INFORME TECNICO DESCRIPTIVO Y MEMORIA DE CALCULO



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1. ALCANCE

El presente documento, denominado “Informe Técnico Descriptivo y Memoria de Cálculo”, se limita a la presentación y desarrollo de las actividades descritas en el numeral 3.01 del CONTRATO DE PRESTACIÓN DE SERVICIOS CELEBRADO ENTRE LA ESE HOSPITAL UNIVERSITARIO DE SANTANDER Y ESTRUCAD INGENIERÍA Y CONSULTORÍA S.A.S., No. 513 DE 2025. Dichas actividades se describen a continuación:

- Presentación de los resultados de la etapa de exploración y levantamiento, mediante una descripción cualitativa.
- Presentación de los resultados de la etapa de ensayos, con descripción cuantitativa y realización de visita a campo.
- Elaboración de la memoria de cálculo del análisis estructural, incluyendo la verificación de los índices de demanda–capacidad para la determinación de la vulnerabilidad estructural frente a las solicitaciones proyectadas.
- Elaboración de informes técnicos sobre el estado de los elementos no estructurales del nivel de terraza, incluyendo las recomendaciones correspondientes.
- Desarrollo del análisis comparativo entre la carga impuesta actual y la carga proyectada, junto con su respectivo análisis.
- Elaboración de las memorias de cálculo del reforzamiento estructural.

2. NORMAS

Normas Colombianas de diseño y Construcción Sismo-Resistente, NSR-10 y decretos complementarios.

- Decreto 926 del 19 de marzo de 2010
- Decreto 2525 del de julio de 2010
- Decreto 092 del 17 de enero de 2011
- Ley 1796 del 13 de julio de 2016
- Decreto 945 del 5 de junio de 2017
- NTC 3692 – Método de ensayo para la determinación del número de rebote del concreto endurecido (Esclerometría).
- NTC 3658 (ASTM C42) – Método de ensayo para la obtención y ensayo de núcleos extraídos y vigas de concreto aserradas.
- INV E 410-13 – Resistencia a la compresión de cilindros de concreto.
- ACI 318-08 – Building Code Requirements for Structural Concrete (Requisitos de Reglamento para Concreto Estructural).
- AISC 360-10 – Specification for Structural Steel Buildings (Especificación para Edificios de Acero Estructural).
- AISC 360-16 – Specification for Structural Steel Buildings (Especificación para Edificios de Acero Estructural).

3. SOFTWARE DE DISEÑO

- ETABS V16: Análisis global de la edificación
- CYPE3D: Analis los elementos metálicos del piso 13
- SAP 2000: Analis los elementos metálicos del piso 13

3.1. MODELO MATEMATICO.

El análisis de las solicitaciones se realiza mediante un cálculo espacial en 3D, por métodos matriciales de rigidez. Se establece la compatibilidad de deformaciones en todos los nudos, considerando 6 grados de libertad, y se crea la hipótesis de indeformabilidad del plano de cada planta, para simular el comportamiento rígido del diafragma, impidiendo los desplazamientos relativos entre nudos del mismo (diafragma rígido). Por tanto, cada planta sólo podrá girar y desplazarse en su conjunto (3 grados de libertad). La consideración de diafragma rígido para cada zona independiente de una planta se mantiene, aunque se introduzcan vigas, vacíos, en la planta, salvo para las vigas exentas que el usuario desconecte del diafragma rígido y salvo para los muros que no estén en contacto con las placas.

Se analizará la estructura por métodos matriciales de tal manera que incluya las fuerzas internas adicionales generadas por deformaciones de los diversos elementos modelados por medio del programa de análisis, de forma que facilite el manejo de la información teniendo en cuenta que se realizarán las combinaciones de carga, prescritas en el capítulo B de la NSR-10, con el fin de diseñar para la solicitación más crítica y verificar que el diseño es adecuado para las demás combinaciones.

3.2. MÉTODO DE ANÁLISIS DINÁMICO ESPECTRAL

El método empleado para obtener el signo de los resultados sísmicos se basa en el procedimiento usado para el diseño sísmico de plantas nucleares. En este método se calcula un juego de fuerzas inerciales nodales para cada modo de vibración y el correspondiente cortante basal modal. También se determina el cortante basal combinado y un conjunto de fuerzas inerciales nodales equivalentes, combinando las fuerzas nodales modales. El programa escala los resultados modales para que el cortante basal correspondiente a las fuerzas inerciales combinadas, sea igual al cortante basal de diseño mínimo requerido por el código selecto, el cual es una fracción del cortante basal estático equivalente.

3.3. METODO DE DISEÑO

Método de los estados límites: Es un método para diseñar estructuras de tal manera que la probabilidad de falla para ciertos estados límites considerados importantes este dentro de valores aceptables. Por lo general se estudian los estados límites de servicio y resistencia. Este último caso se le conoce también como ***método de la resistencia***.

4. RESULTADOS DE LA ETAPA DE EXPLORACIÓN Y LEVANTAMIENTO (DESCRIPCIÓN CUALITATIVA).

La exploración de campo corresponde a una inspección visual y cualitativa de la estructura, orientada a reconocer su configuración general, el sistema estructural existente, las dimensiones aparentes de los elementos y la presencia de patologías visibles. Esta inspección no tiene carácter destructivo ni cuantitativo, y su finalidad es complementar la información obtenida a partir de los ensayos de campo, ensayos de laboratorio y los análisis estructurales, permitiendo una interpretación integral del estado actual de la edificación y del comportamiento de sus elementos estructurales.

4.1. LEVANTAMIENTO ESTRUCTURAL

El levantamiento estructural comprendió la inspección visual detallada de la edificación y la medición en campo de los elementos estructurales existentes, incluyendo dimensiones de secciones, alturas entre pisos, distancias entre ejes y configuración general del sistema estructural. La información obtenida fue contrastada y verificada con los planos estructurales récord del reforzamiento suministrados para el desarrollo del estudio previo, con el fin de identificar concordancias y posibles variaciones respecto a la geometría y disposición de la estructura. En el presente documento se describen de manera sistemática las actividades ejecutadas, así como los resultados del levantamiento, los cuales constituyen la base para la caracterización del estado actual de la edificación y para los análisis estructurales posteriores. Se anexan planos estructurales del E1 al E11.

4.2. IDENTIFICACIÓN DEL SISTEMA ESTRUCTURAL EXISTENTE

De acuerdo con el estudio de vulnerabilidad sísmica realizado por la empresa OTECO en el año 2007, la edificación donde funciona la E.S.E. Hospital Universitario de Santander contaba, para esa fecha, con una antigüedad aproximada de 60 años. La estructura existente se encontraba conformada por una plataforma de tres (3) niveles y una torre de diez (10) pisos, la cual había operado históricamente bajo cargas predominantemente verticales y había resistido eventos sísmicos de corta duración y mediana intensidad sin registrar daños significativos. No obstante, dicho estudio concluye que el sistema estructural original no cumplía con los requisitos de capacidad de disipación de energía especial exigidos por la NSR-98 para edificaciones aporticadas localizadas en zona de amenaza sísmica alta, como es el caso de la ciudad de Bucaramanga.

Con el fin de evitar la presencia de irregularidad en altura, el estudio propuso la implementación de una junta de construcción a nivel de la plataforma, de manera que se independizara estructuralmente el sector de la torre de los tres primeros niveles. En consecuencia, tanto el análisis de la estructura existente como la propuesta de reforzamiento se plantearon considerando dicha condición de separación estructural.

En cuanto al reforzamiento estructural, se identificó que los pórticos existentes estaban conformados por vigas armadas únicamente en la dirección perpendicular a las viguetas y carecían de zonas de confinamiento adecuadas para garantizar un comportamiento aceptable en el rango inelástico. Por esta razón, se propuso complementar el sistema existente mediante la incorporación de muros estructurales, con el objetivo de conformar un sistema combinado de muros de carga y pórticos de concreto. Bajo este esquema, los muros estructurales se diseñaron para resistir la totalidad de las cargas laterales de origen sísmico, mientras que los pórticos existentes se destinaron principalmente a soportar las cargas verticales.

Los elementos pertenecientes a los pórticos existentes fueron evaluados conforme a las de elementos no designados como parte del sistema resistente a fuerzas laterales, mientras que los muros estructurales fueron diseñados para asumir completamente la demanda sísmica. Este enfoque definió el sistema estructural adoptado y constituye la base para la evaluación de las condiciones existentes desarrollada en el presente estudio.

Por lo cual se concluye que actualmente la edificación cuenta con un sistema estructural combinado de muros de concreto DES y pórticos de concreto no resistentes a momento.

4.3. TAMAÑOS DE SECCIÓN DE LOS MIEMBROS ESTRUCTURALES

En este apartado se presentan los tamaños de sección de los miembros estructurales identificados en campo, los cuales fueron obtenidos a partir de las mediciones directas realizadas durante el levantamiento estructural. La información se documenta mediante registros fotográficos y corresponde principalmente a columnas y a las distancias entre ejes, sirviendo como soporte para la verificación de la geometría existente y para los análisis estructurales posteriores.

De las verificaciones realizadas en campo se observa que las secciones de columnas, vigas y muros coinciden en su gran mayoría con lo consignado en los planos récord del reforzamiento estructural. No obstante, se identifican algunas diferencias puntuales, como, por ejemplo, en las columnas ubicadas en las zonas aledañas a los ascensores centrales de la torre, así como la existencia de algunas labores contempladas en el proyecto de reforzamiento que no fueron ejecutadas en obra. Estas condiciones serán analizadas y detalladas en los planos estructurales que se elaborarán al finalizar el análisis de vulnerabilidad sísmica, incorporando las condiciones reales encontradas en la edificación.

		
Medición de sección de columnas	Medición de altura de entre pisos	Medición de la distancia entre columnas

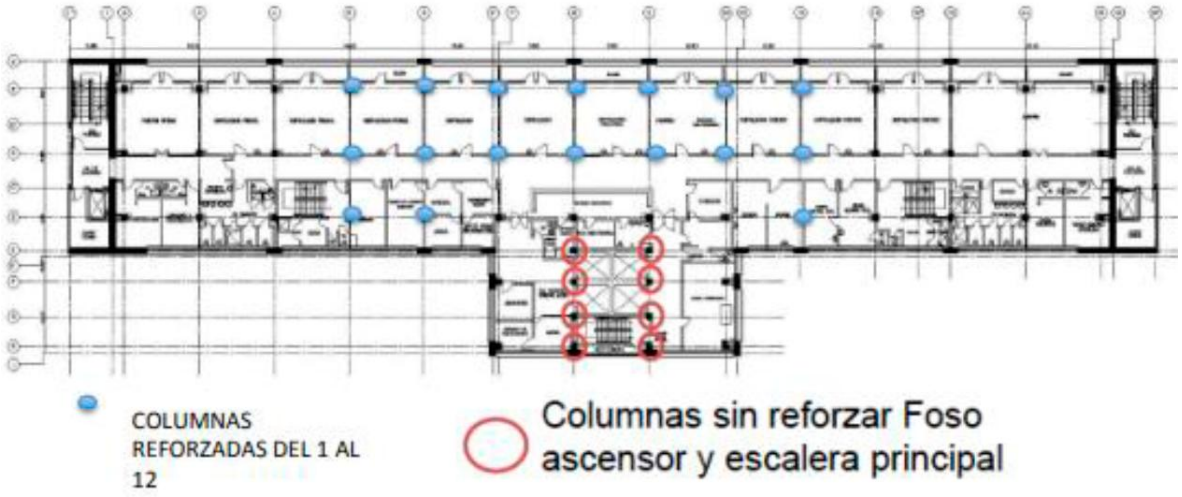
Medición de elementos existentes - Fuente: autor.

Durante la inspección visual y medición de elementos se observó que 8 columnas ubicadas en los ejes 8E, 8F, 8G, 8H, 9E, 9F, 9G y 9H no fueron reforzadas como estaba planteado en el proyecto de reforzamiento establecido en el contrato No.341 “Elaboración de los Estudios de Vulnerabilidad Sísmica Estructural y rediseño del refuerzo del edificio en el cual funciona la Empresa Social del Estado Hospital Universitario de Santander”. Por lo cual en las siguientes

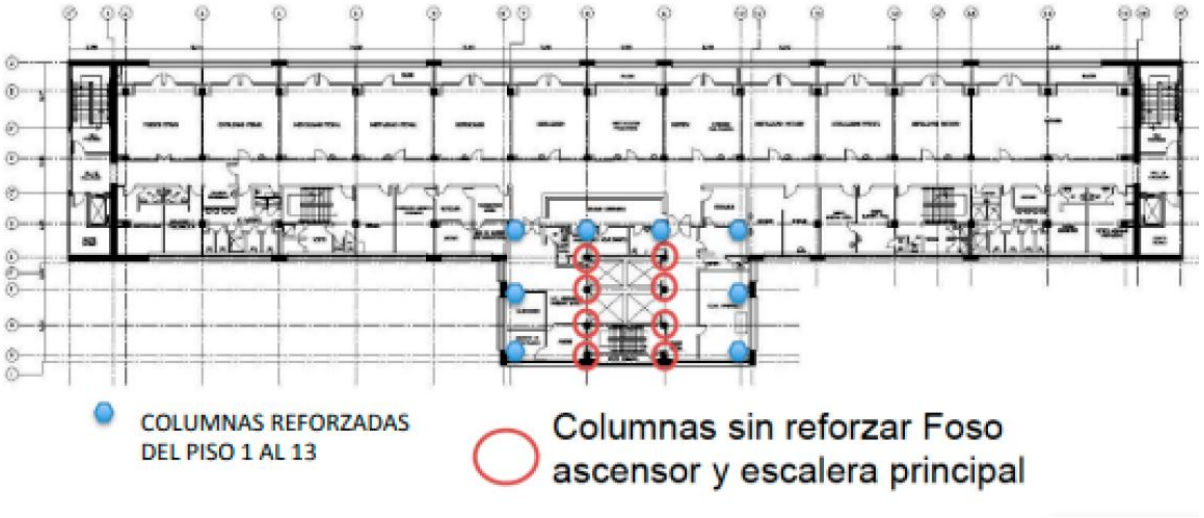
imágenes tomadas del informe final emitido por la empresa OTECO se relacionan el estado actual de las columnas reforzadas y no reforzadas. Información que fue verificada en campo.



Columnas reforzadas del piso 2 al piso 12 – Fuente - OTECO



Columnas reforzadas del piso 1 al piso 12 – Fuente - OTECO



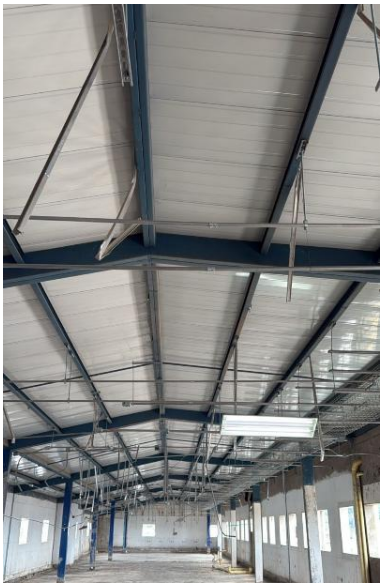
Columnas reforzadas del piso 1 al piso 13 – Fuente - OTECO



Columnas reforzadas del piso 1 al piso 11 – Fuente – OTECO

En base a esto se puede concluir que el piso 12, del eje 12 al eje 15 no cuenta con un sistema estructural definido, debido a que el reforzamiento no fue ejecutado en esta área. Actualmente cuenta con un sistema de mampostería, original de la construcción inicial.

Se identifica sobre piso 13 de la edificación columnas y vigas metálicas fabricadas en perfiles doble C de lámina delgada, las cuales soportan una cubierta liviana mediante correas metálicas tipo C y no hacen parte del sistema de resistencia sísmica de la edificación. es importante mencionar que esta ampliación no fue considerada en la propuesta de reforzamiento del estudio de vulnerabilidad anterior realizado por la empresa OTECO, CONTRATO No.341 “Elaboración de los Estudios de Vulnerabilidad Sísmica Estructural y rediseño del refuerzo del edificio en el cual funciona la Empresa Social del Estado Hospital Universitario de Santander”



Sistema de perfiles metálicos existente - Fuente: autor

Las columnas y vigas corresponden a secciones tipo cajón soldadas (perfiles encajonados), con una sección transversal aproximada de 160×220 mm y un espesor de 3 mm, de acuerdo con lo observado en sitio y registrado en las imágenes anexas.





Medición de perfiles existentes - Fuente: autor.

En cuanto al anclaje a la estructura de concreto existente, se observó la presencia de una placa base metálica de aproximadamente 240 × 240 mm y 12.7 mm de espesor, unida a la columna mediante soldadura. No se evidencian pernos de anclaje, lo cual implica que el mecanismo de transferencia de cargas gravedad y laterales hacia el sistema de concreto no está adecuadamente garantizado.





Medición de placa base - Fuente: autor.

Durante la inspección se observó que varios de los perfiles presentan corrosión generalizada y pérdida efectiva de sección, lo cual constituye un deterioro severo del elemento estructural. Desde el punto de vista técnico, esta condición implica:

- Reducción significativa de la capacidad resistente axial y flexional,
- Disminución del módulo de sección,
- Afectación de la ductilidad,
- Posible aparición de pandeo prematuro en elementos de lámina delgada.

Este nivel de daño debe considerarse crítico, dado que afecta directamente la integridad estructural del sistema y su capacidad para responder adecuadamente ante cargas sísmicas.



Corrosión en los perfiles existentes Medición de perfiles existentes - Fuente: autor

4.4. CALIDAD DE LA CONSTRUCCION Y ESTADO DE CONSERVACION:

4.4.1. POSICIÓN DE LA EDIFICACIÓN EN LA MANZANA:

Esquina costados restringidos	
Intermedia costados restringidos	
Libre por un costado, libre por dos costados	X

4.4.2. GEOMETRIA EN PLANTA:

Buena	X
Regular	
Mala	

4.4.3. GEOMETRIA EN ALTURA:

Buena	
Regular	X
Mala	

4.4.4. ESTADO DEL SISTEMA ESTRUCTURAL

Calidad del diseño y la construcción de la estructura original (A.10.2.2.1)

Buena	X
Regular	
Mala	

Calificación del estado actual de la estructural (sismos, corrosión) (A.10.2.2.2)

Buena	X
Regular	
Mala	

4.5. ESTADO DE LOS ELEMENTOS NO ESTRUCTURALES DEL PISO 13

En el presente numeral se describe el estado de los elementos no estructurales existentes en el nivel de terraza correspondiente al piso 13, con base en la inspección visual realizada durante el levantamiento de información.

De acuerdo con la inspección efectuada, los elementos no estructurales presentes en el nivel de terraza se encuentran, en términos generales, en buen estado de conservación.

- No se evidencian:
- Deflexiones apreciables en los elementos observados
- Fisuras visibles que indiquen procesos de daño o deterioro relevante
- Desprendimientos o fallas en acabados asociados

Lo anterior permite establecer que, bajo las condiciones observadas, estos elementos no presentan manifestaciones patológicas que comprometan su integridad o funcionalidad.

Los elementos que conforman la cubierta del nivel de terraza fueron objeto de verificación visual, evidenciándose un buen estado general.

- No se identifican:
- Deformaciones visibles
- Daños aparentes en los elementos que conforman el sistema de cubierta
- Condiciones que sugieran fallas en su comportamiento actual

Por lo anterior, se establece que la cubierta no presenta, al momento de la inspección, afectaciones que comprometan su desempeño como elemento no estructural.

En el nivel de terraza se identifican elementos conformados por perfiles metálicos tipo doble C soldados, los cuales corresponden a columnas y vigas que hacen parte de la configuración del nivel.

De acuerdo con la definición establecida en el Título A.8 de la NSR-10, estos elementos se clasifican como elementos no estructurales, en la medida en que no hacen parte del sistema de resistencia sísmica de la edificación.

No obstante, dada su función dentro del nivel de terraza, estos elementos requieren verificación en cuanto a su estado y condiciones de servicio.

En el numeral 4.3. Tamaños de sección de los miembros estructurales (páginas 9 a 11), se presenta la descripción detallada de estos elementos, incluyendo sus características geométricas y el levantamiento realizado en campo, donde se identifican patologías y condiciones de deterioro que afectan su estado actual.

En función de dichas condiciones, se establece la necesidad de intervención sobre estos elementos, razón por la cual se desarrolla una propuesta de reforzamiento específica, la cual se presenta en el numeral 7.2. Propuesta de reforzamiento piso 13 del presente documento.

Por lo anterior, el análisis detallado, diagnóstico y definición de medidas de intervención se encuentran contenidos en los numerales previamente citados, evitando duplicidad de información en el presente apartado.

5. RESULTADOS DE LA ETAPA DE ENSAYOS, DESCRIPCIÓN CUANTITATIVA.

En este apartado se presentan los resultados obtenidos durante la etapa de ensayos destructivos y no destructivos realizados a los elementos estructurales de la edificación, con el fin de caracterizar cuantitativamente las propiedades mecánicas y el estado del material existente. Los ensayos ejecutados incluyen esclerometrías, determinación de profundidad de carbonatación, extracción de núcleos de concreto y regatas de verificación, los cuales fueron desarrollados mediante el uso de equipos adecuados y personal técnicamente capacitado. Los resultados aquí consignados constituyen la base técnica para la evaluación del comportamiento estructural y la posterior elaboración de los análisis y memorias de cálculo correspondientes.

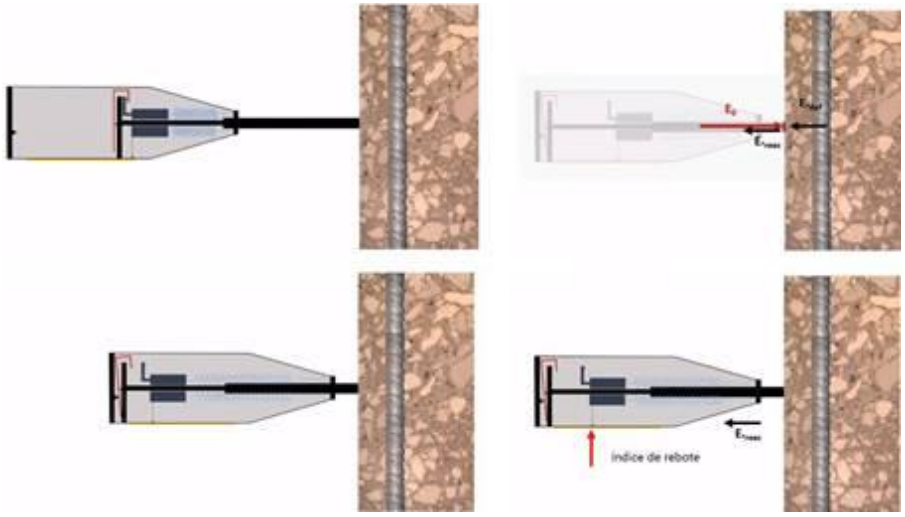
5.1. ENSAYOS NO DESTRUCTIVOS:

Los ensayos no destructivos incluyen procedimientos como la esclerometría, la medición de la profundidad de carbonatación, ultrasonido y el escaneo de refuerzos, los cuales permiten evaluar la uniformidad del material, estimar la resistencia del concreto y verificar la ubicación y recubrimiento del acero de refuerzo sin afectar la integridad de los elementos.

5.1.1. ESCLETOMETRÍA:

El ensayo de esclerometría se basa en el principio de rebote elástico, utilizando un martillo de Schmidt que impacta la superficie del concreto con una fuerza controlada. La magnitud del rebote se mide mediante un índice de rebote, el cual, a través de correlaciones empíricas, se asocia con la resistencia a la compresión del material. Este método es especialmente útil para obtener mediciones rápidas y evaluar la uniformidad del concreto en distintas zonas de la estructura.

Para garantizar la uniformidad de los datos, todas las mediciones se realizaron con el esclerómetro en posición horizontal (0°), es decir, sin inclinación, lo que permite reducir las variaciones en los valores obtenidos debido a la influencia de la gravedad. Las pruebas se llevaron a cabo en diferentes elementos estructurales del hospital, siguiendo las recomendaciones de la Norma Técnica Colombiana NTC 3692 y las directrices del fabricante del equipo.



Ángulo de inclinación del ensayo de esclerometría - Fuente: prontubeam (https://prontubeam.com/articulos/2023-10-12-Ensayo-mediante-esclerometro)

En la siguiente tabla se relacionan las esclerometrías realizadas, en ella se pueden identificar el piso, el código del ensayo, el resultado de la resistencia al concreto en Mpa y el tipo de elemento al cual fue realizado el ensayo:

RESUMEN DE RESULTADOS DE LAS ESCLEROMETRÍAS				
No.	**NIVEL**	**CODIGO**	**ELEMENTO**	***f'c (Mpa)***
1	Piso 13	P13-C1	Columna	51.40
2	Piso 13	P13-C2	Columna	43.85
3	Piso 13	P13-C3	Columna	45.71
4	Piso 11	P11-C1	Columna	29.90
5	Piso 10	P10-C1	Columna	22.10
6	Piso 10	P10-C2	Columna	42.02
7	Piso 10	P10-C3	Columna	45.71
8	Piso 10	P10-C4	Columna	47.58
9	Piso 9	P9-C1	Columna	29.90
10	Piso 8	P8-C1	Columna	31.55
11	Piso 7	P7-C1	Columna	34.93
12	Piso 6	P6-C1	Columna	31.55
13	Piso 5	P5-C1	Columna	31.55
14	Piso 5	P5-C2	Columna	31.55
15	Piso 4	P4-C1	Columna	31.55
16	Piso 3	P3-C1	Columna	42.02
17	Piso 3	P3-C2	Columna	49.48
18	Piso 3	P3-C3	Columna	49.48
19	Piso 1	P1-C1	Columna	57.26
20	Piso 1	P1-C2	Columna	22.10
21	Piso 1	P1-C3	Columna	61.25
			PROMEDIO	***39.64***

Resumen de resultados de las esclerometrías - Fuente: autor.

De los resultados obtenidos en las esclerometrías realizadas, se evidencia que la resistencia a la compresión estimada del concreto f'c presenta un valor promedio de 39.64 MPa, con un valor mínimo de 22.10 MPa y un valor máximo de 61.25 MPa. Esta dispersión de resultados es coherente con las diferencias propias de los elementos estructurales evaluados, asociadas a condiciones de ejecución, antigüedad y estado de conservación del concreto.

Cabe resaltar que la esclerometría corresponde a un método no destructivo de carácter indirecto y aproximado, por lo cual los valores obtenidos deben interpretarse como indicadores del nivel de resistencia del material, y no como valores definitivos para fines de diseño o verificación estructural. En este sentido, los resultados constituyen una herramienta válida para la evaluación preliminar del concreto y para la identificación de posibles variaciones en su calidad.

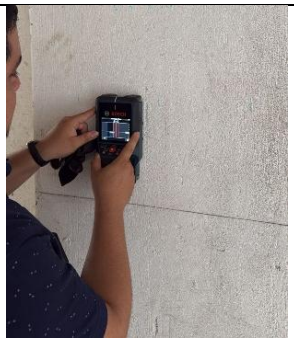
En consecuencia, los valores estimados mediante esclerometría serán verificados y contrastados con los ensayos de resistencia a la compresión realizados sobre los núcleos de concreto extraídos, cuyos resultados se presentan y analizan en un apartado posterior del presente informe, permitiendo así una caracterización más confiable de las propiedades mecánicas del material y el respaldo técnico de los análisis estructurales desarrollados.

5.2. ENSAYOS DESTRUCTIVOS:

Los ensayos destructivos comprenden actividades como la extracción de núcleos y la realización de regatas de verificación, mediante las cuales se obtienen muestras representativas para la determinación directa de la resistencia a compresión y la inspección detallada de las condiciones internas del concreto y del acero de refuerzo.

5.2.1. ESCANEO Y REGATAS:

El presente apartado tiene como objetivo describir la información obtenida a partir del escaneo de refuerzos y la ejecución de regatas de verificación, actividades orientadas a identificar y confirmar la disposición del acero de refuerzo en los elementos estructurales evaluados. El escaneo se realizó mediante el uso de un escáner de materiales Bosch, el cual permite localizar de manera no destructiva el acero de refuerzo longitudinal y transversal embebido en el concreto, facilitando la identificación de su ubicación, cantidad y distribución dentro de la sección de los elementos estructurales.

		
Escaneo de elementos	Medición de acero longitudinal: Ø = No.5	Medición de acero horizontal: Ø =No.3

Evidencia fotográfica de un elemento ensayado - Fuente: autor.

De forma complementaria, se ejecutaron regatas de verificación con el fin de corroborar la información obtenida mediante el escaneo. Estas se realizaron mediante el uso de pulidora, con el propósito de efectuar cortes controlados y rectos que minimizaran la afectación del elemento y evitaran bordes irregulares, y taladro rotopercutor para alcanzar el acero de refuerzo. Una vez expuesto el refuerzo, se procedió a la medición del diámetro de las barras mediante pie de rey, permitiendo la determinación precisa del tamaño del acero y la validación de la cantidad y distribución del refuerzo.

Cabe señalar que, en algunas zonas del hospital, no fue posible la ejecución de regatas debido a que este tipo de intervención genera niveles elevados de ruido y polvo, lo cual podía afectar áreas en operación o pisos con restricciones funcionales. En dichos sectores, la caracterización del acero de refuerzo se realizó exclusivamente mediante el escaneo no destructivo de los elementos estructurales, garantizando la continuidad de las actividades hospitalarias y el cumplimiento de las condiciones operativas del edificio.

A continuación, se presentan las tablas que resumen de los elementos explorados:

RESUMEN DE REGATAS REALIZADAS			
No.	**NIVEL**	**CODIGO**	**ELEMENTO**
1	Piso 13	P13-C1	Columna
2	Piso 13	P13-C2	Columna
3	Piso 13	P13-C3	Columna
4	Piso 12	P12-C1	Columna
5	Piso 12	P12-C2	Columna
6	Piso 10	P10-C1	Columna
7	Piso 10	P10-C2	Columna
8	Piso 10	P10-C3	Columna
9	Piso 10	P10-C4	Columna
10	Piso 8	P8-C1	Columna
11	Piso 6	P6-C1	Columna
12	Piso 5	P5-C2	Columna
13	Piso 4	P4-C1	Columna
14	Piso 3	P3-C1	Columna
15	Piso 3	P3-C2	Columna
16	Piso 3	P3-C3	Columna
17	Piso 1	P1-C1	Columna
18	Piso 1	P1-C2	Columna
19	Piso 1	P1-C3	Columna

Resumen de regatas realizadas - Fuente: autor.

Con la información obtenida a partir del escaneo de refuerzos y las regatas ejecutadas, y con el respectivo registro fotográfico y de los diámetros de acero identificados, se logra una caracterización confiable de la cantidad, disposición y tamaño del acero de refuerzo existente. Esta información permite verificar y contrastar los resultados de campo con los planos estructurales del reforzamiento, identificando posibles concordancias o diferencias en la configuración del refuerzo.

Adicionalmente, los resultados constituyen un insumo fundamental para la modelación de las condiciones estructurales existentes, al permitir incorporar el acero realmente presente en los elementos y evaluar de manera más precisa el comportamiento estructural y los índices de sobreesfuerzo, con base en las condiciones reales encontradas en la edificación.

5.2.2. EXTRACCIÓN DE NUCLEOS Y ENSAYO DE CARBONATACION.

El presente apartado describe las actividades de extracción de núcleos de concreto y la ejecución del ensayo de carbonatación, realizadas con el propósito de caracterizar las propiedades mecánicas y el estado del concreto existente. La extracción de núcleos se llevó a cabo conforme a la normativa INV E 410-13, con el fin de determinar de manera directa la resistencia a la compresión del concreto mediante el ensayo de cilindros obtenidos en campo.

La carbonatación es un tipo particular de reacción ácida, pero de excepcional importancia en la durabilidad del concreto. Se debe a la penetración por difusión del dióxido de carbono o anhídrido carbónico (CO2), del aire atmosférico o del suelo, en la estructura porosa de la superficie de concreto.

A continuación, se presenta un resumen de los núcleos extraídos.

Se realizó la extracción de 23 núcleos:

RESUMEN DE NUCLEOS EXTRAIDOS			
No.	**NIVEL**	**CODIGO**	**ELEMENTO**
1	Piso 13	P13-C1	Columna
2	Piso 13	P13-C2	Columna
3	Piso 13	P13-C3	Columna
4	Piso 12	P12-C1	Columna
5	Piso 12	P12-C2	Columna
6	Piso 11	P11-C1	Columna
7	Piso 10	P10-C1	Columna
8	Piso 10	P10-C2	Columna
9	Piso 10	P10-C3	Columna
10	Piso 10	P10-C4	Columna
11	Piso 9	P9-C1	Columna
12	Piso 8	P8-C1	Columna
13	Piso 7	P7-C1	Columna
14	Piso 6	P6-C1	Columna
15	Piso 5	P5-C1	Columna
16	Piso 5	P5-C2	Columna
17	Piso 4	P4-C1	Columna

18	Piso 3	P3-C1	Columna
19	Piso 3	P3-C2	Columna
20	Piso 3	P3-C3	Columna
21	Piso 1	P1-C1	Columna
22	Piso 1	P1-C2	Columna
23	Piso 1	P1-C3	Columna

Resumen de núcleos extraídos – Fuente: Autor.

Se anexa evidencia fotográfica de una de las muestras extraídas y ensayadas.

ELEMENTO: P1-C3	
	
Núcleo extraído	Ensayo de carbonatación: No presenta carbonatación

Evidencia fotográfica - Fuente: autor.

RESUMEN DE RESULTADOS DE LOS ENSAYOS DE CARBONATACION				
No.	**NIVEL**	**CODIGO**	**ELEMENTO**	**CARBONATACION**
1	Piso 13	P13-C1	Columna	No presenta carbonatación
2	Piso 13	P13-C2	Columna	No presenta carbonatación
3	Piso 13	P13-C3	Columna	No presenta carbonatación
4	Piso 12	P12-C1	Columna	No presenta carbonatación

5	Piso 12	P12-C2	Columna	No presenta carbonatación
6	Piso 11	P11-C1	Columna	90 mm
7	Piso 10	P10-C1	Columna	No presenta carbonatación
8	Piso 10	P10-C2	Columna	20 mm
9	Piso 10	P10-C3	Columna	30 mm
10	Piso 10	P10-C4	Columna	No presenta carbonatación
11	Piso 9	P9-C1	Columna	50 mm
12	Piso 8	P8-C1	Columna	No presenta carbonatación
13	Piso 7	P7-C1	Columna	No presenta carbonatación
14	Piso 6	P6-C1	Columna	40 mm
15	Piso 5	P5-C1	Columna	No presenta carbonatación
16	Piso 5	P5-C2	Columna	No presenta carbonatación
17	Piso 4	P4-C1	Columna	30 mm
18	Piso 3	P3-C1	Columna	No presenta carbonatación
19	Piso 3	P3-C2	Columna	40 mm
20	Piso 3	P3-C3	Columna	No presenta carbonatación
21	Piso 1	P1-C1	Columna	No presenta carbonatación
22	Piso 1	P1-C2	Columna	No presenta carbonatación
23	Piso 1	P1-C3	Columna	No presenta carbonatación

Resumen de resultados de los ensayos de carbonatación - Fuente: autor.

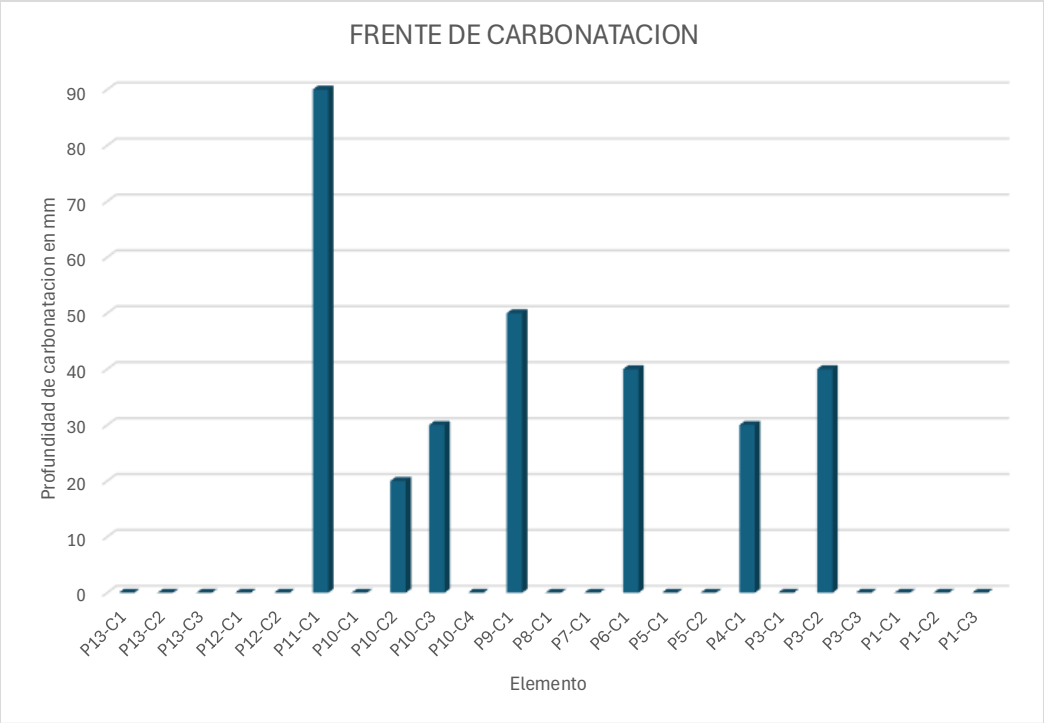


Gráfico de barras de la profundidad de carbonatación por cada elemento - Fuente: autor.

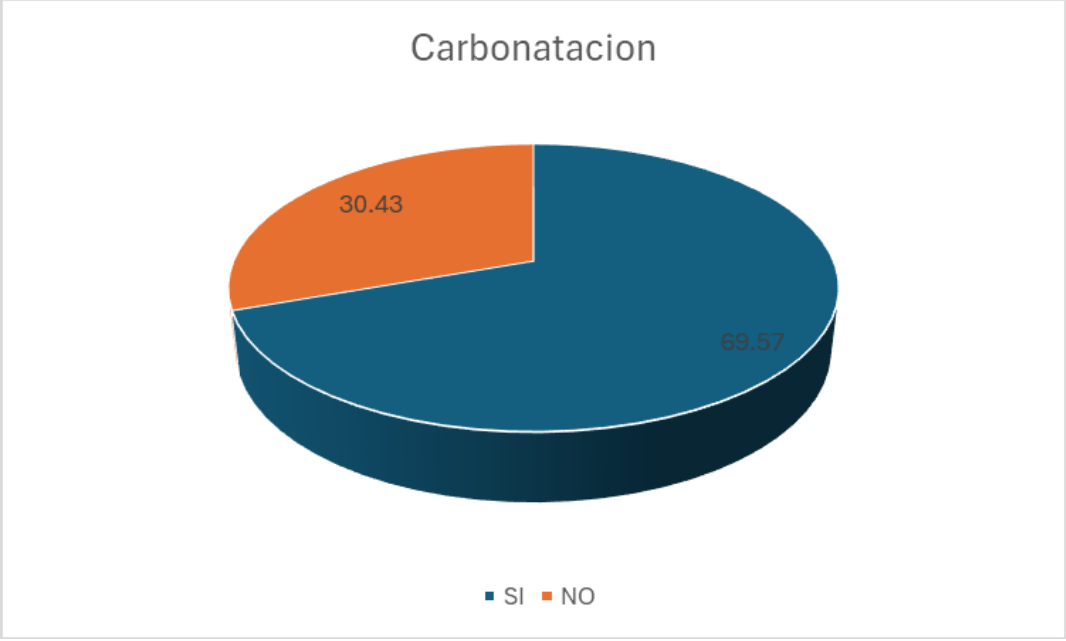


Gráfico de pastel del porcentaje de muestras que presentan carbonatación - Fuente: autor.

Con base en los resultados del ensayo de carbonatación, y tal como se evidencia en las gráficas de resultados presentadas, se observa que la mayoría de los elementos estructurales evaluados (70%) no presenta carbonatación, mientras que únicamente el 30% de los núcleos ensayados (7 de 23) presenta presencia de carbonatación. Esta distribución se ilustra claramente en el gráfico de pastel, el cual confirma que la carbonatación corresponde a un fenómeno puntual y no generalizado dentro de la estructura.

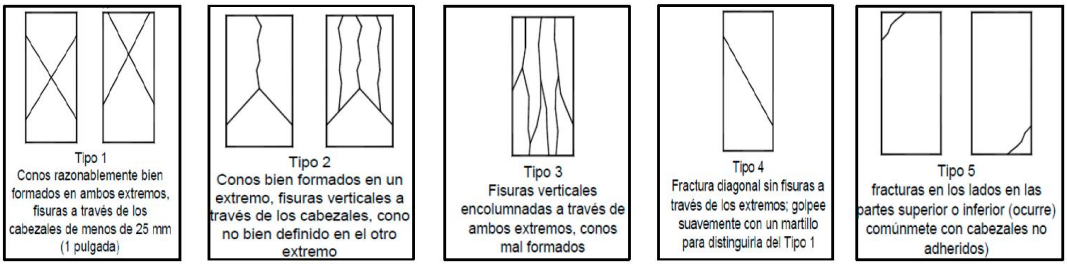
Por su parte, la gráfica del frente de carbonatación muestra que, en los elementos donde se identifica este fenómeno, las profundidades medidas son variables y localizadas, sin alcanzar en ningún caso el recubrimiento del acero de refuerzo. En consecuencia, no se evidencia pérdida de la capa pasiva del acero ni condiciones que indiquen un riesgo inmediato de corrosión asociado a este mecanismo de deterioro.

En conjunto, los resultados obtenidos y su representación gráfica permiten concluir que, desde el punto de vista de la carbonatación, el estado general del concreto es favorable, y que este fenómeno no representa una condición crítica para la durabilidad de los elementos estructurales evaluados en el marco del presente estudio, siendo coherente con el buen desempeño observado del concreto existente.

5.2.3. ENSAYO DE RESISTENCIA A LA COMPRESION.

Los núcleos de concreto fueron extraídos conforme a la NTC 3658 (ASTM C42) y ensayados a compresión de acuerdo con la normativa INV E 410-13, con el objetivo de determinar de manera directa la resistencia a la compresión del concreto de los elementos estructurales evaluados.

En este apartado se presentan los resultados de los ensayos de compresión realizados, así como la identificación del tipo de fractura observada en cada núcleo ensayado, la cual constituye un criterio adicional para la interpretación del comportamiento del concreto durante el ensayo. Para tal fin, se incluye un esquema gráfico de los tipos de falla típicos, utilizado como referencia para la clasificación de las fracturas registradas.



Esquema de fallas - Fuente: autor.

A continuación, se presentan los resultados de los ensayos de compresión realizados a los núcleos ensayados. **Ver anexo 1: resultados de ensayos de compresión,** los cuales se pueden encontrar en el presente documento en el numeral “8. Anexo 1”.

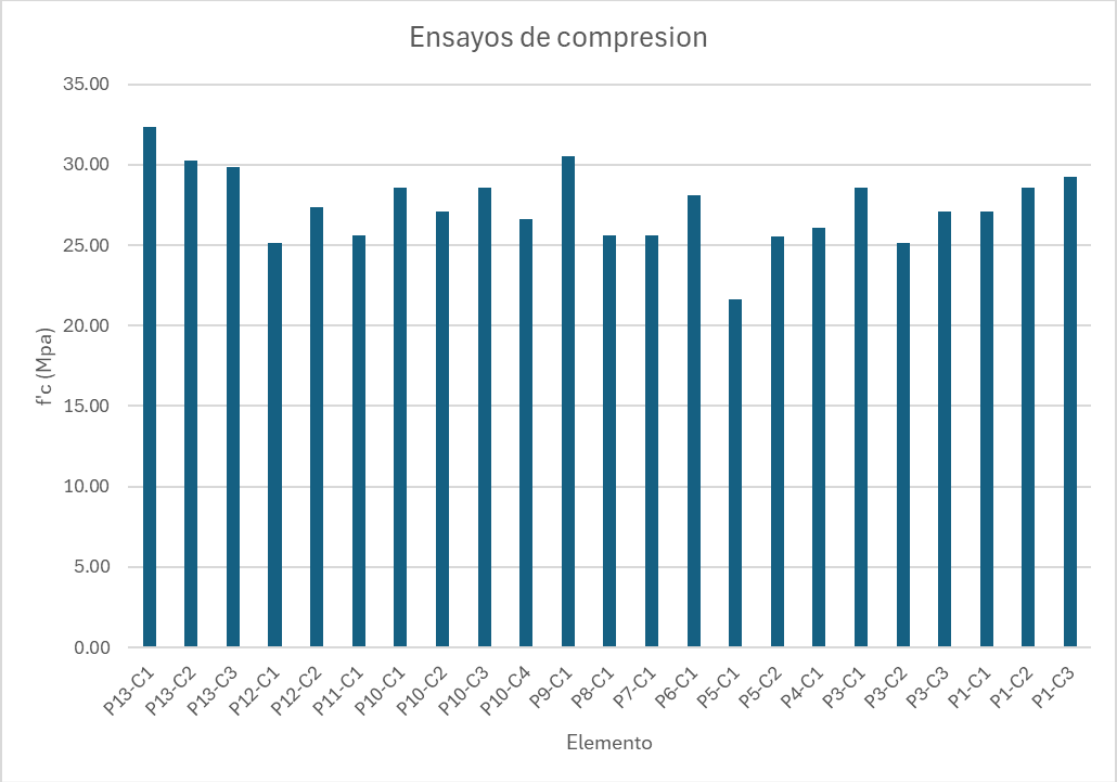


Gráfico de barras de los resultados de los ensayos de compresión para cada elemento - Fuente: autor.

RESUMEN DE RESULTADOS DE LOS ENSAYOS DE COMPRESION				
No.	**NIVEL**	**CODIGO**	**ELEMENTO**	**F'c (PSI)**
1	Piso 13	P13-C1	Columna	4696
2	Piso 13	P13-C2	Columna	4389
3	Piso 13	P13-C3	Columna	4331
4	Piso 12	P12-C1	Columna	3644
5	Piso 12	P12-C2	Columna	3972
6	Piso 11	P11-C1	Columna	3715
7	Piso 10	P10-C1	Columna	4144
8	Piso 10	P10-C2	Columna	3929
9	Piso 10	P10-C3	Columna	4144
10	Piso 10	P10-C4	Columna	3858
11	Piso 9	P9-C1	Columna	4429
12	Piso 8	P8-C1	Columna	3715

13	Piso 7	P7-C1	Columna	3715
14	Piso 6	P6-C1	Columna	4072
15	Piso 5	P5-C1	Columna	3137
16	Piso 5	P5-C2	Columna	3704
17	Piso 4	P4-C1	Columna	3786
18	Piso 3	P3-C1	Columna	4144
19	Piso 3	P3-C2	Columna	3644
20	Piso 3	P3-C3	Columna	3929
21	Piso 1	P1-C1	Columna	3929
22	Piso 1	P1-C2	Columna	4144
23	Piso 1	P1-C3	Columna	4239

Resumen de resultados de los ensayos de compresión - Fuente: autor.

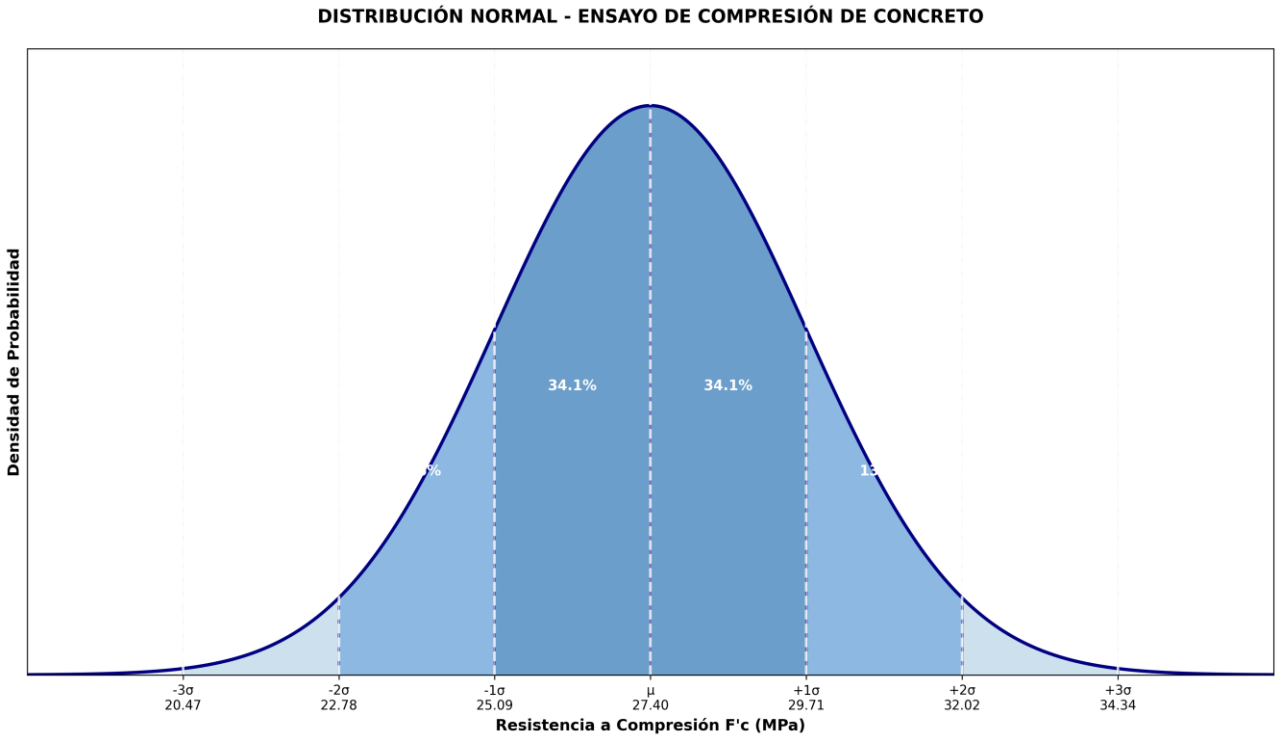


Gráfico de campana de Gauss para análisis de datos - Fuente: autor.

Con base en los resultados obtenidos en los ensayos de resistencia a la compresión de 23 núcleos de concreto extraídos de los elementos del reforzamiento estructural, se realizó un análisis estadístico mediante distribución normal que permitió evaluar la confiabilidad y consistencia de los datos.

Los ensayos presentan un comportamiento que se ajusta adecuadamente a una distribución normal (Gráfico de campana de Gauss para análisis de datos), con los siguientes parámetros estadísticos:

- Resistencia promedio (μ): 27.40 MPa (3,974 psi)
- Desviación estándar (σ): 2.31 MPa
- Coeficiente de variación: 8.4%
- Rango de valores: 21.63 MPa a 32.38 MPa
- Límite inferior (μ-2σ): 22.78 MPa
- Límite superior (μ+2σ): 32.02 MPa

Del análisis de distribución normal se observa que 21 de las 23 muestras (91.3%) se encuentran dentro del rango esperado de ±2 desviaciones estándar, lo cual indica una alta consistencia en la calidad del concreto del reforzamiento. Únicamente 2 muestras presentan valores atípicos: una por encima del límite superior (P13-C1: 32.38 MPa) y otra por debajo del límite inferior (P5-C1: 21.63 MPa).

La grafica (*Gráfico de barras de los resultados de los ensayos de compresión para cada elemento*) permite visualizar la distribución individual de resistencias, evidenciando que la gran mayoría de elementos se agrupan en un rango cercano al promedio de 27.4 MPa, con variaciones moderadas que no comprometen la uniformidad del material.

El bajo coeficiente de variación (8.4%) y la alta proporción de muestras dentro del rango estadístico esperado (91.3%) demuestran un adecuado control de calidad durante la ejecución del reforzamiento estructural. Considerando que:

- El valor promedio obtenido es de 27.40 MPa
- El límite inferior estadístico (μ-2σ) es de 22.78 MPa, muy superior a la resistencia de diseño típica
- Los resultados son consistentes con la información de los ensayos de control de calidad de la interventoría
- La distribución normal valida la confiabilidad de los datos

Se adopta una resistencia a la compresión de 28 MPa (≈4,060 psi) para los elementos correspondientes al reforzamiento estructural ejecutado posterior al año 2007. Este valor es conservador respecto al promedio experimental y cuenta con respaldo estadístico suficiente.

Por su parte, para los elementos pertenecientes a la estructura original (construida previo al año 2007), se mantiene la resistencia de 1,800 psi (≈12.4 MPa) determinada en los estudios de vulnerabilidad sísmica realizados previamente por la empresa OTECO en el contrato No.341 “Elaboración de los Estudios de Vulnerabilidad Sísmica Estructural y rediseño del refuerzo del edificio en el cual funciona la Empresa Social del Estado Hospital Universitario de Santander”, dado que estos elementos no fueron parte del alcance de extracción de núcleos del presente estudio.

Este criterio permite diferenciar de manera técnicamente fundamentada las propiedades mecánicas del concreto según su origen y etapa constructiva, y constituye la base confiable para la modelación estructural y la evaluación del desempeño sísmico de los elementos analizados.

6. MEMORIA DE CALCULO

6.1. DESCRIPCIÓN DEL PROYECTO

La edificación cuenta con 13 niveles, se encuentra localizada en el municipio de Bucaramanga clasificado como zona de amenaza sísmica alta. Consta de un sistema estructural combinado de muros de concreto DES y pórticos de concreto no resistentes a momento.

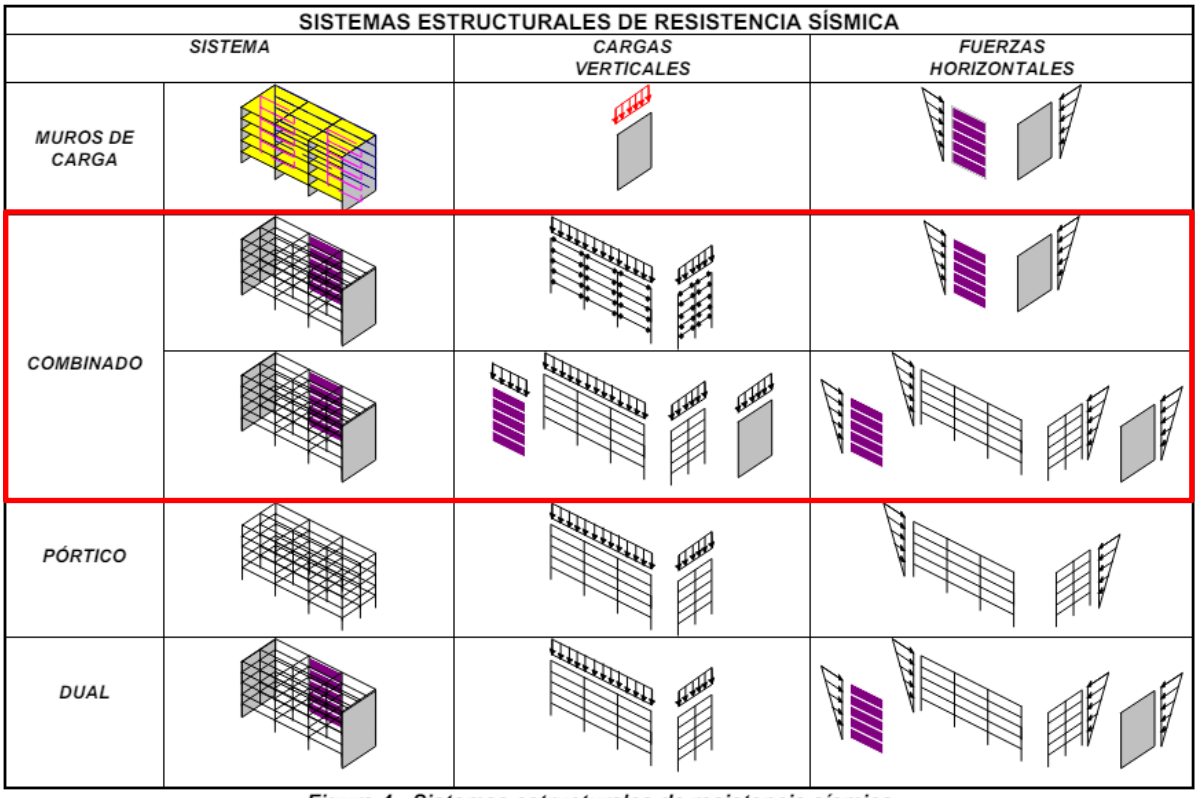


Figura 4 - Sistemas estructurales de resistencia sísmica

B. SISTEMA COMBINADO		Valor R_0 (Nota 2)	Valor Ω_0 (Nota 4)	zonas de amenaza sísmica					
				alta		intermedia		baja	
Sistema resistencia sísmica (fuerzas horizontales)	Sistema resistencia para cargas verticales			uso permit	altura máx.	uso permit	altura máx.	uso permit	altura máx.
n. Muros de cortante compuestos con placa de acero y concreto	pórticos de acero resistente o no a momentos	6.5	2.5	si	50 m	si	Sin límite	si	Sin límite
o. Muros de concreto reforzado (*DES*) mixtos con elementos de acero	pórticos de acero resistente o no a momentos	6.0	2.5	si	50 m	si	Sin límite	si	Sin límite

R = 6.00

Para el valor del R adoptado, no se tiene en cuenta el nivel 13, ya que este se considera un piso liviano según lo descrito en el numeral A.3.2.4.2, debido a que la masa total del piso equivale a menos del 10% de la masa total de la edificación. Ademas no se considera que hace parte del sistema de resistencia sísmica teniendo en cuenta que sus elementos sirven para soporta la cubierta liviana, según lo dispuesto el numeral A.8. de la NSR-10.

A.3.2.4 — COMBINACIÓN DE SISTEMAS ESTRUCTURALES EN LA ALTURA — Cuando se combinen en la altura diferentes sistemas estructurales dentro de una misma edificación, deben cumplirse los siguientes requisitos:

A.3.2.4.1 — *Máximo valor de* R *permitido* — Con la excepción de lo dispuesto en A.3.2.4.2 a A.3.2.4.4, la estructura que combine en la altura diferentes sistemas estructurales se clasifica como irregular del tipo 5aA o 5bA (tabla A.3-7), y el valor del coeficiente de capacidad de disipación de energía, **R** , en cualquier dirección y en cualquier nivel, como máximo debe ser el menor valor de **R** de los sistemas estructurales que se estén combinando por encima de ese nivel y en la dirección considerada. Deben cumplirse los requisitos de diseño exigidos para cada sistema estructural y para cada grado de capacidad de disipación de energía del material estructural.

A.3.2.4.2 — *Pisos livianos* — No hay necesidad de aplicar los requisitos de A.3.2.4.1 cuando la masa de los pisos localizados por encima del nivel donde se inicia un sistema estructural sea menor del 10 por ciento de la masa total, **M** , de la edificación.

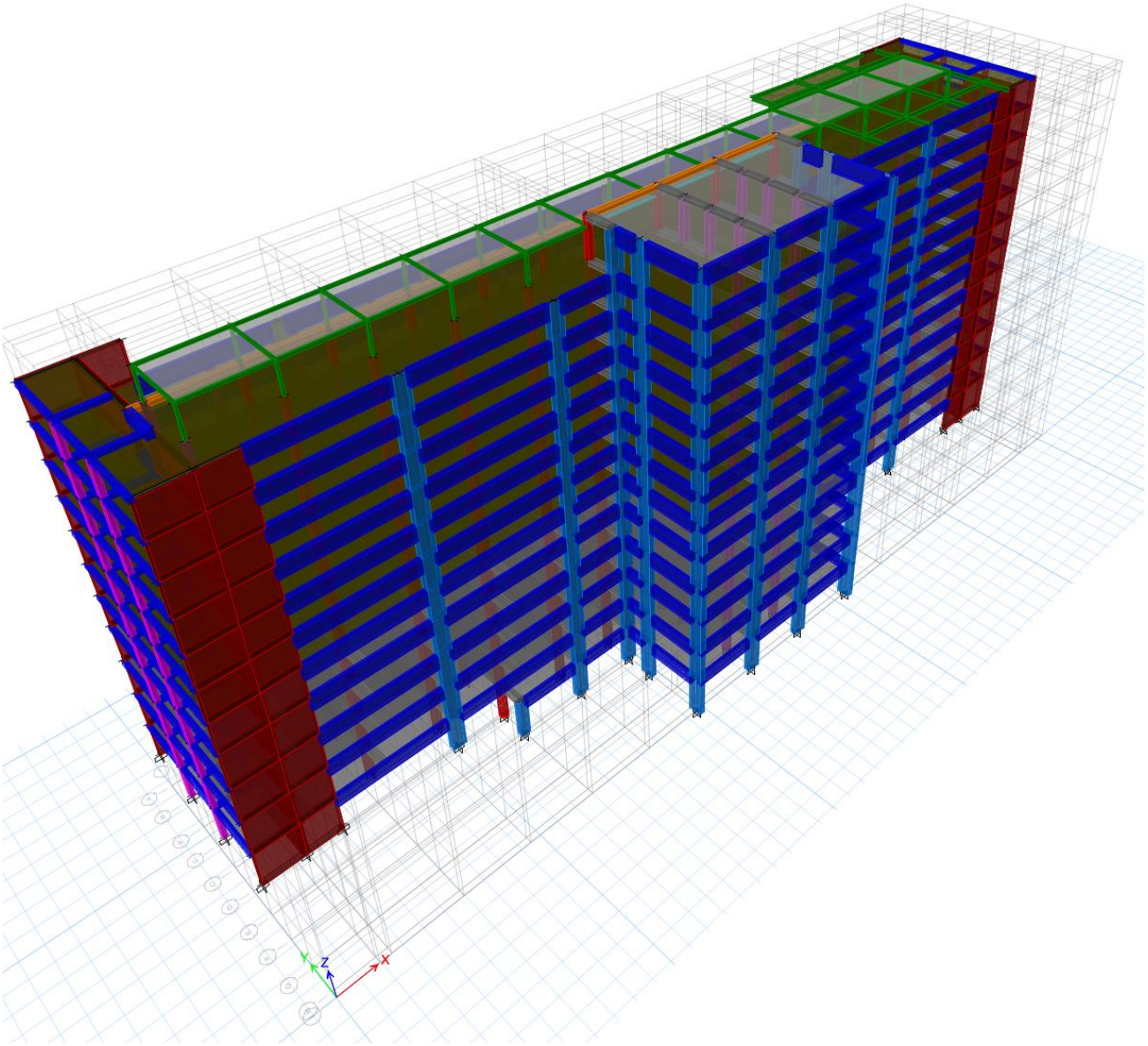
A.3.2.4.3 — *Estructura flexible apoyada sobre una estructura con mayor rigidez* — En estructuras que tengan una parte superior flexible apoyada en una con mayor rigidez y que cumplan los requisitos de la tabla A.3-5, puede utilizarse el procedimiento de diseño indicado allí.

A.3.2.4.4 — *Estructura rígida apoyada sobre una estructura con menor rigidez* — Este tipo de combinación de sistemas estructurales en la altura presenta inconvenientes en su comportamiento sísmico, por lo que para este Reglamento no es un sistema estructural aceptable.

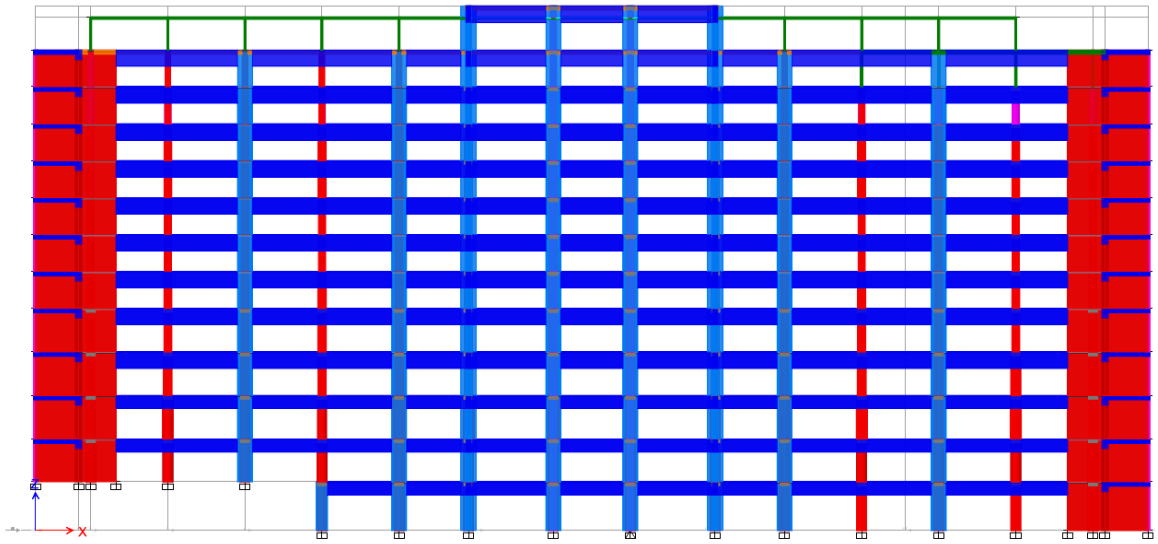
TABLE: Mass Summary by Story

Story	UX	UY	%
	ton	ton	
N+43.20	120.3579	120.3579	0.39%
N+42.20	99.0359	99.0359	0.32%
N+39.20	1642.7086	1642.7086	5.30%
N+35.86	2481.7963	2481.7963	8.00%
N+32.50	2548.161	2548.161	8.22%
N+29.15	2570.78	2570.78	8.29%
N+25.80	2566.2858	2566.2858	8.28%
N+22.45	2561.6571	2561.6571	8.26%
N+19.10	2578.6443	2578.6443	8.32%
N+15.75	2775.9267	2775.9267	8.95%
N+11.79	2842.431	2842.431	9.17%
N+7.85	2814.7622	2814.7622	9.08%
N+3.90	2824.8889	2824.8889	9.11%
N+0.00	2275.4128	2275.4128	7.34%
N-4.42	303.3359	303.3359	0.98%
TOTAL		31006.184	

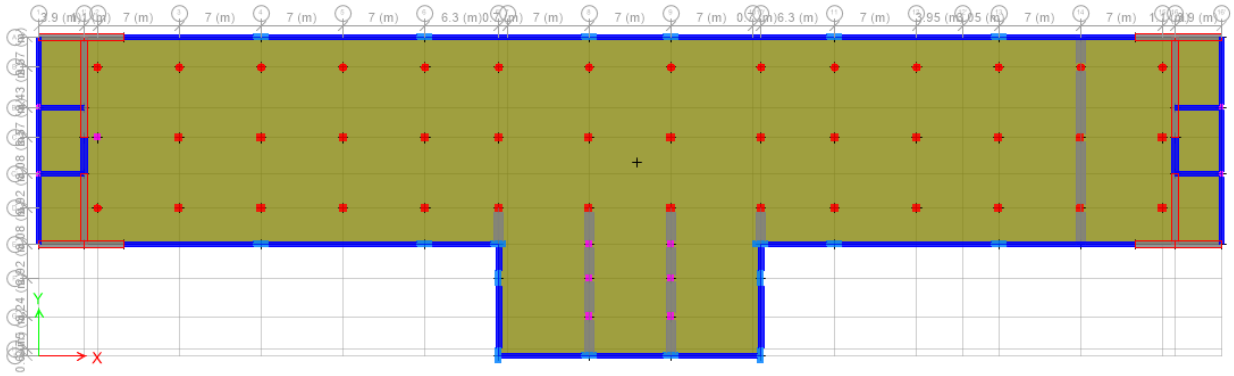
6.2. CHEQUEO DE IRREGULARIDADES



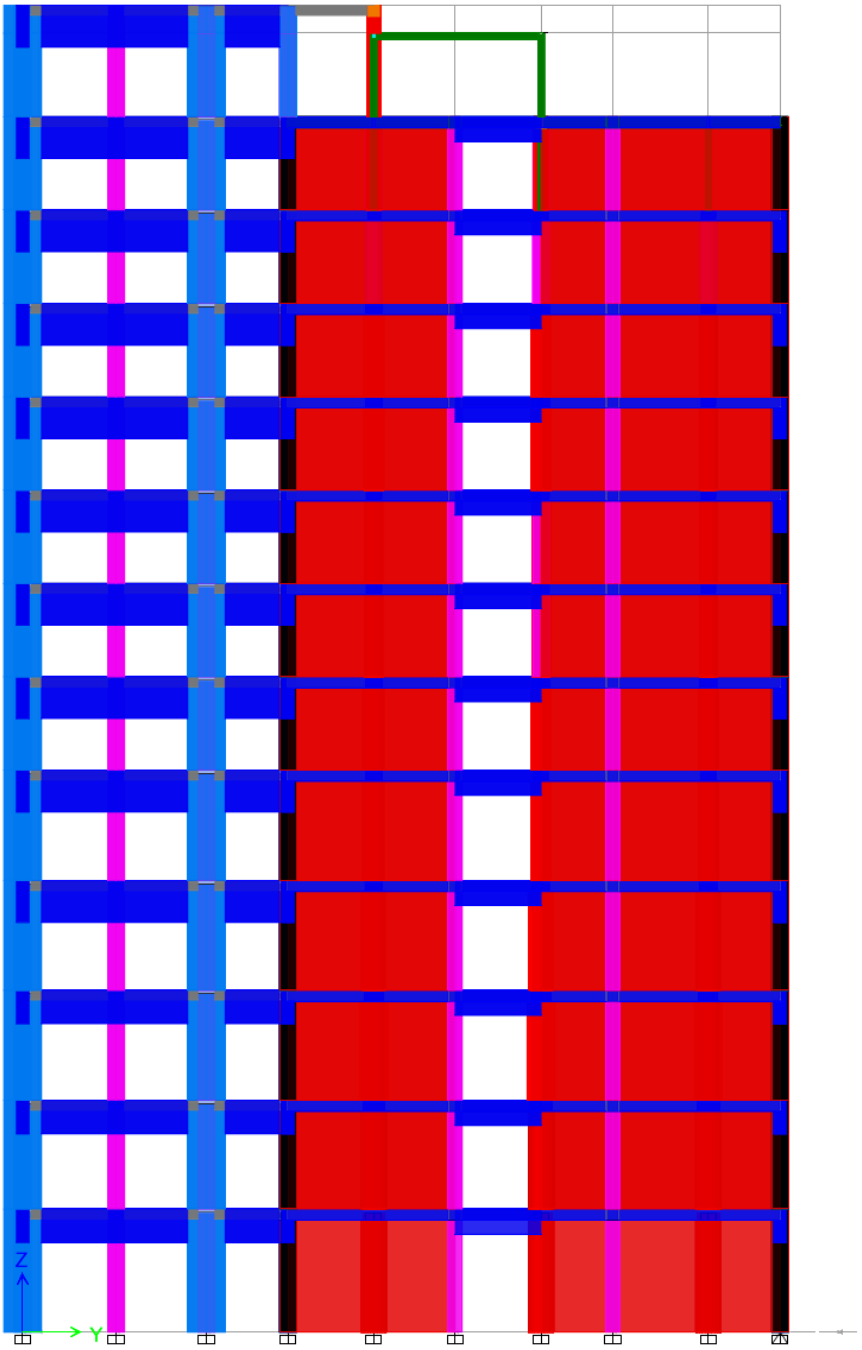
MODELO 3D



VISTA ZX



VISTA XY



VISTA ZY

Tipo 1aP — Irregularidad torsional

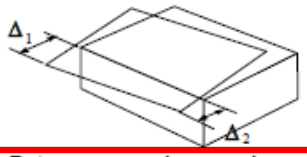
$\phi_p = 0.9$

$$1.4\left(\frac{\Delta_1+\Delta_2}{2}\right) \geq \Delta_1 > 1.2\left(\frac{\Delta_1+\Delta_2}{2}\right)$$

Tipo 1bP — Irregularidad torsional extrema

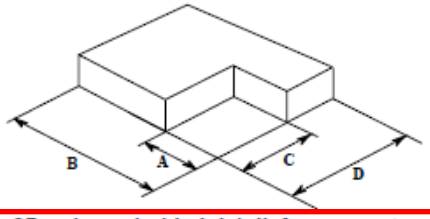
$\phi_p = 0.8$

$$\Delta_1 > 1.4\left(\frac{\Delta_1+\Delta_2}{2}\right)$$



Tipo 2P — Retrocesos en las esquinas — $\phi_p = 0.9$

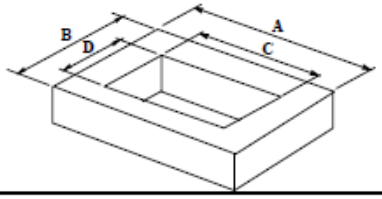
$A > 0.15B$ y $C > 0.15D$

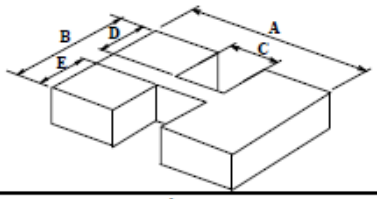


Tipo 3P — Irregularidad del diafragma — $\phi_p = 0.9$

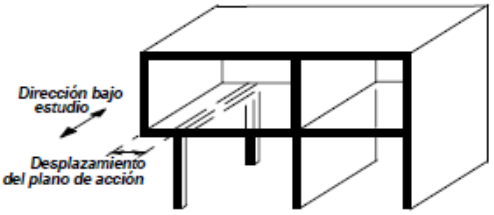
1) $C \times D > 0.5A \times B$

2) $(C \times D + C \times E) > 0.5A \times B$

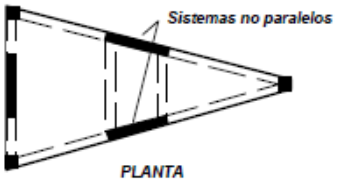




Tipo 4P — Desplazamiento de los planos de Acción — $\phi_p = 0.8$



Tipo 5P — Sistemas no paralelos — $\phi_p = 0.9$



APLICA = 0.80

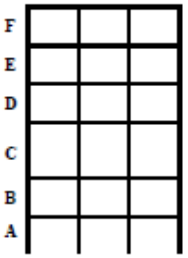
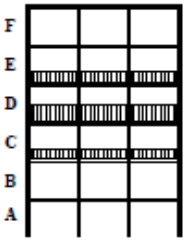
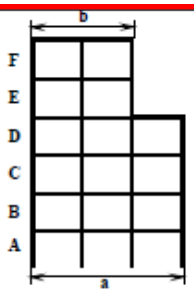
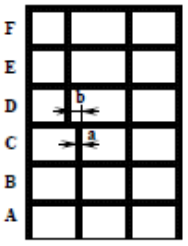
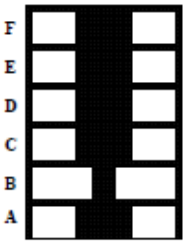
Tipo 1aA — Piso flexible $\phi_a = 0.9$ 0.60 Rigidez $K_D \leq$ Rigidez $K_C <$ 0.70 Rigidez K_D o 0.70 $(K_D+K_E+K_F)$ /3 $\leq$ Rigidez $K_C <$ 0.80 $(K_D+K_E+K_F)$ /3	
Tipo 1bA — Piso flexible extremo $\phi_a = 0.8$ Rigidez $K_C <$ 0.60 Rigidez K_D o Rigidez $K_C <$ 0.70 $(K_D+K_E+K_F)$ /3	
Tipo 2A — Distribución masa — $\phi_a = 0.9$ $m_D >$ 1.50 m_E o $m_D >$ 1.50 m_C	
Tipo 3A — Geométrica — $\phi_a = 0.9$ a > 1.30 b	
Tipo 4A — Desplazamiento dentro del plano de acción — $\phi_a = 0.8$ b > a	
Tipo 5aA — Piso débil $\phi_a = 0.9$ 0.65 Resist. Piso C $\leq$ Resist. Piso B < 0.80 Resist. Piso C	
Tipo 5bA — Piso débil extremo $\phi_a = 0.8$ Resistencia Piso B < 0.65 Resistencia Piso C	

Figura A.3-2 — Irregularidades en la altura

APLICA = 0.9

CHEQUEO DE IRREGULARIDAD TORSIONAL

TABLE: Story Max/Avg Drifts

Story	Load Case/Combo	Direction	Max Drift	Avg Drift	Ratio
			m	m	
N+43.20	FXAJ Max	X	0.003158	0.002147	1.47
N+43.20	FXAJ Max	Y	0.001514	0.001076	1.407
N+43.20	FYAJ Max	X	0.001433	0.000953	1.505
N+43.20	FYAJ Max	Y	0.002463	0.002004	1.229
N+42.20	FXAJ Max	X	0.013434	0.010133	1.326
N+42.20	FXAJ Max	Y	0.019543	0.01096	1.783
N+42.20	FYAJ Max	X	0.008979	0.005582	1.608
N+42.20	FYAJ Max	Y	0.055806	0.031611	1.765
N+39.20	FXAJ Max	X	0.012167	0.012013	1.013
N+39.20	FXAJ Max	Y	0.003327	0.002734	1.217
N+39.20	FYAJ Max	X	0.0039	0.00384	1.015
N+39.20	FYAJ Max	Y	0.011508	0.009357	1.23
N+35.86	FXAJ Max	X	0.012743	0.01263	1.009
N+35.86	FXAJ Max	Y	0.003605	0.002966	1.216
N+35.86	FYAJ Max	X	0.004079	0.004031	1.012
N+35.86	FYAJ Max	Y	0.012565	0.010283	1.222
N+32.50	FXAJ Max	X	0.013749	0.01364	1.008
N+32.50	FXAJ Max	Y	0.003877	0.003199	1.212
N+32.50	FYAJ Max	X	0.004397	0.00435	1.011
N+32.50	FYAJ Max	Y	0.013531	0.01112	1.217
N+29.15	FXAJ Max	X	0.014809	0.014709	1.007
N+29.15	FXAJ Max	Y	0.004144	0.003423	1.211
N+29.15	FYAJ Max	X	0.004732	0.004687	1.01
N+29.15	FYAJ Max	Y	0.014481	0.011926	1.214
N+25.80	FXAJ Max	X	0.015787	0.015695	1.006
N+25.80	FXAJ Max	Y	0.004368	0.003604	1.212
N+25.80	FYAJ Max	X	0.005042	0.004998	1.009
N+25.80	FYAJ Max	Y	0.015278	0.012577	1.215
N+22.45	FXAJ Max	X	0.016542	0.016459	1.005
N+22.45	FXAJ Max	Y	0.00453	0.003725	1.216
N+22.45	FYAJ Max	X	0.005281	0.005239	1.008
N+22.45	FYAJ Max	Y	0.015855	0.013013	1.218
N+19.10	FXAJ Max	X	0.016938	0.016865	1.004
N+19.10	FXAJ Max	Y	0.004585	0.003741	1.226
N+19.10	FYAJ Max	X	0.005407	0.005366	1.008
N+19.10	FYAJ Max	Y	0.016056	0.013079	1.228
N+15.75	FXAJ Max	X	0.02002	0.01996	1.003

N+15.75	FXAJ Max	Y	0.00537	0.004322	1.242
N+15.75	FYAJ Max	X	0.006416	0.006359	1.009
N+15.75	FYAJ Max	Y	0.018819	0.015132	1.244
N+11.79	FXAJ Max	X	0.018563	0.018531	1.002
N+11.79	FXAJ Max	Y	0.005081	0.003998	1.271
N+11.79	FYAJ Max	X	0.005993	0.005922	1.012
N+11.79	FYAJ Max	Y	0.017816	0.01401	1.272
N+7.85	FXAJ Max	X	0.015282	0.015281	1
N+7.85	FXAJ Max	Y	0.004549	0.00344	1.323
N+7.85	FYAJ Max	X	0.005018	0.004921	1.02
N+7.85	FYAJ Max	Y	0.015955	0.012063	1.323
N+3.90	FXAJ Max	X	0.010288	0.008958	1.148
N+3.90	FXAJ Max	Y	0.00362	0.002436	1.486
N+3.90	FYAJ Max	X	0.003576	0.002993	1.195
N+3.90	FYAJ Max	Y	0.012691	0.008536	1.487
N+0.00	FXAJ Max	X	0.00272	0.002671	1.019
N+0.00	FXAJ Max	Y	0.002304	0.001591	1.448
N+0.00	FYAJ Max	X	0.001536	0.001185	1.296
N+0.00	FYAJ Max	Y	0.008063	0.00556	1.45
				MAX	1.783

6.3. PARAMETROS GENERALES DE DISEÑO DE LA ESTRUCTURA

COEFICIENTE DE REDUNCCION	
ϕa: Irregularidad en altura	0.90
ϕp: Irregularidad en planta	0.80
ϕr: Redundancia	1.00
MOVIMIENTOS SISMICOS DE DISEÑO	
Aa: Coeficiente de aceleración	0.25
Av: Coeficiente de velocidad	0.25
Fa: Coeficiente de ampliación	1.15
Fv: Coeficiente de ampliación	1.55
I: COEFICIENTE DE IMPORTANCIA SEGÚN EL USO	1.00

PERIODOS DE EN VIBRACION DEFINIDOS EN EL NUMERAL A.42 NSR-10 TITULO A

T: Periodo fundamental de la edificacion, obtenido partir de las propiedades

Ta: Periodo de vibracion fundamental aproximado, calculado con la EC A.4-2

Tax	Sax		Tay	Say	
0.87	0.53		0.69	0.67	
Sa=	0.53		Sa=	0.67	
Masa total	31010.9	[KN-S2/m]	Masa total	31010.9	[KN-S2/m]
Vs=	161854.7	KN	Vs=	203834.3	KN
k	1.187		k	1.097	

Ta	0.89	Segundos
Cu*Ta	1.14	Segundos

COEFICIENTE DE CAPACIDAD DE DISIPACION DE ENERGIA: definido para cada sistema estructural y grado de capacidad de disipacion de energia del material estructural. Definido enel capitulo A.3 NSR-10 TITULO A

NSR-10 REDUCCIÓN DEL VALOR DE R

PARA ESTRUCTURAS IRREGULARES Y CON AUSENCIA DE REDUNDANCIA

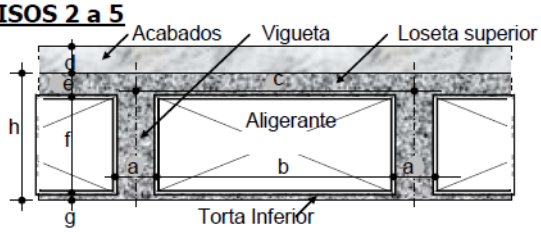
Rxo=	6	Ryo=	6
φax=	0.9	φay=	0.9
φpx=	0.8	φpy=	0.8
φrx=	1	φry=	1
Rx=	**4.32**	**Ry=**	**4.32**

Ro = 6.00

6.4. AVALUO DE CARGAS DE LOS PISOS EXISTENTES

Para el avaluó de cargas de los pisos existentes se empleó el realizado en el contrato No.341 “Elaboración de los Estudios de Vulnerabilidad Sísmica Estructural y rediseño del refuerzo del edificio en el cual funciona la Empresa Social del Estado Hospital Universitario de Santander”. El cual describe el análisis y planteamiento de las cargas incluyendo el reforzamiento propuesto en el año 2007.

