcción), 2014)

Tabla 6. Tipo de suelo y Factores del comportamiento inelástico del subsuelo Fs

Tipo de perfil del subsuelo	Zona sísmica y factor Z					
	I	II	III	IV	V	VI
	0.15	0.25	0.30	0.35	0.40	≥0.5
A	0.75	0.75	0.75	0.75	0.75	0.75
B	0.75	0.75	0.75	0.75	0.75	0.75
C	0.85	0.94	1.02	1.06	1.11	1.23
D	1.02	1.06	1.11	1.19	1.28	1.40
E	1.5	1.6	1.7	1.8	1.9	2
F	Véase Tabla 2 : Clasificación de los perfiles de suelo y 10.6.4					

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

1.1.9. Componentes horizontales de la carga sísmica: espectros elásticos de diseño

- Espectro elástico horizontal de diseño en aceleraciones

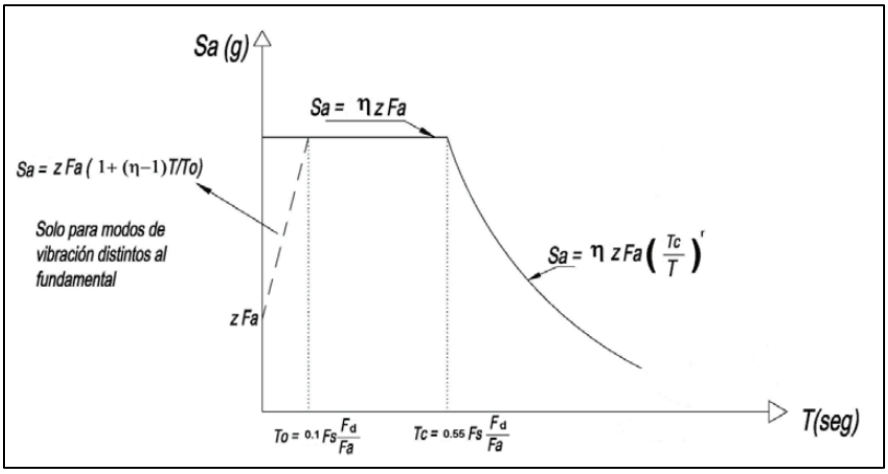
Sa que es el espectro de respuesta elástico de aceleraciones, está expresado como fracción de la aceleración de la gravedad, para el nivel del sismo de diseño, se proporciona en la Figura 8, consistente con:

El factor de zona sísmica Z.

El tipo de suelo del sitio de emplazamiento de la estructura.

La consideración de los valores de los coeficientes de amplificación de suelo Fa, Fd, Fs.

Figura 8. Espectro sísmico elástico de aceleraciones que representa el sismo de diseño



Fuente: (Ministerio de Desarrollo Urbano y Vivienda)

η: Razón entre la aceleración espectral Sa (T = 0.1 s) y el PGA para el período de retorno seleccionado. Dependiendo de la región del Ecuador se obtiene:

η= 1.80: Provincias de la Costa (excepto Esmeraldas)

η= 2.48: Provincias de la Sierra, Esmeraldas y Galápagos

η= 2.60: Provincias del Oriente

Sa: Espectro de respuesta elástico de aceleraciones (expresado como fracción de la aceleración de la gravedad g). Depende del período o modo de vibración de la estructura.

T: Período fundamental de vibración de la estructura.

To: Período límite de vibración en el espectro sísmico elástico de aceleraciones que representa el sismo de diseño.

Tc: Período límite de vibración en el espectro sísmico elástico de aceleraciones que representa el sismo de diseño.

Z Aceleración máxima en roca esperada para el sismo de diseño, expresada como fracción de la aceleración de la gravedad g.

Dicho espectro, que obedece a una fracción de amortiguamiento respecto al crítico de 5%, se obtiene mediante las siguientes ecuaciones, válidas para períodos de vibración estructural T pertenecientes a 2 rangos:

Ecuación 1. Ecuación de amortiguamiento

$$S_a = \eta Z F_a \qquad \text{para } 0 \leq T \leq T_C$$

$$S_a = \eta Z F_a \left(\frac{T_c}{T}\right)^r \qquad \text{para } T > T_C$$

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

Donde: r: Factor usado en el espectro de diseño elástico, cuyos valores dependen de la ubicación geográfica del proyecto.

r = 1 para todos los suelos, con excepción del suelo tipo E.

r = 1.5 para tipo de suelo E.

Sa Espectro de respuesta elástico de aceleraciones (expresado como fracción de la aceleración de la gravedad g). Depende del período o modo de vibración de la estructura

T Período fundamental de vibración de la estructura.

TC Período límite de vibración en el espectro sísmico elástico de aceleraciones que representa el sismo de diseño.

Z Aceleración máxima en roca esperada para el sismo de diseño, expresada como fracción de la aceleración de la gravedad g.

Se puede apreciar adicionalmente el cálculo del período de vibración de la estructura, en base a las fórmulas de la normativa ecuatoriana:

Ecuación 2. Periodo de vibración de la estructura

$\mathbf{T} = C_t h_n^{\alpha}$	
Dónde:	
C_t	Coeficiente que depende del tipo de edificio
$\mathbf{h_n}$	Altura máxima de la edificación de n pisos, medida desde la base de la estructura, en metros.
T	Período de vibración

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

$$T = 0.055 * 11.16^{0.9} = 0.482\ seg$$

El tipo de estructura de la edificación será sin muros estructurales ni diagonales rigidizadores por tanto el valor de Ct y α serán los que se muestran en la tabla 8.

Tabla 7. Tipo de Estructura

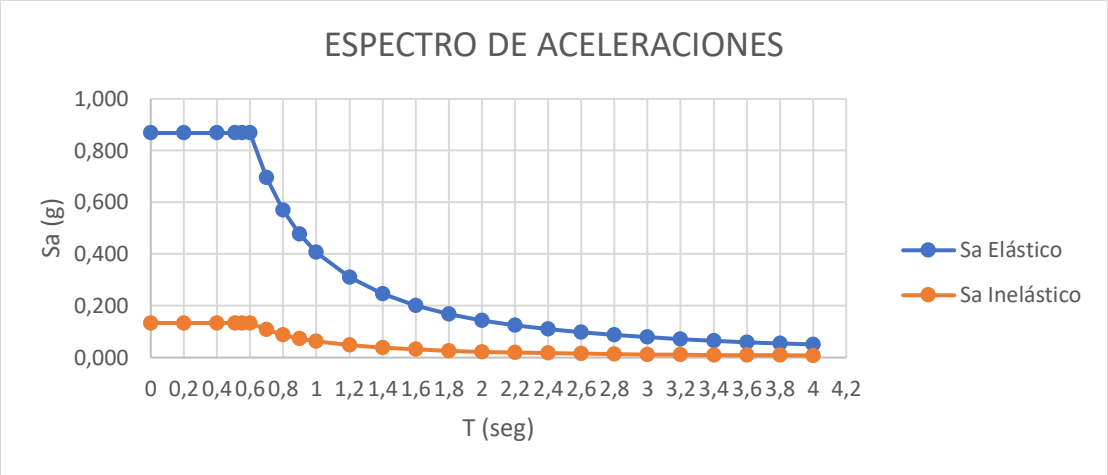
Tipo de estructura	C_t	α
Estructuras de acero		
Sin arriostramientos	0.072	0.8
Con arriostramientos	0.073	0.75
Pórticos especiales de hormigón armado		
Sin muros estructurales ni diagonales rigidizadoras	0.055	0.9
Con muros estructurales o diagonales rigidizadoras y para otras estructuras basadas en muros estructurales y mampostería estructural	0.055	0.75

Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

Adicionalmente, la normativa establece que el período fundamental de la estructura obtenido del modelo matemático, no puede ser mayor en un 30% del valor de T indicado previamente. Por este motivo el período del modelo en ETABS, queda limitado a 0.627 segundos.

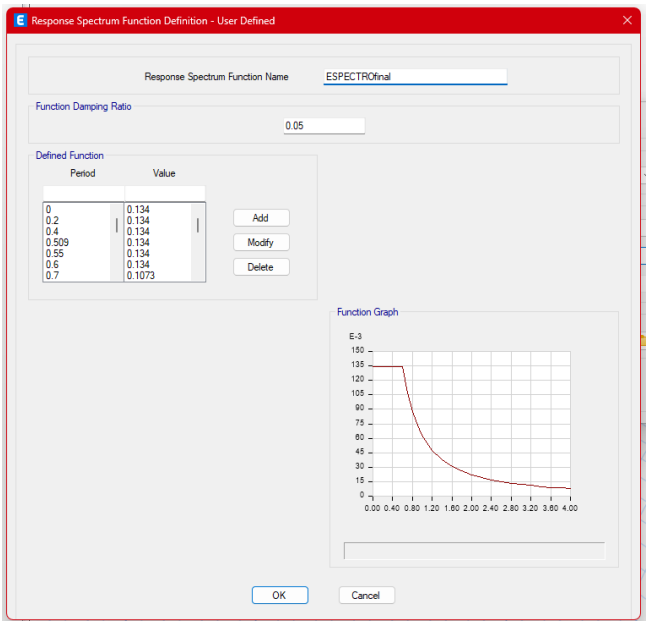
El espectro de aceleraciones obtenido para el proyecto, debe escalarse para considerar los efectos de la ductilidad de nuestro sistema estructural. De esta manera, el espectro queda como indica la siguiente gráfica:

Figura 9. Espectro de aceleraciones



Este espectro de aceleraciones escalado (reducido), se ingresa en la herramienta computacional para poder realizar el análisis estructural.

Figura 10. Espectro ingresado en Etabs



El espectro ingresado al modelo matemático, condensa las cargas sísmicas que afectaran a los diferentes modos de vibrar de la estructura. Análogamente, para el análisis estático de los efectos del sismo, se ingresa al programa los factores de la carga sísmica como se muestra a continuación:

Figura 11. Factor de carga sísmica en x

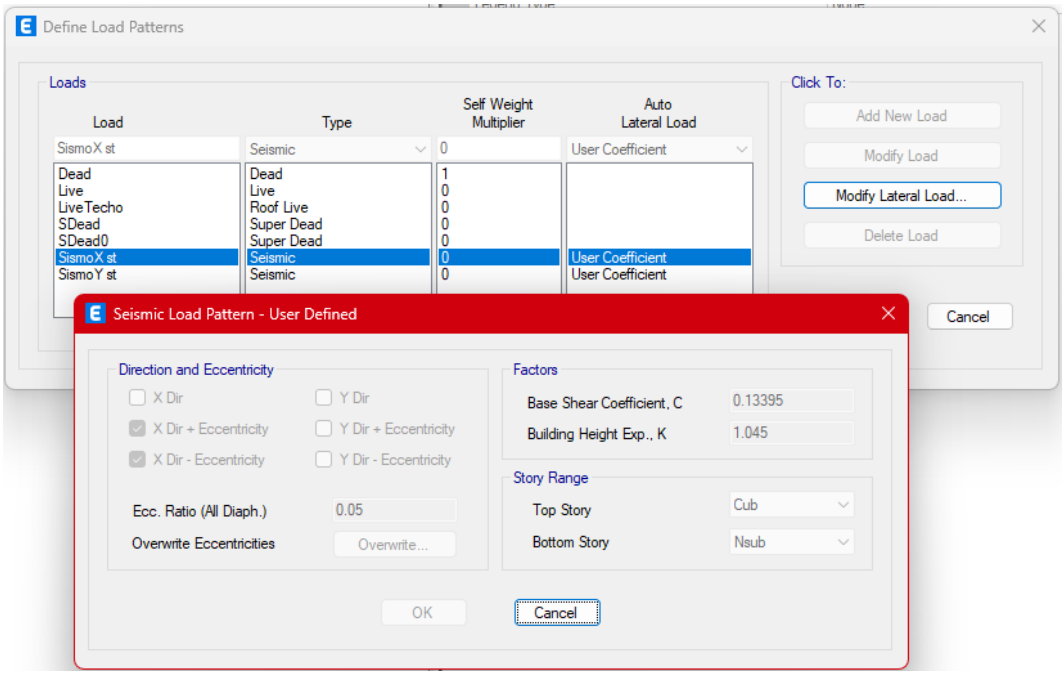
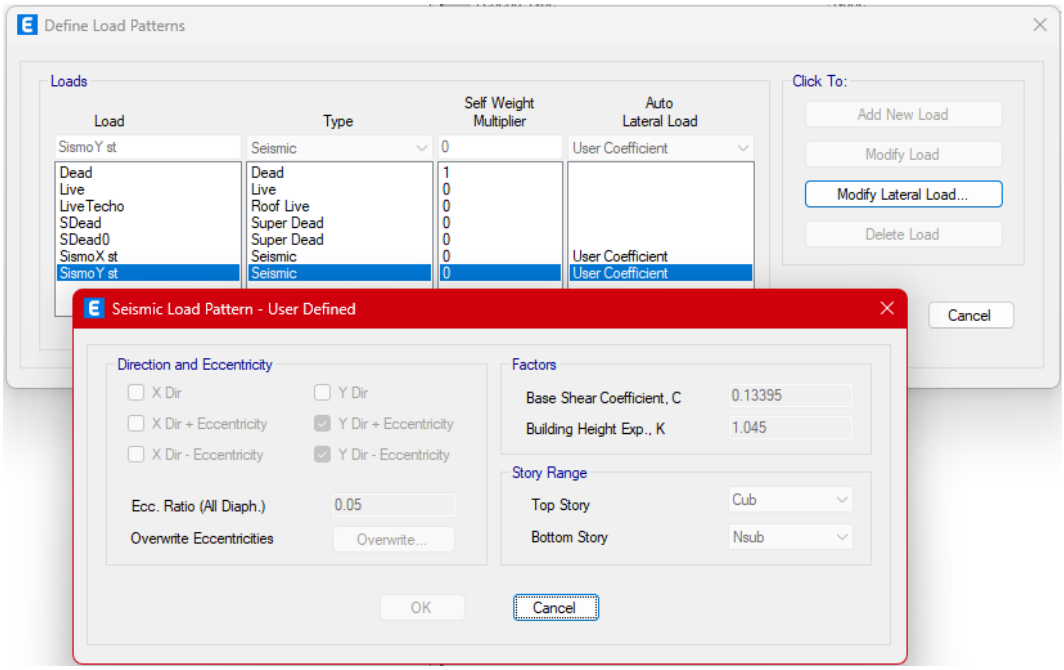


Figura 12. Factor de carga sísmica en y



1.1.10. Modos de vibración de la Estructura

Para el análisis dinámico se consideraron 12 modos de vibración alcanzando el 100% de participación en cada sentido de análisis, como se puede observar en la siguiente tabla.

Tabla 8. Porcentaje de los modos de vibración

Case	ItemType	Item	Static %	Dynamic %
Modal	Acceleration	UX	100	100
Modal	Acceleration	UY	100	100
Modal	Acceleration	UZ	0	0

También se considera dentro del análisis la forma de los dos primeros modos, controlando que estos sean de traslación y su factor de dirección modal en rotación no sobrepase el 10%. En la siguiente tabla, se presentan el resultado de los primeros 12 modos; Además, se evidencia que el porcentaje de participación de masa modal acumulada supera el mínimo de 90% para las dos direcciones considerando 5 modos de vibrar.

Tabla 9. Modos de vibración de la estructura

Mode	Period sec	UX	UY	SumUX	SumUY	RZ	SumRZ
1	0.59	0.8152	0.0024	0.8152	0.0024	0.022	0.022
2	0.586	0.0008	0.8213	0.816	0.8237	0.0185	0.0404
3	0.523	0.0219	0.0162	0.8379	0.8399	0.7949	0.8353
4	0.206	0.0741	0.0183	0.912	0.8581	0.0252	0.8605
5	0.199	0.0285	0.0904	0.9405	0.9486	0.001	0.8615
6	0.179	0.0179	0.0111	0.9584	0.9596	0.0991	0.9605
7	0.113	0.0183	0.0003	0.9767	0.9599	0.0009	0.9614
8	0.111	0.0002	0.0184	0.9768	0.9783	0.0001	0.9615
9	0.102	0.001	0	0.9778	0.9783	0.0172	0.9787
10	0.092	0.0171	0.0001	0.9949	0.9783	0.0053	0.984
11	0.091	0.0002	0.0214	0.9951	0.9998	0.0001	0.9841
12	0.088	0.0049	0.0002	1	1	0.0159	1

El modo 1 tiene 81.52% de participación para la dirección X.

El modo 2 tiene 82.13% de participación para la dirección Y.

1.1.11. Comprobación de Cargas Laterales

El ajuste de las cargas laterales ingresadas en el modelo matemático tanto por cargas estáticas y dinámicas se realiza analizando el porcentaje de la carga reactiva. Sobre este apartado, la normativa exige que el cortante dinámico total en la base de la estructura debe ser por lo menos el 80% del cortante basal obtenido del método estático para estructuras regulares y 85% para estructuras irregulares del mismo cortante basal estático.

Tabla 10. Cargas laterales ingresadas en la estructura

Output Case	Step Number	FX kN	FY kN	FZ kN	MX kN-m	MY kN-m	MZ kN-m
SismoX st	1	-900.7652	0	0	0	-5906.0186	45477.7477
SismoX st	2	-900.7652	0	0	0	-5906.0186	44012.2554
SismoY st	1	0	-900.7652	0	5906.0186	0	167137.6082
SismoY st	2	0	-900.7652	0	5906.0186	0	168497.3874
S_Ex_Modal		751.4322	26.5112	0	115.3069	4916.9194	38955.0337
S_Ey_Modal		26.5112	756.9369	0	4944.2224	117.7686	141848.2681

De la Tabla anterior se puede ver que el cortante basal estático para las dos direcciones (SismoX st y SismoY st) es de 900.77 kN. En el caso del cortante basal dinámico en la dirección X se tiene 751.43 kN y en el caso de la dirección Y es de 756.94 kN. Estos últimos valores corresponden al 83.42% y 84.03% del cortante estático.

Con el objetivo de alcanzar el 85% requerido por normativa, se realiza el escalamiento de la carga dinámica, aumentando la constante de aceleración igual a 9.81 m/s2 en un principio.

El aumento realizado fue, para el cortante basal dinámico en x se multiplicó por 1.0183 para que me dé el valor de 9.99 y para el cortante basal dinámico en y se multiplicó por 1.0112 para que resulte el valor de 9.92.

Figura 13. Escalamiento del cortante basal dinámico en x

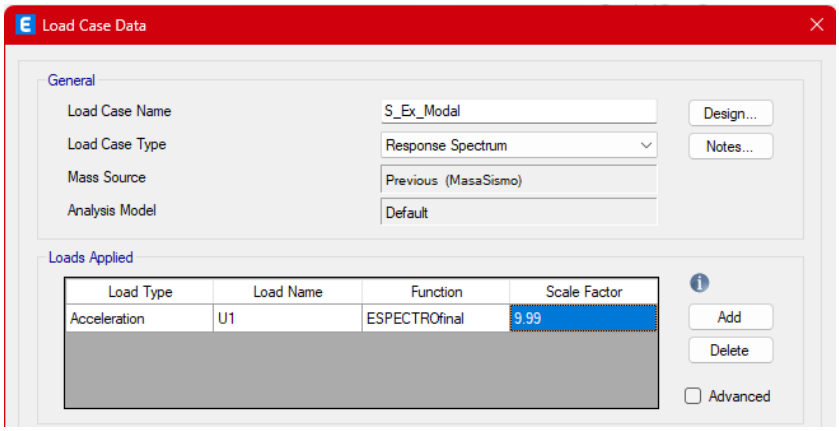
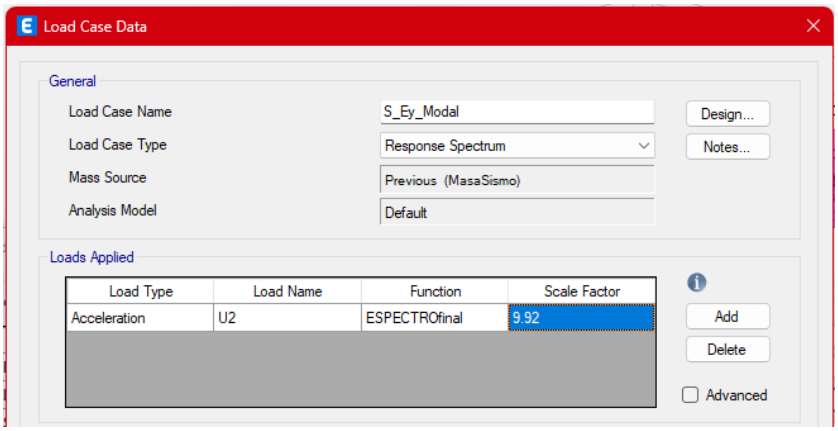


Figura 14. Escalamiento del cortante basal dinámico en y



Conociendo el cortante basal estático igual a 900.76 kN, se puede calcular el 85% de esta fuerza igual a un total de 765.65 kN. En la siguiente tabla, se verifican las cortantes basales dinámicas finales.

Tabla 11. Cargas laterales ingresadas en la estructura, ya escaladas

Output Case	Step Number	FX kN	FY kN	FZ kN	MX kN-m	MY kN-m	MZ kN-m
SismoX st	1	-900.7652	0	0	0	-5872.5816	45482.4035
SismoX st	2	-900.7652	0	0	0	-5872.5816	44015.8856
SismoY st	1	0	-900.7652	0	5872.5816	0	167133.2312
SismoY st	2	0	-900.7652	0	5872.5816	0	168493.9621
S_Ex_Modal		765.6516	27.0129	0	117.4889	5009.9628	39692.1841
S_Ey_Modal		26.8263	765.9328	0	5002.9824	119.1682	143534.0724

De esta manera se puede evidenciar que los cortantes en la base para los casos dinámicos (S_Ex_Modal y S_Ey_Modal) es mayor al valor mínimo establecido por normativa, esto después de realizar los escalamientos de fuerza necesarios.

1.1.12. Límites de deriva

La deriva de piso es un factor calculado como la diferencia de desplazamiento de dos pisos consecutivos divida para la altura del entrepiso. Las derivas se obtienen considerando que las secciones de vigas y columnas son secciones agrietadas como se indica en el código NEC 2015, en función de las respectivas inercias de la sección bruta:

Vigas: 0.5 Ig

Columnas:0.8Ig

El valor de ΔM debe calcularse mediante:

Ecuación 3. Valor de ΔM

$$\Delta M = 0.75 * R * \Delta E$$

En donde,

ΔM = Deriva máxima inelástica,

ΔE = Desplazamiento obtenido en aplicación de las fuerzas laterales de diseño reducidas,

R = Factor de reducción de resistencia.

ΔM no puede ser mayor a los establecidos en la Tabla 5 de la normativa NEC.

Tabla 12. Límites de derivas

Estructuras de:	ΔM máxima
Hormigón armado, estructuras metálicas y de madera.	0.020
De mampostería.	0.010

1.1.13. Análisis de Deriva

Las derivas dinámicas de piso, se calculan empleando fuerzas sísmicas que correspondan al menos al 85% del cortante basal obtenido mediante el análisis estático; esto debido a que tenemos una estructura irregular.

Figura 15. Diagrama de deriva en x

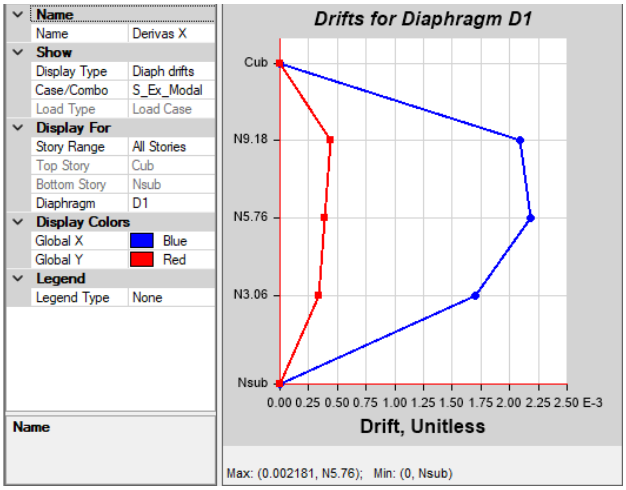
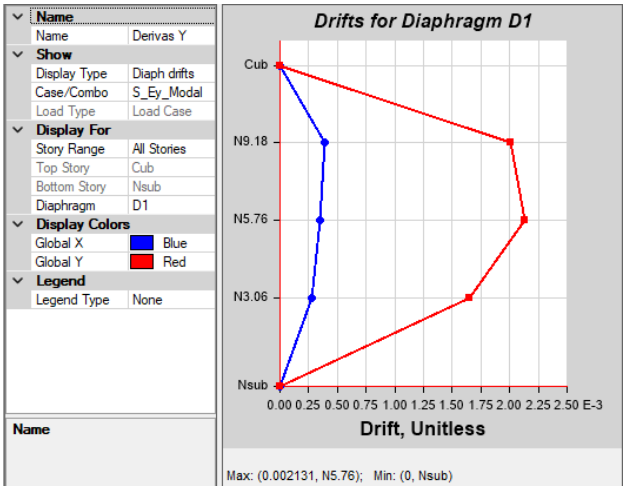


Figura 16. Diagrama de deriva en y



Las derivas obtenidas representan el comportamiento elástico de la estructura, por este motivo se necesita obtener las derivas inelásticas, tal como se muestra a continuación:

Tabla 13. Deriva Dinamica en x

1) Derivas Dinámicas Sismo en X							
Story	**Elevation**	**Location**	**X-Dir**	**Y-Dir**	**X Inelástica**	**Y Inelástica**	**Δ %**
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00208514	0.00043562	1.25%	0.26%	1.28%
N5.76	5.76	Top	0.00218111	0.00039218	1.31%	0.24%	1.33%
N3.06	3.06	Top	0.00169718	0.00033834	1.02%	0.20%	1.04%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

Tabla 14. Deriva Dinamica en y

2) Derivas Dinámicas Sismo en Y							
Story	**Elevation**	**Location**	**X-Dir**	**Y-Dir**	**X Inelástica**	**Y Inelástica**	**Δ %**
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00039134	0.00200485	0.23%	1.20%	1.23%
N5.76	5.76	Top	0.00035234	0.00213064	0.21%	1.28%	1.30%
N3.06	3.06	Top	0.0002817	0.00164815	0.17%	0.99%	1.00%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

2. CAPÍTULO 2

2.1. Diseño estructural

2.1.1. Requisitos del diseño estructural

- Zona sísmica: Con el lugar de emplazamiento de la estructura podemos obtener el factor Z dada por la NEC y a su vez las curvas de peligro sísmico.
- Características del suelo
- Uso e importancia de la infraestructura

2.1.2. Conceptos bases

- Curvas de peligrosidad sísmica

Para definir los diferentes niveles de aceleración sísmica esperada en roca, se proporcionan en las curvas de peligro sísmico probabilista para cada capital de provincia, en donde se relaciona el valor de la aceleración sísmica en el terreno (PGA) con un nivel de probabilidad anual de excedencia (Ministerio de Desarrollo Urbano y Vivienda).

2.1.3. Espectro elástico de diseño

"Espectro de respuesta elástico de aceleraciones (expresado como fracción de la aceleración de la gravedad g). Depende del período o modo de vibración de la estructura" (Ministerio de Desarrollo Urbano y Vivienda).

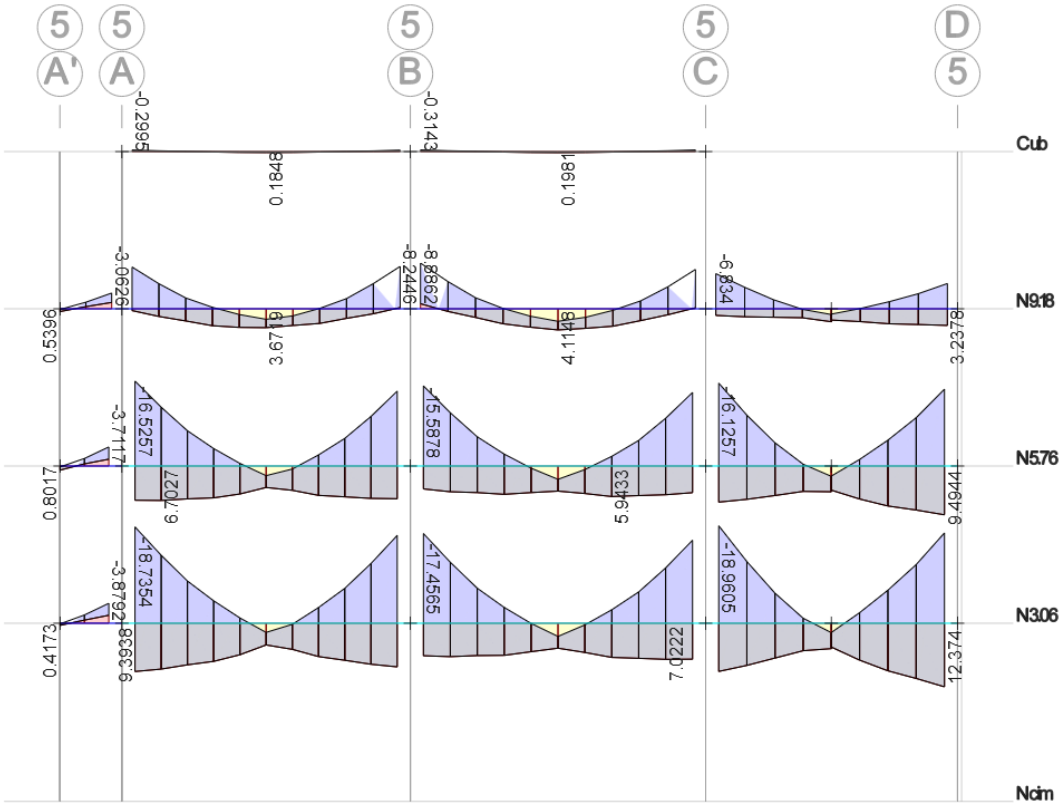
2.1.4. Diseño de Elementos Principales:

Considerando los resultados del análisis y las normativas aplicables, se desarrolla el diseño estructural. Este procedimiento consiste en la determinación de los detalles estructurales de los elementos principales, como vigas y columnas, de manera que se garantice el correcto funcionamiento y estabilidad de la estructura.

2.1.5. Diseño de Vigas

En esta sección se indica el procedimiento a usarse para el diseño a flexión en vigas de hormigón armado, en orden de determinar la cantidad de acero de refuerzo requerido por flexión y corte. El primer paso es determinar los momentos flectores que se producen en las vigas debido a los casos de carga y combinaciones de diseño establecidas. A continuación, se muestran los momentos correspondientes a las vigas del Eje 5.

Figura 17. Vigas del Eje 5



Para demostración del procedimiento de cálculo se han escogido las vigas del nivel 3.06m del eje indicado. A continuación, Se muestra un extracto de la hoja de cálculo elaborada para realizar el diseño:

Tabla 15. Diseño de vigas a flexión

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m	EJE: 5

Viga A' - A

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13			As Sección	0.13 cm2	0.82 cm2	1.82 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	0.02 Tn.m	1.06 Tn.m	2.32 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		0.17 Tn.m	0.01 Tn.m	0.00 Tn.m	As =	**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
d =	0.344 m					As =	0.01 cm2	0.82 cm2	1.82 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	0.84 m						0.13 cm2	0.01 cm2	0.00 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	2	4.02
													4.02

Viga A - B

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	4.52 cm2	k =	65.86			As Sección	10.08 cm2	2.65 cm2	10.02 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.95 cm2	Mu =	15.90 Tn.m	1.56 Tn.m	15.82 Tn.m				
r =	0.048 m	Φ =	0.9	Asmin =	4.52 cm2		7.43 Tn.m	4.44 Tn.m	6.56 Tn.m	As =	**10.08 cm2**	**4.52 cm2**	**10.02 cm2**
d =	0.452 m					As =	10.08 cm2	0.92 cm2	10.02 cm2		**5.04 cm2**	**4.52 cm2**	**5.01 cm2**
L =	4.50 m						4.50 cm2	2.65 cm2	3.96 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	2	5.09
											16	3	6.03
													11.12

Viga B - C

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	5.27 cm2	k =	76.84			As Sección	9.72 cm2	2.72 cm2	9.24 cm2
b =	0.35 m	fy =	420 MPa	As min 2 =	4.61 cm2	Mu =	15.56 Tn.m	0.00 Tn.m	14.83 Tn.m				
r =	0.048 m	Φ =	0.9	Asmin =	5.27 cm2		4.63 Tn.m	4.57 Tn.m	5.12 Tn.m	As =	**9.72 cm2**	**5.27 cm2**	**9.24 cm2**
d =	0.452 m					As =	9.72 cm2	0.00 cm2	9.24 cm2		**5.27 cm2**	**5.27 cm2**	**5.27 cm2**
L =	4.62 m						2.76 cm2	2.72 cm2	3.06 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	2	5.09
											16	3	6.03
													11.12

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	5.27 cm2	k =	76.84			As Sección	10.03 cm2	2.59 cm2	9.86 cm2
b =	0.35 m	fy =	420 MPa	As min 2 =	4.61 cm2	Mu =	16.02 Tn.m	0.00 Tn.m	15.76 Tn.m				
r =	0.048 m	Φ =	0.9	Asmin =	5.27 cm2		7.22 Tn.m	4.34 Tn.m	9.91 Tn.m	As =	**10.03 cm2**	**5.27 cm2**	**9.86 cm2**
d =	0.452 m					As =	10.03 cm2	0.00 cm2	9.86 cm2		**5.27 cm2**	**5.27 cm2**	**6.04 cm2**
L =	3.88 m						4.35 cm2	2.59 cm2	6.04 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	2	5.09
											16	3	6.03
													11.12

Los parámetros a definir en esta etapa son las dimensiones finales del elemento como son ancho, peralte, espesor del recubrimiento, cantidad de acero superior e inferior.

Para esto, se requiere definir también las propiedades mecánicas de los materiales empleados, como son resistencia a compresión del hormigón y el esfuerzo de fluencia del acero.

Conociendo todas estas propiedades, se procede a determinar la cantidad de acero mínima requerida por flexión que deben tener las secciones de cada viga a partir de las siguientes ecuaciones:

Ecuación 4. Cantidad de acero mínima

$$As_{min} = \frac{1.4}{fy} * b * d$$

$$As_{min} = \frac{\sqrt{f'c}}{4 * fy} * b * d$$

También existe un límite de acero, este se conoce como la cuantía máxima permisible para zonas sísmicas, determinado por la siguiente expresión a partir de la cuantía balanceada:

Ecuación 5. Cuantía máxima permisible

$$\rho_b = 0.85 * \beta 1 * \frac{f'c}{fy} * \frac{0.003}{\frac{fy}{Es} + 0.003}$$

$\beta 1 = 0.85$ NEC − SE − HM, 4.1

ACI 22.2.2.4.3

$$\rho_{max} = 0.5 * \rho_b$$

La cantidad de acero requerido por flexión según el cálculo está determinada por la siguiente ecuación:

Ecuación 6. Cantidad de acero requerido

$$As = k\left(1 - \sqrt{1 - \frac{2 * Mu}{\phi * k * d * fy}}\right)$$

$$k = \frac{0.85 * f'c * b * d}{fy}$$

Finalmente, se debe verificar que el acero a emplear en la sección del elemento sea mayor al acero requerido por flexión y al acero mínimo requerido por normativas, además de no sobrepasar la cuantía máxima permisible para zonas sísmicas.

Si el acero calculado es menor al valor de acero mínimo, se utiliza 4/3 del acero calculado:

El diseño a corte en vigas consiste en determinar la resistencia que posee el hormigón y la resistencia que tiene el acero transversal, y de esta manera compararlas con el cortante último que se presenta en el elemento, de manera que se garantice la resistencia de la viga a cortante a partir de la siguiente expresión:

$$V_u < \phi V_n$$

En donde, ϕ es el factor de reducción de resistencia a cortante, cuyo valor para la NEC 2015 y el ACI 318 es de 0.75

La resistencia nominal a cortante del hormigón se calcula con la siguiente expresión:

Ecuación 7. Resistencia nominal a cortante del hormigón

$$V_c = 0.17\sqrt{f'c} \quad [\text{MPa}]$$

Conociendo los valores de la resistencia a cortante del hormigón y el cortante último en el elemento, se procedo a calcular la resistencia a cortante del acero requerida o en su defecto, el acero requerido a cortante para garantizar dicha resistencia, a partir de la siguiente expresión:

Ecuación 8. Resistencia a cortante del acero requerida

$$\frac{A_v}{s} = \frac{\frac{V_u}{\phi} - V_c}{fy * d}$$

Sin embargo, el cortante último viene determinado por análisis específico que se indica a continuación, debido a los momentos en los extremos de la viga que producen doble curvatura y que producen cortantes hiperestáticas:

Ecuación 9. Cortante último del acero

$$V_p = \left(\frac{M_{i-} + M_{j+}}{L}; \frac{M_{i+} + M_{j-}}{L}\right)$$

Donde Vp es el Corte probable que se calcula a partir de los momentos:

Mi + Mj = Momentos resistentes negativos inicial y final

Mi+ + Mj = Momentos resistentes positivos inicial y final

L = luz libre de la viga

Por lo tanto, el corte último es igual a la suma:

Vu = Vu isostático + Vu hiperestático

Los momentos en los extremos del elemento para determinar el corte probable, se calculan a partir de las siguientes ecuaciones:

Ecuación 10. Cortante probable

$$M_u = A_s * \alpha * fy * \left(d - \frac{a}{2}\right) \qquad siendo \ \alpha = 1.25$$

$$M_p = 1.25 * A_s * fy * \left(d - \frac{a}{2}\right) / 1.02 * 10^6$$

$$a = \frac{A_s * \propto * fy}{0.85 * f'c * b}$$

También, se debe tener en cuenta un criterio adicional para estimar la resistencia del hormigón:

Si Vp ≥ 0.50 Vu entonces Vc = 0

El acero calculado por resistencia a corte también debe ser mayor al acero mínimo que depende de las siguientes expresiones:

Ecuación 11. Acero mínimo por resistencia al corte

$$A_{vmin} = 0.0625 * \sqrt{f'c} * \frac{b * s}{fy}$$

$$A_{vmin} = 0.35 * \frac{b * s}{fy} \ ,$$

El acero colocado para refuerzo transversal, debe cumplir los detalles especificados en el ACI 318.

Espaciamiento, “S”, de los estribos requeridos por la norma ACI 318:

- El primer estribo no debe estar a más de 50 mm de la cara del miembro de apoyo.
- El espaciamiento de los estribos cerrados de confinamiento no debe exceder el menor de:

$$s = \frac{d}{4}$$

$$s = 8 * \emptyset \text{ Varilla longitudinal}$$

$$s = 24 * \emptyset \, Estribo$$

- $$s = 300 \, mm$$

A continuación, se muestra el extracto de la hoja de cálculo correspondiente al diseño por cortante para las vigas del nivel 3.06m del Eje 5.

Tabla 16. Diseño de vigas a cortante

Viga A' - A

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	1.24 Tn	1.39 Tn	1.48 Tn	Vp =	14.49 Tn	14.49 Tn	14.49 Tn	Zona Conf.	80.00 cm	0.00 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.39 Tn	0.52 Tn	0.39 Tn	Vu =	16.23 Tn	16.57 Tn	16.45 Tn	s =	8.00 cm	8.50 cm	8.50 cm
r =	0.056 m	Φ =	0.75	Va =	1.74 Tn	2.09 Tn	1.96 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	5.88 cm2	5.88 cm2
d =	0.344 m			a=	2.95 cm	2.95 cm	2.95 cm	Av =	15.0 cm2/m	15.3 cm2/m	15.2 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	0.837 m				2.95 cm	2.95 cm	2.95 cm	Av =	0.15 cm2/cm	0.15 cm2/cm	0.15 cm2/cm	n ramales =	2	2	2
				Mp =	6.07 Tn.m		6.07 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	20.1 cm2/m	20.1 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			Cumple	Cumple	Cumple

Viga A - B

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	5.20 Tn		5.34 Tn	Vp =	7.47 Tn	7.47 Tn	7.46 Tn	Zona Conf.	100.00 cm	250.00 cm	100.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	1.29 Tn		1.32 Tn	Vu =	14.21 Tn		14.39 Tn	s =	10.00 cm	15.00 cm	10.00 cm
r =	0.048 m	Φ =	0.75	Va =	6.74 Tn		6.92 Tn	Vc =	0.00 Tn		0.00 Tn	Av min =	6.92 cm2	10.37 cm2	6.92 cm2
d =	0.452 m			a=	8.65 cm		8.60 cm	Av =	9.98 cm2/m		10.11 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.500 m				4.32 cm		4.30 cm	Av =	0.10 cm2/cm		0.10 cm2/cm	n ramales =	2	2	2
				Mp =	22.06 Tn.m		21.95 Tn.m	So ≤	10.80 cm		10.80 cm	Av total=	17.3 cm2/m	12.0 cm2/m	17.3 cm2/m
					11.61 Tn.m		11.55 Tn.m	S ≤		22.60 cm			Cumple	Cumple	Cumple

Viga B - C

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	6.04 Tn		5.79 Tn	Vp =	7.33 Tn	7.33 Tn	7.11 Tn	Zona Conf.	100.00 cm	262.38 cm	100.00 cm
b =	0.35 m	fy =	420 MPa	Vcv =	1.76 Tn		1.69 Tn	Vu =	15.58 Tn		15.25 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.048 m	Φ =	0.75	Va =	8.25 Tn		7.92 Tn	Vc =	12.99 Tn		12.99 Tn	Av min =	6.45 cm2	11.30 cm2	6.45 cm2
d =	0.452 m			a=	7.15 cm		6.79 cm	Av =	4.10 cm2/m		3.87 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.624 m				3.88 cm		3.88 cm	Av =	0.04 cm2/cm		0.04 cm2/cm	n ramales =	2	2	2
				Mp =	21.67 Tn.m		20.68 Tn.m	So ≤	10.80 cm		10.80 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					12.22 Tn.m		12.22 Tn.m	S ≤		22.60 cm			Cumple	Cumple	Cumple

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	5.43 Tn	1.87 Tn	4.91 Tn	Vp =	9.34 Tn	9.34 Tn	8.81 Tn	Zona Conf.	100.00 cm	187.80 cm	100.00 cm
b =	0.35 m	fy =	420 MPa	Vcv =	1.54 Tn	1.00 Tn	1.26 Tn	Vu =	16.69 Tn	12.61 Tn	15.77 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.048 m	Φ =	0.75	Va =	7.36 Tn	3.28 Tn	6.43 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	6.45 cm2	11.30 cm2	6.45 cm2
d =	0.452 m			a=	7.38 cm	3.88 cm	7.25 cm	Av =	11.72 cm2/m	8.86 cm2/m	11.07 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	3.878 m				3.88 cm	3.88 cm	4.44 cm	Av =	0.12 cm2/cm	0.09 cm2/cm	0.11 cm2/cm	n ramales =	2	2	2
				Mp =	22.30 Tn.m		21.94 Tn.m	So ≤	10.80 cm		10.80 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					12.22 Tn.m		13.90 Tn.m	S ≤		22.60 cm			Cumple	Cumple	Cumple

2.1.6. Diseño de Columnas

En esta sección se indica el procedimiento a usarse para el diseño de los elementos sometidos a flexo-compresión del sistema resistente a momentos.

A diferencia de las vigas, estos elementos se diseñan considerando las combinaciones de carga de manera independiente, es decir, no se utiliza una envolvente de diseño debido a que la combinación de efectos de compresión y flexión producen efectos diferentes en estos elementos:

A continuación, se indican los diagramas obtenidos para los elementos del Eje 5.

Figura 18. Diagrama de la fuerza axial para los elementos del Eje 5.

Figura 19. Diagrama de los momentos 3-3 para los elementos del Eje 5.

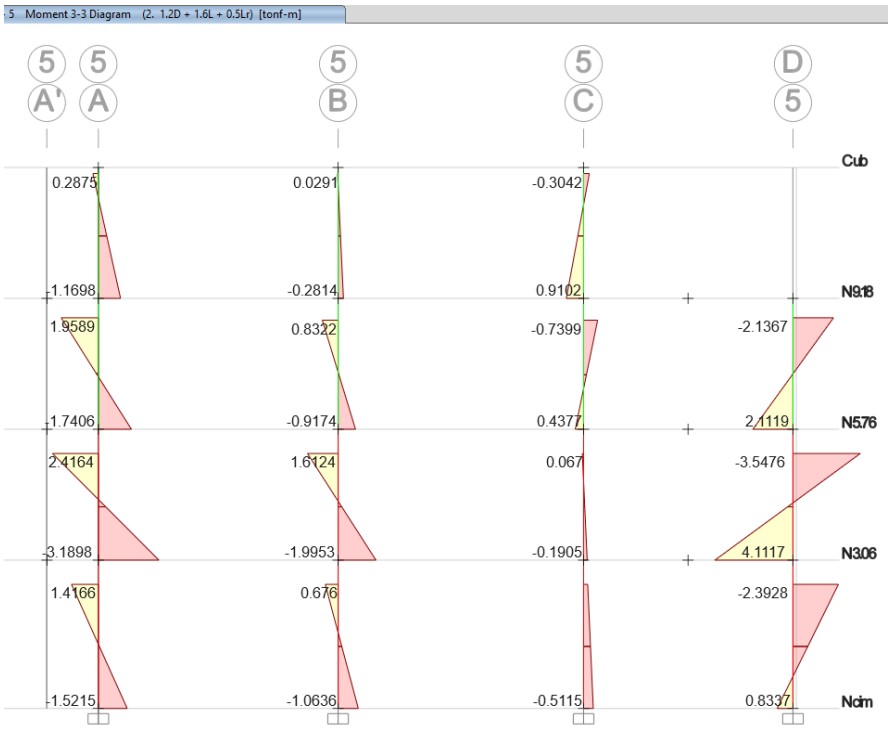
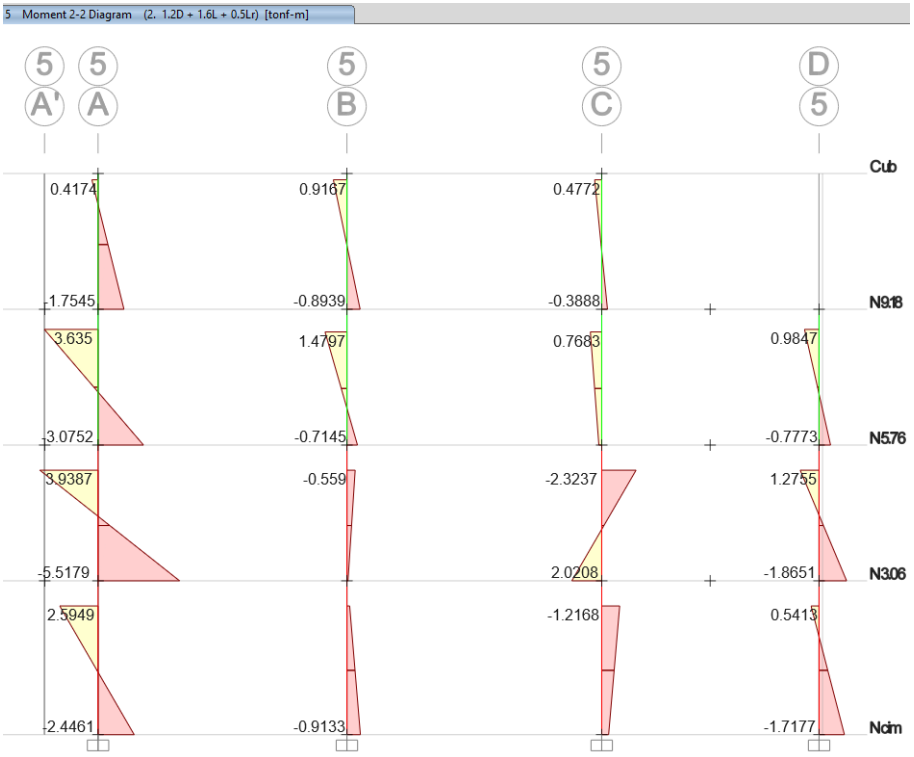


Figura 20. Diagrama de los momentos 2-2 para los elementos del Eje 5.

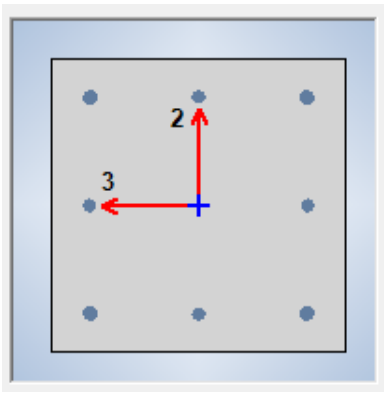


A manera de ejemplo, se muestra el diagrama de interacción de la columna 5-A el primer nivel. La cual posee una sección de 45 x45 cm.

A continuación, se muestran las propiedades del elemento:

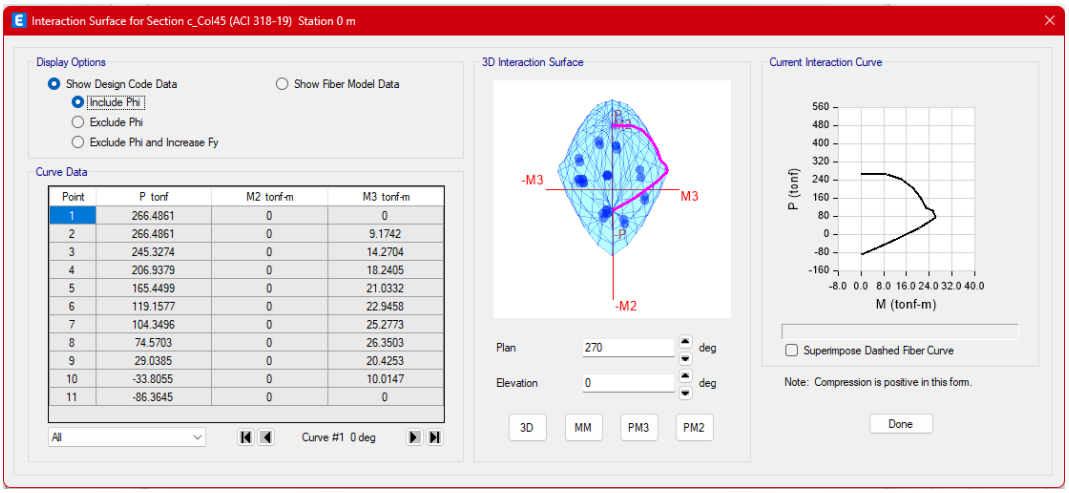
Tabla 17. Propiedades de la columna

Propiedades de Columna				
f'c =	24	Mpa	Beta1 = 0.85	
fy =	420	Mpa	d' = 0.06 m	
b =	0.45	m	d = 0.39 m	
As =	8.83	cm²	h = 0.45 m	
Altura Libre =	2.56	m		
As' =	8.83	cm²		
Recubrimiento eje =	0.06	m		
Mod Elástico Acero =	200000	Mpa		



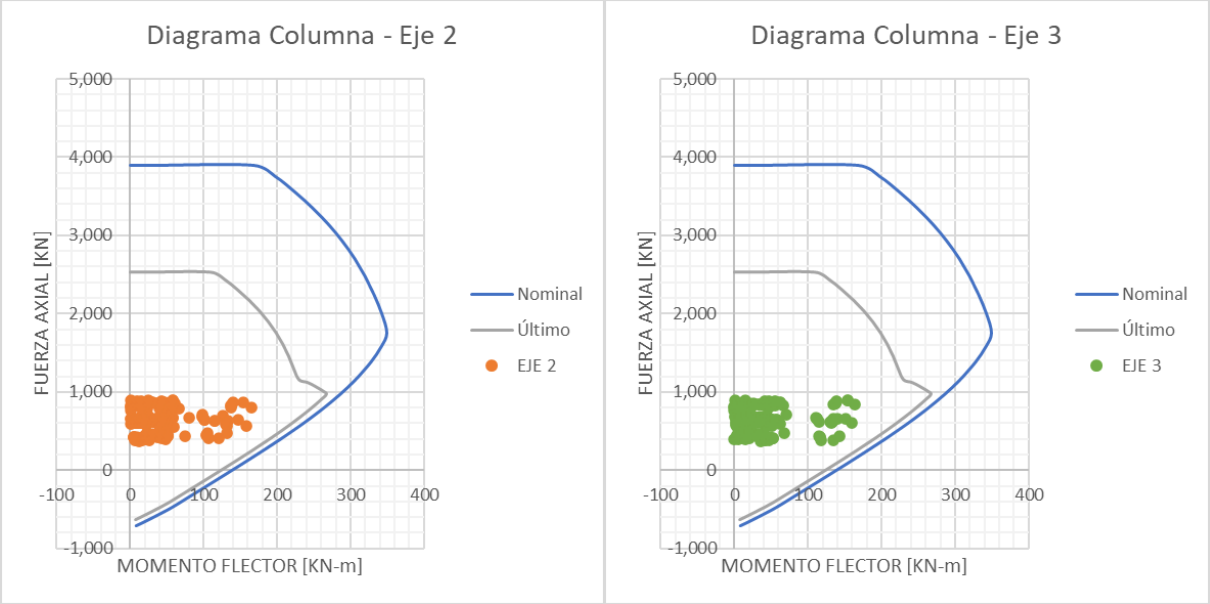
En esta sección se requiere el diagrama de interacción de la columna, permitiendo comprobar si las cargas aplicadas serán soportadas de manera adecuada.

Figura 21. Diagrama de interacción de columna



A continuación, se indica la hoja de cálculo de verificación de la columna frente a los efectos de carga axial y momentos de las diferentes combinaciones de carga:

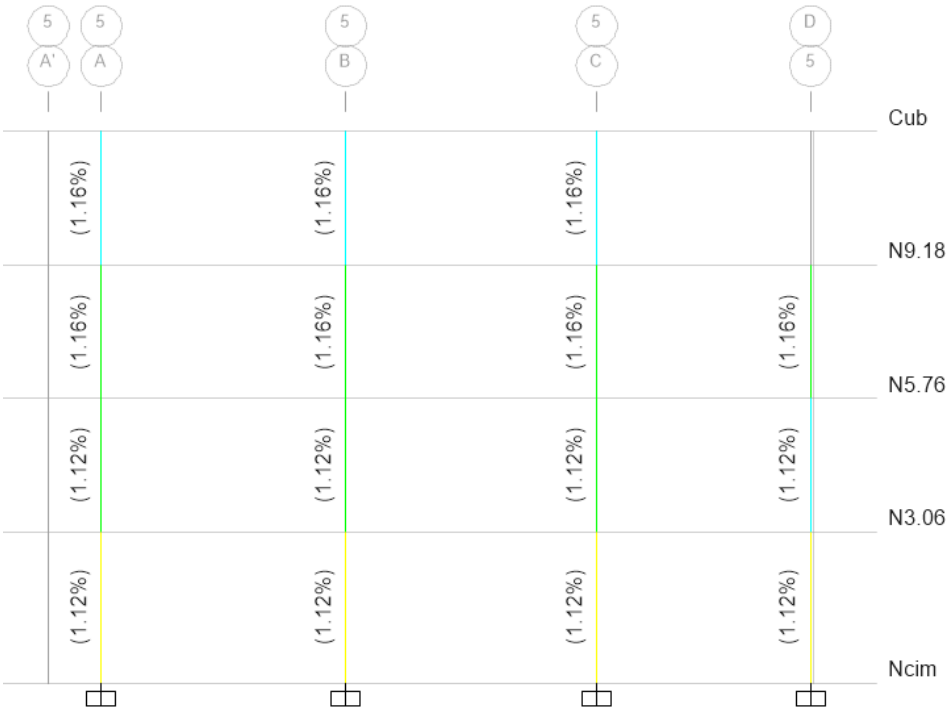
Figura 22. Columna frente a los efectos de carga axial y momentos



La cuantía de refuerzo debe cumplir el siguiente requisito, como indica la norma NEC:

$$0.01 \leq \frac{As}{b * h} \leq 0.03$$

Figura 23. Cuantías en las secciones escogidas



Se observa que las secciones escogidas, generan cuantías que cumplen los requisitos.

En columnas, es importante realizar el cálculo de aceros transversales revisando, además, la armadura requerida por confinamiento.

Tabla 18. Cálculo de columnas en excel

Propiedades de Columna					
f'c =	24	Mpa	Beta1 =	0.85	
fy =	420	Mpa	d' =	0.06	m
b =	0.45	m	d =	0.39	m
As =	8.83	cm²	h =	0.45	m
Altura Libre =	2.56	m			
As' =	8.83	cm²	Po =	4872.72	kN
Recubrimiento eje =	0.06	m	0.8øPo =	2533.81	kN
Mod Elástico Acero =	200000	Mpa		3898.18	kN

Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

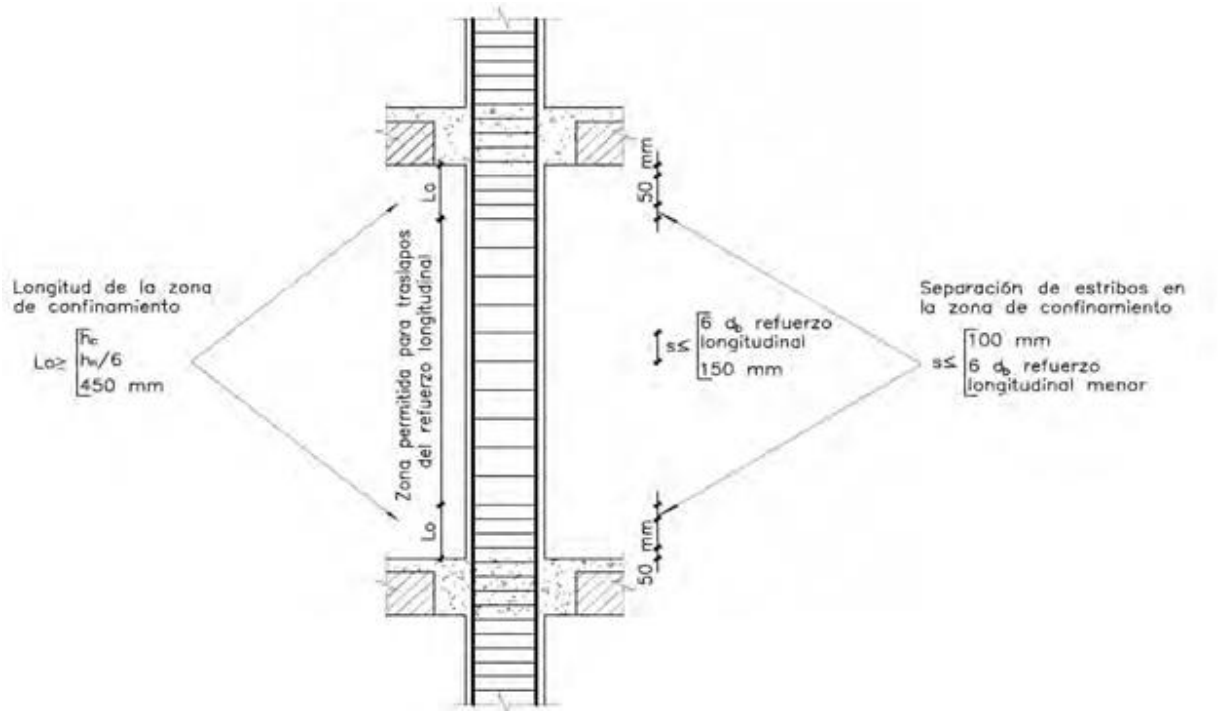
Cuantías Columnas		
As min	20.25 cm²	Cumple
As máx	50.63 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.80 cm	15.00 cm	10.80 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento		
s =	4.50 cm	4.50 cm
Ash =	2.19 cm2	2.19 cm2
	Cumple	Cumple
Av/m =	48.62 cm²/m	48.62 cm²/m

La hoja de cálculo realizada para esta columna, indica los parámetros analizados. El cálculo se basa en la determinación de la luz libre del elemento y la separación máxima en zonas de confinamiento, como indica la siguiente figura:

Figura 24. Confinamiento de columna



Fuente: Norma Ecuatoriana de la Construcción Diseño sismo resistente

Para el diseño por confinamiento en columnas rectangulares se toma en cuenta las siguientes ecuaciones tal y como indica la norma NEC 2015 y el código ACI 318.

Ecuación 12. Diseño por confinamiento para columnas

1. $$Ash = 0.3 * \frac{s * b_c * f'c}{fyt} * \left[\frac{A_g}{A_{ch}} - 1\right]$$

2. $$Ash = 0.09 * \frac{s * b_c * f'c}{fyt}$$

Donde: s = Espaciamiento entre estribos.

bch y bcv= Dimensión medida entre los bordes externos del refuerzo transversal (horizontal y vertical).

f'c= Resistencia de compresión del hormigón (kg/cm2).

fyt= Esfuerzo de fluencia del refuerzo transversal (kg/cm2).

Ag = Área bruta de hormigón.

Ach = Área interior confinada.

Ash = Área total del refuerzo transversal.

Se calcula el acero transversal para las direcciones horizontal y vertical y, de las dos ecuaciones propuestas, se considera como resultado el mayor valor.

2.1.7. Diseño de Cimentación

En esta sección se indica el procedimiento para diseñar las zapatas de cimentación aisladas, utilizando las cargas y sus respectivas combinaciones extraídas de la herramienta computacional.

El primer factor importante para el diseño de la cimentación, es la capacidad del suelo, la cual es la presión de contacto entre la zapata y el suelo, tal que no se produzcan un fallo por cortante del suelo o un asentamiento diferencial excesivo.

Conociendo la capacidad del suelo y las respectivas cargas o reacciones del cimiento, se puede obtener el área de cimentación, tal como se indica a continuación:

Ecuación 13. Área de cimentación

$$A = \frac{FM(P\ servicio\ vertical)}{qa} \qquad FM\ es\ variable, es\ el\ factor\ de\ mayoración\ por\ momento$$

En donde,

A= Área de Cimentación

FM = 1.10

P servicio vertical = Carga de servicio sobre el cimiento o reacción

qa = Capacidad del suelo

Definiendo el área de cimentación, y asumiendo el diseño de zapatas cuadradas, las dimensiones de cada zapata se obtienen con la siguiente expresión:

Ecuación 14. Dimensiones de la zapata

$$B = L = \sqrt[2]{A}$$

Conociendo los efectos de las cargas que llegan a la cimentación de la estructura, se define la excentricidad en el cimiento, y se idealiza la distribución de esfuerzos sobre el mismo.

La excentricidad en la zapata se calcula como:

Ecuación 15. Excentricidad en la zapata

$$e = \frac{M}{P}$$

- Corte Unidireccional

Se considera una sección crítica para corte que se ubica a una distancia d, desde la cara de la columna. Y debe cumplir la siguiente condición:

$$v_{cu} \geq v_{uu}$$

vcu = Esfuerzo unidireccional que resiste el hormigón

vuu = Esfuerzo unidireccional último

$$v_{cu} = 0.17\sqrt{23.54} = 0.825\ MPa$$

$$v_{uu} = \frac{Vuu}{\emptyset . A_u} \quad (*)$$

Vuu = Fuerza resultante de los esfuerzos en la zona exterior a la sección crítica.

Au = Área crítica para corte unidireccional.

- Corte Bidireccional

El esfuerzo de corte bidireccional se calcula dependiendo del tipo de columna, sea esta cuadrada o rectangular.

$$v_{cb} \geq v_{ub}$$

Diseño acero de refuerzo

Revisión de altura por flexión

Ecuación 16. Altura por flexión

$$d = \sqrt{\frac{M_u}{\emptyset R_u b}}$$

Acero de refuerzo y Acero mínimo

Se calcula el acero necesario para resistir flexión y el acero mínimo en la sección, de estos se elige el más desfavorable, además de compararlo con el acero máximo permitido.

Ecuación 17. Acero necesario para resistir flexión

Amín = 0.0018 b*h

b = Ancho de la zapata

h = Altura o espesor de la zapata

Ecuación 18. Acero mínimo en la sección

$$As^{+}min = \frac{0.85\sqrt{f'c}}{fy} \cdot bw \cdot d \quad ó \quad As^{+}min = \frac{14}{fy} \cdot bw \cdot d$$

$$As^{+}max = 0.5 \cdot \rho_h \cdot b \cdot d$$

ρ: Cuantía del refuerzo As evaluada sobre el área b*d.

b: Ancho de la cara en compresión del miembro (cm).

d: Distancia desde la fibra extrema en compresión hasta el centroide del refuerzo longitudinal en tracción (cm).

f'c: Resistencia del concreto a compresión (Kg/cm2).

fy: Resistencia a fluencia del acero (Kg/cm2).

Mu: Momento mayorado en la sección (Kgf*cm).

ϕ: Factor de reducción de resistencia.

Asmin: Área mínima de refuerzo de flexión (cm2).

bw: Ancho del alma o diámetro de la sección circular (cm).

Ecuación 19. Acero requerido

$$A_s = 0.85 * \frac{f'c * b * d}{fy}\left(1 - \sqrt{1 - \frac{2 * M_u}{0.85 * \emptyset * f'c * b * d^2}}\right)$$

Se necesita revisar la longitud de desarrollo para determinar si se requiere hacer el doblado del acero tipo C.

Ecuación 20. Longitud de desarrollo a tracción

$$l_d = \left(\frac{fy\psi_t\psi_e\lambda}{1.4\sqrt{f'c}}\right)d_b$$

ψ t = 1 (Otros casos)

ψe = 1.0 (Para barras sin recubrimiento)

λ = 1 (Concreto de peso normal) Reemplazando

Revisión de aplastamiento

A1 (Área cargada) = Área de la columna (0.50 m * 0.50 m)

A1 = 0.25 m2

A2 (Área de soporte): Área de la zapata (2.65 m * 2.65 m)

A2 =7.02 m2

$$\sqrt{\frac{A_2}{A_1}} = \sqrt{\frac{7.02\ m^2}{0.25\ m^2}} = 5.29 \quad \leq 2 \qquad \textit{se asume valor máximo 2}$$

La resistencia al aplastamiento sobre la columna normalmente es de 0.85Øf'c

La resistencia al aplastamiento en la zapata es

Ecuación 21. Resistencia al aplastamiento en la zapata

$$0.85 * f'c * \phi\sqrt{\frac{A_2}{A_1}}$$

Ø = 0.65 para columnas estribadas

Ø = 0.70 para columnas zunchadas

La resistencia admisible de aplastamiento en la zapata es mayor al aplastamiento de la columna, por lo cual no existe este tipo de falla.

Si se da el caso de excederse la resistencia de aplastamiento del concreto, se usarán refuerzos o dowels. Estos deben tener una cantidad de acero mínimo igual a 0.005 Ag y se colocará al menos 4 varillas.

A continuación, se indican los resultados del cálculo de una zapata:

Tabla 19. Cálculo de las zapatas en excel

Datos de Columna		
b1=	45.00 cm	0.45 m
b2=	45.00 cm	0.45 m
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2
Tipo Columna=	Columna Central	

Datos de Zapata		
σt=	2 kg/cm2	20.00 Tn/m2
ϕ=	0.85	
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2

CARGA	
Peso Total PT=	33.66 Tn
Peso Último Pu=	43.48 Tn

Cálculo Geometría	
Az=	1.68 m²
B=	1.30 m
T=	1.30 m
B asumido=	1.50 m
T asumido=	1.50 m
Área usada=	2.25 m²
σz = Wn=	19.33 Tn/m2
	Sí Cumple

Cortante por Punzonamiento		
hz=	30 cm	
r=	6.60 cm	
d=	23.40 cm	
bo=	2.74 m	
$Vo = Pu - (b+d)(t+d) \cdot Wn$		
$vo = \frac{Vo}{bo \cdot d}$	Vo=	34.44 Tn
	vo=	53.79 Tn/m2
	βc=	1.00
voc		139.58 Tn/m2
		Sí Cumple

Cortante por Flexión (Tracción Diagonal)		
$m = Lv = \frac{B-b}{2}$	m=Lv=	0.525 m
$n = Lv = \frac{T-t}{2}$	n=Lv=	0.525 m
$Vu = B(m-d)Wn$	Vu=	8.44 Tn
$vu = \frac{Vu}{T \cdot d}$	vu=	24.03 Tn/m2
$vuc = 0.53\emptyset\sqrt{f'c}$	vuc=	69.79 Tn/m2
$v_{uc} \geq v_u$		Sí Cumple

Cáculo de Acero					
$M_{ux=}$	3.99 Tn.m		$M_{ux=}$	3.99 Tn.m	
d=	9.9 cm	Sí Cumple	d=	9.9 cm	Sí Cumple
Amin =	7.01 cm²/m		Amin =	7.01 cm²/m	
As=	4.61 cm²/m		As=	4.61 cm²/m	
ϕ Varilla=	10 mm		ϕ Varilla=	10 mm	
Cant. Varillas=	5.87		Cant. Varillas=	5.87	
Espaciamiento=	27.00 cm		Espaciamiento=	27.00 cm	
Cant. Varillas=	6 Varillas	Sí Cumple	Cant. Varillas=	6 Varillas	Sí Cumple
Espaciamiento=	26 cm	Sí Cumple	Espaciamiento=	26 cm	Sí Cumple
4.71 cm²			4.71 cm²		

Aplastamiento del Hormigón			
$f_{au} = \frac{PT}{b \cdot t} = \frac{PT}{Ac}$	fau=	166.21 Tn/m2	16.62 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cc$	fa=	142.80 kg/cm2	142.80 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cz \cdot \sqrt{\frac{Az}{Ac}}$	fa=	476.00 kg/cm2	
$f_a \geq f_{au}$		Sí Cumple	

2.1.8. Diseño de Losas

- Diseño por flexión

Las losas aligeradas en dos direcciones consisten en losas y vigas que trabajan monolíticamente para resistir las cargas y se pueden hacer como una viga T. Inicialmente el patín tiene un espesor, el cual se obtiene considerando las recomendaciones del capítulo 8 del ACI 318, el cual recomienda los espesores mínimos sin considerar las cargas y el módulo de elasticidad del concreto. Esta tabla es aplicable siempre y cuando la losa no contenga cargas permanentes inusualmente altas o que este construida con un concreto de módulo de elasticidad significativamente bajo, el módulo de fluencia del acero de refuerzo debe ser mayor a 550 Mpa. La losa planteada cumple con todas las condiciones para aplicar la tabla del ACI.

Tabla 20. Espesor mínimo de losas no preesforzadas en dos direcciones sin vigas interiores

f_y MPa [2]	Sin ábacos			Con ábacos		
	Paneles exteriores		Paneles interiores	Paneles exteriores		Paneles interiores
	Sin vigas de borde	Con vigas de borde		Sin vigas de borde	Con vigas de borde	
280	$\frac{l_n}{33}$	$\frac{l_n}{36}$	$\frac{l_n}{36}$	$\frac{l_n}{36}$	$\frac{l_n}{40}$	$\frac{l_n}{40}$
420	$\frac{l_n}{30}$	$\frac{l_n}{33}$	$\frac{l_n}{33}$	$\frac{l_n}{33}$	$\frac{l_n}{36}$	$\frac{l_n}{36}$
550	$\frac{l_n}{27}$	$\frac{l_n}{30}$	$\frac{l_n}{30}$	$\frac{l_n}{30}$	$\frac{l_n}{33}$	$\frac{l_n}{33}$
* l n es la luz libre en la dirección larga, medida entre caras de los apoyos (mm)						

Fuente: ACI 318(2019), Cap 8, pág. 105.

- Diseño para momentos positivos

Las alas de las vigas T normalmente son grandes lo que produce que el eje neutro esté dentro de éste, si no éste no está dentro del patín se usa un método de tantos, donde se estima el brazo de palanca del centroide del bloque de esfuerzos de compresión (z). Con este valor se obtiene el área de acero necesaria (As) y posteriormente se revisa el valor asumido del brazo de palanca, si no son cercanos los valores se impone nuevo valor.

Ecuación 22. Brazo de palanca del centroide del bloque de esfuerzos de compresión

z = 0.9d o z = d -hf/2

Ecuación 23. Área de acero necesaria

As= Mn/Fy^z

a= As*fy/0.85f'c

Donde:

As: Área de acero

Mn: Momento nominal (+)

Fc: Resistencia del concreto

Fy: Fluencia del acero

Z y a: Brazo de palanca del centroide del bloque de esfuerzos de compresión

Diseño para momentos negativos

El acero necesario para tensión en el ala de la viga T para el momento último es igual al necesario para el momento de agrietamiento, el cual es aproximadamente el doble de una sección rectangular dando como resultado la formula del acero mínimo.

Ecuación 24. Acero mínimo

$$\text{Asmin} = (0.8\sqrt{\text{f}'\text{c}}/\text{fy}) * \text{bw} * \text{d}$$

Donde:

As: Área de acero mínima

Fc: Resistencia del concreto

Fy: Fluencia del acero

Bw: Ancho

D: distancia del extremo superior al centro del acero más alejado del extremo opuesto

- Diseño por Corte

El tamaño del alma se dictamina por el cortante, el cual debe tener un área adecuada para resistirlo ya que no se utiliza refuerzo de acero para soportarlo, el ancho de esta también se puede elegir de acuerdo al necesario para acomodar las barras de refuerzo.

La fuerza de cortante que soporta el concreto se dictamina con:

Ecuación 25. Fuerza de cortante que soporta el concreto

$$Vc = 1.1(0.53\sqrt{f´c} * bw * d)$$

Fc: Resistencia del concreto

Bw: Ancho de vigueta de apoyo

D: distancia del extremo superior al centro del acero más alejado del extremo opuesto

2.1.9. Diseño de escaleras

Para el desarrollo del análisis estructural es necesario definir las dimensiones básicas de las escaleras que dependen de las normas de diseño y ergonomía, siendo el ancho de la escalera, altura entre piso y tamaño del escalón los parámetros más importantes.

a) Altura y ancho de los escalones:

2h+cp=60 a 64 cm

Donde:

- cp = altura de la contrahuella (usualmente entre 16 y 18 cm),
- P = profundidad de la huella (usualmente entre 26 y 32 cm).

b) Número de escalones y tramos:

n=H/h

Donde:

- H = es la altura entre pisos,
- h =es la altura de cada contrahuella.

Para escaleras de dos tramos, un descanso intermedio se coloca después de cierto número de escalones para cambiar la dirección de la escalera.

c) Longitud de la escalera:

La longitud horizontal que ocupará la escalera (proyección horizontal).

L= n×cp (3)

d) Espesor de la escalera (t) y altura media

Se realiza un predimensionamiento del espesor, teniendo en cuenta que este sea lo suficiente para evitar deflexiones,

Ecuación 26. Predimensionamiento de la escalera

$$t1 = \frac{ln}{20} \qquad \cos\emptyset = \frac{P}{\sqrt{P^2 + Cp^2}}$$

$$t1 = \frac{ln}{25} \qquad Hm = \frac{t}{\cos\emptyset} + \frac{Cp}{2}$$

Donde:

- Ln = Longitud de la escalera
- cp = altura de la contrahuella (usualmente entre 16 y 18 cm),
- P = profundidad de la huella (usualmente entre 26 y 32 cm).

Posteriormente se realiza un metrado de las cargas que actúan sobre ella. Las más comunes son:

- **Carga muerta (Wm)**: El peso propio de la escalera (concreto, revestimientos, barandillas, etc.).
- **Carga viva (Wv)**: El peso de las personas que la usan, equipos, y muebles que pudieran cargarse sobre ella. Según la normativa NEC-2015, la carga viva en escaleras es de 3.0 kN/m² para escaleras residenciales.

Para el diseño estructural hay que tener en cuenta que las escaleras normalmente son elementos estructurales que sufren flexión al igual que las vigas y losas aligeradas en una dirección, usualmente las fuerzas de flexión están acompañadas por fuerzas de corte, por ente las escaleras deben ser diseñadas para estas dos fuerzas.

Conociendo todas estas propiedades, se procede a realizar la verificación de corte de la escalera, el cual similar al de las vigas, pero aplicados a los elementos estructurales inclinados y a

los descansos, que son los componentes principales de la escalera que podrían estar sometidos a fuerzas cortantes significativas.

Ecuación 27. Corte de la escalera

$$Vud' = Vud(cos\theta)$$

$$Vn = Vud'/\emptyset$$

$$Vc = 0.53\sqrt{f'c} * b * d)$$

Donde:

Vud' = Cortante actuante en un elemento inclinado

Nn = Cortante nominal

$\emptyset$ = Factor de seguridad

fc′ = resistencia a compresión del concreto

b = ancho de la viga

d = peralte efectivo de la escalera

Posteriormente se determina la cantidad de acero requerida por momentos positivos y negativos que deben tener cada tramo de la escalera y los descansos a partir de las siguientes ecuaciones:

Ecuación 28. Ecuaciones para momentos positivos

$$As = \frac{M_u}{\emptyset \cdot fy \cdot \left(d - \frac{a}{2}\right)}$$

$$a = \frac{As \cdot fy}{0.85 \cdot f'c \cdot b}$$

$$n = As/\emptyset$$

$$S = \frac{A - 2r - \emptyset}{n - 1}$$

Ecuación 29. Ecuaciones para momentos negativos

$$As_{min} = 0.0018 \cdot A \cdot d$$

$$-As_{min} = {}^{+As}/_{3}$$

$$n = As/\emptyset$$

$$S = \frac{A - 2r - \emptyset}{n - 1}$$

Donde:

- Mu = momento último
- ϕ es el factor de reducción de resistencia (generalmente 0.9 para flexión según NEC),
- fy = resistencia de fluencia del acero
- d = peralte efectivo de la sección (distancia desde el centroide de las barras de refuerzo a la fibra extrema de concreto).
- As+ = Acero positivo

Finalmente se diseña el acero necesario para contracción y temperatura, necesario para evitar agrietamientos en las escaleras, este es colocado transversalmente al acero longitudinal.

Ecuación 30. Acero necesario para contracción y temperatura

$$As_{min} = \rho \cdot 100 \cdot t$$

$$S = \frac{Área\emptyset}{As}$$

Donde:

T = espesor de la esclaera

p = cuantia minima

Depende del tipo de varilla para determinar la cuantía mínima (p), para barras lisas es 0.0025, barras corrugadas con fy<420 Mpa es 0.0020, barras corrugadas o malla de alambre (liso corrugado) de intersecciones soldadas con fy >= 420 Mpa es 0.0018.

3. CAPITULO 3

3.1. Estimación de costos

Teniendo en cuenta todos los conceptos de trabajo que han sido definidos en la cuantificación de volúmenes, el valor estimado del proyecto es **C**IENTO CUARENTA Y NUEVE MIL TRESCIENTOS SESENTA Y OCHO CON 56/100 DÓLARES DE LOS ESTADOS UNIDOS DE AMÉRICA, (USD$ 149,368.56), valor sin incluir IVA y se desglosa a continuación:

PRESUPUESTO						
Ítem	**Código**	**Descripción**	**Unidad**	**Cantidad**	**P.Unitario**	**P.Total**
1		**PRELIMINARES**				**281.60**
1.1	501002	Limpieza y desbroce del terreno (incl desalojo)	m2	220.00	0.70	154.00
1.2	503002	Nivelación y Replanteo	m2	220.00	0.58	127.60
2		**CIMENTACIÓN**				**18,436.68**
2.1	507024	Excavación a máquina en suelo sin clasificar hasta 2 m	m3	25.00	3.34	83.50
2.2	520006	Desalojo Material	m3	32.50	3.92	127.40
2.3	555001	Replantillo de piedra e=20cm	m2	1.00	7.74	7.74
2.4	542035	Hormigón de replantillo f´c = 180 Kg/cm2 / plintos	m3	10.00	167.39	1,673.90
2.5	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	2,441.18	2.60	6,347.07
2.6	529048	Hormigón para plintos, f´c = 240 Kg/cm2	m3	21.94	191.47	4,200.85
2.7	529033	Ho So de f´c=240 kg/cm2 en Cadenas, incluye encofrado	m3	14.58	246.06	3,587.55
2.8	514025	Relleno con Material extraido, compactado	m3	15.00	6.61	99.15
2.9	531021	Ho So de f`c=210 kg/cm2 en Contrapiso e=6 cm	m2	217.06	10.64	2,309.52
3		**PRIMERA PLANTA**				**41,577.18**
3.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	8.63	268.08	2,313.53
3.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	20.12	270.70	5,446.48
3.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	5,954.46	2.60	15,481.60
3.4	529055	Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado	m3	2.51	223.16	560.13
3.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	253.43	70.14	17,775.44

4		**SEGUNDA PLANTA**				**38,919.03**
4.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	7.28	268.08	1,951.62
4.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	20.12	270.70	5,446.48
4.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	5,405.21	2.60	14,053.55
4.4	529055	Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado	m3	2.51	223.16	560.13
4.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	241.05	70.14	16,907.25
5		**TERCERA PLANTA**				**38,297.09**
5.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	4.96	268.08	1,329.68
5.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	20.12	270.70	5,446.48
5.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	5,405.21	2.60	14,053.55
5.4	529055	Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado	m3	2.51	223.16	560.13
5.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	241.05	70.14	16,907.25
6		**CUARTA PLANTA**				**11,856.98**
6.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	3.37	268.08	903.43
6.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	3.28	270.70	887.90
6.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	1,291.87	2.60	3,358.86
6.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	95.62	70.14	6,706.79
		SUBTOTAL				**149,368.56**
		IVA			15 %	**22,405.28**
		TOTAL				**171,773.84**

3.2. Especificaciones técnicas

- Capítulo PRELIMINARES:

- Análisis 501002: Limpieza y desbroce del terreno (incluye desalojo) Unidad: m2

- Análisis 503002: Nivelación y Replanteo Unidad: m2

- Capítulo CIMENTACIÓN:

- Análisis 507024: Excavación a máquina en suelo sin clasificar hasta 2 m Unidad: m3

- Análisis 520006: Desalojo Material Unidad: m3

- Análisis 555001: Replantillo de piedra e=20cm Unidad: m2

- Análisis 542035: Hormigón de replantillo f´c = 180 Kg/cm2 / plintos Unidad: m3

- Análisis 533025: Acero de refuerzo fy = 4200 kg/cm2 Unidad: Kg

Incluye corte y doblado

- Análisis 529048: Hormigón para plintos, f´c = 240 Kg/cm2 Unidad: m3

- Análisis 529033: Ho So de f´c=240 kg/cm2 en Cadenas, incluye encofrado Unidad: m3

- Análisis 514025: Relleno con Material extraido, compactado Unidad: m3

- Análisis 531021: Ho So de f´c=210 kg/cm2 en Contrapiso e=6 cm Unidad: m2

- Capítulo PRIMERA PLANTA:

- Análisis 529053: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado

Unidad: m3

- Análisis 529054: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado Unidad: m3

- Análisis 533025: Acero de refuerzo fy = 4200 kg/cm2 Unidad: Kg

Incluye corte y doblado

- Análisis 529055: Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado Unidad: m3

- Análisis 500053: Losa alivianada e=20cm, incluido encofrado Unidad: m2

- Capítulo SEGUNDA PLANTA:

- Análisis 529053: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado

Unidad: m3

- Análisis 529054: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado Unidad: m3

- Análisis 533025: Acero de refuerzo fy = 4200 kg/cm2 Unidad: Kg

Incluye corte y doblado

- Análisis 529055: Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado Unidad: m3

- Análisis 500053: Losa alivianada e=20cm, incluido encofrado Unidad: m2

- Capítulo TERCERA PLANTA:

- Análisis 529053: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado

Unidad: m3

- Análisis 529054: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado Unidad: m3

- Análisis 533025: Acero de refuerzo fy = 4200 kg/cm2 Unidad: Kg

Incluye corte y doblado

- Análisis 529055: Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado Unidad: m3

- Análisis 500053: Losa alivianada e=20cm, incluido encofrado Unidad: m2

- Capítulo CUARTA PLANTA:

- Análisis 529053: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado

Unidad: m3

- Análisis 529054: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado Unidad: m3

- Análisis 533025: Acero de refuerzo fy = 4200 kg/cm2 Unidad: Kg

Incluye corte y doblado

- Análisis 500053: Losa alivianada e=20cm, incluido encofrado Unidad: m2

4. CAPITULO 4

4.1. Conclusiones y recomendaciones

El edificio fue diseñado cumpliendo con toda la normativa vigente que en este caso es la Norma Ecuatoriana de la construcción. El uso de programas como el Etabs y el Safe, facilitaron en gran medida el análisis y diseño estructural del edificio, estos se tomaron como referencia en primera instancia para luego comprobar todo el diseño de manera manual.

Dentro del análisis dinámico se cumplió que dentro de los primeros modos se controle su traslación y su factor de dirección modal en rotación no sobrepase el 10%. Además, se evidencia que el porcentaje de participación de masa modal acumulada supera el mínimo de 90% para las dos direcciones considerando 5 modos de vibrar.

A su vez el cortante dinámico total en la base de la estructura se escalo para que de como resultado el 85% ya que esta es una estructura irregular. Con esto obtuvimos que las derivas de piso cumplen satisfactoriamente al ser menores al 2% como se indica en la norma.

Como conclusión también aprendí que, al aumentar la sección de la viga, el hierro disminuye, y esto a su vez genera problemas como es la perdida de luz y altura libre de cada piso, también aprendí que las vigas y columnas se diseñan de una forma diferente, ya que éstas trabajan de una forma diferente, ya que las vigas trabajan mayormente a flexión y cortante, y en cambio las columnas tienen esfuerzos grandes de compresión y pequeños de flexión.

También me percate de una mejor manera como las zapatas son las que resisten los mayores momentos, las mayores cargas punzantes, como estas también son el medio de transmisión de las cargas.

Como recomendaciones puedo sugerir: es fundamental revisar el predimensionamiento de los elementos, que fueron determinados mediante métodos empíricos, con el fin de evitar esfuerzos excesivos o el sobredimensionamiento de las secciones.

Los detalles de los planos deben presentarse de manera clara y sencilla, de modo que cualquier persona pueda interpretarlos. Es crucial que el diseño de los elementos estructurales se transmita en los planos de forma precisa, clara y concisa, para evitar problemas durante la construcción y asegurar que el edificio se erija correctamente.

Para el cálculo de las cantidades de obra, es indispensable ser lo más preciso posible, con el fin de obtener un presupuesto realista y minimizar el riesgo de incurrir en costos adicionales en el futuro.

4.2. Bibliografía

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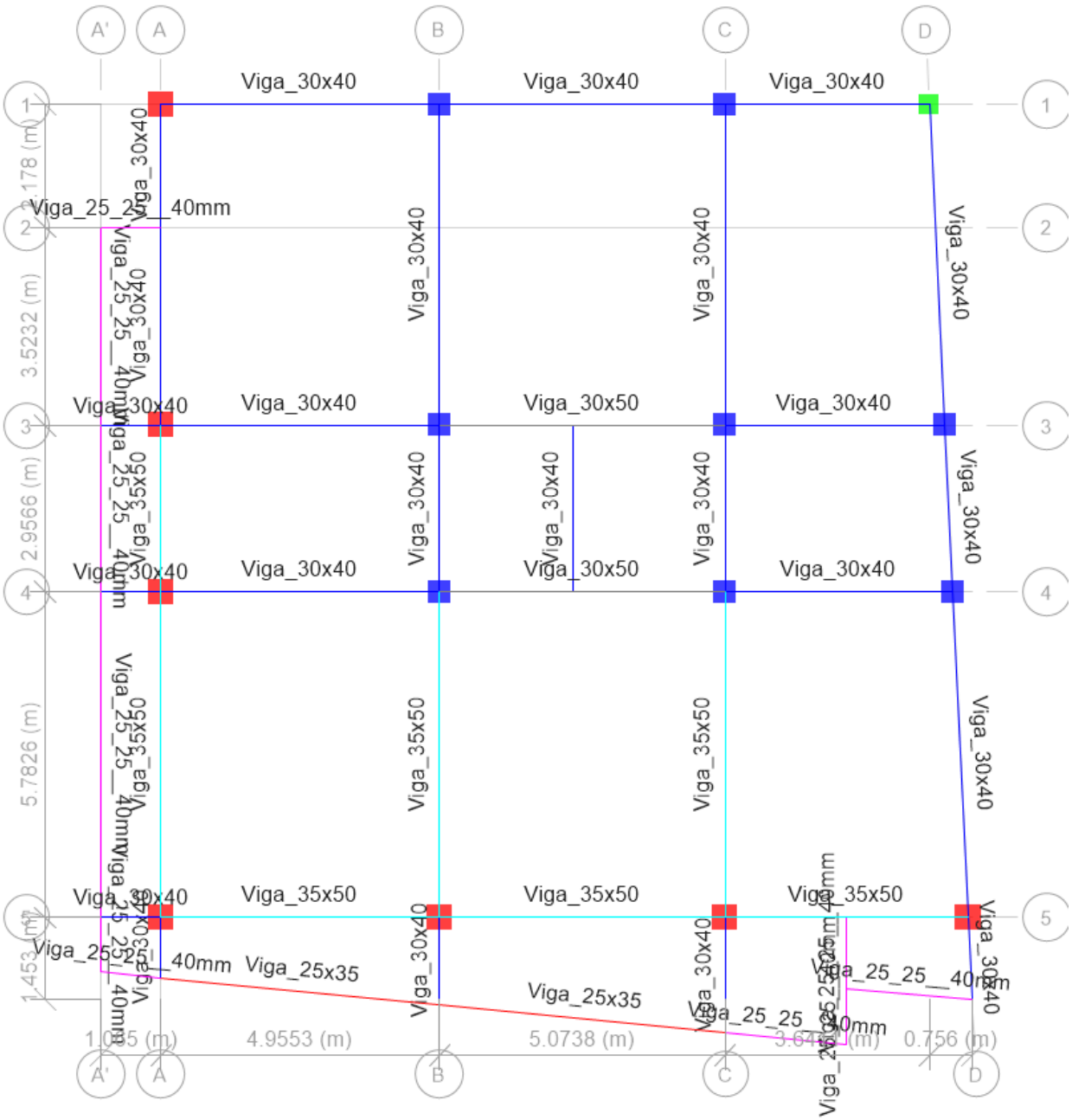
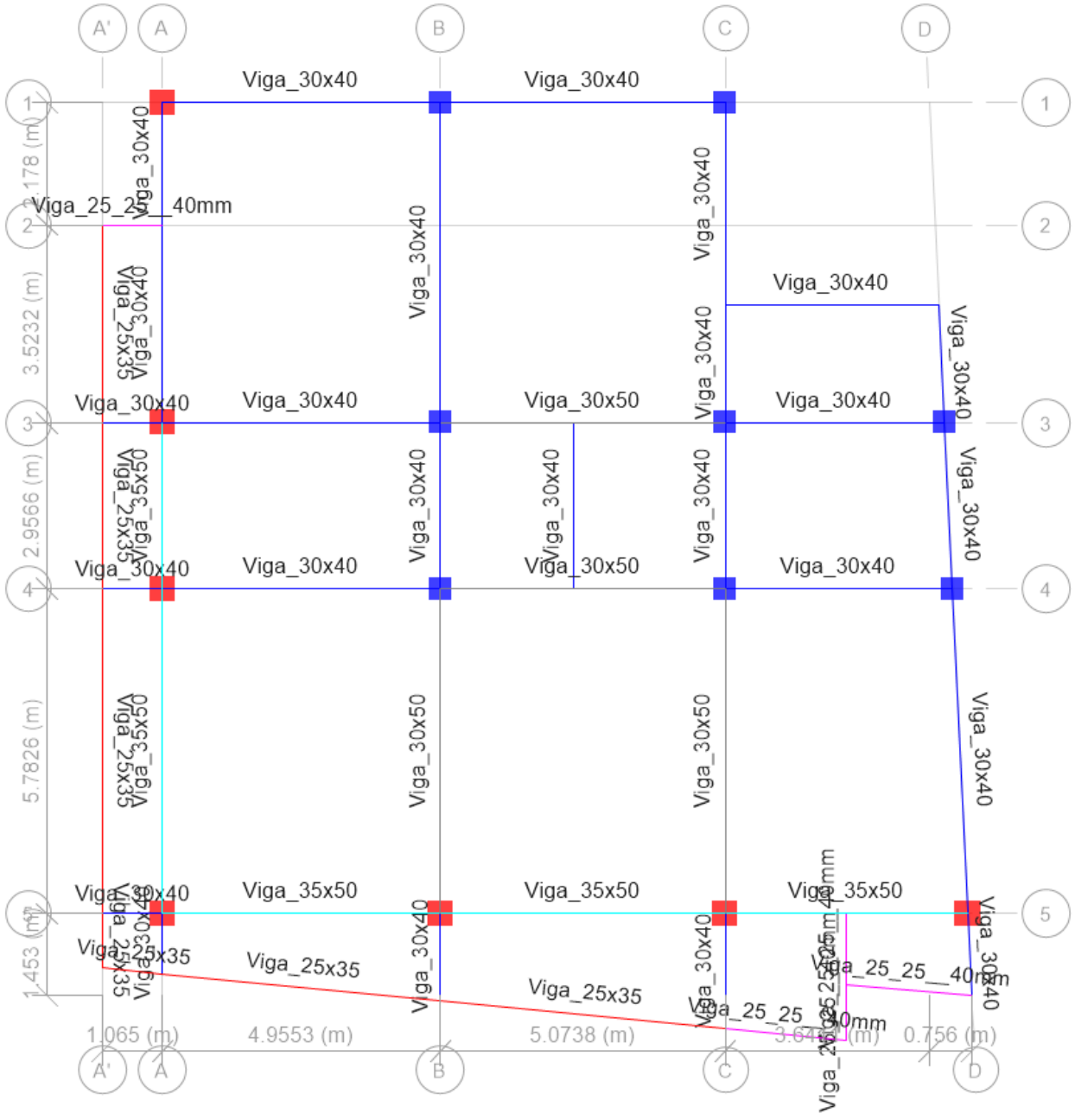
p

ANEXOS

1. Vista Nivel 3.06m



2. Vista Nivel 5.76m

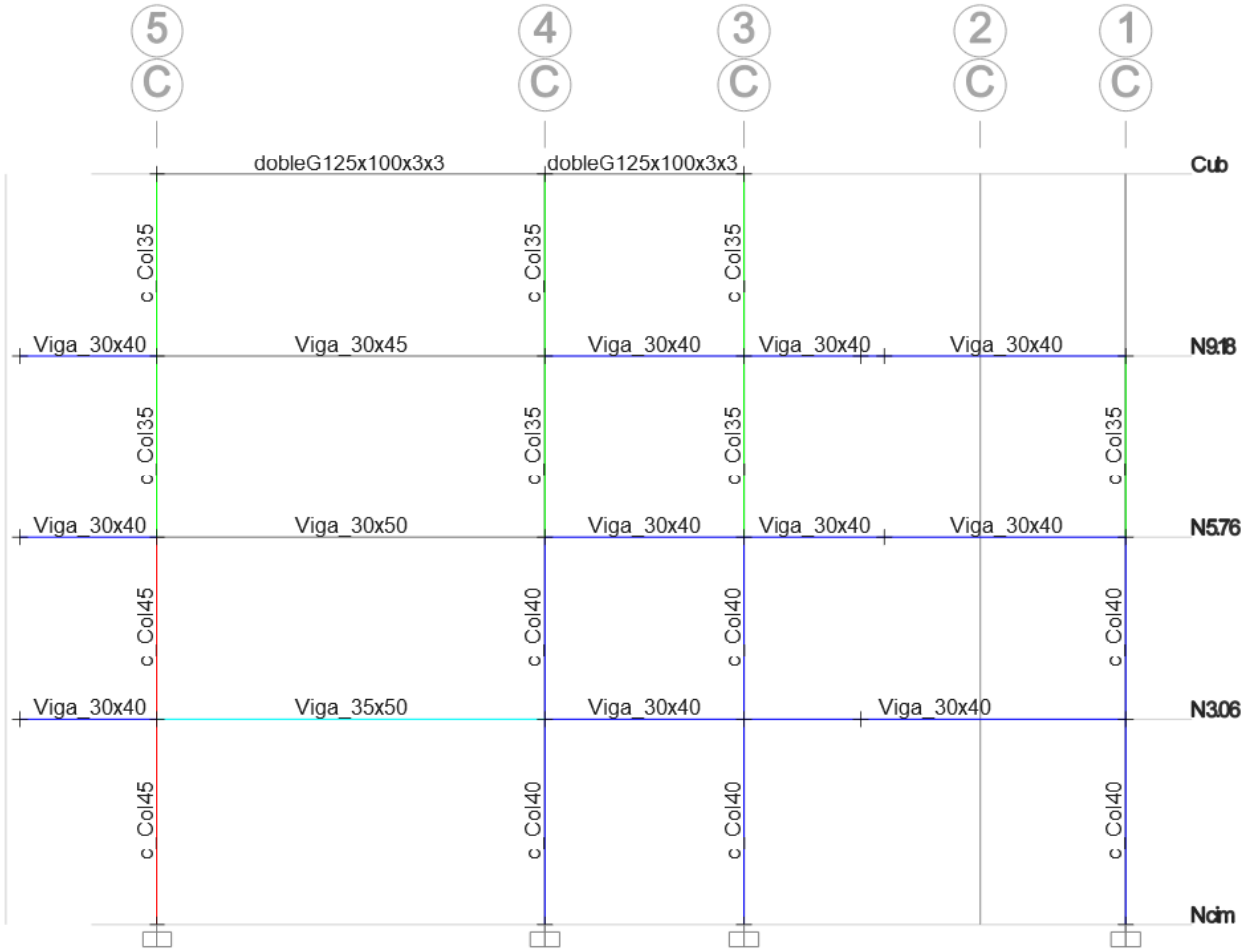


3. Vista Nivel 9.18m

4. Vista Elevación Eje A

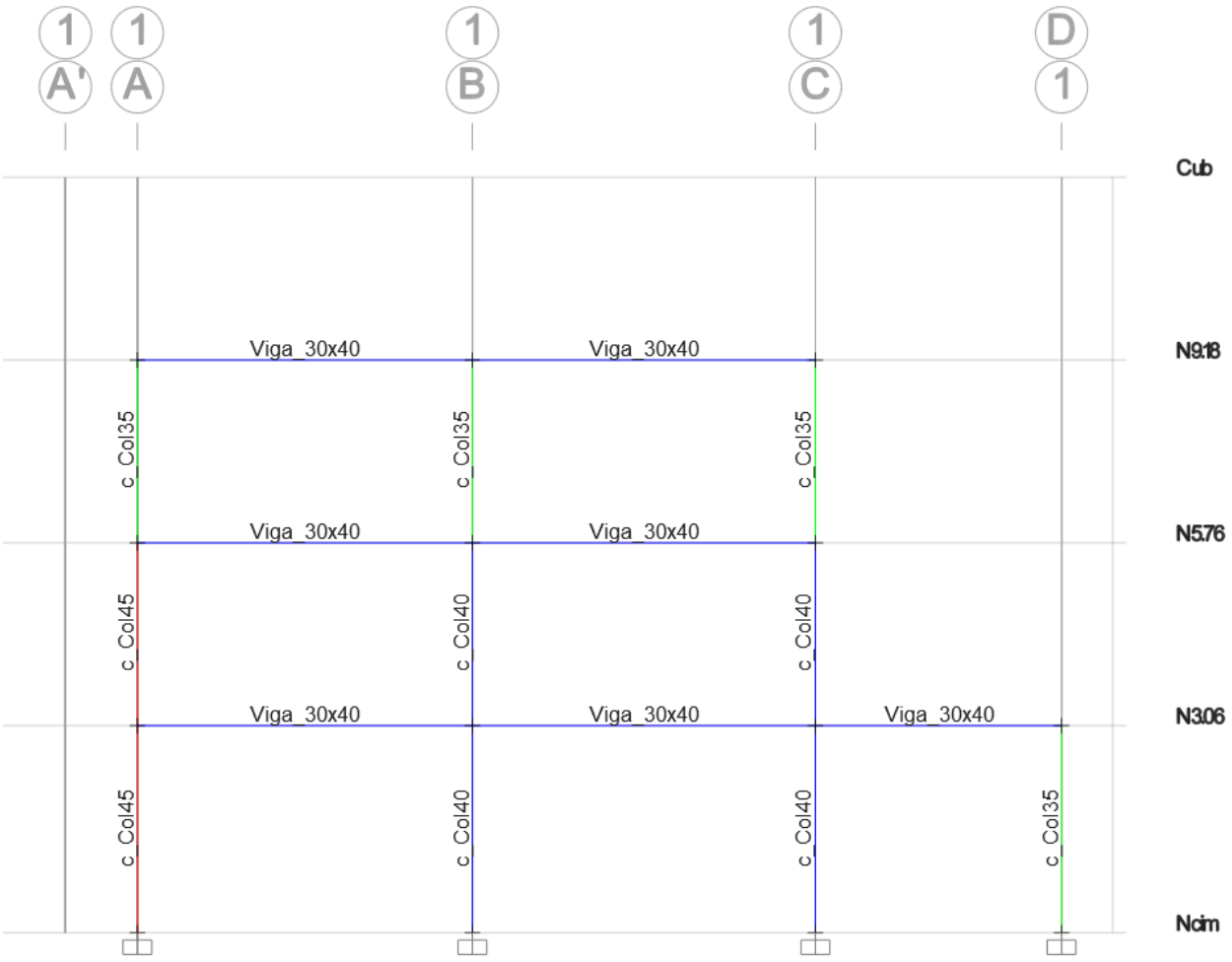
5. Vista Elevación Eje B

6. Vista Elevación Eje C



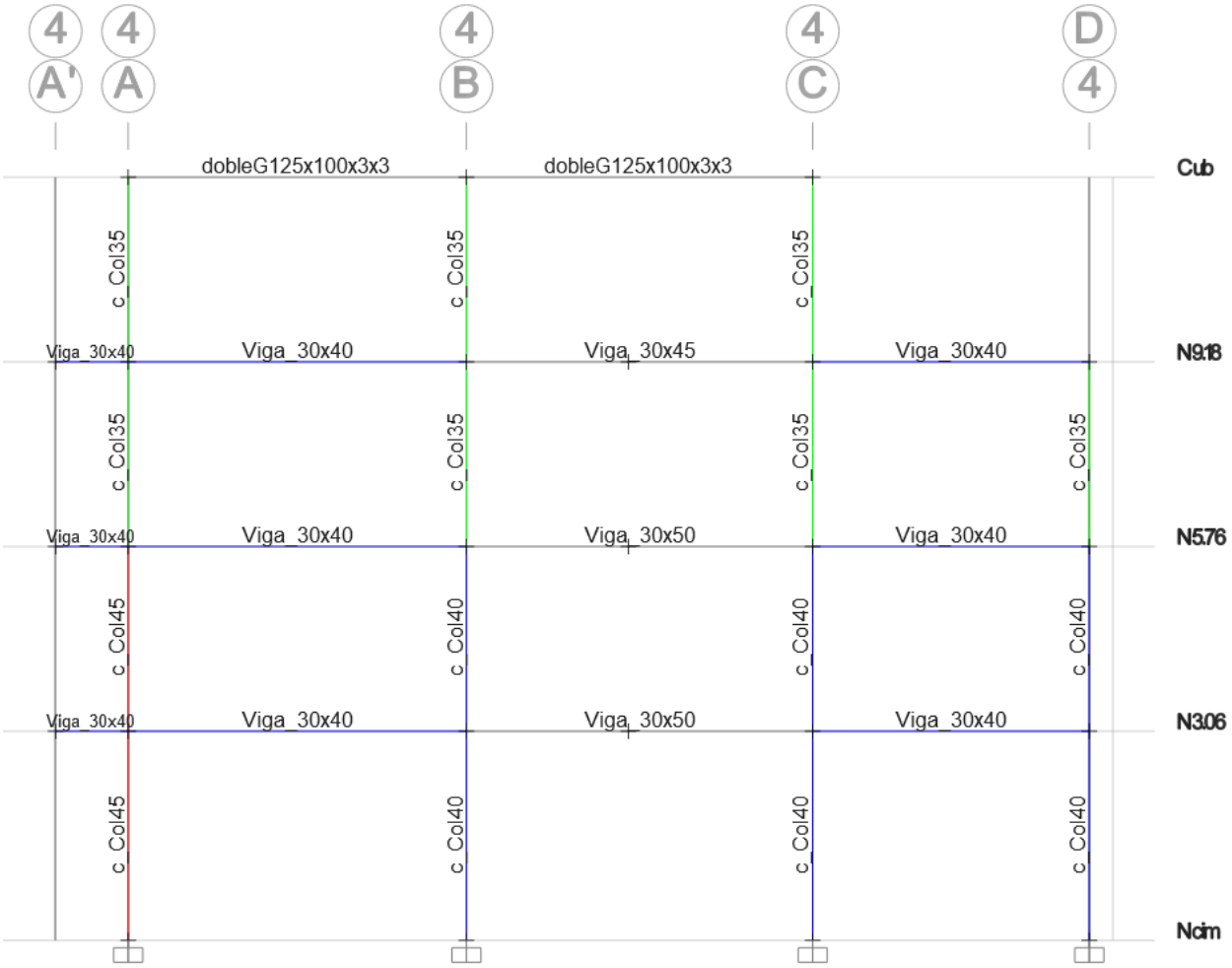
7. Vista Elevación Eje D

8. Vista Elevación Eje 1



9. Vista Elevación Eje 3

10. Vista Elevación Eje 4



11. Vista Elevación Eje 5

12. Derivas Caso Sismos Estáticos

1) Derivas Estáticas Sismo en X

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00225144	0.00017505	1.35%	0.11%	1.35%
N5.76	5.76	Top	0.00238995	2.642E-05	1.43%	0.02%	1.43%
N3.06	3.06	Top	0.00188817	0.00010104	1.13%	0.06%	1.13%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

2) Derivas Estáticas Sismo en Y

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00017251	0.00220066	0.10%	1.32%	1.32%
N5.76	5.76	Top	3.6813E-05	0.00237108	0.02%	1.42%	1.42%
N3.06	3.06	Top	6.7167E-05	0.00185367	0.04%	1.11%	1.11%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

3) Derivas Estáticas Sismo en X ecc +

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.002178	0.00008	1.31%	0.05%	1.31%
N5.76	5.76	Top	0.002662	0.000247	1.60%	0.15%	1.60%
N3.06	3.06	Top	0.001927	0.000098	1.16%	0.06%	1.16%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

4) Derivas Estáticas Sismo en Y ecc +

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	7.029E-05	0.00212319	0.04%	1.27%	1.27%
N5.76	5.76	Top	0.00022856	0.0025947	0.14%	1.56%	1.56%
N3.06	3.06	Top	0.0001243	0.00193581	0.07%	1.16%	1.16%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

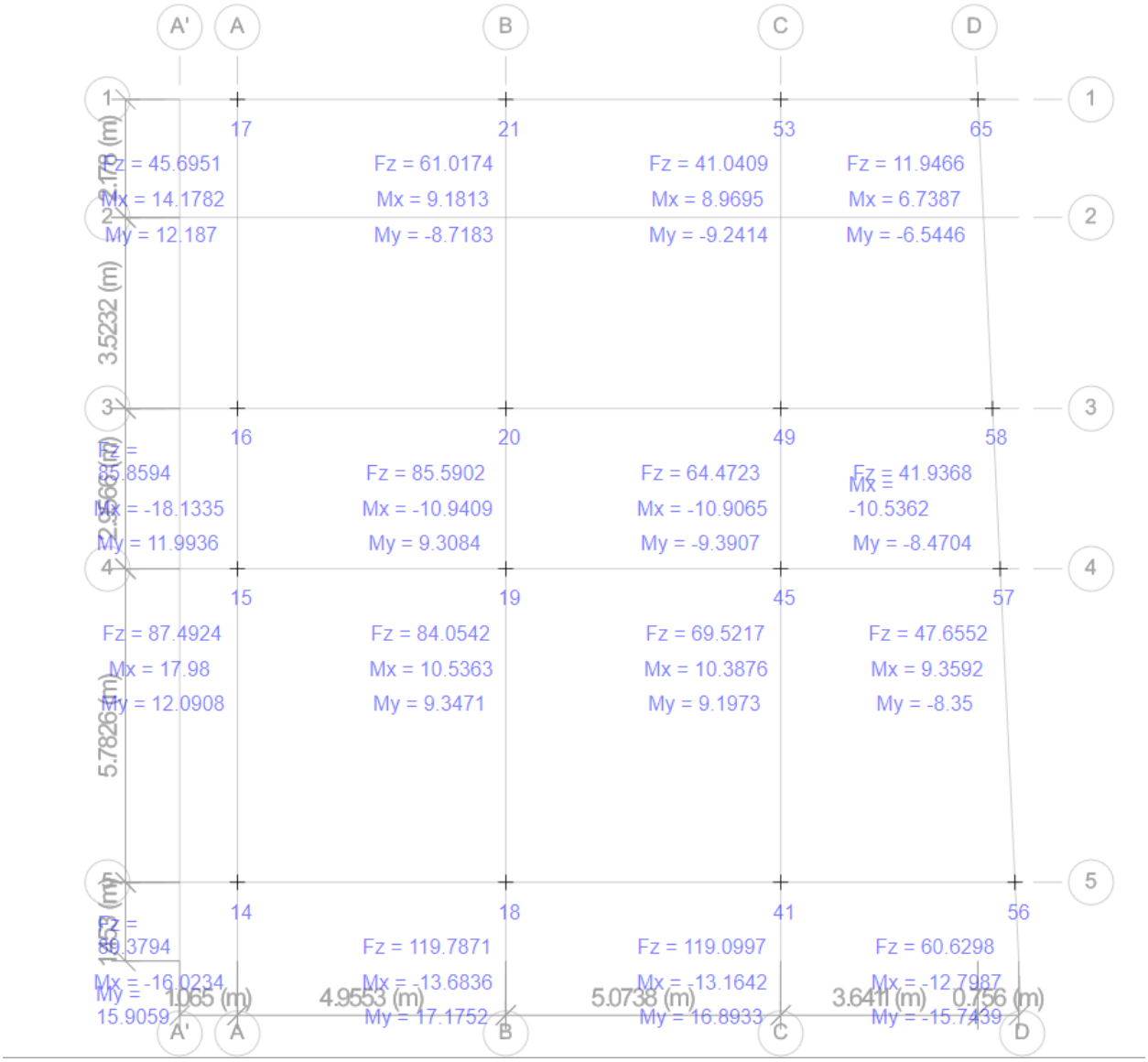
5) Derivas Estáticas Sismo en X ecc -

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00246335	0.00040543	1.48%	0.24%	1.50%
N5.76	5.76	Top	0.00261716	0.00029942	1.57%	0.18%	1.58%
N3.06	3.06	Top	0.00203462	0.00029987	1.22%	0.18%	1.23%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

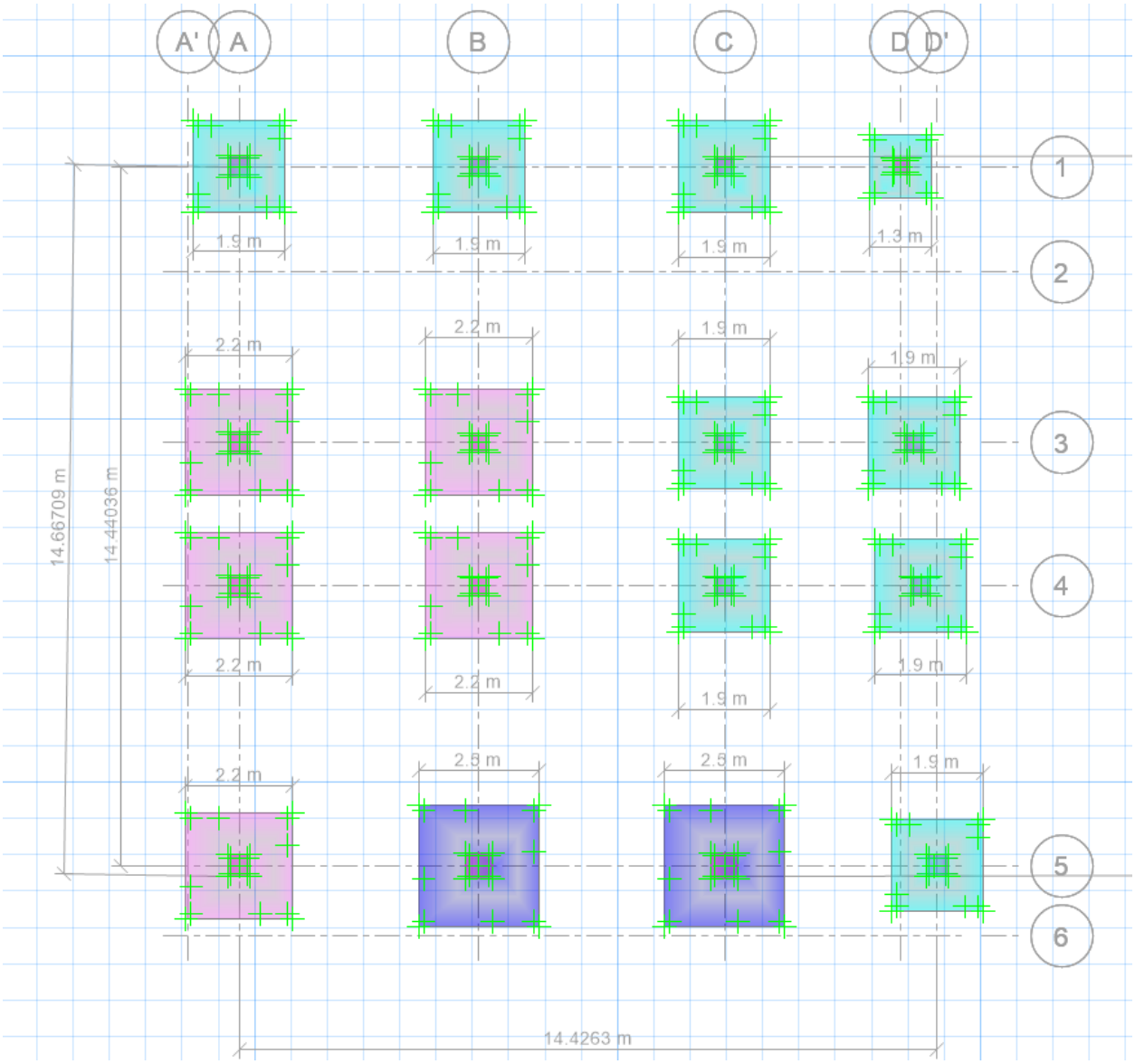
6) Derivas Estáticas Sismo en Y ecc -

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00039608	0.00239639	0.24%	1.44%	1.46%
N5.76	5.76	Top	0.00030219	0.00258183	0.18%	1.55%	1.56%
N3.06	3.06	Top	0.00025863	0.00199465	0.16%	1.20%	1.21%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

13. Cimentación modelado en Etabs



14. Zapatas modeladas en Safe



PRESUPUESTO						
Item	**Código**	**Descripción**	**Unidad**	**Cantidad**	**P. Unitario**	**P. Total**
1		**PRELIMINARES**				**281.60**
1.1	501002	Limpieza y desbroce del terreno (incl desalojo)	m2	220.00000	**0.70**	**154.00**
1.2	503002	Nivelación y Replanteo	m2	220.00000	**0.58**	**127.60**
2		**CIMENTACIÓN**				**18,436.68**
2.1	507024	Excavación a máquina en suelo sin clasificar hasta 2 m	m3	25.00000	**3.34**	**83.50**
2.2	520006	Desalojo Material	m3	32.50000	**3.92**	**127.40**
2.3	555001	Replantillo de piedra e=20cm	m2	1.00000	**7.74**	**7.74**
2.4	542035	Hormigón de replantillo f´c = 180 Kg/cm2 / plintos	m3	10.00000	**167.39**	**1,673.90**
2.5	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	2,441.18000	**2.60**	**6,347.07**
2.6	529048	Hormigón para plintos, f´c = 240 Kg/cm2	m3	21.94000	**191.47**	**4,200.85**
2.7	529033	Ho So de f´c=240 kg/cm2 en Cadenas, incluye encofrado	m3	14.58000	**246.06**	**3,587.55**
2.8	514025	Relleno con Material extraido, compactado	m3	15.00000	**6.61**	**99.15**
2.9	531021	Ho So de f´c=210 kg/cm2 en Contrapiso e=6 cm	m2	217.06000	**10.64**	**2,309.52**
3		**PRIMERA PLANTA**				**41,577.18**
3.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	8.63000	**268.08**	**2,313.53**
3.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	20.12000	**270.70**	**5,446.48**
3.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	5,954.46000	**2.60**	**15,481.60**
3.4	529055	Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado	m3	2.51000	**223.16**	**560.13**
3.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	253.42800	**70.14**	**17,775.44**
4		**SEGUNDA PLANTA**				**38,919.03**
4.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	7.28000	**268.08**	**1,951.62**
4.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	20.12000	**270.70**	**5,446.48**
4.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	5,405.21000	**2.60**	**14,053.55**
4.4	529055	Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado	m3	2.51000	**223.16**	**560.13**
4.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	241.05000	**70.14**	**16,907.25**
5		**TERCERA PLANTA**				**38,297.09**
5.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	4.96000	**268.08**	**1,329.68**
5.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	20.12000	**270.70**	**5,446.48**
5.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	5,405.21000	**2.60**	**14,053.55**
5.4	529055	Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado	m3	2.51000	**223.16**	**560.13**
5.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	241.05000	**70.14**	**16,907.25**
6		**CUARTA PLANTA**				**11,856.98**
6.1	529053	Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado	m3	3.37000	**268.08**	**903.43**
6.2	529054	Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado	m3	3.28000	**270.70**	**887.90**
6.3	533025	Acero de refuerzo fy = 4200 kg/cm2	Kg	1,291.87000	**2.60**	**3,358.86**
6.5	500053	Losa alivianada e=20cm, incluido encofrado	m2	95.62000	**70.14**	**6,706.79**
SUBTOTAL						**149,368.56**
IVA					15.00%	**22,405.28**
TOTAL						**171,773.84**

Son: CIENTO SETENTA Y UNO MIL SETECIENTOS SETENTA Y TRES CON 84/100 DÓLARES DE LOS ESTADOS UNIDOS DE AMÉRICA

RUBRO: Limpieza y desbroce del terreno (incl desalojo) **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.01			0.01
Retroexcavadora	1.00000	30.00	30.00	0.00600	0.18
Volquete de 8m3	1.00000	25.00	25.00	0.00600	0.15
Motosierra	1.00000	10.00	10.00	0.00600	0.06
Equipo de proteccion industrial	1.00000	0.10	0.10	0.00600	0.00
SUBTOTAL M					0.40
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Inspector de Obra (Estr. Oc. B3)	1.00000	4.65	4.65	0.00600	0.03
Peón (Estr. Oc. E2)	2.00000	4.14	8.28	0.00600	0.05
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	0.00600	0.03
Operador Equipo Pesado GI (Estr. Oc. C1)	1.00000	4.65	4.65	0.00600	0.03
Chofer Profesional (Estr. Oc. C1)	1.00000	6.08	6.08	0.00600	0.04
SUBTOTAL N					0.18
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
SUBTOTAL O					0.00
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	0.58
INDIRECTOS Y UTILIDADES: 20.00 %	0.12
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	0.70
VALOR OFERTADO	0.70

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Nivelación y Replanteo **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.01			0.01
Nivel Topográfico	1.00000	1.50	1.50	0.02000	0.03
SUBTOTAL M					0.04
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.02400	0.10
Topógrafo (Estr. Oc. C1)	1.00000	4.65	4.65	0.02400	0.11
SUBTOTAL N					0.21
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Tiras Encofrado de 4X5 cm		u	0.08800	1.80	0.16
Clavos		Kg	0.03000	2.09	0.06
Piola		u	0.00500	2.25	0.01
SUBTOTAL O					0.23
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	0.48
	INDIRECTOS Y UTILIDADES: 20.00 %	0.10
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	0.58
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	0.58

sábado, 19 de octubre de 2024

RUBRO: Excavación a máquina en suelo sin clasificar hasta 2 m **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.02			0.02
Excavadora de Oruga	1.00000	60.00	60.00	0.04000	2.40
SUBTOTAL M					2.42
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Operador Equipo Pesado GI (Estr. Oc. C1)	1.00000	4.65	4.65	0.04000	0.19
Ayud. Maquinaria (Estr. Oc. D2)	1.00000	4.26	4.26	0.04000	0.17
SUBTOTAL N					0.36
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
SUBTOTAL O					0.00
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	2.78
INDIRECTOS Y UTILIDADES: 20.00 %	0.56
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	3.34
VALOR OFERTADO	3.34

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Desalojo Material **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.04			0.04
Volquete de 8m3	1.00000	25.00	25.00	0.04600	1.15
Retroexcavadora	1.00000	30.00	30.00	0.04600	1.38
SUBTOTAL M					2.57
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Chofer Profesional (Estr. Oc. C1)	1.00000	6.08	6.08	0.04600	0.28
Operador Equipo Pesado GI (Estr. Oc. C1)	1.00000	4.65	4.65	0.04600	0.21
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.04600	0.21
SUBTOTAL N					0.70
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
SUBTOTAL O					0.00
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	3.27
INDIRECTOS Y UTILIDADES: 20.00 %	0.65
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	3.92
VALOR OFERTADO	3.92

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Replantillo de piedra e=20cm **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.21			0.21
SUBTOTAL M					0.21
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	2.00000	4.14	8.28	0.34000	2.82
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	0.34000	1.42
SUBTOTAL N					4.24
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Piedra Bola		m3	0.20000	8.00	1.60
Gravilla		m3	0.05000	8.00	0.40
SUBTOTAL O					2.00
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	6.45
	INDIRECTOS Y UTILIDADES: 20.00 %	1.29
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	7.74
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	7.74

sábado, 19 de octubre de 2024

RUBRO: Hormigón de replantillo f´c = 180 Kg/cm2 / plintos **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	2.34			2.34
Concretera	1.00000	5.00	5.00	0.70000	3.50
SUBTOTAL M					5.84
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	4.00000	4.14	16.56	2.00000	33.12
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.00000	8.38
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.70000	2.93
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					46.76
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	325.00000	0.16	52.00
Ripio Cribado		m3	1.37000	8.00	10.96
Agua		m3	0.22000	0.30	0.07
Tabla Encofrado		u	7.00000	3.20	22.40
Clavos		Kg	0.70000	2.09	1.46
SUBTOTAL O					86.89
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	139.49
	INDIRECTOS Y UTILIDADES: 20.00 %	27.90
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	167.39
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	167.39

sábado, 19 de octubre de 2024

RUBRO: Acero de refuerzo fy = 4200 kg/cm2 **UNIDAD:** Kg

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.04			0.04
SUBTOTAL M					0.04
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.08000	0.33
Fierrero (Estr. Oc. D2)	1.00000	4.19	4.19	0.05000	0.21
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.05000	0.23
SUBTOTAL N					0.77
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Acero de refuerzo		Kg	1.05000	1.10	1.16
Alambre de Amarre		Kg	0.10500	1.90	0.20
SUBTOTAL O					1.36
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	2.17
INDIRECTOS Y UTILIDADES: 20.00 %	0.43
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	2.60
VALOR OFERTADO	2.60

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Hormigón para plintos, f´c = 240 Kg/cm2 **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	2.68			2.68
Concretera	1.00000	5.00	5.00	0.80000	4.00
Vibrador	1.00000	3.00	3.00	0.80000	2.40
SUBTOTAL M					9.08
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	4.00000	4.14	16.56	2.15000	35.60
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.15000	9.01
Oper. Equipo Liviano (Estr. Oc. D2)	2.00000	4.19	8.38	0.80000	6.70
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					53.64
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	380.00000	0.16	60.80
Arena		m3	0.65000	8.00	5.20
Grava Triturada 3/4"		m3	0.95000	18.00	17.10
Agua		m3	0.20000	0.30	0.06
Aditivo Acelerante Plastificante		Kg	3.80000	3.60	13.68
SUBTOTAL O					96.84
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	159.56
	INDIRECTOS Y UTILIDADES: 20.00 %	31.91
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	191.47
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	191.47

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Cadenas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.42			3.42
Concretera	1.00000	5.00	5.00	0.90000	4.50
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					10.62

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					68.33

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Agua	m3	0.20000	0.30	0.06
Tiras Encofrado de 4X5 cm.	m	9.00000	0.60	5.40
Tabla Encofrado	u	7.00000	3.20	22.40
Clavos	Kg	0.70000	2.09	1.46
SUBTOTAL O				126.10

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

TOTAL COSTO DIRECTO (M+N+O+P)	205.05
INDIRECTOS Y UTILIDADES: 20.00 %	41.01
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	246.06
VALOR OFERTADO	246.06

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Relleno con Material extraido, compactado **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.17			0.17
Compactador Mecánico	1.00000	5.00	5.00	0.40000	2.00
SUBTOTAL M					2.17
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.40000	1.66
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.40000	1.68
SUBTOTAL N					3.34
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
SUBTOTAL O					0.00
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	5.51
INDIRECTOS Y UTILIDADES: 20.00 %	1.10
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	6.61
VALOR OFERTADO	6.61

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Ho So de f`c=210 kg/cm2 en Contrapiso e=6 cm **UNIDAD:** m2

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	0.14			0.14
Concretera	1.00000	5.00	5.00	0.05400	0.27
SUBTOTAL M					0.41

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	3.00000	4.14	12.42	0.15000	1.86
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	0.15000	0.63
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.05400	0.23
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.03500	0.16
SUBTOTAL N					2.88

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	21.60000	0.16	3.46
Arena	m3	0.03900	8.00	0.31
Grava Triturada 3/4"	m3	0.05700	18.00	1.03
Aditivo Acelerante Plastificante	Kg	0.21600	3.60	0.78
Agua	m3	0.01200	0.30	0.00
SUBTOTAL O				5.58

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	8.87
	INDIRECTOS Y UTILIDADES: 20.00 %	1.77
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	10.64
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	10.64

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.53			3.53
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					11.23

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	1.00000	4.65
SUBTOTAL N					70.65

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Agua	m3	0.20000	0.30	0.06
Tabla Encofrado	u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.	m	18.00000	0.60	10.80
Clavos	Kg	0.90000	2.09	1.88
SUBTOTAL O				141.52

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	223.40
	INDIRECTOS Y UTILIDADES: 20.00 %	44.68
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	268.08
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	268.08

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.13			3.13
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	1.00000	3.00
SUBTOTAL M					11.13

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.25000	46.58
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.25000	9.43
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	1.00000	4.19
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					62.53

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Agua	m3	0.20000	0.30	0.06
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Tabla Encofrado	u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.	m	12.00000	0.60	7.20
Tiras Encofrado de 2.2X5 cm.	u	1.00000	0.88	0.88
Caña Guadua	m	30.00000	0.50	15.00
SUBTOTAL O				151.92

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

TOTAL COSTO DIRECTO (M+N+O+P)	225.58
INDIRECTOS Y UTILIDADES: 20.00 %	45.12
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	270.70
VALOR OFERTADO	270.70

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Acero de refuerzo fy = 4200 kg/cm2 **UNIDAD:** Kg

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.04			0.04
SUBTOTAL M					0.04
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.08000	0.33
Fierrero (Estr. Oc. D2)	1.00000	4.19	4.19	0.05000	0.21
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.05000	0.23
SUBTOTAL N					0.77
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Acero de refuerzo		Kg	1.05000	1.10	1.16
Alambre de Amarre		Kg	0.10500	1.90	0.20
SUBTOTAL O					1.36
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	2.17
INDIRECTOS Y UTILIDADES: 20.00 %	0.43
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	2.60
VALOR OFERTADO	2.60

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.53			3.53
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					11.23

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	1.00000	4.65
SUBTOTAL N					70.65

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Agua	m3	0.20000	0.30	0.06
Encofrado recto para grada	m2	1.00000	7.25	7.25
SUBTOTAL O				104.09

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

TOTAL COSTO DIRECTO (M+N+O+P)	185.97
INDIRECTOS Y UTILIDADES: 20.00 %	37.19
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	223.16
VALOR OFERTADO	223.16

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Encofrado recto para grada **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.17			0.17
SUBTOTAL M					0.17
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.40000	1.66
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	0.40000	1.68
SUBTOTAL N					3.34
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Tabla Encofrado		u	0.83000	3.20	2.66
Tiras Encofrado de 4X5 cm.		m	1.00000	0.60	0.60
Tiras Encofrado de 2.2X5 cm.		u	0.33300	0.88	0.29
Clavos		Kg	0.09000	2.09	0.19
SUBTOTAL O					3.74
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	7.25
	INDIRECTOS Y UTILIDADES: 20.00 %	1.45
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	8.70
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	8.70

sábado, 19 de octubre de 2024

RUBRO: Losa alivianada e=20cm, incluido encofrado **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	1.36			1.36
Concretera	1.00000	5.00	5.00	0.40000	2.00
Vibrador	1.00000	3.00	3.00	0.20000	0.60
SUBTOTAL M					3.96
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	4.00000	4.14	16.56	0.75000	12.42
Ayud. de Albañil (Estr. Oc. E2)	2.00000	4.14	8.28	0.75000	6.21
Albañil (Estr. Oc. D2)	2.00000	4.19	8.38	0.75000	6.29
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					27.25
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	33.60000	0.16	5.38
Grava clasificada diámetro máximo 5cm		m3	0.08000	18.00	1.44
Ripio Cribado		m3	0.05600	8.00	0.45
Bloque liviano 15x20x40 cm		u	8.00000	0.54	4.32
Aditivo Acelerante Plastificante		Kg	0.20000	3.60	0.72
Tabla Encofrado		u	0.80000	3.20	2.56
Tiras Encofrado de 4X5 cm		u	0.40000	1.80	0.72
Caña Guadua		m	15.50000	0.50	7.75
Clavos		Kg	0.22000	2.09	0.46
Agua		m3	0.10000	0.30	0.03
Acero de refuerzo		Kg	3.10000	1.10	3.41
SUBTOTAL O					27.24
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	58.45
INDIRECTOS Y UTILIDADES: 20.00 %	11.69
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	70.14
VALOR OFERTADO	70.14

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.53			3.53
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					11.23

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	1.00000	4.65
SUBTOTAL N					70.65

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Agua	m3	0.20000	0.30	0.06
Tabla Encofrado	u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.	m	18.00000	0.60	10.80
Clavos	Kg	0.90000	2.09	1.88
SUBTOTAL O				141.52

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	223.40
	INDIRECTOS Y UTILIDADES: 20.00 %	44.68
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	268.08
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	268.08

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	3.13			3.13
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	1.00000	3.00
SUBTOTAL M					11.13
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.25000	46.58
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.25000	9.43
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	1.00000	4.19
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					62.53
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	380.00000	0.16	60.80
Arena		m3	0.65000	8.00	5.20
Grava Triturada 3/4"		m3	0.95000	18.00	17.10
Agua		m3	0.20000	0.30	0.06
Aditivo Acelerante Plastificante		Kg	3.80000	3.60	13.68
Tabla Encofrado		u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.		m	12.00000	0.60	7.20
Tiras Encofrado de 2.2X5 cm.		u	1.00000	0.88	0.88
Caña Guadua		m	30.00000	0.50	15.00
SUBTOTAL O					151.92
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	225.58
	INDIRECTOS Y UTILIDADES: 20.00 %	45.12
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	270.70
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	270.70

sábado, 19 de octubre de 2024

RUBRO: Acero de refuerzo fy = 4200 kg/cm2 **UNIDAD:** Kg

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.04			0.04
SUBTOTAL M					0.04
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.08000	0.33
Fierrero (Estr. Oc. D2)	1.00000	4.19	4.19	0.05000	0.21
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.05000	0.23
SUBTOTAL N					0.77
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Acero de refuerzo		Kg	1.05000	1.10	1.16
Alambre de Amarre		Kg	0.10500	1.90	0.20
SUBTOTAL O					1.36
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	2.17
INDIRECTOS Y UTILIDADES: 20.00 %	0.43
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	2.60
VALOR OFERTADO	2.60

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.53			3.53
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					11.23

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	1.00000	4.65
SUBTOTAL N					70.65

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Agua	m3	0.20000	0.30	0.06
Encofrado recto para grada	m2	1.00000	7.25	7.25
SUBTOTAL O				104.09

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

TOTAL COSTO DIRECTO (M+N+O+P)	185.97
INDIRECTOS Y UTILIDADES: 20.00 %	37.19
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	223.16
VALOR OFERTADO	223.16

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Encofrado recto para grada **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.17			0.17
SUBTOTAL M					0.17
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.40000	1.66
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	0.40000	1.68
SUBTOTAL N					3.34
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Tabla Encofrado		u	0.83000	3.20	2.66
Tiras Encofrado de 4X5 cm.		m	1.00000	0.60	0.60
Tiras Encofrado de 2.2X5 cm.		u	0.33300	0.88	0.29
Clavos		Kg	0.09000	2.09	0.19
SUBTOTAL O					3.74
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	7.25
	INDIRECTOS Y UTILIDADES: 20.00 %	1.45
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	8.70
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	8.70

sábado, 19 de octubre de 2024

RUBRO: Losa alivianada e=20cm, incluido encofrado **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	1.36			1.36
Concretera	1.00000	5.00	5.00	0.40000	2.00
Vibrador	1.00000	3.00	3.00	0.20000	0.60
SUBTOTAL M					3.96
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	4.00000	4.14	16.56	0.75000	12.42
Ayud. de Albañil (Estr. Oc. E2)	2.00000	4.14	8.28	0.75000	6.21
Albañil (Estr. Oc. D2)	2.00000	4.19	8.38	0.75000	6.29
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					27.25
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	33.60000	0.16	5.38
Grava clasificada diámetro máximo 5cm		m3	0.08000	18.00	1.44
Ripio Cribado		m3	0.05600	8.00	0.45
Bloque liviano 15x20x40 cm		u	8.00000	0.54	4.32
Aditivo Acelerante Plastificante		Kg	0.20000	3.60	0.72
Tabla Encofrado		u	0.80000	3.20	2.56
Tiras Encofrado de 4X5 cm		u	0.40000	1.80	0.72
Caña Guadua		m	15.50000	0.50	7.75
Clavos		Kg	0.22000	2.09	0.46
Agua		m3	0.10000	0.30	0.03
Acero de refuerzo		Kg	3.10000	1.10	3.41
SUBTOTAL O					27.24
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	58.45
INDIRECTOS Y UTILIDADES: 20.00 %	11.69
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	70.14
VALOR OFERTADO	70.14

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	3.53			3.53
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					11.23
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	1.00000	4.65
SUBTOTAL N					70.65
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	380.00000	0.16	60.80
Arena		m3	0.65000	8.00	5.20
Grava Triturada 3/4"		m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante		Kg	3.80000	3.60	13.68
Agua		m3	0.20000	0.30	0.06
Tabla Encofrado		u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.		m	18.00000	0.60	10.80
Clavos		Kg	0.90000	2.09	1.88
SUBTOTAL O					141.52
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	223.40
	INDIRECTOS Y UTILIDADES: 20.00 %	44.68
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	268.08
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	268.08

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.13			3.13
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	1.00000	3.00
SUBTOTAL M					11.13

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.25000	46.58
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.25000	9.43
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	1.00000	4.19
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					62.53

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Agua	m3	0.20000	0.30	0.06
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Tabla Encofrado	u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.	m	12.00000	0.60	7.20
Tiras Encofrado de 2.2X5 cm.	u	1.00000	0.88	0.88
Caña Guadua	m	30.00000	0.50	15.00
SUBTOTAL O				151.92

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

TOTAL COSTO DIRECTO (M+N+O+P)	225.58
INDIRECTOS Y UTILIDADES: 20.00 %	45.12
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	270.70
VALOR OFERTADO	270.70

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Acero de refuerzo fy = 4200 kg/cm2 **UNIDAD:** Kg

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.04			0.04
SUBTOTAL M					0.04
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.08000	0.33
Fierrero (Estr. Oc. D2)	1.00000	4.19	4.19	0.05000	0.21
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.05000	0.23
SUBTOTAL N					0.77
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Acero de refuerzo		Kg	1.05000	1.10	1.16
Alambre de Amarre		Kg	0.10500	1.90	0.20
SUBTOTAL O					1.36
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	2.17
INDIRECTOS Y UTILIDADES: 20.00 %	0.43
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	2.60
VALOR OFERTADO	2.60

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en escalera, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	3.53			3.53
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					11.23
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	1.00000	4.65
SUBTOTAL N					70.65
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	380.00000	0.16	60.80
Arena		m3	0.65000	8.00	5.20
Grava Triturada 3/4"		m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante		Kg	3.80000	3.60	13.68
Agua		m3	0.20000	0.30	0.06
Encofrado recto para grada		m2	1.00000	7.25	7.25
SUBTOTAL O					104.09
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	185.97
INDIRECTOS Y UTILIDADES: 20.00 %	37.19
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	223.16
VALOR OFERTADO	223.16

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Encofrado recto para grada **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.17			0.17
SUBTOTAL M					0.17
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.40000	1.66
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	0.40000	1.68
SUBTOTAL N					3.34
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Tabla Encofrado		u	0.83000	3.20	2.66
Tiras Encofrado de 4X5 cm.		m	1.00000	0.60	0.60
Tiras Encofrado de 2.2X5 cm.		u	0.33300	0.88	0.29
Clavos		Kg	0.09000	2.09	0.19
SUBTOTAL O					3.74
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	7.25
	INDIRECTOS Y UTILIDADES: 20.00 %	1.45
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	8.70
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	8.70

sábado, 19 de octubre de 2024

RUBRO: Losa alivianada e=20cm, incluido encofrado **UNIDAD:** m2

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	1.36			1.36
Concretera	1.00000	5.00	5.00	0.40000	2.00
Vibrador	1.00000	3.00	3.00	0.20000	0.60
SUBTOTAL M					3.96
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	4.00000	4.14	16.56	0.75000	12.42
Ayud. de Albañil (Estr. Oc. E2)	2.00000	4.14	8.28	0.75000	6.21
Albañil (Estr. Oc. D2)	2.00000	4.19	8.38	0.75000	6.29
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					27.25
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	33.60000	0.16	5.38
Grava clasificada diámetro máximo 5cm		m3	0.08000	18.00	1.44
Ripio Cribado		m3	0.05600	8.00	0.45
Bloque liviano 15x20x40 cm		u	8.00000	0.54	4.32
Aditivo Acelerante Plastificante		Kg	0.20000	3.60	0.72
Tabla Encofrado		u	0.80000	3.20	2.56
Tiras Encofrado de 4X5 cm		u	0.40000	1.80	0.72
Caña Guadua		m	15.50000	0.50	7.75
Clavos		Kg	0.22000	2.09	0.46
Agua		m3	0.10000	0.30	0.03
Acero de refuerzo		Kg	3.10000	1.10	3.41
SUBTOTAL O					27.24
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	58.45
INDIRECTOS Y UTILIDADES: 20.00 %	11.69
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	70.14
VALOR OFERTADO	70.14

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Columnas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	3.53			3.53
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	0.90000	2.70
SUBTOTAL M					11.23
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.50000	51.75
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.50000	10.48
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	0.90000	3.77
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	1.00000	4.65
SUBTOTAL N					70.65
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Cemento Portland		Kg	380.00000	0.16	60.80
Arena		m3	0.65000	8.00	5.20
Grava Triturada 3/4"		m3	0.95000	18.00	17.10
Aditivo Acelerante Plastificante		Kg	3.80000	3.60	13.68
Agua		m3	0.20000	0.30	0.06
Tabla Encofrado		u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.		m	18.00000	0.60	10.80
Clavos		Kg	0.90000	2.09	1.88
SUBTOTAL O					141.52
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

	TOTAL COSTO DIRECTO (M+N+O+P)	223.40
	INDIRECTOS Y UTILIDADES: 20.00 %	44.68
	OTROS INDIRECTOS: 0.00 %	0.00
	COSTO TOTAL DEL RUBRO	268.08
ESTOS PRECIOS NO INCLUYEN IVA.	**VALOR OFERTADO**	268.08

sábado, 19 de octubre de 2024

RUBRO: Ho So de f´c=240 kg/cm2 en Vigas, incluye encofrado **UNIDAD:** m3

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	3.13			3.13
Concretera	1.00000	5.00	5.00	1.00000	5.00
Vibrador	1.00000	3.00	3.00	1.00000	3.00
SUBTOTAL M					11.13

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	5.00000	4.14	20.70	2.25000	46.58
Albañil (Estr. Oc. D2)	1.00000	4.19	4.19	2.25000	9.43
Oper. Equipo Liviano (Estr. Oc. D2)	1.00000	4.19	4.19	1.00000	4.19
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					62.53

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	380.00000	0.16	60.80
Arena	m3	0.65000	8.00	5.20
Grava Triturada 3/4"	m3	0.95000	18.00	17.10
Agua	m3	0.20000	0.30	0.06
Aditivo Acelerante Plastificante	Kg	3.80000	3.60	13.68
Tabla Encofrado	u	10.00000	3.20	32.00
Tiras Encofrado de 4X5 cm.	m	12.00000	0.60	7.20
Tiras Encofrado de 2.2X5 cm.	u	1.00000	0.88	0.88
Caña Guadua	m	30.00000	0.50	15.00
SUBTOTAL O				151.92

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

TOTAL COSTO DIRECTO (M+N+O+P)	225.58
INDIRECTOS Y UTILIDADES: 20.00 %	45.12
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	270.70
VALOR OFERTADO	270.70

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Acero de refuerzo fy = 4200 kg/cm2 **UNIDAD:** Kg

DETALLE:

EQUIPOS					
Descripción	**Cantidad**	**Tarifa**	**Costo Hora**	**Rendimiento**	**Costo**
Herramienta Menor 5% de M.O.	5.00 %MO	0.04			0.04
SUBTOTAL M					0.04
MANO DE OBRA					
Descripción	**Cantidad**	**Jornal/HR**	**Costo Hora**	**Rendimiento**	**Costo**
Peón (Estr. Oc. E2)	1.00000	4.14	4.14	0.08000	0.33
Fierrero (Estr. Oc. D2)	1.00000	4.19	4.19	0.05000	0.21
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.05000	0.23
SUBTOTAL N					0.77
MATERIALES					
Descripción		**Unidad**	**Cantidad**	**Precio Unit.**	**Costo**
Acero de refuerzo		Kg	1.05000	1.10	1.16
Alambre de Amarre		Kg	0.10500	1.90	0.20
SUBTOTAL O					1.36
TRANSPORTE					
Descripción		**Unidad**	**Cantidad**	**Tarifa**	**Costo**
SUBTOTAL P					0.00

TOTAL COSTO DIRECTO (M+N+O+P)	2.17
INDIRECTOS Y UTILIDADES: 20.00 %	0.43
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	2.60
VALOR OFERTADO	2.60

ESTOS PRECIOS NO INCLUYEN IVA.

sábado, 19 de octubre de 2024

RUBRO: Losa alivianada e=20cm, incluido encofrado **UNIDAD:** m2

DETALLE:

EQUIPOS

Descripción	Cantidad	Tarifa	Costo Hora	Rendimiento	Costo
Herramienta Menor 5% de M.O.	5.00 %MO	1.36			1.36
Concretera	1.00000	5.00	5.00	0.40000	2.00
Vibrador	1.00000	3.00	3.00	0.20000	0.60
SUBTOTAL M					3.96

MANO DE OBRA

Descripción	Cantidad	Jornal/HR	Costo Hora	Rendimiento	Costo
Peón (Estr. Oc. E2)	4.00000	4.14	16.56	0.75000	12.42
Ayud. de Albañil (Estr. Oc. E2)	2.00000	4.14	8.28	0.75000	6.21
Albañil (Estr. Oc. D2)	2.00000	4.19	8.38	0.75000	6.29
Maestro Mayor de Obra (Estr. Oc. C1)	1.00000	4.65	4.65	0.50000	2.33
SUBTOTAL N					27.25

MATERIALES

Descripción	Unidad	Cantidad	Precio Unit.	Costo
Cemento Portland	Kg	33.60000	0.16	5.38
Grava clasificada diámetro máximo 5cm	m3	0.08000	18.00	1.44
Ripio Cribado	m3	0.05600	8.00	0.45
Bloque liviano 15x20x40 cm	u	8.00000	0.54	4.32
Aditivo Acelerante Plastificante	Kg	0.20000	3.60	0.72
Tabla Encofrado	u	0.80000	3.20	2.56
Tiras Encofrado de 4X5 cm	u	0.40000	1.80	0.72
Caña Guadua	m	15.50000	0.50	7.75
Clavos	Kg	0.22000	2.09	0.46
Agua	m3	0.10000	0.30	0.03
Acero de refuerzo	Kg	3.10000	1.10	3.41
SUBTOTAL O				27.24

TRANSPORTE

Descripción	Unidad	Cantidad	Tarifa	Costo
SUBTOTAL P				0.00

TOTAL COSTO DIRECTO (M+N+O+P)	58.45
INDIRECTOS Y UTILIDADES: 20.00 %	11.69
OTROS INDIRECTOS: 0.00 %	0.00
COSTO TOTAL DEL RUBRO	70.14
VALOR OFERTADO	70.14

ESTOS PRECIOS NO INCLUYEN IVA.