PISOS 2 a 5



Sección de la Placa

a =	0.12 m	e =	0.05 m
b =	1.00 m	f =	0.40 m
c =	1.12 m	g =	0.00 m
d =	0.07 m	h =	0.45 m

Consumo = 0.093 m³/m²

t= 0.03 m Espesor Alig Reticular Celulado

Sentidos de armado de viguetas: **1 dirección**

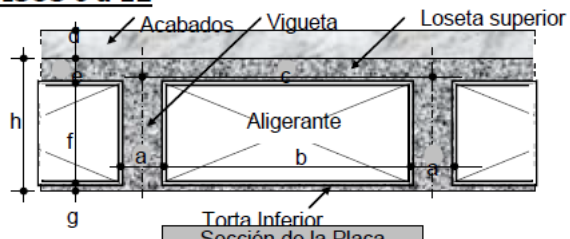
Carga muerta	
Peso propio	222.9 kg{f}/m²
Acabados piso	154.0 kg{f}/m²
Aligerante	157.9 kg{f}/m²
Mampostería	400.0 kg{f}/m²
Cielo Raso	15.0 kg{f}/m²
Instalaciones y Otros	50.2 kg{f}/m²
	1,000.0 kg{f}/m²

Carga viva	
Cuartos	**200.0 kg{f}/m²**
Salas de Operaciones	**400.0 kg{f}/m²**
Escaleras	**400.0 kg{f}/m²**

Datos para el archivo de ETABS

Peso del material :	2,400 kg{f}/m³	Espesor 1 del Floor :	0.093 m	Carga Muerta :	777.1 kg{f}/m²
Masa equivalente del materi	1,098 kg{m}/m³	Espesor 2 del Floor :	0.000 m	Carga Viva :	200.0 kg{f}/m²

PISOS 6 a 12



Sección de la Placa

a =	0.10 m	e =	0.05 m
b1 =	0.50 m	f =	0.30 m
c1 =	0.60 m	g =	0.00 m
b2=	0.50 m	h =	0.35 m
c2=	0.60 m	Consumo =	0.142 m³/m²
d =	0.07 m		

t= 0.03 m Espesor Alig Reticular Celulado

Sentidos de armado de viguetas: **2 direcciones**

Carga muerta	
Peso propio	340.0 kg{f}/m²
Acabados piso	154.0 kg{f}/m²
Aligerante	179.7 kg{f}/m²
Mampostería	400.0 kg{f}/m²
Cielo Raso	15.0 kg{f}/m²
Instalaciones y Otros	16.3 kg{f}/m²
	1,105.0 kg{f}/m²

Carga viva	
Cuartos	**200.0 kg{f}/m²**
Salas de Operaciones	**400.0 kg{f}/m²**
Escaleras	**400.0 kg{f}/m²**

Datos para el archivo de ETABS

Peso del material :	2,400 kg{f}/m³	Espesor 1 del Floor :	0.142 m	Carga Muerta :	765.0 kg{f}/m²
Masa equivalente del materi	795 kg{m}/m³	Espesor 2 del Floor :	0.000 m	Carga Viva :	200.0 kg{f}/m²

6.5. ANÁLISIS COMPARATIVO ENTRE CARGA IMPUESTA ACTUAL Y CARGA PROYECTADA

Con el fin de dar cumplimiento al alcance del presente estudio, se realiza el análisis comparativo entre las cargas consideradas en el diseño estructural previo y las cargas correspondientes a la condición actual de la edificación.

Las cargas proyectadas corresponden a las definidas en el diseño estructural original de la edificación, las cuales se encuentran consignadas y evaluadas en el numeral "*6.4. Avalúo de cargas de los pisos existentes".*

Estas cargas incluyen tanto cargas muertas como cargas vivas asociadas al uso previsto de la edificación y constituyen la base para la verificación estructural inicial.

A partir de la inspección de campo y del levantamiento realizado, se verificó que, para los niveles comprendidos entre el piso 1 y el piso 12, las condiciones actuales de uso y configuración de los elementos constructivos son consistentes con las cargas proyectadas en el diseño original.

En consecuencia, se establece que las cargas actualmente actuantes en dichos niveles no presentan incrementos respecto a las cargas de diseño previamente definidas.

Las cargas verificadas en campo fueron incorporadas en el modelo estructural utilizado para el análisis de la condición actual, tal como se presenta en el numeral "*6.8. Cargas muertas y vivas mínimas".*

Se evidencia que las solicitaciones consideradas en el modelo corresponden a las cargas proyectadas del diseño previo, garantizando coherencia entre la información histórica de diseño y la modelación estructural actual.

Así mismo, se verifica que dichas cargas cumplen y superan los valores mínimos establecidos en el Título B de la NSR-10, por lo cual resultan adecuadas para la evaluación estructural realizada.

El nivel correspondiente al piso 13 no hacía parte del diseño estructural original de la edificación, tal como se describe en el presente documento.

Para efectos del análisis estructural, se adoptaron cargas equivalentes a las consideradas en los niveles inferiores, con el fin de mantener consistencia en la modelación y evaluar su incidencia en el comportamiento global de la estructura.

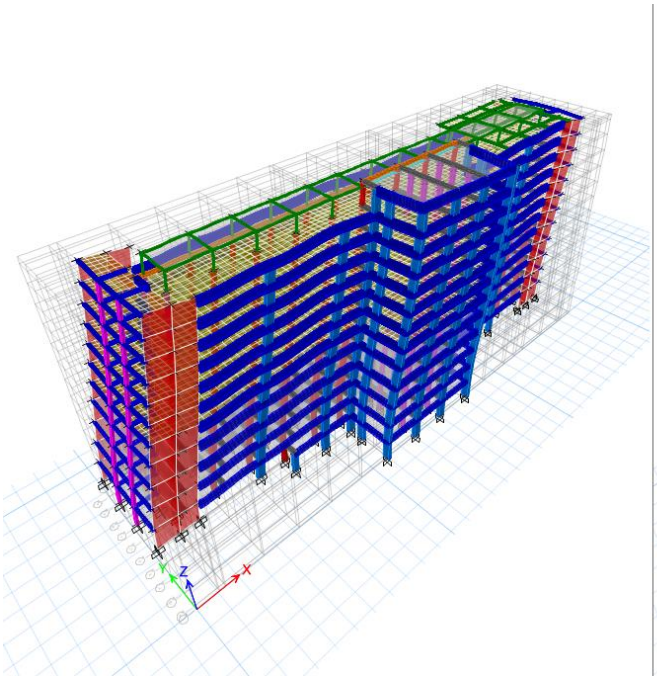
No obstante, se establece como condición que la carga asociada a este nivel debe ser controlada, limitando la altura del mortero conforme a lo indicado en el numeral *"7.2.2. Definición de la altura del mortero en el piso 13",* con el propósito de evitar incrementos de carga no contemplados en el análisis.

Del análisis realizado se concluye que:

- Para los pisos 1 al 12, las cargas actuales coinciden con las cargas proyectadas del diseño original.
- No se identifican incrementos de carga que afecten las condiciones de análisis estructural.
- Las cargas empleadas en el modelo estructural corresponden a dichas condiciones verificadas.
- Para el piso 13, se adoptan cargas equivalentes, sujetas a control constructivo para garantizar la validez del análisis.

En este sentido, se establece que existe consistencia entre las cargas proyectadas y las condiciones actuales de la edificación, dentro del alcance del presente estudio.

6.6. PERIODOS DE LA ESTRUCTURA



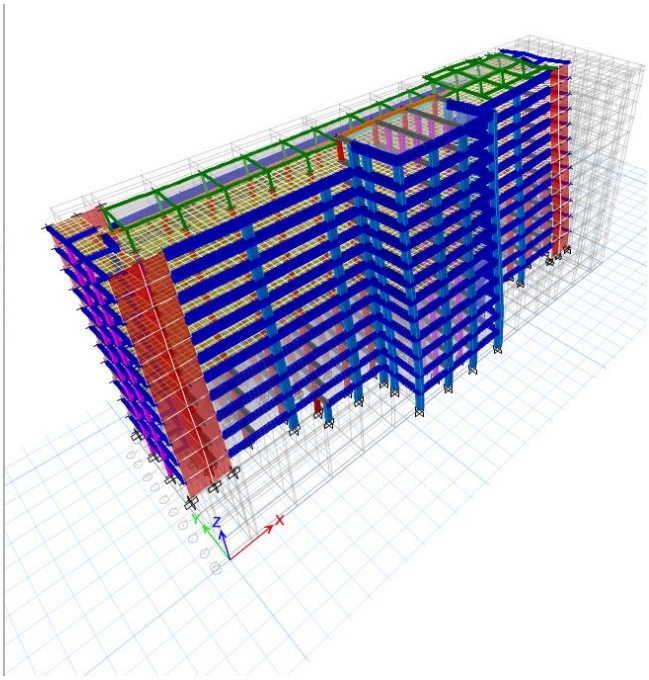


TABLE: Modal Participating Mass Ratios

Case	Mode	Period	UX	UY	Sum UX	Sum UY
		sec				
Modal	1	0.874	0.7104	0.000004127	0.7104	0.000004127
Modal	2	0.694	0	0.7058	0.7104	0.7058
Modal	3	0.457	0.00001385	0.0178	0.7105	0.7236
Modal	4	0.237	0.133	0.00001107	0.8434	0.7236
Modal	5	0.216	0.0005	0.0032	0.8439	0.7268
Modal	6	0.191	0.000003908	0.1365	0.8439	0.8633
Modal	7	0.177	0.0001	0.0142	0.844	0.8775
Modal	8	0.126	0.0002	0.0005	0.8441	0.878
Modal	9	0.112	0.0571	0.00001554	0.9013	0.878
Modal	10	0.094	0.0001	0.0628	0.9014	0.9408
Modal	11	0.087	0.0126	0.0002	0.914	0.941
Modal	12	0.071	0.0008	0.0255	0.9147	0.9664
Modal	13	0.067	0.0196	0.0066	0.9344	0.973
Modal	14	0.066	0.0153	0.0039	0.9496	0.9769
Modal	15	0.062	0.0007	0.0023	0.9503	0.9792

Modal	16	0.061	0.0045	0.000009887	0.9548	0.9792
Modal	17	0.057	0	0.000003095	0.9548	0.9792
Modal	18	0.055	0.0002	0.0054	0.955	0.9846
Modal	19	0.052	0.0032	0.00001352	0.9581	0.9847
Modal	20	0.048	0.0282	0.00002856	0.9863	0.9847
Modal	21	0.044	0	0.0025	0.9863	0.9871
Modal	22	0.044	0.0004	0.0008	0.9867	0.9879
Modal	23	0.04	0.0001	0.0015	0.9868	0.9894
Modal	24	0.039	0.0049	0.0001	0.9917	0.9895
Modal	25	0.039	0.0065	0.0001	0.9982	0.9895
Modal	26	0.035	0.000009649	0.0036	0.9982	0.9932
Modal	27	0.035	0.00001401	0.0002	0.9982	0.9933
Modal	28	0.033	0.0001	0.000007124	0.9983	0.9934
Modal	29	0.033	0.0015	9.357E-07	0.9998	0.9934
Modal	30	0.031	0.00002201	0.0002	0.9999	0.9935
Modal	31	0.029	0.000002178	0.0012	0.9999	0.9947
Modal	32	0.029	0.0001	0	0.9999	0.9947
Modal	33	0.028	0	0.00001268	0.9999	0.9947
Modal	34	0.027	0.000003857	0.0012	0.9999	0.9959
Modal	35	0.026	6.062E-07	0.0001	0.9999	0.996
Modal	36	0.026	0.000002233	0.00004582	0.9999	0.996

6.7. ANALISIS SISMICO-ESTATICO-FUERZA HORIZONTAL EQUIVALENTE

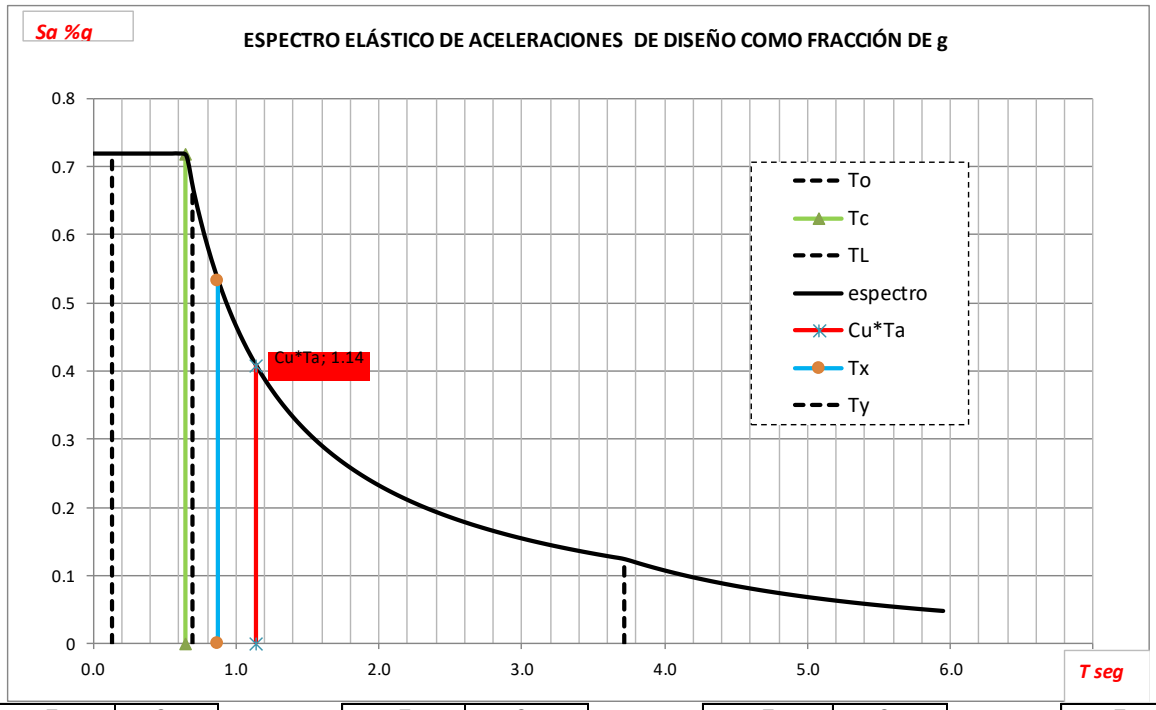
DERIVAS

CIUDAD	BUCARAMANGA
PERFIL DE SUELO	C
Aa=	0.25
Av=	0.25
Fa=	1.15
Fv=	1.55
I=	1.00

$T_0 = 0.1\frac{A_v F_v}{A_a F_a}$ **0.135**

$T_C = 0.48\frac{A_v F_v}{A_a F_a}$ **0.647**

$T_L = 2.4 F_v$ **3.720**



T	Sa
0	0.719
0.05	0.719
0.1	0.719
0.15	0.719
0.2	0.719
0.25	0.719
0.3	0.719
0.35	0.719
0.4	0.719
0.45	0.719
0.5	0.719
0.55	0.719
0.6	0.719
0.65	0.715
0.7	0.664
0.75	0.620
0.8	0.581
0.85	0.547
0.9	0.517
0.95	0.489

T	Sa
1	0.465
1.05	0.443
1.1	0.423
1.15	0.404
1.2	0.388
1.25	0.372
1.3	0.358
1.35	0.344
1.4	0.332
1.45	0.321
1.5	0.310
1.55	0.300
1.6	0.291
1.65	0.282
1.7	0.274
1.75	0.266
1.8	0.258
1.85	0.251
1.9	0.245
1.95	0.238

T	Sa
2	0.238
2.05	0.233
2.1	0.227
2.15	0.221
2.2	0.216
2.25	0.211
2.3	0.207
2.35	0.202
2.4	0.198
2.45	0.194
2.5	0.190
2.55	0.186
2.6	0.182
2.65	0.179
2.7	0.175
2.75	0.172
2.8	0.169
2.85	0.166
2.9	0.163
2.95	0.160

T	Sa
3	0.160
3.05	0.158
3.1	0.155
3.15	0.152
3.2	0.150
3.25	0.148
3.3	0.145
3.35	0.143
3.4	0.141
3.45	0.139
3.5	0.137
3.55	0.135
3.6	0.133
3.65	0.131
3.7	0.129
3.75	0.127
3.8	0.126
3.85	0.123
3.9	0.120
3.95	0.117

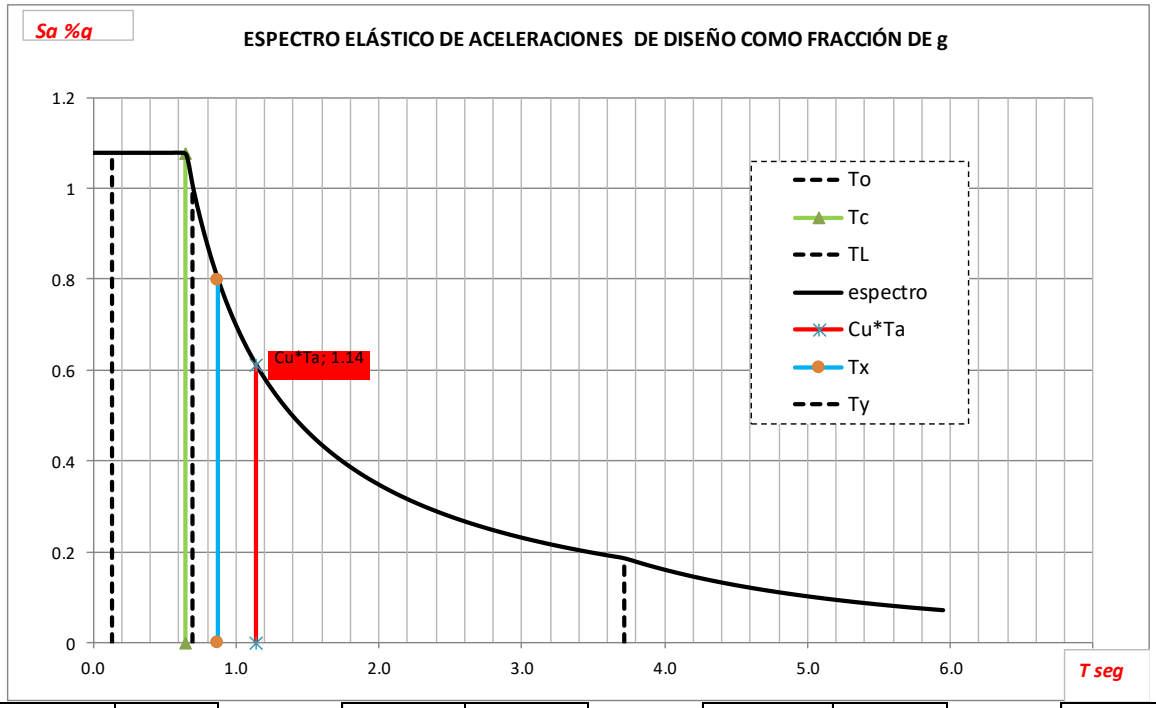
DISEÑO:

CIUDAD	BUCARAMANGA
PERFIL DE SUELO	C
Aa=	0.25
Av=	0.25
Fa=	1.15
Fv=	1.55
I=	1.50

$T_0 = 0.1\frac{A_v F_v}{A_a F_a}$ **0.135**

$T_C = 0.48\frac{A_v F_v}{A_a F_a}$ **0.647**

$T_L = 2.4 F_v$ **3.720**



T	Sa
0	1.078
0.05	1.078
0.1	1.078
0.15	1.078
0.2	1.078
0.25	1.078
0.3	1.078
0.35	1.078
0.4	1.078
0.45	1.078
0.5	1.078
0.55	1.078
0.6	1.078
0.65	1.073
0.7	0.996
0.75	0.930
0.8	0.872
0.85	0.821
0.9	0.775
0.95	0.734

T	Sa
1	0.698
1.05	0.664
1.1	0.634
1.15	0.607
1.2	0.581
1.25	0.558
1.3	0.537
1.35	0.517
1.4	0.498
1.45	0.481
1.5	0.465
1.55	0.450
1.6	0.436
1.65	0.423
1.7	0.410
1.75	0.399
1.8	0.388
1.85	0.377
1.9	0.367
1.95	0.358

T	Sa
2	0.358
2.05	0.349
2.1	0.340
2.15	0.332
2.2	0.324
2.25	0.317
2.3	0.310
2.35	0.303
2.4	0.297
2.45	0.291
2.5	0.285
2.55	0.279
2.6	0.274
2.65	0.268
2.7	0.263
2.75	0.258
2.8	0.254
2.85	0.249
2.9	0.245
2.95	0.241

T	Sa
3	0.241
3.05	0.236
3.1	0.233
3.15	0.229
3.2	0.225
3.25	0.221
3.3	0.218
3.35	0.215
3.4	0.211
3.45	0.208
3.5	0.205
3.55	0.202
3.6	0.199
3.65	0.196
3.7	0.194
3.75	0.191
3.8	0.189
3.85	0.185
3.9	0.180
3.95	0.175

6.8. CARGAS MUERTAS Y VIVAS MINIMAS

CARGA MUERTA:

Tabla B.3.4.3-1
Valores mínimos alternativos de carga muerta de elementos no estructurales cuando no se efectúe un análisis más detallado

Ocupación		*Fachada y particiones (kN/m²) m² de área en planta*	*Afinado de piso y cubierta (kN/m²) m² de área en planta*	*Fachada y particiones (kgf/m²) m² de área en planta*	*Afinado de piso y cubierta (kgf/m²) m² de área en planta*
Reunión	Edificaciones con un salón de reunión para menos de 100 personas y sin escenarios.	1.0	1.8	100	180
Oficinas	Particiones móviles de altura total	1.0	1.8	100	180
	Particiones fijas de mampostería	2.0	1.8	200	180
Educativos	Salones de clase	2.0	1.5	200	150
Fábricas	Industrias livianas	0.8	1.6	80	160
Institucional	Internados con atención a los residentes	2.0	1.6	200	160
	Prisiones, cárceles, reformatorios y centros de detención	2.5	1.8	250	180
	Guarderías.	2.0	1.6	200	160
Comercio	Exhibición y venta de mercancías.	1.5	1.4	150	140
Residencial	Fachada y particiones de mampostería.	3.0	1.6	300	160
	Fachada y particiones livianas.	2.0	1.4	200	140
Almacena-miento	Almacenamiento de materiales livianos.	1.5	1.5	150	150
Garajes	Garajes para vehículos con capacidad de hasta 2000 kg	0.2	1.0	20	100

CARGA VIVA:

Tabla B.4.2.1-1
Cargas vivas mínimas uniformemente distribuidas

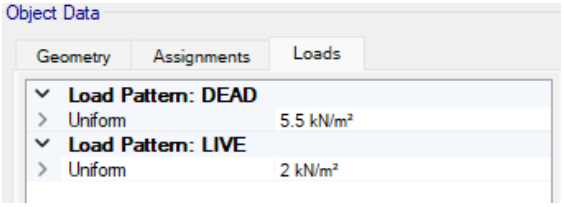
Ocupación o uso		Carga uniforme (kN/m²) m² de área en planta	Carga uniforme (kgf/m²) m² de área en planta
Reunión	Balcones	5.0	500
	Corredores y escaleras	5.0	500
	Sillettería fija (fijada al piso)	3.0	300
	Gimnasios	5.0	500
	Vestíbulos	5.0	500
	Sillettería móvil	5.0	500
	Áreas recreativas	5.0	500
	Plataformas	5.0	500
	Escenarios	7.5	750
Oficinas	Corredores y escaleras	3.0	300
	Oficinas	2.0	200
	Restaurantes	5.0	500
Educativos	Salones de clase	2.0	200
	Corredores y escaleras	5.0	500
	Bibliotecas		
	Salones de lectura	2.0	200
	Estanterías	7.0	700
Fábricas	Industrias livianas	5.0	500
	Industrias pesadas	10.0	1000
Institucional	Cuartos de cirugía, laboratorios	4.0	400
	Cuartos privados	2.0	200
	Corredores y escaleras	5.0	500
Comercio	Minorista	5.0	500
	Mayorista	6.0	600
Residencial	Balcones	5.0	500
	Cuartos privados y sus corredores	1.8	180
	Escaleras	3.0	300
Almacenamiento	Liviano	6.0	600
	Pesado	12.0	1200
Garajes	Garajes para automóviles de pasajeros	2.5	250
	Garajes para vehículos de carga de hasta 2.000 kg de capacidad.	5.0	500
Coliseos y Estadios	Graderías	5.0	500
	Escaleras	5.0	500

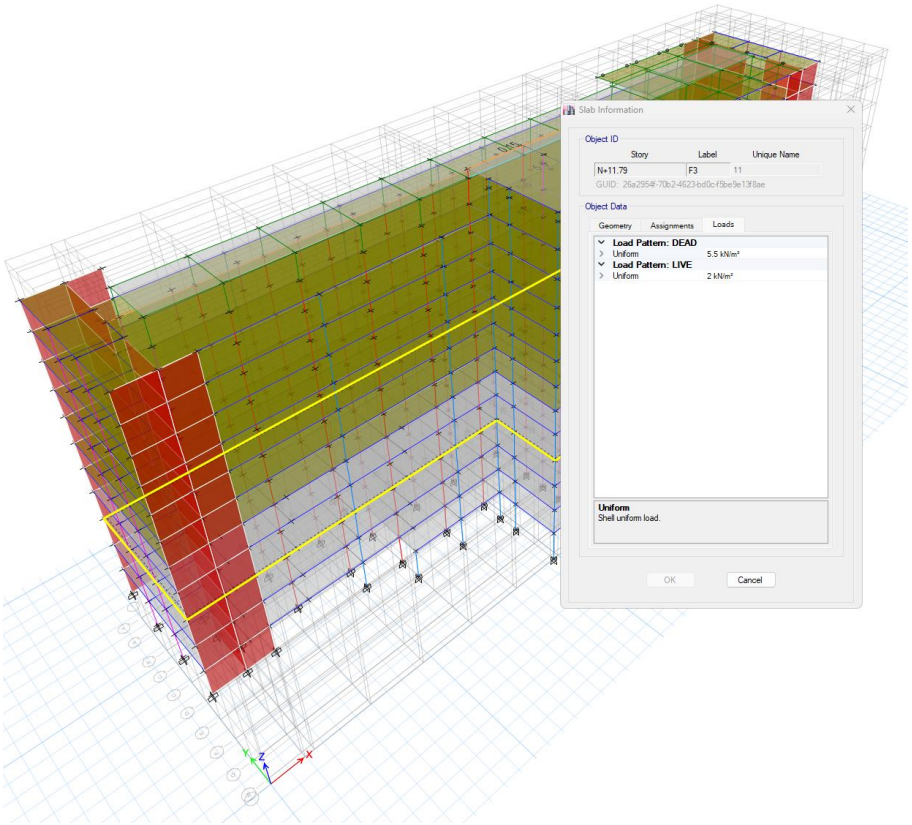
Tabla B.4.2.1-2
Cargas vivas mínimas en cubiertas

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

Nota-1 — La carga viva de la cubierta no debe ser menor que el máximo valor de las cargas vivas usadas en el resto de la edificación, y cuando esta tenga uso mixto, tal carga debe ser la mayor de las cargas vivas correspondientes a los diferentes usos.

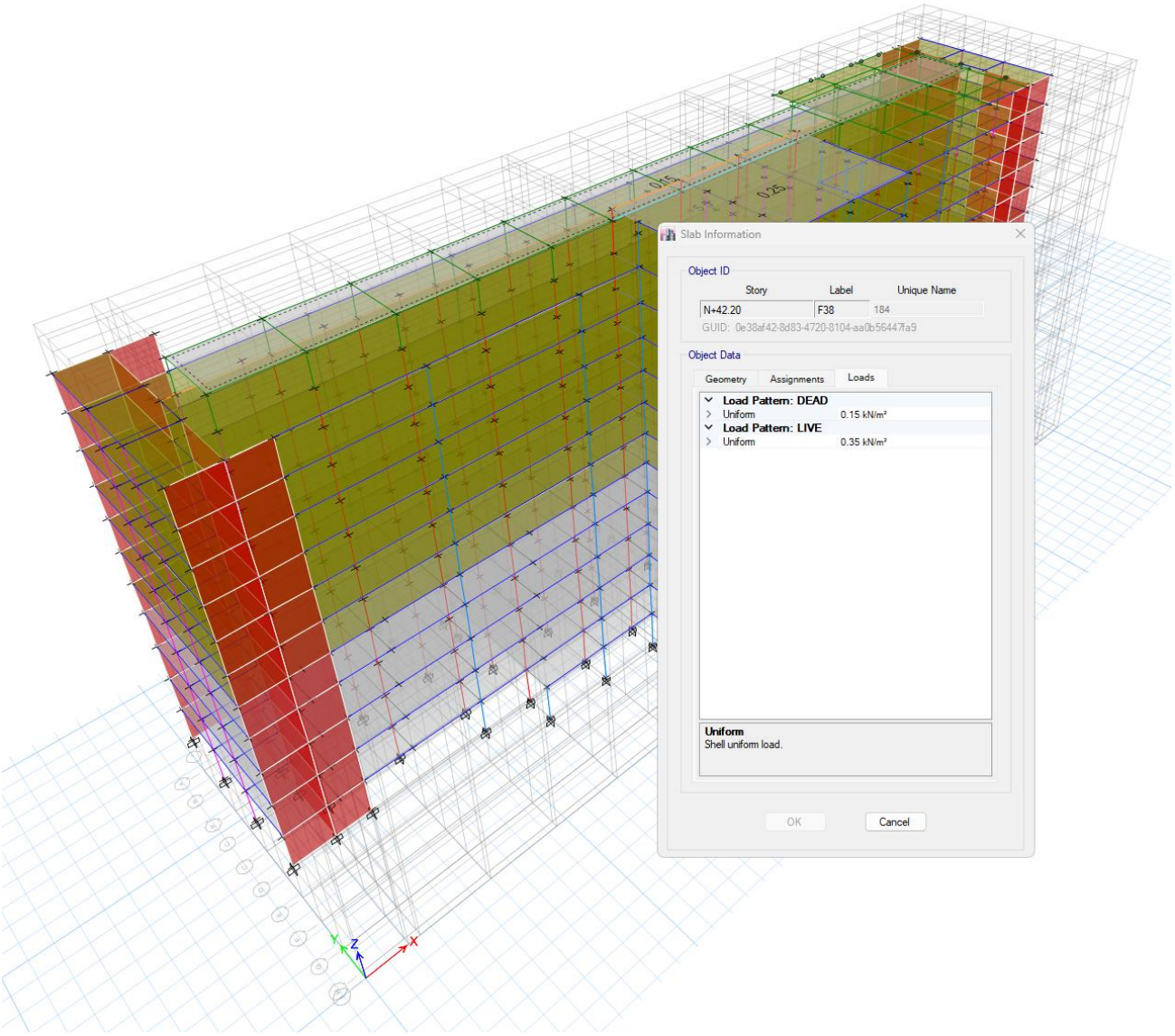
6.9. CARGA VIVA MUERTA APLICADA AL MODELO ESTRUCTURAL (KN/m2)





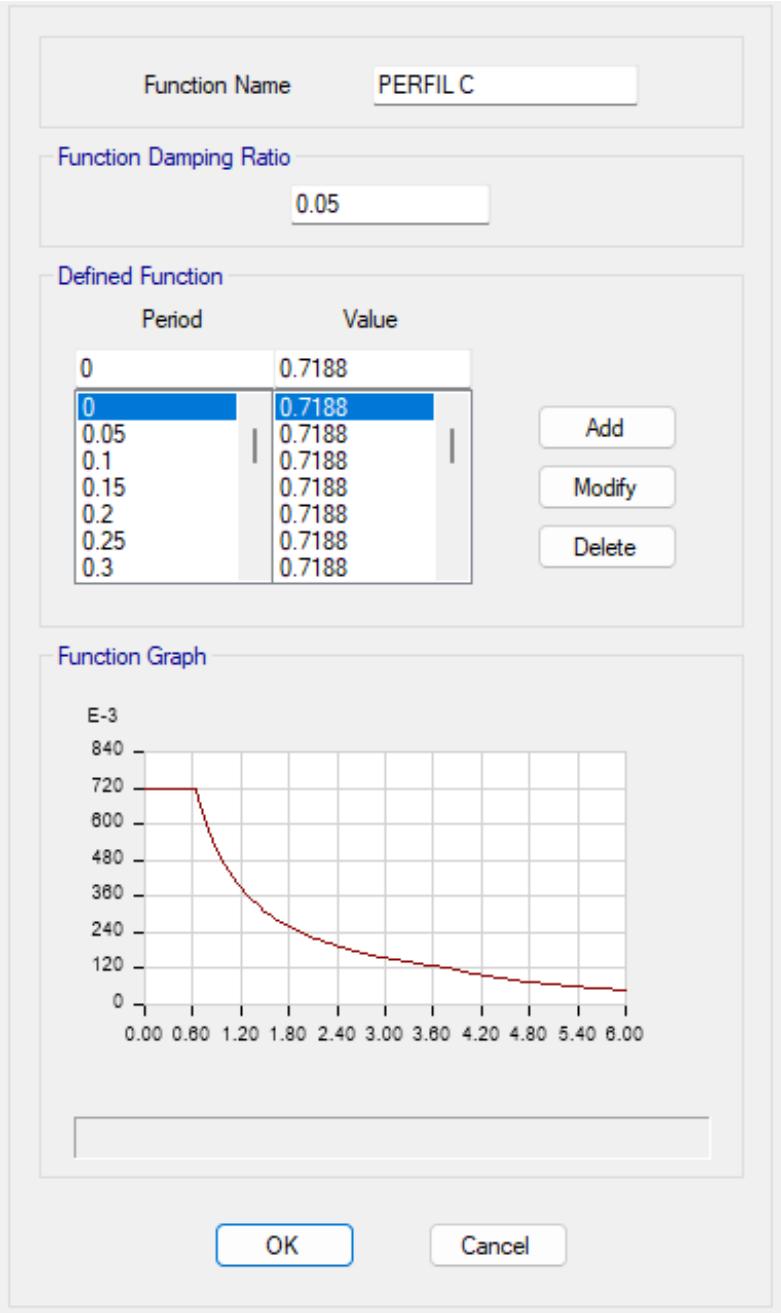
Carga de entre Pisos





Carga de cubiertas

6.10. FUERZA SISMICA ESPECTRO ELASTICO DE DISEÑO APLICADO AL MODELO



6.11. FACTORES DE AJUSTE ESTATICO-DINAMICO

CAPÍTULO A4 NSR-10 FUERZA HORIZONTAL EQUIVALENTE (F.H.E.)

hn=	47.62
N=	13

Todos los otros sistemas estructurales basados en Muros de rigidéz similar o mayor a la de los muros de concreto o mampostería.	Ct	α
	0.049	0.75

PERIODO FUNDAMENTAL A.4.2.2
Ta= 0.89 Segundos

$$T_a = C_t h^{\alpha}$$

PERIODO EMPIRICO A.4.2-5
Ta= 0.93 Segundos

PERIODO REAL
Tx= 0.874 Segundos
Ty= 0.694 Segundos

Cu= 1.29 $C_u = 1.75 - 1.2 A_v F_v$

Cu No debe ser menor de 1.2

Cu*Ta= 1.14

porticos= Np/10
muros= Np/14

A.4.2.3 — El valor de T obtenido al utilizar las ecuaciones A.4.2-1, A.4.2-3 o A.4.2-5 es un estimativo inicial razonable del período estructural para predecir las fuerzas a aplicar sobre la estructura con el fin de dimensionar su sistema de resistencia sísmica. Sin embargo, una vez dimensionada la estructura, debe calcularse el valor ajustado de T mediante la aplicación de análisis modal o de la ecuación A.4.2-1 para compararlo con el estimado inicial; si el período de la estructura diseñada difiriera en más del 10% con el periodo estimado inicialmente, debe repetirse el proceso de análisis, utilizando el último periodo calculado como nuevo estimado, hasta que se converja en un resultado dentro de la tolerancia del 10% señalada.

Tax	Sax	
0.87	0.53	
Sa=	**0.532**	
Masa total	**31010.9**	**[KN-S2/m]**
Vs=	**161854.7**	**KN**
k	**1.187**	

Tay	Say	
0.69	0.67	
Sa=	**0.670**	
Masa total	**31010.9**	**[KN-S2/m]**
Vs=	**203834.3**	**KN**
k	**1.097**	

Para T menor o igual a 0.5 segundos, $k = 1.0$,
Para T entre 0.5 y 2.5 segundos, $k = 0.75 + 0.5T$
Para T mayor que 2.5 segundos, $k = 2.0$.

NSR-10 REDUCCIÓN DEL VALOR DE R
PARA ESTRUCTURAS IRREGULARES Y CON AUSENCIA DE REDUNDANCIA

Rxo=	6
φax=	0.9
φpx=	0.8
φrx=	1

Ryo=	6
φay=	0.9
φpy=	0.8
φry=	1

Rx= 4.32 0.23 **Ry= 4.32** 0.23

NSR-10 COEFICIENTE DE SOBRE-RESISTENCIA Ωo

Ωo= 3.00

El valor de Ωo pude reducirse en 0.5 en estructuras con diafragma flexible, pero no debe ser menos de 2.0 para cualquier estructura

TABLE: Base Reactions		
Combo	FX	FY
	kN	kN
FX Max	118659.92	44082.5498
FY Max	35610.644	146907.7206

CORTANTES SENTIDO X

CAPITULO A5 NSR-10 MÉTODO DE ANALISIS DINÁMICO

Vs =	161855	KN	MAXIMA RELACIÒN PERMITIDA	
CuTa=	1.14	seg	ENTRE Vtj/Vs=	0.90
Vx=	118659.92			
Vy=	44082.55	KN	0.78	
Vx res=	126583.75			
Ttj=	0.87	seg	:BE AJUSTARSE	
FACTOR DE MODIFICACIÒN=			1.15	VER A.5.5.3 NSR-10

CORTANTES SENTIDO Y

CAPITULO A5 NSR-10 MÉTODO DE ANALISIS DINÁMICO

Vs=	203834	KN	MAXIMA RELACIÒN PERMITIDA	
CuTa=	1.14	seg	ENTRE Vtj/Vs=	0.90
Vx=	35610.644			
Vy=	146907.72	KN	0.74	
Vy res=	151162.15			
Ttj=	0.69	seg	:BE AJUSTARSE	
FACTOR DE MODIFICACIÒN=			1.21	VER A.5.5.3 NSR-10

FX AJUSTADO ETABS	**1.15**	**EX ETABS**	**0.231**	**FX AJUSTADO**
			0.069	**FY AJUSTADO**
FY AJUSTADO ETABS	**1.21**	**EY ETABS**	**0.231**	**FY AJUSTADO**
			0.069	**FX AJUSTADO**

6.12. CALCULO DE DERIVA PARA EL ESPECTRO ELASTICO DE DISEÑO

La evaluación de las derivas laterales de la edificación se realizó hasta el **piso 12**, debido a que la cubierta correspondiente al **piso 13 no hace parte del sistema de resistencia sísmica** de la edificación. Por tal razón, este nivel no fue considerado dentro del análisis estructural de derivas.

Las derivas calculadas corresponden únicamente a los niveles que conforman el sistema estructural resistente, y su verificación se efectuó conforme a los límites establecidos por la normativa vigente.

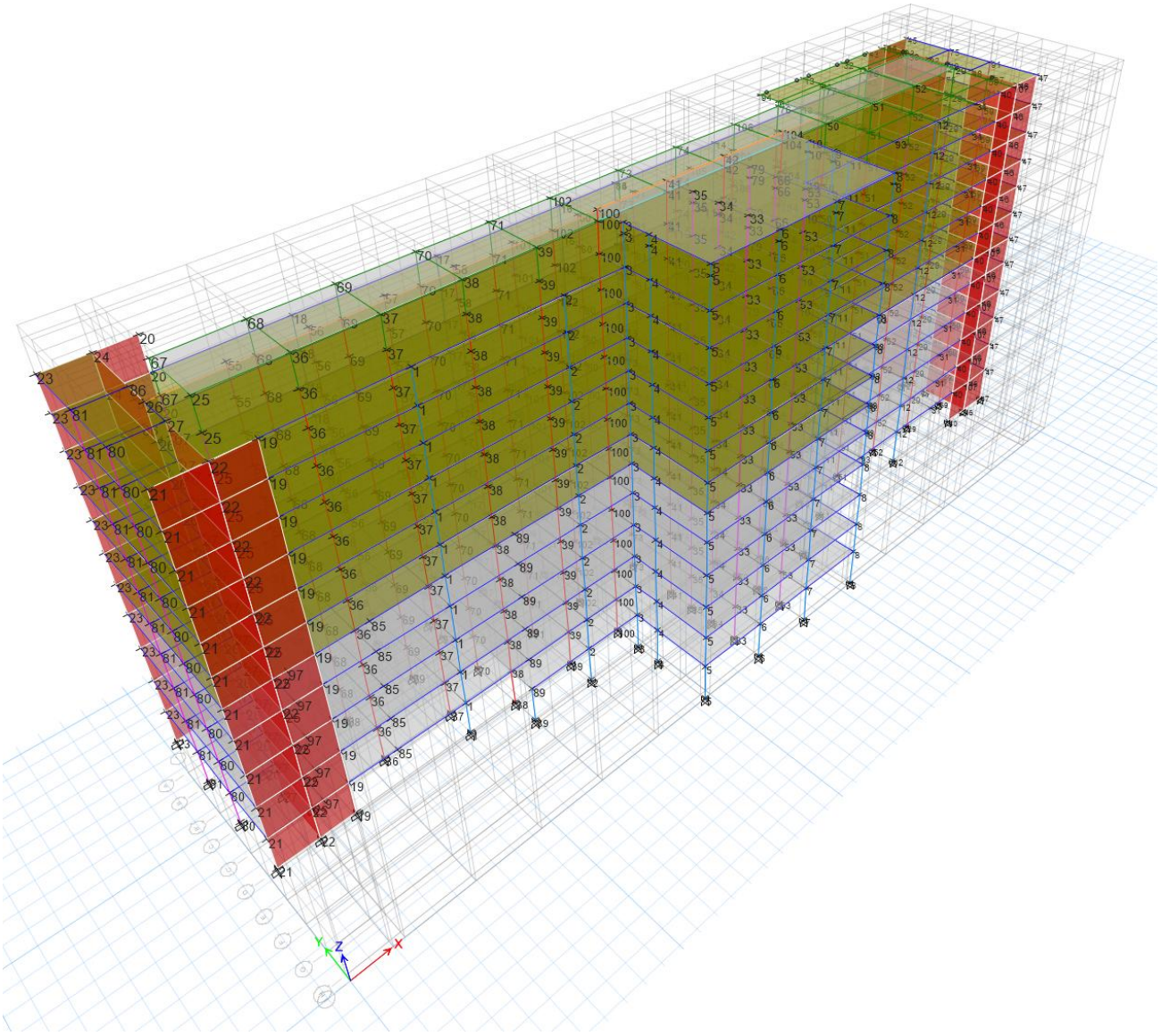


TABLE: Joint Drifts

Story	Label	Load Case/Combo	Displacement X	Displacement Y	Drift X	Drift Y
			m	m		
N+43.20	3	FXAJ Max	0.176591	0.038677	0.32%	0.11%
N+43.20	3	FYAJ Max	0.055991	0.134444	0.10%	0.23%
N+43.20	4	FXAJ Max	0.175326	0.038672	0.26%	0.13%
N+43.20	4	FYAJ Max	0.055898	0.134423	0.08%	0.23%
N+43.20	5	FXAJ Max	0.171804	0.038674	0.11%	0.15%
N+43.20	5	FYAJ Max	0.05584	0.1344	0.06%	0.22%
N+43.20	6	FXAJ Max	0.171813	0.040109	0.14%	0.08%
N+43.20	6	FYAJ Max	0.055823	0.140523	0.05%	0.24%
N+43.20	7	FXAJ Max	0.171811	0.041633	0.14%	0.08%
N+43.20	7	FYAJ Max	0.055784	0.145961	0.05%	0.24%
N+43.20	8	FXAJ Max	0.171802	0.043498	0.11%	0.15%
N+43.20	8	FYAJ Max	0.055761	0.151744	0.06%	0.24%
N+43.20	9	FXAJ Max	0.175322	0.043502	0.26%	0.14%
N+43.20	9	FYAJ Max	0.05583	0.151781	0.08%	0.24%
N+43.20	10	FXAJ Max	0.176587	0.043509	0.32%	0.12%
N+43.20	10	FYAJ Max	0.055966	0.151807	0.10%	0.25%
N+43.20	41	FXAJ Max	0.177558	0.040101	0.22%	0.07%
N+43.20	41	FYAJ Max	0.056104	0.140482	0.08%	0.21%
N+43.20	42	FXAJ Max	0.177555	0.041619	0.22%	0.07%
N+43.20	42	FYAJ Max	0.056107	0.145906	0.07%	0.21%
N+43.20	100	FXAJ Max	0.177638	0.038683	0.22%	0.10%
N+43.20	100	FYAJ Max	0.056128	0.134468	0.10%	0.15%
N+43.20	104	FXAJ Max	0.177631	0.043517	0.22%	0.10%
N+43.20	104	FYAJ Max	0.056133	0.151838	0.14%	0.21%
N+43.20	33	FXAJ Max	0.173246	0.040105	0.21%	0.07%
N+43.20	33	FYAJ Max	0.055623	0.140507	0.07%	0.20%
N+43.20	34	FXAJ Max	0.174735	0.040102	0.25%	0.06%
N+43.20	34	FYAJ Max	0.055643	0.140492	0.08%	0.19%
N+43.20	35	FXAJ Max	0.176112	0.040101	0.28%	0.07%
N+43.20	35	FYAJ Max	0.055808	0.140486	0.09%	0.20%
N+43.20	53	FXAJ Max	0.173245	0.041628	0.21%	0.07%
N+43.20	53	FYAJ Max	0.055672	0.145941	0.07%	0.21%
N+43.20	66	FXAJ Max	0.174733	0.041623	0.25%	0.06%
N+43.20	66	FYAJ Max	0.055702	0.145923	0.08%	0.20%
N+43.20	79	FXAJ Max	0.176109	0.041621	0.28%	0.07%
N+43.20	79	FYAJ Max	0.055842	0.145913	0.09%	0.21%
N+42.20	3	FXAJ Max	0.17362	0.037925	0.32%	0.13%

N+42.20	3	FYAJ Max	0.055054	0.13219	0.10%	0.25%
N+42.20	4	FXAJ Max	0.172855	0.037899	0.30%	0.12%
N+42.20	4	FYAJ Max	0.055108	0.132185	0.09%	0.25%
N+42.20	5	FXAJ Max	0.170715	0.037893	0.24%	0.12%
N+42.20	5	FYAJ Max	0.055405	0.132213	0.08%	0.25%
N+42.20	6	FXAJ Max	0.170434	0.039434	0.23%	0.08%
N+42.20	6	FYAJ Max	0.055357	0.138216	0.07%	0.26%
N+42.20	7	FXAJ Max	0.170435	0.040955	0.23%	0.08%
N+42.20	7	FYAJ Max	0.055382	0.143615	0.07%	0.27%
N+42.20	8	FXAJ Max	0.17072	0.042725	0.24%	0.12%
N+42.20	8	FYAJ Max	0.055522	0.149444	0.08%	0.27%
N+42.20	9	FXAJ Max	0.172853	0.042724	0.30%	0.13%
N+42.20	9	FYAJ Max	0.055065	0.149401	0.09%	0.27%
N+42.20	10	FXAJ Max	0.173616	0.042737	0.32%	0.13%
N+42.20	10	FYAJ Max	0.05503	0.149386	0.10%	0.27%
N+42.20	25	FXAJ Max	0.17642	0.040042	0.43%	0.65%
N+42.20	36	FXAJ Max	0.176395	0.038721	0.43%	0.52%
N+42.20	37	FXAJ Max	0.176307	0.037949	0.43%	0.40%
N+42.20	37	FYAJ Max	0.055773	0.127409	0.18%	0.84%
N+42.20	38	FXAJ Max	0.176136	0.037663	0.42%	0.30%
N+42.20	38	FYAJ Max	0.055694	0.128461	0.16%	0.58%
N+42.20	39	FXAJ Max	0.175861	0.037796	0.40%	0.21%
N+42.20	39	FYAJ Max	0.055577	0.130517	0.14%	0.38%
N+42.20	41	FXAJ Max	0.175399	0.039512	0.38%	0.09%
N+42.20	41	FYAJ Max	0.055426	0.138456	0.13%	0.27%
N+42.20	42	FXAJ Max	0.175389	0.04103	0.38%	0.09%
N+42.20	42	FYAJ Max	0.055427	0.143858	0.12%	0.27%
N+42.20	50	FXAJ Max	0.175759	0.045417	0.40%	0.22%
N+42.20	50	FYAJ Max	0.055659	0.15808	0.16%	0.52%
N+42.20	51	FXAJ Max	0.175967	0.048421	0.41%	0.33%
N+42.20	51	FYAJ Max	0.055826	0.16785	0.19%	0.90%
N+42.20	52	FXAJ Max	0.17607	0.05189	0.42%	0.47%
N+42.20	67	FXAJ Max	0.176928	0.040042	0.44%	0.65%
N+42.20	68	FXAJ Max	0.176935	0.038722	0.44%	0.52%
N+42.20	69	FXAJ Max	0.176966	0.037952	0.44%	0.40%
N+42.20	69	FYAJ Max	0.056072	0.127409	0.21%	0.84%
N+42.20	70	FXAJ Max	0.177045	0.037669	0.44%	0.30%
N+42.20	70	FYAJ Max	0.05606	0.128465	0.20%	0.58%
N+42.20	71	FXAJ Max	0.17719	0.037796	0.44%	0.21%
N+42.20	71	FYAJ Max	0.056055	0.1305	0.18%	0.38%

N+42.20	73	FXAJ Max	0.177499	0.039515	0.45%	0.09%
N+42.20	73	FYAJ Max	0.056104	0.138463	0.15%	0.27%
N+42.20	74	FXAJ Max	0.177491	0.041032	0.45%	0.09%
N+42.20	74	FYAJ Max	0.056128	0.143865	0.15%	0.27%
N+42.20	76	FXAJ Max	0.177194	0.045413	0.44%	0.22%
N+42.20	76	FYAJ Max	0.056363	0.158056	0.24%	0.52%
N+42.20	77	FXAJ Max	0.177067	0.048424	0.44%	0.33%
N+42.20	77	FYAJ Max	0.056493	0.167856	0.28%	0.90%
N+42.20	78	FXAJ Max	0.177008	0.051891	0.44%	0.47%
N+42.20	100	FXAJ Max	0.175516	0.038285	0.39%	0.14%
N+42.20	100	FYAJ Max	0.055455	0.133359	0.13%	0.29%
N+42.20	102	FXAJ Max	0.177399	0.038309	0.45%	0.15%
N+42.20	102	FYAJ Max	0.05608	0.133433	0.16%	0.29%
N+42.20	104	FXAJ Max	0.175471	0.043141	0.39%	0.15%
N+42.20	104	FYAJ Max	0.055474	0.150746	0.13%	0.33%
N+42.20	106	FXAJ Max	0.177387	0.043168	0.45%	0.15%
N+42.20	106	FYAJ Max	0.056217	0.150839	0.19%	0.33%
N+42.20	29	FXAJ Max	0.176099	0.055722	0.42%	0.62%
N+42.20	30	FXAJ Max	0.176993	0.055722	0.44%	0.62%
N+42.20	33	FXAJ Max	0.171338	0.039515	0.25%	0.08%
N+42.20	33	FYAJ Max	0.055031	0.138494	0.08%	0.27%
N+42.20	34	FXAJ Max	0.172411	0.03955	0.28%	0.08%
N+42.20	34	FYAJ Max	0.054922	0.138606	0.09%	0.27%
N+42.20	35	FXAJ Max	0.173476	0.039523	0.32%	0.08%
N+42.20	35	FYAJ Max	0.054983	0.138503	0.10%	0.27%
N+42.20	53	FXAJ Max	0.171337	0.041036	0.25%	0.08%
N+42.20	53	FYAJ Max	0.055067	0.143897	0.08%	0.28%
N+42.20	66	FXAJ Max	0.172409	0.041067	0.28%	0.09%
N+42.20	66	FYAJ Max	0.054963	0.144	0.09%	0.28%
N+42.20	79	FXAJ Max	0.173473	0.041035	0.32%	0.09%
N+42.20	79	FYAJ Max	0.055007	0.143883	0.10%	0.27%
N+39.20	1	FXAJ Max	0.164452	0.031517	0.36%	0.07%
N+39.20	1	FYAJ Max	0.052154	0.11027	0.11%	0.24%
N+39.20	2	FXAJ Max	0.164452	0.034337	0.36%	0.07%
N+39.20	2	FYAJ Max	0.052154	0.120333	0.11%	0.26%
N+39.20	3	FXAJ Max	0.164452	0.035637	0.36%	0.08%
N+39.20	3	FYAJ Max	0.052154	0.124939	0.11%	0.26%
N+39.20	4	FXAJ Max	0.164291	0.035637	0.36%	0.08%
N+39.20	4	FYAJ Max	0.052386	0.124939	0.11%	0.26%
N+39.20	5	FXAJ Max	0.163936	0.035637	0.36%	0.08%

N+39.20	5	FYAJ Max	0.0533	0.124939	0.11%	0.26%
N+39.20	6	FXAJ Max	0.163936	0.037248	0.36%	0.08%
N+39.20	6	FYAJ Max	0.0533	0.130623	0.11%	0.27%
N+39.20	7	FXAJ Max	0.163936	0.038731	0.36%	0.08%
N+39.20	7	FYAJ Max	0.0533	0.135838	0.11%	0.28%
N+39.20	8	FXAJ Max	0.163936	0.04038	0.36%	0.08%
N+39.20	8	FYAJ Max	0.0533	0.141619	0.11%	0.29%
N+39.20	9	FXAJ Max	0.164291	0.04038	0.36%	0.08%
N+39.20	9	FYAJ Max	0.052386	0.141619	0.11%	0.29%
N+39.20	10	FXAJ Max	0.164452	0.04038	0.36%	0.08%
N+39.20	10	FYAJ Max	0.052154	0.141619	0.11%	0.29%
N+39.20	11	FXAJ Max	0.164452	0.041742	0.36%	0.09%
N+39.20	11	FYAJ Max	0.052154	0.146381	0.11%	0.30%
N+39.20	12	FXAJ Max	0.164452	0.044804	0.36%	0.09%
N+39.20	12	FYAJ Max	0.052154	0.15705	0.11%	0.32%
N+39.20	19	FXAJ Max	0.164452	0.029248	0.36%	0.07%
N+39.20	19	FYAJ Max	0.052154	0.102084	0.11%	0.22%
N+39.20	20	FXAJ Max	0.16549	0.029248	0.36%	0.07%
N+39.20	20	FYAJ Max	0.053067	0.102084	0.12%	0.22%
N+39.20	21	FXAJ Max	0.164452	0.027883	0.36%	0.06%
N+39.20	21	FYAJ Max	0.052154	0.097104	0.11%	0.22%
N+39.20	22	FXAJ Max	0.164452	0.028607	0.36%	0.07%
N+39.20	22	FYAJ Max	0.052154	0.099751	0.11%	0.22%
N+39.20	23	FXAJ Max	0.16549	0.027883	0.36%	0.06%
N+39.20	23	FYAJ Max	0.053067	0.097104	0.12%	0.22%
N+39.20	24	FXAJ Max	0.16549	0.028607	0.36%	0.07%
N+39.20	24	FYAJ Max	0.053067	0.099751	0.12%	0.22%
N+39.20	26	FXAJ Max	0.164973	0.028607	0.36%	0.07%
N+39.20	26	FYAJ Max	0.05213	0.099751	0.11%	0.22%
N+39.20	27	FXAJ Max	0.164794	0.028607	0.36%	0.07%
N+39.20	27	FYAJ Max	0.052019	0.099751	0.11%	0.22%
N+39.20	25	FXAJ Max	0.164626	0.028814	0.36%	0.07%
N+39.20	25	FYAJ Max	0.052027	0.100504	0.11%	0.22%
N+39.20	36	FXAJ Max	0.164626	0.030149	0.36%	0.07%
N+39.20	36	FYAJ Max	0.052027	0.105345	0.11%	0.23%
N+39.20	37	FXAJ Max	0.164626	0.031517	0.36%	0.07%
N+39.20	37	FYAJ Max	0.052027	0.11027	0.11%	0.24%
N+39.20	38	FXAJ Max	0.164626	0.032914	0.36%	0.07%
N+39.20	38	FYAJ Max	0.052027	0.115269	0.11%	0.25%
N+39.20	39	FXAJ Max	0.164626	0.034337	0.36%	0.07%

N+39.20	39	FYAJ Max	0.052027	0.120333	0.11%	0.26%
N+39.20	41	FXAJ Max	0.164626	0.037248	0.36%	0.08%
N+39.20	41	FYAJ Max	0.052027	0.130623	0.11%	0.27%
N+39.20	42	FXAJ Max	0.164626	0.038731	0.36%	0.08%
N+39.20	42	FYAJ Max	0.052027	0.135838	0.11%	0.28%
N+39.20	50	FXAJ Max	0.164626	0.041742	0.36%	0.09%
N+39.20	50	FYAJ Max	0.052027	0.146381	0.11%	0.30%
N+39.20	51	FXAJ Max	0.164626	0.043267	0.36%	0.09%
N+39.20	51	FYAJ Max	0.052027	0.151701	0.11%	0.31%
N+39.20	52	FXAJ Max	0.164626	0.044804	0.36%	0.09%
N+39.20	52	FYAJ Max	0.052027	0.15705	0.11%	0.32%
N+39.20	64	FXAJ Max	0.165333	0.043267	0.36%	0.09%
N+39.20	64	FYAJ Max	0.05269	0.151701	0.12%	0.31%
N+39.20	65	FXAJ Max	0.165333	0.044804	0.36%	0.09%
N+39.20	65	FYAJ Max	0.05269	0.15705	0.12%	0.32%
N+39.20	67	FXAJ Max	0.164973	0.028814	0.36%	0.07%
N+39.20	67	FYAJ Max	0.05213	0.100504	0.11%	0.22%
N+39.20	68	FXAJ Max	0.164973	0.030149	0.36%	0.07%
N+39.20	68	FYAJ Max	0.05213	0.105345	0.11%	0.23%
N+39.20	69	FXAJ Max	0.164973	0.031517	0.36%	0.07%
N+39.20	69	FYAJ Max	0.05213	0.11027	0.11%	0.24%
N+39.20	70	FXAJ Max	0.164973	0.032914	0.36%	0.07%
N+39.20	70	FYAJ Max	0.05213	0.115269	0.11%	0.25%
N+39.20	71	FXAJ Max	0.164973	0.034337	0.36%	0.07%
N+39.20	71	FYAJ Max	0.05213	0.120333	0.11%	0.26%
N+39.20	73	FXAJ Max	0.164973	0.037248	0.36%	0.08%
N+39.20	73	FYAJ Max	0.05213	0.130623	0.11%	0.27%
N+39.20	74	FXAJ Max	0.164973	0.038731	0.36%	0.08%
N+39.20	74	FYAJ Max	0.05213	0.135838	0.11%	0.28%
N+39.20	76	FXAJ Max	0.164973	0.041742	0.36%	0.09%
N+39.20	76	FYAJ Max	0.05213	0.146381	0.11%	0.30%
N+39.20	77	FXAJ Max	0.164973	0.043267	0.36%	0.09%
N+39.20	77	FYAJ Max	0.05213	0.151701	0.11%	0.31%
N+39.20	78	FXAJ Max	0.164973	0.044804	0.36%	0.09%
N+39.20	78	FYAJ Max	0.05213	0.15705	0.11%	0.32%
N+39.20	80	FXAJ Max	0.164794	0.027883	0.36%	0.06%
N+39.20	80	FYAJ Max	0.052019	0.097104	0.11%	0.22%
N+39.20	81	FXAJ Max	0.165126	0.027883	0.36%	0.06%
N+39.20	81	FYAJ Max	0.052314	0.097104	0.11%	0.22%
N+39.20	100	FXAJ Max	0.164626	0.035637	0.36%	0.08%

N+39.20	100	FYAJ Max	0.052027	0.124939	0.11%	0.26%
N+39.20	102	FXAJ Max	0.164973	0.035637	0.36%	0.08%
N+39.20	102	FYAJ Max	0.05213	0.124939	0.11%	0.26%
N+39.20	104	FXAJ Max	0.164626	0.04038	0.36%	0.08%
N+39.20	104	FYAJ Max	0.052027	0.141619	0.11%	0.29%
N+39.20	106	FXAJ Max	0.164973	0.04038	0.36%	0.08%
N+39.20	106	FYAJ Max	0.05213	0.141619	0.11%	0.29%
N+39.20	40	FXAJ Max	0.164452	0.047394	0.36%	0.10%
N+39.20	40	FYAJ Max	0.052154	0.166046	0.11%	0.33%
N+39.20	43	FXAJ Max	0.16549	0.047394	0.36%	0.10%
N+39.20	43	FYAJ Max	0.053067	0.166046	0.12%	0.33%
N+39.20	44	FXAJ Max	0.16549	0.048151	0.36%	0.10%
N+39.20	44	FYAJ Max	0.053067	0.168672	0.12%	0.34%
N+39.20	45	FXAJ Max	0.16549	0.049022	0.36%	0.10%
N+39.20	45	FYAJ Max	0.053067	0.17169	0.12%	0.34%
N+39.20	46	FXAJ Max	0.164452	0.048151	0.36%	0.10%
N+39.20	46	FYAJ Max	0.052154	0.168672	0.11%	0.34%
N+39.20	47	FXAJ Max	0.164452	0.049022	0.36%	0.10%
N+39.20	47	FYAJ Max	0.052154	0.17169	0.11%	0.34%
N+39.20	48	FXAJ Max	0.164794	0.048151	0.36%	0.10%
N+39.20	48	FYAJ Max	0.052019	0.168672	0.11%	0.34%
N+39.20	49	FXAJ Max	0.164973	0.048151	0.36%	0.10%
N+39.20	49	FYAJ Max	0.05213	0.168672	0.11%	0.34%
N+39.20	59	FXAJ Max	0.164626	0.047906	0.36%	0.10%
N+39.20	59	FYAJ Max	0.052027	0.167822	0.11%	0.34%
N+39.20	62	FXAJ Max	0.165333	0.047906	0.36%	0.10%
N+39.20	62	FYAJ Max	0.05269	0.167822	0.12%	0.34%
N+39.20	72	FXAJ Max	0.164973	0.047906	0.36%	0.10%
N+39.20	72	FYAJ Max	0.05213	0.167822	0.11%	0.34%
N+39.20	75	FXAJ Max	0.165126	0.049022	0.36%	0.10%
N+39.20	75	FYAJ Max	0.052314	0.17169	0.11%	0.34%
N+39.20	91	FXAJ Max	0.164794	0.049022	0.36%	0.10%
N+39.20	91	FYAJ Max	0.052019	0.17169	0.11%	0.34%
N+39.20	28	FXAJ Max	0.165333	0.04635	0.36%	0.09%
N+39.20	28	FYAJ Max	0.05269	0.162425	0.12%	0.33%
N+39.20	29	FXAJ Max	0.164626	0.04635	0.36%	0.09%
N+39.20	29	FYAJ Max	0.052027	0.162425	0.11%	0.33%
N+39.20	30	FXAJ Max	0.164973	0.04635	0.36%	0.09%
N+39.20	30	FYAJ Max	0.05213	0.162425	0.11%	0.33%
N+39.20	33	FXAJ Max	0.164114	0.037248	0.36%	0.08%

N+39.20	33	FYAJ Max	0.052769	0.130623	0.11%	0.27%
N+39.20	34	FXAJ Max	0.164291	0.037248	0.36%	0.08%
N+39.20	34	FYAJ Max	0.052386	0.130623	0.11%	0.27%
N+39.20	35	FXAJ Max	0.164452	0.037248	0.36%	0.08%
N+39.20	35	FYAJ Max	0.052154	0.130623	0.11%	0.27%
N+39.20	53	FXAJ Max	0.164114	0.038731	0.36%	0.08%
N+39.20	53	FYAJ Max	0.052769	0.135838	0.11%	0.28%
N+39.20	66	FXAJ Max	0.164291	0.038731	0.36%	0.08%
N+39.20	66	FYAJ Max	0.052386	0.135838	0.11%	0.28%
N+39.20	79	FXAJ Max	0.164452	0.038731	0.36%	0.08%
N+39.20	79	FYAJ Max	0.052154	0.135838	0.11%	0.28%
N+35.86	1	FXAJ Max	0.15269	0.029245	0.37%	0.08%
N+35.86	1	FYAJ Max	0.048442	0.102374	0.12%	0.26%
N+35.86	2	FXAJ Max	0.15269	0.031917	0.37%	0.08%
N+35.86	2	FYAJ Max	0.048442	0.111867	0.12%	0.28%
N+35.86	3	FXAJ Max	0.15269	0.033145	0.37%	0.08%
N+35.86	3	FYAJ Max	0.048442	0.11621	0.12%	0.29%
N+35.86	4	FXAJ Max	0.152561	0.033145	0.37%	0.08%
N+35.86	4	FYAJ Max	0.048676	0.11621	0.12%	0.29%
N+35.86	5	FXAJ Max	0.152281	0.033145	0.37%	0.08%
N+35.86	5	FYAJ Max	0.049576	0.11621	0.12%	0.29%
N+35.86	6	FXAJ Max	0.152281	0.034666	0.37%	0.09%
N+35.86	6	FYAJ Max	0.049576	0.121571	0.12%	0.30%
N+35.86	7	FXAJ Max	0.152281	0.036065	0.37%	0.09%
N+35.86	7	FYAJ Max	0.049576	0.126488	0.12%	0.31%
N+35.86	8	FXAJ Max	0.152281	0.037619	0.37%	0.09%
N+35.86	8	FYAJ Max	0.049576	0.131938	0.12%	0.32%
N+35.86	9	FXAJ Max	0.152561	0.037619	0.37%	0.09%
N+35.86	9	FYAJ Max	0.048676	0.131938	0.12%	0.32%
N+35.86	10	FXAJ Max	0.15269	0.037619	0.37%	0.09%
N+35.86	10	FYAJ Max	0.048442	0.131938	0.12%	0.32%
N+35.86	11	FXAJ Max	0.15269	0.038902	0.37%	0.09%
N+35.86	11	FYAJ Max	0.048442	0.136427	0.12%	0.33%
N+35.86	12	FXAJ Max	0.15269	0.041782	0.37%	0.10%
N+35.86	12	FYAJ Max	0.048442	0.146482	0.12%	0.35%
N+35.86	13	FXAJ Max	0.153525	0.041782	0.38%	0.10%
N+35.86	13	FYAJ Max	0.049231	0.146482	0.12%	0.35%
N+35.86	14	FXAJ Max	0.153525	0.038902	0.38%	0.09%
N+35.86	14	FYAJ Max	0.049231	0.136427	0.12%	0.33%
N+35.86	16	FXAJ Max	0.153525	0.034666	0.38%	0.09%

N+35.86	16	FYAJ Max	0.049231	0.121571	0.12%	0.30%
N+35.86	17	FXAJ Max	0.153525	0.031917	0.38%	0.08%
N+35.86	17	FYAJ Max	0.049231	0.111867	0.12%	0.28%
N+35.86	18	FXAJ Max	0.153525	0.029245	0.38%	0.08%
N+35.86	18	FYAJ Max	0.049231	0.102374	0.12%	0.26%
N+35.86	19	FXAJ Max	0.15269	0.02709	0.37%	0.07%
N+35.86	19	FYAJ Max	0.048442	0.094651	0.12%	0.25%
N+35.86	20	FXAJ Max	0.153525	0.02709	0.38%	0.07%
N+35.86	20	FYAJ Max	0.049231	0.094651	0.12%	0.25%
N+35.86	21	FXAJ Max	0.15269	0.02579	0.37%	0.07%
N+35.86	21	FYAJ Max	0.048442	0.089952	0.12%	0.24%
N+35.86	22	FXAJ Max	0.15269	0.02648	0.37%	0.07%
N+35.86	22	FYAJ Max	0.048442	0.09245	0.12%	0.24%
N+35.86	23	FXAJ Max	0.153525	0.02579	0.38%	0.07%
N+35.86	23	FYAJ Max	0.049231	0.089952	0.12%	0.24%
N+35.86	24	FXAJ Max	0.153525	0.02648	0.38%	0.07%
N+35.86	24	FYAJ Max	0.049231	0.09245	0.12%	0.24%
N+35.86	26	FXAJ Max	0.153107	0.02648	0.38%	0.07%
N+35.86	26	FYAJ Max	0.048376	0.09245	0.12%	0.24%
N+35.86	27	FXAJ Max	0.152963	0.02648	0.38%	0.07%
N+35.86	27	FYAJ Max	0.048285	0.09245	0.12%	0.24%
N+35.86	25	FXAJ Max	0.152829	0.026676	0.38%	0.07%
N+35.86	25	FYAJ Max	0.048306	0.09316	0.12%	0.24%
N+35.86	36	FXAJ Max	0.152829	0.027946	0.38%	0.07%
N+35.86	36	FYAJ Max	0.048306	0.097728	0.12%	0.25%
N+35.86	37	FXAJ Max	0.152829	0.029245	0.38%	0.08%
N+35.86	37	FYAJ Max	0.048306	0.102374	0.12%	0.26%
N+35.86	38	FXAJ Max	0.152829	0.03057	0.38%	0.08%
N+35.86	38	FYAJ Max	0.048306	0.10709	0.12%	0.27%
N+35.86	39	FXAJ Max	0.152829	0.031917	0.38%	0.08%
N+35.86	39	FYAJ Max	0.048306	0.111867	0.12%	0.28%
N+35.86	41	FXAJ Max	0.152829	0.034666	0.38%	0.09%
N+35.86	41	FYAJ Max	0.048306	0.121571	0.12%	0.30%
N+35.86	42	FXAJ Max	0.152829	0.036065	0.38%	0.09%
N+35.86	42	FYAJ Max	0.048306	0.126488	0.12%	0.31%
N+35.86	50	FXAJ Max	0.152829	0.038902	0.38%	0.09%
N+35.86	50	FYAJ Max	0.048306	0.136427	0.12%	0.33%
N+35.86	51	FXAJ Max	0.152829	0.040337	0.38%	0.10%
N+35.86	51	FYAJ Max	0.048306	0.141441	0.12%	0.34%
N+35.86	52	FXAJ Max	0.152829	0.041782	0.38%	0.10%

N+35.86	52	FYAJ Max	0.048306	0.146482	0.12%	0.35%
N+35.86	54	FXAJ Max	0.153397	0.026676	0.38%	0.07%
N+35.86	54	FYAJ Max	0.048883	0.09316	0.12%	0.24%
N+35.86	55	FXAJ Max	0.153397	0.027946	0.38%	0.07%
N+35.86	55	FYAJ Max	0.048883	0.097728	0.12%	0.25%
N+35.86	56	FXAJ Max	0.153397	0.029245	0.38%	0.08%
N+35.86	56	FYAJ Max	0.048883	0.102374	0.12%	0.26%
N+35.86	57	FXAJ Max	0.153397	0.03057	0.38%	0.08%
N+35.86	57	FYAJ Max	0.048883	0.10709	0.12%	0.27%
N+35.86	58	FXAJ Max	0.153397	0.031917	0.38%	0.08%
N+35.86	58	FYAJ Max	0.048883	0.111867	0.12%	0.28%
N+35.86	60	FXAJ Max	0.153397	0.034666	0.38%	0.09%
N+35.86	60	FYAJ Max	0.048883	0.121571	0.12%	0.30%
N+35.86	61	FXAJ Max	0.153397	0.036065	0.38%	0.09%
N+35.86	61	FYAJ Max	0.048883	0.126488	0.12%	0.31%
N+35.86	63	FXAJ Max	0.153397	0.038902	0.38%	0.09%
N+35.86	63	FYAJ Max	0.048883	0.136427	0.12%	0.33%
N+35.86	64	FXAJ Max	0.153397	0.040337	0.38%	0.10%
N+35.86	64	FYAJ Max	0.048883	0.141441	0.12%	0.34%
N+35.86	65	FXAJ Max	0.153397	0.041782	0.38%	0.10%
N+35.86	65	FYAJ Max	0.048883	0.146482	0.12%	0.35%
N+35.86	67	FXAJ Max	0.153107	0.026676	0.38%	0.07%
N+35.86	67	FYAJ Max	0.048376	0.09316	0.12%	0.24%
N+35.86	68	FXAJ Max	0.153107	0.027946	0.38%	0.07%
N+35.86	68	FYAJ Max	0.048376	0.097728	0.12%	0.25%
N+35.86	69	FXAJ Max	0.153107	0.029245	0.38%	0.08%
N+35.86	69	FYAJ Max	0.048376	0.102374	0.12%	0.26%
N+35.86	70	FXAJ Max	0.153107	0.03057	0.38%	0.08%
N+35.86	70	FYAJ Max	0.048376	0.10709	0.12%	0.27%
N+35.86	71	FXAJ Max	0.153107	0.031917	0.38%	0.08%
N+35.86	71	FYAJ Max	0.048376	0.111867	0.12%	0.28%
N+35.86	73	FXAJ Max	0.153107	0.034666	0.38%	0.09%
N+35.86	73	FYAJ Max	0.048376	0.121571	0.12%	0.30%
N+35.86	74	FXAJ Max	0.153107	0.036065	0.38%	0.09%
N+35.86	74	FYAJ Max	0.048376	0.126488	0.12%	0.31%
N+35.86	76	FXAJ Max	0.153107	0.038902	0.38%	0.09%
N+35.86	76	FYAJ Max	0.048376	0.136427	0.12%	0.33%
N+35.86	77	FXAJ Max	0.153107	0.040337	0.38%	0.10%
N+35.86	77	FYAJ Max	0.048376	0.141441	0.12%	0.34%
N+35.86	78	FXAJ Max	0.153107	0.041782	0.38%	0.10%

N+35.86	78	FYAJ Max	0.048376	0.146482	0.12%	0.35%
N+35.86	80	FXAJ Max	0.152963	0.02579	0.38%	0.07%
N+35.86	80	FYAJ Max	0.048285	0.089952	0.12%	0.24%
N+35.86	81	FXAJ Max	0.15323	0.02579	0.38%	0.07%
N+35.86	81	FYAJ Max	0.04854	0.089952	0.12%	0.24%
N+35.86	84	FXAJ Max	0.153525	0.036065	0.38%	0.09%
N+35.86	84	FYAJ Max	0.049231	0.126488	0.12%	0.31%
N+35.86	100	FXAJ Max	0.152829	0.033145	0.38%	0.08%
N+35.86	100	FYAJ Max	0.048306	0.11621	0.12%	0.29%
N+35.86	101	FXAJ Max	0.153397	0.033145	0.38%	0.08%
N+35.86	101	FYAJ Max	0.048883	0.11621	0.12%	0.29%
N+35.86	102	FXAJ Max	0.153107	0.033145	0.38%	0.08%
N+35.86	102	FYAJ Max	0.048376	0.11621	0.12%	0.29%
N+35.86	104	FXAJ Max	0.152829	0.037619	0.38%	0.09%
N+35.86	104	FYAJ Max	0.048306	0.131938	0.12%	0.32%
N+35.86	105	FXAJ Max	0.153397	0.037619	0.38%	0.09%
N+35.86	105	FYAJ Max	0.048883	0.131938	0.12%	0.32%
N+35.86	106	FXAJ Max	0.153107	0.037619	0.38%	0.09%
N+35.86	106	FYAJ Max	0.048376	0.131938	0.12%	0.32%
N+35.86	40	FXAJ Max	0.15269	0.044216	0.37%	0.10%
N+35.86	40	FYAJ Max	0.048442	0.154959	0.12%	0.36%
N+35.86	43	FXAJ Max	0.153525	0.044216	0.38%	0.10%
N+35.86	43	FYAJ Max	0.049231	0.154959	0.12%	0.36%
N+35.86	44	FXAJ Max	0.153525	0.044927	0.38%	0.11%
N+35.86	44	FYAJ Max	0.049231	0.157434	0.12%	0.37%
N+35.86	45	FXAJ Max	0.153525	0.045745	0.38%	0.11%
N+35.86	45	FYAJ Max	0.049231	0.160277	0.12%	0.37%
N+35.86	46	FXAJ Max	0.15269	0.044927	0.37%	0.11%
N+35.86	46	FYAJ Max	0.048442	0.157434	0.12%	0.37%
N+35.86	47	FXAJ Max	0.15269	0.045745	0.37%	0.11%
N+35.86	47	FYAJ Max	0.048442	0.160277	0.12%	0.37%
N+35.86	48	FXAJ Max	0.152963	0.044927	0.38%	0.11%
N+35.86	48	FYAJ Max	0.048285	0.157434	0.12%	0.37%
N+35.86	49	FXAJ Max	0.153107	0.044927	0.38%	0.11%
N+35.86	49	FYAJ Max	0.048376	0.157434	0.12%	0.37%
N+35.86	59	FXAJ Max	0.152829	0.044697	0.38%	0.11%
N+35.86	59	FYAJ Max	0.048306	0.156633	0.12%	0.37%
N+35.86	62	FXAJ Max	0.153397	0.044697	0.38%	0.11%
N+35.86	62	FYAJ Max	0.048883	0.156633	0.12%	0.37%
N+35.86	72	FXAJ Max	0.153107	0.044697	0.38%	0.11%

N+35.86	72	FYAJ Max	0.048376	0.156633	0.12%	0.37%
N+35.86	75	FXAJ Max	0.15323	0.045745	0.38%	0.11%
N+35.86	75	FYAJ Max	0.04854	0.160277	0.12%	0.37%
N+35.86	91	FXAJ Max	0.152963	0.045745	0.38%	0.11%
N+35.86	91	FYAJ Max	0.048285	0.160277	0.12%	0.37%
N+35.86	28	FXAJ Max	0.153397	0.043235	0.38%	0.10%
N+35.86	28	FYAJ Max	0.048883	0.151547	0.12%	0.36%
N+35.86	29	FXAJ Max	0.152829	0.043235	0.38%	0.10%
N+35.86	29	FYAJ Max	0.048306	0.151547	0.12%	0.36%
N+35.86	30	FXAJ Max	0.153107	0.043235	0.38%	0.10%
N+35.86	30	FYAJ Max	0.048376	0.151547	0.12%	0.36%
N+35.86	33	FXAJ Max	0.152422	0.034666	0.37%	0.09%
N+35.86	33	FYAJ Max	0.049055	0.121571	0.12%	0.30%
N+35.86	34	FXAJ Max	0.152561	0.034666	0.37%	0.09%
N+35.86	34	FYAJ Max	0.048676	0.121571	0.12%	0.30%
N+35.86	35	FXAJ Max	0.15269	0.034666	0.37%	0.09%
N+35.86	35	FYAJ Max	0.048442	0.121571	0.12%	0.30%
N+35.86	53	FXAJ Max	0.152422	0.036065	0.37%	0.09%
N+35.86	53	FYAJ Max	0.049055	0.126488	0.12%	0.31%
N+35.86	66	FXAJ Max	0.152561	0.036065	0.37%	0.09%
N+35.86	66	FYAJ Max	0.048676	0.126488	0.12%	0.31%
N+35.86	79	FXAJ Max	0.15269	0.036065	0.37%	0.09%
N+35.86	79	FYAJ Max	0.048442	0.126488	0.12%	0.31%
N+32.50	1	FXAJ Max	0.140326	0.026748	0.41%	0.08%
N+32.50	1	FYAJ Max	0.044534	0.093661	0.13%	0.29%
N+32.50	2	FXAJ Max	0.140326	0.029256	0.41%	0.09%
N+32.50	2	FYAJ Max	0.044534	0.10255	0.13%	0.30%
N+32.50	3	FXAJ Max	0.140326	0.030408	0.41%	0.09%
N+32.50	3	FYAJ Max	0.044534	0.106616	0.13%	0.31%
N+32.50	4	FXAJ Max	0.140222	0.030408	0.41%	0.09%
N+32.50	4	FYAJ Max	0.044766	0.106616	0.13%	0.31%
N+32.50	5	FXAJ Max	0.139996	0.030408	0.40%	0.09%
N+32.50	5	FYAJ Max	0.045638	0.106616	0.13%	0.31%
N+32.50	6	FXAJ Max	0.139996	0.031833	0.40%	0.09%
N+32.50	6	FYAJ Max	0.045638	0.111634	0.13%	0.32%
N+32.50	7	FXAJ Max	0.139996	0.033142	0.40%	0.10%
N+32.50	7	FYAJ Max	0.045638	0.116235	0.13%	0.33%
N+32.50	8	FXAJ Max	0.139996	0.034596	0.40%	0.10%
N+32.50	8	FYAJ Max	0.045638	0.121335	0.13%	0.35%
N+32.50	9	FXAJ Max	0.140222	0.034596	0.41%	0.10%

N+32.50	9	FYAJ Max	0.044766	0.121335	0.13%	0.35%
N+32.50	10	FXAJ Max	0.140326	0.034596	0.41%	0.10%
N+32.50	10	FYAJ Max	0.044534	0.121335	0.13%	0.35%
N+32.50	11	FXAJ Max	0.140326	0.035795	0.41%	0.10%
N+32.50	11	FYAJ Max	0.044534	0.125534	0.13%	0.35%
N+32.50	12	FXAJ Max	0.140326	0.038486	0.41%	0.11%
N+32.50	12	FYAJ Max	0.044534	0.13494	0.13%	0.38%
N+32.50	13	FXAJ Max	0.141009	0.038486	0.41%	0.11%
N+32.50	13	FYAJ Max	0.045225	0.13494	0.13%	0.38%
N+32.50	14	FXAJ Max	0.141009	0.035795	0.41%	0.10%
N+32.50	14	FYAJ Max	0.045225	0.125534	0.13%	0.35%
N+32.50	16	FXAJ Max	0.141009	0.031833	0.41%	0.09%
N+32.50	16	FYAJ Max	0.045225	0.111634	0.13%	0.32%
N+32.50	17	FXAJ Max	0.141009	0.029256	0.41%	0.09%
N+32.50	17	FYAJ Max	0.045225	0.10255	0.13%	0.30%
N+32.50	18	FXAJ Max	0.141009	0.026748	0.41%	0.08%
N+32.50	18	FYAJ Max	0.045225	0.093661	0.13%	0.29%
N+32.50	19	FXAJ Max	0.140326	0.024721	0.41%	0.08%
N+32.50	19	FYAJ Max	0.044534	0.086427	0.13%	0.27%
N+32.50	20	FXAJ Max	0.141009	0.024721	0.41%	0.08%
N+32.50	20	FYAJ Max	0.045225	0.086427	0.13%	0.27%
N+32.50	21	FXAJ Max	0.140326	0.023495	0.41%	0.08%
N+32.50	21	FYAJ Max	0.044534	0.082025	0.13%	0.26%
N+32.50	22	FXAJ Max	0.140326	0.024146	0.41%	0.08%
N+32.50	22	FYAJ Max	0.044534	0.084364	0.13%	0.27%
N+32.50	23	FXAJ Max	0.141009	0.023495	0.41%	0.08%
N+32.50	23	FYAJ Max	0.045225	0.082025	0.13%	0.26%
N+32.50	24	FXAJ Max	0.141009	0.024146	0.41%	0.08%
N+32.50	24	FYAJ Max	0.045225	0.084364	0.13%	0.27%
N+32.50	26	FXAJ Max	0.140666	0.024146	0.41%	0.08%
N+32.50	26	FYAJ Max	0.044443	0.084364	0.13%	0.27%
N+32.50	27	FXAJ Max	0.140548	0.024146	0.41%	0.08%
N+32.50	27	FYAJ Max	0.044367	0.084364	0.13%	0.27%
N+32.50	25	FXAJ Max	0.140438	0.024331	0.41%	0.08%
N+32.50	25	FYAJ Max	0.044396	0.085029	0.13%	0.27%
N+32.50	36	FXAJ Max	0.140438	0.025527	0.41%	0.08%
N+32.50	36	FYAJ Max	0.044396	0.089308	0.13%	0.28%
N+32.50	37	FXAJ Max	0.140438	0.026748	0.41%	0.08%
N+32.50	37	FYAJ Max	0.044396	0.093661	0.13%	0.29%
N+32.50	38	FXAJ Max	0.140438	0.027992	0.41%	0.08%