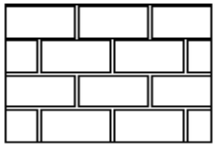
sábado, 19 de octubre de 2024

Longitud de Paredes
PA1
Paredes Exteriores Lateral y Posterior
13.5
15.5

Paredes Exteriores Frontal y Lateral
14
14

Paredes Exteriores Balcones
13.5
13.5

Paredes Interiores Losa 1
64.42



Area
209.98 m2

Ladrillo Cerámico Hueco
Peso Unidad 8.5 kg
Número de Ladrillos en 1m2
11.5

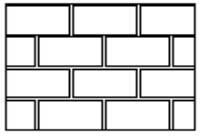
Espesor capa Enlucido 0.01 m
Peso Específico 2000 kg/m3

Longitud de Paredes
PA1
Paredes Exteriores Lateral y Posterior
13.5
15.5

Paredes Exteriores Frontal y Lateral
14
14

Paredes Exteriores Balcones
13.5
13.5

Paredes Interiores Losa 1
64.42



Area
209.98

Ladrillo Cerámico Hueco
Peso Unidad 8.5 kg
Número de Ladrillos en 1m2
11.5

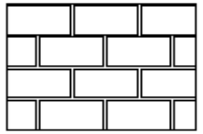
Espesor capa 0.01 m
Peso Específic 2000 kg/m3

Longitud de Paredes
PA1
Paredes Exteriores Lateral y Posterior

Paredes Exteriores Frontal y Lateral
48.12

Paredes Exteriores Balcones

Paredes Interiores Losa 1
32.53



Area
209.98

Ladrillo Cerámico Hueco
Peso Unidad 8.5 kg
Número de Ladrillos en 1m2
11.5

Espesor capa 0.01 m
Peso Específic 2000 kg/m3

Vol mortero	0.07515	m3/m2	Vol mortero	0.07515	m3/m2	Vol mortero	0.07515	m3/m2

Paredes Exteriores Lateral y Posterior			Paredes Exteriores Lateral y Posterior			Paredes Exteriores Lateral y Posterior		
Altura Pared	2.7	m	Altura Pared	2.7	m	Altura Pared	2.7	m
Capas de enlucido	1		Capas de enlu	1		Capas de enlu	1	
Peso Paredes	263.93	kg/m	Peso Paredes	263.93	kg/m	Peso Paredes	263.93	kg/m
Peso Enlucido	54.00	kg/m	Peso Enlucido	54.00	kg/m	Peso Enlucido	54.00	kg/m
Peso Mortero	405.81	kg/m	Peso Mortero	405.81	kg/m	Peso Mortero	405.81	kg/m
	723.74	kg/m		723.74	kg/m		723.74	kg/m

Paredes Exteriores Frontal y Lateral			Paredes Exteriores Frontal y Lateral			Paredes Exteriores Frontal y Lateral		
Altura Pared	2.7		Altura Pared	2.7		Altura Pared	2.7	
Capas de enlucido	2		Capas de enlu	2		Capas de enlu	2	
Peso Paredes	263.93	kg/m	Peso Paredes	263.93	kg/m	Peso Paredes	263.93	kg/m
Peso Enlucido	108.00	kg/m	Peso Enlucido	108.00	kg/m	Peso Enlucido	108.00	kg/m
Peso Mortero	405.81	kg/m	Peso Mortero	405.81	kg/m	Peso Mortero	405.81	kg/m
	777.74	kg/m		777.74	kg/m		777.74	kg/m

Paredes Exteriores Balcones			Paredes Exteriores Balcones			Paredes Exteriores Balcones		
Altura Pared	0.9		Altura Pared	0.9		Altura Pared	0.9	
Capas de enlucido	2		Capas de enlu	2		Capas de enlu	2	
Peso Paredes	87.98	kg/m	Peso Paredes	87.98	kg/m	Peso Paredes	87.98	kg/m
Peso Enlucido	36.00	kg/m	Peso Enlucido	36.00	kg/m	Peso Enlucido	36.00	kg/m
Peso Mortero	135.27	kg/m	Peso Mortero	135.27	kg/m	Peso Mortero	135.27	kg/m
	259.25	kg/m		259.25	kg/m		259.25	kg/m

Paredes Interiores Losa 1			Paredes Interiores Losa 1			Paredes Interiores Losa 1		
Altura Pared	2.7		Altura Pared	2.7		Altura Pared	2.7	
Capas de enlucido	2		Capas de enlu	2		Capas de enlu	2	
Peso Paredes	80.97	kg/m2	Peso Paredes	80.97	kg/m2	Peso Paredes	40.89	kg/m2
Peso Enlucido	33.13	kg/m2	Peso Enlucido	33.13	kg/m2	Peso Enlucido	16.73	kg/m2

Peso Mortero	124.50	kg/m2
	238.60	kg/m2
Baldosa Cerámica	10	kg/m2
Instalaciones Eléctricas	10	kg/m2
Tuberias PVC	0	kg/m2
Cielo Raso	20	kg/m2
	278.60	

Peso Mortero	124.50	kg/m2
	238.60	kg/m2
Baldosa Cerár	20	kg/m2
Instalaciones	10	kg/m2
Tuberias PVC	20	kg/m2
Cielo Raso	20	kg/m2
	308.60	

Peso Mortero	62.87	kg/m2
	120.49	kg/m2
Baldosa Cerár	20	kg/m2
Instalaciones	10	kg/m2
Tuberias PVC	20	kg/m2
Cielo Raso	20	kg/m2
	190.49	

DISEÑO SEGÚN NORMA NEC		
Factor z	Tabla 1	0.25
Tipo de suelo	Tabla 2	D
Categ. de edificio	Tabla 6	Otras
Factor de Importancia I	Tabla 6	1
Factor Red. Sísmica R	Tabla 15	8
Localización		erra, Esmeraldas, Galapag
Factor Fa	Tabla 3	1.4
Factor Fd	Tabla 4	1.45
Factor Fs	Tabla 5	1.06
To=0.1*Fs*(Fd/Fa)	pag. 35	0.1098
Tc=0.55*Fs*(Fd/Fa)	pag. 34	0.6038
TL=2.4*Fd	pag. 34	3.48
η	pag. 34	2.48
Ct	pag. 62	0.055
α	pag. 62	0.9
Altura edificio hn	en metros	11.160
Ta - Método 1	pag. 62	0.482
Ta max	seg	0.627
r	pag. 34	1.500
Sa	pag. 35	0.868
k	pag. 70	1.000
Øp	Tabla 9	0.810
Øe	Tabla 9	1.000
C		0.1339506

$Ø_P = Ø_{PA} \times Ø_{PB}$

Dónde

$Ø_P$ Coeficiente de regularidad en planta

$Ø_{PA}$ Mínimo valor $Ø_{Pi}$ de cada piso i de la estructura en el caso de irregularidades tipo 1, 2 y/o 3

51

$Ø_{PB}$ Mínimo valor $Ø_{Pi}$ de cada piso i de la estructura en el caso de irregularidades tipo 4

$Ø_{Pi}$ Coeficiente de configuración en planta

ØpA = 0.9 por Retrocesos excesivos en esquinas

ØpB = 0.9 por Eejs estructurales no paralelos

T software	seg	0.456
T seleccionado	seg	0.456

Carga Muerta total D		694561.96
Carga Viva piso i Li		0
Carga sísm. reactiva W=D+0.25Li		694561.96
Cort. Basal diseño Vs	pag. 64	42424.87
C		0.13395062

Fuerzas Laterales Equivalentes

Piso	h (m)	P D (kg)	W D (kg)	P L (kg)	W L (kg)	W	w*h^k	Fx	Vx (kg)	Mx(kg.m)
6										
5										
4	11.160	8576.75	8576.75			8576.75	95716.53	636.42	636.42	0.00
3	8.460	196670.54	188093.8		0	196670.54	1663832.77	11062.80	11699.21	148027.57
2	5.760	433289.43	236618.9		0	433289.43	2495747.12	16594.18	28293.39	487548.30
1	3.060	694561.96	261272.5		0	694561.96	2125359.60	14131.48	42424.87	996646.78
			694562		0		6380656.01	42424.87		

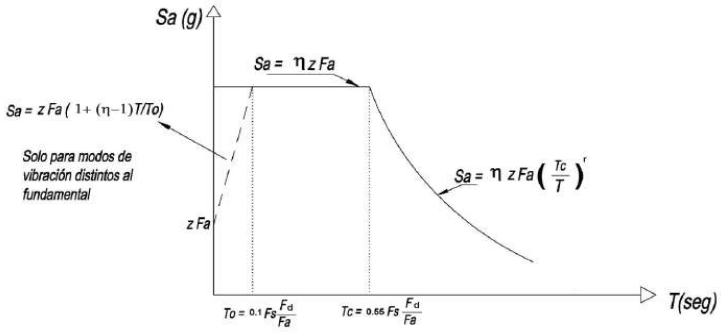
Efectos P-Delta

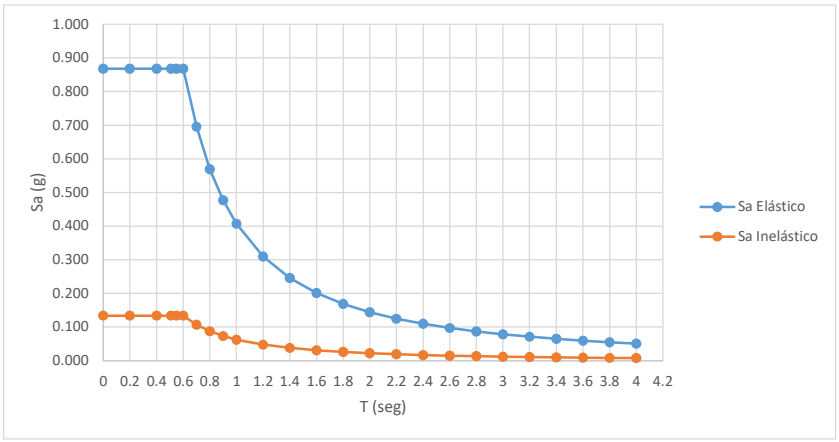
Piso	Altura (ft)	P D (Kips)	P L (Kips)	P Total (Kips)	V (Kips)	Deriva Inelástica		θ
6				0				
5				0				
4				0				
3	3.060	196670.54	0	196670.54	11699.213	2.78%	0.085	0.4670
2	3.060	433289.43	0	433289.43	28293.394	2.57%	0.079	0.3931
1	3.060	694561.96	0	694561.96	42424.873	1.54%	0.047	0.2515

NEC SD

Site Class D

Coeficientes Sísmica						
z	0.25	Tabla 1	**Ta**	0.482	sg pag 65
Fa	1.4	Tabla 3	**Ta max**	0.627	sg
Fd	1.45	Tabla 4			
Fs	1.06	Tabla 5	**T0**	0.1098	sg
n	2.48	Sección 3.3.1	**Tc**	0.6038	sg
r	1.5	Sección 3.3.1	**TL**	3.4800	
Ct	0.055	Sección 6.3.3	**Sa**	0.820	
α	0.9	Sección 6.3.3			
I	1	Tabla 6	**hn**	11.16	m
ϕp	0.81	Sección 5.3			
ϕE	1	Sección 5.3			
R	8	Tabla 13			





Espectro

T	Sa Elástico	T	Sa Inelástico
0	0.8680	0	0.13395062
0.2	0.8680	0.2	0.13395062
0.4	0.8680	0.4	0.13395062
0.509	0.8680	0.509	0.13395062
0.55	0.8680	0.55	0.13395062
0.6	0.8680	0.6	0.13395062
0.7	0.6954	0.7	0.107315
0.8	0.5692	0.8	0.08783599
0.9	0.4770	0.9	0.07361117
1	0.4073	1	0.06285032
1.2	0.3098	1.2	0.04781186
1.4	0.2459	1.4	0.03794158
1.6	0.2012	1.6	0.03105471
1.8	0.1686	1.8	0.02602548
2	0.1440	2	0.02222094
2.2	0.1248	2.2	0.01926076
2.4	0.1095	2.4	0.01690404
2.6	0.0971	2.6	0.01499158
2.8	0.0869	2.8	0.01341438
3	0.0784	3	0.01209555
3.2	0.0711	3.2	0.0109795
3.4	0.0650	3.4	0.01002511
3.6	0.0596	3.6	0.0092014
3.8	0.0550	3.8	0.00848461
4	0.0509	4	0.00785629

1) Derivas Estáticas Sismo en X

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00225144	0.000175047	1.35%	0.11%	1.35%
N5.76	5.76	Top	0.00238995	2.64198E-05	1.43%	0.02%	1.43%
N3.06	3.06	Top	0.00188817	0.000101044	1.13%	0.06%	1.13%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

2) Derivas Estáticas Sismo en Y

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.000172514	0.00220066	0.10%	1.32%	1.32%
N5.76	5.76	Top	3.68133E-05	0.00237108	0.02%	1.42%	1.42%
N3.06	3.06	Top	6.71667E-05	0.00185367	0.04%	1.11%	1.11%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

3) Derivas Estáticas Sismo en X ecc +

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.002178	0.00008	1.31%	0.05%	1.31%
N5.76	5.76	Top	0.002662	0.000247	1.60%	0.15%	1.60%
N3.06	3.06	Top	0.001927	0.000098	1.16%	0.06%	1.16%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

4) Derivas Estáticas Sismo en Y ecc +

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	7.029E-05	0.00212319	0.04%	1.27%	1.27%
N5.76	5.76	Top	0.000228561	0.0025947	0.14%	1.56%	1.56%
N3.06	3.06	Top	0.000124302	0.00193581	0.07%	1.16%	1.16%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

5) Derivas Estáticas Sismo en X ecc -

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00246335	0.000405428	1.48%	0.24%	1.50%
N5.76	5.76	Top	0.00261716	0.000299425	1.57%	0.18%	1.58%
N3.06	3.06	Top	0.00203462	0.000299872	1.22%	0.18%	1.23%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

6) Derivas Estáticas Sismo en Y ecc -

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.000396081	0.00239639	0.24%	1.44%	1.46%
N5.76	5.76	Top	0.000302188	0.00258183	0.18%	1.55%	1.56%
N3.06	3.06	Top	0.000258635	0.00199465	0.16%	1.20%	1.21%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

1) Derivas Dinámicas Sismo en X

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00208514	0.000435625	1.25%	0.26%	1.28%
N5.76	5.76	Top	0.00218111	0.000392181	1.31%	0.24%	1.33%
N3.06	3.06	Top	0.00169718	0.000338337	1.02%	0.20%	1.04%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

2) Derivas Dinámicas Sismo en Y

Story	Elevation	Location	X-Dir	Y-Dir	X Inelástica	Y Inelástica	Δ %
	m						
Cub	11.16	Top	0	0	0.00%	0.00%	0.00%
N9.18	8.46	Top	0.00039134	0.00200485	0.23%	1.20%	1.23%
N5.76	5.76	Top	0.000352339	0.00213064	0.21%	1.28%	1.30%
N3.06	3.06	Top	0.000281696	0.00164815	0.17%	0.99%	1.00%
Nsub	0	Top	0	0	0.00%	0.00%	0.00%

TABLE: Joint Reactions

Story	Label	Unique Name	Output Case	Case Type	Step Type	Step Number	FX	FY	FZ	MX	MY	MZ
							tonf	tonf	tonf	tonf-m	tonf-m	tonf-m
Ncim	12	14	0. 1D	Combination			0.8583	1.2886	57.9282	-1.4293	0.9624	0.0104
Ncim	12	14	0. 1D + 1L	Combination			1.097	1.6249	69.054	-1.8264	1.2499	0.0159
Ncim	12	14	0. 1L	Combination			0.2387	0.3363	11.1258	-0.397	0.2875	0.0054
Ncim	12	14	1. 1.4D	Combination			1.2017	1.804	81.0995	-2.0011	1.3474	0.0146
Ncim	12	14	2. 1.2D + 1.6L + 0.5Lr	Combination			1.4144	2.0915	89.3794	-2.3574	1.6191	0.0214
Ncim	12	14	2. 1.2D + 1.6Lr + L	Combination			1.1573	1.7373	81.6825	-1.9359	1.312	0.0158
Ncim	12	14	2. 1.2D + 1L + 0.5Lr	Combination			1.1518	1.7216	77.141	-1.9206	1.3028	0.0154
Ncim	12	14	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max		-5.61	0.5443	61.5014	1.94	-10.866	0.0378
Ncim	12	14	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min		-6.4904	-0.3072	61.2296	0.3626	-12.4458	-0.0883
Ncim	12	14	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max		-5.4164	4.9181	66.6721	-4.9858	-10.51	0.0652
Ncim	12	14	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min		-6.976	3.4096	66.1905	-7.7801	-13.3085	-0.1581
Ncim	12	14	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max		8.789	3.7361	88.9239	-4.19	15.0431	0.1188
Ncim	12	14	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min		7.9087	2.8845	88.6521	-5.7674	13.4633	-0.0073
Ncim	12	14	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max		9.2747	0.0192	83.963	3.9527	15.9059	0.1886
Ncim	12	14	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min		7.7151	-1.4892	83.4814	1.1584	13.1073	-0.0347
Ncim	12	14	3.5 1.2D + 1L + Ex	Combination	Max		7.9493	2.7836	84.8699	0.0054	13.4961	0.1882
Ncim	12	14	3.5 1.2D + 1L + Ex	Combination	Min		-5.6507	0.6453	65.2836	-3.8328	-10.8987	-0.1577
Ncim	12	14	3.6 1.2D + 1L - Ex	Combination	Max		7.9493	2.7836	84.8699	0.0054	13.4961	0.1882
Ncim	12	14	3.6 1.2D + 1L - Ex	Combination	Min		-5.6507	0.6453	65.2836	-3.8328	-10.8987	-0.1577
Ncim	12	14	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max		-0.406	-4.5293	63.3986	11.119	-1.5162	0.0901
Ncim	12	14	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min		-1.172	-5.2701	63.162	9.7466	-2.8907	-0.0196
Ncim	12	14	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max		4.3235	-4.4313	70.2186	12.196	6.9893	0.1731
Ncim	12	14	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min		2.8255	-5.8802	69.756	9.5121	4.3013	-0.0413
Ncim	12	14	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max		3.4707	8.699	86.9915	-13.574	5.488	0.0501
Ncim	12	14	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min		2.7047	7.9581	86.7549	-14.9464	4.1135	-0.0596
Ncim	12	14	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max		-0.5269	9.309	80.3975	-13.3395	-1.704	0.0718
Ncim	12	14	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min		-2.0248	7.8602	79.9349	-16.0234	-4.392	-0.1426
Ncim	12	14	4.5 1.2D + 1L + Ey	Combination	Max		1.9535	7.9421	82.3546	9.6495	2.7256	0.1469
Ncim	12	14	4.5 1.2D + 1L + Ey	Combination	Min		0.3452	-4.5133	67.7989	-13.4769	-0.1283	-0.1164
Ncim	12	14	4.6 1.2D + 1L - Ey	Combination	Max		1.9535	7.9421	82.3546	9.6495	2.7256	0.1469
Ncim	12	14	4.6 1.2D + 1L - Ey	Combination	Min		0.3452	-4.5133	67.7989	-13.4769	-0.1283	-0.1164
Ncim	12	14	5.1 0.9D + (100Sx + 30Sy)	Combination	Max		-5.9868	-0.0104	38.5601	2.5673	-11.2985	0.0319
Ncim	12	14	5.1 0.9D + (100Sx + 30Sy)	Combination	Min		-6.8672	-0.8619	38.2882	0.9899	-12.8783	-0.0941
Ncim	12	14	5.2 0.9D + (100Sx - 30Sy)	Combination	Max		-5.7933	4.3633	43.7307	-4.3585	-10.9425	0.0593
Ncim	12	14	5.2 0.9D + (100Sx - 30Sy)	Combination	Min		-7.3528	2.8549	43.2491	-7.1528	-13.741	-0.1639
Ncim	12	14	5.3 0.9D - (100Sx + 30Sy)	Combination	Max		8.4122	3.1813	65.9826	-3.5627	14.6106	0.1129
Ncim	12	14	5.3 0.9D - (100Sx + 30Sy)	Combination	Min		7.5318	2.3298	65.7107	-5.1401	13.0308	-0.0131
Ncim	12	14	5.4 0.9D - (100Sx - 30Sy)	Combination	Max		8.8978	-0.5355	61.0217	4.58	15.4734	0.1827
Ncim	12	14	5.4 0.9D - (100Sx - 30Sy)	Combination	Min		7.3383	-2.0439	60.5401	1.7857	12.6748	-0.0405
Ncim	12	14	5.5 0.9D + Ex	Combination	Max		7.5725	2.2289	61.9285	0.6327	13.0636	0.1823
Ncim	12	14	5.5 0.9D + Ex	Combination	Min		-6.0275	0.0906	42.3423	-3.2055	-11.3312	-0.1635
Ncim	12	14	5.6 0.9D - Ex	Combination	Max		7.5725	2.2289	61.9285	0.6327	13.0636	0.1823
Ncim	12	14	5.6 0.9D - Ex	Combination	Min		-6.0275	0.0906	42.3423	-3.2055	-11.3312	-0.1635
Ncim	12	14	6.1 0.9D + (100Sy + 30Sx)	Combination	Max		-0.7828	-5.084	40.4572	11.7463	-1.9486	0.0842
Ncim	12	14	6.1 0.9D + (100Sy + 30Sx)	Combination	Min		-1.5488	-5.8248	40.2207	10.3739	-3.3231	-0.0255
Ncim	12	14	6.2 0.9D + (100Sy - 30Sx)	Combination	Max		3.9467	-4.986	47.2773	12.8233	6.5569	0.1673
Ncim	12	14	6.2 0.9D + (100Sy - 30Sx)	Combination	Min		2.4487	-6.4349	46.8147	10.1394	3.8688	-0.0472
Ncim	12	14	6.3 0.9D - (100Sy + 30Sx)	Combination	Max		3.0938	8.1442	64.0501	-12.9467	5.0555	0.0443
Ncim	12	14	6.3 0.9D - (100Sy + 30Sx)	Combination	Min		2.3279	7.4034	63.8136	-14.3191	3.681	-0.0654
Ncim	12	14	6.4 0.9D - (100Sy - 30Sx)	Combination	Max		-0.9037	8.7543	57.4561	-12.7122	-2.1365	0.066
Ncim	12	14	6.4 0.9D - (100Sy - 30Sx)	Combination	Min		-2.4017	7.3054	56.9936	-15.3961	-4.8245	-0.1485
Ncim	12	14	6.5 0.9D + Ey	Combination	Max		1.5766	7.3874	59.4132	10.2768	2.2931	0.1411
Ncim	12	14	6.5 0.9D + Ey	Combination	Min		-0.0316	-5.068	44.8576	-12.8496	-0.5607	-0.1223
Ncim	12	14	6.6 0.9D - Ey	Combination	Max		1.5766	7.3874	59.4132	10.2768	2.2931	0.1411
Ncim	12	14	6.6 0.9D - Ey	Combination	Min		-0.0316	-5.068	44.8576	-12.8496	-0.5607	-0.1223
Ncim	12	14	3.3 1.2D + 1L -1	Combination	Max		8.789	3.7361	88.9239	-4.19	15.0431	0.1188
Ncim	12	14	3.3 1.2D + 1L -1	Combination	Min		7.9087	2.8845	88.6521	-5.7674	13.4633	-0.0073
Ncim	12	14	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max		-0.406	-4.5293	63.3986	11.119	-1.5162	0.0901
Ncim	12	14	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min		-1.172	-5.2701	63.162	9.7466	-2.8907	-0.0196
Ncim	12	14	0. 1D + 1L + sxST	Combination	Max		-5.5655	2.6416	58.064	-1.4356	-10.7367	0.0521
Ncim	12	14	0. 1D + 1L + sxST	Combination	Min		-6.7855	1.4616	57.6872	-3.6214	-12.9259	-0.1226
Ncim	12	14	0. 1D + 1L + syST	Combination	Max		1.9064	-4.5698	60.7858	11.7449	2.6879	0.1322
Ncim	12	14	0. 1D + 1L + syST	Combination	Min		0.7744	-5.6647	60.4362	9.7167	0.6566	-0.0299
Ncim	12	14	0. 1D + 1L + sxDN	Combination	Max		7.897	2.694	78.8471	0.0927	13.4473	0.1888
Ncim	12	14	0. 1D + 1L + sxDN	Combination	Min		-5.703	0.5557	59.2609	-3.7454	-10.9475	-0.1571
Ncim	12	14	0. 1D + 1L + syDN	Combination	Max		1.9011	7.8525	76.3318	9.7368	2.6769	0.1475
Ncim	12	14	0. 1D + 1L + syDN	Combination	Min		0.2929	-4.6028	61.7762	-13.3895	-0.177	-0.1158
140. 1D							0.8583	1.2886	57.9282	-1.4293	0.9624	0.0104
140. 1D + 1L							1.097	1.6249	69.054	-1.8264	1.2499	0.0159
140. 1L							0.2387	0.3363	11.1258	-0.397	0.2875	0.0054
141. 1.4D							1.2017	1.804	81.0995	-2.0011	1.3474	0.0146
142. 1.2D + 1.6L + 0.5Lr							1.4144	2.0915	89.3794	-2.3574	1.6191	0.0214
142. 1.2D + 1.6Lr + L							1.1573	1.7373	81.6825	-1.9359	1.312	0.0158
142. 1.2D + 1L + 0.5Lr							1.1518	1.7216	77.141	-1.9206	1.3028	0.0154
143.1 1.2D + 1L + (100Sx + 30Sy)Max							-5.61	0.5443	61.5014	1.94	-10.866	0.0378
143.1 1.2D + 1L + (100Sx + 30Sy)Min							-6.4904	-0.3072	61.2296	0.3626	-12.4458	-0.0883
143.2 1.2D + 1L + (100Sx - 30Sy)Max							-5.4164	4.9181	66.6721	-4.9858	-10.51	0.0652
143.2 1.2D + 1L + (100Sx - 30Sy)Min							-6.976	3.4096	66.1905	-7.7801	-13.3085	-0.1581
143.3 1.2D + 1L - (100Sx + 30Sy)Max							8.789	3.7361	88.9239	-4.19	15.0431	0.1188
143.3 1.2D + 1L - (100Sx + 30Sy)Min							7.9087	2.8845	88.6521	-5.7674	13.4633	-0.0073
143.4 1.2D + 1L - (100Sx - 30Sy)Max							9.2747	0.0192	83.963	3.9527	15.9059	0.1886
143.4 1.2D + 1L - (100Sx - 30Sy)Min							7.7151	-1.4892	83.4814	1.1584	13.1073	-0.0347
143.5 1.2D + 1L + ExMax							7.9493	2.7836	84.8699	0.0054	13.4961	0.1882
143.5 1.2D + 1L + ExMin							-5.6507	0.6453	65.2836	-3.8328	-10.8987	-0.1577
143.6 1.2D + 1L - ExMax							7.9493	2.7836	84.8699	0.0054	13.4961	0.1882
143.6 1.2D + 1L - ExMin							-5.6507	0.6453	65.2836	-3.8328	-10.8987	-0.1577
144.1 1.2D + 1L + (100Sy + 30Sx)Max							-0.406	-4.5293	63.3986	11.119	-1.5162	0.0901
144.1 1.2D + 1L + (100Sy + 30Sx)Min							-1.172	-5.2701	63.162	9.7466	-2.8907	-0.0196
144.2 1.2D + 1L + (100Sy - 30Sx)Max							4.3235	-4.4313	70.2186	12.196	6.9893	0.1731
144.2 1.2D + 1L + (100Sy - 30Sx)Min							2.8255	-5.8802	69.756	9.5121	4.3013	-0.0413
144.3 1.2D + 1L - (100Sy + 30Sx)Max							3.4707	8.699	86.9915	-13.574	5.488	0.0501
144.3 1.2D + 1L - (100Sy + 30Sx)Min							2.7047	7.9581	86.7549	-14.9464	4.1135	-0.0596
144.4 1.2D + 1L - (100Sy - 30Sx)Max							-0.5269	9.309	80.3975	-13.3395	-1.704	0.0718
144.4 1.2D + 1L - (100Sy - 30Sx)Min							-2.0248	7.8602	79.9349	-16.0234	-4.392	-0.1426
144.5 1.2D + 1L + EyMax							1.9535	7.9421	82.3546	9.6495	2.7256	0.1469
144.5 1.2D + 1L + EyMin							0.3452	-4.5133	67.7989	-13.4769	-0.1283	-0.1164
144.6 1.2D + 1L - EyMax							1.9535	7.9421	82.3546	9.6495	2.7256	0.1469
144.6 1.2D + 1L - EyMin							0.3452	-4.5133	67.7989	-13.4769	-0.1283	-0.1164
145.1 0.9D + (100Sx + 30Sy)Max							-5.9868	-0.0104	38.5601	2.5673	-11.2985	0.0319
145.1 0.9D + (100Sx + 30Sy)Min							-6.8672	-0.8619	38.2882	0.9899	-12.8783	-0.0941
145.2 0.9D + (100Sx - 30Sy)Max							-5.7933	4.3633	43.7307	-4.3585	-10.9425	0.0593
145.2 0.9D + (100Sx - 30Sy)Min							-7.3528	2.8549	43.2491	-7.1528	-13.741	-0.1639
145.3 0.9D - (100Sx + 30Sy)Max							8.4122	3.1813	65.9826	-3.5627	14.6106	0.1129
145.3 0.9D - (100Sx + 30Sy)Min							7.5318	2.3298	65.7107	-5.1401	13.0308	-0.0131
145.4 0.9D - (100Sx - 30Sy)Max							8.8978	-0.5355	61.0217	4.58	15.4734	0.1827
145.4 0.9D - (100Sx - 30Sy)Min							7.3383	-2.0439	60.5401	1.7857	12.6748	-0.0405
145.5 0.9D + ExMax							7.5725	2.2289	61.9285	0.6327	13.0636	0.1823
145.5 0.9D + ExMin							-6.0275	0.0906	42.3423	-3.2055	-11.3312	-0.1635
145.6 0.9D - ExMax							7.5725	2.2289	61.9285	0.6327	13.0636	0.1823
145.6 0.9D - ExMin							-6.0275	0.0906	42.3423	-3.2055	-11.3312	-0.1635
146.1 0.9D + (100Sy + 30Sx)Max							-0.7828	-5.084	40.4572	11.7463	-1.9486	0.0842
146.1 0.9D + (100Sy + 30Sx)Min							-1.5488	-5.8248	40.2207	10.3739	-3.3231	-0.0255
146.2 0.9D + (100Sy - 30Sx)Max							3.9467	-4.986	47.2773	12.8233	6.5569	0.1673
146.2 0.9D + (100Sy - 30Sx)Min							2.4487	-6.4349	46.8147	10.1394	3.8688	-0.0472
146.3 0.9D - (100Sy + 30Sx)Max							3.0938	8.1442	64.0501	-12.9467	5.0555	0.0443
146.3 0.9D - (100Sy + 30Sx)Min							2.3279	7.4034	63.8136	-14.3191	3.681	-0.0654
146.4 0.9D - (100Sy - 30Sx)Max							-0.9037	8.7543	57.4561	-12.7122	-2.1365	0.066
146.4 0.9D - (100Sy - 30Sx)Min							-2.4017	7.3054	56.9936	-15.3961	-4.8245	-0.1485
146.5 0.9D + EyMax							1.5766	7.3874	59.4132	10.2768	2.2931	0.1411
146.5 0.9D + EyMin							-0.0316	-5.068	44.8576	-12.8496	-0.5607	-0.1223
146.6 0.9D - EyMax							1.5766	7.3874	59.4132	10.2768	2.2931	0.1411
146.6 0.9D - EyMin							-0.0316	-5.068	44.8576	-12.8496	-0.5607	-0.1223
143.3 1.2D + 1L -1Max							8.789	3.7361	88.9239	-4.19	15.0431	0.1188
143.3 1.2D + 1L -1Min							7.9087	2.8845	88.6521	-5.7674	13.4633	-0.0073
144.1 1.2D + 1L + (100Sy + 30Sx)-1Max							-0.406	-4.5293	63.3986	11.119	-1.5162	0.0901
144.1 1.2D + 1L + (100Sy + 30Sx)-1Min							-1.172	-5.2701	63.162	9.7466	-2.8907	-0.0196
140. 1D + 1L + sxSTMax							-5.5655	2.6416	58.064	-1.4356	-10.7367	0.0521
140. 1D + 1L + sxSTMin							-6.7855	1.4616	57.6872	-3.6214	-12.9259	-0.1226
140. 1D + 1L + sySTMax							1.9064	-4.5698	60.7858	11.7449	2.6879	0.1322
140. 1D + 1L + sySTMin							0.7744	-5.6647	60.4362	9.7167	0.6566	-0.0299
140. 1D + 1L + sxDNMax							7.897	2.694	78.8471	0.0927	13.4473	0.1888
140. 1D + 1L + sxDNMin							-5.703	0.5557	59.2609	-3.7454	-10.9475	-0.1571
140. 1D + 1L + syDNMax							1.9011	7.8525	76.3318	9.7368	2.6769	0.1475
140. 1D + 1L + syDNMin							0.2929	-4.6028	61.7762	-13.3895	-0.177	-0.1158

Ncim	13	15	0. 1D	Combination		0.4017	-0.8161	55.7786	0.6291	0.4594	0.0104	150. 1D	0.4017	-0.8161	55.7786	0.6291	0.4594	0.0104
Ncim	13	15	0. 1D + 1L	Combination		0.5153	-1.001	67.008	0.7418	0.5953	0.0159	150. 1D + 1L	0.5153	-1.001	67.008	0.7418	0.5953	0.0159
Ncim	13	15	0. 1L	Combination		0.1136	-0.1849	11.2294	0.1127	0.1359	0.0054	150. 1L	0.1136	-0.1849	11.2294	0.1127	0.1359	0.0054
Ncim	13	15	1. 1.4D	Combination		0.5624	-1.1425	78.09	0.8807	0.6432	0.0146	151. 1.4D	0.5624	-1.1425	78.09	0.8807	0.6432	0.0146
Ncim	13	15	2. 1.2D + 1.6L + 0.5Lr	Combination		0.66	-1.2742	86.322	0.9344	0.7658	0.0214	152. 1.2D + 1.6L + 0.5Lr	0.66	-1.2742	86.322	0.9344	0.7658	0.0214
Ncim	13	15	2. 1.2D + 1.6Lr + L	Combination		0.5266	-1.0687	77.0951	0.8085	0.6099	0.0158	152. 1.2D + 1.6Lr + L	0.5266	-1.0687	77.0951	0.8085	0.6099	0.0158
Ncim	13	15	2. 1.2D + 1L + 0.5Lr	Combination		0.5351	-1.0708	73.9697	0.8104	0.6163	0.0154	152. 1.2D + 1L + 0.5Lr	0.5351	-1.0708	73.9697	0.8104	0.6163	0.0154
Ncim	13	15	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-5.1778	-2.7298	62.4502	5.4751	-10.6473	0.0378	153.1 1.2D + 1L + (100Sx + 30Sy)Max	-5.1778	-2.7298	62.4502	5.4751	-10.6473	0.0378
Ncim	13	15	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-5.2643	-3.9217	60.9377	3.5648	-10.7696	-0.0883	153.1 1.2D + 1L + (100Sx + 30Sy)Min	-5.2643	-3.9217	60.9377	3.5648	-10.7696	-0.0883
Ncim	13	15	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-5.1849	3.4462	70.3054	-2.9566	-10.6358	0.0652	153.2 1.2D + 1L + (100Sx - 30Sy)Max	-5.1849	3.4462	70.3054	-2.9566	-10.6358	0.0652
Ncim	13	15	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-5.3381	1.3348	67.6261	-6.3406	-10.8524	-0.1581	153.2 1.2D + 1L + (100Sx - 30Sy)Min	-5.3381	1.3348	67.6261	-6.3406	-10.8524	-0.1581
Ncim	13	15	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	6.3421	1.7782	84.1603	-1.9423	12.0081	0.1188	153.3 1.2D + 1L - (100Sx + 30Sy)Max	6.3421	1.7782	84.1603	-1.9423	12.0081	0.1188
Ncim	13	15	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	6.2556	0.5863	82.6478	-3.8525	11.8858	-0.0073	153.3 1.2D + 1L - (100Sx + 30Sy)Min	6.2556	0.5863	82.6478	-3.8525	11.8858	-0.0073
Ncim	13	15	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	6.4159	-3.4783	77.4719	7.9631	12.0908	0.1886	153.4 1.2D + 1L - (100Sx - 30Sy)Max	6.4159	-3.4783	77.4719	7.9631	12.0908	0.1886
Ncim	13	15	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	6.2627	-5.5897	74.7926	4.5792	11.8743	-0.0347	153.4 1.2D + 1L - (100Sx - 30Sy)Min	6.2627	-5.5897	74.7926	4.5792	11.8743	-0.0347
Ncim	13	15	3.5 1.2D + 1L + Ex	Combination	Max	5.5704	0.4195	78.2712	3.1433	10.4372	0.1882	153.5 1.2D + 1L + ExMax	5.5704	0.4195	78.2712	3.1433	10.4372	0.1882
Ncim	13	15	3.5 1.2D + 1L + Ex	Combination	Min	-4.4926	-2.5629	66.8268	-1.5208	-9.1987	-0.1577	153.5 1.2D + 1L + ExMin	-4.4926	-2.5629	66.8268	-1.5208	-9.1987	-0.1577
Ncim	13	15	3.6 1.2D + 1L - Ex	Combination	Max	5.5704	0.4195	78.2712	3.1433	10.4372	0.1882	153.6 1.2D + 1L - ExMax	5.5704	0.4195	78.2712	3.1433	10.4372	0.1882
Ncim	13	15	3.6 1.2D + 1L - Ex	Combination	Min	-4.4926	-2.5629	66.8268	-1.5208	-9.1987	-0.1577	153.6 1.2D + 1L - ExMin	-4.4926	-2.5629	66.8268	-1.5208	-9.1987	-0.1577
Ncim	13	15	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.0902	-9.8991	58.9216	16.6606	-2.6719	0.0901	154.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.0902	-9.8991	58.9216	16.6606	-2.6719	0.0901
Ncim	13	15	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.1654	-10.9361	57.6056	14.9985	-2.7783	-0.0196	154.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.1654	-10.9361	57.6056	14.9985	-2.7783	-0.0196
Ncim	13	15	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	2.4139	-9.7661	63.8818	17.98	4.1862	0.1731	154.2 1.2D + 1L + (100Sy - 30Sx)Max	2.4139	-9.7661	63.8818	17.98	4.1862	0.1731
Ncim	13	15	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	2.2668	-11.794	61.3083	14.7297	3.9782	-0.0413	154.2 1.2D + 1L + (100Sy - 30Sx)Min	2.2668	-11.794	61.3083	14.7297	3.9782	-0.0413
Ncim	13	15	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	2.2432	8.7926	87.4924	-13.376	4.0168	0.0501	154.3 1.2D + 1L - (100Sy + 30Sx)Max	2.2432	8.7926	87.4924	-13.376	4.0168	0.0501
Ncim	13	15	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	2.168	7.7556	86.1764	-15.038	3.9104	-0.0596	154.3 1.2D + 1L - (100Sy + 30Sx)Min	2.168	7.7556	86.1764	-15.038	3.9104	-0.0596
Ncim	13	15	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.189	9.6506	83.7897	-13.1072	-2.7397	0.0718	154.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.189	9.6506	83.7897	-13.1072	-2.7397	0.0718
Ncim	13	15	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.3361	7.6226	81.2161	-16.3575	-2.9477	-0.1426	154.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.3361	7.6226	81.2161	-16.3575	-2.9477	-0.1426
Ncim	13	15	4.5 1.2D + 1L + Ey	Combination	Max	0.7871	7.7016	83.715	14.8657	1.1068	0.1469	154.5 1.2D + 1L + EyMax	0.7871	7.7016	83.715	14.8657	1.1068	0.1469
Ncim	13	15	4.5 1.2D + 1L + Ey	Combination	Min	0.2907	-9.8451	61.383	-13.2432	0.1317	-0.1164	154.5 1.2D + 1L + EyMin	0.2907	-9.8451	61.383	-13.2432	0.1317	-0.1164
Ncim	13	15	4.6 1.2D + 1L - Ey	Combination	Max	0.7871	7.7016	83.715	14.8657	1.1068	0.1469	154.6 1.2D + 1L - EyMax	0.7871	7.7016	83.715	14.8657	1.1068	0.1469
Ncim	13	15	4.6 1.2D + 1L - Ey	Combination	Min	0.2907	-9.8451	61.383	-13.2432	0.1317	-0.1164	154.6 1.2D + 1L - EyMin	0.2907	-9.8451	61.383	-13.2432	0.1317	-0.1164
Ncim	13	15	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-5.3552	-2.3925	40.1019	5.23	-10.8531	0.0319	155.1 0.9D + (100Sx + 30Sy)Max	-5.3552	-2.3925	40.1019	5.23	-10.8531	0.0319
Ncim	13	15	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-5.4416	-3.5844	38.5894	3.3197	-10.9754	-0.0941	155.1 0.9D + (100Sx + 30Sy)Min	-5.4416	-3.5844	38.5894	3.3197	-10.9754	-0.0941
Ncim	13	15	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-5.3622	3.7835	47.9572	-3.2017	-10.8415	0.0593	155.2 0.9D + (100Sx - 30Sy)Max	-5.3622	3.7835	47.9572	-3.2017	-10.8415	0.0593
Ncim	13	15	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-5.5154	1.6721	45.2778	-6.5857	-11.0581	-0.1639	155.2 0.9D + (100Sx - 30Sy)Min	-5.5154	1.6721	45.2778	-6.5857	-11.0581	-0.1639
Ncim	13	15	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	6.1648	2.1155	61.812	-2.1874	11.8023	0.1129	155.3 0.9D - (100Sx + 30Sy)Max	6.1648	2.1155	61.812	-2.1874	11.8023	0.1129
Ncim	13	15	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	6.0783	0.9236	60.2995	-4.0976	11.6801	-0.0131	155.3 0.9D - (100Sx + 30Sy)Min	6.0783	0.9236	60.2995	-4.0976	11.6801	-0.0131
Ncim	13	15	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	6.2385	-3.141	55.1236	7.718	11.8851	0.1827	155.4 0.9D - (100Sx - 30Sy)Max	6.2385	-3.141	55.1236	7.718	11.8851	0.1827
Ncim	13	15	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	6.0854	-5.2524	52.4443	4.3341	11.6685	-0.0405	155.4 0.9D - (100Sx - 30Sy)Min	6.0854	-5.2524	52.4443	4.3341	11.6685	-0.0405
Ncim	13	15	5.5 0.9D + Ex	Combination	Max	5.393	0.7568	55.9229	2.8982	10.2314	0.1823	155.5 0.9D + ExMax	5.393	0.7568	55.9229	2.8982	10.2314	0.1823
Ncim	13	15	5.5 0.9D + Ex	Combination	Min	-4.6699	-2.2257	44.4785	-1.7659	-9.4044	-0.1635	155.5 0.9D + ExMin	-4.6699	-2.2257	44.4785	-1.7659	-9.4044	-0.1635
Ncim	13	15	5.6 0.9D - Ex	Combination	Max	5.393	0.7568	55.9229	2.8982	10.2314	0.1823	155.6 0.9D - ExMax	5.393	0.7568	55.9229	2.8982	10.2314	0.1823
Ncim	13	15	5.6 0.9D - Ex	Combination	Min	-4.6699	-2.2257	44.4785	-1.7659	-9.4044	-0.1635	155.6 0.9D - ExMin	-4.6699	-2.2257	44.4785	-1.7659	-9.4044	-0.1635
Ncim	13	15	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.2675	-9.5618	36.5733	16.4155	-2.8777	0.0842	156.1 0.9D + (100Sy + 30Sx)Max	-1.2675	-9.5618	36.5733	16.4155	-2.8777	0.0842
Ncim	13	15	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.3427	-10.5988	35.2573	14.7534	-2.984	-0.0255	156.1 0.9D + (100Sy + 30Sx)Min	-1.3427	-10.5988	35.2573	14.7534	-2.984	-0.0255
Ncim	13	15	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	2.2366	-9.4288	41.5336	17.7349	3.9805	0.1673	156.2 0.9D + (100Sy - 30Sx)Max	2.2366	-9.4288	41.5336	17.7349	3.9805	0.1673
Ncim	13	15	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	2.0894	-11.4568	38.9601	14.4846	3.7724	-0.0472	156.2 0.9D + (100Sy - 30Sx)Min	2.0894	-11.4568	38.9601	14.4846	3.7724	-0.0472
Ncim	13	15	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	2.0659	9.1299	65.1441	-13.6211	3.811	0.0443	156.3 0.9D - (100Sy + 30Sx)Max	2.0659	9.1299	65.1441	-13.6211	3.811	0.0443
Ncim	13	15	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.9906	8.0929	63.8281	-15.2831	3.7046	-0.0654	156.3 0.9D - (100Sy + 30Sx)Min	1.9906	8.0929	63.8281	-15.2831	3.7046	-0.0654
Ncim	13	15	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.3663	9.9878	61.4414	-13.3523	-2.9455	0.066	156.4 0.9D - (100Sy - 30Sx)Max	-1.3663	9.9878	61.4414	-13.3523	-2.9455	0.066
Ncim	13	15	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.5134	7.9599	58.8679	-16.6026	-3.1535	-0.1485	156.4 0.9D - (100Sy - 30Sx)Min	-1.5134	7.9599	58.8679	-16.6026	-3.1535	-0.1485
Ncim	13	15	6.5 0.9D + Ey	Combination	Max	0.6097	8.0389	61.3667	14.6206	0.901	0.1411	156.5 0.9D + EyMax	0.6097	8.0389	61.3667	14.6206	0.901	0.1411
Ncim	13	15	6.5 0.9D + Ey	Combination	Min	0.1134	-9.5078	39.0347	-13.4883	-0.0741	-0.1223	156.5 0.9D + EyMin	0.1134	-9.5078	39.0347	-13.4883	-0.0741	-0.1223
Ncim	13	15	6.6 0.9D - Ey	Combination	Max	0.6097	8.0389	61.3667	14.6206	0.901	0.1411	156.6 0.9D - EyMax	0.6097	8.0389	61.3667	14.6206	0.901	0.1411
Ncim	13	15	6.6 0.9D - Ey	Combination	Min	0.1134	-9.5078	39.0347	-13.4883	-0.0741	-0.1223	156.6 0.9D - EyMin	0.1134	-9.5078	39.0347	-13.4883	-0.0741	-0.1223
Ncim	13	15	3.3 1.2D + 1L -1	Combination	Max	6.3421	1.7782	84.1603	-1.9423	12.0081	0.1188	153.3 1.2D + 1L -1Max	6.3421	1.7782	84.1603	-1.9423	12.0081	0.1188
Ncim	13	15	3.3 1.2D + 1L -1	Combination	Min	6.2556	0.5863	82.6478	-3.8525	11.8858	-0.0073	153.3 1.2D + 1L -1Min	6.2556	0.5863	82.6478	-3.8525	11.8858	-0.0073
Ncim	13	15	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.0902	-9.8991	58.9216	16.6606	-2.6719	0.0901	154.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.0902	-9.8991	58.9216	16.6606	-2.6719	0.0901
Ncim	13	15	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.1654	-10.9361	57.6056	14.9985	-2.7783	-0.0196	154.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.1654	-10.9361	57.6056	14.9985	-2.7783	-0.0196
Ncim	13	15	0. 1D + 1L + sxST	Combination	Max	-5.2049	0.429	60.8368	1.1898	-10.6655	0.0521	150. 1D + 1L + sxSTMax	-5.2049	0.429	60.8368	1.1898	-10.6655	0.0521
Ncim	13	15	0. 1D + 1L + sxST	Combination	Min	-5.3248	-1.2226	58.7409	-1.4573	-10.8349	-0.1226	150. 1D + 1L + sxSTMin	-5.3248	-1.2226	58.7409	-1.4573	-10.8349	-0.1226
Ncim	13	15	0. 1D + 1L + syST	Combination	Max	0.6383	-9.7618	55.8607	17.2509	0.7332	0.1322	150. 1D + 1L + sySTMax	0.6383	-9.7618	55.8607	17.2509	0.7332	0.1322
Ncim	13	15	0. 1D + 1L + syST	Combination	Min	0.5271	-11.2943	53.9159	14.7947	0.576	-0.0299	150. 1D + 1L + sySTMin	0.5271	-11.2943	53.9159	14.7947	0.576	-0.0299
Ncim	13	15	0. 1D + 1L + sxDN	Combination	Max	5.5468	0.4902	72.7302	3.0739	10.4132	0.1888	150. 1D + 1L + sxDNMax	5.5468	0.4902	72.7302	3.0739	10.4132	0.1888
Ncim	13	15	0. 1D + 1L + sxDN	Combination	Min	-4.5161	-2.4922	61.2858	-1.5902	-9.2226	-0.1571	150. 1D + 1L + sxDNMin	-4.5161	-2.4922	61.2858	-1.5902	-9.2226	-0.1571
Ncim	13	15	0. 1D + 1L + syDN	Combination	Max	0.7635	7.7724	78.174	14.7963	1.0828	0.1475	150. 1D + 1L + syDNMax	0.7635	7.7724	78.174	14.7963	1.0828	0.1475
Ncim	13	15	0. 1D + 1L + syDN	Combination	Min	0.2671	-9.7743	55.842	-13.3126	0.1077	-0.1158	150. 1D + 1L + syDNMin	0.2671	-9.7743	55.842	-13.3126	0.1077	-0.1158

Ncim	14	16	0. 1D	Combination		0.4226	1.1308	51.8372	-1.2751	0.451	0.0104	160. 1D	0.4226	1.1308	51.8372	-1.2751	0.451	0.0104
Ncim	14	16	0. 1D + 1L	Combination		0.5393	1.4441	61.5782	-1.6496	0.575	0.0159	160. 1D + 1L	0.5393	1.4441	61.5782	-1.6496	0.575	0.0159
Ncim	14	16	0. 1L	Combination		0.1167	0.3133	9.741	-0.3745	0.1239	0.0054	160. 1L	0.1167	0.3133	9.741	-0.3745	0.1239	0.0054
Ncim	14	16	1. 1.4D	Combination		0.5917	1.5832	72.5721	-1.7851	0.6314	0.0146	161. 1.4D	0.5917	1.5832	72.5721	-1.7851	0.6314	0.0146
Ncim	14	16	2. 1.2D + 1.6L + 0.5Lr	Combination		0.6987	1.8747	80.0278	-2.1452	0.7446	0.0214	162. 1.2D + 1.6L + 0.5Lr	0.6987	1.8747	80.0278	-2.1452	0.7446	0.0214
Ncim	14	16	2. 1.2D + 1.6Lr + L	Combination		0.5808	1.5661	74.2353	-1.7684	0.6193	0.0158	162. 1.2D + 1.6Lr + L	0.5808	1.5661	74.2353	-1.7684	0.6193	0.0158
Ncim	14	16	2. 1.2D + 1L + 0.5Lr	Combination		0.5703	1.53	69.3127	-1.7333	0.6082	0.0154	162. 1.2D + 1L + 0.5Lr	0.5703	1.53	69.3127	-1.7333	0.6082	0.0154
Ncim	14	16	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-4.8541	-0.0818	64.9877	2.8023	-10.1245	0.0378	163.1 1.2D + 1L + (100Sx + 30Sy)Max	-4.8541	-0.0818	64.9877	2.8023	-10.1245	0.0378
Ncim	14	16	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-5.1508	-1.1888	63.4642	0.975	-10.7252	-0.0883	163.1 1.2D + 1L + (100Sx + 30Sy)Min	-5.1508	-1.1888	63.4642	0.975	-10.7252	-0.0883
Ncim	14	16	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-4.6301	5.6603	56.4194	-5.2691	-9.7231	0.0652	163.2 1.2D + 1L + (100Sx - 30Sy)Max	-4.6301	5.6603	56.4194	-5.2691	-9.7231	0.0652
Ncim	14	16	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-5.1557	3.6992	53.7206	-8.5061	-10.7873	-0.1581	163.2 1.2D + 1L + (100Sx - 30Sy)Min	-5.1557	3.6992	53.7206	-8.5061	-10.7873	-0.1581
Ncim	14	16	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	6.2818	4.2161	70.6861	-4.4096	11.9316	0.1188	163.3 1.2D + 1L - (100Sx + 30Sy)Max	6.2818	4.2161	70.6861	-4.4096	11.9316	0.1188
Ncim	14	16	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	5.9851	3.1091	69.1626	-6.2369	11.3308	-0.0073	163.3 1.2D + 1L - (100Sx + 30Sy)Min	5.9851	3.1091	69.1626	-6.2369	11.3308	-0.0073
Ncim	14	16	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	6.2867	-0.6719	80.4297	5.0714	11.9936	0.1886	163.4 1.2D + 1L - (100Sx - 30Sy)Max	6.2867	-0.6719	80.4297	5.0714	11.9936	0.1886
Ncim	14	16	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	5.7611	-2.633	77.7309	1.8344	10.9295	-0.0347	163.4 1.2D + 1L - (100Sx - 30Sy)Min	5.7611	-2.633	77.7309	1.8344	10.9295	-0.0347
Ncim	14	16	3.5 1.2D + 1L + Ex	Combination	Max	5.1766	2.8714	74.02	0.4848	9.7161	0.1882	163.5 1.2D + 1L + ExMax	5.1766	2.8714	74.02	0.4848	9.7161	0.1882
Ncim	14	16	3.5 1.2D + 1L + Ex	Combination	Min	-4.0456	0.1559	60.1303	-3.9195	-8.5097	-0.1577	163.5 1.2D + 1L + ExMin	-4.0456	0.1559	60.1303	-3.9195	-8.5097	-0.1577
Ncim	14	16	3.6 1.2D + 1L - Ex	Combination	Max	5.1766	2.8714	74.02	0.4848	9.7161	0.1882	163.6 1.2D + 1L - ExMax	5.1766	2.8714	74.02	0.4848	9.7161	0.1882
Ncim	14	16	3.6 1.2D + 1L - Ex	Combination	Min	-4.0456	0.1559	60.1303	-3.9195	-8.5097	-0.1577	163.6 1.2D + 1L - ExMin	-4.0456	0.1559	60.1303	-3.9195	-8.5097	-0.1577
Ncim	14	16	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.142	-6.7106	80.7697	13.4699	-2.7012	0.0901	164.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.142	-6.7106	80.7697	13.4699	-2.7012	0.0901
Ncim	14	16	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.4001	-7.6738	79.4442	11.8801	-3.2238	-0.0196	164.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.4001	-7.6738	79.4442	11.8801	-3.2238	-0.0196
Ncim	14	16	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	2.2893	-6.5556	85.8594	14.6988	4.1145	0.1731	164.2 1.2D + 1L + (100Sy - 30Sx)Max	2.2893	-6.5556	85.8594	14.6988	4.1145	0.1731
Ncim	14	16	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	1.7844	-8.4392	83.2671	11.5897	3.0923	-0.0413	164.2 1.2D + 1L + (100Sy - 30Sx)Min	1.7844	-8.4392	83.2671	11.5897	3.0923	-0.0413
Ncim	14	16	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	2.5312	10.7011	54.7061	-15.3148	4.4302	0.0501	164.3 1.2D + 1L - (100Sy + 30Sx)Max	2.5312	10.7011	54.7061	-15.3148	4.4302	0.0501
Ncim	14	16	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	2.273	9.7379	53.3806	-16.9046	3.9075	-0.0596	164.3 1.2D + 1L - (100Sy + 30Sx)Min	2.273	9.7379	53.3806	-16.9046	3.9075	-0.0596
Ncim	14	16	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-0.6534	11.4665	50.8832	-15.0244	-1.886	0.0718	164.4 1.2D + 1L - (100Sy - 30Sx)Max	-0.6534	11.4665	50.8832	-15.0244	-1.886	0.0718
Ncim	14	16	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.1583	9.5829	48.2909	-18.1335	-2.9081	-0.1426	164.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.1583	9.5829	48.2909	-18.1335	-2.9081	-0.1426
Ncim	14	16	4.5 1.2D + 1L + Ey	Combination	Max	1.1425	9.676	80.6293	11.7392	1.6931	0.1469	164.5 1.2D + 1L + EyMax	1.1425	9.676	80.6293	11.7392	1.6931	0.1469
Ncim	14	16	4.5 1.2D + 1L + Ey	Combination	Min	-0.0115	-6.6487	53.521	-15.1739	-0.4868	-0.1164	164.5 1.2D + 1L + EyMin	-0.0115	-6.6487	53.521	-15.1739	-0.4868	-0.1164
Ncim	14	16	4.6 1.2D + 1L - Ey	Combination	Max	1.1425	9.676	80.6293	11.7392	1.6931	0.1469	164.6 1.2D + 1L - EyMax	1.1425	9.676	80.6293	11.7392	1.6931	0.1469
Ncim	14	16	4.6 1.2D + 1L - Ey	Combination	Min	-0.0115	-6.6487	53.521	-15.1739	-0.4868	-0.1164	164.6 1.2D + 1L - EyMin	-0.0115	-6.6487	53.521	-15.1739	-0.4868	-0.1164
Ncim	14	16	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-5.0392	-0.5777	44.566	3.372	-10.3217	0.0319	165.1 0.9D + (100Sx + 30Sy)Max	-5.0392	-0.5777	44.566	3.372	-10.3217	0.0319
Ncim	14	16	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-5.3359	-1.6847	43.0425	1.5447	-10.9225	-0.0941	165.1 0.9D + (100Sx + 30Sy)Min	-5.3359	-1.6847	43.0425	1.5447	-10.9225	-0.0941
Ncim	14	16	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-4.8152	5.1644	35.9977	-4.6993	-9.9204	0.0593	165.2 0.9D + (100Sx - 30Sy)Max	-4.8152	5.1644	35.9977	-4.6993	-9.9204	0.0593
Ncim	14	16	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-5.3408	3.2033	33.2989	-7.9363	-10.9845	-0.1639	165.2 0.9D + (100Sx - 30Sy)Min	-5.3408	3.2033	33.2989	-7.9363	-10.9845	-0.1639
Ncim	14	16	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	6.0967	3.7202	50.2645	-3.8399	11.7343	0.1129	165.3 0.9D - (100Sx + 30Sy)Max	6.0967	3.7202	50.2645	-3.8399	11.7343	0.1129
Ncim	14	16	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	5.8	2.6132	48.741	-5.6672	11.1336	-0.0131	165.3 0.9D - (100Sx + 30Sy)Min	5.8	2.6132	48.741	-5.6672	11.1336	-0.0131
Ncim	14	16	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	6.1016	-1.1678	60.0081	5.6412	11.7964	0.1827	165.4 0.9D - (100Sx - 30Sy)Max	6.1016	-1.1678	60.0081	5.6412	11.7964	0.1827
Ncim	14	16	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	5.576	-3.1289	57.3093	2.4042	10.7322	-0.0405	165.4 0.9D - (100Sx - 30Sy)Min	5.576	-3.1289	57.3093	2.4042	10.7322	-0.0405
Ncim	14	16	5.5 0.9D + Ex	Combination	Max	4.9915	2.3755	53.5983	1.0546	9.5188	0.1823	165.5 0.9D + ExMax	4.9915	2.3755	53.5983	1.0546	9.5188	0.1823
Ncim	14	16	5.5 0.9D + Ex	Combination	Min	-4.2307	-0.34	39.7087	-3.3498	-8.707	-0.1635	165.5 0.9D + ExMin	-4.2307	-0.34	39.7087	-3.3498	-8.707	-0.1635
Ncim	14	16	5.6 0.9D - Ex	Combination	Max	4.9915	2.3755	53.5983	1.0546	9.5188	0.1823	165.6 0.9D - ExMax	4.9915	2.3755	53.5983	1.0546	9.5188	0.1823
Ncim	14	16	5.6 0.9D - Ex	Combination	Min	-4.2307	-0.34	39.7087	-3.3498	-8.707	-0.1635	165.6 0.9D - ExMin	-4.2307	-0.34	39.7087	-3.3498	-8.707	-0.1635
Ncim	14	16	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.3271	-7.2065	60.348	14.0397	-2.8985	0.0842	166.1 0.9D + (100Sy + 30Sx)Max	-1.3271	-7.2065	60.348	14.0397	-2.8985	0.0842
Ncim	14	16	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.5853	-8.1697	59.0225	12.4498	-3.4211	-0.0255	166.1 0.9D + (100Sy + 30Sx)Min	-1.5853	-8.1697	59.0225	12.4498	-3.4211	-0.0255
Ncim	14	16	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	2.1042	-7.0515	65.4377	15.2686	3.9172	0.1673	166.2 0.9D + (100Sy - 30Sx)Max	2.1042	-7.0515	65.4377	15.2686	3.9172	0.1673
Ncim	14	16	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	1.5993	-8.9351	62.8455	12.1595	2.8951	-0.0472	166.2 0.9D + (100Sy - 30Sx)Min	1.5993	-8.9351	62.8455	12.1595	2.8951	-0.0472
Ncim	14	16	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	2.346	10.2052	34.2845	-14.745	4.2329	0.0443	166.3 0.9D - (100Sy + 30Sx)Max	2.346	10.2052	34.2845	-14.745	4.2329	0.0443
Ncim	14	16	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	2.0879	9.242	32.959	-16.3348	3.7103	-0.0654	166.3 0.9D - (100Sy + 30Sx)Min	2.0879	9.242	32.959	-16.3348	3.7103	-0.0654
Ncim	14	16	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-0.8385	10.9706	30.4615	-14.4546	-2.0832	0.066	166.4 0.9D - (100Sy - 30Sx)Max	-0.8385	10.9706	30.4615	-14.4546	-2.0832	0.066
Ncim	14	16	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.3434	9.087	27.8693	-17.5638	-3.1054	-0.1485	166.4 0.9D - (100Sy - 30Sx)Min	-1.3434	9.087	27.8693	-17.5638	-3.1054	-0.1485
Ncim	14	16	6.5 0.9D + Ey	Combination	Max	0.9574	9.1801	60.2077	12.309	1.4958	0.1411	166.5 0.9D + EyMax	0.9574	9.1801	60.2077	12.309	1.4958	0.1411
Ncim	14	16	6.5 0.9D + Ey	Combination	Min	-0.1966	-7.1446	33.0993	-14.6041	-0.684	-0.1223	166.5 0.9D + EyMin	-0.1966	-7.1446	33.0993	-14.6041	-0.684	-0.1223
Ncim	14	16	6.6 0.9D - Ey	Combination	Max	0.9574	9.1801	60.2077	12.309	1.4958	0.1411	166.6 0.9D - EyMax	0.9574	9.1801	60.2077	12.309	1.4958	0.1411
Ncim	14	16	6.6 0.9D - Ey	Combination	Min	-0.1966	-7.1446	33.0993	-14.6041	-0.684	-0.1223	166.6 0.9D - EyMin	-0.1966	-7.1446	33.0993	-14.6041	-0.684	-0.1223
Ncim	14	16	3.3 1.2D + 1L -1	Combination	Max	6.2818	4.2161	70.6861	-4.4096	11.9316	0.1188	163.3 1.2D + 1L -1Max	6.2818	4.2161	70.6861	-4.4096	11.9316	0.1188
Ncim	14	16	3.3 1.2D + 1L -1	Combination	Min	5.9851	3.1091	69.1626	-6.2369	11.3308	-0.0073	163.3 1.2D + 1L -1Min	5.9851	3.1091	69.1626	-6.2369	11.3308	-0.0073
Ncim	14	16	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.142	-6.7106	80.7697	13.4699	-2.7012	0.0901	164.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.142	-6.7106	80.7697	13.4699	-2.7012	0.0901
Ncim	14	16	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.4001	-7.6738	79.4442	11.8801	-3.2238	-0.0196	164.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.4001	-7.6738	79.4442	11.8801	-3.2238	-0.0196
Ncim	14	16	0. 1D + 1L + sxST	Combination	Max	-4.7682	2.7198	55.2066	-1.1656	-9.952	0.0521	160. 1D + 1L + sxSTMax	-4.7682	2.7198	55.2066	-1.1656	-9.952	0.0521
Ncim	14	16	0. 1D + 1L + sxST	Combination	Min	-5.1794	1.1857	53.0954	-3.6978	-10.7845	-0.1226	160. 1D + 1L + sxSTMin	-5.1794	1.1857	53.0954	-3.6978	-10.7845	-0.1226
Ncim	14	16	0. 1D + 1L + syST	Combination	Max	0.5475	-6.7026	77.8176	14.1521	0.6784	0.1322	160. 1D + 1L + sySTMax	0.5475	-6.7026	77.8176	14.1521	0.6784	0.1322
Ncim	14	16	0. 1D + 1L + syST	Combination	Min	0.166	-8.126	75.8587	11.8026	-0.094	-0.0299	160. 1D + 1L + sySTMin	0.166	-8.126	75.8587	11.8026	-0.094	-0.0299
Ncim	14	16	0. 1D + 1L + sxDN	Combination	Max	5.1504	2.8019	68.523	0.5526	9.6879	0.1888	160. 1D + 1L + sxDNMax	5.1504	2.8019	68.523	0.5526	9.6879	0.1888
Ncim	14	16	0. 1D + 1L + sxDN	Combination	Min	-4.0717	0.0864	54.6333	-3.8518	-8.538	-0.1571	160. 1D + 1L + sxDNMin	-4.0717	0.0864	54.6333	-3.8518	-8.538	-0.1571
Ncim	14	16	0. 1D + 1L + syDN	Combination	Max	1.1164	9.6065	75.1323	11.807	1.6649	0.1475	160. 1D + 1L + syDNMax	1.1164	9.6065	75.1323	11.807	1.6649	0.1475
Ncim	14	16	0. 1D + 1L + syDN	Combination	Min	-0.0377	-6.7182	48.024	-15.1061	-0.515	-0.1158	160. 1D + 1L + syDNMin	-0.0377	-6.7182	48.024	-15.1061	-0.515	-0.1158

Ncim	16	17	0. 1D	Combination		0.6954	-1.2961	29.9726	1.1041	0.6649	0.0104	170. 1D	0.6954	-1.2961	29.9726	1.1041	0.6649	0.0104
Ncim	16	17	0. 1D + 1L	Combination		0.7997	-1.5663	33.6568	1.3015	0.7483	0.0159	170. 1D + 1L	0.7997	-1.5663	33.6568	1.3015	0.7483	0.0159
Ncim	16	17	0. 1L	Combination		0.1043	-0.2702	3.6842	0.1974	0.0834	0.0054	170. 1L	0.1043	-0.2702	3.6842	0.1974	0.0834	0.0054
Ncim	16	17	1. 1.4D	Combination		0.9735	-1.8145	41.9616	1.5458	0.9309	0.0146	171. 1.4D	0.9735	-1.8145	41.9616	1.5458	0.9309	0.0146
Ncim	16	17	2. 1.2D + 1.6L + 0.5Lr	Combination		1.0244	-2.0115	43.4819	1.6643	0.9535	0.0214	172. 1.2D + 1.6L + 0.5Lr	1.0244	-2.0115	43.4819	1.6643	0.9535	0.0214
Ncim	16	17	2. 1.2D + 1.6Lr + L	Combination		0.9606	-1.7666	42.9936	1.4988	0.9106	0.0158	172. 1.2D + 1.6Lr + L	0.9606	-1.7666	42.9936	1.4988	0.9106	0.0158
Ncim	16	17	2. 1.2D + 1L + 0.5Lr	Combination		0.9097	-1.7142	39.4293	1.4471	0.8618	0.0154	172. 1.2D + 1L + 0.5Lr	0.9097	-1.7142	39.4293	1.4471	0.8618	0.0154
Ncim	16	17	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-3.5187	-2.497	33.5697	4.7438	-8.3502	0.0378	173.1 1.2D + 1L + (100Sx + 30Sy)Max	-3.5187	-2.497	33.5697	4.7438	-8.3502	0.0378
Ncim	16	17	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-4.3747	-3.1652	33.1554	3.3449	-10.1704	-0.0883	173.1 1.2D + 1L + (100Sx + 30Sy)Min	-4.3747	-3.1652	33.1554	3.3449	-10.1704	-0.0883
Ncim	16	17	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-2.9954	1.0492	30.6572	-1.5152	-7.2835	0.0652	173.2 1.2D + 1L + (100Sx - 30Sy)Max	-2.9954	1.0492	30.6572	-1.5152	-7.2835	0.0652
Ncim	16	17	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-4.5117	-0.1343	29.9233	-3.9932	-10.5079	-0.1581	173.2 1.2D + 1L + (100Sx - 30Sy)Min	-4.5117	-0.1343	29.9233	-3.9932	-10.5079	-0.1581
Ncim	16	17	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	6.1479	-0.2157	42.463	-0.4976	11.8495	0.1188	173.3 1.2D + 1L - (100Sx + 30Sy)Max	6.1479	-0.2157	42.463	-0.4976	11.8495	0.1188
Ncim	16	17	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	5.2919	-0.8838	42.0487	-1.8965	10.0293	-0.0073	173.3 1.2D + 1L - (100Sx + 30Sy)Min	5.2919	-0.8838	42.0487	-1.8965	10.0293	-0.0073
Ncim	16	17	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	6.2849	-3.2465	45.6951	6.8405	12.187	0.1886	173.4 1.2D + 1L - (100Sx - 30Sy)Max	6.2849	-3.2465	45.6951	6.8405	12.187	0.1886
Ncim	16	17	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	4.7686	-4.4301	44.9612	4.3625	8.9626	-0.0347	173.4 1.2D + 1L - (100Sx - 30Sy)Min	4.7686	-4.4301	44.9612	4.3625	8.9626	-0.0347
Ncim	16	17	3.5 1.2D + 1L + Ex	Combination	Max	4.6362	-0.7526	42.6038	3.2097	8.6455	0.1882	173.5 1.2D + 1L + ExMax	4.6362	-0.7526	42.6038	3.2097	8.6455	0.1882
Ncim	16	17	3.5 1.2D + 1L + Ex	Combination	Min	-2.863	-2.6282	33.0146	-0.3624	-6.9663	-0.1577	173.5 1.2D + 1L + ExMin	-2.863	-2.6282	33.0146	-0.3624	-6.9663	-0.1577
Ncim	16	17	3.6 1.2D + 1L - Ex	Combination	Max	4.6362	-0.7526	42.6038	3.2097	8.6455	0.1882	173.6 1.2D + 1L - ExMax	4.6362	-0.7526	42.6038	3.2097	8.6455	0.1882
Ncim	16	17	3.6 1.2D + 1L - Ex	Combination	Min	-2.863	-2.6282	33.0146	-0.3624	-6.9663	-0.1577	173.6 1.2D + 1L - ExMin	-2.863	-2.6282	33.0146	-0.3624	-6.9663	-0.1577
Ncim	16	17	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-0.484	-6.7296	41.3151	13.1295	-1.9515	0.0901	174.1 1.2D + 1L + (100Sy + 30Sx)Max	-0.484	-6.7296	41.3151	13.1295	-1.9515	0.0901
Ncim	16	17	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.2287	-7.3109	40.9546	11.9125	-3.5352	-0.0196	174.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.2287	-7.3109	40.9546	11.9125	-3.5352	-0.0196
Ncim	16	17	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	2.7139	-6.754	45.077	14.1782	4.7557	0.1731	174.2 1.2D + 1L + (100Sy - 30Sx)Max	2.7139	-6.754	45.077	14.1782	4.7557	0.1731
Ncim	16	17	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	1.2575	-7.8909	44.3721	11.7981	1.6587	-0.0413	174.2 1.2D + 1L + (100Sy - 30Sx)Min	1.2575	-7.8909	44.3721	11.7981	1.6587	-0.0413
Ncim	16	17	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	3.0019	3.9301	34.6638	-9.0651	5.2143	0.0501	174.3 1.2D + 1L - (100Sy + 30Sx)Max	3.0019	3.9301	34.6638	-9.0651	5.2143	0.0501
Ncim	16	17	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	2.2572	3.3488	34.3033	-10.2822	3.6307	-0.0596	174.3 1.2D + 1L - (100Sy + 30Sx)Min	2.2572	3.3488	34.3033	-10.2822	3.6307	-0.0596
Ncim	16	17	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	0.5157	4.51	31.2463	-8.9508	0.0205	0.0718	174.4 1.2D + 1L - (100Sy - 30Sx)Max	0.5157	4.51	31.2463	-8.9508	0.0205	0.0718
Ncim	16	17	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-0.9407	3.3732	30.5414	-11.3309	-3.0765	-0.1426	174.4 1.2D + 1L - (100Sy - 30Sx)Min	-0.9407	3.3732	30.5414	-11.3309	-3.0765	-0.1426
Ncim	16	17	4.5 1.2D + 1L + Ey	Combination	Max	2.0006	3.3619	41.9171	11.8433	3.1278	0.1469	174.5 1.2D + 1L + EyMax	2.0006	3.3619	41.9171	11.8433	3.1278	0.1469
Ncim	16	17	4.5 1.2D + 1L + Ey	Combination	Min	-0.2274	-6.7428	33.7013	-8.996	-1.4486	-0.1164	174.5 1.2D + 1L + EyMin	-0.2274	-6.7428	33.7013	-8.996	-1.4486	-0.1164
Ncim	16	17	4.6 1.2D + 1L - Ey	Combination	Max	2.0006	3.3619	41.9171	11.8433	3.1278	0.1469	174.6 1.2D + 1L - EyMax	2.0006	3.3619	41.9171	11.8433	3.1278	0.1469
Ncim	16	17	4.6 1.2D + 1L - Ey	Combination	Min	-0.2274	-6.7428	33.7013	-8.996	-1.4486	-0.1164	174.6 1.2D + 1L - EyMin	-0.2274	-6.7428	33.7013	-8.996	-1.4486	-0.1164
Ncim	16	17	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-3.7795	-1.9731	22.7358	4.3138	-8.5913	0.0319	175.1 0.9D + (100Sx + 30Sy)Max	-3.7795	-1.9731	22.7358	4.3138	-8.5913	0.0319
Ncim	16	17	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-4.6354	-2.6412	22.3215	2.915	-10.4115	-0.0941	175.1 0.9D + (100Sx + 30Sy)Min	-4.6354	-2.6412	22.3215	2.915	-10.4115	-0.0941
Ncim	16	17	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-3.2561	1.5732	19.8233	-1.9451	-7.5246	0.0593	175.2 0.9D + (100Sx - 30Sy)Max	-3.2561	1.5732	19.8233	-1.9451	-7.5246	0.0593
Ncim	16	17	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-4.7725	0.3896	19.0894	-4.4232	-10.749	-0.1639	175.2 0.9D + (100Sx - 30Sy)Min	-4.7725	0.3896	19.0894	-4.4232	-10.749	-0.1639
Ncim	16	17	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	5.8871	0.3083	31.6291	-0.9276	11.6084	0.1129	175.3 0.9D - (100Sx + 30Sy)Max	5.8871	0.3083	31.6291	-0.9276	11.6084	0.1129
Ncim	16	17	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	5.0312	-0.3599	31.2149	-2.3264	9.7882	-0.0131	175.3 0.9D - (100Sx + 30Sy)Min	5.0312	-0.3599	31.2149	-2.3264	9.7882	-0.0131
Ncim	16	17	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	6.0242	-2.7226	34.8612	6.4106	11.9459	0.1827	175.4 0.9D - (100Sx - 30Sy)Max	6.0242	-2.7226	34.8612	6.4106	11.9459	0.1827
Ncim	16	17	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	4.5078	-3.9062	34.1273	3.9325	8.7215	-0.0405	175.4 0.9D - (100Sx - 30Sy)Min	4.5078	-3.9062	34.1273	3.9325	8.7215	-0.0405
Ncim	16	17	5.5 0.9D + Ex	Combination	Max	4.3754	-0.2287	31.7699	2.7797	8.4043	0.1823	175.5 0.9D + ExMax	4.3754	-0.2287	31.7699	2.7797	8.4043	0.1823
Ncim	16	17	5.5 0.9D + Ex	Combination	Min	-3.1237	-2.1043	22.1807	-0.7923	-7.2075	-0.1635	175.5 0.9D + ExMin	-3.1237	-2.1043	22.1807	-0.7923	-7.2075	-0.1635
Ncim	16	17	5.6 0.9D - Ex	Combination	Max	4.3754	-0.2287	31.7699	2.7797	8.4043	0.1823	175.6 0.9D - ExMax	4.3754	-0.2287	31.7699	2.7797	8.4043	0.1823
Ncim	16	17	5.6 0.9D - Ex	Combination	Min	-3.1237	-2.1043	22.1807	-0.7923	-7.2075	-0.1635	175.6 0.9D - ExMin	-3.1237	-2.1043	22.1807	-0.7923	-7.2075	-0.1635
Ncim	16	17	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-0.7447	-6.2057	30.4812	12.6996	-2.1927	0.0842	176.1 0.9D + (100Sy + 30Sx)Max	-0.7447	-6.2057	30.4812	12.6996	-2.1927	0.0842
Ncim	16	17	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.4895	-6.787	30.1208	11.4825	-3.7763	-0.0255	176.1 0.9D + (100Sy + 30Sx)Min	-1.4895	-6.787	30.1208	11.4825	-3.7763	-0.0255
Ncim	16	17	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	2.4532	-6.2301	34.2431	13.7483	4.5145	0.1673	176.2 0.9D + (100Sy - 30Sx)Max	2.4532	-6.2301	34.2431	13.7483	4.5145	0.1673
Ncim	16	17	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	0.9967	-7.3669	33.5382	11.3681	1.4175	-0.0472	176.2 0.9D + (100Sy - 30Sx)Min	0.9967	-7.3669	33.5382	11.3681	1.4175	-0.0472
Ncim	16	17	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	2.7412	4.454	23.8299	-9.4951	4.9732	0.0443	176.3 0.9D - (100Sy + 30Sx)Max	2.7412	4.454	23.8299	-9.4951	4.9732	0.0443
Ncim	16	17	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.9964	3.8727	23.4695	-10.7122	3.3895	-0.0654	176.3 0.9D - (100Sy + 30Sx)Min	1.9964	3.8727	23.4695	-10.7122	3.3895	-0.0654
Ncim	16	17	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	0.255	5.0339	20.4124	-9.3807	-0.2207	0.066	176.4 0.9D - (100Sy - 30Sx)Max	0.255	5.0339	20.4124	-9.3807	-0.2207	0.066
Ncim	16	17	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.2015	3.8971	19.7075	-11.7609	-3.3177	-0.1485	176.4 0.9D - (100Sy - 30Sx)Min	-1.2015	3.8971	19.7075	-11.7609	-3.3177	-0.1485
Ncim	16	17	6.5 0.9D + Ey	Combination	Max	1.7399	3.8859	31.0832	11.4134	2.8867	0.1411	176.5 0.9D + EyMax	1.7399	3.8859	31.0832	11.4134	2.8867	0.1411
Ncim	16	17	6.5 0.9D + Ey	Combination	Min	-0.4882	-6.2189	22.8675	-9.426	-1.6898	-0.1223	176.5 0.9D + EyMin	-0.4882	-6.2189	22.8675	-9.426	-1.6898	-0.1223
Ncim	16	17	6.6 0.9D - Ey	Combination	Max	1.7399	3.8859	31.0832	11.4134	2.8867	0.1411	176.6 0.9D - EyMax	1.7399	3.8859	31.0832	11.4134	2.8867	0.1411
Ncim	16	17	6.6 0.9D - Ey	Combination	Min	-0.4882	-6.2189	22.8675	-9.426	-1.6898	-0.1223	176.6 0.9D - EyMin	-0.4882	-6.2189	22.8675	-9.426	-1.6898	-0.1223
Ncim	16	17	3.3 1.2D + 1L -1	Combination	Max	6.1479	-0.2157	42.463	-0.4976	11.8495	0.1188	173.3 1.2D + 1L -1Max	6.1479	-0.2157	42.463	-0.4976	11.8495	0.1188
Ncim	16	17	3.3 1.2D + 1L -1	Combination	Min	5.2919	-0.8838	42.0487	-1.8965	10.0293	-0.0073	173.3 1.2D + 1L -1Min	5.2919	-0.8838	42.0487	-1.8965	10.0293	-0.0073
Ncim	16	17	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-0.484	-6.7296	41.3151	13.1295	-1.9515	0.0901	174.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-0.484	-6.7296	41.3151	13.1295	-1.9515	0.0901
Ncim	16	17	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.2287	-7.3109	40.9546	11.9125	-3.5352	-0.0196	174.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.2287	-7.3109	40.9546	11.9125	-3.5352	-0.0196
Ncim	16	17	0. 1D + 1L + sxST	Combination	Max	-3.344	-0.5998	27.961	1.4922	-7.9081	0.0521	170. 1D + 1L + sxSTMax	-3.344	-0.5998	27.961	1.4922	-7.9081	0.0521
Ncim	16	17	0. 1D + 1L + sxST	Combination	Min	-4.5301	-1.5256	27.3869	-0.4463	-10.4304	-0.1226	170. 1D + 1L + sxSTMin	-4.5301	-1.5256	27.3869	-0.4463	-10.4304	-0.1226
Ncim	16	17	0. 1D + 1L + syST	Combination	Max	1.028	-6.6177	39.0436	13.5318	1.3108	0.1322	170. 1D + 1L + sySTMax	1.028	-6.6177	39.0436	13.5318	1.3108	0.1322
Ncim	16	17	0. 1D + 1L + syST	Combination	Min	-0.0726	-7.4768	38.5109	11.7331	-1.0296	-0.0299	170. 1D + 1L + sySTMin	-0.0726	-7.4768	38.5109	11.7331	-1.0296	-0.0299
Ncim	16	17	0. 1D + 1L + sxDN	Combination	Max	4.5492	-0.6285	38.4513	3.0876	8.5542	0.1888	170. 1D + 1L + sxDNMax	4.5492	-0.6285	38.4513	3.0876	8.5542	0.1888
Ncim	16	17	0. 1D + 1L + sxDN	Combination	Min	-2.9499	-2.5041	28.8622	-0.4845	-7.0576	-0.1571	170. 1D + 1L + sxDNMin	-2.9499	-2.5041	28.8622	-0.4845	-7.0576	-0.1571
Ncim	16	17	0. 1D + 1L + syDN	Combination	Max	1.9137	3.4861	37.7646	11.7212	3.0365	0.1475	170. 1D + 1L + syDNMax	1.9137	3.4861	37.7646	11.7212	3.0365	0.1475
Ncim	16	17	0. 1D + 1L + syDN	Combination	Min	-0.3144	-6.6187	29.5489	-9.1181	-1.54	-0.1158	170. 1D + 1L + syDNMin	-0.3144	-6.6187	29.5489	-9.1181	-1.54	-0.1158

Ncim	20	18	0. 1D	Combination		0.2487	0.6235	74.8238	-0.8272	0.3661	0.0104	180. 1D	0.2487	0.6235	74.8238	-0.8272	0.3661	0.0104
Ncim	20	18	0. 1D + 1L	Combination		0.3809	0.7393	91.9802	-1.0337	0.5495	0.0159	180. 1D + 1L	0.3809	0.7393	91.9802	-1.0337	0.5495	0.0159
Ncim	20	18	0. 1L	Combination		0.1322	0.1159	17.1563	-0.2065	0.1834	0.0054	180. 1L	0.1322	0.1159	17.1563	-0.2065	0.1834	0.0054
Ncim	20	18	1. 1.4D	Combination		0.3481	0.8728	104.7534	-1.1581	0.5126	0.0146	181. 1.4D	0.3481	0.8728	104.7534	-1.1581	0.5126	0.0146
Ncim	20	18	2. 1.2D + 1.6L + 0.5Lr	Combination		0.5152	0.924	119.7871	-1.3144	0.7397	0.0214	182. 1.2D + 1.6L + 0.5Lr	0.5152	0.924	119.7871	-1.3144	0.7397	0.0214
Ncim	20	18	2. 1.2D + 1.6Lr + L	Combination		0.3815	0.7755	106.5217	-1.0682	0.5532	0.0158	182. 1.2D + 1.6Lr + L	0.3815	0.7755	106.5217	-1.0682	0.5532	0.0158
Ncim	20	18	2. 1.2D + 1L + 0.5Lr	Combination		0.3698	0.7965	100.9152	-1.0872	0.538	0.0154	182. 1.2D + 1L + 0.5Lr	0.3698	0.7965	100.9152	-1.0872	0.538	0.0154
Ncim	20	18	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-8.1055	-0.9688	98.7936	2.6037	-13.3067	0.0378	183.1 1.2D + 1L + (100Sx + 30Sy)Max	-8.1055	-0.9688	98.7936	2.6037	-13.3067	0.0378
Ncim	20	18	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-9.2107	-1.1645	98.2861	2.2513	-15.1064	-0.0883	183.1 1.2D + 1L + (100Sx + 30Sy)Min	-9.2107	-1.1645	98.2861	2.2513	-15.1064	-0.0883
Ncim	20	18	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-7.8857	3.0596	104.0305	-4.6063	-12.925	0.0652	183.2 1.2D + 1L + (100Sx - 30Sy)Max	-7.8857	3.0596	104.0305	-4.6063	-12.925	0.0652
Ncim	20	18	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-9.8436	2.7129	103.1314	-5.2305	-16.1131	-0.1581	183.2 1.2D + 1L + (100Sx - 30Sy)Min	-9.8436	2.7129	103.1314	-5.2305	-16.1131	-0.1581
Ncim	20	18	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	9.9397	2.7767	98.4475	-4.4431	16.1685	0.1188	183.3 1.2D + 1L - (100Sx + 30Sy)Max	9.9397	2.7767	98.4475	-4.4431	16.1685	0.1188
Ncim	20	18	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	8.8345	2.581	97.9399	-4.7955	14.3688	-0.0073	183.3 1.2D + 1L - (100Sx + 30Sy)Min	8.8345	2.581	97.9399	-4.7955	14.3688	-0.0073
Ncim	20	18	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	10.5725	-1.1008	93.6022	3.0387	17.1752	0.1886	183.4 1.2D + 1L - (100Sx - 30Sy)Max	10.5725	-1.1008	93.6022	3.0387	17.1752	0.1886
Ncim	20	18	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	8.6147	-1.4475	92.7031	2.4145	13.9871	-0.0347	183.4 1.2D + 1L - (100Sx - 30Sy)Min	8.6147	-1.4475	92.7031	2.4145	13.9871	-0.0347
Ncim	20	18	3.5 1.2D + 1L + Ex	Combination	Max	8.8811	1.0828	100.8061	-0.6053	14.4084	0.1882	183.5 1.2D + 1L + ExMax	8.8811	1.0828	100.8061	-0.6053	14.4084	0.1882
Ncim	20	18	3.5 1.2D + 1L + Ex	Combination	Min	-8.1521	0.5294	95.9274	-1.5865	-13.3463	-0.1577	183.5 1.2D + 1L + ExMin	-8.1521	0.5294	95.9274	-1.5865	-13.3463	-0.1577
Ncim	20	18	3.6 1.2D + 1L - Ex	Combination	Max	8.8811	1.0828	100.8061	-0.6053	14.4084	0.1882	183.6 1.2D + 1L - ExMax	8.8811	1.0828	100.8061	-0.6053	14.4084	0.1882
Ncim	20	18	3.6 1.2D + 1L - Ex	Combination	Min	-8.1521	0.5294	95.9274	-1.5865	-13.3463	-0.1577	183.6 1.2D + 1L - ExMin	-8.1521	0.5294	95.9274	-1.5865	-13.3463	-0.1577
Ncim	20	18	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.5483	-5.6659	90.9939	11.2556	-2.6334	0.0901	184.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.5483	-5.6659	90.9939	11.2556	-2.6334	0.0901
Ncim	20	18	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-2.5099	-5.8361	90.5523	10.949	-4.1992	-0.0196	184.1 1.2D + 1L + (100Sy + 30Sx)Min	-2.5099	-5.8361	90.5523	10.949	-4.1992	-0.0196
Ncim	20	18	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	4.3867	-5.6467	89.5887	11.4918	7.0511	0.1731	184.2 1.2D + 1L + (100Sy - 30Sx)Max	4.3867	-5.6467	89.5887	11.4918	7.0511	0.1731
Ncim	20	18	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	2.5062	-5.9797	88.7251	10.8923	3.989	-0.0413	184.2 1.2D + 1L + (100Sy - 30Sx)Min	2.5062	-5.9797	88.7251	10.8923	3.989	-0.0413
Ncim	20	18	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	3.2389	7.4483	106.1812	-13.1408	5.2613	0.0501	184.3 1.2D + 1L - (100Sy + 30Sx)Max	3.2389	7.4483	106.1812	-13.1408	5.2613	0.0501
Ncim	20	18	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	2.2773	7.278	105.7396	-13.4474	3.6955	-0.0596	184.3 1.2D + 1L - (100Sy + 30Sx)Min	2.2773	7.278	105.7396	-13.4474	3.6955	-0.0596
Ncim	20	18	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.7772	7.5919	108.0084	-13.0841	-2.9269	0.0718	184.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.7772	7.5919	108.0084	-13.0841	-2.9269	0.0718
Ncim	20	18	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-3.6577	7.2589	107.1448	-13.6836	-5.989	-0.1426	184.4 1.2D + 1L - (100Sy - 30Sx)Min	-3.6577	7.2589	107.1448	-13.6836	-5.989	-0.1426
Ncim	20	18	4.5 1.2D + 1L + Ey	Combination	Max	1.3885	6.5903	105.6869	9.6193	2.1731	0.1469	184.5 1.2D + 1L + EyMax	1.3885	6.5903	105.6869	9.6193	2.1731	0.1469
Ncim	20	18	4.5 1.2D + 1L + Ey	Combination	Min	-0.6595	-4.9782	91.0467	-11.8111	-1.111	-0.1164	184.5 1.2D + 1L + EyMin	-0.6595	-4.9782	91.0467	-11.8111	-1.111	-0.1164
Ncim	20	18	4.6 1.2D + 1L - Ey	Combination	Max	1.3885	6.5903	105.6869	9.6193	2.1731	0.1469	184.6 1.2D + 1L - EyMax	1.3885	6.5903	105.6869	9.6193	2.1731	0.1469
Ncim	20	18	4.6 1.2D + 1L - Ey	Combination	Min	-0.6595	-4.9782	91.0467	-11.8111	-1.111	-0.1164	184.6 1.2D + 1L - EyMin	-0.6595	-4.9782	91.0467	-11.8111	-1.111	-0.1164
Ncim	20	18	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-8.2462	-1.2138	67.7683	2.9551	-13.5083	0.0319	185.1 0.9D + (100Sx + 30Sy)Max	-8.2462	-1.2138	67.7683	2.9551	-13.5083	0.0319
Ncim	20	18	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-9.3514	-1.4095	67.2608	2.6027	-15.308	-0.0941	185.1 0.9D + (100Sx + 30Sy)Min	-9.3514	-1.4095	67.2608	2.6027	-15.308	-0.0941
Ncim	20	18	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-8.0264	2.8147	73.0052	-4.2549	-13.1266	0.0593	185.2 0.9D + (100Sx - 30Sy)Max	-8.0264	2.8147	73.0052	-4.2549	-13.1266	0.0593
Ncim	20	18	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-9.9843	2.468	72.1061	-4.879	-16.3147	-0.1639	185.2 0.9D + (100Sx - 30Sy)Min	-9.9843	2.468	72.1061	-4.879	-16.3147	-0.1639
Ncim	20	18	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	9.799	2.5317	67.4221	-4.0917	15.967	0.1129	185.3 0.9D - (100Sx + 30Sy)Max	9.799	2.5317	67.4221	-4.0917	15.967	0.1129
Ncim	20	18	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	8.6938	2.336	66.9146	-4.444	14.1673	-0.0131	185.3 0.9D - (100Sx + 30Sy)Min	8.6938	2.336	66.9146	-4.444	14.1673	-0.0131
Ncim	20	18	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	10.4318	-1.3457	62.5769	3.3901	16.9737	0.1827	185.4 0.9D - (100Sx - 30Sy)Max	10.4318	-1.3457	62.5769	3.3901	16.9737	0.1827
Ncim	20	18	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	8.474	-1.6924	61.6778	2.7659	13.7856	-0.0405	185.4 0.9D - (100Sx - 30Sy)Min	8.474	-1.6924	61.6778	2.7659	13.7856	-0.0405
Ncim	20	18	5.5 0.9D + Ex	Combination	Max	8.7404	0.8378	69.7808	-0.2539	14.2069	0.1823	185.5 0.9D + ExMax	8.7404	0.8378	69.7808	-0.2539	14.2069	0.1823
Ncim	20	18	5.5 0.9D + Ex	Combination	Min	-8.2928	0.2844	64.9021	-1.2351	-13.5479	-0.1635	185.5 0.9D + ExMin	-8.2928	0.2844	64.9021	-1.2351	-13.5479	-0.1635
Ncim	20	18	5.6 0.9D - Ex	Combination	Max	8.7404	0.8378	69.7808	-0.2539	14.2069	0.1823	185.6 0.9D - ExMax	8.7404	0.8378	69.7808	-0.2539	14.2069	0.1823
Ncim	20	18	5.6 0.9D - Ex	Combination	Min	-8.2928	0.2844	64.9021	-1.2351	-13.5479	-0.1635	185.6 0.9D - ExMin	-8.2928	0.2844	64.9021	-1.2351	-13.5479	-0.1635
Ncim	20	18	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.689	-5.9108	59.9686	11.607	-2.8349	0.0842	186.1 0.9D + (100Sy + 30Sx)Max	-1.689	-5.9108	59.9686	11.607	-2.8349	0.0842
Ncim	20	18	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-2.6506	-6.0811	59.527	11.3004	-4.4007	-0.0255	186.1 0.9D + (100Sy + 30Sx)Min	-2.6506	-6.0811	59.527	11.3004	-4.4007	-0.0255
Ncim	20	18	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	4.246	-5.8917	58.5634	11.8432	6.8496	0.1673	186.2 0.9D + (100Sy - 30Sx)Max	4.246	-5.8917	58.5634	11.8432	6.8496	0.1673
Ncim	20	18	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	2.3655	-6.2247	57.6998	11.2437	3.7874	-0.0472	186.2 0.9D + (100Sy - 30Sx)Min	2.3655	-6.2247	57.6998	11.2437	3.7874	-0.0472
Ncim	20	18	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	3.0982	7.2033	75.1559	-12.7894	5.0598	0.0443	186.3 0.9D - (100Sy + 30Sx)Max	3.0982	7.2033	75.1559	-12.7894	5.0598	0.0443
Ncim	20	18	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	2.1366	7.0331	74.7143	-13.096	3.4939	-0.0654	186.3 0.9D - (100Sy + 30Sx)Min	2.1366	7.0331	74.7143	-13.096	3.4939	-0.0654
Ncim	20	18	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.9179	7.3469	76.9831	-12.7327	-3.1284	0.066	186.4 0.9D - (100Sy - 30Sx)Max	-1.9179	7.3469	76.9831	-12.7327	-3.1284	0.066
Ncim	20	18	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-3.7984	7.0139	76.1195	-13.3222	-6.1906	-0.1485	186.4 0.9D - (100Sy - 30Sx)Min	-3.7984	7.0139	76.1195	-13.3222	-6.1906	-0.1485
Ncim	20	18	6.5 0.9D + Ey	Combination	Max	1.2478	6.3454	74.6616	9.9707	1.9715	0.1411	186.5 0.9D + EyMax	1.2478	6.3454	74.6616	9.9707	1.9715	0.1411
Ncim	20	18	6.5 0.9D + Ey	Combination	Min	-0.8002	-5.2231	60.0213	-11.4597	-1.3125	-0.1223	186.5 0.9D + EyMin	-0.8002	-5.2231	60.0213	-11.4597	-1.3125	-0.1223
Ncim	20	18	6.6 0.9D - Ey	Combination	Max	1.2478	6.3454	74.6616	9.9707	1.9715	0.1411	186.6 0.9D - EyMax	1.2478	6.3454	74.6616	9.9707	1.9715	0.1411
Ncim	20	18	6.6 0.9D - Ey	Combination	Min	-0.8002	-5.2231	60.0213	-11.4597	-1.3125	-0.1223	186.6 0.9D - EyMin	-0.8002	-5.2231	60.0213	-11.4597	-1.3125	-0.1223
Ncim	20	18	3.3 1.2D + 1L -1	Combination	Max	9.9397	2.7767	98.4475	-4.4431	16.1685	0.1188	183.3 1.2D + 1L -1Max	9.9397	2.7767	98.4475	-4.4431	16.1685	0.1188
Ncim	20	18	3.3 1.2D + 1L -1	Combination	Min	8.8345	2.581	97.9399	-4.7955	14.3688	-0.0073	183.3 1.2D + 1L -1Min	8.8345	2.581	97.9399	-4.7955	14.3688	-0.0073
Ncim	20	18	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.5483	-5.6659	90.9939	11.2556	-2.6334	0.0901	184.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.5483	-5.6659	90.9939	11.2556	-2.6334	0.0901
Ncim	20	18	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-2.5099	-5.8361	90.5523	10.949	-4.1992	-0.0196	184.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-2.5099	-5.8361	90.5523	10.949	-4.1992	-0.0196
Ncim	20	18	0. 1D + 1L + sxST	Combination	Max	-7.9792	0.9786	95.0254	-0.9391	-13.0974	0.0521	180. 1D + 1L + sxSTMax	-7.9792	0.9786	95.0254	-0.9391	-13.0974	0.0521
Ncim	20	18	0. 1D + 1L + sxST	Combination	Min	-9.5108	0.7074	94.3221	-1.4274	-15.5913	-0.1226	180. 1D + 1L + sxSTMin	-9.5108	0.7074	94.3221	-1.4274	-15.5913	-0.1226
Ncim	20	18	0. 1D + 1L + syST	Combination	Max	1.4356	-5.7231	83.9047	11.4359	2.2273	0.1322	180. 1D + 1L + sySTMax	1.4356	-5.7231	83.9047	11.4359	2.2273	0.1322
Ncim	20	18	0. 1D + 1L + syST	Combination	Min	0.0145	-5.9747	83.2521	10.9828	-0.0867	-0.0299	180. 1D + 1L + sySTMin	0.0145	-5.9747	83.2521	10.9828	-0.0867	-0.0299
Ncim	20	18	0. 1D + 1L + sxDN	Combination	Max	8.8975	1.016	94.4195	-0.5431	14.4269	0.1888	180. 1D + 1L + sxDNMax	8.8975	1.016	94.4195	-0.5431	14.4269	0.1888
Ncim	20	18	0. 1D + 1L + sxDN	Combination	Min	-8.1358	0.4626	89.5408	-1.5243	-13.3279	-0.1571	180. 1D + 1L + sxDNMin	-8.1358	0.4626	89.5408	-1.5243	-13.3279	-0.1571
Ncim	20	18	0. 1D + 1L + syDN	Combination	Max	1.4048	6.5236	99.3003	9.6815	2.1915	0.1475	180. 1D + 1L + syDNMax	1.4048	6.5236	99.3003	9.6815	2.1915	0.1475
Ncim	20	18	0. 1D + 1L + syDN	Combination	Min	-0.6431	-5.0449	84.66	-11.7489	-1.0925	-0.1158	180. 1D + 1L + syDNMin	-0.6431	-5.0449	84.66	-11.7489	-1.0925	-0.1158

Ncim	21	19	0. 1D	Combination		0.0686	-0.6054	52.8284	0.4601	0.109	0.0065	190. 1D	0.0686	-0.6054	52.8284	0.4601	0.109	0.0065
Ncim	21	19	0. 1D + 1L	Combination		0.0702	-0.7509	65.5962	0.5451	0.1261	0.0099	190. 1D + 1L	0.0702	-0.7509	65.5962	0.5451	0.1261	0.0099
Ncim	21	19	0. 1L	Combination		0.0016	-0.1455	12.7678	0.085	0.0171	0.0034	190. 1L	0.0016	-0.1455	12.7678	0.085	0.0171	0.0034
Ncim	21	19	1. 1.4D	Combination		0.0961	-0.8476	73.9597	0.6442	0.1527	0.0091	191. 1.4D	0.0961	-0.8476	73.9597	0.6442	0.1527	0.0091
Ncim	21	19	2. 1.2D + 1.6L + 0.5Lr	Combination		0.0879	-0.9541	84.0542	0.6826	0.1616	0.0133	192. 1.2D + 1.6L + 0.5Lr	0.0879	-0.9541	84.0542	0.6826	0.1616	0.0133
Ncim	21	19	2. 1.2D + 1.6Lr + L	Combination		0.0926	-0.7827	70.5195	0.577	0.1503	0.0098	192. 1.2D + 1.6Lr + L	0.0926	-0.7827	70.5195	0.577	0.1503	0.0098
Ncim	21	19	2. 1.2D + 1L + 0.5Lr	Combination		0.0861	-0.7941	70.0097	0.5891	0.1428	0.0096	192. 1.2D + 1L + 0.5Lr	0.0861	-0.7941	70.0097	0.5891	0.1428	0.0096
Ncim	21	19	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-5.5676	-2.5219	68.8592	3.5685	-8.9652	0.0236	193.1 1.2D + 1L + (100Sx + 30Sy)Max	-5.5676	-2.5219	68.8592	3.5685	-8.9652	0.0236
Ncim	21	19	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-5.6206	-2.6967	68.7425	3.296	-9.041	-0.0551	193.1 1.2D + 1L + (100Sx + 30Sy)Min	-5.6206	-2.6967	68.7425	3.296	-9.041	-0.0551
Ncim	21	19	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-5.5478	1.245	71.4901	-2.1399	-8.9342	0.0407	193.2 1.2D + 1L + (100Sx - 30Sy)Max	-5.5478	1.245	71.4901	-2.1399	-8.9342	0.0407
Ncim	21	19	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-5.6418	0.9355	71.2833	-2.6225	-9.0684	-0.0987	193.2 1.2D + 1L + (100Sx - 30Sy)Min	-5.6418	0.9355	71.2833	-2.6225	-9.0684	-0.0987
Ncim	21	19	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	5.7869	1.0982	70.8134	-2.1068	9.3197	0.0741	193.3 1.2D + 1L - (100Sx + 30Sy)Max	5.7869	1.0982	70.8134	-2.1068	9.3197	0.0741
Ncim	21	19	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	5.7339	0.9234	70.6967	-2.3792	9.244	-0.0045	193.3 1.2D + 1L - (100Sx + 30Sy)Min	5.7339	0.9234	70.6967	-2.3792	9.244	-0.0045
Ncim	21	19	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	5.8081	-2.534	68.2725	3.8118	9.3471	0.1177	193.4 1.2D + 1L - (100Sx - 30Sy)Max	5.8081	-2.534	68.2725	3.8118	9.3471	0.1177
Ncim	21	19	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	5.7141	-2.8435	68.0658	3.3292	9.213	-0.0217	193.4 1.2D + 1L - (100Sx - 30Sy)Min	5.7141	-2.8435	68.0658	3.3292	9.213	-0.0217
Ncim	21	19	3.5 1.2D + 1L + Ex	Combination	Max	4.9914	-0.5554	70.0741	0.9735	8.0286	0.1175	193.5 1.2D + 1L + ExMax	4.9914	-0.5554	70.0741	0.9735	8.0286	0.1175
Ncim	21	19	3.5 1.2D + 1L + Ex	Combination	Min	-4.8252	-1.0431	69.4818	0.2158	-7.7499	-0.0984	193.5 1.2D + 1L + ExMin	-4.8252	-1.0431	69.4818	0.2158	-7.7499	-0.0984
Ncim	21	19	3.6 1.2D + 1L - Ex	Combination	Max	4.9914	-0.5554	70.0741	0.9735	8.0286	0.1175	193.6 1.2D + 1L - ExMax	4.9914	-0.5554	70.0741	0.9735	8.0286	0.1175
Ncim	21	19	3.6 1.2D + 1L - Ex	Combination	Min	-4.8252	-1.0431	69.4818	0.2158	-7.7499	-0.0984	193.6 1.2D + 1L - ExMin	-4.8252	-1.0431	69.4818	0.2158	-7.7499	-0.0984
Ncim	21	19	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.596	-6.8772	65.6137	10.3816	-2.5732	0.0562	194.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.596	-6.8772	65.6137	10.3816	-2.5732	0.0562
Ncim	21	19	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.6421	-7.0292	65.5121	10.1445	-2.6391	-0.0122	194.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.6421	-7.0292	65.5121	10.1445	-2.6391	-0.0122
Ncim	21	19	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	1.8327	-6.8284	65.4727	10.5363	2.9433	0.1081	194.2 1.2D + 1L + (100Sy - 30Sx)Max	1.8327	-6.8284	65.4727	10.5363	2.9433	0.1081
Ncim	21	19	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	1.7424	-7.1257	65.2741	10.0727	2.8144	-0.0258	194.2 1.2D + 1L + (100Sy - 30Sx)Min	1.7424	-7.1257	65.2741	10.0727	2.8144	-0.0258
Ncim	21	19	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	1.8084	5.4308	74.0438	-8.9552	2.9178	0.0313	194.3 1.2D + 1L - (100Sy + 30Sx)Max	1.8084	5.4308	74.0438	-8.9552	2.9178	0.0313
Ncim	21	19	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	1.7622	5.2787	73.9422	-9.1923	2.8519	-0.0372	194.3 1.2D + 1L - (100Sy + 30Sx)Min	1.7622	5.2787	73.9422	-9.1923	2.8519	-0.0372
Ncim	21	19	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.5761	5.5272	74.2818	-8.8834	-2.5356	0.0448	194.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.5761	5.5272	74.2818	-8.8834	-2.5356	0.0448
Ncim	21	19	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.6664	5.2299	74.0832	-9.347	-2.6645	-0.089	194.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.6664	5.2299	74.0832	-9.347	-2.6645	-0.089
Ncim	21	19	4.5 1.2D + 1L + Ey	Combination	Max	0.3362	4.5959	73.4824	9.0633	0.5466	0.0917	194.5 1.2D + 1L + EyMax	0.3362	4.5959	73.4824	9.0633	0.5466	0.0917
Ncim	21	19	4.5 1.2D + 1L + Ey	Combination	Min	-0.1699	-6.1944	66.0735	-7.874	-0.2678	-0.0727	194.5 1.2D + 1L + EyMin	-0.1699	-6.1944	66.0735	-7.874	-0.2678	-0.0727
Ncim	21	19	4.6 1.2D + 1L - Ey	Combination	Max	0.3362	4.5959	73.4824	9.0633	0.5466	0.0917	194.6 1.2D + 1L - EyMax	0.3362	4.5959	73.4824	9.0633	0.5466	0.0917
Ncim	21	19	4.6 1.2D + 1L - Ey	Combination	Min	-0.1699	-6.1944	66.0735	-7.874	-0.2678	-0.0727	194.6 1.2D + 1L - EyMin	-0.1699	-6.1944	66.0735	-7.874	-0.2678	-0.0727
Ncim	21	19	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-5.589	-2.2676	46.6268	3.388	-9.0065	0.0199	195.1 0.9D + (100Sx + 30Sy)Max	-5.589	-2.2676	46.6268	3.388	-9.0065	0.0199
Ncim	21	19	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-5.642	-2.4423	46.5101	3.1155	-9.0822	-0.0588	195.1 0.9D + (100Sx + 30Sy)Min	-5.642	-2.4423	46.5101	3.1155	-9.0822	-0.0588
Ncim	21	19	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-5.5692	1.4994	49.2577	-2.3204	-8.9754	0.037	195.2 0.9D + (100Sx - 30Sy)Max	-5.5692	1.4994	49.2577	-2.3204	-8.9754	0.037
Ncim	21	19	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-5.6632	1.1898	49.0509	-2.8031	-9.1096	-0.1023	195.2 0.9D + (100Sx - 30Sy)Min	-5.6632	1.1898	49.0509	-2.8031	-9.1096	-0.1023
Ncim	21	19	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	5.7655	1.3525	48.581	-2.2873	9.2785	0.0705	195.3 0.9D - (100Sx + 30Sy)Max	5.7655	1.3525	48.581	-2.2873	9.2785	0.0705
Ncim	21	19	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	5.7125	1.1778	48.4643	-2.5597	9.2027	-0.0082	195.3 0.9D - (100Sx + 30Sy)Min	5.7125	1.1778	48.4643	-2.5597	9.2027	-0.0082
Ncim	21	19	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	5.7867	-2.2796	46.0401	3.6313	9.3059	0.1141	195.4 0.9D - (100Sx - 30Sy)Max	5.7867	-2.2796	46.0401	3.6313	9.3059	0.1141
Ncim	21	19	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	5.6927	-2.5891	45.8333	3.1486	9.1717	-0.0253	195.4 0.9D - (100Sx - 30Sy)Min	5.6927	-2.5891	45.8333	3.1486	9.1717	-0.0253
Ncim	21	19	5.5 0.9D + Ex	Combination	Max	4.97	-0.301	47.8417	0.7929	7.9874	0.1138	195.5 0.9D + ExMax	4.97	-0.301	47.8417	0.7929	7.9874	0.1138
Ncim	21	19	5.5 0.9D + Ex	Combination	Min	-4.8465	-0.7887	47.2494	0.0353	-7.7911	-0.1021	195.5 0.9D + ExMin	-4.8465	-0.7887	47.2494	0.0353	-7.7911	-0.1021
Ncim	21	19	5.6 0.9D - Ex	Combination	Max	4.97	-0.301	47.8417	0.7929	7.9874	0.1138	195.6 0.9D - ExMax	4.97	-0.301	47.8417	0.7929	7.9874	0.1138
Ncim	21	19	5.6 0.9D - Ex	Combination	Min	-4.8465	-0.7887	47.2494	0.0353	-7.7911	-0.1021	195.6 0.9D - ExMin	-4.8465	-0.7887	47.2494	0.0353	-7.7911	-0.1021
Ncim	21	19	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.6173	-6.6228	43.3813	10.201	-2.6144	0.0526	196.1 0.9D + (100Sy + 30Sx)Max	-1.6173	-6.6228	43.3813	10.201	-2.6144	0.0526
Ncim	21	19	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.6635	-6.7749	43.2797	9.964	-2.6803	-0.0159	196.1 0.9D + (100Sy + 30Sx)Min	-1.6635	-6.7749	43.2797	9.964	-2.6803	-0.0159
Ncim	21	19	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	1.8113	-6.574	43.2403	10.3558	2.902	0.1044	196.2 0.9D + (100Sy - 30Sx)Max	1.8113	-6.574	43.2403	10.3558	2.902	0.1044
Ncim	21	19	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	1.721	-6.8713	43.0417	9.8922	2.7731	-0.0295	196.2 0.9D + (100Sy - 30Sx)Min	1.721	-6.8713	43.0417	9.8922	2.7731	-0.0295
Ncim	21	19	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.787	5.6851	51.8114	-9.1358	2.8766	0.0276	196.3 0.9D - (100Sy + 30Sx)Max	1.787	5.6851	51.8114	-9.1358	2.8766	0.0276
Ncim	21	19	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.7408	5.5331	51.7098	-9.3728	2.8107	-0.0408	196.3 0.9D - (100Sy + 30Sx)Min	1.7408	5.5331	51.7098	-9.3728	2.8107	-0.0408
Ncim	21	19	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.5975	5.7816	52.0494	-9.064	-2.5769	0.0412	196.4 0.9D - (100Sy - 30Sx)Max	-1.5975	5.7816	52.0494	-9.064	-2.5769	0.0412
Ncim	21	19	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.6878	5.4843	51.8508	-9.5276	-2.7058	-0.0927	196.4 0.9D - (100Sy - 30Sx)Min	-1.6878	5.4843	51.8508	-9.5276	-2.7058	-0.0927
Ncim	21	19	6.5 0.9D + Ey	Combination	Max	0.3148	4.8503	51.25	8.8828	0.5053	0.0881	196.5 0.9D + EyMax	0.3148	4.8503	51.25	8.8828	0.5053	0.0881
Ncim	21	19	6.5 0.9D + Ey	Combination	Min	-0.1913	-5.94	43.8411	-8.0545	-0.309	-0.0763	196.5 0.9D + EyMin	-0.1913	-5.94	43.8411	-8.0545	-0.309	-0.0763
Ncim	21	19	6.6 0.9D - Ey	Combination	Max	0.3148	4.8503	51.25	8.8828	0.5053	0.0881	196.6 0.9D - EyMax	0.3148	4.8503	51.25	8.8828	0.5053	0.0881
Ncim	21	19	6.6 0.9D - Ey	Combination	Min	-0.1913	-5.94	43.8411	-8.0545	-0.309	-0.0763	196.6 0.9D - EyMin	-0.1913	-5.94	43.8411	-8.0545	-0.309	-0.0763
Ncim	21	19	3.3 1.2D + 1L -1	Combination	Max	5.7869	1.0982	70.8134	-2.1068	9.3197	0.0741	193.3 1.2D + 1L -1Max	5.7869	1.0982	70.8134	-2.1068	9.3197	0.0741
Ncim	21	19	3.3 1.2D + 1L -1	Combination	Min	5.7339	0.9234	70.6967	-2.3792	9.244	-0.0045	193.3 1.2D + 1L -1Min	5.7339	0.9234	70.6967	-2.3792	9.244	-0.0045
Ncim	21	19	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.596	-6.8772	65.6137	10.3816	-2.5732	0.0562	194.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.596	-6.8772	65.6137	10.3816	-2.5732	0.0562
Ncim	21	19	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.6421	-7.0292	65.5121	10.1445	-2.6391	-0.0122	194.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.6421	-7.0292	65.5121	10.1445	-2.6391	-0.0122
Ncim	21	19	0. 1D + 1L + sxST	Combination	Max	-5.5706	-0.5901	65.9929	0.6648	-8.963	0.0325	190. 1D + 1L + sxSTMax	-5.5706	-0.5901	65.9929	0.6648	-8.963	0.0325
Ncim	21	19	0. 1D + 1L + sxST	Combination	Min	-5.6441	-0.8323	65.8311	0.2872	-9.0679	-0.0765	190. 1D + 1L + sxSTMin	-5.6441	-0.8323	65.8311	0.2872	-9.0679	-0.0765
Ncim	21	19	0. 1D + 1L + syST	Combination	Max	0.1054	-6.8045	61.3614	10.4094	0.1718	0.0825	190. 1D + 1L + sySTMax	0.1054	-6.8045	61.3614	10.4094	0.1718	0.0825
Ncim	21	19	0. 1D + 1L + syST	Combination	Min	0.0372	-7.0291	61.2113	10.0591	0.0744	-0.0186	190. 1D + 1L + sySTMin	0.0372	-7.0291	61.2113	10.0591	0.0744	-0.0186
Ncim	21	19	0. 1D + 1L + sxDN	Combination	Max	4.9785	-0.507	65.8923	0.9239	8.0154	0.1179	190. 1D + 1L + sxDNMax	4.9785	-0.507	65.8923	0.9239	8.0154	0.1179
Ncim	21	19	0. 1D + 1L + sxDN	Combination	Min	-4.8381	-0.9948	65.3	0.1663	-7.7631	-0.0981	190. 1D + 1L + sxDNMin	-4.8381	-0.9948	65.3	0.1663	-7.7631	-0.0981
Ncim	21	19	0. 1D + 1L + syDN	Combination	Max	0.3233	4.6443	69.3006	9.0138	0.5333	0.0921	190. 1D + 1L + syDNMax	0.3233	4.6443	69.3006	9.0138	0.5333	0.0921
Ncim	21	19	0. 1D + 1L + syDN	Combination	Min	-0.1828	-6.1461	61.8917	-7.9235	-0.2811	-0.0723	190. 1D + 1L + syDNMin	-0.1828	-6.1461	61.8917	-7.9235	-0.2811	-0.0723

Ncim	22	20	0. 1D	Combination		0.061	1.0416	54.0526	-1.1609	0.0836	0.0065		200. 1D	0.061	1.0416	54.0526	-1.1609	0.0836	0.0065
Ncim	22	20	0. 1D + 1L	Combination		0.0589	1.3657	65.4951	-1.5381	0.0876	0.0099		200. 1D + 1L	0.0589	1.3657	65.4951	-1.5381	0.0876	0.0099
Ncim	22	20	0. 1L	Combination		-0.0022	0.3241	11.4425	-0.3771	0.004	0.0034		200. 1L	-0.0022	0.3241	11.4425	-0.3771	0.004	0.0034
Ncim	22	20	1. 1.4D	Combination		0.0854	1.4583	75.6736	-1.6253	0.117	0.0091		201. 1.4D	0.0854	1.4583	75.6736	-1.6253	0.117	0.0091
Ncim	22	20	2. 1.2D + 1.6L + 0.5Lr	Combination		0.0724	1.7909	85.5902	-2.019	0.1095	0.0133		202. 1.2D + 1.6L + 0.5Lr	0.0724	1.7909	85.5902	-2.019	0.1095	0.0133
Ncim	22	20	2. 1.2D + 1.6Lr + L	Combination		0.0806	1.4838	78.3256	-1.6537	0.1113	0.0098		202. 1.2D + 1.6Lr + L	0.0806	1.4838	78.3256	-1.6537	0.1113	0.0098
Ncim	22	20	2. 1.2D + 1L + 0.5Lr	Combination		0.0748	1.4344	73.0035	-1.6042	0.1051	0.0096		202. 1.2D + 1L + 0.5Lr	0.0748	1.4344	73.0035	-1.6042	0.1051	0.0096
Ncim	22	20	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-5.2587	-0.0919	72.8226	1.1608	-8.5325	0.0236		203.1 1.2D + 1L + (100Sx + 30Sy)Max	-5.2587	-0.0919	72.8226	1.1608	-8.5325	0.0236
Ncim	22	20	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-5.5522	-0.2504	72.6443	0.9044	-9.0152	-0.0551		203.1 1.2D + 1L + (100Sx + 30Sy)Min	-5.5522	-0.2504	72.6443	0.9044	-9.0152	-0.0551
Ncim	22	20	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-5.0861	3.3131	68.7917	-4.2038	-8.2488	0.0407		203.2 1.2D + 1L + (100Sx - 30Sy)Max	-5.0861	3.3131	68.7917	-4.2038	-8.2488	0.0407
Ncim	22	20	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-5.606	3.0325	68.4759	-4.658	-9.1039	-0.0987		203.2 1.2D + 1L + (100Sx - 30Sy)Min	-5.606	3.0325	68.4759	-4.658	-9.1039	-0.0987
Ncim	22	20	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	5.6965	3.0743	68.5244	-4.0678	9.2197	0.0741		203.3 1.2D + 1L - (100Sx + 30Sy)Max	5.6965	3.0743	68.5244	-4.0678	9.2197	0.0741
Ncim	22	20	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	5.403	2.9159	68.3461	-4.3242	8.7371	-0.0045		203.3 1.2D + 1L - (100Sx + 30Sy)Min	5.403	2.9159	68.3461	-4.3242	8.7371	-0.0045
Ncim	22	20	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	5.7503	-0.2085	72.6928	1.4946	9.3084	0.1177		203.4 1.2D + 1L - (100Sx - 30Sy)Max	5.7503	-0.2085	72.6928	1.4946	9.3084	0.1177
Ncim	22	20	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	5.2304	-0.4891	72.377	1.0405	8.4534	-0.0217		203.4 1.2D + 1L - (100Sx - 30Sy)Min	5.2304	-0.4891	72.377	1.0405	8.4534	-0.0217
Ncim	22	20	3.5 1.2D + 1L + Ex	Combination	Max	4.6101	1.6389	70.8598	-1.2208	7.4436	0.1175		203.5 1.2D + 1L + ExMax	4.6101	1.6389	70.8598	-1.2208	7.4436	0.1175
Ncim	22	20	3.5 1.2D + 1L + Ex	Combination	Min	-4.4658	1.1851	70.3089	-1.9426	-7.239	-0.0984		203.5 1.2D + 1L + ExMin	-4.4658	1.1851	70.3089	-1.9426	-7.239	-0.0984
Ncim	22	20	3.6 1.2D + 1L - Ex	Combination	Max	4.6101	1.6389	70.8598	-1.2208	7.4436	0.1175		203.6 1.2D + 1L - ExMax	4.6101	1.6389	70.8598	-1.2208	7.4436	0.1175
Ncim	22	20	3.6 1.2D + 1L - Ex	Combination	Min	-4.4658	1.1851	70.3089	-1.9426	-7.239	-0.0984		203.6 1.2D + 1L - ExMin	-4.4658	1.1851	70.3089	-1.9426	-7.239	-0.0984
Ncim	22	20	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.5336	-4.0657	77.5245	7.6005	-2.4984	0.0562		204.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.5336	-4.0657	77.5245	7.6005	-2.4984	0.0562
Ncim	22	20	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.7889	-4.2035	77.3694	7.3774	-2.9184	-0.0122		204.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.7889	-4.2035	77.3694	7.3774	-2.9184	-0.0122
Ncim	22	20	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	1.8571	-4.0532	77.5391	7.7776	2.9986	0.1081		204.2 1.2D + 1L + (100Sy - 30Sx)Max	1.8571	-4.0532	77.5391	7.7776	2.9986	0.1081
Ncim	22	20	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	1.3578	-4.3227	77.2358	7.3413	2.1774	-0.0258		204.2 1.2D + 1L + (100Sy - 30Sx)Min	1.3578	-4.3227	77.2358	7.3413	2.1774	-0.0258
Ncim	22	20	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	1.9332	7.0275	63.7993	-10.5408	3.123	0.0313		204.3 1.2D + 1L - (100Sy + 30Sx)Max	1.9332	7.0275	63.7993	-10.5408	3.123	0.0313
Ncim	22	20	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	1.6779	6.8897	63.6442	-10.7638	2.703	-0.0372		204.3 1.2D + 1L - (100Sy + 30Sx)Min	1.6779	6.8897	63.6442	-10.7638	2.703	-0.0372
Ncim	22	20	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.2135	7.1467	63.9329	-10.5047	-1.9728	0.0448		204.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.2135	7.1467	63.9329	-10.5047	-1.9728	0.0448
Ncim	22	20	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.7128	6.8772	63.6296	-10.9409	-2.7941	-0.089		204.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.7128	6.8772	63.6296	-10.9409	-2.7941	-0.089
Ncim	22	20	4.5 1.2D + 1L + Ey	Combination	Max	0.5873	6.2914	76.465	6.3791	0.9385	0.0917		204.5 1.2D + 1L + EyMax	0.5873	6.2914	76.465	6.3791	0.9385	0.0917
Ncim	22	20	4.5 1.2D + 1L + Ey	Combination	Min	-0.443	-3.4674	64.7037	-9.5425	-0.734	-0.0727		204.5 1.2D + 1L + EyMin	-0.443	-3.4674	64.7037	-9.5425	-0.734	-0.0727
Ncim	22	20	4.6 1.2D + 1L - Ey	Combination	Max	0.5873	6.2914	76.465	6.3791	0.9385	0.0917		204.6 1.2D + 1L - EyMax	0.5873	6.2914	76.465	6.3791	0.9385	0.0917
Ncim	22	20	4.6 1.2D + 1L - Ey	Combination	Min	-0.443	-3.4674	64.7037	-9.5425	-0.734	-0.0727		204.6 1.2D + 1L - EyMin	-0.443	-3.4674	64.7037	-9.5425	-0.734	-0.0727
Ncim	22	20	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-5.2759	-0.5665	50.8856	1.6977	-8.5596	0.0199		205.1 0.9D + (100Sx + 30Sy)Max	-5.2759	-0.5665	50.8856	1.6977	-8.5596	0.0199
Ncim	22	20	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-5.5694	-0.7249	50.7073	1.4413	-9.0422	-0.0588		205.1 0.9D + (100Sx + 30Sy)Min	-5.5694	-0.7249	50.7073	1.4413	-9.0422	-0.0588
Ncim	22	20	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-5.1033	2.8386	46.8547	-3.667	-8.2759	0.037		205.2 0.9D + (100Sx - 30Sy)Max	-5.1033	2.8386	46.8547	-3.667	-8.2759	0.037
Ncim	22	20	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-5.6232	2.558	46.5388	-4.1212	-9.1309	-0.1023		205.2 0.9D + (100Sx - 30Sy)Min	-5.6232	2.558	46.5388	-4.1212	-9.1309	-0.1023
Ncim	22	20	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	5.6793	2.5998	46.5874	-3.5309	9.1927	0.0705		205.3 0.9D - (100Sx + 30Sy)Max	5.6793	2.5998	46.5874	-3.5309	9.1927	0.0705
Ncim	22	20	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	5.3858	2.4414	46.4091	-3.7873	8.71	-0.0082		205.3 0.9D - (100Sx + 30Sy)Min	5.3858	2.4414	46.4091	-3.7873	8.71	-0.0082
Ncim	22	20	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	5.733	-0.683	50.7558	2.0315	9.2814	0.1141		205.4 0.9D - (100Sx - 30Sy)Max	5.733	-0.683	50.7558	2.0315	9.2814	0.1141
Ncim	22	20	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	5.2132	-0.9637	50.44	1.5773	8.4263	-0.0253		205.4 0.9D - (100Sx - 30Sy)Min	5.2132	-0.9637	50.44	1.5773	8.4263	-0.0253
Ncim	22	20	5.5 0.9D + Ex	Combination	Max	4.5928	1.1644	48.9228	-0.6839	7.4165	0.1138		205.5 0.9D + ExMax	4.5928	1.1644	48.9228	-0.6839	7.4165	0.1138
Ncim	22	20	5.5 0.9D + Ex	Combination	Min	-4.483	0.7106	48.3719	-1.4058	-7.2661	-0.1021		205.5 0.9D + ExMin	-4.483	0.7106	48.3719	-1.4058	-7.2661	-0.1021
Ncim	22	20	5.6 0.9D - Ex	Combination	Max	4.5928	1.1644	48.9228	-0.6839	7.4165	0.1138		205.6 0.9D - ExMax	4.5928	1.1644	48.9228	-0.6839	7.4165	0.1138
Ncim	22	20	5.6 0.9D - Ex	Combination	Min	-4.483	0.7106	48.3719	-1.4058	-7.2661	-0.1021		205.6 0.9D - ExMin	-4.483	0.7106	48.3719	-1.4058	-7.2661	-0.1021
Ncim	22	20	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.5508	-4.5402	55.5875	8.1373	-2.5255	0.0526		206.1 0.9D + (100Sy + 30Sx)Max	-1.5508	-4.5402	55.5875	8.1373	-2.5255	0.0526
Ncim	22	20	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.8062	-4.6781	55.4324	7.9143	-2.9455	-0.0159		206.1 0.9D + (100Sy + 30Sx)Min	-1.8062	-4.6781	55.4324	7.9143	-2.9455	-0.0159
Ncim	22	20	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	1.8399	-4.5277	55.6021	8.3144	2.9716	0.1044		206.2 0.9D + (100Sy - 30Sx)Max	1.8399	-4.5277	55.6021	8.3144	2.9716	0.1044
Ncim	22	20	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	1.3406	-4.7972	55.2987	7.8782	2.1503	-0.0295		206.2 0.9D + (100Sy - 30Sx)Min	1.3406	-4.7972	55.2987	7.8782	2.1503	-0.0295
Ncim	22	20	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.916	6.553	41.8623	-10.0039	3.0959	0.0276		206.3 0.9D - (100Sy + 30Sx)Max	1.916	6.553	41.8623	-10.0039	3.0959	0.0276
Ncim	22	20	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.6607	6.4152	41.7072	-10.227	2.6759	-0.0408		206.3 0.9D - (100Sy + 30Sx)Min	1.6607	6.4152	41.7072	-10.227	2.6759	-0.0408
Ncim	22	20	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.2307	6.6722	41.9959	-9.9678	-1.9999	0.0412		206.4 0.9D - (100Sy - 30Sx)Max	-1.2307	6.6722	41.9959	-9.9678	-1.9999	0.0412
Ncim	22	20	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.73	6.4026	41.6926	-10.4041	-2.8211	-0.0927		206.4 0.9D - (100Sy - 30Sx)Min	-1.73	6.4026	41.6926	-10.4041	-2.8211	-0.0927
Ncim	22	20	6.5 0.9D + Ey	Combination	Max	0.5701	5.8169	54.528	6.916	0.9115	0.0881		206.5 0.9D + EyMax	0.5701	5.8169	54.528	6.916	0.9115	0.0881
Ncim	22	20	6.5 0.9D + Ey	Combination	Min	-0.4602	-3.9419	42.7667	-9.0056	-0.761	-0.0763		206.5 0.9D + EyMin	-0.4602	-3.9419	42.7667	-9.0056	-0.761	-0.0763
Ncim	22	20	6.6 0.9D - Ey	Combination	Max	0.5701	5.8169	54.528	6.916	0.9115	0.0881		206.6 0.9D - EyMax	0.5701	5.8169	54.528	6.916	0.9115	0.0881
Ncim	22	20	6.6 0.9D - Ey	Combination	Min	-0.4602	-3.9419	42.7667	-9.0056	-0.761	-0.0763		206.6 0.9D - EyMin	-0.4602	-3.9419	42.7667	-9.0056	-0.761	-0.0763
Ncim	22	20	3.3 1.2D + 1L -1	Combination	Max	5.6965	3.0743	68.5244	-4.0678	9.2197	0.0741		203.3 1.2D + 1L -1Max	5.6965	3.0743	68.5244	-4.0678	9.2197	0.0741
Ncim	22	20	3.3 1.2D + 1L -1	Combination	Min	5.403	2.9159	68.3461	-4.3242	8.7371	-0.0045		203.3 1.2D + 1L -1Min	5.403	2.9159	68.3461	-4.3242	8.7371	-0.0045
Ncim	22	20	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.5336	-4.0657	77.5245	7.6005	-2.4984	0.0562		204.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.5336	-4.0657	77.5245	7.6005	-2.4984	0.0562
Ncim	22	20	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.7889	-4.2035	77.3694	7.3774	-2.9184	-0.0122		204.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.7889	-4.2035	77.3694	7.3774	-2.9184	-0.0122
Ncim	22	20	0. 1D + 1L + sxST	Combination	Max	-5.1857	1.5643	65.7178	-1.4779	-8.4054	0.0325		200. 1D + 1L + sxSTMax	-5.1857	1.5643	65.7178	-1.4779	-8.4054	0.0325
Ncim	22	20	0. 1D + 1L + sxST	Combination	Min	-5.5924	1.3448	65.4708	-1.8332	-9.0742	-0.0765		200. 1D + 1L + sxSTMin	-5.5924	1.3448	65.4708	-1.8332	-9.0742	-0.0765
Ncim	22	20	0. 1D + 1L + syST	Combination	Max	0.1485	-4.1057	72.4425	7.7326	0.2354	0.0825		200. 1D + 1L + sySTMax	0.1485	-4.1057	72.4425	7.7326	0.2354	0.0825
Ncim	22	20	0. 1D + 1L + syST	Combination	Min	-0.2288	-4.3094	72.2133	7.403	-0.3852	-0.0186		200. 1D + 1L + sySTMin	-0.2288	-4.3094	72.2133	7.403	-0.3852	-0.0186
Ncim	22	20	0. 1D + 1L + sxDN	Combination	Max	4.5968	1.5926	65.7705	-1.1771	7.4289	0.1179		200. 1D + 1L + sxDNMax	4.5968	1.5926	65.7705	-1.1771	7.4289	0.1179
Ncim	22	20	0. 1D + 1L + sxDN	Combination	Min	-4.479	1.1388	65.2196	-1.899	-7.2538	-0.0981		200. 1D + 1L + sxDNMin	-4.479	1.1388	65.2196	-1.899	-7.2538	-0.0981
Ncim	22	20	0. 1D + 1L + syDN	Combination	Max	0.574	6.2451	71.3757	6.4227	0.9238	0.0921		200. 1D + 1L + syDNMax	0.574	6.2451	71.3757	6.4227	0.9238	0.0921
Ncim	22	20	0. 1D + 1L + syDN	Combination	Min	-0.4563	-3.5137	59.6144	-9.4989	-0.7487	-0.0723		200. 1D + 1L + syDNMin	-0.4563	-3.5137	59.6144	-9.4989	-0.7487	-0.0723

Ncim	24	21	0. 1D	Combination		-0.0249	-1.2059	40.3784	1.0564	-0.0358	0.0065	210. 1D	-0.0249	-1.2059	40.3784	1.0564	-0.0358	0.0065
Ncim	24	21	0. 1D + 1L	Combination		-0.0409	-1.5433	46.2374	1.3317	-0.0635	0.0099	210. 1D + 1L	-0.0409	-1.5433	46.2374	1.3317	-0.0635	0.0099
Ncim	24	21	0. 1L	Combination		-0.016	-0.3373	5.859	0.2753	-0.0277	0.0034	210. 1L	-0.016	-0.3373	5.859	0.2753	-0.0277	0.0034
Ncim	24	21	1. 1.4D	Combination		-0.0349	-1.6883	56.5298	1.4789	-0.0502	0.0091	211. 1.4D	-0.0349	-1.6883	56.5298	1.4789	-0.0502	0.0091
Ncim	24	21	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.0516	-2.0134	61.0174	1.734	-0.0837	0.0133	212. 1.2D + 1.6L + 0.5Lr	-0.0516	-2.0134	61.0174	1.734	-0.0837	0.0133
Ncim	24	21	2. 1.2D + 1.6Lr + L	Combination		-0.0254	-1.7006	61.5883	1.4877	-0.0455	0.0098	212. 1.2D + 1.6Lr + L	-0.0254	-1.7006	61.5883	1.4877	-0.0455	0.0098
Ncim	24	21	2. 1.2D + 1L + 0.5Lr	Combination		-0.034	-1.6423	54.5726	1.4311	-0.0533	0.0096	212. 1.2D + 1L + 0.5Lr	-0.034	-1.6423	54.5726	1.4311	-0.0533	0.0096
Ncim	24	21	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-4.0571	-2.7451	54.2204	3.7486	-7.0652	0.0236	213.1 1.2D + 1L + (100Sx + 30Sy)Max	-4.0571	-2.7451	54.2204	3.7486	-7.0652	0.0236
Ncim	24	21	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-4.8489	-2.8701	53.9031	3.5249	-8.4594	-0.0551	213.1 1.2D + 1L + (100Sx + 30Sy)Min	-4.8489	-2.8701	53.9031	3.5249	-8.4594	-0.0551
Ncim	24	21	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-3.58	-0.2917	50.8666	-0.7093	-6.2487	0.0407	213.2 1.2D + 1L + (100Sx - 30Sy)Max	-3.58	-0.2917	50.8666	-0.7093	-6.2487	0.0407
Ncim	24	21	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-4.9828	-0.513	50.3046	-1.1055	-8.7183	-0.0987	213.2 1.2D + 1L + (100Sx - 30Sy)Min	-4.9828	-0.513	50.3046	-1.1055	-8.7183	-0.0987
Ncim	24	21	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	4.7731	-0.3615	48.864	-0.7143	8.3457	0.0741	213.3 1.2D + 1L - (100Sx + 30Sy)Max	4.7731	-0.3615	48.864	-0.7143	8.3457	0.0741
Ncim	24	21	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	3.9813	-0.4865	48.5468	-0.9379	6.9516	-0.0045	213.3 1.2D + 1L - (100Sx + 30Sy)Min	3.9813	-0.4865	48.5468	-0.9379	6.9516	-0.0045
Ncim	24	21	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	4.907	-2.7186	52.4625	3.9161	8.6046	0.1177	213.4 1.2D + 1L - (100Sx - 30Sy)Max	4.907	-2.7186	52.4625	3.9161	8.6046	0.1177
Ncim	24	21	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	3.5042	-2.9399	51.9006	3.5199	6.135	-0.0217	213.4 1.2D + 1L - (100Sx - 30Sy)Min	3.5042	-2.9399	51.9006	3.5199	6.135	-0.0217
Ncim	24	21	3.5 1.2D + 1L + Ex	Combination	Max	3.3737	-1.4501	52.1851	1.7068	5.8907	0.1175	213.5 1.2D + 1L + ExMax	3.3737	-1.4501	52.1851	1.7068	5.8907	0.1175
Ncim	24	21	3.5 1.2D + 1L + Ex	Combination	Min	-3.4495	-1.7815	50.5821	1.1038	-6.0044	-0.0984	213.5 1.2D + 1L + ExMin	-3.4495	-1.7815	50.5821	1.1038	-6.0044	-0.0984
Ncim	24	21	3.6 1.2D + 1L - Ex	Combination	Max	3.3737	-1.4501	52.1851	1.7068	5.8907	0.1175	213.6 1.2D + 1L - ExMax	3.3737	-1.4501	52.1851	1.7068	5.8907	0.1175
Ncim	24	21	3.6 1.2D + 1L - Ex	Combination	Min	-3.4495	-1.7815	50.5821	1.1038	-6.0044	-0.0984	213.6 1.2D + 1L - ExMin	-3.4495	-1.7815	50.5821	1.1038	-6.0044	-0.0984
Ncim	24	21	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.2782	-5.5669	57.5972	9.064	-2.1848	0.0562	214.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.2782	-5.5669	57.5972	9.064	-2.1848	0.0562
Ncim	24	21	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.9671	-5.6756	57.3212	8.8694	-3.3978	-0.0122	214.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.9671	-5.6756	57.3212	8.8694	-3.3978	-0.0122
Ncim	24	21	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	1.6486	-5.5215	57.165	9.1813	2.9344	0.1081	214.2 1.2D + 1L + (100Sy - 30Sx)Max	1.6486	-5.5215	57.165	9.1813	2.9344	0.1081
Ncim	24	21	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	0.3012	-5.734	56.6252	8.8008	0.5623	-0.0258	214.2 1.2D + 1L + (100Sy - 30Sx)Min	0.3012	-5.734	56.6252	8.8008	0.5623	-0.0258
Ncim	24	21	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	1.8914	2.444	45.446	-6.0587	3.2841	0.0313	214.3 1.2D + 1L - (100Sy + 30Sx)Max	1.8914	2.444	45.446	-6.0587	3.2841	0.0313
Ncim	24	21	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	1.2024	2.3353	45.17	-6.2533	2.0711	-0.0372	214.3 1.2D + 1L - (100Sy + 30Sx)Min	1.2024	2.3353	45.17	-6.2533	2.0711	-0.0372
Ncim	24	21	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-0.377	2.5024	46.1419	-5.9901	-0.676	0.0448	214.4 1.2D + 1L - (100Sy - 30Sx)Max	-0.377	2.5024	46.1419	-5.9901	-0.676	0.0448
Ncim	24	21	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.7244	2.2899	45.6022	-6.3707	-3.0481	-0.089	214.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.7244	2.2899	45.6022	-6.3707	-3.0481	-0.089
Ncim	24	21	4.5 1.2D + 1L + Ey	Combination	Max	0.9729	1.9045	56.4691	8.0345	1.6884	0.0917	214.5 1.2D + 1L + EyMax	0.9729	1.9045	56.4691	8.0345	1.6884	0.0917
Ncim	24	21	4.5 1.2D + 1L + Ey	Combination	Min	-1.0487	-5.1361	46.298	-5.2238	-1.8021	-0.0727	214.5 1.2D + 1L + EyMin	-1.0487	-5.1361	46.298	-5.2238	-1.8021	-0.0727
Ncim	24	21	4.6 1.2D + 1L - Ey	Combination	Max	0.9729	1.9045	56.4691	8.0345	1.6884	0.0917	214.6 1.2D + 1L - EyMax	0.9729	1.9045	56.4691	8.0345	1.6884	0.0917
Ncim	24	21	4.6 1.2D + 1L - Ey	Combination	Min	-1.0487	-5.1361	46.298	-5.2238	-1.8021	-0.0727	214.6 1.2D + 1L - EyMin	-1.0487	-5.1361	46.298	-5.2238	-1.8021	-0.0727
Ncim	24	21	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-4.0416	-2.2147	39.1774	3.294	-7.0407	0.0199	215.1 0.9D + (100Sx + 30Sy)Max	-4.0416	-2.2147	39.1774	3.294	-7.0407	0.0199
Ncim	24	21	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-4.8334	-2.3396	38.8601	3.0703	-8.4348	-0.0588	215.1 0.9D + (100Sx + 30Sy)Min	-4.8334	-2.3396	38.8601	3.0703	-8.4348	-0.0588
Ncim	24	21	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-3.5646	0.2387	35.8236	-1.1639	-6.2241	0.037	215.2 0.9D + (100Sx - 30Sy)Max	-3.5646	0.2387	35.8236	-1.1639	-6.2241	0.037
Ncim	24	21	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-4.9673	0.0175	35.2616	-1.5601	-8.6937	-0.1023	215.2 0.9D + (100Sx - 30Sy)Min	-4.9673	0.0175	35.2616	-1.5601	-8.6937	-0.1023
Ncim	24	21	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	4.7886	0.1689	33.821	-1.1688	8.3703	0.0705	215.3 0.9D - (100Sx + 30Sy)Max	4.7886	0.1689	33.821	-1.1688	8.3703	0.0705
Ncim	24	21	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	3.9967	0.044	33.5038	-1.3925	6.9761	-0.0082	215.3 0.9D - (100Sx + 30Sy)Min	3.9967	0.044	33.5038	-1.3925	6.9761	-0.0082
Ncim	24	21	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	4.9224	-2.1881	37.4195	3.4616	8.6292	0.1141	215.4 0.9D - (100Sx - 30Sy)Max	4.9224	-2.1881	37.4195	3.4616	8.6292	0.1141
Ncim	24	21	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	3.5197	-2.4094	36.8576	3.0653	6.1596	-0.0253	215.4 0.9D - (100Sx - 30Sy)Min	3.5197	-2.4094	36.8576	3.0653	6.1596	-0.0253
Ncim	24	21	5.5 0.9D + Ex	Combination	Max	3.3891	-0.9197	37.1421	1.2522	5.9153	0.1138	215.5 0.9D + ExMax	3.3891	-0.9197	37.1421	1.2522	5.9153	0.1138
Ncim	24	21	5.5 0.9D + Ex	Combination	Min	-3.434	-1.251	35.5391	0.6493	-5.9798	-0.1021	215.5 0.9D + ExMin	-3.434	-1.251	35.5391	0.6493	-5.9798	-0.1021
Ncim	24	21	5.6 0.9D - Ex	Combination	Max	3.3891	-0.9197	37.1421	1.2522	5.9153	0.1138	215.6 0.9D - ExMax	3.3891	-0.9197	37.1421	1.2522	5.9153	0.1138
Ncim	24	21	5.6 0.9D - Ex	Combination	Min	-3.434	-1.251	35.5391	0.6493	-5.9798	-0.1021	215.6 0.9D - ExMin	-3.434	-1.251	35.5391	0.6493	-5.9798	-0.1021
Ncim	24	21	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.2627	-5.0365	42.5542	8.6094	-2.1602	0.0526	216.1 0.9D + (100Sy + 30Sx)Max	-1.2627	-5.0365	42.5542	8.6094	-2.1602	0.0526
Ncim	24	21	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.9517	-5.1452	42.2782	8.4148	-3.3732	-0.0159	216.1 0.9D + (100Sy + 30Sx)Min	-1.9517	-5.1452	42.2782	8.4148	-3.3732	-0.0159
Ncim	24	21	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	1.664	-4.9911	42.122	8.7268	2.959	0.1044	216.2 0.9D + (100Sy - 30Sx)Max	1.664	-4.9911	42.122	8.7268	2.959	0.1044
Ncim	24	21	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	0.3167	-5.2036	41.5822	8.3462	0.5869	-0.0295	216.2 0.9D + (100Sy - 30Sx)Min	0.3167	-5.2036	41.5822	8.3462	0.5869	-0.0295
Ncim	24	21	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.9068	2.9745	30.403	-6.5133	3.3087	0.0276	216.3 0.9D - (100Sy + 30Sx)Max	1.9068	2.9745	30.403	-6.5133	3.3087	0.0276
Ncim	24	21	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.2179	2.8658	30.127	-6.7079	2.0957	-0.0408	216.3 0.9D - (100Sy + 30Sx)Min	1.2179	2.8658	30.127	-6.7079	2.0957	-0.0408
Ncim	24	21	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-0.3616	3.0329	31.0989	-6.4447	-0.6514	0.0412	216.4 0.9D - (100Sy - 30Sx)Max	-0.3616	3.0329	31.0989	-6.4447	-0.6514	0.0412
Ncim	24	21	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.7089	2.8204	30.5592	-6.8253	-3.0235	-0.0927	216.4 0.9D - (100Sy - 30Sx)Min	-1.7089	2.8204	30.5592	-6.8253	-3.0235	-0.0927
Ncim	24	21	6.5 0.9D + Ey	Combination	Max	0.9884	2.4349	41.4261	7.5799	1.713	0.0881	216.5 0.9D + EyMax	0.9884	2.4349	41.4261	7.5799	1.713	0.0881
Ncim	24	21	6.5 0.9D + Ey	Combination	Min	-1.0332	-4.6056	31.255	-5.6784	-1.7775	-0.0763	216.5 0.9D + EyMin	-1.0332	-4.6056	31.255	-5.6784	-1.7775	-0.0763
Ncim	24	21	6.6 0.9D - Ey	Combination	Max	0.9884	2.4349	41.4261	7.5799	1.713	0.0881	216.6 0.9D - EyMax	0.9884	2.4349	41.4261	7.5799	1.713	0.0881
Ncim	24	21	6.6 0.9D - Ey	Combination	Min	-1.0332	-4.6056	31.255	-5.6784	-1.7775	-0.0763	216.6 0.9D - EyMin	-1.0332	-4.6056	31.255	-5.6784	-1.7775	-0.0763
Ncim	24	21	3.3 1.2D + 1L -1	Combination	Max	4.7731	-0.3615	48.864	-0.7143	8.3457	0.0741	213.3 1.2D + 1L -1Max	4.7731	-0.3615	48.864	-0.7143	8.3457	0.0741
Ncim	24	21	3.3 1.2D + 1L -1	Combination	Min	3.9813	-0.4865	48.5468	-0.9379	6.9516	-0.0045	213.3 1.2D + 1L -1Min	3.9813	-0.4865	48.5468	-0.9379	6.9516	-0.0045
Ncim	24	21	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.2782	-5.5669	57.5972	9.064	-2.1848	0.0562	214.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.2782	-5.5669	57.5972	9.064	-2.1848	0.0562
Ncim	24	21	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.9671	-5.6756	57.3212	8.8694	-3.3978	-0.0122	214.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.9671	-5.6756	57.3212	8.8694	-3.3978	-0.0122
Ncim	24	21	0. 1D + 1L + sxST	Combination	Max	-3.8216	-1.4459	47.3973	1.4461	-6.6636	0.0325	210. 1D + 1L + sxSTMax	-3.8216	-1.4459	47.3973	1.4461	-6.6636	0.0325
Ncim	24	21	0. 1D + 1L + sxST	Combination	Min	-4.9189	-1.619	46.9577	1.1361	-8.5955	-0.0765	210. 1D + 1L + sxSTMin	-4.9189	-1.619	46.9577	1.1361	-8.5955	-0.0765
Ncim	24	21	0. 1D + 1L + syST	Combination	Max	0.1822	-5.4717	52.2349	9.0491	0.3681	0.0825	210. 1D + 1L + sySTMax	0.1822	-5.4717	52.2349	9.0491	0.3681	0.0825
Ncim	24	21	0. 1D + 1L + syST	Combination	Min	-0.836	-5.6323	51.827	8.7615	-1.4244	-0.0186	210. 1D + 1L + sySTMin	-0.836	-5.6323	51.827	8.7615	-1.4244	-0.0186
Ncim	24	21	0. 1D + 1L + sxDN	Combination	Max	3.3707	-1.3776	47.0389	1.6332	5.884	0.1179	210. 1D + 1L + sxDNMax	3.3707	-1.3776	47.0389	1.6332	5.884	0.1179
Ncim	24	21	0. 1D + 1L + sxDN	Combination	Min	-3.4525	-1.709	45.4359	1.0302	-6.011	-0.0981	210. 1D + 1L + sxDNMin	-3.4525	-1.709	45.4359	1.0302	-6.011	-0.0981
Ncim	24	21	0. 1D + 1L + syDN	Combination	Max	0.9699	1.977	51.3229	7.9609	1.6817	0.0921	210. 1D + 1L + syDNMax	0.9699	1.977	51.3229	7.9609	1.6817	0.0921
Ncim	24	21	0. 1D + 1L + syDN	Combination	Min	-1.0517	-5.0636	41.1518	-5.2974	-1.8087	-0.0723	210. 1D + 1L + syDNMin	-1.0517	-5.0636	41.1518	-5.2974	-1.8087	-0.0723