N+32.50	38	FYAJ Max	0.044396	0.098078	0.13%	0.29%
N+32.50	39	FXAJ Max	0.140438	0.029256	0.41%	0.09%
N+32.50	39	FYAJ Max	0.044396	0.10255	0.13%	0.30%
N+32.50	41	FXAJ Max	0.140438	0.031833	0.41%	0.09%
N+32.50	41	FYAJ Max	0.044396	0.111634	0.13%	0.32%
N+32.50	42	FXAJ Max	0.140438	0.033142	0.41%	0.10%
N+32.50	42	FYAJ Max	0.044396	0.116235	0.13%	0.33%
N+32.50	50	FXAJ Max	0.140438	0.035795	0.41%	0.10%
N+32.50	50	FYAJ Max	0.044396	0.125534	0.13%	0.35%
N+32.50	51	FXAJ Max	0.140438	0.037136	0.41%	0.10%
N+32.50	51	FYAJ Max	0.044396	0.130225	0.13%	0.36%
N+32.50	52	FXAJ Max	0.140438	0.038486	0.41%	0.11%
N+32.50	52	FYAJ Max	0.044396	0.13494	0.13%	0.38%
N+32.50	54	FXAJ Max	0.140904	0.024331	0.41%	0.08%
N+32.50	54	FYAJ Max	0.044903	0.085029	0.13%	0.27%
N+32.50	55	FXAJ Max	0.140904	0.025527	0.41%	0.08%
N+32.50	55	FYAJ Max	0.044903	0.089308	0.13%	0.28%
N+32.50	56	FXAJ Max	0.140904	0.026748	0.41%	0.08%
N+32.50	56	FYAJ Max	0.044903	0.093661	0.13%	0.29%
N+32.50	57	FXAJ Max	0.140904	0.027992	0.41%	0.08%
N+32.50	57	FYAJ Max	0.044903	0.098078	0.13%	0.29%
N+32.50	58	FXAJ Max	0.140904	0.029256	0.41%	0.09%
N+32.50	58	FYAJ Max	0.044903	0.10255	0.13%	0.30%
N+32.50	60	FXAJ Max	0.140904	0.031833	0.41%	0.09%
N+32.50	60	FYAJ Max	0.044903	0.111634	0.13%	0.32%
N+32.50	61	FXAJ Max	0.140904	0.033142	0.41%	0.10%
N+32.50	61	FYAJ Max	0.044903	0.116235	0.13%	0.33%
N+32.50	63	FXAJ Max	0.140904	0.035795	0.41%	0.10%
N+32.50	63	FYAJ Max	0.044903	0.125534	0.13%	0.35%
N+32.50	64	FXAJ Max	0.140904	0.037136	0.41%	0.10%
N+32.50	64	FYAJ Max	0.044903	0.130225	0.13%	0.36%
N+32.50	65	FXAJ Max	0.140904	0.038486	0.41%	0.11%
N+32.50	65	FYAJ Max	0.044903	0.13494	0.13%	0.38%
N+32.50	67	FXAJ Max	0.140666	0.024331	0.41%	0.08%
N+32.50	67	FYAJ Max	0.044443	0.085029	0.13%	0.27%
N+32.50	68	FXAJ Max	0.140666	0.025527	0.41%	0.08%
N+32.50	68	FYAJ Max	0.044443	0.089308	0.13%	0.28%
N+32.50	69	FXAJ Max	0.140666	0.026748	0.41%	0.08%
N+32.50	69	FYAJ Max	0.044443	0.093661	0.13%	0.29%
N+32.50	70	FXAJ Max	0.140666	0.027992	0.41%	0.08%

N+32.50	70	FYAJ Max	0.044443	0.098078	0.13%	0.29%
N+32.50	71	FXAJ Max	0.140666	0.029256	0.41%	0.09%
N+32.50	71	FYAJ Max	0.044443	0.10255	0.13%	0.30%
N+32.50	73	FXAJ Max	0.140666	0.031833	0.41%	0.09%
N+32.50	73	FYAJ Max	0.044443	0.111634	0.13%	0.32%
N+32.50	74	FXAJ Max	0.140666	0.033142	0.41%	0.10%
N+32.50	74	FYAJ Max	0.044443	0.116235	0.13%	0.33%
N+32.50	76	FXAJ Max	0.140666	0.035795	0.41%	0.10%
N+32.50	76	FYAJ Max	0.044443	0.125534	0.13%	0.35%
N+32.50	77	FXAJ Max	0.140666	0.037136	0.41%	0.10%
N+32.50	77	FYAJ Max	0.044443	0.130225	0.13%	0.36%
N+32.50	78	FXAJ Max	0.140666	0.038486	0.41%	0.11%
N+32.50	78	FYAJ Max	0.044443	0.13494	0.13%	0.38%
N+32.50	80	FXAJ Max	0.140548	0.023495	0.41%	0.08%
N+32.50	80	FYAJ Max	0.044367	0.082025	0.13%	0.26%
N+32.50	81	FXAJ Max	0.140767	0.023495	0.41%	0.08%
N+32.50	81	FYAJ Max	0.04459	0.082025	0.13%	0.26%
N+32.50	84	FXAJ Max	0.141009	0.033142	0.41%	0.10%
N+32.50	84	FYAJ Max	0.045225	0.116235	0.13%	0.33%
N+32.50	100	FXAJ Max	0.140438	0.030408	0.41%	0.09%
N+32.50	100	FYAJ Max	0.044396	0.106616	0.13%	0.31%
N+32.50	101	FXAJ Max	0.140904	0.030408	0.41%	0.09%
N+32.50	101	FYAJ Max	0.044903	0.106616	0.13%	0.31%
N+32.50	102	FXAJ Max	0.140666	0.030408	0.41%	0.09%
N+32.50	102	FYAJ Max	0.044443	0.106616	0.13%	0.31%
N+32.50	104	FXAJ Max	0.140438	0.034596	0.41%	0.10%
N+32.50	104	FYAJ Max	0.044396	0.121335	0.13%	0.35%
N+32.50	105	FXAJ Max	0.140904	0.034596	0.41%	0.10%
N+32.50	105	FYAJ Max	0.044903	0.121335	0.13%	0.35%
N+32.50	106	FXAJ Max	0.140666	0.034596	0.41%	0.10%
N+32.50	106	FYAJ Max	0.044443	0.121335	0.13%	0.35%
N+32.50	40	FXAJ Max	0.140326	0.040758	0.41%	0.11%
N+32.50	40	FYAJ Max	0.044534	0.142867	0.13%	0.39%
N+32.50	43	FXAJ Max	0.141009	0.040758	0.41%	0.11%
N+32.50	43	FYAJ Max	0.045225	0.142867	0.13%	0.39%
N+32.50	44	FXAJ Max	0.141009	0.041422	0.41%	0.11%
N+32.50	44	FYAJ Max	0.045225	0.14518	0.13%	0.40%
N+32.50	45	FXAJ Max	0.141009	0.042185	0.41%	0.12%
N+32.50	45	FYAJ Max	0.045225	0.147838	0.13%	0.40%
N+32.50	46	FXAJ Max	0.140326	0.041422	0.41%	0.11%

N+32.50	46	FYAJ Max	0.044534	0.14518	0.13%	0.40%
N+32.50	47	FXAJ Max	0.140326	0.042185	0.41%	0.12%
N+32.50	47	FYAJ Max	0.044534	0.147838	0.13%	0.40%
N+32.50	48	FXAJ Max	0.140548	0.041422	0.41%	0.11%
N+32.50	48	FYAJ Max	0.044367	0.14518	0.13%	0.40%
N+32.50	49	FXAJ Max	0.140666	0.041422	0.41%	0.11%
N+32.50	49	FYAJ Max	0.044443	0.14518	0.13%	0.40%
N+32.50	59	FXAJ Max	0.140438	0.041207	0.41%	0.11%
N+32.50	59	FYAJ Max	0.044396	0.144431	0.13%	0.40%
N+32.50	62	FXAJ Max	0.140904	0.041207	0.41%	0.11%
N+32.50	62	FYAJ Max	0.044903	0.144431	0.13%	0.40%
N+32.50	72	FXAJ Max	0.140666	0.041207	0.41%	0.11%
N+32.50	72	FYAJ Max	0.044443	0.144431	0.13%	0.40%
N+32.50	75	FXAJ Max	0.140767	0.042185	0.41%	0.12%
N+32.50	75	FYAJ Max	0.04459	0.147838	0.13%	0.40%
N+32.50	91	FXAJ Max	0.140548	0.042185	0.41%	0.12%
N+32.50	91	FYAJ Max	0.044367	0.147838	0.13%	0.40%
N+32.50	28	FXAJ Max	0.140904	0.039843	0.41%	0.11%
N+32.50	28	FYAJ Max	0.044903	0.139676	0.13%	0.39%
N+32.50	29	FXAJ Max	0.140438	0.039843	0.41%	0.11%
N+32.50	29	FYAJ Max	0.044396	0.139676	0.13%	0.39%
N+32.50	30	FXAJ Max	0.140666	0.039843	0.41%	0.11%
N+32.50	30	FYAJ Max	0.044443	0.139676	0.13%	0.39%
N+32.50	33	FXAJ Max	0.140109	0.031833	0.40%	0.09%
N+32.50	33	FYAJ Max	0.045135	0.111634	0.13%	0.32%
N+32.50	34	FXAJ Max	0.140222	0.031833	0.41%	0.09%
N+32.50	34	FYAJ Max	0.044766	0.111634	0.13%	0.32%
N+32.50	35	FXAJ Max	0.140326	0.031833	0.41%	0.09%
N+32.50	35	FYAJ Max	0.044534	0.111634	0.13%	0.32%
N+32.50	53	FXAJ Max	0.140109	0.033142	0.40%	0.10%
N+32.50	53	FYAJ Max	0.045135	0.116235	0.13%	0.33%
N+32.50	66	FXAJ Max	0.140222	0.033142	0.41%	0.10%
N+32.50	66	FYAJ Max	0.044766	0.116235	0.13%	0.33%
N+32.50	79	FXAJ Max	0.140326	0.033142	0.41%	0.10%
N+32.50	79	FYAJ Max	0.044534	0.116235	0.13%	0.33%
N+29.15	1	FXAJ Max	0.126954	0.024041	0.44%	0.09%
N+29.15	1	FYAJ Max	0.040308	0.084207	0.14%	0.31%
N+29.15	2	FXAJ Max	0.126954	0.026375	0.44%	0.09%
N+29.15	2	FYAJ Max	0.040308	0.092459	0.14%	0.33%
N+29.15	3	FXAJ Max	0.126954	0.027446	0.44%	0.10%

N+29.15	3	FYAJ Max	0.040308	0.096234	0.14%	0.34%
N+29.15	4	FXAJ Max	0.126873	0.027446	0.44%	0.10%
N+29.15	4	FYAJ Max	0.040536	0.096234	0.14%	0.34%
N+29.15	5	FXAJ Max	0.1267	0.027446	0.44%	0.10%
N+29.15	5	FYAJ Max	0.041378	0.096234	0.14%	0.34%
N+29.15	6	FXAJ Max	0.1267	0.028769	0.44%	0.10%
N+29.15	6	FYAJ Max	0.041378	0.100889	0.14%	0.35%
N+29.15	7	FXAJ Max	0.1267	0.029984	0.44%	0.10%
N+29.15	7	FYAJ Max	0.041378	0.105158	0.14%	0.36%
N+29.15	8	FXAJ Max	0.1267	0.031332	0.44%	0.11%
N+29.15	8	FYAJ Max	0.041378	0.109887	0.14%	0.37%
N+29.15	9	FXAJ Max	0.126873	0.031332	0.44%	0.11%
N+29.15	9	FYAJ Max	0.040536	0.109887	0.14%	0.37%
N+29.15	10	FXAJ Max	0.126954	0.031332	0.44%	0.11%
N+29.15	10	FYAJ Max	0.040308	0.109887	0.14%	0.37%
N+29.15	11	FXAJ Max	0.126954	0.032443	0.44%	0.11%
N+29.15	11	FYAJ Max	0.040308	0.113781	0.14%	0.38%
N+29.15	12	FXAJ Max	0.126954	0.034934	0.44%	0.11%
N+29.15	12	FYAJ Max	0.040308	0.122499	0.14%	0.40%
N+29.15	13	FXAJ Max	0.127492	0.034934	0.44%	0.11%
N+29.15	13	FYAJ Max	0.040902	0.122499	0.14%	0.40%
N+29.15	14	FXAJ Max	0.127492	0.032443	0.44%	0.11%
N+29.15	14	FYAJ Max	0.040902	0.113781	0.14%	0.38%
N+29.15	16	FXAJ Max	0.127492	0.028769	0.44%	0.10%
N+29.15	16	FYAJ Max	0.040902	0.100889	0.14%	0.35%
N+29.15	17	FXAJ Max	0.127492	0.026375	0.44%	0.09%
N+29.15	17	FYAJ Max	0.040902	0.092459	0.14%	0.33%
N+29.15	18	FXAJ Max	0.127492	0.024041	0.44%	0.09%
N+29.15	18	FYAJ Max	0.040902	0.084207	0.14%	0.31%
N+29.15	19	FXAJ Max	0.126954	0.022151	0.44%	0.08%
N+29.15	19	FYAJ Max	0.040308	0.077487	0.14%	0.29%
N+29.15	20	FXAJ Max	0.127492	0.022151	0.44%	0.08%
N+29.15	20	FYAJ Max	0.040902	0.077487	0.14%	0.29%
N+29.15	21	FXAJ Max	0.126954	0.021007	0.44%	0.08%
N+29.15	21	FYAJ Max	0.040308	0.073398	0.14%	0.28%
N+29.15	22	FXAJ Max	0.126954	0.021615	0.44%	0.08%
N+29.15	22	FYAJ Max	0.040308	0.075572	0.14%	0.29%
N+29.15	23	FXAJ Max	0.127492	0.021007	0.44%	0.08%
N+29.15	23	FYAJ Max	0.040902	0.073398	0.14%	0.28%
N+29.15	24	FXAJ Max	0.127492	0.021615	0.44%	0.08%

N+29.15	24	FYAJ Max	0.040902	0.075572	0.14%	0.29%
N+29.15	26	FXAJ Max	0.12722	0.021615	0.44%	0.08%
N+29.15	26	FYAJ Max	0.040192	0.075572	0.14%	0.29%
N+29.15	27	FXAJ Max	0.127127	0.021615	0.44%	0.08%
N+29.15	27	FYAJ Max	0.040131	0.075572	0.14%	0.29%
N+29.15	25	FXAJ Max	0.127041	0.021788	0.44%	0.08%
N+29.15	25	FYAJ Max	0.040168	0.07619	0.14%	0.29%
N+29.15	36	FXAJ Max	0.127041	0.022903	0.44%	0.09%
N+29.15	36	FYAJ Max	0.040168	0.080164	0.14%	0.30%
N+29.15	37	FXAJ Max	0.127041	0.024041	0.44%	0.09%
N+29.15	37	FYAJ Max	0.040168	0.084207	0.14%	0.31%
N+29.15	38	FXAJ Max	0.127041	0.0252	0.44%	0.09%
N+29.15	38	FYAJ Max	0.040168	0.088308	0.14%	0.32%
N+29.15	39	FXAJ Max	0.127041	0.026375	0.44%	0.09%
N+29.15	39	FYAJ Max	0.040168	0.092459	0.14%	0.33%
N+29.15	41	FXAJ Max	0.127041	0.028769	0.44%	0.10%
N+29.15	41	FYAJ Max	0.040168	0.100889	0.14%	0.35%
N+29.15	42	FXAJ Max	0.127041	0.029984	0.44%	0.10%
N+29.15	42	FYAJ Max	0.040168	0.105158	0.14%	0.36%
N+29.15	50	FXAJ Max	0.127041	0.032443	0.44%	0.11%
N+29.15	50	FYAJ Max	0.040168	0.113781	0.14%	0.38%
N+29.15	51	FXAJ Max	0.127041	0.033685	0.44%	0.11%
N+29.15	51	FYAJ Max	0.040168	0.118129	0.14%	0.39%
N+29.15	52	FXAJ Max	0.127041	0.034934	0.44%	0.11%
N+29.15	52	FYAJ Max	0.040168	0.122499	0.14%	0.40%
N+29.15	54	FXAJ Max	0.127408	0.021788	0.44%	0.08%
N+29.15	54	FYAJ Max	0.040607	0.07619	0.14%	0.29%
N+29.15	55	FXAJ Max	0.127408	0.022903	0.44%	0.09%
N+29.15	55	FYAJ Max	0.040607	0.080164	0.14%	0.30%
N+29.15	56	FXAJ Max	0.127408	0.024041	0.44%	0.09%
N+29.15	56	FYAJ Max	0.040607	0.084207	0.14%	0.31%
N+29.15	57	FXAJ Max	0.127408	0.0252	0.44%	0.09%
N+29.15	57	FYAJ Max	0.040607	0.088308	0.14%	0.32%
N+29.15	58	FXAJ Max	0.127408	0.026375	0.44%	0.09%
N+29.15	58	FYAJ Max	0.040607	0.092459	0.14%	0.33%
N+29.15	60	FXAJ Max	0.127408	0.028769	0.44%	0.10%
N+29.15	60	FYAJ Max	0.040607	0.100889	0.14%	0.35%
N+29.15	61	FXAJ Max	0.127408	0.029984	0.44%	0.10%
N+29.15	61	FYAJ Max	0.040607	0.105158	0.14%	0.36%
N+29.15	63	FXAJ Max	0.127408	0.032443	0.44%	0.11%

N+29.15	63	FYAJ Max	0.040607	0.113781	0.14%	0.38%
N+29.15	64	FXAJ Max	0.127408	0.033685	0.44%	0.11%
N+29.15	64	FYAJ Max	0.040607	0.118129	0.14%	0.39%
N+29.15	65	FXAJ Max	0.127408	0.034934	0.44%	0.11%
N+29.15	65	FYAJ Max	0.040607	0.122499	0.14%	0.40%
N+29.15	67	FXAJ Max	0.12722	0.021788	0.44%	0.08%
N+29.15	67	FYAJ Max	0.040192	0.07619	0.14%	0.29%
N+29.15	68	FXAJ Max	0.12722	0.022903	0.44%	0.09%
N+29.15	68	FYAJ Max	0.040192	0.080164	0.14%	0.30%
N+29.15	69	FXAJ Max	0.12722	0.024041	0.44%	0.09%
N+29.15	69	FYAJ Max	0.040192	0.084207	0.14%	0.31%
N+29.15	70	FXAJ Max	0.12722	0.0252	0.44%	0.09%
N+29.15	70	FYAJ Max	0.040192	0.088308	0.14%	0.32%
N+29.15	71	FXAJ Max	0.12722	0.026375	0.44%	0.09%
N+29.15	71	FYAJ Max	0.040192	0.092459	0.14%	0.33%
N+29.15	73	FXAJ Max	0.12722	0.028769	0.44%	0.10%
N+29.15	73	FYAJ Max	0.040192	0.100889	0.14%	0.35%
N+29.15	74	FXAJ Max	0.12722	0.029984	0.44%	0.10%
N+29.15	74	FYAJ Max	0.040192	0.105158	0.14%	0.36%
N+29.15	76	FXAJ Max	0.12722	0.032443	0.44%	0.11%
N+29.15	76	FYAJ Max	0.040192	0.113781	0.14%	0.38%
N+29.15	77	FXAJ Max	0.12722	0.033685	0.44%	0.11%
N+29.15	77	FYAJ Max	0.040192	0.118129	0.14%	0.39%
N+29.15	78	FXAJ Max	0.12722	0.034934	0.44%	0.11%
N+29.15	78	FYAJ Max	0.040192	0.122499	0.14%	0.40%
N+29.15	80	FXAJ Max	0.127127	0.021007	0.44%	0.08%
N+29.15	80	FYAJ Max	0.040131	0.073398	0.14%	0.28%
N+29.15	81	FXAJ Max	0.127299	0.021007	0.44%	0.08%
N+29.15	81	FYAJ Max	0.040323	0.073398	0.14%	0.28%
N+29.15	84	FXAJ Max	0.127492	0.029984	0.44%	0.10%
N+29.15	84	FYAJ Max	0.040902	0.105158	0.14%	0.36%
N+29.15	100	FXAJ Max	0.127041	0.027446	0.44%	0.10%
N+29.15	100	FYAJ Max	0.040168	0.096234	0.14%	0.34%
N+29.15	101	FXAJ Max	0.127408	0.027446	0.44%	0.10%
N+29.15	101	FYAJ Max	0.040607	0.096234	0.14%	0.34%
N+29.15	102	FXAJ Max	0.12722	0.027446	0.44%	0.10%
N+29.15	102	FYAJ Max	0.040192	0.096234	0.14%	0.34%
N+29.15	104	FXAJ Max	0.127041	0.031332	0.44%	0.11%
N+29.15	104	FYAJ Max	0.040168	0.109887	0.14%	0.37%
N+29.15	105	FXAJ Max	0.127408	0.031332	0.44%	0.11%

N+29.15	105	FYAJ Max	0.040607	0.109887	0.14%	0.37%
N+29.15	106	FXAJ Max	0.12722	0.031332	0.44%	0.11%
N+29.15	106	FYAJ Max	0.040192	0.109887	0.14%	0.37%
N+29.15	40	FXAJ Max	0.126954	0.037037	0.44%	0.12%
N+29.15	40	FYAJ Max	0.040308	0.129844	0.14%	0.42%
N+29.15	43	FXAJ Max	0.127492	0.037037	0.44%	0.12%
N+29.15	43	FYAJ Max	0.040902	0.129844	0.14%	0.42%
N+29.15	44	FXAJ Max	0.127492	0.03765	0.44%	0.12%
N+29.15	44	FYAJ Max	0.040902	0.131987	0.14%	0.43%
N+29.15	45	FXAJ Max	0.127492	0.038356	0.44%	0.12%
N+29.15	45	FYAJ Max	0.040902	0.13445	0.14%	0.43%
N+29.15	46	FXAJ Max	0.126954	0.03765	0.44%	0.12%
N+29.15	46	FYAJ Max	0.040308	0.131987	0.14%	0.43%
N+29.15	47	FXAJ Max	0.126954	0.038356	0.44%	0.12%
N+29.15	47	FYAJ Max	0.040308	0.13445	0.14%	0.43%
N+29.15	48	FXAJ Max	0.127127	0.03765	0.44%	0.12%
N+29.15	48	FYAJ Max	0.040131	0.131987	0.14%	0.43%
N+29.15	49	FXAJ Max	0.12722	0.03765	0.44%	0.12%
N+29.15	49	FYAJ Max	0.040192	0.131987	0.14%	0.43%
N+29.15	59	FXAJ Max	0.127041	0.037452	0.44%	0.12%
N+29.15	59	FYAJ Max	0.040168	0.131293	0.14%	0.42%
N+29.15	62	FXAJ Max	0.127408	0.037452	0.44%	0.12%
N+29.15	62	FYAJ Max	0.040607	0.131293	0.14%	0.42%
N+29.15	72	FXAJ Max	0.12722	0.037452	0.44%	0.12%
N+29.15	72	FYAJ Max	0.040192	0.131293	0.14%	0.42%
N+29.15	75	FXAJ Max	0.127299	0.038356	0.44%	0.12%
N+29.15	75	FYAJ Max	0.040323	0.13445	0.14%	0.43%
N+29.15	91	FXAJ Max	0.127127	0.038356	0.44%	0.12%
N+29.15	91	FYAJ Max	0.040131	0.13445	0.14%	0.43%
N+29.15	28	FXAJ Max	0.127408	0.03619	0.44%	0.12%
N+29.15	28	FYAJ Max	0.040607	0.126887	0.14%	0.41%
N+29.15	29	FXAJ Max	0.127041	0.03619	0.44%	0.12%
N+29.15	29	FYAJ Max	0.040168	0.126887	0.14%	0.41%
N+29.15	30	FXAJ Max	0.12722	0.03619	0.44%	0.12%
N+29.15	30	FYAJ Max	0.040192	0.126887	0.14%	0.41%
N+29.15	33	FXAJ Max	0.126786	0.028769	0.44%	0.10%
N+29.15	33	FYAJ Max	0.040894	0.100889	0.14%	0.35%
N+29.15	34	FXAJ Max	0.126873	0.028769	0.44%	0.10%
N+29.15	34	FYAJ Max	0.040536	0.100889	0.14%	0.35%
N+29.15	35	FXAJ Max	0.126954	0.028769	0.44%	0.10%

N+29.15	35	FYAJ Max	0.040308	0.100889	0.14%	0.35%
N+29.15	53	FXAJ Max	0.126786	0.029984	0.44%	0.10%
N+29.15	53	FYAJ Max	0.040894	0.105158	0.14%	0.36%
N+29.15	66	FXAJ Max	0.126873	0.029984	0.44%	0.10%
N+29.15	66	FYAJ Max	0.040536	0.105158	0.14%	0.36%
N+29.15	79	FXAJ Max	0.126954	0.029984	0.44%	0.10%
N+29.15	79	FYAJ Max	0.040308	0.105158	0.14%	0.36%
N+25.80	1	FXAJ Max	0.112487	0.021134	0.47%	0.09%
N+25.80	1	FYAJ Max	0.035737	0.074042	0.15%	0.32%
N+25.80	2	FXAJ Max	0.112487	0.023281	0.47%	0.10%
N+25.80	2	FYAJ Max	0.035737	0.08162	0.15%	0.34%
N+25.80	3	FXAJ Max	0.112487	0.024265	0.47%	0.10%
N+25.80	3	FYAJ Max	0.035737	0.085085	0.15%	0.35%
N+25.80	4	FXAJ Max	0.112428	0.024265	0.47%	0.10%
N+25.80	4	FYAJ Max	0.035959	0.085085	0.15%	0.35%
N+25.80	5	FXAJ Max	0.112303	0.024265	0.47%	0.10%
N+25.80	5	FYAJ Max	0.036769	0.085085	0.15%	0.35%
N+25.80	6	FXAJ Max	0.112303	0.02548	0.47%	0.10%
N+25.80	6	FYAJ Max	0.036769	0.089356	0.15%	0.37%
N+25.80	7	FXAJ Max	0.112303	0.026595	0.47%	0.11%
N+25.80	7	FYAJ Max	0.036769	0.093271	0.15%	0.38%
N+25.80	8	FXAJ Max	0.112303	0.027831	0.47%	0.11%
N+25.80	8	FYAJ Max	0.036769	0.097608	0.15%	0.39%
N+25.80	9	FXAJ Max	0.112428	0.027831	0.47%	0.11%
N+25.80	9	FYAJ Max	0.035959	0.097608	0.15%	0.39%
N+25.80	10	FXAJ Max	0.112487	0.027831	0.47%	0.11%
N+25.80	10	FYAJ Max	0.035737	0.097608	0.15%	0.39%
N+25.80	11	FXAJ Max	0.112487	0.028849	0.47%	0.11%
N+25.80	11	FYAJ Max	0.035737	0.101177	0.15%	0.40%
N+25.80	12	FXAJ Max	0.112487	0.03113	0.47%	0.12%
N+25.80	12	FYAJ Max	0.035737	0.109165	0.15%	0.42%
N+25.80	13	FXAJ Max	0.112893	0.03113	0.47%	0.12%
N+25.80	13	FYAJ Max	0.036238	0.109165	0.15%	0.42%
N+25.80	14	FXAJ Max	0.112893	0.028849	0.47%	0.11%
N+25.80	14	FYAJ Max	0.036238	0.101177	0.15%	0.40%
N+25.80	16	FXAJ Max	0.112893	0.02548	0.47%	0.10%
N+25.80	16	FYAJ Max	0.036238	0.089356	0.15%	0.37%
N+25.80	17	FXAJ Max	0.112893	0.023281	0.47%	0.10%
N+25.80	17	FYAJ Max	0.036238	0.08162	0.15%	0.34%
N+25.80	18	FXAJ Max	0.112893	0.021134	0.47%	0.09%

N+25.80	18	FYAJ Max	0.036238	0.074042	0.15%	0.32%
N+25.80	19	FXAJ Max	0.112487	0.019392	0.47%	0.09%
N+25.80	19	FYAJ Max	0.035737	0.067868	0.15%	0.31%
N+25.80	20	FXAJ Max	0.112893	0.019392	0.47%	0.09%
N+25.80	20	FYAJ Max	0.036238	0.067868	0.15%	0.31%
N+25.80	21	FXAJ Max	0.112487	0.018335	0.47%	0.08%
N+25.80	21	FYAJ Max	0.035737	0.06411	0.15%	0.29%
N+25.80	22	FXAJ Max	0.112487	0.018896	0.47%	0.09%
N+25.80	22	FYAJ Max	0.035737	0.066108	0.15%	0.30%
N+25.80	23	FXAJ Max	0.112893	0.018335	0.47%	0.08%
N+25.80	23	FYAJ Max	0.036238	0.06411	0.15%	0.29%
N+25.80	24	FXAJ Max	0.112893	0.018896	0.47%	0.09%
N+25.80	24	FYAJ Max	0.036238	0.066108	0.15%	0.30%
N+25.80	26	FXAJ Max	0.112686	0.018896	0.47%	0.09%
N+25.80	26	FYAJ Max	0.035599	0.066108	0.15%	0.30%
N+25.80	27	FXAJ Max	0.112616	0.018896	0.47%	0.09%
N+25.80	27	FYAJ Max	0.035551	0.066108	0.15%	0.30%
N+25.80	25	FXAJ Max	0.112552	0.019056	0.47%	0.09%
N+25.80	25	FYAJ Max	0.035596	0.066676	0.15%	0.30%
N+25.80	36	FXAJ Max	0.112552	0.020085	0.47%	0.09%
N+25.80	36	FYAJ Max	0.035596	0.070328	0.15%	0.31%
N+25.80	37	FXAJ Max	0.112552	0.021134	0.47%	0.09%
N+25.80	37	FYAJ Max	0.035596	0.074042	0.15%	0.32%
N+25.80	38	FXAJ Max	0.112552	0.0222	0.47%	0.10%
N+25.80	38	FYAJ Max	0.035596	0.077809	0.15%	0.33%
N+25.80	39	FXAJ Max	0.112552	0.023281	0.47%	0.10%
N+25.80	39	FYAJ Max	0.035596	0.08162	0.15%	0.34%
N+25.80	41	FXAJ Max	0.112552	0.02548	0.47%	0.10%
N+25.80	41	FYAJ Max	0.035596	0.089356	0.15%	0.37%
N+25.80	42	FXAJ Max	0.112552	0.026595	0.47%	0.11%
N+25.80	42	FYAJ Max	0.035596	0.093271	0.15%	0.38%
N+25.80	50	FXAJ Max	0.112552	0.028849	0.47%	0.11%
N+25.80	50	FYAJ Max	0.035596	0.101177	0.15%	0.40%
N+25.80	51	FXAJ Max	0.112552	0.029986	0.47%	0.12%
N+25.80	51	FYAJ Max	0.035596	0.105162	0.15%	0.41%
N+25.80	52	FXAJ Max	0.112552	0.03113	0.47%	0.12%
N+25.80	52	FYAJ Max	0.035596	0.109165	0.15%	0.42%
N+25.80	54	FXAJ Max	0.112829	0.019056	0.47%	0.09%
N+25.80	54	FYAJ Max	0.03597	0.066676	0.15%	0.30%
N+25.80	55	FXAJ Max	0.112829	0.020085	0.47%	0.09%

N+25.80	55	FYAJ Max	0.03597	0.070328	0.15%	0.31%
N+25.80	56	FXAJ Max	0.112829	0.021134	0.47%	0.09%
N+25.80	56	FYAJ Max	0.03597	0.074042	0.15%	0.32%
N+25.80	57	FXAJ Max	0.112829	0.0222	0.47%	0.10%
N+25.80	57	FYAJ Max	0.03597	0.077809	0.15%	0.33%
N+25.80	58	FXAJ Max	0.112829	0.023281	0.47%	0.10%
N+25.80	58	FYAJ Max	0.03597	0.08162	0.15%	0.34%
N+25.80	60	FXAJ Max	0.112829	0.02548	0.47%	0.10%
N+25.80	60	FYAJ Max	0.03597	0.089356	0.15%	0.37%
N+25.80	61	FXAJ Max	0.112829	0.026595	0.47%	0.11%
N+25.80	61	FYAJ Max	0.03597	0.093271	0.15%	0.38%
N+25.80	63	FXAJ Max	0.112829	0.028849	0.47%	0.11%
N+25.80	63	FYAJ Max	0.03597	0.101177	0.15%	0.40%
N+25.80	64	FXAJ Max	0.112829	0.029986	0.47%	0.12%
N+25.80	64	FYAJ Max	0.03597	0.105162	0.15%	0.41%
N+25.80	65	FXAJ Max	0.112829	0.03113	0.47%	0.12%
N+25.80	65	FYAJ Max	0.03597	0.109165	0.15%	0.42%
N+25.80	67	FXAJ Max	0.112686	0.019056	0.47%	0.09%
N+25.80	67	FYAJ Max	0.035599	0.066676	0.15%	0.30%
N+25.80	68	FXAJ Max	0.112686	0.020085	0.47%	0.09%
N+25.80	68	FYAJ Max	0.035599	0.070328	0.15%	0.31%
N+25.80	69	FXAJ Max	0.112686	0.021134	0.47%	0.09%
N+25.80	69	FYAJ Max	0.035599	0.074042	0.15%	0.32%
N+25.80	70	FXAJ Max	0.112686	0.0222	0.47%	0.10%
N+25.80	70	FYAJ Max	0.035599	0.077809	0.15%	0.33%
N+25.80	71	FXAJ Max	0.112686	0.023281	0.47%	0.10%
N+25.80	71	FYAJ Max	0.035599	0.08162	0.15%	0.34%
N+25.80	73	FXAJ Max	0.112686	0.02548	0.47%	0.10%
N+25.80	73	FYAJ Max	0.035599	0.089356	0.15%	0.37%
N+25.80	74	FXAJ Max	0.112686	0.026595	0.47%	0.11%
N+25.80	74	FYAJ Max	0.035599	0.093271	0.15%	0.38%
N+25.80	76	FXAJ Max	0.112686	0.028849	0.47%	0.11%
N+25.80	76	FYAJ Max	0.035599	0.101177	0.15%	0.40%
N+25.80	77	FXAJ Max	0.112686	0.029986	0.47%	0.12%
N+25.80	77	FYAJ Max	0.035599	0.105162	0.15%	0.41%
N+25.80	78	FXAJ Max	0.112686	0.03113	0.47%	0.12%
N+25.80	78	FYAJ Max	0.035599	0.109165	0.15%	0.42%
N+25.80	80	FXAJ Max	0.112616	0.018335	0.47%	0.08%
N+25.80	80	FYAJ Max	0.035551	0.06411	0.15%	0.29%
N+25.80	81	FXAJ Max	0.112746	0.018335	0.47%	0.08%

N+25.80	81	FYAJ Max	0.035713	0.06411	0.15%	0.29%
N+25.80	84	FXAJ Max	0.112893	0.026595	0.47%	0.11%
N+25.80	84	FYAJ Max	0.036238	0.093271	0.15%	0.38%
N+25.80	100	FXAJ Max	0.112552	0.024265	0.47%	0.10%
N+25.80	100	FYAJ Max	0.035596	0.085085	0.15%	0.35%
N+25.80	101	FXAJ Max	0.112829	0.024265	0.47%	0.10%
N+25.80	101	FYAJ Max	0.03597	0.085085	0.15%	0.35%
N+25.80	102	FXAJ Max	0.112686	0.024265	0.47%	0.10%
N+25.80	102	FYAJ Max	0.035599	0.085085	0.15%	0.35%
N+25.80	104	FXAJ Max	0.112552	0.027831	0.47%	0.11%
N+25.80	104	FYAJ Max	0.035596	0.097608	0.15%	0.39%
N+25.80	105	FXAJ Max	0.112829	0.027831	0.47%	0.11%
N+25.80	105	FYAJ Max	0.03597	0.097608	0.15%	0.39%
N+25.80	106	FXAJ Max	0.112686	0.027831	0.47%	0.11%
N+25.80	106	FYAJ Max	0.035599	0.097608	0.15%	0.39%
N+25.80	40	FXAJ Max	0.112487	0.033052	0.47%	0.13%
N+25.80	40	FYAJ Max	0.035737	0.115892	0.15%	0.44%
N+25.80	43	FXAJ Max	0.112893	0.033052	0.47%	0.13%
N+25.80	43	FYAJ Max	0.036238	0.115892	0.15%	0.44%
N+25.80	44	FXAJ Max	0.112893	0.033614	0.47%	0.13%
N+25.80	44	FYAJ Max	0.036238	0.117854	0.15%	0.45%
N+25.80	45	FXAJ Max	0.112893	0.034259	0.47%	0.13%
N+25.80	45	FYAJ Max	0.036238	0.120109	0.15%	0.46%
N+25.80	46	FXAJ Max	0.112487	0.033614	0.47%	0.13%
N+25.80	46	FYAJ Max	0.035737	0.117854	0.15%	0.45%
N+25.80	47	FXAJ Max	0.112487	0.034259	0.47%	0.13%
N+25.80	47	FYAJ Max	0.035737	0.120109	0.15%	0.46%
N+25.80	48	FXAJ Max	0.112616	0.033614	0.47%	0.13%
N+25.80	48	FYAJ Max	0.035551	0.117854	0.15%	0.45%
N+25.80	49	FXAJ Max	0.112686	0.033614	0.47%	0.13%
N+25.80	49	FYAJ Max	0.035599	0.117854	0.15%	0.45%
N+25.80	59	FXAJ Max	0.112552	0.033432	0.47%	0.13%
N+25.80	59	FYAJ Max	0.035596	0.117219	0.15%	0.45%
N+25.80	62	FXAJ Max	0.112829	0.033432	0.47%	0.13%
N+25.80	62	FYAJ Max	0.03597	0.117219	0.15%	0.45%
N+25.80	72	FXAJ Max	0.112686	0.033432	0.47%	0.13%
N+25.80	72	FYAJ Max	0.035599	0.117219	0.15%	0.45%
N+25.80	75	FXAJ Max	0.112746	0.034259	0.47%	0.13%
N+25.80	75	FYAJ Max	0.035713	0.120109	0.15%	0.46%
N+25.80	91	FXAJ Max	0.112616	0.034259	0.47%	0.13%

N+25.80	91	FYAJ Max	0.035551	0.120109	0.15%	0.46%
N+25.80	28	FXAJ Max	0.112829	0.032278	0.47%	0.12%
N+25.80	28	FYAJ Max	0.03597	0.113185	0.15%	0.44%
N+25.80	29	FXAJ Max	0.112552	0.032278	0.47%	0.12%
N+25.80	29	FYAJ Max	0.035596	0.113185	0.15%	0.44%
N+25.80	30	FXAJ Max	0.112686	0.032278	0.47%	0.12%
N+25.80	30	FYAJ Max	0.035599	0.113185	0.15%	0.44%
N+25.80	33	FXAJ Max	0.112365	0.02548	0.47%	0.10%
N+25.80	33	FYAJ Max	0.036305	0.089356	0.15%	0.37%
N+25.80	34	FXAJ Max	0.112428	0.02548	0.47%	0.10%
N+25.80	34	FYAJ Max	0.035959	0.089356	0.15%	0.37%
N+25.80	35	FXAJ Max	0.112487	0.02548	0.47%	0.10%
N+25.80	35	FYAJ Max	0.035737	0.089356	0.15%	0.37%
N+25.80	53	FXAJ Max	0.112365	0.026595	0.47%	0.11%
N+25.80	53	FYAJ Max	0.036305	0.093271	0.15%	0.38%
N+25.80	66	FXAJ Max	0.112428	0.026595	0.47%	0.11%
N+25.80	66	FYAJ Max	0.035959	0.093271	0.15%	0.38%
N+25.80	79	FXAJ Max	0.112487	0.026595	0.47%	0.11%
N+25.80	79	FYAJ Max	0.035737	0.093271	0.15%	0.38%
N+22.45	1	FXAJ Max	0.096994	0.018067	0.49%	0.10%
N+22.45	1	FYAJ Max	0.030841	0.063312	0.16%	0.33%
N+22.45	2	FXAJ Max	0.096994	0.020016	0.49%	0.10%
N+22.45	2	FYAJ Max	0.030841	0.070176	0.16%	0.36%
N+22.45	3	FXAJ Max	0.096994	0.020907	0.49%	0.10%
N+22.45	3	FYAJ Max	0.030841	0.073312	0.16%	0.37%
N+22.45	4	FXAJ Max	0.096955	0.020907	0.49%	0.10%
N+22.45	4	FYAJ Max	0.031058	0.073312	0.16%	0.37%
N+22.45	5	FXAJ Max	0.096874	0.020907	0.49%	0.10%
N+22.45	5	FYAJ Max	0.031833	0.073312	0.16%	0.37%
N+22.45	6	FXAJ Max	0.096874	0.022007	0.49%	0.11%
N+22.45	6	FYAJ Max	0.031833	0.077177	0.16%	0.38%
N+22.45	7	FXAJ Max	0.096874	0.023015	0.49%	0.11%
N+22.45	7	FYAJ Max	0.031833	0.080718	0.16%	0.39%
N+22.45	8	FXAJ Max	0.096874	0.024133	0.49%	0.12%
N+22.45	8	FYAJ Max	0.031833	0.084638	0.16%	0.40%
N+22.45	9	FXAJ Max	0.096955	0.024133	0.49%	0.12%
N+22.45	9	FYAJ Max	0.031058	0.084638	0.16%	0.40%
N+22.45	10	FXAJ Max	0.096994	0.024133	0.49%	0.12%
N+22.45	10	FYAJ Max	0.030841	0.084638	0.16%	0.40%
N+22.45	11	FXAJ Max	0.096994	0.025052	0.49%	0.12%

N+22.45	11	FYAJ Max	0.030841	0.087864	0.16%	0.42%
N+22.45	12	FXAJ Max	0.096994	0.027111	0.49%	0.13%
N+22.45	12	FYAJ Max	0.030841	0.095079	0.16%	0.44%
N+22.45	13	FXAJ Max	0.097276	0.027111	0.49%	0.13%
N+22.45	13	FYAJ Max	0.031254	0.095079	0.16%	0.44%
N+22.45	14	FXAJ Max	0.097276	0.025052	0.49%	0.12%
N+22.45	14	FYAJ Max	0.031254	0.087864	0.16%	0.42%
N+22.45	16	FXAJ Max	0.097276	0.022007	0.49%	0.11%
N+22.45	16	FYAJ Max	0.031254	0.077177	0.16%	0.38%
N+22.45	17	FXAJ Max	0.097276	0.020016	0.49%	0.10%
N+22.45	17	FYAJ Max	0.031254	0.070176	0.16%	0.36%
N+22.45	18	FXAJ Max	0.097276	0.018067	0.49%	0.10%
N+22.45	18	FYAJ Max	0.031254	0.063312	0.16%	0.33%
N+22.45	19	FXAJ Max	0.096994	0.016483	0.49%	0.09%
N+22.45	19	FYAJ Max	0.030841	0.057715	0.16%	0.31%
N+22.45	20	FXAJ Max	0.097276	0.016483	0.49%	0.09%
N+22.45	20	FYAJ Max	0.031254	0.057715	0.16%	0.31%
N+22.45	21	FXAJ Max	0.096994	0.01552	0.49%	0.09%
N+22.45	21	FYAJ Max	0.030841	0.054307	0.16%	0.30%
N+22.45	22	FXAJ Max	0.096994	0.016032	0.49%	0.09%
N+22.45	22	FYAJ Max	0.030841	0.056119	0.16%	0.31%
N+22.45	23	FXAJ Max	0.097276	0.01552	0.49%	0.09%
N+22.45	23	FYAJ Max	0.031254	0.054307	0.16%	0.30%
N+22.45	24	FXAJ Max	0.097276	0.016032	0.49%	0.09%
N+22.45	24	FYAJ Max	0.031254	0.056119	0.16%	0.31%
N+22.45	26	FXAJ Max	0.09713	0.016032	0.49%	0.09%
N+22.45	26	FYAJ Max	0.030683	0.056119	0.16%	0.31%
N+22.45	27	FXAJ Max	0.097081	0.016032	0.49%	0.09%
N+22.45	27	FYAJ Max	0.030649	0.056119	0.16%	0.31%
N+22.45	25	FXAJ Max	0.097038	0.016177	0.49%	0.09%
N+22.45	25	FYAJ Max	0.030699	0.056634	0.16%	0.31%
N+22.45	36	FXAJ Max	0.097038	0.017113	0.49%	0.09%
N+22.45	36	FYAJ Max	0.030699	0.059945	0.16%	0.32%
N+22.45	37	FXAJ Max	0.097038	0.018067	0.49%	0.10%
N+22.45	37	FYAJ Max	0.030699	0.063312	0.16%	0.33%
N+22.45	38	FXAJ Max	0.097038	0.019035	0.49%	0.10%
N+22.45	38	FYAJ Max	0.030699	0.066724	0.16%	0.34%
N+22.45	39	FXAJ Max	0.097038	0.020016	0.49%	0.10%
N+22.45	39	FYAJ Max	0.030699	0.070176	0.16%	0.36%
N+22.45	41	FXAJ Max	0.097038	0.022007	0.49%	0.11%

N+22.45	41	FYAJ Max	0.030699	0.077177	0.16%	0.38%
N+22.45	42	FXAJ Max	0.097038	0.023015	0.49%	0.11%
N+22.45	42	FYAJ Max	0.030699	0.080718	0.16%	0.39%
N+22.45	50	FXAJ Max	0.097038	0.025052	0.49%	0.12%
N+22.45	50	FYAJ Max	0.030699	0.087864	0.16%	0.42%
N+22.45	51	FXAJ Max	0.097038	0.026079	0.49%	0.12%
N+22.45	51	FYAJ Max	0.030699	0.091464	0.16%	0.43%
N+22.45	52	FXAJ Max	0.097038	0.027111	0.49%	0.13%
N+22.45	52	FYAJ Max	0.030699	0.095079	0.16%	0.44%
N+22.45	54	FXAJ Max	0.09723	0.016177	0.49%	0.09%
N+22.45	54	FYAJ Max	0.031011	0.056634	0.16%	0.31%
N+22.45	55	FXAJ Max	0.09723	0.017113	0.49%	0.09%
N+22.45	55	FYAJ Max	0.031011	0.059945	0.16%	0.32%
N+22.45	56	FXAJ Max	0.09723	0.018067	0.49%	0.10%
N+22.45	56	FYAJ Max	0.031011	0.063312	0.16%	0.33%
N+22.45	57	FXAJ Max	0.09723	0.019035	0.49%	0.10%
N+22.45	57	FYAJ Max	0.031011	0.066724	0.16%	0.34%
N+22.45	58	FXAJ Max	0.09723	0.020016	0.49%	0.10%
N+22.45	58	FYAJ Max	0.031011	0.070176	0.16%	0.36%
N+22.45	60	FXAJ Max	0.09723	0.022007	0.49%	0.11%
N+22.45	60	FYAJ Max	0.031011	0.077177	0.16%	0.38%
N+22.45	61	FXAJ Max	0.09723	0.023015	0.49%	0.11%
N+22.45	61	FYAJ Max	0.031011	0.080718	0.16%	0.39%
N+22.45	63	FXAJ Max	0.09723	0.025052	0.49%	0.12%
N+22.45	63	FYAJ Max	0.031011	0.087864	0.16%	0.42%
N+22.45	64	FXAJ Max	0.09723	0.026079	0.49%	0.12%
N+22.45	64	FYAJ Max	0.031011	0.091464	0.16%	0.43%
N+22.45	65	FXAJ Max	0.09723	0.027111	0.49%	0.13%
N+22.45	65	FYAJ Max	0.031011	0.095079	0.16%	0.44%
N+22.45	67	FXAJ Max	0.09713	0.016177	0.49%	0.09%
N+22.45	67	FYAJ Max	0.030683	0.056634	0.16%	0.31%
N+22.45	68	FXAJ Max	0.09713	0.017113	0.49%	0.09%
N+22.45	68	FYAJ Max	0.030683	0.059945	0.16%	0.32%
N+22.45	69	FXAJ Max	0.09713	0.018067	0.49%	0.10%
N+22.45	69	FYAJ Max	0.030683	0.063312	0.16%	0.33%
N+22.45	70	FXAJ Max	0.09713	0.019035	0.49%	0.10%
N+22.45	70	FYAJ Max	0.030683	0.066724	0.16%	0.34%
N+22.45	71	FXAJ Max	0.09713	0.020016	0.49%	0.10%
N+22.45	71	FYAJ Max	0.030683	0.070176	0.16%	0.36%
N+22.45	73	FXAJ Max	0.09713	0.022007	0.49%	0.11%

N+22.45	73	FYAJ Max	0.030683	0.077177	0.16%	0.38%
N+22.45	74	FXAJ Max	0.09713	0.023015	0.49%	0.11%
N+22.45	74	FYAJ Max	0.030683	0.080718	0.16%	0.39%
N+22.45	76	FXAJ Max	0.09713	0.025052	0.49%	0.12%
N+22.45	76	FYAJ Max	0.030683	0.087864	0.16%	0.42%
N+22.45	77	FXAJ Max	0.09713	0.026079	0.49%	0.12%
N+22.45	77	FYAJ Max	0.030683	0.091464	0.16%	0.43%
N+22.45	78	FXAJ Max	0.09713	0.027111	0.49%	0.13%
N+22.45	78	FYAJ Max	0.030683	0.095079	0.16%	0.44%
N+22.45	80	FXAJ Max	0.097081	0.01552	0.49%	0.09%
N+22.45	80	FYAJ Max	0.030649	0.054307	0.16%	0.30%
N+22.45	81	FXAJ Max	0.097172	0.01552	0.49%	0.09%
N+22.45	81	FYAJ Max	0.030782	0.054307	0.16%	0.30%
N+22.45	84	FXAJ Max	0.097276	0.023015	0.49%	0.11%
N+22.45	84	FYAJ Max	0.031254	0.080718	0.16%	0.39%
N+22.45	100	FXAJ Max	0.097038	0.020907	0.49%	0.10%
N+22.45	100	FYAJ Max	0.030699	0.073312	0.16%	0.37%
N+22.45	101	FXAJ Max	0.09723	0.020907	0.49%	0.10%
N+22.45	101	FYAJ Max	0.031011	0.073312	0.16%	0.37%
N+22.45	102	FXAJ Max	0.09713	0.020907	0.49%	0.10%
N+22.45	102	FYAJ Max	0.030683	0.073312	0.16%	0.37%
N+22.45	104	FXAJ Max	0.097038	0.024133	0.49%	0.12%
N+22.45	104	FYAJ Max	0.030699	0.084638	0.16%	0.40%
N+22.45	105	FXAJ Max	0.09723	0.024133	0.49%	0.12%
N+22.45	105	FYAJ Max	0.031011	0.084638	0.16%	0.40%
N+22.45	106	FXAJ Max	0.09713	0.024133	0.49%	0.12%
N+22.45	106	FYAJ Max	0.030683	0.084638	0.16%	0.40%
N+22.45	40	FXAJ Max	0.096994	0.028845	0.49%	0.13%
N+22.45	40	FYAJ Max	0.030841	0.101152	0.16%	0.46%
N+22.45	43	FXAJ Max	0.097276	0.028845	0.49%	0.13%
N+22.45	43	FYAJ Max	0.031254	0.101152	0.16%	0.46%
N+22.45	44	FXAJ Max	0.097276	0.029351	0.49%	0.13%
N+22.45	44	FYAJ Max	0.031254	0.102922	0.16%	0.47%
N+22.45	45	FXAJ Max	0.097276	0.029932	0.49%	0.14%
N+22.45	45	FYAJ Max	0.031254	0.104957	0.16%	0.47%
N+22.45	46	FXAJ Max	0.096994	0.029351	0.49%	0.13%
N+22.45	46	FYAJ Max	0.030841	0.102922	0.16%	0.47%
N+22.45	47	FXAJ Max	0.096994	0.029932	0.49%	0.14%
N+22.45	47	FYAJ Max	0.030841	0.104957	0.16%	0.47%
N+22.45	48	FXAJ Max	0.097081	0.029351	0.49%	0.13%

N+22.45	48	FYAJ Max	0.030649	0.102922	0.16%	0.47%
N+22.45	49	FXAJ Max	0.09713	0.029351	0.49%	0.13%
N+22.45	49	FYAJ Max	0.030683	0.102922	0.16%	0.47%
N+22.45	59	FXAJ Max	0.097038	0.029187	0.49%	0.13%
N+22.45	59	FYAJ Max	0.030699	0.102349	0.16%	0.46%
N+22.45	62	FXAJ Max	0.09723	0.029187	0.49%	0.13%
N+22.45	62	FYAJ Max	0.031011	0.102349	0.16%	0.46%
N+22.45	72	FXAJ Max	0.09713	0.029187	0.49%	0.13%
N+22.45	72	FYAJ Max	0.030683	0.102349	0.16%	0.46%
N+22.45	75	FXAJ Max	0.097172	0.029932	0.49%	0.14%
N+22.45	75	FYAJ Max	0.030782	0.104957	0.16%	0.47%
N+22.45	91	FXAJ Max	0.097081	0.029932	0.49%	0.14%
N+22.45	91	FYAJ Max	0.030649	0.104957	0.16%	0.47%
N+22.45	28	FXAJ Max	0.09723	0.028147	0.49%	0.13%
N+22.45	28	FYAJ Max	0.031011	0.098708	0.16%	0.45%
N+22.45	29	FXAJ Max	0.097038	0.028147	0.49%	0.13%
N+22.45	29	FYAJ Max	0.030699	0.098708	0.16%	0.45%
N+22.45	30	FXAJ Max	0.09713	0.028147	0.49%	0.13%
N+22.45	30	FYAJ Max	0.030683	0.098708	0.16%	0.45%
N+22.45	33	FXAJ Max	0.096914	0.022007	0.49%	0.11%
N+22.45	33	FYAJ Max	0.031391	0.077177	0.16%	0.38%
N+22.45	34	FXAJ Max	0.096955	0.022007	0.49%	0.11%
N+22.45	34	FYAJ Max	0.031058	0.077177	0.16%	0.38%
N+22.45	35	FXAJ Max	0.096994	0.022007	0.49%	0.11%
N+22.45	35	FYAJ Max	0.030841	0.077177	0.16%	0.38%
N+22.45	53	FXAJ Max	0.096914	0.023015	0.49%	0.11%
N+22.45	53	FYAJ Max	0.031391	0.080718	0.16%	0.39%
N+22.45	66	FXAJ Max	0.096955	0.023015	0.49%	0.11%
N+22.45	66	FYAJ Max	0.031058	0.080718	0.16%	0.39%
N+22.45	79	FXAJ Max	0.096994	0.023015	0.49%	0.11%
N+22.45	79	FYAJ Max	0.030841	0.080718	0.16%	0.39%
N+19.10	1	FXAJ Max	0.080688	0.014899	0.50%	0.10%
N+19.10	1	FYAJ Max	0.02569	0.052221	0.16%	0.33%
N+19.10	2	FXAJ Max	0.080688	0.016636	0.50%	0.10%
N+19.10	2	FYAJ Max	0.02569	0.058332	0.16%	0.36%
N+19.10	3	FXAJ Max	0.080688	0.01743	0.50%	0.10%
N+19.10	3	FYAJ Max	0.02569	0.061122	0.16%	0.37%
N+19.10	4	FXAJ Max	0.080667	0.01743	0.50%	0.10%
N+19.10	4	FYAJ Max	0.025901	0.061122	0.16%	0.37%
N+19.10	5	FXAJ Max	0.080626	0.01743	0.50%	0.10%

N+19.10	5	FYAJ Max	0.026642	0.061122	0.16%	0.37%
N+19.10	6	FXAJ Max	0.080626	0.018409	0.50%	0.11%
N+19.10	6	FYAJ Max	0.026642	0.064558	0.16%	0.38%
N+19.10	7	FXAJ Max	0.080626	0.019305	0.50%	0.11%
N+19.10	7	FYAJ Max	0.026642	0.067705	0.16%	0.39%
N+19.10	8	FXAJ Max	0.080626	0.020297	0.50%	0.12%
N+19.10	8	FYAJ Max	0.026642	0.071187	0.16%	0.41%
N+19.10	9	FXAJ Max	0.080667	0.020297	0.50%	0.12%
N+19.10	9	FYAJ Max	0.025901	0.071187	0.16%	0.41%
N+19.10	10	FXAJ Max	0.080688	0.020297	0.50%	0.12%
N+19.10	10	FYAJ Max	0.02569	0.071187	0.16%	0.41%
N+19.10	11	FXAJ Max	0.080688	0.021114	0.50%	0.12%
N+19.10	11	FYAJ Max	0.02569	0.074049	0.16%	0.42%
N+19.10	12	FXAJ Max	0.080688	0.022939	0.50%	0.13%
N+19.10	12	FYAJ Max	0.02569	0.08045	0.16%	0.44%
N+19.10	13	FXAJ Max	0.080859	0.022939	0.51%	0.13%
N+19.10	13	FYAJ Max	0.026018	0.08045	0.16%	0.44%
N+19.10	14	FXAJ Max	0.080859	0.021114	0.51%	0.12%
N+19.10	14	FYAJ Max	0.026018	0.074049	0.16%	0.42%
N+19.10	16	FXAJ Max	0.080859	0.018409	0.51%	0.11%
N+19.10	16	FYAJ Max	0.026018	0.064558	0.16%	0.38%
N+19.10	17	FXAJ Max	0.080859	0.016636	0.51%	0.10%
N+19.10	17	FYAJ Max	0.026018	0.058332	0.16%	0.36%
N+19.10	18	FXAJ Max	0.080859	0.014899	0.51%	0.10%
N+19.10	18	FYAJ Max	0.026018	0.052221	0.16%	0.33%
N+19.10	19	FXAJ Max	0.080688	0.013483	0.50%	0.09%
N+19.10	19	FYAJ Max	0.02569	0.047234	0.16%	0.31%
N+19.10	20	FXAJ Max	0.080859	0.013483	0.51%	0.09%
N+19.10	20	FYAJ Max	0.026018	0.047234	0.16%	0.31%
N+19.10	21	FXAJ Max	0.080688	0.012622	0.50%	0.09%
N+19.10	21	FYAJ Max	0.02569	0.044196	0.16%	0.30%
N+19.10	22	FXAJ Max	0.080688	0.01308	0.50%	0.09%
N+19.10	22	FYAJ Max	0.02569	0.045811	0.16%	0.31%
N+19.10	23	FXAJ Max	0.080859	0.012622	0.51%	0.09%
N+19.10	23	FYAJ Max	0.026018	0.044196	0.16%	0.30%
N+19.10	24	FXAJ Max	0.080859	0.01308	0.51%	0.09%
N+19.10	24	FYAJ Max	0.026018	0.045811	0.16%	0.31%
N+19.10	26	FXAJ Max	0.080767	0.01308	0.50%	0.09%
N+19.10	26	FYAJ Max	0.025513	0.045811	0.16%	0.31%
N+19.10	27	FXAJ Max	0.080738	0.01308	0.50%	0.09%

N+19.10	27	FYAJ Max	0.025491	0.045811	0.16%	0.31%
N+19.10	25	FXAJ Max	0.080713	0.01321	0.50%	0.09%
N+19.10	25	FYAJ Max	0.025548	0.04627	0.16%	0.31%
N+19.10	36	FXAJ Max	0.080713	0.014047	0.50%	0.09%
N+19.10	36	FYAJ Max	0.025548	0.049222	0.16%	0.32%
N+19.10	37	FXAJ Max	0.080713	0.014899	0.50%	0.10%
N+19.10	37	FYAJ Max	0.025548	0.052221	0.16%	0.33%
N+19.10	38	FXAJ Max	0.080713	0.015763	0.50%	0.10%
N+19.10	38	FYAJ Max	0.025548	0.05526	0.16%	0.34%
N+19.10	39	FXAJ Max	0.080713	0.016636	0.50%	0.10%
N+19.10	39	FYAJ Max	0.025548	0.058332	0.16%	0.36%
N+19.10	41	FXAJ Max	0.080713	0.018409	0.50%	0.11%
N+19.10	41	FYAJ Max	0.025548	0.064558	0.16%	0.38%
N+19.10	42	FXAJ Max	0.080713	0.019305	0.50%	0.11%
N+19.10	42	FYAJ Max	0.025548	0.067705	0.16%	0.39%
N+19.10	50	FXAJ Max	0.080713	0.021114	0.50%	0.12%
N+19.10	50	FYAJ Max	0.025548	0.074049	0.16%	0.42%
N+19.10	51	FXAJ Max	0.080713	0.022024	0.50%	0.12%
N+19.10	51	FYAJ Max	0.025548	0.077244	0.16%	0.43%
N+19.10	52	FXAJ Max	0.080713	0.022939	0.50%	0.13%
N+19.10	52	FYAJ Max	0.025548	0.08045	0.16%	0.44%
N+19.10	54	FXAJ Max	0.08083	0.01321	0.51%	0.09%
N+19.10	54	FYAJ Max	0.0258	0.04627	0.16%	0.31%
N+19.10	55	FXAJ Max	0.08083	0.014047	0.51%	0.09%
N+19.10	55	FYAJ Max	0.0258	0.049222	0.16%	0.32%
N+19.10	56	FXAJ Max	0.08083	0.014899	0.51%	0.10%
N+19.10	56	FYAJ Max	0.0258	0.052221	0.16%	0.33%
N+19.10	57	FXAJ Max	0.08083	0.015763	0.51%	0.10%
N+19.10	57	FYAJ Max	0.0258	0.05526	0.16%	0.34%
N+19.10	58	FXAJ Max	0.08083	0.016636	0.51%	0.10%
N+19.10	58	FYAJ Max	0.0258	0.058332	0.16%	0.36%
N+19.10	60	FXAJ Max	0.08083	0.018409	0.51%	0.11%
N+19.10	60	FYAJ Max	0.0258	0.064558	0.16%	0.38%
N+19.10	61	FXAJ Max	0.08083	0.019305	0.51%	0.11%
N+19.10	61	FYAJ Max	0.0258	0.067705	0.16%	0.39%
N+19.10	63	FXAJ Max	0.08083	0.021114	0.51%	0.12%
N+19.10	63	FYAJ Max	0.0258	0.074049	0.16%	0.42%
N+19.10	64	FXAJ Max	0.08083	0.022024	0.51%	0.12%
N+19.10	64	FYAJ Max	0.0258	0.077244	0.16%	0.43%
N+19.10	65	FXAJ Max	0.08083	0.022939	0.51%	0.13%

N+19.10	65	FYAJ Max	0.0258	0.08045	0.16%	0.44%
N+19.10	67	FXAJ Max	0.080767	0.01321	0.50%	0.09%
N+19.10	67	FYAJ Max	0.025513	0.04627	0.16%	0.31%
N+19.10	68	FXAJ Max	0.080767	0.014047	0.50%	0.09%
N+19.10	68	FYAJ Max	0.025513	0.049222	0.16%	0.32%
N+19.10	69	FXAJ Max	0.080767	0.014899	0.50%	0.10%
N+19.10	69	FYAJ Max	0.025513	0.052221	0.16%	0.33%
N+19.10	70	FXAJ Max	0.080767	0.015763	0.50%	0.10%
N+19.10	70	FYAJ Max	0.025513	0.05526	0.16%	0.34%
N+19.10	71	FXAJ Max	0.080767	0.016636	0.50%	0.10%
N+19.10	71	FYAJ Max	0.025513	0.058332	0.16%	0.36%
N+19.10	73	FXAJ Max	0.080767	0.018409	0.50%	0.11%
N+19.10	73	FYAJ Max	0.025513	0.064558	0.16%	0.38%
N+19.10	74	FXAJ Max	0.080767	0.019305	0.50%	0.11%
N+19.10	74	FYAJ Max	0.025513	0.067705	0.16%	0.39%
N+19.10	76	FXAJ Max	0.080767	0.021114	0.50%	0.12%
N+19.10	76	FYAJ Max	0.025513	0.074049	0.16%	0.42%
N+19.10	77	FXAJ Max	0.080767	0.022024	0.50%	0.12%
N+19.10	77	FYAJ Max	0.025513	0.077244	0.16%	0.43%
N+19.10	78	FXAJ Max	0.080767	0.022939	0.50%	0.13%
N+19.10	78	FYAJ Max	0.025513	0.08045	0.16%	0.44%
N+19.10	80	FXAJ Max	0.080738	0.012622	0.50%	0.09%
N+19.10	80	FYAJ Max	0.025491	0.044196	0.16%	0.30%
N+19.10	81	FXAJ Max	0.080793	0.012622	0.50%	0.09%
N+19.10	81	FYAJ Max	0.025597	0.044196	0.16%	0.30%
N+19.10	84	FXAJ Max	0.080859	0.019305	0.51%	0.11%
N+19.10	84	FYAJ Max	0.026018	0.067705	0.16%	0.39%
N+19.10	100	FXAJ Max	0.080713	0.01743	0.50%	0.10%
N+19.10	100	FYAJ Max	0.025548	0.061122	0.16%	0.37%
N+19.10	101	FXAJ Max	0.08083	0.01743	0.51%	0.10%
N+19.10	101	FYAJ Max	0.0258	0.061122	0.16%	0.37%
N+19.10	102	FXAJ Max	0.080767	0.01743	0.50%	0.10%
N+19.10	102	FYAJ Max	0.025513	0.061122	0.16%	0.37%
N+19.10	104	FXAJ Max	0.080713	0.020297	0.50%	0.12%
N+19.10	104	FYAJ Max	0.025548	0.071187	0.16%	0.41%
N+19.10	105	FXAJ Max	0.08083	0.020297	0.51%	0.12%
N+19.10	105	FYAJ Max	0.0258	0.071187	0.16%	0.41%
N+19.10	106	FXAJ Max	0.080767	0.020297	0.50%	0.12%
N+19.10	106	FYAJ Max	0.025513	0.071187	0.16%	0.41%
N+19.10	40	FXAJ Max	0.080688	0.024475	0.50%	0.13%

N+19.10	40	FYAJ Max	0.02569	0.085833	0.16%	0.47%
N+19.10	43	FXAJ Max	0.080859	0.024475	0.51%	0.13%
N+19.10	43	FYAJ Max	0.026018	0.085833	0.16%	0.47%
N+19.10	44	FXAJ Max	0.080859	0.024923	0.51%	0.13%
N+19.10	44	FYAJ Max	0.026018	0.087402	0.16%	0.47%
N+19.10	45	FXAJ Max	0.080859	0.025437	0.51%	0.14%
N+19.10	45	FYAJ Max	0.026018	0.089205	0.16%	0.48%
N+19.10	46	FXAJ Max	0.080688	0.024923	0.50%	0.13%
N+19.10	46	FYAJ Max	0.02569	0.087402	0.16%	0.47%
N+19.10	47	FXAJ Max	0.080688	0.025437	0.50%	0.14%
N+19.10	47	FYAJ Max	0.02569	0.089205	0.16%	0.48%
N+19.10	48	FXAJ Max	0.080738	0.024923	0.50%	0.13%
N+19.10	48	FYAJ Max	0.025491	0.087402	0.16%	0.47%
N+19.10	49	FXAJ Max	0.080767	0.024923	0.50%	0.13%
N+19.10	49	FYAJ Max	0.025513	0.087402	0.16%	0.47%
N+19.10	59	FXAJ Max	0.080713	0.024778	0.50%	0.13%
N+19.10	59	FYAJ Max	0.025548	0.086894	0.16%	0.47%
N+19.10	62	FXAJ Max	0.08083	0.024778	0.51%	0.13%
N+19.10	62	FYAJ Max	0.0258	0.086894	0.16%	0.47%
N+19.10	72	FXAJ Max	0.080767	0.024778	0.50%	0.13%
N+19.10	72	FYAJ Max	0.025513	0.086894	0.16%	0.47%
N+19.10	75	FXAJ Max	0.080793	0.025437	0.50%	0.14%
N+19.10	75	FYAJ Max	0.025597	0.089205	0.16%	0.48%
N+19.10	91	FXAJ Max	0.080738	0.025437	0.50%	0.14%
N+19.10	91	FYAJ Max	0.025491	0.089205	0.16%	0.48%
N+19.10	28	FXAJ Max	0.08083	0.023857	0.51%	0.13%
N+19.10	28	FYAJ Max	0.0258	0.083667	0.16%	0.46%
N+19.10	29	FXAJ Max	0.080713	0.023857	0.50%	0.13%
N+19.10	29	FYAJ Max	0.025548	0.083667	0.16%	0.46%
N+19.10	30	FXAJ Max	0.080767	0.023857	0.50%	0.13%
N+19.10	30	FYAJ Max	0.025513	0.083667	0.16%	0.46%
N+19.10	33	FXAJ Max	0.080645	0.018409	0.50%	0.11%
N+19.10	33	FYAJ Max	0.026221	0.064558	0.16%	0.38%
N+19.10	34	FXAJ Max	0.080667	0.018409	0.50%	0.11%
N+19.10	34	FYAJ Max	0.025901	0.064558	0.16%	0.38%
N+19.10	35	FXAJ Max	0.080688	0.018409	0.50%	0.11%
N+19.10	35	FYAJ Max	0.02569	0.064558	0.16%	0.38%
N+19.10	53	FXAJ Max	0.080645	0.019305	0.50%	0.11%
N+19.10	53	FYAJ Max	0.026221	0.067705	0.16%	0.39%
N+19.10	66	FXAJ Max	0.080667	0.019305	0.50%	0.11%

N+19.10	66	FYAJ Max	0.025901	0.067705	0.16%	0.39%
N+19.10	79	FXAJ Max	0.080688	0.019305	0.50%	0.11%
N+19.10	79	FYAJ Max	0.02569	0.067705	0.16%	0.39%
N+15.75	1	FXAJ Max	0.06393	0.011733	0.50%	0.09%
N+15.75	1	FYAJ Max	0.020397	0.041134	0.16%	0.32%
N+15.75	2	FXAJ Max	0.06393	0.013248	0.50%	0.10%
N+15.75	2	FYAJ Max	0.020397	0.046454	0.16%	0.35%
N+15.75	3	FXAJ Max	0.06393	0.013939	0.50%	0.10%
N+15.75	3	FYAJ Max	0.020397	0.04888	0.16%	0.36%
N+15.75	4	FXAJ Max	0.063924	0.013939	0.50%	0.10%
N+15.75	4	FYAJ Max	0.020603	0.04888	0.16%	0.36%
N+15.75	5	FXAJ Max	0.063918	0.013939	0.50%	0.10%
N+15.75	5	FYAJ Max	0.021311	0.04888	0.16%	0.36%
N+15.75	6	FXAJ Max	0.063918	0.01479	0.50%	0.11%
N+15.75	6	FYAJ Max	0.021311	0.051866	0.16%	0.37%
N+15.75	7	FXAJ Max	0.063918	0.015568	0.50%	0.11%
N+15.75	7	FYAJ Max	0.021311	0.054598	0.16%	0.39%
N+15.75	8	FXAJ Max	0.063918	0.016429	0.50%	0.11%
N+15.75	8	FYAJ Max	0.021311	0.057619	0.16%	0.40%
N+15.75	9	FXAJ Max	0.063924	0.016429	0.50%	0.11%
N+15.75	9	FYAJ Max	0.020603	0.057619	0.16%	0.40%
N+15.75	10	FXAJ Max	0.06393	0.016429	0.50%	0.11%
N+15.75	10	FYAJ Max	0.020397	0.057619	0.16%	0.40%
N+15.75	11	FXAJ Max	0.06393	0.017137	0.50%	0.12%
N+15.75	11	FYAJ Max	0.020397	0.060102	0.16%	0.41%
N+15.75	12	FXAJ Max	0.06393	0.018719	0.50%	0.13%
N+15.75	12	FYAJ Max	0.020397	0.065648	0.16%	0.44%
N+15.75	13	FXAJ Max	0.064003	0.018719	0.51%	0.13%
N+15.75	13	FYAJ Max	0.020646	0.065648	0.16%	0.44%
N+15.75	14	FXAJ Max	0.064003	0.017137	0.51%	0.12%
N+15.75	14	FYAJ Max	0.020646	0.060102	0.16%	0.41%
N+15.75	16	FXAJ Max	0.064003	0.01479	0.51%	0.11%
N+15.75	16	FYAJ Max	0.020646	0.051866	0.16%	0.37%
N+15.75	17	FXAJ Max	0.064003	0.013248	0.51%	0.10%
N+15.75	17	FYAJ Max	0.020646	0.046454	0.16%	0.35%
N+15.75	18	FXAJ Max	0.064003	0.011733	0.51%	0.09%
N+15.75	18	FYAJ Max	0.020646	0.041134	0.16%	0.32%
N+15.75	19	FXAJ Max	0.06393	0.010497	0.50%	0.09%
N+15.75	19	FYAJ Max	0.020397	0.036788	0.16%	0.30%
N+15.75	20	FXAJ Max	0.064003	0.010497	0.51%	0.09%

N+15.75	20	FYAJ Max	0.020646	0.036788	0.16%	0.30%
N+15.75	21	FXAJ Max	0.06393	0.009744	0.50%	0.08%
N+15.75	21	FYAJ Max	0.020397	0.034139	0.16%	0.29%
N+15.75	22	FXAJ Max	0.06393	0.010144	0.50%	0.08%
N+15.75	22	FYAJ Max	0.020397	0.035547	0.16%	0.30%
N+15.75	23	FXAJ Max	0.064003	0.009744	0.51%	0.08%
N+15.75	23	FYAJ Max	0.020646	0.034139	0.16%	0.29%
N+15.75	24	FXAJ Max	0.064003	0.010144	0.51%	0.08%
N+15.75	24	FYAJ Max	0.020646	0.035547	0.16%	0.30%
N+15.75	26	FXAJ Max	0.063959	0.010144	0.50%	0.08%
N+15.75	26	FYAJ Max	0.020203	0.035547	0.16%	0.30%
N+15.75	27	FXAJ Max	0.063947	0.010144	0.50%	0.08%
N+15.75	27	FYAJ Max	0.020192	0.035547	0.16%	0.30%
N+15.75	25	FXAJ Max	0.063938	0.010258	0.50%	0.09%
N+15.75	25	FYAJ Max	0.020255	0.035948	0.16%	0.30%
N+15.75	36	FXAJ Max	0.063938	0.01099	0.50%	0.09%
N+15.75	36	FYAJ Max	0.020255	0.038521	0.16%	0.31%
N+15.75	37	FXAJ Max	0.063938	0.011733	0.50%	0.09%
N+15.75	37	FYAJ Max	0.020255	0.041134	0.16%	0.32%
N+15.75	38	FXAJ Max	0.063938	0.012487	0.50%	0.10%
N+15.75	38	FYAJ Max	0.020255	0.043781	0.16%	0.33%
N+15.75	39	FXAJ Max	0.063938	0.013248	0.50%	0.10%
N+15.75	39	FYAJ Max	0.020255	0.046454	0.16%	0.35%
N+15.75	41	FXAJ Max	0.063938	0.01479	0.50%	0.11%
N+15.75	41	FYAJ Max	0.020255	0.051866	0.16%	0.37%
N+15.75	42	FXAJ Max	0.063938	0.015568	0.50%	0.11%
N+15.75	42	FYAJ Max	0.020255	0.054598	0.16%	0.39%
N+15.75	50	FXAJ Max	0.063938	0.017137	0.50%	0.12%
N+15.75	50	FYAJ Max	0.020255	0.060102	0.16%	0.41%
N+15.75	51	FXAJ Max	0.063938	0.017926	0.50%	0.12%
N+15.75	51	FYAJ Max	0.020255	0.062871	0.16%	0.42%
N+15.75	52	FXAJ Max	0.063938	0.018719	0.50%	0.13%
N+15.75	52	FYAJ Max	0.020255	0.065648	0.16%	0.44%
N+15.75	54	FXAJ Max	0.063988	0.010258	0.51%	0.09%
N+15.75	54	FYAJ Max	0.020451	0.035948	0.16%	0.30%
N+15.75	55	FXAJ Max	0.063988	0.01099	0.51%	0.09%
N+15.75	55	FYAJ Max	0.020451	0.038521	0.16%	0.31%
N+15.75	56	FXAJ Max	0.063988	0.011733	0.51%	0.09%
N+15.75	56	FYAJ Max	0.020451	0.041134	0.16%	0.32%
N+15.75	57	FXAJ Max	0.063988	0.012487	0.51%	0.10%

N+15.75	57	FYAJ Max	0.020451	0.043781	0.16%	0.33%
N+15.75	58	FXAJ Max	0.063988	0.013248	0.51%	0.10%
N+15.75	58	FYAJ Max	0.020451	0.046454	0.16%	0.35%
N+15.75	60	FXAJ Max	0.063988	0.01479	0.51%	0.11%
N+15.75	60	FYAJ Max	0.020451	0.051866	0.16%	0.37%
N+15.75	61	FXAJ Max	0.063988	0.015568	0.51%	0.11%
N+15.75	61	FYAJ Max	0.020451	0.054598	0.16%	0.39%
N+15.75	63	FXAJ Max	0.063988	0.017137	0.51%	0.12%
N+15.75	63	FYAJ Max	0.020451	0.060102	0.16%	0.41%
N+15.75	64	FXAJ Max	0.063988	0.017926	0.51%	0.12%
N+15.75	64	FYAJ Max	0.020451	0.062871	0.16%	0.42%
N+15.75	65	FXAJ Max	0.063988	0.018719	0.51%	0.13%
N+15.75	65	FYAJ Max	0.020451	0.065648	0.16%	0.44%
N+15.75	67	FXAJ Max	0.063959	0.010258	0.50%	0.09%
N+15.75	67	FYAJ Max	0.020203	0.035948	0.16%	0.30%
N+15.75	68	FXAJ Max	0.063959	0.01099	0.50%	0.09%
N+15.75	68	FYAJ Max	0.020203	0.038521	0.16%	0.31%
N+15.75	69	FXAJ Max	0.063959	0.011733	0.50%	0.09%
N+15.75	69	FYAJ Max	0.020203	0.041134	0.16%	0.32%
N+15.75	70	FXAJ Max	0.063959	0.012487	0.50%	0.10%
N+15.75	70	FYAJ Max	0.020203	0.043781	0.16%	0.33%
N+15.75	71	FXAJ Max	0.063959	0.013248	0.50%	0.10%
N+15.75	71	FYAJ Max	0.020203	0.046454	0.16%	0.35%
N+15.75	73	FXAJ Max	0.063959	0.01479	0.50%	0.11%
N+15.75	73	FYAJ Max	0.020203	0.051866	0.16%	0.37%
N+15.75	74	FXAJ Max	0.063959	0.015568	0.50%	0.11%
N+15.75	74	FYAJ Max	0.020203	0.054598	0.16%	0.39%
N+15.75	76	FXAJ Max	0.063959	0.017137	0.50%	0.12%
N+15.75	76	FYAJ Max	0.020203	0.060102	0.16%	0.41%
N+15.75	77	FXAJ Max	0.063959	0.017926	0.50%	0.12%
N+15.75	77	FYAJ Max	0.020203	0.062871	0.16%	0.42%
N+15.75	78	FXAJ Max	0.063959	0.018719	0.50%	0.13%
N+15.75	78	FYAJ Max	0.020203	0.065648	0.16%	0.44%
N+15.75	80	FXAJ Max	0.063947	0.009744	0.50%	0.08%
N+15.75	80	FYAJ Max	0.020192	0.034139	0.16%	0.29%
N+15.75	81	FXAJ Max	0.06397	0.009744	0.50%	0.08%
N+15.75	81	FYAJ Max	0.020273	0.034139	0.16%	0.29%
N+15.75	84	FXAJ Max	0.064003	0.015568	0.51%	0.11%
N+15.75	84	FYAJ Max	0.020646	0.054598	0.16%	0.39%
N+15.75	100	FXAJ Max	0.063938	0.013939	0.50%	0.10%

N+15.75	100	FYAJ Max	0.020255	0.04888	0.16%	0.36%
N+15.75	101	FXAJ Max	0.063988	0.013939	0.51%	0.10%
N+15.75	101	FYAJ Max	0.020451	0.04888	0.16%	0.36%
N+15.75	102	FXAJ Max	0.063959	0.013939	0.50%	0.10%
N+15.75	102	FYAJ Max	0.020203	0.04888	0.16%	0.36%
N+15.75	104	FXAJ Max	0.063938	0.016429	0.50%	0.11%
N+15.75	104	FYAJ Max	0.020255	0.057619	0.16%	0.40%
N+15.75	105	FXAJ Max	0.063988	0.016429	0.51%	0.11%
N+15.75	105	FYAJ Max	0.020451	0.057619	0.16%	0.40%
N+15.75	106	FXAJ Max	0.063959	0.016429	0.50%	0.11%
N+15.75	106	FYAJ Max	0.020203	0.057619	0.16%	0.40%
N+15.75	40	FXAJ Max	0.06393	0.020048	0.50%	0.13%
N+15.75	40	FYAJ Max	0.020397	0.070309	0.16%	0.46%
N+15.75	43	FXAJ Max	0.064003	0.020048	0.51%	0.13%
N+15.75	43	FYAJ Max	0.020646	0.070309	0.16%	0.46%
N+15.75	44	FXAJ Max	0.064003	0.020435	0.51%	0.13%
N+15.75	44	FYAJ Max	0.020646	0.071667	0.16%	0.47%
N+15.75	45	FXAJ Max	0.064003	0.02088	0.51%	0.14%
N+15.75	45	FYAJ Max	0.020646	0.073226	0.16%	0.48%
N+15.75	46	FXAJ Max	0.06393	0.020435	0.50%	0.13%
N+15.75	46	FYAJ Max	0.020397	0.071667	0.16%	0.47%
N+15.75	47	FXAJ Max	0.06393	0.02088	0.50%	0.14%
N+15.75	47	FYAJ Max	0.020397	0.073226	0.16%	0.48%
N+15.75	48	FXAJ Max	0.063947	0.020435	0.50%	0.13%
N+15.75	48	FYAJ Max	0.020192	0.071667	0.16%	0.47%
N+15.75	49	FXAJ Max	0.063959	0.020435	0.50%	0.13%
N+15.75	49	FYAJ Max	0.020203	0.071667	0.16%	0.47%
N+15.75	59	FXAJ Max	0.063938	0.02031	0.50%	0.13%
N+15.75	59	FYAJ Max	0.020255	0.071227	0.16%	0.47%
N+15.75	62	FXAJ Max	0.063988	0.02031	0.51%	0.13%
N+15.75	62	FYAJ Max	0.020451	0.071227	0.16%	0.47%
N+15.75	72	FXAJ Max	0.063959	0.02031	0.50%	0.13%
N+15.75	72	FYAJ Max	0.020203	0.071227	0.16%	0.47%
N+15.75	75	FXAJ Max	0.06397	0.02088	0.50%	0.14%
N+15.75	75	FYAJ Max	0.020273	0.073226	0.16%	0.48%
N+15.75	91	FXAJ Max	0.063947	0.02088	0.50%	0.14%
N+15.75	91	FYAJ Max	0.020192	0.073226	0.16%	0.48%
N+15.75	28	FXAJ Max	0.063988	0.019513	0.51%	0.13%
N+15.75	28	FYAJ Max	0.020451	0.068434	0.16%	0.45%
N+15.75	29	FXAJ Max	0.063938	0.019513	0.50%	0.13%

N+15.75	29	FYAJ Max	0.020255	0.068434	0.16%	0.45%
N+15.75	30	FXAJ Max	0.063959	0.019513	0.50%	0.13%
N+15.75	30	FYAJ Max	0.020203	0.068434	0.16%	0.45%
N+15.75	33	FXAJ Max	0.06392	0.01479	0.50%	0.11%
N+15.75	33	FYAJ Max	0.02091	0.051866	0.16%	0.37%
N+15.75	34	FXAJ Max	0.063924	0.01479	0.50%	0.11%
N+15.75	34	FYAJ Max	0.020603	0.051866	0.16%	0.37%
N+15.75	35	FXAJ Max	0.06393	0.01479	0.50%	0.11%
N+15.75	35	FYAJ Max	0.020397	0.051866	0.16%	0.37%
N+15.75	53	FXAJ Max	0.06392	0.015568	0.50%	0.11%
N+15.75	53	FYAJ Max	0.02091	0.054598	0.16%	0.39%
N+15.75	66	FXAJ Max	0.063924	0.015568	0.50%	0.11%
N+15.75	66	FYAJ Max	0.020603	0.054598	0.16%	0.39%
N+15.75	79	FXAJ Max	0.06393	0.015568	0.50%	0.11%
N+15.75	79	FYAJ Max	0.020397	0.054598	0.16%	0.39%
N+11.79	1	FXAJ Max	0.044045	0.008111	0.47%	0.08%
N+11.79	1	FYAJ Max	0.014122	0.02844	0.15%	0.29%
N+11.79	2	FXAJ Max	0.044045	0.009346	0.47%	0.09%
N+11.79	2	FYAJ Max	0.014122	0.032776	0.15%	0.32%
N+11.79	3	FXAJ Max	0.044045	0.009909	0.47%	0.09%
N+11.79	3	FYAJ Max	0.014122	0.034749	0.15%	0.33%
N+11.79	4	FXAJ Max	0.044053	0.009909	0.47%	0.09%
N+11.79	4	FYAJ Max	0.014322	0.034749	0.15%	0.33%
N+11.79	5	FXAJ Max	0.044076	0.009909	0.47%	0.09%
N+11.79	5	FYAJ Max	0.014993	0.034749	0.15%	0.33%
N+11.79	6	FXAJ Max	0.044076	0.010601	0.47%	0.10%
N+11.79	6	FYAJ Max	0.014993	0.037176	0.15%	0.35%
N+11.79	7	FXAJ Max	0.044076	0.011233	0.47%	0.10%
N+11.79	7	FYAJ Max	0.014993	0.039394	0.15%	0.36%
N+11.79	8	FXAJ Max	0.044076	0.011932	0.47%	0.11%
N+11.79	8	FYAJ Max	0.014993	0.041844	0.15%	0.37%
N+11.79	9	FXAJ Max	0.044053	0.011932	0.47%	0.11%
N+11.79	9	FYAJ Max	0.014322	0.041844	0.15%	0.37%
N+11.79	10	FXAJ Max	0.044045	0.011932	0.47%	0.11%
N+11.79	10	FYAJ Max	0.014122	0.041844	0.15%	0.37%
N+11.79	11	FXAJ Max	0.044045	0.012506	0.47%	0.11%
N+11.79	11	FYAJ Max	0.014122	0.043856	0.15%	0.39%
N+11.79	12	FXAJ Max	0.044045	0.013786	0.47%	0.12%
N+11.79	12	FYAJ Max	0.014122	0.048344	0.15%	0.41%
N+11.79	13	FXAJ Max	0.044038	0.013786	0.47%	0.12%

N+11.79	13	FYAJ Max	0.01429	0.048344	0.15%	0.41%
N+11.79	14	FXAJ Max	0.044038	0.012506	0.47%	0.11%
N+11.79	14	FYAJ Max	0.01429	0.043856	0.15%	0.39%
N+11.79	16	FXAJ Max	0.044038	0.010601	0.47%	0.10%
N+11.79	16	FYAJ Max	0.01429	0.037176	0.15%	0.35%
N+11.79	17	FXAJ Max	0.044038	0.009346	0.47%	0.09%
N+11.79	17	FYAJ Max	0.01429	0.032776	0.15%	0.32%
N+11.79	18	FXAJ Max	0.044038	0.008111	0.47%	0.08%
N+11.79	18	FYAJ Max	0.01429	0.02844	0.15%	0.29%
N+11.79	19	FXAJ Max	0.044045	0.0071	0.47%	0.08%
N+11.79	19	FYAJ Max	0.014122	0.024892	0.15%	0.27%
N+11.79	20	FXAJ Max	0.044038	0.0071	0.47%	0.08%
N+11.79	20	FYAJ Max	0.01429	0.024892	0.15%	0.27%
N+11.79	21	FXAJ Max	0.044045	0.006483	0.47%	0.07%
N+11.79	21	FYAJ Max	0.014122	0.022728	0.15%	0.26%
N+11.79	22	FXAJ Max	0.044045	0.006811	0.47%	0.08%
N+11.79	22	FYAJ Max	0.014122	0.023878	0.15%	0.27%
N+11.79	23	FXAJ Max	0.044038	0.006483	0.47%	0.07%
N+11.79	23	FYAJ Max	0.01429	0.022728	0.15%	0.26%
N+11.79	24	FXAJ Max	0.044038	0.006811	0.47%	0.08%
N+11.79	24	FYAJ Max	0.01429	0.023878	0.15%	0.27%
N+11.79	26	FXAJ Max	0.044034	0.006811	0.47%	0.08%
N+11.79	26	FYAJ Max	0.013909	0.023878	0.15%	0.27%
N+11.79	27	FXAJ Max	0.044036	0.006811	0.47%	0.08%
N+11.79	27	FYAJ Max	0.01391	0.023878	0.15%	0.27%
N+11.79	25	FXAJ Max	0.04404	0.006904	0.47%	0.08%
N+11.79	25	FYAJ Max	0.013979	0.024205	0.15%	0.27%
N+11.79	36	FXAJ Max	0.04404	0.007503	0.47%	0.08%
N+11.79	36	FYAJ Max	0.013979	0.026307	0.15%	0.28%
N+11.79	37	FXAJ Max	0.04404	0.008111	0.47%	0.08%
N+11.79	37	FYAJ Max	0.013979	0.02844	0.15%	0.29%
N+11.79	38	FXAJ Max	0.04404	0.008726	0.47%	0.09%
N+11.79	38	FYAJ Max	0.013979	0.030598	0.15%	0.31%
N+11.79	39	FXAJ Max	0.04404	0.009346	0.47%	0.09%
N+11.79	39	FYAJ Max	0.013979	0.032776	0.15%	0.32%
N+11.79	41	FXAJ Max	0.04404	0.010601	0.47%	0.10%
N+11.79	41	FYAJ Max	0.013979	0.037176	0.15%	0.35%
N+11.79	42	FXAJ Max	0.04404	0.011233	0.47%	0.10%
N+11.79	42	FYAJ Max	0.013979	0.039394	0.15%	0.36%
N+11.79	50	FXAJ Max	0.04404	0.012506	0.47%	0.11%

N+11.79	50	FYAJ Max	0.013979	0.043856	0.15%	0.39%
N+11.79	51	FXAJ Max	0.04404	0.013145	0.47%	0.11%
N+11.79	51	FYAJ Max	0.013979	0.046097	0.15%	0.40%
N+11.79	52	FXAJ Max	0.04404	0.013786	0.47%	0.12%
N+11.79	52	FYAJ Max	0.013979	0.048344	0.15%	0.41%
N+11.79	54	FXAJ Max	0.044035	0.006904	0.47%	0.08%
N+11.79	54	FYAJ Max	0.014118	0.024205	0.15%	0.27%
N+11.79	55	FXAJ Max	0.044035	0.007503	0.47%	0.08%
N+11.79	55	FYAJ Max	0.014118	0.026307	0.15%	0.28%
N+11.79	56	FXAJ Max	0.044035	0.008111	0.47%	0.08%
N+11.79	56	FYAJ Max	0.014118	0.02844	0.15%	0.29%
N+11.79	57	FXAJ Max	0.044035	0.008726	0.47%	0.09%
N+11.79	57	FYAJ Max	0.014118	0.030598	0.15%	0.31%
N+11.79	58	FXAJ Max	0.044035	0.009346	0.47%	0.09%
N+11.79	58	FYAJ Max	0.014118	0.032776	0.15%	0.32%
N+11.79	60	FXAJ Max	0.044035	0.010601	0.47%	0.10%
N+11.79	60	FYAJ Max	0.014118	0.037176	0.15%	0.35%
N+11.79	61	FXAJ Max	0.044035	0.011233	0.47%	0.10%
N+11.79	61	FYAJ Max	0.014118	0.039394	0.15%	0.36%
N+11.79	63	FXAJ Max	0.044035	0.012506	0.47%	0.11%
N+11.79	63	FYAJ Max	0.014118	0.043856	0.15%	0.39%
N+11.79	64	FXAJ Max	0.044035	0.013145	0.47%	0.11%
N+11.79	64	FYAJ Max	0.014118	0.046097	0.15%	0.40%
N+11.79	65	FXAJ Max	0.044035	0.013786	0.47%	0.12%
N+11.79	65	FYAJ Max	0.014118	0.048344	0.15%	0.41%
N+11.79	67	FXAJ Max	0.044034	0.006904	0.47%	0.08%
N+11.79	67	FYAJ Max	0.013909	0.024205	0.15%	0.27%
N+11.79	68	FXAJ Max	0.044034	0.007503	0.47%	0.08%
N+11.79	68	FYAJ Max	0.013909	0.026307	0.15%	0.28%
N+11.79	69	FXAJ Max	0.044034	0.008111	0.47%	0.08%
N+11.79	69	FYAJ Max	0.013909	0.02844	0.15%	0.29%
N+11.79	70	FXAJ Max	0.044034	0.008726	0.47%	0.09%
N+11.79	70	FYAJ Max	0.013909	0.030598	0.15%	0.31%
N+11.79	71	FXAJ Max	0.044034	0.009346	0.47%	0.09%
N+11.79	71	FYAJ Max	0.013909	0.032776	0.15%	0.32%
N+11.79	73	FXAJ Max	0.044034	0.010601	0.47%	0.10%
N+11.79	73	FYAJ Max	0.013909	0.037176	0.15%	0.35%
N+11.79	74	FXAJ Max	0.044034	0.011233	0.47%	0.10%
N+11.79	74	FYAJ Max	0.013909	0.039394	0.15%	0.36%
N+11.79	76	FXAJ Max	0.044034	0.012506	0.47%	0.11%

N+11.79	76	FYAJ Max	0.013909	0.043856	0.15%	0.39%
N+11.79	77	FXAJ Max	0.044034	0.013145	0.47%	0.11%
N+11.79	77	FYAJ Max	0.013909	0.046097	0.15%	0.40%
N+11.79	78	FXAJ Max	0.044034	0.013786	0.47%	0.12%
N+11.79	78	FYAJ Max	0.013909	0.048344	0.15%	0.41%
N+11.79	80	FXAJ Max	0.044036	0.006483	0.47%	0.07%
N+11.79	80	FYAJ Max	0.01391	0.022728	0.15%	0.26%
N+11.79	81	FXAJ Max	0.044033	0.006483	0.47%	0.07%
N+11.79	81	FYAJ Max	0.013965	0.022728	0.15%	0.26%
N+11.79	84	FXAJ Max	0.044038	0.011233	0.47%	0.10%
N+11.79	84	FYAJ Max	0.01429	0.039394	0.15%	0.36%
N+11.79	100	FXAJ Max	0.04404	0.009909	0.47%	0.09%
N+11.79	100	FYAJ Max	0.013979	0.034749	0.15%	0.33%
N+11.79	101	FXAJ Max	0.044035	0.009909	0.47%	0.09%
N+11.79	101	FYAJ Max	0.014118	0.034749	0.15%	0.33%
N+11.79	102	FXAJ Max	0.044034	0.009909	0.47%	0.09%
N+11.79	102	FYAJ Max	0.013909	0.034749	0.15%	0.33%
N+11.79	104	FXAJ Max	0.04404	0.011932	0.47%	0.11%
N+11.79	104	FYAJ Max	0.013979	0.041844	0.15%	0.37%
N+11.79	105	FXAJ Max	0.044035	0.011932	0.47%	0.11%
N+11.79	105	FYAJ Max	0.014118	0.041844	0.15%	0.37%
N+11.79	106	FXAJ Max	0.044034	0.011932	0.47%	0.11%
N+11.79	106	FYAJ Max	0.013909	0.041844	0.15%	0.37%
N+11.79	40	FXAJ Max	0.044045	0.01486	0.47%	0.12%
N+11.79	40	FYAJ Max	0.014122	0.052111	0.15%	0.44%
N+11.79	43	FXAJ Max	0.044038	0.01486	0.47%	0.12%
N+11.79	43	FYAJ Max	0.01429	0.052111	0.15%	0.44%
N+11.79	44	FXAJ Max	0.044038	0.015173	0.47%	0.13%
N+11.79	44	FYAJ Max	0.01429	0.053208	0.15%	0.44%
N+11.79	45	FXAJ Max	0.044038	0.015532	0.47%	0.13%
N+11.79	45	FYAJ Max	0.01429	0.054468	0.15%	0.45%
N+11.79	46	FXAJ Max	0.044045	0.015173	0.47%	0.13%
N+11.79	46	FYAJ Max	0.014122	0.053208	0.15%	0.44%
N+11.79	47	FXAJ Max	0.044045	0.015532	0.47%	0.13%
N+11.79	47	FYAJ Max	0.014122	0.054468	0.15%	0.45%
N+11.79	48	FXAJ Max	0.044036	0.015173	0.47%	0.13%
N+11.79	48	FYAJ Max	0.01391	0.053208	0.15%	0.44%
N+11.79	49	FXAJ Max	0.044034	0.015173	0.47%	0.13%
N+11.79	49	FYAJ Max	0.013909	0.053208	0.15%	0.44%
N+11.79	59	FXAJ Max	0.04404	0.015072	0.47%	0.13%

N+11.79	59	FYAJ Max	0.013979	0.052853	0.15%	0.44%
N+11.79	62	FXAJ Max	0.044035	0.015072	0.47%	0.13%
N+11.79	62	FYAJ Max	0.014118	0.052853	0.15%	0.44%
N+11.79	72	FXAJ Max	0.044034	0.015072	0.47%	0.13%
N+11.79	72	FYAJ Max	0.013909	0.052853	0.15%	0.44%
N+11.79	75	FXAJ Max	0.044033	0.015532	0.47%	0.13%
N+11.79	75	FYAJ Max	0.013965	0.054468	0.15%	0.45%
N+11.79	91	FXAJ Max	0.044036	0.015532	0.47%	0.13%
N+11.79	91	FYAJ Max	0.01391	0.054468	0.15%	0.45%
N+11.79	28	FXAJ Max	0.044035	0.014428	0.47%	0.12%
N+11.79	28	FYAJ Max	0.014118	0.050597	0.15%	0.43%
N+11.79	29	FXAJ Max	0.04404	0.014428	0.47%	0.12%
N+11.79	29	FYAJ Max	0.013979	0.050597	0.15%	0.43%
N+11.79	30	FXAJ Max	0.044034	0.014428	0.47%	0.12%
N+11.79	30	FYAJ Max	0.013909	0.050597	0.15%	0.43%
N+11.79	33	FXAJ Max	0.044063	0.010601	0.47%	0.10%
N+11.79	33	FYAJ Max	0.014616	0.037176	0.15%	0.35%
N+11.79	34	FXAJ Max	0.044053	0.010601	0.47%	0.10%
N+11.79	34	FYAJ Max	0.014322	0.037176	0.15%	0.35%
N+11.79	35	FXAJ Max	0.044045	0.010601	0.47%	0.10%
N+11.79	35	FYAJ Max	0.014122	0.037176	0.15%	0.35%
N+11.79	53	FXAJ Max	0.044063	0.011233	0.47%	0.10%
N+11.79	53	FYAJ Max	0.014616	0.039394	0.15%	0.36%
N+11.79	66	FXAJ Max	0.044053	0.011233	0.47%	0.10%
N+11.79	66	FYAJ Max	0.014322	0.039394	0.15%	0.36%
N+11.79	79	FXAJ Max	0.044045	0.011233	0.47%	0.10%
N+11.79	79	FYAJ Max	0.014122	0.039394	0.15%	0.36%
N+7.85	1	FXAJ Max	0.025553	0.004825	0.39%	0.07%
N+7.85	1	FYAJ Max	0.008295	0.016919	0.12%	0.24%
N+7.85	2	FXAJ Max	0.025553	0.005769	0.39%	0.08%
N+7.85	2	FYAJ Max	0.008295	0.020232	0.12%	0.27%
N+7.85	3	FXAJ Max	0.025553	0.006198	0.39%	0.08%
N+7.85	3	FYAJ Max	0.008295	0.021737	0.12%	0.28%
N+7.85	4	FXAJ Max	0.025567	0.006198	0.39%	0.08%
N+7.85	4	FYAJ Max	0.008496	0.021737	0.12%	0.28%
N+7.85	5	FXAJ Max	0.025606	0.006198	0.39%	0.08%
N+7.85	5	FYAJ Max	0.009142	0.021737	0.13%	0.28%
N+7.85	6	FXAJ Max	0.025606	0.006726	0.39%	0.08%
N+7.85	6	FYAJ Max	0.009142	0.023585	0.13%	0.30%
N+7.85	7	FXAJ Max	0.025606	0.007207	0.39%	0.09%

N+7.85	7	FYAJ Max	0.009142	0.025271	0.13%	0.31%
N+7.85	8	FXAJ Max	0.025606	0.007737	0.39%	0.09%
N+7.85	8	FYAJ Max	0.009142	0.027131	0.13%	0.32%
N+7.85	9	FXAJ Max	0.025567	0.007737	0.39%	0.09%
N+7.85	9	FYAJ Max	0.008496	0.027131	0.12%	0.32%
N+7.85	10	FXAJ Max	0.025553	0.007737	0.39%	0.09%
N+7.85	10	FYAJ Max	0.008295	0.027131	0.12%	0.32%
N+7.85	11	FXAJ Max	0.025553	0.008173	0.39%	0.10%
N+7.85	11	FYAJ Max	0.008295	0.028657	0.12%	0.34%
N+7.85	12	FXAJ Max	0.025553	0.009143	0.39%	0.10%
N+7.85	12	FYAJ Max	0.008295	0.032057	0.12%	0.37%
N+7.85	13	FXAJ Max	0.025501	0.009143	0.39%	0.10%
N+7.85	13	FYAJ Max	0.008399	0.032057	0.12%	0.37%
N+7.85	14	FXAJ Max	0.025501	0.008173	0.39%	0.10%
N+7.85	14	FYAJ Max	0.008399	0.028657	0.12%	0.34%
N+7.85	16	FXAJ Max	0.025501	0.006726	0.39%	0.08%
N+7.85	16	FYAJ Max	0.008399	0.023585	0.12%	0.30%
N+7.85	17	FXAJ Max	0.025501	0.005769	0.39%	0.08%
N+7.85	17	FYAJ Max	0.008399	0.020232	0.12%	0.27%
N+7.85	18	FXAJ Max	0.025501	0.004825	0.39%	0.07%
N+7.85	18	FYAJ Max	0.008399	0.016919	0.12%	0.24%
N+7.85	19	FXAJ Max	0.025553	0.00405	0.39%	0.06%
N+7.85	19	FYAJ Max	0.008295	0.014201	0.12%	0.22%
N+7.85	20	FXAJ Max	0.025501	0.00405	0.39%	0.06%
N+7.85	20	FYAJ Max	0.008399	0.014201	0.12%	0.22%
N+7.85	21	FXAJ Max	0.025553	0.003578	0.39%	0.06%
N+7.85	21	FYAJ Max	0.008295	0.012542	0.12%	0.21%
N+7.85	22	FXAJ Max	0.025553	0.003829	0.39%	0.06%
N+7.85	22	FYAJ Max	0.008295	0.013424	0.12%	0.21%
N+7.85	23	FXAJ Max	0.025501	0.003578	0.39%	0.06%
N+7.85	23	FYAJ Max	0.008399	0.012542	0.12%	0.21%
N+7.85	24	FXAJ Max	0.025501	0.003829	0.39%	0.06%
N+7.85	24	FYAJ Max	0.008399	0.013424	0.12%	0.21%
N+7.85	26	FXAJ Max	0.025519	0.003829	0.39%	0.06%
N+7.85	26	FYAJ Max	0.008061	0.013424	0.12%	0.21%
N+7.85	27	FXAJ Max	0.025528	0.003829	0.39%	0.06%
N+7.85	27	FYAJ Max	0.008072	0.013424	0.12%	0.21%
N+7.85	25	FXAJ Max	0.025539	0.0039	0.39%	0.06%
N+7.85	25	FYAJ Max	0.008148	0.013674	0.12%	0.22%
N+7.85	36	FXAJ Max	0.025539	0.004359	0.39%	0.07%

N+7.85	36	FYAJ Max	0.008148	0.015286	0.12%	0.23%
N+7.85	37	FXAJ Max	0.025539	0.004825	0.39%	0.07%
N+7.85	37	FYAJ Max	0.008148	0.016919	0.12%	0.24%
N+7.85	38	FXAJ Max	0.025539	0.005295	0.39%	0.07%
N+7.85	38	FYAJ Max	0.008148	0.01857	0.12%	0.26%
N+7.85	39	FXAJ Max	0.025539	0.005769	0.39%	0.08%
N+7.85	39	FYAJ Max	0.008148	0.020232	0.12%	0.27%
N+7.85	41	FXAJ Max	0.025539	0.006726	0.39%	0.08%
N+7.85	41	FYAJ Max	0.008148	0.023585	0.12%	0.30%
N+7.85	42	FXAJ Max	0.025539	0.007207	0.39%	0.09%
N+7.85	42	FYAJ Max	0.008148	0.025271	0.12%	0.31%
N+7.85	50	FXAJ Max	0.025539	0.008173	0.39%	0.10%
N+7.85	50	FYAJ Max	0.008148	0.028657	0.12%	0.34%
N+7.85	51	FXAJ Max	0.025539	0.008658	0.39%	0.10%
N+7.85	51	FYAJ Max	0.008148	0.030356	0.12%	0.35%
N+7.85	52	FXAJ Max	0.025539	0.009143	0.39%	0.10%
N+7.85	52	FYAJ Max	0.008148	0.032057	0.12%	0.37%
N+7.85	54	FXAJ Max	0.025505	0.0039	0.39%	0.06%
N+7.85	54	FYAJ Max	0.008242	0.013674	0.12%	0.22%
N+7.85	55	FXAJ Max	0.025505	0.004359	0.39%	0.07%
N+7.85	55	FYAJ Max	0.008242	0.015286	0.12%	0.23%
N+7.85	56	FXAJ Max	0.025505	0.004825	0.39%	0.07%
N+7.85	56	FYAJ Max	0.008242	0.016919	0.12%	0.24%
N+7.85	57	FXAJ Max	0.025505	0.005295	0.39%	0.07%
N+7.85	57	FYAJ Max	0.008242	0.01857	0.12%	0.26%
N+7.85	58	FXAJ Max	0.025505	0.005769	0.39%	0.08%
N+7.85	58	FYAJ Max	0.008242	0.020232	0.12%	0.27%
N+7.85	60	FXAJ Max	0.025505	0.006726	0.39%	0.08%
N+7.85	60	FYAJ Max	0.008242	0.023585	0.12%	0.30%
N+7.85	61	FXAJ Max	0.025505	0.007207	0.39%	0.09%
N+7.85	61	FYAJ Max	0.008242	0.025271	0.12%	0.31%
N+7.85	63	FXAJ Max	0.025505	0.008173	0.39%	0.10%
N+7.85	63	FYAJ Max	0.008242	0.028657	0.12%	0.34%
N+7.85	64	FXAJ Max	0.025505	0.008658	0.39%	0.10%
N+7.85	64	FYAJ Max	0.008242	0.030356	0.12%	0.35%
N+7.85	65	FXAJ Max	0.025505	0.009143	0.39%	0.10%
N+7.85	65	FYAJ Max	0.008242	0.032057	0.12%	0.37%
N+7.85	67	FXAJ Max	0.025519	0.0039	0.39%	0.06%
N+7.85	67	FYAJ Max	0.008061	0.013674	0.12%	0.22%
N+7.85	68	FXAJ Max	0.025519	0.004359	0.39%	0.07%

N+7.85	68	FYAJ Max	0.008061	0.015286	0.12%	0.23%
N+7.85	69	FXAJ Max	0.025519	0.004825	0.39%	0.07%
N+7.85	69	FYAJ Max	0.008061	0.016919	0.12%	0.24%
N+7.85	70	FXAJ Max	0.025519	0.005295	0.39%	0.07%
N+7.85	70	FYAJ Max	0.008061	0.01857	0.12%	0.26%
N+7.85	71	FXAJ Max	0.025519	0.005769	0.39%	0.08%
N+7.85	71	FYAJ Max	0.008061	0.020232	0.12%	0.27%
N+7.85	73	FXAJ Max	0.025519	0.006726	0.39%	0.08%
N+7.85	73	FYAJ Max	0.008061	0.023585	0.12%	0.30%
N+7.85	74	FXAJ Max	0.025519	0.007207	0.39%	0.09%
N+7.85	74	FYAJ Max	0.008061	0.025271	0.12%	0.31%
N+7.85	76	FXAJ Max	0.025519	0.008173	0.39%	0.10%
N+7.85	76	FYAJ Max	0.008061	0.028657	0.12%	0.34%
N+7.85	77	FXAJ Max	0.025519	0.008658	0.39%	0.10%
N+7.85	77	FYAJ Max	0.008061	0.030356	0.12%	0.35%
N+7.85	78	FXAJ Max	0.025519	0.009143	0.39%	0.10%
N+7.85	78	FYAJ Max	0.008061	0.032057	0.12%	0.37%
N+7.85	80	FXAJ Max	0.025528	0.003578	0.39%	0.06%
N+7.85	80	FYAJ Max	0.008072	0.012542	0.12%	0.21%
N+7.85	81	FXAJ Max	0.025512	0.003578	0.39%	0.06%
N+7.85	81	FYAJ Max	0.008106	0.012542	0.12%	0.21%
N+7.85	84	FXAJ Max	0.025501	0.007207	0.39%	0.09%
N+7.85	84	FYAJ Max	0.008399	0.025271	0.12%	0.31%
N+7.85	100	FXAJ Max	0.025539	0.006198	0.39%	0.08%
N+7.85	100	FYAJ Max	0.008148	0.021737	0.12%	0.28%
N+7.85	101	FXAJ Max	0.025505	0.006198	0.39%	0.08%
N+7.85	101	FYAJ Max	0.008242	0.021737	0.12%	0.28%
N+7.85	102	FXAJ Max	0.025519	0.006198	0.39%	0.08%
N+7.85	102	FYAJ Max	0.008061	0.021737	0.12%	0.28%
N+7.85	104	FXAJ Max	0.025539	0.007737	0.39%	0.09%
N+7.85	104	FYAJ Max	0.008148	0.027131	0.12%	0.32%
N+7.85	105	FXAJ Max	0.025505	0.007737	0.39%	0.09%
N+7.85	105	FYAJ Max	0.008242	0.027131	0.12%	0.32%
N+7.85	106	FXAJ Max	0.025519	0.007737	0.39%	0.09%
N+7.85	106	FYAJ Max	0.008061	0.027131	0.12%	0.32%
N+7.85	40	FXAJ Max	0.025553	0.009956	0.39%	0.11%
N+7.85	40	FYAJ Max	0.008295	0.034906	0.12%	0.39%
N+7.85	43	FXAJ Max	0.025501	0.009956	0.39%	0.11%
N+7.85	43	FYAJ Max	0.008399	0.034906	0.12%	0.39%
N+7.85	44	FXAJ Max	0.025501	0.010193	0.39%	0.11%

N+7.85	44	FYAJ Max	0.008399	0.035735	0.12%	0.40%
N+7.85	45	FXAJ Max	0.025501	0.010465	0.39%	0.12%
N+7.85	45	FYAJ Max	0.008399	0.036686	0.12%	0.40%
N+7.85	46	FXAJ Max	0.025553	0.010193	0.39%	0.11%
N+7.85	46	FYAJ Max	0.008295	0.035735	0.12%	0.40%
N+7.85	47	FXAJ Max	0.025553	0.010465	0.39%	0.12%
N+7.85	47	FYAJ Max	0.008295	0.036686	0.12%	0.40%
N+7.85	48	FXAJ Max	0.025528	0.010193	0.39%	0.11%
N+7.85	48	FYAJ Max	0.008072	0.035735	0.12%	0.40%
N+7.85	49	FXAJ Max	0.025519	0.010193	0.39%	0.11%
N+7.85	49	FYAJ Max	0.008061	0.035735	0.12%	0.40%
N+7.85	59	FXAJ Max	0.025539	0.010116	0.39%	0.11%
N+7.85	59	FYAJ Max	0.008148	0.035467	0.12%	0.39%
N+7.85	62	FXAJ Max	0.025505	0.010116	0.39%	0.11%
N+7.85	62	FYAJ Max	0.008242	0.035467	0.12%	0.39%
N+7.85	72	FXAJ Max	0.025519	0.010116	0.39%	0.11%
N+7.85	72	FYAJ Max	0.008061	0.035467	0.12%	0.39%
N+7.85	75	FXAJ Max	0.025512	0.010465	0.39%	0.12%
N+7.85	75	FYAJ Max	0.008106	0.036686	0.12%	0.40%
N+7.85	91	FXAJ Max	0.025528	0.010465	0.39%	0.12%
N+7.85	91	FYAJ Max	0.008072	0.036686	0.12%	0.40%
N+7.85	28	FXAJ Max	0.025505	0.009629	0.39%	0.11%
N+7.85	28	FYAJ Max	0.008242	0.033761	0.12%	0.38%
N+7.85	29	FXAJ Max	0.025539	0.009629	0.39%	0.11%
N+7.85	29	FYAJ Max	0.008148	0.033761	0.12%	0.38%
N+7.85	30	FXAJ Max	0.025519	0.009629	0.39%	0.11%
N+7.85	30	FYAJ Max	0.008061	0.033761	0.12%	0.38%
N+7.85	33	FXAJ Max	0.025585	0.006726	0.39%	0.08%
N+7.85	33	FYAJ Max	0.008782	0.023585	0.13%	0.30%
N+7.85	34	FXAJ Max	0.025567	0.006726	0.39%	0.08%
N+7.85	34	FYAJ Max	0.008496	0.023585	0.12%	0.30%
N+7.85	35	FXAJ Max	0.025553	0.006726	0.39%	0.08%
N+7.85	35	FYAJ Max	0.008295	0.023585	0.12%	0.30%
N+7.85	53	FXAJ Max	0.025585	0.007207	0.39%	0.09%
N+7.85	53	FYAJ Max	0.008782	0.025271	0.13%	0.31%
N+7.85	66	FXAJ Max	0.025567	0.007207	0.39%	0.09%
N+7.85	66	FYAJ Max	0.008496	0.025271	0.12%	0.31%
N+7.85	79	FXAJ Max	0.025553	0.007207	0.39%	0.09%
N+7.85	79	FYAJ Max	0.008295	0.025271	0.12%	0.31%
N+3.90	1	FXAJ Max	0.010288	0.002104	0.26%	0.05%

N+3.90	1	FYAJ Max	0.00352	0.007378	0.09%	0.19%
N+3.90	2	FXAJ Max	0.010288	0.002748	0.20%	0.05%
N+3.90	2	FYAJ Max	0.00352	0.009639	0.06%	0.16%
N+3.90	3	FXAJ Max	0.010288	0.00304	0.20%	0.05%
N+3.90	3	FYAJ Max	0.00352	0.010662	0.06%	0.18%
N+3.90	4	FXAJ Max	0.010304	0.00304	0.20%	0.05%
N+3.90	4	FYAJ Max	0.003734	0.010662	0.07%	0.18%
N+3.90	5	FXAJ Max	0.010345	0.00304	0.20%	0.05%
N+3.90	5	FYAJ Max	0.004377	0.010662	0.08%	0.18%
N+3.90	6	FXAJ Max	0.010345	0.003398	0.20%	0.06%
N+3.90	6	FYAJ Max	0.004377	0.011915	0.08%	0.20%
N+3.90	7	FXAJ Max	0.010345	0.003724	0.20%	0.06%
N+3.90	7	FYAJ Max	0.004377	0.013057	0.08%	0.21%
N+3.90	8	FXAJ Max	0.010345	0.004083	0.20%	0.07%
N+3.90	8	FYAJ Max	0.004377	0.014314	0.08%	0.23%
N+3.90	9	FXAJ Max	0.010304	0.004083	0.20%	0.07%
N+3.90	9	FYAJ Max	0.003734	0.014314	0.07%	0.23%
N+3.90	10	FXAJ Max	0.010288	0.004083	0.20%	0.07%
N+3.90	10	FYAJ Max	0.00352	0.014314	0.06%	0.23%
N+3.90	11	FXAJ Max	0.010288	0.004378	0.20%	0.07%
N+3.90	11	FYAJ Max	0.00352	0.015344	0.06%	0.25%
N+3.90	12	FXAJ Max	0.010288	0.005032	0.20%	0.08%
N+3.90	12	FYAJ Max	0.00352	0.017636	0.06%	0.28%
N+3.90	13	FXAJ Max	0.010233	0.005032	0.20%	0.08%
N+3.90	13	FYAJ Max	0.003576	0.017636	0.07%	0.28%
N+3.90	14	FXAJ Max	0.010233	0.004378	0.20%	0.07%
N+3.90	14	FYAJ Max	0.003576	0.015344	0.07%	0.25%
N+3.90	16	FXAJ Max	0.010233	0.003398	0.20%	0.06%
N+3.90	16	FYAJ Max	0.003576	0.011915	0.07%	0.20%
N+3.90	17	FXAJ Max	0.010233	0.002748	0.20%	0.05%
N+3.90	17	FYAJ Max	0.003576	0.009639	0.07%	0.16%
N+3.90	18	FXAJ Max	0.010233	0.002104	0.26%	0.05%
N+3.90	18	FYAJ Max	0.003576	0.007378	0.09%	0.19%
N+3.90	19	FXAJ Max	0.010288	0.001574	0.26%	0.04%
N+3.90	19	FYAJ Max	0.00352	0.005516	0.09%	0.14%
N+3.90	20	FXAJ Max	0.010233	0.001574	0.26%	0.04%
N+3.90	20	FYAJ Max	0.003576	0.005516	0.09%	0.14%
N+3.90	21	FXAJ Max	0.010288	0.001252	0.26%	0.03%
N+3.90	21	FYAJ Max	0.00352	0.004382	0.09%	0.11%
N+3.90	22	FXAJ Max	0.010288	0.001423	0.26%	0.04%

N+3.90	22	FYAJ Max	0.00352	0.004984	0.09%	0.13%
N+3.90	23	FXAJ Max	0.010233	0.001252	0.26%	0.03%
N+3.90	23	FYAJ Max	0.003576	0.004382	0.09%	0.11%
N+3.90	24	FXAJ Max	0.010233	0.001423	0.26%	0.04%
N+3.90	24	FYAJ Max	0.003576	0.004984	0.09%	0.13%
N+3.90	26	FXAJ Max	0.010251	0.001423	0.26%	0.04%
N+3.90	26	FYAJ Max	0.003239	0.004984	0.08%	0.13%
N+3.90	27	FXAJ Max	0.010262	0.001423	0.26%	0.04%
N+3.90	27	FYAJ Max	0.003261	0.004984	0.08%	0.13%
N+3.90	25	FXAJ Max	0.010274	0.001472	0.26%	0.04%
N+3.90	25	FYAJ Max	0.003353	0.005156	0.09%	0.13%
N+3.90	36	FXAJ Max	0.010274	0.001786	0.26%	0.05%
N+3.90	36	FYAJ Max	0.003353	0.00626	0.09%	0.16%
N+3.90	37	FXAJ Max	0.010274	0.002104	0.26%	0.05%
N+3.90	37	FYAJ Max	0.003353	0.007378	0.09%	0.19%
N+3.90	38	FXAJ Max	0.010274	0.002425	0.20%	0.04%
N+3.90	38	FYAJ Max	0.003353	0.008506	0.06%	0.15%
N+3.90	39	FXAJ Max	0.010274	0.002748	0.20%	0.05%
N+3.90	39	FYAJ Max	0.003353	0.009639	0.06%	0.16%
N+3.90	41	FXAJ Max	0.010274	0.003398	0.20%	0.06%
N+3.90	41	FYAJ Max	0.003353	0.011915	0.06%	0.20%
N+3.90	42	FXAJ Max	0.010274	0.003724	0.20%	0.06%
N+3.90	42	FYAJ Max	0.003353	0.013057	0.06%	0.21%
N+3.90	50	FXAJ Max	0.010274	0.004378	0.20%	0.07%
N+3.90	50	FYAJ Max	0.003353	0.015344	0.06%	0.25%
N+3.90	51	FXAJ Max	0.010274	0.004705	0.20%	0.07%
N+3.90	51	FYAJ Max	0.003353	0.01649	0.06%	0.26%
N+3.90	52	FXAJ Max	0.010274	0.005032	0.20%	0.08%
N+3.90	52	FYAJ Max	0.003353	0.017636	0.06%	0.28%
N+3.90	54	FXAJ Max	0.010237	0.001472	0.26%	0.04%
N+3.90	54	FYAJ Max	0.003418	0.005156	0.09%	0.13%
N+3.90	55	FXAJ Max	0.010237	0.001786	0.26%	0.05%
N+3.90	55	FYAJ Max	0.003418	0.00626	0.09%	0.16%
N+3.90	56	FXAJ Max	0.010237	0.002104	0.26%	0.05%
N+3.90	56	FYAJ Max	0.003418	0.007378	0.09%	0.19%
N+3.90	57	FXAJ Max	0.010237	0.002425	0.20%	0.04%
N+3.90	57	FYAJ Max	0.003418	0.008506	0.06%	0.15%
N+3.90	58	FXAJ Max	0.010237	0.002748	0.20%	0.05%
N+3.90	58	FYAJ Max	0.003418	0.009639	0.06%	0.16%
N+3.90	60	FXAJ Max	0.010237	0.003398	0.20%	0.06%

N+3.90	60	FYAJ Max	0.003418	0.011915	0.06%	0.20%
N+3.90	61	FXAJ Max	0.010237	0.003724	0.20%	0.06%
N+3.90	61	FYAJ Max	0.003418	0.013057	0.06%	0.21%
N+3.90	63	FXAJ Max	0.010237	0.004378	0.20%	0.07%
N+3.90	63	FYAJ Max	0.003418	0.015344	0.06%	0.25%
N+3.90	64	FXAJ Max	0.010237	0.004705	0.20%	0.07%
N+3.90	64	FYAJ Max	0.003418	0.01649	0.06%	0.26%
N+3.90	65	FXAJ Max	0.010237	0.005032	0.20%	0.08%
N+3.90	65	FYAJ Max	0.003418	0.017636	0.06%	0.28%
N+3.90	67	FXAJ Max	0.010251	0.001472	0.26%	0.04%
N+3.90	67	FYAJ Max	0.003239	0.005156	0.08%	0.13%
N+3.90	68	FXAJ Max	0.010251	0.001786	0.26%	0.05%
N+3.90	68	FYAJ Max	0.003239	0.00626	0.08%	0.16%
N+3.90	69	FXAJ Max	0.010251	0.002104	0.26%	0.05%
N+3.90	69	FYAJ Max	0.003239	0.007378	0.08%	0.19%
N+3.90	70	FXAJ Max	0.010251	0.002425	0.20%	0.04%
N+3.90	70	FYAJ Max	0.003239	0.008506	0.06%	0.15%
N+3.90	71	FXAJ Max	0.010251	0.002748	0.20%	0.05%
N+3.90	71	FYAJ Max	0.003239	0.009639	0.06%	0.16%
N+3.90	73	FXAJ Max	0.010251	0.003398	0.20%	0.06%
N+3.90	73	FYAJ Max	0.003239	0.011915	0.06%	0.20%
N+3.90	74	FXAJ Max	0.010251	0.003724	0.20%	0.06%
N+3.90	74	FYAJ Max	0.003239	0.013057	0.06%	0.21%
N+3.90	76	FXAJ Max	0.010251	0.004378	0.20%	0.07%
N+3.90	76	FYAJ Max	0.003239	0.015344	0.06%	0.25%
N+3.90	77	FXAJ Max	0.010251	0.004705	0.20%	0.07%
N+3.90	77	FYAJ Max	0.003239	0.01649	0.06%	0.26%
N+3.90	78	FXAJ Max	0.010251	0.005032	0.20%	0.08%
N+3.90	78	FYAJ Max	0.003239	0.017636	0.06%	0.28%
N+3.90	80	FXAJ Max	0.010262	0.001252	0.26%	0.03%
N+3.90	80	FYAJ Max	0.003261	0.004382	0.08%	0.11%
N+3.90	81	FXAJ Max	0.010244	0.001252	0.26%	0.03%
N+3.90	81	FYAJ Max	0.00328	0.004382	0.08%	0.11%
N+3.90	84	FXAJ Max	0.010233	0.003724	0.20%	0.06%
N+3.90	84	FYAJ Max	0.003576	0.013057	0.07%	0.21%
N+3.90	100	FXAJ Max	0.010274	0.00304	0.20%	0.05%
N+3.90	100	FYAJ Max	0.003353	0.010662	0.06%	0.18%
N+3.90	101	FXAJ Max	0.010237	0.00304	0.20%	0.05%
N+3.90	101	FYAJ Max	0.003418	0.010662	0.06%	0.18%
N+3.90	102	FXAJ Max	0.010251	0.00304	0.20%	0.05%

N+3.90	102	FYAJ Max	0.003239	0.010662	0.06%	0.18%
N+3.90	104	FXAJ Max	0.010274	0.004083	0.20%	0.07%
N+3.90	104	FYAJ Max	0.003353	0.014314	0.06%	0.23%
N+3.90	105	FXAJ Max	0.010237	0.004083	0.20%	0.07%
N+3.90	105	FYAJ Max	0.003418	0.014314	0.06%	0.23%
N+3.90	106	FXAJ Max	0.010251	0.004083	0.20%	0.07%
N+3.90	106	FYAJ Max	0.003239	0.014314	0.06%	0.23%
N+3.90	40	FXAJ Max	0.010288	0.00558	0.20%	0.09%
N+3.90	40	FYAJ Max	0.00352	0.019553	0.06%	0.31%
N+3.90	43	FXAJ Max	0.010233	0.00558	0.20%	0.09%
N+3.90	43	FYAJ Max	0.003576	0.019553	0.07%	0.31%
N+3.90	44	FXAJ Max	0.010233	0.005739	0.20%	0.09%
N+3.90	44	FYAJ Max	0.003576	0.02011	0.07%	0.32%
N+3.90	45	FXAJ Max	0.010233	0.005922	0.20%	0.09%
N+3.90	45	FYAJ Max	0.003576	0.020749	0.07%	0.33%
N+3.90	46	FXAJ Max	0.010288	0.005739	0.20%	0.09%
N+3.90	46	FYAJ Max	0.00352	0.02011	0.06%	0.32%
N+3.90	47	FXAJ Max	0.010288	0.005922	0.20%	0.09%
N+3.90	47	FYAJ Max	0.00352	0.020749	0.06%	0.33%
N+3.90	48	FXAJ Max	0.010262	0.005739	0.20%	0.09%
N+3.90	48	FYAJ Max	0.003261	0.02011	0.06%	0.32%
N+3.90	49	FXAJ Max	0.010251	0.005739	0.20%	0.09%
N+3.90	49	FYAJ Max	0.003239	0.02011	0.06%	0.32%
N+3.90	59	FXAJ Max	0.010274	0.005688	0.20%	0.09%
N+3.90	59	FYAJ Max	0.003353	0.01993	0.06%	0.31%
N+3.90	62	FXAJ Max	0.010237	0.005688	0.20%	0.09%
N+3.90	62	FYAJ Max	0.003418	0.01993	0.06%	0.31%
N+3.90	72	FXAJ Max	0.010251	0.005688	0.20%	0.09%
N+3.90	72	FYAJ Max	0.003239	0.01993	0.06%	0.31%
N+3.90	75	FXAJ Max	0.010244	0.005922	0.20%	0.09%
N+3.90	75	FYAJ Max	0.00328	0.020749	0.06%	0.33%
N+3.90	91	FXAJ Max	0.010262	0.005922	0.20%	0.09%
N+3.90	91	FYAJ Max	0.003261	0.020749	0.06%	0.33%
N+3.90	28	FXAJ Max	0.010237	0.00536	0.20%	0.08%
N+3.90	28	FYAJ Max	0.003418	0.018782	0.06%	0.30%
N+3.90	29	FXAJ Max	0.010274	0.00536	0.20%	0.08%
N+3.90	29	FYAJ Max	0.003353	0.018782	0.06%	0.30%
N+3.90	30	FXAJ Max	0.010251	0.00536	0.20%	0.08%
N+3.90	30	FYAJ Max	0.003239	0.018782	0.06%	0.30%
N+3.90	33	FXAJ Max	0.010323	0.003398	0.20%	0.06%

N+3.90	33	FYAJ Max	0.004027	0.011915	0.07%	0.20%
N+3.90	34	FXAJ Max	0.010304	0.003398	0.20%	0.06%
N+3.90	34	FYAJ Max	0.003734	0.011915	0.07%	0.20%
N+3.90	35	FXAJ Max	0.010288	0.003398	0.20%	0.06%
N+3.90	35	FYAJ Max	0.00352	0.011915	0.06%	0.20%
N+3.90	53	FXAJ Max	0.010323	0.003724	0.20%	0.06%
N+3.90	53	FYAJ Max	0.004027	0.013057	0.07%	0.21%
N+3.90	66	FXAJ Max	0.010304	0.003724	0.20%	0.06%
N+3.90	66	FYAJ Max	0.003734	0.013057	0.07%	0.21%
N+3.90	79	FXAJ Max	0.010288	0.003724	0.20%	0.06%
N+3.90	79	FYAJ Max	0.00352	0.013057	0.06%	0.21%
N+0.00	2	FXAJ Max	0.002673	0.000999	0.06%	0.02%
N+0.00	2	FYAJ Max	0.001038	0.003488	0.02%	0.08%
N+0.00	3	FXAJ Max	0.002673	0.001111	0.06%	0.03%
N+0.00	3	FYAJ Max	0.001038	0.003889	0.02%	0.09%
N+0.00	4	FXAJ Max	0.002686	0.001111	0.06%	0.03%
N+0.00	4	FYAJ Max	0.001173	0.003889	0.03%	0.09%
N+0.00	5	FXAJ Max	0.00272	0.001111	0.06%	0.03%
N+0.00	5	FYAJ Max	0.001536	0.003889	0.03%	0.09%
N+0.00	6	FXAJ Max	0.00272	0.001253	0.06%	0.03%
N+0.00	6	FYAJ Max	0.001536	0.00439	0.03%	0.10%
N+0.00	7	FXAJ Max	0.00272	0.001385	0.06%	0.03%
N+0.00	7	FYAJ Max	0.001536	0.004854	0.03%	0.11%
N+0.00	8	FXAJ Max	0.00272	0.001532	0.06%	0.03%
N+0.00	8	FYAJ Max	0.001536	0.00537	0.03%	0.12%
N+0.00	9	FXAJ Max	0.002686	0.001532	0.06%	0.03%
N+0.00	9	FYAJ Max	0.001173	0.00537	0.03%	0.12%
N+0.00	10	FXAJ Max	0.002673	0.001532	0.06%	0.03%
N+0.00	10	FYAJ Max	0.001038	0.00537	0.02%	0.12%
N+0.00	11	FXAJ Max	0.002673	0.001654	0.06%	0.04%
N+0.00	11	FYAJ Max	0.001038	0.005797	0.02%	0.13%
N+0.00	12	FXAJ Max	0.002673	0.001928	0.06%	0.04%
N+0.00	12	FYAJ Max	0.001038	0.006753	0.02%	0.15%
N+0.00	13	FXAJ Max	0.002621	0.001928	0.06%	0.04%
N+0.00	13	FYAJ Max	0.001045	0.006753	0.02%	0.15%
N+0.00	14	FXAJ Max	0.002621	0.001654	0.06%	0.04%
N+0.00	14	FYAJ Max	0.001045	0.005797	0.02%	0.13%
N+0.00	16	FXAJ Max	0.002621	0.001253	0.06%	0.03%
N+0.00	16	FYAJ Max	0.001045	0.00439	0.02%	0.10%
N+0.00	17	FXAJ Max	0.002621	0.000999	0.06%	0.02%

N+0.00	17	FYAJ Max	0.001045	0.003488	0.02%	0.08%
N+0.00	38	FXAJ Max	0.002661	0.000879	0.06%	0.02%
N+0.00	38	FYAJ Max	0.000925	0.003057	0.02%	0.07%
N+0.00	39	FXAJ Max	0.002661	0.000999	0.06%	0.02%
N+0.00	39	FYAJ Max	0.000925	0.003488	0.02%	0.08%
N+0.00	41	FXAJ Max	0.002661	0.001253	0.06%	0.03%
N+0.00	41	FYAJ Max	0.000925	0.00439	0.02%	0.10%
N+0.00	42	FXAJ Max	0.002661	0.001385	0.06%	0.03%
N+0.00	42	FYAJ Max	0.000925	0.004854	0.02%	0.11%
N+0.00	50	FXAJ Max	0.002661	0.001654	0.06%	0.04%
N+0.00	50	FYAJ Max	0.000925	0.005797	0.02%	0.13%
N+0.00	51	FXAJ Max	0.002661	0.00179	0.06%	0.04%
N+0.00	51	FYAJ Max	0.000925	0.006274	0.02%	0.14%
N+0.00	52	FXAJ Max	0.002661	0.001928	0.06%	0.04%
N+0.00	52	FYAJ Max	0.000925	0.006753	0.02%	0.15%
N+0.00	57	FXAJ Max	0.002626	0.000879	0.06%	0.02%
N+0.00	57	FYAJ Max	0.000947	0.003057	0.02%	0.07%
N+0.00	58	FXAJ Max	0.002626	0.000999	0.06%	0.02%
N+0.00	58	FYAJ Max	0.000947	0.003488	0.02%	0.08%
N+0.00	60	FXAJ Max	0.002626	0.001253	0.06%	0.03%
N+0.00	60	FYAJ Max	0.000947	0.00439	0.02%	0.10%
N+0.00	61	FXAJ Max	0.002626	0.001385	0.06%	0.03%
N+0.00	61	FYAJ Max	0.000947	0.004854	0.02%	0.11%
N+0.00	63	FXAJ Max	0.002626	0.001654	0.06%	0.04%
N+0.00	63	FYAJ Max	0.000947	0.005797	0.02%	0.13%
N+0.00	64	FXAJ Max	0.002626	0.00179	0.06%	0.04%
N+0.00	64	FYAJ Max	0.000947	0.006274	0.02%	0.14%
N+0.00	65	FXAJ Max	0.002626	0.001928	0.06%	0.04%
N+0.00	65	FYAJ Max	0.000947	0.006753	0.02%	0.15%
N+0.00	70	FXAJ Max	0.002641	0.000879	0.06%	0.02%
N+0.00	70	FYAJ Max	0.000834	0.003057	0.02%	0.07%
N+0.00	71	FXAJ Max	0.002641	0.000999	0.06%	0.02%
N+0.00	71	FYAJ Max	0.000834	0.003488	0.02%	0.08%
N+0.00	73	FXAJ Max	0.002641	0.001253	0.06%	0.03%
N+0.00	73	FYAJ Max	0.000834	0.00439	0.02%	0.10%
N+0.00	74	FXAJ Max	0.002641	0.001385	0.06%	0.03%
N+0.00	74	FYAJ Max	0.000834	0.004854	0.02%	0.11%
N+0.00	76	FXAJ Max	0.002641	0.001654	0.06%	0.04%
N+0.00	76	FYAJ Max	0.000834	0.005797	0.02%	0.13%
N+0.00	77	FXAJ Max	0.002641	0.00179	0.06%	0.04%

N+0.00	77	FYAJ Max	0.000834	0.006274	0.02%	0.14%
N+0.00	78	FXAJ Max	0.002641	0.001928	0.06%	0.04%
N+0.00	78	FYAJ Max	0.000834	0.006753	0.02%	0.15%
N+0.00	84	FXAJ Max	0.002621	0.001385	0.06%	0.03%
N+0.00	84	FYAJ Max	0.001045	0.004854	0.02%	0.11%
N+0.00	89	FXAJ Max	0.002673	0.000879	0.06%	0.02%
N+0.00	89	FYAJ Max	0.001038	0.003057	0.02%	0.07%
N+0.00	90	FXAJ Max	0.002621	0.000879	0.06%	0.02%
N+0.00	90	FYAJ Max	0.001045	0.003057	0.02%	0.07%
N+0.00	100	FXAJ Max	0.002661	0.001111	0.06%	0.03%
N+0.00	100	FYAJ Max	0.000925	0.003889	0.02%	0.09%
N+0.00	101	FXAJ Max	0.002626	0.001111	0.06%	0.03%
N+0.00	101	FYAJ Max	0.000947	0.003889	0.02%	0.09%
N+0.00	102	FXAJ Max	0.002641	0.001111	0.06%	0.03%
N+0.00	102	FYAJ Max	0.000834	0.003889	0.02%	0.09%
N+0.00	104	FXAJ Max	0.002661	0.001532	0.06%	0.03%
N+0.00	104	FYAJ Max	0.000925	0.00537	0.02%	0.12%
N+0.00	105	FXAJ Max	0.002626	0.001532	0.06%	0.03%
N+0.00	105	FYAJ Max	0.000947	0.00537	0.02%	0.12%
N+0.00	106	FXAJ Max	0.002641	0.001532	0.06%	0.03%
N+0.00	106	FYAJ Max	0.000834	0.00537	0.02%	0.12%
N+0.00	40	FXAJ Max	0.002673	0.002159	0.06%	0.05%
N+0.00	40	FYAJ Max	0.001038	0.007559	0.02%	0.17%
N+0.00	43	FXAJ Max	0.002621	0.002159	0.06%	0.05%
N+0.00	43	FYAJ Max	0.001045	0.007559	0.02%	0.17%
N+0.00	44	FXAJ Max	0.002621	0.002226	0.06%	0.05%
N+0.00	44	FYAJ Max	0.001045	0.007794	0.02%	0.18%
N+0.00	45	FXAJ Max	0.002621	0.002304	0.06%	0.05%
N+0.00	45	FYAJ Max	0.001045	0.008063	0.02%	0.18%
N+0.00	46	FXAJ Max	0.002673	0.002226	0.06%	0.05%
N+0.00	46	FYAJ Max	0.001038	0.007794	0.02%	0.18%
N+0.00	47	FXAJ Max	0.002673	0.002304	0.06%	0.05%
N+0.00	47	FYAJ Max	0.001038	0.008063	0.02%	0.18%
N+0.00	48	FXAJ Max	0.00265	0.002226	0.06%	0.05%
N+0.00	48	FYAJ Max	0.000856	0.007794	0.02%	0.18%
N+0.00	49	FXAJ Max	0.002641	0.002226	0.06%	0.05%
N+0.00	49	FYAJ Max	0.000834	0.007794	0.02%	0.18%
N+0.00	59	FXAJ Max	0.002661	0.002205	0.06%	0.05%
N+0.00	59	FYAJ Max	0.000925	0.007717	0.02%	0.17%
N+0.00	62	FXAJ Max	0.002626	0.002205	0.06%	0.05%

N+0.00	62	FYAJ Max	0.000947	0.007717	0.02%	0.17%
N+0.00	72	FXAJ Max	0.002641	0.002205	0.06%	0.05%
N+0.00	72	FYAJ Max	0.000834	0.007717	0.02%	0.17%
N+0.00	75	FXAJ Max	0.002634	0.002304	0.06%	0.05%
N+0.00	75	FYAJ Max	0.000859	0.008063	0.02%	0.18%
N+0.00	91	FXAJ Max	0.00265	0.002304	0.06%	0.05%
N+0.00	91	FYAJ Max	0.000856	0.008063	0.02%	0.18%
N+0.00	28	FXAJ Max	0.002626	0.002066	0.06%	0.05%
N+0.00	28	FYAJ Max	0.000947	0.007234	0.02%	0.16%
N+0.00	29	FXAJ Max	0.002661	0.002066	0.06%	0.05%
N+0.00	29	FYAJ Max	0.000925	0.007234	0.02%	0.16%
N+0.00	30	FXAJ Max	0.002641	0.002066	0.06%	0.05%
N+0.00	30	FYAJ Max	0.000834	0.007234	0.02%	0.16%
N+0.00	33	FXAJ Max	0.002702	0.001253	0.06%	0.03%
N+0.00	33	FYAJ Max	0.001343	0.00439	0.03%	0.10%
N+0.00	34	FXAJ Max	0.002686	0.001253	0.06%	0.03%
N+0.00	34	FYAJ Max	0.001173	0.00439	0.03%	0.10%
N+0.00	35	FXAJ Max	0.002673	0.001253	0.06%	0.03%
N+0.00	35	FYAJ Max	0.001038	0.00439	0.02%	0.10%
N+0.00	53	FXAJ Max	0.002702	0.001385	0.06%	0.03%
N+0.00	53	FYAJ Max	0.001343	0.004854	0.03%	0.11%
N+0.00	66	FXAJ Max	0.002686	0.001385	0.06%	0.03%
N+0.00	66	FYAJ Max	0.001173	0.004854	0.03%	0.11%
N+0.00	79	FXAJ Max	0.002673	0.001385	0.06%	0.03%
N+0.00	79	FYAJ Max	0.001038	0.004854	0.02%	0.11%
				MAX	0.51%	0.90%

6.13. ANALISIS SISMICO DEL UMBRAL DE DAÑO

CIUDAD	BUCARAMANGA
PERFIL DE SUELO	C
Ad=	0.09
Ae=	0.15
Fv=	1.55
I=	1.50
$\overline{S}$	2.325

PERIODOS	
	0.25
T_{CD}	1.1625
T_{LD}	5.58

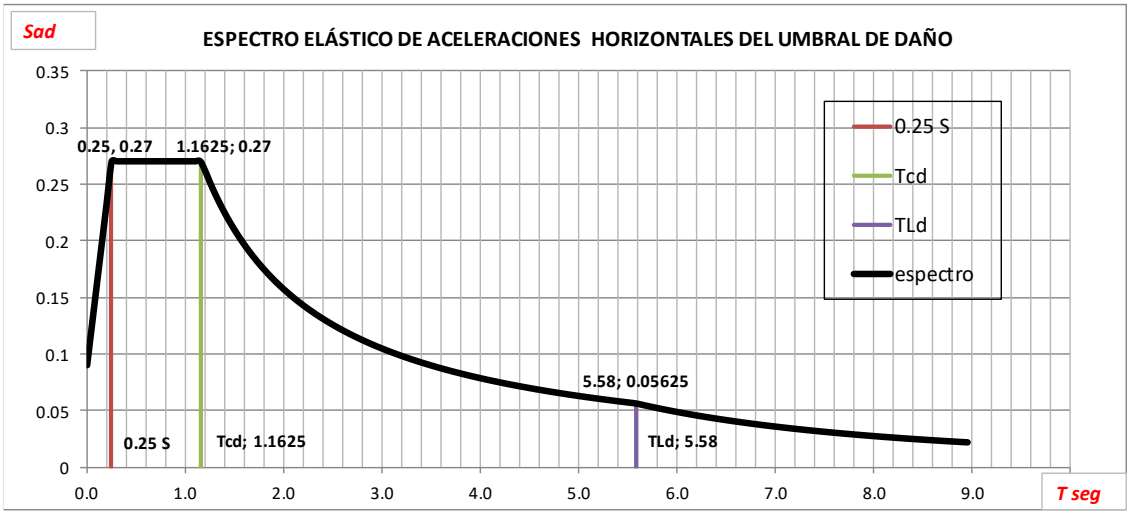


TABLE: Joint Drifts

Story	Label	Load Case/Combo	Displacement X	Displacement Y	Drift X	Drift Y
			m	m		
N+43.20	3	FXAJ Max	0.089416	0.015623	0.15%	0.05%
N+43.20	3	FYAJ Max	0.028303	0.05407	0.05%	0.09%
N+43.20	4	FXAJ Max	0.08878	0.015622	0.13%	0.06%
N+43.20	4	FYAJ Max	0.028199	0.054062	0.04%	0.09%
N+43.20	5	FXAJ Max	0.087001	0.015625	0.06%	0.07%
N+43.20	5	FYAJ Max	0.027971	0.054053	0.03%	0.09%
N+43.20	6	FXAJ Max	0.087006	0.01614	0.07%	0.03%
N+43.20	6	FYAJ Max	0.027966	0.05652	0.02%	0.09%
N+43.20	7	FXAJ Max	0.087006	0.016748	0.07%	0.03%
N+43.20	7	FYAJ Max	0.027954	0.058712	0.02%	0.10%
N+43.20	8	FXAJ Max	0.087001	0.017544	0.06%	0.07%
N+43.20	8	FYAJ Max	0.027946	0.061044	0.03%	0.10%
N+43.20	9	FXAJ Max	0.088778	0.017543	0.13%	0.06%
N+43.20	9	FYAJ Max	0.028177	0.061059	0.04%	0.10%
N+43.20	10	FXAJ Max	0.089413	0.017545	0.15%	0.05%
N+43.20	10	FYAJ Max	0.028295	0.061069	0.05%	0.10%

N+43.20	41	FXAJ Max	0.089896	0.016138	0.11%	0.03%
N+43.20	41	FYAJ Max	0.028394	0.056503	0.04%	0.08%
N+43.20	42	FXAJ Max	0.089895	0.016744	0.11%	0.03%
N+43.20	42	FYAJ Max	0.028395	0.05869	0.04%	0.08%
N+43.20	100	FXAJ Max	0.089938	0.015625	0.11%	0.05%
N+43.20	100	FYAJ Max	0.028406	0.05408	0.04%	0.06%
N+43.20	104	FXAJ Max	0.089934	0.017548	0.11%	0.05%
N+43.20	104	FYAJ Max	0.028408	0.061081	0.05%	0.07%
N+43.20	33	FXAJ Max	0.087729	0.016139	0.10%	0.03%
N+43.20	33	FYAJ Max	0.027988	0.056513	0.03%	0.08%
N+43.20	34	FXAJ Max	0.088477	0.016138	0.12%	0.03%
N+43.20	34	FYAJ Max	0.028082	0.056508	0.04%	0.08%
N+43.20	35	FXAJ Max	0.089169	0.016138	0.14%	0.03%
N+43.20	35	FYAJ Max	0.028215	0.056505	0.04%	0.08%
N+43.20	53	FXAJ Max	0.087727	0.016746	0.10%	0.03%
N+43.20	53	FYAJ Max	0.028003	0.058704	0.03%	0.08%
N+43.20	66	FXAJ Max	0.088476	0.016745	0.12%	0.03%
N+43.20	66	FYAJ Max	0.028101	0.058696	0.04%	0.08%
N+43.20	79	FXAJ Max	0.089167	0.016744	0.14%	0.03%
N+43.20	79	FYAJ Max	0.028226	0.058693	0.04%	0.08%
N+42.20	3	FXAJ Max	0.087926	0.015299	0.16%	0.06%
N+42.20	3	FYAJ Max	0.027833	0.053165	0.05%	0.10%
N+42.20	4	FXAJ Max	0.08754	0.015284	0.15%	0.06%
N+42.20	4	FYAJ Max	0.027805	0.053163	0.05%	0.10%
N+42.20	5	FXAJ Max	0.086454	0.01528	0.12%	0.05%
N+42.20	5	FYAJ Max	0.027769	0.053174	0.04%	0.10%
N+42.20	6	FXAJ Max	0.086314	0.015866	0.11%	0.03%
N+42.20	6	FYAJ Max	0.027738	0.055595	0.04%	0.10%
N+42.20	7	FXAJ Max	0.086314	0.016475	0.11%	0.03%
N+42.20	7	FYAJ Max	0.027746	0.057772	0.04%	0.11%
N+42.20	8	FXAJ Max	0.086456	0.01721	0.12%	0.06%
N+42.20	8	FYAJ Max	0.027807	0.060121	0.04%	0.11%
N+42.20	9	FXAJ Max	0.087539	0.017211	0.15%	0.06%
N+42.20	9	FYAJ Max	0.027791	0.060104	0.05%	0.11%
N+42.20	10	FXAJ Max	0.087924	0.017219	0.16%	0.06%
N+42.20	10	FYAJ Max	0.027826	0.060098	0.05%	0.11%
N+42.20	25	FXAJ Max	0.08931	0.015894	0.20%	0.24%
N+42.20	36	FXAJ Max	0.089298	0.015537	0.20%	0.20%
N+42.20	37	FXAJ Max	0.089257	0.015316	0.20%	0.16%
N+42.20	37	FYAJ Max	0.028203	0.051045	0.07%	0.31%
N+42.20	38	FXAJ Max	0.089175	0.015227	0.20%	0.12%
N+42.20	38	FYAJ Max	0.028172	0.051594	0.07%	0.22%

N+42.20	39	FXAJ Max	0.089041	0.015271	0.19%	0.09%
N+42.20	39	FYAJ Max	0.028123	0.052476	0.07%	0.15%
N+42.20	41	FXAJ Max	0.08881	0.0159	0.18%	0.04%
N+42.20	41	FYAJ Max	0.028052	0.055691	0.06%	0.11%
N+42.20	42	FXAJ Max	0.088805	0.016506	0.18%	0.04%
N+42.20	42	FYAJ Max	0.028052	0.057868	0.06%	0.11%
N+42.20	50	FXAJ Max	0.088987	0.018306	0.19%	0.09%
N+42.20	50	FYAJ Max	0.028137	0.063521	0.07%	0.19%
N+42.20	51	FXAJ Max	0.089088	0.019485	0.19%	0.13%
N+42.20	51	FYAJ Max	0.02819	0.067243	0.08%	0.31%
N+42.20	52	FXAJ Max	0.089137	0.020784	0.20%	0.17%
N+42.20	67	FXAJ Max	0.089564	0.015894	0.21%	0.24%
N+42.20	68	FXAJ Max	0.089568	0.015538	0.21%	0.20%
N+42.20	69	FXAJ Max	0.089584	0.015317	0.21%	0.16%
N+42.20	69	FYAJ Max	0.028326	0.051045	0.08%	0.31%
N+42.20	70	FXAJ Max	0.089624	0.015229	0.21%	0.12%
N+42.20	70	FYAJ Max	0.028331	0.051596	0.08%	0.22%
N+42.20	71	FXAJ Max	0.089698	0.015272	0.21%	0.09%
N+42.20	71	FYAJ Max	0.028343	0.052469	0.08%	0.15%
N+42.20	73	FXAJ Max	0.08986	0.015901	0.21%	0.04%
N+42.20	73	FYAJ Max	0.028386	0.055694	0.07%	0.11%
N+42.20	74	FXAJ Max	0.089857	0.016507	0.21%	0.04%
N+42.20	74	FYAJ Max	0.028392	0.057871	0.07%	0.11%
N+42.20	76	FXAJ Max	0.089703	0.018305	0.21%	0.10%
N+42.20	76	FYAJ Max	0.028414	0.063512	0.09%	0.19%
N+42.20	77	FXAJ Max	0.089638	0.019486	0.21%	0.13%
N+42.20	77	FYAJ Max	0.028428	0.067246	0.10%	0.31%
N+42.20	78	FXAJ Max	0.089608	0.020784	0.21%	0.17%
N+42.20	100	FXAJ Max	0.088869	0.015442	0.19%	0.06%
N+42.20	100	FYAJ Max	0.028067	0.053634	0.06%	0.12%
N+42.20	102	FXAJ Max	0.089806	0.01545	0.21%	0.06%
N+42.20	102	FYAJ Max	0.028369	0.053664	0.07%	0.12%
N+42.20	104	FXAJ Max	0.088846	0.017378	0.19%	0.07%
N+42.20	104	FYAJ Max	0.028071	0.060634	0.06%	0.13%
N+42.20	106	FXAJ Max	0.089802	0.017388	0.21%	0.07%
N+42.20	106	FYAJ Max	0.028402	0.06067	0.08%	0.13%
N+42.20	29	FXAJ Max	0.089151	0.022166	0.20%	0.22%
N+42.20	30	FXAJ Max	0.0896	0.022166	0.21%	0.22%
N+42.20	33	FXAJ Max	0.086772	0.015899	0.12%	0.03%
N+42.20	33	FYAJ Max	0.027689	0.055706	0.04%	0.11%
N+42.20	34	FXAJ Max	0.087313	0.015914	0.14%	0.03%
N+42.20	34	FYAJ Max	0.027718	0.055751	0.04%	0.11%

N+42.20	35	FXAJ Max	0.087849	0.015904	0.15%	0.03%
N+42.20	35	FYAJ Max	0.027801	0.05571	0.05%	0.11%
N+42.20	53	FXAJ Max	0.086772	0.016508	0.12%	0.03%
N+42.20	53	FYAJ Max	0.027701	0.057884	0.04%	0.11%
N+42.20	66	FXAJ Max	0.087312	0.016521	0.14%	0.04%
N+42.20	66	FYAJ Max	0.027732	0.057926	0.04%	0.11%
N+42.20	79	FXAJ Max	0.087848	0.016508	0.15%	0.04%
N+42.20	79	FYAJ Max	0.027809	0.057879	0.05%	0.11%
N+39.20	1	FXAJ Max	0.083313	0.012683	0.18%	0.03%
N+39.20	1	FYAJ Max	0.026375	0.044314	0.06%	0.10%
N+39.20	2	FXAJ Max	0.083313	0.013815	0.18%	0.03%
N+39.20	2	FYAJ Max	0.026375	0.048392	0.06%	0.10%
N+39.20	3	FXAJ Max	0.083313	0.014338	0.18%	0.03%
N+39.20	3	FYAJ Max	0.026375	0.050254	0.06%	0.11%
N+39.20	4	FXAJ Max	0.08323	0.014338	0.18%	0.03%
N+39.20	4	FYAJ Max	0.026438	0.050254	0.06%	0.11%
N+39.20	5	FXAJ Max	0.083045	0.014338	0.18%	0.03%
N+39.20	5	FYAJ Max	0.026705	0.050254	0.06%	0.11%
N+39.20	6	FXAJ Max	0.083045	0.014986	0.18%	0.03%
N+39.20	6	FYAJ Max	0.026705	0.052549	0.06%	0.11%
N+39.20	7	FXAJ Max	0.083045	0.015583	0.18%	0.03%
N+39.20	7	FYAJ Max	0.026705	0.054653	0.06%	0.11%
N+39.20	8	FXAJ Max	0.083045	0.016248	0.18%	0.03%
N+39.20	8	FYAJ Max	0.026705	0.056982	0.06%	0.12%
N+39.20	9	FXAJ Max	0.08323	0.016248	0.18%	0.03%
N+39.20	9	FYAJ Max	0.026438	0.056982	0.06%	0.12%
N+39.20	10	FXAJ Max	0.083313	0.016248	0.18%	0.03%
N+39.20	10	FYAJ Max	0.026375	0.056982	0.06%	0.12%
N+39.20	11	FXAJ Max	0.083313	0.016797	0.18%	0.03%
N+39.20	11	FYAJ Max	0.026375	0.058899	0.06%	0.12%
N+39.20	12	FXAJ Max	0.083313	0.018033	0.18%	0.04%
N+39.20	12	FYAJ Max	0.026375	0.06319	0.06%	0.13%
N+39.20	19	FXAJ Max	0.083313	0.011775	0.18%	0.03%
N+39.20	19	FYAJ Max	0.026375	0.040986	0.06%	0.09%
N+39.20	20	FXAJ Max	0.083836	0.011775	0.18%	0.03%
N+39.20	20	FYAJ Max	0.026724	0.040986	0.06%	0.09%
N+39.20	21	FXAJ Max	0.083313	0.011231	0.18%	0.03%
N+39.20	21	FYAJ Max	0.026375	0.038954	0.06%	0.09%
N+39.20	22	FXAJ Max	0.083313	0.011519	0.18%	0.03%
N+39.20	22	FYAJ Max	0.026375	0.040035	0.06%	0.09%
N+39.20	23	FXAJ Max	0.083836	0.011231	0.18%	0.03%
N+39.20	23	FYAJ Max	0.026724	0.038954	0.06%	0.09%

N+39.20	24	FXAJ Max	0.083836	0.011519	0.18%	0.03%
N+39.20	24	FYAJ Max	0.026724	0.040035	0.06%	0.09%
N+39.20	26	FXAJ Max	0.083578	0.011519	0.18%	0.03%
N+39.20	26	FYAJ Max	0.026399	0.040035	0.06%	0.09%
N+39.20	27	FXAJ Max	0.083487	0.011519	0.18%	0.03%
N+39.20	27	FYAJ Max	0.026354	0.040035	0.06%	0.09%
N+39.20	25	FXAJ Max	0.083402	0.011602	0.18%	0.03%
N+39.20	25	FYAJ Max	0.026346	0.040341	0.06%	0.09%
N+39.20	36	FXAJ Max	0.083402	0.012135	0.18%	0.03%
N+39.20	36	FYAJ Max	0.026346	0.042313	0.06%	0.09%
N+39.20	37	FXAJ Max	0.083402	0.012683	0.18%	0.03%
N+39.20	37	FYAJ Max	0.026346	0.044314	0.06%	0.10%
N+39.20	38	FXAJ Max	0.083402	0.013244	0.18%	0.03%
N+39.20	38	FYAJ Max	0.026346	0.046342	0.06%	0.10%
N+39.20	39	FXAJ Max	0.083402	0.013815	0.18%	0.03%
N+39.20	39	FYAJ Max	0.026346	0.048392	0.06%	0.10%
N+39.20	41	FXAJ Max	0.083402	0.014986	0.18%	0.03%
N+39.20	41	FYAJ Max	0.026346	0.052549	0.06%	0.11%
N+39.20	42	FXAJ Max	0.083402	0.015583	0.18%	0.03%
N+39.20	42	FYAJ Max	0.026346	0.054653	0.06%	0.11%
N+39.20	50	FXAJ Max	0.083402	0.016797	0.18%	0.03%
N+39.20	50	FYAJ Max	0.026346	0.058899	0.06%	0.12%
N+39.20	51	FXAJ Max	0.083402	0.017412	0.18%	0.04%
N+39.20	51	FYAJ Max	0.026346	0.06104	0.06%	0.12%
N+39.20	52	FXAJ Max	0.083402	0.018033	0.18%	0.04%
N+39.20	52	FYAJ Max	0.026346	0.06319	0.06%	0.13%
N+39.20	64	FXAJ Max	0.083757	0.017412	0.18%	0.04%
N+39.20	64	FYAJ Max	0.026596	0.06104	0.06%	0.12%
N+39.20	65	FXAJ Max	0.083757	0.018033	0.18%	0.04%
N+39.20	65	FYAJ Max	0.026596	0.06319	0.06%	0.13%
N+39.20	67	FXAJ Max	0.083578	0.011602	0.18%	0.03%
N+39.20	67	FYAJ Max	0.026399	0.040341	0.06%	0.09%
N+39.20	68	FXAJ Max	0.083578	0.012135	0.18%	0.03%
N+39.20	68	FYAJ Max	0.026399	0.042313	0.06%	0.09%
N+39.20	69	FXAJ Max	0.083578	0.012683	0.18%	0.03%
N+39.20	69	FYAJ Max	0.026399	0.044314	0.06%	0.10%
N+39.20	70	FXAJ Max	0.083578	0.013244	0.18%	0.03%
N+39.20	70	FYAJ Max	0.026399	0.046342	0.06%	0.10%
N+39.20	71	FXAJ Max	0.083578	0.013815	0.18%	0.03%
N+39.20	71	FYAJ Max	0.026399	0.048392	0.06%	0.10%
N+39.20	73	FXAJ Max	0.083578	0.014986	0.18%	0.03%
N+39.20	73	FYAJ Max	0.026399	0.052549	0.06%	0.11%

N+39.20	74	FXAJ Max	0.083578	0.015583	0.18%	0.03%
N+39.20	74	FYAJ Max	0.026399	0.054653	0.06%	0.11%
N+39.20	76	FXAJ Max	0.083578	0.016797	0.18%	0.03%
N+39.20	76	FYAJ Max	0.026399	0.058899	0.06%	0.12%
N+39.20	77	FXAJ Max	0.083578	0.017412	0.18%	0.04%
N+39.20	77	FYAJ Max	0.026399	0.06104	0.06%	0.12%
N+39.20	78	FXAJ Max	0.083578	0.018033	0.18%	0.04%
N+39.20	78	FYAJ Max	0.026399	0.06319	0.06%	0.13%
N+39.20	80	FXAJ Max	0.083487	0.011231	0.18%	0.03%
N+39.20	80	FYAJ Max	0.026354	0.038954	0.06%	0.09%
N+39.20	81	FXAJ Max	0.083654	0.011231	0.18%	0.03%
N+39.20	81	FYAJ Max	0.026466	0.038954	0.06%	0.09%
N+39.20	100	FXAJ Max	0.083402	0.014338	0.18%	0.03%
N+39.20	100	FYAJ Max	0.026346	0.050254	0.06%	0.11%
N+39.20	102	FXAJ Max	0.083578	0.014338	0.18%	0.03%
N+39.20	102	FYAJ Max	0.026399	0.050254	0.06%	0.11%
N+39.20	104	FXAJ Max	0.083402	0.016248	0.18%	0.03%
N+39.20	104	FYAJ Max	0.026346	0.056982	0.06%	0.12%
N+39.20	106	FXAJ Max	0.083578	0.016248	0.18%	0.03%
N+39.20	106	FYAJ Max	0.026399	0.056982	0.06%	0.12%
N+39.20	40	FXAJ Max	0.083313	0.019079	0.18%	0.04%
N+39.20	40	FYAJ Max	0.026375	0.066804	0.06%	0.13%
N+39.20	43	FXAJ Max	0.083836	0.019079	0.18%	0.04%
N+39.20	43	FYAJ Max	0.026724	0.066804	0.06%	0.13%
N+39.20	44	FXAJ Max	0.083836	0.019385	0.18%	0.04%
N+39.20	44	FYAJ Max	0.026724	0.067858	0.06%	0.14%
N+39.20	45	FXAJ Max	0.083836	0.019737	0.18%	0.04%
N+39.20	45	FYAJ Max	0.026724	0.06907	0.06%	0.14%
N+39.20	46	FXAJ Max	0.083313	0.019385	0.18%	0.04%
N+39.20	46	FYAJ Max	0.026375	0.067858	0.06%	0.14%
N+39.20	47	FXAJ Max	0.083313	0.019737	0.18%	0.04%
N+39.20	47	FYAJ Max	0.026375	0.06907	0.06%	0.14%
N+39.20	48	FXAJ Max	0.083487	0.019385	0.18%	0.04%
N+39.20	48	FYAJ Max	0.026354	0.067858	0.06%	0.14%
N+39.20	49	FXAJ Max	0.083578	0.019385	0.18%	0.04%
N+39.20	49	FYAJ Max	0.026399	0.067858	0.06%	0.14%
N+39.20	59	FXAJ Max	0.083402	0.019286	0.18%	0.04%
N+39.20	59	FYAJ Max	0.026346	0.067517	0.06%	0.14%
N+39.20	62	FXAJ Max	0.083757	0.019286	0.18%	0.04%
N+39.20	62	FYAJ Max	0.026596	0.067517	0.06%	0.14%
N+39.20	72	FXAJ Max	0.083578	0.019286	0.18%	0.04%
N+39.20	72	FYAJ Max	0.026399	0.067517	0.06%	0.14%

N+39.20	75	FXAJ Max	0.083654	0.019737	0.18%	0.04%
N+39.20	75	FYAJ Max	0.026466	0.06907	0.06%	0.14%
N+39.20	91	FXAJ Max	0.083487	0.019737	0.18%	0.04%
N+39.20	91	FYAJ Max	0.026354	0.06907	0.06%	0.14%
N+39.20	28	FXAJ Max	0.083757	0.018657	0.18%	0.04%
N+39.20	28	FYAJ Max	0.026596	0.065349	0.06%	0.13%
N+39.20	29	FXAJ Max	0.083402	0.018657	0.18%	0.04%
N+39.20	29	FYAJ Max	0.026346	0.065349	0.06%	0.13%
N+39.20	30	FXAJ Max	0.083578	0.018657	0.18%	0.04%
N+39.20	30	FYAJ Max	0.026399	0.065349	0.06%	0.13%
N+39.20	33	FXAJ Max	0.083138	0.014986	0.18%	0.03%
N+39.20	33	FYAJ Max	0.026548	0.052549	0.06%	0.11%
N+39.20	34	FXAJ Max	0.08323	0.014986	0.18%	0.03%
N+39.20	34	FYAJ Max	0.026438	0.052549	0.06%	0.11%
N+39.20	35	FXAJ Max	0.083313	0.014986	0.18%	0.03%
N+39.20	35	FYAJ Max	0.026375	0.052549	0.06%	0.11%
N+39.20	53	FXAJ Max	0.083138	0.015583	0.18%	0.03%
N+39.20	53	FYAJ Max	0.026548	0.054653	0.06%	0.11%
N+39.20	66	FXAJ Max	0.08323	0.015583	0.18%	0.03%
N+39.20	66	FYAJ Max	0.026438	0.054653	0.06%	0.11%
N+39.20	79	FXAJ Max	0.083313	0.015583	0.18%	0.03%
N+39.20	79	FYAJ Max	0.026375	0.054653	0.06%	0.11%
N+35.86	1	FXAJ Max	0.077373	0.011767	0.19%	0.03%
N+35.86	1	FYAJ Max	0.0245	0.041145	0.06%	0.10%
N+35.86	2	FXAJ Max	0.077373	0.012841	0.19%	0.03%
N+35.86	2	FYAJ Max	0.0245	0.044992	0.06%	0.11%
N+35.86	3	FXAJ Max	0.077373	0.013336	0.19%	0.03%
N+35.86	3	FYAJ Max	0.0245	0.046748	0.06%	0.12%
N+35.86	4	FXAJ Max	0.077306	0.013336	0.19%	0.03%
N+35.86	4	FYAJ Max	0.024566	0.046748	0.06%	0.12%
N+35.86	5	FXAJ Max	0.077159	0.013336	0.19%	0.03%
N+35.86	5	FYAJ Max	0.024833	0.046748	0.06%	0.12%
N+35.86	6	FXAJ Max	0.077159	0.013948	0.19%	0.03%
N+35.86	6	FYAJ Max	0.024833	0.048913	0.06%	0.12%
N+35.86	7	FXAJ Max	0.077159	0.014512	0.19%	0.04%
N+35.86	7	FYAJ Max	0.024833	0.050896	0.06%	0.12%
N+35.86	8	FXAJ Max	0.077159	0.015138	0.19%	0.04%
N+35.86	8	FYAJ Max	0.024833	0.053092	0.06%	0.13%
N+35.86	9	FXAJ Max	0.077306	0.015138	0.19%	0.04%
N+35.86	9	FYAJ Max	0.024566	0.053092	0.06%	0.13%
N+35.86	10	FXAJ Max	0.077373	0.015138	0.19%	0.04%
N+35.86	10	FYAJ Max	0.0245	0.053092	0.06%	0.13%