Ncim	28	41	0. 1D	Combination		-0.0554	0.3325	73.3349	-0.5921	0.0687	0.0104	410. 1D	-0.0554	0.3325	73.3349	-0.5921	0.0687	0.0104
Ncim	28	41	0. 1D + 1L	Combination		-0.0684	0.2739	90.0595	-0.6537	0.1101	0.0159	410. 1D + 1L	-0.0684	0.2739	90.0595	-0.6537	0.1101	0.0159
Ncim	28	41	0. 1L	Combination		-0.013	-0.0586	16.7246	-0.0616	0.0414	0.0054	410. 1L	-0.013	-0.0586	16.7246	-0.0616	0.0414	0.0054
Ncim	28	41	1. 1.4D	Combination		-0.0776	0.4654	102.6689	-0.8289	0.0962	0.0146	411. 1.4D	-0.0776	0.4654	102.6689	-0.8289	0.0962	0.0146
Ncim	28	41	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.0804	0.3069	119.0997	-0.8122	0.1572	0.0214	412. 1.2D + 1.6L + 0.5Lr	-0.0804	0.3069	119.0997	-0.8122	0.1572	0.0214
Ncim	28	41	2. 1.2D + 1.6Lr + L	Combination		-0.0508	0.375	110.2472	-0.7512	0.1304	0.0158	412. 1.2D + 1.6Lr + L	-0.0508	0.375	110.2472	-0.7512	0.1304	0.0158
Ncim	28	41	2. 1.2D + 1L + 0.5Lr	Combination		-0.0661	0.3713	100.7026	-0.7444	0.1117	0.0154	412. 1.2D + 1L + 0.5Lr	-0.0661	0.3713	100.7026	-0.7444	0.1117	0.0154
Ncim	28	41	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-8.6648	-1.572	89.7082	3.7122	-13.8538	0.0378	413.1 1.2D + 1L + (100Sx + 30Sy)Max	-8.6648	-1.572	89.7082	3.7122	-13.8538	0.0378
Ncim	28	41	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-9.7862	-2.0345	88.4763	2.8233	-15.6693	-0.0883	413.1 1.2D + 1L + (100Sx + 30Sy)Min	-9.7862	-2.0345	88.4763	2.8233	-15.6693	-0.0883
Ncim	28	41	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-8.4438	2.3943	95.0256	-3.029	-13.4708	0.0652	413.2 1.2D + 1L + (100Sx - 30Sy)Max	-8.4438	2.3943	95.0256	-3.029	-13.4708	0.0652
Ncim	28	41	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-10.4303	1.5751	92.8433	-4.6037	-16.687	-0.1581	413.2 1.2D + 1L + (100Sx - 30Sy)Min	-10.4303	1.5751	92.8433	-4.6037	-16.687	-0.1581
Ncim	28	41	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	9.6402	2.7738	104.2521	-4.3059	15.8756	0.1188	413.3 1.2D + 1L - (100Sx + 30Sy)Max	9.6402	2.7738	104.2521	-4.3059	15.8756	0.1188
Ncim	28	41	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	8.5189	2.3114	103.0202	-5.1948	14.0601	-0.0073	413.3 1.2D + 1L - (100Sx + 30Sy)Min	8.5189	2.3114	103.0202	-5.1948	14.0601	-0.0073
Ncim	28	41	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	10.2843	-0.8358	99.8851	3.121	16.8933	0.1886	413.4 1.2D + 1L - (100Sx - 30Sy)Max	10.2843	-0.8358	99.8851	3.121	16.8933	0.1886
Ncim	28	41	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	8.2978	-1.6549	97.7028	1.5463	13.6772	-0.0347	413.4 1.2D + 1L - (100Sx - 30Sy)Min	8.2978	-1.6549	97.7028	1.5463	13.6772	-0.0347
Ncim	28	41	3.5 1.2D + 1L + Ex	Combination	Max	8.5668	1.2981	101.4881	0.9682	14.101	0.1882	413.5 1.2D + 1L + ExMax	8.5668	1.2981	101.4881	0.9682	14.101	0.1882
Ncim	28	41	3.5 1.2D + 1L + Ex	Combination	Min	-8.7128	-0.5588	91.2403	-2.4508	-13.8947	-0.1577	413.5 1.2D + 1L + ExMin	-8.7128	-0.5588	91.2403	-2.4508	-13.8947	-0.1577
Ncim	28	41	3.6 1.2D + 1L - Ex	Combination	Max	8.5668	1.2981	101.4881	0.9682	14.101	0.1882	413.6 1.2D + 1L - ExMax	8.5668	1.2981	101.4881	0.9682	14.101	0.1882
Ncim	28	41	3.6 1.2D + 1L - Ex	Combination	Min	-8.7128	-0.5588	91.2403	-2.4508	-13.8947	-0.1577	413.6 1.2D + 1L - ExMin	-8.7128	-0.5588	91.2403	-2.4508	-13.8947	-0.1577
Ncim	28	41	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-2.0102	-5.8261	87.3745	11.5922	-3.0851	0.0901	414.1 1.2D + 1L + (100Sy + 30Sx)Max	-2.0102	-5.8261	87.3745	11.5922	-3.0851	0.0901
Ncim	28	41	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-2.9859	-6.2284	86.3027	10.8188	-4.6647	-0.0196	414.1 1.2D + 1L + (100Sy + 30Sx)Min	-2.9859	-6.2284	86.3027	10.8188	-4.6647	-0.0196
Ncim	28	41	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	4.0109	-5.4665	90.7972	11.6815	6.6836	0.1731	414.2 1.2D + 1L + (100Sy - 30Sx)Max	4.0109	-5.4665	90.7972	11.6815	6.6836	0.1731
Ncim	28	41	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	2.1029	-6.2533	88.7011	10.1691	3.5946	-0.0413	414.2 1.2D + 1L + (100Sy - 30Sx)Min	2.1029	-6.2533	88.7011	10.1691	3.5946	-0.0413
Ncim	28	41	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	2.8399	6.9677	106.4257	-12.3015	4.871	0.0501	414.3 1.2D + 1L - (100Sy + 30Sx)Max	2.8399	6.9677	106.4257	-12.3015	4.871	0.0501
Ncim	28	41	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	1.8642	6.5654	105.3539	-13.0749	3.2915	-0.0596	414.3 1.2D + 1L - (100Sy + 30Sx)Min	1.8642	6.5654	105.3539	-13.0749	3.2915	-0.0596
Ncim	28	41	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-2.2489	6.9926	104.0274	-11.6517	-3.3882	0.0718	414.4 1.2D + 1L - (100Sy - 30Sx)Max	-2.2489	6.9926	104.0274	-11.6517	-3.3882	0.0718
Ncim	28	41	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-4.1569	6.2058	101.9313	-13.1642	-6.4773	-0.1426	414.4 1.2D + 1L - (100Sy - 30Sx)Min	-4.1569	6.2058	101.9313	-13.1642	-6.4773	-0.1426
Ncim	28	41	4.5 1.2D + 1L + Ey	Combination	Max	0.9672	5.657	102.8647	9.1078	1.7611	0.1469	414.5 1.2D + 1L + EyMax	0.9672	5.657	102.8647	9.1078	1.7611	0.1469
Ncim	28	41	4.5 1.2D + 1L + Ey	Combination	Min	-1.1132	-4.9176	89.8637	-10.5905	-1.5547	-0.1164	414.5 1.2D + 1L + EyMin	-1.1132	-4.9176	89.8637	-10.5905	-1.5547	-0.1164
Ncim	28	41	4.6 1.2D + 1L - Ey	Combination	Max	0.9672	5.657	102.8647	9.1078	1.7611	0.1469	414.6 1.2D + 1L - EyMax	0.9672	5.657	102.8647	9.1078	1.7611	0.1469
Ncim	28	41	4.6 1.2D + 1L - Ey	Combination	Min	-1.1132	-4.9176	89.8637	-10.5905	-1.5547	-0.1164	414.6 1.2D + 1L - EyMin	-1.1132	-4.9176	89.8637	-10.5905	-1.5547	-0.1164
Ncim	28	41	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-8.6417	-1.6425	59.3454	3.9206	-13.8951	0.0319	415.1 0.9D + (100Sx + 30Sy)Max	-8.6417	-1.6425	59.3454	3.9206	-13.8951	0.0319
Ncim	28	41	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-9.7631	-2.1049	58.1135	3.0317	-15.7106	-0.0941	415.1 0.9D + (100Sx + 30Sy)Min	-9.7631	-2.1049	58.1135	3.0317	-15.7106	-0.0941
Ncim	28	41	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-8.4206	2.3238	64.6628	-2.8206	-13.5121	0.0593	415.2 0.9D + (100Sx - 30Sy)Max	-8.4206	2.3238	64.6628	-2.8206	-13.5121	0.0593
Ncim	28	41	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-10.4071	1.5046	62.4806	-4.3952	-16.7283	-0.1639	415.2 0.9D + (100Sx - 30Sy)Min	-10.4071	1.5046	62.4806	-4.3952	-16.7283	-0.1639
Ncim	28	41	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	9.6634	2.7033	73.8893	-4.0975	15.8343	0.1129	415.3 0.9D - (100Sx + 30Sy)Max	9.6634	2.7033	73.8893	-4.0975	15.8343	0.1129
Ncim	28	41	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	8.542	2.2409	72.6574	-4.9864	14.0188	-0.0131	415.3 0.9D - (100Sx + 30Sy)Min	8.542	2.2409	72.6574	-4.9864	14.0188	-0.0131
Ncim	28	41	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	10.3074	-0.9062	69.5223	3.3294	16.852	0.1827	415.4 0.9D - (100Sx - 30Sy)Max	10.3074	-0.9062	69.5223	3.3294	16.852	0.1827
Ncim	28	41	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	8.3209	-1.7254	67.34	1.7548	13.6359	-0.0405	415.4 0.9D - (100Sx - 30Sy)Min	8.3209	-1.7254	67.34	1.7548	13.6359	-0.0405
Ncim	28	41	5.5 0.9D + Ex	Combination	Max	8.5899	1.2277	71.1253	1.1766	14.0597	0.1823	415.5 0.9D + ExMax	8.5899	1.2277	71.1253	1.1766	14.0597	0.1823
Ncim	28	41	5.5 0.9D + Ex	Combination	Min	-8.6897	-0.6293	60.8775	-2.2424	-13.936	-0.1635	415.5 0.9D + ExMin	-8.6897	-0.6293	60.8775	-2.2424	-13.936	-0.1635
Ncim	28	41	5.6 0.9D - Ex	Combination	Max	8.5899	1.2277	71.1253	1.1766	14.0597	0.1823	415.6 0.9D - ExMax	8.5899	1.2277	71.1253	1.1766	14.0597	0.1823
Ncim	28	41	5.6 0.9D - Ex	Combination	Min	-8.6897	-0.6293	60.8775	-2.2424	-13.936	-0.1635	415.6 0.9D - ExMin	-8.6897	-0.6293	60.8775	-2.2424	-13.936	-0.1635
Ncim	28	41	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.9871	-5.8965	57.0117	11.8006	-3.1264	0.0842	416.1 0.9D + (100Sy + 30Sx)Max	-1.9871	-5.8965	57.0117	11.8006	-3.1264	0.0842
Ncim	28	41	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-2.9627	-6.2989	55.9399	11.0272	-4.706	-0.0255	416.1 0.9D + (100Sy + 30Sx)Min	-2.9627	-6.2989	55.9399	11.0272	-4.706	-0.0255
Ncim	28	41	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	4.0341	-5.5369	60.4344	11.89	6.6423	0.1673	416.2 0.9D + (100Sy - 30Sx)Max	4.0341	-5.5369	60.4344	11.89	6.6423	0.1673
Ncim	28	41	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	2.126	-6.3237	58.3383	10.3775	3.5533	-0.0472	416.2 0.9D + (100Sy - 30Sx)Min	2.126	-6.3237	58.3383	10.3775	3.5533	-0.0472
Ncim	28	41	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	2.863	6.8973	76.0629	-12.093	4.8297	0.0443	416.3 0.9D - (100Sy + 30Sx)Max	2.863	6.8973	76.0629	-12.093	4.8297	0.0443
Ncim	28	41	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.8873	6.495	74.9911	-12.8664	3.2502	-0.0654	416.3 0.9D - (100Sy + 30Sx)Min	1.8873	6.495	74.9911	-12.8664	3.2502	-0.0654
Ncim	28	41	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-2.2258	6.9222	73.6646	-11.4433	-3.4295	0.066	416.4 0.9D - (100Sy - 30Sx)Max	-2.2258	6.9222	73.6646	-11.4433	-3.4295	0.066
Ncim	28	41	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-4.1338	6.1353	71.5685	-12.9557	-6.5186	-0.1485	416.4 0.9D - (100Sy - 30Sx)Min	-4.1338	6.1353	71.5685	-12.9557	-6.5186	-0.1485
Ncim	28	41	6.5 0.9D + Ey	Combination	Max	0.9904	5.5865	72.5019	9.3162	1.7198	0.1411	416.5 0.9D + EyMax	0.9904	5.5865	72.5019	9.3162	1.7198	0.1411
Ncim	28	41	6.5 0.9D + Ey	Combination	Min	-1.0901	-4.9881	59.5009	-10.382	-1.596	-0.1223	416.5 0.9D + EyMin	-1.0901	-4.9881	59.5009	-10.382	-1.596	-0.1223
Ncim	28	41	6.6 0.9D - Ey	Combination	Max	0.9904	5.5865	72.5019	9.3162	1.7198	0.1411	416.6 0.9D - EyMax	0.9904	5.5865	72.5019	9.3162	1.7198	0.1411
Ncim	28	41	6.6 0.9D - Ey	Combination	Min	-1.0901	-4.9881	59.5009	-10.382	-1.596	-0.1223	416.6 0.9D - EyMin	-1.0901	-4.9881	59.5009	-10.382	-1.596	-0.1223
Ncim	28	41	3.3 1.2D + 1L -1	Combination	Max	9.6402	2.7738	104.2521	-4.3059	15.8756	0.1188	413.3 1.2D + 1L -1Max	9.6402	2.7738	104.2521	-4.3059	15.8756	0.1188
Ncim	28	41	3.3 1.2D + 1L -1	Combination	Min	8.5189	2.3114	103.0202	-5.1948	14.0601	-0.0073	413.3 1.2D + 1L -1Min	8.5189	2.3114	103.0202	-5.1948	14.0601	-0.0073
Ncim	28	41	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-2.0102	-5.8261	87.3745	11.5922	-3.0851	0.0901	414.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-2.0102	-5.8261	87.3745	11.5922	-3.0851	0.0901
Ncim	28	41	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-2.9859	-6.2284	86.3027	10.8188	-4.6647	-0.0196	414.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-2.9859	-6.2284	86.3027	10.8188	-4.6647	-0.0196
Ncim	28	41	0. 1D + 1L + sxST	Combination	Max	-8.5497	0.3153	86.0623	0.4292	-13.6554	0.0521	410. 1D + 1L + sxSTMax	-8.5497	0.3153	86.0623	0.4292	-13.6554	0.0521
Ncim	28	41	0. 1D + 1L + sxST	Combination	Min	-10.1037	-0.3255	84.3552	-0.8026	-16.1712	-0.1226	410. 1D + 1L + sxSTMin	-10.1037	-0.3255	84.3552	-0.8026	-16.1712	-0.1226
Ncim	28	41	0. 1D + 1L + syST	Combination	Max	1.005	-5.742	82.7812	11.7245	1.8062	0.1322	410. 1D + 1L + sySTMax	1.005	-5.742	82.7812	11.7245	1.8062	0.1322
Ncim	28	41	0. 1D + 1L + syST	Combination	Min	-0.4369	-6.3366	81.1972	10.5815	-0.5281	-0.0299	410. 1D + 1L + sySTMin	-0.4369	-6.3366	81.1972	10.5815	-0.5281	-0.0299
Ncim	28	41	0. 1D + 1L + sxDN	Combination	Max	8.5714	1.2024	95.1835	1.0558	14.108	0.1888	410. 1D + 1L + sxDNMax	8.5714	1.2024	95.1835	1.0558	14.108	0.1888
Ncim	28	41	0. 1D + 1L + sxDN	Combination	Min	-8.7082	-0.6546	84.9356	-2.3632	-13.8878	-0.1571	410. 1D + 1L + sxDNMin	-8.7082	-0.6546	84.9356	-2.3632	-13.8878	-0.1571
Ncim	28	41	0. 1D + 1L + syDN	Combination	Max	0.9718	5.5612	96.56	9.1954	1.768	0.1475	410. 1D + 1L + syDNMax	0.9718	5.5612	96.56	9.1954	1.768	0.1475
Ncim	28	41	0. 1D + 1L + syDN	Combination	Min	-1.1087	-5.0134	83.5591	-10.5029	-1.5478	-0.1158	410. 1D + 1L + syDNMin	-1.1087	-5.0134	83.5591	-10.5029	-1.5478	-0.1158

Ncim	29	45	0. 1D	Combination		-0.0382	-0.6448	44.8499	0.468	0.0039	0.0065	450. 1D	-0.0382	-0.6448	44.8499	0.468	0.0039	0.0065
Ncim	29	45	0. 1D + 1L	Combination		-0.0373	-0.7965	53.102	0.5431	0.0203	0.0099	450. 1D + 1L	-0.0373	-0.7965	53.102	0.5431	0.0203	0.0099
Ncim	29	45	0. 1L	Combination		0.001	-0.1517	8.2522	0.0751	0.0164	0.0034	450. 1L	0.001	-0.1517	8.2522	0.0751	0.0164	0.0034
Ncim	29	45	1. 1.4D	Combination		-0.0535	-0.9028	62.7898	0.6552	0.0054	0.0091	451. 1.4D	-0.0535	-0.9028	62.7898	0.6552	0.0054	0.0091
Ncim	29	45	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.0322	-1.019	69.5217	0.6832	0.0434	0.0133	452. 1.2D + 1.6L + 0.5Lr	-0.0322	-1.019	69.5217	0.6832	0.0434	0.0133
Ncim	29	45	2. 1.2D + 1.6Lr + L	Combination		-0.0066	-0.8576	65.9407	0.6041	0.0527	0.0098	452. 1.2D + 1.6Lr + L	-0.0066	-0.8576	65.9407	0.6041	0.0527	0.0098
Ncim	29	45	2. 1.2D + 1L + 0.5Lr	Combination		-0.0333	-0.8521	60.4443	0.6007	0.0253	0.0096	452. 1.2D + 1L + 0.5Lr	-0.0333	-0.8521	60.4443	0.6007	0.0253	0.0096
Ncim	29	45	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-5.6957	-2.6229	54.7606	4.0917	-9.0913	0.0236	453.1 1.2D + 1L + (100Sx + 30Sy)Max	-5.6957	-2.6229	54.7606	4.0917	-9.0913	0.0236
Ncim	29	45	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-5.7534	-3.0648	54.4411	3.3842	-9.1716	-0.0551	453.1 1.2D + 1L + (100Sx + 30Sy)Min	-5.7534	-3.0648	54.4411	3.3842	-9.1716	-0.0551
Ncim	29	45	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-5.6438	1.0686	56.9126	-1.2106	-9.0287	0.0407	453.2 1.2D + 1L + (100Sx - 30Sy)Max	-5.6438	1.0686	56.9126	-1.2106	-9.0287	0.0407
Ncim	29	45	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-5.746	0.2858	56.3466	-2.4639	-9.171	-0.0987	453.2 1.2D + 1L + (100Sx - 30Sy)Min	-5.746	0.2858	56.3466	-2.4639	-9.171	-0.0987
Ncim	29	45	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	5.6626	1.3655	61.4508	-2.1859	9.1973	0.0741	453.3 1.2D + 1L - (100Sx + 30Sy)Max	5.6626	1.3655	61.4508	-2.1859	9.1973	0.0741
Ncim	29	45	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	5.6049	0.9236	61.1313	-2.8934	9.117	-0.0045	453.3 1.2D + 1L - (100Sx + 30Sy)Min	5.6049	0.9236	61.1313	-2.8934	9.117	-0.0045
Ncim	29	45	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	5.6552	-1.9851	59.5452	3.6621	9.1968	0.1177	453.4 1.2D + 1L - (100Sx - 30Sy)Max	5.6552	-1.9851	59.5452	3.6621	9.1968	0.1177
Ncim	29	45	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	5.553	-2.7679	58.9792	2.4088	9.0545	-0.0217	453.4 1.2D + 1L - (100Sx - 30Sy)Min	5.553	-2.7679	58.9792	2.4088	9.0545	-0.0217
Ncim	29	45	3.5 1.2D + 1L + Ex	Combination	Max	4.8558	0.0008	60.1978	1.9371	7.8951	0.1175	453.5 1.2D + 1L + ExMax	4.8558	0.0008	60.1978	1.9371	7.8951	0.1175
Ncim	29	45	3.5 1.2D + 1L + Ex	Combination	Min	-4.9466	-1.7001	55.694	-0.7389	-7.8694	-0.0984	453.5 1.2D + 1L + ExMin	-4.9466	-1.7001	55.694	-0.7389	-7.8694	-0.0984
Ncim	29	45	3.6 1.2D + 1L - Ex	Combination	Max	4.8558	0.0008	60.1978	1.9371	7.8951	0.1175	453.6 1.2D + 1L - ExMax	4.8558	0.0008	60.1978	1.9371	7.8951	0.1175
Ncim	29	45	3.6 1.2D + 1L - Ex	Combination	Min	-4.9466	-1.7001	55.694	-0.7389	-7.8694	-0.0984	453.6 1.2D + 1L - ExMin	-4.9466	-1.7001	55.694	-0.7389	-7.8694	-0.0984
Ncim	29	45	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.7689	-6.596	54.0044	10.3042	-2.7433	0.0562	454.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.7689	-6.596	54.0044	10.3042	-2.7433	0.0562
Ncim	29	45	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.8191	-6.9805	53.7264	9.6886	-2.8132	-0.0122	454.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.8191	-6.9805	53.7264	9.6886	-2.8132	-0.0122
Ncim	29	45	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	1.6537	-6.2721	55.5357	10.3876	2.7672	0.1081	454.2 1.2D + 1L + (100Sy - 30Sx)Max	1.6537	-6.2721	55.5357	10.3876	2.7672	0.1081
Ncim	29	45	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	1.5555	-7.024	54.992	9.1838	2.6305	-0.0258	454.2 1.2D + 1L + (100Sy - 30Sx)Min	1.5555	-7.024	54.992	9.1838	2.6305	-0.0258
Ncim	29	45	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	1.7283	5.2812	62.1654	-8.4904	2.839	0.0313	454.3 1.2D + 1L - (100Sy + 30Sx)Max	1.7283	5.2812	62.1654	-8.4904	2.839	0.0313
Ncim	29	45	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	1.6781	4.8967	61.8875	-9.1059	2.7691	-0.0372	454.3 1.2D + 1L - (100Sy + 30Sx)Min	1.6781	4.8967	61.8875	-9.1059	2.7691	-0.0372
Ncim	29	45	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.6463	5.3247	60.8998	-7.9855	-2.6047	0.0448	454.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.6463	5.3247	60.8998	-7.9855	-2.6047	0.0448
Ncim	29	45	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.7445	4.5728	60.3562	-9.1893	-2.7414	-0.089	454.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.7445	4.5728	60.3562	-9.1893	-2.7414	-0.089
Ncim	29	45	4.5 1.2D + 1L + Ey	Combination	Max	0.2232	4.0456	60.731	8.3385	0.435	0.0917	454.5 1.2D + 1L + EyMax	0.2232	4.0456	60.731	8.3385	0.435	0.0917
Ncim	29	45	4.5 1.2D + 1L + Ey	Combination	Min	-0.314	-5.7449	55.1609	-7.1403	-0.4092	-0.0727	454.5 1.2D + 1L + EyMin	-0.314	-5.7449	55.1609	-7.1403	-0.4092	-0.0727
Ncim	29	45	4.6 1.2D + 1L - Ey	Combination	Max	0.2232	4.0456	60.731	8.3385	0.435	0.0917	454.6 1.2D + 1L - EyMax	0.2232	4.0456	60.731	8.3385	0.435	0.0917
Ncim	29	45	4.6 1.2D + 1L - Ey	Combination	Min	-0.314	-5.7449	55.1609	-7.1403	-0.4092	-0.0727	454.6 1.2D + 1L - EyMin	-0.314	-5.7449	55.1609	-7.1403	-0.4092	-0.0727
Ncim	29	45	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-5.6847	-2.3536	37.1795	3.9137	-9.1006	0.0199	455.1 0.9D + (100Sx + 30Sy)Max	-5.6847	-2.3536	37.1795	3.9137	-9.1006	0.0199
Ncim	29	45	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-5.7424	-2.7955	36.86	3.2062	-9.181	-0.0588	455.1 0.9D + (100Sx + 30Sy)Min	-5.7424	-2.7955	36.86	3.2062	-9.181	-0.0588
Ncim	29	45	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-5.6328	1.3379	39.3316	-1.3885	-9.0381	0.037	455.2 0.9D + (100Sx - 30Sy)Max	-5.6328	1.3379	39.3316	-1.3885	-9.0381	0.037
Ncim	29	45	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-5.7351	0.5551	38.7656	-2.6418	-9.1804	-0.1023	455.2 0.9D + (100Sx - 30Sy)Min	-5.7351	0.5551	38.7656	-2.6418	-9.1804	-0.1023
Ncim	29	45	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	5.6735	1.6348	43.8697	-2.3638	9.188	0.0705	455.3 0.9D - (100Sx + 30Sy)Max	5.6735	1.6348	43.8697	-2.3638	9.188	0.0705
Ncim	29	45	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	5.6158	1.1929	43.5502	-3.0714	9.1076	-0.0082	455.3 0.9D - (100Sx + 30Sy)Min	5.6158	1.1929	43.5502	-3.0714	9.1076	-0.0082
Ncim	29	45	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	5.6662	-1.7158	41.9642	3.4842	9.1874	0.1141	455.4 0.9D - (100Sx - 30Sy)Max	5.6662	-1.7158	41.9642	3.4842	9.1874	0.1141
Ncim	29	45	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	5.564	-2.4986	41.3982	2.2309	9.0451	-0.0253	455.4 0.9D - (100Sx - 30Sy)Min	5.564	-2.4986	41.3982	2.2309	9.0451	-0.0253
Ncim	29	45	5.5 0.9D + Ex	Combination	Max	4.8668	0.2701	42.6168	1.7592	7.8857	0.1138	455.5 0.9D + ExMax	4.8668	0.2701	42.6168	1.7592	7.8857	0.1138
Ncim	29	45	5.5 0.9D + Ex	Combination	Min	-4.9356	-1.4308	38.113	-0.9168	-7.8787	-0.1021	455.5 0.9D + ExMin	-4.9356	-1.4308	38.113	-0.9168	-7.8787	-0.1021
Ncim	29	45	5.6 0.9D - Ex	Combination	Max	4.8668	0.2701	42.6168	1.7592	7.8857	0.1138	455.6 0.9D - ExMax	4.8668	0.2701	42.6168	1.7592	7.8857	0.1138
Ncim	29	45	5.6 0.9D - Ex	Combination	Min	-4.9356	-1.4308	38.113	-0.9168	-7.8787	-0.1021	455.6 0.9D - ExMin	-4.9356	-1.4308	38.113	-0.9168	-7.8787	-0.1021
Ncim	29	45	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.7579	-6.3267	36.4234	10.1263	-2.7527	0.0526	456.1 0.9D + (100Sy + 30Sx)Max	-1.7579	-6.3267	36.4234	10.1263	-2.7527	0.0526
Ncim	29	45	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.8081	-6.7112	36.1454	9.5107	-2.8226	-0.0159	456.1 0.9D + (100Sy + 30Sx)Min	-1.8081	-6.7112	36.1454	9.5107	-2.8226	-0.0159
Ncim	29	45	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	1.6647	-6.0028	37.9546	10.2097	2.7578	0.1044	456.2 0.9D + (100Sy - 30Sx)Max	1.6647	-6.0028	37.9546	10.2097	2.7578	0.1044
Ncim	29	45	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	1.5665	-6.7547	37.411	9.0058	2.6211	-0.0295	456.2 0.9D + (100Sy - 30Sx)Min	1.5665	-6.7547	37.411	9.0058	2.6211	-0.0295
Ncim	29	45	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.7393	5.5505	44.5844	-8.6683	2.8296	0.0276	456.3 0.9D - (100Sy + 30Sx)Max	1.7393	5.5505	44.5844	-8.6683	2.8296	0.0276
Ncim	29	45	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.6891	5.166	44.3064	-9.2839	2.7597	-0.0408	456.3 0.9D - (100Sy + 30Sx)Min	1.6891	5.166	44.3064	-9.2839	2.7597	-0.0408
Ncim	29	45	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.6354	5.594	43.3188	-8.1635	-2.6141	0.0412	456.4 0.9D - (100Sy - 30Sx)Max	-1.6354	5.594	43.3188	-8.1635	-2.6141	0.0412
Ncim	29	45	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.7335	4.8421	42.7752	-9.3673	-2.7508	-0.0927	456.4 0.9D - (100Sy - 30Sx)Min	-1.7335	4.8421	42.7752	-9.3673	-2.7508	-0.0927
Ncim	29	45	6.5 0.9D + Ey	Combination	Max	0.2342	4.3149	43.1499	8.1606	0.4256	0.0881	456.5 0.9D + EyMax	0.2342	4.3149	43.1499	8.1606	0.4256	0.0881
Ncim	29	45	6.5 0.9D + Ey	Combination	Min	-0.303	-5.4756	37.5799	-7.3182	-0.4186	-0.0763	456.5 0.9D + EyMin	-0.303	-5.4756	37.5799	-7.3182	-0.4186	-0.0763
Ncim	29	45	6.6 0.9D - Ey	Combination	Max	0.2342	4.3149	43.1499	8.1606	0.4256	0.0881	456.6 0.9D - EyMax	0.2342	4.3149	43.1499	8.1606	0.4256	0.0881
Ncim	29	45	6.6 0.9D - Ey	Combination	Min	-0.303	-5.4756	37.5799	-7.3182	-0.4186	-0.0763	456.6 0.9D - EyMin	-0.303	-5.4756	37.5799	-7.3182	-0.4186	-0.0763
Ncim	29	45	3.3 1.2D + 1L -1	Combination	Max	5.6626	1.3655	61.4508	-2.1859	9.1973	0.0741	453.3 1.2D + 1L -1Max	5.6626	1.3655	61.4508	-2.1859	9.1973	0.0741
Ncim	29	45	3.3 1.2D + 1L -1	Combination	Min	5.6049	0.9236	61.1313	-2.8934	9.117	-0.0045	453.3 1.2D + 1L -1Min	5.6049	0.9236	61.1313	-2.8934	9.117	-0.0045
Ncim	29	45	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.7689	-6.596	54.0044	10.3042	-2.7433	0.0562	454.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.7689	-6.596	54.0044	10.3042	-2.7433	0.0562
Ncim	29	45	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.8191	-6.9805	53.7264	9.6886	-2.8132	-0.0122	454.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.8191	-6.9805	53.7264	9.6886	-2.8132	-0.0122
Ncim	29	45	0. 1D + 1L + sxST	Combination	Max	-5.6616	-0.724	50.9927	1.3845	-9.0526	0.0325	450. 1D + 1L + sxSTMax	-5.6616	-0.724	50.9927	1.3845	-9.0526	0.0325
Ncim	29	45	0. 1D + 1L + sxST	Combination	Min	-5.7416	-1.3364	50.5499	0.4041	-9.1639	-0.0765	450. 1D + 1L + sxSTMin	-5.7416	-1.3364	50.5499	0.4041	-9.1639	-0.0765
Ncim	29	45	0. 1D + 1L + syST	Combination	Max	-0.0494	-6.3809	49.9261	10.2898	0.0193	0.0825	450. 1D + 1L + sySTMax	-0.0494	-6.3809	49.9261	10.2898	0.0193	0.0825
Ncim	29	45	0. 1D + 1L + syST	Combination	Min	-0.1236	-6.9491	49.5153	9.3801	-0.0839	-0.0186	450. 1D + 1L + sySTMin	-0.1236	-6.9491	49.5153	9.3801	-0.0839	-0.0186
Ncim	29	45	0. 1D + 1L + sxDN	Combination	Max	4.8639	0.0539	55.354	1.8811	7.9025	0.1179	450. 1D + 1L + sxDNMax	4.8639	0.0539	55.354	1.8811	7.9025	0.1179
Ncim	29	45	0. 1D + 1L + sxDN	Combination	Min	-4.9385	-1.6469	50.8501	-0.7949	-7.8619	-0.0981	450. 1D + 1L + sxDNMin	-4.9385	-1.6469	50.8501	-0.7949	-7.8619	-0.0981
Ncim	29	45	0. 1D + 1L + syDN	Combination	Max	0.2314	4.0987	55.8871	8.2825	0.4424	0.0921	450. 1D + 1L + syDNMax	0.2314	4.0987	55.8871	8.2825	0.4424	0.0921
Ncim	29	45	0. 1D + 1L + syDN	Combination	Min	-0.3059	-5.6917	50.317	-7.1963	-0.4018	-0.0723	450. 1D + 1L + syDNMin	-0.3059	-5.6917	50.317	-7.1963	-0.4018	-0.0723

Ncim	30	49	0. 1D	Combination		-0.1636	1.0758	41.244	-1.2255	-0.1376	0.0065	490. 1D	-0.1636	1.0758	41.244	-1.2255	-0.1376	0.0065
Ncim	30	49	0. 1D + 1L	Combination		-0.1689	1.5258	48.8026	-1.7426	-0.1366	0.0099	490. 1D + 1L	-0.1689	1.5258	48.8026	-1.7426	-0.1366	0.0099
Ncim	30	49	0. 1L	Combination		-0.0053	0.45	7.5586	-0.5171	0.0009	0.0034	490. 1L	-0.0053	0.45	7.5586	-0.5171	0.0009	0.0034
Ncim	30	49	1. 1.4D	Combination		-0.2291	1.5061	57.7416	-1.7157	-0.1926	0.0091	491. 1.4D	-0.2291	1.5061	57.7416	-1.7157	-0.1926	0.0091
Ncim	30	49	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.2014	2.0251	64.4723	-2.3127	-0.16	0.0133	492. 1.2D + 1.6L + 0.5Lr	-0.2014	2.0251	64.4723	-2.3127	-0.16	0.0133
Ncim	30	49	2. 1.2D + 1.6Lr + L	Combination		-0.1879	1.561	62.5065	-1.7764	-0.1529	0.0098	492. 1.2D + 1.6Lr + L	-0.1879	1.561	62.5065	-1.7764	-0.1529	0.0098
Ncim	30	49	2. 1.2D + 1L + 0.5Lr	Combination		-0.1955	1.5301	56.1579	-1.7439	-0.161	0.0096	492. 1.2D + 1L + 0.5Lr	-0.1955	1.5301	56.1579	-1.7439	-0.161	0.0096
Ncim	30	49	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-5.5293	-0.0649	53.1889	1.5309	-8.7988	0.0236	493.1 1.2D + 1L + (100Sx + 30Sy)Max	-5.5293	-0.0649	53.1889	1.5309	-8.7988	0.0236
Ncim	30	49	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-5.8266	-0.4629	52.5168	0.8666	-9.2853	-0.0551	493.1 1.2D + 1L + (100Sx + 30Sy)Min	-5.8266	-0.4629	52.5168	0.8666	-9.2853	-0.0551
Ncim	30	49	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-5.3707	3.2531	49.8529	-3.437	-8.5289	0.0407	493.2 1.2D + 1L + (100Sx - 30Sy)Max	-5.3707	3.2531	49.8529	-3.437	-8.5289	0.0407
Ncim	30	49	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-5.8974	2.548	48.6621	-4.6139	-9.3907	-0.0987	493.2 1.2D + 1L + (100Sx - 30Sy)Min	-5.8974	2.548	48.6621	-4.6139	-9.3907	-0.0987
Ncim	30	49	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	5.4286	3.4949	54.0275	-4.3248	8.9561	0.0741	493.3 1.2D + 1L - (100Sx + 30Sy)Max	5.4286	3.4949	54.0275	-4.3248	8.9561	0.0741
Ncim	30	49	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	5.1312	3.0969	53.3553	-4.9892	8.4695	-0.0045	493.3 1.2D + 1L - (100Sx + 30Sy)Min	5.1312	3.0969	53.3553	-4.9892	8.4695	-0.0045
Ncim	30	49	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	5.4994	0.484	57.8821	1.1556	9.0615	0.1177	493.4 1.2D + 1L - (100Sx - 30Sy)Max	5.4994	0.484	57.8821	1.1556	9.0615	0.1177
Ncim	30	49	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	4.9726	-0.2211	56.6914	-0.0212	8.1997	-0.0217	493.4 1.2D + 1L - (100Sx - 30Sy)Min	4.9726	-0.2211	56.6914	-0.0212	8.1997	-0.0217
Ncim	30	49	3.5 1.2D + 1L + Ex	Combination	Max	4.345	2.2768	54.9142	-0.4794	7.1827	0.1175	493.5 1.2D + 1L + ExMax	4.345	2.2768	54.9142	-0.4794	7.1827	0.1175
Ncim	30	49	3.5 1.2D + 1L + Ex	Combination	Min	-4.7431	0.7552	51.63	-2.9789	-7.512	-0.0984	493.5 1.2D + 1L + ExMin	-4.7431	0.7552	51.63	-2.9789	-7.512	-0.0984
Ncim	30	49	3.6 1.2D + 1L - Ex	Combination	Max	4.345	2.2768	54.9142	-0.4794	7.1827	0.1175	493.6 1.2D + 1L - ExMax	4.345	2.2768	54.9142	-0.4794	7.1827	0.1175
Ncim	30	49	3.6 1.2D + 1L - Ex	Combination	Min	-4.7431	0.7552	51.63	-2.9789	-7.512	-0.0984	493.6 1.2D + 1L - ExMin	-4.7431	0.7552	51.63	-2.9789	-7.512	-0.0984
Ncim	30	49	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.7799	-3.6443	58.8917	7.3615	-2.7409	0.0562	494.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.7799	-3.6443	58.8917	7.3615	-2.7409	0.0562
Ncim	30	49	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-2.0387	-3.9906	58.3069	6.7835	-3.1642	-0.0122	494.1 1.2D + 1L + (100Sy + 30Sx)Min	-2.0387	-3.9906	58.3069	6.7835	-3.1642	-0.0122
Ncim	30	49	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	1.6179	-3.3602	60.5013	7.4482	2.7632	0.1081	494.2 1.2D + 1L + (100Sy - 30Sx)Max	1.6179	-3.3602	60.5013	7.4482	2.7632	0.1081
Ncim	30	49	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	1.1119	-4.0375	59.3576	6.3179	1.9353	-0.0258	494.2 1.2D + 1L + (100Sy - 30Sx)Min	1.1119	-4.0375	59.3576	6.3179	1.9353	-0.0258
Ncim	30	49	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	1.6406	7.0226	48.2373	-10.2418	2.835	0.0313	494.3 1.2D + 1L - (100Sy + 30Sx)Max	1.6406	7.0226	48.2373	-10.2418	2.835	0.0313
Ncim	30	49	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	1.3819	6.6763	47.6525	-10.8198	2.4117	-0.0372	494.3 1.2D + 1L - (100Sy + 30Sx)Min	1.3819	6.6763	47.6525	-10.8198	2.4117	-0.0372
Ncim	30	49	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.5099	7.0694	47.1866	-9.7762	-2.2646	0.0448	494.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.5099	7.0694	47.1866	-9.7762	-2.2646	0.0448
Ncim	30	49	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-2.0159	6.3922	46.0429	-10.9065	-3.0924	-0.089	494.4 1.2D + 1L - (100Sy - 30Sx)Min	-2.0159	6.3922	46.0429	-10.9065	-3.0924	-0.089
Ncim	30	49	4.5 1.2D + 1L + Ey	Combination	Max	0.3065	5.9183	58.0713	5.5249	0.662	0.0917	494.5 1.2D + 1L + EyMax	0.3065	5.9183	58.0713	5.5249	0.662	0.0917
Ncim	30	49	4.5 1.2D + 1L + Ey	Combination	Min	-0.7046	-2.8864	48.4729	-8.9832	-0.9912	-0.0727	494.5 1.2D + 1L + EyMin	-0.7046	-2.8864	48.4729	-8.9832	-0.9912	-0.0727
Ncim	30	49	4.6 1.2D + 1L - Ey	Combination	Max	0.3065	5.9183	58.0713	5.5249	0.662	0.0917	494.6 1.2D + 1L - EyMax	0.3065	5.9183	58.0713	5.5249	0.662	0.0917
Ncim	30	49	4.6 1.2D + 1L - Ey	Combination	Min	-0.7046	-2.8864	48.4729	-8.9832	-0.9912	-0.0727	494.6 1.2D + 1L - EyMin	-0.7046	-2.8864	48.4729	-8.9832	-0.9912	-0.0727
Ncim	30	49	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-5.4775	-0.6127	37.0364	2.1571	-8.758	0.0199	495.1 0.9D + (100Sx + 30Sy)Max	-5.4775	-0.6127	37.0364	2.1571	-8.758	0.0199
Ncim	30	49	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-5.7749	-1.0107	36.3643	1.4928	-9.2445	-0.0588	495.1 0.9D + (100Sx + 30Sy)Min	-5.7749	-1.0107	36.3643	1.4928	-9.2445	-0.0588
Ncim	30	49	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-5.3189	2.7053	33.7004	-2.8108	-8.4881	0.037	495.2 0.9D + (100Sx - 30Sy)Max	-5.3189	2.7053	33.7004	-2.8108	-8.4881	0.037
Ncim	30	49	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-5.8457	2.0003	32.5096	-3.9876	-9.3499	-0.1023	495.2 0.9D + (100Sx - 30Sy)Min	-5.8457	2.0003	32.5096	-3.9876	-9.3499	-0.1023
Ncim	30	49	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	5.4803	2.9472	37.875	-3.6986	8.9969	0.0705	495.3 0.9D - (100Sx + 30Sy)Max	5.4803	2.9472	37.875	-3.6986	8.9969	0.0705
Ncim	30	49	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	5.183	2.5491	37.2028	-4.363	8.5104	-0.0082	495.3 0.9D - (100Sx + 30Sy)Min	5.183	2.5491	37.2028	-4.363	8.5104	-0.0082
Ncim	30	49	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	5.5511	-0.0638	41.7296	1.7818	9.1023	0.1141	495.4 0.9D - (100Sx - 30Sy)Max	5.5511	-0.0638	41.7296	1.7818	9.1023	0.1141
Ncim	30	49	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	5.0244	-0.7689	40.5389	0.605	8.2405	-0.0253	495.4 0.9D - (100Sx - 30Sy)Min	5.0244	-0.7689	40.5389	0.605	8.2405	-0.0253
Ncim	30	49	5.5 0.9D + Ex	Combination	Max	4.3968	1.729	38.7617	0.1468	7.2235	0.1138	495.5 0.9D + ExMax	4.3968	1.729	38.7617	0.1468	7.2235	0.1138
Ncim	30	49	5.5 0.9D + Ex	Combination	Min	-4.6913	0.2075	35.4775	-2.3527	-7.4711	-0.1021	495.5 0.9D + ExMin	-4.6913	0.2075	35.4775	-2.3527	-7.4711	-0.1021
Ncim	30	49	5.6 0.9D - Ex	Combination	Max	4.3968	1.729	38.7617	0.1468	7.2235	0.1138	495.6 0.9D - ExMax	4.3968	1.729	38.7617	0.1468	7.2235	0.1138
Ncim	30	49	5.6 0.9D - Ex	Combination	Min	-4.6913	0.2075	35.4775	-2.3527	-7.4711	-0.1021	495.6 0.9D - ExMin	-4.6913	0.2075	35.4775	-2.3527	-7.4711	-0.1021
Ncim	30	49	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.7282	-4.192	42.7392	7.9877	-2.7001	0.0526	496.1 0.9D + (100Sy + 30Sx)Max	-1.7282	-4.192	42.7392	7.9877	-2.7001	0.0526
Ncim	30	49	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.9869	-4.5383	42.1544	7.4097	-3.1234	-0.0159	496.1 0.9D + (100Sy + 30Sx)Min	-1.9869	-4.5383	42.1544	7.4097	-3.1234	-0.0159
Ncim	30	49	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	1.6696	-3.908	44.3488	8.0744	2.804	0.1044	496.2 0.9D + (100Sy - 30Sx)Max	1.6696	-3.908	44.3488	8.0744	2.804	0.1044
Ncim	30	49	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	1.1637	-4.5852	43.2051	6.9441	1.9761	-0.0295	496.2 0.9D + (100Sy - 30Sx)Min	1.1637	-4.5852	43.2051	6.9441	1.9761	-0.0295
Ncim	30	49	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.6924	6.4748	32.0848	-9.6156	2.8758	0.0276	496.3 0.9D - (100Sy + 30Sx)Max	1.6924	6.4748	32.0848	-9.6156	2.8758	0.0276
Ncim	30	49	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.4336	6.1285	31.5	-10.1936	2.4525	-0.0408	496.3 0.9D - (100Sy + 30Sx)Min	1.4336	6.1285	31.5	-10.1936	2.4525	-0.0408
Ncim	30	49	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.4582	6.5217	31.0341	-9.15	-2.2237	0.0412	496.4 0.9D - (100Sy - 30Sx)Max	-1.4582	6.5217	31.0341	-9.15	-2.2237	0.0412
Ncim	30	49	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.9642	5.8445	29.8904	-10.2803	-3.0516	-0.0927	496.4 0.9D - (100Sy - 30Sx)Min	-1.9642	5.8445	29.8904	-10.2803	-3.0516	-0.0927
Ncim	30	49	6.5 0.9D + Ey	Combination	Max	0.3583	5.3706	41.9188	6.1511	0.7028	0.0881	496.5 0.9D + EyMax	0.3583	5.3706	41.9188	6.1511	0.7028	0.0881
Ncim	30	49	6.5 0.9D + Ey	Combination	Min	-0.6528	-3.4341	32.3204	-8.357	-0.9504	-0.0763	496.5 0.9D + EyMin	-0.6528	-3.4341	32.3204	-8.357	-0.9504	-0.0763
Ncim	30	49	6.6 0.9D - Ey	Combination	Max	0.3583	5.3706	41.9188	6.1511	0.7028	0.0881	496.6 0.9D - EyMax	0.3583	5.3706	41.9188	6.1511	0.7028	0.0881
Ncim	30	49	6.6 0.9D - Ey	Combination	Min	-0.6528	-3.4341	32.3204	-8.357	-0.9504	-0.0763	496.6 0.9D - EyMin	-0.6528	-3.4341	32.3204	-8.357	-0.9504	-0.0763
Ncim	30	49	3.3 1.2D + 1L -1	Combination	Max	5.4286	3.4949	54.0275	-4.3248	8.9561	0.0741	493.3 1.2D + 1L -1Max	5.4286	3.4949	54.0275	-4.3248	8.9561	0.0741
Ncim	30	49	3.3 1.2D + 1L -1	Combination	Min	5.1312	3.0969	53.3553	-4.9892	8.4695	-0.0045	493.3 1.2D + 1L -1Min	5.1312	3.0969	53.3553	-4.9892	8.4695	-0.0045
Ncim	30	49	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.7799	-3.6443	58.8917	7.3615	-2.7409	0.0562	494.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.7799	-3.6443	58.8917	7.3615	-2.7409	0.0562
Ncim	30	49	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-2.0387	-3.9906	58.3069	6.7835	-3.1642	-0.0122	494.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-2.0387	-3.9906	58.3069	6.7835	-3.1642	-0.0122
Ncim	30	49	0. 1D + 1L + sxST	Combination	Max	-5.4199	1.6039	47.0514	-0.9665	-8.6359	0.0325	490. 1D + 1L + sxSTMax	-5.4199	1.6039	47.0514	-0.9665	-8.6359	0.0325
Ncim	30	49	0. 1D + 1L + sxST	Combination	Min	-5.832	1.0524	46.1199	-1.8871	-9.31	-0.0765	490. 1D + 1L + sxSTMin	-5.832	1.0524	46.1199	-1.8871	-9.31	-0.0765
Ncim	30	49	0. 1D + 1L + syST	Combination	Max	-0.0509	-3.4924	55.227	7.3914	0.0391	0.0825	490. 1D + 1L + sySTMax	-0.0509	-3.4924	55.227	7.3914	0.0391	0.0825
Ncim	30	49	0. 1D + 1L + syST	Combination	Min	-0.4333	-4.0042	54.3628	6.5373	-0.5865	-0.0186	490. 1D + 1L + sySTMin	-0.4333	-4.0042	54.3628	6.5373	-0.5865	-0.0186
Ncim	30	49	0. 1D + 1L + sxDN	Combination	Max	4.3751	2.2866	50.4447	-0.4929	7.2107	0.1179	490. 1D + 1L + sxDNMax	4.3751	2.2866	50.4447	-0.4929	7.2107	0.1179
Ncim	30	49	0. 1D + 1L + sxDN	Combination	Min	-4.713	0.765	47.1605	-2.9923	-7.484	-0.0981	490. 1D + 1L + sxDNMin	-4.713	0.765	47.1605	-2.9923	-7.484	-0.0981
Ncim	30	49	0. 1D + 1L + syDN	Combination	Max	0.3366	5.9282	53.6018	5.5115	0.6899	0.0921	490. 1D + 1L + syDNMax	0.3366	5.9282	53.6018	5.5115	0.6899	0.0921
Ncim	30	49	0. 1D + 1L + syDN	Combination	Min	-0.6745	-2.8765	44.0034	-8.9967	-0.9632	-0.0723	490. 1D + 1L + syDNMin	-0.6745	-2.8765	44.0034	-8.9967	-0.9632	-0.0723

Ncim	32	53	0. 1D	Combination		-0.2751	-1.0132	26.8172	0.835	-0.2831	0.0065	530. 1D	-0.2751	-1.0132	26.8172	0.835	-0.2831	0.0065
Ncim	32	53	0. 1D + 1L	Combination		-0.2757	-1.445	31.4044	1.1877	-0.2956	0.0099	530. 1D + 1L	-0.2757	-1.445	31.4044	1.1877	-0.2956	0.0099
Ncim	32	53	0. 1L	Combination		-0.0006	-0.4318	4.5872	0.3527	-0.0125	0.0034	530. 1L	-0.0006	-0.4318	4.5872	0.3527	-0.0125	0.0034
Ncim	32	53	1. 1.4D	Combination		-0.3851	-1.4184	37.5441	1.169	-0.3963	0.0091	531. 1.4D	-0.3851	-1.4184	37.5441	1.169	-0.3963	0.0091
Ncim	32	53	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.3449	-1.9274	41.0409	1.5859	-0.3736	0.0133	532. 1.2D + 1.6L + 0.5Lr	-0.3449	-1.9274	41.0409	1.5859	-0.3736	0.0133
Ncim	32	53	2. 1.2D + 1.6Lr + L	Combination		-0.3744	-1.4978	39.3407	1.2408	-0.3904	0.0098	532. 1.2D + 1.6Lr + L	-0.3744	-1.4978	39.3407	1.2408	-0.3904	0.0098
Ncim	32	53	2. 1.2D + 1L + 0.5Lr	Combination		-0.3442	-1.4524	35.995	1.1979	-0.3599	0.0096	532. 1.2D + 1L + 0.5Lr	-0.3442	-1.4524	35.995	1.1979	-0.3599	0.0096
Ncim	32	53	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-4.5316	-2.5855	38.1457	3.9205	-7.5342	0.0236	533.1 1.2D + 1L + (100Sx + 30Sy)Max	-4.5316	-2.5855	38.1457	3.9205	-7.5342	0.0236
Ncim	32	53	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-5.3647	-2.8816	38.087	3.3559	-8.9691	-0.0551	533.1 1.2D + 1L + (100Sx + 30Sy)Min	-5.3647	-2.8816	38.087	3.3559	-8.9691	-0.0551
Ncim	32	53	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-4.0363	-0.1177	34.849	-0.2922	-6.6996	0.0407	533.2 1.2D + 1L + (100Sx - 30Sy)Max	-4.0363	-0.1177	34.849	-0.2922	-6.6996	0.0407
Ncim	32	53	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-5.5121	-0.6423	34.7451	-1.2924	-9.2414	-0.0987	533.2 1.2D + 1L + (100Sx - 30Sy)Min	-5.5121	-0.6423	34.7451	-1.2924	-9.2414	-0.0987
Ncim	32	53	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	4.7038	0.0182	30.8615	-0.9991	8.2772	0.0741	533.3 1.2D + 1L - (100Sx + 30Sy)Max	4.7038	0.0182	30.8615	-0.9991	8.2772	0.0741
Ncim	32	53	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	3.8707	-0.278	30.8028	-1.5637	6.8423	-0.0045	533.3 1.2D + 1L - (100Sx + 30Sy)Min	3.8707	-0.278	30.8028	-1.5637	6.8423	-0.0045
Ncim	32	53	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	4.8512	-2.2211	34.2034	3.6492	8.5495	0.1177	533.4 1.2D + 1L - (100Sx - 30Sy)Max	4.8512	-2.2211	34.2034	3.6492	8.5495	0.1177
Ncim	32	53	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	3.3754	-2.7458	34.0995	2.649	6.0077	-0.0217	533.4 1.2D + 1L - (100Sx - 30Sy)Min	3.3754	-2.7458	34.0995	2.649	6.0077	-0.0217
Ncim	32	53	3.5 1.2D + 1L + Ex	Combination	Max	3.235	-0.8742	36.3364	2.2289	5.7539	0.1175	533.5 1.2D + 1L + ExMax	3.235	-0.8742	36.3364	2.2289	5.7539	0.1175
Ncim	32	53	3.5 1.2D + 1L + Ex	Combination	Min	-3.8958	-1.9892	32.6121	0.1279	-6.4458	-0.0984	533.5 1.2D + 1L + ExMin	-3.8958	-1.9892	32.6121	0.1279	-6.4458	-0.0984
Ncim	32	53	3.6 1.2D + 1L - Ex	Combination	Max	3.235	-0.8742	36.3364	2.2289	5.7539	0.1175	533.6 1.2D + 1L - ExMax	3.235	-0.8742	36.3364	2.2289	5.7539	0.1175
Ncim	32	53	3.6 1.2D + 1L - Ex	Combination	Min	-3.8958	-1.9892	32.6121	0.1279	-6.4458	-0.0984	533.6 1.2D + 1L - ExMin	-3.8958	-1.9892	32.6121	0.1279	-6.4458	-0.0984
Ncim	32	53	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.6173	-5.263	40.6267	8.8815	-2.5199	0.0562	534.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.6173	-5.263	40.6267	8.8815	-2.5199	0.0562
Ncim	32	53	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-2.3421	-5.5207	40.5757	8.3903	-3.7683	-0.0122	534.1 1.2D + 1L + (100Sy + 30Sx)Min	-2.3421	-5.5207	40.5757	8.3903	-3.7683	-0.0122
Ncim	32	53	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	1.4475	-5.0648	39.4616	8.9695	2.7357	0.1081	534.2 1.2D + 1L + (100Sy - 30Sx)Max	1.4475	-5.0648	39.4616	8.9695	2.7357	0.1081
Ncim	32	53	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	0.03	-5.5687	39.3618	8.0088	0.2943	-0.0258	534.2 1.2D + 1L + (100Sy - 30Sx)Min	0.03	-5.5687	39.3618	8.0088	0.2943	-0.0258
Ncim	32	53	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	1.6812	2.6572	28.3729	-6.0335	3.0764	0.0313	534.3 1.2D + 1L - (100Sy + 30Sx)Max	1.6812	2.6572	28.3729	-6.0335	3.0764	0.0313
Ncim	32	53	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	0.9564	2.3995	28.3218	-6.5247	1.828	-0.0372	534.3 1.2D + 1L - (100Sy + 30Sx)Min	0.9564	2.3995	28.3218	-6.5247	1.828	-0.0372
Ncim	32	53	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-0.6909	2.7053	29.5867	-5.652	-0.9862	0.0448	534.4 1.2D + 1L - (100Sy - 30Sx)Max	-0.6909	2.7053	29.5867	-5.652	-0.9862	0.0448
Ncim	32	53	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-2.1084	2.2014	29.4869	-6.6127	-3.4276	-0.089	534.4 1.2D + 1L - (100Sy - 30Sx)Min	-2.1084	2.2014	29.4869	-6.6127	-3.4276	-0.089
Ncim	32	53	4.5 1.2D + 1L + Ey	Combination	Max	0.7229	1.8449	39.1913	7.3303	1.4415	0.0917	534.5 1.2D + 1L + EyMax	0.7229	1.8449	39.1913	7.3303	1.4415	0.0917
Ncim	32	53	4.5 1.2D + 1L + Ey	Combination	Min	-1.3838	-4.7084	29.7572	-4.9735	-2.1334	-0.0727	534.5 1.2D + 1L + EyMin	-1.3838	-4.7084	29.7572	-4.9735	-2.1334	-0.0727
Ncim	32	53	4.6 1.2D + 1L - Ey	Combination	Max	0.7229	1.8449	39.1913	7.3303	1.4415	0.0917	534.6 1.2D + 1L - EyMax	0.7229	1.8449	39.1913	7.3303	1.4415	0.0917
Ncim	32	53	4.6 1.2D + 1L - Ey	Combination	Min	-1.3838	-4.7084	29.7572	-4.9735	-2.1334	-0.0727	534.6 1.2D + 1L - EyMin	-1.3838	-4.7084	29.7572	-4.9735	-2.1334	-0.0727
Ncim	32	53	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-4.4488	-2.0656	27.8069	3.4936	-7.4431	0.0199	535.1 0.9D + (100Sx + 30Sy)Max	-4.4488	-2.0656	27.8069	3.4936	-7.4431	0.0199
Ncim	32	53	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-5.2819	-2.3618	27.7483	2.929	-8.8779	-0.0588	535.1 0.9D + (100Sx + 30Sy)Min	-5.2819	-2.3618	27.7483	2.929	-8.8779	-0.0588
Ncim	32	53	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-3.9534	0.4022	24.5103	-0.7191	-6.6084	0.037	535.2 0.9D + (100Sx - 30Sy)Max	-3.9534	0.4022	24.5103	-0.7191	-6.6084	0.037
Ncim	32	53	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-5.4292	-0.1225	24.4063	-1.7193	-9.1502	-0.1023	535.2 0.9D + (100Sx - 30Sy)Min	-5.4292	-0.1225	24.4063	-1.7193	-9.1502	-0.1023
Ncim	32	53	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	4.7867	0.5381	20.5227	-1.4259	8.3684	0.0705	535.3 0.9D - (100Sx + 30Sy)Max	4.7867	0.5381	20.5227	-1.4259	8.3684	0.0705
Ncim	32	53	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	3.9536	0.2419	20.4641	-1.9906	6.9335	-0.0082	535.3 0.9D - (100Sx + 30Sy)Min	3.9536	0.2419	20.4641	-1.9906	6.9335	-0.0082
Ncim	32	53	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	4.934	-1.7012	23.8647	3.2223	8.6407	0.1141	535.4 0.9D - (100Sx - 30Sy)Max	4.934	-1.7012	23.8647	3.2223	8.6407	0.1141
Ncim	32	53	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	3.4582	-2.2259	23.7607	2.2221	6.0989	-0.0253	535.4 0.9D - (100Sx - 30Sy)Min	3.4582	-2.2259	23.7607	2.2221	6.0989	-0.0253
Ncim	32	53	5.5 0.9D + Ex	Combination	Max	3.3178	-0.3543	25.9977	1.802	5.845	0.1138	535.5 0.9D + ExMax	3.3178	-0.3543	25.9977	1.802	5.845	0.1138
Ncim	32	53	5.5 0.9D + Ex	Combination	Min	-3.813	-1.4694	22.2733	-0.299	-6.3546	-0.1021	535.5 0.9D + ExMin	-3.813	-1.4694	22.2733	-0.299	-6.3546	-0.1021
Ncim	32	53	5.6 0.9D - Ex	Combination	Max	3.3178	-0.3543	25.9977	1.802	5.845	0.1138	535.6 0.9D - ExMax	3.3178	-0.3543	25.9977	1.802	5.845	0.1138
Ncim	32	53	5.6 0.9D - Ex	Combination	Min	-3.813	-1.4694	22.2733	-0.299	-6.3546	-0.1021	535.6 0.9D - ExMin	-3.813	-1.4694	22.2733	-0.299	-6.3546	-0.1021
Ncim	32	53	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.5344	-4.7431	30.2879	8.4546	-2.4287	0.0526	536.1 0.9D + (100Sy + 30Sx)Max	-1.5344	-4.7431	30.2879	8.4546	-2.4287	0.0526
Ncim	32	53	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-2.2593	-5.0008	30.2369	7.9634	-3.6771	-0.0159	536.1 0.9D + (100Sy + 30Sx)Min	-2.2593	-5.0008	30.2369	7.9634	-3.6771	-0.0159
Ncim	32	53	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	1.5304	-4.5449	29.1229	8.5426	2.8269	0.1044	536.2 0.9D + (100Sy - 30Sx)Max	1.5304	-4.5449	29.1229	8.5426	2.8269	0.1044
Ncim	32	53	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	0.1129	-5.0489	29.023	7.5819	0.3854	-0.0295	536.2 0.9D + (100Sy - 30Sx)Min	0.1129	-5.0489	29.023	7.5819	0.3854	-0.0295
Ncim	32	53	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.7641	3.1771	18.0341	-6.4603	3.1676	0.0276	536.3 0.9D - (100Sy + 30Sx)Max	1.7641	3.1771	18.0341	-6.4603	3.1676	0.0276
Ncim	32	53	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	1.0392	2.9194	17.9831	-6.9516	1.9192	-0.0408	536.3 0.9D - (100Sy + 30Sx)Min	1.0392	2.9194	17.9831	-6.9516	1.9192	-0.0408
Ncim	32	53	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-0.608	3.2252	19.248	-6.0789	-0.895	0.0412	536.4 0.9D - (100Sy - 30Sx)Max	-0.608	3.2252	19.248	-6.0789	-0.895	0.0412
Ncim	32	53	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-2.0255	2.7212	19.1481	-7.0396	-3.3364	-0.0927	536.4 0.9D - (100Sy - 30Sx)Min	-2.0255	2.7212	19.1481	-7.0396	-3.3364	-0.0927
Ncim	32	53	6.5 0.9D + Ey	Combination	Max	0.8058	2.3648	28.8525	6.9034	1.5327	0.0881	536.5 0.9D + EyMax	0.8058	2.3648	28.8525	6.9034	1.5327	0.0881
Ncim	32	53	6.5 0.9D + Ey	Combination	Min	-1.3009	-4.1885	19.4185	-5.4004	-2.0422	-0.0763	536.5 0.9D + EyMin	-1.3009	-4.1885	19.4185	-5.4004	-2.0422	-0.0763
Ncim	32	53	6.6 0.9D - Ey	Combination	Max	0.8058	2.3648	28.8525	6.9034	1.5327	0.0881	536.6 0.9D - EyMax	0.8058	2.3648	28.8525	6.9034	1.5327	0.0881
Ncim	32	53	6.6 0.9D - Ey	Combination	Min	-1.3009	-4.1885	19.4185	-5.4004	-2.0422	-0.0763	536.6 0.9D - EyMin	-1.3009	-4.1885	19.4185	-5.4004	-2.0422	-0.0763
Ncim	32	53	3.3 1.2D + 1L -1	Combination	Max	4.7038	0.0182	30.8615	-0.9991	8.2772	0.0741	533.3 1.2D + 1L -1Max	4.7038	0.0182	30.8615	-0.9991	8.2772	0.0741
Ncim	32	53	3.3 1.2D + 1L -1	Combination	Min	3.8707	-0.278	30.8028	-1.5637	6.8423	-0.0045	533.3 1.2D + 1L -1Min	3.8707	-0.278	30.8028	-1.5637	6.8423	-0.0045
Ncim	32	53	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.6173	-5.263	40.6267	8.8815	-2.5199	0.0562	534.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.6173	-5.263	40.6267	8.8815	-2.5199	0.0562
Ncim	32	53	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-2.3421	-5.5207	40.5757	8.3903	-3.7683	-0.0122	534.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-2.3421	-5.5207	40.5757	8.3903	-3.7683	-0.0122
Ncim	32	53	0. 1D + 1L + sxST	Combination	Max	-4.2292	-1.3649	33.4275	1.8235	-7.0665	0.0325	530. 1D + 1L + sxSTMax	-4.2292	-1.3649	33.4275	1.8235	-7.0665	0.0325
Ncim	32	53	0. 1D + 1L + sxST	Combination	Min	-5.3837	-1.7753	33.3462	1.0411	-9.0549	-0.0765	530. 1D + 1L + sxSTMin	-5.3837	-1.7753	33.3462	1.0411	-9.0549	-0.0765
Ncim	32	53	0. 1D + 1L + syST	Combination	Max	-0.0302	-5.1772	36.9743	8.9349	0.1583	0.0825	530. 1D + 1L + sySTMax	-0.0302	-5.1772	36.9743	8.9349	0.1583	0.0825
Ncim	32	53	0. 1D + 1L + syST	Combination	Min	-1.1013	-5.558	36.8989	8.2089	-1.6867	-0.0186	530. 1D + 1L + sySTMin	-1.1013	-5.558	36.8989	8.2089	-1.6867	-0.0186
Ncim	32	53	0. 1D + 1L + sxDN	Combination	Max	3.2897	-0.8875	33.2666	2.2382	5.8042	0.1179	530. 1D + 1L + sxDNMax	3.2897	-0.8875	33.2666	2.2382	5.8042	0.1179
Ncim	32	53	0. 1D + 1L + sxDN	Combination	Min	-3.8411	-2.0025	29.5423	0.1373	-6.3954	-0.0981	530. 1D + 1L + sxDNMin	-3.8411	-2.0025	29.5423	0.1373	-6.3954	-0.0981
Ncim	32	53	0. 1D + 1L + syDN	Combination	Max	0.7776	1.8316	36.1214	7.3396	1.4919	0.0921	530. 1D + 1L + syDNMax	0.7776	1.8316	36.1214	7.3396	1.4919	0.0921
Ncim	32	53	0. 1D + 1L + syDN	Combination	Min	-1.3291	-4.7217	26.6874	-4.9641	-2.0831	-0.0723	530. 1D + 1L + syDNMin	-1.3291	-4.7217	26.6874	-4.9641	-2.0831	-0.0723

Ncim	42	56	0. 1D	Combination		-0.8921	0.6852	35.2879	-0.9794	-0.7496	0.0104	560. 1D	-0.8921	0.6852	35.2879	-0.9794	-0.7496	0.0104
Ncim	42	56	0. 1D + 1L	Combination		-1.1302	0.7465	40.6981	-1.1802	-0.9284	0.0159	560. 1D + 1L	-1.1302	0.7465	40.6981	-1.1802	-0.9284	0.0159
Ncim	42	56	0. 1L	Combination		-0.2382	0.0613	5.4101	-0.2008	-0.1789	0.0054	560. 1L	-0.2382	0.0613	5.4101	-0.2008	-0.1789	0.0054
Ncim	42	56	1. 1.4D	Combination		-1.2489	0.9593	49.4031	-1.3711	-1.0494	0.0146	561. 1.4D	-1.2489	0.9593	49.4031	-1.3711	-1.0494	0.0146
Ncim	42	56	2. 1.2D + 1.6L + 0.5Lr	Combination		-1.4726	0.9406	53.2001	-1.5184	-1.2045	0.0214	562. 1.2D + 1.6L + 0.5Lr	-1.4726	0.9406	53.2001	-1.5184	-1.2045	0.0214
Ncim	42	56	2. 1.2D + 1.6Lr + L	Combination		-1.2567	0.9178	52.0852	-1.3459	-1.0491	0.0158	562. 1.2D + 1.6Lr + L	-1.2567	0.9178	52.0852	-1.3459	-1.0491	0.0158
Ncim	42	56	2. 1.2D + 1L + 0.5Lr	Combination		-1.2106	0.8732	47.2489	-1.2976	-1.0077	0.0154	562. 1.2D + 1L + 0.5Lr	-1.2106	0.8732	47.2489	-1.2976	-1.0077	0.0154
Ncim	42	56	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-8.0041	-0.6807	57.4478	3.5604	-13.2076	0.0378	563.1 1.2D + 1L + (100Sx + 30Sy)Max	-8.0041	-0.6807	57.4478	3.5604	-13.2076	0.0378
Ncim	42	56	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-8.8735	-1.5143	56.5671	1.7988	-14.7766	-0.0883	563.1 1.2D + 1L + (100Sx + 30Sy)Min	-8.8735	-1.5143	56.5671	1.7988	-14.7766	-0.0883
Ncim	42	56	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-7.926	2.583	60.6298	-1.9312	-12.9644	0.0652	563.2 1.2D + 1L + (100Sx - 30Sy)Max	-7.926	2.583	60.6298	-1.9312	-12.9644	0.0652
Ncim	42	56	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-9.4661	1.1063	59.0697	-5.0519	-15.7439	-0.1581	563.2 1.2D + 1L + (100Sx - 30Sy)Min	-9.4661	1.1063	59.0697	-5.0519	-15.7439	-0.1581
Ncim	42	56	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	6.4944	3.2201	33.534	-4.35	12.7988	0.1188	563.3 1.2D + 1L - (100Sx + 30Sy)Max	6.4944	3.2201	33.534	-4.35	12.7988	0.1188
Ncim	42	56	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	5.625	2.3865	32.6534	-6.1117	11.2298	-0.0073	563.3 1.2D + 1L - (100Sx + 30Sy)Min	5.625	2.3865	32.6534	-6.1117	11.2298	-0.0073
Ncim	42	56	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	7.0869	0.5995	31.0315	2.5007	13.7662	0.1886	563.4 1.2D + 1L - (100Sx - 30Sy)Max	7.0869	0.5995	31.0315	2.5007	13.7662	0.1886
Ncim	42	56	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	5.5468	-0.8772	29.4714	-0.6201	10.9866	-0.0347	563.4 1.2D + 1L - (100Sx - 30Sy)Min	5.5468	-0.8772	29.4714	-0.6201	10.9866	-0.0347
Ncim	42	56	3.5 1.2D + 1L + Ex	Combination	Max	5.6877	2.2765	56.8063	1.6016	11.2842	0.1882	563.5 1.2D + 1L + ExMax	5.6877	2.2765	56.8063	1.6016	11.2842	0.1882
Ncim	42	56	3.5 1.2D + 1L + Ex	Combination	Min	-8.0668	-0.5707	33.2949	-4.1528	-13.262	-0.1577	563.5 1.2D + 1L + ExMin	-8.0668	-0.5707	33.2949	-4.1528	-13.262	-0.1577
Ncim	42	56	3.6 1.2D + 1L - Ex	Combination	Max	5.6877	2.2765	56.8063	1.6016	11.2842	0.1882	563.6 1.2D + 1L - ExMax	5.6877	2.2765	56.8063	1.6016	11.2842	0.1882
Ncim	42	56	3.6 1.2D + 1L - Ex	Combination	Min	-8.0668	-0.5707	33.2949	-4.1528	-13.262	-0.1577	563.6 1.2D + 1L - ExMin	-8.0668	-0.5707	33.2949	-4.1528	-13.262	-0.1577
Ncim	42	56	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-2.596	-3.8318	44.71	10.0369	-3.6581	0.0901	564.1 1.2D + 1L + (100Sy + 30Sx)Max	-2.596	-3.8318	44.71	10.0369	-3.6581	0.0901
Ncim	42	56	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-3.3524	-4.5571	43.9438	8.5041	-5.0232	-0.0196	564.1 1.2D + 1L + (100Sy + 30Sx)Min	-3.3524	-4.5571	43.9438	8.5041	-5.0232	-0.0196
Ncim	42	56	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	2.1921	-3.1977	37.0494	10.2474	4.9047	0.1731	564.2 1.2D + 1L + (100Sy - 30Sx)Max	2.1921	-3.1977	37.0494	10.2474	4.9047	0.1731
Ncim	42	56	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	0.7129	-4.6161	35.5509	7.25	2.235	-0.0413	564.2 1.2D + 1L + (100Sy - 30Sx)Min	0.7129	-4.6161	35.5509	7.25	2.235	-0.0413
Ncim	42	56	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	0.9733	6.263	46.1574	-11.0554	3.0454	0.0501	564.3 1.2D + 1L - (100Sy + 30Sx)Max	0.9733	6.263	46.1574	-11.0554	3.0454	0.0501
Ncim	42	56	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	0.2169	5.5377	45.3912	-12.5881	1.6803	-0.0596	564.3 1.2D + 1L - (100Sy + 30Sx)Min	0.2169	5.5377	45.3912	-12.5881	1.6803	-0.0596
Ncim	42	56	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-3.092	6.3219	54.5503	-9.8013	-4.2128	0.0718	564.4 1.2D + 1L - (100Sy - 30Sx)Max	-3.092	6.3219	54.5503	-9.8013	-4.2128	0.0718
Ncim	42	56	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-4.5713	4.9035	53.0518	-12.7987	-6.8825	-0.1426	564.4 1.2D + 1L - (100Sy - 30Sx)Min	-4.5713	4.9035	53.0518	-12.7987	-6.8825	-0.1426
Ncim	42	56	4.5 1.2D + 1L + Ey	Combination	Max	-0.2977	4.8232	49.2732	7.0038	0.5194	0.1469	564.5 1.2D + 1L + EyMax	-0.2977	4.8232	49.2732	7.0038	0.5194	0.1469
Ncim	42	56	4.5 1.2D + 1L + Ey	Combination	Min	-2.0814	-3.1174	40.828	-9.5551	-2.4972	-0.1164	564.5 1.2D + 1L + EyMin	-2.0814	-3.1174	40.828	-9.5551	-2.4972	-0.1164
Ncim	42	56	4.6 1.2D + 1L - Ey	Combination	Max	-0.2977	4.8232	49.2732	7.0038	0.5194	0.1469	564.6 1.2D + 1L - EyMax	-0.2977	4.8232	49.2732	7.0038	0.5194	0.1469
Ncim	42	56	4.6 1.2D + 1L - Ey	Combination	Min	-2.0814	-3.1174	40.828	-9.5551	-2.4972	-0.1164	564.6 1.2D + 1L - EyMin	-2.0814	-3.1174	40.828	-9.5551	-2.4972	-0.1164
Ncim	42	56	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-7.6174	-0.9169	44.1564	3.9546	-12.8933	0.0319	565.1 0.9D + (100Sx + 30Sy)Max	-7.6174	-0.9169	44.1564	3.9546	-12.8933	0.0319
Ncim	42	56	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-8.4868	-1.7505	43.2757	2.193	-14.4623	-0.0941	565.1 0.9D + (100Sx + 30Sy)Min	-8.4868	-1.7505	43.2757	2.193	-14.4623	-0.0941
Ncim	42	56	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-7.5393	2.3468	47.3384	-1.537	-12.6501	0.0593	565.2 0.9D + (100Sx - 30Sy)Max	-7.5393	2.3468	47.3384	-1.537	-12.6501	0.0593
Ncim	42	56	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-9.0794	0.8701	45.7782	-4.6577	-15.4296	-0.1639	565.2 0.9D + (100Sx - 30Sy)Min	-9.0794	0.8701	45.7782	-4.6577	-15.4296	-0.1639
Ncim	42	56	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	6.8811	2.9839	20.2426	-3.9558	13.1131	0.1129	565.3 0.9D - (100Sx + 30Sy)Max	6.8811	2.9839	20.2426	-3.9558	13.1131	0.1129
Ncim	42	56	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	6.0117	2.1503	19.3619	-5.7175	11.5441	-0.0131	565.3 0.9D - (100Sx + 30Sy)Min	6.0117	2.1503	19.3619	-5.7175	11.5441	-0.0131
Ncim	42	56	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	7.4736	0.3633	17.7401	2.8949	14.0805	0.1827	565.4 0.9D - (100Sx - 30Sy)Max	7.4736	0.3633	17.7401	2.8949	14.0805	0.1827
Ncim	42	56	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	5.9335	-1.1134	16.1799	-0.2259	11.3009	-0.0405	565.4 0.9D - (100Sx - 30Sy)Min	5.9335	-1.1134	16.1799	-0.2259	11.3009	-0.0405
Ncim	42	56	5.5 0.9D + Ex	Combination	Max	6.0744	2.0403	43.5148	1.9958	11.5985	0.1823	565.5 0.9D + ExMax	6.0744	2.0403	43.5148	1.9958	11.5985	0.1823
Ncim	42	56	5.5 0.9D + Ex	Combination	Min	-7.6801	-0.8069	20.0035	-3.7586	-12.9477	-0.1635	565.5 0.9D + ExMin	-7.6801	-0.8069	20.0035	-3.7586	-12.9477	-0.1635
Ncim	42	56	5.6 0.9D - Ex	Combination	Max	6.0744	2.0403	43.5148	1.9958	11.5985	0.1823	565.6 0.9D - ExMax	6.0744	2.0403	43.5148	1.9958	11.5985	0.1823
Ncim	42	56	5.6 0.9D - Ex	Combination	Min	-7.6801	-0.8069	20.0035	-3.7586	-12.9477	-0.1635	565.6 0.9D - ExMin	-7.6801	-0.8069	20.0035	-3.7586	-12.9477	-0.1635
Ncim	42	56	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-2.2093	-4.0681	31.4186	10.4311	-3.3438	0.0842	566.1 0.9D + (100Sy + 30Sx)Max	-2.2093	-4.0681	31.4186	10.4311	-3.3438	0.0842
Ncim	42	56	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-2.9657	-4.7933	30.6523	8.8983	-4.7089	-0.0255	566.1 0.9D + (100Sy + 30Sx)Min	-2.9657	-4.7933	30.6523	8.8983	-4.7089	-0.0255
Ncim	42	56	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	2.5788	-3.4339	23.7579	10.6416	5.219	0.1673	566.2 0.9D + (100Sy - 30Sx)Max	2.5788	-3.4339	23.7579	10.6416	5.219	0.1673
Ncim	42	56	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	1.0996	-4.8523	22.2594	7.6442	2.5493	-0.0472	566.2 0.9D + (100Sy - 30Sx)Min	1.0996	-4.8523	22.2594	7.6442	2.5493	-0.0472
Ncim	42	56	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.36	6.0267	32.8659	-10.6612	3.3597	0.0443	566.3 0.9D - (100Sy + 30Sx)Max	1.36	6.0267	32.8659	-10.6612	3.3597	0.0443
Ncim	42	56	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	0.6036	5.3015	32.0997	-12.1939	1.9946	-0.0654	566.3 0.9D - (100Sy + 30Sx)Min	0.6036	5.3015	32.0997	-12.1939	1.9946	-0.0654
Ncim	42	56	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-2.7053	6.0857	41.2589	-9.407	-3.8985	0.066	566.4 0.9D - (100Sy - 30Sx)Max	-2.7053	6.0857	41.2589	-9.407	-3.8985	0.066
Ncim	42	56	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-4.1846	4.6673	39.7604	-12.4045	-6.5682	-0.1485	566.4 0.9D - (100Sy - 30Sx)Min	-4.1846	4.6673	39.7604	-12.4045	-6.5682	-0.1485
Ncim	42	56	6.5 0.9D + Ey	Combination	Max	0.089	4.587	35.9817	7.398	0.8337	0.1411	566.5 0.9D + EyMax	0.089	4.587	35.9817	7.398	0.8337	0.1411
Ncim	42	56	6.5 0.9D + Ey	Combination	Min	-1.6947	-3.3536	27.5366	-9.1608	-2.1829	-0.1223	566.5 0.9D + EyMin	-1.6947	-3.3536	27.5366	-9.1608	-2.1829	-0.1223
Ncim	42	56	6.6 0.9D - Ey	Combination	Max	0.089	4.587	35.9817	7.398	0.8337	0.1411	566.6 0.9D - EyMax	0.089	4.587	35.9817	7.398	0.8337	0.1411
Ncim	42	56	6.6 0.9D - Ey	Combination	Min	-1.6947	-3.3536	27.5366	-9.1608	-2.1829	-0.1223	566.6 0.9D - EyMin	-1.6947	-3.3536	27.5366	-9.1608	-2.1829	-0.1223
Ncim	42	56	3.3 1.2D + 1L -1	Combination	Max	6.4944	3.2201	33.534	-4.35	12.7988	0.1188	563.3 1.2D + 1L -1Max	6.4944	3.2201	33.534	-4.35	12.7988	0.1188
Ncim	42	56	3.3 1.2D + 1L -1	Combination	Min	5.625	2.3865	32.6534	-6.1117	11.2298	-0.0073	563.3 1.2D + 1L -1Min	5.625	2.3865	32.6534	-6.1117	11.2298	-0.0073
Ncim	42	56	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-2.596	-3.8318	44.71	10.0369	-3.6581	0.0901	564.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-2.596	-3.8318	44.71	10.0369	-3.6581	0.0901
Ncim	42	56	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-3.3524	-4.5571	43.9438	8.5041	-5.0232	-0.0196	564.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-3.3524	-4.5571	43.9438	8.5041	-5.0232	-0.0196
Ncim	42	56	0. 1D + 1L + sxST	Combination	Max	-7.9057	0.8448	54.6863	0.9101	-13.0255	0.0521	560. 1D + 1L + sxSTMax	-7.9057	0.8448	54.6863	0.9101	-13.0255	0.0521
Ncim	42	56	0. 1D + 1L + sxST	Combination	Min	-9.1105	-0.3103	53.4659	-1.5311	-15.1998	-0.1226	560. 1D + 1L + sxSTMin	-9.1105	-0.3103	53.4659	-1.5311	-15.1998	-0.1226
Ncim	42	56	0. 1D + 1L + syST	Combination	Max	-0.1426	-3.6212	36.5272	10.2376	0.6838	0.1322	560. 1D + 1L + sySTMax	-0.1426	-3.6212	36.5272	10.2376	0.6838	0.1322
Ncim	42	56	0. 1D + 1L + syST	Combination	Min	-1.2605	-4.693	35.3948	7.9725	-1.3336	-0.0299	560. 1D + 1L + sySTMin	-1.2605	-4.693	35.3948	7.9725	-1.3336	-0.0299
Ncim	42	56	0. 1D + 1L + sxDN	Combination	Max	5.747	2.1701	52.4538	1.6971	11.3446	0.1888	560. 1D + 1L + sxDNMax	5.747	2.1701	52.4538	1.6971	11.3446	0.1888
Ncim	42	56	0. 1D + 1L + sxDN	Combination	Min	-8.0075	-0.677	28.9424	-4.0574	-13.2015	-0.1571	560. 1D + 1L + sxDNMin	-8.0075	-0.677	28.9424	-4.0574	-13.2015	-0.1571
Ncim	42	56	0. 1D + 1L + syDN	Combination	Max	-0.2384	4.7168	44.9206	7.0993	0.5798	0.1475	560. 1D + 1L + syDNMax	-0.2384	4.7168	44.9206	7.0993	0.5798	0.1475
Ncim	42	56	0. 1D + 1L + syDN	Combination	Min	-2.0221	-3.2237	36.4755	-9.4596	-2.4367	-0.1158	560. 1D + 1L + syDNMin	-2.0221	-3.2237	36.4755	-9.4596	-2.4367	-0.1158

Ncim	43	57	0. 1D	Combination		-0.4486	-0.3737	28.2141	0.1784	-0.4019	0.0065	570. 1D	-0.4486	-0.3737	28.2141	0.1784	-0.4019	0.0065
Ncim	43	57	0. 1D + 1L	Combination		-0.5645	-0.3825	31.5181	0.1003	-0.501	0.0099	570. 1D + 1L	-0.5645	-0.3825	31.5181	0.1003	-0.501	0.0099
Ncim	43	57	0. 1L	Combination		-0.1159	-0.0089	3.304	-0.0781	-0.0991	0.0034	570. 1L	-0.1159	-0.0089	3.304	-0.0781	-0.0991	0.0034
Ncim	43	57	1. 1.4D	Combination		-0.6281	-0.5231	39.4997	0.2498	-0.5627	0.0091	571. 1.4D	-0.6281	-0.5231	39.4997	0.2498	-0.5627	0.0091
Ncim	43	57	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.7365	-0.4708	41.2751	0.096	-0.6529	0.0133	572. 1.2D + 1.6L + 0.5Lr	-0.7365	-0.4708	41.2751	0.096	-0.6529	0.0133
Ncim	43	57	2. 1.2D + 1.6Lr + L	Combination		-0.6369	-0.479	42.3307	0.1967	-0.5703	0.0098	572. 1.2D + 1.6Lr + L	-0.6369	-0.479	42.3307	0.1967	-0.5703	0.0098
Ncim	43	57	2. 1.2D + 1L + 0.5Lr	Combination		-0.609	-0.461	37.6407	0.1818	-0.5439	0.0096	572. 1.2D + 1L + 0.5Lr	-0.609	-0.461	37.6407	0.1818	-0.5439	0.0096
Ncim	43	57	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-4.7943	-1.8858	43.0351	3.9317	-8.2151	0.0236	573.1 1.2D + 1L + (100Sx + 30Sy)Max	-4.7943	-1.8858	43.0351	3.9317	-8.2151	0.0236
Ncim	43	57	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-4.8283	-2.6823	41.8635	2.5754	-8.2722	-0.0551	573.1 1.2D + 1L + (100Sx + 30Sy)Min	-4.8283	-2.6823	41.8635	2.5754	-8.2722	-0.0551
Ncim	43	57	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-4.84	1.3297	47.6552	-0.4738	-8.2488	0.0407	573.2 1.2D + 1L + (100Sx - 30Sy)Max	-4.84	1.3297	47.6552	-0.4738	-8.2488	0.0407
Ncim	43	57	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-4.9003	-0.0813	45.5797	-2.8765	-8.35	-0.0987	573.2 1.2D + 1L + (100Sx - 30Sy)Min	-4.9003	-0.0813	45.5797	-2.8765	-8.35	-0.0987
Ncim	43	57	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	3.6357	1.7766	29.1542	-2.2253	7.2084	0.0741	573.3 1.2D + 1L - (100Sx + 30Sy)Max	3.6357	1.7766	29.1542	-2.2253	7.2084	0.0741
Ncim	43	57	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	3.6017	0.9801	27.9826	-3.5816	7.1514	-0.0045	573.3 1.2D + 1L - (100Sx + 30Sy)Min	3.6017	0.9801	27.9826	-3.5816	7.1514	-0.0045
Ncim	43	57	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	3.7077	-0.8244	25.438	3.2266	7.2862	0.1177	573.4 1.2D + 1L - (100Sx - 30Sy)Max	3.7077	-0.8244	25.438	3.2266	7.2862	0.1177
Ncim	43	57	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	3.6475	-2.2353	23.3626	0.8239	7.1851	-0.0217	573.4 1.2D + 1L - (100Sx - 30Sy)Min	3.6475	-2.2353	23.3626	0.8239	7.1851	-0.0217
Ncim	43	57	3.5 1.2D + 1L + Ex	Combination	Max	3.073	0.8474	42.5459	2.359	6.1449	0.1175	573.5 1.2D + 1L + ExMax	3.073	0.8474	42.5459	2.359	6.1449	0.1175
Ncim	43	57	3.5 1.2D + 1L + Ex	Combination	Min	-4.2656	-1.7531	28.4719	-2.0089	-7.2087	-0.0984	573.5 1.2D + 1L + ExMin	-4.2656	-1.7531	28.4719	-2.0089	-7.2087	-0.0984
Ncim	43	57	3.6 1.2D + 1L - Ex	Combination	Max	3.073	0.8474	42.5459	2.359	6.1449	0.1175	573.6 1.2D + 1L - ExMax	3.073	0.8474	42.5459	2.359	6.1449	0.1175
Ncim	43	57	3.6 1.2D + 1L - Ex	Combination	Min	-4.2656	-1.7531	28.4719	-2.0089	-7.2087	-0.0984	573.6 1.2D + 1L - ExMin	-4.2656	-1.7531	28.4719	-2.0089	-7.2087	-0.0984
Ncim	43	57	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.7567	-5.0665	31.779	9.1638	-2.736	0.0562	574.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.7567	-5.0665	31.779	9.1638	-2.736	0.0562
Ncim	43	57	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.7862	-5.7595	30.7597	7.9837	-2.7857	-0.0122	574.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.7862	-5.7595	30.7597	7.9837	-2.7857	-0.0122
Ncim	43	57	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	0.8041	-4.5092	26.8514	9.3592	1.9315	0.1081	574.2 1.2D + 1L + (100Sy - 30Sx)Max	0.8041	-4.5092	26.8514	9.3592	1.9315	0.1081
Ncim	43	57	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	0.7463	-5.8644	24.8579	7.0514	1.8344	-0.0258	574.2 1.2D + 1L + (100Sy - 30Sx)Min	0.7463	-5.8644	24.8579	7.0514	1.8344	-0.0258
Ncim	43	57	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	0.5937	4.8538	40.2581	-7.6336	1.7219	0.0313	574.3 1.2D + 1L - (100Sy + 30Sx)Max	0.5937	4.8538	40.2581	-7.6336	1.7219	0.0313
Ncim	43	57	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	0.5641	4.1608	39.2387	-8.8137	1.6723	-0.0372	574.3 1.2D + 1L - (100Sy + 30Sx)Min	0.5641	4.1608	39.2387	-8.8137	1.6723	-0.0372
Ncim	43	57	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.9389	4.9587	46.1598	-6.7013	-2.8981	0.0448	574.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.9389	4.9587	46.1598	-6.7013	-2.8981	0.0448
Ncim	43	57	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.9967	3.6035	44.1664	-9.0091	-2.9952	-0.089	574.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.9967	3.6035	44.1664	-9.0091	-2.9952	-0.089
Ncim	43	57	4.5 1.2D + 1L + Ey	Combination	Max	-0.4133	3.4595	40.894	6.7916	-0.2033	0.0917	574.5 1.2D + 1L + EyMax	-0.4133	3.4595	40.894	6.7916	-0.2033	0.0917
Ncim	43	57	4.5 1.2D + 1L + Ey	Combination	Min	-0.7793	-4.3652	30.1237	-6.4415	-0.8605	-0.0727	574.5 1.2D + 1L + EyMin	-0.7793	-4.3652	30.1237	-6.4415	-0.8605	-0.0727
Ncim	43	57	4.6 1.2D + 1L - Ey	Combination	Max	-0.4133	3.4595	40.894	6.7916	-0.2033	0.0917	574.6 1.2D + 1L - EyMax	-0.4133	3.4595	40.894	6.7916	-0.2033	0.0917
Ncim	43	57	4.6 1.2D + 1L - Ey	Combination	Min	-0.7793	-4.3652	30.1237	-6.4415	-0.8605	-0.0727	574.6 1.2D + 1L - EyMin	-0.7793	-4.3652	30.1237	-6.4415	-0.8605	-0.0727
Ncim	43	57	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-4.6017	-1.7693	32.9189	3.9172	-8.045	0.0199	575.1 0.9D + (100Sx + 30Sy)Max	-4.6017	-1.7693	32.9189	3.9172	-8.045	0.0199
Ncim	43	57	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-4.6357	-2.5658	31.7473	2.5609	-8.1021	-0.0588	575.1 0.9D + (100Sx + 30Sy)Min	-4.6357	-2.5658	31.7473	2.5609	-8.1021	-0.0588
Ncim	43	57	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-4.6475	1.4462	37.5389	-0.4883	-8.0787	0.037	575.2 0.9D + (100Sx - 30Sy)Max	-4.6475	1.4462	37.5389	-0.4883	-8.0787	0.037
Ncim	43	57	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-4.7077	0.0352	35.4635	-2.891	-8.1798	-0.1023	575.2 0.9D + (100Sx - 30Sy)Min	-4.7077	0.0352	35.4635	-2.891	-8.1798	-0.1023
Ncim	43	57	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	3.8282	1.8931	19.038	-2.2397	7.3786	0.0705	575.3 0.9D - (100Sx + 30Sy)Max	3.8282	1.8931	19.038	-2.2397	7.3786	0.0705
Ncim	43	57	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	3.7942	1.0967	17.8664	-3.5961	7.3215	-0.0082	575.3 0.9D - (100Sx + 30Sy)Min	3.7942	1.0967	17.8664	-3.5961	7.3215	-0.0082
Ncim	43	57	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	3.9002	-0.7079	15.3218	3.2121	7.4563	0.1141	575.4 0.9D - (100Sx - 30Sy)Max	3.9002	-0.7079	15.3218	3.2121	7.4563	0.1141
Ncim	43	57	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	3.84	-2.1188	13.2464	0.8094	7.3552	-0.0253	575.4 0.9D - (100Sx - 30Sy)Min	3.84	-2.1188	13.2464	0.8094	7.3552	-0.0253
Ncim	43	57	5.5 0.9D + Ex	Combination	Max	3.2656	0.9639	32.4296	2.3445	6.3151	0.1138	575.5 0.9D + ExMax	3.2656	0.9639	32.4296	2.3445	6.3151	0.1138
Ncim	43	57	5.5 0.9D + Ex	Combination	Min	-4.0731	-1.6365	18.3557	-2.0233	-7.0386	-0.1021	575.5 0.9D + ExMin	-4.0731	-1.6365	18.3557	-2.0233	-7.0386	-0.1021
Ncim	43	57	5.6 0.9D - Ex	Combination	Max	3.2656	0.9639	32.4296	2.3445	6.3151	0.1138	575.6 0.9D - ExMax	3.2656	0.9639	32.4296	2.3445	6.3151	0.1138
Ncim	43	57	5.6 0.9D - Ex	Combination	Min	-4.0731	-1.6365	18.3557	-2.0233	-7.0386	-0.1021	575.6 0.9D - ExMin	-4.0731	-1.6365	18.3557	-2.0233	-7.0386	-0.1021
Ncim	43	57	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.5641	-4.95	21.6628	9.1493	-2.5659	0.0526	576.1 0.9D + (100Sy + 30Sx)Max	-1.5641	-4.95	21.6628	9.1493	-2.5659	0.0526
Ncim	43	57	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.5937	-5.643	20.6435	7.9692	-2.6156	-0.0159	576.1 0.9D + (100Sy + 30Sx)Min	-1.5937	-5.643	20.6435	7.9692	-2.6156	-0.0159
Ncim	43	57	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	0.9966	-4.3926	16.7351	9.3447	2.1016	0.1044	576.2 0.9D + (100Sy - 30Sx)Max	0.9966	-4.3926	16.7351	9.3447	2.1016	0.1044
Ncim	43	57	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	0.9388	-5.7478	14.7417	7.0369	2.0045	-0.0295	576.2 0.9D + (100Sy - 30Sx)Min	0.9388	-5.7478	14.7417	7.0369	2.0045	-0.0295
Ncim	43	57	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	0.7862	4.9704	30.1418	-7.6481	1.8921	0.0276	576.3 0.9D - (100Sy + 30Sx)Max	0.7862	4.9704	30.1418	-7.6481	1.8921	0.0276
Ncim	43	57	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	0.7566	4.2774	29.1225	-8.8282	1.8424	-0.0408	576.3 0.9D - (100Sy + 30Sx)Min	0.7566	4.2774	29.1225	-8.8282	1.8424	-0.0408
Ncim	43	57	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.7463	5.0752	36.0436	-6.7158	-2.728	0.0412	576.4 0.9D - (100Sy - 30Sx)Max	-1.7463	5.0752	36.0436	-6.7158	-2.728	0.0412
Ncim	43	57	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.8042	3.72	34.0501	-9.0236	-2.8251	-0.0927	576.4 0.9D - (100Sy - 30Sx)Min	-1.8042	3.72	34.0501	-9.0236	-2.8251	-0.0927
Ncim	43	57	6.5 0.9D + Ey	Combination	Max	-0.2207	3.5761	30.7778	6.7771	-0.0331	0.0881	576.5 0.9D + EyMax	-0.2207	3.5761	30.7778	6.7771	-0.0331	0.0881
Ncim	43	57	6.5 0.9D + Ey	Combination	Min	-0.5868	-4.2487	20.0075	-6.4559	-0.6904	-0.0763	576.5 0.9D + EyMin	-0.5868	-4.2487	20.0075	-6.4559	-0.6904	-0.0763
Ncim	43	57	6.6 0.9D - Ey	Combination	Max	-0.2207	3.5761	30.7778	6.7771	-0.0331	0.0881	576.6 0.9D - EyMax	-0.2207	3.5761	30.7778	6.7771	-0.0331	0.0881
Ncim	43	57	6.6 0.9D - Ey	Combination	Min	-0.5868	-4.2487	20.0075	-6.4559	-0.6904	-0.0763	576.6 0.9D - EyMin	-0.5868	-4.2487	20.0075	-6.4559	-0.6904	-0.0763
Ncim	43	57	3.3 1.2D + 1L -1	Combination	Max	3.6357	1.7766	29.1542	-2.2253	7.2084	0.0741	573.3 1.2D + 1L -1Max	3.6357	1.7766	29.1542	-2.2253	7.2084	0.0741
Ncim	43	57	3.3 1.2D + 1L -1	Combination	Min	3.6017	0.9801	27.9826	-3.5816	7.1514	-0.0045	573.3 1.2D + 1L -1Min	3.6017	0.9801	27.9826	-3.5816	7.1514	-0.0045
Ncim	43	57	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.7567	-5.0665	31.779	9.1638	-2.736	0.0562	574.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.7567	-5.0665	31.779	9.1638	-2.736	0.0562
Ncim	43	57	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.7862	-5.7595	30.7597	7.9837	-2.7857	-0.0122	574.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.7862	-5.7595	30.7597	7.9837	-2.7857	-0.0122
Ncim	43	57	0. 1D + 1L + sxST	Combination	Max	-4.7854	-0.2078	41.3544	1.6542	-8.2011	0.0325	570. 1D + 1L + sxSTMax	-4.7854	-0.2078	41.3544	1.6542	-8.2011	0.0325
Ncim	43	57	0. 1D + 1L + sxST	Combination	Min	-4.8325	-1.3115	39.7308	-0.2253	-8.2802	-0.0765	570. 1D + 1L + sxSTMin	-4.8325	-1.3115	39.7308	-0.2253	-8.2802	-0.0765
Ncim	43	57	0. 1D + 1L + syST	Combination	Max	-0.4445	-4.7175	25.3244	9.1868	-0.3714	0.0825	570. 1D + 1L + sySTMax	-0.4445	-4.7175	25.3244	9.1868	-0.3714	0.0825
Ncim	43	57	0. 1D + 1L + syST	Combination	Min	-0.4882	-5.7416	23.818	7.4428	-0.4448	-0.0186	570. 1D + 1L + sySTMin	-0.4882	-5.7416	23.818	7.4428	-0.4448	-0.0186
Ncim	43	57	0. 1D + 1L + sxDN	Combination	Max	3.1048	0.9177	38.5551	2.2842	6.1758	0.1179	570. 1D + 1L + sxDNMax	3.1048	0.9177	38.5551	2.2842	6.1758	0.1179
Ncim	43	57	0. 1D + 1L + sxDN	Combination	Min	-4.2338	-1.6828	24.4811	-2.0836	-7.1778	-0.0981	570. 1D + 1L + sxDNMin	-4.2338	-1.6828	24.4811	-2.0836	-7.1778	-0.0981
Ncim	43	57	0. 1D + 1L + syDN	Combination	Max	-0.3815	3.5298	36.9033	6.7168	-0.1724	0.0921	570. 1D + 1L + syDNMax	-0.3815	3.5298	36.9033	6.7168	-0.1724	0.0921
Ncim	43	57	0. 1D + 1L + syDN	Combination	Min	-0.7475	-4.2949	26.1329	-6.5162	-0.8297	-0.0723	570. 1D + 1L + syDNMin	-0.7475	-4.2949	26.1329	-6.5162	-0.8297	-0.0723

Ncim	44	58	0. 1D	Combination		-0.463	0.8268	22.2935	-1.0071	-0.4341	0.0065	580. 1D	-0.463	0.8268	22.2935	-1.0071	-0.4341	0.0065
Ncim	44	58	0. 1D + 1L	Combination		-0.6295	1.1054	25.1723	-1.3688	-0.5925	0.0099	580. 1D + 1L	-0.6295	1.1054	25.1723	-1.3688	-0.5925	0.0099
Ncim	44	58	0. 1L	Combination		-0.1665	0.2786	2.8788	-0.3617	-0.1584	0.0034	580. 1L	-0.1665	0.2786	2.8788	-0.3617	-0.1584	0.0034
Ncim	44	58	1. 1.4D	Combination		-0.6482	1.1575	31.2109	-1.4099	-0.6077	0.0091	581. 1.4D	-0.6482	1.1575	31.2109	-1.4099	-0.6077	0.0091
Ncim	44	58	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.8334	1.4448	32.8153	-1.7954	-0.7855	0.0133	582. 1.2D + 1.6L + 0.5Lr	-0.8334	1.4448	32.8153	-1.7954	-0.7855	0.0133
Ncim	44	58	2. 1.2D + 1.6Lr + L	Combination		-0.6753	1.1535	32.8541	-1.4153	-0.6355	0.0098	582. 1.2D + 1.6Lr + L	-0.6753	1.1535	32.8541	-1.4153	-0.6355	0.0098
Ncim	44	58	2. 1.2D + 1L + 0.5Lr	Combination		-0.6502	1.1383	29.6486	-1.3975	-0.6112	0.0096	582. 1.2D + 1L + 0.5Lr	-0.6502	1.1383	29.6486	-1.3975	-0.6112	0.0096
Ncim	44	58	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-4.6734	-0.2534	41.6678	2.295	-7.9672	0.0236	583.1 1.2D + 1L + (100Sx + 30Sy)Max	-4.6734	-0.2534	41.6678	2.295	-7.9672	0.0236
Ncim	44	58	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-4.896	-1.0335	40.5148	0.9652	-8.3806	-0.0551	583.1 1.2D + 1L + (100Sx + 30Sy)Min	-4.896	-1.0335	40.5148	0.9652	-8.3806	-0.0551
Ncim	44	58	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-4.5564	2.9359	35.9321	-2.1029	-7.7381	0.0407	583.2 1.2D + 1L + (100Sx - 30Sy)Max	-4.5564	2.9359	35.9321	-2.1029	-7.7381	0.0407
Ncim	44	58	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-4.9507	1.5541	33.8896	-4.4586	-8.4704	-0.0987	583.2 1.2D + 1L + (100Sx - 30Sy)Min	-4.9507	1.5541	33.8896	-4.4586	-8.4704	-0.0987
Ncim	44	58	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	3.6183	3.2964	15.8684	-3.744	7.1803	0.0741	583.3 1.2D + 1L - (100Sx + 30Sy)Max	3.6183	3.2964	15.8684	-3.744	7.1803	0.0741
Ncim	44	58	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	3.3958	2.5163	14.7154	-5.0738	6.767	-0.0045	583.3 1.2D + 1L - (100Sx + 30Sy)Min	3.3958	2.5163	14.7154	-5.0738	6.767	-0.0045
Ncim	44	58	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	3.6731	0.7088	22.4936	1.6798	7.2701	0.1177	583.4 1.2D + 1L - (100Sx - 30Sy)Max	3.6731	0.7088	22.4936	1.6798	7.2701	0.1177
Ncim	44	58	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	3.2788	-0.673	20.4511	-0.6759	6.5379	-0.0217	583.4 1.2D + 1L - (100Sx - 30Sy)Min	3.2788	-0.673	20.4511	-0.6759	6.5379	-0.0217
Ncim	44	58	3.5 1.2D + 1L + Ex	Combination	Max	2.8058	2.3848	37.4069	0.7343	5.6716	0.1175	583.5 1.2D + 1L + ExMax	2.8058	2.3848	37.4069	0.7343	5.6716	0.1175
Ncim	44	58	3.5 1.2D + 1L + Ex	Combination	Min	-4.0834	-0.122	18.9762	-3.5131	-6.8719	-0.0984	583.5 1.2D + 1L + ExMin	-4.0834	-0.122	18.9762	-3.5131	-6.8719	-0.0984
Ncim	44	58	3.6 1.2D + 1L - Ex	Combination	Max	2.8058	2.3848	37.4069	0.7343	5.6716	0.1175	583.6 1.2D + 1L - ExMax	2.8058	2.3848	37.4069	0.7343	5.6716	0.1175
Ncim	44	58	3.6 1.2D + 1L - Ex	Combination	Min	-4.0834	-0.122	18.9762	-3.5131	-6.8719	-0.0984	583.6 1.2D + 1L - ExMin	-4.0834	-0.122	18.9762	-3.5131	-6.8719	-0.0984
Ncim	44	58	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.8329	-3.4425	41.9368	7.5431	-2.7981	0.0562	584.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.8329	-3.4425	41.9368	7.5431	-2.7981	0.0562
Ncim	44	58	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-2.0266	-4.1212	40.9336	6.3861	-3.1577	-0.0122	584.1 1.2D + 1L + (100Sy + 30Sx)Min	-2.0266	-4.1212	40.9336	6.3861	-3.1577	-0.0122
Ncim	44	58	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	0.7378	-2.9198	36.5304	7.7575	1.8971	0.1081	584.2 1.2D + 1L + (100Sy - 30Sx)Max	0.7378	-2.9198	36.5304	7.7575	1.8971	0.1081
Ncim	44	58	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	0.3591	-4.247	34.5686	5.4948	1.1938	-0.0258	584.2 1.2D + 1L + (100Sy - 30Sx)Min	0.3591	-4.247	34.5686	5.4948	1.1938	-0.0258
Ncim	44	58	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	0.7489	6.384	15.4496	-9.1649	1.9575	0.0313	584.3 1.2D + 1L - (100Sy + 30Sx)Max	0.7489	6.384	15.4496	-9.1649	1.9575	0.0313
Ncim	44	58	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	0.5553	5.7053	14.4464	-10.3219	1.5978	-0.0372	584.3 1.2D + 1L - (100Sy + 30Sx)Min	0.5553	5.7053	14.4464	-10.3219	1.5978	-0.0372
Ncim	44	58	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-1.6367	6.5099	21.8146	-8.2736	-2.3941	0.0448	584.4 1.2D + 1L - (100Sy - 30Sx)Max	-1.6367	6.5099	21.8146	-8.2736	-2.3941	0.0448
Ncim	44	58	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-2.0154	5.1826	19.8528	-10.5362	-3.0974	-0.089	584.4 1.2D + 1L - (100Sy - 30Sx)Min	-2.0154	5.1826	19.8528	-10.5362	-3.0974	-0.089
Ncim	44	58	4.5 1.2D + 1L + Ey	Combination	Max	-0.2565	5.0186	36.6942	5.2075	0.1057	0.0917	584.5 1.2D + 1L + EyMax	-0.2565	5.0186	36.6942	5.2075	0.1057	0.0917
Ncim	44	58	4.5 1.2D + 1L + Ey	Combination	Min	-1.0212	-2.7557	19.689	-7.9863	-1.3059	-0.0727	584.5 1.2D + 1L + EyMin	-1.0212	-2.7557	19.689	-7.9863	-1.3059	-0.0727
Ncim	44	58	4.6 1.2D + 1L - Ey	Combination	Max	-0.2565	5.0186	36.6942	5.2075	0.1057	0.0917	584.6 1.2D + 1L - EyMax	-0.2565	5.0186	36.6942	5.2075	0.1057	0.0917
Ncim	44	58	4.6 1.2D + 1L - Ey	Combination	Min	-1.0212	-2.7557	19.689	-7.9863	-1.3059	-0.0727	584.6 1.2D + 1L - EyMin	-1.0212	-2.7557	19.689	-7.9863	-1.3059	-0.0727
Ncim	44	58	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-4.4512	-0.6407	33.5404	2.778	-7.7578	0.0199	585.1 0.9D + (100Sx + 30Sy)Max	-4.4512	-0.6407	33.5404	2.778	-7.7578	0.0199
Ncim	44	58	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-4.6738	-1.4208	32.3874	1.4482	-8.1711	-0.0588	585.1 0.9D + (100Sx + 30Sy)Min	-4.6738	-1.4208	32.3874	1.4482	-8.1711	-0.0588
Ncim	44	58	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-4.3343	2.5486	27.8047	-1.6199	-7.5287	0.037	585.2 0.9D + (100Sx - 30Sy)Max	-4.3343	2.5486	27.8047	-1.6199	-7.5287	0.037
Ncim	44	58	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-4.7286	1.1667	25.7622	-3.9756	-8.2609	-0.1023	585.2 0.9D + (100Sx - 30Sy)Min	-4.7286	1.1667	25.7622	-3.9756	-8.2609	-0.1023
Ncim	44	58	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	3.8405	2.909	7.7409	-3.261	7.3898	0.0705	585.3 0.9D - (100Sx + 30Sy)Max	3.8405	2.909	7.7409	-3.261	7.3898	0.0705
Ncim	44	58	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	3.6179	2.1289	6.5879	-4.5908	6.9764	-0.0082	585.3 0.9D - (100Sx + 30Sy)Min	3.6179	2.1289	6.5879	-4.5908	6.9764	-0.0082
Ncim	44	58	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	3.8952	0.3215	14.3661	2.1628	7.4796	0.1141	585.4 0.9D - (100Sx - 30Sy)Max	3.8952	0.3215	14.3661	2.1628	7.4796	0.1141
Ncim	44	58	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	3.5009	-1.0604	12.3236	-0.1929	6.7473	-0.0253	585.4 0.9D - (100Sx - 30Sy)Min	3.5009	-1.0604	12.3236	-0.1929	6.7473	-0.0253
Ncim	44	58	5.5 0.9D + Ex	Combination	Max	3.0279	1.9975	29.2795	1.2173	5.8811	0.1138	585.5 0.9D + ExMax	3.0279	1.9975	29.2795	1.2173	5.8811	0.1138
Ncim	44	58	5.5 0.9D + Ex	Combination	Min	-3.8613	-0.5093	10.8488	-3.0301	-6.6624	-0.1021	585.5 0.9D + ExMin	-3.8613	-0.5093	10.8488	-3.0301	-6.6624	-0.1021
Ncim	44	58	5.6 0.9D - Ex	Combination	Max	3.0279	1.9975	29.2795	1.2173	5.8811	0.1138	585.6 0.9D - ExMax	3.0279	1.9975	29.2795	1.2173	5.8811	0.1138
Ncim	44	58	5.6 0.9D - Ex	Combination	Min	-3.8613	-0.5093	10.8488	-3.0301	-6.6624	-0.1021	585.6 0.9D - ExMin	-3.8613	-0.5093	10.8488	-3.0301	-6.6624	-0.1021
Ncim	44	58	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.6108	-3.8298	33.8093	8.0261	-2.5886	0.0526	586.1 0.9D + (100Sy + 30Sx)Max	-1.6108	-3.8298	33.8093	8.0261	-2.5886	0.0526
Ncim	44	58	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.8044	-4.5085	32.8062	6.8691	-2.9483	-0.0159	586.1 0.9D + (100Sy + 30Sx)Min	-1.8044	-4.5085	32.8062	6.8691	-2.9483	-0.0159
Ncim	44	58	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	0.9599	-3.3071	28.403	8.2405	2.1066	0.1044	586.2 0.9D + (100Sy - 30Sx)Max	0.9599	-3.3071	28.403	8.2405	2.1066	0.1044
Ncim	44	58	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	0.5812	-4.6344	26.4411	5.9778	1.4033	-0.0295	586.2 0.9D + (100Sy - 30Sx)Min	0.5812	-4.6344	26.4411	5.9778	1.4033	-0.0295
Ncim	44	58	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	0.9711	5.9967	7.3221	-8.6819	2.1669	0.0276	586.3 0.9D - (100Sy + 30Sx)Max	0.9711	5.9967	7.3221	-8.6819	2.1669	0.0276
Ncim	44	58	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	0.7774	5.318	6.3189	-9.8389	1.8073	-0.0408	586.3 0.9D - (100Sy + 30Sx)Min	0.7774	5.318	6.3189	-9.8389	1.8073	-0.0408
Ncim	44	58	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-1.4146	6.1226	13.6871	-7.7906	-2.1846	0.0412	586.4 0.9D - (100Sy - 30Sx)Max	-1.4146	6.1226	13.6871	-7.7906	-2.1846	0.0412
Ncim	44	58	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.7933	4.7953	11.7253	-10.0532	-2.8879	-0.0927	586.4 0.9D - (100Sy - 30Sx)Min	-1.7933	4.7953	11.7253	-10.0532	-2.8879	-0.0927
Ncim	44	58	6.5 0.9D + Ey	Combination	Max	-0.0343	4.6313	28.5668	5.6905	0.3151	0.0881	586.5 0.9D + EyMax	-0.0343	4.6313	28.5668	5.6905	0.3151	0.0881
Ncim	44	58	6.5 0.9D + Ey	Combination	Min	-0.799	-3.1431	11.5615	-7.5033	-1.0965	-0.0763	586.5 0.9D + EyMin	-0.799	-3.1431	11.5615	-7.5033	-1.0965	-0.0763
Ncim	44	58	6.6 0.9D - Ey	Combination	Max	-0.0343	4.6313	28.5668	5.6905	0.3151	0.0881	586.6 0.9D - EyMax	-0.0343	4.6313	28.5668	5.6905	0.3151	0.0881
Ncim	44	58	6.6 0.9D - Ey	Combination	Min	-0.799	-3.1431	11.5615	-7.5033	-1.0965	-0.0763	586.6 0.9D - EyMin	-0.799	-3.1431	11.5615	-7.5033	-1.0965	-0.0763
Ncim	44	58	3.3 1.2D + 1L -1	Combination	Max	3.6183	3.2964	15.8684	-3.744	7.1803	0.0741	583.3 1.2D + 1L -1Max	3.6183	3.2964	15.8684	-3.744	7.1803	0.0741
Ncim	44	58	3.3 1.2D + 1L -1	Combination	Min	3.3958	2.5163	14.7154	-5.0738	6.767	-0.0045	583.3 1.2D + 1L -1Min	3.3958	2.5163	14.7154	-5.0738	6.767	-0.0045
Ncim	44	58	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.8329	-3.4425	41.9368	7.5431	-2.7981	0.0562	584.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.8329	-3.4425	41.9368	7.5431	-2.7981	0.0562
Ncim	44	58	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-2.0266	-4.1212	40.9336	6.3861	-3.1577	-0.0122	584.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-2.0266	-4.1212	40.9336	6.3861	-3.1577	-0.0122
Ncim	44	58	0. 1D + 1L + sxST	Combination	Max	-4.6056	1.3152	35.7807	0.1166	-7.8451	0.0325	580. 1D + 1L + sxSTMax	-4.6056	1.3152	35.7807	0.1166	-7.8451	0.0325
Ncim	44	58	0. 1D + 1L + sxST	Combination	Min	-4.914	0.2342	34.1829	-1.7261	-8.4179	-0.0765	580. 1D + 1L + sxSTMin	-4.914	0.2342	34.1829	-1.7261	-8.4179	-0.0765
Ncim	44	58	0. 1D + 1L + syST	Combination	Max	-0.5382	-3.2072	36.2143	7.6708	-0.4429	0.0825	580. 1D + 1L + sySTMax	-0.5382	-3.2072	36.2143	7.6708	-0.4429	0.0825
Ncim	44	58	0. 1D + 1L + syST	Combination	Min	-0.8244	-4.2102	34.7318	5.961	-0.9743	-0.0186	580. 1D + 1L + sySTMin	-0.8244	-4.2102	34.7318	5.961	-0.9743	-0.0186
Ncim	44	58	0. 1D + 1L + sxDN	Combination	Max	2.8151	2.3588	34.3876	0.7549	5.6792	0.1179	580. 1D + 1L + sxDNMax	2.8151	2.3588	34.3876	0.7549	5.6792	0.1179
Ncim	44	58	0. 1D + 1L + sxDN	Combination	Min	-4.0741	-0.148	15.9569	-3.4926	-6.8643	-0.0981	580. 1D + 1L + sxDNMin	-4.0741	-0.148	15.9569	-3.4926	-6.8643	-0.0981
Ncim	44	58	0. 1D + 1L + syDN	Combination	Max	-0.2471	4.9926	33.6749	5.2281	0.1133	0.0921	580. 1D + 1L + syDNMax	-0.2471	4.9926	33.6749	5.2281	0.1133	0.0921
Ncim	44	58	0. 1D + 1L + syDN	Combination	Min	-1.0118	-2.7818	16.6697	-7.9658	-1.2983	-0.0723	580. 1D + 1L + syDNMin	-1.0118	-2.7818	16.6697	-7.9658	-1.2983	-0.0723
Ncim	46	65	0. 1D	Combination		-0.3955	-1.0496	6.4359	0.9326	-0.3996	0.0038	650. 1D	-0.3955	-1.0496	6.4359	0.9326	-0.3996	0.0038
Ncim	46	65	0. 1D + 1L	Combination		-0.5458	-1.3401	7.7092	1.1712	-0.5559	0.0058	650. 1D + 1L	-0.5458	-1.3401	7.7092	1.1712	-0.5559	0.0058
Ncim	46	65	0. 1L	Combination		-0.1504	-0.2906	1.2734	0.2386	-0.1564	0.002	650. 1L	-0.1504	-0.2906	1.2734	0.2386	-0.1564	0.002
Ncim	46	65	1. 1.4D	Combination		-0.5536	-1.4694	9.0102	1.3057	-0.5594	0.0054	651. 1.4D	-0.5536	-1.4694	9.0102	1.3057	-0.5594	0.0054
Ncim	46	65	2. 1.2D + 1.6L + 0.5Lr	Combination		-0.7202	-1.7282	9.7686	1.504	-0.7349	0.0078	652. 1.2D + 1.6L + 0.5Lr	-0.7202	-1.7282	9.7686	1.504	-0.7349	0.0078
Ncim	46	65	2. 1.2D + 1.6Lr + L	Combination		-0.5661	-1.4171	8.3859	1.2484	-0.5745	0.0058	652. 1.2D + 1.6Lr + L	-0.5661	-1.4171	8.3859	1.2484	-0.5745	0.0058
Ncim	46	65	2. 1.2D + 1L + 0.5Lr	Combination		-0.5548	-1.4086	8.3679	1.2415	-0.5629	0.0056	652. 1.2D + 1L + 0.5Lr	-0.5548	-1.4086	8.3679	1.2415	-0.5629	0.0056
Ncim	46	65	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Max	-3.6023	-2.3261	11.9466	3.5108	-5.3711	0.0138	653.1 1.2D + 1L + (100Sx + 30Sy)Max	-3.6023	-2.3261	11.9466	3.5108	-5.3711	0.0138
Ncim	46	65	3.1 1.2D + 1L + (100Sx + 30Sy)	Combination	Min	-4.2188	-2.7897	11.6449	2.7341	-6.3423	-0.0323	653.1 1.2D + 1L + (100Sx + 30Sy)Min	-4.2188	-2.7897	11.6449	2.7341	-6.3423	-0.0323
Ncim	46	65	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Max	-3.2556	-0.3684	11.1164	0.8354	-4.8243	0.0239	653.2 1.2D + 1L + (100Sx - 30Sy)Max	-3.2556	-0.3684	11.1164	0.8354	-4.8243	0.0239
Ncim	46	65	3.2 1.2D + 1L + (100Sx - 30Sy)	Combination	Min	-4.3477	-1.1898	10.5819	-0.5406	-6.5446	-0.0579	653.2 1.2D + 1L + (100Sx - 30Sy)Min	-4.3477	-1.1898	10.5819	-0.5406	-6.5446	-0.0579
Ncim	46	65	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Max	3.1193	-0.0198	5.0746	-0.2572	5.2269	0.0435	653.3 1.2D + 1L - (100Sx + 30Sy)Max	3.1193	-0.0198	5.0746	-0.2572	5.2269	0.0435
Ncim	46	65	3.3 1.2D + 1L - (100Sx + 30Sy)	Combination	Min	2.5028	-0.4834	4.7729	-1.0339	4.2558	-0.0027	653.3 1.2D + 1L - (100Sx + 30Sy)Min	2.5028	-0.4834	4.7729	-1.0339	4.2558	-0.0027
Ncim	46	65	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Max	3.2482	-1.6197	6.1376	3.0175	5.4293	0.069	653.4 1.2D + 1L - (100Sx - 30Sy)Max	3.2482	-1.6197	6.1376	3.0175	5.4293	0.069
Ncim	46	65	3.4 1.2D + 1L - (100Sx - 30Sy)	Combination	Min	2.1561	-2.4411	5.6031	1.6415	3.7089	-0.0127	653.4 1.2D + 1L - (100Sx - 30Sy)Min	2.1561	-2.4411	5.6031	1.6415	3.7089	-0.0127
Ncim	46	65	3.5 1.2D + 1L + Ex	Combination	Max	2.04	-0.6296	10.7835	2.5116	3.5265	0.0689	653.5 1.2D + 1L + ExMax	2.04	-0.6296	10.7835	2.5116	3.5265	0.0689
Ncim	46	65	3.5 1.2D + 1L + Ex	Combination	Min	-3.1395	-2.1799	5.936	-0.0347	-4.6419	-0.0577	653.5 1.2D + 1L + ExMin	-3.1395	-2.1799	5.936	-0.0347	-4.6419	-0.0577
Ncim	46	65	3.6 1.2D + 1L - Ex	Combination	Max	2.04	-0.6296	10.7835	2.5116	3.5265	0.0689	653.6 1.2D + 1L - ExMax	2.04	-0.6296	10.7835	2.5116	3.5265	0.0689
Ncim	46	65	3.6 1.2D + 1L - Ex	Combination	Min	-3.1395	-2.1799	5.936	-0.0347	-4.6419	-0.0577	653.6 1.2D + 1L - ExMin	-3.1395	-2.1799	5.936	-0.0347	-4.6419	-0.0577
Ncim	46	65	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Max	-1.4549	-4.2468	10.9575	6.6537	-1.9861	0.033	654.1 1.2D + 1L + (100Sy + 30Sx)Max	-1.4549	-4.2468	10.9575	6.6537	-1.9861	0.033
Ncim	46	65	4.1 1.2D + 1L + (100Sy + 30Sx)	Combination	Min	-1.9913	-4.6502	10.695	5.9779	-2.8311	-0.0072	654.1 1.2D + 1L + (100Sy + 30Sx)Min	-1.9913	-4.6502	10.695	5.9779	-2.8311	-0.0072
Ncim	46	65	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Max	0.7852	-3.8958	9.3054	6.7387	1.5453	0.0634	654.2 1.2D + 1L + (100Sy - 30Sx)Max	0.7852	-3.8958	9.3054	6.7387	1.5453	0.0634
Ncim	46	65	4.2 1.2D + 1L + (100Sy - 30Sx)	Combination	Min	-0.2638	-4.6847	8.7919	5.4171	-0.1071	-0.0151	654.2 1.2D + 1L + (100Sy - 30Sx)Min	-0.2638	-4.6847	8.7919	5.4171	-0.1071	-0.0151
Ncim	46	65	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Max	0.8919	1.8407	6.0245	-3.501	1.7157	0.0183	654.3 1.2D + 1L - (100Sy + 30Sx)Max	0.8919	1.8407	6.0245	-3.501	1.7157	0.0183
Ncim	46	65	4.3 1.2D + 1L - (100Sy + 30Sx)	Combination	Min	0.3555	1.4373	5.762	-4.1768	0.8708	-0.0218	654.3 1.2D + 1L - (100Sy + 30Sx)Min	0.3555	1.4373	5.762	-4.1768	0.8708	-0.0218
Ncim	46	65	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Max	-0.8356	1.8752	7.9276	-2.9403	-1.0083	0.0263	654.4 1.2D + 1L - (100Sy - 30Sx)Max	-0.8356	1.8752	7.9276	-2.9403	-1.0083	0.0263
Ncim	46	65	4.4 1.2D + 1L - (100Sy - 30Sx)	Combination	Min	-1.8846	1.0863	7.4141	-4.2619	-2.6607	-0.0522	654.4 1.2D + 1L - (100Sy - 30Sx)Min	-1.8846	1.0863	7.4141	-4.2619	-2.6607	-0.0522
Ncim	46	65	4.5 1.2D + 1L + Ey	Combination	Max	0.2	0.9844	9.9297	5.2343	0.6252	0.0538	654.5 1.2D + 1L + EyMax	0.2	0.9844	9.9297	5.2343	0.6252	0.0538
Ncim	46	65	4.5 1.2D + 1L + Ey	Combination	Min	-1.2995	-3.7939	6.7898	-2.7575	-1.7406	-0.0426	654.5 1.2D + 1L + EyMin	-1.2995	-3.7939	6.7898	-2.7575	-1.7406	-0.0426
Ncim	46	65	4.6 1.2D + 1L - Ey	Combination	Max	0.2	0.9844	9.9297	5.2343	0.6252	0.0538	654.6 1.2D + 1L - EyMax	0.2	0.9844	9.9297	5.2343	0.6252	0.0538
Ncim	46	65	4.6 1.2D + 1L - Ey	Combination	Min	-1.2995	-3.7939	6.7898	-2.7575	-1.7406	-0.0426	654.6 1.2D + 1L - EyMin	-1.2995	-3.7939	6.7898	-2.7575	-1.7406	-0.0426
Ncim	46	65	5.1 0.9D + (100Sx + 30Sy)	Combination	Max	-3.4085	-1.8659	9.3792	3.1117	-5.1731	0.0117	655.1 0.9D + (100Sx + 30Sy)Max	-3.4085	-1.8659	9.3792	3.1117	-5.1731	0.0117
Ncim	46	65	5.1 0.9D + (100Sx + 30Sy)	Combination	Min	-4.025	-2.3296	9.0775	2.335	-6.1442	-0.0344	655.1 0.9D + (100Sx + 30Sy)Min	-4.025	-2.3296	9.0775	2.335	-6.1442	-0.0344
Ncim	46	65	5.2 0.9D + (100Sx - 30Sy)	Combination	Max	-3.0617	0.0917	8.549	0.4363	-4.6262	0.0217	655.2 0.9D + (100Sx - 30Sy)Max	-3.0617	0.0917	8.549	0.4363	-4.6262	0.0217
Ncim	46	65	5.2 0.9D + (100Sx - 30Sy)	Combination	Min	-4.1539	-0.7297	8.0144	-0.9397	-6.3466	-0.06	655.2 0.9D + (100Sx - 30Sy)Min	-4.1539	-0.7297	8.0144	-0.9397	-6.3466	-0.06
Ncim	46	65	5.3 0.9D - (100Sx + 30Sy)	Combination	Max	3.3131	0.4404	2.5072	-0.6563	5.425	0.0413	655.3 0.9D - (100Sx + 30Sy)Max	3.3131	0.4404	2.5072	-0.6563	5.425	0.0413
Ncim	46	65	5.3 0.9D - (100Sx + 30Sy)	Combination	Min	2.6966	-0.0233	2.2054	-1.433	4.4538	-0.0048	655.3 0.9D - (100Sx + 30Sy)Min	2.6966	-0.0233	2.2054	-1.433	4.4538	-0.0048
Ncim	46	65	5.4 0.9D - (100Sx - 30Sy)	Combination	Max	3.442	-1.1596	3.5702	2.6184	5.6274	0.0669	655.4 0.9D - (100Sx - 30Sy)Max	3.442	-1.1596	3.5702	2.6184	5.6274	0.0669
Ncim	46	65	5.4 0.9D - (100Sx - 30Sy)	Combination	Min	2.3499	-1.9809	3.0356	1.2424	3.907	-0.0148	655.4 0.9D - (100Sx - 30Sy)Min	2.3499	-1.9809	3.0356	1.2424	3.907	-0.0148
Ncim	46	65	5.5 0.9D + Ex	Combination	Max	2.2338	-0.1695	8.216	2.1125	3.7246	0.0667	655.5 0.9D + ExMax	2.2338	-0.1695	8.216	2.1125	3.7246	0.0667
Ncim	46	65	5.5 0.9D + Ex	Combination	Min	-2.9456	-1.7198	3.3686	-0.4338	-4.4438	-0.0598	655.5 0.9D + ExMin	-2.9456	-1.7198	3.3686	-0.4338	-4.4438	-0.0598
Ncim	46	65	5.6 0.9D - Ex	Combination	Max	2.2338	-0.1695	8.216	2.1125	3.7246	0.0667	655.6 0.9D - ExMax	2.2338	-0.1695	8.216	2.1125	3.7246	0.0667
Ncim	46	65	5.6 0.9D - Ex	Combination	Min	-2.9456	-1.7198	3.3686	-0.4338	-4.4438	-0.0598	655.6 0.9D - ExMin	-2.9456	-1.7198	3.3686	-0.4338	-4.4438	-0.0598
Ncim	46	65	6.1 0.9D + (100Sy + 30Sx)	Combination	Max	-1.2611	-3.7867	8.3901	6.2546	-1.7881	0.0308	656.1 0.9D + (100Sy + 30Sx)Max	-1.2611	-3.7867	8.3901	6.2546	-1.7881	0.0308
Ncim	46	65	6.1 0.9D + (100Sy + 30Sx)	Combination	Min	-1.7975	-4.1901	8.1276	5.5788	-2.633	-0.0093	656.1 0.9D + (100Sy + 30Sx)Min	-1.7975	-4.1901	8.1276	5.5788	-2.633	-0.0093
Ncim	46	65	6.2 0.9D + (100Sy - 30Sx)	Combination	Max	0.979	-3.4357	6.7379	6.3396	1.7434	0.0612	656.2 0.9D + (100Sy - 30Sx)Max	0.979	-3.4357	6.7379	6.3396	1.7434	0.0612
Ncim	46	65	6.2 0.9D + (100Sy - 30Sx)	Combination	Min	-0.07	-4.2246	6.2245	5.018	0.091	-0.0173	656.2 0.9D + (100Sy - 30Sx)Min	-0.07	-4.2246	6.2245	5.018	0.091	-0.0173
Ncim	46	65	6.3 0.9D - (100Sy + 30Sx)	Combination	Max	1.0857	2.3009	3.457	-3.9001	1.9138	0.0162	656.3 0.9D - (100Sy + 30Sx)Max	1.0857	2.3009	3.457	-3.9001	1.9138	0.0162
Ncim	46	65	6.3 0.9D - (100Sy + 30Sx)	Combination	Min	0.5493	1.8975	3.1945	-4.5759	1.0689	-0.0239	656.3 0.9D - (100Sy + 30Sx)Min	0.5493	1.8975	3.1945	-4.5759	1.0689	-0.0239
Ncim	46	65	6.4 0.9D - (100Sy - 30Sx)	Combination	Max	-0.6418	2.3354	5.3601	-3.3393	-0.8102	0.0241	656.4 0.9D - (100Sy - 30Sx)Max	-0.6418	2.3354	5.3601	-3.3393	-0.8102	0.0241
Ncim	46	65	6.4 0.9D - (100Sy - 30Sx)	Combination	Min	-1.6908	1.5464	4.8467	-4.6609	-2.4626	-0.0543	656.4 0.9D - (100Sy - 30Sx)Min	-1.6908	1.5464	4.8467	-4.6609	-2.4626	-0.0543
Ncim	46	65	6.5 0.9D + Ey	Combination	Max	0.3939	1.4445	7.3623	4.8352	0.8233	0.0516	656.5 0.9D + EyMax	0.3939	1.4445	7.3623	4.8352	0.8233	0.0516
Ncim	46	65	6.5 0.9D + Ey	Combination	Min	-1.1057	-3.3337	4.2223	-3.1565	-1.5425	-0.0447	656.5 0.9D + EyMin	-1.1057	-3.3337	4.2223	-3.1565	-1.5425	-0.0447
Ncim	46	65	6.6 0.9D - Ey	Combination	Max	0.3939	1.4445	7.3623	4.8352	0.8233	0.0516	656.6 0.9D - EyMax	0.3939	1.4445	7.3623	4.8352	0.8233	0.0516
Ncim	46	65	6.6 0.9D - Ey	Combination	Min	-1.1057	-3.3337	4.2223	-3.1565	-1.5425	-0.0447	656.6 0.9D - EyMin	-1.1057	-3.3337	4.2223	-3.1565	-1.5425	-0.0447
Ncim	46	65	3.3 1.2D + 1L -1	Combination	Max	3.1193	-0.0198	5.0746	-0.2572	5.2269	0.0435	653.3 1.2D + 1L -1Max	3.1193	-0.0198	5.0746	-0.2572	5.2269	0.0435
Ncim	46	65	3.3 1.2D + 1L -1	Combination	Min	2.5028	-0.4834	4.7729	-1.0339	4.2558	-0.0027	653.3 1.2D + 1L -1Min	2.5028	-0.4834	4.7729	-1.0339	4.2558	-0.0027
Ncim	46	65	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Max	-1.4549	-4.2468	10.9575	6.6537	-1.9861	0.033	654.1 1.2D + 1L + (100Sy + 30Sx)-1Max	-1.4549	-4.2468	10.9575	6.6537	-1.9861	0.033
Ncim	46	65	4.1 1.2D + 1L + (100Sy + 30Sx)-1	Combination	Min	-1.9913	-4.6502	10.695	5.9779	-2.8311	-0.0072	654.1 1.2D + 1L + (100Sy + 30Sx)-1Min	-1.9913	-4.6502	10.695	5.9779	-2.8311	-0.0072
Ncim	46	65	0. 1D + 1L + sxST	Combination	Max	-3.425	-1.2826	10.881	2.1059	-5.096	0.0191	650. 1D + 1L + sxSTMax	-3.425	-1.2826	10.881	2.1059	-5.096	0.0191
Ncim	46	65	0. 1D + 1L + sxST	Combination	Min	-4.2793	-1.9251	10.4629	1.0295	-6.4417	-0.0449	650. 1D + 1L + sxSTMin	-4.2793	-1.9251	10.4629	1.0295	-6.4417	-0.0449
Ncim	46	65	0. 1D + 1L + syST	Combination	Max	-0.331	-4.0067	9.4809	6.629	-0.2187	0.0484	650. 1D + 1L + sySTMax	-0.331	-4.0067	9.4809	6.629	-0.2187	0.0484
Ncim	46	65	0. 1D + 1L + syST	Combination	Min	-1.1236	-4.6028	9.093	5.6303	-1.4673	-0.0109	650. 1D + 1L + sySTMin	-1.1236	-4.6028	9.093	5.6303	-1.4673	-0.0109
Ncim	46	65	0. 1D + 1L + sxDN	Combination	Max	2.0439	-0.565	10.133	2.4443	3.5282	0.0691	650. 1D + 1L + sxDNMax	2.0439	-0.565	10.133	2.4443	3.5282	0.0691
Ncim	46	65	0. 1D + 1L + sxDN	Combination	Min	-3.1355	-2.1153	5.2855	-0.1019	-4.6401	-0.0575	650. 1D + 1L + sxDNMin	-3.1355	-2.1153	5.2855	-0.1019	-4.6401	-0.0575
Ncim	46	65	0. 1D + 1L + syDN	Combination	Max	0.204	1.049	9.2792	5.1671	0.627	0.054	650. 1D + 1L + syDNMax	0.204	1.049	9.2792	5.1671	0.627	0.054
Ncim	46	65	0. 1D + 1L + syDN	Combination	Min	-1.2956	-3.7293	6.1393	-2.8247	-1.7389	-0.0424	650. 1D + 1L + syDNMin	-1.2956	-3.7293	6.1393	-2.8247	-1.7389	-0.0424

Núm P_ Unico					
14					
	Capacidad del Suelo				
	qa	20.00 Tn/m2		0.20 MPa	
	qa Sismo	26.60 Tn/m2		0.26 MPa	2.66 kg/cm2
P vertical	69.05 Tn				
				0.0927	13.4473
P vertical + sismo	78.85 Tn				
A	4.54 m2				
B=L	2.13 m				
B Asumido	2.20 m				
L columna	0.45 m				
L/6	0.37 m				
	Dirección X		Dirección Y		
e	0.0181 m	Cumple	0.0264 m	Cumple	
e Sismo	0.1705 m	Cumple	0.0012 m	Cumple	
	Revisión de esfuerzos				
qs1,2	14.97 Tn	Cumple	15.30 Tn	Cumple	
	13.56 Tn	Cumple	13.24 Tn	Cumple	
qs1,2 sismo	23.87 Tn	Cumple	16.34 Tn	Cumple	
	8.71 Tn	Cumple	16.24 Tn	Cumple	

$$v_{cu} = 0.17\sqrt{23.54} = 0.825\ MPa$$

$$v_{uu} = \frac{Vuu}{\emptyset . A_u} \quad (*)$$

Vuu = Fuerza resultante de los esfuerzos en la zona exterior a la sección crítica.

A_u = Área crítica para corte unidireccional.

Datos de Columna		
b1=	45.00 cm	0.45 m
b2=	45.00 cm	0.45 m
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2
Tipo Columna=	Columna Central	

Datos de Zapata		
σt=	1.998 kg/cm2	20.00 Tn/m2
ϕ=	0.85	
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2

CARGA	
Peso Total PT=	69.05 Tn
Peso Último Pu=	89.38 Tn

Cálculo Geometría	
Az=	3.45 m²
B=	1.86 m
T=	1.86 m
B asumido=	2.20 m
T asumido=	2.20 m
Área usada=	4.84 m²
σz = Wn=	18.47 Tn/m2
	Sí Cumple

Cortante por Punzonamiento	
hz=	35 cm
r=	6.60 cm
d=	28.40 cm
bo=	2.94 m
$Vo = Pu - (b + d)(t + d) \cdot Wn$	
$vo = \frac{Vo}{bo \cdot d}$ Vo=	79.43 Tn
vo=	95.26 Tn/m2
βc=	1.00
voc	139.58 Tn/m2
	Sí Cumple

Cortante por Flexión (Tracción Diagonal)		
$m = Lv = \frac{B - b}{2}$	m=Lv=	0.875 m
$n = Lv = \frac{T - t}{2}$	n=Lv=	0.875 m
$Vu = B(m - d)Wn$	Vu=	24.01 Tn
$vu = \frac{Vu}{T \cdot d}$	vu=	38.43 Tn/m2
$vuc = 0.53\emptyset\sqrt{f'c}$	vuc=	69.79 Tn/m2
$v_{uc} \geq v_u$		Sí Cumple

Cáculo de Acero					
$M_{ux=}$	15.55 Tn.m		$M_{ux=}$	15.55 Tn.m	
d=	19.5 cm	Sí Cumple	d=	19.5 cm	Sí Cumple
Amin =	11.71 cm²/m		Amin =	11.71 cm²/m	
As=	15.34 cm²/m		As=	15.34 cm²/m	
ϕ Varilla=	14 mm		ϕ Varilla=	14 mm	
Cant. Varillas=	9.97		Cant. Varillas=	9.97	
Espaciamiento=	22.78 cm		Espaciamiento=	22.78 cm	
Cant. Varillas=	10 Varillas	Sí Cumple	Cant. Varillas=	10 Varillas	Sí Cumple
Espaciamiento=	20 cm	Sí Cumple	Espaciamiento=	20 cm	Sí Cumple
	15.39 cm²			15.39 cm²	

Aplastamiento del Hormigón			
$f_{au} = \frac{PT}{b \cdot t} = \frac{PT}{Ac}$	fau=	341.01 Tn/m2	34.10 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cc$	fa=	142.80 kg/cm2	142.80 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cz \cdot \sqrt{\frac{Az}{Ac}}$	fa=	698.13 kg/cm2	
	$f_a \geq f_{au}$		Sí Cumple

Núm P_ Unico
18

	Capacidad del Suelo			
	qa	20.00 Tn/m2	0.20 MPa	
	qa Sismo	26.60 Tn/m2	0.26 MPa	2.66 kg/cm2

P vertical	91.98 Tn		
		9.6815	2.1915
P vertical + sismo	99.30 Tn		

A	5.71 m2
B=L	2.39 m
B Asumido	2.50 m
L columna	0.45 m
L/6	0.42 m

	Dirección X		Dirección Y	
e	0.0060 m	Cumple	0.0112 m	Cumple
e Sismo	0.0221 m	Cumple	0.0975 m	Cumple
	Revisión de esfuerzos			
qs1,2	14.93 Tn	Cumple	15.11 Tn	Cumple
	14.51 Tn	Cumple	14.32 Tn	Cumple
qs1,2 sismo	16.73 Tn	Cumple	19.61 Tn	Cumple
	15.05 Tn	Cumple	12.17 Tn	Cumple

$$v_{cu} = 0.17\sqrt{23.54} = 0.825\ MPa$$

$$v_{uu} = \frac{Vuu}{\emptyset . A_u} \quad (*)$$

Vuu = Fuerza resultante de los esfuerzos en la zona exterior a la sección crítica.

A_u = Área crítica para corte unidireccional.