N+35.86	11	FXAJ Max	0.077373	0.015655	0.19%	0.04%
N+35.86	11	FYAJ Max	0.0245	0.054899	0.06%	0.13%
N+35.86	12	FXAJ Max	0.077373	0.016816	0.19%	0.04%
N+35.86	12	FYAJ Max	0.0245	0.058944	0.06%	0.14%
N+35.86	13	FXAJ Max	0.077793	0.016816	0.19%	0.04%
N+35.86	13	FYAJ Max	0.024798	0.058944	0.06%	0.14%
N+35.86	14	FXAJ Max	0.077793	0.015655	0.19%	0.04%
N+35.86	14	FYAJ Max	0.024798	0.054899	0.06%	0.13%
N+35.86	16	FXAJ Max	0.077793	0.013948	0.19%	0.03%
N+35.86	16	FYAJ Max	0.024798	0.048913	0.06%	0.12%
N+35.86	17	FXAJ Max	0.077793	0.012841	0.19%	0.03%
N+35.86	17	FYAJ Max	0.024798	0.044992	0.06%	0.11%
N+35.86	18	FXAJ Max	0.077793	0.011767	0.19%	0.03%
N+35.86	18	FYAJ Max	0.024798	0.041145	0.06%	0.10%
N+35.86	19	FXAJ Max	0.077373	0.010901	0.19%	0.03%
N+35.86	19	FYAJ Max	0.0245	0.038005	0.06%	0.10%
N+35.86	20	FXAJ Max	0.077793	0.010901	0.19%	0.03%
N+35.86	20	FYAJ Max	0.024798	0.038005	0.06%	0.10%
N+35.86	21	FXAJ Max	0.077373	0.010379	0.19%	0.03%
N+35.86	21	FYAJ Max	0.0245	0.036087	0.06%	0.10%
N+35.86	22	FXAJ Max	0.077373	0.010656	0.19%	0.03%
N+35.86	22	FYAJ Max	0.0245	0.037107	0.06%	0.10%
N+35.86	23	FXAJ Max	0.077793	0.010379	0.19%	0.03%
N+35.86	23	FYAJ Max	0.024798	0.036087	0.06%	0.10%
N+35.86	24	FXAJ Max	0.077793	0.010656	0.19%	0.03%
N+35.86	24	FYAJ Max	0.024798	0.037107	0.06%	0.10%
N+35.86	26	FXAJ Max	0.077585	0.010656	0.19%	0.03%
N+35.86	26	FYAJ Max	0.024505	0.037107	0.06%	0.10%
N+35.86	27	FXAJ Max	0.077512	0.010656	0.19%	0.03%
N+35.86	27	FYAJ Max	0.024468	0.037107	0.06%	0.10%
N+35.86	25	FXAJ Max	0.077444	0.010735	0.19%	0.03%
N+35.86	25	FYAJ Max	0.024466	0.037397	0.06%	0.10%
N+35.86	36	FXAJ Max	0.077444	0.011245	0.19%	0.03%
N+35.86	36	FYAJ Max	0.024466	0.039257	0.06%	0.10%
N+35.86	37	FXAJ Max	0.077444	0.011767	0.19%	0.03%
N+35.86	37	FYAJ Max	0.024466	0.041145	0.06%	0.10%
N+35.86	38	FXAJ Max	0.077444	0.012299	0.19%	0.03%
N+35.86	38	FYAJ Max	0.024466	0.043058	0.06%	0.11%
N+35.86	39	FXAJ Max	0.077444	0.012841	0.19%	0.03%
N+35.86	39	FYAJ Max	0.024466	0.044992	0.06%	0.11%
N+35.86	41	FXAJ Max	0.077444	0.013948	0.19%	0.03%
N+35.86	41	FYAJ Max	0.024466	0.048913	0.06%	0.12%

N+35.86	42	FXAJ Max	0.077444	0.014512	0.19%	0.04%
N+35.86	42	FYAJ Max	0.024466	0.050896	0.06%	0.12%
N+35.86	50	FXAJ Max	0.077444	0.015655	0.19%	0.04%
N+35.86	50	FYAJ Max	0.024466	0.054899	0.06%	0.13%
N+35.86	51	FXAJ Max	0.077444	0.016234	0.19%	0.04%
N+35.86	51	FYAJ Max	0.024466	0.056917	0.06%	0.14%
N+35.86	52	FXAJ Max	0.077444	0.016816	0.19%	0.04%
N+35.86	52	FYAJ Max	0.024466	0.058944	0.06%	0.14%
N+35.86	54	FXAJ Max	0.07773	0.010735	0.19%	0.03%
N+35.86	54	FYAJ Max	0.024681	0.037397	0.06%	0.10%
N+35.86	55	FXAJ Max	0.07773	0.011245	0.19%	0.03%
N+35.86	55	FYAJ Max	0.024681	0.039257	0.06%	0.10%
N+35.86	56	FXAJ Max	0.07773	0.011767	0.19%	0.03%
N+35.86	56	FYAJ Max	0.024681	0.041145	0.06%	0.10%
N+35.86	57	FXAJ Max	0.07773	0.012299	0.19%	0.03%
N+35.86	57	FYAJ Max	0.024681	0.043058	0.06%	0.11%
N+35.86	58	FXAJ Max	0.07773	0.012841	0.19%	0.03%
N+35.86	58	FYAJ Max	0.024681	0.044992	0.06%	0.11%
N+35.86	60	FXAJ Max	0.07773	0.013948	0.19%	0.03%
N+35.86	60	FYAJ Max	0.024681	0.048913	0.06%	0.12%
N+35.86	61	FXAJ Max	0.07773	0.014512	0.19%	0.04%
N+35.86	61	FYAJ Max	0.024681	0.050896	0.06%	0.12%
N+35.86	63	FXAJ Max	0.07773	0.015655	0.19%	0.04%
N+35.86	63	FYAJ Max	0.024681	0.054899	0.06%	0.13%
N+35.86	64	FXAJ Max	0.07773	0.016234	0.19%	0.04%
N+35.86	64	FYAJ Max	0.024681	0.056917	0.06%	0.14%
N+35.86	65	FXAJ Max	0.07773	0.016816	0.19%	0.04%
N+35.86	65	FYAJ Max	0.024681	0.058944	0.06%	0.14%
N+35.86	67	FXAJ Max	0.077585	0.010735	0.19%	0.03%
N+35.86	67	FYAJ Max	0.024505	0.037397	0.06%	0.10%
N+35.86	68	FXAJ Max	0.077585	0.011245	0.19%	0.03%
N+35.86	68	FYAJ Max	0.024505	0.039257	0.06%	0.10%
N+35.86	69	FXAJ Max	0.077585	0.011767	0.19%	0.03%
N+35.86	69	FYAJ Max	0.024505	0.041145	0.06%	0.10%
N+35.86	70	FXAJ Max	0.077585	0.012299	0.19%	0.03%
N+35.86	70	FYAJ Max	0.024505	0.043058	0.06%	0.11%
N+35.86	71	FXAJ Max	0.077585	0.012841	0.19%	0.03%
N+35.86	71	FYAJ Max	0.024505	0.044992	0.06%	0.11%
N+35.86	73	FXAJ Max	0.077585	0.013948	0.19%	0.03%
N+35.86	73	FYAJ Max	0.024505	0.048913	0.06%	0.12%
N+35.86	74	FXAJ Max	0.077585	0.014512	0.19%	0.04%
N+35.86	74	FYAJ Max	0.024505	0.050896	0.06%	0.12%

N+35.86	76	FXAJ Max	0.077585	0.015655	0.19%	0.04%
N+35.86	76	FYAJ Max	0.024505	0.054899	0.06%	0.13%
N+35.86	77	FXAJ Max	0.077585	0.016234	0.19%	0.04%
N+35.86	77	FYAJ Max	0.024505	0.056917	0.06%	0.14%
N+35.86	78	FXAJ Max	0.077585	0.016816	0.19%	0.04%
N+35.86	78	FYAJ Max	0.024505	0.058944	0.06%	0.14%
N+35.86	80	FXAJ Max	0.077512	0.010379	0.19%	0.03%
N+35.86	80	FYAJ Max	0.024468	0.036087	0.06%	0.10%
N+35.86	81	FXAJ Max	0.077647	0.010379	0.19%	0.03%
N+35.86	81	FYAJ Max	0.024564	0.036087	0.06%	0.10%
N+35.86	84	FXAJ Max	0.077793	0.014512	0.19%	0.04%
N+35.86	84	FYAJ Max	0.024798	0.050896	0.06%	0.12%
N+35.86	100	FXAJ Max	0.077444	0.013336	0.19%	0.03%
N+35.86	100	FYAJ Max	0.024466	0.046748	0.06%	0.12%
N+35.86	101	FXAJ Max	0.07773	0.013336	0.19%	0.03%
N+35.86	101	FYAJ Max	0.024681	0.046748	0.06%	0.12%
N+35.86	102	FXAJ Max	0.077585	0.013336	0.19%	0.03%
N+35.86	102	FYAJ Max	0.024505	0.046748	0.06%	0.12%
N+35.86	104	FXAJ Max	0.077444	0.015138	0.19%	0.04%
N+35.86	104	FYAJ Max	0.024466	0.053092	0.06%	0.13%
N+35.86	105	FXAJ Max	0.07773	0.015138	0.19%	0.04%
N+35.86	105	FYAJ Max	0.024681	0.053092	0.06%	0.13%
N+35.86	106	FXAJ Max	0.077585	0.015138	0.19%	0.04%
N+35.86	106	FYAJ Max	0.024505	0.053092	0.06%	0.13%
N+35.86	40	FXAJ Max	0.077373	0.017798	0.19%	0.04%
N+35.86	40	FYAJ Max	0.0245	0.06235	0.06%	0.15%
N+35.86	43	FXAJ Max	0.077793	0.017798	0.19%	0.04%
N+35.86	43	FYAJ Max	0.024798	0.06235	0.06%	0.15%
N+35.86	44	FXAJ Max	0.077793	0.018085	0.19%	0.04%
N+35.86	44	FYAJ Max	0.024798	0.063343	0.06%	0.15%
N+35.86	45	FXAJ Max	0.077793	0.018415	0.19%	0.04%
N+35.86	45	FYAJ Max	0.024798	0.064485	0.06%	0.15%
N+35.86	46	FXAJ Max	0.077373	0.018085	0.19%	0.04%
N+35.86	46	FYAJ Max	0.0245	0.063343	0.06%	0.15%
N+35.86	47	FXAJ Max	0.077373	0.018415	0.19%	0.04%
N+35.86	47	FYAJ Max	0.0245	0.064485	0.06%	0.15%
N+35.86	48	FXAJ Max	0.077512	0.018085	0.19%	0.04%
N+35.86	48	FYAJ Max	0.024468	0.063343	0.06%	0.15%
N+35.86	49	FXAJ Max	0.077585	0.018085	0.19%	0.04%
N+35.86	49	FYAJ Max	0.024505	0.063343	0.06%	0.15%
N+35.86	59	FXAJ Max	0.077444	0.017992	0.19%	0.04%
N+35.86	59	FYAJ Max	0.024466	0.063022	0.06%	0.15%

N+35.86	62	FXAJ Max	0.07773	0.017992	0.19%	0.04%
N+35.86	62	FYAJ Max	0.024681	0.063022	0.06%	0.15%
N+35.86	72	FXAJ Max	0.077585	0.017992	0.19%	0.04%
N+35.86	72	FYAJ Max	0.024505	0.063022	0.06%	0.15%
N+35.86	75	FXAJ Max	0.077647	0.018415	0.19%	0.04%
N+35.86	75	FYAJ Max	0.024564	0.064485	0.06%	0.15%
N+35.86	91	FXAJ Max	0.077512	0.018415	0.19%	0.04%
N+35.86	91	FYAJ Max	0.024468	0.064485	0.06%	0.15%
N+35.86	28	FXAJ Max	0.07773	0.017403	0.19%	0.04%
N+35.86	28	FYAJ Max	0.024681	0.060979	0.06%	0.14%
N+35.86	29	FXAJ Max	0.077444	0.017403	0.19%	0.04%
N+35.86	29	FYAJ Max	0.024466	0.060979	0.06%	0.14%
N+35.86	30	FXAJ Max	0.077585	0.017403	0.19%	0.04%
N+35.86	30	FYAJ Max	0.024505	0.060979	0.06%	0.14%
N+35.86	33	FXAJ Max	0.077233	0.013948	0.19%	0.03%
N+35.86	33	FYAJ Max	0.024677	0.048913	0.06%	0.12%
N+35.86	34	FXAJ Max	0.077306	0.013948	0.19%	0.03%
N+35.86	34	FYAJ Max	0.024566	0.048913	0.06%	0.12%
N+35.86	35	FXAJ Max	0.077373	0.013948	0.19%	0.03%
N+35.86	35	FYAJ Max	0.0245	0.048913	0.06%	0.12%
N+35.86	53	FXAJ Max	0.077233	0.014512	0.19%	0.04%
N+35.86	53	FYAJ Max	0.024677	0.050896	0.06%	0.12%
N+35.86	66	FXAJ Max	0.077306	0.014512	0.19%	0.04%
N+35.86	66	FYAJ Max	0.024566	0.050896	0.06%	0.12%
N+35.86	79	FXAJ Max	0.077373	0.014512	0.19%	0.04%
N+35.86	79	FYAJ Max	0.0245	0.050896	0.06%	0.12%
N+32.50	1	FXAJ Max	0.071119	0.010761	0.20%	0.03%
N+32.50	1	FYAJ Max	0.022525	0.037646	0.06%	0.11%
N+32.50	2	FXAJ Max	0.071119	0.011771	0.20%	0.03%
N+32.50	2	FYAJ Max	0.022525	0.041248	0.06%	0.12%
N+32.50	3	FXAJ Max	0.071119	0.012235	0.20%	0.04%
N+32.50	3	FYAJ Max	0.022525	0.042892	0.06%	0.13%
N+32.50	4	FXAJ Max	0.071065	0.012235	0.20%	0.04%
N+32.50	4	FYAJ Max	0.022591	0.042892	0.06%	0.13%
N+32.50	5	FXAJ Max	0.070946	0.012235	0.20%	0.04%
N+32.50	5	FYAJ Max	0.022853	0.042892	0.06%	0.13%
N+32.50	6	FXAJ Max	0.070946	0.012809	0.20%	0.04%
N+32.50	6	FYAJ Max	0.022853	0.044918	0.06%	0.13%
N+32.50	7	FXAJ Max	0.070946	0.013337	0.20%	0.04%
N+32.50	7	FYAJ Max	0.022853	0.046774	0.06%	0.13%
N+32.50	8	FXAJ Max	0.070946	0.013923	0.20%	0.04%
N+32.50	8	FYAJ Max	0.022853	0.04883	0.06%	0.14%

N+32.50	9	FXAJ Max	0.071065	0.013923	0.20%	0.04%
N+32.50	9	FYAJ Max	0.022591	0.04883	0.06%	0.14%
N+32.50	10	FXAJ Max	0.071119	0.013923	0.20%	0.04%
N+32.50	10	FYAJ Max	0.022525	0.04883	0.06%	0.14%
N+32.50	11	FXAJ Max	0.071119	0.014406	0.20%	0.04%
N+32.50	11	FYAJ Max	0.022525	0.05052	0.06%	0.14%
N+32.50	12	FXAJ Max	0.071119	0.01549	0.20%	0.04%
N+32.50	12	FYAJ Max	0.022525	0.054304	0.06%	0.15%
N+32.50	13	FXAJ Max	0.071463	0.01549	0.21%	0.04%
N+32.50	13	FYAJ Max	0.022783	0.054304	0.07%	0.15%
N+32.50	14	FXAJ Max	0.071463	0.014406	0.21%	0.04%
N+32.50	14	FYAJ Max	0.022783	0.05052	0.07%	0.14%
N+32.50	16	FXAJ Max	0.071463	0.012809	0.21%	0.04%
N+32.50	16	FYAJ Max	0.022783	0.044918	0.07%	0.13%
N+32.50	17	FXAJ Max	0.071463	0.011771	0.21%	0.03%
N+32.50	17	FYAJ Max	0.022783	0.041248	0.07%	0.12%
N+32.50	18	FXAJ Max	0.071463	0.010761	0.21%	0.03%
N+32.50	18	FYAJ Max	0.022783	0.037646	0.07%	0.11%
N+32.50	19	FXAJ Max	0.071119	0.009945	0.20%	0.03%
N+32.50	19	FYAJ Max	0.022525	0.034704	0.06%	0.11%
N+32.50	20	FXAJ Max	0.071463	0.009945	0.21%	0.03%
N+32.50	20	FYAJ Max	0.022783	0.034704	0.07%	0.11%
N+32.50	21	FXAJ Max	0.071119	0.009451	0.20%	0.03%
N+32.50	21	FYAJ Max	0.022525	0.032908	0.06%	0.10%
N+32.50	22	FXAJ Max	0.071119	0.009713	0.20%	0.03%
N+32.50	22	FYAJ Max	0.022525	0.033864	0.06%	0.11%
N+32.50	23	FXAJ Max	0.071463	0.009451	0.21%	0.03%
N+32.50	23	FYAJ Max	0.022783	0.032908	0.07%	0.10%
N+32.50	24	FXAJ Max	0.071463	0.009713	0.21%	0.03%
N+32.50	24	FYAJ Max	0.022783	0.033864	0.07%	0.11%
N+32.50	26	FXAJ Max	0.071293	0.009713	0.21%	0.03%
N+32.50	26	FYAJ Max	0.022517	0.033864	0.06%	0.11%
N+32.50	27	FXAJ Max	0.071233	0.009713	0.20%	0.03%
N+32.50	27	FYAJ Max	0.022486	0.033864	0.06%	0.11%
N+32.50	25	FXAJ Max	0.071177	0.009788	0.20%	0.03%
N+32.50	25	FYAJ Max	0.022489	0.034135	0.06%	0.11%
N+32.50	36	FXAJ Max	0.071177	0.010269	0.20%	0.03%
N+32.50	36	FYAJ Max	0.022489	0.035877	0.06%	0.11%
N+32.50	37	FXAJ Max	0.071177	0.010761	0.20%	0.03%
N+32.50	37	FYAJ Max	0.022489	0.037646	0.06%	0.11%
N+32.50	38	FXAJ Max	0.071177	0.011262	0.20%	0.03%
N+32.50	38	FYAJ Max	0.022489	0.039437	0.06%	0.12%

N+32.50	39	FXAJ Max	0.071177	0.011771	0.20%	0.03%
N+32.50	39	FYAJ Max	0.022489	0.041248	0.06%	0.12%
N+32.50	41	FXAJ Max	0.071177	0.012809	0.20%	0.04%
N+32.50	41	FYAJ Max	0.022489	0.044918	0.06%	0.13%
N+32.50	42	FXAJ Max	0.071177	0.013337	0.20%	0.04%
N+32.50	42	FYAJ Max	0.022489	0.046774	0.06%	0.13%
N+32.50	50	FXAJ Max	0.071177	0.014406	0.20%	0.04%
N+32.50	50	FYAJ Max	0.022489	0.05052	0.06%	0.14%
N+32.50	51	FXAJ Max	0.071177	0.014946	0.20%	0.04%
N+32.50	51	FYAJ Max	0.022489	0.052408	0.06%	0.15%
N+32.50	52	FXAJ Max	0.071177	0.01549	0.20%	0.04%
N+32.50	52	FYAJ Max	0.022489	0.054304	0.06%	0.15%
N+32.50	54	FXAJ Max	0.071411	0.009788	0.21%	0.03%
N+32.50	54	FYAJ Max	0.022675	0.034135	0.07%	0.11%
N+32.50	55	FXAJ Max	0.071411	0.010269	0.21%	0.03%
N+32.50	55	FYAJ Max	0.022675	0.035877	0.07%	0.11%
N+32.50	56	FXAJ Max	0.071411	0.010761	0.21%	0.03%
N+32.50	56	FYAJ Max	0.022675	0.037646	0.07%	0.11%
N+32.50	57	FXAJ Max	0.071411	0.011262	0.21%	0.03%
N+32.50	57	FYAJ Max	0.022675	0.039437	0.07%	0.12%
N+32.50	58	FXAJ Max	0.071411	0.011771	0.21%	0.03%
N+32.50	58	FYAJ Max	0.022675	0.041248	0.07%	0.12%
N+32.50	60	FXAJ Max	0.071411	0.012809	0.21%	0.04%
N+32.50	60	FYAJ Max	0.022675	0.044918	0.07%	0.13%
N+32.50	61	FXAJ Max	0.071411	0.013337	0.21%	0.04%
N+32.50	61	FYAJ Max	0.022675	0.046774	0.07%	0.13%
N+32.50	63	FXAJ Max	0.071411	0.014406	0.21%	0.04%
N+32.50	63	FYAJ Max	0.022675	0.05052	0.07%	0.14%
N+32.50	64	FXAJ Max	0.071411	0.014946	0.21%	0.04%
N+32.50	64	FYAJ Max	0.022675	0.052408	0.07%	0.15%
N+32.50	65	FXAJ Max	0.071411	0.01549	0.21%	0.04%
N+32.50	65	FYAJ Max	0.022675	0.054304	0.07%	0.15%
N+32.50	67	FXAJ Max	0.071293	0.009788	0.21%	0.03%
N+32.50	67	FYAJ Max	0.022517	0.034135	0.06%	0.11%
N+32.50	68	FXAJ Max	0.071293	0.010269	0.21%	0.03%
N+32.50	68	FYAJ Max	0.022517	0.035877	0.06%	0.11%
N+32.50	69	FXAJ Max	0.071293	0.010761	0.21%	0.03%
N+32.50	69	FYAJ Max	0.022517	0.037646	0.06%	0.11%
N+32.50	70	FXAJ Max	0.071293	0.011262	0.21%	0.03%
N+32.50	70	FYAJ Max	0.022517	0.039437	0.06%	0.12%
N+32.50	71	FXAJ Max	0.071293	0.011771	0.21%	0.03%
N+32.50	71	FYAJ Max	0.022517	0.041248	0.06%	0.12%

N+32.50	73	FXAJ Max	0.071293	0.012809	0.21%	0.04%
N+32.50	73	FYAJ Max	0.022517	0.044918	0.06%	0.13%
N+32.50	74	FXAJ Max	0.071293	0.013337	0.21%	0.04%
N+32.50	74	FYAJ Max	0.022517	0.046774	0.06%	0.13%
N+32.50	76	FXAJ Max	0.071293	0.014406	0.21%	0.04%
N+32.50	76	FYAJ Max	0.022517	0.05052	0.06%	0.14%
N+32.50	77	FXAJ Max	0.071293	0.014946	0.21%	0.04%
N+32.50	77	FYAJ Max	0.022517	0.052408	0.06%	0.15%
N+32.50	78	FXAJ Max	0.071293	0.01549	0.21%	0.04%
N+32.50	78	FYAJ Max	0.022517	0.054304	0.06%	0.15%
N+32.50	80	FXAJ Max	0.071233	0.009451	0.20%	0.03%
N+32.50	80	FYAJ Max	0.022486	0.032908	0.06%	0.10%
N+32.50	81	FXAJ Max	0.071343	0.009451	0.21%	0.03%
N+32.50	81	FYAJ Max	0.022569	0.032908	0.07%	0.10%
N+32.50	84	FXAJ Max	0.071463	0.013337	0.21%	0.04%
N+32.50	84	FYAJ Max	0.022783	0.046774	0.07%	0.13%
N+32.50	100	FXAJ Max	0.071177	0.012235	0.20%	0.04%
N+32.50	100	FYAJ Max	0.022489	0.042892	0.06%	0.13%
N+32.50	101	FXAJ Max	0.071411	0.012235	0.21%	0.04%
N+32.50	101	FYAJ Max	0.022675	0.042892	0.07%	0.13%
N+32.50	102	FXAJ Max	0.071293	0.012235	0.21%	0.04%
N+32.50	102	FYAJ Max	0.022517	0.042892	0.06%	0.13%
N+32.50	104	FXAJ Max	0.071177	0.013923	0.20%	0.04%
N+32.50	104	FYAJ Max	0.022489	0.04883	0.06%	0.14%
N+32.50	105	FXAJ Max	0.071411	0.013923	0.21%	0.04%
N+32.50	105	FYAJ Max	0.022675	0.04883	0.07%	0.14%
N+32.50	106	FXAJ Max	0.071293	0.013923	0.21%	0.04%
N+32.50	106	FYAJ Max	0.022517	0.04883	0.06%	0.14%
N+32.50	40	FXAJ Max	0.071119	0.016406	0.20%	0.05%
N+32.50	40	FYAJ Max	0.022525	0.057489	0.06%	0.16%
N+32.50	43	FXAJ Max	0.071463	0.016406	0.21%	0.05%
N+32.50	43	FYAJ Max	0.022783	0.057489	0.07%	0.16%
N+32.50	44	FXAJ Max	0.071463	0.016673	0.21%	0.05%
N+32.50	44	FYAJ Max	0.022783	0.058418	0.07%	0.16%
N+32.50	45	FXAJ Max	0.071463	0.016981	0.21%	0.05%
N+32.50	45	FYAJ Max	0.022783	0.059485	0.07%	0.16%
N+32.50	46	FXAJ Max	0.071119	0.016673	0.20%	0.05%
N+32.50	46	FYAJ Max	0.022525	0.058418	0.06%	0.16%
N+32.50	47	FXAJ Max	0.071119	0.016981	0.20%	0.05%
N+32.50	47	FYAJ Max	0.022525	0.059485	0.06%	0.16%
N+32.50	48	FXAJ Max	0.071233	0.016673	0.20%	0.05%
N+32.50	48	FYAJ Max	0.022486	0.058418	0.06%	0.16%

N+32.50	49	FXAJ Max	0.071293	0.016673	0.21%	0.05%
N+32.50	49	FYAJ Max	0.022517	0.058418	0.06%	0.16%
N+32.50	59	FXAJ Max	0.071177	0.016587	0.20%	0.05%
N+32.50	59	FYAJ Max	0.022489	0.058117	0.06%	0.16%
N+32.50	62	FXAJ Max	0.071411	0.016587	0.21%	0.05%
N+32.50	62	FYAJ Max	0.022675	0.058117	0.07%	0.16%
N+32.50	72	FXAJ Max	0.071293	0.016587	0.21%	0.05%
N+32.50	72	FYAJ Max	0.022517	0.058117	0.06%	0.16%
N+32.50	75	FXAJ Max	0.071343	0.016981	0.21%	0.05%
N+32.50	75	FYAJ Max	0.022569	0.059485	0.07%	0.16%
N+32.50	91	FXAJ Max	0.071233	0.016981	0.20%	0.05%
N+32.50	91	FYAJ Max	0.022486	0.059485	0.06%	0.16%
N+32.50	28	FXAJ Max	0.071411	0.016037	0.21%	0.04%
N+32.50	28	FYAJ Max	0.022675	0.056207	0.07%	0.15%
N+32.50	29	FXAJ Max	0.071177	0.016037	0.20%	0.04%
N+32.50	29	FYAJ Max	0.022489	0.056207	0.06%	0.15%
N+32.50	30	FXAJ Max	0.071293	0.016037	0.21%	0.04%
N+32.50	30	FYAJ Max	0.022517	0.056207	0.06%	0.15%
N+32.50	33	FXAJ Max	0.071006	0.012809	0.20%	0.04%
N+32.50	33	FYAJ Max	0.022701	0.044918	0.06%	0.13%
N+32.50	34	FXAJ Max	0.071065	0.012809	0.20%	0.04%
N+32.50	34	FYAJ Max	0.022591	0.044918	0.06%	0.13%
N+32.50	35	FXAJ Max	0.071119	0.012809	0.20%	0.04%
N+32.50	35	FYAJ Max	0.022525	0.044918	0.06%	0.13%
N+32.50	53	FXAJ Max	0.071006	0.013337	0.20%	0.04%
N+32.50	53	FYAJ Max	0.022701	0.046774	0.06%	0.13%
N+32.50	66	FXAJ Max	0.071065	0.013337	0.20%	0.04%
N+32.50	66	FYAJ Max	0.022591	0.046774	0.06%	0.13%
N+32.50	79	FXAJ Max	0.071119	0.013337	0.20%	0.04%
N+32.50	79	FYAJ Max	0.022525	0.046774	0.06%	0.13%
N+29.15	1	FXAJ Max	0.064344	0.009671	0.22%	0.04%
N+29.15	1	FYAJ Max	0.020385	0.033847	0.07%	0.12%
N+29.15	2	FXAJ Max	0.064344	0.010612	0.22%	0.04%
N+29.15	2	FYAJ Max	0.020385	0.03719	0.07%	0.13%
N+29.15	3	FXAJ Max	0.064344	0.011043	0.22%	0.04%
N+29.15	3	FYAJ Max	0.020385	0.038716	0.07%	0.13%
N+29.15	4	FXAJ Max	0.064301	0.011043	0.22%	0.04%
N+29.15	4	FYAJ Max	0.020451	0.038716	0.07%	0.13%
N+29.15	5	FXAJ Max	0.064209	0.011043	0.22%	0.04%
N+29.15	5	FYAJ Max	0.020707	0.038716	0.07%	0.13%
N+29.15	6	FXAJ Max	0.064209	0.011577	0.22%	0.04%
N+29.15	6	FYAJ Max	0.020707	0.040596	0.07%	0.14%

N+29.15	7	FXAJ Max	0.064209	0.012066	0.22%	0.04%
N+29.15	7	FYAJ Max	0.020707	0.042318	0.07%	0.14%
N+29.15	8	FXAJ Max	0.064209	0.012609	0.22%	0.04%
N+29.15	8	FYAJ Max	0.020707	0.044224	0.07%	0.15%
N+29.15	9	FXAJ Max	0.064301	0.012609	0.22%	0.04%
N+29.15	9	FYAJ Max	0.020451	0.044224	0.07%	0.15%
N+29.15	10	FXAJ Max	0.064344	0.012609	0.22%	0.04%
N+29.15	10	FYAJ Max	0.020385	0.044224	0.07%	0.15%
N+29.15	11	FXAJ Max	0.064344	0.013057	0.22%	0.04%
N+29.15	11	FYAJ Max	0.020385	0.045792	0.07%	0.15%
N+29.15	12	FXAJ Max	0.064344	0.01406	0.22%	0.05%
N+29.15	12	FYAJ Max	0.020385	0.049299	0.07%	0.16%
N+29.15	13	FXAJ Max	0.064615	0.01406	0.22%	0.05%
N+29.15	13	FYAJ Max	0.020603	0.049299	0.07%	0.16%
N+29.15	14	FXAJ Max	0.064615	0.013057	0.22%	0.04%
N+29.15	14	FYAJ Max	0.020603	0.045792	0.07%	0.15%
N+29.15	16	FXAJ Max	0.064615	0.011577	0.22%	0.04%
N+29.15	16	FYAJ Max	0.020603	0.040596	0.07%	0.14%
N+29.15	17	FXAJ Max	0.064615	0.010612	0.22%	0.04%
N+29.15	17	FYAJ Max	0.020603	0.03719	0.07%	0.13%
N+29.15	18	FXAJ Max	0.064615	0.009671	0.22%	0.04%
N+29.15	18	FYAJ Max	0.020603	0.033847	0.07%	0.12%
N+29.15	19	FXAJ Max	0.064344	0.008908	0.22%	0.03%
N+29.15	19	FYAJ Max	0.020385	0.031115	0.07%	0.12%
N+29.15	20	FXAJ Max	0.064615	0.008908	0.22%	0.03%
N+29.15	20	FYAJ Max	0.020603	0.031115	0.07%	0.12%
N+29.15	21	FXAJ Max	0.064344	0.008446	0.22%	0.03%
N+29.15	21	FYAJ Max	0.020385	0.029447	0.07%	0.11%
N+29.15	22	FXAJ Max	0.064344	0.008691	0.22%	0.03%
N+29.15	22	FYAJ Max	0.020385	0.030334	0.07%	0.11%
N+29.15	23	FXAJ Max	0.064615	0.008446	0.22%	0.03%
N+29.15	23	FYAJ Max	0.020603	0.029447	0.07%	0.11%
N+29.15	24	FXAJ Max	0.064615	0.008691	0.22%	0.03%
N+29.15	24	FYAJ Max	0.020603	0.030334	0.07%	0.11%
N+29.15	26	FXAJ Max	0.06448	0.008691	0.22%	0.03%
N+29.15	26	FYAJ Max	0.020364	0.030334	0.07%	0.11%
N+29.15	27	FXAJ Max	0.064433	0.008691	0.22%	0.03%
N+29.15	27	FYAJ Max	0.02034	0.030334	0.07%	0.11%
N+29.15	25	FXAJ Max	0.064389	0.008761	0.22%	0.03%
N+29.15	25	FYAJ Max	0.020346	0.030586	0.07%	0.11%
N+29.15	36	FXAJ Max	0.064389	0.009211	0.22%	0.03%
N+29.15	36	FYAJ Max	0.020346	0.032204	0.07%	0.12%

N+29.15	37	FXAJ Max	0.064389	0.009671	0.22%	0.04%
N+29.15	37	FYAJ Max	0.020346	0.033847	0.07%	0.12%
N+29.15	38	FXAJ Max	0.064389	0.010138	0.22%	0.04%
N+29.15	38	FYAJ Max	0.020346	0.03551	0.07%	0.13%
N+29.15	39	FXAJ Max	0.064389	0.010612	0.22%	0.04%
N+29.15	39	FYAJ Max	0.020346	0.03719	0.07%	0.13%
N+29.15	41	FXAJ Max	0.064389	0.011577	0.22%	0.04%
N+29.15	41	FYAJ Max	0.020346	0.040596	0.07%	0.14%
N+29.15	42	FXAJ Max	0.064389	0.012066	0.22%	0.04%
N+29.15	42	FYAJ Max	0.020346	0.042318	0.07%	0.14%
N+29.15	50	FXAJ Max	0.064389	0.013057	0.22%	0.04%
N+29.15	50	FYAJ Max	0.020346	0.045792	0.07%	0.15%
N+29.15	51	FXAJ Max	0.064389	0.013557	0.22%	0.04%
N+29.15	51	FYAJ Max	0.020346	0.047541	0.07%	0.16%
N+29.15	52	FXAJ Max	0.064389	0.01406	0.22%	0.05%
N+29.15	52	FYAJ Max	0.020346	0.049299	0.07%	0.16%
N+29.15	54	FXAJ Max	0.064574	0.008761	0.22%	0.03%
N+29.15	54	FYAJ Max	0.020506	0.030586	0.07%	0.11%
N+29.15	55	FXAJ Max	0.064574	0.009211	0.22%	0.03%
N+29.15	55	FYAJ Max	0.020506	0.032204	0.07%	0.12%
N+29.15	56	FXAJ Max	0.064574	0.009671	0.22%	0.04%
N+29.15	56	FYAJ Max	0.020506	0.033847	0.07%	0.12%
N+29.15	57	FXAJ Max	0.064574	0.010138	0.22%	0.04%
N+29.15	57	FYAJ Max	0.020506	0.03551	0.07%	0.13%
N+29.15	58	FXAJ Max	0.064574	0.010612	0.22%	0.04%
N+29.15	58	FYAJ Max	0.020506	0.03719	0.07%	0.13%
N+29.15	60	FXAJ Max	0.064574	0.011577	0.22%	0.04%
N+29.15	60	FYAJ Max	0.020506	0.040596	0.07%	0.14%
N+29.15	61	FXAJ Max	0.064574	0.012066	0.22%	0.04%
N+29.15	61	FYAJ Max	0.020506	0.042318	0.07%	0.14%
N+29.15	63	FXAJ Max	0.064574	0.013057	0.22%	0.04%
N+29.15	63	FYAJ Max	0.020506	0.045792	0.07%	0.15%
N+29.15	64	FXAJ Max	0.064574	0.013557	0.22%	0.04%
N+29.15	64	FYAJ Max	0.020506	0.047541	0.07%	0.16%
N+29.15	65	FXAJ Max	0.064574	0.01406	0.22%	0.05%
N+29.15	65	FYAJ Max	0.020506	0.049299	0.07%	0.16%
N+29.15	67	FXAJ Max	0.06448	0.008761	0.22%	0.03%
N+29.15	67	FYAJ Max	0.020364	0.030586	0.07%	0.11%
N+29.15	68	FXAJ Max	0.06448	0.009211	0.22%	0.03%
N+29.15	68	FYAJ Max	0.020364	0.032204	0.07%	0.12%
N+29.15	69	FXAJ Max	0.06448	0.009671	0.22%	0.04%
N+29.15	69	FYAJ Max	0.020364	0.033847	0.07%	0.12%

N+29.15	70	FXAJ Max	0.06448	0.010138	0.22%	0.04%
N+29.15	70	FYAJ Max	0.020364	0.03551	0.07%	0.13%
N+29.15	71	FXAJ Max	0.06448	0.010612	0.22%	0.04%
N+29.15	71	FYAJ Max	0.020364	0.03719	0.07%	0.13%
N+29.15	73	FXAJ Max	0.06448	0.011577	0.22%	0.04%
N+29.15	73	FYAJ Max	0.020364	0.040596	0.07%	0.14%
N+29.15	74	FXAJ Max	0.06448	0.012066	0.22%	0.04%
N+29.15	74	FYAJ Max	0.020364	0.042318	0.07%	0.14%
N+29.15	76	FXAJ Max	0.06448	0.013057	0.22%	0.04%
N+29.15	76	FYAJ Max	0.020364	0.045792	0.07%	0.15%
N+29.15	77	FXAJ Max	0.06448	0.013557	0.22%	0.04%
N+29.15	77	FYAJ Max	0.020364	0.047541	0.07%	0.16%
N+29.15	78	FXAJ Max	0.06448	0.01406	0.22%	0.05%
N+29.15	78	FYAJ Max	0.020364	0.049299	0.07%	0.16%
N+29.15	80	FXAJ Max	0.064433	0.008446	0.22%	0.03%
N+29.15	80	FYAJ Max	0.02034	0.029447	0.07%	0.11%
N+29.15	81	FXAJ Max	0.06452	0.008446	0.22%	0.03%
N+29.15	81	FYAJ Max	0.02041	0.029447	0.07%	0.11%
N+29.15	84	FXAJ Max	0.064615	0.012066	0.22%	0.04%
N+29.15	84	FYAJ Max	0.020603	0.042318	0.07%	0.14%
N+29.15	100	FXAJ Max	0.064389	0.011043	0.22%	0.04%
N+29.15	100	FYAJ Max	0.020346	0.038716	0.07%	0.13%
N+29.15	101	FXAJ Max	0.064574	0.011043	0.22%	0.04%
N+29.15	101	FYAJ Max	0.020506	0.038716	0.07%	0.13%
N+29.15	102	FXAJ Max	0.06448	0.011043	0.22%	0.04%
N+29.15	102	FYAJ Max	0.020364	0.038716	0.07%	0.13%
N+29.15	104	FXAJ Max	0.064389	0.012609	0.22%	0.04%
N+29.15	104	FYAJ Max	0.020346	0.044224	0.07%	0.15%
N+29.15	105	FXAJ Max	0.064574	0.012609	0.22%	0.04%
N+29.15	105	FYAJ Max	0.020506	0.044224	0.07%	0.15%
N+29.15	106	FXAJ Max	0.06448	0.012609	0.22%	0.04%
N+29.15	106	FYAJ Max	0.020364	0.044224	0.07%	0.15%
N+29.15	40	FXAJ Max	0.064344	0.014907	0.22%	0.05%
N+29.15	40	FYAJ Max	0.020385	0.05225	0.07%	0.17%
N+29.15	43	FXAJ Max	0.064615	0.014907	0.22%	0.05%
N+29.15	43	FYAJ Max	0.020603	0.05225	0.07%	0.17%
N+29.15	44	FXAJ Max	0.064615	0.015154	0.22%	0.05%
N+29.15	44	FYAJ Max	0.020603	0.053111	0.07%	0.17%
N+29.15	45	FXAJ Max	0.064615	0.015438	0.22%	0.05%
N+29.15	45	FYAJ Max	0.020603	0.0541	0.07%	0.17%
N+29.15	46	FXAJ Max	0.064344	0.015154	0.22%	0.05%
N+29.15	46	FYAJ Max	0.020385	0.053111	0.07%	0.17%

N+29.15	47	FXAJ Max	0.064344	0.015438	0.22%	0.05%
N+29.15	47	FYAJ Max	0.020385	0.0541	0.07%	0.17%
N+29.15	48	FXAJ Max	0.064433	0.015154	0.22%	0.05%
N+29.15	48	FYAJ Max	0.02034	0.053111	0.07%	0.17%
N+29.15	49	FXAJ Max	0.06448	0.015154	0.22%	0.05%
N+29.15	49	FYAJ Max	0.020364	0.053111	0.07%	0.17%
N+29.15	59	FXAJ Max	0.064389	0.015074	0.22%	0.05%
N+29.15	59	FYAJ Max	0.020346	0.052832	0.07%	0.17%
N+29.15	62	FXAJ Max	0.064574	0.015074	0.22%	0.05%
N+29.15	62	FYAJ Max	0.020506	0.052832	0.07%	0.17%
N+29.15	72	FXAJ Max	0.06448	0.015074	0.22%	0.05%
N+29.15	72	FYAJ Max	0.020364	0.052832	0.07%	0.17%
N+29.15	75	FXAJ Max	0.06452	0.015438	0.22%	0.05%
N+29.15	75	FYAJ Max	0.02041	0.0541	0.07%	0.17%
N+29.15	91	FXAJ Max	0.064433	0.015438	0.22%	0.05%
N+29.15	91	FYAJ Max	0.02034	0.0541	0.07%	0.17%
N+29.15	28	FXAJ Max	0.064574	0.014566	0.22%	0.05%
N+29.15	28	FYAJ Max	0.020506	0.051063	0.07%	0.17%
N+29.15	29	FXAJ Max	0.064389	0.014566	0.22%	0.05%
N+29.15	29	FYAJ Max	0.020346	0.051063	0.07%	0.17%
N+29.15	30	FXAJ Max	0.06448	0.014566	0.22%	0.05%
N+29.15	30	FYAJ Max	0.020364	0.051063	0.07%	0.17%
N+29.15	33	FXAJ Max	0.064256	0.011577	0.22%	0.04%
N+29.15	33	FYAJ Max	0.020559	0.040596	0.07%	0.14%
N+29.15	34	FXAJ Max	0.064301	0.011577	0.22%	0.04%
N+29.15	34	FYAJ Max	0.020451	0.040596	0.07%	0.14%
N+29.15	35	FXAJ Max	0.064344	0.011577	0.22%	0.04%
N+29.15	35	FYAJ Max	0.020385	0.040596	0.07%	0.14%
N+29.15	53	FXAJ Max	0.064256	0.012066	0.22%	0.04%
N+29.15	53	FYAJ Max	0.020559	0.042318	0.07%	0.14%
N+29.15	66	FXAJ Max	0.064301	0.012066	0.22%	0.04%
N+29.15	66	FYAJ Max	0.020451	0.042318	0.07%	0.14%
N+29.15	79	FXAJ Max	0.064344	0.012066	0.22%	0.04%
N+29.15	79	FYAJ Max	0.020385	0.042318	0.07%	0.14%
N+25.80	1	FXAJ Max	0.057003	0.008499	0.24%	0.04%
N+25.80	1	FYAJ Max	0.018066	0.029759	0.07%	0.13%
N+25.80	2	FXAJ Max	0.057003	0.009366	0.24%	0.04%
N+25.80	2	FYAJ Max	0.018066	0.032828	0.07%	0.14%
N+25.80	3	FXAJ Max	0.057003	0.009763	0.24%	0.04%
N+25.80	3	FYAJ Max	0.018066	0.034228	0.07%	0.14%
N+25.80	4	FXAJ Max	0.056971	0.009763	0.24%	0.04%
N+25.80	4	FYAJ Max	0.018132	0.034228	0.07%	0.14%

N+25.80	5	FXAJ Max	0.056903	0.009763	0.24%	0.04%
N+25.80	5	FYAJ Max	0.018381	0.034228	0.08%	0.14%
N+25.80	6	FXAJ Max	0.056903	0.010253	0.24%	0.04%
N+25.80	6	FYAJ Max	0.018381	0.035953	0.08%	0.15%
N+25.80	7	FXAJ Max	0.056903	0.010702	0.24%	0.04%
N+25.80	7	FYAJ Max	0.018381	0.037532	0.08%	0.15%
N+25.80	8	FXAJ Max	0.056903	0.0112	0.24%	0.04%
N+25.80	8	FYAJ Max	0.018381	0.03928	0.08%	0.16%
N+25.80	9	FXAJ Max	0.056971	0.0112	0.24%	0.04%
N+25.80	9	FYAJ Max	0.018132	0.03928	0.07%	0.16%
N+25.80	10	FXAJ Max	0.057003	0.0112	0.24%	0.04%
N+25.80	10	FYAJ Max	0.018066	0.03928	0.07%	0.16%
N+25.80	11	FXAJ Max	0.057003	0.01161	0.24%	0.05%
N+25.80	11	FYAJ Max	0.018066	0.040717	0.07%	0.16%
N+25.80	12	FXAJ Max	0.057003	0.012528	0.24%	0.05%
N+25.80	12	FYAJ Max	0.018066	0.04393	0.07%	0.17%
N+25.80	13	FXAJ Max	0.057207	0.012528	0.24%	0.05%
N+25.80	13	FYAJ Max	0.018248	0.04393	0.08%	0.17%
N+25.80	14	FXAJ Max	0.057207	0.01161	0.24%	0.05%
N+25.80	14	FYAJ Max	0.018248	0.040717	0.08%	0.16%
N+25.80	16	FXAJ Max	0.057207	0.010253	0.24%	0.04%
N+25.80	16	FYAJ Max	0.018248	0.035953	0.08%	0.15%
N+25.80	17	FXAJ Max	0.057207	0.009366	0.24%	0.04%
N+25.80	17	FYAJ Max	0.018248	0.032828	0.08%	0.14%
N+25.80	18	FXAJ Max	0.057207	0.008499	0.24%	0.04%
N+25.80	18	FYAJ Max	0.018248	0.029759	0.08%	0.13%
N+25.80	19	FXAJ Max	0.057003	0.007795	0.24%	0.04%
N+25.80	19	FYAJ Max	0.018066	0.02725	0.07%	0.12%
N+25.80	20	FXAJ Max	0.057207	0.007795	0.24%	0.04%
N+25.80	20	FYAJ Max	0.018248	0.02725	0.08%	0.12%
N+25.80	21	FXAJ Max	0.057003	0.007367	0.24%	0.03%
N+25.80	21	FYAJ Max	0.018066	0.025717	0.07%	0.12%
N+25.80	22	FXAJ Max	0.057003	0.007594	0.24%	0.03%
N+25.80	22	FYAJ Max	0.018066	0.026532	0.07%	0.12%
N+25.80	23	FXAJ Max	0.057207	0.007367	0.24%	0.03%
N+25.80	23	FYAJ Max	0.018248	0.025717	0.08%	0.12%
N+25.80	24	FXAJ Max	0.057207	0.007594	0.24%	0.03%
N+25.80	24	FYAJ Max	0.018248	0.026532	0.08%	0.12%
N+25.80	26	FXAJ Max	0.057104	0.007594	0.24%	0.03%
N+25.80	26	FYAJ Max	0.018035	0.026532	0.07%	0.12%
N+25.80	27	FXAJ Max	0.057069	0.007594	0.24%	0.03%
N+25.80	27	FYAJ Max	0.018015	0.026532	0.07%	0.12%

N+25.80	25	FXAJ Max	0.057036	0.007659	0.24%	0.03%
N+25.80	25	FYAJ Max	0.018026	0.026764	0.07%	0.12%
N+25.80	36	FXAJ Max	0.057036	0.008075	0.24%	0.04%
N+25.80	36	FYAJ Max	0.018026	0.02825	0.07%	0.13%
N+25.80	37	FXAJ Max	0.057036	0.008499	0.24%	0.04%
N+25.80	37	FYAJ Max	0.018026	0.029759	0.07%	0.13%
N+25.80	38	FXAJ Max	0.057036	0.00893	0.24%	0.04%
N+25.80	38	FYAJ Max	0.018026	0.031285	0.07%	0.13%
N+25.80	39	FXAJ Max	0.057036	0.009366	0.24%	0.04%
N+25.80	39	FYAJ Max	0.018026	0.032828	0.07%	0.14%
N+25.80	41	FXAJ Max	0.057036	0.010253	0.24%	0.04%
N+25.80	41	FYAJ Max	0.018026	0.035953	0.07%	0.15%
N+25.80	42	FXAJ Max	0.057036	0.010702	0.24%	0.04%
N+25.80	42	FYAJ Max	0.018026	0.037532	0.07%	0.15%
N+25.80	50	FXAJ Max	0.057036	0.01161	0.24%	0.05%
N+25.80	50	FYAJ Max	0.018026	0.040717	0.07%	0.16%
N+25.80	51	FXAJ Max	0.057036	0.012068	0.24%	0.05%
N+25.80	51	FYAJ Max	0.018026	0.04232	0.07%	0.17%
N+25.80	52	FXAJ Max	0.057036	0.012528	0.24%	0.05%
N+25.80	52	FYAJ Max	0.018026	0.04393	0.07%	0.17%
N+25.80	54	FXAJ Max	0.057175	0.007659	0.24%	0.03%
N+25.80	54	FYAJ Max	0.018159	0.026764	0.08%	0.12%
N+25.80	55	FXAJ Max	0.057175	0.008075	0.24%	0.04%
N+25.80	55	FYAJ Max	0.018159	0.02825	0.08%	0.13%
N+25.80	56	FXAJ Max	0.057175	0.008499	0.24%	0.04%
N+25.80	56	FYAJ Max	0.018159	0.029759	0.08%	0.13%
N+25.80	57	FXAJ Max	0.057175	0.00893	0.24%	0.04%
N+25.80	57	FYAJ Max	0.018159	0.031285	0.08%	0.13%
N+25.80	58	FXAJ Max	0.057175	0.009366	0.24%	0.04%
N+25.80	58	FYAJ Max	0.018159	0.032828	0.08%	0.14%
N+25.80	60	FXAJ Max	0.057175	0.010253	0.24%	0.04%
N+25.80	60	FYAJ Max	0.018159	0.035953	0.08%	0.15%
N+25.80	61	FXAJ Max	0.057175	0.010702	0.24%	0.04%
N+25.80	61	FYAJ Max	0.018159	0.037532	0.08%	0.15%
N+25.80	63	FXAJ Max	0.057175	0.01161	0.24%	0.05%
N+25.80	63	FYAJ Max	0.018159	0.040717	0.08%	0.16%
N+25.80	64	FXAJ Max	0.057175	0.012068	0.24%	0.05%
N+25.80	64	FYAJ Max	0.018159	0.04232	0.08%	0.17%
N+25.80	65	FXAJ Max	0.057175	0.012528	0.24%	0.05%
N+25.80	65	FYAJ Max	0.018159	0.04393	0.08%	0.17%
N+25.80	67	FXAJ Max	0.057104	0.007659	0.24%	0.03%
N+25.80	67	FYAJ Max	0.018035	0.026764	0.07%	0.12%

N+25.80	68	FXAJ Max	0.057104	0.008075	0.24%	0.04%
N+25.80	68	FYAJ Max	0.018035	0.02825	0.07%	0.13%
N+25.80	69	FXAJ Max	0.057104	0.008499	0.24%	0.04%
N+25.80	69	FYAJ Max	0.018035	0.029759	0.07%	0.13%
N+25.80	70	FXAJ Max	0.057104	0.00893	0.24%	0.04%
N+25.80	70	FYAJ Max	0.018035	0.031285	0.07%	0.13%
N+25.80	71	FXAJ Max	0.057104	0.009366	0.24%	0.04%
N+25.80	71	FYAJ Max	0.018035	0.032828	0.07%	0.14%
N+25.80	73	FXAJ Max	0.057104	0.010253	0.24%	0.04%
N+25.80	73	FYAJ Max	0.018035	0.035953	0.07%	0.15%
N+25.80	74	FXAJ Max	0.057104	0.010702	0.24%	0.04%
N+25.80	74	FYAJ Max	0.018035	0.037532	0.07%	0.15%
N+25.80	76	FXAJ Max	0.057104	0.01161	0.24%	0.05%
N+25.80	76	FYAJ Max	0.018035	0.040717	0.07%	0.16%
N+25.80	77	FXAJ Max	0.057104	0.012068	0.24%	0.05%
N+25.80	77	FYAJ Max	0.018035	0.04232	0.07%	0.17%
N+25.80	78	FXAJ Max	0.057104	0.012528	0.24%	0.05%
N+25.80	78	FYAJ Max	0.018035	0.04393	0.07%	0.17%
N+25.80	80	FXAJ Max	0.057069	0.007367	0.24%	0.03%
N+25.80	80	FYAJ Max	0.018015	0.025717	0.07%	0.12%
N+25.80	81	FXAJ Max	0.057134	0.007367	0.24%	0.03%
N+25.80	81	FYAJ Max	0.018074	0.025717	0.08%	0.12%
N+25.80	84	FXAJ Max	0.057207	0.010702	0.24%	0.04%
N+25.80	84	FYAJ Max	0.018248	0.037532	0.08%	0.15%
N+25.80	100	FXAJ Max	0.057036	0.009763	0.24%	0.04%
N+25.80	100	FYAJ Max	0.018026	0.034228	0.07%	0.14%
N+25.80	101	FXAJ Max	0.057175	0.009763	0.24%	0.04%
N+25.80	101	FYAJ Max	0.018159	0.034228	0.08%	0.14%
N+25.80	102	FXAJ Max	0.057104	0.009763	0.24%	0.04%
N+25.80	102	FYAJ Max	0.018035	0.034228	0.07%	0.14%
N+25.80	104	FXAJ Max	0.057036	0.0112	0.24%	0.04%
N+25.80	104	FYAJ Max	0.018026	0.03928	0.07%	0.16%
N+25.80	105	FXAJ Max	0.057175	0.0112	0.24%	0.04%
N+25.80	105	FYAJ Max	0.018159	0.03928	0.08%	0.16%
N+25.80	106	FXAJ Max	0.057104	0.0112	0.24%	0.04%
N+25.80	106	FYAJ Max	0.018035	0.03928	0.07%	0.16%
N+25.80	40	FXAJ Max	0.057003	0.013302	0.24%	0.05%
N+25.80	40	FYAJ Max	0.018066	0.046634	0.07%	0.18%
N+25.80	43	FXAJ Max	0.057207	0.013302	0.24%	0.05%
N+25.80	43	FYAJ Max	0.018248	0.046634	0.08%	0.18%
N+25.80	44	FXAJ Max	0.057207	0.013527	0.24%	0.05%
N+25.80	44	FYAJ Max	0.018248	0.047422	0.08%	0.18%

N+25.80	45	FXAJ Max	0.057207	0.013787	0.24%	0.05%
N+25.80	45	FYAJ Max	0.018248	0.048327	0.08%	0.18%
N+25.80	46	FXAJ Max	0.057003	0.013527	0.24%	0.05%
N+25.80	46	FYAJ Max	0.018066	0.047422	0.07%	0.18%
N+25.80	47	FXAJ Max	0.057003	0.013787	0.24%	0.05%
N+25.80	47	FYAJ Max	0.018066	0.048327	0.07%	0.18%
N+25.80	48	FXAJ Max	0.057069	0.013527	0.24%	0.05%
N+25.80	48	FYAJ Max	0.018015	0.047422	0.07%	0.18%
N+25.80	49	FXAJ Max	0.057104	0.013527	0.24%	0.05%
N+25.80	49	FYAJ Max	0.018035	0.047422	0.07%	0.18%
N+25.80	59	FXAJ Max	0.057036	0.013454	0.24%	0.05%
N+25.80	59	FYAJ Max	0.018026	0.047167	0.07%	0.18%
N+25.80	62	FXAJ Max	0.057175	0.013454	0.24%	0.05%
N+25.80	62	FYAJ Max	0.018159	0.047167	0.08%	0.18%
N+25.80	72	FXAJ Max	0.057104	0.013454	0.24%	0.05%
N+25.80	72	FYAJ Max	0.018035	0.047167	0.07%	0.18%
N+25.80	75	FXAJ Max	0.057134	0.013787	0.24%	0.05%
N+25.80	75	FYAJ Max	0.018074	0.048327	0.08%	0.18%
N+25.80	91	FXAJ Max	0.057069	0.013787	0.24%	0.05%
N+25.80	91	FYAJ Max	0.018015	0.048327	0.07%	0.18%
N+25.80	28	FXAJ Max	0.057175	0.01299	0.24%	0.05%
N+25.80	28	FYAJ Max	0.018159	0.045546	0.08%	0.18%
N+25.80	29	FXAJ Max	0.057036	0.01299	0.24%	0.05%
N+25.80	29	FYAJ Max	0.018026	0.045546	0.07%	0.18%
N+25.80	30	FXAJ Max	0.057104	0.01299	0.24%	0.05%
N+25.80	30	FYAJ Max	0.018035	0.045546	0.07%	0.18%
N+25.80	33	FXAJ Max	0.056937	0.010253	0.24%	0.04%
N+25.80	33	FYAJ Max	0.018238	0.035953	0.07%	0.15%
N+25.80	34	FXAJ Max	0.056971	0.010253	0.24%	0.04%
N+25.80	34	FYAJ Max	0.018132	0.035953	0.07%	0.15%
N+25.80	35	FXAJ Max	0.057003	0.010253	0.24%	0.04%
N+25.80	35	FYAJ Max	0.018066	0.035953	0.07%	0.15%
N+25.80	53	FXAJ Max	0.056937	0.010702	0.24%	0.04%
N+25.80	53	FYAJ Max	0.018238	0.037532	0.07%	0.15%
N+25.80	66	FXAJ Max	0.056971	0.010702	0.24%	0.04%
N+25.80	66	FYAJ Max	0.018132	0.037532	0.07%	0.15%
N+25.80	79	FXAJ Max	0.057003	0.010702	0.24%	0.04%
N+25.80	79	FYAJ Max	0.018066	0.037532	0.07%	0.15%
N+22.45	1	FXAJ Max	0.049132	0.007263	0.25%	0.04%
N+22.45	1	FYAJ Max	0.01558	0.02544	0.08%	0.13%
N+22.45	2	FXAJ Max	0.049132	0.00805	0.25%	0.04%
N+22.45	2	FYAJ Max	0.01558	0.02822	0.08%	0.14%

N+22.45	3	FXAJ Max	0.049132	0.00841	0.25%	0.04%
N+22.45	3	FYAJ Max	0.01558	0.029487	0.08%	0.15%
N+22.45	4	FXAJ Max	0.049111	0.00841	0.25%	0.04%
N+22.45	4	FYAJ Max	0.015646	0.029487	0.08%	0.15%
N+22.45	5	FXAJ Max	0.049066	0.00841	0.25%	0.04%
N+22.45	5	FYAJ Max	0.015887	0.029487	0.08%	0.15%
N+22.45	6	FXAJ Max	0.049066	0.008853	0.25%	0.04%
N+22.45	6	FYAJ Max	0.015887	0.031047	0.08%	0.15%
N+22.45	7	FXAJ Max	0.049066	0.00926	0.25%	0.04%
N+22.45	7	FYAJ Max	0.015887	0.032475	0.08%	0.16%
N+22.45	8	FXAJ Max	0.049066	0.00971	0.25%	0.05%
N+22.45	8	FYAJ Max	0.015887	0.034054	0.08%	0.16%
N+22.45	9	FXAJ Max	0.049111	0.00971	0.25%	0.05%
N+22.45	9	FYAJ Max	0.015646	0.034054	0.08%	0.16%
N+22.45	10	FXAJ Max	0.049132	0.00971	0.25%	0.05%
N+22.45	10	FYAJ Max	0.01558	0.034054	0.08%	0.16%
N+22.45	11	FXAJ Max	0.049132	0.01008	0.25%	0.05%
N+22.45	11	FYAJ Max	0.01558	0.035353	0.08%	0.17%
N+22.45	12	FXAJ Max	0.049132	0.010908	0.25%	0.05%
N+22.45	12	FYAJ Max	0.01558	0.038255	0.08%	0.18%
N+22.45	13	FXAJ Max	0.049274	0.010908	0.25%	0.05%
N+22.45	13	FYAJ Max	0.015727	0.038255	0.08%	0.18%
N+22.45	14	FXAJ Max	0.049274	0.01008	0.25%	0.05%
N+22.45	14	FYAJ Max	0.015727	0.035353	0.08%	0.17%
N+22.45	16	FXAJ Max	0.049274	0.008853	0.25%	0.04%
N+22.45	16	FYAJ Max	0.015727	0.031047	0.08%	0.15%
N+22.45	17	FXAJ Max	0.049274	0.00805	0.25%	0.04%
N+22.45	17	FYAJ Max	0.015727	0.02822	0.08%	0.14%
N+22.45	18	FXAJ Max	0.049274	0.007263	0.25%	0.04%
N+22.45	18	FYAJ Max	0.015727	0.02544	0.08%	0.13%
N+22.45	19	FXAJ Max	0.049132	0.006622	0.25%	0.04%
N+22.45	19	FYAJ Max	0.01558	0.023167	0.08%	0.13%
N+22.45	20	FXAJ Max	0.049274	0.006622	0.25%	0.04%
N+22.45	20	FYAJ Max	0.015727	0.023167	0.08%	0.13%
N+22.45	21	FXAJ Max	0.049132	0.006232	0.25%	0.04%
N+22.45	21	FYAJ Max	0.01558	0.021778	0.08%	0.12%
N+22.45	22	FXAJ Max	0.049132	0.006439	0.25%	0.04%
N+22.45	22	FYAJ Max	0.01558	0.022517	0.08%	0.12%
N+22.45	23	FXAJ Max	0.049274	0.006232	0.25%	0.04%
N+22.45	23	FYAJ Max	0.015727	0.021778	0.08%	0.12%
N+22.45	24	FXAJ Max	0.049274	0.006439	0.25%	0.04%
N+22.45	24	FYAJ Max	0.015727	0.022517	0.08%	0.12%

N+22.45	26	FXAJ Max	0.049202	0.006439	0.25%	0.04%
N+22.45	26	FYAJ Max	0.015538	0.022517	0.08%	0.12%
N+22.45	27	FXAJ Max	0.049178	0.006439	0.25%	0.04%
N+22.45	27	FYAJ Max	0.015525	0.022517	0.08%	0.12%
N+22.45	25	FXAJ Max	0.049155	0.006498	0.25%	0.04%
N+22.45	25	FYAJ Max	0.015538	0.022727	0.08%	0.12%
N+22.45	36	FXAJ Max	0.049155	0.006877	0.25%	0.04%
N+22.45	36	FYAJ Max	0.015538	0.024074	0.08%	0.13%
N+22.45	37	FXAJ Max	0.049155	0.007263	0.25%	0.04%
N+22.45	37	FYAJ Max	0.015538	0.02544	0.08%	0.13%
N+22.45	38	FXAJ Max	0.049155	0.007654	0.25%	0.04%
N+22.45	38	FYAJ Max	0.015538	0.026823	0.08%	0.14%
N+22.45	39	FXAJ Max	0.049155	0.00805	0.25%	0.04%
N+22.45	39	FYAJ Max	0.015538	0.02822	0.08%	0.14%
N+22.45	41	FXAJ Max	0.049155	0.008853	0.25%	0.04%
N+22.45	41	FYAJ Max	0.015538	0.031047	0.08%	0.15%
N+22.45	42	FXAJ Max	0.049155	0.00926	0.25%	0.04%
N+22.45	42	FYAJ Max	0.015538	0.032475	0.08%	0.16%
N+22.45	50	FXAJ Max	0.049155	0.01008	0.25%	0.05%
N+22.45	50	FYAJ Max	0.015538	0.035353	0.08%	0.17%
N+22.45	51	FXAJ Max	0.049155	0.010493	0.25%	0.05%
N+22.45	51	FYAJ Max	0.015538	0.036801	0.08%	0.17%
N+22.45	52	FXAJ Max	0.049155	0.010908	0.25%	0.05%
N+22.45	52	FYAJ Max	0.015538	0.038255	0.08%	0.18%
N+22.45	54	FXAJ Max	0.049252	0.006498	0.25%	0.04%
N+22.45	54	FYAJ Max	0.015647	0.022727	0.08%	0.12%
N+22.45	55	FXAJ Max	0.049252	0.006877	0.25%	0.04%
N+22.45	55	FYAJ Max	0.015647	0.024074	0.08%	0.13%
N+22.45	56	FXAJ Max	0.049252	0.007263	0.25%	0.04%
N+22.45	56	FYAJ Max	0.015647	0.02544	0.08%	0.13%
N+22.45	57	FXAJ Max	0.049252	0.007654	0.25%	0.04%
N+22.45	57	FYAJ Max	0.015647	0.026823	0.08%	0.14%
N+22.45	58	FXAJ Max	0.049252	0.00805	0.25%	0.04%
N+22.45	58	FYAJ Max	0.015647	0.02822	0.08%	0.14%
N+22.45	60	FXAJ Max	0.049252	0.008853	0.25%	0.04%
N+22.45	60	FYAJ Max	0.015647	0.031047	0.08%	0.15%
N+22.45	61	FXAJ Max	0.049252	0.00926	0.25%	0.04%
N+22.45	61	FYAJ Max	0.015647	0.032475	0.08%	0.16%
N+22.45	63	FXAJ Max	0.049252	0.01008	0.25%	0.05%
N+22.45	63	FYAJ Max	0.015647	0.035353	0.08%	0.17%
N+22.45	64	FXAJ Max	0.049252	0.010493	0.25%	0.05%
N+22.45	64	FYAJ Max	0.015647	0.036801	0.08%	0.17%

N+22.45	65	FXAJ Max	0.049252	0.010908	0.25%	0.05%
N+22.45	65	FYAJ Max	0.015647	0.038255	0.08%	0.18%
N+22.45	67	FXAJ Max	0.049202	0.006498	0.25%	0.04%
N+22.45	67	FYAJ Max	0.015538	0.022727	0.08%	0.12%
N+22.45	68	FXAJ Max	0.049202	0.006877	0.25%	0.04%
N+22.45	68	FYAJ Max	0.015538	0.024074	0.08%	0.13%
N+22.45	69	FXAJ Max	0.049202	0.007263	0.25%	0.04%
N+22.45	69	FYAJ Max	0.015538	0.02544	0.08%	0.13%
N+22.45	70	FXAJ Max	0.049202	0.007654	0.25%	0.04%
N+22.45	70	FYAJ Max	0.015538	0.026823	0.08%	0.14%
N+22.45	71	FXAJ Max	0.049202	0.00805	0.25%	0.04%
N+22.45	71	FYAJ Max	0.015538	0.02822	0.08%	0.14%
N+22.45	73	FXAJ Max	0.049202	0.008853	0.25%	0.04%
N+22.45	73	FYAJ Max	0.015538	0.031047	0.08%	0.15%
N+22.45	74	FXAJ Max	0.049202	0.00926	0.25%	0.04%
N+22.45	74	FYAJ Max	0.015538	0.032475	0.08%	0.16%
N+22.45	76	FXAJ Max	0.049202	0.01008	0.25%	0.05%
N+22.45	76	FYAJ Max	0.015538	0.035353	0.08%	0.17%
N+22.45	77	FXAJ Max	0.049202	0.010493	0.25%	0.05%
N+22.45	77	FYAJ Max	0.015538	0.036801	0.08%	0.17%
N+22.45	78	FXAJ Max	0.049202	0.010908	0.25%	0.05%
N+22.45	78	FYAJ Max	0.015538	0.038255	0.08%	0.18%
N+22.45	80	FXAJ Max	0.049178	0.006232	0.25%	0.04%
N+22.45	80	FYAJ Max	0.015525	0.021778	0.08%	0.12%
N+22.45	81	FXAJ Max	0.049223	0.006232	0.25%	0.04%
N+22.45	81	FYAJ Max	0.015572	0.021778	0.08%	0.12%
N+22.45	84	FXAJ Max	0.049274	0.00926	0.25%	0.04%
N+22.45	84	FYAJ Max	0.015727	0.032475	0.08%	0.16%
N+22.45	100	FXAJ Max	0.049155	0.00841	0.25%	0.04%
N+22.45	100	FYAJ Max	0.015538	0.029487	0.08%	0.15%
N+22.45	101	FXAJ Max	0.049252	0.00841	0.25%	0.04%
N+22.45	101	FYAJ Max	0.015647	0.029487	0.08%	0.15%
N+22.45	102	FXAJ Max	0.049202	0.00841	0.25%	0.04%
N+22.45	102	FYAJ Max	0.015538	0.029487	0.08%	0.15%
N+22.45	104	FXAJ Max	0.049155	0.00971	0.25%	0.05%
N+22.45	104	FYAJ Max	0.015538	0.034054	0.08%	0.16%
N+22.45	105	FXAJ Max	0.049252	0.00971	0.25%	0.05%
N+22.45	105	FYAJ Max	0.015647	0.034054	0.08%	0.16%
N+22.45	106	FXAJ Max	0.049202	0.00971	0.25%	0.05%
N+22.45	106	FYAJ Max	0.015538	0.034054	0.08%	0.16%
N+22.45	40	FXAJ Max	0.049132	0.011606	0.25%	0.05%
N+22.45	40	FYAJ Max	0.01558	0.040695	0.08%	0.19%

N+22.45	43	FXAJ Max	0.049274	0.011606	0.25%	0.05%
N+22.45	43	FYAJ Max	0.015727	0.040695	0.08%	0.19%
N+22.45	44	FXAJ Max	0.049274	0.011809	0.25%	0.05%
N+22.45	44	FYAJ Max	0.015727	0.041407	0.08%	0.19%
N+22.45	45	FXAJ Max	0.049274	0.012043	0.25%	0.05%
N+22.45	45	FYAJ Max	0.015727	0.042224	0.08%	0.19%
N+22.45	46	FXAJ Max	0.049132	0.011809	0.25%	0.05%
N+22.45	46	FYAJ Max	0.01558	0.041407	0.08%	0.19%
N+22.45	47	FXAJ Max	0.049132	0.012043	0.25%	0.05%
N+22.45	47	FYAJ Max	0.01558	0.042224	0.08%	0.19%
N+22.45	48	FXAJ Max	0.049178	0.011809	0.25%	0.05%
N+22.45	48	FYAJ Max	0.015525	0.041407	0.08%	0.19%
N+22.45	49	FXAJ Max	0.049202	0.011809	0.25%	0.05%
N+22.45	49	FYAJ Max	0.015538	0.041407	0.08%	0.19%
N+22.45	59	FXAJ Max	0.049155	0.011743	0.25%	0.05%
N+22.45	59	FYAJ Max	0.015538	0.041177	0.08%	0.19%
N+22.45	62	FXAJ Max	0.049252	0.011743	0.25%	0.05%
N+22.45	62	FYAJ Max	0.015647	0.041177	0.08%	0.19%
N+22.45	72	FXAJ Max	0.049202	0.011743	0.25%	0.05%
N+22.45	72	FYAJ Max	0.015538	0.041177	0.08%	0.19%
N+22.45	75	FXAJ Max	0.049223	0.012043	0.25%	0.05%
N+22.45	75	FYAJ Max	0.015572	0.042224	0.08%	0.19%
N+22.45	91	FXAJ Max	0.049178	0.012043	0.25%	0.05%
N+22.45	91	FYAJ Max	0.015525	0.042224	0.08%	0.19%
N+22.45	28	FXAJ Max	0.049252	0.011325	0.25%	0.05%
N+22.45	28	FYAJ Max	0.015647	0.039714	0.08%	0.18%
N+22.45	29	FXAJ Max	0.049155	0.011325	0.25%	0.05%
N+22.45	29	FYAJ Max	0.015538	0.039714	0.08%	0.18%
N+22.45	30	FXAJ Max	0.049202	0.011325	0.25%	0.05%
N+22.45	30	FYAJ Max	0.015538	0.039714	0.08%	0.18%
N+22.45	33	FXAJ Max	0.049088	0.008853	0.25%	0.04%
N+22.45	33	FYAJ Max	0.015749	0.031047	0.08%	0.15%
N+22.45	34	FXAJ Max	0.049111	0.008853	0.25%	0.04%
N+22.45	34	FYAJ Max	0.015646	0.031047	0.08%	0.15%
N+22.45	35	FXAJ Max	0.049132	0.008853	0.25%	0.04%
N+22.45	35	FYAJ Max	0.01558	0.031047	0.08%	0.15%
N+22.45	53	FXAJ Max	0.049088	0.00926	0.25%	0.04%
N+22.45	53	FYAJ Max	0.015749	0.032475	0.08%	0.16%
N+22.45	66	FXAJ Max	0.049111	0.00926	0.25%	0.04%
N+22.45	66	FYAJ Max	0.015646	0.032475	0.08%	0.16%
N+22.45	79	FXAJ Max	0.049132	0.00926	0.25%	0.04%
N+22.45	79	FYAJ Max	0.01558	0.032475	0.08%	0.16%

N+19.10	1	FXAJ Max	0.040846	0.005986	0.25%	0.04%
N+19.10	1	FYAJ Max	0.012963	0.020976	0.08%	0.13%
N+19.10	2	FXAJ Max	0.040846	0.006689	0.25%	0.04%
N+19.10	2	FYAJ Max	0.012963	0.023449	0.08%	0.14%
N+19.10	3	FXAJ Max	0.040846	0.007009	0.25%	0.04%
N+19.10	3	FYAJ Max	0.012963	0.024576	0.08%	0.15%
N+19.10	4	FXAJ Max	0.040834	0.007009	0.25%	0.04%
N+19.10	4	FYAJ Max	0.013029	0.024576	0.08%	0.15%
N+19.10	5	FXAJ Max	0.040809	0.007009	0.25%	0.04%
N+19.10	5	FYAJ Max	0.013262	0.024576	0.08%	0.15%
N+19.10	6	FXAJ Max	0.040809	0.007403	0.25%	0.04%
N+19.10	6	FYAJ Max	0.013262	0.025962	0.08%	0.15%
N+19.10	7	FXAJ Max	0.040809	0.007765	0.25%	0.05%
N+19.10	7	FYAJ Max	0.013262	0.02723	0.08%	0.16%
N+19.10	8	FXAJ Max	0.040809	0.008164	0.25%	0.05%
N+19.10	8	FYAJ Max	0.013262	0.028633	0.08%	0.16%
N+19.10	9	FXAJ Max	0.040834	0.008164	0.25%	0.05%
N+19.10	9	FYAJ Max	0.013029	0.028633	0.08%	0.16%
N+19.10	10	FXAJ Max	0.040846	0.008164	0.25%	0.05%
N+19.10	10	FYAJ Max	0.012963	0.028633	0.08%	0.16%
N+19.10	11	FXAJ Max	0.040846	0.008492	0.25%	0.05%
N+19.10	11	FYAJ Max	0.012963	0.029785	0.08%	0.17%
N+19.10	12	FXAJ Max	0.040846	0.009227	0.25%	0.05%
N+19.10	12	FYAJ Max	0.012963	0.032359	0.08%	0.18%
N+19.10	13	FXAJ Max	0.040932	0.009227	0.26%	0.05%
N+19.10	13	FYAJ Max	0.013077	0.032359	0.08%	0.18%
N+19.10	14	FXAJ Max	0.040932	0.008492	0.26%	0.05%
N+19.10	14	FYAJ Max	0.013077	0.029785	0.08%	0.17%
N+19.10	16	FXAJ Max	0.040932	0.007403	0.26%	0.04%
N+19.10	16	FYAJ Max	0.013077	0.025962	0.08%	0.15%
N+19.10	17	FXAJ Max	0.040932	0.006689	0.26%	0.04%
N+19.10	17	FYAJ Max	0.013077	0.023449	0.08%	0.14%
N+19.10	18	FXAJ Max	0.040932	0.005986	0.26%	0.04%
N+19.10	18	FYAJ Max	0.013077	0.020976	0.08%	0.13%
N+19.10	19	FXAJ Max	0.040846	0.005413	0.25%	0.04%
N+19.10	19	FYAJ Max	0.012963	0.018952	0.08%	0.13%
N+19.10	20	FXAJ Max	0.040932	0.005413	0.26%	0.04%
N+19.10	20	FYAJ Max	0.013077	0.018952	0.08%	0.13%
N+19.10	21	FXAJ Max	0.040846	0.005063	0.25%	0.03%
N+19.10	21	FYAJ Max	0.012963	0.017715	0.08%	0.12%
N+19.10	22	FXAJ Max	0.040846	0.005249	0.25%	0.04%
N+19.10	22	FYAJ Max	0.012963	0.018373	0.08%	0.12%

N+19.10	23	FXAJ Max	0.040932	0.005063	0.26%	0.03%
N+19.10	23	FYAJ Max	0.013077	0.017715	0.08%	0.12%
N+19.10	24	FXAJ Max	0.040932	0.005249	0.26%	0.04%
N+19.10	24	FYAJ Max	0.013077	0.018373	0.08%	0.12%
N+19.10	26	FXAJ Max	0.040887	0.005249	0.26%	0.04%
N+19.10	26	FYAJ Max	0.012912	0.018373	0.08%	0.12%
N+19.10	27	FXAJ Max	0.040872	0.005249	0.26%	0.04%
N+19.10	27	FYAJ Max	0.012903	0.018373	0.08%	0.12%
N+19.10	25	FXAJ Max	0.040859	0.005302	0.26%	0.04%
N+19.10	25	FYAJ Max	0.01292	0.018559	0.08%	0.12%
N+19.10	36	FXAJ Max	0.040859	0.005642	0.26%	0.04%
N+19.10	36	FYAJ Max	0.01292	0.019759	0.08%	0.13%
N+19.10	37	FXAJ Max	0.040859	0.005986	0.26%	0.04%
N+19.10	37	FYAJ Max	0.01292	0.020976	0.08%	0.13%
N+19.10	38	FXAJ Max	0.040859	0.006336	0.26%	0.04%
N+19.10	38	FYAJ Max	0.01292	0.022207	0.08%	0.14%
N+19.10	39	FXAJ Max	0.040859	0.006689	0.26%	0.04%
N+19.10	39	FYAJ Max	0.01292	0.023449	0.08%	0.14%
N+19.10	41	FXAJ Max	0.040859	0.007403	0.26%	0.04%
N+19.10	41	FYAJ Max	0.01292	0.025962	0.08%	0.15%
N+19.10	42	FXAJ Max	0.040859	0.007765	0.26%	0.05%
N+19.10	42	FYAJ Max	0.01292	0.02723	0.08%	0.16%
N+19.10	50	FXAJ Max	0.040859	0.008492	0.26%	0.05%
N+19.10	50	FYAJ Max	0.01292	0.029785	0.08%	0.17%
N+19.10	51	FXAJ Max	0.040859	0.008859	0.26%	0.05%
N+19.10	51	FYAJ Max	0.01292	0.03107	0.08%	0.17%
N+19.10	52	FXAJ Max	0.040859	0.009227	0.26%	0.05%
N+19.10	52	FYAJ Max	0.01292	0.032359	0.08%	0.18%
N+19.10	54	FXAJ Max	0.040918	0.005302	0.26%	0.04%
N+19.10	54	FYAJ Max	0.013006	0.018559	0.08%	0.12%
N+19.10	55	FXAJ Max	0.040918	0.005642	0.26%	0.04%
N+19.10	55	FYAJ Max	0.013006	0.019759	0.08%	0.13%
N+19.10	56	FXAJ Max	0.040918	0.005986	0.26%	0.04%
N+19.10	56	FYAJ Max	0.013006	0.020976	0.08%	0.13%
N+19.10	57	FXAJ Max	0.040918	0.006336	0.26%	0.04%
N+19.10	57	FYAJ Max	0.013006	0.022207	0.08%	0.14%
N+19.10	58	FXAJ Max	0.040918	0.006689	0.26%	0.04%
N+19.10	58	FYAJ Max	0.013006	0.023449	0.08%	0.14%
N+19.10	60	FXAJ Max	0.040918	0.007403	0.26%	0.04%
N+19.10	60	FYAJ Max	0.013006	0.025962	0.08%	0.15%
N+19.10	61	FXAJ Max	0.040918	0.007765	0.26%	0.05%
N+19.10	61	FYAJ Max	0.013006	0.02723	0.08%	0.16%

N+19.10	63	FXAJ	Max	0.040918	0.008492	0.26%	0.05%
N+19.10	63	FYAJ	Max	0.013006	0.029785	0.08%	0.17%
N+19.10	64	FXAJ	Max	0.040918	0.008859	0.26%	0.05%
N+19.10	64	FYAJ	Max	0.013006	0.03107	0.08%	0.17%
N+19.10	65	FXAJ	Max	0.040918	0.009227	0.26%	0.05%
N+19.10	65	FYAJ	Max	0.013006	0.032359	0.08%	0.18%
N+19.10	67	FXAJ	Max	0.040887	0.005302	0.26%	0.04%
N+19.10	67	FYAJ	Max	0.012912	0.018559	0.08%	0.12%
N+19.10	68	FXAJ	Max	0.040887	0.005642	0.26%	0.04%
N+19.10	68	FYAJ	Max	0.012912	0.019759	0.08%	0.13%
N+19.10	69	FXAJ	Max	0.040887	0.005986	0.26%	0.04%
N+19.10	69	FYAJ	Max	0.012912	0.020976	0.08%	0.13%
N+19.10	70	FXAJ	Max	0.040887	0.006336	0.26%	0.04%
N+19.10	70	FYAJ	Max	0.012912	0.022207	0.08%	0.14%
N+19.10	71	FXAJ	Max	0.040887	0.006689	0.26%	0.04%
N+19.10	71	FYAJ	Max	0.012912	0.023449	0.08%	0.14%
N+19.10	73	FXAJ	Max	0.040887	0.007403	0.26%	0.04%
N+19.10	73	FYAJ	Max	0.012912	0.025962	0.08%	0.15%
N+19.10	74	FXAJ	Max	0.040887	0.007765	0.26%	0.05%
N+19.10	74	FYAJ	Max	0.012912	0.02723	0.08%	0.16%
N+19.10	76	FXAJ	Max	0.040887	0.008492	0.26%	0.05%
N+19.10	76	FYAJ	Max	0.012912	0.029785	0.08%	0.17%
N+19.10	77	FXAJ	Max	0.040887	0.008859	0.26%	0.05%
N+19.10	77	FYAJ	Max	0.012912	0.03107	0.08%	0.17%
N+19.10	78	FXAJ	Max	0.040887	0.009227	0.26%	0.05%
N+19.10	78	FYAJ	Max	0.012912	0.032359	0.08%	0.18%
N+19.10	80	FXAJ	Max	0.040872	0.005063	0.26%	0.03%
N+19.10	80	FYAJ	Max	0.012903	0.017715	0.08%	0.12%
N+19.10	81	FXAJ	Max	0.0409	0.005063	0.26%	0.03%
N+19.10	81	FYAJ	Max	0.01294	0.017715	0.08%	0.12%
N+19.10	84	FXAJ	Max	0.040932	0.007765	0.26%	0.05%
N+19.10	84	FYAJ	Max	0.013077	0.02723	0.08%	0.16%
N+19.10	100	FXAJ	Max	0.040859	0.007009	0.26%	0.04%
N+19.10	100	FYAJ	Max	0.01292	0.024576	0.08%	0.15%
N+19.10	101	FXAJ	Max	0.040918	0.007009	0.26%	0.04%
N+19.10	101	FYAJ	Max	0.013006	0.024576	0.08%	0.15%
N+19.10	102	FXAJ	Max	0.040887	0.007009	0.26%	0.04%
N+19.10	102	FYAJ	Max	0.012912	0.024576	0.08%	0.15%
N+19.10	104	FXAJ	Max	0.040859	0.008164	0.26%	0.05%
N+19.10	104	FYAJ	Max	0.01292	0.028633	0.08%	0.16%
N+19.10	105	FXAJ	Max	0.040918	0.008164	0.26%	0.05%
N+19.10	105	FYAJ	Max	0.013006	0.028633	0.08%	0.16%