Datos de Columna		
b1=	45.00 cm	0.45 m
b2=	45.00 cm	0.45 m
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2
Tipo Columna=	Columna Central	

Datos de Zapata		
σt=	1.998 kg/cm2	20.00 Tn/m2
ϕ=	0.85	19.97961264
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2

CARGA	
Peso Total PT=	91.98 Tn
Peso Último Pu=	119.79 Tn

Cálculo Geometría	
Az=	4.60 m²
B=	2.14 m
T=	2.14 m
B asumido=	2.50 m
T asumido=	2.50 m
Área usada=	6.25 m²
σz = Wn=	19.17 Tn/m2
	Sí Cumple

Cortante por Punzonamiento	
hz=	35 cm
r=	6.60 cm
d=	28.40 cm
bo=	2.94 m
$Vo = Pu - (b + d)(t + d) \cdot Wn$	
$vo = \frac{Vo}{bo \cdot d}$ Vo=	109.46 Tn
vo=	131.28 Tn/m2
βc=	1.00
voc	139.58 Tn/m2
	Sí Cumple

Cortante por Flexión (Tracción Diagonal)		
$m = Lv = \frac{B - b}{2}$	m=Lv=	1.025 m
$n = Lv = \frac{T - t}{2}$	n=Lv=	1.025 m
$Vu = B(m - d)Wn$	Vu=	35.50 Tn
$vu = \frac{Vu}{T \cdot d}$	vu=	50.01 Tn/m2
$vuc = 0.53\emptyset\sqrt{f'c}$	vuc=	69.79 Tn/m2
	$v_{uc} \geq v_u$	Sí Cumple

Cáculo de Acero					
$M_{ux=}$	25.17 Tn.m		$M_{ux=}$	25.17 Tn.m	
d=	24.8 cm	Sí Cumple	d=	24.8 cm	Sí Cumple
Amin =	13.51 cm²/m		Amin =	13.51 cm²/m	
As=	25.87 cm²/m		As=	25.87 cm²/m	
ϕ Varilla=	16 mm		ϕ Varilla=	16 mm	
Cant. Varillas=	12.87		Cant. Varillas=	12.87	
Espaciamiento=	19.58 cm		Espaciamiento=	19.58 cm	
Cant. Varillas=	13 Varillas	Sí Cumple	Cant. Varillas=	13 Varillas	Sí Cumple
Espaciamiento=	19 cm	Sí Cumple	Espaciamiento=	19 cm	Sí Cumple
	26.14 cm²			26.14 cm²	

Aplastamiento del Hormigón			
$f_{au} = \frac{PT}{b \cdot t} = \frac{PT}{Ac}$	fau=	454.22 Tn/m2	45.42 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cc$	fa=	142.80 kg/cm2	142.80 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cz \cdot \sqrt{\frac{Az}{Ac}}$	fa=	793.33 kg/cm2	
	$f_a \geq f_{au}$		Sí Cumple

Núm P_ Unico
17

Capacidad del Suelo			
qa	20.00 Tn/m2	0.20 MPa	
qa Sismo	26.60 Tn/m2	0.26 MPa	2.66 kg/cm2

P vertical	33.66 Tn		
		13.5318	1.3108
P vertical + sismo	39.04 Tn		

Datos de Columna

b1=	45.00 cm	0.45 m
b2=	45.00 cm	0.45 m
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2
Tipo Columna=	Columna Central	

Datos de Zapata

σt=	1.998 kg/cm2	20.00 Tn/m2
ϕ=	0.85	
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2

CARGA

Peso Total PT=	33.66 Tn
Peso Último Pu=	43.48 Tn

Cálculo Geometría

Az=	1.68 m²
B=	1.30 m
T=	1.30 m
B asumido=	1.90 m
T asumido=	1.90 m
Área usada=	3.61 m²
σz = Wn=	12.04 Tn/m2
	Sí Cumple

Cortante por Punzonamiento

hz=	30 cm
r=	6.60 cm
d=	23.40 cm
bo=	2.74 m

$$Vo = Pu - (b + d)(t + d) \cdot Wn$$

$$vo = \frac{Vo}{bo \cdot d}$$

Vo=	37.85 Tn
vo=	59.11 Tn/m2
βc=	1.00
voc	139.58 Tn/m2
	Sí Cumple

Cortante por Flexión (Tracción Diagonal)

$$m = Lv = \frac{B - b}{2}$$

$$n = Lv = \frac{T - t}{2}$$

$$Vu = B(m - d)Wn$$

$$vu = \frac{Vu}{T \cdot d}$$

$$vuc = 0.53\phi\sqrt{f'c}$$

m=Lv=	0.725 m
n=Lv=	0.725 m
Vu=	11.24 Tn
vu=	25.27 Tn/m2
vuc=	69.79 Tn/m2
$v_{uc} \geq v_u$	Sí Cumple

Cáculo de Acero					
$M_{ux=}$	6.01 Tn.m		$M_{ux=}$	6.01 Tn.m	
d=	12.1 cm	Sí Cumple	d=	12.1 cm	Sí Cumple
Amin =	7.01 cm²/m		Amin =	7.01 cm²/m	
As=	7.02 cm²/m		As=	7.02 cm²/m	
ϕ Varilla=	12 mm		ϕ Varilla=	12 mm	
Cant. Varillas=	6.20		Cant. Varillas=	6.20	
Espaciamiento=	29.16 cm		Espaciamiento=	29.16 cm	
Cant. Varillas=	7 Varillas	Sí Cumple	Cant. Varillas=	7 Varillas	Sí Cumple
Espaciamiento=	15 cm	Sí Cumple	Espaciamiento=	15 cm	Sí Cumple
	7.92 cm²			7.92 cm²	

Aplastamiento del Hormigón			
$f_{au} = \frac{PT}{b \cdot t} = \frac{PT}{Ac}$	fau=	166.21 Tn/m2	16.62 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cc$	fa=	142.80 kg/cm2	142.80 kg/cm2
$fa = 0.85 \cdot \emptyset \cdot f'cz \cdot \sqrt{\frac{Az}{Ac}}$	fa=	602.93 kg/cm2	
	$f_a \geq f_{au}$		Sí Cumple

Núm P_ Unico

65

Capacidad del Suelo

qa	20.00 Tn/m2	0.20 MPa	
qa Sismo	26.60 Tn/m2	0.26 MPa	2.66 kg/cm2

P vertical	7.71 Tn		
		2.1059	-5.096
P vertical + sismo	10.88 Tn		

Datos de Columna		
b1=	40.00 cm	0.40 m
b2=	40.00 cm	0.40 m
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2
Tipo Columna=	Columna Central	

Datos de Zapata		
σt=	1.998 kg/cm2	20.00 Tn/m2
ϕ=	0.85	
f'c=	240 kg/cm2	2400 Tn/m2
fy=	4200 kg/cm2	42000 Tn/m2

CARGA	
Peso Total PT=	7.71 Tn
Peso Último Pu=	9.77 Tn

Cálculo Geometría	
Az=	0.39 m²
B=	0.62 m
T=	0.62 m
B asumido=	1.30 m
T asumido=	1.30 m
Área usada=	1.69 m²
σz = Wn=	5.78 Tn/m2
	Sí Cumple

Cortante por Punzonamiento	
hz=	25 cm
r=	6.60 cm
d=	18.40 cm
bo=	2.34 m
$Vo = Pu - (b + d)(t + d) \cdot Wn$	
$vo = \frac{Vo}{bo \cdot d}$ Vo=	7.80 Tn
vo=	18.14 Tn/m2
βc=	1.00
voc	139.58 Tn/m2
	Sí Cumple

Cortante por Flexión (Tracción Diagonal)		
$m = Lv = \frac{B - b}{2}$	m=Lv=	0.450 m
$n = Lv = \frac{T - t}{2}$	n=Lv=	0.450 m
$Vu = B(m - d)Wn$	Vu=	2.00 Tn
$vu = \frac{Vu}{T \cdot d}$	vu=	8.36 Tn/m2
$vuc = 0.53\phi\sqrt{f'c}$	vuc=	69.79 Tn/m2
$v_{uc} \geq v_u$		Sí Cumple

Cáculo de Acero

$M_{ux=}$	0.76 Tn.m	
d=	4.3 cm	Sí Cumple
Amin =	2.79 cm²/m	
As=	1.10 cm²/m	
ϕ Varilla=	12 mm	
Cant. Varillas=	0.97	
Espaciamiento=	23.00 cm	
Cant. Varillas=	6 Varillas	Sí Cumple
Espaciamiento=	15 cm	Sí Cumple
	6.79 cm²	

$M_{ux=}$	0.76 Tn.m	
d=	4.3 cm	Sí Cumple
Amin =	2.79 cm²/m	
As=	1.10 cm²/m	
ϕ Varilla=	12 mm	
Cant. Varillas=	0.97	
Espaciamiento=	23.00 cm	
Cant. Varillas=	6 Varillas	Sí Cumple
Espaciamiento=	15 cm	Sí Cumple
	6.79 cm²	

Aplastamiento del Hormigón

$$f_{au} = \frac{PT}{b \cdot t} = \frac{PT}{Ac}$$

fau= 48.18 Tn/m2 | 4.82 kg/cm2

$$fa = 0.85 \cdot \emptyset \cdot f'cc$$

fa= 142.80 kg/cm2

$$fa = 0.85 \cdot \emptyset \cdot f'cz \cdot \sqrt{\frac{Az}{Ac}}$$

fa= 464.10 kg/cm2

142.80 kg/cm2

$f_a \geq f_{au}$ Sí Cumple

VIGAS DE NIVEL DE ENTREPISO: N= Cimentación

Viga 4A - 4B

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido		
h =	0.45 m	f'c =	24 MPa	As min 1 =	3.92 cm2	k =	57.12		As Sección	8.84 cm2	0.00 cm2	6.70 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.43 cm2	Mu =	0.00 Tn.m	0.00 Tn.m				
r =	0.058 m	Φ =	0.9	Asmin =	3.92 cm2		12.09 Tn.m	9.35 Tn.m	As =	**4.42 cm2**	**3.92 cm2**	**3.92 cm2**
d =	0.392 m					As =	0.00 cm2	0.00 cm2	0.00 cm2	**8.84 cm2**	**3.92 cm2**	**6.70 cm2**
L =	4.56 m						8.84 cm2	0.00 cm2	6.70 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	5	10.05
													10.05

Viga B3-B4

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido		
h =	0.45 m	f'c =	24 MPa	As min 1 =	3.92 cm2	k =	57.12		As Sección	7.62 cm2	0.00 cm2	7.93 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.43 cm2	Mu =	0.00 Tn.m	10.94 Tn.m				
r =	0.058 m	Φ =	0.9	Asmin =	3.92 cm2		10.54 Tn.m	0.00 Tn.m	As =	**3.92 cm2**	**3.92 cm2**	**7.93 cm2**
d =	0.392 m					As =	0.00 cm2	0.00 cm2	7.93 cm2	**7.62 cm2**	**3.92 cm2**	**3.97 cm2**
L =	2.56 m						7.62 cm2	0.00 cm2	0.00 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	5	10.05
													10.05

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — EJE: 5

Viga A' - A

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13			As Sección	0.13 cm2	0.82 cm2	1.82 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	0.02 Tn.m	1.06 Tn.m	2.32 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		0.17 Tn.m	0.00 Tn.m	0.00 Tn.m	As =	**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
d =	0.344 m					As =	0.01 cm2	0.82 cm2	1.82 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	0.84 m						0.13 cm2	0.00 cm2	0.00 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	2	4.02
													4.02

Viga A - B

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	5.27 cm2	k =	76.84			As Sección	9.95 cm2	2.68 cm2	9.90 cm2
b =	0.35 m	fy =	420 MPa	As min 2 =	4.61 cm2	Mu =	15.90 Tn.m	0.00 Tn.m	15.82 Tn.m				
r =	0.048 m	Φ =	0.9	Asmin =	5.27 cm2		7.43 Tn.m	4.51 Tn.m	6.56 Tn.m	As =	**9.95 cm2**	**5.27 cm2**	**9.90 cm2**
d =	0.452 m					As =	9.95 cm2	0.00 cm2	9.90 cm2		**5.27 cm2**	**5.27 cm2**	**5.27 cm2**
L =	4.51 m						4.48 cm2	2.68 cm2	3.94 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	4	10.18
											16		0.00
													10.18

Viga B - C

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	5.27 cm2	k =	76.84			As Sección	9.72 cm2	2.72 cm2	9.24 cm2
b =	0.35 m	fy =	420 MPa	As min 2 =	4.61 cm2	Mu =	15.56 Tn.m	0.00 Tn.m	14.83 Tn.m				
r =	0.048 m	Φ =	0.9	Asmin =	5.27 cm2		4.63 Tn.m	4.57 Tn.m	5.12 Tn.m	As =	**9.72 cm2**	**5.27 cm2**	**9.24 cm2**
d =	0.452 m					As =	9.72 cm2	0.00 cm2	9.24 cm2		**5.27 cm2**	**5.27 cm2**	**5.27 cm2**
L =	4.62 m						2.76 cm2	2.72 cm2	3.06 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	4	10.18
											16		0.00
													10.18

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión				Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	5.27 cm2	k =	76.84			As Sección	10.05 cm2	2.59 cm2	9.85 cm2
b =	0.35 m	fy =	420 MPa	As min 2 =	4.61 cm2	Mu =	16.05 Tn.m	0.00 Tn.m	15.75 Tn.m				
r =	0.048 m	Φ =	0.9	Asmin =	5.27 cm2		7.22 Tn.m	4.35 Tn.m	9.93 Tn.m	As =	**10.05 cm2**	**5.27 cm2**	**9.85 cm2**
d =	0.452 m					As =	10.05 cm2	0.00 cm2	9.85 cm2		**5.27 cm2**	**5.27 cm2**	**6.05 cm2**
L =	3.88 m						4.35 cm2	2.59 cm2	6.05 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	4	10.18
											16		0.00
													10.18

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — EJE: 5

Cumple o No Cumple

Viga A' - A

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	1.24 Tn	1.36 Tn	1.48 Tn	Vp =	14.49 Tn	14.49 Tn	14.49 Tn	Zona Conf.	80.00 cm	0.00 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.39 Tn	0.39 Tn	0.39 Tn	Vu =	16.23 Tn	16.34 Tn	16.45 Tn	s =	8.00 cm	8.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	1.74 Tn	1.86 Tn	1.96 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	5.53 cm2	5.53 cm2
d =	0.344 m			a=	2.95 cm	2.95 cm	2.95 cm	Av =	15.0 cm2/m	15.1 cm2/m	15.2 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	0.837 m				2.95 cm	2.95 cm	2.95 cm	Av =	0.15 cm2/cm	0.15 cm2/cm	0.15 cm2/cm	n ramales =	2	2	2
				Mp =	6.07 Tn.m		6.07 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	21.2 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

Viga A - B

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	5.20 Tn		5.34 Tn	Vp =	7.63 Tn	7.63 Tn	7.60 Tn	Zona Conf.	100.00 cm	250.53 cm	100.00 cm
b =	0.35 m	fy =	420 MPa	Vcv =	1.29 Tn		1.34 Tn	Vu =	14.36 Tn		14.57 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.048 m	Φ =	0.75	Va =	6.74 Tn		6.95 Tn	Vc =	0.00 Tn		0.00 Tn	Av min =	6.45 cm2	11.30 cm2	6.45 cm2
d =	0.452 m			a=	7.32 cm		7.28 cm	Av =	10.09 cm2/m		10.23 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.505 m				3.88 cm		3.88 cm	Av =	0.10 cm2/cm		0.10 cm2/cm	n ramales =	2	2	2
				Mp =	22.14 Tn.m		22.02 Tn.m	So ≤	10.80 cm		10.80 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					12.22 Tn.m		12.22 Tn.m	S ≤		22.60 cm			**Cumple**	**Cumple**	**Cumple**

Viga B - C

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	6.04 Tn		5.79 Tn	Vp =	7.33 Tn	7.33 Tn	7.11 Tn	Zona Conf.	100.00 cm	262.38 cm	100.00 cm
b =	0.35 m	fy =	420 MPa	Vcv =	1.76 Tn		1.69 Tn	Vu =	15.58 Tn		15.25 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.048 m	Φ =	0.75	Va =	8.25 Tn		7.92 Tn	Vc =	12.99 Tn		12.99 Tn	Av min =	6.45 cm2	11.30 cm2	6.45 cm2
d =	0.452 m			a=	7.15 cm		6.79 cm	Av =	4.10 cm2/m		3.87 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.624 m				3.88 cm		3.88 cm	Av =	0.04 cm2/cm		0.04 cm2/cm	n ramales =	2	2	2
				Mp =	21.67 Tn.m		20.68 Tn.m	So ≤	10.80 cm		10.80 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					12.22 Tn.m		12.22 Tn.m	S ≤		22.60 cm			**Cumple**	**Cumple**	**Cumple**

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	5.43 Tn	1.87 Tn	4.91 Tn	Vp =	9.35 Tn	9.35 Tn	8.81 Tn	Zona Conf.	100.00 cm	187.80 cm	100.00 cm
b =	0.35 m	fy =	420 MPa	Vcv =	1.54 Tn	1.00 Tn	1.26 Tn	Vu =	16.71 Tn	12.62 Tn	15.78 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.048 m	Φ =	0.75	Va =	7.36 Tn	3.28 Tn	6.43 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	6.45 cm2	11.30 cm2	6.45 cm2
d =	0.452 m			a=	7.39 cm	3.88 cm	7.24 cm	Av =	11.73 cm2/m	8.87 cm2/m	11.08 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	3.878 m				3.88 cm	3.88 cm	4.45 cm	Av =	0.12 cm2/cm	0.09 cm2/cm	0.11 cm2/cm	n ramales =	2	2	2
				Mp =	22.33 Tn.m		21.94 Tn.m	So ≤	10.80 cm		10.80 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					12.22 Tn.m		13.93 Tn.m	S ≤		22.60 cm			**Cumple**	**Cumple**	**Cumple**

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — EJE: 4

Viga A' - A

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13		As Sección	0.09 cm2	0.84 cm2	1.82 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	0.00 Tn.m	1.08 Tn.m	2.32 Tn.m			
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		0.11 Tn.m	0.00 Tn.m	0.00 Tn.m	As =	**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
d =	0.344 m					As =	0.00 cm2	0.84 cm2	1.82 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	0.84 m						0.09 cm2	0.00 cm2	0.00 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	2	4.02
													4.02

Viga A - B

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13		As Sección	4.73 cm2	1.38 cm2	4.33 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	7.83 Tn.m	0.00 Tn.m	7.19 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		2.94 Tn.m	2.34 Tn.m	2.36 Tn.m	As =	**4.73 cm2**	**3.44 cm2**	**4.33 cm2**
d =	0.344 m					As =	4.73 cm2	0.00 cm2	4.33 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	4.53 m						1.74 cm2	1.38 cm2	1.40 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	2	5.09
											16		0.00
													5.09

Viga B - C

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	4.42 cm2	k =	64.41		As Sección	5.98 cm2	1.82 cm2	5.72 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.87 cm2	Mu =	9.83 Tn.m	0.00 Tn.m	9.41 Tn.m				
r =	0.058 m	Φ =	0.9	Asmin =	4.42 cm2		3.76 Tn.m	3.07 Tn.m	4.05 Tn.m	As =	**5.98 cm2**	**4.42 cm2**	**5.72 cm2**
d =	0.442 m					As =	5.98 cm2	0.00 cm2	5.72 cm2		**4.42 cm2**	**4.42 cm2**	**4.42 cm2**
L =	4.67 m						2.23 cm2	1.82 cm2	2.41 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18		0.00
											16	3	6.03
													6.03

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13		As Sección	4.12 cm2	1.08 cm2	4.11 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	6.86 Tn.m	0.00 Tn.m	6.83 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		3.00 Tn.m	1.83 Tn.m	4.16 Tn.m	As =	**4.12 cm2**	**3.44 cm2**	**4.11 cm2**
d =	0.344 m					As =	4.12 cm2	0.00 cm2	4.11 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	3.65 m						1.78 cm2	1.08 cm2	2.47 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	2	5.09
											16		0.00
													5.09

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — EJE: 3

Viga A' - A

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13		As Sección	0.12 cm2	0.91 cm2	2.00 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	0.00 Tn.m	1.17 Tn.m	2.55 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		0.16 Tn.m	0.00 Tn.m	0.00 Tn.m	As =	**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
d =	0.344 m					As =	0.00 cm2	0.91 cm2	2.00 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	0.84 m						0.12 cm2	0.00 cm2	0.00 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	2	4.02
													4.02

Viga A - B

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13		As Sección	5.08 cm2	1.52 cm2	4.69 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	8.40 Tn.m	0.00 Tn.m	7.77 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		2.92 Tn.m	2.56 Tn.m	2.26 Tn.m	As =	**5.08 cm2**	**3.44 cm2**	**4.69 cm2**
d =	0.344 m					As =	5.08 cm2	0.00 cm2	4.69 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	4.53 m						1.73 cm2	1.52 cm2	1.33 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18		0.00
											16	3	6.03
													6.03

Viga B - C

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.50 m	f'c =	24 MPa	As min 1 =	4.42 cm2	k =	64.41		As Sección	6.49 cm2	2.09 cm2	6.16 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.87 cm2	Mu =	10.62 Tn.m	0.00 Tn.m	10.11 Tn.m				
r =	0.058 m	Φ =	0.9	Asmin =	4.42 cm2		3.84 Tn.m	3.53 Tn.m	4.09 Tn.m	As =	**6.49 cm2**	**4.42 cm2**	**6.16 cm2**
d =	0.442 m					As =	6.49 cm2	0.00 cm2	6.16 cm2		**4.42 cm2**	**4.42 cm2**	**4.42 cm2**
L =	4.67 m						2.28 cm2	2.09 cm2	2.43 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	3	7.63
											16		0.00
													7.63

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13		As Sección	4.31 cm2	1.01 cm2	4.18 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	7.16 Tn.m	0.00 Tn.m	6.94 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		4.56 Tn.m	1.72 Tn.m	4.56 Tn.m	As =	**4.31 cm2**	**3.44 cm2**	**4.18 cm2**
d =	0.344 m					As =	4.31 cm2	0.00 cm2	4.18 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	3.51 m						2.71 cm2	1.01 cm2	2.71 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	18	2	5.09
											16		0.00
													5.09

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — EJE: 4

Cumple o No Cumple

Viga A' - A

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	1.34 Tn	1.46 Tn	1.58 Tn	Vp =	14.46 Tn	14.46 Tn	14.46 Tn	Zona Conf.	80.00 cm	0.00 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.05 Tn	0.05 Tn	0.05 Tn	Vu =	15.74 Tn	15.85 Tn	15.96 Tn	s =	8.00 cm	8.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	1.28 Tn	1.39 Tn	1.50 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	5.53 cm2	5.53 cm2
d =	0.344 m			a=	2.95 cm	2.95 cm	2.95 cm	Av =	14.5 cm2/m	14.6 cm2/m	14.7 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	0.839 m				2.95 cm	2.95 cm	2.95 cm	Av =	0.15 cm2/cm	0.15 cm2/cm	0.15 cm2/cm	n ramales =	2	2	2
				Mp =	6.07 Tn.m		6.07 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	21.2 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

Viga A - B

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	2.74 Tn		2.65 Tn	Vp =	3.15 Tn	3.15 Tn	3.00 Tn	Zona Conf.	80.00 cm	293.03 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.76 Tn		0.70 Tn	Vu =	6.82 Tn		6.65 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	3.68 Tn		3.50 Tn	Vc =	8.47 Tn		8.47 Tn	Av min =	5.53 cm2	9.68 cm2	5.53 cm2
d =	0.344 m			a=	4.05 cm		3.72 cm	Av =	0.43 cm2/m		0.27 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.530 m				2.95 cm		2.95 cm	Av =	0.00 cm2/cm		0.00 cm2/cm	n ramales =	2	2	2
				Mp =	8.19 Tn.m		7.55 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

Viga B - C

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	3.21 Tn		2.81 Tn	Vp =	5.00 Tn	5.00 Tn	4.88 Tn	Zona Conf.	100.00 cm	267.38 cm	100.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.75 Tn		0.62 Tn	Vu =	9.09 Tn		8.52 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.058 m	Φ =	0.75	Va =	4.09 Tn		3.53 Tn	Vc =	0.00 Tn		0.00 Tn	Av min =	5.53 cm2	9.68 cm2	5.53 cm2
d =	0.442 m			a=	5.13 cm		4.91 cm	Av =	6.53 cm2/m		6.12 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.674 m				3.79 cm		3.79 cm	Av =	0.07 cm2/cm		0.06 cm2/cm	n ramales =	2	2	2
				Mp =	13.34 Tn.m		12.79 Tn.m	So ≤	9.60 cm		9.60 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					10.01 Tn.m		10.01 Tn.m	S ≤		22.10 cm			**Cumple**	**Cumple**	**Cumple**

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	2.48 Tn	1.00 Tn	2.28 Tn	Vp =	3.63 Tn	3.63 Tn	3.63 Tn	Zona Conf.	80.00 cm	205.30 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.62 Tn	0.35 Tn	0.55 Tn	Vu =	6.86 Tn	5.10 Tn	6.57 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	3.23 Tn	1.46 Tn	2.94 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	9.68 cm2	5.53 cm2
d =	0.344 m			a=	3.54 cm	2.95 cm	3.52 cm	Av =	6.33 cm2/m	4.70 cm2/m	6.06 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	3.653 m				2.95 cm	2.95 cm	2.95 cm	Av =	0.06 cm2/cm	0.05 cm2/cm	0.06 cm2/cm	n ramales =	2	2	2
				Mp =	7.21 Tn.m		7.18 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — EJE: 3

Cumple o No Cumple

Viga A' - A

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	1.34 Tn	1.46 Tn	1.58 Tn	Vp =	14.45 Tn	14.45 Tn		Zona Conf.	80.00 cm	0.00 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.05 Tn	0.05 Tn	0.05 Tn	Vu =	15.73 Tn	15.84 Tn	15.95 Tn	s =	8.00 cm	8.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	1.28 Tn	1.39 Tn	1.50 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	5.53 cm2	5.53 cm2
d =	0.344 m			a=	2.95 cm	2.95 cm	2.95 cm	Av =	14.5 cm2/m	14.6 cm2/m	14.7 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	0.839 m				2.95 cm	2.95 cm	2.95 cm	Av =	0.15 cm2/cm	0.15 cm2/cm	0.15 cm2/cm	n ramales =	2	2	2
				Mp =	6.07 Tn.m		6.07 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	21.2 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

Viga A - B

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	2.74 Tn		2.65 Tn	Vp =	3.27 Tn	3.27 Tn	3.13 Tn	Zona Conf.	80.00 cm	293.03 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.76 Tn		0.70 Tn	Vu =	6.95 Tn		6.77 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	3.68 Tn		3.50 Tn	Vc =	8.47 Tn		8.47 Tn	Av min =	5.53 cm2	9.68 cm2	5.53 cm2
d =	0.344 m			a=	4.36 cm		4.02 cm	Av =	0.55 cm2/m		0.39 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.530 m				2.95 cm		2.95 cm	Av =	0.01 cm2/cm		0.00 cm2/cm	n ramales =	2	2	2
				Mp =	8.77 Tn.m		8.14 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

Viga B - C

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.50 m	f'c =	24 MPa	Vcm =	3.21 Tn		2.81 Tn	Vp =	5.22 Tn	5.22 Tn	5.08 Tn	Zona Conf.	100.00 cm	267.38 cm	100.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.75 Tn		0.62 Tn	Vu =	9.31 Tn		8.75 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.058 m	Φ =	0.75	Va =	4.09 Tn		3.53 Tn	Vc =	0.00 Tn		0.00 Tn	Av min =	5.53 cm2	9.68 cm2	5.53 cm2
d =	0.442 m			a=	5.57 cm		5.29 cm	Av =	6.69 cm2/m		6.28 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.674 m				3.79 cm		3.79 cm	Av =	0.07 cm2/cm		0.06 cm2/cm	n ramales =	2	2	2
				Mp =	14.39 Tn.m		13.72 Tn.m	So ≤	10.80 cm		10.80 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					10.01 Tn.m		10.01 Tn.m	S ≤		22.10 cm			**Cumple**	**Cumple**	**Cumple**

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	2.48 Tn	1.00 Tn	2.28 Tn	Vp =	3.87 Tn	3.87 Tn	3.80 Tn	Zona Conf.	80.00 cm	191.23 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.62 Tn	0.35 Tn	0.55 Tn	Vu =	7.09 Tn	5.33 Tn	6.81 Tn	s =	8.00 cm	14.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	3.23 Tn	1.46 Tn	2.94 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	9.68 cm2	5.53 cm2
d =	0.344 m			a=	3.70 cm	2.95 cm	3.58 cm	Av =	6.55 cm2/m	4.92 cm2/m	6.28 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	3.512 m				2.95 cm	2.95 cm	2.95 cm	Av =	0.07 cm2/cm	0.05 cm2/cm	0.06 cm2/cm	n ramales =	2	2	2
				Mp =	7.52 Tn.m		7.29 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	12.8 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — **EJE: 1**

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.40 m	f'c =	24 MPa	As min 1 =	3.44 cm2	k =	50.13		As Sección	5.34 cm2	1.01 cm2	3.81 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.01 cm2	Mu =	6.57 Tn.m	0.00 Tn.m	4.77 Tn.m			
r =	0.056 m	Φ =	0.9	Asmin =	3.44 cm2		3.57 Tn.m	1.30 Tn.m	3.61 Tn.m	As =	**5.34 cm2**	**3.44 cm2**	**3.81 cm2**
d =	0.344 m					As =	5.34 cm2	0.00 cm2	3.81 cm2		**3.44 cm2**	**3.44 cm2**	**3.44 cm2**
L =	3.27 m						2.82 cm2	1.01 cm2	2.86 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	3	6.03
													6.03

VIGAS DE NIVEL DE ENTREPISO: N= 5.76m — **EJE: A´**

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.35 m	f'c =	24 MPa	As min 1 =	2.43 cm2	k =	35.46		As Sección	0.87 cm2	0.38 cm2	0.13 cm2
b =	0.25 m	fy =	420 MPa	As min 2 =	2.13 cm2	Mu =	1.12 Tn.m	0.49 Tn.m	0.00 Tn.m				
r =	0.058 m	Φ =	0.9	Asmin =	2.43 cm2		0.00 Tn.m	0.36 Tn.m	0.17 Tn.m	As =	**2.43 cm2**	**2.43 cm2**	**2.43 cm2**
d =	0.292 m					As =	0.87 cm2	0.38 cm2	0.00 cm2		**2.43 cm2**	**2.43 cm2**	**2.43 cm2**
L =	3.52 m						0.00 cm2	0.28 cm2	0.13 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	2	4.02
													4.02

VIGAS DE NIVEL DE ENTREPISO: N= 5.76m — **EJE: A´**

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.25 m	f'c =	24 MPa	As min 1 =	1.68 cm2	k =	24.53		As Sección	0.72 cm2	0.34 cm2	0.08 cm2
b =	0.25 m	fy =	420 MPa	As min 2 =	1.47 cm2	Mu =	0.93 Tn.m	0.44 Tn.m	0.00 Tn.m				
r =	0.048 m	Φ =	0.9	Asmin =	1.68 cm2		0.00 Tn.m	0.31 Tn.m	0.11 Tn.m	As =	**1.68 cm2**	**1.68 cm2**	**1.68 cm2**
d =	0.202 m					As =	0.72 cm2	0.34 cm2	0.00 cm2		**1.68 cm2**	**1.68 cm2**	**1.68 cm2**
L =	3.52 m						0.00 cm2	0.24 cm2	0.08 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	2	4.02
													4.02

VIGAS DE NIVEL DE ENTREPISO: N= 9.18m — **EJE: 4**

Viga C - D

Geometría		Propiedades		Acero Mínimo		Acero Por Flexión			Acero Requerido			
h =	0.45 m	f'c =	24 MPa	As min 1 =	3.94 cm2	k =	57.41		As Sección	5.17 cm2	4.95 cm2	4.53 cm2
b =	0.30 m	fy =	420 MPa	As min 2 =	3.45 cm2	Mu =	6.38 Tn.m	0.00 Tn.m	5.62 Tn.m				
r =	0.056 m	Φ =	0.9	Asmin =	3.94 cm2		0.00 Tn.m	6.12 Tn.m	0.23 Tn.m	As =	**5.17 cm2**	**3.94 cm2**	**4.53 cm2**
d =	0.394 m					As =	5.17 cm2	0.00 cm2	4.53 cm2		**3.94 cm2**	**4.95 cm2**	**3.94 cm2**
L =	4.72 m						0.00 cm2	4.95 cm2	0.18 cm2		Φ (mm)	n	A (cm2)
										refuerzo =	16	3	6.03
													6.03

VIGAS DE NIVEL DE ENTREPISO: N= 3.06m — **EJE: 1** — Cumple o No Cumple

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.40 m	f'c =	24 MPa	Vcm =	2.19 Tn	0.05 Tn	1.74 Tn	Vp =	4.67 Tn	4.67 Tn	3.90 Tn	Zona Conf.	80.00 cm	166.61 cm	80.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.05 Tn	0.46 Tn	0.35 Tn	Vu =	6.71 Tn	5.44 Tn	6.80 Tn	s =	8.00 cm	8.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	2.05 Tn	0.78 Tn	2.14 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	5.53 cm2	5.53 cm2
d =	0.344 m			a=	4.58 cm	2.95 cm	3.27 cm	Av =	6.2 cm2/m	5.0 cm2/m	6.3 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	3.266 m				2.95 cm	2.95 cm	2.95 cm	Av =	0.06 cm2/cm	0.05 cm2/cm	0.06 cm2/cm	n ramales =	2	2	2
				Mp =	9.18 Tn.m		6.68 Tn.m	So ≤	8.60 cm		8.60 cm	Av total=	21.2 cm2/m	21.2 cm2/m	21.2 cm2/m
					6.07 Tn.m		6.07 Tn.m	S ≤		17.20 cm			**Cumple**	**Cumple**	**Cumple**

VIGAS DE NIVEL DE ENTREPISO: N= 5.76m — **EJE: A´** — Cumple o No Cumple

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.35 m	f'c =	24 MPa	Vcm =	0.84 Tn	0.92 Tn	0.55 Tn	Vp =	2.07 Tn	2.07 Tn	2.07 Tn	Zona Conf.	70.00 cm	212.34 cm	70.00 cm
b =	0.25 m	fy =	420 MPa	Vcv =	0.01 Tn	0.01 Tn	0.00 Tn	Vu =	2.84 Tn	2.92 Tn	2.56 Tn	s =	8.00 cm	8.00 cm	8.00 cm
r =	0.058 m	Φ =	0.75	Va =	0.77 Tn	0.85 Tn	0.49 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	4.61 cm2	4.61 cm2	4.61 cm2
d =	0.292 m			a=	2.50 cm	2.50 cm	2.50 cm	Av =	3.1 cm2/m	3.2 cm2/m	2.8 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	3.523 m				2.50 cm	2.50 cm	2.50 cm	Av =	0.03 cm2/cm	0.03 cm2/cm	0.03 cm2/cm	n ramales =	2	2	2
				Mp =	3.64 Tn.m		3.64 Tn.m	So ≤	7.30 cm		7.30 cm	Av total=	21.2 cm2/m	21.2 cm2/m	21.2 cm2/m
					3.64 Tn.m		3.64 Tn.m	S ≤		14.60 cm			**Cumple**	**Cumple**	**Cumple**

VIGAS DE NIVEL DE ENTREPISO: N= 5.76m — **EJE: A´** — Cumple o No Cumple

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.25 m	f'c =	24 MPa	Vcm =	0.60 Tn	0.54 Tn	0.43 Tn	Vp =	0.99 Tn	0.99 Tn	0.99 Tn	Zona Conf.	50.00 cm	252.34 cm	50.00 cm
b =	0.25 m	fy =	420 MPa	Vcv =	0.10 Tn	0.11 Tn	0.06 Tn	Vu =	1.70 Tn	1.65 Tn	1.47 Tn	s =	8.00 cm	8.00 cm	8.00 cm
r =	0.048 m	Φ =	0.75	Va =	0.71 Tn	0.66 Tn	0.48 Tn	Vc =	0.00 Tn	0.00 Tn	0.00 Tn	Av min =	4.61 cm2	4.61 cm2	4.61 cm2
d =	0.202 m			a=	1.73 cm	1.73 cm	1.73 cm	Av =	2.7 cm2/m	2.6 cm2/m	2.3 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	3.523 m				1.73 cm	1.73 cm	1.73 cm	Av =	0.03 cm2/cm	0.03 cm2/cm	0.02 cm2/cm	n ramales =	2	2	2
				Mp =	1.74 Tn.m		1.74 Tn.m	So ≤	5.05 cm		5.05 cm	Av total=	21.2 cm2/m	21.2 cm2/m	21.2 cm2/m
					1.74 Tn.m		1.74 Tn.m	S ≤		10.10 cm			**Cumple**	**Cumple**	**Cumple**

VIGAS DE NIVEL DE ENTREPISO: N= 9.18m — **EJE: 4** — Cumple o No Cumple

Viga C - D

Geometría		Propiedades		Cálculo Cortante			Acero Por Cortante			Aceros Detalles			
h =	0.45 m	f'c =	24 MPa	Vcm =	3.38 Tn	1.78 Tn	2.99 Tn	Vp =	3.86 Tn	3.86 Tn	3.61 Tn	Zona Conf.	90.00 cm	292.38 cm	90.00 cm
b =	0.30 m	fy =	420 MPa	Vcv =	0.86 Tn	1.18 Tn	0.63 Tn	Vu =	8.28 Tn	7.35 Tn	7.56 Tn	s =	8.00 cm	8.00 cm	8.00 cm
r =	0.056 m	Φ =	0.75	Va =	4.41 Tn	3.49 Tn	3.69 Tn	Vc =	9.71 Tn	0.00 Tn	0.00 Tn	Av min =	5.53 cm2	5.53 cm2	5.53 cm2
d =	0.394 m			a=	4.44 cm	3.38 cm	3.89 cm	Av =	0.8 cm2/m	5.9 cm2/m	6.1 cm2/m	Φ estribo =	10 mm	10 mm	10 mm
L =	4.724 m				3.38 cm	4.25 cm	3.38 cm	Av =	0.01 cm2/cm	0.06 cm2/cm	0.06 cm2/cm	n ramales =	2	2	2
				Mp =	10.30 Tn.m		9.09 Tn.m	So ≤	9.60 cm		9.60 cm	Av total=	21.2 cm2/m	21.2 cm2/m	21.2 cm2/m
					7.96 Tn.m		7.96 Tn.m	S ≤		19.70 cm			**Cumple**	**Cumple**	**Cumple**

Propiedades de Columna

f'c =	24	Mpa	Beta1 =	0.85	
fy =	420	Mpa	d' =	0.06	m
b =	0.45	m	d =	0.39	m
Ac =	8.83	cm²	h =	0.45	m
Altura Libre =	2.56	m			
As' =	8.83	cm²	Po =	4872.72	kN
Recubrimiento eje =	0.06	m	0.8øPo =	2533.81	kN
Mod Elástico Acero =	200000	Mpa		3898.18	kN

Aceros Longitudinales Colocados

	Ø	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

Cuantías Columnas

As min	20.25 cm²	Cumple
As máx	50.63 cm²	Cumple

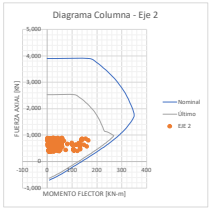
Estribos Detalles

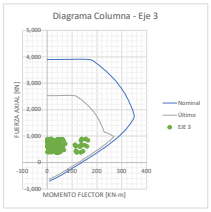
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.80 cm	15.00 cm	10.80 cm
Estribos =	Ø	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento

s =	4.50 cm	4.50 cm
Ash =	2.19 cm2	2.19 cm2
	Cumple	Cumple
Av/m =	48.62 cm²/m	48.62 cm²/m

COMPARAR ETABS





c[m]	a [m]	fs [MPa] sin conf	fs' [MPa]	fs (con conf)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	øMn	øPn	P	M2	M3
0.0045	0.00		-420.000	-7,400.000	420.000	0.257000	7.8334	-706.6065	-706.6065	0.9	7.05	-635.95	811.7129	20.4425	12.6068
0.009	0.01		-420.000	-3,400.000	420.000	0.127000	15.5325	-671.4930	-671.4930	0.9	13.98	-604.34	803.1722	1.1699	0.0052
0.0135	0.01		-420.000	-2,066.667	420.000	0.083667	23.0972	-636.3795	-636.3795	0.9	20.79	-572.74	794.6314	22.7824	12.5965
0.018	0.02		-420.000	-1,400.000	420.000	0.062000	30.5277	-601.2660	-601.2660	0.9	27.47	-541.14	895.4921	23.9887	14.9206
0.0225	0.02		-420.000	-1,000.000	420.000	0.049000	37.8238	-566.1525	-566.1525	0.9	34.04	-509.54	888.1715	0.7299	0.5143
0.027	0.02		-420.000	-733.333	420.000	0.040333	44.9857	-531.0390	-531.0390	0.9	40.49	-477.94	880.8508	25.4484	13.892
0.0315	0.03		-420.000	-542.857	420.000	0.034143	52.0132	-495.9255	-495.9255	0.9	46.81	-446.33	816.8281	19.8299	12.2238
0.036	0.03		-400.000	-400.000	420.000	0.029500	61.8203	-443.1520	-443.1520	0.9	55.64	-398.84	809.5074	0.9678	0.1897
0.0405	0.03		-288.889	-288.889	420.000	0.025889	84.7676	-309.9274	-309.9274	0.9	76.29	-278.93	802.1868	21.7655	11.8445
0.045	0.04		-200.000	-200.000	420.000	0.023000	104.3428	-196.3250	-196.3250	0.9	93.91	-176.69	772.1378	19.6113	12.1232
0.0495	0.04		-127.273	-127.273	420.000	0.020636	121.4291	-96.9933	-96.9933	0.9	109.29	-87.29	764.8172	0.9295	0.1699
0.054	0.05		-66.667	-66.667	420.000	0.018667	136.6151	-8.3647	-8.3647	0.9	122.95	-7.53	757.4965	21.4702	11.7833
0.0585	0.05		-15.385	-15.385	420.000	0.017000	150.3083	72.0309	72.0309	0.9	135.28	64.83	614.8814	19.3788	130.5264
0.063	0.05		28.571	28.571	420.000	0.015571	162.7998	145.9576	145.9576	0.9	146.52	131.36	607.5608	16.2018	46.1743
0.0675	0.06		66.667	66.667	420.000	0.014333	174.3032	214.7092	214.7092	0.9	156.87	193.24	600.2402	18.3202	32.0701
0.072	0.06		100.000	100.000	420.000	0.013250	184.9784	279.2560	279.2560	0.9	166.48	251.33	617.6268	3.3879	114.4873
0.0765	0.07		129.412	129.412	420.000	0.012294	194.9480	340.3401	340.3401	0.9	175.45	306.31	610.3061	10.8541	41.2086
0.081	0.07		155.556	155.556	420.000	0.011444	204.3072	398.5386	398.5386	0.9	183.88	358.68	602.9855	13.0249	38.1779
0.0855	0.07		178.947	178.947	420.000	0.010684	213.1311	454.3070	454.3070	0.9	191.82	408.88	662.7589	52.1453	139.4764
0.09	0.08		200.000	200.000	420.000	0.010000	221.4798	508.0100	508.0100	0.9	199.33	457.21	655.4382	8.8866	48.4609
0.0945	0.08		219.048	219.048	420.000	0.009381	229.4022	559.9425	559.9425	0.9	206.46	503.95	648.1176	43.7525	31.7349
0.099	0.08		236.364	236.364	420.000	0.008818	236.9379	610.3461	610.3461	0.9	213.24	549.31	667.6221	80.4726	111.0637
0.1035	0.09		252.174	252.174	420.000	0.008304	244.1200	659.4201	659.4201	0.9	219.71	593.48	660.3015	18.36	39.6644
0.108	0.09		266.667	266.667	420.000	0.007833	250.9758	707.3307	707.3307	0.9	225.88	636.60	652.9809	34.372	42.5547
0.1125	0.10		280.000	280.000	420.000	0.007400	257.5283	754.2175	754.2175	0.9	231.78	678.80	886.0213	42.4117	138.6421
0.117	0.10		292.308	292.308	420.000	0.007000	263.7972	800.1987	800.1987	0.9	237.42	720.18	878.7007	9.0299	41.5305
0.1215	0.10		303.704	303.704	420.000	0.006630	269.7988	845.3749	845.3749	0.9	242.82	760.84	871.38	29.6472	61.6889
0.126	0.11		314.286	314.286	420.000	0.006286	275.5476	889.8323	889.8323	0.9	247.99	800.85	888.7667	58.4026	154.6812
0.1305	0.11		324.138	324.138	420.000	0.005966	281.0558	933.6453	933.6453	0.9	252.95	840.28	881.446	14.3777	46.4962
0.135	0.11		333.333	333.333	420.000	0.005667	286.3339	976.8783	976.8783	0.9	257.70	879.19	874.1254	24.3518	55.5811
0.1395	0.12		341.935	341.935	420.000	0.005387	291.3913	1,019.5875	#########	0.9	262.25	917.63	836.026	41.4489	135.2185
0.144	0.12		350.000	350.000	420.000	0.005125	296.2361	1,061.8220	#########	0.9	266.61	955.64	828.7053	20.1842	39.9863
0.1485	0.13		357.576	975.758	420.000	0.004879	300.8753	1,103.6249	#########	0.8896	267.64	981.73	821.3847	8.3	66.0656
0.153	0.13		364.706	929.412	420.000	0.004647	305.3153	1,145.0343	#########	0.8696	265.49	995.69	840.8892	13.1215	163.6312
0.1575	0.13		371.429	885.714	420.000	0.004429	309.5617	1,186.0839	#########	0.8507	263.36	1009.05	833.5686	10.7108	48.7828
0.18	0.15		400.000	700.000	420.000	0.003500	328.0441	1,386.8800	#########	0.7707	252.82	1068.85	826.248	1.0805	55.2459
0.2025	0.17		422.222	555.556	420.000	0.002778	341.9200	1,580.1075	#########	0.7084	242.23	1119.39	654.9104	1.2903	112.5915
0.225	0.19		440.000	440.000	420.000	0.002200	349.5243	1,755.6750	#########	0.6586	230.20	1156.32	647.5897	5.991	39.9627
0.2475	0.21		454.545	345.455	420.000	0.001727	342.9099	1,997.0661	#########	0.65	222.89	1298.09	640.2691	29.9227	56.3991
0.27	0.23		466.667	266.667	420.000	0.001333	332.3197	2,242.2033	#########	0.65	216.01	1457.43	848.7377	37.7335	136.7463
0.2925	0.25		476.923	200.000	420.000	0.001000	320.1378	2,476.6375	#########	0.65	208.09	1609.81	841.4171	4.1668	40.2846
0.315	0.27		485.714	142.857	420.000	0.000714	305.9857	2,702.6621	#########	0.65	198.89	1756.73	834.0965	12.7493	32.8881
0.3375	0.29		493.333	93.333	420.000	0.000467	289.5860	2,921.9592	#########	0.65	188.23	1899.27	654.9104	1.2903	112.5915
0.36	0.31		500.000	50.000	420.000	0.000250	270.7304	3,135.7900	#########	0.65	175.97	2038.26	647.5897	5.991	39.9627
0.3825	0.33		505.882	11.765	420.000	0.000059	249.2599	3,345.1193	#########	0.65	162.02	2174.33	640.2691	29.9227	56.3991
0.405	0.34		511.111	-22.222	420.000	-0.000111	225.0506	3,550.6972	#########	0.65	146.28	2307.95	848.7377	37.7335	136.7463
0.4275	0.36		515.789	-52.632	420.000	-0.000263	198.0048	3,753.1162	#########	0.65	128.70	2439.53	841.4171	4.1668	40.2846
0.45	0.38		520.000	-80.000	420.000	-0.000400	168.0444	3,898.1760	#########	0.65	109.23	2533.81	834.0965	12.7493	32.8881
0.54	0.46		533.333	-166.667	420.000	-0.000833	36.9094	3,898.1760	#########	0.65	23.99	2533.81	635.7386	114.5465	31.0845
0.63	0.54		542.857	-228.571	420.000	-0.001143	27.8902	3,898.1760	#########	0.65	18.13	2533.81	628.4179	48.2027	14.592
0.72	0.61		550.000	-275.000	420.000	-0.001375	21.1258	3,898.1760	#########	0.65	13.73	2533.81	621.0973	13.5338	3.4136
0.81	0.69		555.556	-311.111	420.000	-0.001556	15.8646	3,898.1760	#########	0.65	10.31	2533.81	638.1272	100.6336	17.1296
0.9	0.77		560.000	-340.000	420.000	-0.001700	11.6556	3,898.1760	#########	0.65	7.58	2533.81	630.8065	43.5499	10.2716
0.99	0.84		563.636	-363.636	420.000	-0.001818	8.2119	3,898.1760	#########	0.65	5.34	2533.81	623.4859	18.1411	1.9005
1.08	0.92		566.667	-383.333	420.000	-0.001917	5.3422	3,898.1760	#########	0.65	3.47	2533.81	701.2583	125.9648	43.8272
1.17	0.99		569.231	-400.000	420.000	-0.002000	2.9139	3,898.1760	#########	0.65	1.89	2533.81	693.9377	51.0018	9.7665
1.26	1.07		571.429	-414.286	420.000	-0.002071	0.8325	3,898.1760	#########	0.65	0.54	2533.81	686.617	14.9513	34.6866
1.35	1.15		573.333	-426.667	420.000	-0.002133	0.0000	3,898.1760	#########	0.65	0.00	2533.81	705.9295	98.7564	71.1177
1.8	1.53		580.000	-470.000	420.000	-0.002350	0.0000	3,898.1760	#########	0.65	0.00	2533.81	698.6089	41.9026	18.2155
2.25	1.91		584.000	-496.000	420.000	-0.002480	0.0000	3,898.1760	#########	0.65	0.00	2533.81	691.2882	23.9613	24.2942
2.7	2.30		586.667	-513.333	420.000	-0.002567	0.0000	3,898.1760	#########	0.65	0.00	2533.81	865.5209	139.6573	41.2844
3.15	2.68		588.571	-525.714	420.000	-0.002629	0.0000	3,898.1760	#########	0.65	0.00	2533.81	858.2003	41.7257	10.5935
3.6	3.06		590.000	-535.000	420.000	-0.002675	0.0000	3,898.1760	#########	0.65	0.00	2533.81	850.8797	60.8131	25.4115
4.05	3.44		591.111	-542.222	420.000	-0.002711	0.0000	3,898.1760	#########	0.65	0.00	2533.81	867.9095	153.5703	55.2393
4.5	3.83		592.000	-548.000	420.000	-0.002740	0.0000	3,898.1760	#########	0.65	0.00	2533.81	860.5889	46.3786	14.9139
4.95	4.21		592.727	-552.727	420.000	-0.002764	0.0000	3,898.1760	#########	0.65	0.00	2533.81	853.2683	56.2059	20.0974
5.4	4.59		593.333	-556.667	420.000	-0.002783	0.0000	3,898.1760	#########	0.65	0.00	2533.81	797.7186	137.7801	46.9629
5.85	4.97		593.846	-560.000	420.000	-0.002800	0.0000	3,898.1760	#########	0.65	0.00	2533.81	790.398	40.0784	17.8936
6.3	5.36		594.286	-562.857	420.000	-0.002814	0.0000	3,898.1760	#########	0.65	0.00	2533.81	783.0773	66.6333	0.7833
6.75	5.74		594.667	-565.333	420.000	-0.002827	0.0000	3,898.1760	#########	0.65	0.00	2533.81	802.3898	164.9885	19.6724
7.2	6.12		595.000	-567.500	420.000	-0.002838	0.0000	3,898.1760	#########	0.65	0.00	2533.81	795.0691	49.1776	9.4446
7.65	6.50		595.294	-569.412	420.000	-0.002847	0.0000	3,898.1760	#########	0.65	0.00	2533.81	787.7485	57.6233	11.1756
8.1	6.89		595.556	-571.111	420.000	-0.002856	0.0000	3,898.1760	#########	0.65	0.00	2533.81	681.8193	97.874	0.9839
8.55	7.27		595.789	-572.632	420.000	-0.002863	0.0000	3,898.1760	#########	0.65	0.00	2533.81	674.4986	41.7251	3.4019
9	7.65		596.000	-574.000	420.000	-0.002870	0.0000	3,898.1760	#########	0.65	0.00	2533.81	667.178	57.3822	17.9087
9.45	8.03		596.190	-575.238	420.000	-0.002876	0.0000	3,898.1760	#########	0.65	0.00	2533.81	821.8288	136.8978	25.1387
9.9	8.42		596.364	-576.364	420.000	-0.002882	0.0000	3,898.1760	#########	0.65	0.00	2533.81	814.5082	39.901	3.7238
10.35	8.80		596.522	-577.391	420.000	-0.002887	0.0000	3,898.1760	#########	0.65	0.00	2533.81	807.1875	14.7102	5.6023
10.8	9.18		596.667	-578.333	420.000	-0.002892	0.0000	3,898.1760	#########	0.65	0.00	2533.81	681.8193	97.874	0.9839
11.25	9.56		596.800	-579.200	420.000	-0.002896	0.0000	3,898.1760	#########	0.65	0.00	2533.81	674.4986	41.7251	3.4019
11.7	9.95		596.923	-580.000	420.000	-0.002900	0.0000	3,898.1760	#########	0.65	0.00	2533.81	667.178	57.3822	17.9087
12.15	10.33		597.037	-580.741	420.000	-0.002904	0.0000	3,898.1760	#########	0.65	0.00	2533.81	821.8288	136.8978	25.1387
12.6	10.71		597.143	-581.429	420.000	-0.002907	0.0000	3,898.1760	#########	0.65	0.00	2533.81	814.5082	39.901	3.7238
13.05	11.09		597.241	-582.069	420.000	-0.002910	0.0000	3,898.1760	#########	0.65	0.00	2533.81	807.1875	14.7102	5.6023
13.5	11.48		597.333	-582.667	420.000	-0.002913	0.0000	3,898.1760	#########	0.65	0.00	2533.81	384.8728	25.7491	134.4995
13.95	11.86		597.419	-583.226	420.000	-0.002916	0.0000	3,898.1760	#########	0.65	0.00	2533.81	379.3823	16.0419	46.3319
14.4	12.24		597.500	-583.750	420.000	-0.002919	0.0000	3,898.1760	#########	0.65	0.00	2533.81	373.8919	11.63	35.7278
14.85	12.62		597.576	-584.242	420.000	-0.002921	0.0000	3,898.1760	#########	0.65	0.00	2533.81	387.6182	9.7582	118.4603
19.35	16.45		598.140	-587.907	420.000	-0.002940	0.0000	3,898.1760	#########	0.65	0.00	2533.81	382.1277	10.6941	41.3662
23.85	20.27		598.491	-590.189	420.000	-0.002951	0.0000	3,898.1760	#########	0.65	0.00	2533.81	376.6372	6.3347	41.8356
28.35	24.10		598.730	-591.746	420.000	-0.002959	0.0000	3,898.1760	#########	0.65	0.00	2533.81	432.7502	45.775	143.4494
32.85	27.92		598.904	-592.877	420.000	-0.002964	0.0000	3,898.1760	#########	0.65	0.00	2533.81	427.2598	9.0466	48.6185
37.35	31.75		599.036	-593.735	420.000	-0.002969	0.0000	3,898.1760	#########	0.65	0.00	2533.81	421.7693	37.0623	35.3927
41.85	35.57		599.140	-594.409	420.000	-0.002972	0.0000	3,898.1760	#########	0.65	0.00	2533.81	437.6135	74.1023	115.0367
46.35	39.40		599.223	-594.951	420.000	-0.002975	0.0000	3,898.1760	#########	0.65	0.00	2533.81	432.1231	18.52	39.822
50.85	43.22		599.292	-595.398	420.000	-0.002977	0.0000	3,898.1760	#########	0.65	0.00	2533.81	426.6326	27.6818	46.2124
55.35	47.05		599.350	-595.772	420.000	-0.002979	0.0000	3,898.1760	#########	0.65	0.00	2533.81	656.0127	36.0414	134.6691
59.85	50.87		599.398	-596.090	420.000	-0.002980	0.0000	3,898.1760	#########	0.65	0.00	2533.81	650.5222	9.1899	41.3729
64.35	54.70		599.441	-596.364	420.000	-0.002982	0.0000	3,898.1760	#########	0.65	0.00	2533.81	645.0317	22.957	58.0311
68.85	58.52		599.477	-596.601	420.000	-0.002983	0.0000	3,898.1760	#########	0.65	0.00	2533.81	658.758	52.0323	150.7082
73.35	62.35		599.509	-596.810	420.000	-0.002984	0.0000	3,898.1760	#########	0.65	0.00	2533.81	653.2676	14.5377	46.3385
77.85	66.17		599.538	-596.994	420.000	-0.002985	0.0000	3,898.1760	#########	0.65	0.00	2533.81	647.7771	17.6616	51.9233
82.35	70.00		599.563	-597.158	420.000	-0.002986	0.0000	3,898.1760	#########	0.65	0.00	2533.81	606.0173	47.8191	131.2455
86.85	73.82		599.585	-597.306	420.000	-0.002987	0.0000	3,898.1760	#########	0.65	0.00	2533.81	600.5269	20.0242	39.8287
91.35	77.65		599.606	-597.438	420.000	-0.002987	0.0000	3,898.1760	#########	0.65	0.00	2533.81	595.0364	1.6098	62.4079
95.85	81.47		599.624	-597.559	420.000	-0.002988	0.0000	3,898.1760	#########	0.65	0.00	2533.81	610.8806	19.4918	159.6582
100.35	85.30		599.641	-597.668	420.000	-0.002988	0.0000	3,898.1760	#########	0.65	0.00	2533.81	605.3901	10.5508	48.6251
104.85	89.12		599.657	-597.768	420.000	-0.002989	0.0000	3,898.1760	#########	0.65	0.00	2533.81	599.8997	7.7707	51.5881
109.35	92.95		599.671	-597.860	420.000	-0.002989	0.0000	3,898.1760	#########	0.65	0.00	2533.81	424.9017	5.08	116.5645
113.85	96.77		599.684	-597.945	420.000	-0.002990	0.0000	3,898.1760	#########	0.65	0.00	2533.81	419.4113	5.831	40.1203
118.35	100.60		599.696	-598.023	420.000	-0.002990	0.0000	3,898.1760	#########	0.65	0.00	2533.81	413.9208	23.2325	52.7414
122.85	104.42		599.707	-598.095	420.000	-0.002990	0.0000	3,898.1760	#########	0.65	0.00	2533.81	618.7291	31.3632	132.7733
127.35	108.25		599.717	-598.163	420.000	-0.002991	0.0000	3,898.1760	#########	0.65	0.00	2533.81	613.2387	4.3268	40.127
131.85	112.07		599.727	-598.225	420.000	-0.002991	0.0000	3,898.1760	#########	0.65	0.00	2533.81	607.7482	6.0591	36.5459
136.35	115.90		599.736	-598.284	420.000	-0.002991	0.0000	3,898.1760	#########	0.65	0.00	2533.81	424.9017	5.08	116.5645
140.85	119.72		599.744	-598.339	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	419.4113	5.831	40.1203
145.35	123.55		599.752	-598.390	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	413.9208	23.2325	52.7414
149.85	127.37		599.760	-598.438	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	618.7291	31.3632	132.7733
154.35	131.20		599.767	-598.484	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	613.2387	4.3268	40.127
158.85	135.02		599.773	-598.527	420.000	-0.002993	0.0000	3,898.1760	#########	0.65	0.00	2533.81	607.7482	6.0591	36.5459
163.35	138.85		599.780	-598.567	420.000	-0.002993	0.0000	3,898.1760	#########	0.65	0.00	2533.81	405.7299	120.9168	35.0575
													400.2395	48.0428	14.7496
													394.749	20.224	0.2442
													408.1185	107.0039	21.1027
													402.6281	43.3899	10.4292
													397.1376	24.8313	5.5583
													471.2497	132.3351	39.8542
													465.7592	50.8418	9.6089
													460.2687	21.6415	31.0289
													475.9209	105.1267	67.1446
													470.4304	41.7426	18.0579
													464.9399	30.6515	20.6365
													635.5123	133.2871	37.3114
													630.0218	41.8857	10.4359
													624.5314	54.1229	21.7538
													637.9009	147.2	51.2663
													632.4104	46.5386	14.7562
													626.92	49.5157	16.4397
													567.71	131.4099	50.9359
													562.2195	40.2384	18.0513
													556.729	59.9431	4.441
													572.3812	158.6183	23.6455
													566.8907	49.3376	9.6022
													561.4002	50.9331	14.8334
													451.8107	104.2443	4.9569
													446.3202	41.5652	3.5595
													440.8297	50.692	14.251
													591.8202	130.5275	21.1657
													586.3297	40.061	3.5661
													580.8392	21.4004	1.9445
													451.8107	104.2443	4.9569
													446.3202	41.5652	3.5595
													440.8297	50.692	14.251
													591.8202	130.5275	21.1657
													586.3297	40.061	3.5661
													580.8392	21.4004	1.9445
													886.0213	42.4117	138.6421
													878.7007	9.0299	41.5305
													871.38	29.6472	61.6889
													888.7667	58.4026	154.6812
													881.446	14.3777	46.4962
													874.1254	24.3518	55.5811
													635.7386	114.5465	31.0845
													628.4179	48.2027	14.592
													621.0973	13.5338	3.4136
													638.1272	100.6336	17.1296
													630.8065	43.5499	10.2716
													623.4859	18.1411	1.9005

Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.45	m	d =	0.39 m
As =	8.83	cm²	h =	0.45 m
Altura Libre =	2.56	m		
As' =	8.83	cm²	Po =	4872.72 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2533.81 kN
Mod Elástico Acero =	200000	Mpa		3898.18 kN

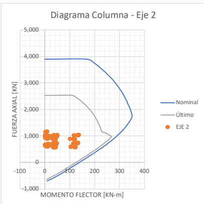
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

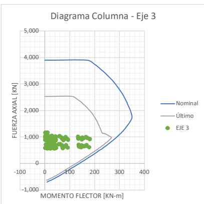
Cuantías Columnas		
As min	20.25 cm²	Cumple
As máx	50.63 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.80 cm	15.00 cm	10.80 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento			
s =	4.50 cm		4.50 cm
Ash =	2.19 cm2		2.19 cm2
	Cumple		Cumple
Av/m =	48.62 cm²/m		48.62 cm²/m

COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.0045	0.00	0.00	-7,400.000	-420.000	51,400.000	420.000	0.257000	7.8334	-706.6065	-706.6065	0.9	7.05	-635.95	1020.8263	8.4137	7.727
0.009	0.01	0.01	-3,400.000	-420.000	25,400.000	420.000	0.127000	15.5325	-671.4930	-671.4930	0.9	13.98	-604.34	1012.2856	3.5604	1.5117
0.0135	0.01	0.01	-2,066.667	-420.000	16,733.333	420.000	0.083667	23.0972	-636.3795	-636.3795	0.9	20.79	-572.74	1003.7448	1.2928	4.7036
0.018	0.02	0.02	-1,400.000	-420.000	12,400.000	420.000	0.062000	30.5277	-601.2660	-601.2660	0.9	27.47	-541.14	1167.7012	8.9563	10.4303
0.0225	0.02	0.02	-1,000.000	-420.000	9,800.000	420.000	0.049000	37.8238	-566.1525	-566.1525	0.9	34.04	-509.54	1160.3806	5.3927	1.9006
0.027	0.02	0.02	-733.333	-420.000	8,066.667	420.000	0.040333	44.9857	-531.0390	-531.0390	0.9	40.49	-477.94	1153.0599	1.8291	6.6291
0.0315	0.03	0.03	-542.857	-420.000	6,828.571	420.000	0.034143	52.0132	-495.9255	-495.9255	0.9	46.81	-446.33	1039.0915	7.4562	7.999
0.036	0.03	0.03	-400.000	-400.000	5,900.000	420.000	0.029500	61.8203	-443.1520	-443.1520	0.9	55.64	-398.84	1031.7709	3.9382	1.494
0.0405	0.03	0.03	-288.889	-288.889	5,177.778	420.000	0.025889	84.7676	-309.9274	-309.9274	0.9	76.29	-278.93	1024.4503	0.4201	5.0111
0.045	0.04	0.04	-200.000	-200.000	4,600.000	420.000	0.023000	104.3428	-196.3250	-196.3250	0.9	93.91	-176.69	983.757	7.6853	7.8572
0.0495	0.04	0.04	-127.273	-127.273	4,127.273	420.000	0.020636	121.4291	-96.9933	-96.9933	0.9	109.29	-87.29	976.4364	3.8202	1.487
0.054	0.05	0.05	-66.667	-66.667	3,733.333	420.000	0.018667	136.6151	-8.3647	-8.3647	0.9	122.95	-7.53	969.1158	0.0449	4.8833
0.0585	0.05	0.05	-15.385	-15.385	3,400.000	420.000	0.017000	150.3083	72.0309	72.0309	0.9	135.28	64.83	955.9496	30.6904	154.9348
0.063	0.05	0.05	28.571	28.571	3,114.286	420.000	0.015571	162.7998	145.9576	145.9576	0.9	146.52	131.36	948.629	9.9465	38.6386
0.0675	0.06	0.06	66.667	66.667	2,866.667	420.000	0.014333	174.3032	214.7092	214.7092	0.9	156.87	193.24	941.3083	9.6132	68.2534
0.072	0.06	0.06	100.000	100.000	2,650.000	420.000	0.013250	184.9784	279.2560	279.2560	0.9	166.48	251.33	960.1403	27.2999	136.8577
0.0765	0.07	0.07	129.412	129.412	2,458.824	420.000	0.012294	194.9480	340.3401	340.3401	0.9	175.45	306.31	952.8196	8.8433	34.3022
0.081	0.07	0.07	155.556	155.556	2,288.889	420.000	0.011444	204.3072	398.5386	398.5386	0.9	183.88	358.68	945.499	10.7974	77.6576
0.0855	0.07	0.07	178.947	178.947	2,136.842	420.000	0.010684	213.1311	454.3070	454.3070	0.9	191.82	408.88	999.1704	43.1845	164.5863
0.09	0.08	0.08	200.000	200.000	2,000.000	420.000	0.010000	221.4798	508.0100	508.0100	0.9	199.33	457.21	991.8497	16.4037	40.7087
0.0945	0.08	0.08	219.048	219.048	1,876.190	420.000	0.009381	229.4022	559.9425	559.9425	0.9	206.46	503.95	984.5291	12.4748	66.5099
0.099	0.08	0.08	236.364	236.364	1,763.636	420.000	0.008818	236.9379	610.3461	610.3461	0.9	213.24	549.31	1006.594	49.1907	132.5634
0.1035	0.09	0.09	252.174	252.174	1,660.870	420.000	0.008304	244.1200	659.4201	659.4201	0.9	219.71	593.48	999.2734	18.358	33.0268
0.108	0.09	0.09	266.667	266.667	1,566.667	420.000	0.007833	250.9758	707.3307	707.3307	0.9	225.88	636.60	991.9527	10.377	83.169
0.1125	0.10	0.10	280.000	280.000	1,480.000	420.000	0.007400	257.5283	754.2175	754.2175	0.9	231.78	678.80	957.0697	42.8788	152.4432
0.117	0.10	0.10	292.308	292.308	1,400.000	420.000	0.007000	263.7972	800.1987	800.1987	0.9	237.42	720.18	949.749	16.3765	37.2697
0.1215	0.10	0.10	303.704	303.704	1,325.926	420.000	0.006630	269.7988	845.3749	845.3749	0.9	242.82	760.84	942.4284	11.31	87.308
0.126	0.11	0.11	314.286	314.286	1,257.143	420.000	0.006286	275.5476	889.8323	889.8323	0.9	247.99	800.85	961.2604	46.2694	170.5203
0.1305	0.11	0.11	324.138	324.138	1,193.103	420.000	0.005966	281.0558	933.6453	933.6453	0.9	252.95	840.28	953.9397	17.4797	41.6062
0.135	0.11	0.11	333.333	333.333	1,133.333	420.000	0.005667	286.3339	976.8783	976.8783	0.9	257.70	879.19	946.6191	10.1258	77.9038
0.1395	0.12	0.12	341.935	341.935	1,077.419	420.000	0.005387	291.3913	1,019.5875	1,019.5875	0.9	262.25	917.63	910.6159	33.6117	148.1488
0.144	0.12	0.12	350.000	350.000	1,025.000	420.000	0.005125	296.2361	1,061.8220	1,061.8220	0.9	266.61	955.64	903.2953	10.8248	35.9943
0.1485	0.13	0.13	357.576	357.576	975.758	420.000	0.004879	300.8753	1,103.6249	1,103.6249	0.8896	267.64	981.73	895.9747	9.8644	92.8194
0.153	0.13	0.13	364.706	364.706	929.412	420.000	0.004647	305.3153	1,145.0343	1,145.0343	0.8696	265.49	995.69	918.0396	27.6055	180.1718
0.1575	0.13	0.13	371.429	371.429	885.714	420.000	0.004429	309.5617	1,186.0839	1,186.0839	0.8507	263.36	1009.05	910.719	8.8705	43.6762
0.18	0.15	0.15	400.000	400.000	700.000	420.000	0.003500	328.0441	1,386.8800	1,386.8800	0.7707	252.82	1068.85	903.3983	11.9621	76.1602
0.2025	0.17	0.17	422.222	420.000	555.556	420.000	0.002778	341.9200	1,580.1075	1,580.1075	0.7084	242.23	1119.39	939.0214	4.6218	134.1852
0.225	0.19	0.19	440.000	420.000	440.000	420.000	0.002200	349.5243	1,755.6750	1,755.6750	0.6586	230.20	1156.32	931.7008	2.8661	33.2919
0.2475	0.21	0.21	454.545	420.000	345.455	345.455	0.001727	342.9099	1,997.0661	1,997.0661	0.65	222.89	1298.09	924.3802	1.7515	77.3592
0.27	0.23	0.23	466.667	420.000	266.667	266.667	0.001333	332.3197	2,242.2033	2,242.2033	0.65	216.01	1457.43	978.1885	10.9572	149.7706
0.2925	0.25	0.25	476.923	420.000	200.000	200.000	0.001000	320.1378	2,476.6375	2,476.6375	0.65	208.09	1609.81	970.8679	4.6671	36.2595
0.315	0.27	0.27	485.714	420.000	142.857	142.857	0.000714	305.9857	2,702.6621	2,702.6621	0.65	198.89	1756.73	963.5472	1.2389	67.7088
0.3375	0.29	0.29	493.333	420.000	93.333	93.333	0.000467	289.5860	2,921.9592	2,921.9592	0.65	188.23	1899.27	939.0214	4.6218	134.1852
0.36	0.31	0.31	500.000	420.000	50.000	50.000	0.000250	270.7304	3,135.7900	3,135.7900	0.65	175.97	2038.26	931.7008	2.8661	33.2919
0.3825	0.33	0.33	505.882	420.000	11.765	11.765	0.000059	249.2599	3,345.1193	3,345.1193	0.65	162.02	2174.33	924.3802	1.7515	77.3592
0.405	0.34	0.34	511.111	420.000	-22.222	-22.222	-0.000111	225.0506	3,550.6972	3,550.6972	0.65	146.28	2307.95	978.1885	10.9572	149.7706
0.4275	0.36	0.36	515.789	420.000	-52.632	-52.632	-0.000263	198.0048	3,753.1162	3,753.1162	0.65	128.70	2439.53	970.8679	4.6671	36.2595
0.45	0.38	0.38	520.000	420.000	-80.000	-80.000	-0.000400	168.0444	3,898.1760	3,952.8500	0.65	109.23	2533.81	963.5472	1.2389	67.7088
0.54	0.46	0.45	533.333	420.000	-166.667	-166.667	-0.000833	36.9094	3,898.1760	4,649.0267	0.65	23.99	2533.81	888.6107	118.7479	42.1155
0.63	0.54	0.45	542.857	420.000	-228.571	-228.571	-0.001143	27.8902	3,898.1760	4,703.6886	0.65	18.13	2533.81	881.2901	41.2717	11.1864
0.72	0.61	0.45	550.000	420.000	-275.000	-275.000	-0.001375	21.1258	3,898.1760	4,744.6850	0.65	13.73	2533.81	873.9695	35.1743	11.5607
0.81	0.69	0.45	555.556	420.000	-311.111	-311.111	-0.001556	15.8646	3,898.1760	4,776.5711	0.65	10.31	2533.81	892.2569	115.798	26.3875
0.9	0.77	0.45	560.000	420.000	-340.000	-340.000	-0.001700	11.6556	3,898.1760	4,802.0800	0.65	7.58	2533.81	884.9362	40.3119	7.4134
0.99	0.84	0.45	563.636	420.000	-363.636	-363.636	-0.001818	8.2119	3,898.1760	4,822.9509	0.65	5.34	2533.81	877.6156	36.2046	19.7428
1.08	0.92	0.45	566.667	420.000	-383.333	-383.333	-0.001917	5.3422	3,898.1760	4,840.3433	0.65	3.47	2533.81	873.7534	120.6415	43.3864
1.17	0.99	0.45	569.231	420.000	-400.000	-400.000	-0.002000	2.9139	3,898.1760	4,855.0600	0.65	1.89	2533.81	866.4328	41.8661	9.9026
1.26	1.07	0.45	571.429	420.000	-414.286	-414.286	-0.002071	0.8325	3,898.1760	4,867.6743	0.65	0.54	2533.81	859.1122	34.8944	39.5824
1.35	1.15	0.45	573.333	420.000	-426.667	-420.000	-0.002133	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	880.8839	114.8725	74.1445
1.8	1.53	0.45	580.000	420.000	-470.000	-420.000	-0.002350	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	873.5632	39.9891	17.281
2.25	1.91	0.45	584.000	420.000	-496.000	-420.000	-0.002480	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	866.2426	36.9093	23.5813
2.7	2.30	0.45	586.667	420.000	-513.333	-420.000	-0.002567	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1024.9531	131.377	41.9729
3.15	2.68	0.45	588.571	420.000	-525.714	-420.000	-0.002629	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1017.6324	47.845	10.3809
3.6	3.06	0.45	590.000	420.000	-535.000	-420.000	-0.002675	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1010.3118	36.7172	29.3932
4.05	3.44	0.45	591.111	420.000	-542.222	-420.000	-0.002711	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1028.5992	134.3269	57.701
4.5	3.83	0.45	592.000	420.000	-548.000	-420.000	-0.002740	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1021.2786	48.8049	14.1539
4.95	4.21	0.45	592.727	420.000	-552.727	-420.000	-0.002764	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1013.9579	35.6869	21.2111
5.4	4.59	0.45	593.333	420.000	-556.667	-420.000	-0.002783	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1036.3261	130.4515	58.559
5.85	4.97	0.45	593.846	420.000	-560.000	-420.000	-0.002800	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1029.0054	47.5222	14.3135
6.3	5.36	0.45	594.286	420.000	-562.857	-420.000	-0.002814	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1021.6848	37.4219	13.9309
6.75	5.74	0.45	594.667	420.000	-565.333	-420.000	-0.002827	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1043.4565	136.2205	27.801
7.2	6.12	0.45	595.000	420.000	-567.500	-420.000	-0.002838	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1036.1359	49.3993	6.935
7.65	6.50	0.45	595.294	420.000	-569.412	-420.000	-0.002847	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1028.8152	35.407	29.932
8.1	6.89	0.45	595.556	420.000	-571.111	-420.000	-0.002856	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	893.8552	100.7774	6.5073
8.55	7.27	0.45	595.789	420.000	-572.632	-420.000	-0.002863	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	886.5346	34.7439	1.6819
9	7.65	0.45	596.000	420.000	-574.000	-420.000	-0.002870	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	879.2139	32.0889	12.868
9.45	8.03	0.45	596.190	420.000	-575.238	-420.000	-0.002876	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1023.3547	116.3564	22.0928
9.9	8.42	0.45	596.364	420.000	-576.364	-420.000	-0.002882	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1016.0341	42.277	4.6494
10.35	8.80	0.45	596.522	420.000	-577.391	-420.000	-0.002887	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1008.7135	31.5763	3.2176
10.8	9.18	0.45	596.667	420.000	-578.333	-420.000	-0.002892	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	893.8552	100.7774	6.5073
11.25	9.56	0.45	596.800	420.000	-579.200	-420.000	-0.002896	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	886.5346	34.7439	1.6819
11.7	9.95	0.45	596.923	420.000	-580.000	-420.000	-0.002900	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	879.2139	32.0889	12.868
12.15	10.33	0.45	597.037	420.000	-580.741	-420.000	-0.002904	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1023.3547	116.3564	22.0928
12.6	10.71	0.45	597.143	420.000	-581.429	-420.000	-0.002907	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1016.0341	42.277	4.6494
13.05	11.09	0.45	597.241	420.000	-582.069	-420.000	-0.002910	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1008.7135	31.5763	3.2176
13.5	11.48	0.45	597.333	420.000	-582.667	-420.000	-0.002913	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	653.5901	33.071	157.7602
13.95	11.86	0.45	597.419	420.000	-583.226	-420.000	-0.002916	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	648.0996	11.4242	39.1506
14.4	12.24	0.45	597.500	420.000	-583.750	-420.000	-0.002919	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	642.6091	9.0384	70.0549
14.85	12.62	0.45	597.576	420.000	-584.242	-420.000	-0.002921	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	657.7808	29.6805	139.6831
19.35	16.45	0.45	598.140	420.000	-587.907	-420.000	-0.002940	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	652.2903	10.3211	34.8141
23.85	20.27	0.45	598.491	420.000	-590.189	-420.000	-0.002951	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	646.7998	10.2226	79.4591
28.35	24.10	0.45	598.730	420.000	-591.746	-420.000	-0.002959	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	696.8109	40.8038	167.4117
32.85	27.92	0.45	598.904	420.000	-592.877	-420.000	-0.002964	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	691.3204	14.926	41.2206
37.35	31.75	0.45	599.036	420.000	-593.735	-420.000	-0.002969	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	685.8299	13.0496	68.3113
41.85	35.57	0.45	599.140	420.000	-594.409	-420.000	-0.002972	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	704.2345	46.81	135.3887
46.35	39.40	0.45	599.223	420.000	-594.951	-420.000	-0.002975	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	698.744	16.8802	33.5387
50.85	43.22	0.45	599.292	420.000	-595.398	-420.000	-0.002977	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	693.2536	10.9518	84.9705
55.35	47.05	0.45	599.350	420.000	-595.772	-420.000	-0.002979	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	654.7102	40.4982	149.6178
59.85	50.87	0.45	599.398	420.000	-596.090	-420.000	-0.002980	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	649.2197	14.8988	36.7577
64.35	54.70	0.45	599.441	420.000	-596.364	-420.000	-0.002982	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	643.7292	11.8848	85.5065
68.85	58.52	0.45	599.477	420.000	-596.601	-420.000	-0.002983	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	658.9009	43.8887	167.6949
73.35	62.35	0.45	599.509	420.000	-596.810	-420.000	-0.002984	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	653.4104	16.002	41.0942
77.85	66.17	0.45	599.538	420.000	-596.994	-420.000	-0.002985	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	647.9199	10.7006	76.1023
82.35	70.00	0.45	599.563	420.000	-597.158	-420.000	-0.002986	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	608.2565	35.9924	145.3234
86.85	73.82	0.45	599.585	420.000	-597.306	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	602.766	12.3025	35.4823
91.35	77.65	0.45	599.606	420.000	-597.438	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	597.2755	9.2896	91.0179
95.85	81.47	0.45	599.624	420.000	-597.559	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	615.6801	29.9861	177.3464
100.35	85.30	0.45	599.641	420.000	-597.668	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	610.1896	10.3483	43.1642
104.85	89.12	0.45	599.657	420.000	-597.768	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	604.6991	11.3873	74.3588
109.35	92.95	0.45	599.671	420.000	-597.860	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	636.6619	2.2411	137.0105
113.85	96.77	0.45	599.684	420.000	-597.945	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	631.1715	1.3884	33.8039
118.35	100.60	0.45	599.696	420.000	-598.023	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	625.681	2.3263	75.5577
122.85	104.42	0.45	599.707	420.000	-598.095	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	675.829	8.5765	146.9452
127.35	108.25	0.45	599.717	420.000	-598.163	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	670.3385	3.1894	35.7475
131.85	112.07	0.45	599.727	420.000	-598.225	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	664.8481	0.6641	69.5103
136.35	115.90	0.45	599.736	420.000	-598.284	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	636.6619	2.2411	137.0105
140.85	119.72	0.45	599.744	420.000	-598.339	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	631.1715	1.3884	33.8039
145.35	123.55	0.45	599.752	420.000	-598.390	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	625.681	2.3263	75.5577
149.85	127.37	0.45	599.760	420.000	-598.438	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	675.829	8.5765	146.9452
154.35	131.20	0.45	599.767	420.000	-598.484	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	670.3385	3.1894	35.7475
158.85	135.02	0.45	599.773	420.000	-598.527	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	664.8481	0.6641	69.5103
163.35	138.85	0.45	599.780	420.000	-598.567	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	586.2513	121.1286	44.9409
														580.7608	42.7494	11.6983
														575.2703	34.5995	13.3621
														589.8974	118.1786	29.2129
														584.4069	41.7896	7.9254
														578.9164	35.6298	21.5443
														571.394	123.0221	40.5611
														565.9035	43.3438	9.3906
														560.413	34.3196	37.781
														578.5244	117.2532	71.3191
														573.0339	41.4668	16.7691
														567.5434	36.3345	21.7798
														722.5936	128.9963	39.1476
														717.1031	46.3673	9.869
														711.6126	37.292	27.5917
														726.2397	131.9462	54.8756
														720.7492	47.3271	13.6419
														715.2588	36.2617	19.4096
														733.9666	128.0708	61.3844
														728.4761	46.0445	14.8255
														722.9856	37.9967	15.7324
														741.097	133.8398	30.6264
														735.6065	47.9216	7.447
														730.1161	35.9818	31.7335
														591.4957	103.1581	9.3327
														586.0052	36.2216	2.1939
														580.5147	32.6637	11.0666
														720.9953	113.9757	19.2674
														715.5048	40.7993	4.1375
														710.0143	31.0015	5.0191
														591.4957	103.1581	9.3327
														586.0052	36.2216	2.1939
														580.5147	32.6637	11.0666
														720.9953	113.9757	19.2674
														715.5048	40.7993	4.1375
														710.0143	31.0015	5.0191
														957.0697	42.8788	152.4432
														949.749	16.3765	37.2697
														942.4284	11.31	87.308
														961.2604	46.2694	170.5203
														953.9397	17.4797	41.6062
														946.6191	10.1258	77.9038
														888.6107	118.7479	42.1155
														881.2901	41.2717	11.1864
														873.9695	35.1743	11.5607
														892.2569	115.798	26.3875
														884.9362	40.3119	7.4134
														877.6156	36.2046	19.7428

Propiedades de Columna

f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.45	m	d =	0.39 m
As =	8.83	cm²	h =	0.45 m
Altura Libre =	2.56	m		
As' =	8.83	cm²	Po =	4872.72 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2533.81 kN
Mod Elástico Acero =	200000	Mpa		3898.18 kN

Aceros Longitudinales Colocados

	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

Cuantías Columnas

As min	20.25 cm²	Cumple
As máx	50.63 cm²	Cumple

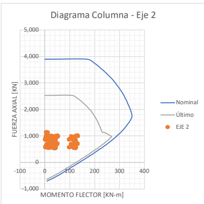
Estribos Detalles

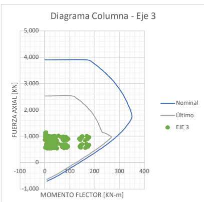
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.80 cm	15.00 cm	10.80 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento

s =	4.50 cm	4.50 cm
Ash =	2.19 cm2	2.19 cm2
	Cumple	Cumple
Av/m =	48.62 cm²/m	48.62 cm²/m

COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.0045	0.00	0.00	-7,400.000	-420.000	51,400.000	420.000	0.257000	7.8334	-706.6065	-706.6065	0.9	7.05	-635.95	990.5485	5.5798	3.566
0.009	0.01	0.01	-3,400.000	-420.000	25,400.000	420.000	0.127000	15.5325	-671.4930	-671.4930	0.9	13.98	-604.34	982.0077	5.4764	2.7963
0.0135	0.01	0.01	-2,066.667	-420.000	16,733.333	420.000	0.083667	23.0972	-636.3795	-636.3795	0.9	20.79	-572.74	973.467	5.3731	2.0267
0.018	0.02	0.02	-1,400.000	-420.000	12,400.000	420.000	0.062000	30.5277	-601.2660	-601.2660	0.9	27.47	-541.14	1146.2427	4.5854	5.0162
0.0225	0.02	0.02	-1,000.000	-420.000	9,800.000	420.000	0.049000	37.8238	-566.1525	-566.1525	0.9	34.04	-509.54	1138.922	8.2591	3.5721
0.027	0.02	0.02	-733.333	-420.000	8,066.667	420.000	0.040333	44.9857	-531.0390	-531.0390	0.9	40.49	-477.94	1131.6014	11.9329	2.128
0.0315	0.03	0.03	-542.857	-420.000	6,828.571	420.000	0.034143	52.0132	-495.9255	-495.9255	0.9	46.81	-446.33	1060.4166	4.7239	3.9738
0.036	0.03	0.03	-400.000	-400.000	5,900.000	420.000	0.029500	61.8203	-443.1520	-443.1520	0.9	55.64	-398.84	1053.0959	5.8935	2.7367
0.0405	0.03	0.03	-288.889	-288.889	5,177.778	420.000	0.025889	84.7676	-309.9274	-309.9274	0.9	76.29	-278.93	1045.7753	7.063	1.4996
0.045	0.04	0.04	-200.000	-200.000	4,600.000	420.000	0.023000	104.3428	-196.3250	-196.3250	0.9	93.91	-176.69	970.1311	4.7217	3.7415
0.0495	0.04	0.04	-127.273	-127.273	4,127.273	420.000	0.020636	121.4291	-96.9933	-96.9933	0.9	109.29	-87.29	962.8105	5.8285	2.7576
0.054	0.05	0.05	-66.667	-66.667	3,733.333	420.000	0.018667	136.6151	-8.3647	-8.3647	0.9	122.95	-7.53	955.4898	6.9352	1.7736
0.0585	0.05	0.05	-15.385	-15.385	3,400.000	420.000	0.017000	150.3083	72.0309	72.0309	0.9	135.28	64.83	855.0268	40.7781	161.1255
0.063	0.05	0.05	28.571	28.571	3,114.286	420.000	0.015571	162.7998	145.9576	145.9576	0.9	146.52	131.36	847.7062	10.1822	36.7274
0.0675	0.06	0.06	66.667	66.667	2,866.667	420.000	0.014333	174.3032	214.7092	214.7092	0.9	156.87	193.24	840.3856	18.2294	77.9142
0.072	0.06	0.06	100.000	100.000	2,650.000	420.000	0.013250	184.9784	279.2560	279.2560	0.9	166.48	251.33	865.9366	31.787	142.8305
0.0765	0.07	0.07	129.412	129.412	2,458.824	420.000	0.012294	194.9480	340.3401	340.3401	0.9	175.45	306.31	858.6159	6.7788	32.4582
0.081	0.07	0.07	155.556	155.556	2,288.889	420.000	0.011444	204.3072	398.5386	398.5386	0.9	183.88	358.68	851.2953	20.4137	87.6707
0.0855	0.07	0.07	178.947	178.947	2,136.842	420.000	0.010684	213.1311	454.3070	454.3070	0.9	191.82	408.88	894.0356	28.5571	170.9022
0.09	0.08	0.08	200.000	200.000	2,000.000	420.000	0.010000	221.4798	508.0100	508.0100	0.9	199.33	457.21	886.715	14.8375	38.7587
0.0945	0.08	0.08	219.048	219.048	1,876.190	420.000	0.009381	229.4022	559.9425	559.9425	0.9	206.46	503.95	879.3943	2.7515	76.1014
0.099	0.08	0.08	236.364	236.364	1,763.636	420.000	0.008818	236.9379	610.3461	610.3461	0.9	213.24	549.31	913.3618	44.4845	138.4933
0.1035	0.09	0.09	252.174	252.174	1,660.870	420.000	0.008304	244.1200	659.4201	659.4201	0.9	219.71	593.48	906.0412	20.8665	31.196
0.108	0.09	0.09	266.667	266.667	1,566.667	420.000	0.007833	250.9758	707.3307	707.3307	0.9	225.88	636.60	898.7205	1.1179	93.3848
0.1125	0.10	0.10	280.000	280.000	1,480.000	420.000	0.007400	257.5283	754.2175	754.2175	0.9	231.78	678.80	992.2479	41.2284	150.1025
0.117	0.10	0.10	292.308	292.308	1,400.000	420.000	0.007000	263.7972	800.1987	800.1987	0.9	237.42	720.18	984.9273	18.3766	37.9923
0.1215	0.10	0.10	303.704	303.704	1,325.926	420.000	0.006630	269.7988	845.3749	845.3749	0.9	242.82	760.84	977.6067	6.6594	83.8743
0.126	0.11	0.11	314.286	314.286	1,257.143	420.000	0.006286	275.5476	889.8323	889.8323	0.9	247.99	800.85	1003.1577	50.2196	168.3974
0.1305	0.11	0.11	324.138	324.138	1,193.103	420.000	0.005966	281.0558	933.6453	933.6453	0.9	252.95	840.28	995.8371	21.7801	42.2616
0.135	0.11	0.11	333.333	333.333	1,133.333	420.000	0.005667	286.3339	976.8783	976.8783	0.9	257.70	879.19	988.5164	4.4752	74.1178
0.1395	0.12	0.12	341.935	341.935	1,077.419	420.000	0.005387	291.3913	1,019.5875	1,019.5875	0.9	262.25	917.63	944.8227	35.0431	145.7653
0.144	0.12	0.12	350.000	350.000	1,025.000	420.000	0.005125	296.2361	1,061.8220	1,061.8220	0.9	266.61	955.64	937.5021	9.2687	36.7302
0.1485	0.13	0.13	357.576	357.576	975.758	420.000	0.004879	300.8753	1,103.6249	1,103.6249	0.8896	267.64	981.73	930.1814	12.6364	89.5883
0.153	0.13	0.13	364.706	364.706	929.412	420.000	0.004647	305.3153	1,145.0343	1,145.0343	0.8696	265.49	995.69	964.1489	19.1156	178.1742
0.1575	0.13	0.13	371.429	371.429	885.714	420.000	0.004429	309.5617	1,186.0839	1,186.0839	0.8507	263.36	1009.05	956.8283	3.2396	44.2929
0.18	0.15	0.15	400.000	400.000	700.000	420.000	0.003500	328.0441	1,386.8800	1,386.8800	0.7707	252.82	1068.85	949.5076	16.5058	72.3049
0.2025	0.17	0.17	422.222	420.000	555.556	420.000	0.002778	341.9200	1,580.1075	1,580.1075	0.7084	242.23	1119.39	881.5479	11.1236	140.117
0.225	0.19	0.19	440.000	420.000	440.000	420.000	0.002200	349.5243	1,755.6750	1,755.6750	0.6586	230.20	1156.32	874.2273	0.3634	31.4604
0.2475	0.21	0.21	454.545	420.000	345.455	345.455	0.001727	342.9099	1,997.0661	1,997.0661	0.65	222.89	1298.09	866.9067	1.6666	73.502
0.27	0.23	0.23	466.667	420.000	266.667	266.667	0.001333	332.3197	2,242.2033	2,242.2033	0.65	216.01	1457.43	976.6366	20.565	147.3889
0.2925	0.25	0.25	476.923	420.000	200.000	200.000	0.001000	320.1378	2,476.6375	2,476.6375	0.65	208.09	1609.81	969.3159	11.2345	36.9946
0.315	0.27	0.27	485.714	420.000	142.857	142.857	0.000714	305.9857	2,702.6621	2,702.6621	0.65	198.89	1756.73	961.9953	12.0877	77.2984
0.3375	0.29	0.29	493.333	420.000	93.333	93.333	0.000467	289.5860	2,921.9592	2,921.9592	0.65	188.23	1899.27	881.5479	11.1236	140.117
0.36	0.31	0.31	500.000	420.000	50.000	50.000	0.000250	270.7304	3,135.7900	3,135.7900	0.65	175.97	2038.26	874.2273	0.3634	31.4604
0.3825	0.33	0.33	505.882	420.000	11.765	11.765	0.000059	249.2599	3,345.1193	3,345.1193	0.65	162.02	2174.33	866.9067	1.6666	73.502
0.405	0.34	0.34	511.111	420.000	-22.222	-22.222	-0.000111	225.0506	3,550.6972	3,550.6972	0.65	146.28	2307.95	976.6366	20.565	147.3889
0.4275	0.36	0.36	515.789	420.000	-52.632	-52.632	-0.000263	198.0048	3,753.1162	3,753.1162	0.65	128.70	2439.53	969.3159	11.2345	36.9946
0.45	0.38	0.38	520.000	420.000	-80.000	-80.000	-0.000400	168.0444	3,898.1760	3,952.8500	0.65	109.23	2533.81	961.9953	12.0877	77.2984
0.54	0.46	0.45	533.333	420.000	-166.667	-166.667	-0.000833	36.9094	3,898.1760	4,649.0267	0.65	23.99	2533.81	838.2173	121.9101	46.882
0.63	0.54	0.45	542.857	420.000	-228.571	-228.571	-0.001143	27.8902	3,898.1760	4,703.6886	0.65	18.13	2533.81	830.8966	39.9031	9.7148
0.72	0.61	0.45	550.000	420.000	-275.000	-275.000	-0.001375	21.1258	3,898.1760	4,744.6850	0.65	13.73	2533.81	823.576	40.2034	18.9637
0.81	0.69	0.45	555.556	420.000	-311.111	-311.111	-0.001556	15.8646	3,898.1760	4,776.5711	0.65	10.31	2533.81	847.7093	114.0873	30.9644
0.9	0.77	0.45	560.000	420.000	-340.000	-340.000	-0.001700	11.6556	3,898.1760	4,802.0800	0.65	7.58	2533.81	840.3887	36.9419	6.0004
0.99	0.84	0.45	563.636	420.000	-363.636	-363.636	-0.001818	8.2119	3,898.1760	4,822.9509	0.65	5.34	2533.81	833.0681	42.1039	27.4524
1.08	0.92	0.45	566.667	420.000	-383.333	-383.333	-0.001917	5.3422	3,898.1760	4,840.3433	0.65	3.47	2533.81	861.8831	122.8869	39.6967
1.17	0.99	0.45	569.231	420.000	-400.000	-400.000	-0.002000	2.9139	3,898.1760	4,855.0600	0.65	1.89	2533.81	854.5625	40.6501	11.0417
1.26	1.07	0.45	571.429	420.000	-414.286	-414.286	-0.002071	0.8325	3,898.1760	4,867.6743	0.65	0.54	2533.81	847.2418	37.8703	34.214
1.35	1.15	0.45	573.333	420.000	-426.667	-420.000	-0.002133	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	880.446	107.5886	70.8255
1.8	1.53	0.45	580.000	420.000	-470.000	-420.000	-0.002350	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	873.1253	34.8592	18.3057
2.25	1.91	0.45	584.000	420.000	-496.000	-420.000	-0.002480	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	865.8047	41.5868	17.6133
2.7	2.30	0.45	586.667	420.000	-513.333	-420.000	-0.002567	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1010.4752	123.5288	38.2364
3.15	2.68	0.45	588.571	420.000	-525.714	-420.000	-0.002629	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1003.1546	48.5398	11.5345
3.6	3.06	0.45	590.000	420.000	-535.000	-420.000	-0.002675	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	995.8339	28.3496	23.656
4.05	3.44	0.45	591.111	420.000	-542.222	-420.000	-0.002711	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1019.9672	131.3515	54.154
4.5	3.83	0.45	592.000	420.000	-548.000	-420.000	-0.002740	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1012.6466	51.5009	15.249
4.95	4.21	0.45	592.727	420.000	-552.727	-420.000	-0.002764	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	1005.326	26.4492	15.1673
5.4	4.59	0.45	593.333	420.000	-556.667	-420.000	-0.002783	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	977.7386	117.03	63.5535
5.85	4.97	0.45	593.846	420.000	-560.000	-420.000	-0.002800	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	970.4179	46.457	12.7715
6.3	5.36	0.45	594.286	420.000	-562.857	-420.000	-0.002814	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	963.0973	27.8325	21.4097
6.75	5.74	0.45	594.667	420.000	-565.333	-420.000	-0.002827	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	996.3014	132.3283	32.4248
7.2	6.12	0.45	595.000	420.000	-567.500	-420.000	-0.002838	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	988.9808	52.2479	5.5075
7.65	6.50	0.45	595.294	420.000	-569.412	-420.000	-0.002847	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	981.6601	24.116	38.0104
8.1	6.89	0.45	595.556	420.000	-571.111	-420.000	-0.002856	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	870.7147	96.1797	10.8381
8.55	7.27	0.45	595.789	420.000	-572.632	-420.000	-0.002863	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	863.3941	30.5298	0.3454
9	7.65	0.45	596.000	420.000	-574.000	-420.000	-0.002870	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	856.0734	21.6831	6.4255
9.45	8.03	0.45	596.190	420.000	-575.238	-420.000	-0.002876	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	987.4698	105.6211	18.11
9.9	8.42	0.45	596.364	420.000	-576.364	-420.000	-0.002882	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	980.1492	42.1276	5.8796
10.35	8.80	0.45	596.522	420.000	-577.391	-420.000	-0.002887	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	972.8285	35.4374	10.2219
10.8	9.18	0.45	596.667	420.000	-578.333	-420.000	-0.002892	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	870.7147	96.1797	10.8381
11.25	9.56	0.45	596.800	420.000	-579.200	-420.000	-0.002896	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	863.3941	30.5298	0.3454
11.7	9.95	0.45	596.923	420.000	-580.000	-420.000	-0.002900	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	856.0734	21.6831	6.4255
12.15	10.33	0.45	597.037	420.000	-580.741	-420.000	-0.002904	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	987.4698	105.6211	18.11
12.6	10.71	0.45	597.143	420.000	-581.429	-420.000	-0.002907	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	980.1492	42.1276	5.8796
13.05	11.09	0.45	597.241	420.000	-582.069	-420.000	-0.002910	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	972.8285	35.4374	10.2219
13.5	11.48	0.45	597.333	420.000	-582.667	-420.000	-0.002913	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	562.7157	41.9118	162.469
13.95	11.86	0.45	597.419	420.000	-583.226	-420.000	-0.002916	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	557.2252	12.4606	37.6968
14.4	12.24	0.45	597.500	420.000	-583.750	-420.000	-0.002919	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	551.7348	14.8064	77.3188
14.85	12.62	0.45	597.576	420.000	-584.242	-420.000	-0.002921	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	573.6255	32.9207	144.1741
19.35	16.45	0.45	598.140	420.000	-587.907	-420.000	-0.002940	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	568.135	9.0572	33.4276
23.85	20.27	0.45	598.491	420.000	-590.189	-420.000	-0.002951	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	562.6445	16.9907	87.0754
28.35	24.10	0.45	598.730	420.000	-591.746	-420.000	-0.002959	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	601.7245	27.4234	172.2458
32.85	27.92	0.45	598.904	420.000	-592.877	-420.000	-0.002964	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	596.234	12.5591	39.7282
37.35	31.75	0.45	599.036	420.000	-593.735	-420.000	-0.002969	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	590.7435	6.1745	75.506
41.85	35.57	0.45	599.140	420.000	-594.409	-420.000	-0.002972	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	621.0507	43.3508	139.8369
46.35	39.40	0.45	599.223	420.000	-594.951	-420.000	-0.002975	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	615.5602	18.5881	32.1654
50.85	43.22	0.45	599.292	420.000	-595.398	-420.000	-0.002977	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	610.0698	2.3052	92.7894
55.35	47.05	0.45	599.350	420.000	-595.772	-420.000	-0.002979	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	699.9368	40.0947	148.7589
59.85	50.87	0.45	599.398	420.000	-596.090	-420.000	-0.002980	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	694.4464	16.0983	37.0229
64.35	54.70	0.45	599.441	420.000	-596.364	-420.000	-0.002982	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	688.9559	10.0824	84.4697
68.85	58.52	0.45	599.477	420.000	-596.601	-420.000	-0.002983	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	710.8466	49.0859	167.0539
73.35	62.35	0.45	599.509	420.000	-596.810	-420.000	-0.002984	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	705.3561	19.5017	41.2921
77.85	66.17	0.45	599.538	420.000	-596.994	-420.000	-0.002985	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	699.8656	7.8982	74.7131
82.35	70.00	0.45	599.563	420.000	-597.158	-420.000	-0.002986	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	652.5116	36.1768	144.4217
86.85	73.82	0.45	599.585	420.000	-597.306	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	647.0211	11.547	35.7607
91.35	77.65	0.45	599.606	420.000	-597.438	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	641.5306	9.2134	90.1837
95.85	81.47	0.45	599.624	420.000	-597.559	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	671.8378	20.2493	176.8306
100.35	85.30	0.45	599.641	420.000	-597.668	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	666.3473	5.518	43.3235
104.85	89.12	0.45	599.657	420.000	-597.768	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	660.8569	13.0827	72.9003
109.35	92.95	0.45	599.671	420.000	-597.860	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	589.2368	12.2573	141.4605
113.85	96.77	0.45	599.684	420.000	-597.945	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	583.7464	1.915	32.4299
118.35	100.60	0.45	599.696	420.000	-598.023	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	578.2559	1.7565	74.0974
122.85	104.42	0.45	599.707	420.000	-598.095	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	684.3255	19.4313	146.0454
127.35	108.25	0.45	599.717	420.000	-598.163	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	678.835	8.9561	36.0252
131.85	112.07	0.45	599.727	420.000	-598.225	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	673.3445	8.6647	76.7031
136.35	115.90	0.45	599.736	420.000	-598.284	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	589.2368	12.2573	141.4605
140.85	119.72	0.45	599.744	420.000	-598.339	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	583.7464	1.915	32.4299
145.35	123.55	0.45	599.752	420.000	-598.390	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	578.2559	1.7565	74.0974
149.85	127.37	0.45	599.760	420.000	-598.438	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	684.3255	19.4313	146.0454
154.35	131.20	0.45	599.767	420.000	-598.484	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	678.835	8.9561	36.0252
158.85	135.02	0.45	599.773	420.000	-598.527	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	673.3445	8.6647	76.7031
163.35	138.85	0.45	599.780	420.000	-598.567	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	545.9062	123.0438	48.2256
														540.4157	42.1815	10.6842
														534.9252	36.7804	18.3684
														555.3982	115.221	32.308
														549.9077	39.2203	6.9698
														544.4173	38.6808	26.8571
														569.572	124.0206	38.3532
														564.0815	42.9284	10.0723
														558.5911	34.4472	34.8094
														588.1349	108.7223	69.4819
														582.6444	37.1375	17.3363
														577.1539	38.1637	18.2086
														718.1641	122.3951	36.8928
														712.6736	46.2614	10.5651
														707.1831	31.7726	24.2514
														727.6561	130.2178	52.8104
														722.1657	49.2226	14.2795
														716.6752	29.8722	15.7626
														685.4275	115.8963	64.8971
														679.937	44.1786	13.741
														674.4465	31.2555	20.8144
														703.9903	131.1946	33.7683
														698.4998	49.9695	6.477
														693.0093	27.539	37.4151
														578.4036	97.3134	12.1816
														572.9131	32.8082	1.3148
														567.4227	25.1061	7.0208
														695.1587	104.4874	16.7665
														689.6682	39.8493	4.9101
														684.1777	32.0143	9.6266
														578.4036	97.3134	12.1816
														572.9131	32.8082	1.3148
														567.4227	25.1061	7.0208
														695.1587	104.4874	16.7665
														689.6682	39.8493	4.9101
														684.1777	32.0143	9.6266
														992.2479	41.2284	150.1025
														984.9273	18.3766	37.9923
														977.6067	6.6594	83.8743
														1003.1577	50.2196	168.3974
														995.8371	21.7801	42.2616
														988.5164	4.4752	74.1178
														838.2173	121.9101	46.882
														830.8966	39.9031	9.7148
														823.576	40.2034	18.9637
														847.7093	114.0873	30.9644
														840.3887	36.9419	6.0004
														833.0681	42.1039	27.4524

Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.45	m	d =	0.39 m
As =	8.83	cm²	h =	0.45 m
Altura Libre =	2.56	m		
As' =	8.83	cm²	Po =	4872.72 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2533.81 kN
Mod Elástico Acero =	200000	Mpa		3898.18 kN

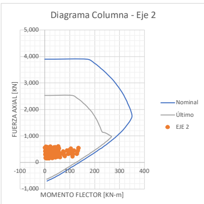
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

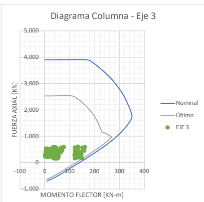
Cuantías Columnas		
As min	20.25 cm²	Cumple
As máx	50.63 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.80 cm	15.00 cm	10.80 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento			
s =	4.50 cm		4.50 cm
Ash =	2.19 cm2		2.19 cm2
	Cumple		Cumple
Av/m =	48.62 cm²/m		48.62 cm²/m

COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.0045	0.00	0.00	-7,400.000	-420.000	51,400.000	420.000	0.257000	7.8334	-706.6065	-706.6065	0.9	7.05	-635.95	493.6666	15.1577	7.3198
0.009	0.01	0.01	-3,400.000	-420.000	25,400.000	420.000	0.127000	15.5325	-671.4930	-671.4930	0.9	13.98	-604.34	485.1259	3.4075	6.1571
0.0135	0.01	0.01	-2,066.667	-420.000	16,733.333	420.000	0.083667	23.0972	-636.3795	-636.3795	0.9	20.79	-572.74	476.5851	8.3427	19.6341
0.018	0.02	0.02	-1,400.000	-420.000	12,400.000	420.000	0.062000	30.5277	-601.2660	-601.2660	0.9	27.47	-541.14	533.1318	16.8447	8.1758
0.0225	0.02	0.02	-1,000.000	-420.000	9,800.000	420.000	0.049000	37.8238	-566.1525	-566.1525	0.9	34.04	-509.54	525.8112	5.7683	7.6449
0.027	0.02	0.02	-733.333	-420.000	8,066.667	420.000	0.040333	44.9857	-531.0390	-531.0390	0.9	40.49	-477.94	518.4905	5.3081	23.4656
0.0315	0.03	0.03	-542.857	-420.000	6,828.571	420.000	0.034143	52.0132	-495.9255	-495.9255	0.9	46.81	-446.33	521.7181	14.8783	7.4449
0.036	0.03	0.03	-400.000	-400.000	5,900.000	420.000	0.029500	61.8203	-443.1520	-443.1520	0.9	55.64	-398.84	514.3975	3.7069	6.262
0.0405	0.03	0.03	-288.889	-288.889	5,177.778	420.000	0.025889	84.7676	-309.9274	-309.9274	0.9	76.29	-278.93	507.0769	7.4645	19.969
0.045	0.04	0.04	-200.000	-200.000	4,600.000	420.000	0.023000	104.3428	-196.3250	-196.3250	0.9	93.91	-176.69	472.801	14.3586	7.0057
0.0495	0.04	0.04	-127.273	-127.273	4,127.273	420.000	0.020636	121.4291	-96.9933	-96.9933	0.9	109.29	-87.29	465.4804	3.7859	6.0756
0.054	0.05	0.05	-66.667	-66.667	3,733.333	420.000	0.018667	136.6151	-8.3647	-8.3647	0.9	122.95	-7.53	458.1597	6.7868	19.1569
0.0585	0.05	0.05	-15.385	-15.385	3,400.000	420.000	0.017000	150.3083	72.0309	72.0309	0.9	135.28	64.83	569.1275	36.5946	151.2682
0.063	0.05	0.05	28.571	28.571	3,114.286	420.000	0.015571	162.7998	145.9576	145.9576	0.9	146.52	131.36	561.8069	16.1655	39.7706
0.0675	0.06	0.06	66.667	66.667	2,866.667	420.000	0.014333	174.3032	214.7092	214.7092	0.9	156.87	193.24	554.4863	1.5443	65.7087
0.072	0.06	0.06	100.000	100.000	2,650.000	420.000	0.013250	184.9784	279.2560	279.2560	0.9	166.48	251.33	578.0366	18.4874	135.2845
0.0765	0.07	0.07	129.412	129.412	2,458.824	420.000	0.012294	194.9480	340.3401	340.3401	0.9	175.45	306.31	570.7159	8.4715	34.7879
0.081	0.07	0.07	155.556	155.556	2,288.889	420.000	0.011444	204.3072	398.5386	398.5386	0.9	183.88	358.68	563.3953	4.2636	71.727
0.0855	0.07	0.07	178.947	178.947	2,136.842	420.000	0.010684	213.1311	454.3070	454.3070	0.9	191.82	408.88	591.4871	21.1346	160.2539
0.09	0.08	0.08	200.000	200.000	2,000.000	420.000	0.010000	221.4798	508.0100	508.0100	0.9	199.33	457.21	584.1665	8.6921	42.0462
0.0945	0.08	0.08	219.048	219.048	1,876.190	420.000	0.009381	229.4022	559.9425	559.9425	0.9	206.46	503.95	576.8458	8.5676	65.5004
0.099	0.08	0.08	236.364	236.364	1,763.636	420.000	0.008818	236.9379	610.3461	610.3461	0.9	213.24	549.31	607.2691	53.2108	131.9393
0.1035	0.09	0.09	252.174	252.174	1,660.870	420.000	0.008304	244.1200	659.4201	659.4201	0.9	219.71	593.48	599.9485	22.3216	33.2194
0.108	0.09	0.09	266.667	266.667	1,566.667	420.000	0.007833	250.9758	707.3307	707.3307	0.9	225.88	636.60	592.6278	3.7505	76.1615
0.1125	0.10	0.10	280.000	280.000	1,480.000	420.000	0.007400	257.5283	754.2175	754.2175	0.9	231.78	678.80	323.0953	46.7321	121.6724
0.117	0.10	0.10	292.308	292.308	1,400.000	420.000	0.007000	263.7972	800.1987	800.1987	0.9	237.42	720.18	315.7746	16.1151	46.7696
0.1215	0.10	0.10	303.704	303.704	1,325.926	420.000	0.006630	269.7988	845.3749	845.3749	0.9	242.82	760.84	308.454	17.2212	34.1515
0.126	0.11	0.11	314.286	314.286	1,257.143	420.000	0.006286	275.5476	889.8323	889.8323	0.9	247.99	800.85	332.0043	64.8393	137.6562
0.1305	0.11	0.11	324.138	324.138	1,193.103	420.000	0.005966	281.0558	933.6453	933.6453	0.9	252.95	840.28	324.6837	23.809	51.7523
0.135	0.11	0.11	333.333	333.333	1,133.333	420.000	0.005667	286.3339	976.8783	976.8783	0.9	257.70	879.19	317.363	14.5019	28.1333
0.1395	0.12	0.12	341.935	341.935	1,077.419	420.000	0.005387	291.3913	1,019.5875	1,019.5875	0.9	262.25	917.63	293.8627	24.9661	118.3273
0.144	0.12	0.12	350.000	350.000	1,025.000	420.000	0.005125	296.2361	1,061.8220	1,061.8220	0.9	266.61	955.64	286.5421	14.678	45.2012
0.1485	0.13	0.13	357.576	357.576	975.758	420.000	0.004879	300.8753	1,103.6249	1,103.6249	0.8896	267.64	981.73	279.2214	9.2071	38.586
0.153	0.13	0.13	364.706	364.706	929.412	420.000	0.004647	305.3153	1,145.0343	1,145.0343	0.8696	265.49	995.69	309.6447	7.1101	146.6419
0.1575	0.13	0.13	371.429	371.429	885.714	420.000	0.004429	309.5617	1,186.0839	1,186.0839	0.8507	263.36	1009.05	302.3241	1.0485	54.0279
0.18	0.15	0.15	400.000	400.000	700.000	420.000	0.003500	328.0441	1,386.8800	1,386.8800	0.7707	252.82	1068.85	295.0034	4.3899	27.925
0.2025	0.17	0.17	422.222	420.000	555.556	420.000	0.002778	341.9200	1,580.1075	1,580.1075	0.7084	242.23	1119.39	331.4041	13.6167	133.0541
0.225	0.19	0.19	440.000	420.000	440.000	420.000	0.002200	349.5243	1,755.6750	1,755.6750	0.6586	230.20	1156.32	324.0834	6.7875	33.6443
0.2475	0.21	0.21	454.545	420.000	345.455	345.455	0.001727	342.9099	1,997.0661	1,997.0661	0.65	222.89	1298.09	316.7628	13.7294	28.3901
0.27	0.23	0.23	466.667	420.000	266.667	266.667	0.001333	332.3197	2,242.2033	2,242.2033	0.65	216.01	1457.43	569.7278	41.8613	119.4421
0.2925	0.25	0.25	476.923	420.000	200.000	200.000	0.001000	320.1378	2,476.6375	2,476.6375	0.65	208.09	1609.81	562.4071	14.4311	45.6261
0.315	0.27	0.27	485.714	420.000	142.857	142.857	0.000714	305.9857	2,702.6621	2,702.6621	0.65	198.89	1756.73	555.0865	0.7719	65.9655
0.3375	0.29	0.29	493.333	420.000	93.333	93.333	0.000467	289.5860	2,921.9592	2,921.9592	0.65	188.23	1899.27	331.4041	13.6167	133.0541
0.36	0.31	0.31	500.000	420.000	50.000	50.000	0.000250	270.7304	3,135.7900	3,135.7900	0.65	175.97	2038.26	324.0834	6.7875	33.6443
0.3825	0.33	0.33	505.882	420.000	11.765	11.765	0.000059	249.2599	3,345.1193	3,345.1193	0.65	162.02	2174.33	316.7628	13.7294	28.3901
0.405	0.34	0.34	511.111	420.000	-22.222	-22.222	-0.000111	225.0506	3,550.6972	3,550.6972	0.65	146.28	2307.95	569.7278	41.8613	119.4421
0.4275	0.36	0.36	515.789	420.000	-52.632	-52.632	-0.000263	198.0048	3,753.1162	3,753.1162	0.65	128.70	2439.53	562.4071	14.4311	45.6261
0.45	0.38	0.38	520.000	420.000	-80.000	-80.000	-0.000400	168.0444	3,898.1760	3,952.8500	0.65	109.23	2533.81	555.0865	0.7719	65.9655
0.54	0.46	0.45	533.333	420.000	-166.667	-166.667	-0.000833	36.9094	3,898.1760	4,649.0267	0.65	23.99	2533.81	444.4711	104.4028	50.4231
0.63	0.54	0.45	542.857	420.000	-228.571	-228.571	-0.001143	27.8902	3,898.1760	4,703.6886	0.65	18.13	2533.81	437.1504	46.5691	8.6216
0.72	0.61	0.45	550.000	420.000	-275.000	-275.000	-0.001375	21.1258	3,898.1760	4,744.6850	0.65	13.73	2533.81	429.8298	8.8986	27.9438
0.81	0.69	0.45	555.556	420.000	-311.111	-311.111	-0.001556	15.8646	3,898.1760	4,776.5711	0.65	10.31	2533.81	452.2224	88.6486	36.5164
0.9	0.77	0.45	560.000	420.000	-340.000	-340.000	-0.001700	11.6556	3,898.1760	4,802.0800	0.65	7.58	2533.81	444.9018	39.875	4.2863
0.99	0.84	0.45	563.636	420.000	-363.636	-363.636	-0.001818	8.2119	3,898.1760	4,822.9509	0.65	5.34	2533.81	437.5811	11.2646	33.18
1.08	0.92	0.45	566.667	420.000	-383.333	-383.333	-0.001917	5.3422	3,898.1760	4,840.3433	0.65	3.47	2533.81	359.2189	106.3464	25.6604
1.17	0.99	0.45	569.231	420.000	-400.000	-400.000	-0.002000	2.9139	3,898.1760	4,855.0600	0.65	1.89	2533.81	351.8983	48.4311	15.3752
1.26	1.07	0.45	571.429	420.000	-414.286	-414.286	-0.002071	0.8325	3,898.1760	4,867.6743	0.65	0.54	2533.81	344.5776	4.8574	5.1501
1.35	1.15	0.45	573.333	420.000	-426.667	-420.000	-0.002133	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	374.3776	75.5372	52.8567
1.8	1.53	0.45	580.000	420.000	-470.000	-420.000	-0.002350	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	367.0569	35.3399	23.8533
2.25	1.91	0.45	584.000	420.000	-496.000	-420.000	-0.002480	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	359.7363	9.4843	5.0899
2.7	2.30	0.45	586.667	420.000	-513.333	-420.000	-0.002567	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	448.9094	116.8933	22.9044
3.15	2.68	0.45	588.571	420.000	-525.714	-420.000	-0.002629	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	441.5888	47.5185	16.268
3.6	3.06	0.45	590.000	420.000	-535.000	-420.000	-0.002675	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	434.2682	24.2221	4.3955
4.05	3.44	0.45	591.111	420.000	-542.222	-420.000	-0.002711	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	456.6608	132.6475	36.8111
4.5	3.83	0.45	592.000	420.000	-548.000	-420.000	-0.002740	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	449.3401	54.2127	20.6033
4.95	4.21	0.45	592.727	420.000	-552.727	-420.000	-0.002764	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	442.0195	21.8562	9.6317
5.4	4.59	0.45	593.333	420.000	-556.667	-420.000	-0.002783	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	526.7543	103.7819	66.4687
5.85	4.97	0.45	593.846	420.000	-560.000	-420.000	-0.002800	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	519.4336	42.9834	11.8716
6.3	5.36	0.45	594.286	420.000	-562.857	-420.000	-0.002814	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	512.113	22.4419	32.4856
6.75	5.74	0.45	594.667	420.000	-565.333	-420.000	-0.002827	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	541.9129	134.5911	39.2725
7.2	6.12	0.45	595.000	420.000	-567.500	-420.000	-0.002838	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	534.5923	56.0746	3.3934
7.65	6.50	0.45	595.294	420.000	-569.412	-420.000	-0.002847	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	527.2716	17.815	42.7256
8.1	6.89	0.45	595.556	420.000	-571.111	-420.000	-0.002856	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	412.5161	72.9336	19.8347
8.55	7.27	0.45	595.789	420.000	-572.632	-420.000	-0.002863	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	405.1955	33.4768	2.4145
9	7.65	0.45	596.000	420.000	-574.000	-420.000	-0.002870	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	397.8749	19.7791	12.6639
9.45	8.03	0.45	596.190	420.000	-575.238	-420.000	-0.002876	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	488.6157	101.1783	6.2227
9.9	8.42	0.45	596.364	420.000	-576.364	-420.000	-0.002882	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	481.2951	41.1204	9.5672
10.35	8.80	0.45	596.522	420.000	-577.391	-420.000	-0.002887	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	473.9744	6.8216	24.9115
10.8	9.18	0.45	596.667	420.000	-578.333	-420.000	-0.002892	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	412.5161	72.9336	19.8347
11.25	9.56	0.45	596.800	420.000	-579.200	-420.000	-0.002896	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	405.1955	33.4768	2.4145
11.7	9.95	0.45	596.923	420.000	-580.000	-420.000	-0.002900	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	397.8749	19.7791	12.6639
12.15	10.33	0.45	597.037	420.000	-580.741	-420.000	-0.002904	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	488.6157	101.1783	6.2227
12.6	10.71	0.45	597.143	420.000	-581.429	-420.000	-0.002907	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	481.2951	41.1204	9.5672
13.05	11.09	0.45	597.241	420.000	-582.069	-420.000	-0.002910	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	473.9744	6.8216	24.9115
13.5	11.48	0.45	597.333	420.000	-582.667	-420.000	-0.002913	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	435.9187	40.9727	149.1678
13.95	11.86	0.45	597.419	420.000	-583.226	-420.000	-0.002916	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	430.4283	17.7967	41.8033
14.4	12.24	0.45	597.500	420.000	-583.750	-420.000	-0.002919	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	424.9378	2.6599	59.5429
14.85	12.62	0.45	597.576	420.000	-584.242	-420.000	-0.002921	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	444.8278	22.8655	133.1841
19.35	16.45	0.45	598.140	420.000	-587.907	-420.000	-0.002940	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	439.3373	10.1028	36.8206
23.85	20.27	0.45	598.491	420.000	-590.189	-420.000	-0.002951	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	433.8468	5.3792	65.5611
28.35	24.10	0.45	598.730	420.000	-591.746	-420.000	-0.002959	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	458.2783	16.7564	158.1535
32.85	27.92	0.45	598.904	420.000	-592.877	-420.000	-0.002964	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	452.7878	7.0608	44.0789
37.35	31.75	0.45	599.036	420.000	-593.735	-420.000	-0.002969	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	447.2974	7.452	59.3346
41.85	35.57	0.45	599.140	420.000	-594.409	-420.000	-0.002972	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	474.0603	48.8327	129.8389
46.35	39.40	0.45	599.223	420.000	-594.951	-420.000	-0.002975	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	468.5698	20.6903	35.2521
50.85	43.22	0.45	599.292	420.000	-595.398	-420.000	-0.002977	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	463.0794	2.6349	69.9957
55.35	47.05	0.45	599.350	420.000	-595.772	-420.000	-0.002979	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	189.8865	42.3539	123.7729
59.85	50.87	0.45	599.398	420.000	-596.090	-420.000	-0.002980	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	184.396	14.4838	44.7369
64.35	54.70	0.45	599.441	420.000	-596.364	-420.000	-0.002982	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	178.9055	16.1056	40.3173
68.85	58.52	0.45	599.477	420.000	-596.601	-420.000	-0.002983	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	198.7955	60.4611	139.7566
73.35	62.35	0.45	599.509	420.000	-596.810	-420.000	-0.002984	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	193.305	22.1778	49.7196
77.85	66.17	0.45	599.538	420.000	-596.994	-420.000	-0.002985	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	187.8145	13.3863	34.2991
82.35	70.00	0.45	599.563	420.000	-597.158	-420.000	-0.002986	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	160.6539	29.3443	120.4277
86.85	73.82	0.45	599.585	420.000	-597.306	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	155.1634	16.3093	43.1684
91.35	77.65	0.45	599.606	420.000	-597.438	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	149.673	8.0915	44.7518
95.85	81.47	0.45	599.624	420.000	-597.559	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	176.4359	2.732	148.7423
100.35	85.30	0.45	599.641	420.000	-597.668	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	170.9454	2.6798	51.9952
104.85	89.12	0.45	599.657	420.000	-597.768	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	165.455	3.2744	34.0908
109.35	92.95	0.45	599.671	420.000	-597.860	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	198.1953	17.9948	130.9537
113.85	96.77	0.45	599.684	420.000	-597.945	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	192.7048	8.4188	35.677
118.35	100.60	0.45	599.696	420.000	-598.023	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	187.2143	12.6139	34.5559
122.85	104.42	0.45	599.707	420.000	-598.095	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	436.519	37.4832	121.5425
127.35	108.25	0.45	599.717	420.000	-598.163	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	431.0285	12.7998	43.5933
131.85	112.07	0.45	599.727	420.000	-598.225	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	425.538	1.8875	59.7997
136.35	115.90	0.45	599.736	420.000	-598.284	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	198.1953	17.9948	130.9537
140.85	119.72	0.45	599.744	420.000	-598.339	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	192.7048	8.4188	35.677
145.35	123.55	0.45	599.752	420.000	-598.390	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	187.2143	12.6139	34.5559
149.85	127.37	0.45	599.760	420.000	-598.438	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	436.519	37.4832	121.5425
154.35	131.20	0.45	599.767	420.000	-598.484	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	431.0285	12.7998	43.5933
158.85	135.02	0.45	599.773	420.000	-598.527	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	425.538	1.8875	59.7997
163.35	138.85	0.45	599.780	420.000	-598.567	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	311.2623	108.7809	48.3227
														305.7718	48.2004	10.6543
														300.2813	10.0142	21.778
														319.0136	93.0267	34.416
														313.5231	41.5062	6.319
														308.0326	12.3802	27.0141
														226.0101	110.7246	27.7609
														220.5196	50.0623	13.3424
														215.0292	5.973	11.3159
														241.1687	79.9153	54.9571
														235.6783	36.9711	21.8206
														230.1878	10.5999	1.076
														315.7006	112.5151	25.0048
														310.2102	45.8873	14.2353
														304.7197	23.1066	1.7703
														323.452	128.2694	38.9115
														317.9615	52.5814	18.5706
														312.471	20.7406	3.4658
														393.5455	99.4037	64.3683
														388.055	41.3522	13.9043
														382.5645	21.3263	26.3198
														408.7041	130.213	37.1721
														403.2136	54.4434	5.4261
														397.7232	16.6994	36.5597
														279.3073	77.3117	17.7343
														273.8168	35.1081	0.3818
														268.3264	18.6635	6.4981
														355.4069	96.8001	8.3231
														349.9164	39.4891	7.5345
														344.4259	7.9372	18.7457
														279.3073	77.3117	17.7343
														273.8168	35.1081	0.3818
														268.3264	18.6635	6.4981
														355.4069	96.8001	8.3231
														349.9164	39.4891	7.5345
														344.4259	7.9372	18.7457
														323.0953	46.7321	121.6724
														315.7746	16.1151	46.7696
														308.454	17.2212	34.1515
														332.0043	64.8393	137.6562
														324.6837	23.809	51.7523
														317.363	14.5019	28.1333
														444.4711	104.4028	50.4231
														437.1504	46.5691	8.6216
														429.8298	8.8986	27.9438
														452.2224	88.6486	36.5164
														444.9018	39.875	4.2863
														437.5811	11.2646	33.18

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C11	141	1. 1.4D	Combination			0	-811.7129	-9.845	-16.8847	-0.1678	-20.4425	-12.6068	141	0	
N3.06	C11	141	1. 1.4D	Combination			1.28	-803.1722	-9.845	-16.8847	-0.1678	1.1699	-0.0052	141	1.28	
N3.06	C11	141	1. 1.4D	Combination			2.56	-794.6314	-9.845	-16.8847	-0.1678	22.7824	12.5965	141	2.56	
N3.06	C11	141	2. 1.2D + 1.6I	Combination			0	-895.4921	-11.255	-19.3114	-0.2445	-23.9887	-14.9206	141	0	
N3.06	C11	141	2. 1.2D + 1.6I	Combination			1.28	-888.1715	-11.255	-19.3114	-0.2445	0.7299	-0.5143	141	1.28	
N3.06	C11	141	2. 1.2D + 1.6I	Combination			2.56	-880.8508	-11.255	-19.3114	-0.2445	25.4484	13.892	141	2.56	
N3.06	C11	141	2. 1.2D + 1.6I	Combination			0	-816.8281	-9.4017	-16.2482	-0.1792	-19.8299	-12.2238	141	0	
N3.06	C11	141	2. 1.2D + 1.6I	Combination			1.28	-809.5074	-9.4017	-16.2482	-0.1792	0.9678	-0.1897	141	1.28	
N3.06	C11	141	2. 1.2D + 1.6I	Combination			2.56	-802.1868	-9.4017	-16.2482	-0.1792	21.7655	11.8445	141	2.56	
N3.06	C11	141	2. 1.2D + 1L +	Combination			0	-772.1378	-9.3385	-16.0475	-0.1762	-19.6113	-12.1232	141	0	
N3.06	C11	141	2. 1.2D + 1L +	Combination			1.28	-764.8172	-9.3385	-16.0475	-0.1762	0.9295	-0.1699	141	1.28	
N3.06	C11	141	2. 1.2D + 1L +	Combination			2.56	-757.4965	-9.3385	-16.0475	-0.1762	21.4702	11.7833	141	2.56	
N3.06	C11	141	3.1 1.2D + 1L	Combination	Max		0	-614.8814	65.9001	2.482	0.8864	19.3788	130.5264	141	0	
N3.06	C11	141	3.1 1.2D + 1L	Combination	Max		1.28	-607.5608	65.9001	2.482	0.8864	16.2018	46.1743	141	1.28	
N3.06	C11	141	3.1 1.2D + 1L	Combination	Max		2.56	-600.2402	65.9001	2.482	0.8864	18.3202	-32.0701	141	2.56	
N3.06	C11	141	3.1 1.2D + 1L	Combination	Min		0	-617.6268	57.249	-5.8329	-0.456	3.3879	114.4873	141	0	
N3.06	C11	141	3.1 1.2D + 1L	Combination	Min		1.28	-610.3061	57.249	-5.8329	-0.456	10.8541	41.2086	141	1.28	
N3.06	C11	141	3.1 1.2D + 1L	Combination	Min		2.56	-602.9855	57.249	-5.8329	-0.456	13.0249	-38.1779	141	2.56	
N3.06	C11	141	3.2 1.2D + 1L	Combination	Max		0	-662.7589	71.1059	-33.7958	1.5941	-52.1453	139.4764	141	0	
N3.06	C11	141	3.2 1.2D + 1L	Combination	Max		1.28	-655.4382	71.1059	-33.7958	1.5941	-8.8866	48.4609	141	1.28	
N3.06	C11	141	3.2 1.2D + 1L	Combination	Max		2.56	-648.1176	71.1059	-33.7958	1.5941	43.7525	-31.7349	141	2.56	
N3.06	C11	141	3.2 1.2D + 1L	Combination	Min		0	-667.6221	55.7807	-48.5254	-0.7839	-80.4726	111.0637	141	0	
N3.06	C11	141	3.2 1.2D + 1L	Combination	Min		1.28	-660.3015	55.7807	-48.5254	-0.7839	-18.36	39.6644	141	1.28	
N3.06	C11	141	3.2 1.2D + 1L	Combination	Min		2.56	-652.9809	55.7807	-48.5254	-0.7839	34.372	-42.5547	141	2.56	
N3.06	C11	141	3.3 1.2D + 1L	Combination	Max		0	-886.0213	-75.8684	-26.0795	0.1063	-42.4117	-138.6421	141	0	
N3.06	C11	141	3.3 1.2D + 1L	Combination	Max		1.28	-878.7007	-75.8684	-26.0795	0.1063	-9.0299	-41.5305	141	1.28	
N3.06	C11	141	3.3 1.2D + 1L	Combination	Max		2.56	-871.38	-75.8684	-26.0795	0.1063	29.6472	61.6889	141	2.56	
N3.06	C11	141	3.3 1.2D + 1L	Combination	Min		0	-888.7667	-84.5196	-34.3944	-1.2361	-58.4026	-154.6812	141	0	
N3.06	C11	141	3.3 1.2D + 1L	Combination	Min		1.28	-881.446	-84.5196	-34.3944	-1.2361	-14.3777	-46.4962	141	1.28	
N3.06	C11	141	3.3 1.2D + 1L	Combination	Min		2.56	-874.1254	-84.5196	-34.3944	-1.2361	24.3518	55.5811	141	2.56	
N3.06	C11	141	3.4 1.2D + 1L	Combination	Max		0	-836.026	-74.4002	16.613	0.4342	41.4489	-135.2185	141	0	
N3.06	C11	141	3.4 1.2D + 1L	Combination	Max		1.28	-828.7053	-74.4002	16.613	0.4342	20.1842	-39.9863	141	1.28	
N3.06	C11	141	3.4 1.2D + 1L	Combination	Max		2.56	-821.3847	-74.4002	16.613	0.4342	8.3	66.0656	141	2.56	
N3.06	C11	141	3.4 1.2D + 1L	Combination	Min		0	-840.8892	-89.7253	1.8834	-1.9438	13.1215	-163.6312	141	0	
N3.06	C11	141	3.4 1.2D + 1L	Combination	Min		1.28	-833.5686	-89.7253	1.8834	-1.9438	10.7108	-48.7828	141	1.28	
N3.06	C11	141	3.4 1.2D + 1L	Combination	Min		2.56	-826.248	-89.7253	1.8834	-1.9438	-1.0805	55.2459	141	2.56	
N3.06	C11	141	3.5 1.2D + 1L	Combination	Max		0	-654.9104	56.7869	-5.5599	1.5068	-1.2903	112.5915	141	0	
N3.06	C11	141	3.5 1.2D + 1L	Combination	Max		1.28	-647.5897	56.7869	-5.5599	1.5068	5.991	39.9627	141	1.28	
N3.06	C11	141	3.5 1.2D + 1L	Combination	Max		2.56	-640.2691	56.7869	-5.5599	1.5068	29.9227	56.3991	141	2.56	
N3.06	C11	141	3.5 1.2D + 1L	Combination	Min		0	-848.7377	-75.4064	-26.3525	-1.8565	-37.7335	-136.7463	141	0	
N3.06	C11	141	3.5 1.2D + 1L	Combination	Min		1.28	-841.4171	-75.4064	-26.3525	-1.8565	-4.1668	-40.2846	141	1.28	
N3.06	C11	141	3.5 1.2D + 1L	Combination	Min		2.56	-834.0965	-75.4064	-26.3525	-1.8565	12.7493	-32.8881	141	2.56	
N3.06	C11	141	3.6 1.2D + 1L	Combination	Max		0	-654.9104	56.7869	-5.5599	1.5068	-1.2903	112.5915	141	0	
N3.06	C11	141	3.6 1.2D + 1L	Combination	Max		1.28	-647.5897	56.7869	-5.5599	1.5068	5.991	39.9627	141	1.28	
N3.06	C11	141	3.6 1.2D + 1L	Combination	Max		2.56	-640.2691	56.7869	-5.5599	1.5068	29.9227	56.3991	141	2.56	
N3.06	C11	141	3.6 1.2D + 1L	Combination	Min		0	-848.7377	-75.4064	-26.3525	-1.8565	-37.7335	-136.7463	141	0	
N3.06	C11	141	3.6 1.2D + 1L	Combination	Min		1.28	-841.4171	-75.4064	-26.3525	-1.8565	-4.1668	-40.2846	141	1.28	
N3.06	C11	141	3.6 1.2D + 1L	Combination	Min		2.56	-834.0965	-75.4064	-26.3525	-1.8565	12.7493	-32.8881	141	2.56	
N3.06	C11	141	4.1 1.2D + 1L	Combination	Max		0	-635.7386	12.8848	51.8311	0.2382	114.5465	31.0845	141	0	
N3.06	C11	141	4.1 1.2D + 1L	Combination	Max		1.28	-628.4179	12.8848	51.8311	0.2382	48.2027	14.592	141	1.28	
N3.06	C11	141	4.1 1.2D + 1L	Combination	Max		2.56	-621.0973	12.8848	51.8311	0.2382	-13.5338	3.4136	141	2.56	
N3.06	C11	141	4.1 1.2D + 1L	Combination	Min		0	-638.1272	5.3578	44.5967	-0.9297	100.6336	17.1296	141	0	
N3.06	C11	141	4.1 1.2D + 1L	Combination	Min		1.28	-630.8065	5.3578	44.5967	-0.9297	43.5499	10.2716	141	1.28	
N3.06	C11	141	4.1 1.2D + 1L	Combination	Min		2.56	-623.4859	5.3578	44.5967	-0.9297	-18.1411	-1.9005	141	2.56	
N3.06	C11	141	4.2 1.2D + 1L	Combination	Max		0	-701.2583	-26.61	58.5649	0.5053	125.9648	-43.8272	141	0	
N3.06	C11	141	4.2 1.2D + 1L	Combination	Max		1.28	-693.9377	-26.61	58.5649	0.5053	51.0018	-9.7665	141	1.28	
N3.06	C11	141	4.2 1.2D + 1L	Combination	Max		2.56	-686.617	-26.61	58.5649	0.5053	-14.9513	34.6866	141	2.56	
N3.06	C11	141	4.2 1.2D + 1L	Combination	Min		0	-705.9295	-41.3298	44.4171	-1.7788	98.7564	-71.1177	141	0	
N3.06	C11	141	4.2 1.2D + 1L	Combination	Min		1.28	-698.6089	-41.3298	44.4171	-1.7788	41.9026	-18.2155	141	1.28	
N3.06	C11	141	4.2 1.2D + 1L	Combination	Min		2.56	-691.2882	-41.3298	44.4171	-1.7788	-23.9613	24.2942	141	2.56	
N3.06	C11	141	4.3 1.2D + 1L	Combination	Max		0	-865.5209	-23.9773	-76.5091	0.58	-139.6573	-41.2844	141	0	
N3.06	C11	141	4.3 1.2D + 1L	Combination	Max		1.28	-858.2003	-23.9773	-76.5091	0.58	-41.7257	-10.5935	141	1.28	
N3.06	C11	141	4.3 1.2D + 1L	Combination	Max		2.56	-850.8797	-23.9773	-76.5091	0.58	60.8131	25.4115	141	2.56	
N3.06	C11	141	4.3 1.2D + 1L	Combination	Min		0	-867.9095	-31.5042	-83.7435	-0.5879	-153.5703	-55.2393	141	0	
N3.06	C11	141	4.3 1.2D + 1L	Combination	Min		1.28	-860.5889	-31.5042	-83.7435	-0.5879	-46.3786	-14.9139	141	1.28	
N3.06	C11	141	4.3 1.2D + 1L	Combination	Min		2.56	-853.2683	-31.5042	-83.7435	-0.5879	56.2059	20.0974	141	2.56	
N3.06	C11	141	4.4 1.2D + 1L	Combination	Max		0	-797.7186	22.7103	-76.3295	1.4291	-137.7801	46.9629	141	0	
N3.06	C11	141	4.4 1.2D + 1L	Combination	Max		1.28	-790.398	22.7103	-76.3295	1.4291	-40.0784	17.8936	141	1.28	
N3.06	C11	141	4.4 1.2D + 1L	Combination	Max		2.56	-783.0773	22.7103	-76.3295	1.4291	66.6333	-0.7833	141	2.56	
N3.06	C11	141	4.4 1.2D + 1L	Combination	Min		0	-802.3898	7.9905	-90.4773	-0.855	-164.9885	19.6724	141	0	
N3.06	C11	141	4.4 1.2D + 1L	Combination	Min		1.28	-795.0691	7.9905	-90.4773	-0.855	-49.1776	9.4446	141	1.28	
N3.06	C11	141	4.4 1.2D + 1L	Combination	Min		2.56	-787.7485	7.9905	-90.4773	-0.855	57.6233	-11.1756	141	2.56	
N3.06	C11	141	4.5 1.2D + 1L	Combination	Max		0	-681.8193	-1.8352	43.9187	1.143	97.874	0.9839	141	0	
N3.06	C11	141	4.5 1.2D + 1L	Combination	Max		1.28	-674.4986	-1.8352	43.9187	1.143	41.7251	3.4019	141	1.28	
N3.06	C11	141	4.5 1.2D + 1L	Combination	Max		2.56	-667.178	-1.8352	43.9187	1.143	57.3822	17.9087	141	2.56	
N3.06	C11	141	4.5 1.2D + 1L	Combination	Min		0	-821.8288	-16.7843	-75.8312	-1.4927	-136.8978	-25.1387	141	0	
N3.06	C11	141	4.5 1.2D + 1L	Combination	Min		1.28	-814.5082	-16.7843	-75.8312	-1.4927	-39.901	-3.7238	141	1.28	
N3.06	C11	141	4.5 1.2D + 1L	Combination	Min		2.56	-807.1875	-16.7843	-75.8312	-1.4927	-14.7102	5.6023	141	2.56	
N3.06	C11	141	4.6 1.2D + 1L	Combination	Max		0	-681.8193	-1.8352	43.9187	1.143	97.874	0.9839	141	0	
N3.06	C11	141	4.6 1.2D + 1L	Combination	Max		1.28	-674.4986	-1.8352	43.9187	1.143	41.7251	3.4019	141	1.28	
N3.06	C11	141	4.6 1.2D + 1L	Combination	Max		2.56	-667.178	-1.8352	43.9187	1.143	57.3822	17.9087	141	2.56	
N3.06	C11	141	4.6 1.2D + 1L	Combination	Min		0	-821.8288	-16.7843	-75.8312	-1.4927	-136.8978	-25.1387	141	0	
N3.06	C11	141	4.6 1.2D + 1L	Combination	Min		1.28	-814.5082	-16.7843	-75.8312	-1.4927	-39.901	-3.7238	141	1.28	
N3.06	C11	141	4.6 1.2D + 1L	Combination	Min		2.56	-807.1875	-16.7843	-75.8312	-1.4927	-14.7102	5.6023	141	2.56	
N3.06	C11	141	5.1 0.9D + (1(	Combination	Max		0	-384.8728	68.8809	7.5838	0.9534	25.7491	134.4995	141	0	
N3.06	C11	141	5.1 0.9D + (1(	Combination	Max		1.28	-379.3823	68.8809	7.5838	0.9534	16.0419	46.3319	141	1.28	
N3.06	C11	141	5.1 0.9D + (1(	Combination	Max		2.56	-373.8919	68.8809	7.5838	0.9534	11.63	-35.7278	141	2.56	
N3.06	C11	141	5.1 0.9D + (1(	Combination	Min		0	-387.6182	60.2298	-0.7312	-0.389	9.7582	118.4603	141	0	
N3.06	C11	141	5.1 0.9D + (1(	Combination	Min		1.28	-382.1277	60.2298	-0.7312	-0.389	10.6941	41.3662	141	1.28	
N3.06	C11	141	5.1 0.9D + (1(	Combination	Min		2.56	-376.6372	60.2298	-0.7312	-0.389	6.3347	-41.8356	141	2.56	
N3.06	C11	141	5.2 0.9D + (1(	Combination	Max		0	-432.7502	74.0867	-28.6941	1.661	-45.775	143.4494	141	0	
N3.06	C11	141	5.2 0.9D + (1(	Combination	Max		1.28	-427.2598	74.0867	-28.6941	1.661	-9.0466	48.6185	141	1.28	
N3.06	C11	141	5.2 0.9D + (1(	Combination	Max		2.56	-421.7693	74.0867	-28.6941	1.661	37.0623	-35.3927	141	2.56	
N3.06	C11	141	5.2 0.9D + (1(	Combination	Min		0	-437.6135	58.7615	-43.4237	-0.7169	-74.1023	115.0367	141	0	
N3.06	C11	141	5.2 0.9D + (1(	Combination	Min		1.28	-432.1231	58.7615	-43.4237	-0.7169	-18.52	39.822	141	1.28	
N3.06	C11	141	5.2 0.9D + (1(	Combination	Min		2.56	-426.6326	58.7615	-43.4237	-0.7169	27.6818	-46.2124	141	2.56	

N3.06	C11	141	5.3	0.9D - (1C	Combination	Max	0	-656.0127	-72.8877	-20.9777	0.1733	-36.0414	-134.6691	141	0
N3.06	C11	141	5.3	0.9D - (1C	Combination	Max	1.28	-650.5222	-72.8877	-20.9777	0.1733	-9.1899	-41.3729	141	1.28
N3.06	C11	141	5.3	0.9D - (1C	Combination	Max	2.56	-645.0317	-72.8877	-20.9777	0.1733	22.957	58.0311	141	2.56
N3.06	C11	141	5.3	0.9D - (1C	Combination	Min	0	-658.758	-81.5388	-29.2927	-1.1691	-52.0323	-150.7082	141	0
N3.06	C11	141	5.3	0.9D - (1C	Combination	Min	1.28	-653.2676	-81.5388	-29.2927	-1.1691	-14.5377	-46.3385	141	1.28
N3.06	C11	141	5.3	0.9D - (1C	Combination	Min	2.56	-647.7771	-81.5388	-29.2927	-1.1691	17.6616	51.9233	141	2.56
N3.06	C11	141	5.4	0.9D - (1C	Combination	Max	0	-606.0173	-71.4194	21.7148	0.5012	47.8191	-131.2455	141	0
N3.06	C11	141	5.4	0.9D - (1C	Combination	Max	1.28	-600.5269	-71.4194	21.7148	0.5012	20.0242	-39.8287	141	1.28
N3.06	C11	141	5.4	0.9D - (1C	Combination	Max	2.56	-595.0364	-71.4194	21.7148	0.5012	1.6098	62.4079	141	2.56
N3.06	C11	141	5.4	0.9D - (1C	Combination	Min	0	-610.8806	-86.7446	6.9852	-1.8768	19.4918	-159.6582	141	0
N3.06	C11	141	5.4	0.9D - (1C	Combination	Min	1.28	-605.3901	-86.7446	6.9852	-1.8768	10.5508	-48.6251	141	1.28
N3.06	C11	141	5.4	0.9D - (1C	Combination	Min	2.56	-599.8997	-86.7446	6.9852	-1.8768	-7.7707	51.5881	141	2.56
N3.06	C11	141	5.5	0.9D + Ex	Combination	Max	0	-424.9017	59.7677	-0.4582	1.5738	5.08	116.5645	141	0
N3.06	C11	141	5.5	0.9D + Ex	Combination	Max	1.28	-419.4113	59.7677	-0.4582	1.5738	5.831	40.1203	141	1.28
N3.06	C11	141	5.5	0.9D + Ex	Combination	Max	2.56	-413.9208	59.7677	-0.4582	1.5738	23.2325	52.7414	141	2.56
N3.06	C11	141	5.5	0.9D + Ex	Combination	Min	0	-618.7291	-72.4256	-21.2508	-1.7895	-31.3632	-132.7733	141	0
N3.06	C11	141	5.5	0.9D + Ex	Combination	Min	1.28	-613.2387	-72.4256	-21.2508	-1.7895	-4.3268	-40.127	141	1.28
N3.06	C11	141	5.5	0.9D + Ex	Combination	Min	2.56	-607.7482	-72.4256	-21.2508	-1.7895	6.0591	-36.5459	141	2.56
N3.06	C11	141	5.6	0.9D - Ex	Combination	Max	0	-424.9017	59.7677	-0.4582	1.5738	5.08	116.5645	141	0
N3.06	C11	141	5.6	0.9D - Ex	Combination	Max	1.28	-419.4113	59.7677	-0.4582	1.5738	5.831	40.1203	141	1.28
N3.06	C11	141	5.6	0.9D - Ex	Combination	Max	2.56	-413.9208	59.7677	-0.4582	1.5738	23.2325	52.7414	141	2.56
N3.06	C11	141	5.6	0.9D - Ex	Combination	Min	0	-618.7291	-72.4256	-21.2508	-1.7895	-31.3632	-132.7733	141	0
N3.06	C11	141	5.6	0.9D - Ex	Combination	Min	1.28	-613.2387	-72.4256	-21.2508	-1.7895	-4.3268	-40.127	141	1.28
N3.06	C11	141	5.6	0.9D - Ex	Combination	Min	2.56	-607.7482	-72.4256	-21.2508	-1.7895	6.0591	-36.5459	141	2.56
N3.06	C11	141	6.1	0.9D + (1(	Combination	Max	0	-405.7299	15.8656	56.9328	0.3052	120.9168	35.0575	141	0
N3.06	C11	141	6.1	0.9D + (1(	Combination	Max	1.28	-400.2395	15.8656	56.9328	0.3052	48.0428	14.7496	141	1.28
N3.06	C11	141	6.1	0.9D + (1(	Combination	Max	2.56	-394.749	15.8656	56.9328	0.3052	-20.224	-0.2442	141	2.56
N3.06	C11	141	6.1	0.9D + (1(	Combination	Min	0	-408.1185	8.3386	49.6984	-0.8627	107.0039	21.1027	141	0
N3.06	C11	141	6.1	0.9D + (1(	Combination	Min	1.28	-402.6281	8.3386	49.6984	-0.8627	43.3899	10.4292	141	1.28
N3.06	C11	141	6.1	0.9D + (1(	Combination	Min	2.56	-397.1376	8.3386	49.6984	-0.8627	-24.8313	-5.5583	141	2.56
N3.06	C11	141	6.2	0.9D + (1(	Combination	Max	0	-471.2497	-23.6292	63.6666	0.5723	132.3351	-39.8542	141	0
N3.06	C11	141	6.2	0.9D + (1(	Combination	Max	1.28	-465.7592	-23.6292	63.6666	0.5723	50.8418	-9.6089	141	1.28
N3.06	C11	141	6.2	0.9D + (1(	Combination	Max	2.56	-460.2687	-23.6292	63.6666	0.5723	-21.6415	31.0289	141	2.56
N3.06	C11	141	6.2	0.9D + (1(	Combination	Min	0	-475.9209	-38.349	49.5188	-1.7118	105.1267	-67.1446	141	0
N3.06	C11	141	6.2	0.9D + (1(	Combination	Min	1.28	-470.4304	-38.349	49.5188	-1.7118	41.7426	-18.0579	141	1.28
N3.06	C11	141	6.2	0.9D + (1(	Combination	Min	2.56	-464.9399	-38.349	49.5188	-1.7118	-30.6515	20.6365	141	2.56
N3.06	C11	141	6.3	0.9D - (1C	Combination	Max	0	-635.5123	-20.9965	-71.4073	0.647	-133.2871	-37.3114	141	0
N3.06	C11	141	6.3	0.9D - (1C	Combination	Max	1.28	-630.0218	-20.9965	-71.4073	0.647	-41.8857	-10.4359	141	1.28
N3.06	C11	141	6.3	0.9D - (1C	Combination	Max	2.56	-624.5314	-20.9965	-71.4073	0.647	54.1229	21.7538	141	2.56
N3.06	C11	141	6.3	0.9D - (1C	Combination	Min	0	-637.9009	-28.5235	-78.6418	-0.521	-147.2	-51.2663	141	0
N3.06	C11	141	6.3	0.9D - (1C	Combination	Min	1.28	-632.4104	-28.5235	-78.6418	-0.521	-46.5386	-14.7562	141	1.28
N3.06	C11	141	6.3	0.9D - (1C	Combination	Min	2.56	-626.92	-28.5235	-78.6418	-0.521	49.5157	16.4397	141	2.56
N3.06	C11	141	6.4	0.9D - (1C	Combination	Max	0	-567.71	25.6911	-71.2277	1.4961	-131.4099	50.9359	141	0
N3.06	C11	141	6.4	0.9D - (1C	Combination	Max	1.28	-562.2195	25.6911	-71.2277	1.4961	-40.2384	18.0513	141	1.28
N3.06	C11	141	6.4	0.9D - (1C	Combination	Max	2.56	-556.729	25.6911	-71.2277	1.4961	59.9431	-4.441	141	2.56
N3.06	C11	141	6.4	0.9D - (1C	Combination	Min	0	-572.3812	10.9713	-85.3755	-0.788	-158.6183	23.6455	141	0
N3.06	C11	141	6.4	0.9D - (1C	Combination	Min	1.28	-566.8907	10.9713	-85.3755	-0.788	-49.3376	9.6022	141	1.28
N3.06	C11	141	6.4	0.9D - (1C	Combination	Min	2.56	-561.4002	10.9713	-85.3755	-0.788	50.9331	-14.8334	141	2.56
N3.06	C11	141	6.5	0.9D + Ey	Combination	Max	0	-451.8107	1.1456	49.0205	1.21	104.2443	4.9569	141	0
N3.06	C11	141	6.5	0.9D + Ey	Combination	Max	1.28	-446.3202	1.1456	49.0205	1.21	41.5652	3.5595	141	1.28
N3.06	C11	141	6.5	0.9D + Ey	Combination	Max	2.56	-440.8297	1.1456	49.0205	1.21	50.692	14.251	141	2.56
N3.06	C11	141	6.5	0.9D + Ey	Combination	Min	0	-591.8202	-13.8035	-70.7294	-1.4257	-130.5275	-21.1657	141	0
N3.06	C11	141	6.5	0.9D + Ey	Combination	Min	1.28	-586.3297	-13.8035	-70.7294	-1.4257	-40.061	-3.5661	141	1.28
N3.06	C11	141	6.5	0.9D + Ey	Combination	Min	2.56	-580.8392	-13.8035	-70.7294	-1.4257	-21.4004	1.9445	141	2.56
N3.06	C11	141	6.6	0.9D - Ey	Combination	Max	0	-451.8107	1.1456	49.0205	1.21	104.2443	4.9569	141	0
N3.06	C11	141	6.6	0.9D - Ey	Combination	Max	1.28	-446.3202	1.1456	49.0205	1.21	41.5652	3.5595	141	1.28
N3.06	C11	141	6.6	0.9D - Ey	Combination	Max	2.56	-440.8297	1.1456	49.0205	1.21	50.692	14.251	141	2.56
N3.06	C11	141	6.6	0.9D - Ey	Combination	Min	0	-591.8202	-13.8035	-70.7294	-1.4257	-130.5275	-21.1657	141	0
N3.06	C11	141	6.6	0.9D - Ey	Combination	Min	1.28	-586.3297	-13.8035	-70.7294	-1.4257	-40.061	-3.5661	141	1.28
N3.06	C11	141	6.6	0.9D - Ey	Combination	Min	2.56	-580.8392	-13.8035	-70.7294	-1.4257	-21.4004	1.9445	141	2.56
N3.06	C11	141	3.3	1.2D + 1L	Combination	Max	0	-886.0213	-75.8684	-26.0795	0.1063	-42.4117	-138.6421	141	0
N3.06	C11	141	3.3	1.2D + 1L	Combination	Max	1.28	-878.7007	-75.8684	-26.0795	0.1063	-9.0299	-41.5305	141	1.28
N3.06	C11	141	3.3	1.2D + 1L	Combination	Max	2.56	-871.38	-75.8684	-26.0795	0.1063	29.6472	61.6889	141	2.56
N3.06	C11	141	3.3	1.2D + 1L	Combination	Min	0	-888.7667	-84.5196	-34.3944	-1.2361	-58.4026	-154.6812	141	0
N3.06	C11	141	3.3	1.2D + 1L	Combination	Min	1.28	-881.446	-84.5196	-34.3944	-1.2361	-14.3777	-46.4962	141	1.28
N3.06	C11	141	3.3	1.2D + 1L	Combination	Min	2.56	-874.1254	-84.5196	-34.3944	-1.2361	24.3518	55.5811	141	2.56
N3.06	C11	141	4.1	1.2D + 1L	Combination	Max	0	-635.7386	12.8848	51.8311	0.2382	114.5465	31.0845	141	0
N3.06	C11	141	4.1	1.2D + 1L	Combination	Max	1.28	-628.4179	12.8848	51.8311	0.2382	48.2027	14.592	141	1.28
N3.06	C11	141	4.1	1.2D + 1L	Combination	Max	2.56	-621.0973	12.8848	51.8311	0.2382	-13.5338	3.4136	141	2.56
N3.06	C11	141	4.1	1.2D + 1L	Combination	Min	0	-638.1272	5.3578	44.5967	-0.9297	100.6336	17.1296	141	0
N3.06	C11	141	4.1	1.2D + 1L	Combination	Min	1.28	-630.8065	5.3578	44.5967	-0.9297	43.5499	10.2716	141	1.28
N3.06	C11	141	4.1	1.2D + 1L	Combination	Min	2.56	-623.4859	5.3578	44.5967	-0.9297	-18.1411	-1.9005	141	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C19	181	1. 1.4D	Combination			0	-1020.8263	-4.8557	-3.7916	-0.1678	-8.4137	-7.727	181	0	
N3.06	C19	181	1. 1.4D	Combination			1.28	-1012.2856	-4.8557	-3.7916	-0.1678	-3.5604	-1.5117	181	1.28	
N3.06	C19	181	1. 1.4D	Combination			2.56	-1003.7448	-4.8557	-3.7916	-0.1678	1.2928	4.7036	181	2.56	
N3.06	C19	181	2. 1.2D + 1.6l	Combination			0	-1167.7012	-6.6638	-2.7841	-0.2445	-8.9563	-10.4303	181	0	
N3.06	C19	181	2. 1.2D + 1.6l	Combination			1.28	-1160.3806	-6.6638	-2.7841	-0.2445	-5.3927	-1.9006	181	1.28	
N3.06	C19	181	2. 1.2D + 1.6l	Combination			2.56	-1153.0599	-6.6638	-2.7841	-0.2445	-1.8291	6.6291	181	2.56	
N3.06	C19	181	2. 1.2D + 1.6l	Combination			0	-1039.0915	-5.0821	-2.7485	-0.1792	-7.4562	-7.999	181	0	
N3.06	C19	181	2. 1.2D + 1.6l	Combination			1.28	-1031.7709	-5.0821	-2.7485	-0.1792	-3.9382	-1.494	181	1.28	
N3.06	C19	181	2. 1.2D + 1.6l	Combination			2.56	-1024.4503	-5.0821	-2.7485	-0.1792	-0.4201	5.0111	181	2.56	
N3.06	C19	181	2. 1.2D + 1L +	Combination			0	-983.757	-4.9767	-3.0196	-0.1762	-7.6853	-7.8572	181	0	
N3.06	C19	181	2. 1.2D + 1L +	Combination			1.28	-976.4364	-4.9767	-3.0196	-0.1762	-3.8202	-1.487	181	1.28	
N3.06	C19	181	2. 1.2D + 1L +	Combination			2.56	-969.1158	-4.9767	-3.0196	-0.1762	0.0449	4.8833	181	2.56	
N3.06	C19	181	3.1 1.2D + 1L	Combination	Max		0	-955.9496	90.8564	16.2062	0.8864	30.6904	154.9348	181	0	
N3.06	C19	181	3.1 1.2D + 1L	Combination	Max		1.28	-948.629	90.8564	16.2062	0.8864	9.9465	38.6386	181	1.28	
N3.06	C19	181	3.1 1.2D + 1L	Combination	Max		2.56	-941.3083	90.8564	16.2062	0.8864	-9.6132	-68.2534	181	2.56	
N3.06	C19	181	3.1 1.2D + 1L	Combination	Min		0	-960.1403	80.1215	14.4191	-0.456	27.2999	136.8577	181	0	
N3.06	C19	181	3.1 1.2D + 1L	Combination	Min		1.28	-952.8196	80.1215	14.4191	-0.456	8.8433	34.3022	181	1.28	
N3.06	C19	181	3.1 1.2D + 1L	Combination	Min		2.56	-945.499	80.1215	14.4191	-0.456	-10.7974	-77.6576	181	2.56	
N3.06	C19	181	3.2 1.2D + 1L	Combination	Max		0	-999.1704	96.7794	-20.9225	1.5941	-43.1845	164.5863	181	0	
N3.06	C19	181	3.2 1.2D + 1L	Combination	Max		1.28	-991.8497	96.7794	-20.9225	1.5941	-16.4037	40.7087	181	1.28	
N3.06	C19	181	3.2 1.2D + 1L	Combination	Max		2.56	-984.5291	96.7794	-20.9225	1.5941	12.4748	-66.5099	181	2.56	
N3.06	C19	181	3.2 1.2D + 1L	Combination	Min		0	-1006.594	77.763	-24.0881	-0.7839	-49.1907	132.5634	181	0	
N3.06	C19	181	3.2 1.2D + 1L	Combination	Min		1.28	-999.2734	77.763	-24.0881	-0.7839	-18.358	33.0268	181	1.28	
N3.06	C19	181	3.2 1.2D + 1L	Combination	Min		2.56	-991.9527	77.763	-24.0881	-0.7839	10.377	-83.169	181	2.56	
N3.06	C19	181	3.3 1.2D + 1L	Combination	Max		0	-957.0697	-89.9793	-20.7049	0.1063	-42.8788	-152.4432	181	0	
N3.06	C19	181	3.3 1.2D + 1L	Combination	Max		1.28	-949.749	-89.9793	-20.7049	0.1063	-16.3765	-37.2697	181	1.28	
N3.06	C19	181	3.3 1.2D + 1L	Combination	Max		2.56	-942.4284	-89.9793	-20.7049	0.1063	11.31	87.308	181	2.56	
N3.06	C19	181	3.3 1.2D + 1L	Combination	Min		0	-961.2604	-100.7142	-22.4919	-1.2361	-46.2694	-170.5203	181	0	
N3.06	C19	181	3.3 1.2D + 1L	Combination	Min		1.28	-953.9397	-100.7142	-22.4919	-1.2361	-17.4797	-41.6062	181	1.28	
N3.06	C19	181	3.3 1.2D + 1L	Combination	Min		2.56	-946.6191	-100.7142	-22.4919	-1.2361	10.1258	77.9038	181	2.56	
N3.06	C19	181	3.4 1.2D + 1L	Combination	Max		0	-910.6159	-87.6207	17.8023	0.4342	33.6117	-148.1488	181	0	
N3.06	C19	181	3.4 1.2D + 1L	Combination	Max		1.28	-903.2953	-87.6207	17.8023	0.4342	10.8248	-35.9943	181	1.28	
N3.06	C19	181	3.4 1.2D + 1L	Combination	Max		2.56	-895.9747	-87.6207	17.8023	0.4342	-9.8644	92.8194	181	2.56	
N3.06	C19	181	3.4 1.2D + 1L	Combination	Min		0	-918.0396	-106.6372	14.6367	-1.9438	27.6055	-180.1718	181	0	
N3.06	C19	181	3.4 1.2D + 1L	Combination	Min		1.28	-910.719	-106.6372	14.6367	-1.9438	8.8705	-43.6762	181	1.28	
N3.06	C19	181	3.4 1.2D + 1L	Combination	Min		2.56	-903.3983	-106.6372	14.6367	-1.9438	-11.9621	76.1602	181	2.56	
N3.06	C19	181	3.5 1.2D + 1L	Combination	Max		0	-939.0214	78.8512	-1.3402	1.5068	-4.6218	134.1852	181	0	
N3.06	C19	181	3.5 1.2D + 1L	Combination	Max		1.28	-931.7008	78.8512	-1.3402	1.5068	-2.8661	33.2919	181	1.28	
N3.06	C19	181	3.5 1.2D + 1L	Combination	Max		2.56	-924.3802	78.8512	-1.3402	1.5068	1.7515	77.3592	181	2.56	
N3.06	C19	181	3.5 1.2D + 1L	Combination	Min		0	-978.1885	-88.709	-4.9455	-1.8565	-10.9572	-149.7706	181	0	
N3.06	C19	181	3.5 1.2D + 1L	Combination	Min		1.28	-970.8679	-88.709	-4.9455	-1.8565	-4.6671	-36.2595	181	1.28	
N3.06	C19	181	3.5 1.2D + 1L	Combination	Min		2.56	-963.5472	-88.709	-4.9455	-1.8565	-1.2389	-67.7088	181	2.56	
N3.06	C19	181	3.6 1.2D + 1L	Combination	Max		0	-939.0214	78.8512	-1.3402	1.5068	-4.6218	134.1852	181	0	
N3.06	C19	181	3.6 1.2D + 1L	Combination	Max		1.28	-931.7008	78.8512	-1.3402	1.5068	-2.8661	33.2919	181	1.28	
N3.06	C19	181	3.6 1.2D + 1L	Combination	Max		2.56	-924.3802	78.8512	-1.3402	1.5068	1.7515	77.3592	181	2.56	
N3.06	C19	181	3.6 1.2D + 1L	Combination	Min		0	-978.1885	-88.709	-4.9455	-1.8565	-10.9572	-149.7706	181	0	
N3.06	C19	181	3.6 1.2D + 1L	Combination	Min		1.28	-970.8679	-88.709	-4.9455	-1.8565	-4.6671	-36.2595	181	1.28	
N3.06	C19	181	3.6 1.2D + 1L	Combination	Min		2.56	-963.5472	-88.709	-4.9455	-1.8565	-1.2389	-67.7088	181	2.56	
N3.06	C19	181	4.1 1.2D + 1L	Combination	Max		0	-888.6107	24.1634	60.5283	0.2382	118.7479	42.1155	181	0	
N3.06	C19	181	4.1 1.2D + 1L	Combination	Max		1.28	-881.2901	24.1634	60.5283	0.2382	41.2717	11.1864	181	1.28	
N3.06	C19	181	4.1 1.2D + 1L	Combination	Max		2.56	-873.9695	24.1634	60.5283	0.2382	-35.1743	-11.5607	181	2.56	
N3.06	C19	181	4.1 1.2D + 1L	Combination	Min		0	-892.2569	14.8235	58.9735	-0.9297	115.798	26.3875	181	0	
N3.06	C19	181	4.1 1.2D + 1L	Combination	Min		1.28	-884.9362	14.8235	58.9735	-0.9297	40.3119	7.4134	181	1.28	
N3.06	C19	181	4.1 1.2D + 1L	Combination	Min		2.56	-877.6156	14.8235	58.9735	-0.9297	-36.2046	-19.7428	181	2.56	
N3.06	C19	181	4.2 1.2D + 1L	Combination	Max		0	-873.7534	-26.1593	61.5433	0.5053	120.6415	-43.3864	181	0	
N3.06	C19	181	4.2 1.2D + 1L	Combination	Max		1.28	-866.4328	-26.1593	61.5433	0.5053	41.8661	-9.9026	181	1.28	
N3.06	C19	181	4.2 1.2D + 1L	Combination	Max		2.56	-859.1122	-26.1593	61.5433	0.5053	-34.8944	39.5824	181	2.56	
N3.06	C19	181	4.2 1.2D + 1L	Combination	Min		0	-880.8839	-44.4246	58.5027	-1.7788	114.8725	-74.1445	181	0	
N3.06	C19	181	4.2 1.2D + 1L	Combination	Min		1.28	-873.5632	-44.4246	58.5027	-1.7788	39.9891	-17.281	181	1.28	
N3.06	C19	181	4.2 1.2D + 1L	Combination	Min		2.56	-866.2426	-44.4246	58.5027	-1.7788	-36.9093	23.5813	181	2.56	
N3.06	C19	181	4.3 1.2D + 1L	Combination	Max		0	-1024.9531	-24.6812	-65.2593	0.58	-131.377	-41.9729	181	0	
N3.06	C19	181	4.3 1.2D + 1L	Combination	Max		1.28	-1017.6324	-24.6812	-65.2593	0.58	-47.845	-10.3809	181	1.28	
N3.06	C19	181	4.3 1.2D + 1L	Combination	Max		2.56	-1010.3118	-24.6812	-65.2593	0.58	36.7172	29.3932	181	2.56	
N3.06	C19	181	4.3 1.2D + 1L	Combination	Min		0	-1028.5992	-34.0212	-66.8141	-0.5879	-134.3269	-57.701	181	0	
N3.06	C19	181	4.3 1.2D + 1L	Combination	Min		1.28	-1021.2786	-34.0212	-66.8141	-0.5879	-48.8049	-14.1539	181	1.28	
N3.06	C19	181	4.3 1.2D + 1L	Combination	Min		2.56	-1013.9579	-34.0212	-66.8141	-0.5879	35.6869	21.2111	181	2.56	
N3.06	C19	181	4.4 1.2D + 1L	Combination	Max		0	-1036.3261	34.5668	-64.7885	1.4291	-130.4515	58.559	181	0	
N3.06	C19	181	4.4 1.2D + 1L	Combination	Max		1.28	-1029.0054	34.5668	-64.7885	1.4291	-47.5222	14.3135	181	1.28	
N3.06	C19	181	4.4 1.2D + 1L	Combination	Max		2.56	-1021.6848	34.5668	-64.7885	1.4291	37.4219	-13.9309	181	2.56	
N3.06	C19	181	4.4 1.2D + 1L	Combination	Min		0	-1043.4565	16.3015	-67.829	-0.855	-136.2205	27.801	181	0	
N3.06	C19	181	4.4 1.2D + 1L	Combination	Min		1.28	-1036.1359	16.3015	-67.829	-0.855	-49.3993	6.935	181	1.28	
N3.06	C19	181	4.4 1.2D + 1L	Combination	Min		2.56	-1028.8152	16.3015	-67.829	-0.855	35.407	-29.932	181	2.56	
N3.06	C19	181	4.5 1.2D + 1L	Combination	Max		0	-893.8552	3.7907	51.6393	1.143	100.7774	6.5073	181	0	
N3.06	C19	181	4.5 1.2D + 1L	Combination	Max		1.28	-886.5346	3.7907	51.6393	1.143	34.7439	1.6819	181	1.28	
N3.06	C19	181	4.5 1.2D + 1L	Combination	Max		2.56	-879.2139	3.7907	51.6393	1.143	32.0889	12.868	181	2.56	
N3.06	C19	181	4.5 1.2D + 1L	Combination	Min		0	-1023.3547	-13.6484	-57.9251	-1.4927	-116.3564	-22.0928	181	0	
N3.06	C19	181	4.5 1.2D + 1L	Combination	Min		1.28	-1016.0341	-13.6484	-57.9251	-1.4927	-42.277	-4.6494	181	1.28	
N3.06	C19	181	4.5 1.2D + 1L	Combination	Min		2.56	-1008.7135	-13.6484	-57.9251	-1.4927	-31.5763	-3.2176	181	2.56	
N3.06	C19	181	4.6 1.2D + 1L	Combination	Max		0	-893.8552	3.7907	51.6393	1.143	100.7774	6.5073	181	0	
N3.06	C19	181	4.6 1.2D + 1L	Combination	Max		1.28	-886.5346	3.7907	51.6393	1.143	34.7439	1.6819	181	1.28	
N3.06	C19	181	4.6 1.2D + 1L	Combination	Max		2.56	-879.2139	3.7907	51.6393	1.143	32.0889	12.868	181	2.56	
N3.06	C19	181	4.6 1.2D + 1L	Combination	Min		0	-1023.3547	-13.6484	-57.9251	-1.4927	-116.3564	-22.0928	181	0	
N3.06	C19	181	4.6 1.2D + 1L	Combination	Min		1.28	-1016.0341	-13.6484	-57.9251	-1.4927	-42.277	-4.6494	181	1.28	
N3.06	C19	181	4.6 1.2D + 1L	Combination	Min		2.56	-1008.7135	-13.6484	-57.9251	-1.4927	-31.5763	-3.2176	181	2.56	
N3.06	C19	181	5.1 0.9D + (1(	Combination	Max		0	-653.5901	92.6638	16.9116	0.9534	33.071	157.7602	181	0	
N3.06	C19	181	5.1 0.9D + (1(	Combination	Max		1.28	-648.0996	92.6638	16.9116	0.9534	11.4242	39.1506	181	1.28	
N3.06	C19	181	5.1 0.9D + (1(	Combination	Max		2.56	-642.6091	92.6638	16.9116	0.9534	-9.0384	-70.0549	181	2.56	
N3.06	C19	181	5.1 0.9D + (1(	Combination	Min		0	-657.7808	81.9289	15.1246	-0.389	29.6805	139.6831	181	0	
N3.06	C19	181	5.1 0.9D + (1(	Combination	Min		1.28	-652.2903	81.9289	15.1246	-0.389	10.3211	34.8141	181	1.28	
N3.06	C19	181	5.1 0.9D + (1(	Combination	Min		2.56	-646.7998	81.9289	15.1246	-0.389	-10.2226	-79.4591	181	2.56	
N3.06	C19	181	5.2 0.9D + (1(	Combination	Max		0	-696.8109	98.5868	-20.217	1.661	-40.8038	167.4117	181	0	
N3.06	C19	181	5.2 0.9D + (1(	Combination	Max		1.28	-691.3204	98.5868	-20.217	1.661	-14.926	41.2206	181	1.28	
N3.06	C19	181	5.2 0.9D + (1(	Combination	Max		2.56	-685.8299	98.5868	-20.217	1.661	13.0496	-68.3113	181	2.56	
N3.06	C19	181	5.2 0.9D + (1(	Combination	Min		0	-704.2345	79.5703	-23.3826	-0.7169	-46.81	135.3887	181	0	
N3.06	C19	181	5.2 0.9D + (1(	Combination	Min		1.28	-698.744	79.5703	-23.3826	-0.7169	-16.8802	33.5387	181	1.28	
N3.06	C19	181	5.2 0.9D + (1(	Combination	Min		2.56	-693.2536	79.5703	-23.3826	-0.7169	10.9518	-84.9705	181	2.56	

N3.06	C19	181	5.3	0.9D - (1C	Combination	Max	0	-654.7102	-88.1719	-19.9995	0.1733	-40.4982	-149.6178	181	0
N3.06	C19	181	5.3	0.9D - (1C	Combination	Max	1.28	-649.2197	-88.1719	-19.9995	0.1733	-14.8988	-36.7577	181	1.28
N3.06	C19	181	5.3	0.9D - (1C	Combination	Max	2.56	-643.7292	-88.1719	-19.9995	0.1733	11.8848	85.5065	181	2.56
N3.06	C19	181	5.3	0.9D - (1C	Combination	Min	0	-658.9009	-98.9068	-21.7865	-1.1691	-43.8887	-167.6949	181	0
N3.06	C19	181	5.3	0.9D - (1C	Combination	Min	1.28	-653.4104	-98.9068	-21.7865	-1.1691	-16.002	-41.0942	181	1.28
N3.06	C19	181	5.3	0.9D - (1C	Combination	Min	2.56	-647.9199	-98.9068	-21.7865	-1.1691	10.7006	76.1023	181	2.56
N3.06	C19	181	5.4	0.9D - (1C	Combination	Max	0	-608.2565	-85.8134	18.5077	0.5012	35.9924	-145.3234	181	0
N3.06	C19	181	5.4	0.9D - (1C	Combination	Max	1.28	-602.766	-85.8134	18.5077	0.5012	12.3025	-35.4823	181	1.28
N3.06	C19	181	5.4	0.9D - (1C	Combination	Max	2.56	-597.2755	-85.8134	18.5077	0.5012	-9.2896	91.0179	181	2.56
N3.06	C19	181	5.4	0.9D - (1C	Combination	Min	0	-615.6801	-104.8298	15.3421	-1.8768	29.9861	-177.3464	181	0
N3.06	C19	181	5.4	0.9D - (1C	Combination	Min	1.28	-610.1896	-104.8298	15.3421	-1.8768	10.3483	-43.1642	181	1.28
N3.06	C19	181	5.4	0.9D - (1C	Combination	Min	2.56	-604.6991	-104.8298	15.3421	-1.8768	-11.3873	74.3588	181	2.56
N3.06	C19	181	5.5	0.9D + Ex	Combination	Max	0	-636.6619	80.6586	-0.6348	1.5738	-2.2411	137.0105	181	0
N3.06	C19	181	5.5	0.9D + Ex	Combination	Max	1.28	-631.1715	80.6586	-0.6348	1.5738	-1.3884	33.8039	181	1.28
N3.06	C19	181	5.5	0.9D + Ex	Combination	Max	2.56	-625.681	80.6586	-0.6348	1.5738	2.3263	75.5577	181	2.56
N3.06	C19	181	5.5	0.9D + Ex	Combination	Min	0	-675.829	-86.9016	-4.2401	-1.7895	-8.5765	-146.9452	181	0
N3.06	C19	181	5.5	0.9D + Ex	Combination	Min	1.28	-670.3385	-86.9016	-4.2401	-1.7895	-3.1894	-35.7475	181	1.28
N3.06	C19	181	5.5	0.9D + Ex	Combination	Min	2.56	-664.8481	-86.9016	-4.2401	-1.7895	-0.6641	-69.5103	181	2.56
N3.06	C19	181	5.6	0.9D - Ex	Combination	Max	0	-636.6619	80.6586	-0.6348	1.5738	-2.2411	137.0105	181	0
N3.06	C19	181	5.6	0.9D - Ex	Combination	Max	1.28	-631.1715	80.6586	-0.6348	1.5738	-1.3884	33.8039	181	1.28
N3.06	C19	181	5.6	0.9D - Ex	Combination	Max	2.56	-625.681	80.6586	-0.6348	1.5738	2.3263	75.5577	181	2.56
N3.06	C19	181	5.6	0.9D - Ex	Combination	Min	0	-675.829	-86.9016	-4.2401	-1.7895	-8.5765	-146.9452	181	0
N3.06	C19	181	5.6	0.9D - Ex	Combination	Min	1.28	-670.3385	-86.9016	-4.2401	-1.7895	-3.1894	-35.7475	181	1.28
N3.06	C19	181	5.6	0.9D - Ex	Combination	Min	2.56	-664.8481	-86.9016	-4.2401	-1.7895	-0.6641	-69.5103	181	2.56
N3.06	C19	181	6.1	0.9D + (1(	Combination	Max	0	-586.2513	25.9708	61.2337	0.3052	121.1286	44.9409	181	0
N3.06	C19	181	6.1	0.9D + (1(	Combination	Max	1.28	-580.7608	25.9708	61.2337	0.3052	42.7494	11.6983	181	1.28
N3.06	C19	181	6.1	0.9D + (1(	Combination	Max	2.56	-575.2703	25.9708	61.2337	0.3052	-34.5995	-13.3621	181	2.56
N3.06	C19	181	6.1	0.9D + (1(	Combination	Min	0	-589.8974	16.6309	59.6789	-0.8627	118.1786	29.2129	181	0
N3.06	C19	181	6.1	0.9D + (1(	Combination	Min	1.28	-584.4069	16.6309	59.6789	-0.8627	41.7896	7.9254	181	1.28
N3.06	C19	181	6.1	0.9D + (1(	Combination	Min	2.56	-578.9164	16.6309	59.6789	-0.8627	-35.6298	-21.5443	181	2.56
N3.06	C19	181	6.2	0.9D + (1(	Combination	Max	0	-571.394	-24.3519	62.2487	0.5723	123.0221	-40.5611	181	0
N3.06	C19	181	6.2	0.9D + (1(	Combination	Max	1.28	-565.9035	-24.3519	62.2487	0.5723	43.3438	-9.3906	181	1.28
N3.06	C19	181	6.2	0.9D + (1(	Combination	Max	2.56	-560.413	-24.3519	62.2487	0.5723	-34.3196	37.781	181	2.56
N3.06	C19	181	6.2	0.9D + (1(	Combination	Min	0	-578.5244	-42.6172	59.2081	-1.7118	117.2532	-71.3191	181	0
N3.06	C19	181	6.2	0.9D + (1(	Combination	Min	1.28	-573.0339	-42.6172	59.2081	-1.7118	41.4668	-16.7691	181	1.28
N3.06	C19	181	6.2	0.9D + (1(	Combination	Min	2.56	-567.5434	-42.6172	59.2081	-1.7118	-36.3345	21.7798	181	2.56
N3.06	C19	181	6.3	0.9D - (1C	Combination	Max	0	-722.5936	-22.8739	-64.5539	0.647	-128.9963	-39.1476	181	0
N3.06	C19	181	6.3	0.9D - (1C	Combination	Max	1.28	-717.1031	-22.8739	-64.5539	0.647	-46.3673	-9.869	181	1.28
N3.06	C19	181	6.3	0.9D - (1C	Combination	Max	2.56	-711.6126	-22.8739	-64.5539	0.647	37.292	27.5917	181	2.56
N3.06	C19	181	6.3	0.9D - (1C	Combination	Min	0	-726.2397	-32.2138	-66.1087	-0.521	-131.9462	-54.8756	181	0
N3.06	C19	181	6.3	0.9D - (1C	Combination	Min	1.28	-720.7492	-32.2138	-66.1087	-0.521	-47.3271	-13.6419	181	1.28
N3.06	C19	181	6.3	0.9D - (1C	Combination	Min	2.56	-715.2588	-32.2138	-66.1087	-0.521	36.2617	19.4096	181	2.56
N3.06	C19	181	6.4	0.9D - (1C	Combination	Max	0	-733.9666	36.3742	-64.0831	1.4961	-128.0708	61.3844	181	0
N3.06	C19	181	6.4	0.9D - (1C	Combination	Max	1.28	-728.4761	36.3742	-64.0831	1.4961	-46.0445	14.8255	181	1.28
N3.06	C19	181	6.4	0.9D - (1C	Combination	Max	2.56	-722.9856	36.3742	-64.0831	1.4961	37.9967	-15.7324	181	2.56
N3.06	C19	181	6.4	0.9D - (1C	Combination	Min	0	-741.097	18.1089	-67.1236	-0.788	-133.8398	30.6264	181	0
N3.06	C19	181	6.4	0.9D - (1C	Combination	Min	1.28	-735.6065	18.1089	-67.1236	-0.788	-47.9216	7.447	181	1.28
N3.06	C19	181	6.4	0.9D - (1C	Combination	Min	2.56	-730.1161	18.1089	-67.1236	-0.788	35.9818	-31.7335	181	2.56
N3.06	C19	181	6.5	0.9D + Ey	Combination	Max	0	-591.4957	5.598	52.3447	1.21	103.1581	9.3327	181	0
N3.06	C19	181	6.5	0.9D + Ey	Combination	Max	1.28	-586.0052	5.598	52.3447	1.21	36.2216	2.1939	181	1.28
N3.06	C19	181	6.5	0.9D + Ey	Combination	Max	2.56	-580.5147	5.598	52.3447	1.21	32.6637	11.0666	181	2.56
N3.06	C19	181	6.5	0.9D + Ey	Combination	Min	0	-720.9953	-11.8411	-57.2197	-1.4257	-113.9757	-19.2674	181	0
N3.06	C19	181	6.5	0.9D + Ey	Combination	Min	1.28	-715.5048	-11.8411	-57.2197	-1.4257	-40.7993	-4.1375	181	1.28
N3.06	C19	181	6.5	0.9D + Ey	Combination	Min	2.56	-710.0143	-11.8411	-57.2197	-1.4257	-31.0015	-5.0191	181	2.56
N3.06	C19	181	6.6	0.9D - Ey	Combination	Max	0	-591.4957	5.598	52.3447	1.21	103.1581	9.3327	181	0
N3.06	C19	181	6.6	0.9D - Ey	Combination	Max	1.28	-586.0052	5.598	52.3447	1.21	36.2216	2.1939	181	1.28
N3.06	C19	181	6.6	0.9D - Ey	Combination	Max	2.56	-580.5147	5.598	52.3447	1.21	32.6637	11.0666	181	2.56
N3.06	C19	181	6.6	0.9D - Ey	Combination	Min	0	-720.9953	-11.8411	-57.2197	-1.4257	-113.9757	-19.2674	181	0
N3.06	C19	181	6.6	0.9D - Ey	Combination	Min	1.28	-715.5048	-11.8411	-57.2197	-1.4257	-40.7993	-4.1375	181	1.28
N3.06	C19	181	6.6	0.9D - Ey	Combination	Min	2.56	-710.0143	-11.8411	-57.2197	-1.4257	-31.0015	-5.0191	181	2.56
N3.06	C19	181	3.3	1.2D + 1L	Combination	Max	0	-957.0697	-89.9793	-20.7049	0.1063	-42.8788	-152.4432	181	0
N3.06	C19	181	3.3	1.2D + 1L	Combination	Max	1.28	-949.749	-89.9793	-20.7049	0.1063	-16.3765	-37.2697	181	1.28
N3.06	C19	181	3.3	1.2D + 1L	Combination	Max	2.56	-942.4284	-89.9793	-20.7049	0.1063	11.31	87.308	181	2.56
N3.06	C19	181	3.3	1.2D + 1L	Combination	Min	0	-961.2604	-100.7142	-22.4919	-1.2361	-46.2694	-170.5203	181	0
N3.06	C19	181	3.3	1.2D + 1L	Combination	Min	1.28	-953.9397	-100.7142	-22.4919	-1.2361	-17.4797	-41.6062	181	1.28
N3.06	C19	181	3.3	1.2D + 1L	Combination	Min	2.56	-946.6191	-100.7142	-22.4919	-1.2361	10.1258	77.9038	181	2.56
N3.06	C19	181	4.1	1.2D + 1L	Combination	Max	0	-888.6107	24.1634	60.5283	0.2382	118.7479	42.1155	181	0
N3.06	C19	181	4.1	1.2D + 1L	Combination	Max	1.28	-881.2901	24.1634	60.5283	0.2382	41.2717	11.1864	181	1.28
N3.06	C19	181	4.1	1.2D + 1L	Combination	Max	2.56	-873.9695	24.1634	60.5283	0.2382	-35.1743	-11.5607	181	2.56
N3.06	C19	181	4.1	1.2D + 1L	Combination	Min	0	-892.2569	14.8235	58.9735	-0.9297	115.798	26.3875	181	0
N3.06	C19	181	4.1	1.2D + 1L	Combination	Min	1.28	-884.9362	14.8235	58.9735	-0.9297	40.3119	7.4134	181	1.28
N3.06	C19	181	4.1	1.2D + 1L	Combination	Min	2.56	-877.6156	14.8235	58.9735	-0.9297	-36.2046	-19.7428	181	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C27	221	1. 1.4D	Combination			0	-990.5485	-0.6013	-0.0808	-0.1678	-5.5798	-3.566	221	0	
N3.06	C27	221	1. 1.4D	Combination			1.28	-982.0077	-0.6013	-0.0808	-0.1678	-5.4764	-2.7963	221	1.28	
N3.06	C27	221	1. 1.4D	Combination			2.56	-973.467	-0.6013	-0.0808	-0.1678	-5.3731	-2.0267	221	2.56	
N3.06	C27	221	2. 1.2D + 1.6I	Combination			0	-1146.2427	-1.1282	2.8701	-0.2445	-4.5854	-5.0162	221	0	
N3.06	C27	221	2. 1.2D + 1.6I	Combination			1.28	-1138.922	-1.1282	2.8701	-0.2445	-8.2591	-3.5721	221	1.28	
N3.06	C27	221	2. 1.2D + 1.6I	Combination			2.56	-1131.6014	-1.1282	2.8701	-0.2445	-11.9329	-2.128	221	2.56	
N3.06	C27	221	2. 1.2D + 1.6I	Combination			0	-1060.4166	-0.9665	0.9137	-0.1792	-4.7239	-3.9738	221	0	
N3.06	C27	221	2. 1.2D + 1.6I	Combination			1.28	-1053.0959	-0.9665	0.9137	-0.1792	-5.8935	-2.7367	221	1.28	
N3.06	C27	221	2. 1.2D + 1.6I	Combination			2.56	-1045.7753	-0.9665	0.9137	-0.1792	-7.063	-1.4996	221	2.56	
N3.06	C27	221	2. 1.2D + 1L +	Combination			0	-970.1311	-0.7687	0.8647	-0.1762	-4.7217	-3.7415	221	0	
N3.06	C27	221	2. 1.2D + 1L +	Combination			1.28	-962.8105	-0.7687	0.8647	-0.1762	-5.8285	-2.7576	221	1.28	
N3.06	C27	221	2. 1.2D + 1L +	Combination			2.56	-955.4898	-0.7687	0.8647	-0.1762	-6.9352	-1.7736	221	2.56	
N3.06	C27	221	3.1 1.2D + 1L	Combination	Max		0	-855.0268	97.186	23.9031	0.8864	40.7781	161.1255	221	0	
N3.06	C27	221	3.1 1.2D + 1L	Combination	Max		1.28	-847.7062	97.186	23.9031	0.8864	10.1822	36.7274	221	1.28	
N3.06	C27	221	3.1 1.2D + 1L	Combination	Max		2.56	-840.3856	97.186	23.9031	0.8864	-18.2294	-77.9142	221	2.56	
N3.06	C27	221	3.1 1.2D + 1L	Combination	Min		0	-865.9366	86.2284	19.5377	-0.456	31.787	142.8305	221	0	
N3.06	C27	221	3.1 1.2D + 1L	Combination	Min		1.28	-858.6159	86.2284	19.5377	-0.456	6.7788	32.4582	221	1.28	
N3.06	C27	221	3.1 1.2D + 1L	Combination	Min		2.56	-851.2953	86.2284	19.5377	-0.456	-20.4137	-87.6707	221	2.56	
N3.06	C27	221	3.2 1.2D + 1L	Combination	Max		0	-894.0356	103.2371	-10.7184	1.5941	-28.5571	170.9022	221	0	
N3.06	C27	221	3.2 1.2D + 1L	Combination	Max		1.28	-886.715	103.2371	-10.7184	1.5941	-14.8375	38.7587	221	1.28	
N3.06	C27	221	3.2 1.2D + 1L	Combination	Max		2.56	-879.3943	103.2371	-10.7184	1.5941	2.7515	-76.1014	221	2.56	
N3.06	C27	221	3.2 1.2D + 1L	Combination	Min		0	-913.3618	83.8261	-18.4515	-0.7839	-44.4845	138.4933	221	0	
N3.06	C27	221	3.2 1.2D + 1L	Combination	Min		1.28	-906.0412	83.8261	-18.4515	-0.7839	-20.8665	31.196	221	1.28	
N3.06	C27	221	3.2 1.2D + 1L	Combination	Min		2.56	-898.7205	83.8261	-18.4515	-0.7839	-1.1179	-93.3848	221	2.56	
N3.06	C27	221	3.3 1.2D + 1L	Combination	Max		0	-992.2479	-87.586	-17.853	0.1063	-41.2284	-150.1025	221	0	
N3.06	C27	221	3.3 1.2D + 1L	Combination	Max		1.28	-984.9273	-87.586	-17.853	0.1063	-18.3766	-37.9923	221	1.28	
N3.06	C27	221	3.3 1.2D + 1L	Combination	Max		2.56	-977.6067	-87.586	-17.853	0.1063	6.6594	83.8743	221	2.56	
N3.06	C27	221	3.3 1.2D + 1L	Combination	Min		0	-1003.1577	-98.5437	-22.2184	-1.2361	-50.2196	-168.3974	221	0	
N3.06	C27	221	3.3 1.2D + 1L	Combination	Min		1.28	-995.8371	-98.5437	-22.2184	-1.2361	-21.7801	-42.2616	221	1.28	
N3.06	C27	221	3.3 1.2D + 1L	Combination	Min		2.56	-988.5164	-98.5437	-22.2184	-1.2361	4.4752	74.1178	221	2.56	
N3.06	C27	221	3.4 1.2D + 1L	Combination	Max		0	-944.8227	-85.1837	20.1363	0.4342	35.0431	-145.7653	221	0	
N3.06	C27	221	3.4 1.2D + 1L	Combination	Max		1.28	-937.5021	-85.1837	20.1363	0.4342	9.2687	-36.7302	221	1.28	
N3.06	C27	221	3.4 1.2D + 1L	Combination	Max		2.56	-930.1814	-85.1837	20.1363	0.4342	-12.6364	89.5883	221	2.56	
N3.06	C27	221	3.4 1.2D + 1L	Combination	Min		0	-964.1489	-104.5947	12.4031	-1.9438	19.1156	-178.1742	221	0	
N3.06	C27	221	3.4 1.2D + 1L	Combination	Min		1.28	-956.8283	-104.5947	12.4031	-1.9438	3.2396	-44.2929	221	1.28	
N3.06	C27	221	3.4 1.2D + 1L	Combination	Min		2.56	-949.5076	-104.5947	12.4031	-1.9438	-16.5058	72.3049	221	2.56	
N3.06	C27	221	3.5 1.2D + 1L	Combination	Max		0	-881.5479	84.9154	9.0194	1.5068	11.1236	140.117	221	0	
N3.06	C27	221	3.5 1.2D + 1L	Combination	Max		1.28	-874.2273	84.9154	9.0194	1.5068	-0.3634	31.4604	221	1.28	
N3.06	C27	221	3.5 1.2D + 1L	Combination	Max		2.56	-866.9067	84.9154	9.0194	1.5068	-1.6666	73.502	221	2.56	
N3.06	C27	221	3.5 1.2D + 1L	Combination	Min		0	-976.6366	-86.273	-7.3347	-1.8565	-20.565	-147.3889	221	0	
N3.06	C27	221	3.5 1.2D + 1L	Combination	Min		1.28	-969.3159	-86.273	-7.3347	-1.8565	-11.2345	-36.9946	221	1.28	
N3.06	C27	221	3.5 1.2D + 1L	Combination	Min		2.56	-961.9953	-86.273	-7.3347	-1.8565	-12.0877	-77.2984	221	2.56	
N3.06	C27	221	3.6 1.2D + 1L	Combination	Max		0	-881.5479	84.9154	9.0194	1.5068	11.1236	140.117	221	0	
N3.06	C27	221	3.6 1.2D + 1L	Combination	Max		1.28	-874.2273	84.9154	9.0194	1.5068	-0.3634	31.4604	221	1.28	
N3.06	C27	221	3.6 1.2D + 1L	Combination	Max		2.56	-866.9067	84.9154	9.0194	1.5068	-1.6666	73.502	221	2.56	
N3.06	C27	221	3.6 1.2D + 1L	Combination	Min		0	-976.6366	-86.273	-7.3347	-1.8565	-20.565	-147.3889	221	0	
N3.06	C27	221	3.6 1.2D + 1L	Combination	Min		1.28	-969.3159	-86.273	-7.3347	-1.8565	-11.2345	-36.9946	221	1.28	
N3.06	C27	221	3.6 1.2D + 1L	Combination	Min		2.56	-961.9953	-86.273	-7.3347	-1.8565	-12.0877	-77.2984	221	2.56	
N3.06	C27	221	4.1 1.2D + 1L	Combination	Max		0	-838.2173	29.0369	64.068	0.2382	121.9101	46.882	221	0	
N3.06	C27	221	4.1 1.2D + 1L	Combination	Max		1.28	-830.8966	29.0369	64.068	0.2382	39.9031	9.7148	221	1.28	
N3.06	C27	221	4.1 1.2D + 1L	Combination	Max		2.56	-823.576	29.0369	64.068	0.2382	-40.2034	-18.9637	221	2.56	
N3.06	C27	221	4.1 1.2D + 1L	Combination	Min		0	-847.7093	19.5032	60.2698	-0.9297	114.0873	30.9644	221	0	
N3.06	C27	221	4.1 1.2D + 1L	Combination	Min		1.28	-840.3887	19.5032	60.2698	-0.9297	36.9419	6.0004	221	1.28	
N3.06	C27	221	4.1 1.2D + 1L	Combination	Min		2.56	-833.0681	19.5032	60.2698	-0.9297	-42.1039	-27.4524	221	2.56	
N3.06	C27	221	4.2 1.2D + 1L	Combination	Max		0	-861.8831	-22.3867	64.2475	0.5053	122.8869	-39.6967	221	0	
N3.06	C27	221	4.2 1.2D + 1L	Combination	Max		1.28	-854.5625	-22.3867	64.2475	0.5053	40.6501	-11.0417	221	1.28	
N3.06	C27	221	4.2 1.2D + 1L	Combination	Max		2.56	-847.2418	-22.3867	64.2475	0.5053	-37.8703	34.214	221	2.56	
N3.06	C27	221	4.2 1.2D + 1L	Combination	Min		0	-880.446	-41.0311	56.8199	-1.7788	107.5886	-70.8255	221	0	
N3.06	C27	221	4.2 1.2D + 1L	Combination	Min		1.28	-873.1253	-41.0311	56.8199	-1.7788	34.8592	-18.3057	221	1.28	
N3.06	C27	221	4.2 1.2D + 1L	Combination	Min		2.56	-865.8047	-41.0311	56.8199	-1.7788	-41.5868	17.6133	221	2.56	
N3.06	C27	221	4.3 1.2D + 1L	Combination	Max		0	-1010.4752	-20.8608	-58.5851	0.58	-123.5288	-38.2364	221	0	
N3.06	C27	221	4.3 1.2D + 1L	Combination	Max		1.28	-1003.1546	-20.8608	-58.5851	0.58	-48.5398	-11.5345	221	1.28	
N3.06	C27	221	4.3 1.2D + 1L	Combination	Max		2.56	-995.8339	-20.8608	-58.5851	0.58	28.3496	23.656	221	2.56	
N3.06	C27	221	4.3 1.2D + 1L	Combination	Min		0	-1019.9672	-30.3945	-62.3832	-0.5879	-131.3515	-54.154	221	0	
N3.06	C27	221	4.3 1.2D + 1L	Combination	Min		1.28	-1012.6466	-30.3945	-62.3832	-0.5879	-51.5009	-15.249	221	1.28	
N3.06	C27	221	4.3 1.2D + 1L	Combination	Min		2.56	-1005.326	-30.3945	-62.3832	-0.5879	26.4492	15.1673	221	2.56	
N3.06	C27	221	4.4 1.2D + 1L	Combination	Max		0	-977.7386	39.6734	-55.1352	1.4291	-117.03	63.5535	221	0	
N3.06	C27	221	4.4 1.2D + 1L	Combination	Max		1.28	-970.4179	39.6734	-55.1352	1.4291	-46.457	12.7715	221	1.28	
N3.06	C27	221	4.4 1.2D + 1L	Combination	Max		2.56	-963.0973	39.6734	-55.1352	1.4291	27.8325	-21.4097	221	2.56	
N3.06	C27	221	4.4 1.2D + 1L	Combination	Min		0	-996.3014	21.0291	-62.5628	-0.855	-132.3283	32.4248	221	0	
N3.06	C27	221	4.4 1.2D + 1L	Combination	Min		1.28	-988.9808	21.0291	-62.5628	-0.855	-52.2479	5.5075	221	1.28	
N3.06	C27	221	4.4 1.2D + 1L	Combination	Min		2.56	-981.6601	21.0291	-62.5628	-0.855	24.116	-38.0104	221	2.56	
N3.06	C27	221	4.5 1.2D + 1L	Combination	Max		0	-870.7147	8.2187	51.3435	1.143	96.1797	10.8381	221	0	
N3.06	C27	221	4.5 1.2D + 1L	Combination	Max		1.28	-863.3941	8.2187	51.3435	1.143	30.5298	0.3454	221	1.28	
N3.06	C27	221	4.5 1.2D + 1L	Combination	Max		2.56	-856.0734	8.2187	51.3435	1.143	21.6831	6.4255	221	2.56	
N3.06	C27	221	4.5 1.2D + 1L	Combination	Min		0	-987.4698	-9.5763	-49.6588	-1.4927	-105.6211	-18.11	221	0	
N3.06	C27	221	4.5 1.2D + 1L	Combination	Min		1.28	-980.1492	-9.5763	-49.6588	-1.4927	-42.1276	-5.8796	221	1.28	
N3.06	C27	221	4.5 1.2D + 1L	Combination	Min		2.56	-972.8285	-9.5763	-49.6588	-1.4927	-35.4374	-10.2219	221	2.56	
N3.06	C27	221	4.6 1.2D + 1L	Combination	Max		0	-870.7147	8.2187	51.3435	1.143	96.1797	10.8381	221	0	
N3.06	C27	221	4.6 1.2D + 1L	Combination	Max		1.28	-863.3941	8.2187	51.3435	1.143	30.5298	0.3454	221	1.28	
N3.06	C27	221	4.6 1.2D + 1L	Combination	Max		2.56	-856.0734	8.2187	51.3435	1.143	21.6831	6.4255	221	2.56	
N3.06	C27	221	4.6 1.2D + 1L	Combination	Min		0	-987.4698	-9.5763	-49.6588	-1.4927	-105.6211	-18.11	221	0	
N3.06	C27	221	4.6 1.2D + 1L	Combination	Min		1.28	-980.1492	-9.5763	-49.6588	-1.4927	-42.1276	-5.8796	221	1.28	
N3.06	C27	221	4.6 1.2D + 1L	Combination	Min		2.56	-972.8285	-9.5763	-49.6588	-1.4927	-35.4374	-10.2219	221	2.56	
N3.06	C27	221	5.1 0.9D + (1(	Combination	Max		0	-562.7157	97.4783	23.0088	0.9534	41.9118	162.469	221	0	
N3.06	C27	221	5.1 0.9D + (1(	Combination	Max		1.28	-557.2252	97.4783	23.0088	0.9534	12.4606	37.6968	221	1.28	
N3.06	C27	221	5.1 0.9D + (1(	Combination	Max		2.56	-551.7348	97.4783	23.0088	0.9534	-14.8064	-77.3188	221	2.56	
N3.06	C27	221	5.1 0.9D + (1(	Combination	Min		0	-573.6255	86.5207	18.6434	-0.389	32.9207	144.1741	221	0	
N3.06	C27	221	5.1 0.9D + (1(	Combination	Min		1.28	-568.135	86.5207	18.6434	-0.389	9.0572	33.4276	221	1.28	
N3.06	C27	221	5.1 0.9D + (1(	Combination	Min		2.56	-562.6445	86.5207	18.6434	-0.389	-16.9907	-87.0754	221	2.56	
N3.06	C27	221	5.2 0.9D + (1(	Combination	Max		0	-601.7245	103.5294	-11.6127	1.661	-27.4234	172.2458	221	0	
N3.06	C27	221	5.2 0.9D + (1(	Combination	Max		1.28	-596.234	103.5294	-11.6127	1.661	-12.5591	39.7282	221	1.28	
N3.06	C27	221	5.2 0.9D + (1(	Combination	Max		2.56	-590.7435	103.5294	-11.6127	1.661	6.1745	-75.506	221	2.56	
N3.06	C27	221	5.2 0.9D + (1(	Combination	Min		0	-621.0507	84.1183	-19.3458	-0.7169	-43.3508	139.8369	221	0	
N3.06	C27	221	5.2 0.9D + (1(	Combination	Min		1.28	-615.5602	84.1183	-19.3458	-0.7169	-18.5881	32.1654	221	1.28	
N3.06	C27	221	5.2 0.9D + (1(	Combination	Min		2.56	-610.0698	84.1183	-19.3458	-0.7169	2.3052	-92.7894	221	2.56	

N3.06	C27	221	5.3	0.9D - (1C	Combination	Max	0	-699.9368	-87.2938	-18.7472	0.1733	-40.0947	-148.7589	221	0
N3.06	C27	221	5.3	0.9D - (1C	Combination	Max	1.28	-694.4464	-87.2938	-18.7472	0.1733	-16.0983	-37.0229	221	1.28
N3.06	C27	221	5.3	0.9D - (1C	Combination	Max	2.56	-688.9559	-87.2938	-18.7472	0.1733	10.0824	84.4697	221	2.56
N3.06	C27	221	5.3	0.9D - (1C	Combination	Min	0	-710.8466	-98.2514	-23.1126	-1.1691	-49.0859	-167.0539	221	0
N3.06	C27	221	5.3	0.9D - (1C	Combination	Min	1.28	-705.3561	-98.2514	-23.1126	-1.1691	-19.5017	-41.2921	221	1.28
N3.06	C27	221	5.3	0.9D - (1C	Combination	Min	2.56	-699.8656	-98.2514	-23.1126	-1.1691	7.8982	74.7131	221	2.56
N3.06	C27	221	5.4	0.9D - (1C	Combination	Max	0	-652.5116	-84.8914	19.242	0.5012	36.1768	-144.4217	221	0
N3.06	C27	221	5.4	0.9D - (1C	Combination	Max	1.28	-647.0211	-84.8914	19.242	0.5012	11.547	-35.7607	221	1.28
N3.06	C27	221	5.4	0.9D - (1C	Combination	Max	2.56	-641.5306	-84.8914	19.242	0.5012	-9.2134	90.1837	221	2.56
N3.06	C27	221	5.4	0.9D - (1C	Combination	Min	0	-671.8378	-104.3025	11.5089	-1.8768	20.2493	-176.8306	221	0
N3.06	C27	221	5.4	0.9D - (1C	Combination	Min	1.28	-666.3473	-104.3025	11.5089	-1.8768	5.518	-43.3235	221	1.28
N3.06	C27	221	5.4	0.9D - (1C	Combination	Min	2.56	-660.8569	-104.3025	11.5089	-1.8768	-13.0827	72.9003	221	2.56
N3.06	C27	221	5.5	0.9D + Ex	Combination	Max	0	-589.2368	85.2077	8.1251	1.5738	12.2573	141.4605	221	0
N3.06	C27	221	5.5	0.9D + Ex	Combination	Max	1.28	-583.7464	85.2077	8.1251	1.5738	1.915	32.4299	221	1.28
N3.06	C27	221	5.5	0.9D + Ex	Combination	Max	2.56	-578.2559	85.2077	8.1251	1.5738	1.7565	74.0974	221	2.56
N3.06	C27	221	5.5	0.9D + Ex	Combination	Min	0	-684.3255	-85.9808	-8.229	-1.7895	-19.4313	-146.0454	221	0
N3.06	C27	221	5.5	0.9D + Ex	Combination	Min	1.28	-678.835	-85.9808	-8.229	-1.7895	-8.9561	-36.0252	221	1.28
N3.06	C27	221	5.5	0.9D + Ex	Combination	Min	2.56	-673.3445	-85.9808	-8.229	-1.7895	-8.6647	-76.7031	221	2.56
N3.06	C27	221	5.6	0.9D - Ex	Combination	Max	0	-589.2368	85.2077	8.1251	1.5738	12.2573	141.4605	221	0
N3.06	C27	221	5.6	0.9D - Ex	Combination	Max	1.28	-583.7464	85.2077	8.1251	1.5738	1.915	32.4299	221	1.28
N3.06	C27	221	5.6	0.9D - Ex	Combination	Max	2.56	-578.2559	85.2077	8.1251	1.5738	1.7565	74.0974	221	2.56
N3.06	C27	221	5.6	0.9D - Ex	Combination	Min	0	-684.3255	-85.9808	-8.229	-1.7895	-19.4313	-146.0454	221	0
N3.06	C27	221	5.6	0.9D - Ex	Combination	Min	1.28	-678.835	-85.9808	-8.229	-1.7895	-8.9561	-36.0252	221	1.28
N3.06	C27	221	5.6	0.9D - Ex	Combination	Min	2.56	-673.3445	-85.9808	-8.229	-1.7895	-8.6647	-76.7031	221	2.56
N3.06	C27	221	6.1	0.9D + (1(	Combination	Max	0	-545.9062	29.3292	63.1737	0.3052	123.0438	48.2256	221	0
N3.06	C27	221	6.1	0.9D + (1(	Combination	Max	1.28	-540.4157	29.3292	63.1737	0.3052	42.1815	10.6842	221	1.28
N3.06	C27	221	6.1	0.9D + (1(	Combination	Max	2.56	-534.9252	29.3292	63.1737	0.3052	-36.7804	-18.3684	221	2.56
N3.06	C27	221	6.1	0.9D + (1(	Combination	Min	0	-555.3982	19.7954	59.3756	-0.8627	115.221	32.308	221	0
N3.06	C27	221	6.1	0.9D + (1(	Combination	Min	1.28	-549.9077	19.7954	59.3756	-0.8627	39.2203	6.9698	221	1.28
N3.06	C27	221	6.1	0.9D + (1(	Combination	Min	2.56	-544.4173	19.7954	59.3756	-0.8627	-38.6808	-26.8571	221	2.56
N3.06	C27	221	6.2	0.9D + (1(	Combination	Max	0	-569.572	-22.0945	63.3533	0.5723	124.0206	-38.3532	221	0
N3.06	C27	221	6.2	0.9D + (1(	Combination	Max	1.28	-564.0815	-22.0945	63.3533	0.5723	42.9284	-10.0723	221	1.28
N3.06	C27	221	6.2	0.9D + (1(	Combination	Max	2.56	-558.5911	-22.0945	63.3533	0.5723	-34.4472	34.8094	221	2.56
N3.06	C27	221	6.2	0.9D + (1(	Combination	Min	0	-588.1349	-40.7388	55.9256	-1.7118	108.7223	-69.4819	221	0
N3.06	C27	221	6.2	0.9D + (1(	Combination	Min	1.28	-582.6444	-40.7388	55.9256	-1.7118	37.1375	-17.3363	221	1.28
N3.06	C27	221	6.2	0.9D + (1(	Combination	Min	2.56	-577.1539	-40.7388	55.9256	-1.7118	-38.1637	18.2086	221	2.56
N3.06	C27	221	6.3	0.9D - (1C	Combination	Max	0	-718.1641	-20.5685	-59.4794	0.647	-122.3951	-36.8928	221	0
N3.06	C27	221	6.3	0.9D - (1C	Combination	Max	1.28	-712.6736	-20.5685	-59.4794	0.647	-46.2614	-10.5651	221	1.28
N3.06	C27	221	6.3	0.9D - (1C	Combination	Max	2.56	-707.1831	-20.5685	-59.4794	0.647	31.7726	24.2514	221	2.56
N3.06	C27	221	6.3	0.9D - (1C	Combination	Min	0	-727.6561	-30.1023	-63.2775	-0.521	-130.2178	-52.8104	221	0
N3.06	C27	221	6.3	0.9D - (1C	Combination	Min	1.28	-722.1657	-30.1023	-63.2775	-0.521	-49.2226	-14.2795	221	1.28
N3.06	C27	221	6.3	0.9D - (1C	Combination	Min	2.56	-716.6752	-30.1023	-63.2775	-0.521	29.8722	15.7626	221	2.56
N3.06	C27	221	6.4	0.9D - (1C	Combination	Max	0	-685.4275	39.9657	-56.0294	1.4961	-115.8963	64.8971	221	0
N3.06	C27	221	6.4	0.9D - (1C	Combination	Max	1.28	-679.937	39.9657	-56.0294	1.4961	-44.1786	13.741	221	1.28
N3.06	C27	221	6.4	0.9D - (1C	Combination	Max	2.56	-674.4465	39.9657	-56.0294	1.4961	31.2555	-20.8144	221	2.56
N3.06	C27	221	6.4	0.9D - (1C	Combination	Min	0	-703.9903	21.3214	-63.4571	-0.788	-131.1946	33.7683	221	0
N3.06	C27	221	6.4	0.9D - (1C	Combination	Min	1.28	-698.4998	21.3214	-63.4571	-0.788	-49.9695	6.477	221	1.28
N3.06	C27	221	6.4	0.9D - (1C	Combination	Min	2.56	-693.0093	21.3214	-63.4571	-0.788	27.539	-37.4151	221	2.56
N3.06	C27	221	6.5	0.9D + Ey	Combination	Max	0	-578.4036	8.5109	50.4492	1.21	97.3134	12.1816	221	0
N3.06	C27	221	6.5	0.9D + Ey	Combination	Max	1.28	-572.9131	8.5109	50.4492	1.21	32.8082	1.3148	221	1.28
N3.06	C27	221	6.5	0.9D + Ey	Combination	Max	2.56	-567.4227	8.5109	50.4492	1.21	25.1061	7.0208	221	2.56
N3.06	C27	221	6.5	0.9D + Ey	Combination	Min	0	-695.1587	-9.284	-50.553	-1.4257	-104.4874	-16.7665	221	0
N3.06	C27	221	6.5	0.9D + Ey	Combination	Min	1.28	-689.6682	-9.284	-50.553	-1.4257	-39.8493	-4.9101	221	1.28
N3.06	C27	221	6.5	0.9D + Ey	Combination	Min	2.56	-684.1777	-9.284	-50.553	-1.4257	-32.0143	-9.6266	221	2.56
N3.06	C27	221	6.6	0.9D - Ey	Combination	Max	0	-578.4036	8.5109	50.4492	1.21	97.3134	12.1816	221	0
N3.06	C27	221	6.6	0.9D - Ey	Combination	Max	1.28	-572.9131	8.5109	50.4492	1.21	32.8082	1.3148	221	1.28
N3.06	C27	221	6.6	0.9D - Ey	Combination	Max	2.56	-567.4227	8.5109	50.4492	1.21	25.1061	7.0208	221	2.56
N3.06	C27	221	6.6	0.9D - Ey	Combination	Min	0	-695.1587	-9.284	-50.553	-1.4257	-104.4874	-16.7665	221	0
N3.06	C27	221	6.6	0.9D - Ey	Combination	Min	1.28	-689.6682	-9.284	-50.553	-1.4257	-39.8493	-4.9101	221	1.28
N3.06	C27	221	6.6	0.9D - Ey	Combination	Min	2.56	-684.1777	-9.284	-50.553	-1.4257	-32.0143	-9.6266	221	2.56
N3.06	C27	221	3.3	1.2D + 1L	Combination	Max	0	-992.2479	-87.586	-17.853	0.1063	-41.2284	-150.1025	221	0
N3.06	C27	221	3.3	1.2D + 1L	Combination	Max	1.28	-984.9273	-87.586	-17.853	0.1063	-18.3766	-37.9923	221	1.28
N3.06	C27	221	3.3	1.2D + 1L	Combination	Max	2.56	-977.6067	-87.586	-17.853	0.1063	6.6594	83.8743	221	2.56
N3.06	C27	221	3.3	1.2D + 1L	Combination	Min	0	-1003.1577	-98.5437	-22.2184	-1.2361	-50.2196	-168.3974	221	0
N3.06	C27	221	3.3	1.2D + 1L	Combination	Min	1.28	-995.8371	-98.5437	-22.2184	-1.2361	-21.7801	-42.2616	221	1.28
N3.06	C27	221	3.3	1.2D + 1L	Combination	Min	2.56	-988.5164	-98.5437	-22.2184	-1.2361	4.4752	74.1178	221	2.56
N3.06	C27	221	4.1	1.2D + 1L	Combination	Max	0	-838.2173	29.0369	64.068	0.2382	121.9101	46.882	221	0
N3.06	C27	221	4.1	1.2D + 1L	Combination	Max	1.28	-830.8966	29.0369	64.068	0.2382	39.9031	9.7148	221	1.28
N3.06	C27	221	4.1	1.2D + 1L	Combination	Max	2.56	-823.576	29.0369	64.068	0.2382	-40.2034	-18.9637	221	2.56
N3.06	C27	221	4.1	1.2D + 1L	Combination	Min	0	-847.7093	19.5032	60.2698	-0.9297	114.0873	30.9644	221	0
N3.06	C27	221	4.1	1.2D + 1L	Combination	Min	1.28	-840.3887	19.5032	60.2698	-0.9297	36.9419	6.0004	221	1.28
N3.06	C27	221	4.1	1.2D + 1L	Combination	Min	2.56	-833.0681	19.5032	60.2698	-0.9297	-42.1039	-27.4524	221	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C42	386	1. 1.4D	Combination			0	-493.6666	10.5289	-9.1798	-0.1678	-15.1577	7.3198	386	0	
N3.06	C42	386	1. 1.4D	Combination			1.28	-485.1259	10.5289	-9.1798	-0.1678	-3.4075	-6.1571	386	1.28	
N3.06	C42	386	1. 1.4D	Combination			2.56	-476.5851	10.5289	-9.1798	-0.1678	8.3427	-19.6341	386	2.56	
N3.06	C42	386	2. 1.2D + 1.6L	Combination			0	-533.1318	12.3599	-8.6534	-0.2445	-16.8447	8.1758	386	0	
N3.06	C42	386	2. 1.2D + 1.6L	Combination			1.28	-525.8112	12.3599	-8.6534	-0.2445	-5.7683	-7.6449	386	1.28	
N3.06	C42	386	2. 1.2D + 1.6L	Combination			2.56	-518.4905	12.3599	-8.6534	-0.2445	5.3081	-23.4656	386	2.56	
N3.06	C42	386	2. 1.2D + 1.6L	Combination			0	-521.7181	10.7085	-8.7276	-0.1792	-14.8783	7.4449	386	0	
N3.06	C42	386	2. 1.2D + 1.6L	Combination			1.28	-514.3975	10.7085	-8.7276	-0.1792	-3.7069	-6.262	386	1.28	
N3.06	C42	386	2. 1.2D + 1.6L	Combination			2.56	-507.0769	10.7085	-8.7276	-0.1792	7.4645	-19.969	386	2.56	
N3.06	C42	386	2. 1.2D + 1L +	Combination			0	-472.801	10.2197	-8.2599	-0.1762	-14.3586	7.0057	386	0	
N3.06	C42	386	2. 1.2D + 1L +	Combination			1.28	-465.4804	10.2197	-8.2599	-0.1762	-3.7859	-6.0756	386	1.28	
N3.06	C42	386	2. 1.2D + 1L +	Combination			2.56	-458.1597	10.2197	-8.2599	-0.1762	6.7868	-19.1569	386	2.56	
N3.06	C42	386	3.1 1.2D + 1L	Combination	Max		0	-569.1275	87.1075	15.9602	0.8864	36.5946	151.2682	386	0	
N3.06	C42	386	3.1 1.2D + 1L	Combination	Max		1.28	-561.8069	87.1075	15.9602	0.8864	16.1655	39.7706	386	1.28	
N3.06	C42	386	3.1 1.2D + 1L	Combination	Max		2.56	-554.4863	87.1075	15.9602	0.8864	-1.5443	-65.7087	386	2.56	
N3.06	C42	386	3.1 1.2D + 1L	Combination	Min		0	-578.0366	78.513	7.8249	-0.456	18.4874	135.2845	386	0	
N3.06	C42	386	3.1 1.2D + 1L	Combination	Min		1.28	-570.7159	78.513	7.8249	-0.456	8.4715	34.7879	386	1.28	
N3.06	C42	386	3.1 1.2D + 1L	Combination	Min		2.56	-563.3953	78.513	7.8249	-0.456	-4.2636	-71.727	386	2.56	
N3.06	C42	386	3.2 1.2D + 1L	Combination	Max		0	-591.4871	92.3498	-9.7207	1.5941	-21.1346	160.2539	386	0	
N3.06	C42	386	3.2 1.2D + 1L	Combination	Max		1.28	-584.1665	92.3498	-9.7207	1.5941	-8.6921	42.0462	386	1.28	
N3.06	C42	386	3.2 1.2D + 1L	Combination	Max		2.56	-576.8458	92.3498	-9.7207	1.5941	8.5676	-65.5004	386	2.56	
N3.06	C42	386	3.2 1.2D + 1L	Combination	Min		0	-607.2691	77.1249	-24.1322	-0.7839	-53.2108	131.9393	386	0	
N3.06	C42	386	3.2 1.2D + 1L	Combination	Min		1.28	-599.9485	77.1249	-24.1322	-0.7839	-22.3216	33.2194	386	1.28	
N3.06	C42	386	3.2 1.2D + 1L	Combination	Min		2.56	-592.6278	77.1249	-24.1322	-0.7839	3.7505	-76.1615	386	2.56	
N3.06	C42	386	3.3 1.2D + 1L	Combination	Max		0	-323.0953	-58.5179	-23.9195	0.1063	-46.7321	-121.6724	386	0	
N3.06	C42	386	3.3 1.2D + 1L	Combination	Max		1.28	-315.7746	-58.5179	-23.9195	0.1063	-16.1151	-46.7696	386	1.28	
N3.06	C42	386	3.3 1.2D + 1L	Combination	Max		2.56	-308.454	-58.5179	-23.9195	0.1063	17.2212	34.1515	386	2.56	
N3.06	C42	386	3.3 1.2D + 1L	Combination	Min		0	-332.0043	-67.1124	-32.0549	-1.2361	-64.8393	-137.6562	386	0	
N3.06	C42	386	3.3 1.2D + 1L	Combination	Min		1.28	-324.6837	-67.1124	-32.0549	-1.2361	-23.809	-51.7523	386	1.28	
N3.06	C42	386	3.3 1.2D + 1L	Combination	Min		2.56	-317.363	-67.1124	-32.0549	-1.2361	14.5019	28.1333	386	2.56	
N3.06	C42	386	3.4 1.2D + 1L	Combination	Max		0	-293.8627	-57.1298	8.0376	0.4342	24.9661	-118.3273	386	0	
N3.06	C42	386	3.4 1.2D + 1L	Combination	Max		1.28	-286.5421	-57.1298	8.0376	0.4342	14.678	-45.2012	386	1.28	
N3.06	C42	386	3.4 1.2D + 1L	Combination	Max		2.56	-279.2214	-57.1298	8.0376	0.4342	9.2071	38.586	386	2.56	
N3.06	C42	386	3.4 1.2D + 1L	Combination	Min		0	-309.6447	-72.3546	-6.3739	-1.9438	-7.1101	-146.6419	386	0	
N3.06	C42	386	3.4 1.2D + 1L	Combination	Min		1.28	-302.3241	-72.3546	-6.3739	-1.9438	1.0485	-54.0279	386	1.28	
N3.06	C42	386	3.4 1.2D + 1L	Combination	Min		2.56	-295.0034	-72.3546	-6.3739	-1.9438	4.3899	27.925	386	2.56	
N3.06	C42	386	3.5 1.2D + 1L	Combination	Max		0	-331.4041	77.7063	5.4494	1.5068	13.6167	133.0541	386	0	
N3.06	C42	386	3.5 1.2D + 1L	Combination	Max		1.28	-324.0834	77.7063	5.4494	1.5068	6.7875	33.6443	386	1.28	
N3.06	C42	386	3.5 1.2D + 1L	Combination	Max		2.56	-316.7628	77.7063	5.4494	1.5068	13.7294	28.3901	386	2.56	
N3.06	C42	386	3.5 1.2D + 1L	Combination	Min		0	-569.7278	-57.7112	-21.5441	-1.8565	-41.8613	-119.4421	386	0	
N3.06	C42	386	3.5 1.2D + 1L	Combination	Min		1.28	-562.4071	-57.7112	-21.5441	-1.8565	-14.4311	-45.6261	386	1.28	
N3.06	C42	386	3.5 1.2D + 1L	Combination	Min		2.56	-555.0865	-57.7112	-21.5441	-1.8565	-0.7719	-65.9655	386	2.56	
N3.06	C42	386	3.6 1.2D + 1L	Combination	Max		0	-331.4041	77.7063	5.4494	1.5068	13.6167	133.0541	386	0	
N3.06	C42	386	3.6 1.2D + 1L	Combination	Max		1.28	-324.0834	77.7063	5.4494	1.5068	6.7875	33.6443	386	1.28	
N3.06	C42	386	3.6 1.2D + 1L	Combination	Max		2.56	-316.7628	77.7063	5.4494	1.5068	13.7294	28.3901	386	2.56	
N3.06	C42	386	3.6 1.2D + 1L	Combination	Min		0	-569.7278	-57.7112	-21.5441	-1.8565	-41.8613	-119.4421	386	0	
N3.06	C42	386	3.6 1.2D + 1L	Combination	Min		1.28	-562.4071	-57.7112	-21.5441	-1.8565	-14.4311	-45.6261	386	1.28	
N3.06	C42	386	3.6 1.2D + 1L	Combination	Min		2.56	-555.0865	-57.7112	-21.5441	-1.8565	-0.7719	-65.9655	386	2.56	
N3.06	C42	386	4.1 1.2D + 1L	Combination	Max		0	-444.4711	32.6574	45.1826	0.2382	104.4028	50.4231	386	0	
N3.06	C42	386	4.1 1.2D + 1L	Combination	Max		1.28	-437.1504	32.6574	45.1826	0.2382	46.5691	8.6216	386	1.28	
N3.06	C42	386	4.1 1.2D + 1L	Combination	Max		2.56	-429.8298	32.6574	45.1826	0.2382	-8.8986	-27.9438	386	2.56	
N3.06	C42	386	4.1 1.2D + 1L	Combination	Min		0	-452.2224	25.1797	38.1044	-0.9297	88.6486	36.5164	386	0	
N3.06	C42	386	4.1 1.2D + 1L	Combination	Min		1.28	-444.9018	25.1797	38.1044	-0.9297	39.875	4.2863	386	1.28	
N3.06	C42	386	4.1 1.2D + 1L	Combination	Min		2.56	-437.5811	25.1797	38.1044	-0.9297	-11.2646	-33.18	386	2.56	
N3.06	C42	386	4.2 1.2D + 1L	Combination	Max		0	-359.2189	-8.0354	45.2464	0.5053	106.3464	-25.6604	386	0	
N3.06	C42	386	4.2 1.2D + 1L	Combination	Max		1.28	-351.8983	-8.0354	45.2464	0.5053	48.4311	-15.3752	386	1.28	
N3.06	C42	386	4.2 1.2D + 1L	Combination	Max		2.56	-344.5776	-8.0354	45.2464	0.5053	-4.8574	5.1501	386	2.56	
N3.06	C42	386	4.2 1.2D + 1L	Combination	Min		0	-374.3776	-22.6589	31.4041	-1.7788	75.5372	-52.8567	386	0	
N3.06	C42	386	4.2 1.2D + 1L	Combination	Min		1.28	-367.0569	-22.6589	31.4041	-1.7788	35.3399	-23.8533	386	1.28	
N3.06	C42	386	4.2 1.2D + 1L	Combination	Min		2.56	-359.7363	-22.6589	31.4041	-1.7788	-9.4843	-5.0899	386	2.56	
N3.06	C42	386	4.3 1.2D + 1L	Combination	Max		0	-448.9094	-5.1846	-54.199	0.58	-116.8933	-22.9044	386	0	
N3.06	C42	386	4.3 1.2D + 1L	Combination	Max		1.28	-441.5888	-5.1846	-54.199	0.58	-47.5185	-16.268	386	1.28	
N3.06	C42	386	4.3 1.2D + 1L	Combination	Max		2.56	-434.2682	-5.1846	-54.199	0.58	24.2221	-4.3955	386	2.56	
N3.06	C42	386	4.3 1.2D + 1L	Combination	Min		0	-456.6608	-12.6623	-61.2772	-0.5879	-132.6475	-36.8111	386	0	
N3.06	C42	386	4.3 1.2D + 1L	Combination	Min		1.28	-449.3401	-12.6623	-61.2772	-0.5879	-54.2127	-20.6033	386	1.28	
N3.06	C42	386	4.3 1.2D + 1L	Combination	Min		2.56	-442.0195	-12.6623	-61.2772	-0.5879	21.8562	-9.6317	386	2.56	
N3.06	C42	386	4.4 1.2D + 1L	Combination	Max		0	-526.7543	42.654	-47.4988	1.4291	-103.7819	66.4687	386	0	
N3.06	C42	386	4.4 1.2D + 1L	Combination	Max		1.28	-519.4336	42.654	-47.4988	1.4291	-42.9834	11.8716	386	1.28	
N3.06	C42	386	4.4 1.2D + 1L	Combination	Max		2.56	-512.113	42.654	-47.4988	1.4291	22.4419	-32.4856	386	2.56	
N3.06	C42	386	4.4 1.2D + 1L	Combination	Min		0	-541.9129	28.0305	-61.341	-0.855	-134.5911	39.2725	386	0	
N3.06	C42	386	4.4 1.2D + 1L	Combination	Min		1.28	-534.5923	28.0305	-61.341	-0.855	-56.0746	3.3934	386	1.28	
N3.06	C42	386	4.4 1.2D + 1L	Combination	Min		2.56	-527.2716	28.0305	-61.341	-0.855	17.815	-42.7256	386	2.56	
N3.06	C42	386	4.5 1.2D + 1L	Combination	Max		0	-412.5161	17.4434	30.9106	1.143	72.9336	19.8347	386	0	
N3.06	C42	386	4.5 1.2D + 1L	Combination	Max		1.28	-405.1955	17.4434	30.9106	1.143	33.4768	-2.4145	386	1.28	
N3.06	C42	386	4.5 1.2D + 1L	Combination	Max		2.56	-397.8749	17.4434	30.9106	1.143	19.7791	-12.6639	386	2.56	
N3.06	C42	386	4.5 1.2D + 1L	Combination	Min		0	-488.6157	2.5517	-47.0052	-1.4927	-101.1783	-6.2227	386	0	
N3.06	C42	386	4.5 1.2D + 1L	Combination	Min		1.28	-481.2951	2.5517	-47.0052	-1.4927	-41.1204	-9.5672	386	1.28	
N3.06	C42	386	4.5 1.2D + 1L	Combination	Min		2.56	-473.9744	2.5517	-47.0052	-1.4927	-6.8216	-24.9115	386	2.56	
N3.06	C42	386	4.6 1.2D + 1L	Combination	Max		0	-412.5161	17.4434	30.9106	1.143	72.9336	19.8347	386	0	
N3.06	C42	386	4.6 1.2D + 1L	Combination	Max		1.28	-405.1955	17.4434	30.9106	1.143	33.4768	-2.4145	386	1.28	
N3.06	C42	386	4.6 1.2D + 1L	Combination	Max		2.56	-397.8749	17.4434	30.9106	1.143	19.7791	-12.6639	386	2.56	
N3.06	C42	386	4.6 1.2D + 1L	Combination	Min		0	-488.6157	2.5517	-47.0052	-1.4927	-101.1783	-6.2227	386	0	
N3.06	C42	386	4.6 1.2D + 1L	Combination	Min		1.28	-481.2951	2.5517	-47.0052	-1.4927	-41.1204	-9.5672	386	1.28	
N3.06	C42	386	4.6 1.2D + 1L	Combination	Min		2.56	-473.9744	2.5517	-47.0052	-1.4927	-6.8216	-24.9115	386	2.56	
N3.06	C42	386	5.1 0.9D + (1(	Combination	Max		0	-435.9187	83.8785	18.1062	0.9534	40.9727	149.1678	386	0	
N3.06	C42	386	5.1 0.9D + (1(	Combination	Max		1.28	-430.4283	83.8785	18.1062	0.9534	17.7967	41.8033	386	1.28	
N3.06	C42	386	5.1 0.9D + (1(	Combination	Max		2.56	-424.9378	83.8785	18.1062	0.9534	-2.6599	-59.5429	386	2.56	
N3.06	C42	386	5.1 0.9D + (1(	Combination	Min		0	-444.8278	75.284	9.9709	-0.389	22.8655	133.1841	386	0	
N3.06	C42	386	5.1 0.9D + (1(	Combination	Min		1.28	-439.3373	75.284	9.9709	-0.389	10.1028	36.8206	386	1.28	
N3.06	C42	386	5.1 0.9D + (1(	Combination	Min		2.56	-433.8468	75.284	9.9709	-0.389	-5.3792	-65.5611	386	2.56	
N3.06	C42	386	5.2 0.9D + (1(	Combination	Max		0	-458.2783	89.1208	-7.5747	1.661	-16.7564	158.1535	386	0	
N3.06	C42	386	5.2 0.9D + (1(	Combination	Max		1.28	-452.7878	89.1208	-7.5747	1.661	-7.0608	44.0789	386	1.28	
N3.06	C42	386	5.2 0.9D + (1(	Combination	Max		2.56	-447.2974	89.1208	-7.5747	1.661	7.452	-59.3346	386	2.56	
N3.06	C42	386	5.2 0.9D + (1(	Combination	Min		0	-474.0603	73.8959	-21.9862	-0.7169	-48.8327	129.8389	386	0	
N3.06	C42	386	5.2 0.9D + (1(	Combination	Min		1.28	-468.5698	73.8959	-21.9862	-0.7169	-20.6903	35.2521	386	1.28	
N3.06	C42	386	5.2 0.9D + (1(	Combination	Min		2.56	-463.0794	73.8959	-21.9862	-0.7169	2.6349	-69.9957	386	2.56	
N3.06	C42	386	5.3 0.9D - (10	Combination	Max		0	-189.8865	-61.7469	-21.7735	0.1733	-42.3539	-123.7729	386	0	
N3.06	C42	386	5.3 0.9D - (10	Combination	Max		1.28	-184.396	-61.7469	-21.7735	0.1733	-14.4838	-44.7369	386	1.28	
N3.06	C42	386	5.3 0.9D - (10	Combination	Max		2.56	-178.9055	-61.7469	-21.7735	0.1733	16.1056	40.3173	386	2.56	
N3.06	C42	386	5.3 0.9D - (10	Combination	Min		0	-198.7955	-70.3414	-29.9089	-1.1691	-60.4611	-139.7566	386	0	
N3.06	C42	386	5.3 0.9D - (10	Combination	Min		1.28	-193.305	-70.3414	-29.9089	-1.1691	-22.1778	-49.7196	386	1.28	
N3.06	C42	386	5.3 0.9D - (10	Combination	Min		2.56	-187.8145	-70.3414	-29.9089	-1.1691	13.3863	34.2991	386	2.56	
N3.06	C42	386	5.4 0.9D - (10	Combination	Max		0	-160.6539	-60.3588	10.1836	0.5012	29.3443	-120.4277	386	0	
N3.06	C42	386	5.4 0.9D - (10	Combination	Max		1.28	-155.1634	-60.3588	10.1836	0.5012	16.3093	-43.1684	386	1.28	

N3.06	C42	386	5.4	0.9D - (10	Combination	Max	2.56	-149.673	-60.3588	10.1836	0.5012	8.0915	44.7518	386	2.56
N3.06	C42	386	5.4	0.9D - (10	Combination	Min	0	-176.4359	-75.5836	-4.2279	-1.8768	-2.732	-148.7423	386	0
N3.06	C42	386	5.4	0.9D - (10	Combination	Min	1.28	-170.9454	-75.5836	-4.2279	-1.8768	2.6798	-51.9952	386	1.28
N3.06	C42	386	5.4	0.9D - (10	Combination	Min	2.56	-165.455	-75.5836	-4.2279	-1.8768	3.2744	34.0908	386	2.56
N3.06	C42	386	5.5	0.9D + Ex	Combination	Max	0	-198.1953	74.4773	7.5954	1.5738	17.9948	130.9537	386	0
N3.06	C42	386	5.5	0.9D + Ex	Combination	Max	1.28	-192.7048	74.4773	7.5954	1.5738	8.4188	35.677	386	1.28
N3.06	C42	386	5.5	0.9D + Ex	Combination	Max	2.56	-187.2143	74.4773	7.5954	1.5738	12.6139	34.5559	386	2.56
N3.06	C42	386	5.5	0.9D + Ex	Combination	Min	0	-436.519	-60.9402	-19.3981	-1.7895	-37.4832	-121.5425	386	0
N3.06	C42	386	5.5	0.9D + Ex	Combination	Min	1.28	-431.0285	-60.9402	-19.3981	-1.7895	-12.7998	-43.5933	386	1.28
N3.06	C42	386	5.5	0.9D + Ex	Combination	Min	2.56	-425.538	-60.9402	-19.3981	-1.7895	-1.8875	-59.7997	386	2.56
N3.06	C42	386	5.6	0.9D - Ex	Combination	Max	0	-198.1953	74.4773	7.5954	1.5738	17.9948	130.9537	386	0
N3.06	C42	386	5.6	0.9D - Ex	Combination	Max	1.28	-192.7048	74.4773	7.5954	1.5738	8.4188	35.677	386	1.28
N3.06	C42	386	5.6	0.9D - Ex	Combination	Max	2.56	-187.2143	74.4773	7.5954	1.5738	12.6139	34.5559	386	2.56
N3.06	C42	386	5.6	0.9D - Ex	Combination	Min	0	-436.519	-60.9402	-19.3981	-1.7895	-37.4832	-121.5425	386	0
N3.06	C42	386	5.6	0.9D - Ex	Combination	Min	1.28	-431.0285	-60.9402	-19.3981	-1.7895	-12.7998	-43.5933	386	1.28
N3.06	C42	386	5.6	0.9D - Ex	Combination	Min	2.56	-425.538	-60.9402	-19.3981	-1.7895	-1.8875	-59.7997	386	2.56
N3.06	C42	386	6.1	0.9D + (1(	Combination	Max	0	-311.2623	29.4284	47.3286	0.3052	108.7809	48.3227	386	0
N3.06	C42	386	6.1	0.9D + (1(	Combination	Max	1.28	-305.7718	29.4284	47.3286	0.3052	48.2004	10.6543	386	1.28
N3.06	C42	386	6.1	0.9D + (1(	Combination	Max	2.56	-300.2813	29.4284	47.3286	0.3052	-10.0142	-21.778	386	2.56
N3.06	C42	386	6.1	0.9D + (1(	Combination	Min	0	-319.0136	21.9508	40.2504	-0.8627	93.0267	34.416	386	0
N3.06	C42	386	6.1	0.9D + (1(	Combination	Min	1.28	-313.5231	21.9508	40.2504	-0.8627	41.5062	6.319	386	1.28
N3.06	C42	386	6.1	0.9D + (1(	Combination	Min	2.56	-308.0326	21.9508	40.2504	-0.8627	-12.3802	-27.0141	386	2.56
N3.06	C42	386	6.2	0.9D + (1(	Combination	Max	0	-226.0101	-11.2644	47.3924	0.5723	110.7246	-27.7609	386	0
N3.06	C42	386	6.2	0.9D + (1(	Combination	Max	1.28	-220.5196	-11.2644	47.3924	0.5723	50.0623	-13.3424	386	1.28
N3.06	C42	386	6.2	0.9D + (1(	Combination	Max	2.56	-215.0292	-11.2644	47.3924	0.5723	-5.973	11.3159	386	2.56
N3.06	C42	386	6.2	0.9D + (1(	Combination	Min	0	-241.1687	-25.8879	33.5501	-1.7118	79.9153	-54.9571	386	0
N3.06	C42	386	6.2	0.9D + (1(	Combination	Min	1.28	-235.6783	-25.8879	33.5501	-1.7118	36.9711	-21.8206	386	1.28
N3.06	C42	386	6.2	0.9D + (1(	Combination	Min	2.56	-230.1878	-25.8879	33.5501	-1.7118	-10.5999	1.076	386	2.56
N3.06	C42	386	6.3	0.9D - (10	Combination	Max	0	-315.7006	-8.4136	-52.053	0.647	-112.5151	-25.0048	386	0
N3.06	C42	386	6.3	0.9D - (10	Combination	Max	1.28	-310.2102	-8.4136	-52.053	0.647	-45.8873	-14.2353	386	1.28
N3.06	C42	386	6.3	0.9D - (10	Combination	Max	2.56	-304.7197	-8.4136	-52.053	0.647	23.1066	1.7703	386	2.56
N3.06	C42	386	6.3	0.9D - (10	Combination	Min	0	-323.452	-15.8913	-59.1312	-0.521	-128.2694	-38.9115	386	0
N3.06	C42	386	6.3	0.9D - (10	Combination	Min	1.28	-317.9615	-15.8913	-59.1312	-0.521	-52.5814	-18.5706	386	1.28
N3.06	C42	386	6.3	0.9D - (10	Combination	Min	2.56	-312.471	-15.8913	-59.1312	-0.521	20.7406	-3.4658	386	2.56
N3.06	C42	386	6.4	0.9D - (10	Combination	Max	0	-393.5455	39.425	-45.3528	1.4961	-99.4037	64.3683	386	0
N3.06	C42	386	6.4	0.9D - (10	Combination	Max	1.28	-388.055	39.425	-45.3528	1.4961	-41.3522	13.9043	386	1.28
N3.06	C42	386	6.4	0.9D - (10	Combination	Max	2.56	-382.5645	39.425	-45.3528	1.4961	21.3263	-26.3198	386	2.56
N3.06	C42	386	6.4	0.9D - (10	Combination	Min	0	-408.7041	24.8015	-59.195	-0.788	-130.213	37.1721	386	0
N3.06	C42	386	6.4	0.9D - (10	Combination	Min	1.28	-403.2136	24.8015	-59.195	-0.788	-54.4434	5.4261	386	1.28
N3.06	C42	386	6.4	0.9D - (10	Combination	Min	2.56	-397.7232	24.8015	-59.195	-0.788	16.6994	-36.5597	386	2.56
N3.06	C42	386	6.5	0.9D + Ey	Combination	Max	0	-279.3073	14.2144	33.0566	1.21	77.3117	17.7343	386	0
N3.06	C42	386	6.5	0.9D + Ey	Combination	Max	1.28	-273.8168	14.2144	33.0566	1.21	35.1081	-0.3818	386	1.28
N3.06	C42	386	6.5	0.9D + Ey	Combination	Max	2.56	-268.3264	14.2144	33.0566	1.21	18.6635	-6.4981	386	2.56
N3.06	C42	386	6.5	0.9D + Ey	Combination	Min	0	-355.4069	-0.6772	-44.8592	-1.4257	-96.8001	-8.3231	386	0
N3.06	C42	386	6.5	0.9D + Ey	Combination	Min	1.28	-349.9164	-0.6772	-44.8592	-1.4257	-39.4891	-7.5345	386	1.28
N3.06	C42	386	6.5	0.9D + Ey	Combination	Min	2.56	-344.4259	-0.6772	-44.8592	-1.4257	-7.9372	-18.7457	386	2.56
N3.06	C42	386	6.6	0.9D - Ey	Combination	Max	0	-279.3073	14.2144	33.0566	1.21	77.3117	17.7343	386	0
N3.06	C42	386	6.6	0.9D - Ey	Combination	Max	1.28	-273.8168	14.2144	33.0566	1.21	35.1081	-0.3818	386	1.28
N3.06	C42	386	6.6	0.9D - Ey	Combination	Max	2.56	-268.3264	14.2144	33.0566	1.21	18.6635	-6.4981	386	2.56
N3.06	C42	386	6.6	0.9D - Ey	Combination	Min	0	-355.4069	-0.6772	-44.8592	-1.4257	-96.8001	-8.3231	386	0
N3.06	C42	386	6.6	0.9D - Ey	Combination	Min	1.28	-349.9164	-0.6772	-44.8592	-1.4257	-39.4891	-7.5345	386	1.28
N3.06	C42	386	6.6	0.9D - Ey	Combination	Min	2.56	-344.4259	-0.6772	-44.8592	-1.4257	-7.9372	-18.7457	386	2.56
N3.06	C42	386	3.3	1.2D + 1L	Combination	Max	0	-323.0953	-58.5179	-23.9195	0.1063	-46.7321	-121.6724	386	0
N3.06	C42	386	3.3	1.2D + 1L	Combination	Max	1.28	-315.7746	-58.5179	-23.9195	0.1063	-16.1151	-46.7696	386	1.28
N3.06	C42	386	3.3	1.2D + 1L	Combination	Max	2.56	-308.454	-58.5179	-23.9195	0.1063	17.2212	34.1515	386	2.56
N3.06	C42	386	3.3	1.2D + 1L	Combination	Min	0	-332.0043	-67.1124	-32.0549	-1.2361	-64.8393	-137.6562	386	0
N3.06	C42	386	3.3	1.2D + 1L	Combination	Min	1.28	-324.6837	-67.1124	-32.0549	-1.2361	-23.809	-51.7523	386	1.28
N3.06	C42	386	3.3	1.2D + 1L	Combination	Min	2.56	-317.363	-67.1124	-32.0549	-1.2361	14.5019	28.1333	386	2.56
N3.06	C42	386	4.1	1.2D + 1L	Combination	Max	0	-444.4711	32.6574	45.1826	0.2382	104.4028	50.4231	386	0
N3.06	C42	386	4.1	1.2D + 1L	Combination	Max	1.28	-437.1504	32.6574	45.1826	0.2382	46.5691	8.6216	386	1.28
N3.06	C42	386	4.1	1.2D + 1L	Combination	Max	2.56	-429.8298	32.6574	45.1826	0.2382	-8.8986	-27.9438	386	2.56
N3.06	C42	386	4.1	1.2D + 1L	Combination	Min	0	-452.2224	25.1797	38.1044	-0.9297	88.6486	36.5164	386	0
N3.06	C42	386	4.1	1.2D + 1L	Combination	Min	1.28	-444.9018	25.1797	38.1044	-0.9297	39.875	4.2863	386	1.28
N3.06	C42	386	4.1	1.2D + 1L	Combination	Min	2.56	-437.5811	25.1797	38.1044	-0.9297	-11.2646	-33.18	386	2.56

Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.45	m	d =	0.39 m
As =	8.83	cm²	h =	0.45 m
Altura Libre =	2.66	m		
As' =	8.83	cm²	Po =	4872.72 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2533.81 kN
Mod Elástico Acero =	200000	Mpa		3898.18 kN

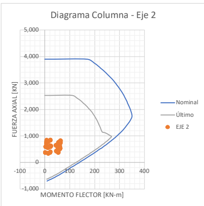
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

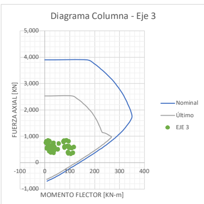
Cuantías Columnas		
As min	20.25 cm²	Cumple
As máx	50.63 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	176.00 cm	45.00 cm
S ≤	10.80 cm	15.00 cm	10.80 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento			
s =	4.50 cm		4.50 cm
Ash =	2.19 cm2		2.19 cm2
	Cumple		Cumple
Av/m =	48.62 cm²/m		48.62 cm²/m

COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.0045	0.00	0.00	-7,400.000	-420.000	51,400.000	420.000	0.257000	7.8334	-706.6065	-706.6065	0.9	7.05	-635.95	765.8015	5.5157	11.2041
0.009	0.01	0.01	-3,400.000	-420.000	25,400.000	420.000	0.127000	15.5325	-671.4930	-671.4930	0.9	13.98	-604.34	757.2607	5.5157	11.2041
0.0135	0.01	0.01	-2,066.667	-420.000	16,733.333	420.000	0.083667	23.0972	-636.3795	-636.3795	0.9	20.79	-572.74	748.72	5.5157	11.2041
0.018	0.02	0.02	-1,400.000	-420.000	12,400.000	420.000	0.062000	30.5277	-601.2660	-601.2660	0.9	27.47	-541.14	846.5296	6.4722	12.4952
0.0225	0.02	0.02	-1,000.000	-420.000	9,800.000	420.000	0.049000	37.8238	-566.1525	-566.1525	0.9	34.04	-509.54	839.2089	6.4722	12.4952
0.027	0.02	0.02	-733.333	-420.000	8,066.667	420.000	0.040333	44.9857	-531.0390	-531.0390	0.9	40.49	-477.94	831.8883	6.4722	12.4952
0.0315	0.03	0.03	-542.857	-420.000	6,828.571	420.000	0.034143	52.0132	-495.9255	-495.9255	0.9	46.81	-446.33	756.0451	5.1644	10.48
0.036	0.03	0.03	-400.000	-400.000	5,900.000	420.000	0.029500	61.8203	-443.1520	-443.1520	0.9	55.64	-398.84	748.7245	5.1644	10.48
0.0405	0.03	0.03	-288.889	-288.889	5,177.778	420.000	0.025889	84.7676	-309.9274	-309.9274	0.9	76.29	-278.93	741.4038	5.1644	10.48
0.045	0.04	0.04	-200.000	-200.000	4,600.000	420.000	0.023000	104.3428	-196.3250	-196.3250	0.9	93.91	-176.69	725.3946	5.2471	10.5007
0.0495	0.04	0.04	-127.273	-127.273	4,127.273	420.000	0.020636	121.4291	-96.9933	-96.9933	0.9	109.29	-87.29	718.074	5.2471	10.5007
0.054	0.05	0.05	-66.667	-66.667	3,733.333	420.000	0.018667	136.6151	-8.3647	-8.3647	0.9	122.95	-7.53	710.7533	5.2471	10.5007
0.0585	0.05	0.05	-15.385	-15.385	3,400.000	420.000	0.017000	150.3083	72.0309	72.0309	0.9	135.28	64.83	597.5947	51.6252	38.4584
0.063	0.05	0.05	28.571	28.571	3,114.286	420.000	0.015571	162.7998	145.9576	145.9576	0.9	146.52	131.36	590.2741	51.6252	38.4584
0.0675	0.06	0.06	66.667	66.667	2,866.667	420.000	0.014333	174.3032	214.7092	214.7092	0.9	156.87	193.24	582.9534	51.6252	38.4584
0.072	0.06	0.06	100.000	100.000	2,650.000	420.000	0.013250	184.9784	279.2560	279.2560	0.9	166.48	251.33	612.4274	50.7773	26.7701
0.0765	0.07	0.07	129.412	129.412	2,458.824	420.000	0.012294	194.9480	340.3401	340.3401	0.9	175.45	306.31	605.1067	50.7773	26.7701
0.081	0.07	0.07	155.556	155.556	2,288.889	420.000	0.011444	204.3072	398.5386	398.5386	0.9	183.88	358.68	597.7861	50.7773	26.7701
0.0855	0.07	0.07	178.947	178.947	2,136.842	420.000	0.010684	213.1311	454.3070	454.3070	0.9	191.82	408.88	663.1852	52.3487	13.0903
0.09	0.08	0.08	200.000	200.000	2,000.000	420.000	0.010000	221.4798	508.0100	508.0100	0.9	199.33	457.21	655.8646	52.3487	13.0903
0.0945	0.08	0.08	219.048	219.048	1,876.190	420.000	0.009381	229.4022	559.9425	559.9425	0.9	206.46	503.95	648.5439	52.3487	13.0903
0.099	0.08	0.08	236.364	236.364	1,763.636	420.000	0.008818	236.9379	610.3461	610.3461	0.9	213.24	549.31	689.4607	50.8467	33.7957
0.1035	0.09	0.09	252.174	252.174	1,660.870	420.000	0.008304	244.1200	659.4201	659.4201	0.9	219.71	593.48	682.1401	50.8467	33.7957
0.108	0.09	0.09	266.667	266.667	1,566.667	420.000	0.007833	250.9758	707.3307	707.3307	0.9	225.88	636.60	674.8194	50.8467	33.7957
0.1125	0.10	0.10	280.000	280.000	1,480.000	420.000	0.007400	257.5283	754.2175	754.2175	0.9	231.78	678.80	810.4978	61.3467	5.7499
0.117	0.10	0.10	292.308	292.308	1,400.000	420.000	0.007000	263.7972	800.1987	800.1987	0.9	237.42	720.18	803.1772	61.3467	5.7499
0.1215	0.10	0.10	303.704	303.704	1,325.926	420.000	0.006630	269.7988	845.3749	845.3749	0.9	242.82	760.84	795.8565	61.3467	5.7499
0.126	0.11	0.11	314.286	314.286	1,257.143	420.000	0.006286	275.5476	889.8323	889.8323	0.9	247.99	800.85	825.3304	62.1945	17.4382
0.1305	0.11	0.11	324.138	324.138	1,193.103	420.000	0.005966	281.0558	933.6453	933.6453	0.9	252.95	840.28	818.0098	62.1945	17.4382
0.135	0.11	0.11	333.333	333.333	1,133.333	420.000	0.005667	286.3339	976.8783	976.8783	0.9	257.70	879.19	810.6892	62.1945	17.4382
0.1395	0.12	0.12	341.935	341.935	1,077.419	420.000	0.005387	291.3913	1,019.5875	1,019.5875	0.9	262.25	917.63	733.4645	61.416	54.816
0.144	0.12	0.12	350.000	350.000	1,025.000	420.000	0.005125	296.2361	1,061.8220	1,061.8220	0.9	266.61	955.64	726.1438	61.416	54.816
0.1485	0.13	0.13	357.576	357.576	975.758	420.000	0.004879	300.8753	1,103.6249	1,103.6249	0.8896	267.64	981.73	718.8232	61.416	54.816
0.153	0.13	0.13	364.706	364.706	929.412	420.000	0.004647	305.3153	1,145.0343	1,145.0343	0.8696	265.49	995.69	759.74	62.918	34.1106
0.1575	0.13	0.13	371.429	371.429	885.714	420.000	0.004429	309.5617	1,186.0839	1,186.0839	0.8507	263.36	1009.05	752.4193	62.918	34.1106
0.18	0.15	0.15	400.000	400.000	700.000	420.000	0.003500	328.0441	1,386.8800	1,386.8800	0.7707	252.82	1068.85	745.0987	62.918	34.1106
0.2025	0.17	0.17	422.222	420.000	555.556	420.000	0.002778	341.9200	1,580.1075	1,580.1075	0.7084	242.23	1119.39	655.347	44.0572	25.134
0.225	0.19	0.19	440.000	420.000	440.000	420.000	0.002200	349.5243	1,755.6750	1,755.6750	0.6586	230.20	1156.32	648.0263	44.0572	25.134
0.2475	0.21	0.21	454.545	420.000	345.455	345.455	0.001727	342.9099	1,997.0661	1,997.0661	0.65	222.89	1298.09	640.7057	44.0572	25.134
0.27	0.23	0.23	466.667	420.000	266.667	266.667	0.001333	332.3197	2,242.2033	2,242.2033	0.65	216.01	1457.43	767.5782	54.6265	4.1137
0.2925	0.25	0.25	476.923	420.000	200.000	200.000	0.001000	320.1378	2,476.6375	2,476.6375	0.65	208.09	1609.81	760.2575	54.6265	4.1137
0.315	0.27	0.27	485.714	420.000	142.857	142.857	0.000714	305.9857	2,702.6621	2,702.6621	0.65	198.89	1756.73	752.9369	54.6265	4.1137
0.3375	0.29	0.29	493.333	420.000	93.333	93.333	0.000467	289.5860	2,921.9592	2,921.9592	0.65	188.23	1899.27	655.347	44.0572	25.134
0.36	0.31	0.31	500.000	420.000	50.000	50.000	0.000250	270.7304	3,135.7900	3,135.7900	0.65	175.97	2038.26	648.0263	44.0572	25.134
0.3825	0.33	0.33	505.882	420.000	11.765	11.765	0.000059	249.2599	3,345.1193	3,345.1193	0.65	162.02	2174.33	640.7057	44.0572	25.134
0.405	0.34	0.34	511.111	420.000	-22.222	-22.222	-0.000111	225.0506	3,550.6972	3,550.6972	0.65	146.28	2307.95	767.5782	54.6265	4.1137
0.4275	0.36	0.36	515.789	420.000	-52.632	-52.632	-0.000263	198.0048	3,753.1162	3,753.1162	0.65	128.70	2439.53	760.2575	54.6265	4.1137
0.45	0.38	0.38	520.000	420.000	-80.000	-80.000	-0.000400	168.0444	3,898.1760	3,952.8500	0.65	109.23	2533.81	752.9369	54.6265	4.1137
0.54	0.46	0.45	533.333	420.000	-166.667	-166.667	-0.000833	36.9094	3,898.1760	4,649.0267	0.65	23.99	2533.81	564.9181	11.4287	107.2463
0.63	0.54	0.45	542.857	420.000	-228.571	-228.571	-0.001143	27.8902	3,898.1760	4,703.6886	0.65	18.13	2533.81	557.5975	11.4287	107.2463
0.72	0.61	0.45	550.000	420.000	-275.000	-275.000	-0.001375	21.1258	3,898.1760	4,744.6850	0.65	13.73	2533.81	550.2768	11.4287	107.2463
0.81	0.69	0.45	555.556	420.000	-311.111	-311.111	-0.001556	15.8646	3,898.1760	4,776.5711	0.65	10.31	2533.81	577.8233	10.691	97.0768
0.9	0.77	0.45	560.000	420.000	-340.000	-340.000	-0.001700	11.6556	3,898.1760	4,802.0800	0.65	7.58	2533.81	570.5027	10.691	97.0768
0.99	0.84	0.45	563.636	420.000	-363.636	-363.636	-0.001818	8.2119	3,898.1760	4,822.9509	0.65	5.34	2533.81	563.182	10.691	97.0768
1.08	0.92	0.45	566.667	420.000	-383.333	-383.333	-0.001917	5.3422	3,898.1760	4,840.3433	0.65	3.47	2533.81	601.2292	22.2293	115.66
1.17	0.99	0.45	569.231	420.000	-400.000	-400.000	-0.002000	2.9139	3,898.1760	4,855.0600	0.65	1.89	2533.81	593.9086	22.2293	115.66
1.26	1.07	0.45	571.429	420.000	-414.286	-414.286	-0.002071	0.8325	3,898.1760	4,867.6743	0.65	0.54	2533.81	586.588	22.2293	115.66
1.35	1.15	0.45	573.333	420.000	-426.667	-420.000	-0.002133	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	626.4669	23.6719	95.7725
1.8	1.53	0.45	580.000	420.000	-470.000	-420.000	-0.002350	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	619.1462	23.6719	95.7725
2.25	1.91	0.45	584.000	420.000	-496.000	-420.000	-0.002480	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	611.8256	23.6719	95.7725
2.7	2.30	0.45	586.667	420.000	-513.333	-420.000	-0.002567	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	845.1019	21.2604	76.0566
3.15	2.68	0.45	588.571	420.000	-525.714	-420.000	-0.002629	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	837.7812	21.2604	76.0566
3.6	3.06	0.45	590.000	420.000	-535.000	-420.000	-0.002675	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	830.4606	21.2604	76.0566
4.05	3.44	0.45	591.111	420.000	-542.222	-420.000	-0.002711	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	858.007	21.998	86.226
4.5	3.83	0.45	592.000	420.000	-548.000	-420.000	-0.002740	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	850.6864	21.998	86.226
4.95	4.21	0.45	592.727	420.000	-552.727	-420.000	-0.002764	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	843.3658	21.998	86.226
5.4	4.59	0.45	593.333	420.000	-556.667	-420.000	-0.002783	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	796.4583	13.1026	74.7522
5.85	4.97	0.45	593.846	420.000	-560.000	-420.000	-0.002800	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	789.1376	13.1026	74.7522
6.3	5.36	0.45	594.286	420.000	-562.857	-420.000	-0.002814	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	781.817	13.1026	74.7522
6.75	5.74	0.45	594.667	420.000	-565.333	-420.000	-0.002827	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	821.6959	11.66	94.6398
7.2	6.12	0.45	595.000	420.000	-567.500	-420.000	-0.002838	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	814.3753	11.66	94.6398
7.65	6.50	0.45	595.294	420.000	-569.412	-420.000	-0.002847	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	807.0547	11.66	94.6398
8.1	6.89	0.45	595.556	420.000	-571.111	-420.000	-0.002856	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	601.9615	2.8509	96.5473
8.55	7.27	0.45	595.789	420.000	-572.632	-420.000	-0.002863	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	594.6409	2.8509	96.5473
9	7.65	0.45	596.000	420.000	-574.000	-420.000	-0.002870	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	587.3202	2.8509	96.5473
9.45	8.03	0.45	596.190	420.000	-575.238	-420.000	-0.002876	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	820.9637	7.7184	75.5271
9.9	8.42	0.45	596.364	420.000	-576.364	-420.000	-0.002882	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	813.643	7.7184	75.5271
10.35	8.80	0.45	596.522	420.000	-577.391	-420.000	-0.002887	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	806.3224	7.7184	75.5271
10.8	9.18	0.45	596.667	420.000	-578.333	-420.000	-0.002892	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	601.9615	2.8509	96.5473
11.25	9.56	0.45	596.800	420.000	-579.200	-420.000	-0.002896	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	594.6409	2.8509	96.5473
11.7	9.95	0.45	596.923	420.000	-580.000	-420.000	-0.002900	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	587.3202	2.8509	96.5473
12.15	10.33	0.45	597.037	420.000	-580.741	-420.000	-0.002904	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	820.9637	7.7184	75.5271
12.6	10.71	0.45	597.143	420.000	-581.429	-420.000	-0.002907	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	813.643	7.7184	75.5271
13.05	11.09	0.45	597.241	420.000	-582.069	-420.000	-0.002910	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	806.3224	7.7184	75.5271
13.5	11.48	0.45	597.333	420.000	-582.667	-420.000	-0.002913	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	378.4331	53.364	35.1509
13.95	11.86	0.45	597.419	420.000	-583.226	-420.000	-0.002916	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	372.9426	53.364	35.1509
14.4	12.24	0.45	597.500	420.000	-583.750	-420.000	-0.002919	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	367.4521	53.364	35.1509
14.85	12.62	0.45	597.576	420.000	-584.242	-420.000	-0.002921	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	393.2657	52.5162	23.4626
19.35	16.45	0.45	598.140	420.000	-587.907	-420.000	-0.002940	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	387.7752	52.5162	23.4626
23.85	20.27	0.45	598.491	420.000	-590.189	-420.000	-0.002951	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	382.2848	52.5162	23.4626
28.35	24.10	0.45	598.730	420.000	-591.746	-420.000	-0.002959	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	444.0236	54.0875	16.3978
32.85	27.92	0.45	598.904	420.000	-592.877	-420.000	-0.002964	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	438.5331	54.0875	16.3978
37.35	31.75	0.45	599.036	420.000	-593.735	-420.000	-0.002969	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	433.0426	54.0875	16.3978
41.85	35.57	0.45	599.140	420.000	-594.409	-420.000	-0.002972	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	470.2991	52.5856	37.1032
46.35	39.40	0.45	599.223	420.000	-594.951	-420.000	-0.002975	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	464.8086	52.5856	37.1032
50.85	43.22	0.45	599.292	420.000	-595.398	-420.000	-0.002977	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	459.3181	52.5856	37.1032
55.35	47.05	0.45	599.350	420.000	-595.772	-420.000	-0.002979	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	591.3362	59.6078	9.0573
59.85	50.87	0.45	599.398	420.000	-596.090	-420.000	-0.002980	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	585.8457	59.6078	9.0573
64.35	54.70	0.45	599.441	420.000	-596.364	-420.000	-0.002982	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	580.3552	59.6078	9.0573
68.85	58.52	0.45	599.477	420.000	-596.601	-420.000	-0.002983	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	606.1688	60.4557	20.7457
73.35	62.35	0.45	599.509	420.000	-596.810	-420.000	-0.002984	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	600.6783	60.4557	20.7457
77.85	66.17	0.45	599.538	420.000	-596.994	-420.000	-0.002985	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	595.1879	60.4557	20.7457
82.35	70.00	0.45	599.563	420.000	-597.158	-420.000	-0.002986	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	514.3028	59.6772	51.5085
86.85	73.82	0.45	599.585	420.000	-597.306	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	508.8123	59.6772	51.5085
91.35	77.65	0.45	599.606	420.000	-597.438	-420.000	-0.002987	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	503.3219	59.6772	51.5085
95.85	81.47	0.45	599.624	420.000	-597.559	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	540.5783	61.1792	30.8031
100.35	85.30	0.45	599.641	420.000	-597.668	-420.000	-0.002988	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	535.0878	61.1792	30.8031
104.85	89.12	0.45	599.657	420.000	-597.768	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	529.5974	61.1792	30.8031
109.35	92.95	0.45	599.671	420.000	-597.860	-420.000	-0.002989	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	436.1853	45.796	21.8265
113.85	96.77	0.45	599.684	420.000	-597.945	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	430.6949	45.796	21.8265
118.35	100.60	0.45	599.696	420.000	-598.023	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	425.2044	45.796	21.8265
122.85	104.42	0.45	599.707	420.000	-598.095	-420.000	-0.002990	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	548.4165	52.8877	7.4212
127.35	108.25	0.45	599.717	420.000	-598.163	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	542.9261	52.8877	7.4212
131.85	112.07	0.45	599.727	420.000	-598.225	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	537.4356	52.8877	7.4212
136.35	115.90	0.45	599.736	420.000	-598.284	-420.000	-0.002991	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	436.1853	45.796	21.8265
140.85	119.72	0.45	599.744	420.000	-598.339	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	430.6949	45.796	21.8265
145.35	123.55	0.45	599.752	420.000	-598.390	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	425.2044	45.796	21.8265
149.85	127.37	0.45	599.760	420.000	-598.438	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	548.4165	52.8877	7.4212
154.35	131.20	0.45	599.767	420.000	-598.484	-420.000	-0.002992	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	542.9261	52.8877	7.4212
158.85	135.02	0.45	599.773	420.000	-598.527	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	537.4356	52.8877	7.4212
163.35	138.85	0.45	599.780	420.000	-598.567	-420.000	-0.002993	0.0000	3,898.1760	4,872.7200	0.65	0.00	2533.81	345.7565	13.1676	103.9388
														340.266	13.1676	103.9388
														334.7755	13.1676	103.9388
														358.6617	12.4299	93.7694
														353.1712	12.4299	93.7694
														347.6807	12.4299	93.7694
														382.0676	20.4905	112.3526
														376.5771	20.4905	112.3526
														371.0866	20.4905	112.3526
														407.3052	21.9331	92.465
														401.8148	21.9331	92.465
														396.3243	21.9331	92.465
														625.9402	19.5215	79.3641
														620.4497	19.5215	79.3641
														614.9593	19.5215	79.3641
														638.8454	20.2592	89.5335
														633.3549	20.2592	89.5335
														627.8645	20.2592	89.5335
														577.2966	14.8414	78.0597
														571.8062	14.8414	78.0597
														566.3157	14.8414	78.0597
														602.5343	13.3988	97.9473
														597.0438	13.3988	97.9473
														591.5533	13.3988	97.9473
														382.7999	1.1121	93.2398
														377.3094	1.1121	93.2398
														371.8189	1.1121	93.2398
														601.802	5.9796	78.8345
														596.3115	5.9796	78.8345
														590.8211	5.9796	78.8345
														382.7999	1.1121	93.2398
														377.3094	1.1121	93.2398
														371.8189	1.1121	93.2398
														601.802	5.9796	78.8345
														596.3115	5.9796	78.8345
														590.8211	5.9796	78.8345
														810.4978	61.3467	5.7499
														803.1772	61.3467	5.7499
														795.8565	61.3467	5.7499
														825.3304	62.1945	17.4382
														818.0098	62.1945	17.4382
														810.6892	62.1945	17.4382
														564.9181	11.4287	107.2463
														557.5975	11.4287	107.2463
														550.2768	11.4287	107.2463
														577.8233	10.691	97.0768
														570.5027	10.691	97.0768
														563.182	10.691	97.0768

Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.4	m	d =	0.34 m
As =	7.11	cm²	h =	0.40 m
Altura Libre =	2.56	m		
As' =	7.11	cm²	Po =	3861.24 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2007.84 kN
Mod Elástico Acero =	200000	Mpa		3088.99 kN

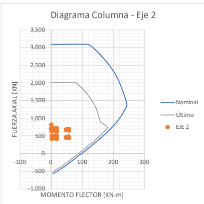
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

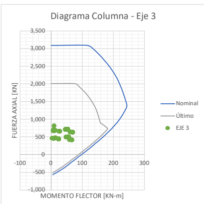
Cuantías Columnas		
As min	16.00 cm²	Cumple
As máx	40.00 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.00 cm	15.00 cm	10.00 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento			
s =	4.50 cm		4.50 cm
Ash =	2.25 cm2		2.25 cm2
	Cumple		Cumple
Av/m =	49.96 cm²/m		49.96 cm²/m

COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.004	0.00	0.00	-8,400.000	-420.000	50,400.000	420.000	0.252000	5.5016	-569.4960	-569.4960	0.9	4.95	-512.55	725.2972	0.942	8.3119
0.008	0.01	0.01	-3,900.000	-420.000	24,900.000	420.000	0.124500	10.9089	-541.7520	-541.7520	0.9	9.82	-487.58	718.5489	0.942	8.3119
0.012	0.01	0.01	-2,400.000	-420.000	16,400.000	420.000	0.082000	16.2219	-514.0080	-514.0080	0.9	14.60	-462.61	711.8007	0.942	8.3119
0.016	0.01	0.01	-1,650.000	-420.000	12,150.000	420.000	0.060750	21.4406	-486.2640	-486.2640	0.9	19.30	-437.64	824.2904	0.8619	9.3566
0.02	0.02	0.02	-1,200.000	-420.000	9,600.000	420.000	0.048000	26.5649	-458.5200	-458.5200	0.9	23.91	-412.67	818.5062	0.8619	9.3566
0.024	0.02	0.02	-900.000	-420.000	7,900.000	420.000	0.039500	31.5949	-430.7760	-430.7760	0.9	28.44	-387.70	812.722	0.8619	9.3566
0.028	0.02	0.02	-685.714	-420.000	6,685.714	420.000	0.033429	36.5305	-403.0320	-403.0320	0.9	32.88	-362.73	691.5597	0.9081	7.6756
0.032	0.03	0.03	-525.000	-420.000	5,775.000	420.000	0.028875	41.3719	-375.2880	-375.2880	0.9	37.23	-337.76	685.7755	0.9081	7.6756
0.036	0.03	0.03	-400.000	-400.000	5,066.667	420.000	0.025333	48.1097	-333.3240	-333.3240	0.9	43.30	-299.99	679.9913	0.9081	7.6756
0.04	0.03	0.03	-300.000	-300.000	4,500.000	420.000	0.022500	62.7163	-234.4800	-234.4800	0.9	56.44	-211.03	686.5603	0.8444	7.7872
0.044	0.04	0.04	-218.182	-218.182	4,036.364	420.000	0.020182	75.4188	-148.5633	-148.5633	0.9	67.88	-133.71	680.7761	0.8444	7.7872
0.048	0.04	0.04	-150.000	-150.000	3,650.000	420.000	0.018250	86.6697	-72.3420	-72.3420	0.9	78.00	-65.11	674.9919	0.8444	7.7872
0.052	0.04	0.04	-92.308	-92.308	3,323.077	420.000	0.016615	96.7820	-3.5788	-3.5788	0.9	87.10	-3.22	674.1335	55.1196	26.4452
0.056	0.05	0.05	-42.857	-42.857	3,042.857	420.000	0.015214	105.9797	59.3246	59.3246	0.9	95.38	53.39	668.3493	55.1196	26.4452
0.06	0.05	0.05	0.000	0.000	2,800.000	420.000	0.014000	114.4267	117.5400	117.5400	0.9	102.98	105.79	662.5651	55.1196	26.4452
0.064	0.05	0.05	37.500	37.500	2,587.500	420.000	0.012938	122.2462	171.9465	171.9465	0.9	110.02	154.75	675.2783	54.5994	24.7317
0.068	0.06	0.06	70.588	70.588	2,400.000	420.000	0.012000	129.5321	223.2162	223.2162	0.9	116.58	200.89	669.4941	54.5994	24.7317
0.072	0.06	0.06	100.000	100.000	2,233.333	420.000	0.011167	136.3578	271.8720	271.8720	0.9	122.72	244.68	663.7099	54.5994	24.7317
0.076	0.06	0.06	126.316	126.316	2,084.211	420.000	0.010421	142.7810	318.3265	318.3265	0.9	128.50	286.49	699.0508	55.3267	9.1739
0.08	0.07	0.07	150.000	150.000	1,950.000	420.000	0.009750	148.8479	362.9100	362.9100	0.9	133.96	326.62	693.2666	55.3267	9.1739
0.084	0.07	0.07	171.429	171.429	1,828.571	420.000	0.009143	154.5959	405.8897	405.8897	0.9	139.14	365.30	687.4823	55.3267	9.1739
0.088	0.07	0.07	190.909	190.909	1,718.182	420.000	0.008591	160.0557	447.4844	447.4844	0.9	144.05	402.74	701.0787	54.4053	12.2094
0.092	0.08	0.08	208.696	208.696	1,617.391	420.000	0.008087	165.2526	487.8746	487.8746	0.9	148.73	439.09	695.2945	54.4053	12.2094
0.096	0.08	0.08	225.000	225.000	1,525.000	420.000	0.007625	170.2076	527.2110	527.2110	0.9	153.19	474.49	689.5103	54.4053	12.2094
0.1	0.09	0.09	240.000	240.000	1,440.000	420.000	0.007200	174.9384	565.6200	565.6200	0.9	157.44	509.06	693.2975	56.2302	9.0559
0.104	0.09	0.09	253.846	253.846	1,361.538	420.000	0.006808	179.4600	603.2086	603.2086	0.9	161.51	542.89	687.5133	56.2302	9.0559
0.108	0.09	0.09	266.667	266.667	1,288.889	420.000	0.006444	183.7853	640.0680	640.0680	0.9	165.41	576.06	681.7291	56.2302	9.0559
0.112	0.10	0.10	278.571	278.571	1,221.429	420.000	0.006107	187.9250	676.2763	676.2763	0.9	169.13	608.65	694.4423	56.7504	10.7694
0.116	0.10	0.10	289.655	289.655	1,158.621	420.000	0.005793	191.8887	711.9008	711.9008	0.9	172.70	640.71	688.6581	56.7504	10.7694
0.12	0.10	0.10	300.000	300.000	1,100.000	420.000	0.005500	195.6845	747.0000	747.0000	0.9	176.12	672.30	682.8739	56.7504	10.7694
0.124	0.11	0.11	309.677	309.677	1,045.161	420.000	0.005226	199.3195	781.6246	781.6246	0.9	179.39	703.46	667.497	56.0361	27.8851
0.128	0.11	0.11	318.750	318.750	993.750	420.000	0.004969	202.8000	815.8193	815.8193	0.8973	181.97	732.04	661.7128	56.0361	27.8851
0.132	0.11	0.11	327.273	327.273	945.455	420.000	0.004727	206.1315	849.6229	849.6229	0.8765	180.67	744.69	655.9286	56.0361	27.8851
0.136	0.12	0.12	335.294	335.294	900.000	420.000	0.004500	209.3187	883.0701	883.0701	0.8569	179.36	756.70	669.525	56.9575	24.8497
0.14	0.12	0.12	342.857	342.857	857.143	420.000	0.004286	212.3659	916.1914	916.1914	0.8384	178.05	768.16	663.7408	56.9575	24.8497
0.16	0.14	0.14	375.000	375.000	675.000	420.000	0.003375	225.6226	1,077.7650	1,077.7650	0.7599	171.45	819.01	657.9566	56.9575	24.8497
0.18	0.15	0.15	400.000	400.000	533.333	420.000	0.002667	235.8101	1,234.2600	1,234.2600	0.6989	164.80	862.56	681.3838	47.3186	10.2294
0.2	0.17	0.17	420.000	420.000	420.000	420.000	0.002100	243.1416	1,387.2000	1,387.2000	0.65	158.04	901.68	675.5996	47.3186	10.2294
0.22	0.19	0.19	436.364	420.000	327.273	327.273	0.001636	236.8940	1,591.8491	1,591.8491	0.65	153.98	1034.70	669.8154	47.3186	10.2294
0.24	0.20	0.20	450.000	420.000	250.000	250.000	0.001250	229.8265	1,785.5100	1,785.5100	0.65	149.39	1160.58	687.192	48.9494	5.4464
0.26	0.22	0.22	461.538	420.000	184.615	184.615	0.000923	221.5841	1,970.7185	1,970.7185	0.65	144.03	1280.97	681.4078	48.9494	5.4464
0.28	0.24	0.24	471.429	420.000	128.571	128.571	0.000643	211.9133	2,149.2857	2,149.2857	0.65	137.74	1397.04	675.6236	48.9494	5.4464
0.3	0.26	0.26	480.000	420.000	80.000	80.000	0.000400	200.6280	2,322.5400	2,322.5400	0.65	130.41	1509.65	681.3838	47.3186	10.2294
0.32	0.27	0.27	487.500	420.000	37.500	37.500	0.000187	187.5888	2,491.4775	2,491.4775	0.65	121.93	1619.46	675.5996	47.3186	10.2294
0.34	0.29	0.29	494.118	420.000	0.000	0.000	0.000000	172.6891	2,656.8600	2,656.8600	0.65	112.25	1726.96	669.8154	47.3186	10.2294
0.36	0.31	0.31	500.000	420.000	-33.333	-33.333	-0.000167	155.8459	2,819.2800	2,819.2800	0.65	101.30	1832.53	687.192	48.9494	5.4464
0.38	0.32	0.32	505.263	420.000	-63.158	-63.158	-0.000316	136.9937	2,979.2053	2,979.2053	0.65	89.05	1936.48	681.4078	48.9494	5.4464
0.4	0.34	0.34	510.000	420.000	-90.000	-90.000	-0.000450	116.0802	3,088.9920	3,137.0100	0.65	75.45	2007.84	675.6236	48.9494	5.4464
0.48	0.41	0.40	525.000	420.000	-175.000	-175.000	-0.000875	24.3873	3,088.9920	3,687.0450	0.65	15.85	2007.84	642.4543	16.1035	68.9333
0.56	0.48	0.40	535.714	420.000	-235.714	-235.714	-0.001179	18.3438	3,088.9920	3,730.2129	0.65	11.92	2007.84	636.6701	16.1035	68.9333
0.64	0.54	0.40	543.750	420.000	-281.250	-281.250	-0.001406	13.8112	3,088.9920	3,762.5888	0.65	8.98	2007.84	630.8859	16.1035	68.9333
0.72	0.61	0.40	550.000	420.000	-316.667	-316.667	-0.001583	10.2858	3,088.9920	3,787.7700	0.65	6.69	2007.84	643.4504	15.6509	67.4424
0.8	0.68	0.40	555.000	420.000	-345.000	-345.000	-0.001725	7.4655	3,088.9920	3,807.9150	0.65	4.85	2007.84	637.6662	15.6509	67.4424
0.88	0.75	0.40	559.091	420.000	-368.182	-368.182	-0.001841	5.1580	3,088.9920	3,824.3973	0.65	3.35	2007.84	631.8819	15.6509	67.4424
0.96	0.82	0.40	562.500	420.000	-387.500	-387.500	-0.001938	3.2351	3,088.9920	3,838.1325	0.65	2.10	2007.84	640.1199	17.0871	69.8793
1.04	0.88	0.40	565.385	420.000	-403.846	-403.846	-0.002019	1.6080	3,088.9920	3,849.7546	0.65	1.05	2007.84	634.3357	17.0871	69.8793
1.12	0.95	0.40	567.857	420.000	-417.857	-417.857	-0.002089	0.2133	3,088.9920	3,859.7164	0.65	0.14	2007.84	628.5515	17.0871	69.8793
1.2	1.02	0.40	570.000	420.000	-430.000	-420.000	-0.002150	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	642.0678	17.9722	66.9638
1.6	1.36	0.40	577.500	420.000	-472.500	-420.000	-0.002363	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	636.2836	17.9722	66.9638
2	1.70	0.40	582.000	420.000	-498.000	-420.000	-0.002490	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	630.4994	17.9722	66.9638
2.4	2.04	0.40	585.000	420.000	-515.000	-420.000	-0.002575	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	725.1254	17.2817	51.7667
2.8	2.38	0.40	587.143	420.000	-527.143	-420.000	-0.002636	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	719.3412	17.2817	51.7667
3.2	2.72	0.40	588.750	420.000	-536.250	-420.000	-0.002681	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	713.557	17.2817	51.7667
3.6	3.06	0.40	590.000	420.000	-543.333	-420.000	-0.002717	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	726.1214	17.7343	53.2575
4	3.40	0.40	591.000	420.000	-549.000	-420.000	-0.002745	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	720.3372	17.7343	53.2575
4.4	3.74	0.40	591.818	420.000	-553.636	-420.000	-0.002768	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	714.553	17.7343	53.2575
4.8	4.08	0.40	592.500	420.000	-557.500	-420.000	-0.002788	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	726.5079	16.3414	51.288
5.2	4.42	0.40	593.077	420.000	-560.769	-420.000	-0.002804	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	720.7237	16.3414	51.288
5.6	4.76	0.40	593.571	420.000	-563.571	-420.000	-0.002818	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	714.9395	16.3414	51.288
6	5.10	0.40	594.000	420.000	-566.000	-420.000	-0.002830	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	728.4558	15.4563	54.2035
6.4	5.44	0.40	594.375	420.000	-568.125	-420.000	-0.002841	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	722.6716	15.4563	54.2035
6.8	5.78	0.40	594.706	420.000	-570.000	-420.000	-0.002850	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	716.8874	15.4563	54.2035
7.2	6.12	0.40	595.000	420.000	-571.667	-420.000	-0.002858	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	647.9599	1.666	60.7465
7.6	6.46	0.40	595.263	420.000	-573.158	-420.000	-0.002866	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	642.1757	1.666	60.7465
8	6.80	0.40	595.500	420.000	-574.500	-420.000	-0.002873	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	636.3915	1.666	60.7465
8.4	7.14	0.40	595.714	420.000	-575.714	-420.000	-0.002879	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	720.6159	3.2968	45.0707
8.8	7.48	0.40	595.909	420.000	-576.818	-420.000	-0.002884	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	714.8317	3.2968	45.0707
9.2	7.82	0.40	596.087	420.000	-577.826	-420.000	-0.002889	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	709.0475	3.2968	45.0707
9.6	8.16	0.40	596.250	420.000	-578.750	-420.000	-0.002894	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	647.9599	1.666	60.7465
10	8.50	0.40	596.400	420.000	-579.600	-420.000	-0.002898	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	642.1757	1.666	60.7465
10.4	8.84	0.40	596.538	420.000	-580.385	-420.000	-0.002902	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	636.3915	1.666	60.7465
10.8	9.18	0.40	596.667	420.000	-581.111	-420.000	-0.002906	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	720.6159	3.2968	45.0707
11.2	9.52	0.40	596.786	420.000	-581.786	-420.000	-0.002909	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	714.8317	3.2968	45.0707
11.6	9.86	0.40	596.897	420.000	-582.414	-420.000	-0.002912	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	709.0475	3.2968	45.0707
12	10.20	0.40	597.000	420.000	-583.000	-420.000	-0.002915	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	456.1081	55.3294	23.9507
12.4	10.54	0.40	597.097	420.000	-583.548	-420.000	-0.002918	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	451.7699	55.3294	23.9507
12.8	10.88	0.40	597.188	420.000	-584.063	-420.000	-0.002920	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	447.4318	55.3294	23.9507
13.2	11.22	0.40	597.273	420.000	-584.545	-420.000	-0.002923	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	457.2529	54.8092	22.2372
17.2	14.62	0.40	597.907	420.000	-588.140	-420.000	-0.002941	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	452.9147	54.8092	22.2372
21.2	18.02	0.40	598.302	420.000	-590.377	-420.000	-0.002952	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	448.5766	54.8092	22.2372
25.2	21.42	0.40	598.571	420.000	-591.905	-420.000	-0.002960	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	481.0254	55.5366	11.6684
29.2	24.82	0.40	598.767	420.000	-593.014	-420.000	-0.002965	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	476.6872	55.5366	11.6684
33.2	28.22	0.40	598.916	420.000	-593.855	-420.000	-0.002969	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	472.349	55.5366	11.6684
37.2	31.62	0.40	599.032	420.000	-594.516	-420.000	-0.002973	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	483.0533	54.6151	14.7039
41.2	35.02	0.40	599.126	420.000	-595.049	-420.000	-0.002975	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	478.7152	54.6151	14.7039
45.2	38.42	0.40	599.204	420.000	-595.487	-420.000	-0.002977	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	474.377	54.6151	14.7039
49.2	41.82	0.40	599.268	420.000	-595.854	-420.000	-0.002979	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	475.2721	56.0204	11.5504
53.2	45.22	0.40	599.323	420.000	-596.165	-420.000	-0.002981	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	470.9339	56.0204	11.5504
57.2	48.62	0.40	599.371	420.000	-596.434	-420.000	-0.002982	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	466.5958	56.0204	11.5504
61.2	52.02	0.40	599.412	420.000	-596.667	-420.000	-0.002983	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	476.4169	56.5406	13.2639
65.2	55.42	0.40	599.448	420.000	-596.871	-420.000	-0.002984	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	472.0787	56.5406	13.2639
69.2	58.82	0.40	599.480	420.000	-597.052	-420.000	-0.002985	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	467.7406	56.5406	13.2639
73.2	62.22	0.40	599.508	420.000	-597.213	-420.000	-0.002986	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	449.4716	55.8262	25.3906
77.2	65.62	0.40	599.534	420.000	-597.358	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	445.1335	55.8262	25.3906
81.2	69.02	0.40	599.557	420.000	-597.488	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	440.7953	55.8262	25.3906
85.2	72.42	0.40	599.577	420.000	-597.606	-420.000	-0.002988	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	451.4996	56.7477	22.3552
89.2	75.82	0.40	599.596	420.000	-597.713	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	447.1614	56.7477	22.3552
93.2	79.22	0.40	599.614	420.000	-597.811	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	442.8233	56.7477	22.3552
97.2	82.62	0.40	599.630	420.000	-597.901	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	463.3584	47.5284	7.7349
101.2	86.02	0.40	599.644	420.000	-597.984	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	459.0202	47.5284	7.7349
105.2	89.42	0.40	599.658	420.000	-598.061	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	454.6821	47.5284	7.7349
109.2	92.82	0.40	599.670	420.000	-598.132	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	469.1666	48.7395	2.9519
113.2	96.22	0.40	599.682	420.000	-598.198	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	464.8284	48.7395	2.9519
117.2	99.62	0.40	599.693	420.000	-598.259	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	460.4903	48.7395	2.9519
121.2	103.02	0.40	599.703	420.000	-598.317	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	463.3584	47.5284	7.7349
125.2	106.42	0.40	599.712	420.000	-598.371	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	459.0202	47.5284	7.7349
129.2	109.82	0.40	599.721	420.000	-598.421	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	454.6821	47.5284	7.7349
133.2	113.22	0.40	599.730	420.000	-598.468	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	469.1666	48.7395	2.9519
137.2	116.62	0.40	599.738	420.000	-598.513	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	464.8284	48.7395	2.9519
141.2	120.02	0.40	599.745	420.000	-598.555	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	460.4903	48.7395	2.9519
145.2	123.42	0.40	599.752	420.000	-598.595	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	424.4289	16.3133	66.4388
														420.0908	16.3133	66.4388
														415.7526	16.3133	66.4388
														425.425	15.8608	64.9479
														421.0868	15.8608	64.9479
														416.7486	15.8608	64.9479
														422.0945	16.8773	67.3848
														417.7564	16.8773	67.3848
														413.4182	16.8773	67.3848
														424.0424	17.7624	64.4693
														419.7043	17.7624	64.4693
														415.3661	17.7624	64.4693
														507.1	17.0719	54.2612
														502.7618	17.0719	54.2612
														498.4237	17.0719	54.2612
														508.096	17.5245	55.752
														503.7579	17.5245	55.752
														499.4197	17.5245	55.752
														508.4825	16.5512	53.7825
														504.1444	16.5512	53.7825
														499.8062	16.5512	53.7825
														510.4304	15.6662	56.698
														506.0923	15.6662	56.698
														501.7541	15.6662	56.698
														429.9345	1.8758	58.252
														425.5963	1.8758	58.252
														421.2582	1.8758	58.252
														502.5905	3.087	47.5652
														498.2523	3.087	47.5652
														493.9142	3.087	47.5652
														429.9345	1.8758	58.252
														425.5963	1.8758	58.252
														421.2582	1.8758	58.252
														502.5905	3.087	47.5652
														498.2523	3.087	47.5652
														493.9142	3.087	47.5652
														693.2975	56.2302	9.0559
														687.5133	56.2302	9.0559
														681.7291	56.2302	9.0559
														694.4423	56.7504	10.7694
														688.6581	56.7504	10.7694
														682.8739	56.7504	10.7694
														642.4543	16.1035	68.9333
														636.6701	16.1035	68.9333
														630.8859	16.1035	68.9333
														643.4504	15.6509	67.4424
														637.6662	15.6509	67.4424
														631.8819	15.6509	67.4424

Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.4	m	d =	0.34 m
As =	7.11	cm²	h =	0.40 m
Altura Libre =	2.56	m		
As' =	7.11	cm²	Po =	3861.24 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2007.84 kN
Mod Elástico Acero =	200000	Mpa		3088.99 kN

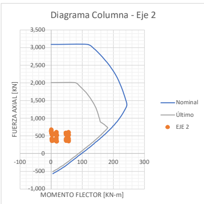
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

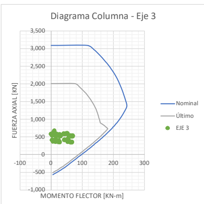
Cuantías Columnas		
As min	16.00 cm²	Cumple
As máx	40.00 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.00 cm	15.00 cm	10.00 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento			
s =	4.50 cm		4.50 cm
Ash =	2.25 cm2		2.25 cm2
	Cumple		Cumple
Av/m =	49.96 cm²/m		49.96 cm²/m

COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.004	0.00	0.00	-8,400.000	-420.000	50,400.000	420.000	0.252000	5.5016	-569.4960	-569.4960	0.9	4.95	-512.55	615.7578	0.5249	8.853
0.008	0.01	0.01	-3,900.000	-420.000	24,900.000	420.000	0.124500	10.9089	-541.7520	-541.7520	0.9	9.82	-487.58	609.0096	0.5249	8.853
0.012	0.01	0.01	-2,400.000	-420.000	16,400.000	420.000	0.082000	16.2219	-514.0080	-514.0080	0.9	14.60	-462.61	602.2614	0.5249	8.853
0.016	0.01	0.01	-1,650.000	-420.000	12,150.000	420.000	0.060750	21.4406	-486.2640	-486.2640	0.9	19.30	-437.64	681.7746	0.3159	9.9929
0.02	0.02	0.02	-1,200.000	-420.000	9,600.000	420.000	0.048000	26.5649	-458.5200	-458.5200	0.9	23.91	-412.67	675.9904	0.3159	9.9929
0.024	0.02	0.02	-900.000	-420.000	7,900.000	420.000	0.039500	31.5949	-430.7760	-430.7760	0.9	28.44	-387.70	670.2062	0.3159	9.9929
0.028	0.02	0.02	-685.714	-420.000	6,685.714	420.000	0.033429	36.5305	-403.0320	-403.0320	0.9	32.88	-362.73	646.657	0.0645	8.4104
0.032	0.03	0.03	-525.000	-420.000	5,775.000	420.000	0.028875	41.3719	-375.2880	-375.2880	0.9	37.23	-337.76	640.8728	0.0645	8.4104
0.036	0.03	0.03	-400.000	-400.000	5,066.667	420.000	0.025333	48.1097	-333.3240	-333.3240	0.9	43.30	-299.99	635.0886	0.0645	8.4104
0.04	0.03	0.03	-300.000	-300.000	4,500.000	420.000	0.022500	62.7163	-234.4800	-234.4800	0.9	56.44	-211.03	592.7559	0.3262	8.3566
0.044	0.04	0.04	-218.182	-218.182	4,036.364	420.000	0.020182	75.4188	-148.5633	-148.5633	0.9	67.88	-133.71	586.9717	0.3262	8.3566
0.048	0.04	0.04	-150.000	-150.000	3,650.000	420.000	0.018250	86.6697	-72.3420	-72.3420	0.9	78.00	-65.11	581.1875	0.3262	8.3566
0.052	0.04	0.04	-92.308	-92.308	3,323.077	420.000	0.016615	96.7820	-3.5788	-3.5788	0.9	87.10	-3.22	533.8846	56.4211	30.0556
0.056	0.05	0.05	-42.857	-42.857	3,042.857	420.000	0.015214	105.9797	59.3246	59.3246	0.9	95.38	53.39	528.1004	56.4211	30.0556
0.06	0.05	0.05	0.000	0.000	2,800.000	420.000	0.014000	114.4267	117.5400	117.5400	0.9	102.98	105.79	522.3162	56.4211	30.0556
0.064	0.05	0.05	37.500	37.500	2,587.500	420.000	0.012938	122.2462	171.9465	171.9465	0.9	110.02	154.75	537.0179	55.8553	25.7219
0.068	0.06	0.06	70.588	70.588	2,400.000	420.000	0.012000	129.5321	223.2162	223.2162	0.9	116.58	200.89	531.2337	55.8553	25.7219
0.072	0.06	0.06	100.000	100.000	2,233.333	420.000	0.011167	136.3578	271.8720	271.8720	0.9	122.72	244.68	525.4495	55.8553	25.7219
0.076	0.06	0.06	126.316	126.316	2,084.211	420.000	0.010421	142.7810	318.3265	318.3265	0.9	128.50	286.49	552.5715	56.3495	2.803
0.08	0.07	0.07	150.000	150.000	1,950.000	420.000	0.009750	148.8479	362.9100	362.9100	0.9	133.96	326.62	546.7873	56.3495	2.803
0.084	0.07	0.07	171.429	171.429	1,828.571	420.000	0.009143	154.5959	405.8897	405.8897	0.9	139.14	365.30	541.0031	56.3495	2.803
0.088	0.07	0.07	190.909	190.909	1,718.182	420.000	0.008591	160.0557	447.4844	447.4844	0.9	144.05	402.74	558.1221	55.3471	10.4799
0.092	0.08	0.08	208.696	208.696	1,617.391	420.000	0.008087	165.2526	487.8746	487.8746	0.9	148.73	439.09	552.3379	55.3471	10.4799
0.096	0.08	0.08	225.000	225.000	1,525.000	420.000	0.007625	170.2076	527.2110	527.2110	0.9	153.19	474.49	546.5537	55.3471	10.4799
0.1	0.09	0.09	240.000	240.000	1,440.000	420.000	0.007200	174.9384	565.6200	565.6200	0.9	157.44	509.06	599.493	54.9649	9.0578
0.104	0.09	0.09	253.846	253.846	1,361.538	420.000	0.006808	179.4600	603.2086	603.2086	0.9	161.51	542.89	593.7088	54.9649	9.0578
0.108	0.09	0.09	266.667	266.667	1,288.889	420.000	0.006444	183.7853	640.0680	640.0680	0.9	165.41	576.06	587.9246	54.9649	9.0578
0.112	0.10	0.10	278.571	278.571	1,221.429	420.000	0.006107	187.9250	676.2763	676.2763	0.9	169.13	608.65	602.6263	55.5307	13.3914
0.116	0.10	0.10	289.655	289.655	1,158.621	420.000	0.005793	191.8887	711.9008	711.9008	0.9	172.70	640.71	596.8421	55.5307	13.3914
0.12	0.10	0.10	300.000	300.000	1,100.000	420.000	0.005500	195.6845	747.0000	747.0000	0.9	176.12	672.30	591.0579	55.5307	13.3914
0.124	0.11	0.11	309.677	309.677	1,045.161	420.000	0.005226	199.3195	781.6246	781.6246	0.9	179.39	703.46	578.3888	54.4567	27.144
0.128	0.11	0.11	318.750	318.750	993.750	420.000	0.004969	202.8000	815.8193	815.8193	0.8973	181.97	732.04	572.6046	54.4567	27.144
0.132	0.11	0.11	327.273	327.273	945.455	420.000	0.004727	206.1315	849.6229	849.6229	0.8765	180.67	744.69	566.8204	54.4567	27.144
0.136	0.12	0.12	335.294	335.294	900.000	420.000	0.004500	209.3187	883.0701	883.0701	0.8569	179.36	756.70	583.9394	55.4591	19.4672
0.14	0.12	0.12	342.857	342.857	857.143	420.000	0.004286	212.3659	916.1914	916.1914	0.8384	178.05	768.16	578.1552	55.4591	19.4672
0.16	0.14	0.14	375.000	375.000	675.000	420.000	0.003375	225.6226	1,077.7650	1,077.7650	0.7599	171.45	819.01	572.371	55.4591	19.4672
0.18	0.15	0.15	400.000	400.000	533.333	420.000	0.002667	235.8101	1,234.2600	1,234.2600	0.6989	164.80	862.56	546.1717	48.5095	16.6718
0.2	0.17	0.17	420.000	420.000	420.000	420.000	0.002100	243.1416	1,387.2000	1,387.2000	0.65	158.04	901.68	540.3875	48.5095	16.6718
0.22	0.19	0.19	436.364	420.000	327.273	327.273	0.001636	236.8940	1,591.8491	1,591.8491	0.65	153.98	1034.70	534.6033	48.5095	16.6718
0.24	0.20	0.20	450.000	420.000	250.000	250.000	0.001250	229.8265	1,785.5100	1,785.5100	0.65	149.39	1160.58	590.3392	47.6191	0.0076
0.26	0.22	0.22	461.538	420.000	184.615	184.615	0.000923	221.5841	1,970.7185	1,970.7185	0.65	144.03	1280.97	584.555	47.6191	0.0076
0.28	0.24	0.24	471.429	420.000	128.571	128.571	0.000643	211.9133	2,149.2857	2,149.2857	0.65	137.74	1397.04	578.7708	47.6191	0.0076
0.3	0.26	0.26	480.000	420.000	80.000	80.000	0.000400	200.6280	2,322.5400	2,322.5400	0.65	130.41	1509.65	546.1717	48.5095	16.6718
0.32	0.27	0.27	487.500	420.000	37.500	37.500	0.000187	187.5888	2,491.4775	2,491.4775	0.65	121.93	1619.46	540.3875	48.5095	16.6718
0.34	0.29	0.29	494.118	420.000	0.000	0.000	0.000000	172.6891	2,656.8600	2,656.8600	0.65	112.25	1726.96	534.6033	48.5095	16.6718
0.36	0.31	0.31	500.000	420.000	-33.333	-33.333	-0.000167	155.8459	2,819.2800	2,819.2800	0.65	101.30	1832.53	590.3392	47.6191	0.0076
0.38	0.32	0.32	505.263	420.000	-63.158	-63.158	-0.000316	136.9937	2,979.2053	2,979.2053	0.65	89.05	1936.48	584.555	47.6191	0.0076
0.4	0.34	0.34	510.000	420.000	-90.000	-90.000	-0.000450	116.0802	3,088.9920	3,137.0100	0.65	75.45	2007.84	578.7708	47.6191	0.0076
0.48	0.41	0.40	525.000	420.000	-175.000	-175.000	-0.000875	24.3873	3,088.9920	3,687.0450	0.65	15.85	2007.84	526.8761	17.8389	68.4551
0.56	0.48	0.40	535.714	420.000	-235.714	-235.714	-0.001179	18.3438	3,088.9920	3,730.2129	0.65	11.92	2007.84	521.0919	17.8389	68.4551
0.64	0.54	0.40	543.750	420.000	-281.250	-281.250	-0.001406	13.8112	3,088.9920	3,762.5888	0.65	8.98	2007.84	515.3077	17.8389	68.4551
0.72	0.61	0.40	550.000	420.000	-316.667	-316.667	-0.001583	10.2858	3,088.9920	3,787.7700	0.65	6.69	2007.84	529.6023	17.3466	64.6847
0.8	0.68	0.40	555.000	420.000	-345.000	-345.000	-0.001725	7.4655	3,088.9920	3,807.9150	0.65	4.85	2007.84	523.8181	17.3466	64.6847
0.88	0.75	0.40	559.091	420.000	-368.182	-368.182	-0.001841	5.1580	3,088.9920	3,824.3973	0.65	3.35	2007.84	518.0339	17.3466	64.6847
0.96	0.82	0.40	562.500	420.000	-387.500	-387.500	-0.001938	3.2351	3,088.9920	3,838.1325	0.65	2.10	2007.84	539.2874	15.2547	68.8818
1.04	0.88	0.40	565.385	420.000	-403.846	-403.846	-0.002019	1.6080	3,088.9920	3,849.7546	0.65	1.05	2007.84	533.5032	15.2547	68.8818
1.12	0.95	0.40	567.857	420.000	-417.857	-417.857	-0.002089	0.2133	3,088.9920	3,859.7164	0.65	0.14	2007.84	527.719	15.2547	68.8818
1.2	1.02	0.40	570.000	420.000	-430.000	-420.000	-0.002150	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	544.6187	16.2174	61.5081
1.6	1.36	0.40	577.500	420.000	-472.500	-420.000	-0.002363	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	538.8345	16.2174	61.5081
2	1.70	0.40	582.000	420.000	-498.000	-420.000	-0.002490	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	533.0503	16.2174	61.5081
2.4	2.04	0.40	585.000	420.000	-515.000	-420.000	-0.002575	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	606.9086	16.4562	48.0205
2.8	2.38	0.40	587.143	420.000	-527.143	-420.000	-0.002636	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	601.1244	16.4562	48.0205
3.2	2.72	0.40	588.750	420.000	-536.250	-420.000	-0.002681	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	595.3402	16.4562	48.0205
3.6	3.06	0.40	590.000	420.000	-543.333	-420.000	-0.002717	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	609.6348	16.9485	51.791
4	3.40	0.40	591.000	420.000	-549.000	-420.000	-0.002745	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	603.8506	16.9485	51.791
4.4	3.74	0.40	591.818	420.000	-553.636	-420.000	-0.002768	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	598.0664	16.9485	51.791
4.8	4.08	0.40	592.500	420.000	-557.500	-420.000	-0.002788	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	591.8922	17.1079	44.844
5.2	4.42	0.40	593.077	420.000	-560.769	-420.000	-0.002804	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	586.108	17.1079	44.844
5.6	4.76	0.40	593.571	420.000	-563.571	-420.000	-0.002818	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	580.3238	17.1079	44.844
6	5.10	0.40	594.000	420.000	-566.000	-420.000	-0.002830	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	597.2235	16.1451	52.2176
6.4	5.44	0.40	594.375	420.000	-568.125	-420.000	-0.002841	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	591.4393	16.1451	52.2176
6.8	5.78	0.40	594.706	420.000	-570.000	-420.000	-0.002850	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	585.6551	16.1451	52.2176
7.2	6.12	0.40	595.000	420.000	-571.667	-420.000	-0.002858	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	540.9437	3.0796	56.3378
7.6	6.46	0.40	595.263	420.000	-573.158	-420.000	-0.002866	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	535.1595	3.0796	56.3378
8	6.80	0.40	595.500	420.000	-574.500	-420.000	-0.002873	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	529.3753	3.0796	56.3378
8.4	7.14	0.40	595.714	420.000	-575.714	-420.000	-0.002879	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	595.5672	2.1892	39.6736
8.8	7.48	0.40	595.909	420.000	-576.818	-420.000	-0.002884	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	589.783	2.1892	39.6736
9.2	7.82	0.40	596.087	420.000	-577.826	-420.000	-0.002889	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	583.9988	2.1892	39.6736
9.6	8.16	0.40	596.250	420.000	-578.750	-420.000	-0.002894	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	540.9437	3.0796	56.3378
10	8.50	0.40	596.400	420.000	-579.600	-420.000	-0.002898	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	535.1595	3.0796	56.3378
10.4	8.84	0.40	596.538	420.000	-580.385	-420.000	-0.002902	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	529.3753	3.0796	56.3378
10.8	9.18	0.40	596.667	420.000	-581.111	-420.000	-0.002906	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	595.5672	2.1892	39.6736
11.2	9.52	0.40	596.786	420.000	-581.786	-420.000	-0.002909	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	589.783	2.1892	39.6736
11.6	9.86	0.40	596.897	420.000	-582.414	-420.000	-0.002912	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	583.9988	2.1892	39.6736
12	10.20	0.40	597.000	420.000	-583.000	-420.000	-0.002915	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	361.4735	56.3133	27.4147
12.4	10.54	0.40	597.097	420.000	-583.548	-420.000	-0.002918	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	357.1353	56.3133	27.4147
12.8	10.88	0.40	597.188	420.000	-584.063	-420.000	-0.002920	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	352.7971	56.3133	27.4147
13.2	11.22	0.40	597.273	420.000	-584.545	-420.000	-0.002923	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	364.6068	55.7475	23.0811
17.2	14.62	0.40	597.907	420.000	-588.140	-420.000	-0.002941	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	360.2686	55.7475	23.0811
21.2	18.02	0.40	598.302	420.000	-590.377	-420.000	-0.002952	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	355.9305	55.7475	23.0811
25.2	21.42	0.40	598.571	420.000	-591.905	-420.000	-0.002960	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	380.1604	56.2417	5.4439
29.2	24.82	0.40	598.767	420.000	-593.014	-420.000	-0.002965	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	375.8223	56.2417	5.4439
33.2	28.22	0.40	598.916	420.000	-593.855	-420.000	-0.002969	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	371.4841	56.2417	5.4439
37.2	31.62	0.40	599.032	420.000	-594.516	-420.000	-0.002973	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	385.711	55.2394	13.1207
41.2	35.02	0.40	599.126	420.000	-595.049	-420.000	-0.002975	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	381.3728	55.2394	13.1207
45.2	38.42	0.40	599.204	420.000	-595.487	-420.000	-0.002977	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	377.0347	55.2394	13.1207
49.2	41.82	0.40	599.268	420.000	-595.854	-420.000	-0.002979	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	427.0819	55.0726	11.6986
53.2	45.22	0.40	599.323	420.000	-596.165	-420.000	-0.002981	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	422.7437	55.0726	11.6986
57.2	48.62	0.40	599.371	420.000	-596.434	-420.000	-0.002982	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	418.4056	55.0726	11.6986
61.2	52.02	0.40	599.412	420.000	-596.667	-420.000	-0.002983	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	430.2152	55.6385	16.0323
65.2	55.42	0.40	599.448	420.000	-596.871	-420.000	-0.002984	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	425.8771	55.6385	16.0323
69.2	58.82	0.40	599.480	420.000	-597.052	-420.000	-0.002985	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	421.5389	55.6385	16.0323
73.2	62.22	0.40	599.508	420.000	-597.213	-420.000	-0.002986	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	405.9777	54.5645	24.5032
77.2	65.62	0.40	599.534	420.000	-597.358	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	401.6395	54.5645	24.5032
81.2	69.02	0.40	599.557	420.000	-597.488	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	397.3014	54.5645	24.5032
85.2	72.42	0.40	599.577	420.000	-597.606	-420.000	-0.002988	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	411.5282	55.5668	16.8263
89.2	75.82	0.40	599.596	420.000	-597.713	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	407.1901	55.5668	16.8263
93.2	79.22	0.40	599.614	420.000	-597.811	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	402.8519	55.5668	16.8263
97.2	82.62	0.40	599.630	420.000	-597.901	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	373.7606	48.4018	14.0309
101.2	86.02	0.40	599.644	420.000	-597.984	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	369.4224	48.4018	14.0309
105.2	89.42	0.40	599.658	420.000	-598.061	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	365.0843	48.4018	14.0309
109.2	92.82	0.40	599.670	420.000	-598.132	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	417.9281	47.7269	2.6485
113.2	96.22	0.40	599.682	420.000	-598.198	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	413.5899	47.7269	2.6485
117.2	99.62	0.40	599.693	420.000	-598.259	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	409.2518	47.7269	2.6485
121.2	103.02	0.40	599.703	420.000	-598.317	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	373.7606	48.4018	14.0309
125.2	106.42	0.40	599.712	420.000	-598.371	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	369.4224	48.4018	14.0309
129.2	109.82	0.40	599.721	420.000	-598.421	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	365.0843	48.4018	14.0309
133.2	113.22	0.40	599.730	420.000	-598.468	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	417.9281	47.7269	2.6485
137.2	116.62	0.40	599.738	420.000	-598.513	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	413.5899	47.7269	2.6485
141.2	120.02	0.40	599.745	420.000	-598.555	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	409.2518	47.7269	2.6485
145.2	123.42	0.40	599.752	420.000	-598.595	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	354.465	17.7311	65.8143
														350.1269	17.7311	65.8143
														345.7887	17.7311	65.8143
														357.1912	17.2388	62.0438
														352.853	17.2388	62.0438
														348.5149	17.2388	62.0438
														366.8763	15.3624	66.2409
														362.5381	15.3624	66.2409
														358.2	15.3624	66.2409
														372.2076	16.3252	58.8673
														367.8695	16.3252	58.8673
														363.5313	16.3252	58.8673
														434.4975	16.564	50.6614
														430.1593	16.564	50.6614
														425.8212	16.564	50.6614
														437.2236	17.0563	54.4318
														432.8855	17.0563	54.4318
														428.5473	17.0563	54.4318
														419.481	17.0001	47.4848
														415.1429	17.0001	47.4848
														410.8047	17.0001	47.4848
														424.8124	16.0373	54.8585
														420.4742	16.0373	54.8585
														416.1361	16.0373	54.8585
														368.5326	2.9719	53.6969
														364.1944	2.9719	53.6969
														359.8563	2.9719	53.6969
														423.1561	2.297	42.3145
														418.8179	2.297	42.3145
														414.4798	2.297	42.3145
														368.5326	2.9719	53.6969
														364.1944	2.9719	53.6969
														359.8563	2.9719	53.6969
														423.1561	2.297	42.3145
														418.8179	2.297	42.3145
														414.4798	2.297	42.3145
														599.493	54.9649	9.0578
														593.7088	54.9649	9.0578
														587.9246	54.9649	9.0578
														602.6263	55.5307	13.3914
														596.8421	55.5307	13.3914
														591.0579	55.5307	13.3914
														526.8761	17.8389	68.4551
														521.0919	17.8389	68.4551
														515.3077	17.8389	68.4551
														529.6023	17.3466	64.6847
														523.8181	17.3466	64.6847
														518.0339	17.3466	64.6847

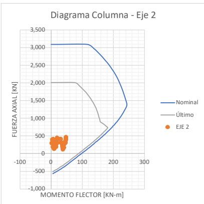
Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.4	m	d =	0.34 m
As =	7.11	cm²	h =	0.40 m
Altura Libre =	2.66	m		
As' =	7.11	cm²	Po =	3861.24 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2007.84 kN
Mod Elástico Acero =	200000	Mpa		3088.99 kN

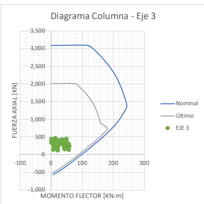
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