N+19.10	106	FXAJ	Max	0.040887	0.008164	0.26%	0.05%
N+19.10	106	FYAJ	Max	0.012912	0.028633	0.08%	0.16%
N+19.10	40	FXAJ	Max	0.040846	0.009844	0.25%	0.05%
N+19.10	40	FYAJ	Max	0.012963	0.034522	0.08%	0.19%
N+19.10	43	FXAJ	Max	0.040932	0.009844	0.26%	0.05%
N+19.10	43	FYAJ	Max	0.013077	0.034522	0.08%	0.19%
N+19.10	44	FXAJ	Max	0.040932	0.010024	0.26%	0.05%
N+19.10	44	FYAJ	Max	0.013077	0.035153	0.08%	0.19%
N+19.10	45	FXAJ	Max	0.040932	0.010231	0.26%	0.06%
N+19.10	45	FYAJ	Max	0.013077	0.035877	0.08%	0.19%
N+19.10	46	FXAJ	Max	0.040846	0.010024	0.25%	0.05%
N+19.10	46	FYAJ	Max	0.012963	0.035153	0.08%	0.19%
N+19.10	47	FXAJ	Max	0.040846	0.010231	0.25%	0.06%
N+19.10	47	FYAJ	Max	0.012963	0.035877	0.08%	0.19%
N+19.10	48	FXAJ	Max	0.040872	0.010024	0.26%	0.05%
N+19.10	48	FYAJ	Max	0.012903	0.035153	0.08%	0.19%
N+19.10	49	FXAJ	Max	0.040887	0.010024	0.26%	0.05%
N+19.10	49	FYAJ	Max	0.012912	0.035153	0.08%	0.19%
N+19.10	59	FXAJ	Max	0.040859	0.009966	0.26%	0.05%
N+19.10	59	FYAJ	Max	0.01292	0.034949	0.08%	0.19%
N+19.10	62	FXAJ	Max	0.040918	0.009966	0.26%	0.05%
N+19.10	62	FYAJ	Max	0.013006	0.034949	0.08%	0.19%
N+19.10	72	FXAJ	Max	0.040887	0.009966	0.26%	0.05%
N+19.10	72	FYAJ	Max	0.012912	0.034949	0.08%	0.19%
N+19.10	75	FXAJ	Max	0.0409	0.010231	0.26%	0.06%
N+19.10	75	FYAJ	Max	0.01294	0.035877	0.08%	0.19%
N+19.10	91	FXAJ	Max	0.040872	0.010231	0.26%	0.06%
N+19.10	91	FYAJ	Max	0.012903	0.035877	0.08%	0.19%
N+19.10	28	FXAJ	Max	0.040918	0.009596	0.26%	0.05%
N+19.10	28	FYAJ	Max	0.013006	0.033652	0.08%	0.18%
N+19.10	29	FXAJ	Max	0.040859	0.009596	0.26%	0.05%
N+19.10	29	FYAJ	Max	0.01292	0.033652	0.08%	0.18%
N+19.10	30	FXAJ	Max	0.040887	0.009596	0.26%	0.05%
N+19.10	30	FYAJ	Max	0.012912	0.033652	0.08%	0.18%
N+19.10	33	FXAJ	Max	0.040821	0.007403	0.25%	0.04%
N+19.10	33	FYAJ	Max	0.013129	0.025962	0.08%	0.15%
N+19.10	34	FXAJ	Max	0.040834	0.007403	0.25%	0.04%
N+19.10	34	FYAJ	Max	0.013029	0.025962	0.08%	0.15%
N+19.10	35	FXAJ	Max	0.040846	0.007403	0.25%	0.04%
N+19.10	35	FYAJ	Max	0.012963	0.025962	0.08%	0.15%
N+19.10	53	FXAJ	Max	0.040821	0.007765	0.25%	0.05%
N+19.10	53	FYAJ	Max	0.013129	0.02723	0.08%	0.16%

N+19.10	66	FXAJ Max	0.040834	0.007765	0.25%	0.05%
N+19.10	66	FYAJ Max	0.013029	0.02723	0.08%	0.16%
N+19.10	79	FXAJ Max	0.040846	0.007765	0.25%	0.05%
N+19.10	79	FYAJ Max	0.012963	0.02723	0.08%	0.16%
N+15.75	1	FXAJ Max	0.032333	0.004711	0.26%	0.04%
N+15.75	1	FYAJ Max	0.010276	0.016513	0.08%	0.13%
N+15.75	2	FXAJ Max	0.032333	0.005323	0.26%	0.04%
N+15.75	2	FYAJ Max	0.010276	0.018664	0.08%	0.14%
N+15.75	3	FXAJ Max	0.032333	0.005602	0.26%	0.04%
N+15.75	3	FYAJ Max	0.010276	0.019643	0.08%	0.14%
N+15.75	4	FXAJ Max	0.032329	0.005602	0.25%	0.04%
N+15.75	4	FYAJ Max	0.010341	0.019643	0.08%	0.14%
N+15.75	5	FXAJ Max	0.032322	0.005602	0.25%	0.04%
N+15.75	5	FYAJ Max	0.010566	0.019643	0.08%	0.14%
N+15.75	6	FXAJ Max	0.032322	0.005945	0.25%	0.04%
N+15.75	6	FYAJ Max	0.010566	0.020847	0.08%	0.15%
N+15.75	7	FXAJ Max	0.032322	0.006258	0.25%	0.04%
N+15.75	7	FYAJ Max	0.010566	0.021948	0.08%	0.15%
N+15.75	8	FXAJ Max	0.032322	0.006605	0.25%	0.05%
N+15.75	8	FYAJ Max	0.010566	0.023164	0.08%	0.16%
N+15.75	9	FXAJ Max	0.032329	0.006605	0.25%	0.05%
N+15.75	9	FYAJ Max	0.010341	0.023164	0.08%	0.16%
N+15.75	10	FXAJ Max	0.032333	0.006605	0.26%	0.05%
N+15.75	10	FYAJ Max	0.010276	0.023164	0.08%	0.16%
N+15.75	11	FXAJ Max	0.032333	0.00689	0.26%	0.05%
N+15.75	11	FYAJ Max	0.010276	0.024163	0.08%	0.17%
N+15.75	12	FXAJ Max	0.032333	0.007526	0.26%	0.05%
N+15.75	12	FYAJ Max	0.010276	0.026393	0.08%	0.18%
N+15.75	13	FXAJ Max	0.03237	0.007526	0.26%	0.05%
N+15.75	13	FYAJ Max	0.010358	0.026393	0.08%	0.18%
N+15.75	14	FXAJ Max	0.03237	0.00689	0.26%	0.05%
N+15.75	14	FYAJ Max	0.010358	0.024163	0.08%	0.17%
N+15.75	16	FXAJ Max	0.03237	0.005945	0.26%	0.04%
N+15.75	16	FYAJ Max	0.010358	0.020847	0.08%	0.15%
N+15.75	17	FXAJ Max	0.03237	0.005323	0.26%	0.04%
N+15.75	17	FYAJ Max	0.010358	0.018664	0.08%	0.14%
N+15.75	18	FXAJ Max	0.03237	0.004711	0.26%	0.04%
N+15.75	18	FYAJ Max	0.010358	0.016513	0.08%	0.13%
N+15.75	19	FXAJ Max	0.032333	0.00421	0.26%	0.03%
N+15.75	19	FYAJ Max	0.010276	0.014751	0.08%	0.12%
N+15.75	20	FXAJ Max	0.03237	0.00421	0.26%	0.03%
N+15.75	20	FYAJ Max	0.010358	0.014751	0.08%	0.12%

N+15.75	21	FXAJ	Max	0.032333	0.003904	0.26%	0.03%
N+15.75	21	FYAJ	Max	0.010276	0.013673	0.08%	0.12%
N+15.75	22	FXAJ	Max	0.032333	0.004067	0.26%	0.03%
N+15.75	22	FYAJ	Max	0.010276	0.014246	0.08%	0.12%
N+15.75	23	FXAJ	Max	0.03237	0.003904	0.26%	0.03%
N+15.75	23	FYAJ	Max	0.010358	0.013673	0.08%	0.12%
N+15.75	24	FXAJ	Max	0.03237	0.004067	0.26%	0.03%
N+15.75	24	FYAJ	Max	0.010358	0.014246	0.08%	0.12%
N+15.75	26	FXAJ	Max	0.032349	0.004067	0.26%	0.03%
N+15.75	26	FYAJ	Max	0.010216	0.014246	0.08%	0.12%
N+15.75	27	FXAJ	Max	0.032343	0.004067	0.26%	0.03%
N+15.75	27	FYAJ	Max	0.010212	0.014246	0.08%	0.12%
N+15.75	25	FXAJ	Max	0.032338	0.004113	0.26%	0.03%
N+15.75	25	FYAJ	Max	0.010231	0.014409	0.08%	0.12%
N+15.75	36	FXAJ	Max	0.032338	0.00441	0.26%	0.04%
N+15.75	36	FYAJ	Max	0.010231	0.015454	0.08%	0.12%
N+15.75	37	FXAJ	Max	0.032338	0.004711	0.26%	0.04%
N+15.75	37	FYAJ	Max	0.010231	0.016513	0.08%	0.13%
N+15.75	38	FXAJ	Max	0.032338	0.005016	0.26%	0.04%
N+15.75	38	FYAJ	Max	0.010231	0.017584	0.08%	0.13%
N+15.75	39	FXAJ	Max	0.032338	0.005323	0.26%	0.04%
N+15.75	39	FYAJ	Max	0.010231	0.018664	0.08%	0.14%
N+15.75	41	FXAJ	Max	0.032338	0.005945	0.26%	0.04%
N+15.75	41	FYAJ	Max	0.010231	0.020847	0.08%	0.15%
N+15.75	42	FXAJ	Max	0.032338	0.006258	0.26%	0.04%
N+15.75	42	FYAJ	Max	0.010231	0.021948	0.08%	0.15%
N+15.75	50	FXAJ	Max	0.032338	0.00689	0.26%	0.05%
N+15.75	50	FYAJ	Max	0.010231	0.024163	0.08%	0.17%
N+15.75	51	FXAJ	Max	0.032338	0.007207	0.26%	0.05%
N+15.75	51	FYAJ	Max	0.010231	0.025277	0.08%	0.17%
N+15.75	52	FXAJ	Max	0.032338	0.007526	0.26%	0.05%
N+15.75	52	FYAJ	Max	0.010231	0.026393	0.08%	0.18%
N+15.75	54	FXAJ	Max	0.032363	0.004113	0.26%	0.03%
N+15.75	54	FYAJ	Max	0.010296	0.014409	0.08%	0.12%
N+15.75	55	FXAJ	Max	0.032363	0.00441	0.26%	0.04%
N+15.75	55	FYAJ	Max	0.010296	0.015454	0.08%	0.12%
N+15.75	56	FXAJ	Max	0.032363	0.004711	0.26%	0.04%
N+15.75	56	FYAJ	Max	0.010296	0.016513	0.08%	0.13%
N+15.75	57	FXAJ	Max	0.032363	0.005016	0.26%	0.04%
N+15.75	57	FYAJ	Max	0.010296	0.017584	0.08%	0.13%
N+15.75	58	FXAJ	Max	0.032363	0.005323	0.26%	0.04%
N+15.75	58	FYAJ	Max	0.010296	0.018664	0.08%	0.14%

N+15.75	60	FXAJ Max	0.032363	0.005945	0.26%	0.04%
N+15.75	60	FYAJ Max	0.010296	0.020847	0.08%	0.15%
N+15.75	61	FXAJ Max	0.032363	0.006258	0.26%	0.04%
N+15.75	61	FYAJ Max	0.010296	0.021948	0.08%	0.15%
N+15.75	63	FXAJ Max	0.032363	0.00689	0.26%	0.05%
N+15.75	63	FYAJ Max	0.010296	0.024163	0.08%	0.17%
N+15.75	64	FXAJ Max	0.032363	0.007207	0.26%	0.05%
N+15.75	64	FYAJ Max	0.010296	0.025277	0.08%	0.17%
N+15.75	65	FXAJ Max	0.032363	0.007526	0.26%	0.05%
N+15.75	65	FYAJ Max	0.010296	0.026393	0.08%	0.18%
N+15.75	67	FXAJ Max	0.032349	0.004113	0.26%	0.03%
N+15.75	67	FYAJ Max	0.010216	0.014409	0.08%	0.12%
N+15.75	68	FXAJ Max	0.032349	0.00441	0.26%	0.04%
N+15.75	68	FYAJ Max	0.010216	0.015454	0.08%	0.12%
N+15.75	69	FXAJ Max	0.032349	0.004711	0.26%	0.04%
N+15.75	69	FYAJ Max	0.010216	0.016513	0.08%	0.13%
N+15.75	70	FXAJ Max	0.032349	0.005016	0.26%	0.04%
N+15.75	70	FYAJ Max	0.010216	0.017584	0.08%	0.13%
N+15.75	71	FXAJ Max	0.032349	0.005323	0.26%	0.04%
N+15.75	71	FYAJ Max	0.010216	0.018664	0.08%	0.14%
N+15.75	73	FXAJ Max	0.032349	0.005945	0.26%	0.04%
N+15.75	73	FYAJ Max	0.010216	0.020847	0.08%	0.15%
N+15.75	74	FXAJ Max	0.032349	0.006258	0.26%	0.04%
N+15.75	74	FYAJ Max	0.010216	0.021948	0.08%	0.15%
N+15.75	76	FXAJ Max	0.032349	0.00689	0.26%	0.05%
N+15.75	76	FYAJ Max	0.010216	0.024163	0.08%	0.17%
N+15.75	77	FXAJ Max	0.032349	0.007207	0.26%	0.05%
N+15.75	77	FYAJ Max	0.010216	0.025277	0.08%	0.17%
N+15.75	78	FXAJ Max	0.032349	0.007526	0.26%	0.05%
N+15.75	78	FYAJ Max	0.010216	0.026393	0.08%	0.18%
N+15.75	80	FXAJ Max	0.032343	0.003904	0.26%	0.03%
N+15.75	80	FYAJ Max	0.010212	0.013673	0.08%	0.12%
N+15.75	81	FXAJ Max	0.032355	0.003904	0.26%	0.03%
N+15.75	81	FYAJ Max	0.010238	0.013673	0.08%	0.12%
N+15.75	84	FXAJ Max	0.03237	0.006258	0.26%	0.04%
N+15.75	84	FYAJ Max	0.010358	0.021948	0.08%	0.15%
N+15.75	100	FXAJ Max	0.032338	0.005602	0.26%	0.04%
N+15.75	100	FYAJ Max	0.010231	0.019643	0.08%	0.14%
N+15.75	101	FXAJ Max	0.032363	0.005602	0.26%	0.04%
N+15.75	101	FYAJ Max	0.010296	0.019643	0.08%	0.14%
N+15.75	102	FXAJ Max	0.032349	0.005602	0.26%	0.04%
N+15.75	102	FYAJ Max	0.010216	0.019643	0.08%	0.14%

N+15.75	104	FXAJ Max	0.032338	0.006605	0.26%	0.05%
N+15.75	104	FYAJ Max	0.010231	0.023164	0.08%	0.16%
N+15.75	105	FXAJ Max	0.032363	0.006605	0.26%	0.05%
N+15.75	105	FYAJ Max	0.010296	0.023164	0.08%	0.16%
N+15.75	106	FXAJ Max	0.032349	0.006605	0.26%	0.05%
N+15.75	106	FYAJ Max	0.010216	0.023164	0.08%	0.16%
N+15.75	40	FXAJ Max	0.032333	0.00806	0.26%	0.05%
N+15.75	40	FYAJ Max	0.010276	0.028266	0.08%	0.19%
N+15.75	43	FXAJ Max	0.03237	0.00806	0.26%	0.05%
N+15.75	43	FYAJ Max	0.010358	0.028266	0.08%	0.19%
N+15.75	44	FXAJ Max	0.03237	0.008215	0.26%	0.05%
N+15.75	44	FYAJ Max	0.010358	0.028811	0.08%	0.19%
N+15.75	45	FXAJ Max	0.03237	0.008394	0.26%	0.05%
N+15.75	45	FYAJ Max	0.010358	0.029438	0.08%	0.19%
N+15.75	46	FXAJ Max	0.032333	0.008215	0.26%	0.05%
N+15.75	46	FYAJ Max	0.010276	0.028811	0.08%	0.19%
N+15.75	47	FXAJ Max	0.032333	0.008394	0.26%	0.05%
N+15.75	47	FYAJ Max	0.010276	0.029438	0.08%	0.19%
N+15.75	48	FXAJ Max	0.032343	0.008215	0.26%	0.05%
N+15.75	48	FYAJ Max	0.010212	0.028811	0.08%	0.19%
N+15.75	49	FXAJ Max	0.032349	0.008215	0.26%	0.05%
N+15.75	49	FYAJ Max	0.010216	0.028811	0.08%	0.19%
N+15.75	59	FXAJ Max	0.032338	0.008165	0.26%	0.05%
N+15.75	59	FYAJ Max	0.010231	0.028635	0.08%	0.19%
N+15.75	62	FXAJ Max	0.032363	0.008165	0.26%	0.05%
N+15.75	62	FYAJ Max	0.010296	0.028635	0.08%	0.19%
N+15.75	72	FXAJ Max	0.032349	0.008165	0.26%	0.05%
N+15.75	72	FYAJ Max	0.010216	0.028635	0.08%	0.19%
N+15.75	75	FXAJ Max	0.032355	0.008394	0.26%	0.05%
N+15.75	75	FYAJ Max	0.010238	0.029438	0.08%	0.19%
N+15.75	91	FXAJ Max	0.032343	0.008394	0.26%	0.05%
N+15.75	91	FYAJ Max	0.010212	0.029438	0.08%	0.19%
N+15.75	28	FXAJ Max	0.032363	0.007845	0.26%	0.05%
N+15.75	28	FYAJ Max	0.010296	0.027513	0.08%	0.18%
N+15.75	29	FXAJ Max	0.032338	0.007845	0.26%	0.05%
N+15.75	29	FYAJ Max	0.010231	0.027513	0.08%	0.18%
N+15.75	30	FXAJ Max	0.032349	0.007845	0.26%	0.05%
N+15.75	30	FYAJ Max	0.010216	0.027513	0.08%	0.18%
N+15.75	33	FXAJ Max	0.032325	0.005945	0.25%	0.04%
N+15.75	33	FYAJ Max	0.010438	0.020847	0.08%	0.15%
N+15.75	34	FXAJ Max	0.032329	0.005945	0.25%	0.04%
N+15.75	34	FYAJ Max	0.010341	0.020847	0.08%	0.15%

N+15.75	35	FXAJ Max	0.032333	0.005945	0.26%	0.04%
N+15.75	35	FYAJ Max	0.010276	0.020847	0.08%	0.15%
N+15.75	53	FXAJ Max	0.032325	0.006258	0.25%	0.04%
N+15.75	53	FYAJ Max	0.010438	0.021948	0.08%	0.15%
N+15.75	66	FXAJ Max	0.032329	0.006258	0.25%	0.04%
N+15.75	66	FYAJ Max	0.010341	0.021948	0.08%	0.15%
N+15.75	79	FXAJ Max	0.032333	0.006258	0.26%	0.04%
N+15.75	79	FYAJ Max	0.010276	0.021948	0.08%	0.15%
N+11.79	1	FXAJ Max	0.022245	0.003253	0.24%	0.03%
N+11.79	1	FYAJ Max	0.007092	0.011406	0.08%	0.12%
N+11.79	2	FXAJ Max	0.022245	0.003752	0.24%	0.04%
N+11.79	2	FYAJ Max	0.007092	0.013157	0.08%	0.13%
N+11.79	3	FXAJ Max	0.022245	0.003979	0.24%	0.04%
N+11.79	3	FYAJ Max	0.007092	0.013952	0.08%	0.13%
N+11.79	4	FXAJ Max	0.022247	0.003979	0.24%	0.04%
N+11.79	4	FYAJ Max	0.007156	0.013952	0.08%	0.13%
N+11.79	5	FXAJ Max	0.022255	0.003979	0.24%	0.04%
N+11.79	5	FYAJ Max	0.007374	0.013952	0.08%	0.13%
N+11.79	6	FXAJ Max	0.022255	0.004258	0.24%	0.04%
N+11.79	6	FYAJ Max	0.007374	0.01493	0.08%	0.14%
N+11.79	7	FXAJ Max	0.022255	0.004512	0.24%	0.04%
N+11.79	7	FYAJ Max	0.007374	0.015823	0.08%	0.14%
N+11.79	8	FXAJ Max	0.022255	0.004793	0.24%	0.04%
N+11.79	8	FYAJ Max	0.007374	0.016809	0.08%	0.15%
N+11.79	9	FXAJ Max	0.022247	0.004793	0.24%	0.04%
N+11.79	9	FYAJ Max	0.007156	0.016809	0.08%	0.15%
N+11.79	10	FXAJ Max	0.022245	0.004793	0.24%	0.04%
N+11.79	10	FYAJ Max	0.007092	0.016809	0.08%	0.15%
N+11.79	11	FXAJ Max	0.022245	0.005024	0.24%	0.04%
N+11.79	11	FYAJ Max	0.007092	0.017618	0.08%	0.16%
N+11.79	12	FXAJ Max	0.022245	0.005538	0.24%	0.05%
N+11.79	12	FYAJ Max	0.007092	0.019422	0.08%	0.17%
N+11.79	13	FXAJ Max	0.022241	0.005538	0.24%	0.05%
N+11.79	13	FYAJ Max	0.007144	0.019422	0.08%	0.17%
N+11.79	14	FXAJ Max	0.022241	0.005024	0.24%	0.04%
N+11.79	14	FYAJ Max	0.007144	0.017618	0.08%	0.16%
N+11.79	16	FXAJ Max	0.022241	0.004258	0.24%	0.04%
N+11.79	16	FYAJ Max	0.007144	0.01493	0.08%	0.14%
N+11.79	17	FXAJ Max	0.022241	0.003752	0.24%	0.04%
N+11.79	17	FYAJ Max	0.007144	0.013157	0.08%	0.13%
N+11.79	18	FXAJ Max	0.022241	0.003253	0.24%	0.03%
N+11.79	18	FYAJ Max	0.007144	0.011406	0.08%	0.12%

N+11.79	19	FXAJ	Max	0.022245	0.002844	0.24%	0.03%
N+11.79	19	FYAJ	Max	0.007092	0.009969	0.08%	0.11%
N+11.79	20	FXAJ	Max	0.022241	0.002844	0.24%	0.03%
N+11.79	20	FYAJ	Max	0.007144	0.009969	0.08%	0.11%
N+11.79	21	FXAJ	Max	0.022245	0.002593	0.24%	0.03%
N+11.79	21	FYAJ	Max	0.007092	0.00909	0.08%	0.10%
N+11.79	22	FXAJ	Max	0.022245	0.002726	0.24%	0.03%
N+11.79	22	FYAJ	Max	0.007092	0.009558	0.08%	0.11%
N+11.79	23	FXAJ	Max	0.022241	0.002593	0.24%	0.03%
N+11.79	23	FYAJ	Max	0.007144	0.00909	0.08%	0.10%
N+11.79	24	FXAJ	Max	0.022241	0.002726	0.24%	0.03%
N+11.79	24	FYAJ	Max	0.007144	0.009558	0.08%	0.11%
N+11.79	26	FXAJ	Max	0.02224	0.002726	0.24%	0.03%
N+11.79	26	FYAJ	Max	0.007023	0.009558	0.08%	0.11%
N+11.79	27	FXAJ	Max	0.022241	0.002726	0.24%	0.03%
N+11.79	27	FYAJ	Max	0.007024	0.009558	0.08%	0.11%
N+11.79	25	FXAJ	Max	0.022243	0.002764	0.24%	0.03%
N+11.79	25	FYAJ	Max	0.007046	0.009691	0.08%	0.11%
N+11.79	36	FXAJ	Max	0.022243	0.003007	0.24%	0.03%
N+11.79	36	FYAJ	Max	0.007046	0.010543	0.08%	0.11%
N+11.79	37	FXAJ	Max	0.022243	0.003253	0.24%	0.03%
N+11.79	37	FYAJ	Max	0.007046	0.011406	0.08%	0.12%
N+11.79	38	FXAJ	Max	0.022243	0.003502	0.24%	0.04%
N+11.79	38	FYAJ	Max	0.007046	0.012278	0.08%	0.12%
N+11.79	39	FXAJ	Max	0.022243	0.003752	0.24%	0.04%
N+11.79	39	FYAJ	Max	0.007046	0.013157	0.08%	0.13%
N+11.79	41	FXAJ	Max	0.022243	0.004258	0.24%	0.04%
N+11.79	41	FYAJ	Max	0.007046	0.01493	0.08%	0.14%
N+11.79	42	FXAJ	Max	0.022243	0.004512	0.24%	0.04%
N+11.79	42	FYAJ	Max	0.007046	0.015823	0.08%	0.14%
N+11.79	50	FXAJ	Max	0.022243	0.005024	0.24%	0.04%
N+11.79	50	FYAJ	Max	0.007046	0.017618	0.08%	0.16%
N+11.79	51	FXAJ	Max	0.022243	0.005281	0.24%	0.05%
N+11.79	51	FYAJ	Max	0.007046	0.018519	0.08%	0.16%
N+11.79	52	FXAJ	Max	0.022243	0.005538	0.24%	0.05%
N+11.79	52	FYAJ	Max	0.007046	0.019422	0.08%	0.17%
N+11.79	54	FXAJ	Max	0.02224	0.002764	0.24%	0.03%
N+11.79	54	FYAJ	Max	0.00709	0.009691	0.08%	0.11%
N+11.79	55	FXAJ	Max	0.02224	0.003007	0.24%	0.03%
N+11.79	55	FYAJ	Max	0.00709	0.010543	0.08%	0.11%
N+11.79	56	FXAJ	Max	0.02224	0.003253	0.24%	0.03%
N+11.79	56	FYAJ	Max	0.00709	0.011406	0.08%	0.12%

N+11.79	57	FXAJ	Max	0.02224	0.003502	0.24%	0.04%
N+11.79	57	FYAJ	Max	0.00709	0.012278	0.08%	0.12%
N+11.79	58	FXAJ	Max	0.02224	0.003752	0.24%	0.04%
N+11.79	58	FYAJ	Max	0.00709	0.013157	0.08%	0.13%
N+11.79	60	FXAJ	Max	0.02224	0.004258	0.24%	0.04%
N+11.79	60	FYAJ	Max	0.00709	0.01493	0.08%	0.14%
N+11.79	61	FXAJ	Max	0.02224	0.004512	0.24%	0.04%
N+11.79	61	FYAJ	Max	0.00709	0.015823	0.08%	0.14%
N+11.79	63	FXAJ	Max	0.02224	0.005024	0.24%	0.04%
N+11.79	63	FYAJ	Max	0.00709	0.017618	0.08%	0.16%
N+11.79	64	FXAJ	Max	0.02224	0.005281	0.24%	0.05%
N+11.79	64	FYAJ	Max	0.00709	0.018519	0.08%	0.16%
N+11.79	65	FXAJ	Max	0.02224	0.005538	0.24%	0.05%
N+11.79	65	FYAJ	Max	0.00709	0.019422	0.08%	0.17%
N+11.79	67	FXAJ	Max	0.02224	0.002764	0.24%	0.03%
N+11.79	67	FYAJ	Max	0.007023	0.009691	0.08%	0.11%
N+11.79	68	FXAJ	Max	0.02224	0.003007	0.24%	0.03%
N+11.79	68	FYAJ	Max	0.007023	0.010543	0.08%	0.11%
N+11.79	69	FXAJ	Max	0.02224	0.003253	0.24%	0.03%
N+11.79	69	FYAJ	Max	0.007023	0.011406	0.08%	0.12%
N+11.79	70	FXAJ	Max	0.02224	0.003502	0.24%	0.04%
N+11.79	70	FYAJ	Max	0.007023	0.012278	0.08%	0.12%
N+11.79	71	FXAJ	Max	0.02224	0.003752	0.24%	0.04%
N+11.79	71	FYAJ	Max	0.007023	0.013157	0.08%	0.13%
N+11.79	73	FXAJ	Max	0.02224	0.004258	0.24%	0.04%
N+11.79	73	FYAJ	Max	0.007023	0.01493	0.08%	0.14%
N+11.79	74	FXAJ	Max	0.02224	0.004512	0.24%	0.04%
N+11.79	74	FYAJ	Max	0.007023	0.015823	0.08%	0.14%
N+11.79	76	FXAJ	Max	0.02224	0.005024	0.24%	0.04%
N+11.79	76	FYAJ	Max	0.007023	0.017618	0.08%	0.16%
N+11.79	77	FXAJ	Max	0.02224	0.005281	0.24%	0.05%
N+11.79	77	FYAJ	Max	0.007023	0.018519	0.08%	0.16%
N+11.79	78	FXAJ	Max	0.02224	0.005538	0.24%	0.05%
N+11.79	78	FYAJ	Max	0.007023	0.019422	0.08%	0.17%
N+11.79	80	FXAJ	Max	0.022241	0.002593	0.24%	0.03%
N+11.79	80	FYAJ	Max	0.007024	0.00909	0.08%	0.10%
N+11.79	81	FXAJ	Max	0.02224	0.002593	0.24%	0.03%
N+11.79	81	FYAJ	Max	0.007041	0.00909	0.08%	0.10%
N+11.79	84	FXAJ	Max	0.022241	0.004512	0.24%	0.04%
N+11.79	84	FYAJ	Max	0.007144	0.015823	0.08%	0.14%
N+11.79	100	FXAJ	Max	0.022243	0.003979	0.24%	0.04%
N+11.79	100	FYAJ	Max	0.007046	0.013952	0.08%	0.13%

N+11.79	101	FXAJ Max	0.02224	0.003979	0.24%	0.04%
N+11.79	101	FYAJ Max	0.00709	0.013952	0.08%	0.13%
N+11.79	102	FXAJ Max	0.02224	0.003979	0.24%	0.04%
N+11.79	102	FYAJ Max	0.007023	0.013952	0.08%	0.13%
N+11.79	104	FXAJ Max	0.022243	0.004793	0.24%	0.04%
N+11.79	104	FYAJ Max	0.007046	0.016809	0.08%	0.15%
N+11.79	105	FXAJ Max	0.02224	0.004793	0.24%	0.04%
N+11.79	105	FYAJ Max	0.00709	0.016809	0.08%	0.15%
N+11.79	106	FXAJ Max	0.02224	0.004793	0.24%	0.04%
N+11.79	106	FYAJ Max	0.007023	0.016809	0.08%	0.15%
N+11.79	40	FXAJ Max	0.022245	0.00597	0.24%	0.05%
N+11.79	40	FYAJ Max	0.007092	0.020935	0.08%	0.18%
N+11.79	43	FXAJ Max	0.022241	0.00597	0.24%	0.05%
N+11.79	43	FYAJ Max	0.007144	0.020935	0.08%	0.18%
N+11.79	44	FXAJ Max	0.022241	0.006096	0.24%	0.05%
N+11.79	44	FYAJ Max	0.007144	0.021375	0.08%	0.18%
N+11.79	45	FXAJ Max	0.022241	0.00624	0.24%	0.05%
N+11.79	45	FYAJ Max	0.007144	0.021881	0.08%	0.18%
N+11.79	46	FXAJ Max	0.022245	0.006096	0.24%	0.05%
N+11.79	46	FYAJ Max	0.007092	0.021375	0.08%	0.18%
N+11.79	47	FXAJ Max	0.022245	0.00624	0.24%	0.05%
N+11.79	47	FYAJ Max	0.007092	0.021881	0.08%	0.18%
N+11.79	48	FXAJ Max	0.022241	0.006096	0.24%	0.05%
N+11.79	48	FYAJ Max	0.007024	0.021375	0.08%	0.18%
N+11.79	49	FXAJ Max	0.02224	0.006096	0.24%	0.05%
N+11.79	49	FYAJ Max	0.007023	0.021375	0.08%	0.18%
N+11.79	59	FXAJ Max	0.022243	0.006055	0.24%	0.05%
N+11.79	59	FYAJ Max	0.007046	0.021233	0.08%	0.18%
N+11.79	62	FXAJ Max	0.02224	0.006055	0.24%	0.05%
N+11.79	62	FYAJ Max	0.00709	0.021233	0.08%	0.18%
N+11.79	72	FXAJ Max	0.02224	0.006055	0.24%	0.05%
N+11.79	72	FYAJ Max	0.007023	0.021233	0.08%	0.18%
N+11.79	75	FXAJ Max	0.02224	0.00624	0.24%	0.05%
N+11.79	75	FYAJ Max	0.007041	0.021881	0.08%	0.18%
N+11.79	91	FXAJ Max	0.022241	0.00624	0.24%	0.05%
N+11.79	91	FYAJ Max	0.007024	0.021881	0.08%	0.18%
N+11.79	28	FXAJ Max	0.02224	0.005796	0.24%	0.05%
N+11.79	28	FYAJ Max	0.00709	0.020327	0.08%	0.17%
N+11.79	29	FXAJ Max	0.022243	0.005796	0.24%	0.05%
N+11.79	29	FYAJ Max	0.007046	0.020327	0.08%	0.17%
N+11.79	30	FXAJ Max	0.02224	0.005796	0.24%	0.05%
N+11.79	30	FYAJ Max	0.007023	0.020327	0.08%	0.17%

N+11.79	33	FXAJ Max	0.022251	0.004258	0.24%	0.04%
N+11.79	33	FYAJ Max	0.007251	0.01493	0.08%	0.14%
N+11.79	34	FXAJ Max	0.022247	0.004258	0.24%	0.04%
N+11.79	34	FYAJ Max	0.007156	0.01493	0.08%	0.14%
N+11.79	35	FXAJ Max	0.022245	0.004258	0.24%	0.04%
N+11.79	35	FYAJ Max	0.007092	0.01493	0.08%	0.14%
N+11.79	53	FXAJ Max	0.022251	0.004512	0.24%	0.04%
N+11.79	53	FYAJ Max	0.007251	0.015823	0.08%	0.14%
N+11.79	66	FXAJ Max	0.022247	0.004512	0.24%	0.04%
N+11.79	66	FYAJ Max	0.007156	0.015823	0.08%	0.14%
N+11.79	79	FXAJ Max	0.022245	0.004512	0.24%	0.04%
N+11.79	79	FYAJ Max	0.007092	0.015823	0.08%	0.14%
N+7.85	1	FXAJ Max	0.012881	0.001932	0.20%	0.03%
N+7.85	1	FYAJ Max	0.00414	0.006777	0.06%	0.10%
N+7.85	2	FXAJ Max	0.012881	0.002313	0.20%	0.03%
N+7.85	2	FYAJ Max	0.00414	0.008112	0.06%	0.11%
N+7.85	3	FXAJ Max	0.012881	0.002486	0.20%	0.03%
N+7.85	3	FYAJ Max	0.00414	0.008718	0.06%	0.11%
N+7.85	4	FXAJ Max	0.012887	0.002486	0.20%	0.03%
N+7.85	4	FYAJ Max	0.004205	0.008718	0.06%	0.11%
N+7.85	5	FXAJ Max	0.012903	0.002486	0.20%	0.03%
N+7.85	5	FYAJ Max	0.004419	0.008718	0.06%	0.11%
N+7.85	6	FXAJ Max	0.012903	0.002698	0.20%	0.03%
N+7.85	6	FYAJ Max	0.004419	0.009461	0.06%	0.12%
N+7.85	7	FXAJ Max	0.012903	0.002892	0.20%	0.04%
N+7.85	7	FYAJ Max	0.004419	0.010139	0.06%	0.12%
N+7.85	8	FXAJ Max	0.012903	0.003105	0.20%	0.04%
N+7.85	8	FYAJ Max	0.004419	0.010887	0.06%	0.13%
N+7.85	9	FXAJ Max	0.012887	0.003105	0.20%	0.04%
N+7.85	9	FYAJ Max	0.004205	0.010887	0.06%	0.13%
N+7.85	10	FXAJ Max	0.012881	0.003105	0.20%	0.04%
N+7.85	10	FYAJ Max	0.00414	0.010887	0.06%	0.13%
N+7.85	11	FXAJ Max	0.012881	0.00328	0.20%	0.04%
N+7.85	11	FYAJ Max	0.00414	0.0115	0.06%	0.14%
N+7.85	12	FXAJ Max	0.012881	0.00367	0.20%	0.04%
N+7.85	12	FYAJ Max	0.00414	0.012865	0.06%	0.15%
N+7.85	13	FXAJ Max	0.012855	0.00367	0.20%	0.04%
N+7.85	13	FYAJ Max	0.00417	0.012865	0.06%	0.15%
N+7.85	14	FXAJ Max	0.012855	0.00328	0.20%	0.04%
N+7.85	14	FYAJ Max	0.00417	0.0115	0.06%	0.14%
N+7.85	16	FXAJ Max	0.012855	0.002698	0.20%	0.03%
N+7.85	16	FYAJ Max	0.00417	0.009461	0.06%	0.12%

N+7.85	17	FXAJ Max	0.012855	0.002313	0.20%	0.03%
N+7.85	17	FYAJ Max	0.00417	0.008112	0.06%	0.11%
N+7.85	18	FXAJ Max	0.012855	0.001932	0.20%	0.03%
N+7.85	18	FYAJ Max	0.00417	0.006777	0.06%	0.10%
N+7.85	19	FXAJ Max	0.012881	0.001619	0.20%	0.03%
N+7.85	19	FYAJ Max	0.00414	0.005678	0.06%	0.09%
N+7.85	20	FXAJ Max	0.012855	0.001619	0.20%	0.03%
N+7.85	20	FYAJ Max	0.00417	0.005678	0.06%	0.09%
N+7.85	21	FXAJ Max	0.012881	0.001428	0.20%	0.02%
N+7.85	21	FYAJ Max	0.00414	0.005006	0.06%	0.08%
N+7.85	22	FXAJ Max	0.012881	0.00153	0.20%	0.02%
N+7.85	22	FYAJ Max	0.00414	0.005363	0.06%	0.09%
N+7.85	23	FXAJ Max	0.012855	0.001428	0.20%	0.02%
N+7.85	23	FYAJ Max	0.00417	0.005006	0.06%	0.08%
N+7.85	24	FXAJ Max	0.012855	0.00153	0.20%	0.02%
N+7.85	24	FYAJ Max	0.00417	0.005363	0.06%	0.09%
N+7.85	26	FXAJ Max	0.012865	0.00153	0.20%	0.02%
N+7.85	26	FYAJ Max	0.004063	0.005363	0.06%	0.09%
N+7.85	27	FXAJ Max	0.01287	0.00153	0.20%	0.02%
N+7.85	27	FYAJ Max	0.004067	0.005363	0.06%	0.09%
N+7.85	25	FXAJ Max	0.012875	0.001559	0.20%	0.02%
N+7.85	25	FYAJ Max	0.004092	0.005465	0.06%	0.09%
N+7.85	36	FXAJ Max	0.012875	0.001744	0.20%	0.03%
N+7.85	36	FYAJ Max	0.004092	0.006117	0.06%	0.09%
N+7.85	37	FXAJ Max	0.012875	0.001932	0.20%	0.03%
N+7.85	37	FYAJ Max	0.004092	0.006777	0.06%	0.10%
N+7.85	38	FXAJ Max	0.012875	0.002122	0.20%	0.03%
N+7.85	38	FYAJ Max	0.004092	0.007442	0.06%	0.10%
N+7.85	39	FXAJ Max	0.012875	0.002313	0.20%	0.03%
N+7.85	39	FYAJ Max	0.004092	0.008112	0.06%	0.11%
N+7.85	41	FXAJ Max	0.012875	0.002698	0.20%	0.03%
N+7.85	41	FYAJ Max	0.004092	0.009461	0.06%	0.12%
N+7.85	42	FXAJ Max	0.012875	0.002892	0.20%	0.04%
N+7.85	42	FYAJ Max	0.004092	0.010139	0.06%	0.12%
N+7.85	50	FXAJ Max	0.012875	0.00328	0.20%	0.04%
N+7.85	50	FYAJ Max	0.004092	0.0115	0.06%	0.14%
N+7.85	51	FXAJ Max	0.012875	0.003475	0.20%	0.04%
N+7.85	51	FYAJ Max	0.004092	0.012182	0.06%	0.14%
N+7.85	52	FXAJ Max	0.012875	0.00367	0.20%	0.04%
N+7.85	52	FYAJ Max	0.004092	0.012865	0.06%	0.15%
N+7.85	54	FXAJ Max	0.012858	0.001559	0.20%	0.02%
N+7.85	54	FYAJ Max	0.00412	0.005465	0.06%	0.09%

N+7.85	55	FXAJ Max	0.012858	0.001744	0.20%	0.03%
N+7.85	55	FYAJ Max	0.00412	0.006117	0.06%	0.09%
N+7.85	56	FXAJ Max	0.012858	0.001932	0.20%	0.03%
N+7.85	56	FYAJ Max	0.00412	0.006777	0.06%	0.10%
N+7.85	57	FXAJ Max	0.012858	0.002122	0.20%	0.03%
N+7.85	57	FYAJ Max	0.00412	0.007442	0.06%	0.10%
N+7.85	58	FXAJ Max	0.012858	0.002313	0.20%	0.03%
N+7.85	58	FYAJ Max	0.00412	0.008112	0.06%	0.11%
N+7.85	60	FXAJ Max	0.012858	0.002698	0.20%	0.03%
N+7.85	60	FYAJ Max	0.00412	0.009461	0.06%	0.12%
N+7.85	61	FXAJ Max	0.012858	0.002892	0.20%	0.04%
N+7.85	61	FYAJ Max	0.00412	0.010139	0.06%	0.12%
N+7.85	63	FXAJ Max	0.012858	0.00328	0.20%	0.04%
N+7.85	63	FYAJ Max	0.00412	0.0115	0.06%	0.14%
N+7.85	64	FXAJ Max	0.012858	0.003475	0.20%	0.04%
N+7.85	64	FYAJ Max	0.00412	0.012182	0.06%	0.14%
N+7.85	65	FXAJ Max	0.012858	0.00367	0.20%	0.04%
N+7.85	65	FYAJ Max	0.00412	0.012865	0.06%	0.15%
N+7.85	67	FXAJ Max	0.012865	0.001559	0.20%	0.02%
N+7.85	67	FYAJ Max	0.004063	0.005465	0.06%	0.09%
N+7.85	68	FXAJ Max	0.012865	0.001744	0.20%	0.03%
N+7.85	68	FYAJ Max	0.004063	0.006117	0.06%	0.09%
N+7.85	69	FXAJ Max	0.012865	0.001932	0.20%	0.03%
N+7.85	69	FYAJ Max	0.004063	0.006777	0.06%	0.10%
N+7.85	70	FXAJ Max	0.012865	0.002122	0.20%	0.03%
N+7.85	70	FYAJ Max	0.004063	0.007442	0.06%	0.10%
N+7.85	71	FXAJ Max	0.012865	0.002313	0.20%	0.03%
N+7.85	71	FYAJ Max	0.004063	0.008112	0.06%	0.11%
N+7.85	73	FXAJ Max	0.012865	0.002698	0.20%	0.03%
N+7.85	73	FYAJ Max	0.004063	0.009461	0.06%	0.12%
N+7.85	74	FXAJ Max	0.012865	0.002892	0.20%	0.04%
N+7.85	74	FYAJ Max	0.004063	0.010139	0.06%	0.12%
N+7.85	76	FXAJ Max	0.012865	0.00328	0.20%	0.04%
N+7.85	76	FYAJ Max	0.004063	0.0115	0.06%	0.14%
N+7.85	77	FXAJ Max	0.012865	0.003475	0.20%	0.04%
N+7.85	77	FYAJ Max	0.004063	0.012182	0.06%	0.14%
N+7.85	78	FXAJ Max	0.012865	0.00367	0.20%	0.04%
N+7.85	78	FYAJ Max	0.004063	0.012865	0.06%	0.15%
N+7.85	80	FXAJ Max	0.01287	0.001428	0.20%	0.02%
N+7.85	80	FYAJ Max	0.004067	0.005006	0.06%	0.08%
N+7.85	81	FXAJ Max	0.012862	0.001428	0.20%	0.02%
N+7.85	81	FYAJ Max	0.004077	0.005006	0.06%	0.08%

N+7.85	84	FXAJ Max	0.012855	0.002892	0.20%	0.04%
N+7.85	84	FYAJ Max	0.00417	0.010139	0.06%	0.12%
N+7.85	100	FXAJ Max	0.012875	0.002486	0.20%	0.03%
N+7.85	100	FYAJ Max	0.004092	0.008718	0.06%	0.11%
N+7.85	101	FXAJ Max	0.012858	0.002486	0.20%	0.03%
N+7.85	101	FYAJ Max	0.00412	0.008718	0.06%	0.11%
N+7.85	102	FXAJ Max	0.012865	0.002486	0.20%	0.03%
N+7.85	102	FYAJ Max	0.004063	0.008718	0.06%	0.11%
N+7.85	104	FXAJ Max	0.012875	0.003105	0.20%	0.04%
N+7.85	104	FYAJ Max	0.004092	0.010887	0.06%	0.13%
N+7.85	105	FXAJ Max	0.012858	0.003105	0.20%	0.04%
N+7.85	105	FYAJ Max	0.00412	0.010887	0.06%	0.13%
N+7.85	106	FXAJ Max	0.012865	0.003105	0.20%	0.04%
N+7.85	106	FYAJ Max	0.004063	0.010887	0.06%	0.13%
N+7.85	40	FXAJ Max	0.012881	0.003996	0.20%	0.04%
N+7.85	40	FYAJ Max	0.00414	0.014009	0.06%	0.16%
N+7.85	43	FXAJ Max	0.012855	0.003996	0.20%	0.04%
N+7.85	43	FYAJ Max	0.00417	0.014009	0.06%	0.16%
N+7.85	44	FXAJ Max	0.012855	0.004091	0.20%	0.05%
N+7.85	44	FYAJ Max	0.00417	0.014342	0.06%	0.16%
N+7.85	45	FXAJ Max	0.012855	0.0042	0.20%	0.05%
N+7.85	45	FYAJ Max	0.00417	0.014724	0.06%	0.16%
N+7.85	46	FXAJ Max	0.012881	0.004091	0.20%	0.05%
N+7.85	46	FYAJ Max	0.00414	0.014342	0.06%	0.16%
N+7.85	47	FXAJ Max	0.012881	0.0042	0.20%	0.05%
N+7.85	47	FYAJ Max	0.00414	0.014724	0.06%	0.16%
N+7.85	48	FXAJ Max	0.01287	0.004091	0.20%	0.05%
N+7.85	48	FYAJ Max	0.004067	0.014342	0.06%	0.16%
N+7.85	49	FXAJ Max	0.012865	0.004091	0.20%	0.05%
N+7.85	49	FYAJ Max	0.004063	0.014342	0.06%	0.16%
N+7.85	59	FXAJ Max	0.012875	0.004061	0.20%	0.05%
N+7.85	59	FYAJ Max	0.004092	0.014234	0.06%	0.16%
N+7.85	62	FXAJ Max	0.012858	0.004061	0.20%	0.05%
N+7.85	62	FYAJ Max	0.00412	0.014234	0.06%	0.16%
N+7.85	72	FXAJ Max	0.012865	0.004061	0.20%	0.05%
N+7.85	72	FYAJ Max	0.004063	0.014234	0.06%	0.16%
N+7.85	75	FXAJ Max	0.012862	0.0042	0.20%	0.05%
N+7.85	75	FYAJ Max	0.004077	0.014724	0.06%	0.16%
N+7.85	91	FXAJ Max	0.01287	0.0042	0.20%	0.05%
N+7.85	91	FYAJ Max	0.004067	0.014724	0.06%	0.16%
N+7.85	28	FXAJ Max	0.012858	0.003865	0.20%	0.04%
N+7.85	28	FYAJ Max	0.00412	0.013549	0.06%	0.15%

N+7.85	29	FXAJ Max	0.012875	0.003865	0.20%	0.04%
N+7.85	29	FYAJ Max	0.004092	0.013549	0.06%	0.15%
N+7.85	30	FXAJ Max	0.012865	0.003865	0.20%	0.04%
N+7.85	30	FYAJ Max	0.004063	0.013549	0.06%	0.15%
N+7.85	33	FXAJ Max	0.012895	0.002698	0.20%	0.03%
N+7.85	33	FYAJ Max	0.004299	0.009461	0.06%	0.12%
N+7.85	34	FXAJ Max	0.012887	0.002698	0.20%	0.03%
N+7.85	34	FYAJ Max	0.004205	0.009461	0.06%	0.12%
N+7.85	35	FXAJ Max	0.012881	0.002698	0.20%	0.03%
N+7.85	35	FYAJ Max	0.00414	0.009461	0.06%	0.12%
N+7.85	53	FXAJ Max	0.012895	0.002892	0.20%	0.04%
N+7.85	53	FYAJ Max	0.004299	0.010139	0.06%	0.12%
N+7.85	66	FXAJ Max	0.012887	0.002892	0.20%	0.04%
N+7.85	66	FYAJ Max	0.004205	0.010139	0.06%	0.12%
N+7.85	79	FXAJ Max	0.012881	0.002892	0.20%	0.04%
N+7.85	79	FYAJ Max	0.00414	0.010139	0.06%	0.12%
N+3.90	1	FXAJ Max	0.00517	0.000841	0.13%	0.02%
N+3.90	1	FYAJ Max	0.00172	0.00295	0.04%	0.08%
N+3.90	2	FXAJ Max	0.00517	0.0011	0.10%	0.02%
N+3.90	2	FYAJ Max	0.00172	0.003858	0.03%	0.06%
N+3.90	3	FXAJ Max	0.00517	0.001218	0.10%	0.02%
N+3.90	3	FYAJ Max	0.00172	0.004269	0.03%	0.07%
N+3.90	4	FXAJ Max	0.005177	0.001218	0.10%	0.02%
N+3.90	4	FYAJ Max	0.001792	0.004269	0.03%	0.07%
N+3.90	5	FXAJ Max	0.005194	0.001218	0.10%	0.02%
N+3.90	5	FYAJ Max	0.002013	0.004269	0.04%	0.07%
N+3.90	6	FXAJ Max	0.005194	0.001361	0.10%	0.02%
N+3.90	6	FYAJ Max	0.002013	0.004772	0.04%	0.08%
N+3.90	7	FXAJ Max	0.005194	0.001492	0.10%	0.02%
N+3.90	7	FYAJ Max	0.002013	0.005231	0.04%	0.09%
N+3.90	8	FXAJ Max	0.005194	0.001636	0.10%	0.03%
N+3.90	8	FYAJ Max	0.002013	0.005735	0.04%	0.09%
N+3.90	9	FXAJ Max	0.005177	0.001636	0.10%	0.03%
N+3.90	9	FYAJ Max	0.001792	0.005735	0.03%	0.09%
N+3.90	10	FXAJ Max	0.00517	0.001636	0.10%	0.03%
N+3.90	10	FYAJ Max	0.00172	0.005735	0.03%	0.09%
N+3.90	11	FXAJ Max	0.00517	0.001755	0.10%	0.03%
N+3.90	11	FYAJ Max	0.00172	0.006148	0.03%	0.10%
N+3.90	12	FXAJ Max	0.00517	0.002017	0.10%	0.03%
N+3.90	12	FYAJ Max	0.00172	0.007068	0.03%	0.11%
N+3.90	13	FXAJ Max	0.005142	0.002017	0.10%	0.03%
N+3.90	13	FYAJ Max	0.001736	0.007068	0.03%	0.11%

N+3.90	14	FXAJ Max	0.005142	0.001755	0.10%	0.03%
N+3.90	14	FYAJ Max	0.001736	0.006148	0.03%	0.10%
N+3.90	16	FXAJ Max	0.005142	0.001361	0.10%	0.02%
N+3.90	16	FYAJ Max	0.001736	0.004772	0.03%	0.08%
N+3.90	17	FXAJ Max	0.005142	0.0011	0.10%	0.02%
N+3.90	17	FYAJ Max	0.001736	0.003858	0.03%	0.06%
N+3.90	18	FXAJ Max	0.005142	0.000841	0.13%	0.02%
N+3.90	18	FYAJ Max	0.001736	0.00295	0.04%	0.08%
N+3.90	19	FXAJ Max	0.00517	0.000628	0.13%	0.02%
N+3.90	19	FYAJ Max	0.00172	0.0022	0.04%	0.06%
N+3.90	20	FXAJ Max	0.005142	0.000628	0.13%	0.02%
N+3.90	20	FYAJ Max	0.001736	0.0022	0.04%	0.06%
N+3.90	21	FXAJ Max	0.00517	0.000498	0.13%	0.01%
N+3.90	21	FYAJ Max	0.00172	0.001741	0.04%	0.04%
N+3.90	22	FXAJ Max	0.00517	0.000567	0.13%	0.01%
N+3.90	22	FYAJ Max	0.00172	0.001985	0.04%	0.05%
N+3.90	23	FXAJ Max	0.005142	0.000498	0.13%	0.01%
N+3.90	23	FYAJ Max	0.001736	0.001741	0.04%	0.04%
N+3.90	24	FXAJ Max	0.005142	0.000567	0.13%	0.01%
N+3.90	24	FYAJ Max	0.001736	0.001985	0.04%	0.05%
N+3.90	26	FXAJ Max	0.005153	0.000567	0.13%	0.01%
N+3.90	26	FYAJ Max	0.001628	0.001985	0.04%	0.05%
N+3.90	27	FXAJ Max	0.005158	0.000567	0.13%	0.01%
N+3.90	27	FYAJ Max	0.001635	0.001985	0.04%	0.05%
N+3.90	25	FXAJ Max	0.005164	0.000587	0.13%	0.02%
N+3.90	25	FYAJ Max	0.001666	0.002054	0.04%	0.05%
N+3.90	36	FXAJ Max	0.005164	0.000713	0.13%	0.02%
N+3.90	36	FYAJ Max	0.001666	0.0025	0.04%	0.06%
N+3.90	37	FXAJ Max	0.005164	0.000841	0.13%	0.02%
N+3.90	37	FYAJ Max	0.001666	0.00295	0.04%	0.08%
N+3.90	38	FXAJ Max	0.005164	0.00097	0.10%	0.02%
N+3.90	38	FYAJ Max	0.001666	0.003403	0.03%	0.06%
N+3.90	39	FXAJ Max	0.005164	0.0011	0.10%	0.02%
N+3.90	39	FYAJ Max	0.001666	0.003858	0.03%	0.06%
N+3.90	41	FXAJ Max	0.005164	0.001361	0.10%	0.02%
N+3.90	41	FYAJ Max	0.001666	0.004772	0.03%	0.08%
N+3.90	42	FXAJ Max	0.005164	0.001492	0.10%	0.02%
N+3.90	42	FYAJ Max	0.001666	0.005231	0.03%	0.09%
N+3.90	50	FXAJ Max	0.005164	0.001755	0.10%	0.03%
N+3.90	50	FYAJ Max	0.001666	0.006148	0.03%	0.10%
N+3.90	51	FXAJ Max	0.005164	0.001886	0.10%	0.03%
N+3.90	51	FYAJ Max	0.001666	0.006608	0.03%	0.11%

N+3.90	52	FXAJ	Max	0.005164	0.002017	0.10%	0.03%
N+3.90	52	FYAJ	Max	0.001666	0.007068	0.03%	0.11%
N+3.90	54	FXAJ	Max	0.005145	0.000587	0.13%	0.02%
N+3.90	54	FYAJ	Max	0.001684	0.002054	0.04%	0.05%
N+3.90	55	FXAJ	Max	0.005145	0.000713	0.13%	0.02%
N+3.90	55	FYAJ	Max	0.001684	0.0025	0.04%	0.06%
N+3.90	56	FXAJ	Max	0.005145	0.000841	0.13%	0.02%
N+3.90	56	FYAJ	Max	0.001684	0.00295	0.04%	0.08%
N+3.90	57	FXAJ	Max	0.005145	0.00097	0.10%	0.02%
N+3.90	57	FYAJ	Max	0.001684	0.003403	0.03%	0.06%
N+3.90	58	FXAJ	Max	0.005145	0.0011	0.10%	0.02%
N+3.90	58	FYAJ	Max	0.001684	0.003858	0.03%	0.06%
N+3.90	60	FXAJ	Max	0.005145	0.001361	0.10%	0.02%
N+3.90	60	FYAJ	Max	0.001684	0.004772	0.03%	0.08%
N+3.90	61	FXAJ	Max	0.005145	0.001492	0.10%	0.02%
N+3.90	61	FYAJ	Max	0.001684	0.005231	0.03%	0.09%
N+3.90	63	FXAJ	Max	0.005145	0.001755	0.10%	0.03%
N+3.90	63	FYAJ	Max	0.001684	0.006148	0.03%	0.10%
N+3.90	64	FXAJ	Max	0.005145	0.001886	0.10%	0.03%
N+3.90	64	FYAJ	Max	0.001684	0.006608	0.03%	0.11%
N+3.90	65	FXAJ	Max	0.005145	0.002017	0.10%	0.03%
N+3.90	65	FYAJ	Max	0.001684	0.007068	0.03%	0.11%
N+3.90	67	FXAJ	Max	0.005153	0.000587	0.13%	0.02%
N+3.90	67	FYAJ	Max	0.001628	0.002054	0.04%	0.05%
N+3.90	68	FXAJ	Max	0.005153	0.000713	0.13%	0.02%
N+3.90	68	FYAJ	Max	0.001628	0.0025	0.04%	0.06%
N+3.90	69	FXAJ	Max	0.005153	0.000841	0.13%	0.02%
N+3.90	69	FYAJ	Max	0.001628	0.00295	0.04%	0.08%
N+3.90	70	FXAJ	Max	0.005153	0.00097	0.10%	0.02%
N+3.90	70	FYAJ	Max	0.001628	0.003403	0.03%	0.06%
N+3.90	71	FXAJ	Max	0.005153	0.0011	0.10%	0.02%
N+3.90	71	FYAJ	Max	0.001628	0.003858	0.03%	0.06%
N+3.90	73	FXAJ	Max	0.005153	0.001361	0.10%	0.02%
N+3.90	73	FYAJ	Max	0.001628	0.004772	0.03%	0.08%
N+3.90	74	FXAJ	Max	0.005153	0.001492	0.10%	0.02%
N+3.90	74	FYAJ	Max	0.001628	0.005231	0.03%	0.09%
N+3.90	76	FXAJ	Max	0.005153	0.001755	0.10%	0.03%
N+3.90	76	FYAJ	Max	0.001628	0.006148	0.03%	0.10%
N+3.90	77	FXAJ	Max	0.005153	0.001886	0.10%	0.03%
N+3.90	77	FYAJ	Max	0.001628	0.006608	0.03%	0.11%
N+3.90	78	FXAJ	Max	0.005153	0.002017	0.10%	0.03%
N+3.90	78	FYAJ	Max	0.001628	0.007068	0.03%	0.11%

N+3.90	80	FXAJ	Max	0.005158	0.000498	0.13%	0.01%
N+3.90	80	FYAJ	Max	0.001635	0.001741	0.04%	0.04%
N+3.90	81	FXAJ	Max	0.00515	0.000498	0.13%	0.01%
N+3.90	81	FYAJ	Max	0.00164	0.001741	0.04%	0.04%
N+3.90	84	FXAJ	Max	0.005142	0.001492	0.10%	0.02%
N+3.90	84	FYAJ	Max	0.001736	0.005231	0.03%	0.09%
N+3.90	100	FXAJ	Max	0.005164	0.001218	0.10%	0.02%
N+3.90	100	FYAJ	Max	0.001666	0.004269	0.03%	0.07%
N+3.90	101	FXAJ	Max	0.005145	0.001218	0.10%	0.02%
N+3.90	101	FYAJ	Max	0.001684	0.004269	0.03%	0.07%
N+3.90	102	FXAJ	Max	0.005153	0.001218	0.10%	0.02%
N+3.90	102	FYAJ	Max	0.001628	0.004269	0.03%	0.07%
N+3.90	104	FXAJ	Max	0.005164	0.001636	0.10%	0.03%
N+3.90	104	FYAJ	Max	0.001666	0.005735	0.03%	0.09%
N+3.90	105	FXAJ	Max	0.005145	0.001636	0.10%	0.03%
N+3.90	105	FYAJ	Max	0.001684	0.005735	0.03%	0.09%
N+3.90	106	FXAJ	Max	0.005153	0.001636	0.10%	0.03%
N+3.90	106	FYAJ	Max	0.001628	0.005735	0.03%	0.09%
N+3.90	40	FXAJ	Max	0.00517	0.002237	0.10%	0.04%
N+3.90	40	FYAJ	Max	0.00172	0.007836	0.03%	0.12%
N+3.90	43	FXAJ	Max	0.005142	0.002237	0.10%	0.04%
N+3.90	43	FYAJ	Max	0.001736	0.007836	0.03%	0.12%
N+3.90	44	FXAJ	Max	0.005142	0.002301	0.10%	0.04%
N+3.90	44	FYAJ	Max	0.001736	0.00806	0.03%	0.13%
N+3.90	45	FXAJ	Max	0.005142	0.002375	0.10%	0.04%
N+3.90	45	FYAJ	Max	0.001736	0.008316	0.03%	0.13%
N+3.90	46	FXAJ	Max	0.00517	0.002301	0.10%	0.04%
N+3.90	46	FYAJ	Max	0.00172	0.00806	0.03%	0.13%
N+3.90	47	FXAJ	Max	0.00517	0.002375	0.10%	0.04%
N+3.90	47	FYAJ	Max	0.00172	0.008316	0.03%	0.13%
N+3.90	48	FXAJ	Max	0.005158	0.002301	0.10%	0.04%
N+3.90	48	FYAJ	Max	0.001635	0.00806	0.03%	0.13%
N+3.90	49	FXAJ	Max	0.005153	0.002301	0.10%	0.04%
N+3.90	49	FYAJ	Max	0.001628	0.00806	0.03%	0.13%
N+3.90	59	FXAJ	Max	0.005164	0.002281	0.10%	0.04%
N+3.90	59	FYAJ	Max	0.001666	0.007988	0.03%	0.13%
N+3.90	62	FXAJ	Max	0.005145	0.002281	0.10%	0.04%
N+3.90	62	FYAJ	Max	0.001684	0.007988	0.03%	0.13%
N+3.90	72	FXAJ	Max	0.005153	0.002281	0.10%	0.04%
N+3.90	72	FYAJ	Max	0.001628	0.007988	0.03%	0.13%
N+3.90	75	FXAJ	Max	0.00515	0.002375	0.10%	0.04%
N+3.90	75	FYAJ	Max	0.00164	0.008316	0.03%	0.13%

N+3.90	91	FXAJ Max	0.005158	0.002375	0.10%	0.04%
N+3.90	91	FYAJ Max	0.001635	0.008316	0.03%	0.13%
N+3.90	28	FXAJ Max	0.005145	0.002149	0.10%	0.03%
N+3.90	28	FYAJ Max	0.001684	0.007527	0.03%	0.12%
N+3.90	29	FXAJ Max	0.005164	0.002149	0.10%	0.03%
N+3.90	29	FYAJ Max	0.001666	0.007527	0.03%	0.12%
N+3.90	30	FXAJ Max	0.005153	0.002149	0.10%	0.03%
N+3.90	30	FYAJ Max	0.001628	0.007527	0.03%	0.12%
N+3.90	33	FXAJ Max	0.005185	0.001361	0.10%	0.02%
N+3.90	33	FYAJ Max	0.001892	0.004772	0.03%	0.08%
N+3.90	34	FXAJ Max	0.005177	0.001361	0.10%	0.02%
N+3.90	34	FYAJ Max	0.001792	0.004772	0.03%	0.08%
N+3.90	35	FXAJ Max	0.00517	0.001361	0.10%	0.02%
N+3.90	35	FYAJ Max	0.00172	0.004772	0.03%	0.08%
N+3.90	53	FXAJ Max	0.005185	0.001492	0.10%	0.02%
N+3.90	53	FYAJ Max	0.001892	0.005231	0.03%	0.09%
N+3.90	66	FXAJ Max	0.005177	0.001492	0.10%	0.02%
N+3.90	66	FYAJ Max	0.001792	0.005231	0.03%	0.09%
N+3.90	79	FXAJ Max	0.00517	0.001492	0.10%	0.02%
N+3.90	79	FYAJ Max	0.00172	0.005231	0.03%	0.09%
N+0.00	2	FXAJ Max	0.001328	0.000385	0.03%	0.01%
N+0.00	2	FYAJ Max	0.000483	0.001347	0.01%	0.03%
N+0.00	3	FXAJ Max	0.001328	0.000433	0.03%	0.01%
N+0.00	3	FYAJ Max	0.000483	0.001518	0.01%	0.03%
N+0.00	4	FXAJ Max	0.001334	0.000433	0.03%	0.01%
N+0.00	4	FYAJ Max	0.00053	0.001518	0.01%	0.03%
N+0.00	5	FXAJ Max	0.001348	0.000433	0.03%	0.01%
N+0.00	5	FYAJ Max	0.000661	0.001518	0.01%	0.03%
N+0.00	6	FXAJ Max	0.001348	0.000493	0.03%	0.01%
N+0.00	6	FYAJ Max	0.000661	0.001729	0.01%	0.04%
N+0.00	7	FXAJ Max	0.001348	0.000548	0.03%	0.01%
N+0.00	7	FYAJ Max	0.000661	0.001922	0.01%	0.04%
N+0.00	8	FXAJ Max	0.001348	0.000609	0.03%	0.01%
N+0.00	8	FYAJ Max	0.000661	0.002134	0.01%	0.05%
N+0.00	9	FXAJ Max	0.001334	0.000609	0.03%	0.01%
N+0.00	9	FYAJ Max	0.00053	0.002134	0.01%	0.05%
N+0.00	10	FXAJ Max	0.001328	0.000609	0.03%	0.01%
N+0.00	10	FYAJ Max	0.000483	0.002134	0.01%	0.05%
N+0.00	11	FXAJ Max	0.001328	0.000659	0.03%	0.01%
N+0.00	11	FYAJ Max	0.000483	0.002309	0.01%	0.05%
N+0.00	12	FXAJ Max	0.001328	0.00077	0.03%	0.02%
N+0.00	12	FYAJ Max	0.000483	0.002697	0.01%	0.06%

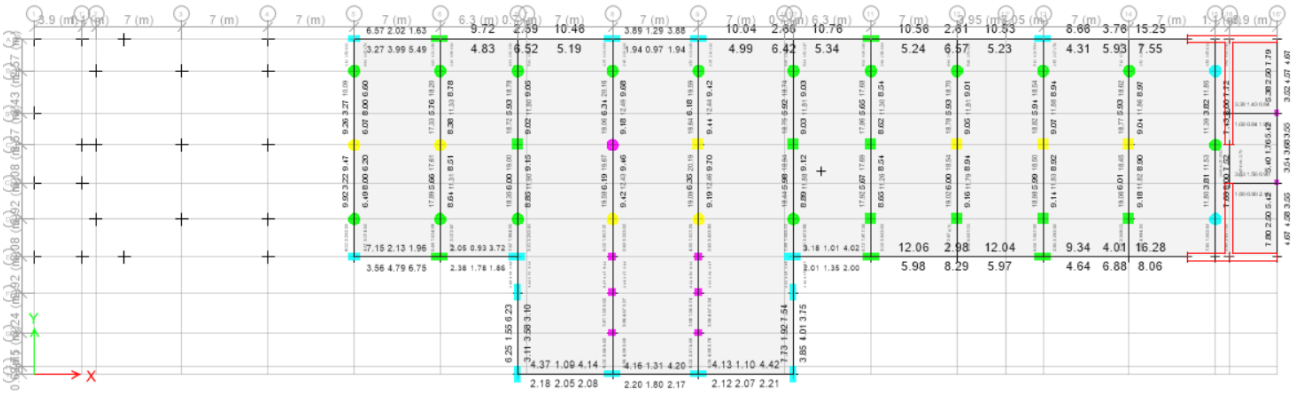
N+0.00	13	FXAJ Max	0.001302	0.00077	0.03%	0.02%
N+0.00	13	FYAJ Max	0.000483	0.002697	0.01%	0.06%
N+0.00	14	FXAJ Max	0.001302	0.000659	0.03%	0.01%
N+0.00	14	FYAJ Max	0.000483	0.002309	0.01%	0.05%
N+0.00	16	FXAJ Max	0.001302	0.000493	0.03%	0.01%
N+0.00	16	FYAJ Max	0.000483	0.001729	0.01%	0.04%
N+0.00	17	FXAJ Max	0.001302	0.000385	0.03%	0.01%
N+0.00	17	FYAJ Max	0.000483	0.001347	0.01%	0.03%
N+0.00	38	FXAJ Max	0.001322	0.000333	0.03%	0.01%
N+0.00	38	FYAJ Max	0.000445	0.001158	0.01%	0.03%
N+0.00	39	FXAJ Max	0.001322	0.000385	0.03%	0.01%
N+0.00	39	FYAJ Max	0.000445	0.001347	0.01%	0.03%
N+0.00	41	FXAJ Max	0.001322	0.000493	0.03%	0.01%
N+0.00	41	FYAJ Max	0.000445	0.001729	0.01%	0.04%
N+0.00	42	FXAJ Max	0.001322	0.000548	0.03%	0.01%
N+0.00	42	FYAJ Max	0.000445	0.001922	0.01%	0.04%
N+0.00	50	FXAJ Max	0.001322	0.000659	0.03%	0.01%
N+0.00	50	FYAJ Max	0.000445	0.002309	0.01%	0.05%
N+0.00	51	FXAJ Max	0.001322	0.000715	0.03%	0.02%
N+0.00	51	FYAJ Max	0.000445	0.002503	0.01%	0.06%
N+0.00	52	FXAJ Max	0.001322	0.00077	0.03%	0.02%
N+0.00	52	FYAJ Max	0.000445	0.002697	0.01%	0.06%
N+0.00	57	FXAJ Max	0.001305	0.000333	0.03%	0.01%
N+0.00	57	FYAJ Max	0.00045	0.001158	0.01%	0.03%
N+0.00	58	FXAJ Max	0.001305	0.000385	0.03%	0.01%
N+0.00	58	FYAJ Max	0.00045	0.001347	0.01%	0.03%
N+0.00	60	FXAJ Max	0.001305	0.000493	0.03%	0.01%
N+0.00	60	FYAJ Max	0.00045	0.001729	0.01%	0.04%
N+0.00	61	FXAJ Max	0.001305	0.000548	0.03%	0.01%
N+0.00	61	FYAJ Max	0.00045	0.001922	0.01%	0.04%
N+0.00	63	FXAJ Max	0.001305	0.000659	0.03%	0.01%
N+0.00	63	FYAJ Max	0.00045	0.002309	0.01%	0.05%
N+0.00	64	FXAJ Max	0.001305	0.000715	0.03%	0.02%
N+0.00	64	FYAJ Max	0.00045	0.002503	0.01%	0.06%
N+0.00	65	FXAJ Max	0.001305	0.00077	0.03%	0.02%
N+0.00	65	FYAJ Max	0.00045	0.002697	0.01%	0.06%
N+0.00	70	FXAJ Max	0.001313	0.000333	0.03%	0.01%
N+0.00	70	FYAJ Max	0.000415	0.001158	0.01%	0.03%
N+0.00	71	FXAJ Max	0.001313	0.000385	0.03%	0.01%
N+0.00	71	FYAJ Max	0.000415	0.001347	0.01%	0.03%
N+0.00	73	FXAJ Max	0.001313	0.000493	0.03%	0.01%
N+0.00	73	FYAJ Max	0.000415	0.001729	0.01%	0.04%

N+0.00	74	FXAJ	Max	0.001313	0.000548	0.03%	0.01%
N+0.00	74	FYAJ	Max	0.000415	0.001922	0.01%	0.04%
N+0.00	76	FXAJ	Max	0.001313	0.000659	0.03%	0.01%
N+0.00	76	FYAJ	Max	0.000415	0.002309	0.01%	0.05%
N+0.00	77	FXAJ	Max	0.001313	0.000715	0.03%	0.02%
N+0.00	77	FYAJ	Max	0.000415	0.002503	0.01%	0.06%
N+0.00	78	FXAJ	Max	0.001313	0.00077	0.03%	0.02%
N+0.00	78	FYAJ	Max	0.000415	0.002697	0.01%	0.06%
N+0.00	84	FXAJ	Max	0.001302	0.000548	0.03%	0.01%
N+0.00	84	FYAJ	Max	0.000483	0.001922	0.01%	0.04%
N+0.00	89	FXAJ	Max	0.001328	0.000333	0.03%	0.01%
N+0.00	89	FYAJ	Max	0.000483	0.001158	0.01%	0.03%
N+0.00	90	FXAJ	Max	0.001302	0.000333	0.03%	0.01%
N+0.00	90	FYAJ	Max	0.000483	0.001158	0.01%	0.03%
N+0.00	100	FXAJ	Max	0.001322	0.000433	0.03%	0.01%
N+0.00	100	FYAJ	Max	0.000445	0.001518	0.01%	0.03%
N+0.00	101	FXAJ	Max	0.001305	0.000433	0.03%	0.01%
N+0.00	101	FYAJ	Max	0.00045	0.001518	0.01%	0.03%
N+0.00	102	FXAJ	Max	0.001313	0.000433	0.03%	0.01%
N+0.00	102	FYAJ	Max	0.000415	0.001518	0.01%	0.03%
N+0.00	104	FXAJ	Max	0.001322	0.000609	0.03%	0.01%
N+0.00	104	FYAJ	Max	0.000445	0.002134	0.01%	0.05%
N+0.00	105	FXAJ	Max	0.001305	0.000609	0.03%	0.01%
N+0.00	105	FYAJ	Max	0.00045	0.002134	0.01%	0.05%
N+0.00	106	FXAJ	Max	0.001313	0.000609	0.03%	0.01%
N+0.00	106	FYAJ	Max	0.000415	0.002134	0.01%	0.05%
N+0.00	40	FXAJ	Max	0.001328	0.000864	0.03%	0.02%
N+0.00	40	FYAJ	Max	0.000483	0.003023	0.01%	0.07%
N+0.00	43	FXAJ	Max	0.001302	0.000864	0.03%	0.02%
N+0.00	43	FYAJ	Max	0.000483	0.003023	0.01%	0.07%
N+0.00	44	FXAJ	Max	0.001302	0.000891	0.03%	0.02%
N+0.00	44	FYAJ	Max	0.000483	0.003118	0.01%	0.07%
N+0.00	45	FXAJ	Max	0.001302	0.000923	0.03%	0.02%
N+0.00	45	FYAJ	Max	0.000483	0.003226	0.01%	0.07%
N+0.00	46	FXAJ	Max	0.001328	0.000891	0.03%	0.02%
N+0.00	46	FYAJ	Max	0.000483	0.003118	0.01%	0.07%
N+0.00	47	FXAJ	Max	0.001328	0.000923	0.03%	0.02%
N+0.00	47	FYAJ	Max	0.000483	0.003226	0.01%	0.07%
N+0.00	48	FXAJ	Max	0.001318	0.000891	0.03%	0.02%
N+0.00	48	FYAJ	Max	0.000422	0.003118	0.01%	0.07%
N+0.00	49	FXAJ	Max	0.001313	0.000891	0.03%	0.02%
N+0.00	49	FYAJ	Max	0.000415	0.003118	0.01%	0.07%

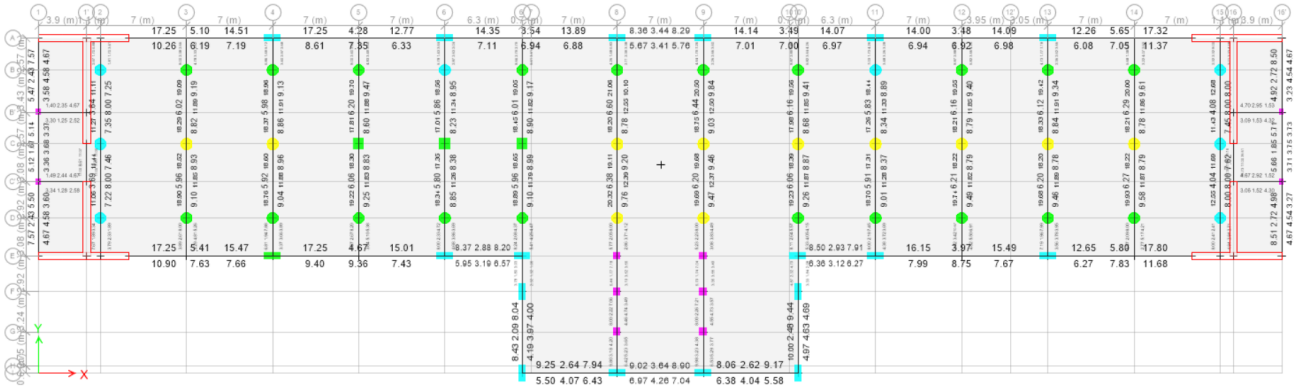
N+0.00	59	FXAJ Max	0.001322	0.000883	0.03%	0.02%
N+0.00	59	FYAJ Max	0.000445	0.003087	0.01%	0.07%
N+0.00	62	FXAJ Max	0.001305	0.000883	0.03%	0.02%
N+0.00	62	FYAJ Max	0.00045	0.003087	0.01%	0.07%
N+0.00	72	FXAJ Max	0.001313	0.000883	0.03%	0.02%
N+0.00	72	FYAJ Max	0.000415	0.003087	0.01%	0.07%
N+0.00	75	FXAJ Max	0.001309	0.000923	0.03%	0.02%
N+0.00	75	FYAJ Max	0.000422	0.003226	0.01%	0.07%
N+0.00	91	FXAJ Max	0.001318	0.000923	0.03%	0.02%
N+0.00	91	FYAJ Max	0.000422	0.003226	0.01%	0.07%
N+0.00	28	FXAJ Max	0.001305	0.000826	0.03%	0.02%
N+0.00	28	FYAJ Max	0.00045	0.002892	0.01%	0.07%
N+0.00	29	FXAJ Max	0.001322	0.000826	0.03%	0.02%
N+0.00	29	FYAJ Max	0.000445	0.002892	0.01%	0.07%
N+0.00	30	FXAJ Max	0.001313	0.000826	0.03%	0.02%
N+0.00	30	FYAJ Max	0.000415	0.002892	0.01%	0.07%
N+0.00	33	FXAJ Max	0.00134	0.000493	0.03%	0.01%
N+0.00	33	FYAJ Max	0.000591	0.001729	0.01%	0.04%
N+0.00	34	FXAJ Max	0.001334	0.000493	0.03%	0.01%
N+0.00	34	FYAJ Max	0.00053	0.001729	0.01%	0.04%
N+0.00	35	FXAJ Max	0.001328	0.000493	0.03%	0.01%
N+0.00	35	FYAJ Max	0.000483	0.001729	0.01%	0.04%
N+0.00	53	FXAJ Max	0.00134	0.000548	0.03%	0.01%
N+0.00	53	FYAJ Max	0.000591	0.001922	0.01%	0.04%
N+0.00	66	FXAJ Max	0.001334	0.000548	0.03%	0.01%
N+0.00	66	FYAJ Max	0.00053	0.001922	0.01%	0.04%
N+0.00	79	FXAJ Max	0.001328	0.000548	0.03%	0.01%
N+0.00	79	FYAJ Max	0.000483	0.001922	0.01%	0.04%
				MAX	0.26%	0.31%