Cuantías Columnas		
As min	16.00 cm²	Cumple
As máx	40.00 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	176.00 cm	45.00 cm
S ≤	10.00 cm	15.00 cm	10.00 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento				
s =	4.50 cm		4.50 cm	
Ash =	2.25 cm2		2.25 cm2	
	Cumple		Cumple	
Av/m =	49.96 cm²/m		49.96 cm²/m	COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.004	0.00	0.00	-8,400.000	-420.000	50,400.000	420.000	0.252000	5.5016	-569.4960	-569.4960	0.9	4.95	-512.55	387.3595	6.1593	5.1303
0.008	0.01	0.01	-3,900.000	-420.000	24,900.000	420.000	0.124500	10.9089	-541.7520	-541.7520	0.9	9.82	-487.58	380.3476	6.1593	5.1303
0.012	0.01	0.01	-2,400.000	-420.000	16,400.000	420.000	0.082000	16.2219	-514.0080	-514.0080	0.9	14.60	-462.61	373.3358	6.1593	5.1303
0.016	0.01	0.01	-1,650.000	-420.000	12,150.000	420.000	0.060750	21.4406	-486.2640	-486.2640	0.9	19.30	-437.64	404.7708	7.2221	4.6166
0.02	0.02	0.02	-1,200.000	-420.000	9,600.000	420.000	0.048000	26.5649	-458.5200	-458.5200	0.9	23.91	-412.67	398.7607	7.2221	4.6166
0.024	0.02	0.02	-900.000	-420.000	7,900.000	420.000	0.039500	31.5949	-430.7760	-430.7760	0.9	28.44	-387.70	392.7505	7.2221	4.6166
0.028	0.02	0.02	-685.714	-420.000	6,685.714	420.000	0.033429	36.5305	-403.0320	-403.0320	0.9	32.88	-362.73	415.122	6.2457	4.6973
0.032	0.03	0.03	-525.000	-420.000	5,775.000	420.000	0.028875	41.3719	-375.2880	-375.2880	0.9	37.23	-337.76	409.1119	6.2457	4.6973
0.036	0.03	0.03	-400.000	-400.000	5,066.667	420.000	0.025333	48.1097	-333.3240	-333.3240	0.9	43.30	-299.99	403.1017	6.2457	4.6973
0.04	0.03	0.03	-300.000	-300.000	4,500.000	420.000	0.022500	62.7163	-234.4800	-234.4800	0.9	56.44	-211.03	369.1291	5.972	4.521
0.044	0.04	0.04	-218.182	-218.182	4,036.364	420.000	0.020182	75.4188	-148.5633	-148.5633	0.9	67.88	-133.71	363.1189	5.972	4.521
0.048	0.04	0.04	-150.000	-150.000	3,650.000	420.000	0.018250	86.6697	-72.3420	-72.3420	0.9	78.00	-65.11	357.1088	5.972	4.521
0.052	0.04	0.04	-92.308	-92.308	3,323.077	420.000	0.016615	96.7820	-3.5788	-3.5788	0.9	87.10	-3.22	410.541	47.349	26.3044
0.056	0.05	0.05	-42.857	-42.857	3,042.857	420.000	0.015214	105.9797	59.3246	59.3246	0.9	95.38	53.39	404.5309	47.349	26.3044
0.06	0.05	0.05	0.000	0.000	2,800.000	420.000	0.014000	114.4267	117.5400	117.5400	0.9	102.98	105.79	398.5207	47.349	26.3044
0.064	0.05	0.05	37.500	37.500	2,587.500	420.000	0.012938	122.2462	171.9465	171.9465	0.9	110.02	154.75	422.0304	47.0156	18.4935
0.068	0.06	0.06	70.588	70.588	2,400.000	420.000	0.012000	129.5321	223.2162	223.2162	0.9	116.58	200.89	416.0202	47.0156	18.4935
0.072	0.06	0.06	100.000	100.000	2,233.333	420.000	0.011167	136.3578	271.8720	271.8720	0.9	122.72	244.68	410.0101	47.0156	18.4935
0.076	0.06	0.06	126.316	126.316	2,084.211	420.000	0.010421	142.7810	318.3265	318.3265	0.9	128.50	286.49	446.9846	48.0552	0.7972
0.08	0.07	0.07	150.000	150.000	1,950.000	420.000	0.009750	148.8479	362.9100	362.9100	0.9	133.96	326.62	440.9744	48.0552	0.7972
0.084	0.07	0.07	171.429	171.429	1,828.571	420.000	0.009143	154.5959	405.8897	405.8897	0.9	139.14	365.30	434.9643	48.0552	0.7972
0.088	0.07	0.07	190.909	190.909	1,718.182	420.000	0.008591	160.0557	447.4844	447.4844	0.9	144.05	402.74	467.3375	47.4646	13.0394
0.092	0.08	0.08	208.696	208.696	1,617.391	420.000	0.008087	165.2526	487.8746	487.8746	0.9	148.73	439.09	461.3273	47.4646	13.0394
0.096	0.08	0.08	225.000	225.000	1,525.000	420.000	0.007625	170.2076	527.2110	527.2110	0.9	153.19	474.49	455.3172	47.4646	13.0394
0.1	0.09	0.09	240.000	240.000	1,440.000	420.000	0.007200	174.9384	565.6200	565.6200	0.9	157.44	509.06	274.416	35.3204	9.6117
0.104	0.09	0.09	253.846	253.846	1,361.538	420.000	0.006808	179.4600	603.2086	603.2086	0.9	161.51	542.89	268.4059	35.3204	9.6117
0.108	0.09	0.09	266.667	266.667	1,288.889	420.000	0.006444	183.7853	640.0680	640.0680	0.9	165.41	576.06	262.3957	35.3204	9.6117
0.112	0.10	0.10	278.571	278.571	1,221.429	420.000	0.006107	187.9250	676.2763	676.2763	0.9	169.13	608.65	285.9054	35.6538	17.4226
0.116	0.10	0.10	289.655	289.655	1,158.621	420.000	0.005793	191.8887	711.9008	711.9008	0.9	172.70	640.71	279.8952	35.6538	17.4226
0.12	0.10	0.10	300.000	300.000	1,100.000	420.000	0.005500	195.6845	747.0000	747.0000	0.9	176.12	672.30	273.885	35.6538	17.4226
0.124	0.11	0.11	309.677	309.677	1,045.161	420.000	0.005226	199.3195	781.6246	781.6246	0.9	179.39	703.46	229.1089	35.7694	21.9212
0.128	0.11	0.11	318.750	318.750	993.750	420.000	0.004969	202.8000	815.8193	815.8193	0.8973	181.97	732.04	223.0988	35.7694	21.9212
0.132	0.11	0.11	327.273	327.273	945.455	420.000	0.004727	206.1315	849.6229	849.6229	0.8765	180.67	744.69	217.0886	35.7694	21.9212
0.136	0.12	0.12	335.294	335.294	900.000	420.000	0.004500	209.3187	883.0701	883.0701	0.8569	179.36	756.70	249.4618	36.36	8.0846
0.14	0.12	0.12	342.857	342.857	857.143	420.000	0.004286	212.3659	916.1914	916.1914	0.8384	178.05	768.16	243.4517	36.36	8.0846
0.16	0.14	0.14	375.000	375.000	675.000	420.000	0.003375	225.6226	1,077.7650	1,077.7650	0.7599	171.45	819.01	237.4415	36.36	8.0846
0.18	0.15	0.15	400.000	400.000	533.333	420.000	0.002667	235.8101	1,234.2600	1,234.2600	0.6989	164.80	862.56	279.2139	41.8315	17.1917
0.2	0.17	0.17	420.000	420.000	420.000	420.000	0.002100	243.1416	1,387.2000	1,387.2000	0.65	158.04	901.68	273.2038	41.8315	17.1917
0.22	0.19	0.19	436.364	420.000	327.273	327.273	0.001636	236.8940	1,591.8491	1,591.8491	0.65	153.98	1034.70	267.1936	41.8315	17.1917
0.24	0.20	0.20	450.000	420.000	250.000	250.000	0.001250	229.8265	1,785.5100	1,785.5100	0.65	149.39	1160.58	417.2325	30.1363	8.3099
0.26	0.22	0.22	461.538	420.000	184.615	184.615	0.000923	221.5841	1,970.7185	1,970.7185	0.65	144.03	1280.97	411.2223	30.1363	8.3099
0.28	0.24	0.24	471.429	420.000	128.571	128.571	0.000643	211.9133	2,149.2857	2,149.2857	0.65	137.74	1397.04	405.2122	30.1363	8.3099
0.3	0.26	0.26	480.000	420.000	80.000	80.000	0.000400	200.6280	2,322.5400	2,322.5400	0.65	130.41	1509.65	279.2139	41.8315	17.1917
0.32	0.27	0.27	487.500	420.000	37.500	37.500	0.000187	187.5888	2,491.4775	2,491.4775	0.65	121.93	1619.46	273.2038	41.8315	17.1917
0.34	0.29	0.29	494.118	420.000	0.000	0.000	0.000000	172.6891	2,656.8600	2,656.8600	0.65	112.25	1726.96	267.1936	41.8315	17.1917
0.36	0.31	0.31	500.000	420.000	-33.333	-33.333	-0.000167	155.8459	2,819.2800	2,819.2800	0.65	101.30	1832.53	417.2325	30.1363	8.3099
0.38	0.32	0.32	505.263	420.000	-63.158	-63.158	-0.000316	136.9937	2,979.2053	2,979.2053	0.65	89.05	1936.48	411.2223	30.1363	8.3099
0.4	0.34	0.34	510.000	420.000	-90.000	-90.000	-0.000450	116.0802	3,088.9920	3,137.0100	0.65	75.45	2007.84	405.2122	30.1363	8.3099
0.48	0.41	0.40	525.000	420.000	-175.000	-175.000	-0.000875	24.3873	3,088.9920	3,687.0450	0.65	15.85	2007.84	301.6496	17.5171	56.4816
0.56	0.48	0.40	535.714	420.000	-235.714	-235.714	-0.001179	18.3438	3,088.9920	3,730.2129	0.65	11.92	2007.84	295.6394	17.5171	56.4816
0.64	0.54	0.40	543.750	420.000	-281.250	-281.250	-0.001406	13.8112	3,088.9920	3,762.5888	0.65	8.98	2007.84	289.6292	17.5171	56.4816
0.72	0.61	0.40	550.000	420.000	-316.667	-316.667	-0.001583	10.2858	3,088.9920	3,787.7700	0.65	6.69	2007.84	311.6459	17.227	49.6857
0.8	0.68	0.40	555.000	420.000	-345.000	-345.000	-0.001725	7.4655	3,088.9920	3,807.9150	0.65	4.85	2007.84	305.6357	17.227	49.6857
0.88	0.75	0.40	559.091	420.000	-368.182	-368.182	-0.001841	5.1580	3,088.9920	3,824.3973	0.65	3.35	2007.84	299.6256	17.227	49.6857
0.96	0.82	0.40	562.500	420.000	-387.500	-387.500	-0.001938	3.2351	3,088.9920	3,838.1325	0.65	2.10	2007.84	243.7731	7.3184	57.5099
1.04	0.88	0.40	565.385	420.000	-403.846	-403.846	-0.002019	1.6080	3,088.9920	3,849.7546	0.65	1.05	2007.84	237.763	7.3184	57.5099
1.12	0.95	0.40	567.857	420.000	-417.857	-417.857	-0.002089	0.2133	3,088.9920	3,859.7164	0.65	0.14	2007.84	231.7528	7.3184	57.5099
1.2	1.02	0.40	570.000	420.000	-430.000	-420.000	-0.002150	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	263.3221	7.8857	44.2198
1.6	1.36	0.40	577.500	420.000	-472.500	-420.000	-0.002363	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	257.312	7.8857	44.2198
2	1.70	0.40	582.000	420.000	-498.000	-420.000	-0.002490	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	251.3018	7.8857	44.2198
2.4	2.04	0.40	585.000	420.000	-515.000	-420.000	-0.002575	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	384.8005	5.5317	40.8039
2.8	2.38	0.40	587.143	420.000	-527.143	-420.000	-0.002636	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	378.7904	5.5317	40.8039
3.2	2.72	0.40	588.750	420.000	-536.250	-420.000	-0.002681	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	372.7802	5.5317	40.8039
3.6	3.06	0.40	590.000	420.000	-543.333	-420.000	-0.002717	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	394.7968	5.8218	47.5998
4	3.40	0.40	591.000	420.000	-549.000	-420.000	-0.002745	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	388.7867	5.8218	47.5998
4.4	3.74	0.40	591.818	420.000	-553.636	-420.000	-0.002768	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	382.7765	5.8218	47.5998
4.8	4.08	0.40	592.500	420.000	-557.500	-420.000	-0.002788	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	433.1243	19.581	35.338
5.2	4.42	0.40	593.077	420.000	-560.769	-420.000	-0.002804	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	427.1141	19.581	35.338
5.6	4.76	0.40	593.571	420.000	-563.571	-420.000	-0.002818	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	421.104	19.581	35.338
6	5.10	0.40	594.000	420.000	-566.000	-420.000	-0.002830	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	452.6733	19.0137	48.6281
6.4	5.44	0.40	594.375	420.000	-568.125	-420.000	-0.002841	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	446.6631	19.0137	48.6281
6.8	5.78	0.40	594.706	420.000	-570.000	-420.000	-0.002850	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	440.653	19.0137	48.6281
7.2	6.12	0.40	595.000	420.000	-571.667	-420.000	-0.002858	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	295.4129	7.6426	42.8081
7.6	6.46	0.40	595.263	420.000	-573.158	-420.000	-0.002866	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	289.4027	7.6426	42.8081
8	6.80	0.40	595.500	420.000	-574.500	-420.000	-0.002873	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	283.3926	7.6426	42.8081
8.4	7.14	0.40	595.714	420.000	-575.714	-420.000	-0.002879	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	401.0335	4.0526	33.9263
8.8	7.48	0.40	595.909	420.000	-576.818	-420.000	-0.002884	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	395.0234	4.0526	33.9263
9.2	7.82	0.40	596.087	420.000	-577.826	-420.000	-0.002889	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	389.0132	4.0526	33.9263
9.6	8.16	0.40	596.250	420.000	-578.750	-420.000	-0.002894	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	295.4129	7.6426	42.8081
10	8.50	0.40	596.400	420.000	-579.600	-420.000	-0.002898	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	289.4027	7.6426	42.8081
10.4	8.84	0.40	596.538	420.000	-580.385	-420.000	-0.002902	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	283.3926	7.6426	42.8081
10.8	9.18	0.40	596.667	420.000	-581.111	-420.000	-0.002906	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	401.0335	4.0526	33.9263
11.2	9.52	0.40	596.786	420.000	-581.786	-420.000	-0.002909	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	395.0234	4.0526	33.9263
11.6	9.86	0.40	596.897	420.000	-582.414	-420.000	-0.002912	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	389.0132	4.0526	33.9263
12	10.20	0.40	597.000	420.000	-583.000	-420.000	-0.002915	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	311.3346	45.461	25.1615
12.4	10.54	0.40	597.097	420.000	-583.548	-420.000	-0.002918	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	306.827	45.461	25.1615
12.8	10.88	0.40	597.188	420.000	-584.063	-420.000	-0.002920	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	302.3194	45.461	25.1615
13.2	11.22	0.40	597.273	420.000	-584.545	-420.000	-0.002923	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	322.824	45.1276	17.3507
17.2	14.62	0.40	597.907	420.000	-588.140	-420.000	-0.002941	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	318.3163	45.1276	17.3507
21.2	18.02	0.40	598.302	420.000	-590.377	-420.000	-0.002952	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	313.8087	45.1276	17.3507
25.2	21.42	0.40	598.571	420.000	-591.905	-420.000	-0.002960	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	347.7782	46.1671	0.3456
29.2	24.82	0.40	598.767	420.000	-593.014	-420.000	-0.002965	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	343.2706	46.1671	0.3456
33.2	28.22	0.40	598.916	420.000	-593.855	-420.000	-0.002969	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	338.7629	46.1671	0.3456
37.2	31.62	0.40	599.032	420.000	-594.516	-420.000	-0.002973	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	368.1311	45.5765	14.1822
41.2	35.02	0.40	599.126	420.000	-595.049	-420.000	-0.002975	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	363.6235	45.5765	14.1822
45.2	38.42	0.40	599.204	420.000	-595.487	-420.000	-0.002977	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	359.1158	45.5765	14.1822
49.2	41.82	0.40	599.268	420.000	-595.854	-420.000	-0.002979	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	175.2096	37.2084	10.7545
53.2	45.22	0.40	599.323	420.000	-596.165	-420.000	-0.002981	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	170.702	37.2084	10.7545
57.2	48.62	0.40	599.371	420.000	-596.434	-420.000	-0.002982	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	166.1944	37.2084	10.7545
61.2	52.02	0.40	599.412	420.000	-596.667	-420.000	-0.002983	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	186.699	37.5418	18.5654
65.2	55.42	0.40	599.448	420.000	-596.871	-420.000	-0.002984	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	182.1913	37.5418	18.5654
69.2	58.82	0.40	599.480	420.000	-597.052	-420.000	-0.002985	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	177.6837	37.5418	18.5654
73.2	62.22	0.40	599.508	420.000	-597.213	-420.000	-0.002986	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	129.9025	37.6574	20.7784
77.2	65.62	0.40	599.534	420.000	-597.358	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	125.3949	37.6574	20.7784
81.2	69.02	0.40	599.557	420.000	-597.488	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	120.8873	37.6574	20.7784
85.2	72.42	0.40	599.577	420.000	-597.606	-420.000	-0.002988	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	150.2554	38.248	6.9417
89.2	75.82	0.40	599.596	420.000	-597.713	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	145.7478	38.248	6.9417
93.2	79.22	0.40	599.614	420.000	-597.811	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	141.2402	38.248	6.9417
97.2	82.62	0.40	599.630	420.000	-597.901	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	180.0075	39.9434	16.0489
101.2	86.02	0.40	599.644	420.000	-597.984	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	175.4999	39.9434	16.0489
105.2	89.42	0.40	599.658	420.000	-598.061	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	170.9923	39.9434	16.0489
109.2	92.82	0.40	599.670	420.000	-598.132	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	318.0261	32.0243	9.4527
113.2	96.22	0.40	599.682	420.000	-598.198	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	313.5185	32.0243	9.4527
117.2	99.62	0.40	599.693	420.000	-598.259	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	309.0108	32.0243	9.4527
121.2	103.02	0.40	599.703	420.000	-598.317	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	180.0075	39.9434	16.0489
125.2	106.42	0.40	599.712	420.000	-598.371	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	175.4999	39.9434	16.0489
129.2	109.82	0.40	599.721	420.000	-598.421	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	170.9923	39.9434	16.0489
133.2	113.22	0.40	599.730	420.000	-598.468	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	318.0261	32.0243	9.4527
137.2	116.62	0.40	599.738	420.000	-598.513	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	313.5185	32.0243	9.4527
141.2	120.02	0.40	599.745	420.000	-598.555	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	309.0108	32.0243	9.4527
145.2	123.42	0.40	599.752	420.000	-598.595	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	202.4432	15.629	55.3388
														197.9355	15.629	55.3388
														193.4279	15.629	55.3388
														212.4395	15.3389	48.5429
														207.9319	15.3389	48.5429
														203.4242	15.3389	48.5429
														144.5667	9.2065	56.3671
														140.0591	9.2065	56.3671
														135.5515	9.2065	56.3671
														164.1157	9.7738	43.0769
														159.6081	9.7738	43.0769
														155.1005	9.7738	43.0769
														285.5941	7.4198	41.9467
														281.0865	7.4198	41.9467
														276.5789	7.4198	41.9467
														295.5904	7.7099	48.7426
														291.0828	7.7099	48.7426
														286.5752	7.7099	48.7426
														333.9179	17.6929	36.4808
														329.4103	17.6929	36.4808
														324.9027	17.6929	36.4808
														353.4669	17.1256	49.7709
														348.9593	17.1256	49.7709
														344.4516	17.1256	49.7709
														196.2065	5.7546	41.6653
														191.6988	5.7546	41.6653
														187.1912	5.7546	41.6653
														301.8271	2.1646	35.0691
														297.3195	2.1646	35.0691
														292.8119	2.1646	35.0691
														196.2065	5.7546	41.6653
														191.6988	5.7546	41.6653
														187.1912	5.7546	41.6653
														301.8271	2.1646	35.0691
														297.3195	2.1646	35.0691
														292.8119	2.1646	35.0691
														274.416	35.3204	9.6117
														268.4059	35.3204	9.6117
														262.3957	35.3204	9.6117
														285.9054	35.6538	17.4226
														279.8952	35.6538	17.4226
														273.885	35.6538	17.4226
														301.6496	17.5171	56.4816
														295.6394	17.5171	56.4816
														289.6292	17.5171	56.4816
														311.6459	17.227	49.6857
														305.6357	17.227	49.6857
														299.6256	17.227	49.6857

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C12	146	1. 1.4D	Combination			0	-765.8015	-5.5157	11.2041	-0.1434	8.637	-6.3076	146	0	
N3.06	C12	146	1. 1.4D	Combination			1.28	-757.2607	-5.5157	11.2041	-0.1434	-5.7043	0.7525	146	1.28	
N3.06	C12	146	1. 1.4D	Combination			2.56	-748.72	-5.5157	11.2041	-0.1434	-20.0456	7.8127	146	2.56	
N3.06	C12	146	2. 1.2D + 1.6l	Combination			0	-846.5296	-6.4722	12.4952	-0.2096	9.1638	-7.5097	146	0	
N3.06	C12	146	2. 1.2D + 1.6l	Combination			1.28	-839.2089	-6.4722	12.4952	-0.2096	-6.8301	0.7748	146	1.28	
N3.06	C12	146	2. 1.2D + 1.6l	Combination			2.56	-831.8883	-6.4722	12.4952	-0.2096	-22.824	9.0592	146	2.56	
N3.06	C12	146	2. 1.2D + 1.6l	Combination			0	-756.0451	-5.1644	10.48	-0.1546	7.929	-5.981	146	0	
N3.06	C12	146	2. 1.2D + 1.6l	Combination			1.28	-748.7245	-5.1644	10.48	-0.1546	-5.4853	0.6294	146	1.28	
N3.06	C12	146	2. 1.2D + 1.6l	Combination			2.56	-741.4038	-5.1644	10.48	-0.1546	-18.8997	7.2398	146	2.56	
N3.06	C12	146	2. 1.2D + 1L +	Combination			0	-725.3946	-5.2471	10.5007	-0.1511	7.9475	-6.044	146	0	
N3.06	C12	146	2. 1.2D + 1L +	Combination			1.28	-718.074	-5.2471	10.5007	-0.1511	-5.4934	0.6722	146	1.28	
N3.06	C12	146	2. 1.2D + 1L +	Combination			2.56	-710.7533	-5.2471	10.5007	-0.1511	-18.9343	7.3885	146	2.56	
N3.06	C12	146	3.1 1.2D + 1L	Combination	Max		0	-597.5947	51.6252	38.4584	0.8658	53.6924	105.6138	146	0	
N3.06	C12	146	3.1 1.2D + 1L	Combination	Max		1.28	-590.2741	51.6252	38.4584	0.8658	4.4657	39.5335	146	1.28	
N3.06	C12	146	3.1 1.2D + 1L	Combination	Max		2.56	-582.9534	51.6252	38.4584	0.8658	-33.5723	-25.5752	146	2.56	
N3.06	C12	146	3.1 1.2D + 1L	Combination	Min		0	-612.4274	50.7773	26.7701	-0.3702	34.9591	104.4147	146	0	
N3.06	C12	146	3.1 1.2D + 1L	Combination	Min		1.28	-605.1067	50.7773	26.7701	-0.3702	0.6934	39.4197	146	1.28	
N3.06	C12	146	3.1 1.2D + 1L	Combination	Min		2.56	-597.7861	50.7773	26.7701	-0.3702	-44.7611	-26.5468	146	2.56	
N3.06	C12	146	3.2 1.2D + 1L	Combination	Max		0	-663.1852	52.3487	-13.0903	1.5503	-28.9944	106.4253	146	0	
N3.06	C12	146	3.2 1.2D + 1L	Combination	Max		1.28	-655.8646	52.3487	-13.0903	1.5503	-12.2388	39.419	146	1.28	
N3.06	C12	146	3.2 1.2D + 1L	Combination	Max		2.56	-648.5439	52.3487	-13.0903	1.5503	24.3373	-25.8663	146	2.56	
N3.06	C12	146	3.2 1.2D + 1L	Combination	Min		0	-689.4607	50.8467	-33.7957	-0.6393	-62.1798	104.3012	146	0	
N3.06	C12	146	3.2 1.2D + 1L	Combination	Min		1.28	-682.1401	50.8467	-33.7957	-0.6393	-18.9212	39.2174	146	1.28	
N3.06	C12	146	3.2 1.2D + 1L	Combination	Min		2.56	-674.8194	50.8467	-33.7957	-0.6393	4.5168	-27.5873	146	2.56	
N3.06	C12	146	3.3 1.2D + 1L	Combination	Max		0	-810.4978	-61.3467	-5.7499	0.0713	-19.0473	-116.5602	146	0	
N3.06	C12	146	3.3 1.2D + 1L	Combination	Max		1.28	-803.1772	-61.3467	-5.7499	0.0713	-11.6874	-38.0364	146	1.28	
N3.06	C12	146	3.3 1.2D + 1L	Combination	Max		2.56	-795.8565	-61.3467	-5.7499	0.0713	6.8612	41.4588	146	2.56	
N3.06	C12	146	3.3 1.2D + 1L	Combination	Min		0	-825.3304	-62.1945	-17.4382	-1.1648	-37.7806	-117.7592	146	0	
N3.06	C12	146	3.3 1.2D + 1L	Combination	Min		1.28	-818.0098	-62.1945	-17.4382	-1.1648	-15.4597	-38.1502	146	1.28	
N3.06	C12	146	3.3 1.2D + 1L	Combination	Min		2.56	-810.6892	-62.1945	-17.4382	-1.1648	-4.3276	40.4873	146	2.56	
N3.06	C12	146	3.4 1.2D + 1L	Combination	Max		0	-733.4645	-61.416	54.816	0.3403	78.0916	-116.4467	146	0	
N3.06	C12	146	3.4 1.2D + 1L	Combination	Max		1.28	-726.1438	-61.416	54.816	0.3403	7.9272	-37.8341	146	1.28	
N3.06	C12	146	3.4 1.2D + 1L	Combination	Max		2.56	-718.8232	-61.416	54.816	0.3403	-42.4167	42.4994	146	2.56	
N3.06	C12	146	3.4 1.2D + 1L	Combination	Min		0	-759.74	-62.918	34.1106	-1.8493	44.9063	-118.5707	146	0	
N3.06	C12	146	3.4 1.2D + 1L	Combination	Min		1.28	-752.4193	-62.918	34.1106	-1.8493	1.2448	-38.0357	146	1.28	
N3.06	C12	146	3.4 1.2D + 1L	Combination	Min		2.56	-745.0987	-62.918	34.1106	-1.8493	-62.2372	40.7784	146	2.56	
N3.06	C12	146	3.5 1.2D + 1L	Combination	Max		0	-655.347	44.0572	25.134	1.5463	30.8257	90.2083	146	0	
N3.06	C12	146	3.5 1.2D + 1L	Combination	Max		1.28	-648.0263	44.0572	25.134	1.5463	-1.3058	33.8689	146	1.28	
N3.06	C12	146	3.5 1.2D + 1L	Combination	Max		2.56	-640.7057	44.0572	25.134	1.5463	-4.3599	37.6087	146	2.56	
N3.06	C12	146	3.5 1.2D + 1L	Combination	Min		0	-767.5782	-54.6265	-4.1137	-1.8453	-14.9138	-102.3537	146	0	
N3.06	C12	146	3.5 1.2D + 1L	Combination	Min		1.28	-760.2575	-54.6265	-4.1137	-1.8453	-9.6882	-32.4856	146	1.28	
N3.06	C12	146	3.5 1.2D + 1L	Combination	Min		2.56	-752.9369	-54.6265	-4.1137	-1.8453	-33.54	-22.6967	146	2.56	
N3.06	C12	146	3.6 1.2D + 1L	Combination	Max		0	-655.347	44.0572	25.134	1.5463	30.8257	90.2083	146	0	
N3.06	C12	146	3.6 1.2D + 1L	Combination	Max		1.28	-648.0263	44.0572	25.134	1.5463	-1.3058	33.8689	146	1.28	
N3.06	C12	146	3.6 1.2D + 1L	Combination	Max		2.56	-640.7057	44.0572	25.134	1.5463	-4.3599	37.6087	146	2.56	
N3.06	C12	146	3.6 1.2D + 1L	Combination	Min		0	-767.5782	-54.6265	-4.1137	-1.8453	-14.9138	-102.3537	146	0	
N3.06	C12	146	3.6 1.2D + 1L	Combination	Min		1.28	-760.2575	-54.6265	-4.1137	-1.8453	-9.6882	-32.4856	146	1.28	
N3.06	C12	146	3.6 1.2D + 1L	Combination	Min		2.56	-752.9369	-54.6265	-4.1137	-1.8453	-33.54	-22.6967	146	2.56	
N3.06	C12	146	4.1 1.2D + 1L	Combination	Max		0	-564.9181	11.4287	107.2463	0.1923	163.3842	27.2457	146	0	
N3.06	C12	146	4.1 1.2D + 1L	Combination	Max		1.28	-557.5975	11.4287	107.2463	0.1923	26.109	12.6169	146	1.28	
N3.06	C12	146	4.1 1.2D + 1L	Combination	Max		2.56	-550.2768	11.4287	107.2463	0.1923	-101.4314	-1.1666	146	2.56	
N3.06	C12	146	4.1 1.2D + 1L	Combination	Min		0	-577.8233	10.691	97.0768	-0.8831	147.0853	26.2024	146	0	
N3.06	C12	146	4.1 1.2D + 1L	Combination	Min		1.28	-570.5027	10.691	97.0768	-0.8831	22.8269	12.5179	146	1.28	
N3.06	C12	146	4.1 1.2D + 1L	Combination	Min		2.56	-563.182	10.691	97.0768	-0.8831	-111.1663	-2.0119	146	2.56	
N3.06	C12	146	4.2 1.2D + 1L	Combination	Max		0	-601.2292	-22.2293	115.66	0.4054	176.324	-39.0128	146	0	
N3.06	C12	146	4.2 1.2D + 1L	Combination	Max		1.28	-593.9086	-22.2293	115.66	0.4054	28.2791	-10.5593	146	1.28	
N3.06	C12	146	4.2 1.2D + 1L	Combination	Max		2.56	-586.588	-22.2293	115.66	0.4054	-100.7281	19.5472	146	2.56	
N3.06	C12	146	4.2 1.2D + 1L	Combination	Min		0	-626.4669	-23.6719	95.7725	-1.6977	144.4494	-41.0529	146	0	
N3.06	C12	146	4.2 1.2D + 1L	Combination	Min		1.28	-619.1462	-23.6719	95.7725	-1.6977	21.8606	-10.7528	146	1.28	
N3.06	C12	146	4.2 1.2D + 1L	Combination	Min		2.56	-611.8256	-23.6719	95.7725	-1.6977	-119.7657	17.8942	146	2.56	
N3.06	C12	146	4.3 1.2D + 1L	Combination	Max		0	-845.1019	-21.2604	-76.0566	0.5842	-131.1734	-38.3479	146	0	
N3.06	C12	146	4.3 1.2D + 1L	Combination	Max		1.28	-837.7812	-21.2604	-76.0566	0.5842	-33.8209	-11.1346	146	1.28	
N3.06	C12	146	4.3 1.2D + 1L	Combination	Max		2.56	-830.4606	-21.2604	-76.0566	0.5842	73.2663	16.9239	146	2.56	
N3.06	C12	146	4.3 1.2D + 1L	Combination	Min		0	-858.007	-21.998	-86.226	-0.4913	-147.4723	-39.3911	146	0	
N3.06	C12	146	4.3 1.2D + 1L	Combination	Min		1.28	-850.6864	-21.998	-86.226	-0.4913	-37.103	-11.2336	146	1.28	
N3.06	C12	146	4.3 1.2D + 1L	Combination	Min		2.56	-843.3658	-21.998	-86.226	-0.4913	63.5315	16.0786	146	2.56	
N3.06	C12	146	4.4 1.2D + 1L	Combination	Max		0	-796.4583	13.1026	-74.7522	1.3987	-128.5375	28.9075	146	0	
N3.06	C12	146	4.4 1.2D + 1L	Combination	Max		1.28	-789.1376	13.1026	-74.7522	1.3987	-32.8547	12.1361	146	1.28	
N3.06	C12	146	4.4 1.2D + 1L	Combination	Max		2.56	-781.817	13.1026	-74.7522	1.3987	81.8658	-2.9822	146	2.56	
N3.06	C12	146	4.4 1.2D + 1L	Combination	Min		0	-821.6959	11.66	-94.6398	-0.7044	-160.4121	26.8673	146	0	
N3.06	C12	146	4.4 1.2D + 1L	Combination	Min		1.28	-814.3753	11.66	-94.6398	-0.7044	-39.2732	11.9426	146	1.28	
N3.06	C12	146	4.4 1.2D + 1L	Combination	Min		2.56	-807.0547	11.66	-94.6398	-0.7044	62.8282	-4.6352	146	2.56	
N3.06	C12	146	4.5 1.2D + 1L	Combination	Max		0	-601.9615	-2.8509	96.5473	1.1417	145.7828	-1.2915	146	0	
N3.06	C12	146	4.5 1.2D + 1L	Combination	Max		1.28	-594.6409	-2.8509	96.5473	1.1417	22.2255	2.5235	146	1.28	
N3.06	C12	146	4.5 1.2D + 1L	Combination	Max		2.56	-587.3202	-2.8509	96.5473	1.1417	63.494	9.2618	146	2.56	
N3.06	C12	146	4.5 1.2D + 1L	Combination	Min		0	-820.9637	-7.7184	-75.5271	-1.4407	-129.8709	-10.8539	146	0	
N3.06	C12	146	4.5 1.2D + 1L	Combination	Min		1.28	-813.643	-7.7184	-75.5271	-1.4407	-33.2196	-1.1402	146	1.28	
N3.06	C12	146	4.5 1.2D + 1L	Combination	Min		2.56	-806.3224	-7.7184	-75.5271	-1.4407	-101.3939	5.6502	146	2.56	
N3.06	C12	146	4.6 1.2D + 1L	Combination	Max		0	-601.9615	-2.8509	96.5473	1.1417	145.7828	-1.2915	146	0	
N3.06	C12	146	4.6 1.2D + 1L	Combination	Max		1.28	-594.6409	-2.8509	96.5473	1.1417	22.2255	2.5235	146	1.28	
N3.06	C12	146	4.6 1.2D + 1L	Combination	Max		2.56	-587.3202	-2.8509	96.5473	1.1417	63.494	9.2618	146	2.56	
N3.06	C12	146	4.6 1.2D + 1L	Combination	Min		0	-820.9637	-7.7184	-75.5271	-1.4407	-129.8709	-10.8539	146	0	
N3.06	C12	146	4.6 1.2D + 1L	Combination	Min		1.28	-813.643	-7.7184	-75.5271	-1.4407	-33.2196	-1.1402	146	1.28	
N3.06	C12	146	4.6 1.2D + 1L	Combination	Min		2.56	-806.3224	-7.7184	-75.5271	-1.4407	-101.3939	5.6502	146	2.56	
N3.06	C12	146	5.1 0.9D + (1(	Combination	Max		0	-378.4331	53.364	35.1509	0.9231	51.2888	107.6316	146	0	
N3.06	C12	146	5.1 0.9D + (1(	Combination	Max		1.28	-372.9426	53.364	35.1509	0.9231	6.2956	39.3256	146	1.28	
N3.06	C12	146	5.1 0.9D + (1(	Combination	Max		2.56	-367.4521	53.364	35.1509	0.9231	-27.5088	-28.0088	146	2.56	
N3.06	C12	146	5.1 0.9D + (1(	Combination	Min		0	-393.2657	52.5162	23.4626	-0.3129	32.5555	106.4326	146	0	
N3.06	C12	146	5.1 0.9D + (1(	Combination	Min		1.28	-387.7752	52.5162	23.4626	-0.3129	2.5234	39.2119	146	1.28	
N3.06	C12	146	5.1 0.9D + (1(	Combination	Min		2.56	-382.2848	52.5162	23.4626	-0.3129	-38.6976	-28.9803	146	2.56	
N3.06	C12	146	5.2 0.9D + (1(	Combination	Max		0	-444.0236	54.0875	-16.3978	1.6076	-31.398	108.4431	146	0	
N3.06	C12	146	5.2 0.9D + (1(	Combination	Max		1.28	-438.5331	54.0875	-16.3978	1.6076	-10.4088	39.2111	146	1.28	
N3.06	C12	146	5.2 0.9D + (1(	Combination	Max		2.56	-433.0426	54.0875	-16.3978	1.6076	30.4008	-28.2999	146	2.56	
N3.06	C12	146	5.2 0.9D + (1(	Combination	Min		0	-470.2991	52.5856	-37.1032	-0.582	-64.5834	106.3191	146	0	
N3.06	C12	146	5.2 0.9D + (1(	Combination	Min		1.28	-464.8086	52.5856	-37.1032	-0.582	-17.0913	39.0096	146	1.28	
N3.06	C12	146	5.2 0.9D + (1(	Combination	Min		2.56	-459.3181	52.5856	-37.1032	-0.582	10.5803	-30.0209	146	2.56	

N3.06	C12	146	5.3	0.9D - (1C	Combination	Max	0	-591.3362	-59.6078	-9.0573	0.1286	-21.4509	-114.5423	146	0
N3.06	C12	146	5.3	0.9D - (1C	Combination	Max	1.28	-585.8457	-59.6078	-9.0573	0.1286	-9.8575	-38.2443	146	1.28
N3.06	C12	146	5.3	0.9D - (1C	Combination	Max	2.56	-580.3552	-59.6078	-9.0573	0.1286	12.9247	39.0252	146	2.56
N3.06	C12	146	5.3	0.9D - (1C	Combination	Min	0	-606.1688	-60.4557	-20.7457	-1.1075	-40.1842	-115.7414	146	0
N3.06	C12	146	5.3	0.9D - (1C	Combination	Min	1.28	-600.6783	-60.4557	-20.7457	-1.1075	-13.6297	-38.3581	146	1.28
N3.06	C12	146	5.3	0.9D - (1C	Combination	Min	2.56	-595.1879	-60.4557	-20.7457	-1.1075	1.7359	38.0537	146	2.56
N3.06	C12	146	5.4	0.9D - (1C	Combination	Max	0	-514.3028	-59.6772	51.5085	0.3976	75.688	-114.4288	146	0
N3.06	C12	146	5.4	0.9D - (1C	Combination	Max	1.28	-508.8123	-59.6772	51.5085	0.3976	9.7572	-38.042	146	1.28
N3.06	C12	146	5.4	0.9D - (1C	Combination	Max	2.56	-503.3219	-59.6772	51.5085	0.3976	-36.3532	40.0658	146	2.56
N3.06	C12	146	5.4	0.9D - (1C	Combination	Min	0	-540.5783	-61.1792	30.8031	-1.792	42.5027	-116.5529	146	0
N3.06	C12	146	5.4	0.9D - (1C	Combination	Min	1.28	-535.0878	-61.1792	30.8031	-1.792	3.0747	-38.2435	146	1.28
N3.06	C12	146	5.4	0.9D - (1C	Combination	Min	2.56	-529.5974	-61.1792	30.8031	-1.792	-56.1737	38.3448	146	2.56
N3.06	C12	146	5.5	0.9D + Ex	Combination	Max	0	-436.1853	45.796	21.8265	1.6036	28.4221	92.2261	146	0
N3.06	C12	146	5.5	0.9D + Ex	Combination	Max	1.28	-430.6949	45.796	21.8265	1.6036	0.5241	33.661	146	1.28
N3.06	C12	146	5.5	0.9D + Ex	Combination	Max	2.56	-425.2044	45.796	21.8265	1.6036	1.7036	35.1751	146	2.56
N3.06	C12	146	5.5	0.9D + Ex	Combination	Min	0	-548.4165	-52.8877	-7.4212	-1.788	-17.3174	-100.3359	146	0
N3.06	C12	146	5.5	0.9D + Ex	Combination	Min	1.28	-542.9261	-52.8877	-7.4212	-1.788	-7.8582	-32.6935	146	1.28
N3.06	C12	146	5.5	0.9D + Ex	Combination	Min	2.56	-537.4356	-52.8877	-7.4212	-1.788	-27.4765	-25.1302	146	2.56
N3.06	C12	146	5.6	0.9D - Ex	Combination	Max	0	-436.1853	45.796	21.8265	1.6036	28.4221	92.2261	146	0
N3.06	C12	146	5.6	0.9D - Ex	Combination	Max	1.28	-430.6949	45.796	21.8265	1.6036	0.5241	33.661	146	1.28
N3.06	C12	146	5.6	0.9D - Ex	Combination	Max	2.56	-425.2044	45.796	21.8265	1.6036	1.7036	35.1751	146	2.56
N3.06	C12	146	5.6	0.9D - Ex	Combination	Min	0	-548.4165	-52.8877	-7.4212	-1.788	-17.3174	-100.3359	146	0
N3.06	C12	146	5.6	0.9D - Ex	Combination	Min	1.28	-542.9261	-52.8877	-7.4212	-1.788	-7.8582	-32.6935	146	1.28
N3.06	C12	146	5.6	0.9D - Ex	Combination	Min	2.56	-537.4356	-52.8877	-7.4212	-1.788	-27.4765	-25.1302	146	2.56
N3.06	C12	146	6.1	0.9D + (1(	Combination	Max	0	-345.7565	13.1676	103.9388	0.2496	160.9806	29.2635	146	0
N3.06	C12	146	6.1	0.9D + (1(	Combination	Max	1.28	-340.266	13.1676	103.9388	0.2496	27.939	12.409	146	1.28
N3.06	C12	146	6.1	0.9D + (1(	Combination	Max	2.56	-334.7755	13.1676	103.9388	0.2496	-95.3679	-3.6002	146	2.56
N3.06	C12	146	6.1	0.9D + (1(	Combination	Min	0	-358.6617	12.4299	93.7694	-0.8258	144.6817	28.2203	146	0
N3.06	C12	146	6.1	0.9D + (1(	Combination	Min	1.28	-353.1712	12.4299	93.7694	-0.8258	24.6569	12.31	146	1.28
N3.06	C12	146	6.1	0.9D + (1(	Combination	Min	2.56	-347.6807	12.4299	93.7694	-0.8258	-105.1027	-4.4455	146	2.56
N3.06	C12	146	6.2	0.9D + (1(	Combination	Max	0	-382.0676	-20.4905	112.3526	0.4627	173.9204	-36.9949	146	0
N3.06	C12	146	6.2	0.9D + (1(	Combination	Max	1.28	-376.5771	-20.4905	112.3526	0.4627	30.1091	-10.7671	146	1.28
N3.06	C12	146	6.2	0.9D + (1(	Combination	Max	2.56	-371.0866	-20.4905	112.3526	0.4627	-94.6646	17.1136	146	2.56
N3.06	C12	146	6.2	0.9D + (1(	Combination	Min	0	-407.3052	-21.9331	92.465	-1.6404	142.0458	-39.0351	146	0
N3.06	C12	146	6.2	0.9D + (1(	Combination	Min	1.28	-401.8148	-21.9331	92.465	-1.6404	23.6906	-10.9607	146	1.28
N3.06	C12	146	6.2	0.9D + (1(	Combination	Min	2.56	-396.3243	-21.9331	92.465	-1.6404	-113.7022	15.4606	146	2.56
N3.06	C12	146	6.3	0.9D - (1C	Combination	Max	0	-625.9402	-19.5215	-79.3641	0.6415	-133.577	-36.33	146	0
N3.06	C12	146	6.3	0.9D - (1C	Combination	Max	1.28	-620.4497	-19.5215	-79.3641	0.6415	-31.991	-11.3425	146	1.28
N3.06	C12	146	6.3	0.9D - (1C	Combination	Max	2.56	-614.9593	-19.5215	-79.3641	0.6415	79.3299	14.4903	146	2.56
N3.06	C12	146	6.3	0.9D - (1C	Combination	Min	0	-638.8454	-20.2592	-89.5335	-0.434	-149.8759	-37.3733	146	0
N3.06	C12	146	6.3	0.9D - (1C	Combination	Min	1.28	-633.3549	-20.2592	-89.5335	-0.434	-35.273	-11.4415	146	1.28
N3.06	C12	146	6.3	0.9D - (1C	Combination	Min	2.56	-627.8645	-20.2592	-89.5335	-0.434	69.595	13.6451	146	2.56
N3.06	C12	146	6.4	0.9D - (1C	Combination	Max	0	-577.2966	14.8414	-78.0597	1.456	-130.9411	30.9253	146	0
N3.06	C12	146	6.4	0.9D - (1C	Combination	Max	1.28	-571.8062	14.8414	-78.0597	1.456	-31.0247	11.9283	146	1.28
N3.06	C12	146	6.4	0.9D - (1C	Combination	Max	2.56	-566.3157	14.8414	-78.0597	1.456	87.9293	-5.4158	146	2.56
N3.06	C12	146	6.4	0.9D - (1C	Combination	Min	0	-602.5343	13.3988	-97.9473	-0.6471	-162.8157	28.8852	146	0
N3.06	C12	146	6.4	0.9D - (1C	Combination	Min	1.28	-597.0438	13.3988	-97.9473	-0.6471	-37.4432	11.7347	146	1.28
N3.06	C12	146	6.4	0.9D - (1C	Combination	Min	2.56	-591.5533	13.3988	-97.9473	-0.6471	68.8917	-7.0688	146	2.56
N3.06	C12	146	6.5	0.9D + Ey	Combination	Max	0	-382.7999	-1.1121	93.2398	1.1991	143.3792	0.7263	146	0
N3.06	C12	146	6.5	0.9D + Ey	Combination	Max	1.28	-377.3094	-1.1121	93.2398	1.1991	24.0555	2.3157	146	1.28
N3.06	C12	146	6.5	0.9D + Ey	Combination	Max	2.56	-371.8189	-1.1121	93.2398	1.1991	69.5575	6.8282	146	2.56
N3.06	C12	146	6.5	0.9D + Ey	Combination	Min	0	-601.802	-5.9796	-78.8345	-1.3834	-132.2745	-8.8361	146	0
N3.06	C12	146	6.5	0.9D + Ey	Combination	Min	1.28	-596.3115	-5.9796	-78.8345	-1.3834	-31.3896	-1.3481	146	1.28
N3.06	C12	146	6.5	0.9D + Ey	Combination	Min	2.56	-590.8211	-5.9796	-78.8345	-1.3834	-95.3304	3.2167	146	2.56
N3.06	C12	146	6.6	0.9D - Ey	Combination	Max	0	-382.7999	-1.1121	93.2398	1.1991	143.3792	0.7263	146	0
N3.06	C12	146	6.6	0.9D - Ey	Combination	Max	1.28	-377.3094	-1.1121	93.2398	1.1991	24.0555	2.3157	146	1.28
N3.06	C12	146	6.6	0.9D - Ey	Combination	Max	2.56	-371.8189	-1.1121	93.2398	1.1991	69.5575	6.8282	146	2.56
N3.06	C12	146	6.6	0.9D - Ey	Combination	Min	0	-601.802	-5.9796	-78.8345	-1.3834	-132.2745	-8.8361	146	0
N3.06	C12	146	6.6	0.9D - Ey	Combination	Min	1.28	-596.3115	-5.9796	-78.8345	-1.3834	-31.3896	-1.3481	146	1.28
N3.06	C12	146	6.6	0.9D - Ey	Combination	Min	2.56	-590.8211	-5.9796	-78.8345	-1.3834	-95.3304	3.2167	146	2.56
N3.06	C12	146	3.3	1.2D + 1L	Combination	Max	0	-810.4978	-61.3467	-5.7499	0.0713	-19.0473	-116.5602	146	0
N3.06	C12	146	3.3	1.2D + 1L	Combination	Max	1.28	-803.1772	-61.3467	-5.7499	0.0713	-11.6874	-38.0364	146	1.28
N3.06	C12	146	3.3	1.2D + 1L	Combination	Max	2.56	-795.8565	-61.3467	-5.7499	0.0713	6.8612	41.4588	146	2.56
N3.06	C12	146	3.3	1.2D + 1L	Combination	Min	0	-825.3304	-62.1945	-17.4382	-1.1648	-37.7806	-117.7592	146	0
N3.06	C12	146	3.3	1.2D + 1L	Combination	Min	1.28	-818.0098	-62.1945	-17.4382	-1.1648	-15.4597	-38.1502	146	1.28
N3.06	C12	146	3.3	1.2D + 1L	Combination	Min	2.56	-810.6892	-62.1945	-17.4382	-1.1648	-4.3276	40.4873	146	2.56
N3.06	C12	146	4.1	1.2D + 1L	Combination	Max	0	-564.9181	11.4287	107.2463	0.1923	163.3842	27.2457	146	0
N3.06	C12	146	4.1	1.2D + 1L	Combination	Max	1.28	-557.5975	11.4287	107.2463	0.1923	26.109	12.6169	146	1.28
N3.06	C12	146	4.1	1.2D + 1L	Combination	Max	2.56	-550.2768	11.4287	107.2463	0.1923	-101.4314	-1.1666	146	2.56
N3.06	C12	146	4.1	1.2D + 1L	Combination	Min	0	-577.8233	10.691	97.0768	-0.8831	147.0853	26.2024	146	0
N3.06	C12	146	4.1	1.2D + 1L	Combination	Min	1.28	-570.5027	10.691	97.0768	-0.8831	22.8269	12.5179	146	1.28
N3.06	C12	146	4.1	1.2D + 1L	Combination	Min	2.56	-563.182	10.691	97.0768	-0.8831	-111.1663	-2.0119	146	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C20	186	1. 1.4D	Combination			0	-725.2972	-0.942	8.3119	-0.0895	6.3171	-1.4971	186	0	
N3.06	C20	186	1. 1.4D	Combination			1.28	-718.5489	-0.942	8.3119	-0.0895	-4.3222	-0.2913	186	1.28	
N3.06	C20	186	1. 1.4D	Combination			2.56	-711.8007	-0.942	8.3119	-0.0895	-14.9615	0.9144	186	2.56	
N3.06	C20	186	2. 1.2D + 1.6L	Combination			0	-824.2904	-0.8619	9.3566	-0.1308	6.6944	-1.5847	186	0	
N3.06	C20	186	2. 1.2D + 1.6L	Combination			1.28	-818.5062	-0.8619	9.3566	-0.1308	-5.282	-0.4814	186	1.28	
N3.06	C20	186	2. 1.2D + 1.6L	Combination			2.56	-812.722	-0.8619	9.3566	-0.1308	-17.2584	0.6218	186	2.56	
N3.06	C20	186	2. 1.2D + 1.6L	Combination			0	-691.5597	-0.9081	7.6756	-0.0965	5.6584	-1.4743	186	0	
N3.06	C20	186	2. 1.2D + 1.6L	Combination			1.28	-685.7755	-0.9081	7.6756	-0.0965	-4.1663	-0.312	186	1.28	
N3.06	C20	186	2. 1.2D + 1.6L	Combination			2.56	-679.9913	-0.9081	7.6756	-0.0965	-13.9911	0.8503	186	2.56	
N3.06	C20	186	2. 1.2D + 1L +	Combination			0	-686.5603	-0.8444	7.7872	-0.0943	5.7774	-1.4005	186	0	
N3.06	C20	186	2. 1.2D + 1L +	Combination			1.28	-680.7761	-0.8444	7.7872	-0.0943	-4.1902	-0.3197	186	1.28	
N3.06	C20	186	2. 1.2D + 1L +	Combination			2.56	-674.9919	-0.8444	7.7872	-0.0943	-14.1578	0.7611	186	2.56	
N3.06	C20	186	3.1 1.2D + 1L	Combination	Max		0	-674.1335	55.1196	26.4452	0.5405	34.995	88.6616	186	0	
N3.06	C20	186	3.1 1.2D + 1L	Combination	Max		1.28	-668.3493	55.1196	26.4452	0.5405	1.1451	18.1085	186	1.28	
N3.06	C20	186	3.1 1.2D + 1L	Combination	Max		2.56	-662.5651	55.1196	26.4452	0.5405	-30.99	-51.8557	186	2.56	
N3.06	C20	186	3.1 1.2D + 1L	Combination	Min		0	-675.2783	54.5994	24.7317	-0.2311	32.3232	87.9188	186	0	
N3.06	C20	186	3.1 1.2D + 1L	Combination	Min		1.28	-669.4941	54.5994	24.7317	-0.2311	0.6666	18.0315	186	1.28	
N3.06	C20	186	3.1 1.2D + 1L	Combination	Min		2.56	-663.7099	54.5994	24.7317	-0.2311	-32.7048	-52.4446	186	2.56	
N3.06	C20	186	3.2 1.2D + 1L	Combination	Max		0	-699.0508	55.3267	-9.1739	0.9679	-20.9852	88.9303	186	0	
N3.06	C20	186	3.2 1.2D + 1L	Combination	Max		1.28	-693.2666	55.3267	-9.1739	0.9679	-9.2426	18.1121	186	1.28	
N3.06	C20	186	3.2 1.2D + 1L	Combination	Max		2.56	-687.4823	55.3267	-9.1739	0.9679	5.5377	-51.663	186	2.56	
N3.06	C20	186	3.2 1.2D + 1L	Combination	Min		0	-701.0787	54.4053	-12.2094	-0.3991	-25.7182	87.6145	186	0	
N3.06	C20	186	3.2 1.2D + 1L	Combination	Min		1.28	-695.2945	54.4053	-12.2094	-0.3991	-10.0902	17.9757	186	1.28	
N3.06	C20	186	3.2 1.2D + 1L	Combination	Min		2.56	-689.5103	54.4053	-12.2094	-0.3991	2.5	-52.7061	186	2.56	
N3.06	C20	186	3.3 1.2D + 1L	Combination	Max		0	-693.2975	-56.2302	-9.0559	0.0445	-20.6602	-90.6526	186	0	
N3.06	C20	186	3.3 1.2D + 1L	Combination	Max		1.28	-687.5133	-56.2302	-9.0559	0.0445	-9.0687	-18.6779	186	1.28	
N3.06	C20	186	3.3 1.2D + 1L	Combination	Max		2.56	-681.7291	-56.2302	-9.0559	0.0445	4.2377	53.8856	186	2.56	
N3.06	C20	186	3.3 1.2D + 1L	Combination	Min		0	-694.4423	-56.7504	-10.7694	-0.7272	-23.332	-91.3954	186	0	
N3.06	C20	186	3.3 1.2D + 1L	Combination	Min		1.28	-688.6581	-56.7504	-10.7694	-0.7272	-9.5472	-18.7549	186	1.28	
N3.06	C20	186	3.3 1.2D + 1L	Combination	Min		2.56	-682.8739	-56.7504	-10.7694	-0.7272	2.5229	53.2967	186	2.56	
N3.06	C20	186	3.4 1.2D + 1L	Combination	Max		0	-667.497	-56.0361	27.8851	0.2124	37.3811	-90.3483	186	0	
N3.06	C20	186	3.4 1.2D + 1L	Combination	Max		1.28	-661.7128	-56.0361	27.8851	0.2124	1.6882	-18.6222	186	1.28	
N3.06	C20	186	3.4 1.2D + 1L	Combination	Max		2.56	-655.9286	-56.0361	27.8851	0.2124	-30.967	54.1471	186	2.56	
N3.06	C20	186	3.4 1.2D + 1L	Combination	Min		0	-669.525	-56.9575	24.8497	-1.1545	32.6482	-91.6642	186	0	
N3.06	C20	186	3.4 1.2D + 1L	Combination	Min		1.28	-663.7408	-56.9575	24.8497	-1.1545	0.8406	-18.7585	186	1.28	
N3.06	C20	186	3.4 1.2D + 1L	Combination	Min		2.56	-657.9566	-56.9575	24.8497	-1.1545	-34.0048	53.104	186	2.56	
N3.06	C20	186	3.5 1.2D + 1L	Combination	Max		0	-681.3838	47.3186	10.2294	0.9654	9.5463	76.0003	186	0	
N3.06	C20	186	3.5 1.2D + 1L	Combination	Max		1.28	-675.5996	47.3186	10.2294	0.9654	-3.5403	15.4438	186	1.28	
N3.06	C20	186	3.5 1.2D + 1L	Combination	Max		2.56	-669.8154	47.3186	10.2294	0.9654	-11.8223	46.584	186	2.56	
N3.06	C20	186	3.5 1.2D + 1L	Combination	Min		0	-687.192	-48.9494	5.4464	-1.152	2.1166	-78.7341	186	0	
N3.06	C20	186	3.5 1.2D + 1L	Combination	Min		1.28	-681.4078	-48.9494	5.4464	-1.152	-4.8617	-16.0902	186	1.28	
N3.06	C20	186	3.5 1.2D + 1L	Combination	Min		2.56	-675.6236	-48.9494	5.4464	-1.152	-16.6448	-45.143	186	2.56	
N3.06	C20	186	3.6 1.2D + 1L	Combination	Max		0	-681.3838	47.3186	10.2294	0.9654	9.5463	76.0003	186	0	
N3.06	C20	186	3.6 1.2D + 1L	Combination	Max		1.28	-675.5996	47.3186	10.2294	0.9654	-3.5403	15.4438	186	1.28	
N3.06	C20	186	3.6 1.2D + 1L	Combination	Max		2.56	-669.8154	47.3186	10.2294	0.9654	-11.8223	46.584	186	2.56	
N3.06	C20	186	3.6 1.2D + 1L	Combination	Min		0	-687.192	-48.9494	5.4464	-1.152	2.1166	-78.7341	186	0	
N3.06	C20	186	3.6 1.2D + 1L	Combination	Min		1.28	-681.4078	-48.9494	5.4464	-1.152	-4.8617	-16.0902	186	1.28	
N3.06	C20	186	3.6 1.2D + 1L	Combination	Min		2.56	-675.6236	-48.9494	5.4464	-1.152	-16.6448	-45.143	186	2.56	
N3.06	C20	186	4.1 1.2D + 1L	Combination	Max		0	-642.4543	16.1035	68.9333	0.12	101.8084	25.8803	186	0	
N3.06	C20	186	4.1 1.2D + 1L	Combination	Max		1.28	-636.6701	16.1035	68.9333	0.12	13.5738	5.2678	186	1.28	
N3.06	C20	186	4.1 1.2D + 1L	Combination	Max		2.56	-630.8859	16.1035	68.9333	0.12	-73.1688	-14.8324	186	2.56	
N3.06	C20	186	4.1 1.2D + 1L	Combination	Min		0	-643.4504	15.6509	67.4424	-0.5513	99.4838	25.234	186	0	
N3.06	C20	186	4.1 1.2D + 1L	Combination	Min		1.28	-637.6662	15.6509	67.4424	-0.5513	13.1575	5.2008	186	1.28	
N3.06	C20	186	4.1 1.2D + 1L	Combination	Min		2.56	-631.8819	15.6509	67.4424	-0.5513	-74.6608	-15.3447	186	2.56	
N3.06	C20	186	4.2 1.2D + 1L	Combination	Max		0	-640.1199	-17.0871	69.8793	0.2531	103.3258	-27.5998	186	0	
N3.06	C20	186	4.2 1.2D + 1L	Combination	Max		1.28	-634.3357	-17.0871	69.8793	0.2531	13.8803	-5.7283	186	1.28	
N3.06	C20	186	4.2 1.2D + 1L	Combination	Max		2.56	-628.5515	-17.0871	69.8793	0.2531	-72.6475	17.1452	186	2.56	
N3.06	C20	186	4.2 1.2D + 1L	Combination	Min		0	-642.0678	-17.9722	66.9638	-1.0598	98.7798	-28.8637	186	0	
N3.06	C20	186	4.2 1.2D + 1L	Combination	Min		1.28	-636.2836	-17.9722	66.9638	-1.0598	13.0661	-5.8593	186	1.28	
N3.06	C20	186	4.2 1.2D + 1L	Combination	Min		2.56	-630.4994	-17.9722	66.9638	-1.0598	-75.5653	16.1432	186	2.56	
N3.06	C20	186	4.3 1.2D + 1L	Combination	Max		0	-725.1254	-17.2817	-51.7667	0.3647	-87.8209	-27.9679	186	0	
N3.06	C20	186	4.3 1.2D + 1L	Combination	Max		1.28	-719.3412	-17.2817	-51.7667	0.3647	-21.5596	-5.8473	186	1.28	
N3.06	C20	186	4.3 1.2D + 1L	Combination	Max		2.56	-713.557	-17.2817	-51.7667	0.3647	46.1938	16.7857	186	2.56	
N3.06	C20	186	4.3 1.2D + 1L	Combination	Min		0	-726.1214	-17.7343	-53.2575	-0.3067	-90.1455	-28.6142	186	0	
N3.06	C20	186	4.3 1.2D + 1L	Combination	Min		1.28	-720.3372	-17.7343	-53.2575	-0.3067	-21.9759	-5.9142	186	1.28	
N3.06	C20	186	4.3 1.2D + 1L	Combination	Min		2.56	-714.553	-17.7343	-53.2575	-0.3067	44.7018	16.2734	186	2.56	
N3.06	C20	186	4.4 1.2D + 1L	Combination	Max		0	-726.5079	16.3414	-51.288	0.8732	-87.1168	26.1298	186	0	
N3.06	C20	186	4.4 1.2D + 1L	Combination	Max		1.28	-720.7237	16.3414	-51.288	0.8732	-21.4682	5.2128	186	1.28	
N3.06	C20	186	4.4 1.2D + 1L	Combination	Max		2.56	-714.9395	16.3414	-51.288	0.8732	47.0982	-14.7022	186	2.56	
N3.06	C20	186	4.4 1.2D + 1L	Combination	Min		0	-728.4558	15.4563	-54.2035	-0.4398	-91.6629	24.866	186	0	
N3.06	C20	186	4.4 1.2D + 1L	Combination	Min		1.28	-722.6716	15.4563	-54.2035	-0.4398	-22.2823	5.0819	186	1.28	
N3.06	C20	186	4.4 1.2D + 1L	Combination	Min		2.56	-716.8874	15.4563	-54.2035	-0.4398	44.1804	-15.7042	186	2.56	
N3.06	C20	186	4.5 1.2D + 1L	Combination	Max		0	-647.9599	1.666	60.7465	0.7128	88.8806	2.6261	186	0	
N3.06	C20	186	4.5 1.2D + 1L	Combination	Max		1.28	-642.1757	1.666	60.7465	0.7128	11.1352	0.505	186	1.28	
N3.06	C20	186	4.5 1.2D + 1L	Combination	Max		2.56	-636.3915	1.666	60.7465	0.7128	38.1693	3.0878	186	2.56	
N3.06	C20	186	4.5 1.2D + 1L	Combination	Min		0	-720.6159	-3.2968	-45.0707	-0.8994	-77.2176	-5.3599	186	0	
N3.06	C20	186	4.5 1.2D + 1L	Combination	Min		1.28	-714.8317	-3.2968	-45.0707	-0.8994	-19.5373	-1.1514	186	1.28	
N3.06	C20	186	4.5 1.2D + 1L	Combination	Min		2.56	-709.0475	-3.2968	-45.0707	-0.8994	-66.6363	-1.6468	186	2.56	
N3.06	C20	186	4.6 1.2D + 1L	Combination	Max		0	-647.9599	1.666	60.7465	0.7128	88.8806	2.6261	186	0	
N3.06	C20	186	4.6 1.2D + 1L	Combination	Max		1.28	-642.1757	1.666	60.7465	0.7128	11.1352	0.505	186	1.28	
N3.06	C20	186	4.6 1.2D + 1L	Combination	Max		2.56	-636.3915	1.666	60.7465	0.7128	38.1693	3.0878	186	2.56	
N3.06	C20	186	4.6 1.2D + 1L	Combination	Min		0	-720.6159	-3.2968	-45.0707	-0.8994	-77.2176	-5.3599	186	0	
N3.06	C20	186	4.6 1.2D + 1L	Combination	Min		1.28	-714.8317	-3.2968	-45.0707	-0.8994	-19.5373	-1.1514	186	1.28	
N3.06	C20	186	4.6 1.2D + 1L	Combination	Min		2.56	-709.0475	-3.2968	-45.0707	-0.8994	-66.6363	-1.6468	186	2.56	
N3.06	C20	186	5.1 0.9D + (1(	Combination	Max		0	-456.1081	55.3294	23.9507	0.5763	33.2245	89.0661	186	0	
N3.06	C20	186	5.1 0.9D + (1(	Combination	Max		1.28	-451.7699	55.3294	23.9507	0.5763	2.5676	18.2444	186	1.28	
N3.06	C20	186	5.1 0.9D + (1(	Combination	Max		2.56	-447.4318	55.3294	23.9507	0.5763	-26.3745	-51.9884	186	2.56	
N3.06	C20	186	5.1 0.9D + (1(	Combination	Min		0	-457.2529	54.8092	22.2372	-0.1954	30.5527	88.3233	186	0	
N3.06	C20	186	5.1 0.9D + (1(	Combination	Min		1.28	-452.9147	54.8092	22.2372	-0.1954	2.0891	18.1675	186	1.28	
N3.06	C20	186	5.1 0.9D + (1(	Combination	Min		2.56	-448.5766	54.8092	22.2372	-0.1954	-28.0894	-52.5772	186	2.56	
N3.06	C20	186	5.2 0.9D + (1(	Combination	Max		0	-481.0254	55.5366	-11.6684	1.0036	-22.7557	89.3349	186	0	
N3.06	C20	186	5.2 0.9D + (1(	Combination	Max		1.28	-476.6872	55.5366	-11.6684	1.0036	-7.8202	18.248	186	1.28	
N3.06	C20	186	5.2 0.9D + (1(	Combination	Max		2.56	-472.349	55.5366	-11.6684	1.0036	10.1532	-51.7956	186	2.56	
N3.06	C20	186	5.2 0.9D + (1(	Combination	Min		0	-483.0533	54.6151	-14.7039	-0.3633	-27.4887	88.019	186	0	
N3.06	C20	186	5.2 0.9D + (1(	Combination	Min		1.28	-478.7152	54.6151	-14.7039	-0.3633	-8.6678	18.1117	186	1.28	
N3.06	C20	186	5.2 0.9D + (1(	Combination	Min		2.56	-474.377	54.6151	-14.7039	-0.3633	7.1154	-52.8388	186	2.56	
N3.06	C20	186	5.3 0.9D - (10	Combination	Max		0	-475.2721	-56.0204	-11.5504	0.0803	-22.4307	-90.2481	186	0	
N3.06	C20	186	5.3 0.9D - (10	Combination	Max		1.28	-470.9339	-56.0204	-11.5504	0.0803	-7.6462	-18.542	186	1.28	
N3.06	C20	186	5.3 0.9D - (10	Combination	Max		2.56	-466.5958	-56.0204	-11.5504	0.0803	8.8532	53.7529	186	2.56	
N3.06	C20	186	5.3 0.9D - (10	Combination	Min		0	-476.4169	-56.5406	-13.2639	-0.6914	-25.1025	-90.9909	186	0	
N3.06	C20	186	5.3 0.9D - (10	Combination	Min		1.28	-472.0787	-56.5406	-13.2639	-0.6914	-8.1247	-18.619	186	1.28	
N3.06	C20	186	5.3 0.9D - (10	Combination	Min		2.56	-467.7406	-56.5406	-13.2639	-0.6914	7.1383	53.1641	186	2.56	
N3.06	C20	186	5.4 0.9D - (10	Combination	Max		0	-449.4716	-55.8262	25.3906	0.2482	35.6106	-89.9438	186	0	
N3.06	C20	186	5.4 0.9D - (10	Combination	Max		1.28	-445.1335	-55.8262	25.3906	0.2482	3.1106	-18.4862	186	1.28	

N3.06	C20	186	5.4	0.9D - (10	Combination	Max	2.56	-440.7953	-55.8262	25.3906	0.2482	-26.3516	54.0145	186	2.56
N3.06	C20	186	5.4	0.9D - (10	Combination	Min	0	-451.4996	-56.7477	22.3552	-1.1187	30.8777	-91.2597	186	0
N3.06	C20	186	5.4	0.9D - (10	Combination	Min	1.28	-447.1614	-56.7477	22.3552	-1.1187	2.263	-18.6226	186	1.28
N3.06	C20	186	5.4	0.9D - (10	Combination	Min	2.56	-442.8233	-56.7477	22.3552	-1.1187	-29.3894	52.9714	186	2.56
N3.06	C20	186	5.5	0.9D + Ex	Combination	Max	0	-463.3584	47.5284	7.7349	1.0011	7.7759	76.4048	186	0
N3.06	C20	186	5.5	0.9D + Ex	Combination	Max	1.28	-459.0202	47.5284	7.7349	1.0011	-2.1179	15.5797	186	1.28
N3.06	C20	186	5.5	0.9D + Ex	Combination	Max	2.56	-454.6821	47.5284	7.7349	1.0011	-7.2069	46.4513	186	2.56
N3.06	C20	186	5.5	0.9D + Ex	Combination	Min	0	-469.1666	-48.7395	2.9519	-1.1162	0.3461	-78.3296	186	0
N3.06	C20	186	5.5	0.9D + Ex	Combination	Min	1.28	-464.8284	-48.7395	2.9519	-1.1162	-3.4392	-15.9543	186	1.28
N3.06	C20	186	5.5	0.9D + Ex	Combination	Min	2.56	-460.4903	-48.7395	2.9519	-1.1162	-12.0293	-45.2756	186	2.56
N3.06	C20	186	5.6	0.9D - Ex	Combination	Max	0	-463.3584	47.5284	7.7349	1.0011	7.7759	76.4048	186	0
N3.06	C20	186	5.6	0.9D - Ex	Combination	Max	1.28	-459.0202	47.5284	7.7349	1.0011	-2.1179	15.5797	186	1.28
N3.06	C20	186	5.6	0.9D - Ex	Combination	Max	2.56	-454.6821	47.5284	7.7349	1.0011	-7.2069	46.4513	186	2.56
N3.06	C20	186	5.6	0.9D - Ex	Combination	Min	0	-469.1666	-48.7395	2.9519	-1.1162	0.3461	-78.3296	186	0
N3.06	C20	186	5.6	0.9D - Ex	Combination	Min	1.28	-464.8284	-48.7395	2.9519	-1.1162	-3.4392	-15.9543	186	1.28
N3.06	C20	186	5.6	0.9D - Ex	Combination	Min	2.56	-460.4903	-48.7395	2.9519	-1.1162	-12.0293	-45.2756	186	2.56
N3.06	C20	186	6.1	0.9D + (1(	Combination	Max	0	-424.4289	16.3133	66.4388	0.1558	100.0379	26.2848	186	0
N3.06	C20	186	6.1	0.9D + (1(	Combination	Max	1.28	-420.0908	16.3133	66.4388	0.1558	14.9963	5.4038	186	1.28
N3.06	C20	186	6.1	0.9D + (1(	Combination	Max	2.56	-415.7526	16.3133	66.4388	0.1558	-68.5534	-14.965	186	2.56
N3.06	C20	186	6.1	0.9D + (1(	Combination	Min	0	-425.425	15.8608	64.9479	-0.5156	97.7133	25.6385	186	0
N3.06	C20	186	6.1	0.9D + (1(	Combination	Min	1.28	-421.0868	15.8608	64.9479	-0.5156	14.58	5.3368	186	1.28
N3.06	C20	186	6.1	0.9D + (1(	Combination	Min	2.56	-416.7486	15.8608	64.9479	-0.5156	-70.0454	-15.4773	186	2.56
N3.06	C20	186	6.2	0.9D + (1(	Combination	Max	0	-422.0945	-16.8773	67.3848	0.2889	101.5553	-27.1953	186	0
N3.06	C20	186	6.2	0.9D + (1(	Combination	Max	1.28	-417.7564	-16.8773	67.3848	0.2889	15.3027	-5.5923	186	1.28
N3.06	C20	186	6.2	0.9D + (1(	Combination	Max	2.56	-413.4182	-16.8773	67.3848	0.2889	-68.0321	17.0125	186	2.56
N3.06	C20	186	6.2	0.9D + (1(	Combination	Min	0	-424.0424	-17.7624	64.4693	-1.0241	97.0093	-28.4592	186	0
N3.06	C20	186	6.2	0.9D + (1(	Combination	Min	1.28	-419.7043	-17.7624	64.4693	-1.0241	14.4886	-5.7233	186	1.28
N3.06	C20	186	6.2	0.9D + (1(	Combination	Min	2.56	-415.3661	-17.7624	64.4693	-1.0241	-70.9498	16.0106	186	2.56
N3.06	C20	186	6.3	0.9D - (10	Combination	Max	0	-507.1	-17.0719	-54.2612	0.4005	-89.5914	-27.5634	186	0
N3.06	C20	186	6.3	0.9D - (10	Combination	Max	1.28	-502.7618	-17.0719	-54.2612	0.4005	-20.1371	-5.7113	186	1.28
N3.06	C20	186	6.3	0.9D - (10	Combination	Max	2.56	-498.4237	-17.0719	-54.2612	0.4005	50.8092	16.653	186	2.56
N3.06	C20	186	6.3	0.9D - (10	Combination	Min	0	-508.096	-17.5245	-55.752	-0.2709	-91.916	-28.2096	186	0
N3.06	C20	186	6.3	0.9D - (10	Combination	Min	1.28	-503.7579	-17.5245	-55.752	-0.2709	-20.5534	-5.7783	186	1.28
N3.06	C20	186	6.3	0.9D - (10	Combination	Min	2.56	-499.4197	-17.5245	-55.752	-0.2709	49.3172	16.1407	186	2.56
N3.06	C20	186	6.4	0.9D - (10	Combination	Max	0	-508.4825	16.5512	-53.7825	0.909	-88.8873	26.5344	186	0
N3.06	C20	186	6.4	0.9D - (10	Combination	Max	1.28	-504.1444	16.5512	-53.7825	0.909	-20.0457	5.3488	186	1.28
N3.06	C20	186	6.4	0.9D - (10	Combination	Max	2.56	-499.8062	16.5512	-53.7825	0.909	51.7136	-14.8349	186	2.56
N3.06	C20	186	6.4	0.9D - (10	Combination	Min	0	-510.4304	15.6662	-56.698	-0.404	-93.4334	25.2705	186	0
N3.06	C20	186	6.4	0.9D - (10	Combination	Min	1.28	-506.0923	15.6662	-56.698	-0.404	-20.8599	5.2178	186	1.28
N3.06	C20	186	6.4	0.9D - (10	Combination	Min	2.56	-501.7541	15.6662	-56.698	-0.404	48.7959	-15.8368	186	2.56
N3.06	C20	186	6.5	0.9D + Ey	Combination	Max	0	-429.9345	1.8758	58.252	0.7486	87.1101	3.0306	186	0
N3.06	C20	186	6.5	0.9D + Ey	Combination	Max	1.28	-425.5963	1.8758	58.252	0.7486	12.5577	0.641	186	1.28
N3.06	C20	186	6.5	0.9D + Ey	Combination	Max	2.56	-421.2582	1.8758	58.252	0.7486	42.7847	2.9551	186	2.56
N3.06	C20	186	6.5	0.9D + Ey	Combination	Min	0	-502.5905	-3.087	-47.5652	-0.8637	-78.9881	-4.9554	186	0
N3.06	C20	186	6.5	0.9D + Ey	Combination	Min	1.28	-498.2523	-3.087	-47.5652	-0.8637	-18.1148	-1.0155	186	1.28
N3.06	C20	186	6.5	0.9D + Ey	Combination	Min	2.56	-493.9142	-3.087	-47.5652	-0.8637	-62.0209	-1.7794	186	2.56
N3.06	C20	186	6.6	0.9D - Ey	Combination	Max	0	-429.9345	1.8758	58.252	0.7486	87.1101	3.0306	186	0
N3.06	C20	186	6.6	0.9D - Ey	Combination	Max	1.28	-425.5963	1.8758	58.252	0.7486	12.5577	0.641	186	1.28
N3.06	C20	186	6.6	0.9D - Ey	Combination	Max	2.56	-421.2582	1.8758	58.252	0.7486	42.7847	2.9551	186	2.56
N3.06	C20	186	6.6	0.9D - Ey	Combination	Min	0	-502.5905	-3.087	-47.5652	-0.8637	-78.9881	-4.9554	186	0
N3.06	C20	186	6.6	0.9D - Ey	Combination	Min	1.28	-498.2523	-3.087	-47.5652	-0.8637	-18.1148	-1.0155	186	1.28
N3.06	C20	186	6.6	0.9D - Ey	Combination	Min	2.56	-493.9142	-3.087	-47.5652	-0.8637	-62.0209	-1.7794	186	2.56
N3.06	C20	186	3.3	1.2D + 1L	Combination	Max	0	-693.2975	-56.2302	-9.0559	0.0445	-20.6602	-90.6526	186	0
N3.06	C20	186	3.3	1.2D + 1L	Combination	Max	1.28	-687.5133	-56.2302	-9.0559	0.0445	-9.0687	-18.6779	186	1.28
N3.06	C20	186	3.3	1.2D + 1L	Combination	Max	2.56	-681.7291	-56.2302	-9.0559	0.0445	4.2377	53.8856	186	2.56
N3.06	C20	186	3.3	1.2D + 1L	Combination	Min	0	-694.4423	-56.7504	-10.7694	-0.7272	-23.332	-91.3954	186	0
N3.06	C20	186	3.3	1.2D + 1L	Combination	Min	1.28	-688.6581	-56.7504	-10.7694	-0.7272	-9.5472	-18.7549	186	1.28
N3.06	C20	186	3.3	1.2D + 1L	Combination	Min	2.56	-682.8739	-56.7504	-10.7694	-0.7272	2.5229	53.2967	186	2.56
N3.06	C20	186	4.1	1.2D + 1L	Combination	Max	0	-642.4543	16.1035	68.9333	0.12	101.8084	25.8803	186	0
N3.06	C20	186	4.1	1.2D + 1L	Combination	Max	1.28	-636.6701	16.1035	68.9333	0.12	13.5738	5.2678	186	1.28
N3.06	C20	186	4.1	1.2D + 1L	Combination	Max	2.56	-630.8859	16.1035	68.9333	0.12	-73.1688	-14.8324	186	2.56
N3.06	C20	186	4.1	1.2D + 1L	Combination	Min	0	-643.4504	15.6509	67.4424	-0.5513	99.4838	25.234	186	0
N3.06	C20	186	4.1	1.2D + 1L	Combination	Min	1.28	-637.6662	15.6509	67.4424	-0.5513	13.1575	5.2008	186	1.28
N3.06	C20	186	4.1	1.2D + 1L	Combination	Min	2.56	-631.8819	15.6509	67.4424	-0.5513	-74.6608	-15.3447	186	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C28	226	1. 1.4D	Combination			0	-615.7578	0.5249	8.853	-0.0895	6.4252	-0.0533	226	0	
N3.06	C28	226	1. 1.4D	Combination			1.28	-609.0096	0.5249	8.853	-0.0895	-4.9067	-0.7252	226	1.28	
N3.06	C28	226	1. 1.4D	Combination			2.56	-602.2614	0.5249	8.853	-0.0895	-16.2385	-1.3971	226	2.56	
N3.06	C28	226	2. 1.2D + 1.6I	Combination			0	-681.7746	0.3159	9.9929	-0.1308	6.7004	-0.4255	226	0	
N3.06	C28	226	2. 1.2D + 1.6I	Combination			1.28	-675.9904	0.3159	9.9929	-0.1308	-6.0906	-0.8298	226	1.28	
N3.06	C28	226	2. 1.2D + 1.6I	Combination			2.56	-670.2062	0.3159	9.9929	-0.1308	-18.8815	-1.2341	226	2.56	
N3.06	C28	226	2. 1.2D + 1.6I	Combination			0	-646.657	0.0645	8.4104	-0.0965	5.924	-0.5171	226	0	
N3.06	C28	226	2. 1.2D + 1.6I	Combination			1.28	-640.8728	0.0645	8.4104	-0.0965	-4.8414	-0.5997	226	1.28	
N3.06	C28	226	2. 1.2D + 1.6I	Combination			2.56	-635.0886	0.0645	8.4104	-0.0965	-15.6068	-0.6822	226	2.56	
N3.06	C28	226	2. 1.2D + 1L +	Combination			0	-592.7559	0.3262	8.3566	-0.0943	5.8906	-0.2484	226	0	
N3.06	C28	226	2. 1.2D + 1L +	Combination			1.28	-586.9717	0.3262	8.3566	-0.0943	-4.8059	-0.666	226	1.28	
N3.06	C28	226	2. 1.2D + 1L +	Combination			2.56	-581.1875	0.3262	8.3566	-0.0943	-15.5023	-1.0835	226	2.56	
N3.06	C28	226	3.1 1.2D + 1L	Combination	Max		0	-533.8846	56.4211	30.0556	0.5405	40.1256	89.9425	226	0	
N3.06	C28	226	3.1 1.2D + 1L	Combination	Max		1.28	-528.1004	56.4211	30.0556	0.5405	1.6544	17.7235	226	1.28	
N3.06	C28	226	3.1 1.2D + 1L	Combination	Max		2.56	-522.3162	56.4211	30.0556	0.5405	-32.6609	-53.8347	226	2.56	
N3.06	C28	226	3.1 1.2D + 1L	Combination	Min		0	-537.0179	55.8553	25.7219	-0.2311	33.1872	89.1548	226	0	
N3.06	C28	226	3.1 1.2D + 1L	Combination	Min		1.28	-531.2337	55.8553	25.7219	-0.2311	0.2632	17.66	226	1.28	
N3.06	C28	226	3.1 1.2D + 1L	Combination	Min		2.56	-525.4495	55.8553	25.7219	-0.2311	-36.8167	-54.4955	226	2.56	
N3.06	C28	226	3.2 1.2D + 1L	Combination	Max		0	-552.5715	56.3495	-2.803	0.9679	-11.8717	89.9369	226	0	
N3.06	C28	226	3.2 1.2D + 1L	Combination	Max		1.28	-546.7873	56.3495	-2.803	0.9679	-8.2838	17.8096	226	1.28	
N3.06	C28	226	3.2 1.2D + 1L	Combination	Max		2.56	-541.0031	56.3495	-2.803	0.9679	2.6658	-53.1472	226	2.56	
N3.06	C28	226	3.2 1.2D + 1L	Combination	Min		0	-558.1221	55.3471	-10.4799	-0.3991	-24.1627	88.5415	226	0	
N3.06	C28	226	3.2 1.2D + 1L	Combination	Min		1.28	-552.3379	55.3471	-10.4799	-0.3991	-10.7484	17.6971	226	1.28	
N3.06	C28	226	3.2 1.2D + 1L	Combination	Min		2.56	-546.5537	55.3471	-10.4799	-0.3991	-4.696	-54.3178	226	2.56	
N3.06	C28	226	3.3 1.2D + 1L	Combination	Max		0	-599.493	-54.9649	-9.0578	0.0445	-21.4365	-89.4072	226	0	
N3.06	C28	226	3.3 1.2D + 1L	Combination	Max		1.28	-593.7088	-54.9649	-9.0578	0.0445	-9.8425	-19.0522	226	1.28	
N3.06	C28	226	3.3 1.2D + 1L	Combination	Max		2.56	-587.9246	-54.9649	-9.0578	0.0445	5.9072	51.9636	226	2.56	
N3.06	C28	226	3.3 1.2D + 1L	Combination	Min		0	-602.6263	-55.5307	-13.3914	-0.7272	-28.3748	-90.195	226	0	
N3.06	C28	226	3.3 1.2D + 1L	Combination	Min		1.28	-596.8421	-55.5307	-13.3914	-0.7272	-11.2338	-19.1157	226	1.28	
N3.06	C28	226	3.3 1.2D + 1L	Combination	Min		2.56	-591.0579	-55.5307	-13.3914	-0.7272	1.7514	51.3028	226	2.56	
N3.06	C28	226	3.4 1.2D + 1L	Combination	Max		0	-578.3888	-54.4567	27.144	0.2124	35.9134	-88.7939	226	0	
N3.06	C28	226	3.4 1.2D + 1L	Combination	Max		1.28	-572.6046	-54.4567	27.144	0.2124	1.1691	-19.0893	226	1.28	
N3.06	C28	226	3.4 1.2D + 1L	Combination	Max		2.56	-566.8204	-54.4567	27.144	0.2124	-26.2135	51.7858	226	2.56	
N3.06	C28	226	3.4 1.2D + 1L	Combination	Min		0	-583.9394	-55.4591	19.4672	-1.1545	23.6225	-90.1894	226	0	
N3.06	C28	226	3.4 1.2D + 1L	Combination	Min		1.28	-578.1552	-55.4591	19.4672	-1.1545	-1.2955	-19.2018	226	1.28	
N3.06	C28	226	3.4 1.2D + 1L	Combination	Min		2.56	-572.371	-55.4591	19.4672	-1.1545	-33.5753	50.6153	226	2.56	
N3.06	C28	226	3.5 1.2D + 1L	Combination	Max		0	-546.1717	48.5095	16.6718	0.9654	18.9968	77.1722	226	0	
N3.06	C28	226	3.5 1.2D + 1L	Combination	Max		1.28	-540.3875	48.5095	16.6718	0.9654	-2.3348	15.0918	226	1.28	
N3.06	C28	226	3.5 1.2D + 1L	Combination	Max		2.56	-534.6033	48.5095	16.6718	0.9654	-7.2215	44.4885	226	2.56	
N3.06	C28	226	3.5 1.2D + 1L	Combination	Min		0	-590.3392	-47.6191	-0.0076	-1.152	-7.246	-77.4246	226	0	
N3.06	C28	226	3.5 1.2D + 1L	Combination	Min		1.28	-584.555	-47.6191	-0.0076	-1.152	-7.2446	-16.484	226	1.28	
N3.06	C28	226	3.5 1.2D + 1L	Combination	Min		2.56	-578.7708	-47.6191	-0.0076	-1.152	-23.688	-47.0204	226	2.56	
N3.06	C28	226	3.6 1.2D + 1L	Combination	Max		0	-546.1717	48.5095	16.6718	0.9654	18.9968	77.1722	226	0	
N3.06	C28	226	3.6 1.2D + 1L	Combination	Max		1.28	-540.3875	48.5095	16.6718	0.9654	-2.3348	15.0918	226	1.28	
N3.06	C28	226	3.6 1.2D + 1L	Combination	Max		2.56	-534.6033	48.5095	16.6718	0.9654	-7.2215	44.4885	226	2.56	
N3.06	C28	226	3.6 1.2D + 1L	Combination	Min		0	-590.3392	-47.6191	-0.0076	-1.152	-7.246	-77.4246	226	0	
N3.06	C28	226	3.6 1.2D + 1L	Combination	Min		1.28	-584.555	-47.6191	-0.0076	-1.152	-7.2446	-16.484	226	1.28	
N3.06	C28	226	3.6 1.2D + 1L	Combination	Min		2.56	-578.7708	-47.6191	-0.0076	-1.152	-23.688	-47.0204	226	2.56	
N3.06	C28	226	4.1 1.2D + 1L	Combination	Max		0	-526.8761	17.8389	68.4551	0.12	101.0496	27.5883	226	0	
N3.06	C28	226	4.1 1.2D + 1L	Combination	Max		1.28	-521.0919	17.8389	68.4551	0.12	13.4271	4.7545	226	1.28	
N3.06	C28	226	4.1 1.2D + 1L	Combination	Max		2.56	-515.3077	17.8389	68.4551	0.12	-70.5798	-17.5044	226	2.56	
N3.06	C28	226	4.1 1.2D + 1L	Combination	Min		0	-529.6023	17.3466	64.6847	-0.5513	95.0129	26.9029	226	0	
N3.06	C28	226	4.1 1.2D + 1L	Combination	Min		1.28	-523.8181	17.3466	64.6847	-0.5513	12.2166	4.6993	226	1.28	
N3.06	C28	226	4.1 1.2D + 1L	Combination	Min		2.56	-518.0339	17.3466	64.6847	-0.5513	-74.1955	-18.0793	226	2.56	
N3.06	C28	226	4.2 1.2D + 1L	Combination	Max		0	-539.2874	-15.2547	68.8818	0.2531	101.8675	-25.7963	226	0	
N3.06	C28	226	4.2 1.2D + 1L	Combination	Max		1.28	-533.5032	-15.2547	68.8818	0.2531	13.6988	-6.2703	226	1.28	
N3.06	C28	226	4.2 1.2D + 1L	Combination	Max		2.56	-527.719	-15.2547	68.8818	0.2531	-67.3988	14.38	226	2.56	
N3.06	C28	226	4.2 1.2D + 1L	Combination	Min		0	-544.6187	-16.2174	61.5081	-1.0598	90.062	-27.1366	226	0	
N3.06	C28	226	4.2 1.2D + 1L	Combination	Min		1.28	-538.8345	-16.2174	61.5081	-1.0598	11.3316	-6.3783	226	1.28	
N3.06	C28	226	4.2 1.2D + 1L	Combination	Min		2.56	-533.0503	-16.2174	61.5081	-1.0598	-74.4698	13.2557	226	2.56	
N3.06	C28	226	4.3 1.2D + 1L	Combination	Max		0	-606.9086	-16.4562	-48.0205	0.3647	-83.2622	-27.1554	226	0	
N3.06	C28	226	4.3 1.2D + 1L	Combination	Max		1.28	-601.1244	-16.4562	-48.0205	0.3647	-21.7959	-6.0915	226	1.28	
N3.06	C28	226	4.3 1.2D + 1L	Combination	Max		2.56	-595.3402	-16.4562	-48.0205	0.3647	43.286	15.5474	226	2.56	
N3.06	C28	226	4.3 1.2D + 1L	Combination	Min		0	-609.6348	-16.9485	-51.791	-0.3067	-89.2989	-27.8408	226	0	
N3.06	C28	226	4.3 1.2D + 1L	Combination	Min		1.28	-603.8506	-16.9485	-51.791	-0.3067	-23.0064	-6.1467	226	1.28	
N3.06	C28	226	4.3 1.2D + 1L	Combination	Min		2.56	-598.0664	-16.9485	-51.791	-0.3067	39.6703	14.9725	226	2.56	
N3.06	C28	226	4.4 1.2D + 1L	Combination	Max		0	-591.8922	17.1079	-44.844	0.8732	-78.3112	26.8842	226	0	
N3.06	C28	226	4.4 1.2D + 1L	Combination	Max		1.28	-586.108	17.1079	-44.844	0.8732	-20.911	4.9861	226	1.28	
N3.06	C28	226	4.4 1.2D + 1L	Combination	Max		2.56	-580.3238	17.1079	-44.844	0.8732	43.5603	-15.7876	226	2.56	
N3.06	C28	226	4.4 1.2D + 1L	Combination	Min		0	-597.2235	16.1451	-52.2176	-0.4398	-90.1167	25.5439	226	0	
N3.06	C28	226	4.4 1.2D + 1L	Combination	Min		1.28	-591.4393	16.1451	-52.2176	-0.4398	-23.2782	4.8781	226	1.28	
N3.06	C28	226	4.4 1.2D + 1L	Combination	Min		2.56	-585.6551	16.1451	-52.2176	-0.4398	36.4893	-16.9119	226	2.56	
N3.06	C28	226	4.5 1.2D + 1L	Combination	Max		0	-540.9437	3.0796	56.3378	0.7128	81.773	4.0132	226	0	
N3.06	C28	226	4.5 1.2D + 1L	Combination	Max		1.28	-535.1595	3.0796	56.3378	0.7128	9.672	0.0941	226	1.28	
N3.06	C28	226	4.5 1.2D + 1L	Combination	Max		2.56	-529.3753	3.0796	56.3378	0.7128	31.5492	1.3523	226	2.56	
N3.06	C28	226	4.5 1.2D + 1L	Combination	Min		0	-595.5672	-2.1892	-39.6736	-0.8994	-70.0223	-4.2657	226	0	
N3.06	C28	226	4.5 1.2D + 1L	Combination	Min		1.28	-589.783	-2.1892	-39.6736	-0.8994	-19.2513	-1.4863	226	1.28	
N3.06	C28	226	4.5 1.2D + 1L	Combination	Min		2.56	-583.9988	-2.1892	-39.6736	-0.8994	-62.4587	-3.8842	226	2.56	
N3.06	C28	226	4.6 1.2D + 1L	Combination	Max		0	-540.9437	3.0796	56.3378	0.7128	81.773	4.0132	226	0	
N3.06	C28	226	4.6 1.2D + 1L	Combination	Max		1.28	-535.1595	3.0796	56.3378	0.7128	9.672	0.0941	226	1.28	
N3.06	C28	226	4.6 1.2D + 1L	Combination	Max		2.56	-529.3753	3.0796	56.3378	0.7128	31.5492	1.3523	226	2.56	
N3.06	C28	226	4.6 1.2D + 1L	Combination	Min		0	-595.5672	-2.1892	-39.6736	-0.8994	-70.0223	-4.2657	226	0	
N3.06	C28	226	4.6 1.2D + 1L	Combination	Min		1.28	-589.783	-2.1892	-39.6736	-0.8994	-19.2513	-1.4863	226	1.28	
N3.06	C28	226	4.6 1.2D + 1L	Combination	Min		2.56	-583.9988	-2.1892	-39.6736	-0.8994	-62.4587	-3.8842	226	2.56	
N3.06	C28	226	5.1 0.9D + (1(	Combination	Max		0	-361.4735	56.3133	27.4147	0.5763	38.3806	90.0345	226	0	
N3.06	C28	226	5.1 0.9D + (1(	Combination	Max		1.28	-357.1353	56.3133	27.4147	0.5763	3.2898	17.9534	226	1.28	
N3.06	C28	226	5.1 0.9D + (1(	Combination	Max		2.56	-352.7971	56.3133	27.4147	0.5763	-27.6452	-53.4669	226	2.56	
N3.06	C28	226	5.1 0.9D + (1(	Combination	Min		0	-364.6068	55.7475	23.0811	-0.1954	31.4423	89.2467	226	0	
N3.06	C28	226	5.1 0.9D + (1(	Combination	Min		1.28	-360.2686	55.7475	23.0811	-0.1954	1.8985	17.8899	226	1.28	
N3.06	C28	226	5.1 0.9D + (1(	Combination	Min		2.56	-355.9305	55.7475	23.0811	-0.1954	-31.801	-54.1277	226	2.56	
N3.06	C28	226	5.2 0.9D + (1(	Combination	Max		0	-380.1604	56.2417	-5.4439	1.0036	-13.6166	90.0289	226	0	
N3.06	C28	226	5.2 0.9D + (1(	Combination	Max		1.28	-375.8223	56.2417	-5.4439	1.0036	-6.6484	18.0395	226	1.28	
N3.06	C28	226	5.2 0.9D + (1(	Combination	Max		2.56	-371.4841	56.2417	-5.4439	1.0036	7.6815	-52.7794	226	2.56	
N3.06	C28	226	5.2 0.9D + (1(	Combination	Min		0	-385.711	55.2394	-13.1207	-0.3633	-25.9076	88.6334	226	0	
N3.06	C28	226	5.2 0.9D + (1(	Combination	Min		1.28	-381.3728	55.2394	-13.1207	-0.3633	-9.113	17.927	226	1.28	
N3.06	C28	226	5.2 0.9D + (1(	Combination	Min		2.56	-377.0347	55.2394	-13.1207	-0.3633	0.3197	-53.9499	226	2.56	

N3.06	C28	226	5.3	0.9D - (1C	Combination	Max	0	-427.0819	-55.0726	-11.6986	0.0803	-23.1814	-89.3153	226	0
N3.06	C28	226	5.3	0.9D - (1C	Combination	Max	1.28	-422.7437	-55.0726	-11.6986	0.0803	-8.2071	-18.8223	226	1.28
N3.06	C28	226	5.3	0.9D - (1C	Combination	Max	2.56	-418.4056	-55.0726	-11.6986	0.0803	10.9229	52.3314	226	2.56
N3.06	C28	226	5.3	0.9D - (1C	Combination	Min	0	-430.2152	-55.6385	-16.0323	-0.6914	-30.1197	-90.103	226	0
N3.06	C28	226	5.3	0.9D - (1C	Combination	Min	1.28	-425.8771	-55.6385	-16.0323	-0.6914	-9.5984	-18.8858	226	1.28
N3.06	C28	226	5.3	0.9D - (1C	Combination	Min	2.56	-421.5389	-55.6385	-16.0323	-0.6914	6.7671	51.6706	226	2.56
N3.06	C28	226	5.4	0.9D - (1C	Combination	Max	0	-405.9777	-54.5645	24.5032	0.2482	34.1685	-88.702	226	0
N3.06	C28	226	5.4	0.9D - (1C	Combination	Max	1.28	-401.6395	-54.5645	24.5032	0.2482	2.8044	-18.8594	226	1.28
N3.06	C28	226	5.4	0.9D - (1C	Combination	Max	2.56	-397.3014	-54.5645	24.5032	0.2482	-21.1978	52.1537	226	2.56
N3.06	C28	226	5.4	0.9D - (1C	Combination	Min	0	-411.5282	-55.5668	16.8263	-1.1187	21.8775	-90.0974	226	0
N3.06	C28	226	5.4	0.9D - (1C	Combination	Min	1.28	-407.1901	-55.5668	16.8263	-1.1187	0.3398	-18.9719	226	1.28
N3.06	C28	226	5.4	0.9D - (1C	Combination	Min	2.56	-402.8519	-55.5668	16.8263	-1.1187	-28.5596	50.9831	226	2.56
N3.06	C28	226	5.5	0.9D + Ex	Combination	Max	0	-373.7606	48.4018	14.0309	1.0011	17.2519	77.2641	226	0
N3.06	C28	226	5.5	0.9D + Ex	Combination	Max	1.28	-369.4224	48.4018	14.0309	1.0011	-0.6994	15.3217	226	1.28
N3.06	C28	226	5.5	0.9D + Ex	Combination	Max	2.56	-365.0843	48.4018	14.0309	1.0011	-2.2058	44.8563	226	2.56
N3.06	C28	226	5.5	0.9D + Ex	Combination	Min	0	-417.9281	-47.7269	-2.6485	-1.1162	-8.9909	-77.3327	226	0
N3.06	C28	226	5.5	0.9D + Ex	Combination	Min	1.28	-413.5899	-47.7269	-2.6485	-1.1162	-5.6092	-16.2541	226	1.28
N3.06	C28	226	5.5	0.9D + Ex	Combination	Min	2.56	-409.2518	-47.7269	-2.6485	-1.1162	-18.6723	-46.6526	226	2.56
N3.06	C28	226	5.6	0.9D - Ex	Combination	Max	0	-373.7606	48.4018	14.0309	1.0011	17.2519	77.2641	226	0
N3.06	C28	226	5.6	0.9D - Ex	Combination	Max	1.28	-369.4224	48.4018	14.0309	1.0011	-0.6994	15.3217	226	1.28
N3.06	C28	226	5.6	0.9D - Ex	Combination	Max	2.56	-365.0843	48.4018	14.0309	1.0011	-2.2058	44.8563	226	2.56
N3.06	C28	226	5.6	0.9D - Ex	Combination	Min	0	-417.9281	-47.7269	-2.6485	-1.1162	-8.9909	-77.3327	226	0
N3.06	C28	226	5.6	0.9D - Ex	Combination	Min	1.28	-413.5899	-47.7269	-2.6485	-1.1162	-5.6092	-16.2541	226	1.28
N3.06	C28	226	5.6	0.9D - Ex	Combination	Min	2.56	-409.2518	-47.7269	-2.6485	-1.1162	-18.6723	-46.6526	226	2.56
N3.06	C28	226	6.1	0.9D + (1(	Combination	Max	0	-354.465	17.7311	65.8143	0.1558	99.3047	27.6802	226	0
N3.06	C28	226	6.1	0.9D + (1(	Combination	Max	1.28	-350.1269	17.7311	65.8143	0.1558	15.0624	4.9844	226	1.28
N3.06	C28	226	6.1	0.9D + (1(	Combination	Max	2.56	-345.7887	17.7311	65.8143	0.1558	-65.5641	-17.1366	226	2.56
N3.06	C28	226	6.1	0.9D + (1(	Combination	Min	0	-357.1912	17.2388	62.0438	-0.5156	93.268	26.9949	226	0
N3.06	C28	226	6.1	0.9D + (1(	Combination	Min	1.28	-352.853	17.2388	62.0438	-0.5156	13.852	4.9291	226	1.28
N3.06	C28	226	6.1	0.9D + (1(	Combination	Min	2.56	-348.5149	17.2388	62.0438	-0.5156	-69.1798	-17.7115	226	2.56
N3.06	C28	226	6.2	0.9D + (1(	Combination	Max	0	-366.8763	-15.3624	66.2409	0.2889	100.1226	-25.7044	226	0
N3.06	C28	226	6.2	0.9D + (1(	Combination	Max	1.28	-362.5381	-15.3624	66.2409	0.2889	15.3342	-6.0404	226	1.28
N3.06	C28	226	6.2	0.9D + (1(	Combination	Max	2.56	-358.2	-15.3624	66.2409	0.2889	-62.3831	14.7478	226	2.56
N3.06	C28	226	6.2	0.9D + (1(	Combination	Min	0	-372.2076	-16.3252	58.8673	-1.0241	88.3171	-27.0447	226	0
N3.06	C28	226	6.2	0.9D + (1(	Combination	Min	1.28	-367.8695	-16.3252	58.8673	-1.0241	12.967	-6.1484	226	1.28
N3.06	C28	226	6.2	0.9D + (1(	Combination	Min	2.56	-363.5313	-16.3252	58.8673	-1.0241	-69.4541	13.6235	226	2.56
N3.06	C28	226	6.3	0.9D - (1C	Combination	Max	0	-434.4975	-16.564	-50.6614	0.4005	-85.0071	-27.0634	226	0
N3.06	C28	226	6.3	0.9D - (1C	Combination	Max	1.28	-430.1593	-16.564	-50.6614	0.4005	-20.1606	-5.8616	226	1.28
N3.06	C28	226	6.3	0.9D - (1C	Combination	Max	2.56	-425.8212	-16.564	-50.6614	0.4005	48.3017	15.9152	226	2.56
N3.06	C28	226	6.3	0.9D - (1C	Combination	Min	0	-437.2236	-17.0563	-54.4318	-0.2709	-91.0438	-27.7488	226	0
N3.06	C28	226	6.3	0.9D - (1C	Combination	Min	1.28	-432.8855	-17.0563	-54.4318	-0.2709	-21.371	-5.9168	226	1.28
N3.06	C28	226	6.3	0.9D - (1C	Combination	Min	2.56	-428.5473	-17.0563	-54.4318	-0.2709	44.686	15.3403	226	2.56
N3.06	C28	226	6.4	0.9D - (1C	Combination	Max	0	-419.481	17.0001	-47.4848	0.909	-80.0561	26.9761	226	0
N3.06	C28	226	6.4	0.9D - (1C	Combination	Max	1.28	-415.1429	17.0001	-47.4848	0.909	-19.2756	5.216	226	1.28
N3.06	C28	226	6.4	0.9D - (1C	Combination	Max	2.56	-410.8047	17.0001	-47.4848	0.909	48.576	-15.4198	226	2.56
N3.06	C28	226	6.4	0.9D - (1C	Combination	Min	0	-424.8124	16.0373	-54.8585	-0.404	-91.8616	25.6358	226	0
N3.06	C28	226	6.4	0.9D - (1C	Combination	Min	1.28	-420.4742	16.0373	-54.8585	-0.404	-21.6428	5.108	226	1.28
N3.06	C28	226	6.4	0.9D - (1C	Combination	Min	2.56	-416.1361	16.0373	-54.8585	-0.404	41.505	-16.5441	226	2.56
N3.06	C28	226	6.5	0.9D + Ey	Combination	Max	0	-368.5326	2.9719	53.6969	0.7486	80.0281	4.1052	226	0
N3.06	C28	226	6.5	0.9D + Ey	Combination	Max	1.28	-364.1944	2.9719	53.6969	0.7486	11.3074	0.324	226	1.28
N3.06	C28	226	6.5	0.9D + Ey	Combination	Max	2.56	-359.8563	2.9719	53.6969	0.7486	36.5649	1.7201	226	2.56
N3.06	C28	226	6.5	0.9D + Ey	Combination	Min	0	-423.1561	-2.297	-42.3145	-0.8637	-71.7672	-4.1737	226	0
N3.06	C28	226	6.5	0.9D + Ey	Combination	Min	1.28	-418.8179	-2.297	-42.3145	-0.8637	-17.616	-1.2564	226	1.28
N3.06	C28	226	6.5	0.9D + Ey	Combination	Min	2.56	-414.4798	-2.297	-42.3145	-0.8637	-57.443	-3.5164	226	2.56
N3.06	C28	226	6.6	0.9D - Ey	Combination	Max	0	-368.5326	2.9719	53.6969	0.7486	80.0281	4.1052	226	0
N3.06	C28	226	6.6	0.9D - Ey	Combination	Max	1.28	-364.1944	2.9719	53.6969	0.7486	11.3074	0.324	226	1.28
N3.06	C28	226	6.6	0.9D - Ey	Combination	Max	2.56	-359.8563	2.9719	53.6969	0.7486	36.5649	1.7201	226	2.56
N3.06	C28	226	6.6	0.9D - Ey	Combination	Min	0	-423.1561	-2.297	-42.3145	-0.8637	-71.7672	-4.1737	226	0
N3.06	C28	226	6.6	0.9D - Ey	Combination	Min	1.28	-418.8179	-2.297	-42.3145	-0.8637	-17.616	-1.2564	226	1.28
N3.06	C28	226	6.6	0.9D - Ey	Combination	Min	2.56	-414.4798	-2.297	-42.3145	-0.8637	-57.443	-3.5164	226	2.56
N3.06	C28	226	3.3	1.2D + 1L	Combination	Max	0	-599.493	-54.9649	-9.0578	0.0445	-21.4365	-89.4072	226	0
N3.06	C28	226	3.3	1.2D + 1L	Combination	Max	1.28	-593.7088	-54.9649	-9.0578	0.0445	-9.8425	-19.0522	226	1.28
N3.06	C28	226	3.3	1.2D + 1L	Combination	Max	2.56	-587.9246	-54.9649	-9.0578	0.0445	5.9072	51.9636	226	2.56
N3.06	C28	226	3.3	1.2D + 1L	Combination	Min	0	-602.6263	-55.5307	-13.3914	-0.7272	-28.3748	-90.195	226	0
N3.06	C28	226	3.3	1.2D + 1L	Combination	Min	1.28	-596.8421	-55.5307	-13.3914	-0.7272	-11.2338	-19.1157	226	1.28
N3.06	C28	226	3.3	1.2D + 1L	Combination	Min	2.56	-591.0579	-55.5307	-13.3914	-0.7272	1.7514	51.3028	226	2.56
N3.06	C28	226	4.1	1.2D + 1L	Combination	Max	0	-526.8761	17.8389	68.4551	0.12	101.0496	27.5883	226	0
N3.06	C28	226	4.1	1.2D + 1L	Combination	Max	1.28	-521.0919	17.8389	68.4551	0.12	13.4271	4.7545	226	1.28
N3.06	C28	226	4.1	1.2D + 1L	Combination	Max	2.56	-515.3077	17.8389	68.4551	0.12	-70.5798	-17.5044	226	2.56
N3.06	C28	226	4.1	1.2D + 1L	Combination	Min	0	-529.6023	17.3466	64.6847	-0.5513	95.0129	26.9029	226	0
N3.06	C28	226	4.1	1.2D + 1L	Combination	Min	1.28	-523.8181	17.3466	64.6847	-0.5513	12.2166	4.6993	226	1.28
N3.06	C28	226	4.1	1.2D + 1L	Combination	Min	2.56	-518.0339	17.3466	64.6847	-0.5513	-74.1955	-18.0793	226	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C43	416	1. 1.4D	Combination			0	-387.3595	6.1593	5.1303	-0.0895	2.4494	5.5184	416	0	
N3.06	C43	416	1. 1.4D	Combination			1.33	-380.3476	6.1593	5.1303	-0.0895	-4.374	-2.6734	416	1.33	
N3.06	C43	416	1. 1.4D	Combination			2.66	-373.3358	6.1593	5.1303	-0.0895	-11.1973	-10.8653	416	2.66	
N3.06	C43	416	2. 1.2D + 1.6L	Combination			0	-404.7708	7.2221	4.6166	-0.1308	0.941	6.4027	416	0	
N3.06	C43	416	2. 1.2D + 1.6L	Combination			1.33	-398.7607	7.2221	4.6166	-0.1308	-5.1992	-3.2027	416	1.33	
N3.06	C43	416	2. 1.2D + 1.6L	Combination			2.66	-392.7505	7.2221	4.6166	-0.1308	-11.3393	-12.8081	416	2.66	
N3.06	C43	416	2. 1.2D + 1.6L	Combination			0	-415.122	6.2457	4.6973	-0.0965	1.9294	5.5932	416	0	
N3.06	C43	416	2. 1.2D + 1.6L	Combination			1.33	-409.1119	6.2457	4.6973	-0.0965	-4.318	-2.7136	416	1.33	
N3.06	C43	416	2. 1.2D + 1.6L	Combination			2.66	-403.1017	6.2457	4.6973	-0.0965	-10.5654	-11.0203	416	2.66	
N3.06	C43	416	2. 1.2D + 1L +	Combination			0	-369.1291	5.972	4.521	-0.0943	1.7831	5.3338	416	0	
N3.06	C43	416	2. 1.2D + 1L +	Combination			1.33	-363.1189	5.972	4.521	-0.0943	-4.2298	-2.609	416	1.33	
N3.06	C43	416	2. 1.2D + 1L +	Combination			2.66	-357.1088	5.972	4.521	-0.0943	-10.2428	-10.5518	416	2.66	
N3.06	C43	416	3.1 1.2D + 1L	Combination	Max		0	-410.541	47.349	26.3044	0.5405	38.5568	81.1225	416	0	
N3.06	C43	416	3.1 1.2D + 1L	Combination	Max		1.33	-404.5309	47.349	26.3044	0.5405	3.572	18.1483	416	1.33	
N3.06	C43	416	3.1 1.2D + 1L	Combination	Max		2.66	-398.5207	47.349	26.3044	0.5405	-23.9371	-44.4988	416	2.66	
N3.06	C43	416	3.1 1.2D + 1L	Combination	Min		0	-422.0304	47.0156	18.4935	-0.2311	25.2556	80.5628	416	0	
N3.06	C43	416	3.1 1.2D + 1L	Combination	Min		1.33	-416.0202	47.0156	18.4935	-0.2311	0.6593	18.032	416	1.33	
N3.06	C43	416	3.1 1.2D + 1L	Combination	Min		2.66	-410.0101	47.0156	18.4935	-0.2311	-31.4128	-44.8259	416	2.66	
N3.06	C43	416	3.2 1.2D + 1L	Combination	Max		0	-446.9846	48.0552	0.7972	0.9679	-4.6464	81.8852	416	0	
N3.06	C43	416	3.2 1.2D + 1L	Combination	Max		1.33	-440.9744	48.0552	0.7972	0.9679	-5.7068	17.9717	416	1.33	
N3.06	C43	416	3.2 1.2D + 1L	Combination	Max		2.66	-434.9643	48.0552	0.7972	0.9679	6.4759	-45.3624	416	2.66	
N3.06	C43	416	3.2 1.2D + 1L	Combination	Min		0	-467.3375	47.4646	-13.0394	-0.3991	-28.209	80.8935	416	0	
N3.06	C43	416	3.2 1.2D + 1L	Combination	Min		1.33	-461.3273	47.4646	-13.0394	-0.3991	-10.8665	17.7656	416	1.33	
N3.06	C43	416	3.2 1.2D + 1L	Combination	Min		2.66	-455.3172	47.4646	-13.0394	-0.3991	-6.7671	-45.9417	416	2.66	
N3.06	C43	416	3.3 1.2D + 1L	Combination	Max		0	-274.416	-35.3204	-9.6117	0.0445	-21.8223	-70.1309	416	0	
N3.06	C43	416	3.3 1.2D + 1L	Combination	Max		1.33	-268.4059	-35.3204	-9.6117	0.0445	-9.0387	-23.1548	416	1.33	
N3.06	C43	416	3.3 1.2D + 1L	Combination	Max		2.66	-262.3957	-35.3204	-9.6117	0.0445	11.2205	24.1484	416	2.66	
N3.06	C43	416	3.3 1.2D + 1L	Combination	Min		0	-285.9054	-35.6538	-17.4226	-0.7272	-35.1235	-70.6906	416	0	
N3.06	C43	416	3.3 1.2D + 1L	Combination	Min		1.33	-279.8952	-35.6538	-17.4226	-0.7272	-11.9515	-23.2711	416	1.33	
N3.06	C43	416	3.3 1.2D + 1L	Combination	Min		2.66	-273.885	-35.6538	-17.4226	-0.7272	3.7448	23.8213	416	2.66	
N3.06	C43	416	3.4 1.2D + 1L	Combination	Max		0	-229.1089	-35.7694	21.9212	0.2124	31.6423	-70.4616	416	0	
N3.06	C43	416	3.4 1.2D + 1L	Combination	Max		1.33	-223.0988	-35.7694	21.9212	0.2124	2.4871	-22.8884	416	1.33	
N3.06	C43	416	3.4 1.2D + 1L	Combination	Max		2.66	-217.0886	-35.7694	21.9212	0.2124	-13.4252	25.2642	416	2.66	
N3.06	C43	416	3.4 1.2D + 1L	Combination	Min		0	-249.4618	-36.36	8.0846	-1.1545	8.0797	-71.4533	416	0	
N3.06	C43	416	3.4 1.2D + 1L	Combination	Min		1.33	-243.4517	-36.36	8.0846	-1.1545	-2.6727	-23.0945	416	1.33	
N3.06	C43	416	3.4 1.2D + 1L	Combination	Min		2.66	-237.4415	-36.36	8.0846	-1.1545	-26.6682	24.6848	416	2.66	
N3.06	C43	416	3.5 1.2D + 1L	Combination	Max		0	-279.2139	41.8315	17.1917	0.9654	23.1335	70.6931	416	0	
N3.06	C43	416	3.5 1.2D + 1L	Combination	Max		1.33	-273.2038	41.8315	17.1917	0.9654	0.2839	15.0796	416	1.33	
N3.06	C43	416	3.5 1.2D + 1L	Combination	Max		2.66	-267.1936	41.8315	17.1917	0.9654	2.415	19.9274	416	2.66	
N3.06	C43	416	3.5 1.2D + 1L	Combination	Min		0	-417.2325	-30.1363	-8.3099	-1.152	-19.7002	-60.2612	416	0	
N3.06	C43	416	3.5 1.2D + 1L	Combination	Min		1.33	-411.2223	-30.1363	-8.3099	-1.152	-8.6634	-20.2024	416	1.33	
N3.06	C43	416	3.5 1.2D + 1L	Combination	Min		2.66	-405.2122	-30.1363	-8.3099	-1.152	-22.6073	-40.6049	416	2.66	
N3.06	C43	416	3.6 1.2D + 1L	Combination	Max		0	-279.2139	41.8315	17.1917	0.9654	23.1335	70.6931	416	0	
N3.06	C43	416	3.6 1.2D + 1L	Combination	Max		1.33	-273.2038	41.8315	17.1917	0.9654	0.2839	15.0796	416	1.33	
N3.06	C43	416	3.6 1.2D + 1L	Combination	Max		2.66	-267.1936	41.8315	17.1917	0.9654	2.415	19.9274	416	2.66	
N3.06	C43	416	3.6 1.2D + 1L	Combination	Min		0	-417.2325	-30.1363	-8.3099	-1.152	-19.7002	-60.2612	416	0	
N3.06	C43	416	3.6 1.2D + 1L	Combination	Min		1.33	-411.2223	-30.1363	-8.3099	-1.152	-8.6634	-20.2024	416	1.33	
N3.06	C43	416	3.6 1.2D + 1L	Combination	Min		2.66	-405.2122	-30.1363	-8.3099	-1.152	-22.6073	-40.6049	416	2.66	
N3.06	C43	416	4.1 1.2D + 1L	Combination	Max		0	-301.6496	17.5171	56.4816	0.12	89.8663	27.3183	416	0	
N3.06	C43	416	4.1 1.2D + 1L	Combination	Max		1.33	-295.6394	17.5171	56.4816	0.12	14.7458	4.0206	416	1.33	
N3.06	C43	416	4.1 1.2D + 1L	Combination	Max		2.66	-289.6292	17.5171	56.4816	0.12	-53.8705	-18.9925	416	2.66	
N3.06	C43	416	4.1 1.2D + 1L	Combination	Min		0	-311.6459	17.227	49.6857	-0.5513	78.2935	26.8313	416	0	
N3.06	C43	416	4.1 1.2D + 1L	Combination	Min		1.33	-305.6357	17.227	49.6857	-0.5513	12.2115	3.9194	416	1.33	
N3.06	C43	416	4.1 1.2D + 1L	Combination	Min		2.66	-299.6256	17.227	49.6857	-0.5513	-60.3747	-19.2771	416	2.66	
N3.06	C43	416	4.2 1.2D + 1L	Combination	Max		0	-243.7731	-7.3184	57.5099	0.2531	91.7823	-17.989	416	0	
N3.06	C43	416	4.2 1.2D + 1L	Combination	Max		1.33	-237.763	-7.3184	57.5099	0.2531	15.2941	-8.2555	416	1.33	
N3.06	C43	416	4.2 1.2D + 1L	Combination	Max		2.66	-231.7528	-7.3184	57.5099	0.2531	-48.4742	2.0345	416	2.66	
N3.06	C43	416	4.2 1.2D + 1L	Combination	Min		0	-263.3221	-7.8857	44.2198	-1.0598	69.1504	-18.9415	416	0	
N3.06	C43	416	4.2 1.2D + 1L	Combination	Min		1.33	-257.312	-7.8857	44.2198	-1.0598	10.3381	-8.4535	416	1.33	
N3.06	C43	416	4.2 1.2D + 1L	Combination	Min		2.66	-251.3018	-7.8857	44.2198	-1.0598	-61.1941	1.478	416	2.66	
N3.06	C43	416	4.3 1.2D + 1L	Combination	Max		0	-384.8005	-5.5317	-40.8039	0.3647	-74.8602	-16.3994	416	0	
N3.06	C43	416	4.3 1.2D + 1L	Combination	Max		1.33	-378.7904	-5.5317	-40.8039	0.3647	-20.591	-9.0422	416	1.33	
N3.06	C43	416	4.3 1.2D + 1L	Combination	Max		2.66	-372.7802	-5.5317	-40.8039	0.3647	40.1825	-1.4004	416	2.66	
N3.06	C43	416	4.3 1.2D + 1L	Combination	Min		0	-394.7968	-5.8218	-47.5998	-0.3067	-86.433	-16.8864	416	0	
N3.06	C43	416	4.3 1.2D + 1L	Combination	Min		1.33	-388.7867	-5.8218	-47.5998	-0.3067	-23.1252	-9.1434	416	1.33	
N3.06	C43	416	4.3 1.2D + 1L	Combination	Min		2.66	-382.7765	-5.8218	-47.5998	-0.3067	33.6782	-1.685	416	2.66	
N3.06	C43	416	4.4 1.2D + 1L	Combination	Max		0	-433.1243	19.581	-35.338	0.8732	-65.7171	29.3734	416	0	
N3.06	C43	416	4.4 1.2D + 1L	Combination	Max		1.33	-427.1141	19.581	-35.338	0.8732	-18.7176	3.3307	416	1.33	
N3.06	C43	416	4.4 1.2D + 1L	Combination	Max		2.66	-421.104	19.581	-35.338	0.8732	41.0018	-22.1555	416	2.66	
N3.06	C43	416	4.4 1.2D + 1L	Combination	Min		0	-452.6733	19.0137	-48.6281	-0.4398	-88.349	28.4209	416	0	
N3.06	C43	416	4.4 1.2D + 1L	Combination	Min		1.33	-446.6631	19.0137	-48.6281	-0.4398	-23.6736	3.1327	416	1.33	
N3.06	C43	416	4.4 1.2D + 1L	Combination	Min		2.66	-440.653	19.0137	-48.6281	-0.4398	28.2819	-22.712	416	2.66	
N3.06	C43	416	4.5 1.2D + 1L	Combination	Max		0	-295.4129	7.6426	42.8081	0.7128	66.6024	8.4387	416	0	
N3.06	C43	416	4.5 1.2D + 1L	Combination	Max		1.33	-289.4027	7.6426	42.8081	0.7128	9.6888	-1.5063	416	1.33	
N3.06	C43	416	4.5 1.2D + 1L	Combination	Max		2.66	-283.3926	7.6426	42.8081	0.7128	27.0906	-8.5389	416	2.66	
N3.06	C43	416	4.5 1.2D + 1L	Combination	Min		0	-401.0335	4.0526	-33.9263	-0.8994	-63.1691	1.9932	416	0	
N3.06	C43	416	4.5 1.2D + 1L	Combination	Min		1.33	-395.0234	4.0526	-33.9263	-0.8994	-18.0683	-3.6165	416	1.33	
N3.06	C43	416	4.5 1.2D + 1L	Combination	Min		2.66	-389.0132	4.0526	-33.9263	-0.8994	-47.2828	-12.1386	416	2.66	
N3.06	C43	416	4.6 1.2D + 1L	Combination	Max		0	-295.4129	7.6426	42.8081	0.7128	66.6024	8.4387	416	0	
N3.06	C43	416	4.6 1.2D + 1L	Combination	Max		1.33	-289.4027	7.6426	42.8081	0.7128	9.6888	-1.5063	416	1.33	
N3.06	C43	416	4.6 1.2D + 1L	Combination	Max		2.66	-283.3926	7.6426	42.8081	0.7128	27.0906	-8.5389	416	2.66	
N3.06	C43	416	4.6 1.2D + 1L	Combination	Min		0	-401.0335	4.0526	-33.9263	-0.8994	-63.1691	1.9932	416	0	
N3.06	C43	416	4.6 1.2D + 1L	Combination	Min		1.33	-395.0234	4.0526	-33.9263	-0.8994	-18.0683	-3.6165	416	1.33	
N3.06	C43	416	4.6 1.2D + 1L	Combination	Min		2.66	-389.0132	4.0526	-33.9263	-0.8994	-47.2828	-12.1386	416	2.66	
N3.06	C43	416	5.1 0.9D + (1(	Combination	Max		0	-311.3346	45.461	25.1615	0.5763	38.4147	79.4542	416	0	
N3.06	C43	416	5.1 0.9D + (1(	Combination	Max		1.33	-306.827	45.461	25.1615	0.5763	4.9499	18.9911	416	1.33	
N3.06	C43	416	5.1 0.9D + (1(	Combination	Max		2.66	-302.3194	45.461	25.1615	0.5763	-21.0392	-41.1449	416	2.66	
N3.06	C43	416	5.1 0.9D + (1(	Combination	Min		0	-322.824	45.1276	17.3507	-0.1954	25.1135	78.8944	416	0	
N3.06	C43	416	5.1 0.9D + (1(	Combination	Min		1.33	-318.3163	45.1276	17.3507	-0.1954	2.0372	18.8747	416	1.33	
N3.06	C43	416	5.1 0.9D + (1(	Combination	Min		2.66	-313.8087	45.1276	17.3507	-0.1954	-28.515	-41.472	416	2.66	
N3.06	C43	416	5.2 0.9D + (1(	Combination	Max		0	-347.7782	46.1671	-0.3456	1.0036	-4.7885	80.2168	416	0	
N3.06	C43	416	5.2 0.9D + (1(	Combination	Max		1.33	-343.2706	46.1671	-0.3456	1.0036	-4.3289	18.8145	416	1.33	
N3.06	C43	416	5.2 0.9D + (1(	Combination	Max		2.66	-338.7629	46.1671	-0.3456	1.0036	9.3738	-42.0085	416	2.66	
N3.06	C43	416	5.2 0.9D + (1(	Combination	Min		0	-368.1311	45.5765	-14.1822	-0.3633	-28.351	79.2252	416	0	
N3.06	C43	416	5.2 0.9D + (1(	Combination	Min		1.33	-363.6235	45.5765	-14.1822	-0.3633	-9.4886	18.6084	416	1.33	
N3.06	C43	416	5.2 0.9D + (1(	Combination	Min		2.66	-359.1158	45.5765	-14.1822	-0.3633	-3.8692	-42.5878	416	2.66	
N3.06	C43	416	5.3 0.9D - (10	Combination	Max		0	-175.2096	-37.2084	-10.7545	0.0803	-21.9644	-71.7993	416	0	
N3.06	C43	416	5.3 0.9D - (10	Combination	Max		1.33	-170.702	-37.2084	-10.7545	0.0803	-7.6608	-22.312	416	1.33	
N3.06	C43	416	5.3 0.9D - (10	Combination	Max		2.66	-166.1944	-37.2084	-10.7545	0.0803	14.1184	27.5023	416	2.66	
N3.06	C43	416	5.3 0.9D - (10	Combination	Min		0	-186.699	-37.5418	-18.5654	-0.6914	-35.2655	-72.359	416	0	
N3.06	C43	416	5.3 0.9D - (10	Combination	Min		1.33	-182.1913	-37.5418	-18.5654	-0.6914	-10.5736	-22.4284	416	1.33	
N3.06	C43	416	5.3 0.9D - (10	Combination	Min		2.66	-177.6837	-37.5418	-18.5654	-0.6914	6.6427	27.1752	416	2.66	
N3.06	C43	416	5.4 0.9D - (10	Combination	Max		0	-129.9025	-37.6574	20.7784	0.2482	31.5002	-72.13	416	0	
N3.06	C43	416	5.4 0.9D - (10	Combination	Max		1.33	-125.3949	-37.6574	20.7784	0.2482	3.865	-22.0456	416	1.33	

N3.06	C43	416	5.4	0.9D - (10	Combination	Max	2.66	-120.8873	-37.6574	20.7784	0.2482	-10.5273	28.6181	416	2.66
N3.06	C43	416	5.4	0.9D - (10	Combination	Min	0	-150.2554	-38.248	6.9417	-1.1187	7.9377	-73.1216	416	0
N3.06	C43	416	5.4	0.9D - (10	Combination	Min	1.33	-145.7478	-38.248	6.9417	-1.1187	-1.2948	-22.2518	416	1.33
N3.06	C43	416	5.4	0.9D - (10	Combination	Min	2.66	-141.2402	-38.248	6.9417	-1.1187	-23.7703	28.0387	416	2.66
N3.06	C43	416	5.5	0.9D + Ex	Combination	Max	0	-180.0075	39.9434	16.0489	1.0011	22.9915	69.0247	416	0
N3.06	C43	416	5.5	0.9D + Ex	Combination	Max	1.33	-175.4999	39.9434	16.0489	1.0011	1.6618	15.9223	416	1.33
N3.06	C43	416	5.5	0.9D + Ex	Combination	Max	2.66	-170.9923	39.9434	16.0489	1.0011	5.3129	23.2813	416	2.66
N3.06	C43	416	5.5	0.9D + Ex	Combination	Min	0	-318.0261	-32.0243	-9.4527	-1.1162	-19.8423	-61.9296	416	0
N3.06	C43	416	5.5	0.9D + Ex	Combination	Min	1.33	-313.5185	-32.0243	-9.4527	-1.1162	-7.2855	-19.3596	416	1.33
N3.06	C43	416	5.5	0.9D + Ex	Combination	Min	2.66	-309.0108	-32.0243	-9.4527	-1.1162	-19.7094	-37.251	416	2.66
N3.06	C43	416	5.6	0.9D - Ex	Combination	Max	0	-180.0075	39.9434	16.0489	1.0011	22.9915	69.0247	416	0
N3.06	C43	416	5.6	0.9D - Ex	Combination	Max	1.33	-175.4999	39.9434	16.0489	1.0011	1.6618	15.9223	416	1.33
N3.06	C43	416	5.6	0.9D - Ex	Combination	Max	2.66	-170.9923	39.9434	16.0489	1.0011	5.3129	23.2813	416	2.66
N3.06	C43	416	5.6	0.9D - Ex	Combination	Min	0	-318.0261	-32.0243	-9.4527	-1.1162	-19.8423	-61.9296	416	0
N3.06	C43	416	5.6	0.9D - Ex	Combination	Min	1.33	-313.5185	-32.0243	-9.4527	-1.1162	-7.2855	-19.3596	416	1.33
N3.06	C43	416	5.6	0.9D - Ex	Combination	Min	2.66	-309.0108	-32.0243	-9.4527	-1.1162	-19.7094	-37.251	416	2.66
N3.06	C43	416	6.1	0.9D + (1(	Combination	Max	0	-202.4432	15.629	55.3388	0.1558	89.7242	25.6499	416	0
N3.06	C43	416	6.1	0.9D + (1(	Combination	Max	1.33	-197.9355	15.629	55.3388	0.1558	16.1237	4.8634	416	1.33
N3.06	C43	416	6.1	0.9D + (1(	Combination	Max	2.66	-193.4279	15.629	55.3388	0.1558	-50.9726	-15.6386	416	2.66
N3.06	C43	416	6.1	0.9D + (1(	Combination	Min	0	-212.4395	15.3389	48.5429	-0.5156	78.1515	25.1629	416	0
N3.06	C43	416	6.1	0.9D + (1(	Combination	Min	1.33	-207.9319	15.3389	48.5429	-0.5156	13.5894	4.7621	416	1.33
N3.06	C43	416	6.1	0.9D + (1(	Combination	Min	2.66	-203.4242	15.3389	48.5429	-0.5156	-57.4769	-15.9232	416	2.66
N3.06	C43	416	6.2	0.9D + (1(	Combination	Max	0	-144.5667	-9.2065	56.3671	0.2889	91.6402	-19.6574	416	0
N3.06	C43	416	6.2	0.9D + (1(	Combination	Max	1.33	-140.0591	-9.2065	56.3671	0.2889	16.672	-7.4127	416	1.33
N3.06	C43	416	6.2	0.9D + (1(	Combination	Max	2.66	-135.5515	-9.2065	56.3671	0.2889	-45.5763	5.3884	416	2.66
N3.06	C43	416	6.2	0.9D + (1(	Combination	Min	0	-164.1157	-9.7738	43.0769	-1.0241	69.0084	-20.6098	416	0
N3.06	C43	416	6.2	0.9D + (1(	Combination	Min	1.33	-159.6081	-9.7738	43.0769	-1.0241	11.716	-7.6107	416	1.33
N3.06	C43	416	6.2	0.9D + (1(	Combination	Min	2.66	-155.1005	-9.7738	43.0769	-1.0241	-58.2962	4.8319	416	2.66
N3.06	C43	416	6.3	0.9D - (10	Combination	Max	0	-285.5941	-7.4198	-41.9467	0.4005	-75.0023	-18.0678	416	0
N3.06	C43	416	6.3	0.9D - (10	Combination	Max	1.33	-281.0865	-7.4198	-41.9467	0.4005	-19.2131	-8.1994	416	1.33
N3.06	C43	416	6.3	0.9D - (10	Combination	Max	2.66	-276.5789	-7.4198	-41.9467	0.4005	43.0803	1.9535	416	2.66
N3.06	C43	416	6.3	0.9D - (10	Combination	Min	0	-295.5904	-7.7099	-48.7426	-0.2709	-86.575	-18.5548	416	0
N3.06	C43	416	6.3	0.9D - (10	Combination	Min	1.33	-291.0828	-7.7099	-48.7426	-0.2709	-21.7473	-8.3007	416	1.33
N3.06	C43	416	6.3	0.9D - (10	Combination	Min	2.66	-286.5752	-7.7099	-48.7426	-0.2709	36.576	1.6689	416	2.66
N3.06	C43	416	6.4	0.9D - (10	Combination	Max	0	-333.9179	17.6929	-36.4808	0.909	-65.8592	27.705	416	0
N3.06	C43	416	6.4	0.9D - (10	Combination	Max	1.33	-329.4103	17.6929	-36.4808	0.909	-17.3397	4.1734	416	1.33
N3.06	C43	416	6.4	0.9D - (10	Combination	Max	2.66	-324.9027	17.6929	-36.4808	0.909	43.8997	-18.8016	416	2.66
N3.06	C43	416	6.4	0.9D - (10	Combination	Min	0	-353.4669	17.1256	-49.7709	-0.404	-88.491	26.7525	416	0
N3.06	C43	416	6.4	0.9D - (10	Combination	Min	1.33	-348.9593	17.1256	-49.7709	-0.404	-22.2957	3.9754	416	1.33
N3.06	C43	416	6.4	0.9D - (10	Combination	Min	2.66	-344.4516	17.1256	-49.7709	-0.404	31.1797	-19.3581	416	2.66
N3.06	C43	416	6.5	0.9D + Ey	Combination	Max	0	-196.2065	5.7546	41.6653	0.7486	66.4604	6.7703	416	0
N3.06	C43	416	6.5	0.9D + Ey	Combination	Max	1.33	-191.6988	5.7546	41.6653	0.7486	11.0667	-0.6635	416	1.33
N3.06	C43	416	6.5	0.9D + Ey	Combination	Max	2.66	-187.1912	5.7546	41.6653	0.7486	29.9884	-5.185	416	2.66
N3.06	C43	416	6.5	0.9D + Ey	Combination	Min	0	-301.8271	2.1646	-35.0691	-0.8637	-63.3112	0.3248	416	0
N3.06	C43	416	6.5	0.9D + Ey	Combination	Min	1.33	-297.3195	2.1646	-35.0691	-0.8637	-16.6903	-2.7738	416	1.33
N3.06	C43	416	6.5	0.9D + Ey	Combination	Min	2.66	-292.8119	2.1646	-35.0691	-0.8637	-44.385	-8.7847	416	2.66
N3.06	C43	416	6.6	0.9D - Ey	Combination	Max	0	-196.2065	5.7546	41.6653	0.7486	66.4604	6.7703	416	0
N3.06	C43	416	6.6	0.9D - Ey	Combination	Max	1.33	-191.6988	5.7546	41.6653	0.7486	11.0667	-0.6635	416	1.33
N3.06	C43	416	6.6	0.9D - Ey	Combination	Max	2.66	-187.1912	5.7546	41.6653	0.7486	29.9884	-5.185	416	2.66
N3.06	C43	416	6.6	0.9D - Ey	Combination	Min	0	-301.8271	2.1646	-35.0691	-0.8637	-63.3112	0.3248	416	0
N3.06	C43	416	6.6	0.9D - Ey	Combination	Min	1.33	-297.3195	2.1646	-35.0691	-0.8637	-16.6903	-2.7738	416	1.33
N3.06	C43	416	6.6	0.9D - Ey	Combination	Min	2.66	-292.8119	2.1646	-35.0691	-0.8637	-44.385	-8.7847	416	2.66
N3.06	C43	416	3.3	1.2D + 1L	Combination	Max	0	-274.416	-35.3204	-9.6117	0.0445	-21.8223	-70.1309	416	0
N3.06	C43	416	3.3	1.2D + 1L	Combination	Max	1.33	-268.4059	-35.3204	-9.6117	0.0445	-9.0387	-23.1548	416	1.33
N3.06	C43	416	3.3	1.2D + 1L	Combination	Max	2.66	-262.3957	-35.3204	-9.6117	0.0445	11.2205	24.1484	416	2.66
N3.06	C43	416	3.3	1.2D + 1L	Combination	Min	0	-285.9054	-35.6538	-17.4226	-0.7272	-35.1235	-70.6906	416	0
N3.06	C43	416	3.3	1.2D + 1L	Combination	Min	1.33	-279.8952	-35.6538	-17.4226	-0.7272	-11.9515	-23.2711	416	1.33
N3.06	C43	416	3.3	1.2D + 1L	Combination	Min	2.66	-273.885	-35.6538	-17.4226	-0.7272	3.7448	23.8213	416	2.66
N3.06	C43	416	4.1	1.2D + 1L	Combination	Max	0	-301.6496	17.5171	56.4816	0.12	89.8663	27.3183	416	0
N3.06	C43	416	4.1	1.2D + 1L	Combination	Max	1.33	-295.6394	17.5171	56.4816	0.12	14.7458	4.0206	416	1.33
N3.06	C43	416	4.1	1.2D + 1L	Combination	Max	2.66	-289.6292	17.5171	56.4816	0.12	-53.8705	-18.9925	416	2.66
N3.06	C43	416	4.1	1.2D + 1L	Combination	Min	0	-311.6459	17.227	49.6857	-0.5513	78.2935	26.8313	416	0
N3.06	C43	416	4.1	1.2D + 1L	Combination	Min	1.33	-305.6357	17.227	49.6857	-0.5513	12.2115	3.9194	416	1.33
N3.06	C43	416	4.1	1.2D + 1L	Combination	Min	2.66	-299.6256	17.227	49.6857	-0.5513	-60.3747	-19.2771	416	2.66

Propiedades de Columna

f'c =	24	Mpa	Beta1 =	0.85	
fy =	420	Mpa	d' =	0.06	m
b =	0.45	m	d =	0.39	m
Ac =	8.83	cm²	h =	0.45	m
Altura Libre =	2.66	m			
As' =	8.83	cm²	Po =	4872.72	kN
Recubrimiento eje =	0.06	m	0.8øPo =	2533.81	kN
Mod Elástico Acero =	200000	Mpa		3898.18	kN

Aceros Longitudinales Colocados

	Ø	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

Cuantías Columnas

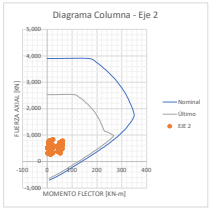
As min	20.25 cm²	Cumple
As máx	50.63 cm²	Cumple

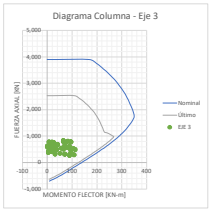
Estribos Detalles

Zona Conf.	45.00 cm	176.00 cm	45.00 cm	
S ≤	10.80 cm	15.00 cm	10.80 cm	
Estribos =	Ø	n ramales	Área	
	10	3	2.36 cm2	

Estribos Confinamiento

s =	4.50 cm		4.50 cm
Ash =	2.19 cm2		2.19 cm2
	Cumple		Cumple
Av/m =	48.62 cm²/m	48.62 cm²/m	COMPARAR ETABS





c[m]	a [m]	fs[MPa] con cond	fs' [MPa]	fs [sin cond]	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.0045	0.00		-7,400.000	51,400.000	420.000	0.257000	7.8334	-706.6065	-706.6065	0.9	7.05	-635.95	711.6893	5.8026	15.5256
0.009	0.01		-3,400.000	25,400.000	420.000	0.127000	15.5325	-671.4930	-671.4930	0.9	13.98	-604.34	703.1486	5.8026	15.5256
0.0135	0.01		-2,066.667	16,733.333	420.000	0.083667	23.0972	-636.3795	-636.3795	0.9	20.79	-572.74	694.6078	5.8026	15.5256
0.018	0.02		-1,400.000	12,400.000	420.000	0.062000	30.5277	-601.2660	-601.2660	0.9	27.47	-541.14	784.8044	6.8516	18.3841
0.0225	0.02		-1,000.000	9,800.000	420.000	0.049000	37.8238	-566.1525	-566.1525	0.9	34.04	-509.54	777.4838	6.8516	18.3841
0.027	0.02		-733.333	8,066.667	420.000	0.040333	44.9857	-531.0390	-531.0390	0.9	40.49	-477.94	770.1632	6.8516	18.3841
0.0315	0.03		-542.857	6,828.571	420.000	0.034143	52.0132	-495.9255	-495.9255	0.9	46.81	-446.33	728	5.6958	15.3581
0.036	0.03		-400.000	5,900.000	420.000	0.029500	61.8203	-443.1520	-443.1520	0.9	55.64	-398.84	720.6794	5.6958	15.3581
0.0405	0.03		-288.889	5,177.778	420.000	0.025889	84.7676	-309.9274	-309.9274	0.9	76.29	-278.93	713.3587	5.6958	15.3581
0.045	0.04		-200.000	4,600.000	420.000	0.023000	104.3428	-196.3250	-196.3250	0.9	93.91	-176.69	679.7255	5.5927	15.0045
0.0495	0.04		-127.273	4,127.273	420.000	0.020636	121.4291	-96.9933	-96.9933	0.9	109.29	-87.29	672.4049	5.5927	15.0045
0.054	0.05		-66.667	3,733.333	420.000	0.018667	136.6151	-8.3647	-8.3647	0.9	122.95	-7.53	665.0842	5.5927	15.0045
0.0585	0.05		-15.385	3,400.000	420.000	0.017000	150.3083	72.0309	72.0309	0.9	135.28	64.83	622.371	50.5121	11.6584
0.063	0.05		28.571	3,114.286	420.000	0.015571	162.7998	145.9576	145.9576	0.9	146.52	131.36	615.0504	50.5121	11.6584
0.0675	0.06		66.667	2,866.667	420.000	0.014333	174.3032	214.7092	214.7092	0.9	156.87	193.24	607.7298	50.5121	11.6584
0.072	0.06		100.000	2,650.000	420.000	0.013250	184.9784	279.2560	279.2560	0.9	166.48	251.33	637.3115	47.6022	0.8019
0.0765	0.07		129.412	2,458.824	420.000	0.012294	194.9480	340.3401	340.3401	0.9	175.45	306.31	629.9909	47.6022	0.8019
0.081	0.07		155.556	2,288.889	420.000	0.011444	204.3072	398.5386	398.5386	0.9	183.88	358.68	622.6703	47.6022	0.8019
0.0855	0.07		178.947	2,136.842	420.000	0.010684	213.1311	454.3070	454.3070	0.9	191.82	408.88	526.8187	50.56	36.277
0.09	0.08		200.000	2,000.000	420.000	0.010000	221.4798	508.0100	508.0100	0.9	199.33	457.21	519.4981	50.56	36.277
0.0945	0.08		219.048	1,876.190	420.000	0.009381	229.4022	559.9425	559.9425	0.9	206.46	503.95	512.1774	50.56	36.277
0.099	0.08		236.364	1,763.636	420.000	0.008818	236.9379	610.3461	610.3461	0.9	213.24	549.31	553.2852	45.4053	55.5088
0.1035	0.09		252.174	1,660.870	420.000	0.008304	244.1200	659.4201	659.4201	0.9	219.71	593.48	545.9646	45.4053	55.5088
0.108	0.09		266.667	1,566.667	420.000	0.007833	250.9758	707.3307	707.3307	0.9	225.88	636.60	538.644	45.4053	55.5088
0.1125	0.10		280.000	1,480.000	420.000	0.007400	257.5283	754.2175	754.2175	0.9	231.78	678.80	678.2536	58.694	30.4895
0.117	0.10		292.308	1,400.000	420.000	0.007000	263.7972	800.1987	800.1987	0.9	237.42	720.18	670.9329	58.694	30.4895
0.1215	0.10		303.704	1,325.926	420.000	0.006630	269.7988	845.3749	845.3749	0.9	242.82	760.84	663.6123	58.694	30.4895
0.126	0.11		314.286	1,257.143	420.000	0.006286	275.5476	889.8323	889.8323	0.9	247.99	800.85	693.1941	61.6038	41.346
0.1305	0.11		324.138	1,193.103	420.000	0.005966	281.0558	933.6453	933.6453	0.9	252.95	840.28	685.8734	61.6038	41.346
0.135	0.11		333.333	1,133.333	420.000	0.005667	286.3339	976.8783	976.8783	0.9	257.70	879.19	678.5528	61.6038	41.346
0.1395	0.12		341.935	1,077.419	420.000	0.005387	291.3913	1,019.5875	#########	0.9	262.25	917.63	762.2799	56.497	25.8212
0.144	0.12		350.000	1,025.000	420.000	0.005125	296.2361	1,061.8220	#########	0.9	266.61	955.64	754.9592	56.497	25.8212
0.1485	0.13		357.576	975.758	420.000	0.004879	300.8753	1,103.6249	#########	0.8896	267.64	981.73	747.6386	56.497	25.8212
0.153	0.13		364.706	929.412	420.000	0.004647	305.3153	1,145.0343	#########	0.8696	265.49	995.69	788.7464	61.6518	6.5893
0.1575	0.13		371.429	885.714	420.000	0.004429	309.5617	1,186.0839	#########	0.8507	263.36	1009.05	781.4258	61.6518	6.5893
0.18	0.15		400.000	700.000	420.000	0.003500	328.0441	1,386.8800	#########	0.7707	252.82	1068.85	774.1051	61.6518	6.5893
0.2025	0.17		422.222	555.556	420.000	0.002778	341.9200	1,580.1075	#########	0.7084	242.23	1119.39	589.6769	39.6734	1.5286
0.225	0.19		440.000	440.000	420.000	0.002200	349.5243	1,755.6750	#########	0.6586	230.20	1156.32	582.3562	39.6734	1.5286
0.2475	0.21		454.545	345.455	420.000	0.001727	342.9099	1,997.0661	#########	0.65	222.89	1298.09	575.0356	39.6734	1.5286
0.27	0.23		466.667	266.667	420.000	0.001333	332.3197	2,242.2033	#########	0.65	216.01	1457.43	725.8882	50.7652	28.1591
0.2925	0.25		476.923	200.000	420.000	0.001000	320.1378	2,476.6375	#########	0.65	208.09	1609.81	718.5676	50.7652	28.1591
0.315	0.27		485.714	142.857	420.000	0.000714	305.9857	2,702.6621	#########	0.65	198.89	1756.73	711.247	50.7652	28.1591
0.3375	0.29		493.333	93.333	420.000	0.000467	289.5860	2,921.9592	#########	0.65	188.23	1899.27	589.6769	39.6734	1.5286
0.36	0.31		500.000	50.000	420.000	0.000250	270.7304	3,135.7900	#########	0.65	175.97	2038.26	582.3562	39.6734	1.5286
0.3825	0.33		505.882	11.765	420.000	0.000059	249.2599	3,345.1193	#########	0.65	162.02	2174.33	575.0356	39.6734	1.5286
0.405	0.34		511.111	-22.222	420.000	-0.000111	225.0506	3,550.6972	#########	0.65	146.28	2307.95	725.8882	50.7652	28.1591
0.4275	0.36		515.789	-52.632	420.000	-0.000263	198.0048	3,753.1162	#########	0.65	128.70	2439.53	718.5676	50.7652	28.1591
0.45	0.38		520.000	-80.000	420.000	-0.000400	168.0444	3,898.1760	#########	0.65	109.23	2533.81	711.247	50.7652	28.1591
0.54	0.46		533.333	-166.667	420.000	-0.000833	36.9094	3,898.1760	#########	0.65	23.99	2533.81	779.0812	13.7306	75.2545
0.63	0.54		542.857	-228.571	420.000	-0.001143	27.8902	3,898.1760	#########	0.65	18.13	2533.81	771.7605	13.7306	75.2545
0.72	0.61		550.000	-275.000	420.000	-0.001375	21.1258	3,898.1760	#########	0.65	13.73	2533.81	764.4399	13.7306	75.2545
0.81	0.69		555.556	-311.111	420.000	-0.001556	15.8646	3,898.1760	#########	0.65	10.31	2533.81	792.0802	11.1988	65.8087
0.9	0.77		560.000	-340.000	420.000	-0.001700	11.6556	3,898.1760	#########	0.65	7.58	2533.81	784.7595	11.1988	65.8087
0.99	0.84		563.636	-363.636	420.000	-0.001818	8.2119	3,898.1760	#########	0.65	5.34	2533.81	777.4389	11.1988	65.8087
1.08	0.92		566.667	-383.333	420.000	-0.001917	5.3422	3,898.1760	#########	0.65	3.47	2533.81	816.5717	17.4992	82.7602
1.17	0.99		569.231	-400.000	420.000	-0.002000	2.9139	3,898.1760	#########	0.65	1.89	2533.81	809.251	17.4992	82.7602
1.26	1.07		571.429	-414.286	420.000	-0.002071	0.8325	3,898.1760	#########	0.65	0.54	2533.81	801.9304	17.4992	82.7602
1.35	1.15		573.333	-426.667	420.000	-0.002133	0.0000	3,898.1760	#########	0.65	0.00	2533.81	841.9928	22.4503	64.288
1.8	1.53		580.000	-470.000	420.000	-0.002350	0.0000	3,898.1760	#########	0.65	0.00	2533.81	834.6721	22.4503	64.288
2.25	1.91		584.000	-496.000	420.000	-0.002480	0.0000	3,898.1760	#########	0.65	0.00	2533.81	827.3515	22.4503	64.288
2.7	2.30		586.667	-513.333	420.000	-0.002567	0.0000	3,898.1760	#########	0.65	0.00	2533.81	523.4849	22.2906	95.4964
3.15	2.68		588.571	-525.714	420.000	-0.002629	0.0000	3,898.1760	#########	0.65	0.00	2533.81	516.1643	22.2906	95.4964
3.6	3.06		590.000	-535.000	420.000	-0.002675	0.0000	3,898.1760	#########	0.65	0.00	2533.81	508.8437	22.2906	95.4964
4.05	3.44		591.111	-542.222	420.000	-0.002711	0.0000	3,898.1760	#########	0.65	0.00	2533.81	536.484	24.8223	104.9421
4.5	3.83		592.000	-548.000	420.000	-0.002740	0.0000	3,898.1760	#########	0.65	0.00	2533.81	529.1633	24.8223	104.9421
4.95	4.21		592.727	-552.727	420.000	-0.002764	0.0000	3,898.1760	#########	0.65	0.00	2533.81	521.8427	24.8223	104.9421
5.4	4.59		593.333	-556.667	420.000	-0.002783	0.0000	3,898.1760	#########	0.65	0.00	2533.81	473.5723	11.3586	93.9757
5.85	4.97		593.846	-560.000	420.000	-0.002800	0.0000	3,898.1760	#########	0.65	0.00	2533.81	466.2517	11.3586	93.9757
6.3	5.36		594.286	-562.857	420.000	-0.002814	0.0000	3,898.1760	#########	0.65	0.00	2533.81	458.9311	11.3586	93.9757
6.75	5.74		594.667	-565.333	420.000	-0.002827	0.0000	3,898.1760	#########	0.65	0.00	2533.81	498.9935	6.4075	112.4479
7.2	6.12		595.000	-567.500	420.000	-0.002838	0.0000	3,898.1760	#########	0.65	0.00	2533.81	491.6728	6.4075	112.4479
7.65	6.50		595.294	-569.412	420.000	-0.002847	0.0000	3,898.1760	#########	0.65	0.00	2533.81	484.3522	6.4075	112.4479
8.1	6.89		595.556	-571.111	420.000	-0.002856	0.0000	3,898.1760	#########	0.65	0.00	2533.81	524.8617	0.1127	65.2014
8.55	7.27		595.789	-572.632	420.000	-0.002863	0.0000	3,898.1760	#########	0.65	0.00	2533.81	517.5411	0.1127	65.2014
9	7.65		596.000	-574.000	420.000	-0.002870	0.0000	3,898.1760	#########	0.65	0.00	2533.81	510.2204	0.1127	65.2014
9.45	8.03		596.190	-575.238	420.000	-0.002876	0.0000	3,898.1760	#########	0.65	0.00	2533.81	790.7034	11.2044	94.889
9.9	8.42		596.364	-576.364	420.000	-0.002882	0.0000	3,898.1760	#########	0.65	0.00	2533.81	783.3828	11.2044	94.889
10.35	8.80		596.522	-577.391	420.000	-0.002887	0.0000	3,898.1760	#########	0.65	0.00	2533.81	776.0621	11.2044	94.889
10.8	9.18		596.667	-578.333	420.000	-0.002892	0.0000	3,898.1760	#########	0.65	0.00	2533.81	524.8617	0.1127	65.2014
11.25	9.56		596.800	-579.200	420.000	-0.002896	0.0000	3,898.1760	#########	0.65	0.00	2533.81	517.5411	0.1127	65.2014
11.7	9.95		596.923	-580.000	420.000	-0.002900	0.0000	3,898.1760	#########	0.65	0.00	2533.81	510.2204	0.1127	65.2014
12.15	10.33		597.037	-580.741	420.000	-0.002904	0.0000	3,898.1760	#########	0.65	0.00	2533.81	790.7034	11.2044	94.889
12.6	10.71		597.143	-581.429	420.000	-0.002907	0.0000	3,898.1760	#########	0.65	0.00	2533.81	783.3828	11.2044	94.889
13.05	11.09		597.241	-582.069	420.000	-0.002910	0.0000	3,898.1760	#########	0.65	0.00	2533.81	776.0621	11.2044	94.889
13.5	11.48		597.333	-582.667	420.000	-0.002913	0.0000	3,898.1760	#########	0.65	0.00	2533.81	422.103	52.3277	16.5214
13.95	11.86		597.419	-583.226	420.000	-0.002916	0.0000	3,898.1760	#########	0.65	0.00	2533.81	416.6126	52.3277	16.5214
14.4	12.24		597.500	-583.750	420.000	-0.002919	0.0000	3,898.1760	#########	0.65	0.00	2533.81	411.1221	52.3277	16.5214
14.85	12.62		597.576	-584.242	420.000	-0.002921	0.0000	3,898.1760	#########	0.65	0.00	2533.81	437.0435	49.4178	5.665
19.35	16.45		598.140	-587.907	420.000	-0.002940	0.0000	3,898.1760	#########	0.65	0.00	2533.81	431.5531	49.4178	5.665
23.85	20.27		598.491	-590.189	420.000	-0.002951	0.0000	3,898.1760	#########	0.65	0.00	2533.81	426.0626	49.4178	5.665
28.35	24.10		598.730	-591.746	420.000	-0.002959	0.0000	3,898.1760	#########	0.65	0.00	2533.81	326.5507	52.3756	31.4139
32.85	27.92		598.904	-592.877	420.000	-0.002964	0.0000	3,898.1760	#########	0.65	0.00	2533.81	321.0602	52.3756	31.4139
37.35	31.75		599.036	-593.735	420.000	-0.002969	0.0000	3,898.1760	#########	0.65	0.00	2533.81	315.5697	52.3756	31.4139
41.85	35.57		599.140	-594.409	420.000	-0.002972	0.0000	3,898.1760	#########	0.65	0.00	2533.81	353.0172	47.2209	50.6457
46.35	39.40		599.223	-594.951	420.000	-0.002975	0.0000	3,898.1760	#########	0.65	0.00	2533.81	347.5268	47.2209	50.6457
50.85	43.22		599.292	-595.398	420.000	-0.002977	0.0000	3,898.1760	#########	0.65	0.00	2533.81	342.0363	47.2209	50.6457
55.35	47.05		599.350	-595.772	420.000	-0.002979	0.0000	3,898.1760	#########	0.65	0.00	2533.81	477.9856	56.8784	25.6265
59.85	50.87		599.398	-596.090	420.000	-0.002980	0.0000	3,898.1760	#########	0.65	0.00	2533.81	472.4951	56.8784	25.6265
64.35	54.70		599.441	-596.364	420.000	-0.002982	0.0000	3,898.1760	#########	0.65	0.00	2533.81	467.0046	56.8784	25.6265
68.85	58.52		599.477	-596.601	420.000	-0.002983	0.0000	3,898.1760	#########	0.65	0.00	2533.81	492.9261	59.7882	36.4829
73.35	62.35		599.509	-596.810	420.000	-0.002984	0.0000	3,898.1760	#########	0.65	0.00	2533.81	487.4356	59.7882	36.4829
77.85	66.17		599.538	-596.994	420.000	-0.002985	0.0000	3,898.1760	#########	0.65	0.00	2533.81	481.9451	59.7882	36.4829
82.35	70.00		599.563	-597.158	420.000	-0.002986	0.0000	3,898.1760	#########	0.65	0.00	2533.81	562.0119	54.6814	30.6843
86.85	73.82		599.585	-597.306	420.000	-0.002987	0.0000	3,898.1760	#########	0.65	0.00	2533.81	556.5214	54.6814	30.6843
91.35	77.65		599.606	-597.438	420.000	-0.002987	0.0000	3,898.1760	#########	0.65	0.00	2533.81	551.0309	54.6814	30.6843
95.85	81.47		599.624	-597.559	420.000	-0.002988	0.0000	3,898.1760	#########	0.65	0.00	2533.81	588.4784	59.8361	11.4524
100.35	85.30		599.641	-597.668	420.000	-0.002988	0.0000	3,898.1760	#########	0.65	0.00	2533.81	582.9879	59.8361	11.4524
104.85	89.12		599.657	-597.768	420.000	-0.002989	0.0000	3,898.1760	#########	0.65	0.00	2533.81	577.4975	59.8361	11.4524
109.35	92.95		599.671	-597.860	420.000	-0.002989	0.0000	3,898.1760	#########	0.65	0.00	2533.81	389.4089	41.489	3.3345
113.85	96.77		599.684	-597.945	420.000	-0.002990	0.0000	3,898.1760	#########	0.65	0.00	2533.81	383.9184	41.489	3.3345
118.35	100.60		599.695	-598.023	420.000	-0.002990	0.0000	3,898.1760	#########	0.65	0.00	2533.81	378.4279	41.489	3.3345
122.85	104.42		599.707	-598.095	420.000	-0.002990	0.0000	3,898.1760	#########	0.65	0.00	2533.81	525.6202	48.9495	23.296
127.35	108.25		599.717	-598.163	420.000	-0.002991	0.0000	3,898.1760	#########	0.65	0.00	2533.81	520.1298	48.9495	23.296
131.85	112.07		599.727	-598.225	420.000	-0.002991	0.0000	3,898.1760	#########	0.65	0.00	2533.81	514.6393	48.9495	23.296
136.35	115.90		599.736	-598.284	420.000	-0.002991	0.0000	3,898.1760	#########	0.65	0.00	2533.81	389.4089	41.489	3.3345
140.85	119.72		599.744	-598.339	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	383.9184	41.489	3.3345
145.35	123.55		599.752	-598.390	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	378.4279	41.489	3.3345
149.85	127.37		599.760	-598.438	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	525.6202	48.9495	23.296
154.35	131.20		599.767	-598.484	420.000	-0.002992	0.0000	3,898.1760	#########	0.65	0.00	2533.81	520.1298	48.9495	23.296
158.85	135.02		599.773	-598.527	420.000	-0.002993	0.0000	3,898.1760	#########	0.65	0.00	2533.81	514.6393	48.9495	23.296
163.35	138.85		599.780	-598.567	420.000	-0.002993	0.0000	3,898.1760	#########	0.65	0.00	2533.81	578.8132	15.5462	80.1175
													573.3227	15.5462	80.1175
													567.8322	15.5462	80.1175
													591.8122	13.0145	70.6718
													586.3217	13.0145	70.6718
													580.8312	13.0145	70.6718
													616.3037	15.6836	87.6233
													610.8132	15.6836	87.6233
													605.3227	15.6836	87.6233
													641.7248	20.6347	69.1511
													636.2343	20.6347	69.1511
													630.7438	20.6347	69.1511
													323.2169	20.475	90.6333
													317.7265	20.475	90.6333
													312.236	20.475	90.6333
													336.216	23.0067	100.079
													330.7255	23.0067	100.079
													325.235	23.0067	100.079
													273.3043	13.1742	89.1126
													267.8138	13.1742	89.1126
													262.3234	13.1742	89.1126
													298.7255	8.2231	107.5848
													293.235	8.2231	107.5848
													287.7445	8.2231	107.5848
													324.5937	1.9283	70.0645
													319.1032	1.9283	70.0645
													313.6127	1.9283	70.0645
													590.4354	9.3888	90.0259
													584.9449	9.3888	90.0259
													579.4544	9.3888	90.0259
													324.5937	1.9283	70.0645
													319.1032	1.9283	70.0645
													313.6127	1.9283	70.0645
													590.4354	9.3888	90.0259
													584.9449	9.3888	90.0259
													579.4544	9.3888	90.0259
													678.2536	58.694	30.4895
													670.9329	58.694	30.4895
													663.6123	58.694	30.4895
													693.1941	61.6038	41.346
													685.8734	61.6038	41.346
													678.5528	61.6038	41.346
													779.0812	13.7306	75.2545
													771.7605	13.7306	75.2545
													764.4399	13.7306	75.2545
													792.0802	11.1988	65.8087
													784.7595	11.1988	65.8087
													777.4389	11.1988	65.8087