6.14. CHEQUEO DE VIGAS EXISTENTES

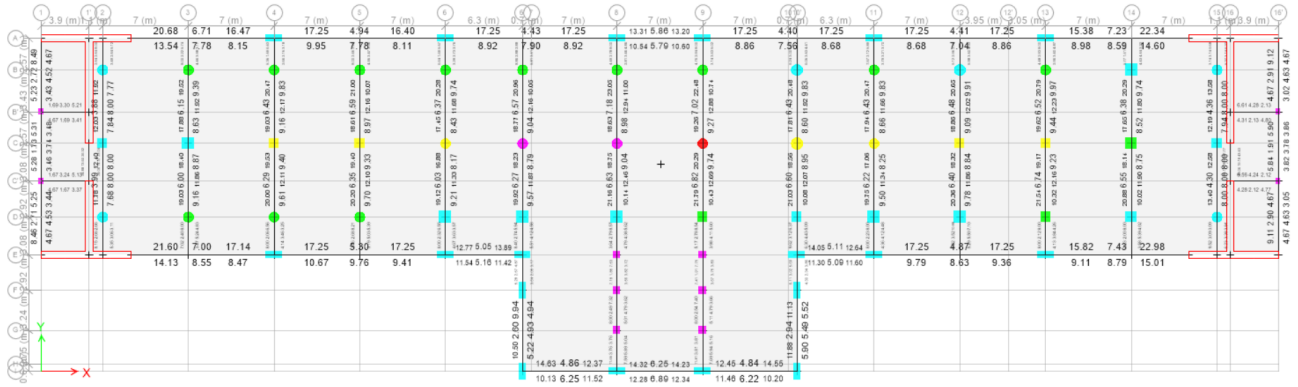
ACERO DE REFUERZO [cm2] N+0.00



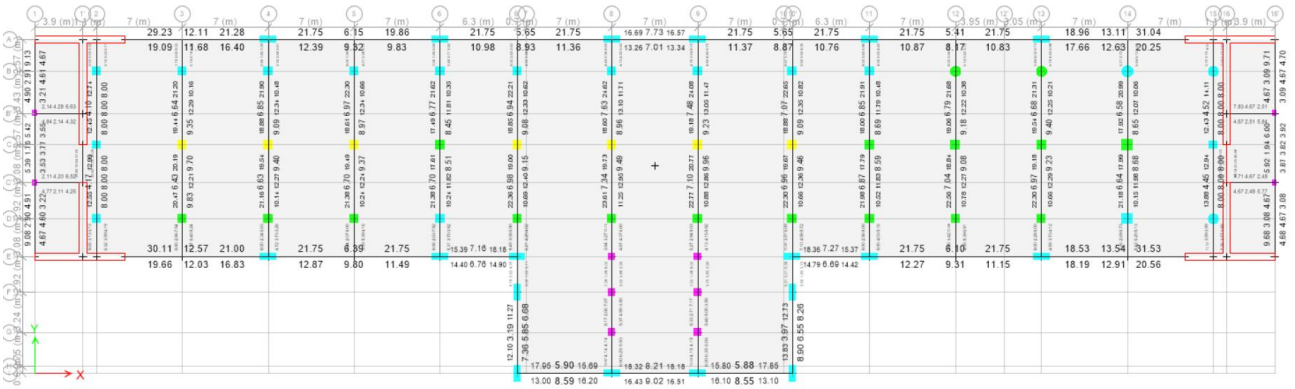
ACERO DE REFUERZO [cm2] N+3.90



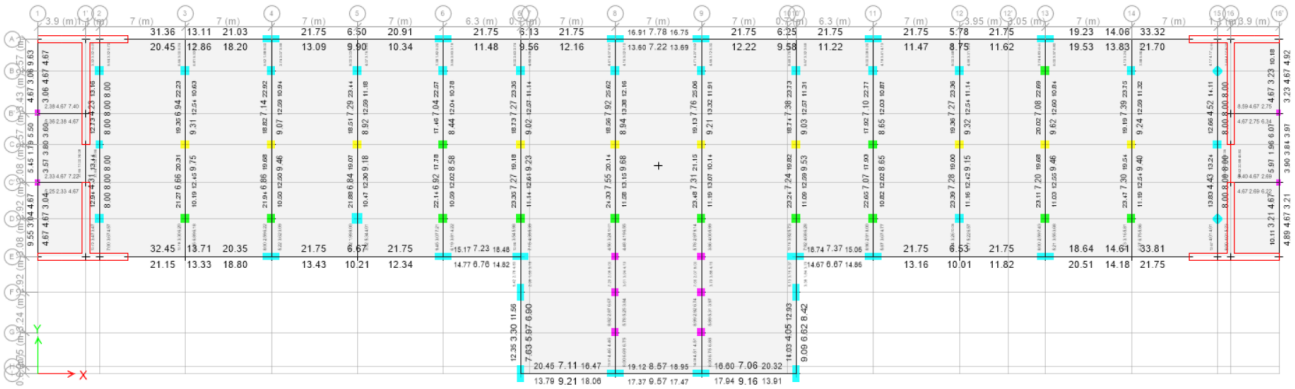
ACERO DE REFUERZO [cm2] N+7.85



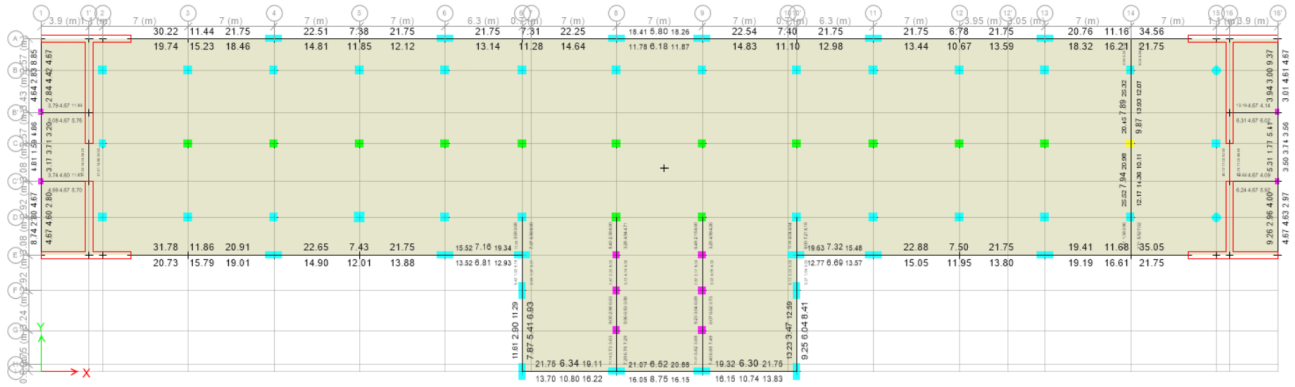
ACERO DE REFUERZO [cm2] N+11.79



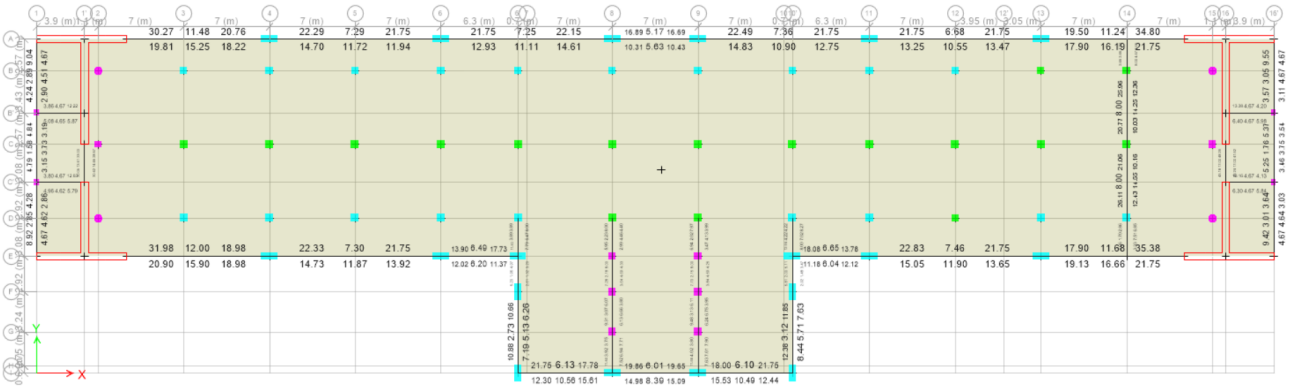
ACERO DE REFUERZO [cm2] N+15.75



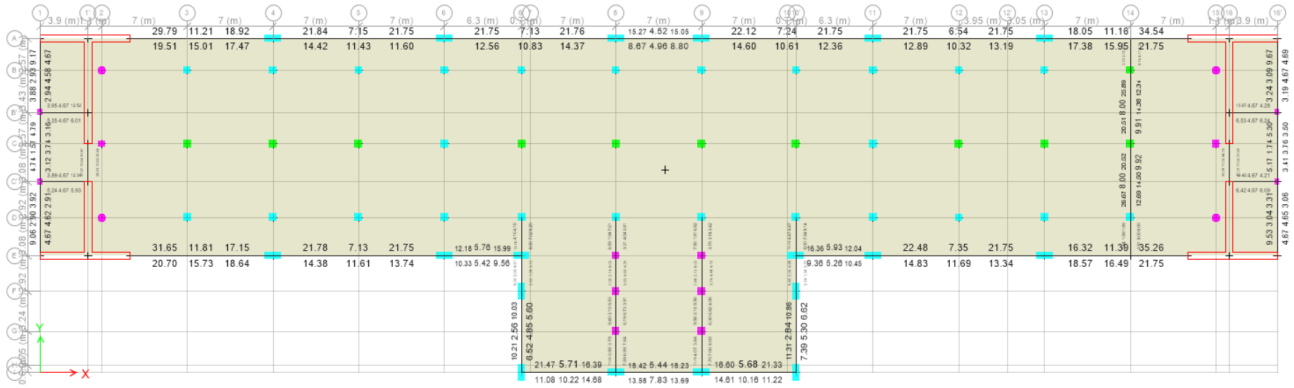
ACERO DE REFUERZO [cm2] N+19.10



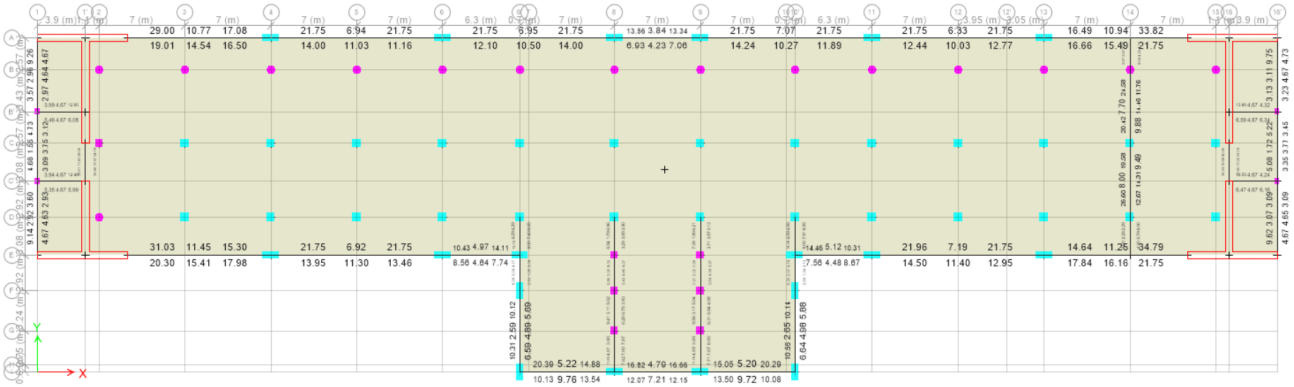
ACERO DE REFUERZO [cm2] N+22.45



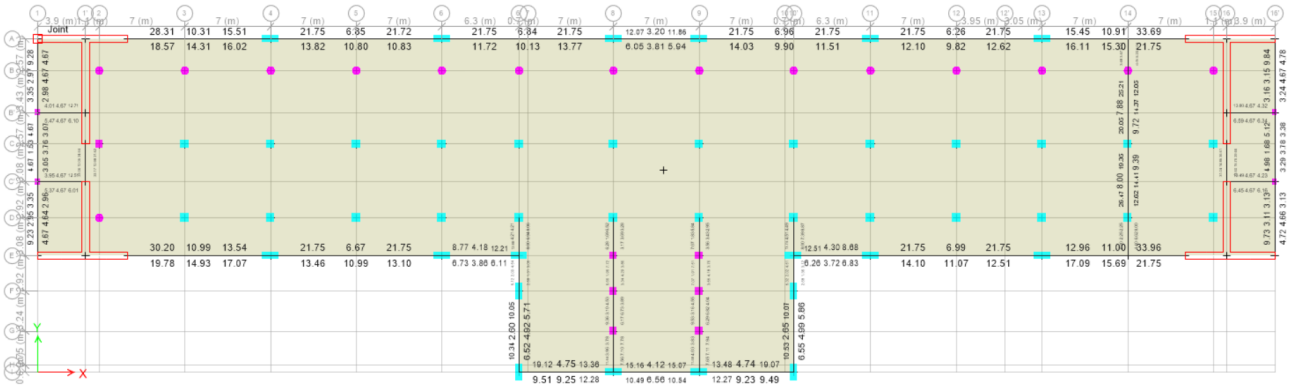
ACERO DE REFUERZO [cm2] N+25.80



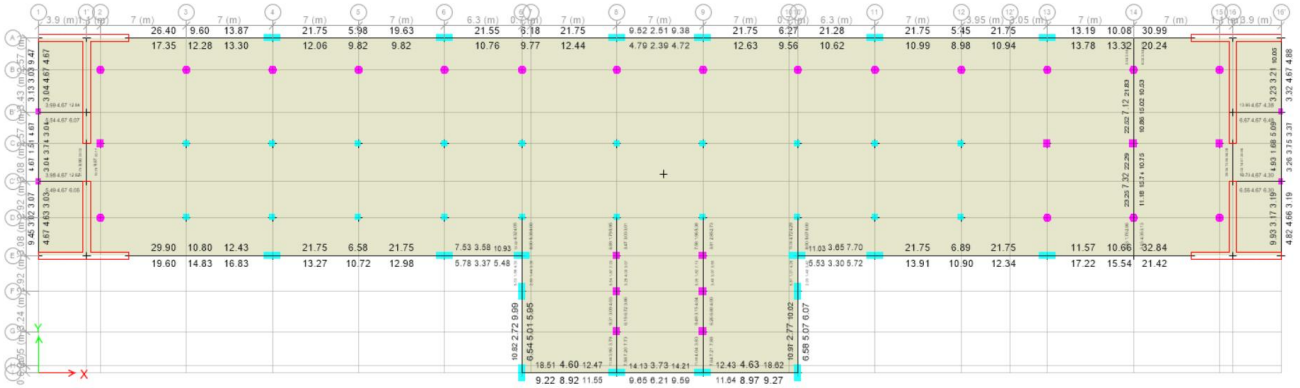
ACERO DE REFUERZO [cm2] N+29.15



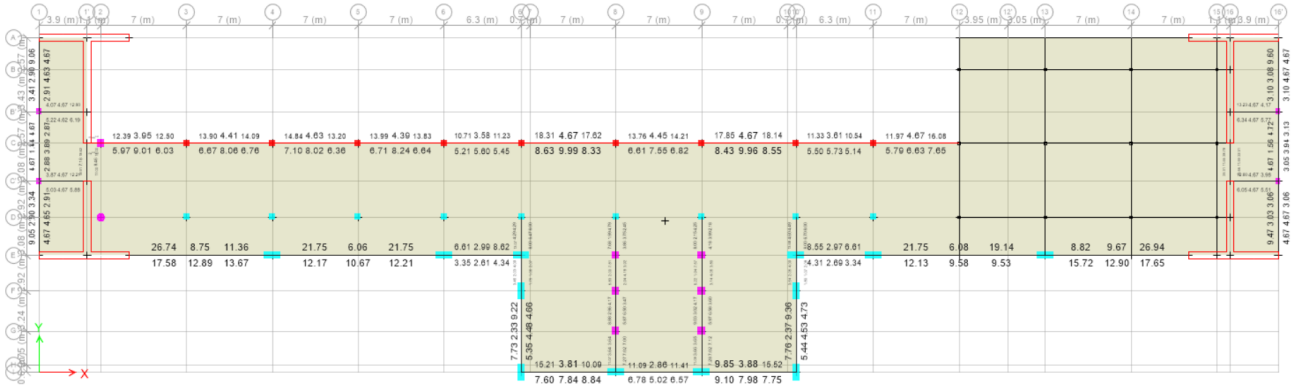
ACERO DE REFUERZO [cm2] N+32.50



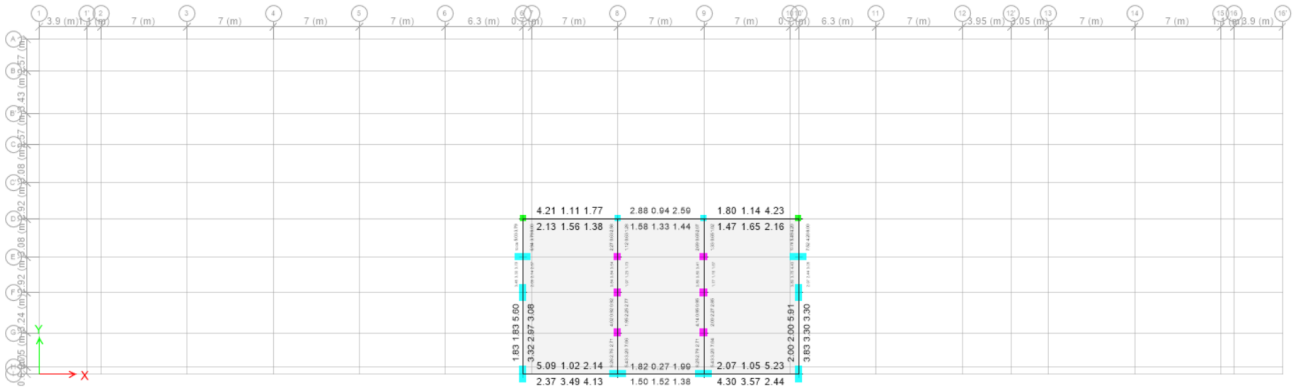
ACERO DE REFUERZO [cm2] N+35.86



ACERO DE REFUERZO [cm2] N+39.20

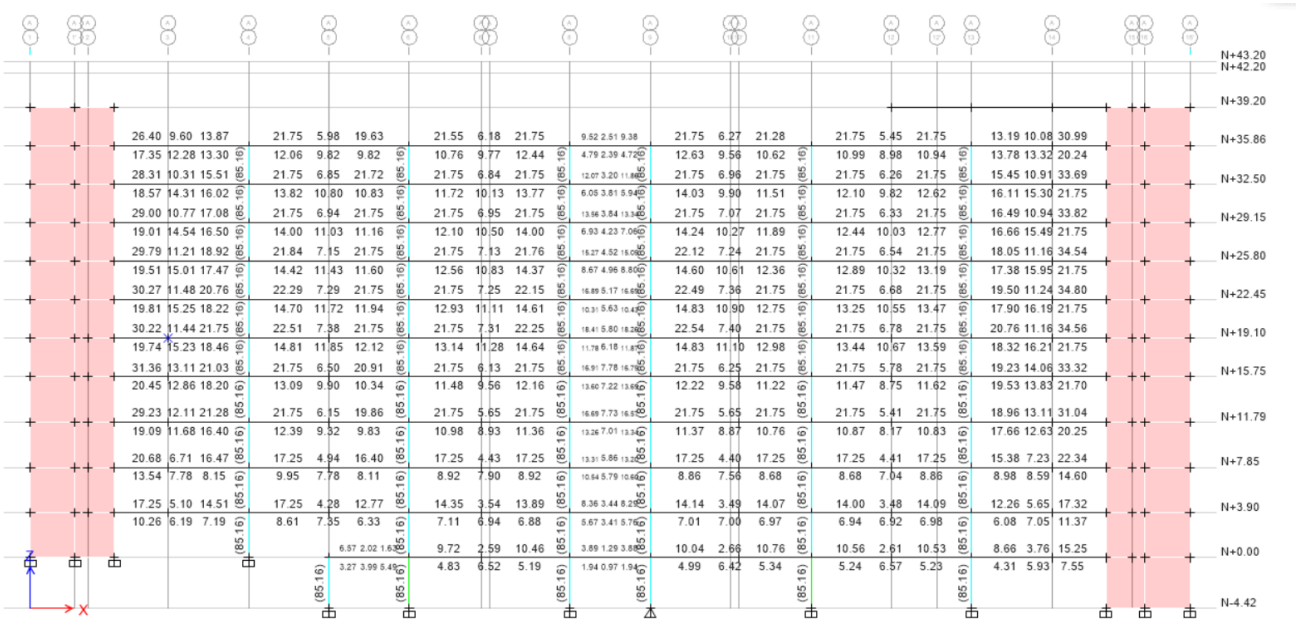


ACERO DE REFUERZO [cm2] N+43.20

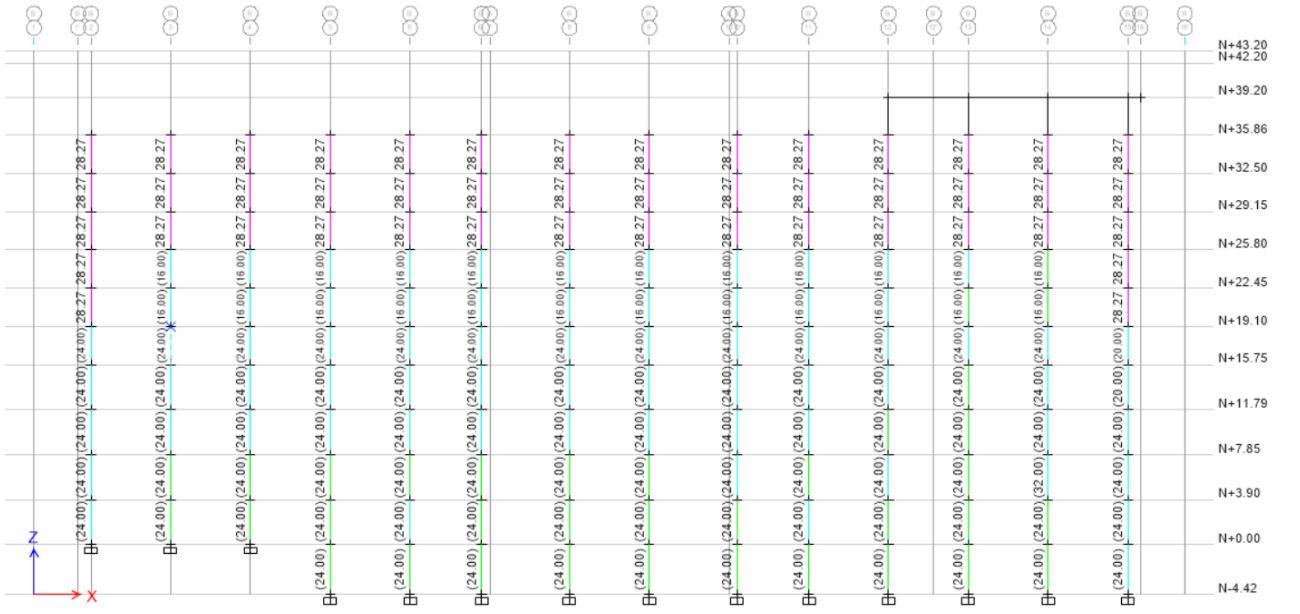


6.15. CHEQUEO DE COLUMNAS EXISTENTES

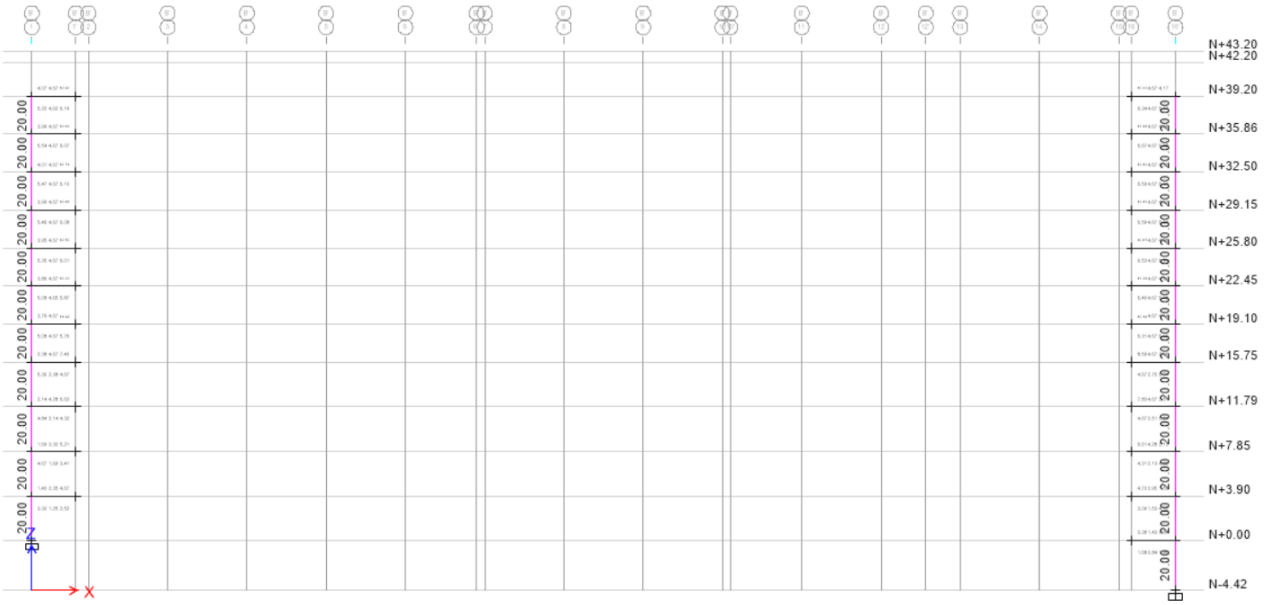
EJE A [cm²]



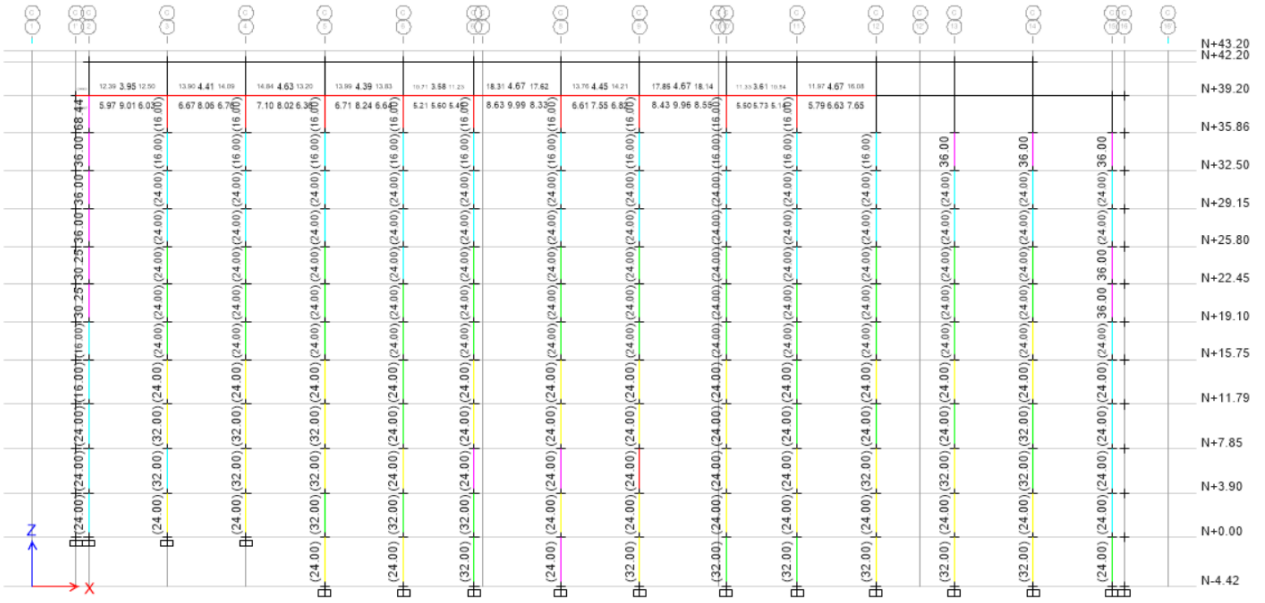
EJE B [cm²]



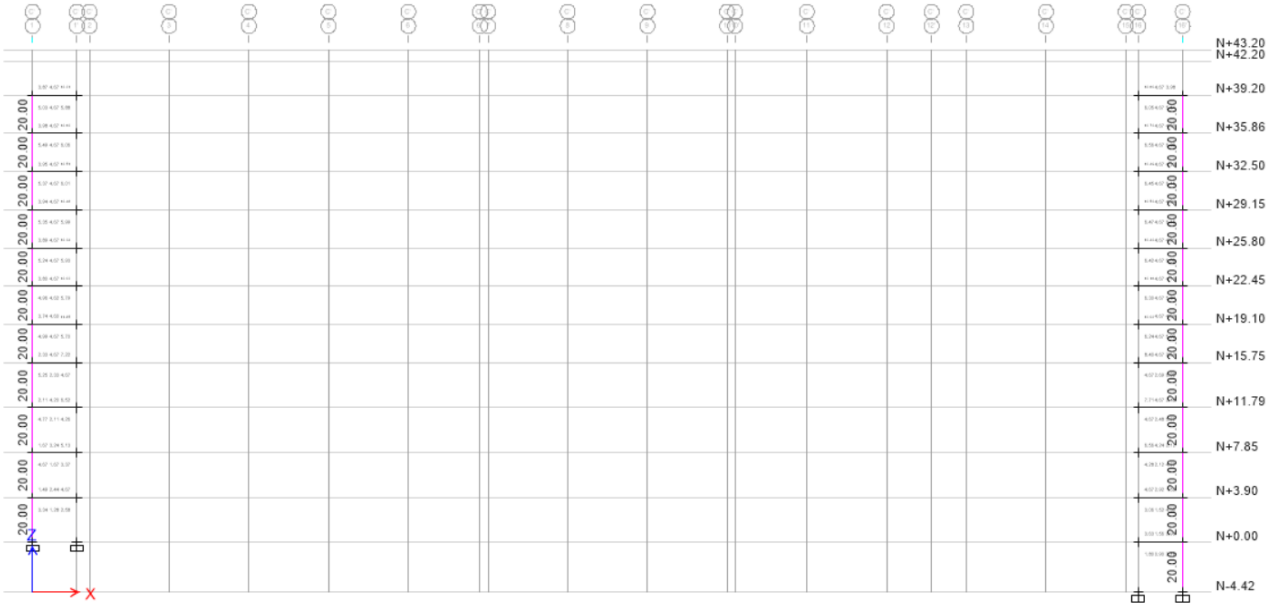
EJE B' [cm²]



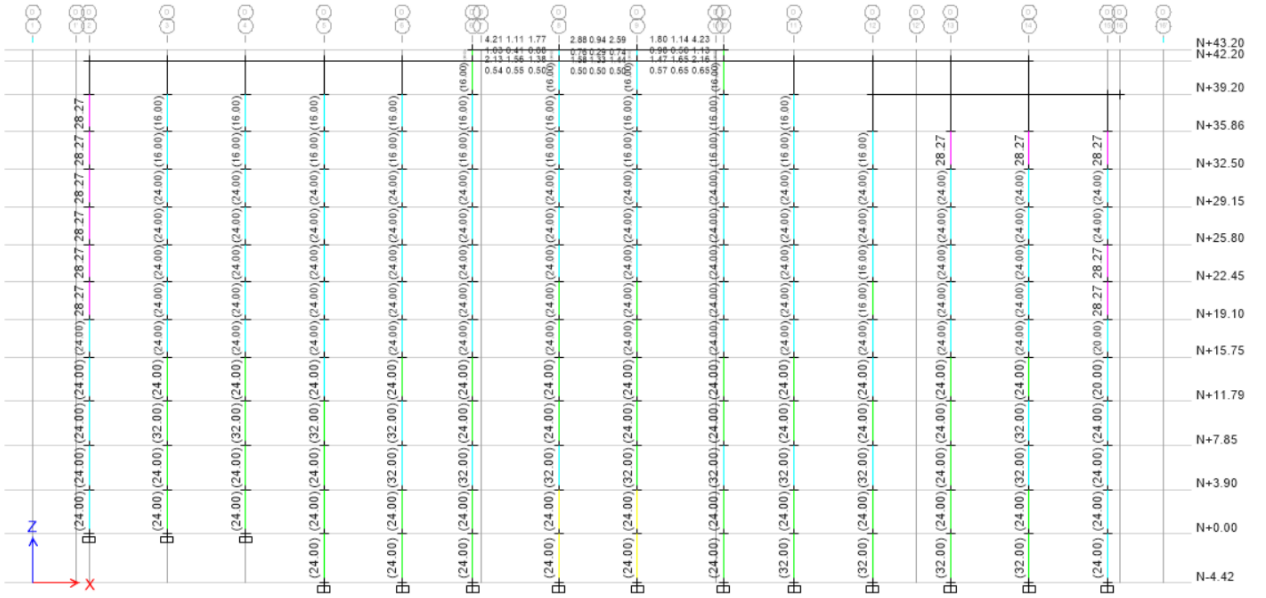
EJE C [cm²]



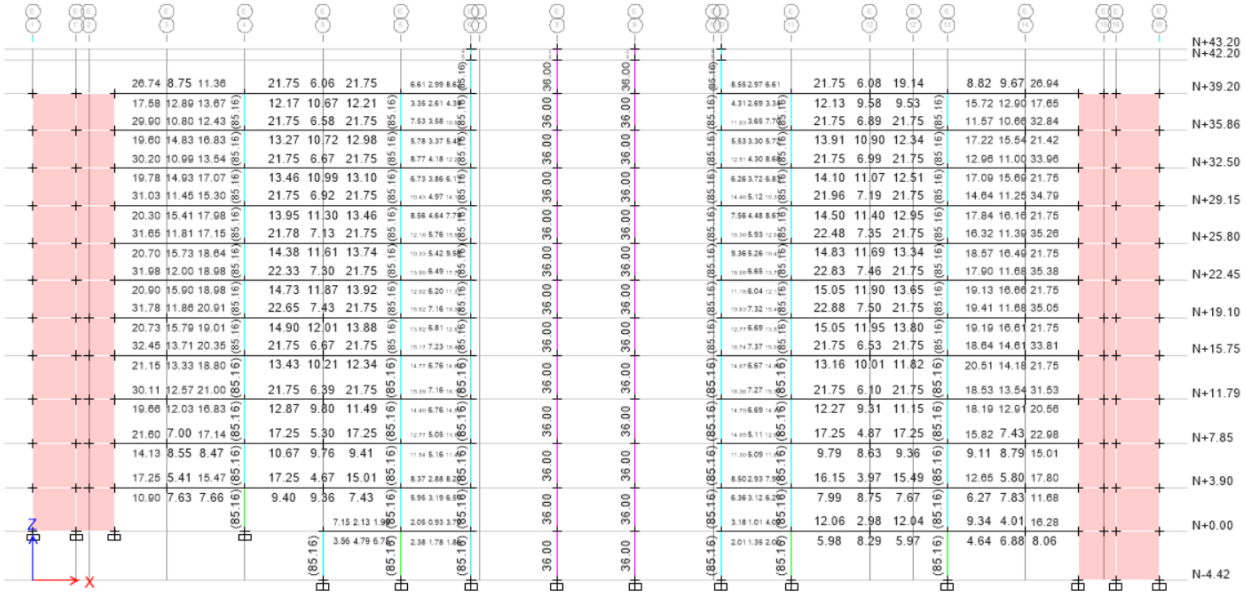
EJE C' [cm²]



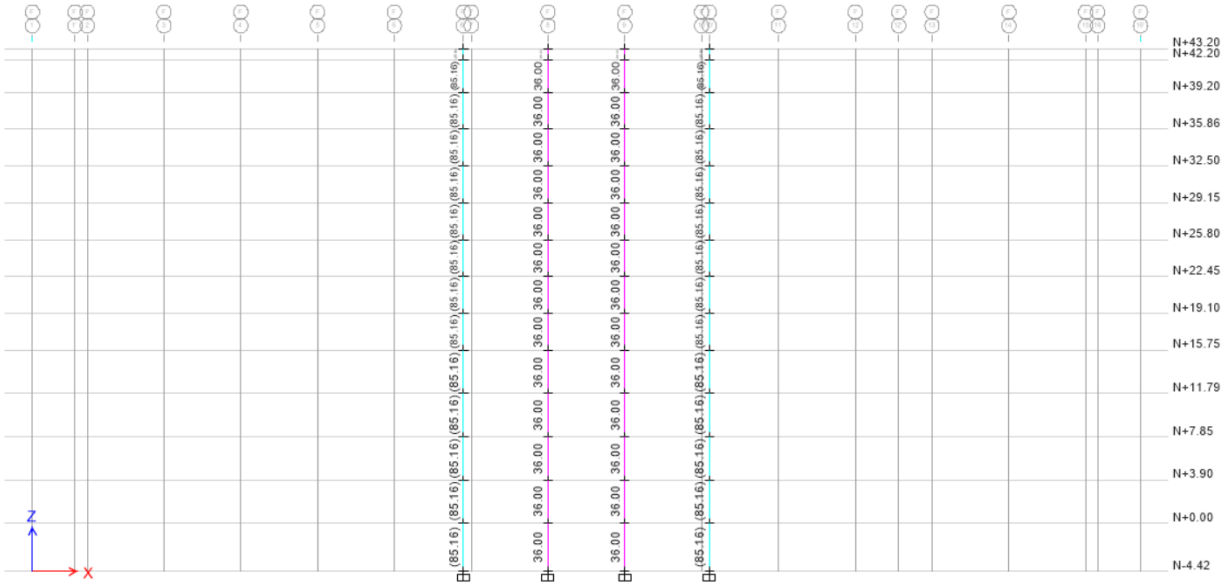
EJE D [cm²]



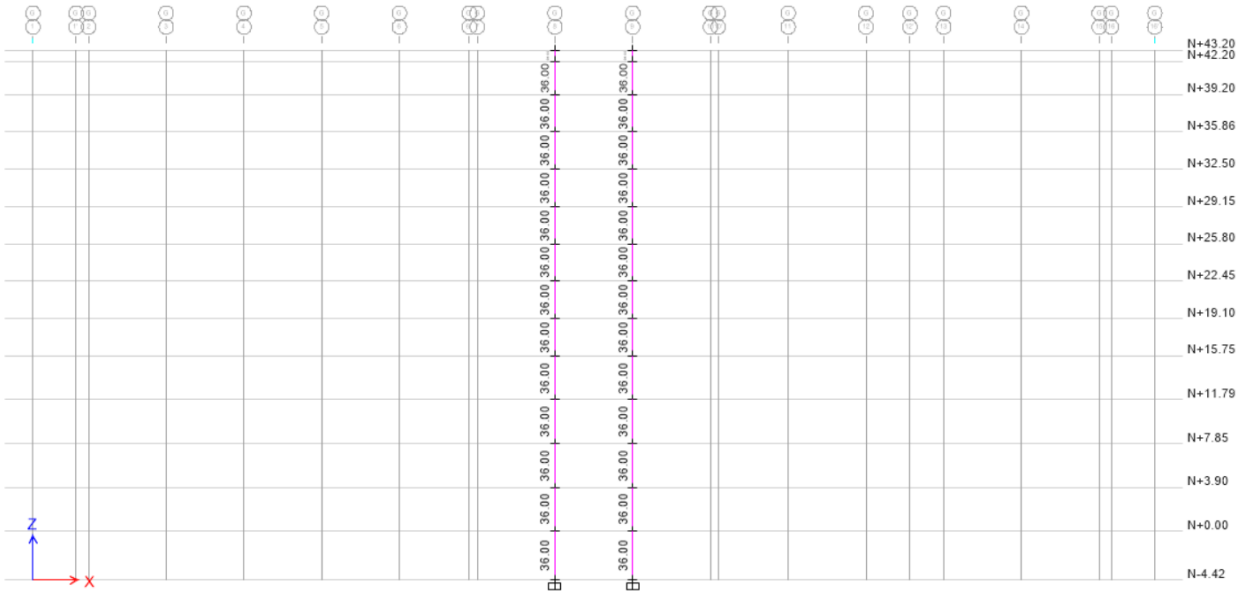
EJE E [cm²]



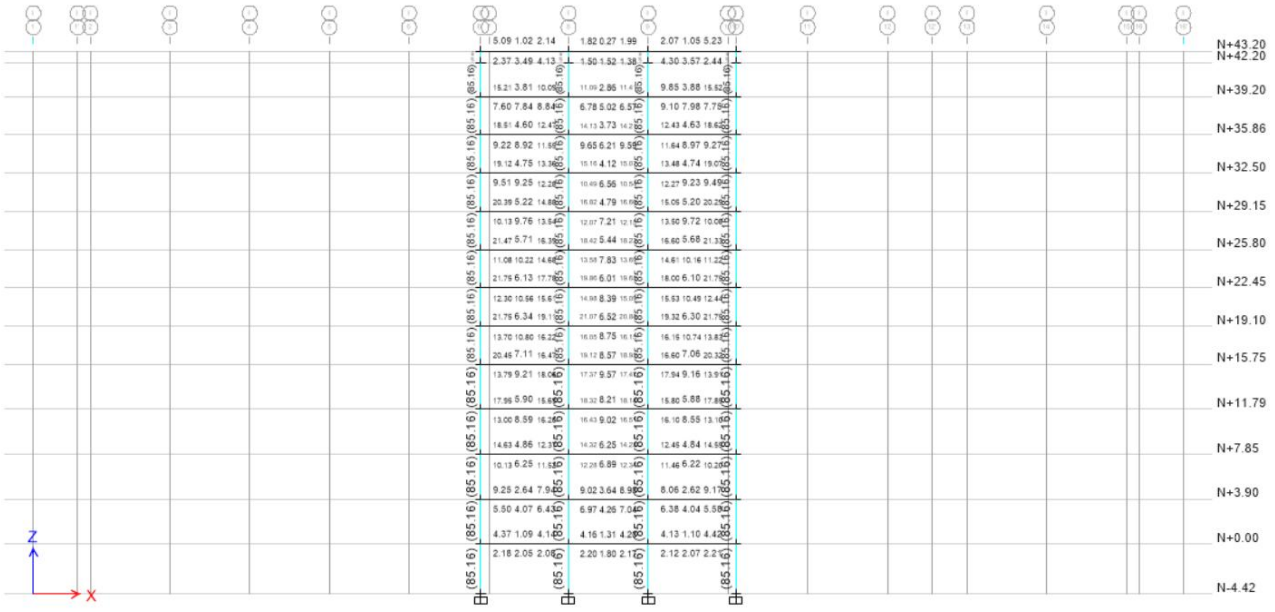
EJE F [cm²]



EJE G [cm²]

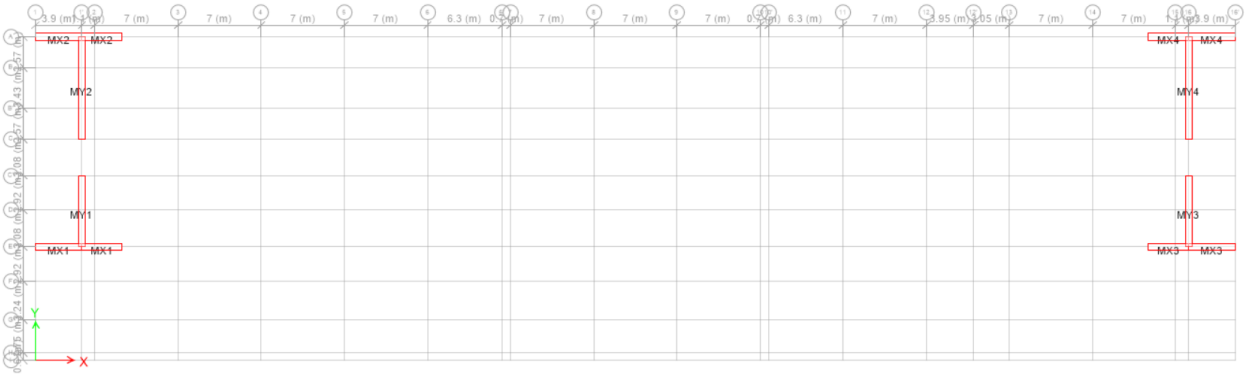


EJE I [cm²]



6.16. CHEQUEO DE MUROS EXISTENTES

IDENTIFICACIÓN DE MUROS DE CORTANTE:



ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+3.90	MX1	3.65	9.51	7.3	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_v	Φ_v (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	0	9.51	7.3	9.51	7.3	0.6
Bottom	Leg 1	0	9.51	7.3	9.51	7.3	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm²)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm²
Top	109.5	0.0025	0.0028	COMB6	12681.8787	13.239	-6562.445	43800
Bottom	309.84	0.0071	0.0028	COMB5	4260.3094	-99.5227	46626.6356	43800

Shear Design

Station Location	ID	Rebar cm²/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.17	COMB3	6558.5174	21941.4672	6474.4225	3464.0579	6474.4225
Bottom	Leg 1	0.17	COMB3	7041.4925	46668.8457	6474.4225	3464.0579	6474.4225

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Top–Left	Leg 1	0.88128	COMB4	15342.318	-6455.9588	4714.29	5600	1.61128	1.7381
Top–Right	Leg 1	0.88128	COMB4	15342.318	7219.2227	4857.52	5600	1.61128	1.7381
Bottom–Left	Leg 1	0.92181	COMB4	15825.2931	-14946.4006	6417.81	5600	1.65181	1.7381
Botttom–Right	Leg 1	0.92181	COMB4	15825.2931	15273.8056	6479.25	5600	1.65181	1.7381

ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+3.90	MX2	3.65	27.16	7.3	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_v	Φ_v (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	0	27.16	7.3	27.16	7.3	0.6
Bottom	Leg 1	0	27.16	7.3	27.16	7.3	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm²)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm²
Top	109.5	0.0025	0.0028	COMB6	13608.0668	-71.7924	-6638.3012	43800
Bottom	316.07	0.0072	0.0028	COMB5	3890.7882	100.5591	46395.3853	43800

Shear Design

Station Location	ID	Rebar cm²/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.16	COMB3	6106.4418	21915.5982	6411.6832	3464.0579	6411.6832
Bottom	Leg 1	0.16	COMB3	6589.4169	46399.0344	6411.6832	3464.0579	6411.6832

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Top–Left	Leg 1	0.95209	COMB4	16185.9517	-6568.231	4927.97	5600	1.68209	1.7381
Top–Right	Leg 1	0.95209	COMB4	16185.9517	7125.0633	5032.46	5600	1.68209	1.7381
Bottom–Left	Leg 1	0.99263	COMB4	16668.9268	-15161.7	6650.82	5600	1.72263	1.7381
Botttom–Right	Leg 1	0.99263	COMB4	16668.9268	15282.7722	6673.54	5600	1.72263	1.7381

ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+0.00	MX3	97.35	9.51	7.3	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_v	Φ_v (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	93.7	9.51	101	9.51	7.3	0.6

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Bottom	Leg 1	93.7	9.51	101	9.51	7.3	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm²)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm²
Top	128.17	0.0029	0.0028	COMB6	-2607.6915	26.6085	-5839.2501	43800.02
Bottom	109.5	0.0025	0.0028	COMB6	16752.0468	-346.9892	-4999.4655	43800.02

Shear Design

Station Location	ID	Rebar cm²/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.15	COMB3	6806.6586	15921.9329	670.7412	1514.1623	4232.0758
Bottom	Leg 1	0.15	COMB3	7354.0304	14618.9867	670.7412	1628.5177	4346.4312

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Top–Left	Leg 1	1.20854	COMB4	19241.0371	-6060.0979	5530.12	5600	1.93854	1.7381
Top–Right	Leg 1	1.20854	COMB4	19241.0371	4610.7941	5258.16	5600	1.93854	1.7381
Bottom–Left	Leg 1	1.25448	COMB4	19788.4089	-4999.5179	5456.07	5600	1.98448	1.7381
Botttom–Right	Leg 1	1.25448	COMB4	19788.4089	5010.9645	5458.22	5600	1.98448	1.7381

ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+0.00	MX4	97.35	27.16	7.3	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_V	Φ_V (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	93.7	27.16	101	27.16	7.3	0.6
Bottom	Leg 1	93.7	27.16	101	27.16	7.3	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm²)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm²
Top	175.83	0.004	0.0028	COMB6	-4332.1592	-22.2151	-5871.7209	43800.02
Bottom	158.15	0.0036	0.0028	COMB6	-3921.6304	351.4106	5041.1595	43800.02

Shear Design

Station Location	ID	Rebar cm²/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.15	COMB3	6292.3986	15993.6299	696.9806	1524.4762	4242.3897
Bottom	Leg 1	0.15	COMB3	6839.7703	14453.9491	696.9806	1660.0515	4377.9651

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Top–Left	Leg 1	1.33092	COMB4	20698.92	-6082.5788	5867.19	5600	2.06092	1.7381
Top–Right	Leg 1	1.33092	COMB4	20698.92	4729.761	5613.33	5600	2.06092	1.7381
Bottom–Left	Leg 1	1.37686	COMB4	21246.2918	-5035.4854	5795.67	5600	2.10686	1.7381
Botttom–Right	Leg 1	1.37686	COMB4	21246.2918	5043.8529	5797.24	5600	2.10686	1.7381

ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+3.90	MY1	3.9	12.51	6	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_v	Φ_v (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	3.9	9.51	3.9	15.51	6	0.6
Bottom	Leg 1	3.9	9.51	3.9	15.51	6	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm^2)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm^2
Top	90	0.0025	0.0029	COMB6	6196.7301	-42.005	-2308.6454	36000
Bottom	90	0.0025	0.0029	COMB6	6494.4545	-209.2298	-10748.0067	36000

Shear Design

Station Location	ID	Rebar cm^2/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.15	COMB4	6339.9226	2608.2164	2188.8447	4082.8763	6316.7779
Bottom	Leg 1	0.15	COMB4	6736.8884	10972.6327	2188.8447	2847.1709	5081.0724

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m^2	Stress Limit kN/m^2	C Depth m	C Limit m
Top–Left	Leg 1	Not Required	COMB4	8401.7074	-2237.6933	2955.39	5600	0.96958	1.42857
Top–Right	Leg 1	Not Required	COMB4	8401.7074	2608.2164	3058.31	5600	0.96958	1.42857
Bottom–Left	Leg 1	0.50146	COMB4	8798.6732	-10698.1625	5415.79	5600	1.00291	1.42857
Botttom–Right	Leg 1	0.50146	COMB4	8798.6732	10972.6327	5492.03	5600	1.00291	1.42857

ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+3.90	MY2	3.9	22.875	8.57	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_v	Φ_v (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	3.9	18.59	3.9	27.16	8.57	0.6
Bottom	Leg 1	3.9	18.59	3.9	27.16	8.57	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm²)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm²
Top	128.55	0.0025	0.0028	COMB6	9125.5426	-57.9868	-10155.6085	51420
Bottom	128.55	0.0025	0.0028	COMB6	9550.7923	-290.8523	-23319.0225	51420

Shear Design

Station Location	ID	Rebar cm²/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.15	COMB4	7839.7758	9879.8123	3489.2594	5649.3463	8840.1024
Bottom	Leg 1	0.15	COMB4	8406.7753	23369.7141	3489.2594	5734.3963	8925.1523

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Top–Left	Leg 1	Not Required	COMB4	12111.226	-10197.6963	3743.84	5600	1.39874	2.04048
Top–Right	Leg 1	Not Required	COMB4	12111.226	9879.8123	3700.55	5600	1.39874	2.04048

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Bottom–Left	Leg 1	0.72315	COMB4	12678.2255	-23299.3555	5637.98	5600	1.44629	2.04048
Botttom–Right	Leg 1	0.72315	COMB4	12678.2255	23369.7141	5647.56	5600	1.44629	2.04048

ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+0.00	MY3	97.1	12.51	6	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_v	Φ_v (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	97.1	9.51	97.1	15.51	6	0.6
Bottom	Leg 1	97.1	9.51	97.1	15.51	6	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm²)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm²
Top	90	0.0025	0.0029	COMB6	6661.8928	-31.9416	-3176.6802	36000
Bottom	90	0.0025	0.0029	COMB6	6999.3138	-28.4808	-14933.5398	36000

Shear Design

Station Location	ID	Rebar cm²/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.15	COMB4	7100.9395	3483.0359	2681.7207	2847.1709	5081.0724
Bottom	Leg 1	0.15	COMB4	7550.8341	15171.365	2681.7207	2847.1709	5081.0724

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Top–Left	Leg 1	Not Required	COMB4	9075.9856	-3104.6613	3383.51	5600	1.0262	1.42857
Top–Right	Leg 1	Not Required	COMB4	9075.9856	3483.0359	3488.62	5600	1.0262	1.42857
Bottom–Left	Leg 1	0.53199	COMB4	9525.8802	-14879.6089	6779.3	5600	1.06398	1.42857
Botttom–Right	Leg 1	0.53199	COMB4	9525.8802	15171.365	6860.35	5600	1.06398	1.42857

ETABS 2016 Shear Wall Design

ACI 318-08 Pier Design

Pier Details

Story ID	Pier ID	Centroid X (m)	Centroid Y (m)	Length (m)	Thickness (m)	LLRF
N+0.00	MY4	97.1	22.875	8.57	0.6	0.4

Material Properties

E_c (kN/m²)	f'_c (kN/m²)	Lt.Wt Factor (Unitless)	f_y (kN/m²)	f_{ys} (kN/m²)
24870000	28000	1	413685.47	413685.47

Design Code Parameters

Φ_T	Φ_C	Φ_v	Φ_v (Seismic)	IP_{MAX}	IP_{MIN}	P_{MAX}
0.9	0.65	0.75	0.6	0.02	0.0025	0.8

Pier Leg Location, Length and Thickness

Station Location	ID	Left X_1 m	Left Y_1 m	Right X_2 m	Right Y_2 m	Length m	Thickness m
Top	Leg 1	97.1	18.59	97.1	27.16	8.57	0.6
Bottom	Leg 1	97.1	18.59	97.1	27.16	8.57	0.6

Flexural Design for P_u, M_{u2} and M_{u3}

Station Location	Required Rebar Area (cm²)	Required Reinf Ratio	Current Reinf Ratio	Flexural Combo	P_u kN	M_{u2} kN-m	M_{u3} kN-m	Pier A_g cm²
Top	128.55	0.0025	0.0028	COMB6	10404.7108	-39.7412	-14176.2517	51420
Bottom	128.55	0.0025	0.0028	COMB6	10886.6604	-38.6065	-32844.9577	51420

Shear Design

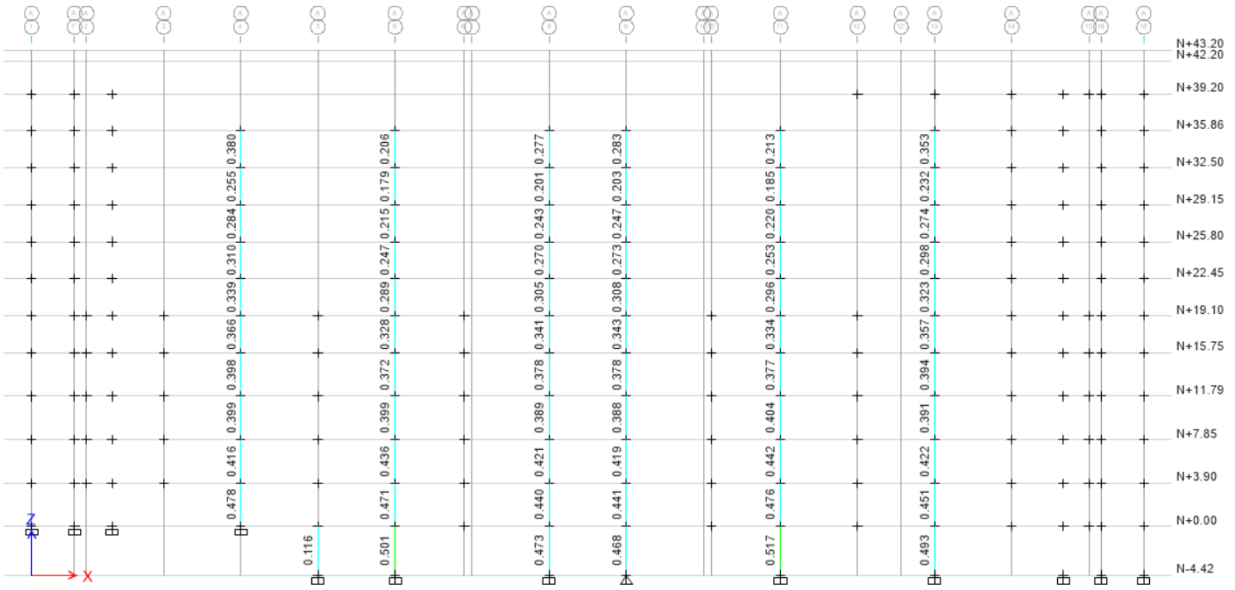
Station Location	ID	Rebar cm²/cm	Shear Combo	P_u kN	M_u kN-m	V_u kN	ΦV_c kN	ΦV_n kN
Top	Leg 1	0.15	COMB4	8533.1911	14045.6013	4336.9955	5753.3586	8944.1147
Bottom	Leg 1	0.15	COMB4	9175.7906	33093.9379	4336.9955	5849.7486	9040.5046

Boundary Element Check (ACI 21.9.6.3, 21.9.6.4)

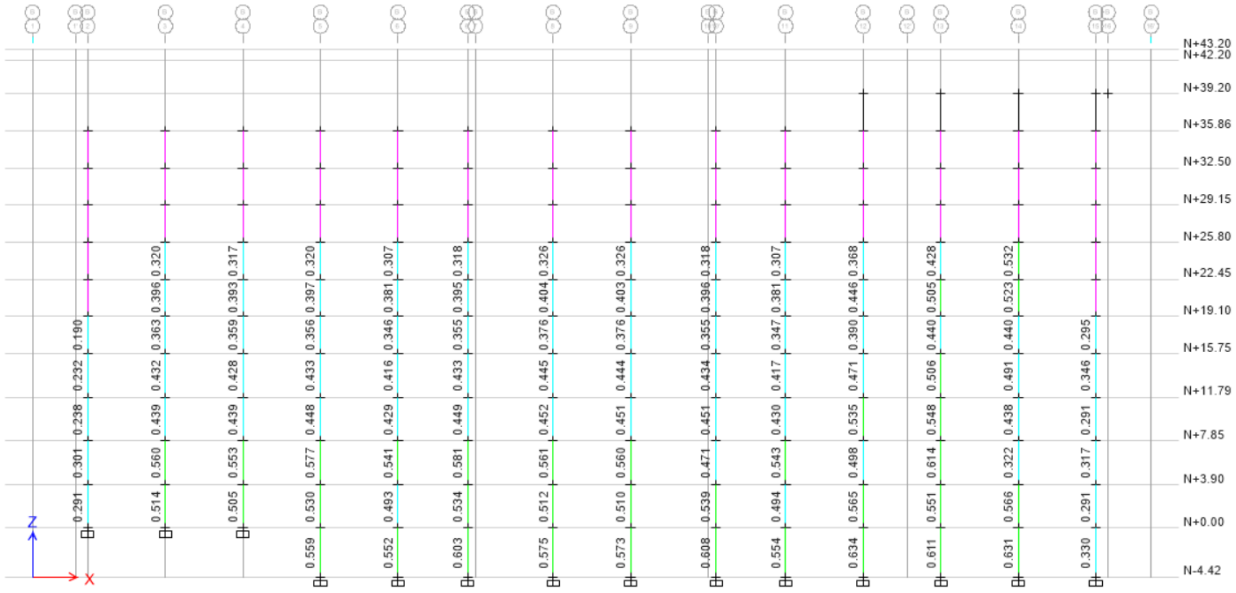
Station Location	ID	Edge Length (m)	Governing Combo	P_u kN	M_u kN-m	Stress Comp kN/m²	Stress Limit kN/m²	C Depth m	C Limit m
Top–Left	Leg 1	0.76786	COMB4	13744.5981	-14187.3558	4604.71	5600	1.53572	2.04048
Top–Right	Leg 1	0.76786	COMB4	13744.5981	14045.6013	4585.41	5600	1.53572	2.04048
Bottom–Left	Leg 1	0.79481	COMB4	14387.1976	-32780.4325	7261.25	5600	1.58962	2.04048
Botttom–Right	Leg 1	0.79481	COMB4	14387.1976	33093.9379	7303.93	5600	1.58962	2.04048

6.17. INDICE DE SOBRE ESFUERZO

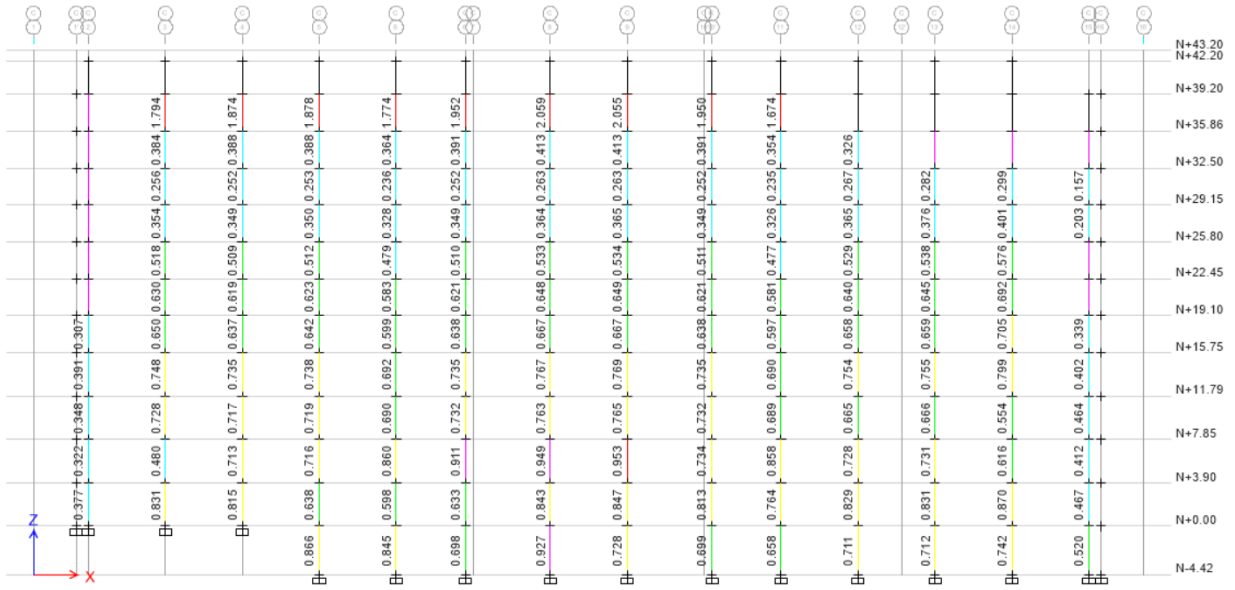
EJE A [cm²]



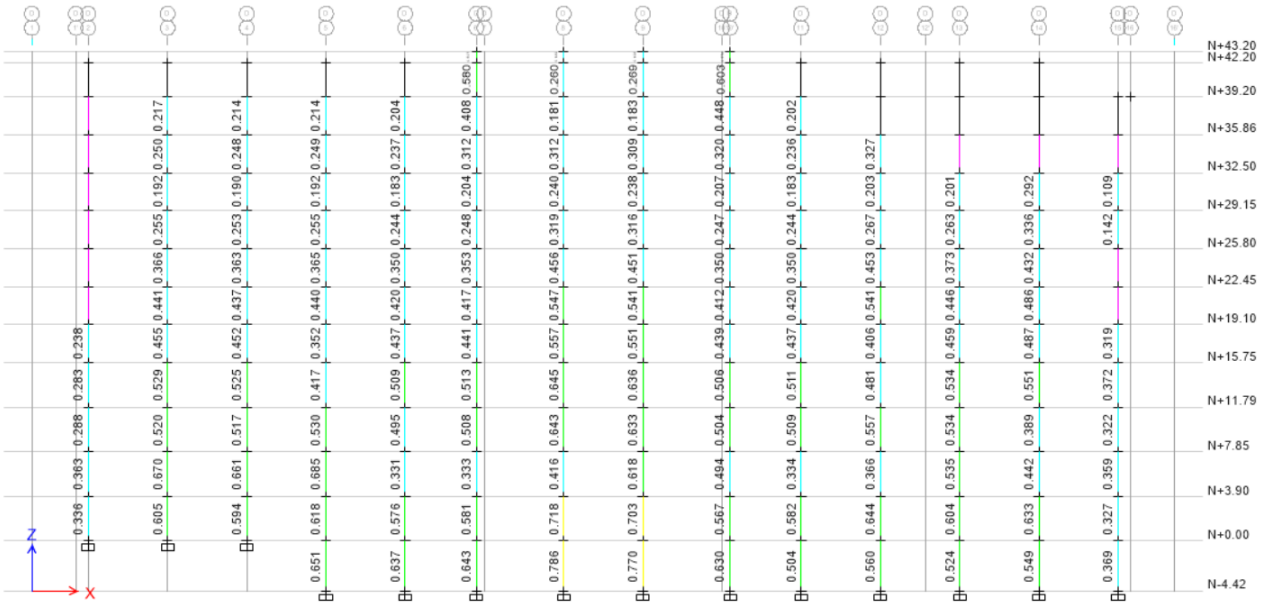
EJE B [cm²]



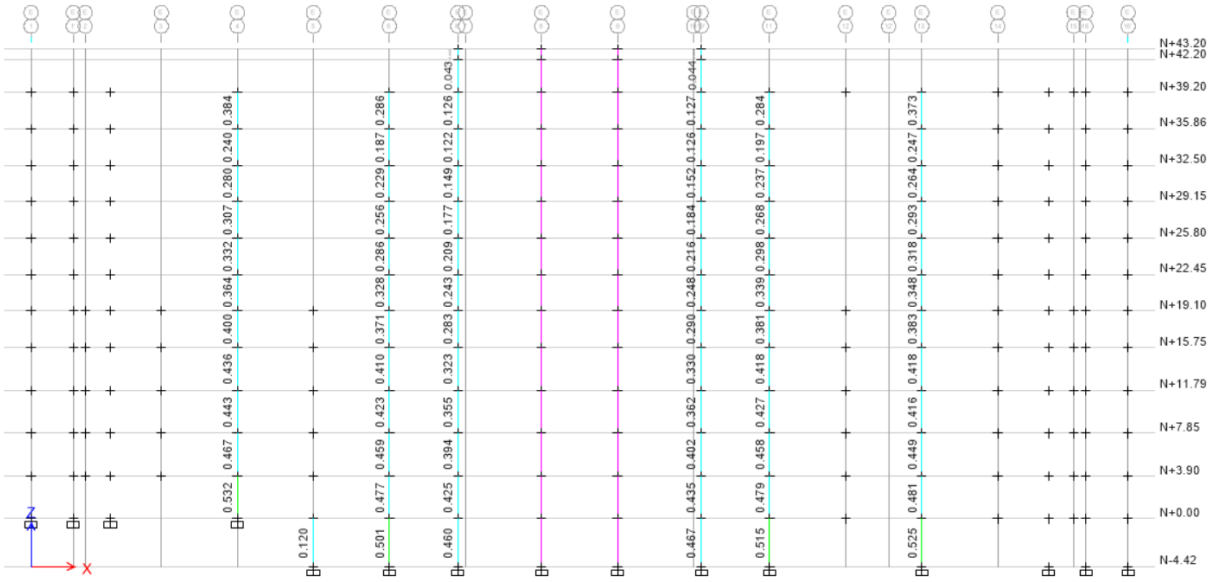
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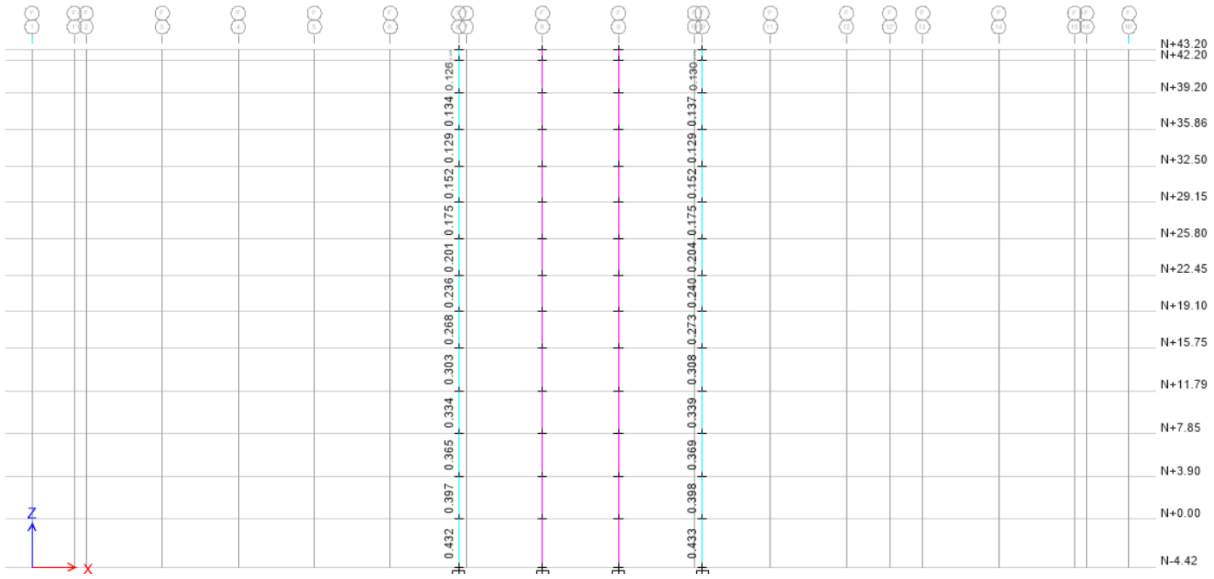
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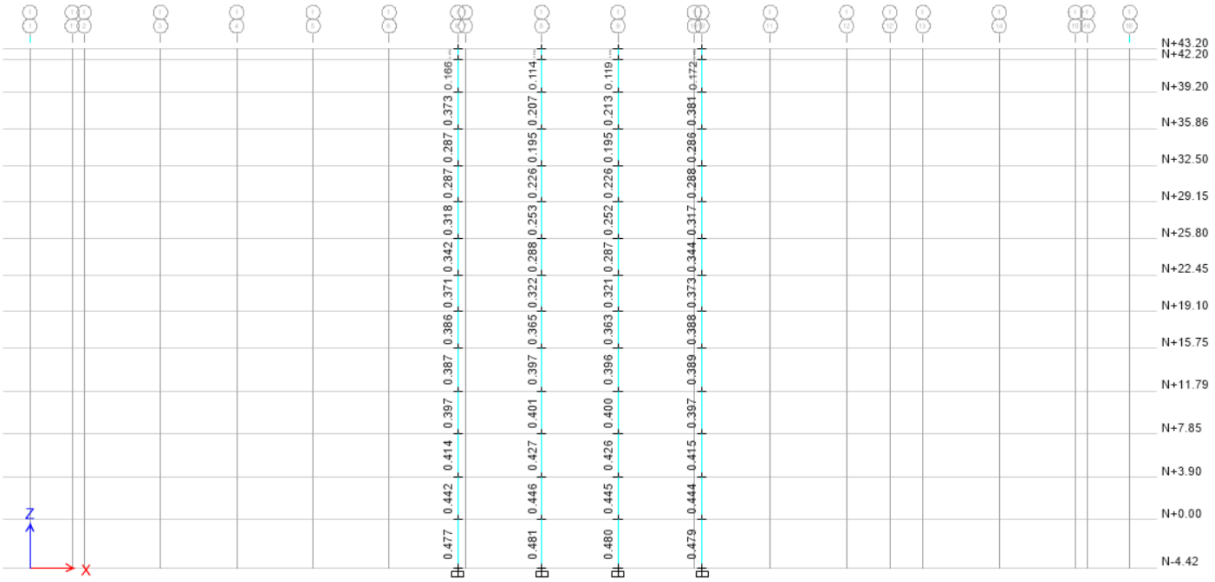
EJE E [cm²]



EJE F [cm²]

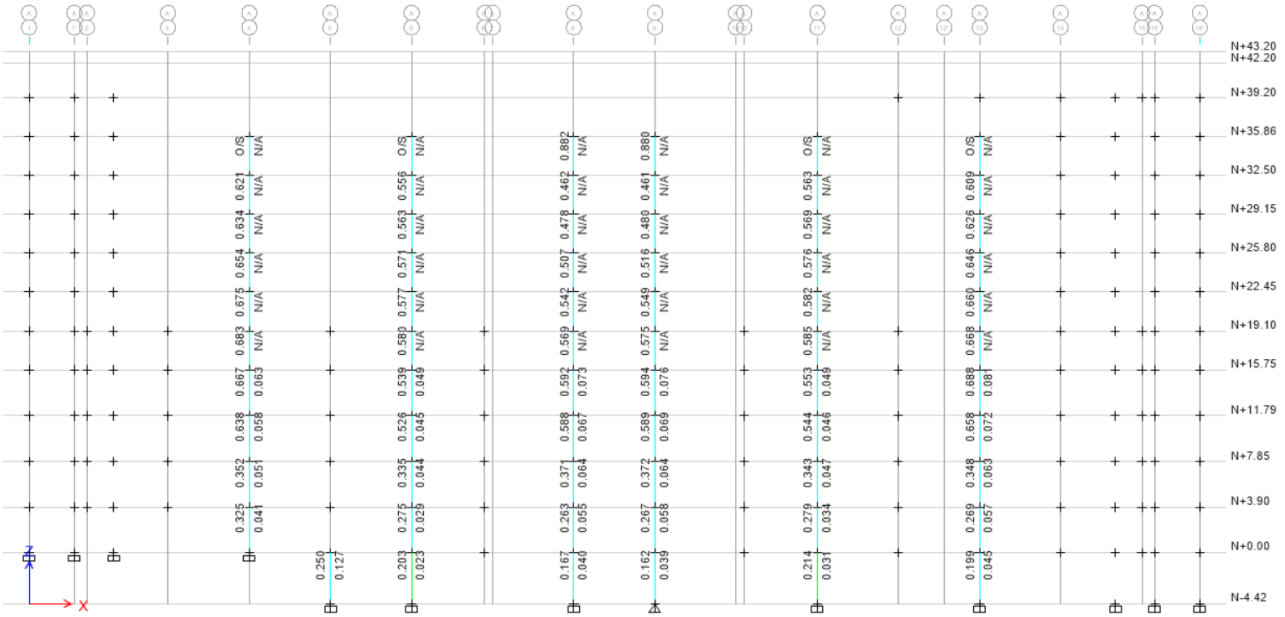


EJE I [cm²]

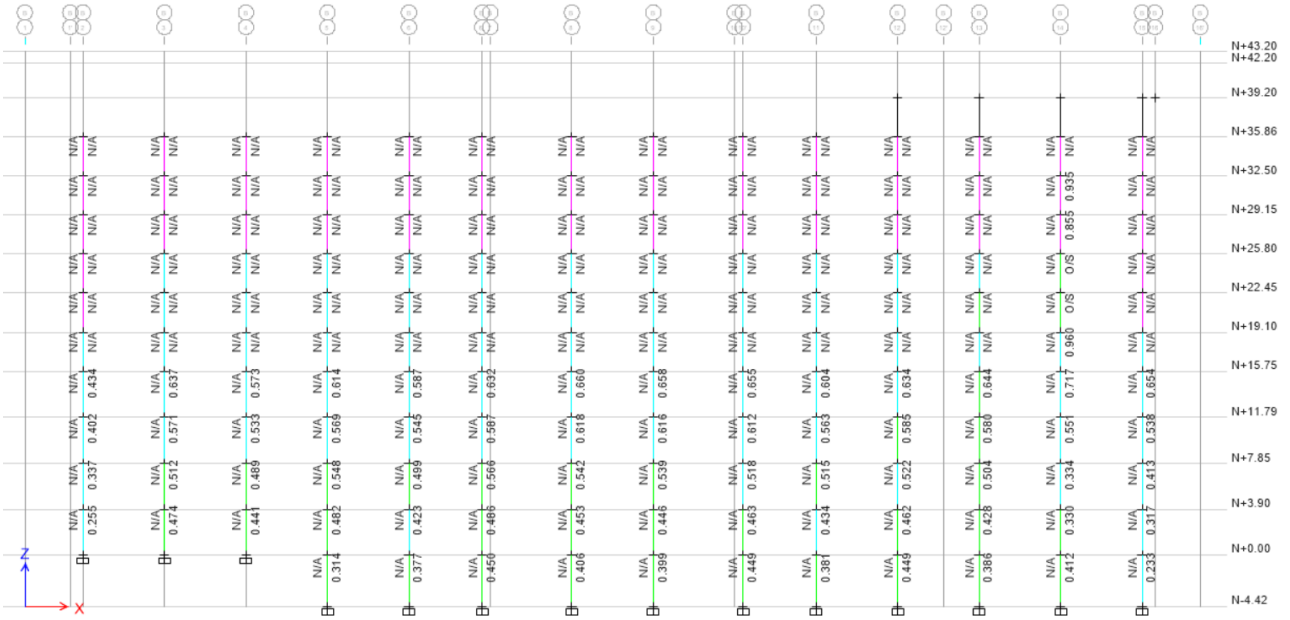


6.18. CHEQUEO COLUMNA FUERTE – VIGA DEBIL

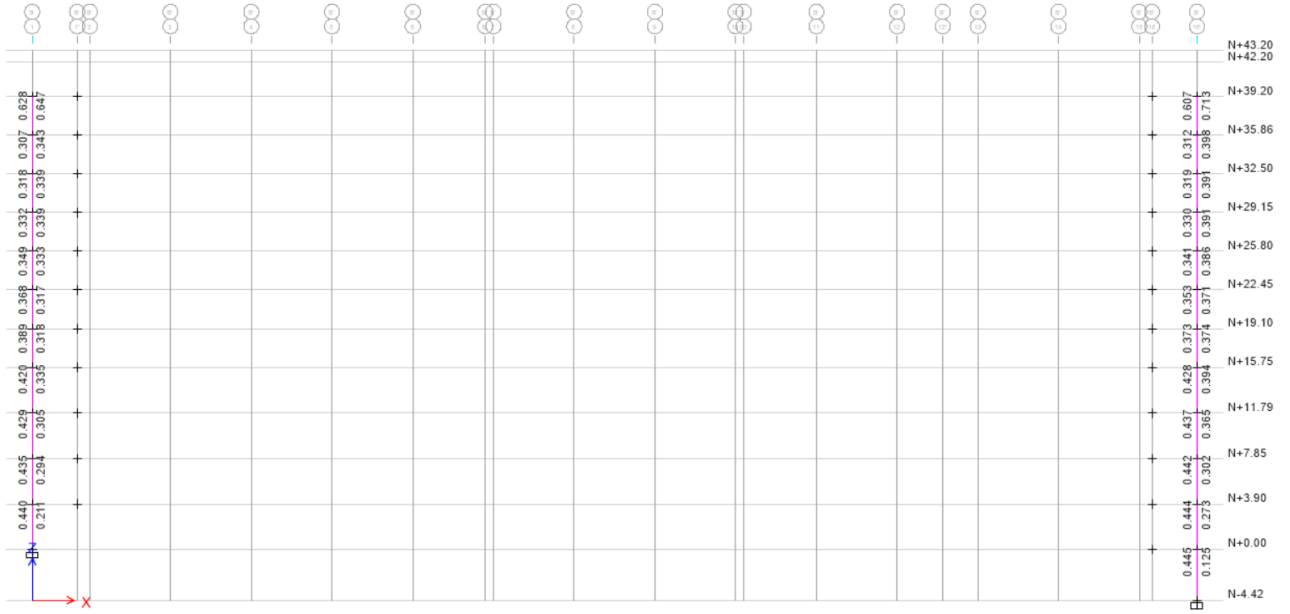
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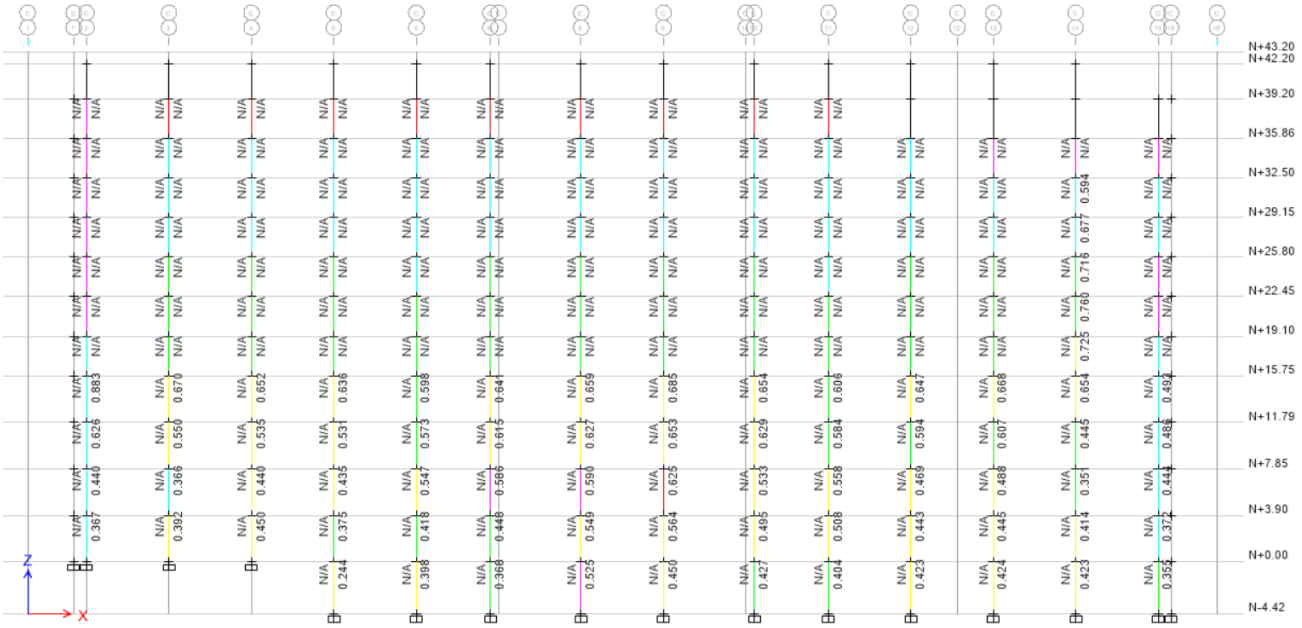
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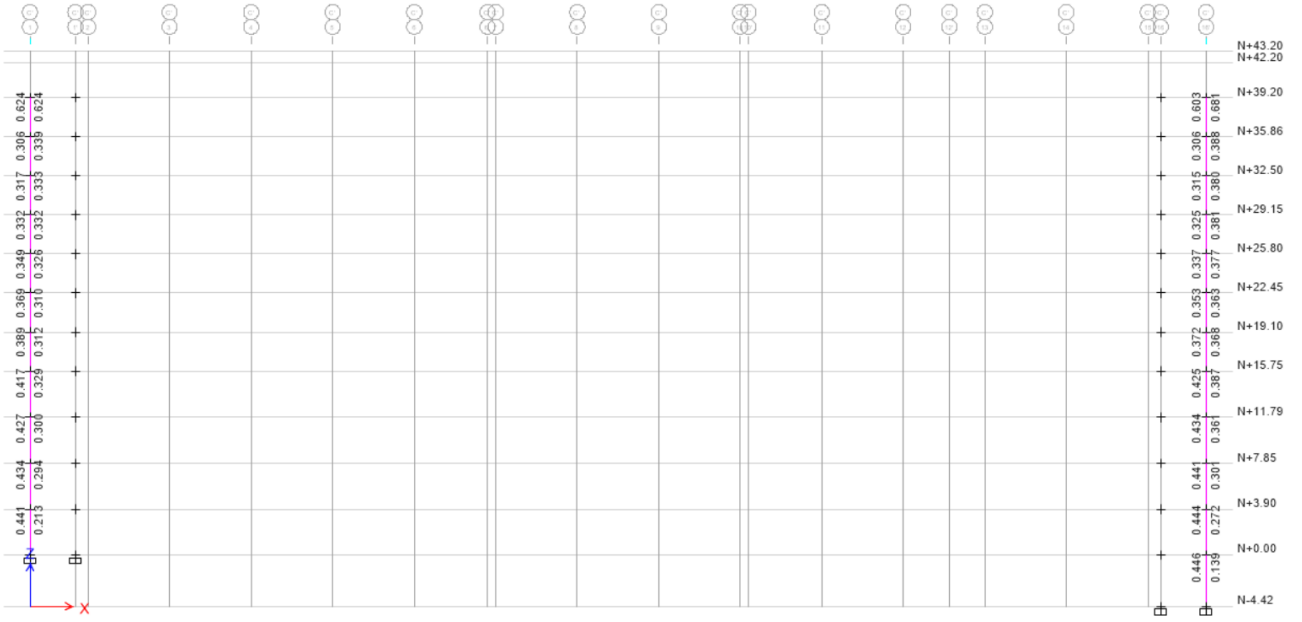
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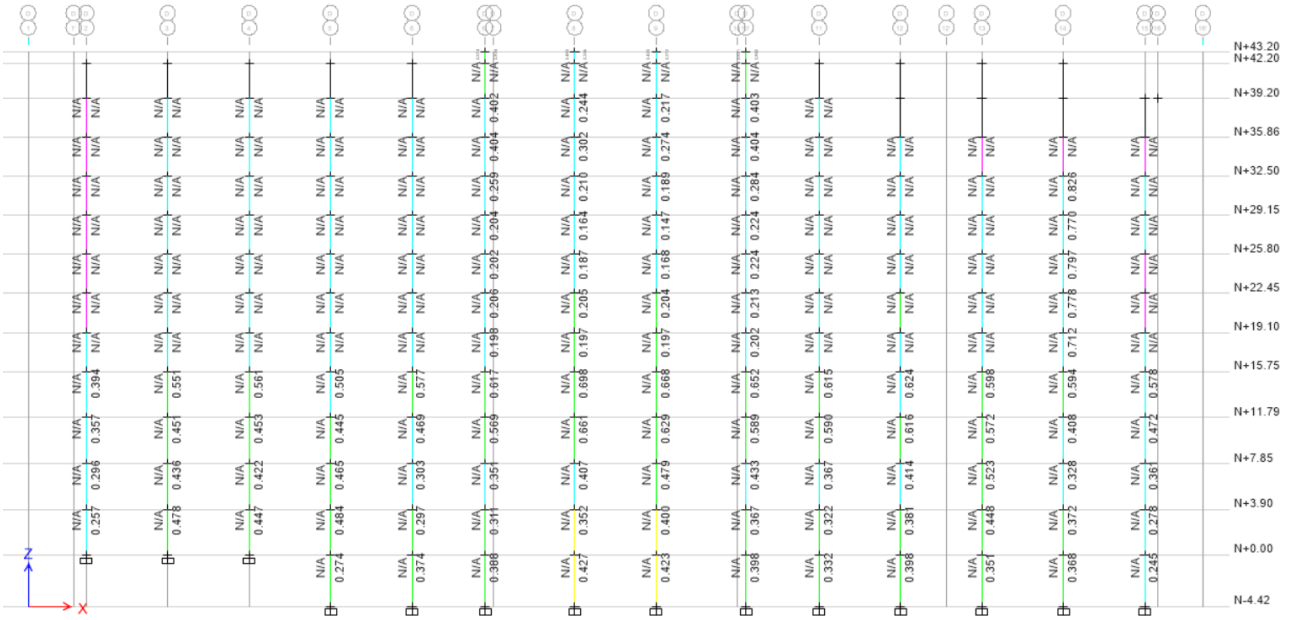
EJE C [cm²]



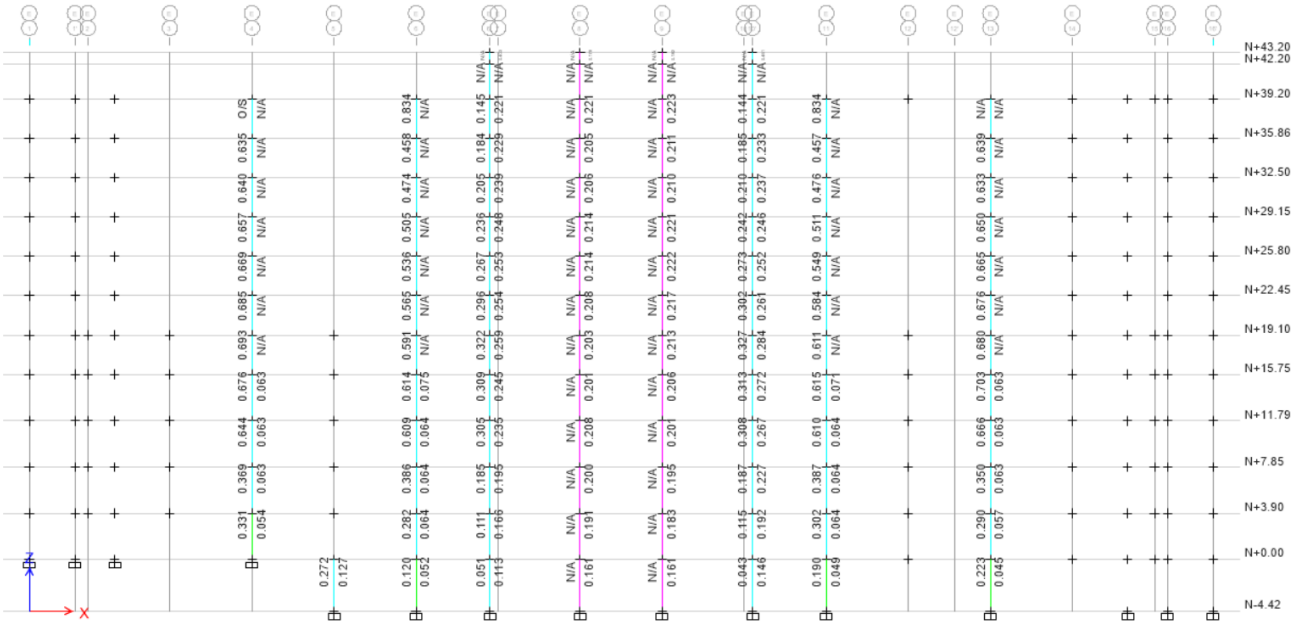
EJE C' [cm²]



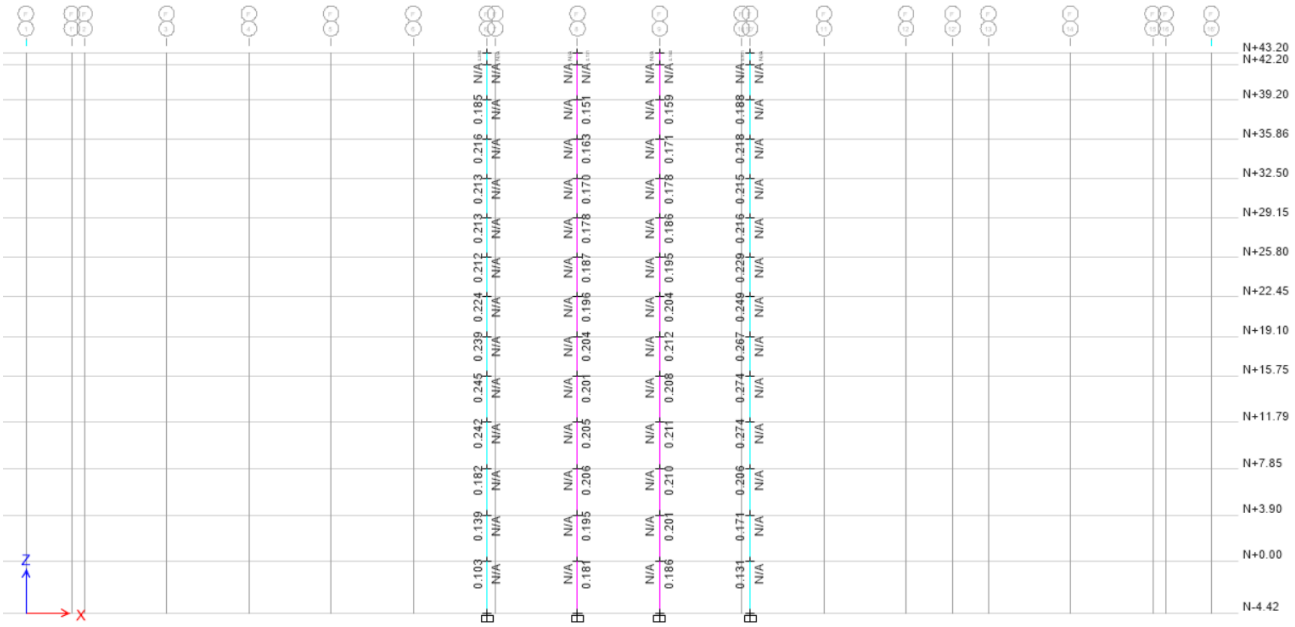
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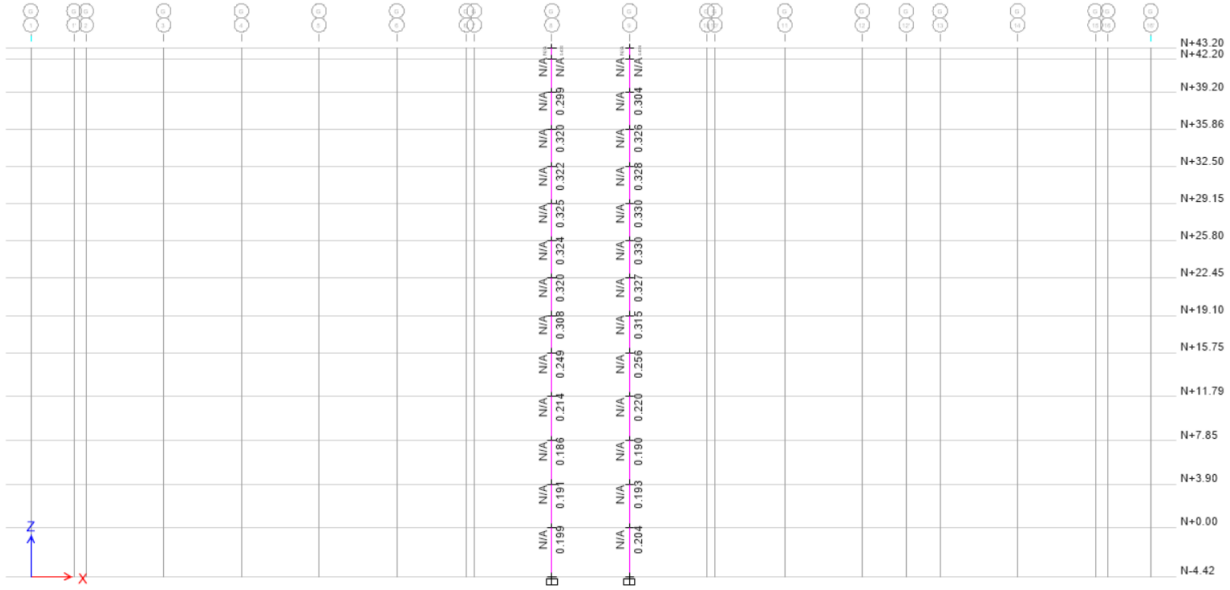
EJE E [cm²]



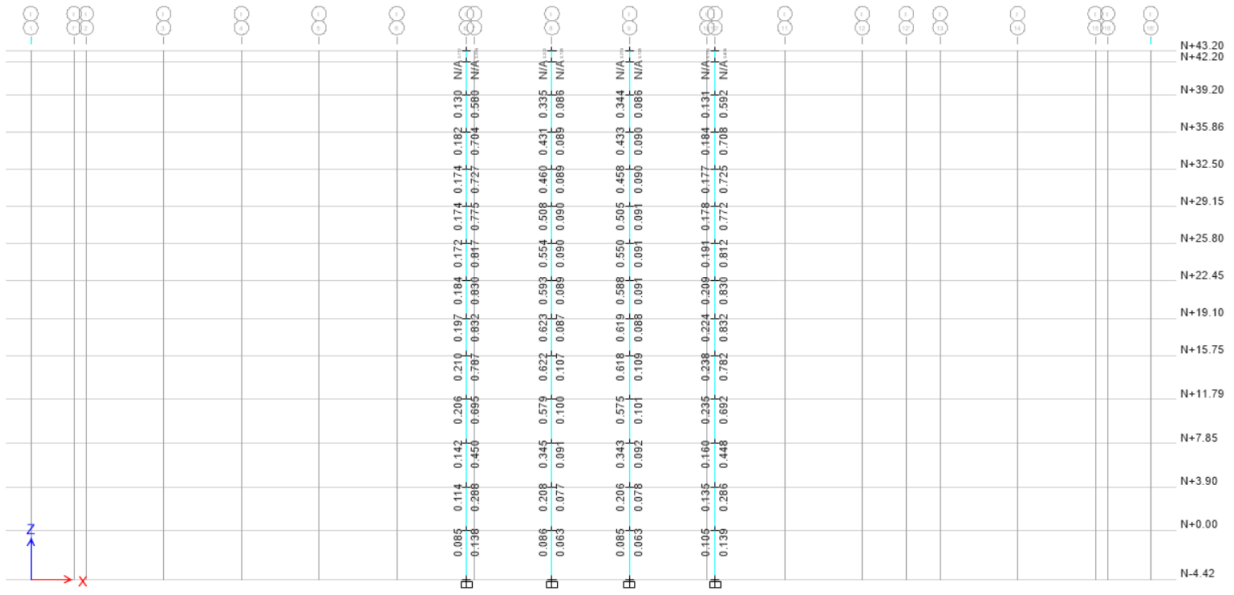
EJE F [cm²]



EJE G [cm²]



EJE I [cm²]


N+43.20
N+42.20
N+39.20
N+35.86
N+32.50
N+29.15
N+25.80
N+22.45
N+19.10
N+15.75
N+11.79
N+7.85
N+3.90
N+0.00
N-4.42
Z
X

6.19. CHEQUEO DEL INDICE DE FLEXIBILIDAD

El índice de flexibilidad de la estructura se determina mediante la comparación de los desplazamientos laterales máximos de cada entre piso, tal como recomienda la NSR-10, la comparación se hace con respecto a una estructura diseñada y construida bajo los parámetros de una estructura regida por la NSR-10.