Propiedades de Columna

f'c =	24	Mpa	Beta1 =	0.85	
fy =	420	Mpa	d' =	0.06	m
b =	0.4	m	d =	0.34	m
Ac =	7.11	cm²	h =	0.40	m
Altura Libre =	2.56	m			
As' =	7.11	cm²	Po =	3861.24	kN
Recubrimiento eje =	0.06	m	0.8øPo =	2007.84	kN
Mod Elástico Acero =	200000	Mpa		3088.99	kN

Aceros Longitudinales Colocados

	Ø	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

Cuantias Columnas

As min	16.00 cm²	Cumple
As máx	40.00 cm²	Cumple

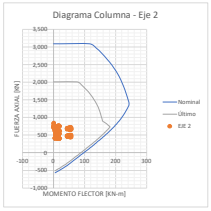
Estribos Detalles

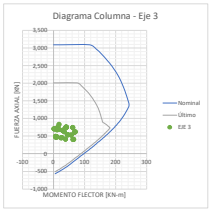
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.00 cm	15.00 cm	10.00 cm
Estribos =	Ø	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento

s =	4.50 cm	4.50 cm
Ash =	2.25 cm2	2.25 cm2
	Cumple	Cumple
Av/m =	49.96 cm²/m	49.96 cm²/m

COMPARAR ETABS





c[m]	a [cm]	a[m]	fs' [MPa]	fs [cm] cond	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.004		0.00	-420.000	-8,400.000	420.000	0.252000	5.5016	-569.4960	0.9	4.95	-512.55	742.1049	0.838	14.3009
0.008	0.01	0.01	-420.000	-3,900.000	420.000	0.124500	10.9089	-541.7520	0.9	9.82	-487.58	735.3567	0.838	14.3009
0.012	0.01	0.01	-420.000	-2,400.000	420.000	0.082000	16.2219	-514.0080	0.9	14.60	-462.61	728.6084	0.838	14.3009
0.016	0.01	0.01	-420.000	-1,650.000	420.000	0.060750	21.4406	-486.2640	0.9	19.30	-437.64	839.3532	0.7102	17.5629
0.02	0.02	0.02	-420.000	-1,200.000	420.000	0.048000	26.5649	-458.5200	0.9	23.91	-412.67	833.569	0.7102	17.5629
0.024	0.02	0.02	-420.000	-900.000	420.000	0.039500	31.5949	-430.7760	0.9	28.44	-387.70	827.7848	0.7102	17.5629
0.028	0.02	0.02	-420.000	-685.714	420.000	0.033429	36.5305	-403.0320	0.9	32.88	-362.73	768.1121	0.7905	14.5512
0.032	0.03	0.03	-420.000	-525.000	420.000	0.028875	41.3719	-375.2880	0.9	37.23	-337.76	762.3279	0.7905	14.5512
0.036	0.03	0.03	-400.000	-400.000	420.000	0.025333	48.1097	-333.3240	-333.3240	0.9	43.30	-299.99	756.5437	0.7905	14.5512
0.04	0.03	0.03	-300.000	-300.000	420.000	0.022500	62.7163	-234.4800	-234.4800	0.9	56.44	-211.03	715.9198	0.7336	14.067
0.044	0.04	0.04	-218.182	-218.182	420.000	0.020182	75.4188	-148.5633	-148.5633	0.9	67.88	-133.71	710.1356	0.7336	14.067
0.048	0.04	0.04	-150.000	-150.000	420.000	0.018250	86.6697	-72.3420	-72.3420	0.9	78.00	-65.11	704.3514	0.7336	14.067
0.052	0.04	0.04	-92.308	-92.308	420.000	0.016615	96.7820	-3.5788	-3.5788	0.9	87.10	-3.22	712.3976	54.4483	2.4552
0.056	0.05	0.05	-42.857	-42.857	420.000	0.015214	105.9797	59.3246	59.3246	0.9	95.38	53.39	706.6134	54.4483	2.4552
0.06	0.05	0.05	0.000	0.000	420.000	0.014000	114.4267	117.5400	117.5400	0.9	102.98	105.79	700.8292	54.4483	2.4552
0.064	0.05	0.05	37.500	37.500	420.000	0.012938	122.2462	171.9465	171.9465	0.9	110.02	154.75	714.1459	51.5704	0.9016
0.068	0.06	0.06	70.588	70.588	420.000	0.012000	129.5321	223.2162	223.2162	0.9	116.58	200.89	708.3617	51.5704	0.9016
0.072	0.06	0.06	100.000	100.000	420.000	0.011167	136.3578	271.8720	271.8720	0.9	122.72	244.68	702.5775	51.5704	0.9016
0.076	0.06	0.06	126.316	126.316	420.000	0.010421	142.7810	318.3265	318.3265	0.9	128.50	286.49	671.5188	54.9756	29.7387
0.08	0.07	0.07	150.000	150.000	420.000	0.009750	148.8479	362.9100	362.9100	0.9	133.96	326.62	665.7346	54.9756	29.7387
0.084	0.07	0.07	171.429	171.429	420.000	0.009143	154.5959	405.8897	405.8897	0.9	139.14	365.30	659.9503	54.9756	29.7387
0.088	0.07	0.07	190.909	190.909	420.000	0.008591	160.0557	447.4844	447.4844	0.9	144.05	402.74	674.6158	49.8775	32.4908
0.092	0.08	0.08	208.696	208.696	420.000	0.008087	165.2526	487.8746	487.8746	0.9	148.73	439.09	668.8316	49.8775	32.4908
0.096	0.08	0.08	225.000	225.000	420.000	0.007625	170.2076	527.2110	527.2110	0.9	153.19	474.49	663.0474	49.8775	32.4908
0.1	0.09	0.09	240.000	240.000	420.000	0.007200	174.9384	565.6200	565.6200	0.9	157.44	509.06	670.2462	52.9857	28.5955
0.104	0.09	0.09	253.846	253.846	420.000	0.006808	179.4600	603.2086	603.2086	0.9	161.51	542.89	664.462	52.9857	28.5955
0.108	0.09	0.09	266.667	266.667	420.000	0.006444	183.7853	640.0680	640.0680	0.9	165.41	576.06	658.6778	52.9857	28.5955
0.112	0.10	0.10	278.571	278.571	420.000	0.006107	187.9250	676.2763	676.2763	0.9	169.13	608.65	671.9945	55.8637	30.149
0.116	0.10	0.10	289.655	289.655	420.000	0.005793	191.8887	711.9008	711.9008	0.9	172.70	640.71	666.2103	55.8637	30.149
0.12	0.10	0.10	300.000	300.000	420.000	0.005500	195.6845	747.0000	747.0000	0.9	176.12	672.30	660.4261	55.8637	30.149
0.124	0.11	0.11	309.677	309.677	420.000	0.005226	199.3195	781.6246	781.6246	0.9	179.39	703.46	709.7762	51.2928	4.7969
0.128	0.11	0.11	318.750	318.750	420.000	0.004969	202.8000	815.8193	815.8193	0.8973	181.97	732.04	703.992	51.2928	4.7969
0.132	0.11	0.11	327.273	327.273	420.000	0.004727	206.1315	849.6229	849.6229	0.8765	180.67	744.69	698.2078	51.2928	4.7969
0.136	0.12	0.12	335.294	335.294	420.000	0.004500	209.3187	883.0701	883.0701	0.8569	179.36	756.70	712.8733	56.3909	2.0448
0.14	0.12	0.12	342.857	342.857	420.000	0.004286	212.3659	916.1914	916.1914	0.8384	178.05	768.16	707.0891	56.3909	2.0448
0.16	0.14	0.14	375.000	375.000	420.000	0.003375	225.6226	1,077.7650	1,077.7650	0.7599	171.45	819.01	701.3049	56.3909	2.0448
0.18	0.15	0.15	400.000	400.000	420.000	0.002667	235.8101	1,234.2600	1,234.2600	0.6989	164.80	862.56	689.4952	43.7941	11.6219
0.2	0.17	0.17	420.000	420.000	420.000	0.002100	243.1416	1,387.2000	1,387.2000	0.65	158.04	901.68	683.711	43.7941	11.6219
0.22	0.19	0.19	436.364	420.000	420.000	0.001636	236.8940	1,591.8491	1,591.8491	0.65	153.98	1034.70	677.9268	43.7941	11.6219
0.24	0.20	0.20	450.000	420.000	420.000	0.001250	229.8265	1,785.5100	1,785.5100	0.65	149.39	1160.58	694.8969	45.2094	16.0719
0.26	0.22	0.22	461.538	420.000	420.000	0.000923	221.5841	1,970.7185	1,970.7185	0.65	144.03	1280.97	689.1127	45.2094	16.0719
0.28	0.24	0.24	471.429	420.000	420.000	0.000643	211.9133	2,149.2857	2,149.2857	0.65	137.74	1397.04	683.3285	45.2094	16.0719
0.3	0.26	0.26	480.000	420.000	420.000	0.000400	200.6280	2,322.5400	2,322.5400	0.65	130.41	1509.65	689.4952	43.7941	11.6219
0.32	0.27	0.27	487.500	420.000	420.000	0.000187	187.5888	2,491.4775	2,491.4775	0.65	121.93	1619.46	683.711	43.7941	11.6219
0.34	0.29	0.29	494.118	420.000	420.000	0.000000	172.6891	2,656.8600	2,656.8600	0.65	112.25	1726.96	677.9268	43.7941	11.6219
0.36	0.31	0.31	500.000	420.000	420.000	-0.000167	155.8459	2,819.2800	2,819.2800	0.65	101.30	1832.53	694.8969	45.2094	16.0719
0.38	0.32	0.32	505.263	420.000	420.000	-0.000316	136.9937	2,979.2053	2,979.2053	0.65	89.05	1936.48	689.1127	45.2094	16.0719
0.4	0.34	0.34	510.000	420.000	420.000	-0.000450	116.0802	3,088.9920	3,137.0100	0.65	75.45	2007.84	683.3285	45.2094	16.0719
0.48	0.41	0.41	525.000	420.000	420.000	-0.000875	24.3873	3,088.9920	3,687.0450	0.65	15.85	2007.84	758.7349	17.5434	41.2227
0.56	0.48	0.40	535.714	420.000	420.000	-0.001179	18.3438	3,088.9920	3,730.2129	0.65	11.92	2007.84	752.9507	17.5434	41.2227
0.64	0.54	0.40	543.750	420.000	420.000	-0.001406	13.8112	3,088.9920	3,762.5888	0.65	8.98	2007.84	747.1665	17.5434	41.2227
0.72	0.61	0.40	550.000	420.000	420.000	-0.001583	10.2858	3,088.9920	3,787.7700	0.65	6.69	2007.84	760.256	15.0394	39.8711
0.8	0.68	0.40	555.000	420.000	420.000	-0.001725	7.4655	3,088.9920	3,807.9150	0.65	4.85	2007.84	754.4718	15.0394	39.8711
0.88	0.75	0.40	559.091	420.000	420.000	-0.001841	5.1580	3,088.9920	3,824.3973	0.65	3.35	2007.84	748.6876	15.0394	39.8711
0.96	0.82	0.40	562.500	420.000	420.000	-0.001938	3.2351	3,088.9920	3,838.1325	0.65	2.10	2007.84	757.424	13.3156	42.3913
1.04	0.88	0.40	565.385	420.000	420.000	-0.002019	1.6080	3,088.9920	3,849.7546	0.65	1.05	2007.84	751.6398	13.3156	42.3913
1.12	0.95	0.40	567.857	420.000	420.000	-0.002089	0.2133	3,088.9920	3,859.7164	0.65	0.14	2007.84	745.8556	13.3156	42.3913
1.2	1.02	0.40	570.000	420.000	420.000	-0.002150	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	760.3988	18.2123	39.748
1.6	1.36	0.40	577.500	420.000	420.000	-0.002363	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	754.6145	18.2123	39.748
2	1.70	0.40	582.000	420.000	420.000	-0.002490	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	748.8303	18.2123	39.748
2.4	2.04	0.40	585.000	420.000	420.000	-0.002575	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	624.136	16.4547	67.5649
2.8	2.38	0.40	587.143	420.000	420.000	-0.002636	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	618.3518	16.4547	67.5649
3.2	2.72	0.40	588.750	420.000	420.000	-0.002681	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	612.5676	16.4547	67.5649
3.6	3.06	0.40	590.000	420.000	420.000	-0.002717	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	625.6571	18.9587	68.9166
4	3.40	0.40	591.000	420.000	420.000	-0.002745	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	619.8729	18.9587	68.9166
4.4	3.74	0.40	591.818	420.000	420.000	-0.002768	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	614.0887	18.9587	68.9166
4.8	4.08	0.40	592.500	420.000	420.000	-0.002788	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	623.9933	16.797	67.4418
5.2	4.42	0.40	593.077	420.000	420.000	-0.002804	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	618.2091	16.797	67.4418
5.6	4.76	0.40	593.571	420.000	420.000	-0.002818	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	612.4249	16.797	67.4418
6	5.10	0.40	594.000	420.000	420.000	-0.002830	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	626.968	11.9003	70.0852
6.4	5.44	0.40	594.375	420.000	420.000	-0.002841	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	621.1838	11.9003	70.0852
6.8	5.78	0.40	594.706	420.000	420.000	-0.002850	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	615.3996	11.9003	70.0852
7.2	6.12	0.40	595.000	420.000	420.000	-0.002858	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	634.5262	4.3443	34.0035
7.6	6.46	0.40	595.263	420.000	420.000	-0.002866	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	628.742	4.3443	34.0035
8	6.80	0.40	595.500	420.000	420.000	-0.002873	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	622.9578	4.3443	34.0035
8.4	7.14	0.40	595.714	420.000	420.000	-0.002879	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	749.8658	5.7597	61.6974
8.8	7.48	0.40	595.909	420.000	420.000	-0.002884	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	744.0816	5.7597	61.6974
9.2	7.82	0.40	596.087	420.000	420.000	-0.002889	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	738.2974	5.7597	61.6974
9.6	8.16	0.40	596.250	420.000	420.000	-0.002894	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	634.5262	4.3443	34.0035
10	8.50	0.40	596.400	420.000	420.000	-0.002898	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	628.742	4.3443	34.0035
10.4	8.84	0.40	596.538	420.000	420.000	-0.002902	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	622.9578	4.3443	34.0035
10.8	9.18	0.40	596.667	420.000	420.000	-0.002906	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	749.8658	5.7597	61.6974
11.2	9.52	0.40	596.786	420.000	420.000	-0.002909	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	744.0816	5.7597	61.6974
11.6	9.86	0.40	596.897	420.000	420.000	-0.002912	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	738.2974	5.7597	61.6974
12	10.20	0.40	597.000	420.000	420.000	-0.002915	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	497.269	54.6173	7.1087
12.4	10.54	0.40	597.097	420.000	420.000	-0.002918	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	492.9309	54.6173	7.1087
12.8	10.88	0.40	597.188	420.000	420.000	-0.002920	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	488.5927	54.6173	7.1087
13.2	11.22	0.40	597.273	420.000	420.000	-0.002923	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	499.0173	51.7394	5.5551
17.2	14.62	0.40	597.907	420.000	420.000	-0.002941	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	494.6792	51.7394	5.5551
21.2	18.02	0.40	598.302	420.000	420.000	-0.002952	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	490.341	51.7394	5.5551
25.2	21.42	0.40	598.571	420.000	420.000	-0.002960	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	456.3902	55.1446	25.0852
29.2	24.82	0.40	598.767	420.000	420.000	-0.002965	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	452.052	55.1446	25.0852
33.2	28.23	0.40	598.916	420.000	420.000	-0.002969	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	447.7139	55.1446	25.0852
37.2	31.63	0.40	599.032	420.000	420.000	-0.002973	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	459.4872	50.0465	27.8372
41.2	35.02	0.40	599.126	420.000	420.000	-0.002975	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	455.1491	50.0465	27.8372
45.2	38.42	0.40	599.204	420.000	420.000	-0.002977	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	450.8109	50.0465	27.8372
49.2	41.82	0.40	599.268	420.000	420.000	-0.002979	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	455.1176	52.8168	23.942
53.2	45.23	0.40	599.323	420.000	420.000	-0.002981	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	450.7794	52.8168	23.942
57.2	48.62	0.40	599.371	420.000	420.000	-0.002982	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	446.4413	52.8168	23.942
61.2	52.02	0.40	599.412	420.000	420.000	-0.002983	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	456.8659	55.6947	25.4955
65.2	55.42	0.40	599.448	420.000	420.000	-0.002984	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	452.5277	55.6947	25.4955
69.2	58.82	0.40	599.480	420.000	420.000	-0.002985	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	448.1896	55.6947	25.4955
73.2	62.22	0.40	599.508	420.000	420.000	-0.002986	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	494.6477	51.1239	9.4504
77.2	65.62	0.40	599.534	420.000	420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	490.3095	51.1239	9.4504
81.2	69.02	0.40	599.557	420.000	420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	485.9714	51.1239	9.4504
85.2	72.43	0.40	599.577	420.000	420.000	-0.002988	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	497.7447	56.222	6.6983
89.2	75.82	0.40	599.596	420.000	420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	493.4066	56.222	6.6983
93.2	79.22	0.40	599.614	420.000	420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	489.0684	56.222	6.6983
97.2	82.62	0.40	599.630	420.000	420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	474.3666	43.963	6.9684
101.2	86.02	0.40	599.644	420.000	420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	470.0284	43.963	6.9684
105.2	89.42	0.40	599.658	420.000	420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	465.6903	43.963	6.9684
109.2	92.82	0.40	599.670	420.000	420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	479.7683	45.0404	11.4184
113.2	96.22	0.40	599.682	420.000	420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	475.4302	45.0404	11.4184
117.2	99.62	0.40	599.693	420.000	420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	471.092	45.0404	11.4184
121.2	103.02	0.40	599.703	420.000	420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	474.3666	43.963	6.9684
125.2	106.42	0.40	599.712	420.000	420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	470.0284	43.963	6.9684
129.2	109.82	0.40	599.721	420.000	420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	465.6903	43.963	6.9684
133.2	113.22	0.40	599.730	420.000	420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	479.7683	45.0404	11.4184
137.2	116.62	0.40	599.738	420.000	420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	475.4302	45.0404	11.4184
141.2	120.02	0.40	599.745	420.000	420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	471.092	45.0404	11.4184
145.2	123.42	0.40	599.752	420.000	420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	543.6064	17.7123	45.8762
													539.2682	17.7123	45.8762
													534.93	17.7123	45.8762
													545.1275	15.2084	44.5246
													540.7893	15.2084	44.5246
													536.4512	15.2084	44.5246
													542.2955	13.1466	47.0448
													537.9573	13.1466	47.0448
													533.6191	13.1466	47.0448
													545.2702	18.0434	44.4015
													540.932	18.0434	44.4015
													536.5939	18.0434	44.4015
													409.0074	16.2858	62.9114
													404.6693	16.2858	62.9114
													400.3311	16.2858	62.9114
													410.5286	18.7897	64.2631
													406.1904	18.7897	64.2631
													401.8523	18.7897	64.2631
													408.8647	16.966	62.7883
													404.5266	16.966	62.7883
													400.1884	16.966	62.7883
													411.8395	12.0692	65.4317
													407.5013	12.0692	65.4317
													403.1631	12.0692	65.4317
													419.3977	4.5133	38.657
													415.0595	4.5133	38.657
													410.7213	4.5133	38.657
													534.7373	5.5907	57.0439
													530.3991	5.5907	57.0439
													526.061	5.5907	57.0439
													419.3977	4.5133	38.657
													415.0595	4.5133	38.657
													410.7213	4.5133	38.657
													534.7373	5.5907	57.0439
													530.3991	5.5907	57.0439
													526.061	5.5907	57.0439
													670.2462	52.9857	28.5955
													664.462	52.9857	28.5955
													658.6778	52.9857	28.5955
													671.9945	55.8637	30.149
													666.2103	55.8637	30.149
													660.4261	55.8637	30.149
													758.7349	17.5434	41.2227
													752.9507	17.5434	41.2227
													747.1665	17.5434	41.2227
													760.256	15.0394	39.8711
													754.4718	15.0394	39.8711
													748.6876	15.0394	39.8711

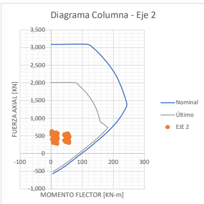
Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.4	m	d =	0.34 m
As =	7.11	cm²	h =	0.40 m
Altura Libre =	2.56	m		
As' =	7.11	cm²	Po =	3861.24 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2007.84 kN
Mod Elástico Acero =	200000	Mpa		3088.99 kN

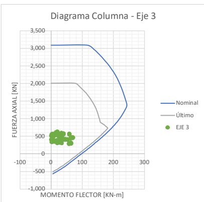
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

Cuantías Columnas		
As min	16.00 cm²	Cumple
As máx	40.00 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	166.00 cm	45.00 cm
S ≤	10.00 cm	15.00 cm	10.00 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento				
s =	4.50 cm		4.50 cm	
Ash =	2.25 cm2		2.25 cm2	
	Cumple		Cumple	
Av/m =	**49.96 cm²/m**		**49.96 cm²/m**	COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.004	0.00	0.00	-8,400.000	-420.000	50,400.000	420.000	0.252000	5.5016	-569.4960	-569.4960	0.9	4.95	-512.55	566.2519	2.2467	14.7703
0.008	0.01	0.01	-3,900.000	-420.000	24,900.000	420.000	0.124500	10.9089	-541.7520	-541.7520	0.9	9.82	-487.58	559.5037	2.2467	14.7703
0.012	0.01	0.01	-2,400.000	-420.000	16,400.000	420.000	0.082000	16.2219	-514.0080	-514.0080	0.9	14.60	-462.61	552.7555	2.2467	14.7703
0.016	0.01	0.01	-1,650.000	-420.000	12,150.000	420.000	0.060750	21.4406	-486.2640	-486.2640	0.9	19.30	-437.64	632.2575	1.9748	19.8591
0.02	0.02	0.02	-1,200.000	-420.000	9,600.000	420.000	0.048000	26.5649	-458.5200	-458.5200	0.9	23.91	-412.67	626.4733	1.9748	19.8591
0.024	0.02	0.02	-900.000	-420.000	7,900.000	420.000	0.039500	31.5949	-430.7760	-430.7760	0.9	28.44	-387.70	620.6891	1.9748	19.8591
0.028	0.02	0.02	-685.714	-420.000	6,685.714	420.000	0.033429	36.5305	-403.0320	-403.0320	0.9	32.88	-362.73	612.9791	1.8427	15.3085
0.032	0.03	0.03	-525.000	-420.000	5,775.000	420.000	0.028875	41.3719	-375.2880	-375.2880	0.9	37.23	-337.76	607.1949	1.8427	15.3085
0.036	0.03	0.03	-400.000	-400.000	5,066.667	420.000	0.025333	48.1097	-333.3240	-333.3240	0.9	43.30	-299.99	601.4106	1.8427	15.3085
0.04	0.03	0.03	-300.000	-300.000	4,500.000	420.000	0.022500	62.7163	-234.4800	-234.4800	0.9	56.44	-211.03	550.7205	1.9176	15.0048
0.044	0.04	0.04	-218.182	-218.182	4,036.364	420.000	0.020182	75.4188	-148.5633	-148.5633	0.9	67.88	-133.71	544.9363	1.9176	15.0048
0.048	0.04	0.04	-150.000	-150.000	3,650.000	420.000	0.018250	86.6697	-72.3420	-72.3420	0.9	78.00	-65.11	539.1521	1.9176	15.0048
0.052	0.04	0.04	-92.308	-92.308	3,323.077	420.000	0.016615	96.7820	-3.5788	-3.5788	0.9	87.10	-3.22	515.0136	57.1398	4.5398
0.056	0.05	0.05	-42.857	-42.857	3,042.857	420.000	0.015214	105.9797	59.3246	59.3246	0.9	95.38	53.39	509.2294	57.1398	4.5398
0.06	0.05	0.05	0.000	0.000	2,800.000	420.000	0.014000	114.4267	117.5400	117.5400	0.9	102.98	105.79	503.4452	57.1398	4.5398
0.064	0.05	0.05	37.500	37.500	2,587.500	420.000	0.012938	122.2462	171.9465	171.9465	0.9	110.02	154.75	521.6054	54.2236	0.6366
0.068	0.06	0.06	70.588	70.588	2,400.000	420.000	0.012000	129.5321	223.2162	223.2162	0.9	116.58	200.89	515.8212	54.2236	0.6366
0.072	0.06	0.06	100.000	100.000	2,233.333	420.000	0.011167	136.3578	271.8720	271.8720	0.9	122.72	244.68	510.037	54.2236	0.6366
0.076	0.06	0.06	126.316	126.316	2,084.211	420.000	0.010421	142.7810	318.3265	318.3265	0.9	128.50	286.49	477.2124	57.834	24.9875
0.08	0.07	0.07	150.000	150.000	1,950.000	420.000	0.009750	148.8479	362.9100	362.9100	0.9	133.96	326.62	471.4282	57.834	24.9875
0.084	0.07	0.07	171.429	171.429	1,828.571	420.000	0.009143	154.5959	405.8897	405.8897	0.9	139.14	365.30	465.644	57.834	24.9875
0.088	0.07	0.07	190.909	190.909	1,718.182	420.000	0.008591	160.0557	447.4844	447.4844	0.9	144.05	402.74	488.8896	52.6681	31.9019
0.092	0.08	0.08	208.696	208.696	1,617.391	420.000	0.008087	165.2526	487.8746	487.8746	0.9	148.73	439.09	483.1054	52.6681	31.9019
0.096	0.08	0.08	225.000	225.000	1,525.000	420.000	0.007625	170.2076	527.2110	527.2110	0.9	153.19	474.49	477.3212	52.6681	31.9019
0.1	0.09	0.09	240.000	240.000	1,440.000	420.000	0.007200	174.9384	565.6200	565.6200	0.9	157.44	509.06	523.2368	50.3202	30.3701
0.104	0.09	0.09	253.846	253.846	1,361.538	420.000	0.006808	179.4600	603.2086	603.2086	0.9	161.51	542.89	517.4526	50.3202	30.3701
0.108	0.09	0.09	266.667	266.667	1,288.889	420.000	0.006444	183.7853	640.0680	640.0680	0.9	165.41	576.06	511.6684	50.3202	30.3701
0.112	0.10	0.10	278.571	278.571	1,221.429	420.000	0.006107	187.9250	676.2763	676.2763	0.9	169.13	608.65	529.8286	53.2364	34.2733
0.116	0.10	0.10	289.655	289.655	1,158.621	420.000	0.005793	191.8887	711.9008	711.9008	0.9	172.70	640.71	524.0444	53.2364	34.2733
0.12	0.10	0.10	300.000	300.000	1,100.000	420.000	0.005500	195.6845	747.0000	747.0000	0.9	176.12	672.30	518.2602	53.2364	34.2733
0.124	0.11	0.11	309.677	309.677	1,045.161	420.000	0.005226	199.3195	781.6246	781.6246	0.9	179.39	703.46	555.9526	48.7647	2.1685
0.128	0.11	0.11	318.750	318.750	993.750	420.000	0.004969	202.8000	815.8193	815.8193	0.8973	181.97	732.04	550.1684	48.7647	2.1685
0.132	0.11	0.11	327.273	327.273	945.455	420.000	0.004727	206.1315	849.6229	849.6229	0.8765	180.67	744.69	544.3842	48.7647	2.1685
0.136	0.12	0.12	335.294	335.294	900.000	420.000	0.004500	209.3187	883.0701	883.0701	0.8569	179.36	756.70	567.6298	53.9307	4.746
0.14	0.12	0.12	342.857	342.857	857.143	420.000	0.004286	212.3659	916.1914	916.1914	0.8384	178.05	768.16	561.8456	53.9307	4.746
0.16	0.14	0.14	375.000	375.000	675.000	420.000	0.003375	225.6226	1,077.7650	1,077.7650	0.7599	171.45	819.01	556.0614	53.9307	4.746
0.18	0.15	0.15	400.000	400.000	533.333	420.000	0.002667	235.8101	1,234.2600	1,234.2600	0.6989	164.80	862.56	506.3176	46.5135	7.406
0.2	0.17	0.17	420.000	420.000	420.000	420.000	0.002100	243.1416	1,387.2000	1,387.2000	0.65	158.04	901.68	500.5334	46.5135	7.406
0.22	0.19	0.19	436.364	420.000	327.273	327.273	0.001636	236.8940	1,591.8491	1,591.8491	0.65	153.98	1034.70	494.7492	46.5135	7.406
0.24	0.20	0.20	450.000	420.000	250.000	250.000	0.001250	229.8265	1,785.5100	1,785.5100	0.65	149.39	1160.58	538.5246	42.6101	22.3275
0.26	0.22	0.22	461.538	420.000	184.615	184.615	0.000923	221.5841	1,970.7185	1,970.7185	0.65	144.03	1280.97	532.7404	42.6101	22.3275
0.28	0.24	0.24	471.429	420.000	128.571	128.571	0.000643	211.9133	2,149.2857	2,149.2857	0.65	137.74	1397.04	526.9562	42.6101	22.3275
0.3	0.26	0.26	480.000	420.000	80.000	80.000	0.000400	200.6280	2,322.5400	2,322.5400	0.65	130.41	1509.65	506.3176	46.5135	7.406
0.32	0.27	0.27	487.500	420.000	37.500	37.500	0.000187	187.5888	2,491.4775	2,491.4775	0.65	121.93	1619.46	500.5334	46.5135	7.406
0.34	0.29	0.29	494.118	420.000	0.000	0.000	0.000000	172.6891	2,656.8600	2,656.8600	0.65	112.25	1726.96	494.7492	46.5135	7.406
0.36	0.31	0.31	500.000	420.000	-33.333	-33.333	-0.000167	155.8459	2,819.2800	2,819.2800	0.65	101.30	1832.53	538.5246	42.6101	22.3275
0.38	0.32	0.32	505.263	420.000	-63.158	-63.158	-0.000316	136.9937	2,979.2053	2,979.2053	0.65	89.05	1936.48	532.7404	42.6101	22.3275
0.4	0.34	0.34	510.000	420.000	-90.000	-90.000	-0.000450	116.0802	3,088.9920	3,137.0100	0.65	75.45	2007.84	526.9562	42.6101	22.3275
0.48	0.41	0.40	525.000	420.000	-175.000	-175.000	-0.000875	24.3873	3,088.9920	3,687.0450	0.65	15.85	2007.84	571.7954	19.9924	39.1344
0.56	0.48	0.40	535.714	420.000	-235.714	-235.714	-0.001179	18.3438	3,088.9920	3,730.2129	0.65	11.92	2007.84	566.0112	19.9924	39.1344
0.64	0.54	0.40	543.750	420.000	-281.250	-281.250	-0.001406	13.8112	3,088.9920	3,762.5888	0.65	8.98	2007.84	560.227	19.9924	39.1344
0.72	0.61	0.40	550.000	420.000	-316.667	-316.667	-0.001583	10.2858	3,088.9920	3,787.7700	0.65	6.69	2007.84	577.5307	17.4551	35.7384
0.8	0.68	0.40	555.000	420.000	-345.000	-345.000	-0.001725	7.4655	3,088.9920	3,807.9150	0.65	4.85	2007.84	571.7465	17.4551	35.7384
0.88	0.75	0.40	559.091	420.000	-368.182	-368.182	-0.001841	5.1580	3,088.9920	3,824.3973	0.65	3.35	2007.84	565.9623	17.4551	35.7384
0.96	0.82	0.40	562.500	420.000	-387.500	-387.500	-0.001938	3.2351	3,088.9920	3,838.1325	0.65	2.10	2007.84	582.0996	10.9041	39.594
1.04	0.88	0.40	565.385	420.000	-403.846	-403.846	-0.002019	1.6080	3,088.9920	3,849.7546	0.65	1.05	2007.84	576.3154	10.9041	39.594
1.12	0.95	0.40	567.857	420.000	-417.857	-417.857	-0.002089	0.2133	3,088.9920	3,859.7164	0.65	0.14	2007.84	570.5312	10.9041	39.594
1.2	1.02	0.40	570.000	420.000	-430.000	-420.000	-0.002150	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	593.3156	15.866	32.9527
1.6	1.36	0.40	577.500	420.000	-472.500	-420.000	-0.002363	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	587.5314	15.866	32.9527
2	1.70	0.40	582.000	420.000	-498.000	-420.000	-0.002490	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	581.7472	15.866	32.9527
2.4	2.04	0.40	585.000	420.000	-515.000	-420.000	-0.002575	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	467.3115	13.5518	65.4719
2.8	2.38	0.40	587.143	420.000	-527.143	-420.000	-0.002636	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	461.5273	13.5518	65.4719
3.2	2.72	0.40	588.750	420.000	-536.250	-420.000	-0.002681	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	455.7431	13.5518	65.4719
3.6	3.06	0.40	590.000	420.000	-543.333	-420.000	-0.002717	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	473.0468	16.089	68.8679
4	3.40	0.40	591.000	420.000	-549.000	-420.000	-0.002745	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	467.2626	16.089	68.8679
4.4	3.74	0.40	591.818	420.000	-553.636	-420.000	-0.002768	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	461.4783	16.089	68.8679
4.8	4.08	0.40	592.500	420.000	-557.500	-420.000	-0.002788	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	451.5266	19.7694	62.6861
5.2	4.42	0.40	593.077	420.000	-560.769	-420.000	-0.002804	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	445.7424	19.7694	62.6861
5.6	4.76	0.40	593.571	420.000	-563.571	-420.000	-0.002818	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	439.9582	19.7694	62.6861
6	5.10	0.40	594.000	420.000	-566.000	-420.000	-0.002830	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	462.7426	14.8075	69.3275
6.4	5.44	0.40	594.375	420.000	-568.125	-420.000	-0.002841	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	456.9584	14.8075	69.3275
6.8	5.78	0.40	594.706	420.000	-570.000	-420.000	-0.002850	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	451.1742	14.8075	69.3275
7.2	6.12	0.40	595.000	420.000	-571.667	-420.000	-0.002858	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	475.3571	6.9094	28.3056
7.6	6.46	0.40	595.263	420.000	-573.158	-420.000	-0.002866	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	469.5729	6.9094	28.3056
8	6.80	0.40	595.500	420.000	-574.500	-420.000	-0.002873	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	463.7886	6.9094	28.3056
8.4	7.14	0.40	595.714	420.000	-575.714	-420.000	-0.002879	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	569.4851	3.006	58.0391
8.8	7.48	0.40	595.909	420.000	-576.818	-420.000	-0.002884	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	563.7009	3.006	58.0391
9.2	7.82	0.40	596.087	420.000	-577.826	-420.000	-0.002889	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	557.9167	3.006	58.0391
9.6	8.16	0.40	596.250	420.000	-578.750	-420.000	-0.002894	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	475.3571	6.9094	28.3056
10	8.50	0.40	596.400	420.000	-579.600	-420.000	-0.002898	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	469.5729	6.9094	28.3056
10.4	8.84	0.40	596.538	420.000	-580.385	-420.000	-0.002902	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	463.7886	6.9094	28.3056
10.8	9.18	0.40	596.667	420.000	-581.111	-420.000	-0.002906	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	569.4851	3.006	58.0391
11.2	9.52	0.40	596.786	420.000	-581.786	-420.000	-0.002909	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	563.7009	3.006	58.0391
11.6	9.86	0.40	596.897	420.000	-582.414	-420.000	-0.002912	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	557.9167	3.006	58.0391
12	10.20	0.40	597.000	420.000	-583.000	-420.000	-0.002915	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	356.6116	56.6324	9.9114
12.4	10.54	0.40	597.097	420.000	-583.548	-420.000	-0.002918	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	352.2734	56.6324	9.9114
12.8	10.88	0.40	597.188	420.000	-584.063	-420.000	-0.002920	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	347.9353	56.6324	9.9114
13.2	11.22	0.40	597.273	420.000	-584.545	-420.000	-0.002923	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	363.2034	53.7162	6.0082
17.2	14.62	0.40	597.907	420.000	-588.140	-420.000	-0.002941	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	358.8653	53.7162	6.0082
21.2	18.02	0.40	598.302	420.000	-590.377	-420.000	-0.002952	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	354.5271	53.7162	6.0082
25.2	21.42	0.40	598.571	420.000	-591.905	-420.000	-0.002960	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	318.8104	57.3266	19.616
29.2	24.82	0.40	598.767	420.000	-593.014	-420.000	-0.002965	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	314.4722	57.3266	19.616
33.2	28.22	0.40	598.916	420.000	-593.855	-420.000	-0.002969	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	310.1341	57.3266	19.616
37.2	31.62	0.40	599.032	420.000	-594.516	-420.000	-0.002973	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	330.4876	52.1607	26.5304
41.2	35.02	0.40	599.126	420.000	-595.049	-420.000	-0.002975	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	326.1494	52.1607	26.5304
45.2	38.42	0.40	599.204	420.000	-595.487	-420.000	-0.002977	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	321.8113	52.1607	26.5304
49.2	41.82	0.40	599.268	420.000	-595.854	-420.000	-0.002979	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	364.8348	50.8276	24.9985
53.2	45.22	0.40	599.323	420.000	-596.165	-420.000	-0.002981	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	360.4966	50.8276	24.9985
57.2	48.62	0.40	599.371	420.000	-596.434	-420.000	-0.002982	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	356.1585	50.8276	24.9985
61.2	52.02	0.40	599.412	420.000	-596.667	-420.000	-0.002983	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	371.4266	53.7438	28.9018
65.2	55.42	0.40	599.448	420.000	-596.871	-420.000	-0.002984	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	367.0885	53.7438	28.9018
69.2	58.82	0.40	599.480	420.000	-597.052	-420.000	-0.002985	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	362.7503	53.7438	28.9018
73.2	62.22	0.40	599.508	420.000	-597.213	-420.000	-0.002986	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	397.5506	49.2721	7.54
77.2	65.62	0.40	599.534	420.000	-597.358	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	393.2125	49.2721	7.54
81.2	69.02	0.40	599.557	420.000	-597.488	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	388.8743	49.2721	7.54
85.2	72.42	0.40	599.577	420.000	-597.606	-420.000	-0.002988	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	409.2278	54.4381	0.6256
89.2	75.82	0.40	599.596	420.000	-597.713	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	404.8897	54.4381	0.6256
93.2	79.22	0.40	599.614	420.000	-597.811	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	400.5515	54.4381	0.6256
97.2	82.62	0.40	599.630	420.000	-597.901	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	347.9156	46.0061	2.0344
101.2	86.02	0.40	599.644	420.000	-597.984	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	343.5774	46.0061	2.0344
105.2	89.42	0.40	599.658	420.000	-598.061	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	339.2393	46.0061	2.0344
109.2	92.82	0.40	599.670	420.000	-598.132	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	380.1226	43.1175	16.9559
113.2	96.22	0.40	599.682	420.000	-598.198	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	375.7845	43.1175	16.9559
117.2	99.62	0.40	599.693	420.000	-598.259	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	371.4463	43.1175	16.9559
121.2	103.02	0.40	599.703	420.000	-598.317	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	347.9156	46.0061	2.0344
125.2	106.42	0.40	599.712	420.000	-598.371	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	343.5774	46.0061	2.0344
129.2	109.82	0.40	599.721	420.000	-598.421	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	339.2393	46.0061	2.0344
133.2	113.22	0.40	599.730	420.000	-598.468	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	380.1226	43.1175	16.9559
137.2	116.62	0.40	599.738	420.000	-598.513	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	375.7845	43.1175	16.9559
141.2	120.02	0.40	599.745	420.000	-598.555	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	371.4463	43.1175	16.9559
145.2	123.42	0.40	599.752	420.000	-598.595	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	413.3934	19.485	44.506
														409.0553	19.485	44.506
														404.7171	19.485	44.506
														419.1287	16.9477	41.11
														414.7905	16.9477	41.11
														410.4524	16.9477	41.11
														423.6976	11.4115	44.9655
														419.3595	11.4115	44.9655
														415.0213	11.4115	44.9655
														434.9136	16.3734	38.3242
														430.5754	16.3734	38.3242
														426.2373	16.3734	38.3242
														308.9095	14.0592	60.1003
														304.5714	14.0592	60.1003
														300.2332	14.0592	60.1003
														314.6448	16.5964	63.4963
														310.3066	16.5964	63.4963
														305.9684	16.5964	63.4963
														293.1246	19.262	57.3146
														288.7865	19.262	57.3146
														284.4483	19.262	57.3146
														304.3406	14.3001	63.9559
														300.0024	14.3001	63.9559
														295.6643	14.3001	63.9559
														316.9551	6.402	33.6771
														312.6169	6.402	33.6771
														308.2788	6.402	33.6771
														411.0831	3.5134	52.6675
														406.745	3.5134	52.6675
														402.4068	3.5134	52.6675
														316.9551	6.402	33.6771
														312.6169	6.402	33.6771
														308.2788	6.402	33.6771
														411.0831	3.5134	52.6675
														406.745	3.5134	52.6675
														402.4068	3.5134	52.6675
														523.2368	50.3202	30.3701
														517.4526	50.3202	30.3701
														511.6684	50.3202	30.3701
														529.8286	53.2364	34.2733
														524.0444	53.2364	34.2733
														518.2602	53.2364	34.2733
														571.7954	19.9924	39.1344
														566.0112	19.9924	39.1344
														560.227	19.9924	39.1344
														577.5307	17.4551	35.7384
														571.7465	17.4551	35.7384
														565.9623	17.4551	35.7384

Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.4	m	d =	0.34 m
As =	7.11	cm²	h =	0.40 m
Altura Libre =	2.66	m		
As' =	7.11	cm²	Po =	3861.24 kN
Recubrimiento eje =	0.06	m	0.8øPo =	2007.84 kN
Mod Elástico Acero =	200000	Mpa		3088.99 kN

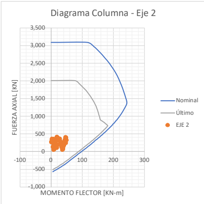
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

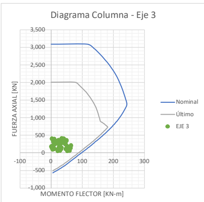
Cuantías Columnas		
As min	16.00 cm²	Cumple
As máx	40.00 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	176.00 cm	45.00 cm
S ≤	10.00 cm	15.00 cm	10.00 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento			
s =	4.50 cm		4.50 cm
Ash =	2.25 cm2		2.25 cm2
	Cumple		Cumple
Av/m =	**49.96 cm²/m**		**49.96 cm²/m**

COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.004	0.00	0.00	-8,400.000	-420.000	50,400.000	420.000	0.252000	5.5016	-569.4960	-569.4960	0.9	4.95	-512.55	306.0742	6.3562	11.3511
0.008	0.01	0.01	-3,900.000	-420.000	24,900.000	420.000	0.124500	10.9089	-541.7520	-541.7520	0.9	9.82	-487.58	299.0624	6.3562	11.3511
0.012	0.01	0.01	-2,400.000	-420.000	16,400.000	420.000	0.082000	16.2219	-514.0080	-514.0080	0.9	14.60	-462.61	292.0505	6.3562	11.3511
0.016	0.01	0.01	-1,650.000	-420.000	12,150.000	420.000	0.060750	21.4406	-486.2640	-486.2640	0.9	19.30	-437.64	321.8083	8.1726	14.1687
0.02	0.02	0.02	-1,200.000	-420.000	9,600.000	420.000	0.048000	26.5649	-458.5200	-458.5200	0.9	23.91	-412.67	315.7981	8.1726	14.1687
0.024	0.02	0.02	-900.000	-420.000	7,900.000	420.000	0.039500	31.5949	-430.7760	-430.7760	0.9	28.44	-387.70	309.788	8.1726	14.1687
0.028	0.02	0.02	-685.714	-420.000	6,685.714	420.000	0.033429	36.5305	-403.0320	-403.0320	0.9	32.88	-362.73	322.1891	6.6228	11.3121
0.032	0.03	0.03	-525.000	-420.000	5,775.000	420.000	0.028875	41.3719	-375.2880	-375.2880	0.9	37.23	-337.76	316.179	6.6228	11.3121
0.036	0.03	0.03	-400.000	-400.000	5,066.667	420.000	0.025333	48.1097	-333.3240	-333.3240	0.9	43.30	-299.99	310.1688	6.6228	11.3121
0.04	0.03	0.03	-300.000	-300.000	4,500.000	420.000	0.022500	62.7163	-234.4800	-234.4800	0.9	56.44	-211.03	290.7538	6.3765	11.1633
0.044	0.04	0.04	-218.182	-218.182	4,036.364	420.000	0.020182	75.4188	-148.5633	-148.5633	0.9	67.88	-133.71	284.7436	6.3765	11.1633
0.048	0.04	0.04	-150.000	-150.000	3,650.000	420.000	0.018250	86.6697	-72.3420	-72.3420	0.9	78.00	-65.11	278.7335	6.3765	11.1633
0.052	0.04	0.04	-92.308	-92.308	3,323.077	420.000	0.016615	96.7820	-3.5788	-3.5788	0.9	87.10	-3.22	397.3145	48.0129	10.1349
0.056	0.05	0.05	-42.857	-42.857	3,042.857	420.000	0.015214	105.9797	59.3246	59.3246	0.9	95.38	53.39	391.3043	48.0129	10.1349
0.06	0.05	0.05	0.000	0.000	2,800.000	420.000	0.014000	114.4267	117.5400	117.5400	0.9	102.98	105.79	385.2942	48.0129	10.1349
0.064	0.05	0.05	37.500	37.500	2,587.500	420.000	0.012938	122.2462	171.9465	171.9465	0.9	110.02	154.75	408.6216	45.8302	2.485
0.068	0.06	0.06	70.588	70.588	2,400.000	420.000	0.012000	129.5321	223.2162	223.2162	0.9	116.58	200.89	402.6114	45.8302	2.485
0.072	0.06	0.06	100.000	100.000	2,233.333	420.000	0.011167	136.3578	271.8720	271.8720	0.9	122.72	244.68	396.6013	45.8302	2.485
0.076	0.06	0.06	126.316	126.316	2,084.211	420.000	0.010421	142.7810	318.3265	318.3265	0.9	128.50	286.49	332.3434	48.5498	15.2401
0.08	0.07	0.07	150.000	150.000	1,950.000	420.000	0.009750	148.8479	362.9100	362.9100	0.9	133.96	326.62	326.3333	48.5498	15.2401
0.084	0.07	0.07	171.429	171.429	1,828.571	420.000	0.009143	154.5959	405.8897	405.8897	0.9	139.14	365.30	320.3231	48.5498	15.2401
0.088	0.07	0.07	190.909	190.909	1,718.182	420.000	0.008591	160.0557	447.4844	447.4844	0.9	144.05	402.74	352.3735	44.6833	28.7916
0.092	0.08	0.08	208.696	208.696	1,617.391	420.000	0.008087	165.2526	487.8746	487.8746	0.9	148.73	439.09	346.3634	44.6833	28.7916
0.096	0.08	0.08	225.000	225.000	1,525.000	420.000	0.007625	170.2076	527.2110	527.2110	0.9	153.19	474.49	340.3532	44.6833	28.7916
0.1	0.09	0.09	240.000	240.000	1,440.000	420.000	0.007200	174.9384	565.6200	565.6200	0.9	157.44	509.06	144.3084	33.301	24.6763
0.104	0.09	0.09	253.846	253.846	1,361.538	420.000	0.006808	179.4600	603.2086	603.2086	0.9	161.51	542.89	138.2983	33.301	24.6763
0.108	0.09	0.09	266.667	266.667	1,288.889	420.000	0.006444	183.7853	640.0680	640.0680	0.9	165.41	576.06	132.2881	33.301	24.6763
0.112	0.10	0.10	278.571	278.571	1,221.429	420.000	0.006107	187.9250	676.2763	676.2763	0.9	169.13	608.65	155.6155	35.4837	32.3262
0.116	0.10	0.10	289.655	289.655	1,158.621	420.000	0.005793	191.8887	711.9008	711.9008	0.9	172.70	640.71	149.6054	35.4837	32.3262
0.12	0.10	0.10	300.000	300.000	1,100.000	420.000	0.005500	195.6845	747.0000	747.0000	0.9	176.12	672.30	143.5952	35.4837	32.3262
0.124	0.11	0.11	309.677	309.677	1,045.161	420.000	0.005226	199.3195	781.6246	781.6246	0.9	179.39	703.46	200.5565	32.1541	6.6003
0.128	0.11	0.11	318.750	318.750	993.750	420.000	0.004969	202.8000	815.8193	815.8193	0.8973	181.97	732.04	194.5463	32.1541	6.6003
0.132	0.11	0.11	327.273	327.273	945.455	420.000	0.004727	206.1315	849.6229	849.6229	0.8765	180.67	744.69	188.5362	32.1541	6.6003
0.136	0.12	0.12	335.294	335.294	900.000	420.000	0.004500	209.3187	883.0701	883.0701	0.8569	179.36	756.70	220.5866	36.0207	6.9512
0.14	0.12	0.12	342.857	342.857	857.143	420.000	0.004286	212.3659	916.1914	916.1914	0.8384	178.05	768.16	214.5765	36.0207	6.9512
0.16	0.14	0.14	375.000	375.000	675.000	420.000	0.003375	225.6226	1,077.7650	1,077.7650	0.7599	171.45	819.01	208.5663	36.0207	6.9512
0.18	0.15	0.15	400.000	400.000	533.333	420.000	0.002667	235.8101	1,234.2600	1,234.2600	0.6989	164.80	862.56	186.0932	40.0446	1.196
0.2	0.17	0.17	420.000	420.000	420.000	420.000	0.002100	243.1416	1,387.2000	1,387.2000	0.65	158.04	901.68	180.0831	40.0446	1.196
0.22	0.19	0.19	436.364	420.000	327.273	327.273	0.001636	236.8940	1,591.8491	1,591.8491	0.65	153.98	1034.70	174.0729	40.0446	1.196
0.24	0.20	0.20	450.000	420.000	250.000	250.000	0.001250	229.8265	1,785.5100	1,785.5100	0.65	149.39	1160.58	366.8368	27.5154	23.3872
0.26	0.22	0.22	461.538	420.000	184.615	184.615	0.000923	221.5841	1,970.7185	1,970.7185	0.65	144.03	1280.97	360.8267	27.5154	23.3872
0.28	0.24	0.24	471.429	420.000	128.571	128.571	0.000643	211.9133	2,149.2857	2,149.2857	0.65	137.74	1397.04	354.8165	27.5154	23.3872
0.3	0.26	0.26	480.000	420.000	80.000	80.000	0.000400	200.6280	2,322.5400	2,322.5400	0.65	130.41	1509.65	186.0932	40.0446	1.196
0.32	0.27	0.27	487.500	420.000	37.500	37.500	0.000187	187.5888	2,491.4775	2,491.4775	0.65	121.93	1619.46	180.0831	40.0446	1.196
0.34	0.29	0.29	494.118	420.000	0.000	0.000	0.000000	172.6891	2,656.8600	2,656.8600	0.65	112.25	1726.96	174.0729	40.0446	1.196
0.36	0.31	0.31	500.000	420.000	-33.333	-33.333	-0.000167	155.8459	2,819.2800	2,819.2800	0.65	101.30	1832.53	366.8368	27.5154	23.3872
0.38	0.32	0.32	505.263	420.000	-63.158	-63.158	-0.000316	136.9937	2,979.2053	2,979.2053	0.65	89.05	1936.48	360.8267	27.5154	23.3872
0.4	0.34	0.34	510.000	420.000	-90.000	-90.000	-0.000450	116.0802	3,088.9920	3,137.0100	0.65	75.45	2007.84	354.8165	27.5154	23.3872
0.48	0.41	0.40	525.000	420.000	-175.000	-175.000	-0.000875	24.3873	3,088.9920	3,687.0450	0.65	15.85	2007.84	401.4215	19.8738	40.4147
0.56	0.48	0.40	535.714	420.000	-235.714	-235.714	-0.001179	18.3438	3,088.9920	3,730.2129	0.65	11.92	2007.84	395.4114	19.8738	40.4147
0.64	0.54	0.40	543.750	420.000	-281.250	-281.250	-0.001406	13.8112	3,088.9920	3,762.5888	0.65	8.98	2007.84	389.4012	19.8738	40.4147
0.72	0.61	0.40	550.000	420.000	-316.667	-316.667	-0.001583	10.2858	3,088.9920	3,787.7700	0.65	6.69	2007.84	411.2593	17.9747	33.7589
0.8	0.68	0.40	555.000	420.000	-345.000	-345.000	-0.001725	7.4655	3,088.9920	3,807.9150	0.65	4.85	2007.84	405.2492	17.9747	33.7589
0.88	0.75	0.40	559.091	420.000	-368.182	-368.182	-0.001841	5.1580	3,088.9920	3,824.3973	0.65	3.35	2007.84	399.239	17.9747	33.7589
0.96	0.82	0.40	562.500	420.000	-387.500	-387.500	-0.001938	3.2351	3,088.9920	3,838.1325	0.65	2.10	2007.84	339.002	3.5215	41.6493
1.04	0.88	0.40	565.385	420.000	-403.846	-403.846	-0.002019	1.6080	3,088.9920	3,849.7546	0.65	1.05	2007.84	332.9918	3.5215	41.6493
1.12	0.95	0.40	567.857	420.000	-417.857	-417.857	-0.002089	0.2133	3,088.9920	3,859.7164	0.65	0.14	2007.84	326.9817	3.5215	41.6493
1.2	1.02	0.40	570.000	420.000	-430.000	-420.000	-0.002150	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	358.2409	7.2354	28.6331
1.6	1.36	0.40	577.500	420.000	-472.500	-420.000	-0.002363	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	352.2308	7.2354	28.6331
2	1.70	0.40	582.000	420.000	-498.000	-420.000	-0.002490	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	346.2206	7.2354	28.6331
2.4	2.04	0.40	585.000	420.000	-515.000	-420.000	-0.002575	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	141.6707	5.4455	55.9502
2.8	2.38	0.40	587.143	420.000	-527.143	-420.000	-0.002636	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	135.6606	5.4455	55.9502
3.2	2.72	0.40	588.750	420.000	-536.250	-420.000	-0.002681	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	129.6504	5.4455	55.9502
3.6	3.06	0.40	590.000	420.000	-543.333	-420.000	-0.002717	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	151.5085	7.3446	62.606
4	3.40	0.40	591.000	420.000	-549.000	-420.000	-0.002745	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	145.4983	7.3446	62.606
4.4	3.74	0.40	591.818	420.000	-553.636	-420.000	-0.002768	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	139.4882	7.3446	62.606
4.8	4.08	0.40	592.500	420.000	-557.500	-420.000	-0.002788	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	194.6891	19.7646	50.8244
5.2	4.42	0.40	593.077	420.000	-560.769	-420.000	-0.002804	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	188.6789	19.7646	50.8244
5.6	4.76	0.40	593.571	420.000	-563.571	-420.000	-0.002818	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	182.6688	19.7646	50.8244
6	5.10	0.40	594.000	420.000	-566.000	-420.000	-0.002830	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	213.928	16.0507	63.8406
6.4	5.44	0.40	594.375	420.000	-568.125	-420.000	-0.002841	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	207.9179	16.0507	63.8406
6.8	5.78	0.40	594.706	420.000	-570.000	-420.000	-0.002850	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	201.9077	16.0507	63.8406
7.2	6.12	0.40	595.000	420.000	-571.667	-420.000	-0.002858	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	193.0827	10.0142	27.0245
7.6	6.46	0.40	595.263	420.000	-573.158	-420.000	-0.002866	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	187.0725	10.0142	27.0245
8	6.80	0.40	595.500	420.000	-574.500	-420.000	-0.002873	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	181.0623	10.0142	27.0245
8.4	7.14	0.40	595.714	420.000	-575.714	-420.000	-0.002879	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	359.8474	2.515	49.2158
8.8	7.48	0.40	595.909	420.000	-576.818	-420.000	-0.002884	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	353.8372	2.515	49.2158
9.2	7.82	0.40	596.087	420.000	-577.826	-420.000	-0.002889	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	347.8271	2.515	49.2158
9.6	8.16	0.40	596.250	420.000	-578.750	-420.000	-0.002894	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	193.0827	10.0142	27.0245
10	8.50	0.40	596.400	420.000	-579.600	-420.000	-0.002898	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	187.0725	10.0142	27.0245
10.4	8.84	0.40	596.538	420.000	-580.385	-420.000	-0.002902	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	181.0623	10.0142	27.0245
10.8	9.18	0.40	596.667	420.000	-581.111	-420.000	-0.002906	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	359.8474	2.515	49.2158
11.2	9.52	0.40	596.786	420.000	-581.786	-420.000	-0.002909	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	353.8372	2.515	49.2158
11.6	9.86	0.40	596.897	420.000	-582.414	-420.000	-0.002912	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	347.8271	2.515	49.2158
12	10.20	0.40	597.000	420.000	-583.000	-420.000	-0.002915	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	317.6115	45.8344	13.9334
12.4	10.54	0.40	597.097	420.000	-583.548	-420.000	-0.002918	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	313.1039	45.8344	13.9334
12.8	10.88	0.40	597.188	420.000	-584.063	-420.000	-0.002920	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	308.5962	45.8344	13.9334
13.2	11.22	0.40	597.273	420.000	-584.545	-420.000	-0.002923	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	328.9186	43.6517	6.2835
17.2	14.62	0.40	597.907	420.000	-588.140	-420.000	-0.002941	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	324.411	43.6517	6.2835
21.2	18.02	0.40	598.302	420.000	-590.377	-420.000	-0.002952	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	319.9033	43.6517	6.2835
25.2	21.42	0.40	598.571	420.000	-591.905	-420.000	-0.002960	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	252.6404	46.3714	11.4416
29.2	24.82	0.40	598.767	420.000	-593.014	-420.000	-0.002965	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	248.1328	46.3714	11.4416
33.2	28.22	0.40	598.916	420.000	-593.855	-420.000	-0.002969	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	243.6252	46.3714	11.4416
37.2	31.62	0.40	599.032	420.000	-594.516	-420.000	-0.002973	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	272.6705	42.5048	24.9931
41.2	35.02	0.40	599.126	420.000	-595.049	-420.000	-0.002975	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	268.1629	42.5048	24.9931
45.2	38.42	0.40	599.204	420.000	-595.487	-420.000	-0.002977	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	263.6553	42.5048	24.9931
49.2	41.82	0.40	599.268	420.000	-595.854	-420.000	-0.002979	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	64.6054	35.4794	20.8778
53.2	45.22	0.40	599.323	420.000	-596.165	-420.000	-0.002981	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	60.0978	35.4794	20.8778
57.2	48.62	0.40	599.371	420.000	-596.434	-420.000	-0.002982	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	55.5902	35.4794	20.8778
61.2	52.02	0.40	599.412	420.000	-596.667	-420.000	-0.002983	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	75.9125	37.6621	28.5277
65.2	55.42	0.40	599.448	420.000	-596.871	-420.000	-0.002984	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	71.4049	37.6621	28.5277
69.2	58.82	0.40	599.480	420.000	-597.052	-420.000	-0.002985	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	66.8973	37.6621	28.5277
73.2	62.22	0.40	599.508	420.000	-597.213	-420.000	-0.002986	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	120.8535	34.3325	10.3988
77.2	65.62	0.40	599.534	420.000	-597.358	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	116.3459	34.3325	10.3988
81.2	69.02	0.40	599.557	420.000	-597.488	-420.000	-0.002987	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	111.8382	34.3325	10.3988
85.2	72.42	0.40	599.577	420.000	-597.606	-420.000	-0.002988	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	140.8836	38.1991	3.1527
89.2	75.82	0.40	599.596	420.000	-597.713	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	136.376	38.1991	3.1527
93.2	79.22	0.40	599.614	420.000	-597.811	-420.000	-0.002989	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	131.8684	38.1991	3.1527
97.2	82.62	0.40	599.630	420.000	-597.901	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	106.3902	37.8662	4.9944
101.2	86.02	0.40	599.644	420.000	-597.984	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	101.8826	37.8662	4.9944
105.2	89.42	0.40	599.658	420.000	-598.061	-420.000	-0.002990	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	97.375	37.8662	4.9944
109.2	92.82	0.40	599.670	420.000	-598.132	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	287.1338	29.6939	19.5887
113.2	96.22	0.40	599.682	420.000	-598.198	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	282.6262	29.6939	19.5887
117.2	99.62	0.40	599.693	420.000	-598.259	-420.000	-0.002991	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	278.1186	29.6939	19.5887
121.2	103.02	0.40	599.703	420.000	-598.317	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	106.3902	37.8662	4.9944
125.2	106.42	0.40	599.712	420.000	-598.371	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	101.8826	37.8662	4.9944
129.2	109.82	0.40	599.721	420.000	-598.421	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	97.375	37.8662	4.9944
133.2	113.22	0.40	599.730	420.000	-598.468	-420.000	-0.002992	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	287.1338	29.6939	19.5887
137.2	116.62	0.40	599.738	420.000	-598.513	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	282.6262	29.6939	19.5887
141.2	120.02	0.40	599.745	420.000	-598.555	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	278.1186	29.6939	19.5887
145.2	123.42	0.40	599.752	420.000	-598.595	-420.000	-0.002993	0.0000	3,088.9920	3,861.2400	0.65	0.00	2007.84	321.7185	17.6953	44.2132
														317.2109	17.6953	44.2132
														312.7033	17.6953	44.2132
														331.5563	15.7963	37.5574
														327.0487	15.7963	37.5574
														322.5411	15.7963	37.5574
														259.299	5.7	45.4478
														254.7914	5.7	45.4478
														250.2838	5.7	45.4478
														278.5379	9.4138	32.4316
														274.0303	9.4138	32.4316
														269.5227	9.4138	32.4316
														61.9677	7.6239	52.1517
														57.4601	7.6239	52.1517
														52.9525	7.6239	52.1517
														71.8055	9.523	58.8075
														67.2979	9.523	58.8075
														62.7903	9.523	58.8075
														114.9861	17.5861	47.0259
														110.4785	17.5861	47.0259
														105.9708	17.5861	47.0259
														134.225	13.8723	60.0421
														129.7174	13.8723	60.0421
														125.2098	13.8723	60.0421
														113.3796	7.8358	30.823
														108.872	7.8358	30.823
														104.3644	7.8358	30.823
														280.1444	0.3365	45.4173
														275.6368	0.3365	45.4173
														271.1291	0.3365	45.4173
														113.3796	7.8358	30.823
														108.872	7.8358	30.823
														104.3644	7.8358	30.823
														280.1444	0.3365	45.4173
														275.6368	0.3365	45.4173
														271.1291	0.3365	45.4173
														144.3084	33.301	24.6763
														138.2983	33.301	24.6763
														132.2881	33.301	24.6763
														155.6155	35.4837	32.3262
														149.6054	35.4837	32.3262
														143.5952	35.4837	32.3262
														401.4215	19.8738	40.4147
														395.4114	19.8738	40.4147
														389.4012	19.8738	40.4147
														411.2593	17.9747	33.7589
														405.2492	17.9747	33.7589
														399.239	17.9747	33.7589

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C13	151	1. 1.4D	Combination			0	-711.6893	-5.8026	-15.5256	-0.1434	-17.5059	-6.192	151	0	
N3.06	C13	151	1. 1.4D	Combination			1.28	-703.1486	-5.8026	-15.5256	-0.1434	2.3668	1.2353	151	1.28	
N3.06	C13	151	1. 1.4D	Combination			2.56	-694.6078	-5.8026	-15.5256	-0.1434	22.2396	8.6627	151	2.56	
N3.06	C13	151	2. 1.2D + 1.6L	Combination			0	-784.8044	-6.8516	-18.3841	-0.2096	-21.0377	-7.3017	151	0	
N3.06	C13	151	2. 1.2D + 1.6L	Combination			1.28	-777.4838	-6.8516	-18.3841	-0.2096	2.494	1.4683	151	1.28	
N3.06	C13	151	2. 1.2D + 1.6L	Combination			2.56	-770.1632	-6.8516	-18.3841	-0.2096	26.0257	10.2384	151	2.56	
N3.06	C13	151	2. 1.2D + 1.6L	Combination			0	-728	-5.6958	-15.3581	-0.1546	-17.3418	-6.0735	151	0	
N3.06	C13	151	2. 1.2D + 1.6L	Combination			1.28	-720.6794	-5.6958	-15.3581	-0.1546	2.3166	1.2172	151	1.28	
N3.06	C13	151	2. 1.2D + 1.6L	Combination			2.56	-713.3587	-5.6958	-15.3581	-0.1546	21.9749	8.5078	151	2.56	
N3.06	C13	151	2. 1.2D + 1L +	Combination			0	-679.7255	-5.5927	-15.0045	-0.1511	-16.9978	-5.9647	151	0	
N3.06	C13	151	2. 1.2D + 1L +	Combination			1.28	-672.4049	-5.5927	-15.0045	-0.1511	2.208	1.194	151	1.28	
N3.06	C13	151	2. 1.2D + 1L +	Combination			2.56	-665.0842	-5.5927	-15.0045	-0.1511	21.4138	8.3528	151	2.56	
N3.06	C13	151	3.1 1.2D + 1L	Combination	Max		0	-622.371	50.5121	11.6584	0.8658	27.4807	105.1782	151	0	
N3.06	C13	151	3.1 1.2D + 1L	Combination	Max		1.28	-615.0504	50.5121	11.6584	0.8658	12.558	40.5227	151	1.28	
N3.06	C13	151	3.1 1.2D + 1L	Combination	Max		2.56	-607.7298	50.5121	11.6584	0.8658	7.5082	-22.5745	151	2.56	
N3.06	C13	151	3.1 1.2D + 1L	Combination	Min		0	-637.3115	47.6022	0.8019	-0.3702	9.561	99.2872	151	0	
N3.06	C13	151	3.1 1.2D + 1L	Combination	Min		1.28	-629.9909	47.6022	0.8019	-0.3702	8.5346	38.3563	151	1.28	
N3.06	C13	151	3.1 1.2D + 1L	Combination	Min		2.56	-622.6703	47.6022	0.8019	-0.3702	-2.3647	-24.1327	151	2.56	
N3.06	C13	151	3.2 1.2D + 1L	Combination	Max		0	-526.8187	50.56	-36.277	1.5503	-51.672	105.7869	151	0	
N3.06	C13	151	3.2 1.2D + 1L	Combination	Max		1.28	-519.4981	50.56	-36.277	1.5503	-5.2375	41.0701	151	1.28	
N3.06	C13	151	3.2 1.2D + 1L	Combination	Max		2.56	-512.1774	50.56	-36.277	1.5503	58.6864	-20.8864	151	2.56	
N3.06	C13	151	3.2 1.2D + 1L	Combination	Min		0	-553.2852	45.4053	-55.5088	-0.6393	-83.4162	95.3511	151	0	
N3.06	C13	151	3.2 1.2D + 1L	Combination	Min		1.28	-545.9646	45.4053	-55.5088	-0.6393	-12.3649	37.2324	151	1.28	
N3.06	C13	151	3.2 1.2D + 1L	Combination	Min		2.56	-538.644	45.4053	-55.5088	-0.6393	41.197	-23.6467	151	2.56	
N3.06	C13	151	3.3 1.2D + 1L	Combination	Max		0	-678.2536	-58.694	-30.4895	0.0713	-43.2438	-111.1175	151	0	
N3.06	C13	151	3.3 1.2D + 1L	Combination	Max		1.28	-670.9329	-58.694	-30.4895	0.0713	-4.2172	-35.9892	151	1.28	
N3.06	C13	151	3.3 1.2D + 1L	Combination	Max		2.56	-663.6123	-58.694	-30.4895	0.0713	44.6823	40.6972	151	2.56	
N3.06	C13	151	3.3 1.2D + 1L	Combination	Min		0	-693.1941	-61.6038	-41.346	-1.1648	-61.1635	-117.0086	151	0	
N3.06	C13	151	3.3 1.2D + 1L	Combination	Min		1.28	-685.8734	-61.6038	-41.346	-1.1648	-8.2406	-38.1557	151	1.28	
N3.06	C13	151	3.3 1.2D + 1L	Combination	Min		2.56	-678.5528	-61.6038	-41.346	-1.1648	34.8094	39.1391	151	2.56	
N3.06	C13	151	3.4 1.2D + 1L	Combination	Max		0	-762.2799	-56.497	25.8212	0.3403	49.7334	-107.1815	151	0	
N3.06	C13	151	3.4 1.2D + 1L	Combination	Max		1.28	-754.9592	-56.497	25.8212	0.3403	16.6823	-34.8653	151	1.28	
N3.06	C13	151	3.4 1.2D + 1L	Combination	Max		2.56	-747.6386	-56.497	25.8212	0.3403	1.1206	40.2112	151	2.56	
N3.06	C13	151	3.4 1.2D + 1L	Combination	Min		0	-788.7464	-61.6518	6.5893	-1.8493	17.9892	-117.6173	151	0	
N3.06	C13	151	3.4 1.2D + 1L	Combination	Min		1.28	-781.4258	-61.6518	6.5893	-1.8493	9.5549	-38.7031	151	1.28	
N3.06	C13	151	3.4 1.2D + 1L	Combination	Min		2.56	-774.1051	-61.6518	6.5893	-1.8493	-16.3688	37.4509	151	2.56	
N3.06	C13	151	3.5 1.2D + 1L	Combination	Max		0	-589.6769	39.6734	-1.5286	1.5463	4.7547	83.4521	151	0	
N3.06	C13	151	3.5 1.2D + 1L	Combination	Max		1.28	-582.3562	39.6734	-1.5286	1.5463	6.7325	32.726	151	1.28	
N3.06	C13	151	3.5 1.2D + 1L	Combination	Max		2.56	-575.0356	39.6734	-1.5286	1.5463	33.6652	34.8095	151	2.56	
N3.06	C13	151	3.5 1.2D + 1L	Combination	Min		0	-725.8882	-50.7652	-28.1591	-1.8453	-38.4375	-95.2824	151	0	
N3.06	C13	151	3.5 1.2D + 1L	Combination	Min		1.28	-718.5676	-50.7652	-28.1591	-1.8453	-2.4151	-30.3589	151	1.28	
N3.06	C13	151	3.5 1.2D + 1L	Combination	Min		2.56	-711.247	-50.7652	-28.1591	-1.8453	8.6524	-18.245	151	2.56	
N3.06	C13	151	3.6 1.2D + 1L	Combination	Max		0	-589.6769	39.6734	-1.5286	1.5463	4.7547	83.4521	151	0	
N3.06	C13	151	3.6 1.2D + 1L	Combination	Max		1.28	-582.3562	39.6734	-1.5286	1.5463	6.7325	32.726	151	1.28	
N3.06	C13	151	3.6 1.2D + 1L	Combination	Max		2.56	-575.0356	39.6734	-1.5286	1.5463	33.6652	34.8095	151	2.56	
N3.06	C13	151	3.6 1.2D + 1L	Combination	Min		0	-725.8882	-50.7652	-28.1591	-1.8453	-38.4375	-95.2824	151	0	
N3.06	C13	151	3.6 1.2D + 1L	Combination	Min		1.28	-718.5676	-50.7652	-28.1591	-1.8453	-2.4151	-30.3589	151	1.28	
N3.06	C13	151	3.6 1.2D + 1L	Combination	Min		2.56	-711.247	-50.7652	-28.1591	-1.8453	8.6524	-18.245	151	2.56	
N3.06	C13	151	4.1 1.2D + 1L	Combination	Max		0	-779.0812	13.7306	75.2545	0.1923	132.0947	31.6151	151	0	
N3.06	C13	151	4.1 1.2D + 1L	Combination	Max		1.28	-771.7605	13.7306	75.2545	0.1923	35.769	14.04	151	1.28	
N3.06	C13	151	4.1 1.2D + 1L	Combination	Max		2.56	-764.4399	13.7306	75.2545	0.1923	-51.9668	-2.1794	151	2.56	
N3.06	C13	151	4.1 1.2D + 1L	Combination	Min		0	-792.0802	11.1988	65.8087	-0.8831	116.5036	26.4896	151	0	
N3.06	C13	151	4.1 1.2D + 1L	Combination	Min		1.28	-784.7595	11.1988	65.8087	-0.8831	32.2684	12.1551	151	1.28	
N3.06	C13	151	4.1 1.2D + 1L	Combination	Min		2.56	-777.4389	11.1988	65.8087	-0.8831	-60.5567	-3.5351	151	2.56	
N3.06	C13	151	4.2 1.2D + 1L	Combination	Max		0	-816.5717	-17.4992	82.7602	0.4054	144.1464	-30.3254	151	0	
N3.06	C13	151	4.2 1.2D + 1L	Combination	Max		1.28	-809.251	-17.4992	82.7602	0.4054	38.2133	-7.9265	151	1.28	
N3.06	C13	151	4.2 1.2D + 1L	Combination	Max		2.56	-801.9304	-17.4992	82.7602	0.4054	-50.9212	17.1238	151	2.56	
N3.06	C13	151	4.2 1.2D + 1L	Combination	Min		0	-841.9928	-22.4503	64.288	-1.6977	113.6562	-40.349	151	0	
N3.06	C13	151	4.2 1.2D + 1L	Combination	Min		1.28	-834.6721	-22.4503	64.288	-1.6977	31.3675	-11.6126	151	1.28	
N3.06	C13	151	4.2 1.2D + 1L	Combination	Min		2.56	-827.3515	-22.4503	64.288	-1.6977	-67.7198	14.4725	151	2.56	
N3.06	C13	151	4.3 1.2D + 1L	Combination	Max		0	-523.4849	-22.2906	-95.4964	0.5842	-150.1864	-38.32	151	0	
N3.06	C13	151	4.3 1.2D + 1L	Combination	Max		1.28	-516.1643	-22.2906	-95.4964	0.5842	-27.951	-9.788	151	1.28	
N3.06	C13	151	4.3 1.2D + 1L	Combination	Max		2.56	-508.8437	-22.2906	-95.4964	0.5842	102.8743	20.0996	151	2.56	
N3.06	C13	151	4.3 1.2D + 1L	Combination	Min		0	-536.484	-24.8223	-104.9421	-0.4913	-165.7775	-43.4455	151	0	
N3.06	C13	151	4.3 1.2D + 1L	Combination	Min		1.28	-529.1633	-24.8223	-104.9421	-0.4913	-31.4516	-11.6729	151	1.28	
N3.06	C13	151	4.3 1.2D + 1L	Combination	Min		2.56	-521.8427	-24.8223	-104.9421	-0.4913	94.2844	18.7439	151	2.56	
N3.06	C13	151	4.4 1.2D + 1L	Combination	Max		0	-473.5723	11.3586	-93.9757	1.3987	-147.339	28.5187	151	0	
N3.06	C13	151	4.4 1.2D + 1L	Combination	Max		1.28	-466.2517	11.3586	-93.9757	1.3987	-27.0501	13.9797	151	1.28	
N3.06	C13	151	4.4 1.2D + 1L	Combination	Max		2.56	-458.9311	11.3586	-93.9757	1.3987	110.0374	2.092	151	2.56	
N3.06	C13	151	4.4 1.2D + 1L	Combination	Min		0	-498.9935	6.4075	-112.4479	-0.7044	-177.8292	18.4951	151	0	
N3.06	C13	151	4.4 1.2D + 1L	Combination	Min		1.28	-491.6728	6.4075	-112.4479	-0.7044	-33.8959	10.2935	151	1.28	
N3.06	C13	151	4.4 1.2D + 1L	Combination	Min		2.56	-484.3522	6.4075	-112.4479	-0.7044	93.2388	-0.5592	151	2.56	
N3.06	C13	151	4.5 1.2D + 1L	Combination	Max		0	-524.8617	0.1127	65.2014	1.1417	115.1223	4.7734	151	0	
N3.06	C13	151	4.5 1.2D + 1L	Combination	Max		1.28	-517.5411	0.1127	65.2014	1.1417	31.6929	4.6704	151	1.28	
N3.06	C13	151	4.5 1.2D + 1L	Combination	Max		2.56	-510.2204	0.1127	65.2014	1.1417	94.1338	12.154	151	2.56	
N3.06	C13	151	4.5 1.2D + 1L	Combination	Min		0	-790.7034	-11.2044	-94.889	-1.4407	-148.8051	-16.6038	151	0	
N3.06	C13	151	4.5 1.2D + 1L	Combination	Min		1.28	-783.3828	-11.2044	-94.889	-1.4407	-27.3755	-2.3033	151	1.28	
N3.06	C13	151	4.5 1.2D + 1L	Combination	Min		2.56	-776.0621	-11.2044	-94.889	-1.4407	-51.8162	4.4105	151	2.56	
N3.06	C13	151	4.6 1.2D + 1L	Combination	Max		0	-524.8617	0.1127	65.2014	1.1417	115.1223	4.7734	151	0	
N3.06	C13	151	4.6 1.2D + 1L	Combination	Max		1.28	-517.5411	0.1127	65.2014	1.1417	31.6929	4.6704	151	1.28	
N3.06	C13	151	4.6 1.2D + 1L	Combination	Max		2.56	-510.2204	0.1127	65.2014	1.1417	94.1338	12.154	151	2.56	
N3.06	C13	151	4.6 1.2D + 1L	Combination	Min		0	-790.7034	-11.2044	-94.889	-1.4407	-148.8051	-16.6038	151	0	
N3.06	C13	151	4.6 1.2D + 1L	Combination	Min		1.28	-783.3828	-11.2044	-94.889	-1.4407	-27.3755	-2.3033	151	1.28	
N3.06	C13	151	4.6 1.2D + 1L	Combination	Min		2.56	-776.0621	-11.2044	-94.889	-1.4407	-51.8162	4.4105	151	2.56	
N3.06	C13	151	5.1 0.9D + (1(	Combination	Max		0	-422.103	52.3277	16.5214	0.9231	33.0683	107.1128	151	0	
N3.06	C13	151	5.1 0.9D + (1(	Combination	Max		1.28	-416.6126	52.3277	16.5214	0.9231	11.9209	40.1334	151	1.28	
N3.06	C13	151	5.1 0.9D + (1(	Combination	Max		2.56	-411.1221	52.3277	16.5214	0.9231	0.6463	-25.2879	151	2.56	
N3.06	C13	151	5.1 0.9D + (1(	Combination	Min		0	-437.0435	49.4178	5.665	-0.3129	15.1486	101.2218	151	0	
N3.06	C13	151	5.1 0.9D + (1(	Combination	Min		1.28	-431.5531	49.4178	5.665	-0.3129	7.8974	37.9669	151	1.28	
N3.06	C13	151	5.1 0.9D + (1(	Combination	Min		2.56	-426.0626	49.4178	5.665	-0.3129	-9.2266	-26.8461	151	2.56	
N3.06	C13	151	5.2 0.9D + (1(	Combination	Max		0	-326.5507	52.3756	-31.4139	1.6076	-46.0844	107.7215	151	0	
N3.06	C13	151	5.2 0.9D + (1(	Combination	Max		1.28	-321.0602	52.3756	-31.4139	1.6076	-5.8747	40.6807	151	1.28	
N3.06	C13	151	5.2 0.9D + (1(	Combination	Max		2.56	-315.5697	52.3756	-31.4139	1.6076	51.8245	-23.5998	151	2.56	
N3.06	C13	151	5.2 0.9D + (1(	Combination	Min		0	-353.0172	47.2209	-50.6457	-0.582	-77.8286	97.2857	151	0	
N3.06	C13	151	5.2 0.9D + (1(	Combination	Min		1.28	-347.5268	47.2209	-50.6457	-0.582	-13.002	36.843	151	1.28	
N3.06	C13	151	5.2 0.9D + (1(	Combination	Min		2.56	-342.0363	47.2209	-50.6457	-0.582	34.3351	-26.3601	151	2.56	
N3.06	C13	151	5.3 0.9D - (10	Combination	Max		0	-477.9856	-56.8784	-25.6265	0.1286	-37.6562	-109.1829	151	0	
N3.06	C13	151	5.3 0.9D - (10	Combination	Max		1.28	-472.4951	-56.8784	-25.6265	0.1286	-4.8544	-36.3786	151	1.28	
N3.06	C13	151	5.3 0.9D - (10	Combination	Max		2.56	-467.0046	-56.8784	-25.6265	0.1286	37.8204	37.9839	151	2.56	
N3.06	C13	151	5.3 0.9D - (10	Combination	Min		0	-492.9261	-59.7882	-36.4829	-1.1075	-55.576	-115.074	151	0	
N3.06	C13	151	5.3 0.9D - (10	Combination	Min		1.28	-487.4356	-59.7882	-36.4829	-1.1075	-8.8778	-38.5451	151	1.28	
N3.06	C13	151	5.3 0.9D - (10	Combination	Min		2.56	-481.9451	-59.7882	-36.4829	-1.1075	27.9475	36.4257	151	2.56	
N3.06	C13	151	5.4 0.9D - (10	Combination	Max		0	-562.0119	-54.6814	30.6843	0.3976	55.321	-105.2469	151	0	
N3.06	C13	151	5.4 0.9D - (10	Combination	Max		1.28	-556.5214	-54.6814	30.6843	0.3976	16.0451	-35.2547	151	1.28	

N3.06	C13	151	5.4	0.9D - (10	Combination	Max	2.56	-551.0309	-54.6814	30.6843	0.3976	-5.7413	37.4978	151	2.56
N3.06	C13	151	5.4	0.9D - (10	Combination	Min	0	-588.4784	-59.8361	11.4524	-1.792	23.5768	-115.6827	151	0
N3.06	C13	151	5.4	0.9D - (10	Combination	Min	1.28	-582.9879	-59.8361	11.4524	-1.792	8.9178	-39.0924	151	1.28
N3.06	C13	151	5.4	0.9D - (10	Combination	Min	2.56	-577.4975	-59.8361	11.4524	-1.792	-23.2307	34.7375	151	2.56
N3.06	C13	151	5.5	0.9D + Ex	Combination	Max	0	-389.4089	41.489	3.3345	1.6036	10.3423	85.3867	151	0
N3.06	C13	151	5.5	0.9D + Ex	Combination	Max	1.28	-383.9184	41.489	3.3345	1.6036	6.0954	32.3366	151	1.28
N3.06	C13	151	5.5	0.9D + Ex	Combination	Max	2.56	-378.4279	41.489	3.3345	1.6036	26.8033	32.0961	151	2.56
N3.06	C13	151	5.5	0.9D + Ex	Combination	Min	0	-525.6202	-48.9495	-23.296	-1.788	-32.8499	-93.3478	151	0
N3.06	C13	151	5.5	0.9D + Ex	Combination	Min	1.28	-520.1298	-48.9495	-23.296	-1.788	-3.0523	-30.7483	151	1.28
N3.06	C13	151	5.5	0.9D + Ex	Combination	Min	2.56	-514.6393	-48.9495	-23.296	-1.788	1.7905	-20.9583	151	2.56
N3.06	C13	151	5.6	0.9D - Ex	Combination	Max	0	-389.4089	41.489	3.3345	1.6036	10.3423	85.3867	151	0
N3.06	C13	151	5.6	0.9D - Ex	Combination	Max	1.28	-383.9184	41.489	3.3345	1.6036	6.0954	32.3366	151	1.28
N3.06	C13	151	5.6	0.9D - Ex	Combination	Max	2.56	-378.4279	41.489	3.3345	1.6036	26.8033	32.0961	151	2.56
N3.06	C13	151	5.6	0.9D - Ex	Combination	Min	0	-525.6202	-48.9495	-23.296	-1.788	-32.8499	-93.3478	151	0
N3.06	C13	151	5.6	0.9D - Ex	Combination	Min	1.28	-520.1298	-48.9495	-23.296	-1.788	-3.0523	-30.7483	151	1.28
N3.06	C13	151	5.6	0.9D - Ex	Combination	Min	2.56	-514.6393	-48.9495	-23.296	-1.788	1.7905	-20.9583	151	2.56
N3.06	C13	151	6.1	0.9D + (1(	Combination	Max	0	-578.8132	15.5462	80.1175	0.2496	137.6823	33.5498	151	0
N3.06	C13	151	6.1	0.9D + (1(	Combination	Max	1.28	-573.3227	15.5462	80.1175	0.2496	35.1319	13.6506	151	1.28
N3.06	C13	151	6.1	0.9D + (1(	Combination	Max	2.56	-567.8322	15.5462	80.1175	0.2496	-58.8287	-4.8928	151	2.56
N3.06	C13	151	6.1	0.9D + (1(	Combination	Min	0	-591.8122	13.0145	70.6718	-0.8258	122.0912	28.4242	151	0
N3.06	C13	151	6.1	0.9D + (1(	Combination	Min	1.28	-586.3217	13.0145	70.6718	-0.8258	31.6313	11.7657	151	1.28
N3.06	C13	151	6.1	0.9D + (1(	Combination	Min	2.56	-580.8312	13.0145	70.6718	-0.8258	-67.4186	-6.2485	151	2.56
N3.06	C13	151	6.2	0.9D + (1(	Combination	Max	0	-616.3037	-15.6836	87.6233	0.4627	149.734	-28.3908	151	0
N3.06	C13	151	6.2	0.9D + (1(	Combination	Max	1.28	-610.8132	-15.6836	87.6233	0.4627	37.5762	-8.3159	151	1.28
N3.06	C13	151	6.2	0.9D + (1(	Combination	Max	2.56	-605.3227	-15.6836	87.6233	0.4627	-57.7831	14.4104	151	2.56
N3.06	C13	151	6.2	0.9D + (1(	Combination	Min	0	-641.7248	-20.6347	69.1511	-1.6404	119.2438	-38.4144	151	0
N3.06	C13	151	6.2	0.9D + (1(	Combination	Min	1.28	-636.2343	-20.6347	69.1511	-1.6404	30.7303	-12.002	151	1.28
N3.06	C13	151	6.2	0.9D + (1(	Combination	Min	2.56	-630.7438	-20.6347	69.1511	-1.6404	-74.5817	11.7591	151	2.56
N3.06	C13	151	6.3	0.9D - (10	Combination	Max	0	-323.2169	-20.475	-90.6333	0.6415	-144.5988	-36.3854	151	0
N3.06	C13	151	6.3	0.9D - (10	Combination	Max	1.28	-317.7265	-20.475	-90.6333	0.6415	-28.5882	-10.1774	151	1.28
N3.06	C13	151	6.3	0.9D - (10	Combination	Max	2.56	-312.236	-20.475	-90.6333	0.6415	96.0124	17.3863	151	2.56
N3.06	C13	151	6.3	0.9D - (10	Combination	Min	0	-336.216	-23.0067	-100.079	-0.434	-160.1899	-41.5109	151	0
N3.06	C13	151	6.3	0.9D - (10	Combination	Min	1.28	-330.7255	-23.0067	-100.079	-0.434	-32.0888	-12.0623	151	1.28
N3.06	C13	151	6.3	0.9D - (10	Combination	Min	2.56	-325.235	-23.0067	-100.079	-0.434	87.4225	16.0306	151	2.56
N3.06	C13	151	6.4	0.9D - (10	Combination	Max	0	-273.3043	13.1742	-89.1126	1.456	-141.7514	30.4533	151	0
N3.06	C13	151	6.4	0.9D - (10	Combination	Max	1.28	-267.8138	13.1742	-89.1126	1.456	-27.6872	13.5903	151	1.28
N3.06	C13	151	6.4	0.9D - (10	Combination	Max	2.56	-262.3234	13.1742	-89.1126	1.456	103.1755	-0.6214	151	2.56
N3.06	C13	151	6.4	0.9D - (10	Combination	Min	0	-298.7255	8.2231	-107.5848	-0.6471	-172.2417	20.4297	151	0
N3.06	C13	151	6.4	0.9D - (10	Combination	Min	1.28	-293.235	8.2231	-107.5848	-0.6471	-34.5331	9.9042	151	1.28
N3.06	C13	151	6.4	0.9D - (10	Combination	Min	2.56	-287.7445	8.2231	-107.5848	-0.6471	86.3769	-3.2726	151	2.56
N3.06	C13	151	6.5	0.9D + Ey	Combination	Max	0	-324.5937	1.9283	70.0645	1.1991	120.7099	6.708	151	0
N3.06	C13	151	6.5	0.9D + Ey	Combination	Max	1.28	-319.1032	1.9283	70.0645	1.1991	31.0558	4.281	151	1.28
N3.06	C13	151	6.5	0.9D + Ey	Combination	Max	2.56	-313.6127	1.9283	70.0645	1.1991	87.2719	9.4406	151	2.56
N3.06	C13	151	6.5	0.9D + Ey	Combination	Min	0	-590.4354	-9.3888	-90.0259	-1.3834	-143.2175	-14.6692	151	0
N3.06	C13	151	6.5	0.9D + Ey	Combination	Min	1.28	-584.9449	-9.3888	-90.0259	-1.3834	-28.0127	-2.6927	151	1.28
N3.06	C13	151	6.5	0.9D + Ey	Combination	Min	2.56	-579.4544	-9.3888	-90.0259	-1.3834	-58.6781	1.6971	151	2.56
N3.06	C13	151	6.6	0.9D - Ey	Combination	Max	0	-324.5937	1.9283	70.0645	1.1991	120.7099	6.708	151	0
N3.06	C13	151	6.6	0.9D - Ey	Combination	Max	1.28	-319.1032	1.9283	70.0645	1.1991	31.0558	4.281	151	1.28
N3.06	C13	151	6.6	0.9D - Ey	Combination	Max	2.56	-313.6127	1.9283	70.0645	1.1991	87.2719	9.4406	151	2.56
N3.06	C13	151	6.6	0.9D - Ey	Combination	Min	0	-590.4354	-9.3888	-90.0259	-1.3834	-143.2175	-14.6692	151	0
N3.06	C13	151	6.6	0.9D - Ey	Combination	Min	1.28	-584.9449	-9.3888	-90.0259	-1.3834	-28.0127	-2.6927	151	1.28
N3.06	C13	151	6.6	0.9D - Ey	Combination	Min	2.56	-579.4544	-9.3888	-90.0259	-1.3834	-58.6781	1.6971	151	2.56
N3.06	C13	151	3.3	1.2D + 1L	Combination	Max	0	-678.2536	-58.694	-30.4895	0.0713	-43.2438	-111.1175	151	0
N3.06	C13	151	3.3	1.2D + 1L	Combination	Max	1.28	-670.9329	-58.694	-30.4895	0.0713	-4.2172	-35.9892	151	1.28
N3.06	C13	151	3.3	1.2D + 1L	Combination	Max	2.56	-663.6123	-58.694	-30.4895	0.0713	44.6823	40.6972	151	2.56
N3.06	C13	151	3.3	1.2D + 1L	Combination	Min	0	-693.1941	-61.6038	-41.346	-1.1648	-61.1635	-117.0086	151	0
N3.06	C13	151	3.3	1.2D + 1L	Combination	Min	1.28	-685.8734	-61.6038	-41.346	-1.1648	-8.2406	-38.1557	151	1.28
N3.06	C13	151	3.3	1.2D + 1L	Combination	Min	2.56	-678.5528	-61.6038	-41.346	-1.1648	34.8094	39.1391	151	2.56
N3.06	C13	151	4.1	1.2D + 1L	Combination	Max	0	-779.0812	13.7306	75.2545	0.1923	132.0947	31.6151	151	0
N3.06	C13	151	4.1	1.2D + 1L	Combination	Max	1.28	-771.7605	13.7306	75.2545	0.1923	35.769	14.04	151	1.28
N3.06	C13	151	4.1	1.2D + 1L	Combination	Max	2.56	-764.4399	13.7306	75.2545	0.1923	-51.9668	-2.1794	151	2.56
N3.06	C13	151	4.1	1.2D + 1L	Combination	Min	0	-792.0802	11.1988	65.8087	-0.8831	116.5036	26.4896	151	0
N3.06	C13	151	4.1	1.2D + 1L	Combination	Min	1.28	-784.7595	11.1988	65.8087	-0.8831	32.2684	12.1551	151	1.28
N3.06	C13	151	4.1	1.2D + 1L	Combination	Min	2.56	-777.4389	11.1988	65.8087	-0.8831	-60.5567	-3.5351	151	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C21	191	1. 1.4D	Combination			0	-742.1049	-0.838	-14.3009	-0.0895	-15.9387	-1.1474	191	0	
N3.06	C21	191	1. 1.4D	Combination			1.28	-735.3567	-0.838	-14.3009	-0.0895	2.3664	-0.0748	191	1.28	
N3.06	C21	191	1. 1.4D	Combination			2.56	-728.6084	-0.838	-14.3009	-0.0895	20.6716	0.9979	191	2.56	
N3.06	C21	191	2. 1.2D + 1.6I	Combination			0	-839.3532	-0.7102	-17.5629	-0.1308	-19.8	-1.0739	191	0	
N3.06	C21	191	2. 1.2D + 1.6I	Combination			1.28	-833.569	-0.7102	-17.5629	-0.1308	2.6805	-0.1648	191	1.28	
N3.06	C21	191	2. 1.2D + 1.6I	Combination			2.56	-827.7848	-0.7102	-17.5629	-0.1308	25.161	0.7442	191	2.56	
N3.06	C21	191	2. 1.2D + 1.6I	Combination			0	-768.1121	-0.7905	-14.5512	-0.0965	-16.2174	-1.0919	191	0	
N3.06	C21	191	2. 1.2D + 1.6I	Combination			1.28	-762.3279	-0.7905	-14.5512	-0.0965	2.4081	-0.08	191	1.28	
N3.06	C21	191	2. 1.2D + 1.6I	Combination			2.56	-756.5437	-0.7905	-14.5512	-0.0965	21.0336	0.9319	191	2.56	
N3.06	C21	191	2. 1.2D + 1L +	Combination			0	-715.9198	-0.7336	-14.067	-0.0943	-15.7317	-1.0308	191	0	
N3.06	C21	191	2. 1.2D + 1L +	Combination			1.28	-710.1356	-0.7336	-14.067	-0.0943	2.2741	-0.0919	191	1.28	
N3.06	C21	191	2. 1.2D + 1L +	Combination			2.56	-704.3514	-0.7336	-14.067	-0.0943	20.2798	0.8471	191	2.56	
N3.06	C21	191	3.1 1.2D + 1L	Combination	Max		0	-712.3976	54.4483	2.4552	0.5405	11.3837	88.4087	191	0	
N3.06	C21	191	3.1 1.2D + 1L	Combination	Max		1.28	-706.6134	54.4483	2.4552	0.5405	8.2411	18.7148	191	1.28	
N3.06	C21	191	3.1 1.2D + 1L	Combination	Max		2.56	-700.8292	54.4483	2.4552	0.5405	6.5613	-48.3451	191	2.56	
N3.06	C21	191	3.1 1.2D + 1L	Combination	Min		0	-714.1459	51.5704	0.9016	-0.2311	8.8694	83.6752	191	0	
N3.06	C21	191	3.1 1.2D + 1L	Combination	Min		1.28	-708.3617	51.5704	0.9016	-0.2311	7.7153	17.665	191	1.28	
N3.06	C21	191	3.1 1.2D + 1L	Combination	Min		2.56	-702.5775	51.5704	0.9016	-0.2311	5.0985	-50.9791	191	2.56	
N3.06	C21	191	3.2 1.2D + 1L	Combination	Max		0	-671.5188	54.9756	-29.7387	0.9679	-41.2253	89.2784	191	0	
N3.06	C21	191	3.2 1.2D + 1L	Combination	Max		1.28	-665.7346	54.9756	-29.7387	0.9679	-3.1597	18.9096	191	1.28	
N3.06	C21	191	3.2 1.2D + 1L	Combination	Max		2.56	-659.9503	54.9756	-29.7387	0.9679	37.497	-46.7932	191	2.56	
N3.06	C21	191	3.2 1.2D + 1L	Combination	Min		0	-674.6158	49.8775	-32.4908	-0.3991	-45.6793	80.8932	191	0	
N3.06	C21	191	3.2 1.2D + 1L	Combination	Min		1.28	-668.8316	49.8775	-32.4908	-0.3991	-4.0912	17.05	191	1.28	
N3.06	C21	191	3.2 1.2D + 1L	Combination	Min		2.56	-663.0474	49.8775	-32.4908	-0.3991	34.9058	-51.4592	191	2.56	
N3.06	C21	191	3.3 1.2D + 1L	Combination	Max		0	-670.2462	-52.9857	-28.5955	0.0445	-39.8913	-85.6813	191	0	
N3.06	C21	191	3.3 1.2D + 1L	Combination	Max		1.28	-664.462	-52.9857	-28.5955	0.0445	-3.2891	-17.8595	191	1.28	
N3.06	C21	191	3.3 1.2D + 1L	Combination	Max		2.56	-658.6778	-52.9857	-28.5955	0.0445	34.7759	52.5962	191	2.56	
N3.06	C21	191	3.3 1.2D + 1L	Combination	Min		0	-671.9945	-55.8637	-30.149	-0.7272	-42.4056	-90.4148	191	0	
N3.06	C21	191	3.3 1.2D + 1L	Combination	Min		1.28	-666.2103	-55.8637	-30.149	-0.7272	-3.8149	-18.9093	191	1.28	
N3.06	C21	191	3.3 1.2D + 1L	Combination	Min		2.56	-660.4261	-55.8637	-30.149	-0.7272	33.3132	49.9622	191	2.56	
N3.06	C21	191	3.4 1.2D + 1L	Combination	Max		0	-709.7762	-51.2928	4.7969	0.2124	14.6575	-82.8993	191	0	
N3.06	C21	191	3.4 1.2D + 1L	Combination	Max		1.28	-703.992	-51.2928	4.7969	0.2124	8.5174	-17.2445	191	1.28	
N3.06	C21	191	3.4 1.2D + 1L	Combination	Max		2.56	-698.2078	-51.2928	4.7969	0.2124	4.9686	53.0763	191	2.56	
N3.06	C21	191	3.4 1.2D + 1L	Combination	Min		0	-712.8733	-56.3909	2.0448	-1.1545	10.2034	-91.2845	191	0	
N3.06	C21	191	3.4 1.2D + 1L	Combination	Min		1.28	-707.0891	-56.3909	2.0448	-1.1545	7.586	-19.1041	191	1.28	
N3.06	C21	191	3.4 1.2D + 1L	Combination	Min		2.56	-701.3049	-56.3909	2.0448	-1.1545	2.3774	48.4103	191	2.56	
N3.06	C21	191	3.5 1.2D + 1L	Combination	Max		0	-689.4952	43.7941	-11.6219	0.9654	-11.9715	70.9907	191	0	
N3.06	C21	191	3.5 1.2D + 1L	Combination	Max		1.28	-683.711	43.7941	-11.6219	0.9654	2.9397	14.9464	191	1.28	
N3.06	C21	191	3.5 1.2D + 1L	Combination	Max		2.56	-677.9268	43.7941	-11.6219	0.9654	22.1167	42.7479	191	2.56	
N3.06	C21	191	3.5 1.2D + 1L	Combination	Min		0	-694.8969	-45.2094	-16.0719	-1.152	-19.0504	-72.9968	191	0	
N3.06	C21	191	3.5 1.2D + 1L	Combination	Min		1.28	-689.1127	-45.2094	-16.0719	-1.152	1.4865	-15.1409	191	1.28	
N3.06	C21	191	3.5 1.2D + 1L	Combination	Min		2.56	-683.3285	-45.2094	-16.0719	-1.152	17.7577	-41.1308	191	2.56	
N3.06	C21	191	3.6 1.2D + 1L	Combination	Max		0	-689.4952	43.7941	-11.6219	0.9654	-11.9715	70.9907	191	0	
N3.06	C21	191	3.6 1.2D + 1L	Combination	Max		1.28	-683.711	43.7941	-11.6219	0.9654	2.9397	14.9464	191	1.28	
N3.06	C21	191	3.6 1.2D + 1L	Combination	Max		2.56	-677.9268	43.7941	-11.6219	0.9654	22.1167	42.7479	191	2.56	
N3.06	C21	191	3.6 1.2D + 1L	Combination	Min		0	-694.8969	-45.2094	-16.0719	-1.152	-19.0504	-72.9968	191	0	
N3.06	C21	191	3.6 1.2D + 1L	Combination	Min		1.28	-689.1127	-45.2094	-16.0719	-1.152	1.4865	-15.1409	191	1.28	
N3.06	C21	191	3.6 1.2D + 1L	Combination	Min		2.56	-683.3285	-45.2094	-16.0719	-1.152	17.7577	-41.1308	191	2.56	
N3.06	C21	191	4.1 1.2D + 1L	Combination	Max		0	-758.7349	17.5434	41.2227	0.12	74.5354	28.6198	191	0	
N3.06	C21	191	4.1 1.2D + 1L	Combination	Max		1.28	-752.9507	17.5434	41.2227	0.12	21.7703	6.1643	191	1.28	
N3.06	C21	191	4.1 1.2D + 1L	Combination	Max		2.56	-747.1665	17.5434	41.2227	0.12	-29.7221	-13.9996	191	2.56	
N3.06	C21	191	4.1 1.2D + 1L	Combination	Min		0	-760.256	15.0394	39.8711	-0.5513	72.3478	24.5014	191	0	
N3.06	C21	191	4.1 1.2D + 1L	Combination	Min		1.28	-754.4718	15.0394	39.8711	-0.5513	21.3128	5.2509	191	1.28	
N3.06	C21	191	4.1 1.2D + 1L	Combination	Min		2.56	-748.6876	15.0394	39.8711	-0.5513	-30.9948	-16.2912	191	2.56	
N3.06	C21	191	4.2 1.2D + 1L	Combination	Max		0	-757.424	-13.3156	42.3913	0.2531	76.2718	-21.3525	191	0	
N3.06	C21	191	4.2 1.2D + 1L	Combination	Max		1.28	-751.6398	-13.3156	42.3913	0.2531	22.011	-4.3086	191	1.28	
N3.06	C21	191	4.2 1.2D + 1L	Combination	Max		2.56	-745.8556	-13.3156	42.3913	0.2531	-29.7611	17.2171	191	2.56	
N3.06	C21	191	4.2 1.2D + 1L	Combination	Min		0	-760.3988	-18.2123	39.748	-1.0598	71.9937	-29.4065	191	0	
N3.06	C21	191	4.2 1.2D + 1L	Combination	Min		1.28	-754.6145	-18.2123	39.748	-1.0598	21.1163	-6.0947	191	1.28	
N3.06	C21	191	4.2 1.2D + 1L	Combination	Min		2.56	-748.8303	-18.2123	39.748	-1.0598	-32.2499	12.7354	191	2.56	
N3.06	C21	191	4.3 1.2D + 1L	Combination	Max		0	-624.136	-16.4547	-67.5649	0.3647	-103.3697	-26.5075	191	0	
N3.06	C21	191	4.3 1.2D + 1L	Combination	Max		1.28	-618.3518	-16.4547	-67.5649	0.3647	-16.8866	-5.4454	191	1.28	
N3.06	C21	191	4.3 1.2D + 1L	Combination	Max		2.56	-612.5676	-16.4547	-67.5649	0.3647	70.8692	17.9083	191	2.56	
N3.06	C21	191	4.3 1.2D + 1L	Combination	Min		0	-625.6571	-18.9587	-68.9166	-0.3067	-105.5573	-30.6259	191	0	
N3.06	C21	191	4.3 1.2D + 1L	Combination	Min		1.28	-619.8729	-18.9587	-68.9166	-0.3067	-17.3441	-6.3588	191	1.28	
N3.06	C21	191	4.3 1.2D + 1L	Combination	Min		2.56	-614.0887	-18.9587	-68.9166	-0.3067	69.5965	15.6167	191	2.56	
N3.06	C21	191	4.4 1.2D + 1L	Combination	Max		0	-623.9933	16.797	-67.4418	0.8732	-103.0156	27.4005	191	0	
N3.06	C21	191	4.4 1.2D + 1L	Combination	Max		1.28	-618.2091	16.797	-67.4418	0.8732	-16.6901	5.9003	191	1.28	
N3.06	C21	191	4.4 1.2D + 1L	Combination	Max		2.56	-612.4249	16.797	-67.4418	0.8732	72.1243	-11.1183	191	2.56	
N3.06	C21	191	4.4 1.2D + 1L	Combination	Min		0	-626.968	11.9003	-70.0852	-0.4398	-107.2937	19.3464	191	0	
N3.06	C21	191	4.4 1.2D + 1L	Combination	Min		1.28	-621.1838	11.9003	-70.0852	-0.4398	-17.5847	4.1141	191	1.28	
N3.06	C21	191	4.4 1.2D + 1L	Combination	Min		2.56	-615.3996	11.9003	-70.0852	-0.4398	69.6355	-15.6	191	2.56	
N3.06	C21	191	4.5 1.2D + 1L	Combination	Max		0	-634.5262	4.3443	34.0035	0.7128	62.5578	7.1977	191	0	
N3.06	C21	191	4.5 1.2D + 1L	Combination	Max		1.28	-628.742	4.3443	34.0035	0.7128	19.0476	1.6429	191	1.28	
N3.06	C21	191	4.5 1.2D + 1L	Combination	Max		2.56	-622.9578	4.3443	34.0035	0.7128	64.3765	5.5453	191	2.56	
N3.06	C21	191	4.5 1.2D + 1L	Combination	Min		0	-749.8658	-5.7597	-61.6974	-0.8994	-93.5797	-9.2038	191	0	
N3.06	C21	191	4.5 1.2D + 1L	Combination	Min		1.28	-744.0816	-5.7597	-61.6974	-0.8994	-14.6213	-1.8374	191	1.28	
N3.06	C21	191	4.5 1.2D + 1L	Combination	Min		2.56	-738.2974	-5.7597	-61.6974	-0.8994	-24.5021	-3.9282	191	2.56	
N3.06	C21	191	4.6 1.2D + 1L	Combination	Max		0	-634.5262	4.3443	34.0035	0.7128	62.5578	7.1977	191	0	
N3.06	C21	191	4.6 1.2D + 1L	Combination	Max		1.28	-628.742	4.3443	34.0035	0.7128	19.0476	1.6429	191	1.28	
N3.06	C21	191	4.6 1.2D + 1L	Combination	Max		2.56	-622.9578	4.3443	34.0035	0.7128	64.3765	5.5453	191	2.56	
N3.06	C21	191	4.6 1.2D + 1L	Combination	Min		0	-749.8658	-5.7597	-61.6974	-0.8994	-93.5797	-9.2038	191	0	
N3.06	C21	191	4.6 1.2D + 1L	Combination	Min		1.28	-744.0816	-5.7597	-61.6974	-0.8994	-14.6213	-1.8374	191	1.28	
N3.06	C21	191	4.6 1.2D + 1L	Combination	Min		2.56	-738.2974	-5.7597	-61.6974	-0.8994	-24.5021	-3.9282	191	2.56	
N3.06	C21	191	5.1 0.9D + (1(	Combination	Max		0	-497.269	54.6173	7.1087	0.5763	16.6484	88.6741	191	0	
N3.06	C21	191	5.1 0.9D + (1(	Combination	Max		1.28	-492.9309	54.6173	7.1087	0.5763	7.5493	18.764	191	1.28	
N3.06	C21	191	5.1 0.9D + (1(	Combination	Max		2.56	-488.5927	54.6173	7.1087	0.5763	-0.0871	-48.5122	191	2.56	
N3.06	C21	191	5.1 0.9D + (1(	Combination	Min		0	-499.0173	51.7394	5.5551	-0.1954	14.134	83.9406	191	0	
N3.06	C21	191	5.1 0.9D + (1(	Combination	Min		1.28	-494.6792	51.7394	5.5551	-0.1954	7.0235	17.7142	191	1.28	
N3.06	C21	191	5.1 0.9D + (1(	Combination	Min		2.56	-490.341	51.7394	5.5551	-0.1954	-1.5498	-51.1462	191	2.56	
N3.06	C21	191	5.2 0.9D + (1(	Combination	Max		0	-456.3902	55.1446	-25.0852	1.0036	-35.9606	89.5438	191	0	
N3.06	C21	191	5.2 0.9D + (1(	Combination	Max		1.28	-452.052	55.1446	-25.0852	1.0036	-3.8516	18.9588	191	1.28	
N3.06	C21	191	5.2 0.9D + (1(	Combination	Max		2.56	-447.7139	55.1446	-25.0852	1.0036	30.8486	-46.9603	191	2.56	
N3.06	C21	191	5.2 0.9D + (1(	Combination	Min		0	-459.4872	50.0465	-27.8372	-0.3633	-40.4147	81.1586	191	0	
N3.06	C21	191	5.2 0.9D + (1(	Combination	Min		1.28	-455.1491	50.0465	-27.8372	-0.3633	-4.783	17.0992	191	1.28	
N3.06	C21	191	5.2 0.9D + (1(	Combination	Min		2.56	-450.8109	50.0465	-27.8372	-0.3633	28.2574	-51.6263	191	2.56	

N3.06	C21	191	5.3	0.9D - (1C	Combination	Max	0	-455.1176	-52.8168	-23.942	0.0803	-34.6266	-85.4158	191	0
N3.06	C21	191	5.3	0.9D - (1C	Combination	Max	1.28	-450.7794	-52.8168	-23.942	0.0803	-3.9809	-17.8103	191	1.28
N3.06	C21	191	5.3	0.9D - (1C	Combination	Max	2.56	-446.4413	-52.8168	-23.942	0.0803	28.1276	52.4291	191	2.56
N3.06	C21	191	5.3	0.9D - (1C	Combination	Min	0	-456.8659	-55.6947	-25.4955	-0.6914	-37.141	-90.1493	191	0
N3.06	C21	191	5.3	0.9D - (1C	Combination	Min	1.28	-452.5277	-55.6947	-25.4955	-0.6914	-4.5067	-18.8601	191	1.28
N3.06	C21	191	5.3	0.9D - (1C	Combination	Min	2.56	-448.1896	-55.6947	-25.4955	-0.6914	26.6648	49.7951	191	2.56
N3.06	C21	191	5.4	0.9D - (1C	Combination	Max	0	-494.6477	-51.1239	9.4504	0.2482	19.9221	-82.6338	191	0
N3.06	C21	191	5.4	0.9D - (1C	Combination	Max	1.28	-490.3095	-51.1239	9.4504	0.2482	7.8256	-17.1953	191	1.28
N3.06	C21	191	5.4	0.9D - (1C	Combination	Max	2.56	-485.9714	-51.1239	9.4504	0.2482	-1.6797	52.9092	191	2.56
N3.06	C21	191	5.4	0.9D - (1C	Combination	Min	0	-497.7447	-56.222	6.6983	-1.1187	15.4681	-91.019	191	0
N3.06	C21	191	5.4	0.9D - (1C	Combination	Min	1.28	-493.4066	-56.222	6.6983	-1.1187	6.8942	-19.0549	191	1.28
N3.06	C21	191	5.4	0.9D - (1C	Combination	Min	2.56	-489.0684	-56.222	6.6983	-1.1187	-4.2709	48.2433	191	2.56
N3.06	C21	191	5.5	0.9D + Ex	Combination	Max	0	-474.3666	43.963	-6.9684	1.0011	-6.7069	71.2562	191	0
N3.06	C21	191	5.5	0.9D + Ex	Combination	Max	1.28	-470.0284	43.963	-6.9684	1.0011	2.2479	14.9956	191	1.28
N3.06	C21	191	5.5	0.9D + Ex	Combination	Max	2.56	-465.6903	43.963	-6.9684	1.0011	15.4684	42.5809	191	2.56
N3.06	C21	191	5.5	0.9D + Ex	Combination	Min	0	-479.7683	-45.0404	-11.4184	-1.1162	-13.7857	-72.7313	191	0
N3.06	C21	191	5.5	0.9D + Ex	Combination	Min	1.28	-475.4302	-45.0404	-11.4184	-1.1162	0.7947	-15.0917	191	1.28
N3.06	C21	191	5.5	0.9D + Ex	Combination	Min	2.56	-471.092	-45.0404	-11.4184	-1.1162	11.1093	-41.2979	191	2.56
N3.06	C21	191	5.6	0.9D - Ex	Combination	Max	0	-474.3666	43.963	-6.9684	1.0011	-6.7069	71.2562	191	0
N3.06	C21	191	5.6	0.9D - Ex	Combination	Max	1.28	-470.0284	43.963	-6.9684	1.0011	2.2479	14.9956	191	1.28
N3.06	C21	191	5.6	0.9D - Ex	Combination	Max	2.56	-465.6903	43.963	-6.9684	1.0011	15.4684	42.5809	191	2.56
N3.06	C21	191	5.6	0.9D - Ex	Combination	Min	0	-479.7683	-45.0404	-11.4184	-1.1162	-13.7857	-72.7313	191	0
N3.06	C21	191	5.6	0.9D - Ex	Combination	Min	1.28	-475.4302	-45.0404	-11.4184	-1.1162	0.7947	-15.0917	191	1.28
N3.06	C21	191	5.6	0.9D - Ex	Combination	Min	2.56	-471.092	-45.0404	-11.4184	-1.1162	11.1093	-41.2979	191	2.56
N3.06	C21	191	6.1	0.9D + (1(	Combination	Max	0	-543.6064	17.7123	45.8762	0.1558	79.8001	28.8852	191	0
N3.06	C21	191	6.1	0.9D + (1(	Combination	Max	1.28	-539.2682	17.7123	45.8762	0.1558	21.0785	6.2135	191	1.28
N3.06	C21	191	6.1	0.9D + (1(	Combination	Max	2.56	-534.93	17.7123	45.8762	0.1558	-36.3704	-14.1666	191	2.56
N3.06	C21	191	6.1	0.9D + (1(	Combination	Min	0	-545.1275	15.2084	44.5246	-0.5156	77.6124	24.7668	191	0
N3.06	C21	191	6.1	0.9D + (1(	Combination	Min	1.28	-540.7893	15.2084	44.5246	-0.5156	20.621	5.3001	191	1.28
N3.06	C21	191	6.1	0.9D + (1(	Combination	Min	2.56	-536.4512	15.2084	44.5246	-0.5156	-37.6431	-16.4583	191	2.56
N3.06	C21	191	6.2	0.9D + (1(	Combination	Max	0	-542.2955	-13.1466	47.0448	0.2889	81.5365	-21.0871	191	0
N3.06	C21	191	6.2	0.9D + (1(	Combination	Max	1.28	-537.9573	-13.1466	47.0448	0.2889	21.3191	-4.2594	191	1.28
N3.06	C21	191	6.2	0.9D + (1(	Combination	Max	2.56	-533.6191	-13.1466	47.0448	0.2889	-36.4094	17.05	191	2.56
N3.06	C21	191	6.2	0.9D + (1(	Combination	Min	0	-545.2702	-18.0434	44.4015	-1.0241	77.2583	-29.1411	191	0
N3.06	C21	191	6.2	0.9D + (1(	Combination	Min	1.28	-540.932	-18.0434	44.4015	-1.0241	20.4245	-6.0456	191	1.28
N3.06	C21	191	6.2	0.9D + (1(	Combination	Min	2.56	-536.5939	-18.0434	44.4015	-1.0241	-38.8983	12.5683	191	2.56
N3.06	C21	191	6.3	0.9D - (1C	Combination	Max	0	-409.0074	-16.2858	-62.9114	0.4005	-98.105	-26.242	191	0
N3.06	C21	191	6.3	0.9D - (1C	Combination	Max	1.28	-404.6693	-16.2858	-62.9114	0.4005	-17.5784	-5.3962	191	1.28
N3.06	C21	191	6.3	0.9D - (1C	Combination	Max	2.56	-400.3311	-16.2858	-62.9114	0.4005	64.2208	17.7413	191	2.56
N3.06	C21	191	6.3	0.9D - (1C	Combination	Min	0	-410.5286	-18.7897	-64.2631	-0.2709	-100.2926	-30.3604	191	0
N3.06	C21	191	6.3	0.9D - (1C	Combination	Min	1.28	-406.1904	-18.7897	-64.2631	-0.2709	-18.0359	-6.3096	191	1.28
N3.06	C21	191	6.3	0.9D - (1C	Combination	Min	2.56	-401.8523	-18.7897	-64.2631	-0.2709	62.9482	15.4496	191	2.56
N3.06	C21	191	6.4	0.9D - (1C	Combination	Max	0	-408.8647	16.966	-62.7883	0.909	-97.7509	27.6659	191	0
N3.06	C21	191	6.4	0.9D - (1C	Combination	Max	1.28	-404.5266	16.966	-62.7883	0.909	-17.3819	5.9494	191	1.28
N3.06	C21	191	6.4	0.9D - (1C	Combination	Max	2.56	-400.1884	16.966	-62.7883	0.909	65.476	-11.2854	191	2.56
N3.06	C21	191	6.4	0.9D - (1C	Combination	Min	0	-411.8395	12.0692	-65.4317	-0.404	-102.0291	19.6119	191	0
N3.06	C21	191	6.4	0.9D - (1C	Combination	Min	1.28	-407.5013	12.0692	-65.4317	-0.404	-18.2765	4.1633	191	1.28
N3.06	C21	191	6.4	0.9D - (1C	Combination	Min	2.56	-403.1631	12.0692	-65.4317	-0.404	62.9871	-15.767	191	2.56
N3.06	C21	191	6.5	0.9D + Ey	Combination	Max	0	-419.3977	4.5133	38.657	0.7486	67.8224	7.4631	191	0
N3.06	C21	191	6.5	0.9D + Ey	Combination	Max	1.28	-415.0595	4.5133	38.657	0.7486	18.3558	1.6921	191	1.28
N3.06	C21	191	6.5	0.9D + Ey	Combination	Max	2.56	-410.7213	4.5133	38.657	0.7486	57.7282	5.3782	191	2.56
N3.06	C21	191	6.5	0.9D + Ey	Combination	Min	0	-534.7373	-5.5907	-57.0439	-0.8637	-88.315	-8.9383	191	0
N3.06	C21	191	6.5	0.9D + Ey	Combination	Min	1.28	-530.3991	-5.5907	-57.0439	-0.8637	-15.3132	-1.7882	191	1.28
N3.06	C21	191	6.5	0.9D + Ey	Combination	Min	2.56	-526.061	-5.5907	-57.0439	-0.8637	-31.1504	-4.0953	191	2.56
N3.06	C21	191	6.6	0.9D - Ey	Combination	Max	0	-419.3977	4.5133	38.657	0.7486	67.8224	7.4631	191	0
N3.06	C21	191	6.6	0.9D - Ey	Combination	Max	1.28	-415.0595	4.5133	38.657	0.7486	18.3558	1.6921	191	1.28
N3.06	C21	191	6.6	0.9D - Ey	Combination	Max	2.56	-410.7213	4.5133	38.657	0.7486	57.7282	5.3782	191	2.56
N3.06	C21	191	6.6	0.9D - Ey	Combination	Min	0	-534.7373	-5.5907	-57.0439	-0.8637	-88.315	-8.9383	191	0
N3.06	C21	191	6.6	0.9D - Ey	Combination	Min	1.28	-530.3991	-5.5907	-57.0439	-0.8637	-15.3132	-1.7882	191	1.28
N3.06	C21	191	6.6	0.9D - Ey	Combination	Min	2.56	-526.061	-5.5907	-57.0439	-0.8637	-31.1504	-4.0953	191	2.56
N3.06	C21	191	3.3	1.2D + 1L	Combination	Max	0	-670.2462	-52.9857	-28.5955	0.0445	-39.8913	-85.6813	191	0
N3.06	C21	191	3.3	1.2D + 1L	Combination	Max	1.28	-664.462	-52.9857	-28.5955	0.0445	-3.2891	-17.8595	191	1.28
N3.06	C21	191	3.3	1.2D + 1L	Combination	Max	2.56	-658.6778	-52.9857	-28.5955	0.0445	34.7759	52.5962	191	2.56
N3.06	C21	191	3.3	1.2D + 1L	Combination	Min	0	-671.9945	-55.8637	-30.149	-0.7272	-42.4056	-90.4148	191	0
N3.06	C21	191	3.3	1.2D + 1L	Combination	Min	1.28	-666.2103	-55.8637	-30.149	-0.7272	-3.8149	-18.9093	191	1.28
N3.06	C21	191	3.3	1.2D + 1L	Combination	Min	2.56	-660.4261	-55.8637	-30.149	-0.7272	33.3132	49.9622	191	2.56
N3.06	C21	191	4.1	1.2D + 1L	Combination	Max	0	-758.7349	17.5434	41.2227	0.12	74.5354	28.6198	191	0
N3.06	C21	191	4.1	1.2D + 1L	Combination	Max	1.28	-752.9507	17.5434	41.2227	0.12	21.7703	6.1643	191	1.28
N3.06	C21	191	4.1	1.2D + 1L	Combination	Max	2.56	-747.1665	17.5434	41.2227	0.12	-29.7221	-13.9996	191	2.56
N3.06	C21	191	4.1	1.2D + 1L	Combination	Min	0	-760.256	15.0394	39.8711	-0.5513	72.3478	24.5014	191	0
N3.06	C21	191	4.1	1.2D + 1L	Combination	Min	1.28	-754.4718	15.0394	39.8711	-0.5513	21.3128	5.2509	191	1.28
N3.06	C21	191	4.1	1.2D + 1L	Combination	Min	2.56	-748.6876	15.0394	39.8711	-0.5513	-30.9948	-16.2912	191	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C29	231	1. 1.4D	Combination			0	-566.2519	2.2467	-14.7703	-0.0895	-16.8251	1.8886	231	0	
N3.06	C29	231	1. 1.4D	Combination			1.28	-559.5037	2.2467	-14.7703	-0.0895	2.0809	-0.9872	231	1.28	
N3.06	C29	231	1. 1.4D	Combination			2.56	-552.7555	2.2467	-14.7703	-0.0895	20.9868	-3.8629	231	2.56	
N3.06	C29	231	2. 1.2D + 1.6L	Combination			0	-632.2575	1.9748	-19.8591	-0.1308	-22.6803	1.5687	231	0	
N3.06	C29	231	2. 1.2D + 1.6L	Combination			1.28	-626.4733	1.9748	-19.8591	-0.1308	2.7394	-0.959	231	1.28	
N3.06	C29	231	2. 1.2D + 1.6L	Combination			2.56	-620.6891	1.9748	-19.8591	-0.1308	28.159	-3.4867	231	2.56	
N3.06	C29	231	2. 1.2D + 1.6L	Combination			0	-612.9791	1.8427	-15.3085	-0.0965	-17.4205	1.4998	231	0	
N3.06	C29	231	2. 1.2D + 1.6L	Combination			1.28	-607.1949	1.8427	-15.3085	-0.0965	2.1744	-0.8589	231	1.28	
N3.06	C29	231	2. 1.2D + 1.6L	Combination			2.56	-601.4106	1.8427	-15.3085	-0.0965	21.7693	-3.2176	231	2.56	
N3.06	C29	231	2. 1.2D + 1L +	Combination			0	-550.7205	1.9176	-15.0048	-0.0943	-17.1019	1.5785	231	0	
N3.06	C29	231	2. 1.2D + 1L +	Combination			1.28	-544.9363	1.9176	-15.0048	-0.0943	2.1042	-0.8761	231	1.28	
N3.06	C29	231	2. 1.2D + 1L +	Combination			2.56	-539.1521	1.9176	-15.0048	-0.0943	21.3104	-3.3306	231	2.56	
N3.06	C29	231	3.1 1.2D + 1L	Combination	Max		0	-515.0136	57.1398	4.5398	0.5405	15.0127	91.0576	231	0	
N3.06	C29	231	3.1 1.2D + 1L	Combination	Max		1.28	-509.2294	57.1398	4.5398	0.5405	9.2017	17.9187	231	1.28	
N3.06	C29	231	3.1 1.2D + 1L	Combination	Max		2.56	-503.4452	57.1398	4.5398	0.5405	6.8683	-52.5259	231	2.56	
N3.06	C29	231	3.1 1.2D + 1L	Combination	Min		0	-521.6054	54.2236	0.6366	-0.2311	8.498	86.2864	231	0	
N3.06	C29	231	3.1 1.2D + 1L	Combination	Min		1.28	-515.8212	54.2236	0.6366	-0.2311	7.6832	16.8802	231	1.28	
N3.06	C29	231	3.1 1.2D + 1L	Combination	Min		2.56	-510.037	54.2236	0.6366	-0.2311	3.3907	-55.2202	231	2.56	
N3.06	C29	231	3.2 1.2D + 1L	Combination	Max		0	-477.2124	57.834	-24.9875	0.9679	-33.7059	92.0917	231	0	
N3.06	C29	231	3.2 1.2D + 1L	Combination	Max		1.28	-471.4282	57.834	-24.9875	0.9679	-1.7219	18.0641	231	1.28	
N3.06	C29	231	3.2 1.2D + 1L	Combination	Max		2.56	-465.644	57.834	-24.9875	0.9679	36.4225	-51.1907	231	2.56	
N3.06	C29	231	3.2 1.2D + 1L	Combination	Min		0	-488.8896	52.6681	-31.9019	-0.3991	-45.2465	83.6397	231	0	
N3.06	C29	231	3.2 1.2D + 1L	Combination	Min		1.28	-483.1054	52.6681	-31.9019	-0.3991	-4.412	16.2245	231	1.28	
N3.06	C29	231	3.2 1.2D + 1L	Combination	Min		2.56	-477.3212	52.6681	-31.9019	-0.3991	30.2622	-55.9635	231	2.56	
N3.06	C29	231	3.3 1.2D + 1L	Combination	Max		0	-523.2368	-50.3202	-30.3701	0.0445	-42.4123	-83.0578	231	0	
N3.06	C29	231	3.3 1.2D + 1L	Combination	Max		1.28	-517.4526	-50.3202	-30.3701	0.0445	-3.5385	-18.648	231	1.28	
N3.06	C29	231	3.3 1.2D + 1L	Combination	Max		2.56	-511.6684	-50.3202	-30.3701	0.0445	38.8127	48.4562	231	2.56	
N3.06	C29	231	3.3 1.2D + 1L	Combination	Min		0	-529.8286	-53.2364	-34.2733	-0.7272	-48.927	-87.829	231	0	
N3.06	C29	231	3.3 1.2D + 1L	Combination	Min		1.28	-524.0444	-53.2364	-34.2733	-0.7272	-5.0571	-19.6864	231	1.28	
N3.06	C29	231	3.3 1.2D + 1L	Combination	Min		2.56	-518.2602	-53.2364	-34.2733	-0.7272	35.3352	45.7619	231	2.56	
N3.06	C29	231	3.4 1.2D + 1L	Combination	Max		0	-555.9526	-48.7647	2.1685	0.2124	11.3322	-80.4111	231	0	
N3.06	C29	231	3.4 1.2D + 1L	Combination	Max		1.28	-550.1684	-48.7647	2.1685	0.2124	8.5566	-17.9922	231	1.28	
N3.06	C29	231	3.4 1.2D + 1L	Combination	Max		2.56	-544.3842	-48.7647	2.1685	0.2124	11.9413	49.1995	231	2.56	
N3.06	C29	231	3.4 1.2D + 1L	Combination	Min		0	-567.6298	-53.9307	-4.746	-1.1545	-0.2084	-88.8631	231	0	
N3.06	C29	231	3.4 1.2D + 1L	Combination	Min		1.28	-561.8456	-53.9307	-4.746	-1.1545	5.8665	-19.8318	231	1.28	
N3.06	C29	231	3.4 1.2D + 1L	Combination	Min		2.56	-556.0614	-53.9307	-4.746	-1.1545	5.781	44.4266	231	2.56	
N3.06	C29	231	3.5 1.2D + 1L	Combination	Max		0	-506.3176	46.5135	-7.406	0.9654	-4.7014	73.6671	231	0	
N3.06	C29	231	3.5 1.2D + 1L	Combination	Max		1.28	-500.5334	46.5135	-7.406	0.9654	4.7872	14.1422	231	1.28	
N3.06	C29	231	3.5 1.2D + 1L	Combination	Max		2.56	-494.7492	46.5135	-7.406	0.9654	27.9527	38.6522	231	2.56	
N3.06	C29	231	3.5 1.2D + 1L	Combination	Min		0	-538.5246	-42.6101	-22.3275	-1.152	-29.2128	-70.4385	231	0	
N3.06	C29	231	3.5 1.2D + 1L	Combination	Min		1.28	-532.7404	-42.6101	-22.3275	-1.152	-0.6426	-15.9099	231	1.28	
N3.06	C29	231	3.5 1.2D + 1L	Combination	Min		2.56	-526.9562	-42.6101	-22.3275	-1.152	14.2508	-45.4163	231	2.56	
N3.06	C29	231	3.6 1.2D + 1L	Combination	Max		0	-506.3176	46.5135	-7.406	0.9654	-4.7014	73.6671	231	0	
N3.06	C29	231	3.6 1.2D + 1L	Combination	Max		1.28	-500.5334	46.5135	-7.406	0.9654	4.7872	14.1422	231	1.28	
N3.06	C29	231	3.6 1.2D + 1L	Combination	Max		2.56	-494.7492	46.5135	-7.406	0.9654	27.9527	38.6522	231	2.56	
N3.06	C29	231	3.6 1.2D + 1L	Combination	Min		0	-538.5246	-42.6101	-22.3275	-1.152	-29.2128	-70.4385	231	0	
N3.06	C29	231	3.6 1.2D + 1L	Combination	Min		1.28	-532.7404	-42.6101	-22.3275	-1.152	-0.6426	-15.9099	231	1.28	
N3.06	C29	231	3.6 1.2D + 1L	Combination	Min		2.56	-526.9562	-42.6101	-22.3275	-1.152	14.2508	-45.4163	231	2.56	
N3.06	C29	231	4.1 1.2D + 1L	Combination	Max		0	-571.7954	19.9924	39.1344	0.12	72.1919	31.0301	231	0	
N3.06	C29	231	4.1 1.2D + 1L	Combination	Max		1.28	-566.0112	19.9924	39.1344	0.12	22.0998	5.4399	231	1.28	
N3.06	C29	231	4.1 1.2D + 1L	Combination	Max		2.56	-560.227	19.9924	39.1344	0.12	-24.9665	-17.8062	231	2.56	
N3.06	C29	231	4.1 1.2D + 1L	Combination	Min		0	-577.5307	17.4551	35.7384	-0.5513	66.5237	26.8789	231	0	
N3.06	C29	231	4.1 1.2D + 1L	Combination	Min		1.28	-571.7465	17.4551	35.7384	-0.5513	20.7786	4.5364	231	1.28	
N3.06	C29	231	4.1 1.2D + 1L	Combination	Min		2.56	-565.9623	17.4551	35.7384	-0.5513	-27.9922	-20.1504	231	2.56	
N3.06	C29	231	4.2 1.2D + 1L	Combination	Max		0	-582.0996	-10.9041	39.594	0.2531	73.0421	-18.9791	231	0	
N3.06	C29	231	4.2 1.2D + 1L	Combination	Max		1.28	-576.3154	-10.9041	39.594	0.2531	22.3619	-5.0219	231	1.28	
N3.06	C29	231	4.2 1.2D + 1L	Combination	Max		2.56	-570.5312	-10.9041	39.594	0.2531	-22.4014	13.5197	231	2.56	
N3.06	C29	231	4.2 1.2D + 1L	Combination	Min		0	-593.3156	-15.866	32.9527	-1.0598	61.9574	-27.0973	231	0	
N3.06	C29	231	4.2 1.2D + 1L	Combination	Min		1.28	-587.5314	-15.866	32.9527	-1.0598	19.778	-6.7888	231	1.28	
N3.06	C29	231	4.2 1.2D + 1L	Combination	Min		2.56	-581.7472	-15.866	32.9527	-1.0598	-28.3184	8.9354	231	2.56	
N3.06	C29	231	4.3 1.2D + 1L	Combination	Max		0	-467.3115	-13.5518	-65.4719	0.3647	-100.438	-23.6503	231	0	
N3.06	C29	231	4.3 1.2D + 1L	Combination	Max		1.28	-461.5273	-13.5518	-65.4719	0.3647	-16.634	-6.3041	231	1.28	
N3.06	C29	231	4.3 1.2D + 1L	Combination	Max		2.56	-455.7431	-13.5518	-65.4719	0.3647	70.1957	13.3863	231	2.56	
N3.06	C29	231	4.3 1.2D + 1L	Combination	Min		0	-473.0468	-16.089	-68.8679	-0.3067	-106.1061	-27.8015	231	0	
N3.06	C29	231	4.3 1.2D + 1L	Combination	Min		1.28	-467.2626	-16.089	-68.8679	-0.3067	-17.9552	-7.2076	231	1.28	
N3.06	C29	231	4.3 1.2D + 1L	Combination	Min		2.56	-461.4783	-16.089	-68.8679	-0.3067	67.17	11.0422	231	2.56	
N3.06	C29	231	4.4 1.2D + 1L	Combination	Max		0	-451.5266	19.7694	-62.6861	0.8732	-95.8717	30.3259	231	0	
N3.06	C29	231	4.4 1.2D + 1L	Combination	Max		1.28	-445.7424	19.7694	-62.6861	0.8732	-15.6334	5.0211	231	1.28	
N3.06	C29	231	4.4 1.2D + 1L	Combination	Max		2.56	-439.9582	19.7694	-62.6861	0.8732	70.5219	-15.6994	231	2.56	
N3.06	C29	231	4.4 1.2D + 1L	Combination	Min		0	-462.7426	14.8075	-69.3275	-0.4398	-106.9564	22.2077	231	0	
N3.06	C29	231	4.4 1.2D + 1L	Combination	Min		1.28	-456.9584	14.8075	-69.3275	-0.4398	-18.2173	3.2542	231	1.28	
N3.06	C29	231	4.4 1.2D + 1L	Combination	Min		2.56	-451.1742	14.8075	-69.3275	-0.4398	64.6049	-20.2837	231	2.56	
N3.06	C29	231	4.5 1.2D + 1L	Combination	Max		0	-475.3571	6.9094	28.3056	0.7128	54.1811	9.7203	231	0	
N3.06	C29	231	4.5 1.2D + 1L	Combination	Max		1.28	-469.5729	6.9094	28.3056	0.7128	17.9658	0.8868	231	1.28	
N3.06	C29	231	4.5 1.2D + 1L	Combination	Max		2.56	-463.7886	6.9094	28.3056	0.7128	60.4974	1.2117	231	2.56	
N3.06	C29	231	4.5 1.2D + 1L	Combination	Min		0	-569.4851	-3.006	-58.0391	-0.8994	-88.0953	-6.4917	231	0	
N3.06	C29	231	4.5 1.2D + 1L	Combination	Min		1.28	-563.7009	-3.006	-58.0391	-0.8994	-13.8212	-2.6545	231	1.28	
N3.06	C29	231	4.5 1.2D + 1L	Combination	Min		2.56	-557.9167	-3.006	-58.0391	-0.8994	-18.294	-7.9757	231	2.56	
N3.06	C29	231	4.6 1.2D + 1L	Combination	Max		0	-475.3571	6.9094	28.3056	0.7128	54.1811	9.7203	231	0	
N3.06	C29	231	4.6 1.2D + 1L	Combination	Max		1.28	-469.5729	6.9094	28.3056	0.7128	17.9658	0.8868	231	1.28	
N3.06	C29	231	4.6 1.2D + 1L	Combination	Max		2.56	-463.7886	6.9094	28.3056	0.7128	60.4974	1.2117	231	2.56	
N3.06	C29	231	4.6 1.2D + 1L	Combination	Min		0	-569.4851	-3.006	-58.0391	-0.8994	-88.0953	-6.4917	231	0	
N3.06	C29	231	4.6 1.2D + 1L	Combination	Min		1.28	-563.7009	-3.006	-58.0391	-0.8994	-13.8212	-2.6545	231	1.28	
N3.06	C29	231	4.6 1.2D + 1L	Combination	Min		2.56	-557.9167	-3.006	-58.0391	-0.8994	-18.294	-7.9757	231	2.56	
N3.06	C29	231	5.1 0.9D + (1(	Combination	Max		0	-356.6116	56.6324	9.9114	0.5763	21.1537	90.6574	231	0	
N3.06	C29	231	5.1 0.9D + (1(	Combination	Max		1.28	-352.2734	56.6324	9.9114	0.5763	8.4671	18.1679	231	1.28	
N3.06	C29	231	5.1 0.9D + (1(	Combination	Max		2.56	-347.9353	56.6324	9.9114	0.5763	-0.7419	-51.6272	231	2.56	
N3.06	C29	231	5.1 0.9D + (1(	Combination	Min		0	-363.2034	53.7162	6.0082	-0.1954	14.639	85.8862	231	0	
N3.06	C29	231	5.1 0.9D + (1(	Combination	Min		1.28	-358.8653	53.7162	6.0082	-0.1954	6.9485	17.1295	231	1.28	
N3.06	C29	231	5.1 0.9D + (1(	Combination	Min		2.56	-354.5271	53.7162	6.0082	-0.1954	-4.2195	-54.3215	231	2.56	
N3.06	C29	231	5.2 0.9D + (1(	Combination	Max		0	-318.8104	57.3266	-19.616	1.0036	-27.5649	91.6915	231	0	
N3.06	C29	231	5.2 0.9D + (1(	Combination	Max		1.28	-314.4722	57.3266	-19.616	1.0036	-2.4565	18.3133	231	1.28	
N3.06	C29	231	5.2 0.9D + (1(	Combination	Max		2.56	-310.1341	57.3266	-19.616	1.0036	28.8123	-50.2919	231	2.56	
N3.06	C29	231	5.2 0.9D + (1(	Combination	Min		0	-330.4876	52.1607	-26.5304	-0.3633	-39.1055	83.2395	231	0	
N3.06	C29	231	5.2 0.9D + (1(	Combination	Min		1.28	-326.1494	52.1607	-26.5304	-0.3633	-5.1466	16.4738	231	1.28	
N3.06	C29	231	5.2 0.9D + (1(	Combination	Min		2.56	-321.8113	52.1607	-26.5304	-0.3633	22.6519	-55.0648	231	2.56	
N3.06	C29	231	5.3 0.9D - (10	Combination	Max		0	-364.8348	-50.8276	-24.9985	0.0803	-36.2713	-83.458	231	0	
N3.06	C29	231	5.3 0.9D - (10	Combination	Max		1.28	-360.4966	-50.8276	-24.9985	0.0803	-4.2732	-18.3987	231	1.28	
N3.06	C29	231	5.3 0.9D - (10	Combination	Max		2.56	-356.1585	-50.8276	-24.9985	0.0803	31.2025	49.3549	231	2.56	
N3.06	C29	231	5.3 0.9D - (10	Combination	Min		0	-371.4266	-53.7438	-28.9018	-0.6914	-42.786	-88.2292	231	0	
N3.06	C29	231	5.3 0.9D - (10	Combination	Min		1.28	-367.0885	-53.7438	-28.9018	-0.6914	-5.7917	-19.4372	231	1.28	
N3.06	C29	231	5.3 0.9D - (10	Combination	Min		2.56	-362.7503	-53.7438	-28.9018	-0.6914	27.725	46.6606	231	2.56	
N3.06	C29	231	5.4 0.9D - (10	Combination	Max		0	-397.5506	-49.2721	7.54	0.2482	17.4732	-80.8113	231	0	
N3.06	C29	231	5.4 0.9D - (10	Combination	Max		1.28	-393.2125	-49.2721	7.54	0.2482	7.822	-17.743	231	1.28	

N3.06	C29	231	5.4	0.9D - (10	Combination	Max	2.56	-388.8743	-49.2721	7.54	0.2482	4.3311	50.0982	231	2.56
N3.06	C29	231	5.4	0.9D - (10	Combination	Min	0	-409.2278	-54.4381	0.6256	-1.1187	5.9326	-89.2633	231	0
N3.06	C29	231	5.4	0.9D - (10	Combination	Min	1.28	-404.8897	-54.4381	0.6256	-1.1187	5.1319	-19.5826	231	1.28
N3.06	C29	231	5.4	0.9D - (10	Combination	Min	2.56	-400.5515	-54.4381	0.6256	-1.1187	-1.8292	45.3254	231	2.56
N3.06	C29	231	5.5	0.9D + Ex	Combination	Max	0	-347.9156	46.0061	-2.0344	1.0011	1.4396	73.2669	231	0
N3.06	C29	231	5.5	0.9D + Ex	Combination	Max	1.28	-343.5774	46.0061	-2.0344	1.0011	4.0526	14.3914	231	1.28
N3.06	C29	231	5.5	0.9D + Ex	Combination	Max	2.56	-339.2393	46.0061	-2.0344	1.0011	20.3425	39.551	231	2.56
N3.06	C29	231	5.5	0.9D + Ex	Combination	Min	0	-380.1226	-43.1175	-16.9559	-1.1162	-23.0718	-70.8388	231	0
N3.06	C29	231	5.5	0.9D + Ex	Combination	Min	1.28	-375.7845	-43.1175	-16.9559	-1.1162	-1.3772	-15.6606	231	1.28
N3.06	C29	231	5.5	0.9D + Ex	Combination	Min	2.56	-371.4463	-43.1175	-16.9559	-1.1162	6.6406	-44.5175	231	2.56
N3.06	C29	231	5.6	0.9D - Ex	Combination	Max	0	-347.9156	46.0061	-2.0344	1.0011	1.4396	73.2669	231	0
N3.06	C29	231	5.6	0.9D - Ex	Combination	Max	1.28	-343.5774	46.0061	-2.0344	1.0011	4.0526	14.3914	231	1.28
N3.06	C29	231	5.6	0.9D - Ex	Combination	Max	2.56	-339.2393	46.0061	-2.0344	1.0011	20.3425	39.551	231	2.56
N3.06	C29	231	5.6	0.9D - Ex	Combination	Min	0	-380.1226	-43.1175	-16.9559	-1.1162	-23.0718	-70.8388	231	0
N3.06	C29	231	5.6	0.9D - Ex	Combination	Min	1.28	-375.7845	-43.1175	-16.9559	-1.1162	-1.3772	-15.6606	231	1.28
N3.06	C29	231	5.6	0.9D - Ex	Combination	Min	2.56	-371.4463	-43.1175	-16.9559	-1.1162	6.6406	-44.5175	231	2.56
N3.06	C29	231	6.1	0.9D + (1(	Combination	Max	0	-413.3934	19.485	44.506	0.1558	78.3329	30.6299	231	0
N3.06	C29	231	6.1	0.9D + (1(	Combination	Max	1.28	-409.0553	19.485	44.506	0.1558	21.3652	5.6891	231	1.28
N3.06	C29	231	6.1	0.9D + (1(	Combination	Max	2.56	-404.7171	19.485	44.506	0.1558	-32.5768	-16.9075	231	2.56
N3.06	C29	231	6.1	0.9D + (1(	Combination	Min	0	-419.1287	16.9477	41.11	-0.5156	72.6647	26.4787	231	0
N3.06	C29	231	6.1	0.9D + (1(	Combination	Min	1.28	-414.7905	16.9477	41.11	-0.5156	20.044	4.7856	231	1.28
N3.06	C29	231	6.1	0.9D + (1(	Combination	Min	2.56	-410.4524	16.9477	41.11	-0.5156	-35.6024	-19.2516	231	2.56
N3.06	C29	231	6.2	0.9D + (1(	Combination	Max	0	-423.6976	-11.4115	44.9655	0.2889	79.1831	-19.3794	231	0
N3.06	C29	231	6.2	0.9D + (1(	Combination	Max	1.28	-419.3595	-11.4115	44.9655	0.2889	21.6273	-4.7726	231	1.28
N3.06	C29	231	6.2	0.9D + (1(	Combination	Max	2.56	-415.0213	-11.4115	44.9655	0.2889	-30.0116	14.4184	231	2.56
N3.06	C29	231	6.2	0.9D + (1(	Combination	Min	0	-434.9136	-16.3734	38.3242	-1.0241	68.0984	-27.4975	231	0
N3.06	C29	231	6.2	0.9D + (1(	Combination	Min	1.28	-430.5754	-16.3734	38.3242	-1.0241	19.0434	-6.5395	231	1.28
N3.06	C29	231	6.2	0.9D + (1(	Combination	Min	2.56	-426.2373	-16.3734	38.3242	-1.0241	-35.9286	9.8341	231	2.56
N3.06	C29	231	6.3	0.9D - (10	Combination	Max	0	-308.9095	-14.0592	-60.1003	0.4005	-94.297	-24.0506	231	0
N3.06	C29	231	6.3	0.9D - (10	Combination	Max	1.28	-304.5714	-14.0592	-60.1003	0.4005	-17.3686	-6.0548	231	1.28
N3.06	C29	231	6.3	0.9D - (10	Combination	Max	2.56	-300.2332	-14.0592	-60.1003	0.4005	62.5855	14.285	231	2.56
N3.06	C29	231	6.3	0.9D - (10	Combination	Min	0	-314.6448	-16.5964	-63.4963	-0.2709	-99.9651	-28.2017	231	0
N3.06	C29	231	6.3	0.9D - (10	Combination	Min	1.28	-310.3066	-16.5964	-63.4963	-0.2709	-18.6898	-6.9583	231	1.28
N3.06	C29	231	6.3	0.9D - (10	Combination	Min	2.56	-305.9684	-16.5964	-63.4963	-0.2709	59.5598	11.9409	231	2.56
N3.06	C29	231	6.4	0.9D - (10	Combination	Max	0	-293.1246	19.262	-57.3146	0.909	-89.7307	29.9256	231	0
N3.06	C29	231	6.4	0.9D - (10	Combination	Max	1.28	-288.7865	19.262	-57.3146	0.909	-16.368	5.2703	231	1.28
N3.06	C29	231	6.4	0.9D - (10	Combination	Max	2.56	-284.4483	19.262	-57.3146	0.909	62.9117	-14.8007	231	2.56
N3.06	C29	231	6.4	0.9D - (10	Combination	Min	0	-304.3406	14.3001	-63.9559	-0.404	-100.8154	21.8075	231	0
N3.06	C29	231	6.4	0.9D - (10	Combination	Min	1.28	-300.0024	14.3001	-63.9559	-0.404	-18.9519	3.5034	231	1.28
N3.06	C29	231	6.4	0.9D - (10	Combination	Min	2.56	-295.6643	14.3001	-63.9559	-0.404	56.9946	-19.385	231	2.56
N3.06	C29	231	6.5	0.9D + Ey	Combination	Max	0	-316.9551	6.402	33.6771	0.7486	60.3221	9.3201	231	0
N3.06	C29	231	6.5	0.9D + Ey	Combination	Max	1.28	-312.6169	6.402	33.6771	0.7486	17.2312	1.136	231	1.28
N3.06	C29	231	6.5	0.9D + Ey	Combination	Max	2.56	-308.2788	6.402	33.6771	0.7486	52.8872	2.1104	231	2.56
N3.06	C29	231	6.5	0.9D + Ey	Combination	Min	0	-411.0831	-3.5134	-52.6675	-0.8637	-81.9543	-6.8919	231	0
N3.06	C29	231	6.5	0.9D + Ey	Combination	Min	1.28	-406.745	-3.5134	-52.6675	-0.8637	-14.5558	-2.4052	231	1.28
N3.06	C29	231	6.5	0.9D + Ey	Combination	Min	2.56	-402.4068	-3.5134	-52.6675	-0.8637	-25.9042	-7.077	231	2.56
N3.06	C29	231	6.6	0.9D - Ey	Combination	Max	0	-316.9551	6.402	33.6771	0.7486	60.3221	9.3201	231	0
N3.06	C29	231	6.6	0.9D - Ey	Combination	Max	1.28	-312.6169	6.402	33.6771	0.7486	17.2312	1.136	231	1.28
N3.06	C29	231	6.6	0.9D - Ey	Combination	Max	2.56	-308.2788	6.402	33.6771	0.7486	52.8872	2.1104	231	2.56
N3.06	C29	231	6.6	0.9D - Ey	Combination	Min	0	-411.0831	-3.5134	-52.6675	-0.8637	-81.9543	-6.8919	231	0
N3.06	C29	231	6.6	0.9D - Ey	Combination	Min	1.28	-406.745	-3.5134	-52.6675	-0.8637	-14.5558	-2.4052	231	1.28
N3.06	C29	231	6.6	0.9D - Ey	Combination	Min	2.56	-402.4068	-3.5134	-52.6675	-0.8637	-25.9042	-7.077	231	2.56
N3.06	C29	231	3.3	1.2D + 1L	Combination	Max	0	-523.2368	-50.3202	-30.3701	0.0445	-42.4123	-83.0578	231	0
N3.06	C29	231	3.3	1.2D + 1L	Combination	Max	1.28	-517.4526	-50.3202	-30.3701	0.0445	-3.5385	-18.648	231	1.28
N3.06	C29	231	3.3	1.2D + 1L	Combination	Max	2.56	-511.6684	-50.3202	-30.3701	0.0445	38.8127	48.4562	231	2.56
N3.06	C29	231	3.3	1.2D + 1L	Combination	Min	0	-529.8286	-53.2364	-34.2733	-0.7272	-48.927	-87.829	231	0
N3.06	C29	231	3.3	1.2D + 1L	Combination	Min	1.28	-524.0444	-53.2364	-34.2733	-0.7272	-5.0571	-19.6864	231	1.28
N3.06	C29	231	3.3	1.2D + 1L	Combination	Min	2.56	-518.2602	-53.2364	-34.2733	-0.7272	35.3352	45.7619	231	2.56
N3.06	C29	231	4.1	1.2D + 1L	Combination	Max	0	-571.7954	19.9924	39.1344	0.12	72.1919	31.0301	231	0
N3.06	C29	231	4.1	1.2D + 1L	Combination	Max	1.28	-566.0112	19.9924	39.1344	0.12	22.0998	5.4399	231	1.28
N3.06	C29	231	4.1	1.2D + 1L	Combination	Max	2.56	-560.227	19.9924	39.1344	0.12	-24.9665	-17.8062	231	2.56
N3.06	C29	231	4.1	1.2D + 1L	Combination	Min	0	-577.5307	17.4551	35.7384	-0.5513	66.5237	26.8789	231	0
N3.06	C29	231	4.1	1.2D + 1L	Combination	Min	1.28	-571.7465	17.4551	35.7384	-0.5513	20.7786	4.5364	231	1.28
N3.06	C29	231	4.1	1.2D + 1L	Combination	Min	2.56	-565.9623	17.4551	35.7384	-0.5513	-27.9922	-20.1504	231	2.56

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C44	446	1. 1.4D	Combination			0	-306.0742	6.3562	-11.3511	-0.0895	-13.8269	5.9598	446	0	
N3.06	C44	446	1. 1.4D	Combination			1.33	-299.0624	6.3562	-11.3511	-0.0895	1.2701	-2.494	446	1.33	
N3.06	C44	446	1. 1.4D	Combination			2.66	-292.0505	6.3562	-11.3511	-0.0895	16.3671	-10.9478	446	2.66	
N3.06	C44	446	2. 1.2D + 1.6l	Combination			0	-321.8083	8.1726	-14.1687	-0.1308	-17.6068	7.7026	446	0	
N3.06	C44	446	2. 1.2D + 1.6l	Combination			1.33	-315.7981	8.1726	-14.1687	-0.1308	1.2376	-3.1669	446	1.33	
N3.06	C44	446	2. 1.2D + 1.6l	Combination			2.66	-309.788	8.1726	-14.1687	-0.1308	20.0821	-14.0364	446	2.66	
N3.06	C44	446	2. 1.2D + 1.6l	Combination			0	-322.1891	6.6228	-11.3121	-0.0965	-13.8794	6.232	446	0	
N3.06	C44	446	2. 1.2D + 1.6l	Combination			1.33	-316.179	6.6228	-11.3121	-0.0965	1.1657	-2.5763	446	1.33	
N3.06	C44	446	2. 1.2D + 1.6l	Combination			2.66	-310.1688	6.6228	-11.3121	-0.0965	16.2108	-11.3847	446	2.66	
N3.06	C44	446	2. 1.2D + 1L +	Combination			0	-290.7538	6.3765	-11.1633	-0.0943	-13.7047	5.9936	446	0	
N3.06	C44	446	2. 1.2D + 1L +	Combination			1.33	-284.7436	6.3765	-11.1633	-0.0943	1.1425	-2.4872	446	1.33	
N3.06	C44	446	2. 1.2D + 1L +	Combination			2.66	-278.7335	6.3765	-11.1633	-0.0943	15.9896	-10.968	446	2.66	
N3.06	C44	446	3.1 1.2D + 1L	Combination	Max		0	-397.3145	48.0129	10.1349	0.5405	22.5063	82.1854	446	0	
N3.06	C44	446	3.1 1.2D + 1L	Combination	Max		1.33	-391.3043	48.0129	10.1349	0.5405	9.0268	18.3282	446	1.33	
N3.06	C44	446	3.1 1.2D + 1L	Combination	Max		2.66	-385.2942	48.0129	10.1349	0.5405	2.8552	-43.7764	446	2.66	
N3.06	C44	446	3.1 1.2D + 1L	Combination	Min		0	-408.6216	45.8302	2.485	-0.2311	9.4654	78.1318	446	0	
N3.06	C44	446	3.1 1.2D + 1L	Combination	Min		1.33	-402.6114	45.8302	2.485	-0.2311	6.1603	17.1777	446	1.33	
N3.06	C44	446	3.1 1.2D + 1L	Combination	Min		2.66	-396.6013	45.8302	2.485	-0.2311	-4.4526	-45.5289	446	2.66	
N3.06	C44	446	3.2 1.2D + 1L	Combination	Max		0	-332.3434	48.5498	-15.2401	0.9679	-20.6224	83.0659	446	0	
N3.06	C44	446	3.2 1.2D + 1L	Combination	Max		1.33	-326.3333	48.5498	-15.2401	0.9679	-0.3531	18.4946	446	1.33	
N3.06	C44	446	3.2 1.2D + 1L	Combination	Max		2.66	-320.3231	48.5498	-15.2401	0.9679	32.8617	-42.9722	446	2.66	
N3.06	C44	446	3.2 1.2D + 1L	Combination	Min		0	-352.3735	44.6833	-28.7916	-0.3991	-43.7239	75.8853	446	0	
N3.06	C44	446	3.2 1.2D + 1L	Combination	Min		1.33	-346.3634	44.6833	-28.7916	-0.3991	-5.4311	16.4565	446	1.33	
N3.06	C44	446	3.2 1.2D + 1L	Combination	Min		2.66	-340.3532	44.6833	-28.7916	-0.3991	19.9162	-46.0766	446	2.66	
N3.06	C44	446	3.3 1.2D + 1L	Combination	Max		0	-144.3084	-33.301	-24.6763	0.0445	-36.7159	-66.3614	446	0	
N3.06	C44	446	3.3 1.2D + 1L	Combination	Max		1.33	-138.2983	-33.301	-24.6763	0.0445	-3.8964	-22.0711	446	1.33	
N3.06	C44	446	3.3 1.2D + 1L	Combination	Max		2.66	-132.2881	-33.301	-24.6763	0.0445	36.2308	23.9717	446	2.66	
N3.06	C44	446	3.3 1.2D + 1L	Combination	Min		0	-155.6155	-35.4837	-32.3262	-0.7272	-49.7568	-70.4149	446	0	
N3.06	C44	446	3.3 1.2D + 1L	Combination	Min		1.33	-149.6054	-35.4837	-32.3262	-0.7272	-6.763	-23.2216	446	1.33	
N3.06	C44	446	3.3 1.2D + 1L	Combination	Min		2.66	-143.5952	-35.4837	-32.3262	-0.7272	28.9231	22.2193	446	2.66	
N3.06	C44	446	3.4 1.2D + 1L	Combination	Max		0	-200.5565	-32.1541	6.6003	0.2124	16.4733	-64.1148	446	0	
N3.06	C44	446	3.4 1.2D + 1L	Combination	Max		1.33	-194.5463	-32.1541	6.6003	0.2124	7.6949	-21.3499	446	1.33	
N3.06	C44	446	3.4 1.2D + 1L	Combination	Max		2.66	-188.5362	-32.1541	6.6003	0.2124	11.862	24.5195	446	2.66	
N3.06	C44	446	3.4 1.2D + 1L	Combination	Min		0	-220.5866	-36.0207	-6.9512	-1.1545	-6.6281	-71.2955	446	0	
N3.06	C44	446	3.4 1.2D + 1L	Combination	Min		1.33	-214.5765	-36.0207	-6.9512	-1.1545	2.6169	-23.388	446	1.33	
N3.06	C44	446	3.4 1.2D + 1L	Combination	Min		2.66	-208.5663	-36.0207	-6.9512	-1.1545	-1.0834	21.415	446	2.66	
N3.06	C44	446	3.5 1.2D + 1L	Combination	Max		0	-186.0932	40.0446	1.196	0.9654	7.2014	67.39	446	0	
N3.06	C44	446	3.5 1.2D + 1L	Combination	Max		1.33	-180.0831	40.0446	1.196	0.9654	5.6237	14.1544	446	1.33	
N3.06	C44	446	3.5 1.2D + 1L	Combination	Max		2.66	-174.0729	40.0446	1.196	0.9654	27.7677	17.5993	446	2.66	
N3.06	C44	446	3.5 1.2D + 1L	Combination	Min		0	-366.8368	-27.5154	-23.3872	-1.152	-34.452	-55.6195	446	0	
N3.06	C44	446	3.5 1.2D + 1L	Combination	Min		1.33	-360.8267	-27.5154	-23.3872	-1.152	-3.3598	-19.0477	446	1.33	
N3.06	C44	446	3.5 1.2D + 1L	Combination	Min		2.66	-354.8165	-27.5154	-23.3872	-1.152	4.0105	-39.1565	446	2.66	
N3.06	C44	446	3.6 1.2D + 1L	Combination	Max		0	-186.0932	40.0446	1.196	0.9654	7.2014	67.39	446	0	
N3.06	C44	446	3.6 1.2D + 1L	Combination	Max		1.33	-180.0831	40.0446	1.196	0.9654	5.6237	14.1544	446	1.33	
N3.06	C44	446	3.6 1.2D + 1L	Combination	Max		2.66	-174.0729	40.0446	1.196	0.9654	27.7677	17.5993	446	2.66	
N3.06	C44	446	3.6 1.2D + 1L	Combination	Min		0	-366.8368	-27.5154	-23.3872	-1.152	-34.452	-55.6195	446	0	
N3.06	C44	446	3.6 1.2D + 1L	Combination	Min		1.33	-360.8267	-27.5154	-23.3872	-1.152	-3.3598	-19.0477	446	1.33	
N3.06	C44	446	3.6 1.2D + 1L	Combination	Min		2.66	-354.8165	-27.5154	-23.3872	-1.152	4.0105	-39.1565	446	2.66	
N3.06	C44	446	4.1 1.2D + 1L	Combination	Max		0	-401.4215	19.8738	40.4147	0.12	73.9723	30.9665	446	0	
N3.06	C44	446	4.1 1.2D + 1L	Combination	Max		1.33	-395.4114	19.8738	40.4147	0.12	20.2207	4.5344	446	1.33	
N3.06	C44	446	4.1 1.2D + 1L	Combination	Max		2.66	-389.4012	19.8738	40.4147	0.12	-27.1728	-20.3729	446	2.66	
N3.06	C44	446	4.1 1.2D + 1L	Combination	Min		0	-411.2593	17.9747	33.7589	-0.5513	62.626	27.4397	446	0	
N3.06	C44	446	4.1 1.2D + 1L	Combination	Min		1.33	-405.2492	17.9747	33.7589	-0.5513	17.7266	3.5334	446	1.33	
N3.06	C44	446	4.1 1.2D + 1L	Combination	Min		2.66	-399.239	17.9747	33.7589	-0.5513	-33.5309	-21.8977	446	2.66	
N3.06	C44	446	4.2 1.2D + 1L	Combination	Max		0	-339.002	-3.5215	41.6493	0.2531	76.0747	-11.7075	446	0	
N3.06	C44	446	4.2 1.2D + 1L	Combination	Max		1.33	-332.9918	-3.5215	41.6493	0.2531	20.6811	-7.0239	446	1.33	
N3.06	C44	446	4.2 1.2D + 1L	Combination	Max		2.66	-326.9817	-3.5215	41.6493	0.2531	-22.2784	0.6416	446	2.66	
N3.06	C44	446	4.2 1.2D + 1L	Combination	Min		0	-358.2409	-7.2354	28.6331	-1.0598	53.8857	-18.6045	446	0	
N3.06	C44	446	4.2 1.2D + 1L	Combination	Min		1.33	-352.2308	-7.2354	28.6331	-1.0598	15.8037	-8.9815	446	1.33	
N3.06	C44	446	4.2 1.2D + 1L	Combination	Min		2.66	-346.2206	-7.2354	28.6331	-1.0598	-34.7125	-2.3402	446	2.66	
N3.06	C44	446	4.3 1.2D + 1L	Combination	Max		0	-141.6707	-5.4455	-55.9502	0.3647	-89.8766	-15.6693	446	0	
N3.06	C44	446	4.3 1.2D + 1L	Combination	Max		1.33	-135.6606	-5.4455	-55.9502	0.3647	-15.4628	-8.4267	446	1.33	
N3.06	C44	446	4.3 1.2D + 1L	Combination	Max		2.66	-129.6504	-5.4455	-55.9502	0.3647	65.3092	0.3405	446	2.66	
N3.06	C44	446	4.3 1.2D + 1L	Combination	Min		0	-151.5085	-7.3446	-62.606	-0.3067	-101.2228	-19.196	446	0	
N3.06	C44	446	4.3 1.2D + 1L	Combination	Min		1.33	-145.4983	-7.3446	-62.606	-0.3067	-17.9568	-9.4278	446	1.33	
N3.06	C44	446	4.3 1.2D + 1L	Combination	Min		2.66	-139.4882	-7.3446	-62.606	-0.3067	58.951	-1.1842	446	2.66	
N3.06	C44	446	4.4 1.2D + 1L	Combination	Max		0	-194.6891	19.7646	-50.8244	0.8732	-81.1362	30.375	446	0	
N3.06	C44	446	4.4 1.2D + 1L	Combination	Max		1.33	-188.6789	19.7646	-50.8244	0.8732	-13.5398	4.0881	446	1.33	
N3.06	C44	446	4.4 1.2D + 1L	Combination	Max		2.66	-182.6688	19.7646	-50.8244	0.8732	66.4908	-19.2169	446	2.66	
N3.06	C44	446	4.4 1.2D + 1L	Combination	Min		0	-213.928	16.0507	-63.8406	-0.4398	-103.3252	23.4779	446	0	
N3.06	C44	446	4.4 1.2D + 1L	Combination	Min		1.33	-207.9179	16.0507	-63.8406	-0.4398	-18.4172	2.1305	446	1.33	
N3.06	C44	446	4.4 1.2D + 1L	Combination	Min		2.66	-201.9077	16.0507	-63.8406	-0.4398	54.0566	-22.1987	446	2.66	
N3.06	C44	446	4.5 1.2D + 1L	Combination	Max		0	-193.0827	10.0142	27.0245	0.7128	51.0684	12.8066	446	0	
N3.06	C44	446	4.5 1.2D + 1L	Combination	Max		1.33	-187.0725	10.0142	27.0245	0.7128	15.1457	-0.4957	446	1.33	
N3.06	C44	446	4.5 1.2D + 1L	Combination	Max		2.66	-181.0623	10.0142	27.0245	0.7128	52.6103	-7.7049	446	2.66	
N3.06	C44	446	4.5 1.2D + 1L	Combination	Min		0	-359.8474	2.515	-49.2158	-0.8994	-78.319	-1.0361	446	0	
N3.06	C44	446	4.5 1.2D + 1L	Combination	Min		1.33	-353.8372	2.515	-49.2158	-0.8994	-12.8819	-4.3976	446	1.33	
N3.06	C44	446	4.5 1.2D + 1L	Combination	Min		2.66	-347.8271	2.515	-49.2158	-0.8994	-20.832	-13.8523	446	2.66	
N3.06	C44	446	4.6 1.2D + 1L	Combination	Max		0	-193.0827	10.0142	27.0245	0.7128	51.0684	12.8066	446	0	
N3.06	C44	446	4.6 1.2D + 1L	Combination	Max		1.33	-187.0725	10.0142	27.0245	0.7128	15.1457	-0.4957	446	1.33	
N3.06	C44	446	4.6 1.2D + 1L	Combination	Max		2.66	-181.0623	10.0142	27.0245	0.7128	52.6103	-7.7049	446	2.66	
N3.06	C44	446	4.6 1.2D + 1L	Combination	Min		0	-359.8474	2.515	-49.2158	-0.8994	-78.319	-1.0361	446	0	
N3.06	C44	446	4.6 1.2D + 1L	Combination	Min		1.33	-353.8372	2.515	-49.2158	-0.8994	-12.8819	-4.3976	446	1.33	
N3.06	C44	446	4.6 1.2D + 1L	Combination	Min		2.66	-347.8271	2.515	-49.2158	-0.8994	-20.832	-13.8523	446	2.66	
N3.06	C44	446	5.1 0.9D + (1(	Combination	Max		0	-317.6115	45.8344	13.9334	0.5763	27.2428	80.1314	446	0	
N3.06	C44	446	5.1 0.9D + (1(	Combination	Max		1.33	-313.1039	45.8344	13.9334	0.5763	8.7114	19.1716	446	1.33	
N3.06	C44	446	5.1 0.9D + (1(	Combination	Max		2.66	-308.5962	45.8344	13.9334	0.5763	-2.5122	-40.0357	446	2.66	
N3.06	C44	446	5.1 0.9D + (1(	Combination	Min		0	-328.9186	43.6517	6.2835	-0.1954	14.2019	76.0779	446	0	
N3.06	C44	446	5.1 0.9D + (1(	Combination	Min		1.33	-324.411	43.6517	6.2835	-0.1954	5.8448	18.0211	446	1.33	
N3.06	C44	446	5.1 0.9D + (1(	Combination	Min		2.66	-319.9033	43.6517	6.2835	-0.1954	-9.82	-41.7882	446	2.66	
N3.06	C44	446	5.2 0.9D + (1(	Combination	Max		0	-252.6404	46.3714	-11.4416	1.0036	-15.8859	81.012	446	0	
N3.06	C44	446	5.2 0.9D + (1(	Combination	Max		1.33	-248.1328	46.3714	-11.4416	1.0036	-0.6685	19.338	446	1.33	
N3.06	C44	446	5.2 0.9D + (1(	Combination	Max		2.66	-243.6252	46.3714	-11.4416	1.0036	27.4943	-39.2315	446	2.66	
N3.06	C44	446	5.2 0.9D + (1(	Combination	Min		0	-272.6705	42.5048	-24.9931	-0.3633	-38.9873	73.8313	446	0	
N3.06	C44	446	5.2 0.9D + (1(	Combination	Min		1.33	-268.1629	42.5048	-24.9931	-0.3633	-5.7465	17.2999	446	1.33	
N3.06	C44	446	5.2 0.9D + (1(	Combination	Min		2.66	-263.6553	42.5048	-24.9931	-0.3633	14.5488	-42.3359	446	2.66	

N3.06	C44	446	5.3	0.9D - (1C	Combination	Max	0	-64.6054	-35.4794	-20.8778	0.0803	-31.9793	-68.4153	446	0
N3.06	C44	446	5.3	0.9D - (1C	Combination	Max	1.33	-60.0978	-35.4794	-20.8778	0.0803	-4.2119	-21.2277	446	1.33
N3.06	C44	446	5.3	0.9D - (1C	Combination	Max	2.66	-55.5902	-35.4794	-20.8778	0.0803	30.8634	27.7124	446	2.66
N3.06	C44	446	5.3	0.9D - (1C	Combination	Min	0	-75.9125	-37.6621	-28.5277	-0.6914	-45.0202	-72.4688	446	0
N3.06	C44	446	5.3	0.9D - (1C	Combination	Min	1.33	-71.4049	-37.6621	-28.5277	-0.6914	-7.0784	-22.3782	446	1.33
N3.06	C44	446	5.3	0.9D - (1C	Combination	Min	2.66	-66.8973	-37.6621	-28.5277	-0.6914	23.5556	25.96	446	2.66
N3.06	C44	446	5.4	0.9D - (1C	Combination	Max	0	-120.8535	-34.3325	10.3988	0.2482	21.2099	-66.1687	446	0
N3.06	C44	446	5.4	0.9D - (1C	Combination	Max	1.33	-116.3459	-34.3325	10.3988	0.2482	7.3795	-20.5065	446	1.33
N3.06	C44	446	5.4	0.9D - (1C	Combination	Max	2.66	-111.8382	-34.3325	10.3988	0.2482	6.4946	28.2602	446	2.66
N3.06	C44	446	5.4	0.9D - (1C	Combination	Min	0	-140.8836	-38.1991	-3.1527	-1.1187	-1.8916	-73.3494	446	0
N3.06	C44	446	5.4	0.9D - (1C	Combination	Min	1.33	-136.376	-38.1991	-3.1527	-1.1187	2.3015	-22.5446	446	1.33
N3.06	C44	446	5.4	0.9D - (1C	Combination	Min	2.66	-131.8684	-38.1991	-3.1527	-1.1187	-6.4509	25.1557	446	2.66
N3.06	C44	446	5.5	0.9D + Ex	Combination	Max	0	-106.3902	37.8662	4.9944	1.0011	11.938	65.3361	446	0
N3.06	C44	446	5.5	0.9D + Ex	Combination	Max	1.33	-101.8826	37.8662	4.9944	1.0011	5.3082	14.9978	446	1.33
N3.06	C44	446	5.5	0.9D + Ex	Combination	Max	2.66	-97.375	37.8662	4.9944	1.0011	22.4003	21.34	446	2.66
N3.06	C44	446	5.5	0.9D + Ex	Combination	Min	0	-287.1338	-29.6939	-19.5887	-1.1162	-29.7154	-57.6735	446	0
N3.06	C44	446	5.5	0.9D + Ex	Combination	Min	1.33	-282.6262	-29.6939	-19.5887	-1.1162	-3.6752	-18.2043	446	1.33
N3.06	C44	446	5.5	0.9D + Ex	Combination	Min	2.66	-278.1186	-29.6939	-19.5887	-1.1162	-1.3569	-35.4158	446	2.66
N3.06	C44	446	5.6	0.9D - Ex	Combination	Max	0	-106.3902	37.8662	4.9944	1.0011	11.938	65.3361	446	0
N3.06	C44	446	5.6	0.9D - Ex	Combination	Max	1.33	-101.8826	37.8662	4.9944	1.0011	5.3082	14.9978	446	1.33
N3.06	C44	446	5.6	0.9D - Ex	Combination	Max	2.66	-97.375	37.8662	4.9944	1.0011	22.4003	21.34	446	2.66
N3.06	C44	446	5.6	0.9D - Ex	Combination	Min	0	-287.1338	-29.6939	-19.5887	-1.1162	-29.7154	-57.6735	446	0
N3.06	C44	446	5.6	0.9D - Ex	Combination	Min	1.33	-282.6262	-29.6939	-19.5887	-1.1162	-3.6752	-18.2043	446	1.33
N3.06	C44	446	5.6	0.9D - Ex	Combination	Min	2.66	-278.1186	-29.6939	-19.5887	-1.1162	-1.3569	-35.4158	446	2.66
N3.06	C44	446	6.1	0.9D + (1(	Combination	Max	0	-321.7185	17.6953	44.2132	0.1558	78.7088	28.9126	446	0
N3.06	C44	446	6.1	0.9D + (1(	Combination	Max	1.33	-317.2109	17.6953	44.2132	0.1558	19.9052	5.3778	446	1.33
N3.06	C44	446	6.1	0.9D + (1(	Combination	Max	2.66	-312.7033	17.6953	44.2132	0.1558	-32.5402	-16.6322	446	2.66
N3.06	C44	446	6.1	0.9D + (1(	Combination	Min	0	-331.5563	15.7963	37.5574	-0.5156	67.3626	25.3858	446	0
N3.06	C44	446	6.1	0.9D + (1(	Combination	Min	1.33	-327.0487	15.7963	37.5574	-0.5156	17.4112	4.3768	446	1.33
N3.06	C44	446	6.1	0.9D + (1(	Combination	Min	2.66	-322.5411	15.7963	37.5574	-0.5156	-38.8984	-18.157	446	2.66
N3.06	C44	446	6.2	0.9D + (1(	Combination	Max	0	-259.299	-5.7	45.4478	0.2889	80.8112	-13.7614	446	0
N3.06	C44	446	6.2	0.9D + (1(	Combination	Max	1.33	-254.7914	-5.7	45.4478	0.2889	20.3656	-6.1805	446	1.33
N3.06	C44	446	6.2	0.9D + (1(	Combination	Max	2.66	-250.2838	-5.7	45.4478	0.2889	-27.6458	4.3823	446	2.66
N3.06	C44	446	6.2	0.9D + (1(	Combination	Min	0	-278.5379	-9.4138	32.4316	-1.0241	58.6223	-20.6585	446	0
N3.06	C44	446	6.2	0.9D + (1(	Combination	Min	1.33	-274.0303	-9.4138	32.4316	-1.0241	15.4882	-8.1381	446	1.33
N3.06	C44	446	6.2	0.9D + (1(	Combination	Min	2.66	-269.5227	-9.4138	32.4316	-1.0241	-40.0799	1.4005	446	2.66
N3.06	C44	446	6.3	0.9D - (1C	Combination	Max	0	-61.9677	-7.6239	-52.1517	0.4005	-85.14	-17.7232	446	0
N3.06	C44	446	6.3	0.9D - (1C	Combination	Max	1.33	-57.4601	-7.6239	-52.1517	0.4005	-15.7782	-7.5834	446	1.33
N3.06	C44	446	6.3	0.9D - (1C	Combination	Max	2.66	-52.9525	-7.6239	-52.1517	0.4005	59.9418	4.0812	446	2.66
N3.06	C44	446	6.3	0.9D - (1C	Combination	Min	0	-71.8055	-9.523	-58.8075	-0.2709	-96.4863	-21.25	446	0
N3.06	C44	446	6.3	0.9D - (1C	Combination	Min	1.33	-67.2979	-9.523	-58.8075	-0.2709	-18.2723	-8.5844	446	1.33
N3.06	C44	446	6.3	0.9D - (1C	Combination	Min	2.66	-62.7903	-9.523	-58.8075	-0.2709	53.5836	2.5565	446	2.66
N3.06	C44	446	6.4	0.9D - (1C	Combination	Max	0	-114.9861	17.5861	-47.0259	0.909	-76.3997	28.321	446	0
N3.06	C44	446	6.4	0.9D - (1C	Combination	Max	1.33	-110.4785	17.5861	-47.0259	0.909	-13.8552	4.9315	446	1.33
N3.06	C44	446	6.4	0.9D - (1C	Combination	Max	2.66	-105.9708	17.5861	-47.0259	0.909	61.1233	-15.4762	446	2.66
N3.06	C44	446	6.4	0.9D - (1C	Combination	Min	0	-134.225	13.8723	-60.0421	-0.404	-98.5887	21.424	446	0
N3.06	C44	446	6.4	0.9D - (1C	Combination	Min	1.33	-129.7174	13.8723	-60.0421	-0.404	-18.7327	2.9739	446	1.33
N3.06	C44	446	6.4	0.9D - (1C	Combination	Min	2.66	-125.2098	13.8723	-60.0421	-0.404	48.6892	-18.458	446	2.66
N3.06	C44	446	6.5	0.9D + Ey	Combination	Max	0	-113.3796	7.8358	30.823	0.7486	55.805	10.7526	446	0
N3.06	C44	446	6.5	0.9D + Ey	Combination	Max	1.33	-108.872	7.8358	30.823	0.7486	14.8303	0.3477	446	1.33
N3.06	C44	446	6.5	0.9D + Ey	Combination	Max	2.66	-104.3644	7.8358	30.823	0.7486	47.2429	-3.9642	446	2.66
N3.06	C44	446	6.5	0.9D + Ey	Combination	Min	0	-280.1444	0.3365	-45.4173	-0.8637	-73.5824	-3.09	446	0
N3.06	C44	446	6.5	0.9D + Ey	Combination	Min	1.33	-275.6368	0.3365	-45.4173	-0.8637	-13.1973	-3.5543	446	1.33
N3.06	C44	446	6.5	0.9D + Ey	Combination	Min	2.66	-271.1291	0.3365	-45.4173	-0.8637	-26.1995	-10.1116	446	2.66
N3.06	C44	446	6.6	0.9D - Ey	Combination	Max	0	-113.3796	7.8358	30.823	0.7486	55.805	10.7526	446	0
N3.06	C44	446	6.6	0.9D - Ey	Combination	Max	1.33	-108.872	7.8358	30.823	0.7486	14.8303	0.3477	446	1.33
N3.06	C44	446	6.6	0.9D - Ey	Combination	Max	2.66	-104.3644	7.8358	30.823	0.7486	47.2429	-3.9642	446	2.66
N3.06	C44	446	6.6	0.9D - Ey	Combination	Min	0	-280.1444	0.3365	-45.4173	-0.8637	-73.5824	-3.09	446	0
N3.06	C44	446	6.6	0.9D - Ey	Combination	Min	1.33	-275.6368	0.3365	-45.4173	-0.8637	-13.1973	-3.5543	446	1.33
N3.06	C44	446	6.6	0.9D - Ey	Combination	Min	2.66	-271.1291	0.3365	-45.4173	-0.8637	-26.1995	-10.1116	446	2.66
N3.06	C44	446	3.3	1.2D + 1L	Combination	Max	0	-144.3084	-33.301	-24.6763	0.0445	-36.7159	-66.3614	446	0
N3.06	C44	446	3.3	1.2D + 1L	Combination	Max	1.33	-138.2983	-33.301	-24.6763	0.0445	-3.8964	-22.0711	446	1.33
N3.06	C44	446	3.3	1.2D + 1L	Combination	Max	2.66	-132.2881	-33.301	-24.6763	0.0445	36.2308	23.9717	446	2.66
N3.06	C44	446	3.3	1.2D + 1L	Combination	Min	0	-155.6155	-35.4837	-32.3262	-0.7272	-49.7568	-70.4149	446	0
N3.06	C44	446	3.3	1.2D + 1L	Combination	Min	1.33	-149.6054	-35.4837	-32.3262	-0.7272	-6.763	-23.2216	446	1.33
N3.06	C44	446	3.3	1.2D + 1L	Combination	Min	2.66	-143.5952	-35.4837	-32.3262	-0.7272	28.9231	22.2193	446	2.66
N3.06	C44	446	4.1	1.2D + 1L	Combination	Max	0	-401.4215	19.8738	40.4147	0.12	73.9723	30.9665	446	0
N3.06	C44	446	4.1	1.2D + 1L	Combination	Max	1.33	-395.4114	19.8738	40.4147	0.12	20.2207	4.5344	446	1.33
N3.06	C44	446	4.1	1.2D + 1L	Combination	Max	2.66	-389.4012	19.8738	40.4147	0.12	-27.1728	-20.3729	446	2.66
N3.06	C44	446	4.1	1.2D + 1L	Combination	Min	0	-411.2593	17.9747	33.7589	-0.5513	62.626	27.4397	446	0
N3.06	C44	446	4.1	1.2D + 1L	Combination	Min	1.33	-405.2492	17.9747	33.7589	-0.5513	17.7266	3.5334	446	1.33
N3.06	C44	446	4.1	1.2D + 1L	Combination	Min	2.66	-399.239	17.9747	33.7589	-0.5513	-33.5309	-21.8977	446	2.66

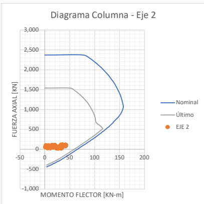
Propiedades de Columna				
f'c =	24	Mpa	Beta1 =	0.85
fy =	420	Mpa	d' =	0.06 m
b =	0.35	m	d =	0.29 m
As =	5.56	cm²	h =	0.35 m
Altura Libre =	2.66	m		
As' =	5.56	cm²	Po =	2966.04 kN
Recubrimiento eje =	0.06	m	0.8øPo =	1542.34 kN
Mod Elástico Acero =	200000	Mpa		2372.83 kN

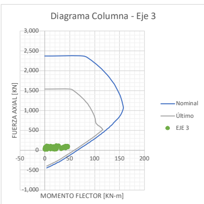
Aceros Longitudinales Colocados			
	Φ	n barras	Área
Esquina	20 mm	4	12.57 cm²
Interior	18 mm	4	10.18 cm²
Total			**22.75 cm²**

Cuantías Columnas		
As min	12.25 cm²	Cumple
As máx	30.63 cm²	Cumple

Estribos Detalles			
Zona Conf.	45.00 cm	176.00 cm	45.00 cm
S ≤	8.75 cm	15.00 cm	8.75 cm
Estribos =	Φ	n ramales	Área
	10	3	2.36 cm2

Estribos Confinamiento			
s =	4.50 cm		4.50 cm
Ash =	2.33 cm2		2.33 cm2
	Cumple		Cumple
Av/m =	**51.88 cm²/m**		**51.88 cm²/m** COMPARAR ETABS





c[m]	a (sin cond)	a[m]	fs'[MPa] sin cond	fs' [MPa]	fs (sin cond)	fs[MPa]	def unit As	Mn[KNm]	Pn[KN]	Pn[KN]	ø	ØMn	ØPn	P	M2	M3
0.0035	0.00	0.00	-9,685.714	-420.000	49,114.286	420.000	0.245571	3.6857	-445.7985	-445.7985	0.9	3.32	-401.22	88.3604	5.4293	14.4098
0.007	0.01	0.01	-4,542.857	-420.000	24,257.143	420.000	0.121286	7.3081	-424.5570	-424.5570	0.9	6.58	-382.10	82.9919	5.4293	14.4098
0.0105	0.01	0.01	-2,828.571	-420.000	15,971.429	420.000	0.079857	10.8674	-403.3155	-403.3155	0.9	9.78	-362.98	77.6235	5.4293	14.4098
0.014	0.01	0.01	-1,971.429	-420.000	11,828.571	420.000	0.059143	14.3635	-382.0740	-382.0740	0.9	12.93	-343.87	95.7973	7.0629	16.9481
0.0175	0.01	0.01	-1,457.143	-420.000	9,342.857	420.000	0.046714	17.7964	-360.8325	-360.8325	0.9	16.02	-324.75	91.1958	7.0629	16.9481
0.021	0.02	0.02	-1,114.286	-420.000	7,685.714	420.000	0.038429	21.1661	-339.5910	-339.5910	0.9	19.05	-305.63	86.5942	7.0629	16.9481
0.0245	0.02	0.02	-869.388	-420.000	6,502.041	420.000	0.032510	24.4726	-318.3495	-318.3495	0.9	22.03	-286.51	82.2374	5.5512	13.8973
0.028	0.02	0.02	-685.714	-420.000	5,614.286	420.000	0.028071	27.7159	-297.1080	-297.1080	0.9	24.94	-267.40	77.6359	5.5512	13.8973
0.0315	0.03	0.03	-542.857	-420.000	4,923.810	420.000	0.024619	30.8960	-275.8665	-275.8665	0.9	27.81	-248.28	73.0343	5.5512	13.8973
0.035	0.03	0.03	-428.571	-420.000	4,371.429	420.000	0.021857	34.0130	-254.6250	-254.6250	0.9	30.61	-229.16	82.0612	5.441	13.8138
0.0385	0.03	0.03	-335.065	-335.065	3,919.481	420.000	0.019597	42.4974	-186.1596	-186.1596	0.9	38.25	-167.54	77.4597	5.441	13.8138
0.042	0.04	0.04	-257.143	-257.143	3,542.857	420.000	0.017714	50.4703	-121.5934	-121.5934	0.9	45.42	-109.43	72.8582	5.441	13.8138
0.0455	0.04	0.04	-191.209	-191.209	3,224.176	420.000	0.016121	57.6135	-63.6926	-63.6926	0.9	51.85	-57.32	114.1974	41.372	27.3579
0.049	0.04	0.04	-134.694	-134.694	2,951.020	420.000	0.014755	64.0912	-11.0288	-11.0288	0.9	57.68	-9.93	109.5959	41.372	27.3579
0.0525	0.04	0.04	-85.714	-85.714	2,714.286	420.000	0.013571	70.0239	37.4454	37.4454	0.9	63.02	33.70	104.9944	41.372	27.3579
0.056	0.05	0.05	-42.857	-42.857	2,507.143	420.000	0.012536	75.5020	82.5154	82.5154	0.9	67.95	74.26	117.1565	35.3261	22.8109
0.0595	0.05	0.05	-5.042	-5.042	2,324.370	420.000	0.011622	80.5944	124.7821	124.7821	0.9	72.53	112.30	112.555	35.3261	22.8109
0.063	0.05	0.05	28.571	28.571	2,161.905	420.000	0.010810	85.3550	164.7127	164.7127	0.9	76.82	148.24	107.9535	35.3261	22.8109
0.0665	0.06	0.06	58.647	58.647	2,016.541	420.000	0.010083	89.8262	202.6760	202.6760	0.9	80.84	182.41	103.7728	42.6361	11.6679
0.07	0.06	0.06	85.714	85.714	1,885.714	420.000	0.009429	94.0419	238.9671	238.9671	0.9	84.64	215.07	99.1712	42.6361	11.6679
0.0735	0.06	0.06	110.204	110.204	1,767.347	420.000	0.008837	98.0296	273.8250	273.8250	0.9	88.23	246.44	94.5697	42.6361	11.6679
0.077	0.07	0.07	132.468	132.468	1,659.740	420.000	0.008299	101.8117	307.4449	307.4449	0.9	91.63	276.70	109.0147	31.9261	3.6132
0.0805	0.07	0.07	152.795	152.795	1,561.491	420.000	0.007807	105.4069	339.9885	339.9885	0.9	94.87	305.99	104.4132	31.9261	3.6132
0.084	0.07	0.07	171.429	171.429	1,471.429	420.000	0.007357	108.8305	371.5903	371.5903	0.9	97.95	334.43	99.8117	31.9261	3.6132
0.0875	0.07	0.07	188.571	188.571	1,388.571	420.000	0.006943	112.0957	402.3632	402.3632	0.9	100.89	362.13	46.8057	24.5443	4.7408
0.091	0.08	0.08	204.396	204.396	1,312.088	420.000	0.006560	115.2133	432.4030	432.4030	0.9	103.69	389.16	42.2042	24.5443	4.7408
0.0945	0.08	0.08	219.048	219.048	1,241.270	420.000	0.006206	118.1928	461.7910	461.7910	0.9	106.37	415.61	37.6026	24.5443	4.7408
0.098	0.08	0.08	232.653	232.653	1,175.510	420.000	0.005878	121.0421	490.5971	490.5971	0.9	108.94	441.54	49.7648	30.5901	0.1939
0.1015	0.09	0.09	245.320	245.320	1,114.286	420.000	0.005571	123.7683	518.8815	518.8815	0.9	111.39	466.99	45.1633	30.5901	0.1939
0.105	0.09	0.09	257.143	257.143	1,057.143	420.000	0.005286	126.3773	546.6964	546.6964	0.9	113.74	492.03	40.5618	30.5901	0.1939
0.1085	0.09	0.09	268.203	268.203	1,003.687	420.000	0.005018	128.8744	574.0872	574.0872	0.9	115.99	516.68	54.9475	21.1443	23.9386
0.112	0.10	0.10	278.571	278.571	953.571	420.000	0.004768	131.2640	601.0937	601.0937	0.88	115.51	528.96	50.346	21.1443	23.9386
0.1155	0.10	0.10	288.312	288.312	906.494	420.000	0.004532	133.5503	627.7508	627.7508	0.8597	114.81	539.67	45.7445	21.1443	23.9386
0.119	0.10	0.10	297.479	297.479	862.185	420.000	0.004311	135.7367	654.0893	654.0893	0.8406	114.10	549.83	60.1895	31.8542	15.8839
0.1225	0.10	0.10	306.122	306.122	820.408	420.000	0.004102	137.8265	680.1366	680.1366	0.8226	113.37	559.47	55.588	31.8542	15.8839
0.14	0.12	0.12	342.857	342.857	642.857	420.000	0.003214	146.9128	806.7686	806.7686	0.7461	109.61	601.90	50.9864	31.8542	15.8839
0.1575	0.13	0.13	371.429	371.429	504.762	420.000	0.002524	153.8974	928.8618	928.8618	0.6865	105.66	637.70	58.2125	30.7875	21.3775
0.175	0.15	0.15	394.286	394.286	394.286	394.286	0.001971	157.2926	1,062.0750	1,062.0750	0.65	102.24	690.35	53.611	30.7875	21.3775
0.1925	0.16	0.16	412.987	412.987	303.896	303.896	0.001519	154.7068	1,228.9370	1,228.9370	0.65	100.56	798.81	49.0095	30.7875	21.3775
0.21	0.18	0.18	428.571	420.000	228.571	228.571	0.001143	150.7572	1,380.9243	1,380.9243	0.65	97.99	897.60	105.7497	20.0057	6.1743
0.2275	0.19	0.19	441.758	420.000	164.835	164.835	0.000824	145.5202	1,522.5691	1,522.5691	0.65	94.59	989.67	101.1482	20.0057	6.1743
0.245	0.21	0.21	453.061	420.000	110.204	110.204	0.000551	139.2856	1,659.1515	1,659.1515	0.65	90.54	1078.45	96.5466	20.0057	6.1743
0.2625	0.22	0.22	462.857	420.000	62.857	62.857	0.000314	131.9370	1,791.6839	1,791.6839	0.65	85.76	1164.59	58.2125	30.7875	21.3775
0.28	0.24	0.24	471.429	420.000	21.429	21.429	0.000107	123.3869	1,920.9257	1,920.9257	0.65	80.20	1248.60	53.611	30.7875	21.3775
0.2975	0.25	0.25	478.992	420.000	-15.126	-15.126	-0.000076	113.5686	2,047.4576	2,047.4576	0.65	73.82	1330.85	49.0095	30.7875	21.3775
0.315	0.27	0.27	485.714	420.000	-47.619	-47.619	-0.000238	102.4301	2,171.7312	2,171.7312	0.65	66.58	1411.63	105.7497	20.0057	6.1743
0.3325	0.28	0.28	491.729	420.000	-76.692	-76.692	-0.000383	89.9306	2,294.1031	2,294.1031	0.65	58.45	1491.17	101.1482	20.0057	6.1743
0.35	0.30	0.30	497.143	420.000	-102.857	-102.857	-0.000514	76.0371	2,372.8320	2,414.8586	0.65	49.42	1542.34	96.5466	20.0057	6.1743
0.42	0.36	0.35	514.286	420.000	-185.714	-185.714	-0.000929	14.9802	2,372.8320	2,835.7771	0.65	9.74	1542.34	104.8822	19.5282	45.603
0.49	0.42	0.35	526.531	420.000	-244.898	-244.898	-0.001224	11.1960	2,372.8320	2,868.6833	0.65	7.28	1542.34	100.2806	19.5282	45.603
0.56	0.48	0.35	535.714	420.000	-289.286	-289.286	-0.001446	8.3579	2,372.8320	2,893.3629	0.65	5.43	1542.34	95.6791	19.5282	45.603
0.63	0.54	0.35	542.857	420.000	-323.810	-323.810	-0.001619	6.1504	2,372.8320	2,912.5581	0.65	4.00	1542.34	107.4568	14.268	41.647
0.7	0.60	0.35	548.571	420.000	-351.429	-351.429	-0.001757	4.3845	2,372.8320	2,927.9143	0.65	2.85	1542.34	102.8552	14.268	41.647
0.77	0.65	0.35	553.247	420.000	-374.026	-374.026	-0.001870	2.9396	2,372.8320	2,940.4784	0.65	1.91	1542.34	98.2537	14.268	41.647
0.84	0.71	0.35	557.143	420.000	-392.857	-392.857	-0.001964	1.7355	2,372.8320	2,950.9486	0.65	1.13	1542.34	86.2194	2.5871	45.9413
0.91	0.77	0.35	560.440	420.000	-408.791	-408.791	-0.002044	0.7167	2,372.8320	2,959.8079	0.65	0.47	1542.34	81.6179	2.5871	45.9413
0.98	0.83	0.35	563.265	420.000	-422.449	-420.000	-0.002112	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	77.0164	2.5871	45.9413
1.05	0.89	0.35	565.714	420.000	-434.286	-420.000	-0.002171	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	91.2544	7.6998	38.2047
1.4	1.19	0.35	574.286	420.000	-475.714	-420.000	-0.002379	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	86.6529	7.6998	38.2047
1.75	1.49	0.35	579.429	420.000	-500.571	-420.000	-0.002503	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	82.0513	7.6998	38.2047
2.1	1.79	0.35	582.857	420.000	-517.143	-420.000	-0.002586	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	56.5055	3.4862	14.0952
2.45	2.08	0.35	585.306	420.000	-528.980	-420.000	-0.002645	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	51.904	3.4862	14.0952
2.8	2.38	0.35	587.143	420.000	-537.857	-420.000	-0.002689	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	47.3024	3.4862	14.0952
3.15	2.68	0.35	588.571	420.000	-544.762	-420.000	-0.002724	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	59.0801	8.7464	18.0513
3.5	2.98	0.35	589.714	420.000	-550.286	-420.000	-0.002751	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	54.4786	8.7464	18.0513
3.85	3.27	0.35	590.649	420.000	-554.805	-420.000	-0.002774	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	49.877	8.7464	18.0513
4.2	3.57	0.35	591.429	420.000	-558.571	-420.000	-0.002793	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	72.7079	18.4817	10.653
4.55	3.87	0.35	592.088	420.000	-561.758	-420.000	-0.002809	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	68.1063	18.4817	10.653
4.9	4.17	0.35	592.653	420.000	-564.490	-420.000	-0.002822	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	63.5048	18.4817	10.653
5.25	4.46	0.35	593.143	420.000	-566.857	-420.000	-0.002834	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	77.7428	8.1948	18.3896
5.6	4.76	0.35	593.571	420.000	-568.929	-420.000	-0.002845	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	73.1413	8.1948	18.3896
5.95	5.06	0.35	593.950	420.000	-570.756	-420.000	-0.002854	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	68.5397	8.1948	18.3896
6.3	5.36	0.35	594.286	420.000	-572.381	-420.000	-0.002862	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	66.5851	12.7436	37.2054
6.65	5.65	0.35	594.586	420.000	-573.835	-420.000	-0.002869	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	61.9836	12.7436	37.2054
7	5.95	0.35	594.857	420.000	-575.143	-420.000	-0.002876	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	57.3821	12.7436	37.2054
7.35	6.25	0.35	595.102	420.000	-576.327	-420.000	-0.002882	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	97.3771	1.9618	9.6536
7.7	6.55	0.35	595.325	420.000	-577.403	-420.000	-0.002887	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	92.7756	1.9618	9.6536
8.05	6.84	0.35	595.528	420.000	-578.385	-420.000	-0.002892	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	88.1741	1.9618	9.6536
8.4	7.14	0.35	595.714	420.000	-579.286	-420.000	-0.002896	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	66.5851	12.7436	37.2054
8.75	7.44	0.35	595.886	420.000	-580.114	-420.000	-0.002901	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	61.9836	12.7436	37.2054
9.1	7.74	0.35	596.044	420.000	-580.879	-420.000	-0.002904	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	57.3821	12.7436	37.2054
9.45	8.03	0.35	596.190	420.000	-581.587	-420.000	-0.002908	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	97.3771	1.9618	9.6536
9.8	8.33	0.35	596.327	420.000	-582.245	-420.000	-0.002911	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	92.7756	1.9618	9.6536
10.15	8.63	0.35	596.453	420.000	-582.857	-420.000	-0.002914	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	88.1741	1.9618	9.6536
10.5	8.93	0.35	596.571	420.000	-583.429	-420.000	-0.002917	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	89.0194	39.4713	22.8454
10.85	9.22	0.35	596.682	420.000	-583.963	-420.000	-0.002920	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	85.5682	39.4713	22.8454
11.2	9.52	0.35	596.786	420.000	-584.464	-420.000	-0.002922	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	82.1171	39.4713	22.8454
11.55	9.82	0.35	596.883	420.000	-584.935	-420.000	-0.002925	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	91.9785	33.4255	18.2985
15.05	12.79	0.35	597.608	420.000	-588.439	-420.000	-0.002942	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	88.5274	33.4255	18.2985
18.55	15.77	0.35	598.059	420.000	-590.620	-420.000	-0.002953	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	85.0762	33.4255	18.2985
22.05	18.74	0.35	598.367	420.000	-592.109	-420.000	-0.002961	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	78.5947	40.7354	7.1554
25.55	21.72	0.35	598.591	420.000	-593.190	-420.000	-0.002966	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	75.1436	40.7354	7.1554
29.05	24.69	0.35	598.761	420.000	-594.010	-420.000	-0.002970	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	71.6924	40.7354	7.1554
32.55	27.67	0.35	598.894	420.000	-594.654	-420.000	-0.002973	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	83.8367	30.0255	0.8993
36.05	30.64	0.35	599.001	420.000	-595.173	-420.000	-0.002976	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	80.3856	30.0255	0.8993
39.55	33.62	0.35	599.090	420.000	-595.601	-420.000	-0.002978	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	76.9344	30.0255	0.8993
43.05	36.59	0.35	599.164	420.000	-595.958	-420.000	-0.002980	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	21.6277	26.4449	0.2284
46.55	39.57	0.35	599.227	420.000	-596.262	-420.000	-0.002981	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	18.1765	26.4449	0.2284
50.05	42.54	0.35	599.281	420.000	-596.523	-420.000	-0.002983	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	14.7254	26.4449	0.2284
53.55	45.52	0.35	599.328	420.000	-596.751	-420.000	-0.002984	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	24.5868	32.4908	4.3186
57.05	48.49	0.35	599.369	420.000	-596.950	-420.000	-0.002985	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	21.1356	32.4908	4.3186
60.55	51.47	0.35	599.405	420.000	-597.126	-420.000	-0.002986	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	17.6845	32.4908	4.3186
64.05	54.44	0.35	599.438	420.000	-597.283	-420.000	-0.002986	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	29.7695	23.0449	19.4262
67.55	57.42	0.35	599.467	420.000	-597.424	-420.000	-0.002987	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	26.3183	23.0449	19.4262
71.05	60.39	0.35	599.493	420.000	-597.551	-420.000	-0.002988	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	22.8672	23.0449	19.4262
74.55	63.37	0.35	599.517	420.000	-597.666	-420.000	-0.002988	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	35.0115	33.7549	11.3714
78.05	66.34	0.35	599.539	420.000	-597.771	-420.000	-0.002989	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	31.5603	33.7549	11.3714
81.55	69.32	0.35	599.559	420.000	-597.866	-420.000	-0.002989	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	28.1092	33.7549	11.3714
85.05	72.29	0.35	599.577	420.000	-597.954	-420.000	-0.002990	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	33.0345	28.8869	16.865
88.55	75.27	0.35	599.593	420.000	-598.035	-420.000	-0.002990	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	29.5834	28.8869	16.865
92.05	78.24	0.35	599.609	420.000	-598.110	-420.000	-0.002991	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	26.1322	28.8869	16.865
95.55	81.22	0.35	599.623	420.000	-598.179	-420.000	-0.002991	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	80.5717	21.9063	1.6618
99.05	84.19	0.35	599.637	420.000	-598.243	-420.000	-0.002991	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	77.1205	21.9063	1.6618
102.55	87.17	0.35	599.649	420.000	-598.303	-420.000	-0.002992	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	73.6694	21.9063	1.6618
106.05	90.14	0.35	599.661	420.000	-598.359	-420.000	-0.002992	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	33.0345	28.8869	16.865
109.55	93.12	0.35	599.671	420.000	-598.412	-420.000	-0.002992	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	29.5834	28.8869	16.865
113.05	96.09	0.35	599.682	420.000	-598.461	-420.000	-0.002992	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	26.1322	28.8869	16.865
116.55	99.07	0.35	599.691	420.000	-598.507	-420.000	-0.002993	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	80.5717	21.9063	1.6618
120.05	102.04	0.35	599.700	420.000	-598.551	-420.000	-0.002993	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	77.1205	21.9063	1.6618
123.55	105.02	0.35	599.709	420.000	-598.592	-420.000	-0.002993	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	73.6694	21.9063	1.6618
127.05	107.99	0.35	599.717	420.000	-598.630	-420.000	-0.002993	0.0000	2,372.8320	2,966.0400	0.65	0.00	1542.34	79.7041	17.6276	41.0906
														76.253	17.6276	41.0906
														72.8018	17.6276	41.0906
														82.2787	12.3674	37.1345
														78.8276	12.3674	37.1345
														75.3764	12.3674	37.1345
														61.0414	0.6864	41.4289
														57.5903	0.6864	41.4289
														54.1391	0.6864	41.4289
														66.0763	9.6005	33.6923
														62.6252	9.6005	33.6923
														59.1741	9.6005	33.6923
														31.3274	5.3868	18.6076
														27.8763	5.3868	18.6076
														24.4252	5.3868	18.6076
														33.902	10.647	22.5637
														30.4509	10.647	22.5637
														26.9998	10.647	22.5637
														47.5298	16.581	15.1654
														44.0787	16.581	15.1654
														40.6275	16.581	15.1654
														52.5648	6.2941	22.902
														49.1136	6.2941	22.902
														45.6625	6.2941	22.902
														41.4071	10.843	32.6929
														37.956	10.843	32.6929
														34.5048	10.843	32.6929
														72.1991	3.8624	14.1661
														68.7479	3.8624	14.1661
														65.2968	3.8624	14.1661
														41.4071	10.843	32.6929
														37.956	10.843	32.6929
														34.5048	10.843	32.6929
														72.1991	3.8624	14.1661
														68.7479	3.8624	14.1661
														65.2968	3.8624	14.1661
														46.8057	24.5443	4.7408
														42.2042	24.5443	4.7408
														37.6026	24.5443	4.7408
														49.7648	30.5901	0.1939
														45.1633	30.5901	0.1939
														40.5618	30.5901	0.1939
														104.8822	19.5282	45.603
														100.2806	19.5282	45.603
														95.6791	19.5282	45.603
														107.4568	14.268	41.647
														102.8552	14.268	41.647
														98.2537	14.268	41.647

TABLE: Element Forces - Columns

Story	Column	Unique Name	Output Case	Case Type	Step Type	Step Number	Station	P	V2	V3	T	M2	M3	Element	Elem Station	Location
							m	kN	kN	kN	kN-m	kN-m	kN-m		m	
N3.06	C1	506	1. 1.4D	Combination			0	-88.3604	5.4293	14.4098	-0.0525	12.8041	5.4858	506	0	
N3.06	C1	506	1. 1.4D	Combination			1.33	-82.9919	5.4293	14.4098	-0.0525	-6.3609	-1.7352	506	1.33	
N3.06	C1	506	1. 1.4D	Combination			2.66	-77.6235	5.4293	14.4098	-0.0525	-25.5259	-8.9562	506	2.66	
N3.06	C1	506	2. 1.2D + 1.6L	Combination			0	-95.7973	7.0629	16.9481	-0.0767	14.7493	7.2073	506	0	
N3.06	C1	506	2. 1.2D + 1.6L	Combination			1.33	-91.1958	7.0629	16.9481	-0.0767	-7.7917	-2.1863	506	1.33	
N3.06	C1	506	2. 1.2D + 1.6L	Combination			2.66	-86.5942	7.0629	16.9481	-0.0767	-30.3326	-11.5799	506	2.66	
N3.06	C1	506	2. 1.2D + 1.6L	Combination			0	-82.2374	5.5512	13.8973	-0.0566	12.2424	5.6339	506	0	
N3.06	C1	506	2. 1.2D + 1.6L	Combination			1.33	-77.6359	5.5512	13.8973	-0.0566	-6.2409	-1.7492	506	1.33	
N3.06	C1	506	2. 1.2D + 1.6L	Combination			2.66	-73.0343	5.5512	13.8973	-0.0566	-24.7243	-9.1322	506	2.66	
N3.06	C1	506	2. 1.2D + 1L +	Combination			0	-82.0612	5.441	13.8138	-0.0553	12.1754	5.5205	506	0	
N3.06	C1	506	2. 1.2D + 1L +	Combination			1.33	-77.4597	5.441	13.8138	-0.0553	-6.197	-1.7161	506	1.33	
N3.06	C1	506	2. 1.2D + 1L +	Combination			2.66	-72.8582	5.441	13.8138	-0.0553	-24.5694	-8.9526	506	2.66	
N3.06	C1	506	3.1 1.2D + 1L	Combination	Max		0	-114.1974	41.372	27.3579	0.3168	34.4293	62.1965	506	0	
N3.06	C1	506	3.1 1.2D + 1L	Combination	Max		1.33	-109.5959	41.372	27.3579	0.3168	-1.9567	7.1718	506	1.33	
N3.06	C1	506	3.1 1.2D + 1L	Combination	Max		2.66	-104.9944	41.372	27.3579	0.3168	-33.8649	-41.2948	506	2.66	
N3.06	C1	506	3.1 1.2D + 1L	Combination	Min		0	-117.1565	35.3261	22.8109	-0.1355	26.8122	52.6727	506	0	
N3.06	C1	506	3.1 1.2D + 1L	Combination	Min		1.33	-112.555	35.3261	22.8109	-0.1355	-3.5263	5.689	506	1.33	
N3.06	C1	506	3.1 1.2D + 1L	Combination	Min		2.66	-107.9535	35.3261	22.8109	-0.1355	-38.3427	-47.8529	506	2.66	
N3.06	C1	506	3.2 1.2D + 1L	Combination	Max		0	-103.7728	42.6361	11.6679	0.5673	8.1921	64.181	506	0	
N3.06	C1	506	3.2 1.2D + 1L	Combination	Max		1.33	-99.1712	42.6361	11.6679	0.5673	-7.3263	7.475	506	1.33	
N3.06	C1	506	3.2 1.2D + 1L	Combination	Max		2.66	-94.5697	42.6361	11.6679	0.5673	-14.9123	-37.6134	506	2.66	
N3.06	C1	506	3.2 1.2D + 1L	Combination	Min		0	-109.0147	31.9261	3.6132	-0.2339	-5.3013	47.31	506	0	
N3.06	C1	506	3.2 1.2D + 1L	Combination	Min		1.33	-104.4132	31.9261	3.6132	-0.2339	-10.1068	4.8483	506	1.33	
N3.06	C1	506	3.2 1.2D + 1L	Combination	Min		2.66	-99.8117	31.9261	3.6132	-0.2339	-22.8446	-49.2309	506	2.66	
N3.06	C1	506	3.3 1.2D + 1L	Combination	Max		0	-46.8057	-24.5443	4.7408	0.0261	-2.5224	-41.735	506	0	
N3.06	C1	506	3.3 1.2D + 1L	Combination	Max		1.33	-42.2042	-24.5443	4.7408	0.0261	-8.8277	-9.0911	506	1.33	
N3.06	C1	506	3.3 1.2D + 1L	Combination	Max		2.66	-37.6026	-24.5443	4.7408	0.0261	-10.6553	30.111	506	2.66	
N3.06	C1	506	3.3 1.2D + 1L	Combination	Min		0	-49.7648	-30.5901	0.1939	-0.4262	-10.1395	-51.2587	506	0	
N3.06	C1	506	3.3 1.2D + 1L	Combination	Min		1.33	-45.1633	-30.5901	0.1939	-0.4262	-10.3974	-10.5739	506	1.33	
N3.06	C1	506	3.3 1.2D + 1L	Combination	Min		2.66	-40.5618	-30.5901	0.1939	-0.4262	-15.1331	23.5529	506	2.66	
N3.06	C1	506	3.4 1.2D + 1L	Combination	Max		0	-54.9475	-21.1443	23.9386	0.1245	29.5911	-36.3723	506	0	
N3.06	C1	506	3.4 1.2D + 1L	Combination	Max		1.33	-50.346	-21.1443	23.9386	0.1245	-2.2472	-8.2504	506	1.33	
N3.06	C1	506	3.4 1.2D + 1L	Combination	Max		2.66	-45.7445	-21.1443	23.9386	0.1245	-26.1533	31.489	506	2.66	
N3.06	C1	506	3.4 1.2D + 1L	Combination	Min		0	-60.1895	-31.8542	15.8839	-0.6768	16.0978	-53.2432	506	0	
N3.06	C1	506	3.4 1.2D + 1L	Combination	Min		1.33	-55.588	-31.8542	15.8839	-0.6768	-5.0278	-10.8771	506	1.33	
N3.06	C1	506	3.4 1.2D + 1L	Combination	Min		2.66	-50.9864	-31.8542	15.8839	-0.6768	-34.0856	19.8715	506	2.66	
N3.06	C1	506	3.5 1.2D + 1L	Combination	Max		0	-58.2125	30.7875	21.3775	0.5659	24.6299	45.5211	506	0	
N3.06	C1	506	3.5 1.2D + 1L	Combination	Max		1.33	-53.611	30.7875	21.3775	0.5659	-3.7885	4.5743	506	1.33	
N3.06	C1	506	3.5 1.2D + 1L	Combination	Max		2.66	-49.0095	30.7875	21.3775	0.5659	-16.7554	18.6321	506	2.66	
N3.06	C1	506	3.5 1.2D + 1L	Combination	Min		0	-105.7497	-20.0057	6.1743	-0.6753	-0.3401	-34.5833	506	0	
N3.06	C1	506	3.5 1.2D + 1L	Combination	Min		1.33	-101.1482	-20.0057	6.1743	-0.6753	-8.5656	-7.9764	506	1.33	
N3.06	C1	506	3.5 1.2D + 1L	Combination	Min		2.66	-96.5466	-20.0057	6.1743	-0.6753	-32.2426	-36.3741	506	2.66	
N3.06	C1	506	3.6 1.2D + 1L	Combination	Max		0	-58.2125	30.7875	21.3775	0.5659	24.6299	45.5211	506	0	
N3.06	C1	506	3.6 1.2D + 1L	Combination	Max		1.33	-53.611	30.7875	21.3775	0.5659	-3.7885	4.5743	506	1.33	
N3.06	C1	506	3.6 1.2D + 1L	Combination	Max		2.66	-49.0095	30.7875	21.3775	0.5659	-16.7554	18.6321	506	2.66	
N3.06	C1	506	3.6 1.2D + 1L	Combination	Min		0	-105.7497	-20.0057	6.1743	-0.6753	-0.3401	-34.5833	506	0	
N3.06	C1	506	3.6 1.2D + 1L	Combination	Min		1.33	-101.1482	-20.0057	6.1743	-0.6753	-8.5656	-7.9764	506	1.33	
N3.06	C1	506	3.6 1.2D + 1L	Combination	Min		2.66	-96.5466	-20.0057	6.1743	-0.6753	-32.2426	-36.3741	506	2.66	
N3.06	C1	506	4.1 1.2D + 1L	Combination	Max		0	-104.8822	19.5282	45.603	0.0704	65.2506	27.7634	506	0	
N3.06	C1	506	4.1 1.2D + 1L	Combination	Max		1.33	-100.2806	19.5282	45.603	0.0704	4.5986	1.7909	506	1.33	
N3.06	C1	506	4.1 1.2D + 1L	Combination	Max		2.66	-95.6791	19.5282	45.603	0.0704	-52.1575	-18.4756	506	2.66	
N3.06	C1	506	4.1 1.2D + 1L	Combination	Min		0	-107.4568	14.268	41.647	-0.3232	58.6234	19.4773	506	0	
N3.06	C1	506	4.1 1.2D + 1L	Combination	Min		1.33	-102.8552	14.268	41.647	-0.3232	3.2329	0.5008	506	1.33	
N3.06	C1	506	4.1 1.2D + 1L	Combination	Min		2.66	-98.2537	14.268	41.647	-0.3232	-56.0534	-24.1816	506	2.66	
N3.06	C1	506	4.2 1.2D + 1L	Combination	Max		0	-86.2194	2.5871	45.9413	0.1484	66.0843	1.0499	506	0	
N3.06	C1	506	4.2 1.2D + 1L	Combination	Max		1.33	-81.6179	2.5871	45.9413	0.1484	4.9823	-2.3909	506	1.33	
N3.06	C1	506	4.2 1.2D + 1L	Combination	Max		2.66	-77.0164	2.5871	45.9413	0.1484	-48.5007	5.3269	506	2.66	
N3.06	C1	506	4.2 1.2D + 1L	Combination	Min		0	-91.2544	-7.6998	38.2047	-0.6213	53.1239	-15.1546	506	0	
N3.06	C1	506	4.2 1.2D + 1L	Combination	Min		1.33	-86.6529	-7.6998	38.2047	-0.6213	2.3116	-4.9138	506	1.33	
N3.06	C1	506	4.2 1.2D + 1L	Combination	Min		2.66	-82.0513	-7.6998	38.2047	-0.6213	-56.1197	-5.8317	506	2.66	
N3.06	C1	506	4.3 1.2D + 1L	Combination	Max		0	-56.5055	-3.4862	-14.0952	0.2138	-34.3336	-8.5395	506	0	
N3.06	C1	506	4.3 1.2D + 1L	Combination	Max		1.33	-51.904	-3.4862	-14.0952	0.2138	-15.587	-3.9029	506	1.33	
N3.06	C1	506	4.3 1.2D + 1L	Combination	Max		2.66	-47.3024	-3.4862	-14.0952	0.2138	7.0555	6.4396	506	2.66	
N3.06	C1	506	4.3 1.2D + 1L	Combination	Min		0	-59.0801	-8.7464	-18.0513	-0.1798	-40.9608	-16.8257	506	0	
N3.06	C1	506	4.3 1.2D + 1L	Combination	Min		1.33	-54.4786	-8.7464	-18.0513	-0.1798	-16.9527	-5.193	506	1.33	
N3.06	C1	506	4.3 1.2D + 1L	Combination	Min		2.66	-49.877	-8.7464	-18.0513	-0.1798	3.1596	0.7337	506	2.66	
N3.06	C1	506	4.4 1.2D + 1L	Combination	Max		0	-72.7079	18.4817	-10.653	0.5118	-28.8341	26.0924	506	0	
N3.06	C1	506	4.4 1.2D + 1L	Combination	Max		1.33	-68.1063	18.4817	-10.653	0.5118	-14.6657	1.5117	506	1.33	
N3.06	C1	506	4.4 1.2D + 1L	Combination	Max		2.66	-63.5048	18.4817	-10.653	0.5118	7.1217	-11.9103	506	2.66	
N3.06	C1	506	4.4 1.2D + 1L	Combination	Min		0	-77.7428	8.1948	-18.3896	-0.2578	-41.7945	9.8878	506	0	
N3.06	C1	506	4.4 1.2D + 1L	Combination	Min		1.33	-73.1413	8.1948	-18.3896	-0.2578	-17.3364	-1.0112	506	1.33	
N3.06	C1	506	4.4 1.2D + 1L	Combination	Min		2.66	-68.5397	8.1948	-18.3896	-0.2578	-0.4972	-23.0689	506	2.66	
N3.06	C1	506	4.5 1.2D + 1L	Combination	Max		0	-66.5851	12.7436	37.2054	0.4178	51.3312	17.0692	506	0	
N3.06	C1	506	4.5 1.2D + 1L	Combination	Max		1.33	-61.9836	12.7436	37.2054	0.4178	1.8485	0.1206	506	1.33	
N3.06	C1	506	4.5 1.2D + 1L	Combination	Max		2.66	-57.3821	12.7436	37.2054	0.4178	-1.3626	-0.9131	506	2.66	
N3.06	C1	506	4.5 1.2D + 1L	Combination	Min		0	-97.3771	-1.9618	-9.6536	-0.5272	-27.0414	-6.1315	506	0	
N3.06	C1	506	4.5 1.2D + 1L	Combination	Min		1.33	-92.7756	-1.9618	-9.6536	-0.5272	-14.2025	-3.5227	506	1.33	
N3.06	C1	506	4.5 1.2D + 1L	Combination	Min		2.66	-88.1741	-1.9618	-9.6536	-0.5272	-47.6354	-16.8289	506	2.66	
N3.06	C1	506	4.6 1.2D + 1L	Combination	Max		0	-66.5851	12.7436	37.2054	0.4178	51.3312	17.0692	506	0	
N3.06	C1	506	4.6 1.2D + 1L	Combination	Max		1.33	-61.9836	12.7436	37.2054	0.4178	1.8485	0.1206	506	1.33	
N3.06	C1	506	4.6 1.2D + 1L	Combination	Max		2.66	-57.3821	12.7436	37.2054	0.4178	-1.3626	-0.9131	506	2.66	
N3.06	C1	506	4.6 1.2D + 1L	Combination	Min		0	-97.3771	-1.9618	-9.6536	-0.5272	-27.0414	-6.1315	506	0	
N3.06	C1	506	4.6 1.2D + 1L	Combination	Min		1.33	-92.7756	-1.9618	-9.6536	-0.5272	-14.2025	-3.5227	506	1.33	
N3.06	C1	506	4.6 1.2D + 1L	Combination	Min		2.66	-88.1741	-1.9618	-9.6536	-0.5272	-47.6354	-16.8289	506	2.66	
N3.06	C1	506	5.1 0.9D + (1(	Combination	Max		0	-89.0194	39.4713	22.8454	0.3378	30.5156	60.2542	506	0	
N3.06	C1	506	5.1 0.9D + (1(	Combination	Max		1.33	-85.5682	39.4713	22.8454	0.3378	0.1312	7.7573	506	1.33	
N3.06	C1	506	5.1 0.9D + (1(	Combination	Max		2.66	-82.1171	39.4713	22.8454	0.3378	-25.7754	-38.1814	506	2.66	
N3.06	C1	506	5.1 0.9D + (1(	Combination	Min		0	-91.9785	33.4255	18.2985	-0.1145	22.8985	50.7304	506	0	
N3.06	C1	506	5.1 0.9D + (1(	Combination	Min		1.33	-88.5274	33.4255	18.2985	-0.1145	-1.4384	6.2745	506	1.33	
N3.06	C1	506	5.1 0.9D + (1(	Combination	Min		2.66	-85.0762	33.4255	18.2985	-0.1145	-30.2532	-44.7395	506	2.66	
N3.06	C1	506	5.2 0.9D + (1(	Combination	Max		0	-78.5947	40.7354	7.1554	0.5883	4.2784	62.2387	506	0	
N3.06	C1	506	5.2 0.9D + (1(	Combination	Max		1.33	-75.1436	40.7354	7.1554	0.5883	-5.2384	8.0606	506	1.33	
N3.06	C1	506	5.2 0.9D + (1(	Combination	Max		2.66	-71.6924	40.7354	7.1554	0.5883	-6.8228	-34.5	506	2.66	
N3.06	C1	506	5.2 0.9D + (1(	Combination	Min		0	-83.8367	30.0255	-0.8993	-0.213	-9.215	45.3677	506	0	
N3.06	C1	506	5.2 0.9D + (1(	Combination	Min		1.33	-80.3856	30.0255	-0.8993	-0.213	-8.0189	5.4339	506	1.33	
N3.06	C1	506	5.2 0.9D + (1(	Combination	Min		2.66	-76.9344	30.0255	-0.8993	-0.213	-14.7551	-46.1175	506	2.66	
N3.06	C1	506	5.3 0.9D - (10	Combination	Max		0	-21.6277	-26.4449	0.2284	0.0471	-6.4361	-43.6773	506	0	
N3.06	C1	506	5.3 0.9D - (10	Combination	Max		1.33	-18.1765	-26.4449	0.2284	0.0471	-6.7398	-8.5055	506	1.33	
N3.06	C1	506	5.3 0.9D - (10	Combination	Max		2.66	-14.7254	-26.4449	0.2284	0.0471	-2.5658	33.2244	506	2.66	
N3.06	C1	506	5.3 0.9D - (10	Combination	Min		0	-24.5868	-32.4908	-4.3186	-0.4053	-14.0532	-53.201	506	0	
N3.06	C1	506	5.3 0.9D - (10	Combination	Min		1.33	-21.1356	-32.4908	-4.3186	-0.4053	-8.3095	-9.9883	506	1.33	
N3.06	C1	506	5.3 0.9D - (10	Combination	Min		2.66	-17.6845	-32.4908	-4.3186	-0.4053	-7.0436	26.6663	506	2.66	
N3.06	C1	506	5.4 0.9D - (10	Combination	Max		0	-29.7695	-23.0449	19.4262	0.1455	25.6774	-38.3146	506	0	
N3.06	C1	506	5.4 0.9D - (10	Combination	Max		1.33	-26.3183	-23.0449	19.4262	0.1455	-0.1593	-7.6648	506	1.33	

N3.06	C1	506	5.4	0.9D - (10	Combination	Max	2.66	-22.8672	-23.0449	19.4262	0.1455	-18.0639	34.6024	506	2.66
N3.06	C1	506	5.4	0.9D - (10	Combination	Min	0	-35.0115	-33.7549	11.3714	-0.6558	12.184	-55.1855	506	0
N3.06	C1	506	5.4	0.9D - (10	Combination	Min	1.33	-31.5603	-33.7549	11.3714	-0.6558	-2.9399	-10.2916	506	1.33
N3.06	C1	506	5.4	0.9D - (10	Combination	Min	2.66	-28.1092	-33.7549	11.3714	-0.6558	-25.9961	22.9849	506	2.66
N3.06	C1	506	5.5	0.9D + Ex	Combination	Max	0	-33.0345	28.8869	16.865	0.5869	20.7162	43.5788	506	0
N3.06	C1	506	5.5	0.9D + Ex	Combination	Max	1.33	-29.5834	28.8869	16.865	0.5869	-1.7006	5.1599	506	1.33
N3.06	C1	506	5.5	0.9D + Ex	Combination	Max	2.66	-26.1322	28.8869	16.865	0.5869	-8.6659	21.7455	506	2.66
N3.06	C1	506	5.5	0.9D + Ex	Combination	Min	0	-80.5717	-21.9063	1.6618	-0.6543	-4.2538	-36.5256	506	0
N3.06	C1	506	5.5	0.9D + Ex	Combination	Min	1.33	-77.1205	-21.9063	1.6618	-0.6543	-6.4777	-7.3909	506	1.33
N3.06	C1	506	5.5	0.9D + Ex	Combination	Min	2.66	-73.6694	-21.9063	1.6618	-0.6543	-24.1531	-33.2606	506	2.66
N3.06	C1	506	5.6	0.9D - Ex	Combination	Max	0	-33.0345	28.8869	16.865	0.5869	20.7162	43.5788	506	0
N3.06	C1	506	5.6	0.9D - Ex	Combination	Max	1.33	-29.5834	28.8869	16.865	0.5869	-1.7006	5.1599	506	1.33
N3.06	C1	506	5.6	0.9D - Ex	Combination	Max	2.66	-26.1322	28.8869	16.865	0.5869	-8.6659	21.7455	506	2.66
N3.06	C1	506	5.6	0.9D - Ex	Combination	Min	0	-80.5717	-21.9063	1.6618	-0.6543	-4.2538	-36.5256	506	0
N3.06	C1	506	5.6	0.9D - Ex	Combination	Min	1.33	-77.1205	-21.9063	1.6618	-0.6543	-6.4777	-7.3909	506	1.33
N3.06	C1	506	5.6	0.9D - Ex	Combination	Min	2.66	-73.6694	-21.9063	1.6618	-0.6543	-24.1531	-33.2606	506	2.66
N3.06	C1	506	6.1	0.9D + (1(	Combination	Max	0	-79.7041	17.6276	41.0906	0.0913	61.3369	25.8211	506	0
N3.06	C1	506	6.1	0.9D + (1(	Combination	Max	1.33	-76.253	17.6276	41.0906	0.0913	6.6865	2.3765	506	1.33
N3.06	C1	506	6.1	0.9D + (1(	Combination	Max	2.66	-72.8018	17.6276	41.0906	0.0913	-44.068	-15.3622	506	2.66
N3.06	C1	506	6.1	0.9D + (1(	Combination	Min	0	-82.2787	12.3674	37.1345	-0.3022	54.7097	17.535	506	0
N3.06	C1	506	6.1	0.9D + (1(	Combination	Min	1.33	-78.8276	12.3674	37.1345	-0.3022	5.3208	1.0864	506	1.33
N3.06	C1	506	6.1	0.9D + (1(	Combination	Min	2.66	-75.3764	12.3674	37.1345	-0.3022	-47.964	-21.0681	506	2.66
N3.06	C1	506	6.2	0.9D + (1(	Combination	Max	0	-61.0414	0.6864	41.4289	0.1693	62.1706	-0.8924	506	0
N3.06	C1	506	6.2	0.9D + (1(	Combination	Max	1.33	-57.5903	0.6864	41.4289	0.1693	7.0702	-1.8053	506	1.33
N3.06	C1	506	6.2	0.9D + (1(	Combination	Max	2.66	-54.1391	0.6864	41.4289	0.1693	-40.4112	8.4403	506	2.66
N3.06	C1	506	6.2	0.9D + (1(	Combination	Min	0	-66.0763	-9.6005	33.6923	-0.6003	49.2102	-17.0969	506	0
N3.06	C1	506	6.2	0.9D + (1(	Combination	Min	1.33	-62.6252	-9.6005	33.6923	-0.6003	4.3995	-4.3283	506	1.33
N3.06	C1	506	6.2	0.9D + (1(	Combination	Min	2.66	-59.1741	-9.6005	33.6923	-0.6003	-48.0302	-2.7183	506	2.66
N3.06	C1	506	6.3	0.9D - (10	Combination	Max	0	-31.3274	-5.3868	-18.6076	0.2347	-38.2473	-10.4818	506	0
N3.06	C1	506	6.3	0.9D - (10	Combination	Max	1.33	-27.8763	-5.3868	-18.6076	0.2347	-13.4991	-3.3174	506	1.33
N3.06	C1	506	6.3	0.9D - (10	Combination	Max	2.66	-24.4252	-5.3868	-18.6076	0.2347	15.145	9.553	506	2.66
N3.06	C1	506	6.3	0.9D - (10	Combination	Min	0	-33.902	-10.647	-22.5637	-0.1588	-44.8745	-18.768	506	0
N3.06	C1	506	6.3	0.9D - (10	Combination	Min	1.33	-30.4509	-10.647	-22.5637	-0.1588	-14.8648	-4.6075	506	1.33
N3.06	C1	506	6.3	0.9D - (10	Combination	Min	2.66	-26.9998	-10.647	-22.5637	-0.1588	11.2491	3.8471	506	2.66
N3.06	C1	506	6.4	0.9D - (10	Combination	Max	0	-47.5298	16.581	-15.1654	0.5328	-32.7478	24.1501	506	0
N3.06	C1	506	6.4	0.9D - (10	Combination	Max	1.33	-44.0787	16.581	-15.1654	0.5328	-12.5778	2.0973	506	1.33
N3.06	C1	506	6.4	0.9D - (10	Combination	Max	2.66	-40.6275	16.581	-15.1654	0.5328	15.2112	-8.7968	506	2.66
N3.06	C1	506	6.4	0.9D - (10	Combination	Min	0	-52.5648	6.2941	-22.902	-0.2368	-45.7082	7.9455	506	0
N3.06	C1	506	6.4	0.9D - (10	Combination	Min	1.33	-49.1136	6.2941	-22.902	-0.2368	-15.2485	-0.4257	506	1.33
N3.06	C1	506	6.4	0.9D - (10	Combination	Min	2.66	-45.6625	6.2941	-22.902	-0.2368	7.5923	-19.9555	506	2.66
N3.06	C1	506	6.5	0.9D + Ey	Combination	Max	0	-41.4071	10.843	32.6929	0.4388	47.4175	15.1269	506	0
N3.06	C1	506	6.5	0.9D + Ey	Combination	Max	1.33	-37.956	10.843	32.6929	0.4388	3.9364	0.7062	506	1.33
N3.06	C1	506	6.5	0.9D + Ey	Combination	Max	2.66	-34.5048	10.843	32.6929	0.4388	6.7269	2.2004	506	2.66
N3.06	C1	506	6.5	0.9D + Ey	Combination	Min	0	-72.1991	-3.8624	-14.1661	-0.5063	-30.9551	-8.0738	506	0
N3.06	C1	506	6.5	0.9D + Ey	Combination	Min	1.33	-68.7479	-3.8624	-14.1661	-0.5063	-12.1147	-2.9372	506	1.33
N3.06	C1	506	6.5	0.9D + Ey	Combination	Min	2.66	-65.2968	-3.8624	-14.1661	-0.5063	-39.5459	-13.7155	506	2.66
N3.06	C1	506	6.6	0.9D - Ey	Combination	Max	0	-41.4071	10.843	32.6929	0.4388	47.4175	15.1269	506	0
N3.06	C1	506	6.6	0.9D - Ey	Combination	Max	1.33	-37.956	10.843	32.6929	0.4388	3.9364	0.7062	506	1.33
N3.06	C1	506	6.6	0.9D - Ey	Combination	Max	2.66	-34.5048	10.843	32.6929	0.4388	6.7269	2.2004	506	2.66
N3.06	C1	506	6.6	0.9D - Ey	Combination	Min	0	-72.1991	-3.8624	-14.1661	-0.5063	-30.9551	-8.0738	506	0
N3.06	C1	506	6.6	0.9D - Ey	Combination	Min	1.33	-68.7479	-3.8624	-14.1661	-0.5063	-12.1147	-2.9372	506	1.33
N3.06	C1	506	6.6	0.9D - Ey	Combination	Min	2.66	-65.2968	-3.8624	-14.1661	-0.5063	-39.5459	-13.7155	506	2.66
N3.06	C1	506	3.3	1.2D + 1L	Combination	Max	0	-46.8057	-24.5443	4.7408	0.0261	-2.5224	-41.735	506	0
N3.06	C1	506	3.3	1.2D + 1L	Combination	Max	1.33	-42.2042	-24.5443	4.7408	0.0261	-8.8277	-9.0911	506	1.33
N3.06	C1	506	3.3	1.2D + 1L	Combination	Max	2.66	-37.6026	-24.5443	4.7408	0.0261	-10.6553	30.111	506	2.66
N3.06	C1	506	3.3	1.2D + 1L	Combination	Min	0	-49.7648	-30.5901	0.1939	-0.4262	-10.1395	-51.2587	506	0
N3.06	C1	506	3.3	1.2D + 1L	Combination	Min	1.33	-45.1633	-30.5901	0.1939	-0.4262	-10.3974	-10.5739	506	1.33
N3.06	C1	506	3.3	1.2D + 1L	Combination	Min	2.66	-40.5618	-30.5901	0.1939	-0.4262	-15.1331	23.5529	506	2.66
N3.06	C1	506	4.1	1.2D + 1L	Combination	Max	0	-104.8822	19.5282	45.603	0.0704	65.2506	27.7634	506	0
N3.06	C1	506	4.1	1.2D + 1L	Combination	Max	1.33	-100.2806	19.5282	45.603	0.0704	4.5986	1.7909	506	1.33
N3.06	C1	506	4.1	1.2D + 1L	Combination	Max	2.66	-95.6791	19.5282	45.603	0.0704	-52.1575	-18.4756	506	2.66
N3.06	C1	506	4.1	1.2D + 1L	Combination	Min	0	-107.4568	14.268	41.647	-0.3232	58.6234	19.4773	506	0
N3.06	C1	506	4.1	1.2D + 1L	Combination	Min	1.33	-102.8552	14.268	41.647	-0.3232	3.2329	0.5008	506	1.33
N3.06	C1	506	4.1	1.2D + 1L	Combination	Min	2.66	-98.2537	14.268	41.647	-0.3232	-56.0534	-24.1816	506	2.66

Datos de diseño

Escalera	E1			
Dimensión de pasos	P	0.25	m	
Dimensión de contrapasos	Cp	0.17	m	
Ancho de escalera	A	1.2	m	
Resistencia de compresión	fc	240	kg/cm2	
Resistencia a la fluencia	fy	4200	kg/cm2	
Recubrimiento	r	3	cm	
Sobre carga según NEC	Sc	205	kg/m2	Departamentos unifamiliares
Ancho de cimentación	C	0.4	m	
Descanso Tramo 1	D1	1.2	m	
Numero de pasos Tramo 1	#P1	7		
Luz libre tramo 1	Ln1	2.55	m	
Base de apoyo tramo 2	b1	0.25	m	Base de apoyo (puede ser una viga)
Descanso Tramo 2	D2	1.2	m	
Numero de pasos Tramo 1	#P2	8		
Luz libre tramo 1	Ln2	4.4	m	
Base de apoyo tramo 3	b2	0.25	m	Base de apoyo (Puede ser una viga)

Predimensionamiento

TRAMO 1

1) Calculo del espesor "t" de la escalera

$t1 = \frac{ln1}{20}$	t1	0.13	m
$t1 = \frac{ln1}{25}$	t2	0.11	m
Promedio		0.15	m

2) Calculo de la altura media "Hm"

$\cos\emptyset = \frac{P}{\sqrt{P^2 + Cp^2}}$	cosØ	0.827	
$Hm = \frac{t}{\cos\emptyset} + \frac{Cp}{2}$	Hm	0.27	m

Metrado de cargas

TRAMO 1

1) Metrado de Garganta

CARGA MUERTA (WD)	PESO	HM (m)	b (m)	PARCIAL (Tn/m)
Peso Propio (Tn/m3)	2.4	0.27	1.2	0.77
Peso piso terminado (Tn/m2)	0.1		1.2	0.12
			WD	0.89

CARGA VIVA (WL)	PESO (Tn/m2)	HM (m)	b (m)	PARCIAL (Tn/m)
USO VIVIENDAS UNIFAMILIARES	0.205		1.2	0.25
			WL	0.25

$Wu1 = 1.2WD + 1.6WL$ Wu1 1.47 Tn/m

2) Metrado de Descanso

CARGA MUERTA (WD)	PESO	HM (m)	b (m)	PARCIAL (Tn/m)
Peso Propio (Tn/m3)	2.4	0.15	1.2	0.44
Peso piso terminado (Tn/m2)	0.1		1.2	0.12
			WD	0.56

CARGA VIVA (WL)	PESO (Tn/m2)	HM (m)	b (m)	PARCIAL (Tn/m)
USO VIVIENDAS UNIFAMILIARES	0.205		1.2	0.25
			WL	0.25

$Wu1 = 1.2WD + 1.6WL$ Wu1 1.21 Tn/m

1) Calculo del espesor "t" de la escalera

$t1 = \frac{ln2}{20}$	t1	0.22	m
$t1 = \frac{ln2}{25}$	t2	0.18	m
Promedio		0.2	m

$\cos\emptyset = \frac{P}{\sqrt{P^2 + Cp^2}}$	cosØ	0.827	
$Hm = \frac{t}{\cos\emptyset} + \frac{Cp}{2}$	Hm	0.33	m

TRAMO 2

1) Metrado de Garganta

CARGA MUERTA (WD)	PESO	HM (m)	b (m)	PARCIAL (Tn/m)
Peso Propio (Tn/m3)	2.4	0.33	1.2	0.95
Peso piso terminado (Tn/m2)	0.1		1.2	0.12
			WD	1.07

CARGA VIVA (WL)	PESO (Tn/m2)	HM (m)	b (m)	PARCIAL (Tn/m)
USO VIVIENDAS UNIFAMILIARES	0.205		1.2	0.25
			WL	0.25

$Wu2 = 1.2WD + 1.6WL$ Wu2 1.69 Tn/m

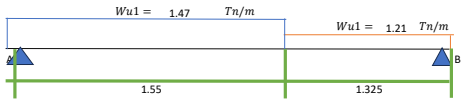
CARGA MUERTA (WD)	PESO	HM (m)	b (m)	PARCIAL (Tn/m)
Peso Propio (Tn/m3)	2.4	0.20	1.2	0.58
Peso piso terminado (Tn/m2)	0.1		1.2	0.12
			WD	0.70

CARGA VIVA (WL)	PESO (Tn/m2)	HM (m)	b (m)	PARCIAL (Tn/m)
USO VIVIENDAS UNIFAMILIARES	0.205		1.2	0.25
			WL	0.25

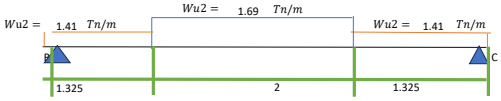
$Wu2 = 1.2WD + 1.6WL$ Wu2 1.41 Tn/m

Idealización

TRAMO 1



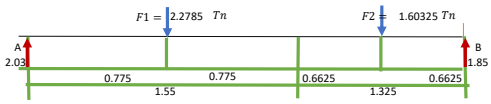
TRAMO 2



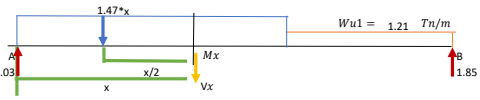
Calculo de reacciones y momentos

TRAMO 1

SUMATORIAFY-	-3.88175
SUMATORIAMA	5.313028125
RA	2.033740217
RB	1.848009783



Corte 1-1 0.00 m < x < 1.55 m



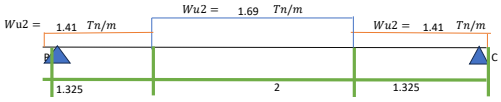
$$Vx = 2.03 - 1.47 * x = 0$$

x= 1.38

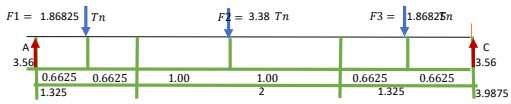
$$Mx = 2.83 * x - 1.04 * x^2 = 0$$

Mumáx 1.41

TRAMO 2

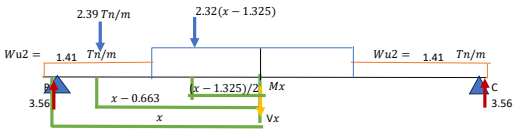


SUMATORIAFY-	-7.1165
SUMATORIAMA	16.5458625
RB	3.55825
RC	3.55825



3.9875

Corte 1-1 1.325m <x< 3.325 m



$$Vx = 5.38 - 2.31x = 0$$

x = 2.33

$$Mx = -0.45 + 5.38x - 1.16x^2$$

Mx = 4.32

Resumen de datos del análisis estructural

TRAMO 1		TRAMO 2	
Vmax	2.03	Vmax	3.56
Mmax	1.41	Mmax	4.32

Verificación por corte

TRAMO 1

Ray	2.03	$Vud = Ray - (Wu1)(\frac{C}{2} + d)$	1.56334022
Wu1	1.47		
C	0.4	$Vud' = Vud(cos\theta)$	1.29276746
d	0.12	$Vn = Vud'/\emptyset$	1.52090289
Cos(θ)	####	$Vc = 0.53\sqrt{f'c} * b * d)$	11.8234436
ϕ	0.85		
		Vn<=Vc	

TRAMO 2

Rcy	3.55825	3.1423
Wu2	1.41	
b2	0.25	
d	0.17	
Cos(θ)	0.827	3.69682353
ϕ	0.85	16.7498784
		Vn<=Vc

Calculo de acero por momento (As+)

1) Acero longitudinal: As (+)

TRAMO 1

Mu	140683.6487	kg-cm	As(+)	3.365259138	$As = \frac{M_u}{\emptyset \cdot fy \cdot (d - \frac{a}{2})}$
d	12	cm	a	0.58	
A	120	cm		0.58	$a = \frac{As \cdot fy}{0.85 \cdot f'c \cdot b}$
fc	240	kg/cm2			
fy	4200	kg/cm2	Diametro	9.5	

$n = As/\emptyset$

$S = \frac{A - 2r - \emptyset}{n - 1}$

Cant. Varillas (n) 5

Separación (s) 26.13 25 cm

$A_{s+} = \rho * b * d$

Cálculo de la cuantía mecánica:

w 0.04089254

$\omega = 0.85 - \sqrt{0.7225 - \frac{1.7M_u}{\emptyset * f'c * b * d^2}}$

Cálculo de la cuantía de diseño:

p 0.00233672 $\rho = \omega * \frac{f'c}{fy}$

Cálculo del área de acero (As+):

As 3.36487215

2) Acero longitudinal (As-)

$As_{min} = 0.0018 \cdot A \cdot d$ Asmin 2.592

$-As_{min} = +As/_3$ Asmin 1.121624

Acero a usar As(-) 2.592

Diametro 9.5

$n = As/\emptyset$

$S = \frac{A - 2r - \emptyset}{n - 1}$

Cant. Varillas 4

Espaciamiento 34.83333333 30 cm

3) Acero por contracción y temperatura

$As_{min} = \rho \cdot 100 \cdot t$ Asmin 2.7 cm2/m

Diametro 9.5

$S = \frac{Área\emptyset}{As}$ Separación 26.2962963 25 cm

Dependiendo del tipo de varilla a usar varia el coeficiente
Barras lisas 0.0025
Barras corrugadas con fy<420 Mpa 0.0020
Barras corrugadas o malla de alambre
(liso corrugado) de intersecciones soldadas
con fy >= 420 Mpa 0.0018

Calculo de acero por momento (As+)

1) Acero longitudinal: As (+

Mu	432200	kg-cm	As(+)	7.50089379	$As = \frac{M_u}{\emptyset \cdot fy \cdot (d - \frac{a}{2})}$
d	17	cm	a	1.72	
A	120	cm		1.29	$a = \frac{As \cdot fy}{0.85 \cdot f'c \cdot b}$
fc	240	kg/cm2			
fy	4200	kg/cm2	Diametro	9.5	

$n = As/\emptyset$

$S = \frac{A - 2r - \emptyset}{n - 1}$

Cant. Varillas (n) 11

Separación (s) 10.45

$A_{s+} = \rho * b * d$

Cálculo de la cuantía mecánica:

w 0.06345966

$\omega = 0.85 - \sqrt{0.7225 - \frac{1.7M_u}{\emptyset * f'c * b * d^2}}$

Cálculo de la cuantía de diseño:

p 0.00362627 $\rho = \omega * \frac{f'c}{fy}$

Cálculo del área de acero (As+):

As 7.39758272

2) Acero longitudinal (As-)

$As_{min} = 0.0018 \cdot A \cdot d$ Asmin 3.672

$-As_{min} = +As/_3$ Asmin 2.4658609

Acero a usar As(-) 3.672

Diametro 9.5

$n = As/\emptyset$

$S = \frac{A - 2r - \emptyset}{n - 1}$

Cant. Varillas 6

Espaciamiento 20.9

3) Acero por contracción y temperatura

$As_{min} = \rho \cdot 100 \cdot t$ Asmin 3.6 cm2/cm

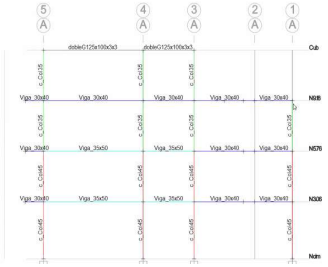
Diametro 9.5

$S = \frac{Área\emptyset}{As}$ Separación 19.72222222 cm

Dependiendo del tipo de varilla a usar varia el coeficiente
Barras lisas 0.0025
Barras corrugadas con fy<420 Mpa 0.0020
Barras corrugadas o malla de alambre
(liso corrugado) de intersecciones soldadas
con fy >= 420 Mpa 0.0018

DATOS DE DISEÑO

Tramos	3				
fc	240	kg/cm2			
fy	4200	kg/cm2			
			D1	5.8	
			D2	3	
			D3	5.7	



DESARROLLO

1) Calculo del espesor de la losa aligerada

e=l/24	0.24	m	Redondear

2) Metrado de cargas

a)Carga muerta:

Peso losa aligerada	300	kg/m2			
Peso piso terminado	140	kg/m2			
Peso tabiquería	90	kg/m2			
PESO TOTAL (WD)	530	kg/m2	WD	212	

b)Carga viva)

PESO TOTAL	205	kg/m2	WL	82	

c)Carga ultima (De diseño)

Wu=1.2WD + 1.6WL

WU	964	kg/m2
WU	0.964	Tn/m2

b)Carga ultima por vigueta

WUvigueta = WU*b

WUvigueta	385.6	kg/m2
Wuvigueta	0.3856	Tn/m2

3) Cálculo de momentos últimos resistentes:

$$Mur = \emptyset * wmax * fc * bw * d^2(1 - 0.59wmax)$$

r	2.5	cm	Mur Apoyos		
e	15	cm		114642.562	kg-cm
fi	0.9			1146.42562	kg-m
wmax	0.31875	cuantía máxima			
d	12.5	cm	Mur Tramos		
b	40	cm		305713.499	kg-cm
bw	15	cm		3057.13499	kg-m

$$As = \frac{Mu}{fi * fy * (d - \frac{a}{2})} \qquad a = \frac{As * fy}{0.85 * fc * b}$$

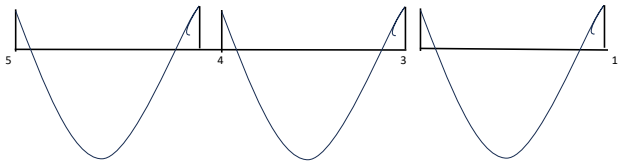
Tabla 5.1 Coeficientes para momento positivo.

MOMENTOS POSITIVOS	
Tramos extremos	
El extremo discontinuo no está restringido	$(1/11)W_u L_n^2$
El extremo discontinuo es monolítico con el apoyo	$(1/14)W_u L_n^2$
Tramos interiores	$(1/16)W_u L_n^2$

Tabla 5.2 Coeficientes para momento negativo.

MOMENTOS NEGATIVOS	
Momento negativo en la cara exterior del primer apoyo interior	
Dos tramos	$(1/9)W_u L_n^2$
Más de dos tramos	$(1/10)W_u L_n^2$
Momento negativo en las demás caras de apoyos interiores	$(1/11)W_u L_n^2$
Momento negativo en la cara de todos los apoyos para losas con luces que no excedan de 3 m y vigas en las cuales el cociente entre la suma de las rigideces de las columnas y la rigidez de la viga exceda de 8 en cada extremo del tramo	$(1/12)W_u L_n^2$
Momento negativo en la cara interior de los apoyos exteriores para los elementos construidos monolíticamente con sus apoyos	
Cuando el apoyo es una viga de borde	$(1/24)W_u L_n^2$
Cuando el apoyo es una columna	$(1/16)W_u L_n^2$

4) Cálculo de los momentos máximos-momentos actuantes (método simplificado de los coeficientes ACI)



						As (cm2)	a impones	a calculado
(-)		5	1/24*w*l^2	540.482667	0	1.24932138	2.11	1.71475484
(+)	5--4		1/14*w*l^2	231.635429	0	0.50790894	0.87	0.69712992
(-)		4	1/10*w*l^2	746.5216	0	1.7962027	3.01	2.46537625
(+)	4--3		1/16*w*l^2	216.9	0	0.47441879	0.81	0.65116304
(-)		3	1/10*w*l^2	729.6516	0	1.75004101	2.94	2.40201708
(+)	3--1		1/14*w*l^2	783.009	0	1.89867313	3.18	2.60602194
(-)		1	1/24*w*l^2	130.5015	0	0.28160038	0.48	0.38651032

$$As = \frac{M_u}{\emptyset \cdot fy \cdot \left(d - \frac{a}{2}\right)}$$

$$a = \frac{As \cdot fy}{0.85 \cdot f'c \cdot b}$$

Si no cumple el Mur del tramo se deberia aumentar el espesor de la losa
Si no cumple el Mur del apoyo se debe ensachar la vigueta

Asmin 0.55328334

$$A_{s\,min} = 0.80\frac{\sqrt{f'_c}}{f_y} b_w d$$

5) Calculo del acero por temperatura

$$pt = \frac{Ast}{b * d}$$

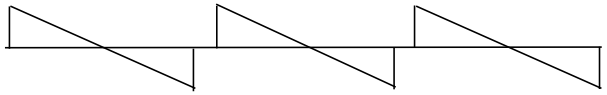
pt	0.0018	
b	100	cm
d	5	cm
Ast	0.9	cm2
# varillas	5	

Separación b/# varillas 20 cm smax 40cm Según la norma
5veces e 25 5 veces el espesor

Tabla 5.3 Coeficientes por fuerza cortante.

FUERZA CORTANTE	
Cara exterior del primer apoyo interior	$1.5(1/2)W_u L_n$
Caras de todos los demás apoyos	$(1/2)W_u L_n$

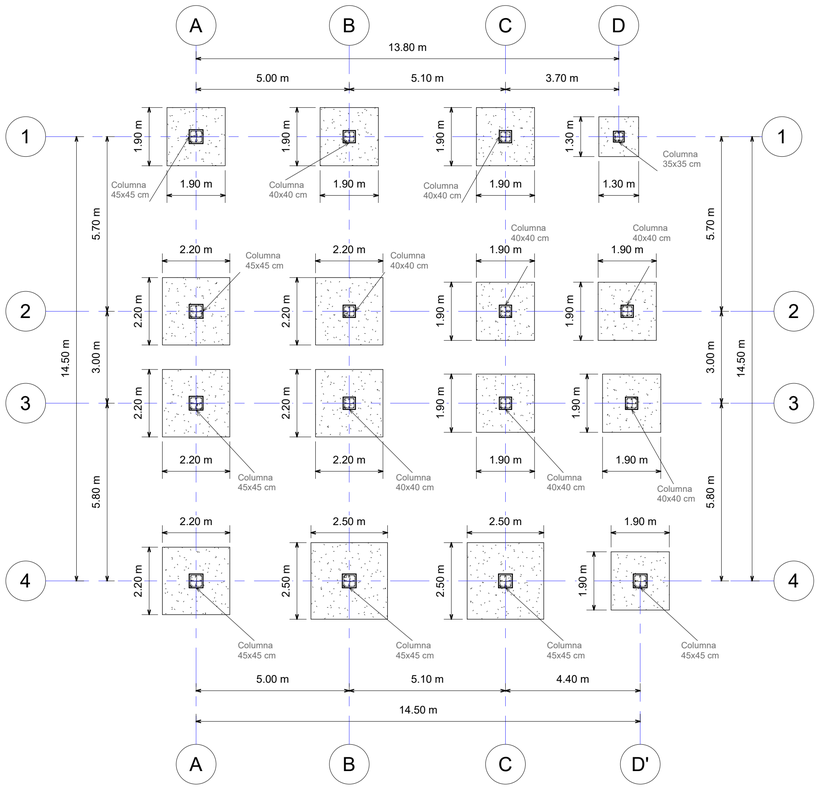
6) Diseño por corte (Método de los coeficientes)



(-)		5	(1/2)*w*l	1118.24
(+)	5--4		1.5(1/2)*w*l	1677.36
(-)		4	(1/2)*w*l	578.4
(+)	4--3		(1/2)*w*l	578.4
(-)		3	1.5(1/2)*w*l	1648.44
(+)	3--1		(1/2)*w*l	1098.96

Cortante resistente del concreto del alma

Vc 1539.51088 El ancho de la vigueta es suficientemente grande para soportar las cargas



1 Nivel-Cimentación
1 : 100

Cuadros de Cuantificaciones

Tabla de cantidad de acero para la cimentación

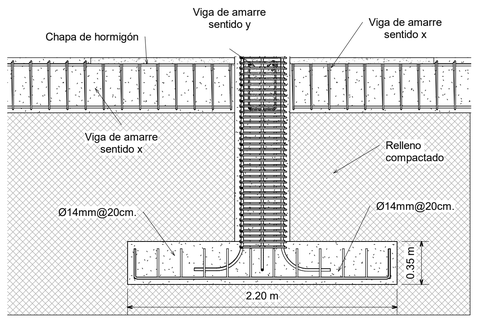
Tipo de Zapata	Cantidad	Modelo	Diametro (mm)	Espaciado (cm)	Cantidad	Longitud Total	Peso Kg/ML	Peso Total (Kg)
Zapata 1.3x1.3x0.25m.	1	Acero longitudinal Y	12	15	9	13.14	0.888	11.67
		Acero longitudinal x	12	15	9	13.14	0.888	11.67
Zapata 1.9x1.9x0.3m	8	Acero longitudinal Y	12	15	13	221.52	0.888	196.71
		Acero longitudinal x	12	15	13	221.52	0.888	196.71
Zapata 2.2x2.2x0.35m.	5	Acero longitudinal Y	14	20	12	152.4	1.208	184.10
		Acero longitudinal x	14	20	12	152.4	1.208	184.10
Zapata 2.5x2.5x0.35m.	2	Acero longitudinal Y	16	19	14	78.68	1.578	124.16
		Acero longitudinal x	16	19	14	78.68	1.578	124.16
TOTAL								1033.27

Tabla de cantidad de hormigón para la cimentación

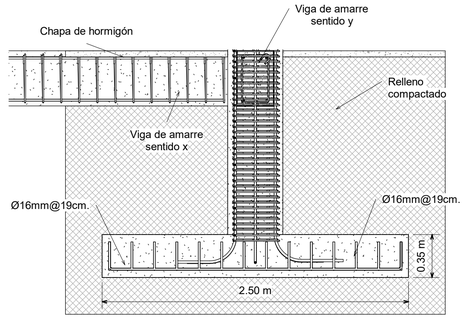
Modelo	Ancho (m)	Alto (m)	Espesor (m)	Cantidad	Volumen (m3)
Zapata 1.3x1.3x0.25m.	1.3	1.3	0.25	1	0.4225
Zapata 1.9x1.9x0.3m.	1.9	1.9	0.3	8	8.664
Zapata 2.2x2.2x0.35m.	2.2	2.2	0.35	5	8.47
Zapata 2.5x2.5x0.35m.	2.5	2.5	0.35	2	4.375
TOTAL					21.94

ESPECIFICACIONES TÉCNICAS:

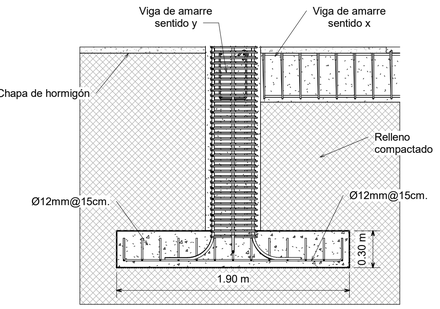
1.-RESISTENCIA CILINDRICA DEL HORMIGON SIMPLE:
COLUMNAS , ZAPATAS, MUROS, VIGAS: F'c=240 Kgf/cm2.
2.-LIMITE DE FLUENCIA HIERRO REDONDO CORRUGADO Fy=4200 Kgf/cm2.
3.-LIMITE DE FLUENCIA DE ACERO:
Estructura Principal: A572Gr50 Fy=3500 Kgf/cm2
4.-RECUBRIMIENTOS MINIMOS (si no se indica en planos): ZAPATAS (6cm). COLUMNAS Y VIGAS (6cm). LOSAS (2.5cm) Y MUROS (5cm).
5.-TAMAÑO MAXIMO DEL AGREGADO GRUESO 3/4".
6.-RESISTENCIA ADMISIBLE DEL SUELO 2.66 Kgf/cm2.(VERIFICAR EN OBRA)
NORMAS TÉCNICAS:
• Norma Ecuatoriana de la Construcción.
• NEC-SE-HM-2015 (Hormigón Armado)
• NEC-SE-AC-2015 (Acero Estructural)
• NEC-SE-DS-2015 (Peligro sísmico)
• NEC-SE-CG-2015 (Cargas No Sísmicas)
• ACI 318-14
• ANSI/AISC 360,341
NOTAS GENERALES:
• Nivel de cimentación mínimo de 1.50 m por debajo del nivel del terreno.
• Capacidad admisible del suelo: Teórica (Asumido 2.6kgf/cm2). Valor corde a estudio de mecanica de suelos. Para mas detalle dirigirse al estudio.
• Las cantidades expuestas en la presente propuesta no contemplan desperdicios.
• El Consultor dispone del acceso en nube al modelo 3D como método referencial para mejora en la interpretación en caso de requerirse.
• Los detalles solo presentan dimensiones reales, son solo referencias constructivas, las medidas reales se encuentran acotadas en las diferentes vistas principales.



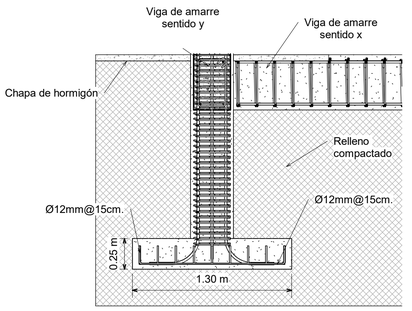
4 Zapata 2.2x2.2
1 : 25



5. Zapata 2.5x2.5
1 : 25



3 Zapata 1.9x1.9
1 : 25



2 Zapata 1.3x1.3
1 : 25

CUADRO DE COLUMNAS

Numero	5	4	2	4	1
Ejes / Niveles	A2,A3,A4,B4,C4	B2,B3,C2,C3	A1,D4	B1,C1,D2,D3	D1
Nivel 5 – +11.16					
Nivel 4 – +8.46	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)
Nivel 3 – +5.76	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)
Nivel 2 – +3.06	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)	Estribos Ø 10mm @ 15cm. (Zona permitida para traslapar de no mas 50% del refuerzo longitudinal de columnas)
Nivel 1 – +0.00					

Estribos Ø 10mm @ 4.5cm.(No se debe traslapar aceros de columnas en esta zona)
Ø20mm. Ø18mm.

TUTOR DE TESIS:
ING. DAVID CONTRERAS

UNIVERSIDAD DEL AZUAY

DIS. CHRISTIAN STEFANO BARZALLO SOLIS
DIB. CHRISTIAN STEFANO BARZALLO SOLIS
REV. ING. DAVID RICARDO CONTRERAS L.

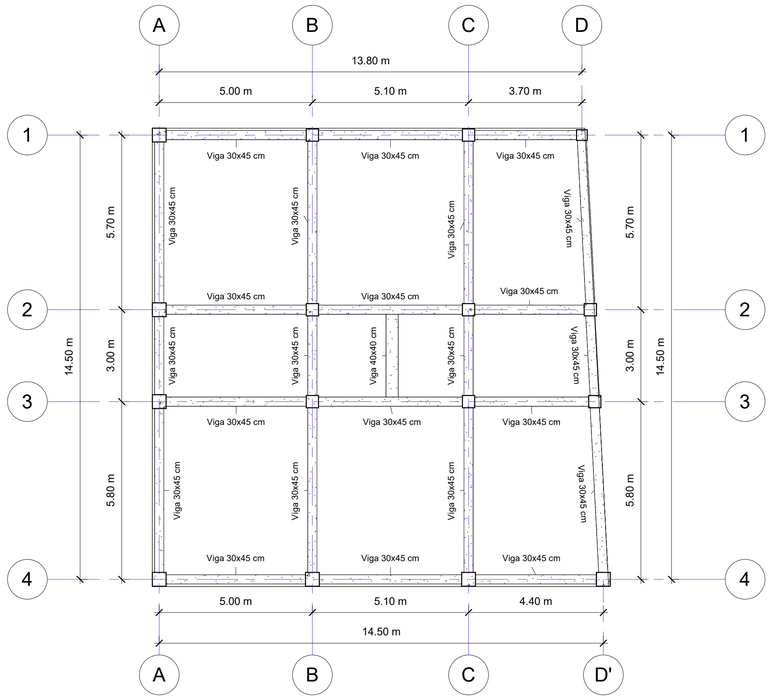
ESCALA: Según se indican.

CHRISTIAN STEFANO BARZALLO
Estudiante de Ingenieria Civil

Contenido:
- Vista de planta de cimentación
- Vista de perfil zapatas aislada
- Cuadro de columnas
- Tabla de cuantificaciones de las zapatas

SEPTIEMBRE DEL 2024

LÁMINA 1/5



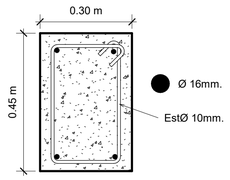
1 Vista planta de vigas de cimentación

1 : 100

Tabla de cantidad de acero de vigas de cimentación						
Nivel +0.00						
Tipo de viga	Cantidad	Modelo	Diametro (mm)	Longitud Total	Peso Kg/ML	Peso Total (Kg)
Viga 30x45 cm.	24	Acero longitudinal	16	418.51	1.578	660.41
		Estribos	10	933.46	0.617	575.94
Viga 40x40 cm.	1	Acero longitudinal	16	12.85	1.578	20.28
		Estribos	10	28.12	0.617	17.35
TOTAL						1273.98

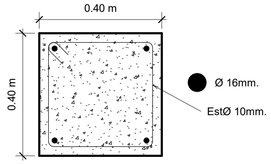
Tabla de cantidad de hormigón de losas		
Piso	Area (m2)	Volumen (m3)
Planta baja	217.06	10.853
1er piso	253.428	36.76
2do piso	241.05	35.15
3ro piso	241.05	35.15
4to piso	95.62	13.74
Volumen total		131.653

Tabla de cantidad de hormigón de vigas de cimentación				
Nivel +0.00				
Modelo	Ancho (m)	Alto (m)	Longitud total(m)	Volumen (m3)
Viga 30x45 cm.	0.3	0.45	104.83	14.15
Viga 40x40 cm.	0.4	0.4	2.7	0.43
TOTAL				14.58



4 Viga 30x45

1 : 10



5 Viga 40*40

1 : 10

Tabla de cantidad de acero de losas				
Tabla de cantidad de acero de losa de planta baja				
Modelo	Diametro (mm)	Longitud Total	Peso Kg/ML	Peso Total (Kg)
Acero longitudinal	10.00	217.06	0.617	133.93
TOTAL				133.93
Tabla de cantidad de acero de losa de 1er piso				
Modelo	Diametro (mm)	Longitud Total	Peso Kg/ML	Peso Total (Kg)
Acero longitudinal	10.00	253.43	0.617	156.37
Acero longitudinal	12.00	253.43	0.888	225.05
Acero longitudinal	14.00	253.43	1.208	306.14
TOTAL				687.56
Tabla de cantidad de acero de losa de 2do y 3er piso				
Modelo	Diametro (mm)	Longitud Total	Peso Kg/ML	Peso Total (Kg)
Acero longitudinal	10.00	241.05	0.617	148.73
Acero longitudinal	12.00	241.05	0.888	214.05
Acero longitudinal	14.00	241.05	1.208	291.19
TOTAL POR PISO				653.97
TOTAL DEL 2do y 3er piso				1 307.94
Tabla de cantidad de acero de losa de 4to piso				
Modelo	Diametro (mm)	Longitud Total	Peso Kg/ML	Peso Total (Kg)
Acero longitudinal	10.00	95.62	0.617	59.00
Acero longitudinal	12.00	95.62	0.888	84.91
Acero longitudinal	14.00	95.62	1.208	115.51
TOTAL				259.42
TOTAL DE ACERO DE LOSA				2388.85

ESPECIFICACIONES TÉCNICAS:

1.-RESISTENCIA CILINDRICA DEL HORMIGON SIMPLE:
COLUMNAS , ZAPATAS, MUROS, VIGAS: F'c=240 Kgf/cm2.
2.-LIMITE DE FLUENCIA HIERRO REDONDO CORRUGADO Fy=4200 Kgf/cm2.
3.-LIMITE DE FLUENCIA DE ACERO:
Estructura Principal: A572Gr50 Fy=3500 Kgf/cm2
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VIGAS (6cm). LOSAS (2.5cm) Y MUROS (5cm).
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• NEC-SE-CG-2015 (Cargas No Sísmicas)
• ACI 318-14
• ANSI/AISC 360,341
NOTAS GENERALES:
• Nivel de cimentación mínimo de 1.50 m por debajo del nivel del terreno.
• Capacidad admisible del suelo: Teórica (Asumido 2.6kgf/cm2). Valor corde a estudio de mecanica de suelos. Para mas detalle dirigirse al estudio.
• Las cantidades expuestas en la presente propuesta no contemplan desperdicios.
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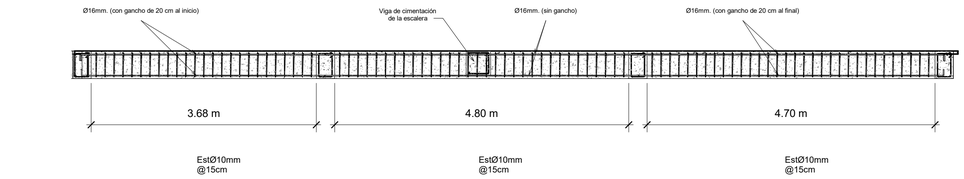
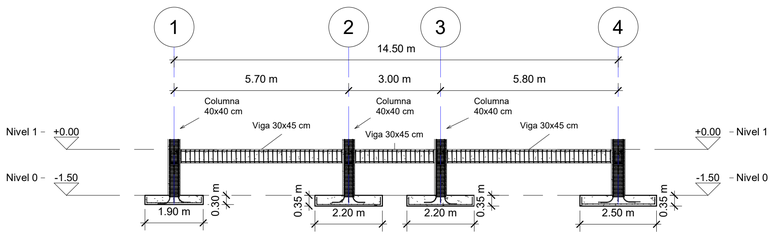


2 Eje de vigas de cimentación

1 : 50

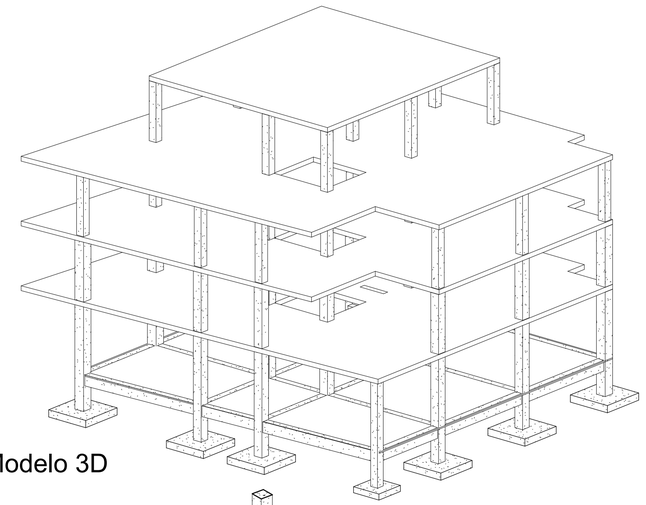
3 Eje de viga de cimentación de la escalera

1 : 50

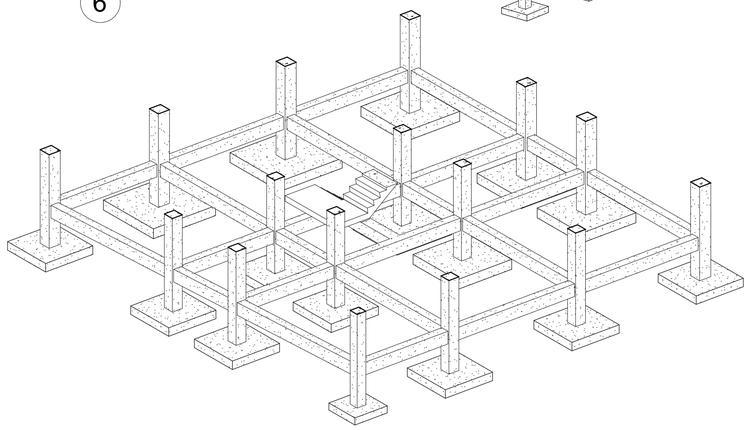


9 Detalle de cimentación

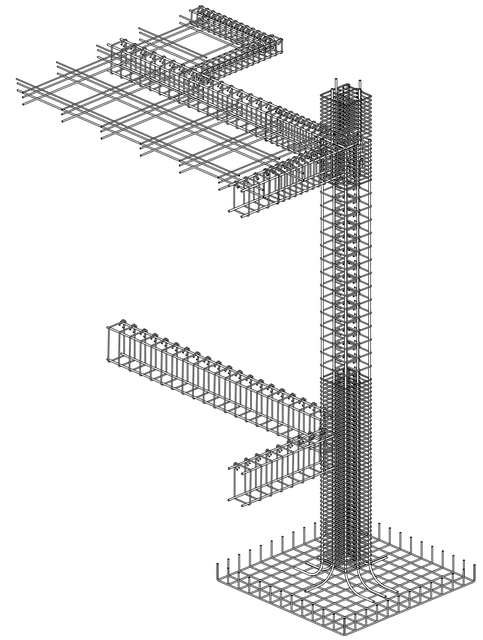
1 : 100



6 Modelo 3D



7 Modelo 3D cimentación



8 Modelo 3D armado de acero

TUTOR DE TESIS:

ING. DAVID CONTRERAS

UNIVERSIDAD DEL AZUAY

DIS. CHRISTIAN STEFANO BARZALLO SOLIS

DIB. CHRISTIAN STEFANO BARZALLO SOLIS

REV. ING. DAVID RICARDO CONTRERAS L.

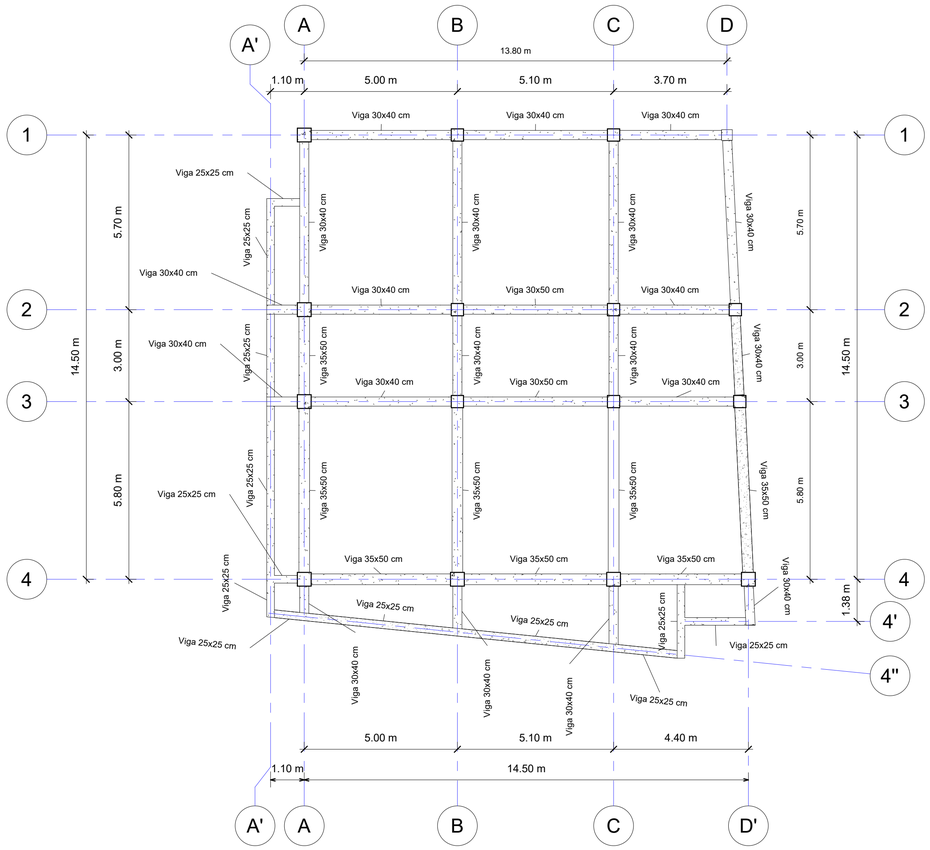
ESCALA: Según se indican.

CHRISTIAN STEFANO BARZALLO
Estudiante de Ingeniería Civil

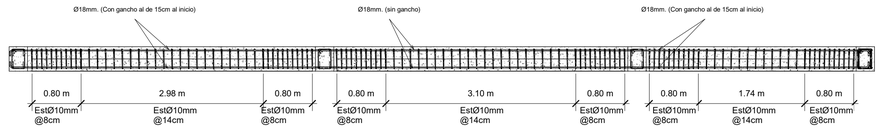
Contenido:
- Vista de planta de vigas de cimentación
- Detalle de cimentación
- Perfil de vigas de cimentación
- Tablas de cuantificación
- Modelos tridimensionales

SEPTIEMBRE DEL 2024

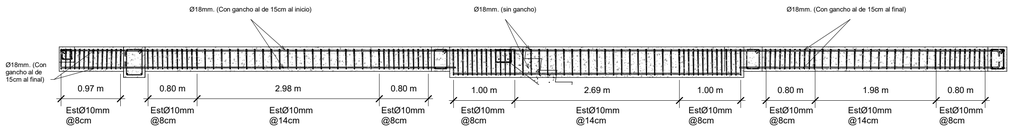
LÁMINA 2/5



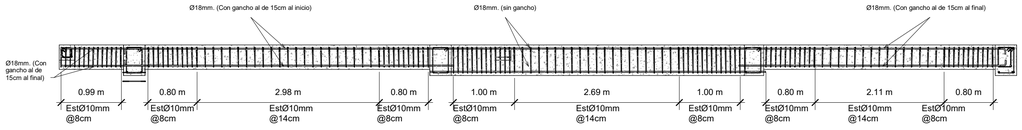
1 Vista de planta de vigas de 1er piso
1 : 100



2 Perfil del Eje 1
1 : 50



3 Perfil del Eje 2
1 : 50



4 Perfil del Eje 3
1 : 50

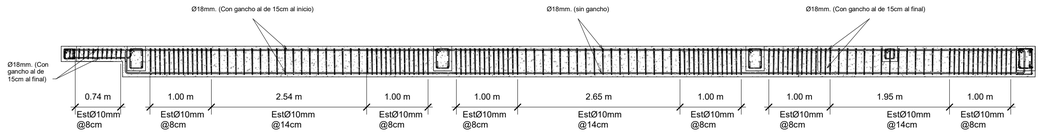
Cuadros de Cuantificaciones

Tabla de cantidad de acero de vigas						
Primer piso						
Tipo de viga	**Cantidad**	**Modelo**	**Diametro (mm)**	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Viga 35x50 cm.	8	Acero longitudinal	18	182.72	1.998	365.07
		Estribos	10	556.8	0.617	343.55
Viga 30x50 cm.	2	Acero longitudinal	18	44.08	1.998	88.07
		Estribos	10	132.3	0.617	81.63
Viga 30x40cm.	20	Acero longitudinal	18	376.96	1.998	753.17
		Estribos	10	891.25	0.617	549.90
Viga 25*25 cm.	12	Acero longitudinal	16	201.2	1.578	317.49
		Estribos	10	340.4	0.617	210.03
TOTAL						2708.91

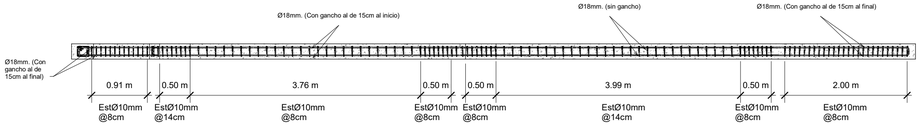
Tabla de cantidad de hormigón de vigas				
Primer piso				
Modelo	**Ancho (m)**	**Alto (m)**	**Longitud total(m)**	**Volumen (m3)**
Viga 35x50 cm.	0.35	0.5	45.71	8.00
Viga 30x50 cm.	0.3	0.5	10.23	1.53
Viga 30x40 cm.	0.3	0.4	71.92	8.63
Viga 25x25 cm.	0.25	0.25	31.26	1.95
TOTAL				20.12

ESPECIFICACIONES TÉCNICAS:

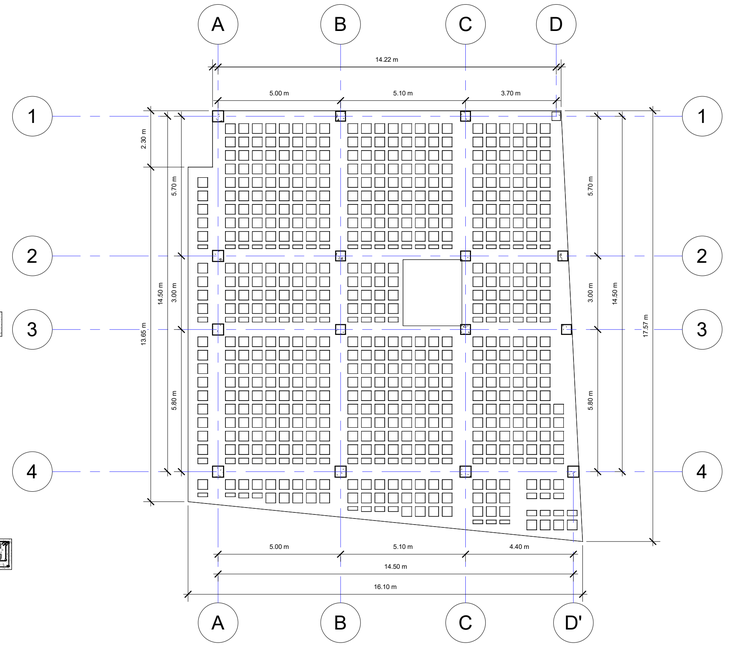
1.-RESISTENCIA CILINDRICA DEL HORMIGON SIMPLE:
COLUMNAS , ZAPATAS, MUROS, VIGAS: F'c=240 Kgf/cm2.
2.-LIMITE DE FLUENCIA HIERRO REDONDO CORRUGADO Fy=4200 Kgf/cm2.
3.-LIMITE DE FLUENCIA DE ACERO:
Estructura Principal: A572Gr50 Fy=3500 Kgf/cm2
4.-RECUBRIMIENTOS MINIMOS (si no se indica en planos): ZAPATAS (6cm).
COLUMNAS Y
VIGAS (6cm). LOSAS (2.5cm) Y MUROS (5cm).
5.-TAMAÑO MAXIMO DEL AGREGADO GRUESO 3/4".
6.-RESISTENCIA ADMISIBLE DEL SUELO 2.66 Kgf/cm2.(VERIFICAR EN OBRA)
NORMAS TÉCNICAS:
• Norma Ecuatoriana de la Construcción.
• NEC-SE-HM-2015 (Hormigón Armado)
• NEC-SE-AC-2015 (Acero Estructural)
• NEC-SE-DS-2015 (Peligro sísmico)
• NEC-SE-CG-2015 (Cargas No Sísmicas)
• ACI 318-14
• ANSI/AISC 360,341
NOTAS GENERALES:
• Nivel de cimentación mínimo de 1.50 m por debajo del nivel del terreno.
• Capacidad admisible del suelo: Teórica (Asumido 2.6kgf/cm2). Valor corde a estudio de mecanica de suelos. Para mas detalle dirigirse al estudio.
• Las cantidades expuestas en la presente propuesta no contemplan desperdicios.
• El Consultor dispone del acceso en nube al modelo 3D como método referencial para mejora en la interpretación en caso de requerirse.
• Los detalles solo presentan dimensiones reales, son solo referencias constructivas, las medidas reales se encuentran acotadas en las diferentes vistas principales.



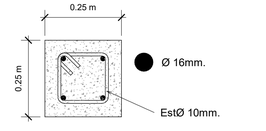
5 Perfil del Eje 4
1 : 50



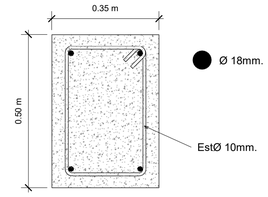
6 Perfil del Eje 4'
1 : 50



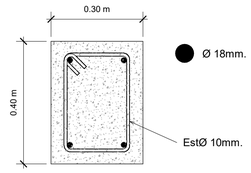
11 Vista plata distribución de casetones
1 : 125



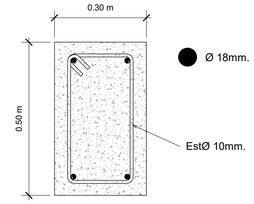
7 Viga 25x25
1 : 10



8 Viga 35x50
1 : 10



10 Viga 30x40
1 : 10



9 Viga 30x50
1 : 10

TUTOR DE TESIS:
ING. DAVID CONTRERAS

UNIVERSIDAD DEL AZUAY

DIS. CHRISTIAN STEFANO BARZALLO SOLIS
DIB. CHRISTIAN STEFANO BARZALLO SOLIS
REV. ING. DAVID RICARDO CONTRERAS L.
ESCALA: Según se indican.

CHRISTIAN STEFANO BARZALLO
Estudiante de Ingenieria Civil

Contenido:
- Vista de planta de vigas del 1er piso
- Vista de planta de losa y distribución de casetones del 1er piso
- Ejes 1,2,3,4',4" de vigas del 1er piso
- Perfiles de vigas del 1er piso
- Tabla de cuantificaciones de vigas del 1er piso

SEPTIEMBRE DEL 2024

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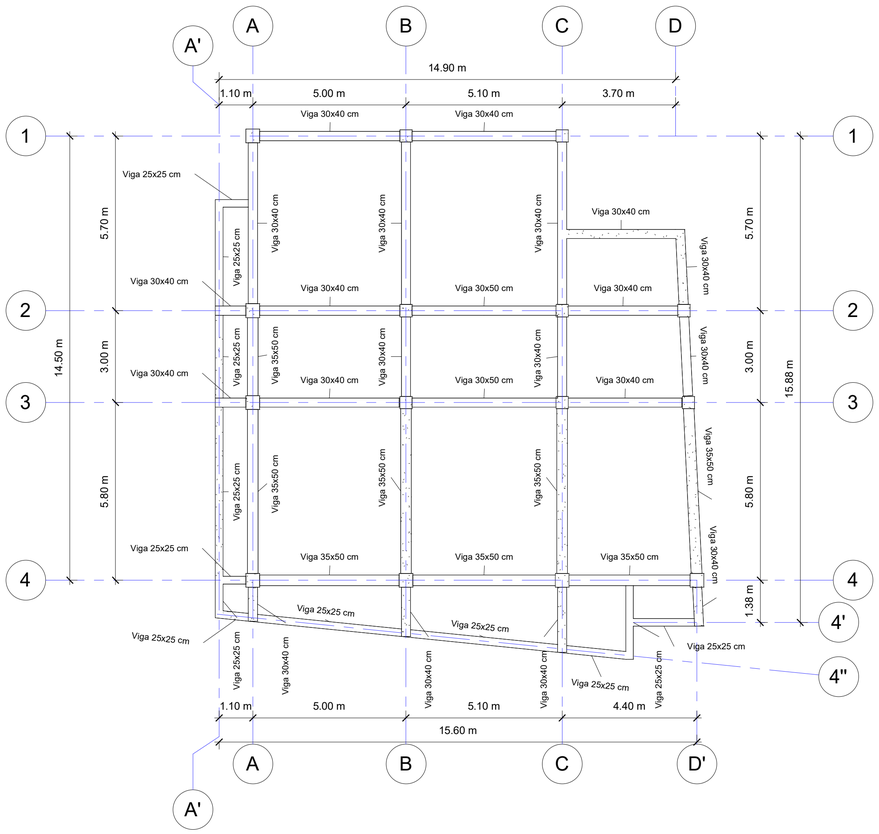
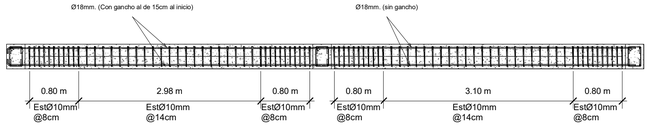
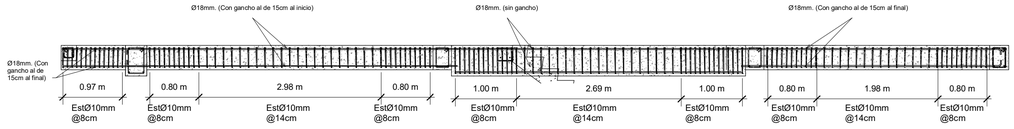


1 Vista planta de vigas del 2do y 3er piso
1 : 100



2 Perfil del Eje 1
1 : 50



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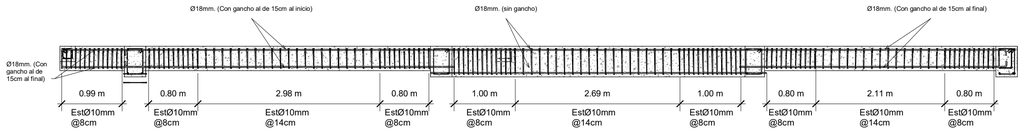
1 : 50



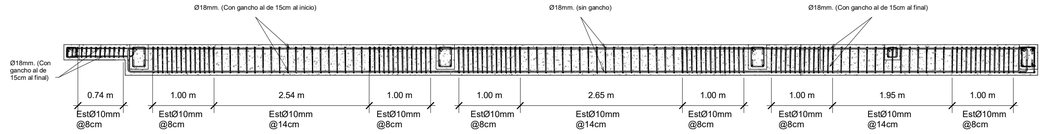
4 Perfil del Eje 3
1 : 50

Tabla de cantidad de acero de vigas						
Segundo y tercer piso						
Tipo de viga	Cantidad	Modelo	Diametro (mm)	Longitud Total	Peso Kg/ML	Peso Total (Kg)
Viga 35x50 cm.	8	Acero longitudinal	18	182.72	1.998	365.07
		Estribos	10	556.8	0.617	343.55
Viga 30x50 cm.	2	Acero longitudinal	18	44.08	1.998	88.07
		Estribos	10	132.3	0.617	81.63
Viga 30x40cm.	20	Acero longitudinal	18	376.96	1.998	753.17
		Estribos	10	891.25	0.617	549.90
Viga 25*25 cm.	12	Acero longitudinal	16	201.2	1.578	317.49
		Estribos	10	340.4	0.617	210.03
TOTAL POR PISO						2708.91
TOTAL DE 2do y 3er PISO						5417.82

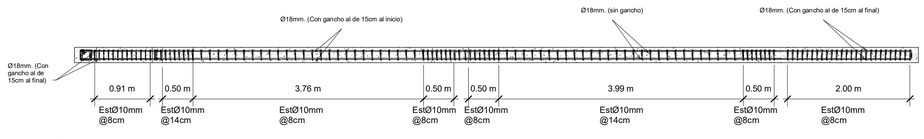
Tabla de cantidad de hormigón de vigas				
Segundo y tercer piso				
Modelo	Ancho (m)	Alto (m)	Longitud total(m)	Volumen (m3)
Viga 35x50 cm.	0.35	0.5	45.71	8.00
Viga 30x50 cm.	0.3	0.5	10.23	1.53
Viga 30x40 cm.	0.3	0.4	71.92	8.63
Viga 25x25 cm.	0.25	0.25	31.26	1.95
TOTAL POR PISO				20.12
TOTAL DE 2do y 3er PISO				40.24

ESPECIFICACIONES TÉCNICAS:

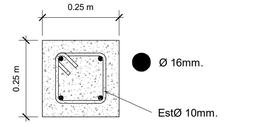
1.-RESISTENCIA CILINDRICA DEL HORMIGON SIMPLE:
COLUMNAS , ZAPATAS, MUROS, VIGAS: F'c=240 Kgf/cm2.
2.-LIMITE DE FLUENCIA HIERRO REDONDO CORRUGADO Fy=4200 Kgf/cm2.
3.-LIMITE DE FLUENCIA DE ACERO:
Estructura Principal: A572Gr50 Fy=3500 Kgf/cm2
4.-RECUBRIMIENTOS MINIMOS (si no se indica en planos): ZAPATAS (6cm).
COLUMNAS Y
VIGAS (6cm). LOSAS (2.5cm) Y MUROS (5cm).
5.-TAMAÑO MAXIMO DEL AGREGADO GRUESO 3/4".
6.-RESISTENCIA ADMISIBLE DEL SUELO 2.66 Kgf/cm2.(VERIFICAR EN OBRA)
NORMAS TÉCNICAS:
• Norma Ecuatoriana de la Construcción.
• NEC-SE-HM-2015 (Hormigón Armado)
• NEC-SE-AC-2015 (Acero Estructural)
• NEC-SE-DS-2015 (Peligro sísmico)
• NEC-SE-CG-2015 (Cargas No Sísmicas)
• ACI 318-14
• ANSI/AISC 360,341
NOTAS GENERALES:
• Nivel de cimentación mínimo de 1.50 m por debajo del nivel del terreno.
• Capacidad admisible del suelo: Teórica (Asumido 2.6kgf/cm2). Valor corde a estudio de mecanica de suelos. Para mas detalle dirigirse al estudio.
• Las cantidades expuestas en la presente propuesta no contemplan desperdicios.
• El Consultor dispone del acceso en nube al modelo 3D como método referencial para mejora en la interpretación en caso de requerirse.
• Los detalles solo presentan dimensiones reales, son solo referencias constructivas, las medidas reales se encuentran acotadas en las diferentes vistas principales.



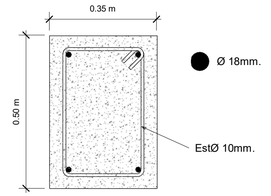
5 Perfil del Eje 4
1 : 50



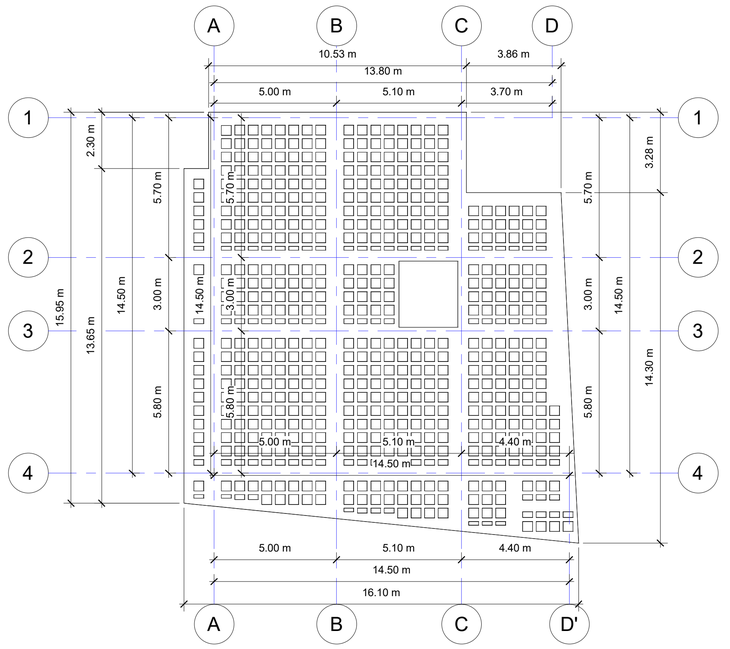
6 Perfil del Eje 4'
1 : 50



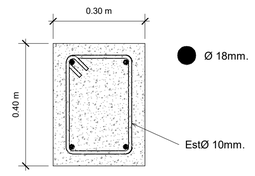
7 Viga 25x25
1 : 10



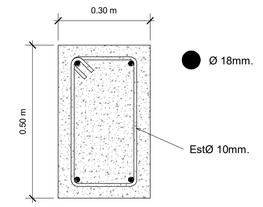
8 Viga 35x50
1 : 10



11 Vista planta distribución de casetones
1 : 125



10 Viga 30x40
1 : 10



9 Viga 30x50
1 : 10

TUTOR DE TESIS:
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UNIVERSIDAD DEL AZUAY

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DIB. CHRISTIAN STEFANO BARZALLO SOLIS
REV. ING. DAVID RICARDO CONTRERAS L.

ESCALA: Según se indican.

CHRISTIAN STEFANO BARZALLO
Estudiante de Ingeniería Civil

Contenido:
- Vista de planta de vigas del 2do y 3er piso
- Vista de planta de losa y distribución de casetones del 2do y 3er piso
- Ejes 1,2,3,4,4',4" de vigas del 2do y 3er piso
- Perfiles de vigas del 2do y 3er piso
- Tabla de cuantificaciones de vigas del 2do y 3er piso

SEPTIEMBRE DEL 2024

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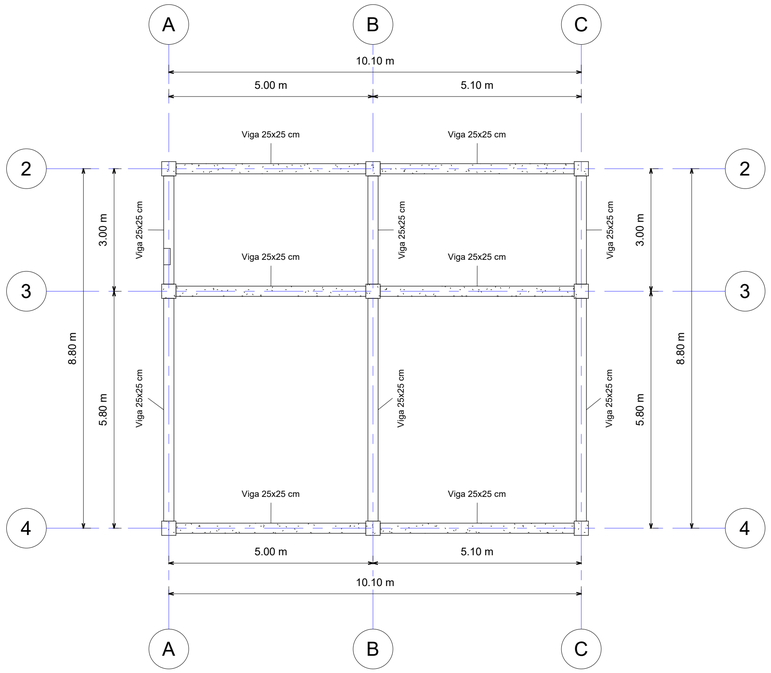

1 Vista de planta de vigas del 4to piso

1 : 75

Tabla de cantidad de acero de columnas					
Primera Planta					
Modelo	**Diametro (mm)**	**Cantidad**	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Acero longitudinal	20.00	64.00	324.48	2.47	800.17
Acero longitudinal	18.00	64.00	324.48	2.00	648.31
Acero estribos	10.00	1168.00	1623.52	0.62	1001.71
TOTAL					2450.19
Segunda Planta					
Modelo	**Diametro (mm)**	**Cantidad**	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Acero longitudinal	20.00	60.00	186.00	2.47	458.68
Acero longitudinal	18.00	60.00	186.00	2.00	371.63
Acero estribos	10.00	525.00	729.75	0.62	450.26
TOTAL					1280.56
Tercera Planta					
Modelo	**Diametro (mm)**	**Cantidad**	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Acero longitudinal	20.00	60.00	186.00	2.47	458.68
Acero longitudinal	18.00	60.00	186.00	2.00	371.63
Acero estribos	10.00	525.00	729.75	0.62	450.26
TOTAL					1280.56
Cuarta Planta					
Modelo	**Diametro (mm)**	Cantidad	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Acero longitudinal	20.00	36.00	109.80	2.47	270.77
Acero longitudinal	18.00	36.00	109.80	2.00	219.38
Acero estribos	10.00	315.00	437.85	0.62	270.15
TOTAL					760.30
TOTAL DE TODAS LAS COLUMNAS					5771.61

Tabla de cantidad de hormigón de columnas					
Primera Planta					
Modelo	**Ancho (m)**	**Alto (m)**	**Cantidad**	**Altura**	**Volumen (m3)**
Columna 45x45 cm	0.45	0.45	7.00	3.06	4.34
Columna 40x40 cm	0.40	0.40	8.00	3.06	3.92
Columna 35x35	0.35	0.35	1.00	3.06	0.37
TOTAL					8.63
Segunda Planta					
Modelo	**Ancho (m)**	**Alto (m)**	**Cantidad**	**Altura**	**Volumen (m3)**
Columna 45x45 cm	0.45	0.45	7.00	2.70	3.83
Columna 40x40 cm	0.40	0.40	8.00	2.70	3.46
TOTAL					7.28
Tercera Planta					
Modelo	**Ancho (m)**	**Alto (m)**	**Cantidad**	**Altura**	**Volumen (m3)**
Columna 35x35	0.35	0.35	15.00	2.70	4.96
TOTAL					4.96
Cuarta Planta					
Modelo	**Ancho (m)**	**Alto (m)**	**Cantidad**	**Altura**	**Volumen (m3)**
Columna 35x35	0.35	0.35	9.00	3.06	3.37
TOTAL					3.37
Sumatoria Total					24.25

ESPECIFICACIONES TÉCNICAS:

1.-RESISTENCIA CILINDRICA DEL HORMIGON SIMPLE:
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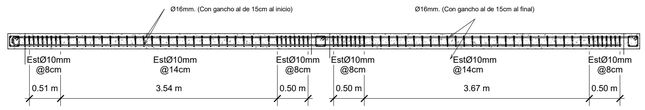
Tabla de cantidad de acero de vigas						
Apoyos de escalera						
Tipo de viga	**Cantidad**	**Modelo**	**Diametro (mm)**	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Viga 25x25 cm.	2	Acero longitudinal	16	22.40	1.578	35.35
		Estribos	10	65.12	0.617	40.18
TOTAL POR ESCALERA						75.53
TOTAL PARA 3 ESCALERAS						226.59

Tabla de cantidad de hormigón de vigas				
Apoyos de escalera				
Modelo	**Ancho (m)**	**Alto (m)**	**Longitud total(m)**	**Volumen (m3)**
Viga 25x25 cm.	0.25	0.25	5.4	0.34
TOTAL POR ESCALERA				0.34
TOTAL PARA 3 ESCALERAS				1.02

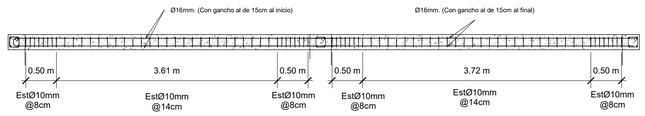


2 Perfil del Eje 2.

1 : 50

Tabla de cantidad de acero de vigas						
Cuarta Planta						
Tipo de viga	**Cantidad**	**Modelo**	**Diametro (mm)**	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Viga 25x25 cm.	12	Acero longitudinal	16	53.7	1.578	84.74
		Estribos	10	303.75	0.617	187.41
TOTAL						272.15

Tabla de cantidad de hormigón de vigas				
Cuarta Planta				
Modelo	**Ancho (m)**	**Alto (m)**	**Longitud total(m)**	**Volumen (m3)**
Viga 25x25 cm.	0.25	0.25	52.5	3.28
TOTAL				3.28

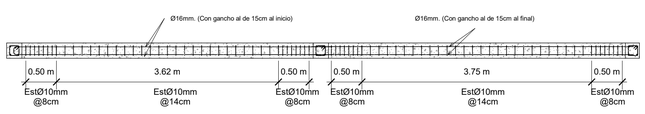


3 Perfil del Eje 3.

1 : 50

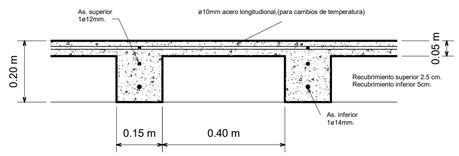
Tabla de cantidad de acero de escaleras					
Escalera					
Tipo	**Modelo**	**Diametro (mm)**	**Longitud Total**	**Peso Kg/ML**	**Peso Total (Kg)**
Escalera de hormigón armado	Acero longitudinal (-)	8	4.30	0.395	1.70
	Acero longitudinal (+)	8	15.55	0.395	6.14
	Acero longitudinal	10	39.6	0.617	24.43
TOTAL POR ESCALERA					32.27
TOTAL PARA 3 ESCALERAS					96.81

Tabla de cantidad de hormigón Escaleras	
Modelo	**Volumen (m3)**
Escalera de hormigón armado	2.17
TOTAL POR ESCALERA	2.17
TOTAL PARA 3 ESCALERAS	6.51



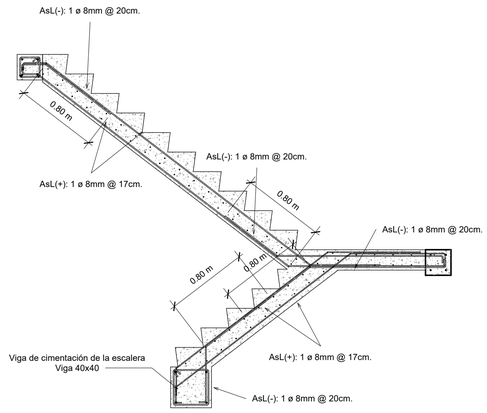
4 Perfil del Eje 4.

1 : 50



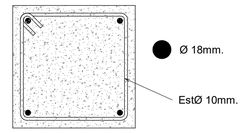
5 Detalle de losa

1 : 10



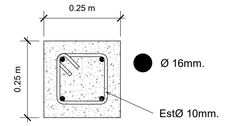
7 Detalle de escaleras

1 : 30



8 Viga 40x40 cm.

1 : 10



6 Viga 25x25.

1 : 10

TUTOR DE TESIS:

ING. DAVID CONTRERAS

UNIVERSIDAD DEL AZUAY

DIS. CHRISTIAN STEFANO BARZALLO SOLIS

DIB. CHRISTIAN STEFANO BARZALLO SOLIS

REV. ING. DAVID RICARDO CONTRERAS L.

ESCALA: Según se indican.

CHRISTIAN STEFANO BARZALLO
Estudiante de Ingenieria Civil

Contenido:
- Vista de planta de vigas del 4to piso
- Ejes 2,3,4 de las vigas del 4to piso
- Perfiles de viagas del 4to piso
- Detalle de losa aligerada y escalera
- Tablas de cuantificación

SEPTIEMBRE DEL 2024

LÁMINA 5