Dichos desplazamientos o derivadas no deben superar el 1.00 % de la altura total de cada entre piso.

- Deriva máxima calculada: 0.0090 (0.90 % de la altura de entre piso)
- Deriva máxima admisible: 0.01 (1% de la altura de entre piso)

$$INDICE\ DE\ FLEXIBILIDAD = \frac{Deriva\ máxima\ calculada}{Deriva\ máxima\ admisible}$$

$$INDICE\ DE\ FLEXIBILIDAD = \frac{0.0090}{0.01}$$

$$INDICE\ DE\ FLEXIBILIDAD = 0.90$$

6.20. COMBINACIONES DE CARGA DISEÑO POR METODO DE RESISTENCIA

TABLE: Load Combinations

Name	Load Case/Combo	Scale Factor	Type	Auto
FXAJ	FX	1.15	Linear Add	No
FYAJ	FY	1.21	Linear Add	No
EX	FXAJ	0.198413	Linear Add	No
EY	FYAJ	0.198413	Linear Add	No
COMB1	DEAD	1.4	Linear Add	No
COMB2	DEAD	1.2	Linear Add	No
COMB2	LIVE	1.6		
COMB3	DEAD	1.2	Linear Add	No
COMB3	LIVE	1		
COMB3	EX	1		
COMB4	DEAD	1.2	Linear Add	No
COMB4	LIVE	1		
COMB4	EY	1		
COMB5	DEAD	0.9	Linear Add	No
COMB5	EX	1		
COMB6	DEAD	0.9	Linear Add	No
COMB6	EY	1		
ENV	COMB1	1	Envelope	No
ENV	COMB2	1		
ENV	COMB3	1		
ENV	COMB4	1		
ENV	COMB5	1		
ENV	COMB6	1		
1D	DEAD	1	Linear Add	No
1L	LIVE	1	Linear Add	No

0.1EX	EX	0.1	Linear Add	No
0.1EY	EY	0.1	Linear Add	No

7. PROPUESTA DE REFORZAMIENTO

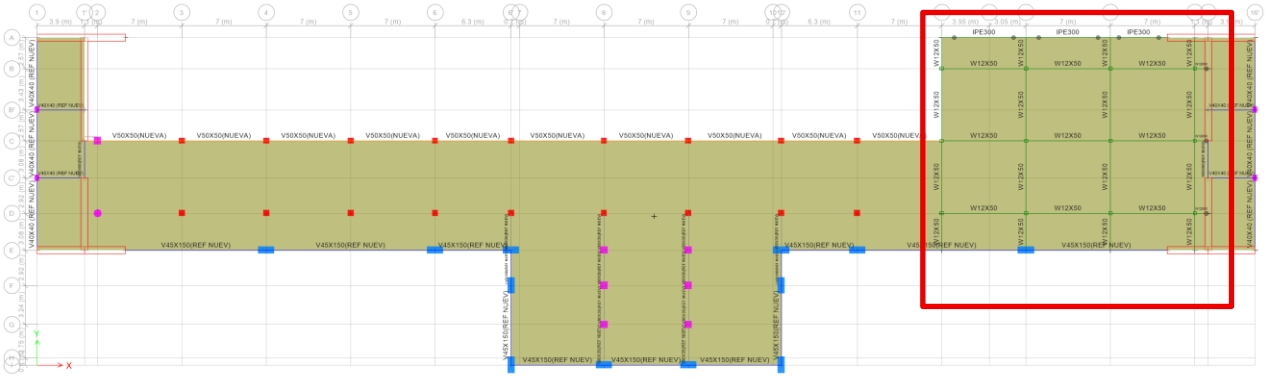
7.1. PROPUESTA DE REFORZAMIENTO PISO 12

Después de la recopilación de la información disponible y del análisis realizado, se determinó que en el piso 12, en el área comprendida entre los ejes 12–13–14–15 y B–C–D, la edificación no cuenta con un sistema estructural definido. Dicha área no fue intervenida durante las obras de reforzamiento ejecutadas en la edificación y, aunque el reforzamiento estaba planteado en los diseños originales, se evidenció que no fue ejecutado.

En consecuencia, se considera necesario implementar un sistema estructural que garantice un adecuado comportamiento resistente. La propuesta consiste en la implementación de un sistema de pórticos en acero resistentes a momento, con capacidad especial de disipación de energía (DES). Las columnas estarán conformadas por perfiles tubulares estructurales PTE 250×250×7,0 mm, rellenos con concreto de f’c = 28 MPa, y las vigas por perfiles W12X50.

Con esta solución se completa el sistema estructural en el área mencionada, proporcionando continuidad y resistencia lateral, además de constituir una alternativa de construcción rápida y de menor intervención sobre la edificación existente.

La placa existente se apoyará sobre el nuevo sistema estructural sin ningún tipo de integración ni conexión estructural con los pórticos propuestos, transmitiendo exclusivamente cargas gravitacionales. En consecuencia, no se considerará como parte del sistema resistente lateral ni como diafragma estructural, manteniendo un comportamiento independiente del sistema de pórticos en acero



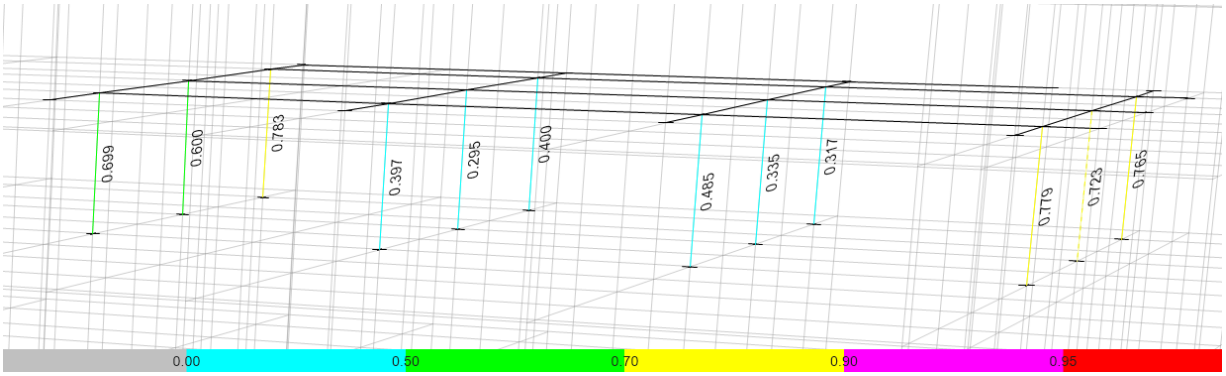
Área a intervenir en el piso 12 – Fuente: autor



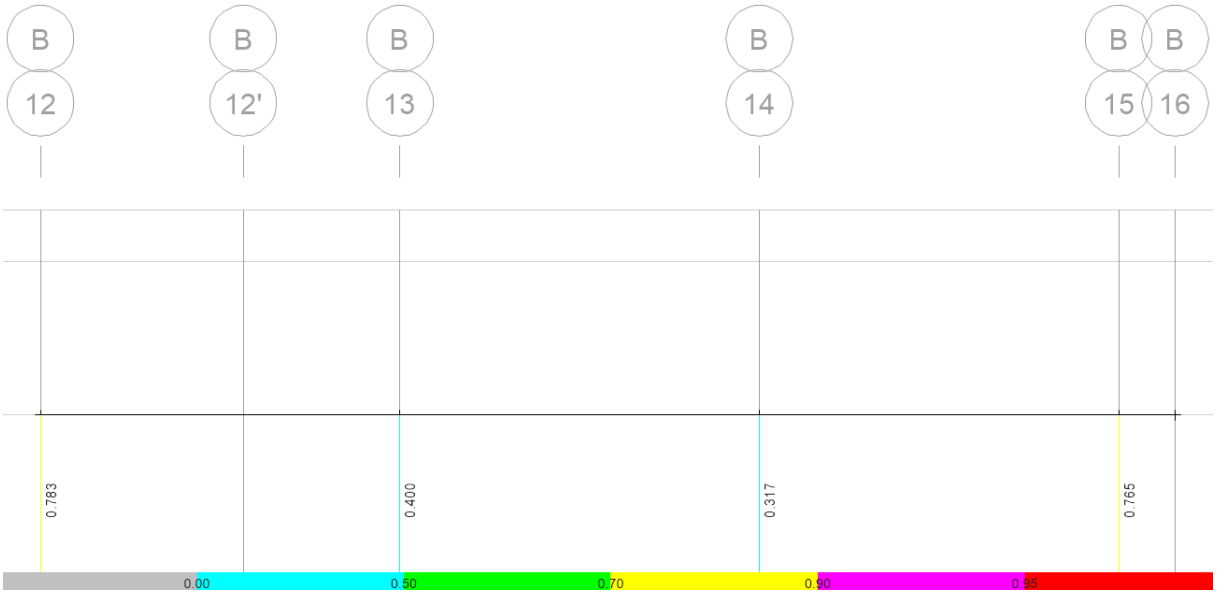
Área a intervenir en el piso 12 – Fuente: autor

7.1.1. DISEÑO DE COLUMNAS NUEVAS

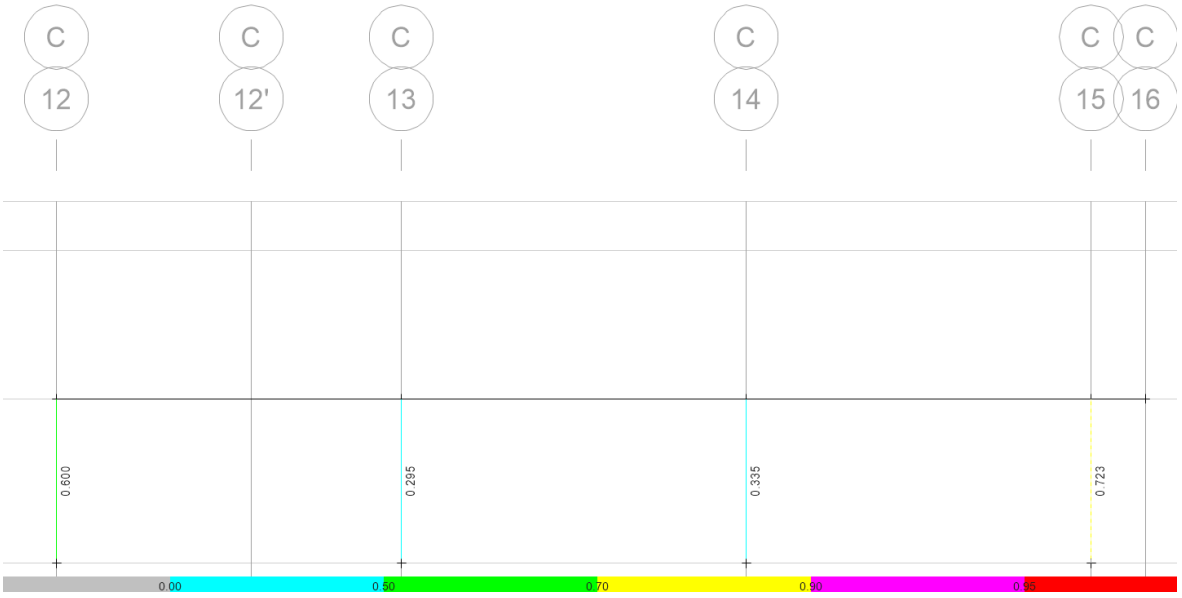
VISTA 3D



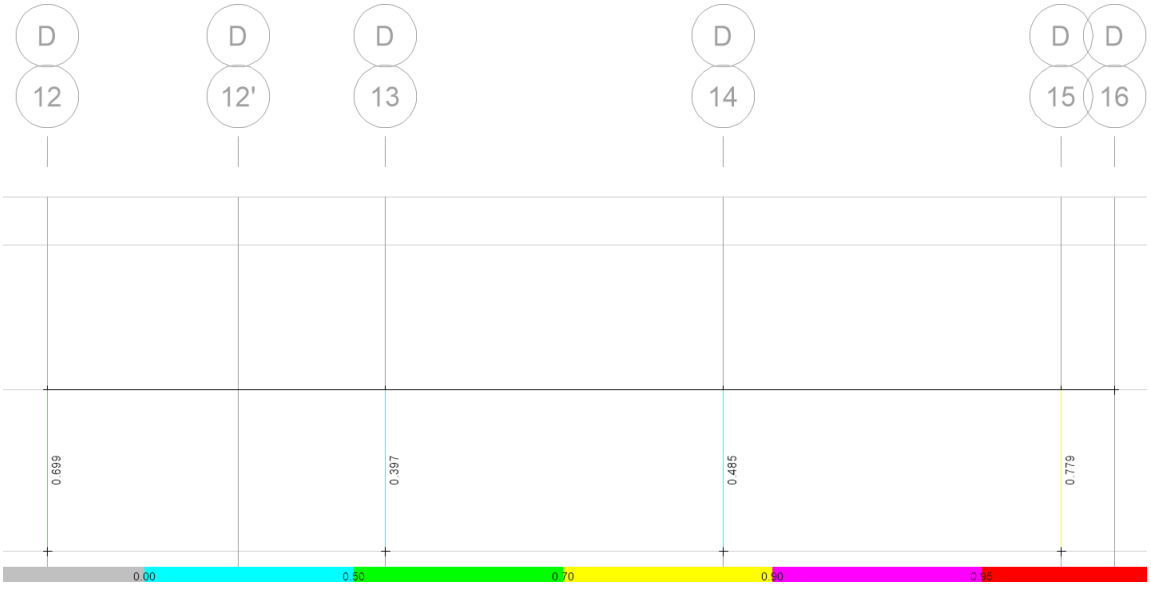
EJE B



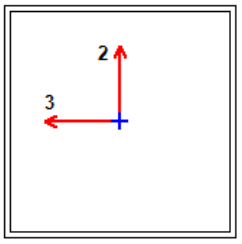
EJE C


C
12
C
12'
C
13
C
14
C
C
15
16
0.600
0.295
0.335
0.723
0.00
0.50
0.70
0.90
0.95

EJE D


D
12
D
12'
D
13
D
14
D
D
15
16
0.699
0.397
0.485
0.779
0.00
0.50
0.70
0.90
0.95

ETABS 2016 Composite Column Design



Element Details

Level	Element	Unique Name	Location (m)	Combo	Section	Classification
N+39.20	C28	1867	0	COMB2	PTE250X250X7.00	Compact

LLRF and Demand/Capacity Ratio

L (m)	LLRF	Stress Ratio Limit
3.34000	0.872	0.95

Analysis and Design Parameters

Provision	Analysis	2nd Order	Reduction
LRFD	Direct Analysis	General 2nd Order	Tau-b Fixed

Stiffness Reduction Factors

$\alpha P_r / P_y$	$\alpha P_r / P_e$
0.166	0.027

Design Code Parameters

Φ_b	Φ_c	Φ_{TY}	Φ_{TF}	Φ_V	$\Phi_{V\text{-}RI}$	Φ_{VT}
0.9	0.75	0.9	0.75	0.9	1	1

Design Properties of Steel Section

A (m²)	J (m⁴)	I_{33} (m⁴)	I_{22} (m⁴)	A_{v3} (m²)	A_{v2} (m²)
0.0068	0.0001	0.000067	0.000067	0.0035	0.0035

Material Properties

E_s (kN/m²)	f'_c (kN/m²)	F_y (kN/m²)
199947978.8	28000	350000

Demand/Capacity (D/C) Ratio Eqn.(H1-1b)

D/C Ratio =	$(P_r /2P_c) + (M_{r33} /M_{c33}) + (M_{r22} /M_{c22})$
0.723 =	0.078 + 1.519E-05 + 0.645

Stress Check forces and Moments

Location (m)	P_u (kN)	M_{u33} (kN-m)	M_{u22} (kN-m)	V_{u2} (kN)	V_{u3} (kN)	T_u (kN-m)
0	-394.9965	0.0033	140.3126	-0.0266	-72.2495	0.0028

Axial Force & Biaxial Moment Design Factors (H1-1b)

	L Factor	K_1	K_2	B_1	B_2	C_m
Major Bending	0.907	1	1	1	1	0.583
Minor Bending	0.907	1	1	1	1	0.417

Parameters for Lateral Torsion Buckling

L_{ltb}	K_{ltb}	C_b
0.88	0	1.769

Axial Force and Capacities

P_u Force (kN)	ϕP_{nc} Capacity (kN)	ϕP_{nt} Capacity (kN)
394.9965	2520.6506	2143.26

Moments and Capacities

	M_u Moment (kN-m)	ϕM_n Capacity (kN-m)	ϕM_n (No LTB) (kN-m)
Major Bending	0.0033	217.6488	217.6488
Minor Bending	140.3126	217.6488	

Torsion Moment and Capacities

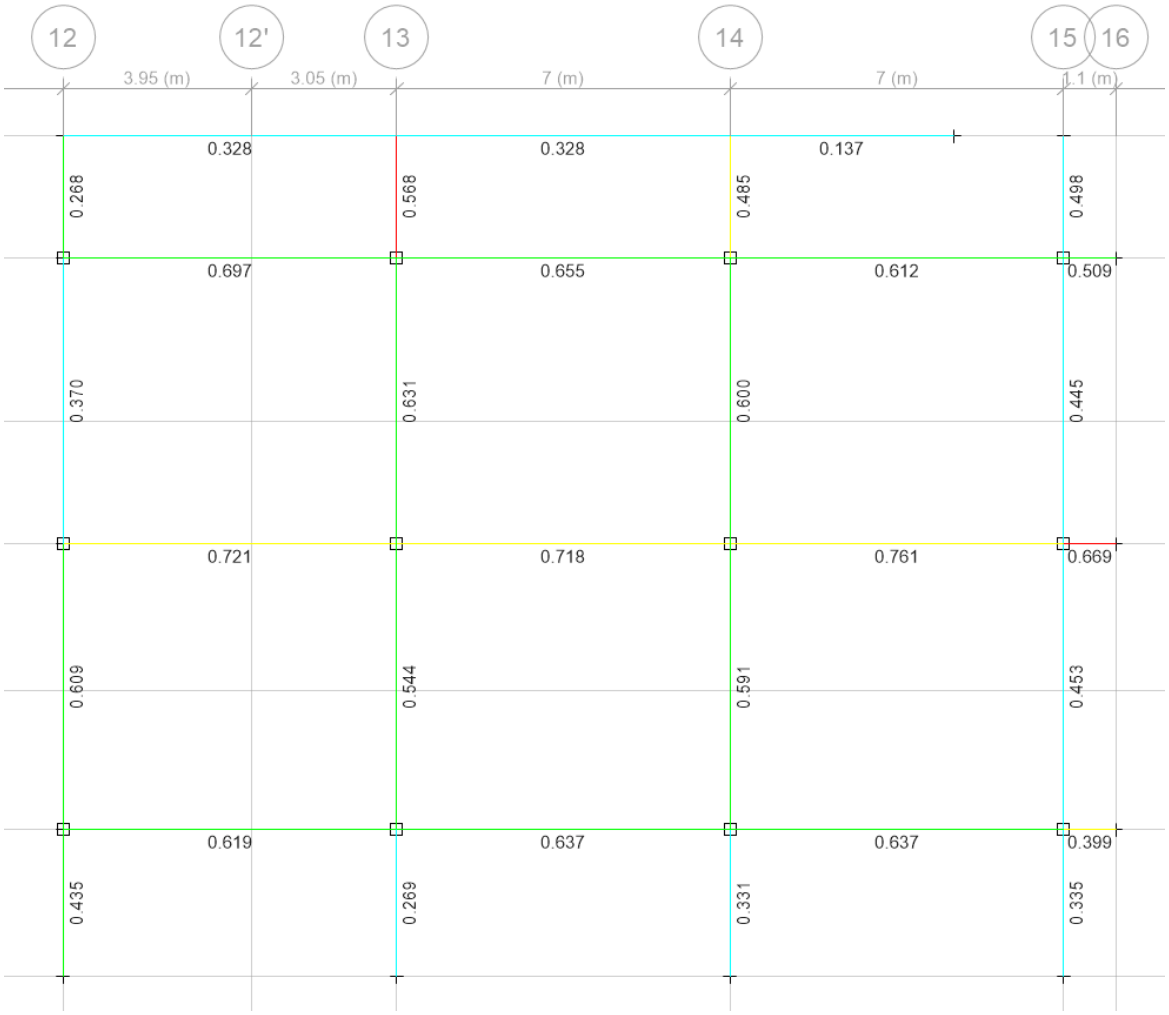
T_u Moment (kN-m)	T_n Capacity (kN-m)	ϕT_n Capacity (kN-m)
0.0028	173.3258	155.9932

Shear Design

	V_u Force (kN)	ϕV_n Capacity (kN)
Major Shear	0.0266	605.934
Minor Shear	72.2495	605.934

7.1.2. DISEÑO DE VIGAS NUEVAS





ETABS 2016 Steel Frame Design

AISC 360-10 Steel Section Check (Strength Summary)

Element Details

Level	Element	Unique Name	Location (m)	Combo	Element Type	Section	Classification
N+39.20	B116	922	6.875	DStlS15	Special Moment Frame	W12X50	Seismic HD

LLRF and Demand/Capacity Ratio

L (m)	LLRF	Stress Ratio Limit
7.00000	0.92	0.95

Analysis and Design Parameters

Provision	Analysis	2nd Order	Reduction
LRFD	Direct Analysis	General 2nd Order	Tau-b Fixed

Stiffness Reduction Factors

$\alpha P_r / P_y$	$\alpha P_r / P_e$	τ_b	EA factor	EI factor
0.021	0.01	1	0.8	0.8

Seismic Parameters

Ignore Seismic Code?	Ignore Special EQ Load?	Plug Welded?	SDC	I	Rho	S_{DS}	R	Ω_0	C_d
No	No	Yes	D	1	1	0.5	8	3	5.5

Design Code Parameters

Φ_b	Φ_c	Φ_{TY}	Φ_{TF}	Φ_V	$\Phi_{V\text{-}RI}$	Φ_{VT}
0.9	0.9	0.9	0.75	0.9	1	1

Section Properties

A (m^2)	J (m^4)	I_{33} (m^4)	I_{22} (m^4)	A_{v3} (m^2)	A_{v2} (m^2)
0.0094	0.000001	0.000163	0.000023	0.0067	0.0029

Design Properties

S_{33} (m^3)	S_{22} (m^3)	Z_{33} (m^3)	Z_{22} (m^3)	r_{33} (m)	r_{22} (m)	C_w (m^6)
0.00105	0.000228	0.001178	0.000349	0.13145	0.04988	0

Material Properties

E (kN/m^2)	f_y (kN/m^2)	R_y	α
200000000	344737.89	1.1	NA

Stress Check forces and Moments

Location (m)	P_u (kN)	M_{u33} (kN-m)	M_{u22} (kN-m)	V_{u2} (kN)	V_{u3} (kN)	T_u (kN-m)
6.875	-69.3054	-255.7577	-0.4087	165.2046	0.7156	-0.0283

Axial Force & Biaxial Moment Design Factors (H1-1b)

	L Factor	K_1	K_2	B_1	B_2	C_m
Major Bending	0.964	1	1	1	1	1
Minor Bending	0.333	1	1	1	1	1

Parameters for Lateral Torsion Buckling

L_{ltb}	K_{ltb}	C_b
0.333	1	1.094

Demand/Capacity (D/C) Ratio Eqn.(H1-1b)

D/C Ratio =	$(P_r /2P_c) + (M_{r33} /M_{c33}) + (M_{r22} /M_{c22})$
0.718 =	0.014 + 0.7 + 0.004

Axial Force and Capacities

P_u Force (kN)	ϕP_{nc} Capacity (kN)	ϕP_{nt} Capacity (kN)
69.3054	2410.1052	2922.4819

Moments and Capacities

	M_u Moment (kN-m)	ϕM_n (kN-m)	ϕM_n No LTB (kN-m)	ϕM_n Cb=1 (kN-m)
Major Bending	255.7577	365.5624	365.5624	359.7483
Minor Bending	0.4087	108.296		

Shear Design

	V_u Force (kN)	ϕV_n Capacity (kN)	Stress Ratio
Major Shear	165.2046	602.3782	0.274
Minor Shear	0.7156	1242.1429	0.001

End Reaction Major Shear Forces

Left End Reaction (kN)	Load Combo	Right End Reaction (kN)	Load Combo
299.9634	DStlS18	301.3737	DStlS18

7.1.3. DISEÑO DE CONEXIONES

CONEXIÓN PRECALIFICADA 4E

Familia: Viga - Ala de columna (BCF)
Tipo: Moment end plate

Código de diseño: AISC 360-16 LRFD

Consideraciones geométricas

Dimensiones	Unidad	Valor	Min.	Max.	Est.	Referencias
Placa de extremo extendida						
Distancia vertical al borde	[mm]	60.00	41.27	152.40	✔	Sec. J3.5
Distancia horizontal al borde	[mm]	60.00	41.27	152.40	✔	Sec. J3.5
Separación vertical entre pernos (ala exterior)	[mm]	126.26	84.67	--	✔	Sec. J3.3
Distancia libre entre huecos (longitudinal)	[mm]	91.33	31.75	--	✔	Sec. J3.3
Separación vertical entre pernos (ala interior)	[mm]	126.26	84.67	--	✔	Sec. J3.3
Distancia libre entre huecos (longitudinal)	[mm]	91.33	31.75	--	✔	Sec. J3.3
Separación horizontal	[mm]	135.00	127.00	205.23	✔	DG4 Sec. 2.1, 2.4, DG16 Sec. 2.5
Distancia exterior del perno (ala exterior)	[mm]	55.00	50.80	--	✔	DG4 Sec. 2.1
Distancia interior del perno (ala exterior)	[mm]	55.00	50.80	--	✔	DG4 Sec. 2.1
Distancia exterior del perno (ala interior)	[mm]	55.00	50.80	--	✔	DG4 Sec. 2.1
Distancia interior del perno (ala interior)	[mm]	55.00	50.80	--	✔	DG4 Sec. 2.1
Diámetro del perno	[mm]	31.75	--	38.10	✔	DG4 Sec. 1.1
Viga						
Alma	[1/16in]	10	3	--	✔	table J2.4
Soporte						
Distancia horizontal al borde	[mm]	91.25	41.27	152.40	✔	Sec. J3.5

Comportamiento placa/columna

Comportamiento de placa de extremo (ala exterior)
Comportamiento de placa gruesa controlado por ruptura de pernos sin acción de palanca

Comportamiento de placa de extremo (ala interior)
Comportamiento de placa gruesa controlado por ruptura de pernos sin acción de palanca

Comportamiento de ala de columna (ala exterior)
Comportamiento de placa gruesa controlado por ruptura de pernos sin acción de palanca

Comportamiento de ala de columna (ala interior)
Comportamiento de placa gruesa controlado por ruptura de pernos sin acción de palanca

Verificación de diseño

Verificación	Unidad	Capacidad	Solicitación	EC ctrl	Rel.	Referencias

Placa de extremo a momento (ala exterior)						
Flexión en fluencia	[KN*m]	562.13	0.00	CM	0.00	DG4 Eq. 3.10, Sec. 2.2.3
Momento resistente en pernos sin efecto de palanca	[KN*m]	433.76	0.00	CM	0.00	DG4 Eq. 3.7
Corte en los pernos	[KN]	886.35	601.80	CM	0.68	Tables (7-1..14)
Aplastamiento de pernos por corte	[KN]	3278.36	601.80	CM	0.18	Tables (7-1..14)
Desgarramiento bajo carga de corte	[KN]	3455.66	601.80	CM	0.17	Tables (7-1..14)
Corte a fluencia	[KN]	1519.05	631.76	CM	0.42	DG4 Eq. 3.12
Corte a rotura	[KN]	1174.37	631.76	CM	0.54	DG4 Eq. 3.13
Placa de extremo a momento (ala interior)						
Flexión en fluencia	[KN*m]	562.13	371.00	CM	0.66	DG4 Eq. 3.10, Sec. 2.2.3
Momento resistente en pernos sin efecto de palanca	[KN*m]	433.76	371.00	CM	0.86	DG4 Eq. 3.7
Corte en los pernos	[KN]	886.35	0.00	CM	0.00	Tables (7-1..14)
Aplastamiento de pernos por corte	[KN]	3278.36	601.80	CM	0.18	Tables (7-1..14)
Desgarramiento bajo carga de corte	[KN]	3455.66	601.80	CM	0.17	Tables (7-1..14)
Corte a fluencia	[KN]	1519.05	631.76	CM	0.42	DG4 Eq. 3.12
Corte a rotura	[KN]	1174.37	631.76	CM	0.54	DG4 Eq. 3.13
Viga						
Resistencia a corte de la soldadura al alma	[KN]	614.29	601.80	CM	0.98	Eq. J2-4
Resistencia de la soldadura al alma para alcanzar e...	[KN/m]	7313.87	2915.85	CM	0.40	Eq. J4-1
Corte a fluencia	[KN]	602.38	601.80	CM	1.00	Eq. J4-3
Soporte						
Flexión en fluencia (ala exterior)	[KN*m]	875.47	0.00	CM	0.00	DG4 Eq. 3.20, Sec. 2.2.3
Aplastamiento de pernos en soporte (ala exterior)	[KN]	3643.07	601.80	CM	0.17	Tables (7-1..14)
Flexión en fluencia (ala interior)	[KN*m]	875.47	371.00	CM	0.42	DG4 Eq. 3.20, Sec. 2.2.3
Aplastamiento de pernos en soporte (ala interior)	[KN]	3643.07	601.80	CM	0.17	Tables (7-1..14)
Corte de panel en el alma	[KN]	1431.49	1263.52	CM	0.88	Eq. J10-9
Soporte - lado derecho						
Fluencia local del alma	[KN]	2933.35	1263.52	CM	0.43	DG4 eq. 3.24
Aplastamiento del alma superior	[KN]	3297.61	1263.52	CM	0.38	Eq. J10-4

Relación de resistencia crítica global **1.00**

CONEXIÓN A CORTANTE IPE 300

Consideraciones geométricas

Dimensiones	Unidad	Valor	Min.	Max.	Est.	Referencias

Placa (lado de la viga)						
Distancia vertical al borde	[mm]	30.00	25.40	--	✔	Tables J3.4, J3.5
Distancia horizontal al borde	[mm]	30.00	25.40	--	✔	Tables J3.4, J3.5
Separación vertical entre pernos	[mm]	60.00	50.80	170.40	✔	Sec. J3.5
Distancia libre entre huecos (longitudinal)	[mm]	39.36	19.05	--	✔	Sec. J3.3
Viga						
Distancia vertical al borde	[mm]	90.00	25.40	--	✔	Tables J3.4, J3.5
Distancia horizontal al borde	[mm]	35.00	25.40	--	✔	Tables J3.4, J3.5
Soporte						
Tamaño de soldadura	[1/16in]	4	4	--	✔	p. 10-87

Verificación de diseño

Verificación	Unidad	Capacidad	Solicitación	EC ctrl	Rel.	Referencias
Placa (lado de la viga)						
Corte en los pernos	[KN]	80.39	50.99	CM1	0.63	Tables (7-1..14)
Aplastamiento de pernos por corte	[KN]	139.62	50.99	CM1	0.37	Tables (7-1..14)
Desgarramiento bajo carga de corte	[KN]	172.39	50.99	CM2	0.30	Sec. J3.6
Corte a fluencia	[KN]	335.08	50.00	CM1	0.15	Eq. J4-3
Corte a rotura	[KN]	205.69	50.00	CM1	0.24	Eq. J4-4
Bloque de corte	[KN]	228.54	50.00	CM1	0.22	Eq. J4-5
Flexión a rotura	[KN]	137.93	50.00	CM1	0.36	p. 9-6
Flexión en fluencia	[KN*m]	22.62	2.25	CM1	0.10	Sec. F1
Pandeo lateral torsional	[KN*m]	22.21	2.25	CM1	0.10	Sec. F1
Tensión en fluencia	[KN]	502.63	10.00	CM1	0.02	Eq. J4-1
Tensión a rotura	[KN]	342.81	10.00	CM1	0.03	Eq. J4-2
Compresión	[KN]	502.63	0.00	CM1	0.00	Sec. J4.4
Bloque de corte por axial	[KN]	297.11	10.00	CM1	0.03	Eq. J4-5
Placa (lado del soporte)						
Resistencia de la soldadura	[KN]	566.97	50.99	CM1	0.09	Tables 8-4 .. 8-11
Interacción de axial, flexión y corte a fluencia		1.00	0.03	CM1	0.03	Ch. H, Eq. 10-5
Interacción de axial, flexión y corte a rotura		1.00	0.08	CM1	0.08	Ch. H, Eq. 10-5
Viga						
Aplastamiento de pernos por corte	[KN]	110.15	50.99	CM1	0.46	Tables (7-1..14)
Corte a fluencia	[KN]	440.57	50.00	CM1	0.11	Eq. J4-3
Fluencia por fuerza axial	[KN]	1669.21	10.00	CM1	0.01	Eq. D2-1
Tensión a rotura	[KN]	606.36	10.00	CM1	0.02	Eq. J4-2
Bloque de corte por axial	[KN]	248.70	10.00	CM1	0.04	Eq. J4-5
Soporte						
Rotura en las soldaduras	[KN/m]	1909.15	116.94	CM1	0.06	p. 9-5

Resistencia a corte en las soldaduras	[KN]	515.47	50.00	CM1	0.10	Eq. J4-4
Grupo de pernos						
Resistencia efectiva de perno	[KN]	78.44	50.99	CM1	0.65	Sec. J3.6

Relación de resistencia crítica global **0.65**

Notas

La placa es diseñada con criterios de la configuración extendida.

Placa base (AISC 360-16 LRFD)

7.1.4. DISEÑO DE CONEXIÓN DE VIGAS METALICAS A ELEMENTOS DE CONCRETO EXISTENTES

ASDIP Steel 4.1.3 **STEEL BASE PLATE DESIGN** *www.asdipsoft.com*

GEOMETRY

Column Section W12X50

		Width		Length		
Column		20.5		31.0	cm	
Plate		40.0		45.0	cm	OK
Concrete Support	Wp1	22.5	Lp1	22.5	cm	OK
	Wp2	22.5	Lp2	22.5	cm	OK
Rod Offset		15.0		18.0	cm	OK
Thickness of Grout				5.0	cm	

MATERIALS

Plate Steel Strength Fy	252.0	MPa
Pier Concrete Strength f'c	28.0	MPa

FACTORED LOADS (LRFD)

Vertical Load P	0.0	KN
Bending Moment M	38.0	KN-m
Horizontal Load V	22.0	KN
Design Eccentricity e	380000000.0	cm

Design Eccentricity Is > L/2

SEISMIC PROVISIONS

Design spectral acceleration Sds = 0.75 Overstrength seismic factor Ωo = 3.00

Non-yielding base plate / Ductile or non-yielding anchorage ACI 17.2.3.4.2 (a) or (d)

Percentage due to seismic = 5.0 % <= 20 % , Ignore seismic provisions ACI 17.2.3.4.1

AXIALLY LOADED PLATES

$P = P * (1 + \% / 100 * (\Omega o - 1)) =$ 0.0 * (1 + 5.0 / 100 * (1.00 - 1)) = 0.0 KN

Bearing stress $fp = P / (W * L) =$ 0.0 / (40.0 * 45.0) = 0.0 MPa

Bearing strength $Fp = 0.85 * f'c \sqrt{\frac{A2}{A1}}$ $= 0.85 * 28.0 \sqrt{\frac{1800}{1800}} = 23.8$ MPa ACI 22.8.3.2

Under-strength factor $\phi = 0.65$ ACI 21.2.1

Bearing strength ratio $= \frac{fp}{\phi Fp} = \frac{0.0}{0.65 * 23.8} = 0.00$ < 1.0 OK

Critical section m = $0.5 * (L - 0.95 * d) =$ 0.5 * (45.0 - 0.95 *31.0) = 7.8 cm AISC-DG#1 3.1.2

Critical section n = $0.5 * (W - 0.80 * bf) =$ 0.5 * (40.0 - 0.80 *20.5) = 11.8 cm

$X = [\frac{4 * d * bf}{(d + bf)^2}] * Bearing\ ratio = [\frac{4 * 31.0 * 20.5}{(31.0 + 20.5)^2}] * 0.00 = 0.00$ AISC-DG#1 3.1.2

$\lambda = \frac{2 \cdot \sqrt{X}}{(1 + \sqrt{1 - X})} = \frac{2 \cdot \sqrt{0}}{1 + \sqrt{1 - 0}} = 0.00$

$n' = 0.25 \cdot \sqrt{d \cdot bf} = 0.25 \cdot \sqrt{31 \cdot 20.5} = 6.3$ cm

Controlling section $k = Max\ (m, n, \lambda n') =$ Max (7.8, 11.8, 0.00 * 6.3) = 11.8 cm

Plate moment $M = fp * k^2 / 2 =$ 0.0 * 11.8² / 2 = 0.0 KN-cm/cm

Plate thickness $t = k \sqrt{\frac{2 \cdot fp}{(Phi \cdot fy)}} = 11.8 \sqrt{\frac{2 \cdot 0}{0.9 \cdot 252}} = 0.00$ cm AISC-DG#1 3.1.2

BASE PLATES WITH MOMENT

*M = M * (1 + % / 100 * (Ωo - 1))* = 38.0 * (1 + 5.0 / 100 * (1.00 - 1)) = 38.0 KN

- Blodgett Model

Eccentricity *e = M / P* = 38.0 * 100 / 0.0 = 380000000.0 (Len Rod offset) / 3 = (45.0 - 18.0) / 3 = 9.0 cm

Factor *k1 = 3 * (e - L / 2)* = 3 * (380000000.0 - 45.0 / 2) = 1139999932.5

Factor *k2 = 6 * n * Tension rods * Area / W * (Rod offset + e)*

k2 = 6 * 8.0 * 6 * 1.98 / 40.0 * (18.0 + 380000000.0) = 2719873154.1

Factor *k3 = -k2 * (L / 2 + Rod offset)* = 2719873154.1 * (45.0 / 2 + 18.0) = -110154862739.8

Solving the polynomial $Y^3 + k1 * Y^2 + k2 * Y + k3 = 0$, Bearing length Y = 8.7 cm

Tension *T = -P * [(L / 2 - Y / 3 - e) / (L / 2 - Y / 3 + Rod offset)]*

T = -0.0 * [(45.0 / 2 - 8.7 / 3 - 18.0) / (45.0 / 2 - 8.7 / 3 + 18.0)] = 0.0 KN

Max bearing stress $fp = \frac{2 * (P + T)}{Y * W} = \frac{2 * (0.0 + 0.0)}{8.7 * 40.0}$ = 0.0 MPa

Bearing at critical section *fp1 = (Y - m) * fp / Y* = (8.7 - 7.8) * 0.0 / 8.7 = 0.0 MPa

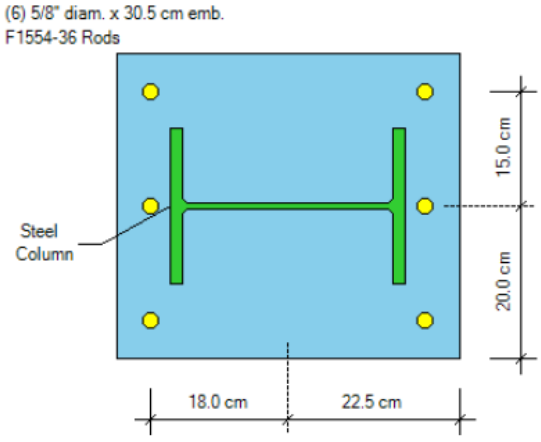
Moment due to bearing *Mb = 0.5 * [fp1 * m² + m² * 2 / 3 * (fp - fp1)]*

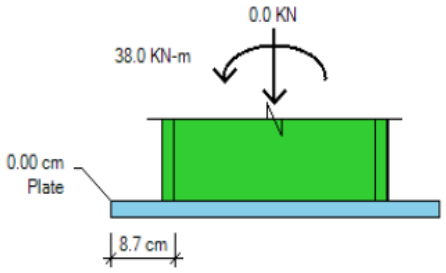
Mb = 0.5 * [0.0 * 7.8² + 7.8² * 2 / 3 * (0.0 - 0.0)] = 0.0 KN-cm/cm

Moment due to tension *Mt = T * [m - (L / 2 - Rod offset)] / [2 * (m - (L / 2 - Rod offset)]*

Mt = 0.0 * [7.8 - (45.0 / 2 - 18.0)] / [2 * (7.8 - (45.0 / 2 - 18.0))] = 0.0 KN-cm/cm

Plate thickness $t = \sqrt{\frac{4 \cdot Mc}{(Phi \cdot fy)}} = \sqrt{\frac{4 \cdot 0}{0.9 \cdot 252}}$ = 0.00 cm AISC-DG#1 3.1.2





ANCHORAGE DESIGN

Rod Material Specification ..... F1554-36 , Use (6) Rods , fya = 248.2 MPa, futa = 399.9 MPa

Anchor Rod Size ..5/8" diam. x 30.5 cm emb. , Ase = 1.46 cm² , Abrg = 4.32 cm²

- Tension Analysis ACI 17.4.1.1

Total tension force Nu = 105.6 KN , # of tension rods = 6 , Tension force per rod Nui = 0.0 KN

- Steel strength of anchors in tension ACI 17.4.1.1

Steel strength $Nsa = Ase * futa =$ 1.458 * 399.9 = 58.3 KN ACI Eq. (17.4.1.2)

Under-strength factor $\phi = 0.75$ ACI 17.3.3

Steel strength ratio $= \frac{Nui}{\phi Nsa} = \frac{0.0}{0.75 * 58.3} = 0.00 < 1.0$ OK ACI 17.3.1.1

- Concrete breakout strength of anchors in tension ACI 17.4.2.1

Anchor reinforcement: Use 2 bars #5 per rod

Bar strength $Nrg = Area * Bars\ per\ rod * Tension\ rods * fy =$ 2.00 * 2 * 6 * 420 = 1008.0 KN

Under-strength factor $\phi = 0.75$ ACI 17.4.2.9

Bar strength ratio $= \frac{Nu}{\phi Nrg} = \frac{105.6}{0.75 * 1008.0} = 0.00 < 1.0$ OK ACI 17.3.1.1

Effective embedment $hef = Ca,max / 1.5 =$ 7.50 / 1.5 = 5.00 cm ACI 17.4.2.3

Anchor group area $Anc = (Ca_1 + S_1 + Cb_1) * (Ca_2 + S_2 + Cb_2)$

Anc = (4.5 + 36.0 + 4.5) * (7.5 + 30.0 + 4.5) = 2025.0 cm² ACI 17.4.2.1

Single anchor area $Anco = 9\ hef^2 =$ 9 * (5.0)² = 225.0 cm² Eq. (17.4.2.1c)

Single anchor strength $Nb = 10\sqrt{f'c} \cdot hef^{1.5} = 10\sqrt{28} \cdot 5^{1.5} =$ 18.7 KN ACI Eq. (17.4.2.2b)

Eccentricity factor $\Psi ec =$ 1.00 (No eccentric load) ACI 17.4.2.4

Edge effects factor $\Psi ed = 0.7 + 0.3\frac{Ca,min}{1.5\ hef} = 0.7 + 0.3\frac{4.5}{1.5 * 5.0} =$ 0.88 ACI 17.4.2.5

Cracking factor $\Psi cn =$ 1.00 (Cracked concrete at service load level) ACI 17.4.2.6

Breakout strength $Ncbg = \frac{Anc}{Anco} \Psi ec\ \Psi ed\ \Psi cn\ Nb$

$Ncbg = \frac{2025.0}{225.0}$ 1.00 * 0.88 * 1.00 * 18.7 = 148.2 KN ACI Eq. (17.4.2.1b)

Under-strength factor $\phi = 0.75$ ACI 17.3.3

Breakout strength ratio $= \frac{Nu}{\phi Ncbg} = \frac{105.6}{0.75 * 148.2} = 0.00 < 1.0$ OK ACI 17.3.1.1

Breakout strength ratio controls (0.00 < 0.00)0 < 1.0 OK ACI 17.4.2.9

- Concrete pullout strength of anchors in tension ACI 17.4.3.1

Single anchor strength $Np = 8\ Abrg\ f'c =$ 8 * 4.32 * 28.0 = 96.8 KN ACI Eq. (17.4.3.4)

Cracking factor $\Psi cp =$ 1.00 (Cracked concrete at service load level) ACI 17.4.3.6

Pullout strength $Npn = \Psi cp\ Np =$ 1.00 * 96.8 = 96.8 KN ACI Eq. (17.4.3.1)

Under-strength factor $\phi = 0.75$ ACI 17.3.3

Pullout strength ratio $= \frac{Nu}{\phi Npn} = \frac{0.0}{0.75 * 96.8} = 0.00 < 1.0$ OK ACI 17.3.1.1

- Concrete side-face blowout strength of anchors in tension — ACI 17.4.4.1

Single anchor strength $Nsb = 160\ Ca_1\ Abrg\ f'c$ = 160 * 4.32 * 28.0 = 42.9 KN — ACI Eq. (17.4.4.1)

Side-face blowout $Nsbg = (1 + \frac{S}{6\ Ca_1})\ Nsb = (1 + \frac{15.0}{6 * 4.5})\ 42.9$ = 100.1 KN — ACI Eq. (17.4.4.2)

Under-strength factor ϕ = 0.75 — ACI 17.3.3

Side-face blowout ratio = $\frac{Nu}{\phi\ Nsbg} = \frac{105.6}{0.75 * 100.1}$ = 0.00 < 1.0 OK — ACI 17.3.1.1

Tension Design Ratio = $\frac{Nu}{\phi\ Nn}$ = 0.00 < 1.0 OK — ACI 17.3.1.1

- Shear Analysis — ACI 17.4.1.1

Shear resisted by Anchor Rods only (anchor rods are not welded to the base plate)

Total shear force Vu = 22.0 KN , Shear per rod Vi = 7.3 KN , (only front rods are effective)

- Steel strength of anchor rods in shear

Steel strength $Vsa = 0.6 * Ase * futa * grout\ factor$ = 0.6 * 1.46 * 399.9 * 0.80 = 28.0 KN — ACI 17.5.1.2

Under-strength factor ϕ = 0.65 — ACI 17.3.3

Steel strength ratio = $\frac{Vi}{\phi\ Vsa} = \frac{7.3}{0.65 * 28.0}$ = 0.40 < 1.0 OK — ACI 17.3.1.1

- Concrete breakout strength of anchors in shear — ACI 17.4.2.1

Anchor reinforcement: Use hairpins #4 per rod

Bar strength $Vrg = 2 * Area * rods / 2 * fy$ = 2 * 1.29 * 6 / 2 * 420.0 = 325.2 KN

Under-strength factor ϕ = 0.75 — ACI 17.5.2.9

Bar strength ratio = $\frac{Vu}{\phi\ Vrg} = \frac{22.0}{0.75 * 325.2}$ = 0.09 < 1.0 OK — ACI 17.3.1.1

Anchor group area $Avc = (1.5 * Ca_1) * (Ca_2 + S_2 + Cb_2)$

Avc = (1.5 * 4.50) * (6.75 + 30.00 + 6.75) = 293.6 cm² — ACI 17.5.2.1

Single anchor area $Avco = 4.5 * Ca_1^2$ = 4.5 * (4.50)² = 91.1 cm² — ACI Eq. (17.5.2.1c)

Single anchor strength $Vb = 7 \cdot \left(\frac{le}{da}\right)^{0.2} \cdot \sqrt{da} \cdot \sqrt{f'c} \cdot Ca1^{1.5}$

$Vb = 7 \cdot \frac{12.7}{1.6}^{0.2} \cdot \sqrt{1.6} \cdot \sqrt{28} \cdot 4.5^{1.5}$ Vb = 4.8 KN — ACI Eq. (17.5.2.2a)

Eccentricity factor Ψec = 1.00 (No eccentric load) — ACI 17.5.2.5

Edge effects factor $\Psi ed = 1.0$ — ACI 17.5.2.6

Cracking factor Ψcv = 1.20 (Cracked concrete at service load level) — ACI 17.5.2.7

Thickness factor $\Psi hv = 1.0$ — ACI 17.5.2.8

Breakout strength $Vcbg = \frac{Avc}{Avco}\ \Psi ec\ \Psi ed\ \Psi cv\ \Psi hv\ Vb$

$Vcbg = \frac{293.6}{91.1}$ 1.00 * 1.00 * 1.20 * 1.00 * 4.8 = 18.6 KN — ACI Eq. (17.5.2.1b)

Under-strength factor ϕ = 0.75 — ACI 17.3.3

Breakout strength ratio = $\frac{Vu}{\phi\ Vcbg} = \frac{22.0}{0.75 * 18.6}$ = 1.58 > 1.0 NG — ACI 17.3.1.1

Bar strength ratio controls (0.09 < 1.58) — ACI 17.5.2.9

- Concrete pryout strength of anchors in shear

Pryout strength $Vcpg = 2.0 * Ncbg =$ 2.0 * 148.2 = 296.3 KN — ACI 17.5.3.1

Under-strength factor $\phi = 0.75$ — ACI 17.3.3

Pryout strength ratio $= \frac{Vu}{\phi\, Vcpg} = \frac{22.0}{0.75 * 296.3} = 0.10 < 1.0$ OK — ACI 17.3.1.1

Shear Design Ratio $= \frac{Vu}{\phi\, Vn} = 0.40 < 1.0$ OK — ACI 17.3.1.1

- Tension-Shear Interaction

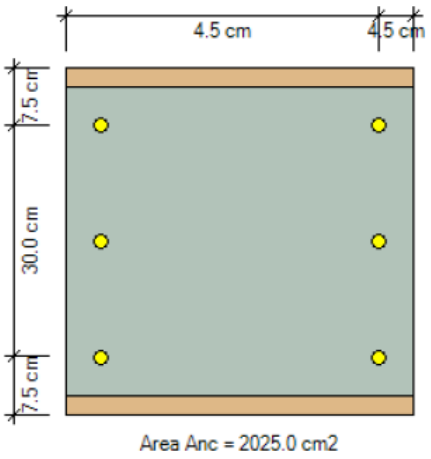
Combined Stress Ratio = $[(\text{Tension Ratio})^{1.67} + (\text{Shear Ratio})^{1.67}]^{0.6}$ — ACI R17.6

Combined Stress Ratio = $[(0.00)^{1.67} + (0.40)^{1.67}]^{0.6} = 0.40 < 1.0$ OK

Anchorage design is ductile

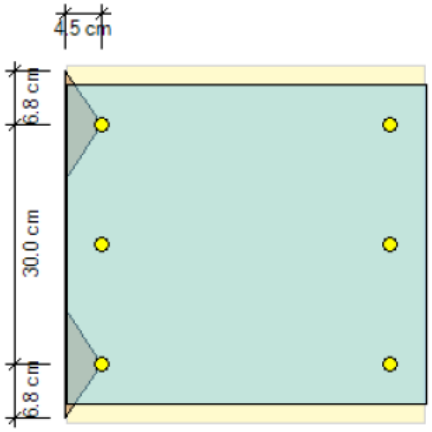
DESIGN CODES

Steel Design	AISC 360-10 (14th Ed.)
Base Plate	AISC Design Series # 1
Anchorage	ACI 318-14 Chapter 17
Load Combinations	User-defined



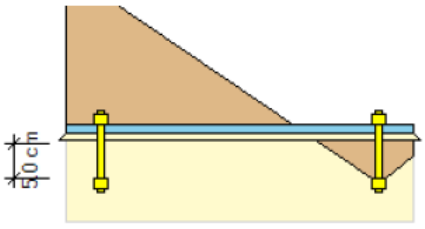
Area Anc = 2025.0 cm2

PLAN



Area Avc = 293.6 cm2

PLAN



SECTION



SECTION

7.1.5. DISEÑO DE PLACA DE ANCLAJE

PLACA BASE

Consideraciones geométricas

Dimensiones	Unidad	Valor	Min.	Max.	Est.	Referencias
Placa base						
Distancia del ancla al borde	[mm]	50.71	6.35	--	✔	
Tamaño de soldadura	[1/16in]	5	3	--	✔	table J2.4

Verificación de diseño

Verificación	Unidad	Capacidad	Solicitación	EC ctrl	Rel.	Referencias
Pedestal						
Aplastamiento por axial	[KN/mm2]	0.01	0.00	CM1	**0.00**	DG1 3.1.1
Placa base						
Flexión en fluencia (interfaz de aplastamiento)	[KN*m/m]	79.43	0.00	CM1	**0.00**	DG1 Eq. 3.3.13
Flexión en fluencia (interfaz de tensión)	[KN*m/m]	79.43	63.68	CM1	**0.80**	DG1 Eq. 3.3.13

Relación 0.80

Anclas

Consideraciones geométricas

Dimensiones	Unidad	Valor	Min.	Max.	Est.	Referencias
Anclas						
Espaciamiento entre anclas	[mm]	185.00	114.30	--	✔	Sec. D.8.1
Recubrimiento de concreto	[mm]	75.71	50.80	--	✔	Sec. 7.7.1
Longitud efectiva	[mm]	648.57	--	881.43	✔	

Verificación de diseño

Verificación	Unidad	Capacidad	Solicitación	EC ctrl	Rel.	Referencias
Tensión en anclas	[KN]	318.30	126.15	CM1	**0.40**	Eq. D-3
Extracción por deslizamiento de ancla en tensión	[KN]	187.25	126.15	CM1	**0.67**	Sec. D.4.1.1
Refuerzo de grupo de anclas a tensión	[KN]	2568.77	605.61	CM1	**0.24**	Sec. D.5.2.9, D.6.2.9
Corte en el ancla	[KN]	132.41	12.77	CM1	**0.10**	Eq. D-20, Sec. D.6.1.3
Desprendimiento de ancla a corte	[KN]	115.58	9.03	CM1	**0.08**	Sec. D.4.1.1
Desprendimiento de grupo de anclas a corte	[KN]	201.25	72.24	CM1	**0.36**	Sec. D.4.1.1
Refuerzo de grupo de anclas a corte	[KN]	243.87	72.24	CM1	**0.30**	Sec. D.5.2.9, D.6.2.9

Diseño en el eje menor

Placa base (AISC 360-16 LRFD)

Consideraciones geométricas

Dimensiones	Unidad	Valor	Min.	Max.	Est.	Referencias
Placa base						
Distancia del ancla al borde	[mm]	50.71	6.35	--	✔	
Tamaño de soldadura	[1/16in]	5	3	--	✔	table J2.4

Verificación de diseño

Verificación	Unidad	Capacidad	Solicitación		EC ctrl	Rel.	Referencias
Pedestal							
Aplastamiento por axial	[KN/mm2]		0.01	0.00	CM1	**0.00**	DG1 3.1.1
Placa base							
Flexión en fluencia (interfaz de aplastamiento)	[KN*m/m]		79.43	0.00	CM1	**0.00**	DG1 Eq. 3.3.13
Flexión en fluencia (interfaz de tensión)	[KN*m/m]		79.43	63.68	CM1	**0.80**	DG1 Eq. 3.3.13

Relación 0.80

Anclas

Consideraciones geométricas

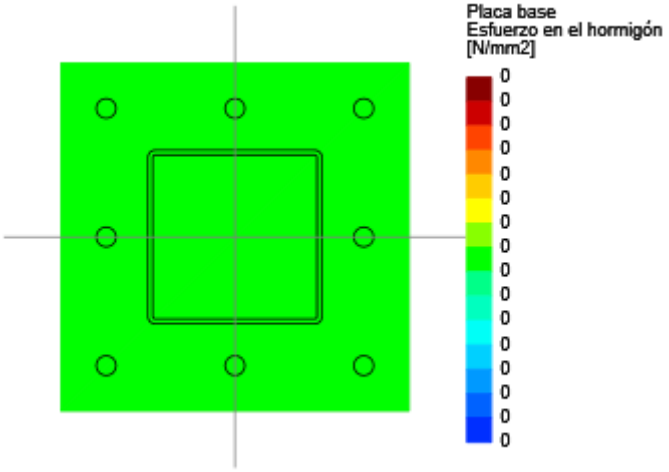
Dimensiones	Unidad	Valor	Min.	Max.	Est.	Referencias
Anclas						
Espaciamiento entre anclas	[mm]	185.00	114.30	--	✔	Sec. D.8.1
Recubrimiento de concreto	[mm]	75.71	50.80	--	✔	Sec. 7.7.1
Longitud efectiva	[mm]	648.57	--	881.43	✔	

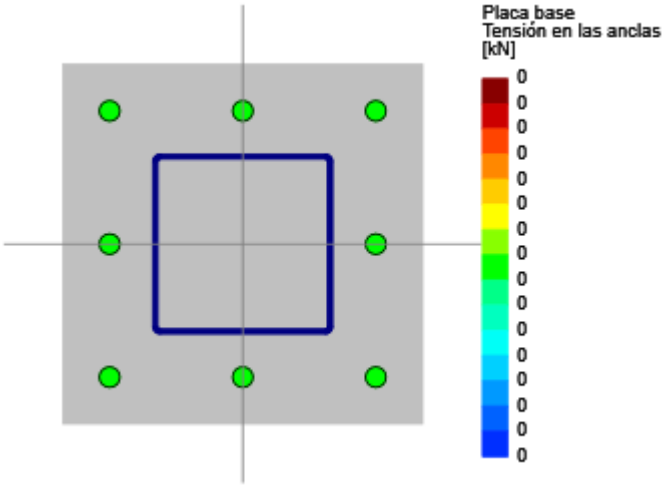
Verificación de diseño

Verificación	Unidad	Capacidad		Solicitación		EC ctrl	Rel.	Referencias
Tensión en anclas	[KN]	318.30	126.15	CM1	**0.40**	Eq. D-3		
Extracción por deslizamiento de ancla en tensión	[KN]		187.25	126.15	CM1	**0.67**	Sec. D.4.1.1	
Refuerzo de grupo de anclas a tensión	[KN]		2568.77	605.61	CM1	**0.24**	Sec. D.5.2.9, D.6.2.9	
Corte en el ancla	[KN]	132.41	12.77	CM1	**0.10**	Eq. D-20, Sec. D.6.1.3		
Desprendimiento de ancla a corte	[KN]		115.58	9.03	CM1	**0.08**	Sec. D.4.1.1	
Desprendimiento de grupo de anclas a corte	[KN]		201.25	72.24	CM1	**0.36**	Sec. D.4.1.1	
Refuerzo de grupo de anclas a corte	[KN]		243.87	72.24	CM1	**0.30**	Sec. D.5.2.9, D.6.2.9	

Biaxial

Máxima compresión (CM2)





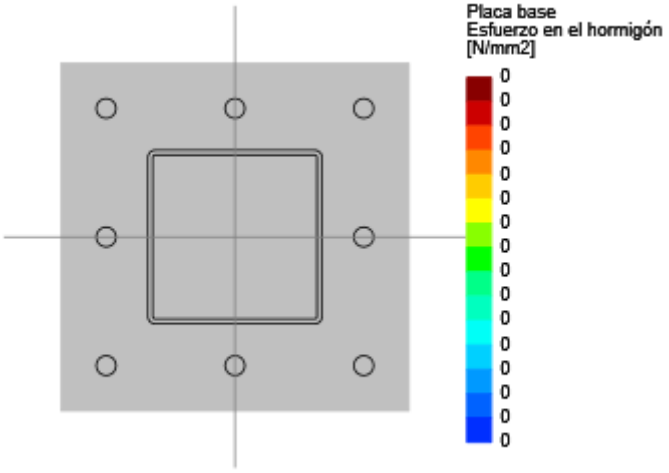
Máximo esfuerzo en el concreto	0.00	[N/mm2]
Mínimo esfuerzo en el concreto	0.00	[N/mm2]
Máxima tensión en las anclas	0.00	[kN]
Mínima tensión en las anclas	0.00	[kN]
Ángulo del eje neutro	0.00	[deg]
Ubicación del eje neutro	1E33	[mm]
Longitud de aplastamiento	500.00	[mm]

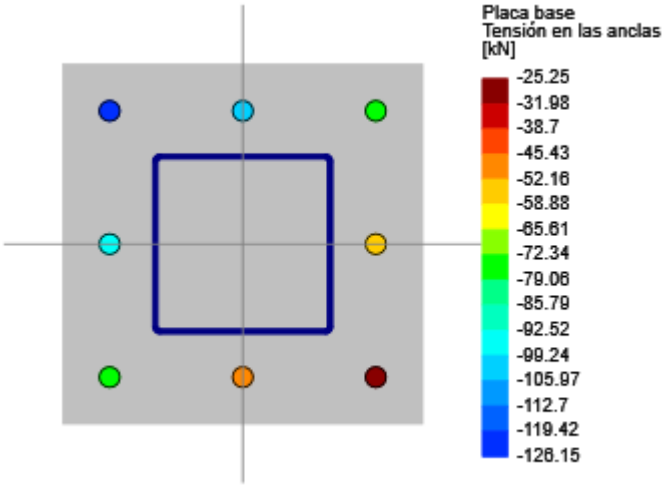
Tensiones en anclas

Ancla	Transversal		Longitudinal	Corte	Tensión
[mm]	[mm]	[kN]	[kN]		
1	185.00	185.00	0.00	0.00	
2	-185.00	185.00	0.00	0.00	
3	185.00	-185.00	0.00	0.00	
4	-185.00	-185.00	0.00	0.00	
5	185.00	0.00	0.00	0.00	
6	-185.00	0.00	0.00	0.00	
7	0.00	185.00	0.00	0.00	

8 0.00 -185.00 0.00 0.00

Máxima tensión (CM1)





Máximo esfuerzo en el concreto	0.00	[N/mm2]
Mínimo esfuerzo en el concreto	0.00	[N/mm2]
Máxima tensión en las anclas	126.15	[kN]
Mínima tensión en las anclas	25.25	[kN]
Ángulo del eje neutro	-135.00	[deg]
Ubicación del eje neutro	-39.02	[mm]
Longitud de aplastamiento	0.00	[mm]

Tensiones en anclas

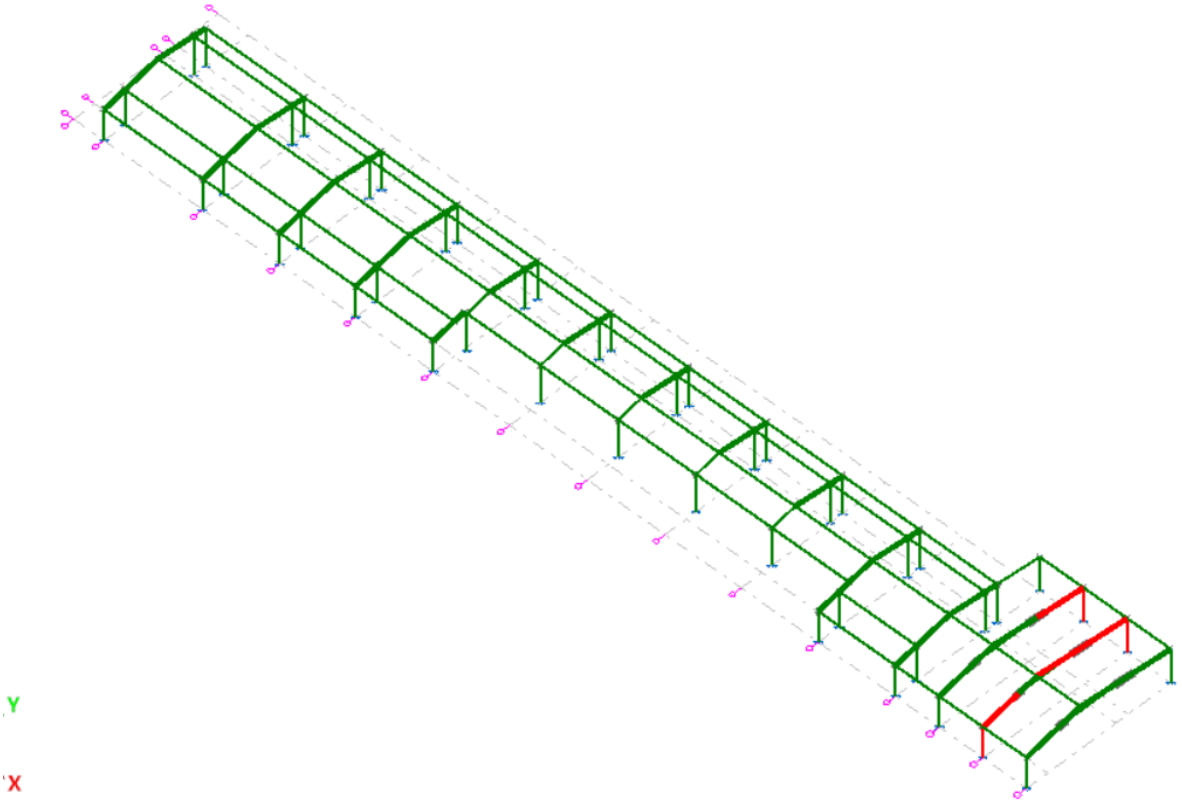
Ancla	Transversal		Longitudinal	Corte	Tensión
[mm]	[mm]	[kN]	[kN]		
1 185.00	185.00	9.03	75.70		
2 -185.00	185.00	9.03	126.15		
3 185.00	-185.00	9.03	25.25		

4	-185.00	-185.00	9.03	75.70
5	185.00	0.00	9.03	50.48
6	-185.00	0.00	9.03	100.93
7	0.00	185.00	9.03	100.93
8	0.00	-185.00	9.03	50.48

7.2. PROPUESTA DE REFORZAMIENTO PISO 13

Se realizó el análisis de los elementos estructurales existentes en la cubierta del piso 13 de la edificación, los cuales corresponden a perfiles doble C soldados. Dichos elementos fueron verificados y diseñados en el rango elástico, sin considerar solicitaciones sísmicas, dado que no hacen parte del sistema de resistencia sísmica de la edificación.

La evaluación estructural se efectuó considerando únicamente cargas de viento, carga muerta y carga viva. Como resultado del análisis, se identificó la existencia de dos pórticos ubicados sobre los ejes del modelo de cubierta, denominados M y N, los cuales corresponden a los perfiles resaltados en color rojo en la imagen de referencia y tienen una sección de perfiles doble C 160x60x3.00 mm.



Identificación de perfiles a reforzar.

Perfil	Peso	Resistencia
Negro Grado 50 C 100x50x15x2.0mm, Doble en cajón soldado	6.75	1119.22 %
Negro Grado 50 C 100x50x15x2.5mm, Doble en cajón soldado	8.27	763.93 %
Negro Grado 50 C 120x60x15x2.0mm, Doble en cajón soldado	8.01	533.42 %
Negro Grado 50 C 120x60x15x2.5mm, Doble en cajón soldado	9.84	359.47 %
Negro Grado 50 C 150x50x15x2.0mm, Doble en cajón soldado	8.32	398.53 %
Negro Grado 50 C 150x50x15x2.5mm, Doble en cajón soldado	10.24	266.24 %
Negro Grado 50 C 160x60x15x2.0mm, Doble en cajón soldado	9.26	283.29 %
Negro Grado 50 C 160x60x15x2.5mm, Doble en cajón soldado	11.41	173.12 %
Negro Grado 50 C 160x60x15x3.0mm, Doble en cajón soldado	13.50	125.45 %

Nivel de sobre esfuerzo de los perfiles a reforzar.

Por otro lado, se observó que en la base de los perfiles metálicos existentes se presentan procesos de corrosión, los cuales han generado pérdida de área en la sección transversal. Adicionalmente, se evidenció que las placas de anclaje existentes no presentan un diseño ni una construcción adecuados, lo que dificulta una correcta transferencia de cargas hacia el elemento de soporte.

En razón a lo anterior, se propone realizar el reforzamiento de los primeros 40 cm de cada perfil metálico, así como el reforzamiento de la placa base existente, con el fin de restablecer la capacidad resistente de los elementos y garantizar una adecuada transferencia de cargas.

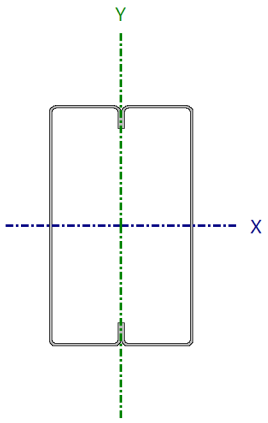
7.2.1. DISEÑO DE REFORZAMIENTO DE PERFILES 160X60X3.00 mm

La propuesta de reforzamiento para los dos pórticos conformados por perfiles 160×160×3,0 mm consiste en la construcción de un perfil soldado adicional, con el fin de aumentar el área de la sección transversal de los elementos existentes. Este incremento de sección permitirá mejorar su capacidad resistente y contribuirá a garantizar el correcto funcionamiento estructural de los pórticos.

Para mayor claridad, se anexa el diseño de reforzamiento correspondiente y detalles constructivos en los planos estructurales.

Barra N204/N205

Perfil: REFORZADA, Doble en cajón soldado (Cordón discontinuo)
Material: Acero (A1011 GR50)



Nudos		Longitud (m)	Características mecánicas			
Inicial	Final		Área (cm²)	I_x(1) (cm4)	I_y(1) (cm4)	I_t(2) (cm4)
N204	N205	2.800	20.41	1176.58	476.30	0.61

Notas:
(1) Inercia respecto al eje indicado
(2) Momento de inercia a torsión uniforme

	Pandeo		Pandeo lateral	
	Plano ZX	Plano ZY	Ala sup.	Ala inf.
β	1.00	1.00	0.00	0.00
L_K	2.800	2.800	0.000	0.000
C_m	1.000	1.000	-	-
C_b	-		1.000	

Notación:
β: Coeficiente de pandeo
L_K: Longitud de pandeo (m)
C_m: Coeficiente de momentos
C_b: Factor de modificación para el momento crítico

Barra	COMPROBACIONES (AISI S100-16 (2016))															Estado
	w / t	T	P	Tr	M_x	M_y	V_x	V_y	M_xTr	M_yTr	M_xV_y	M_yV_x	MT	MP	TPTrMV	
N204/N205	w / t ≤ (w / t)Máx. Cumple	x: 2.696 m η = 0.4	x: 0 m η = 7.4	N.P.(1)	x: 2.697 m η = 70.4	x: 2.697 m η = 0.2	η < 0.1	η = 8.6	N.P.(2)	N.P.(3)	x: 2.697 m η = 50.3	x: 0 m η < 0.1	x: 2.697 m η = 7.1	x: 2.697 m η = 77.9	x: 2.697 m η = 77.8	**CUMPLE η = 77.9**

Notación:
w / t: Limitaciones geométricas
T: Resistencia a tracción
P: Resistencia a compresión
Tr: Resistencia a torsión
M_x: Resistencia a flexión alrededor del eje X
M_y: Resistencia a flexión alrededor del eje Y
V_x: Resistencia a corte en la dirección del eje X
V_y: Resistencia a corte en la dirección del eje Y
M_xTr: Resistencia a flexión alrededor del eje X combinada con torsión
M_yTr: Resistencia a flexión alrededor del eje Y combinada con torsión
M_xV_y: Resistencia a flexión alrededor del eje X combinada con corte en la dirección del eje Y
M_yV_x: Resistencia a flexión alrededor del eje Y combinada con corte en la dirección del eje X
MT: Resistencia a flexión combinada con tracción
MP: Resistencia a flexión combinada con compresión
TPTrMV: Flexión combinada con cortante, axil y torsión - Comprobación de Von Mises
x: Distancia al origen de la barra
η: Coeficiente de aprovechamiento (%)
N.P.: No procede

Comprobaciones que no proceden (N.P.):
(1) La comprobación no procede, ya que no hay torsión.
(2) No hay interacción entre torsión y flexión alrededor del eje X para ninguna combinación. Por lo tanto, la comprobación no procede.
(3) No hay interacción entre torsión y flexión alrededor del eje Y para ninguna combinación. Por lo tanto, la comprobación no procede.

Nota: El análisis de piezas compuestas se realiza mediante la verificación de cada uno de los perfiles simples que las constituyen. Las comprobaciones de dichos perfiles se realizan para los esfuerzos calculados a partir de los que actúan sobre la pieza compuesta, según sus características mecánicas. Para las comprobaciones de estabilidad se utiliza la esbeltez mecánica ideal, obtenida en función de la esbeltez de la pieza y una esbeltez complementaria que tiene en cuenta la separación de los enlaces entre los perfiles simples.

Limitaciones geométricas (B4.1)

Se debe satisfacer:

w_1 / t : ***16.00*** ✓

Donde:

w_1: Longitud del tramo recto del elemento horizontal (paralelo al eje X). **w_1** : *48.00* mm

t: Espesor. **t** : *3.00* mm

w_2 / t : ***62.67*** ✓

Donde:

w_2: Longitud del tramo recto del elemento vertical (paralelo al eje Y). **w_2** : *188.00* mm

t: Espesor. **t** : *3.00* mm

w_3 / t : ***4.67*** ✓

Donde:

w_3: Longitud del tramo recto del rigidizador de borde. **w_3** : *14.00* mm

t: Espesor. **t** : *3.00* mm

Resistencia a tracción (D1)

Se debe satisfacer:

η_T : ***0.004*** ✓

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.696 m del nudo N204, para la combinación de acciones 0.9·PP+0.9·D+W.

Donde:

T_f: Resistencia a tracción requerida para las combinaciones de carga LRFD. **T_f** : *1.18* kN

T_c: Resistencia de diseño a tracción.

T_c : *321.39* kN

Donde:

φ_t: Factor de resistencia para tracción. φ_t : *0.90*

T_n : *357.10* kN

T_n: La resistencia nominal a tracción es igual al valor calculado según la Sección D1:

D1 Plastificación de la sección bruta.

T_n : *357.10* kN

Donde:

A_g: Área de la sección bruta. **A_g** : *10.20* cm²

F_y: Límite elástico del acero. **F_y** : *350.00* MPa

Resistencia a compresión (E1)

Se debe satisfacer:

η_C : ***0.074*** ✓

El esfuerzo solicitante de cálculo pésimo se produce en el nudo N204, para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

Donde:

P_f: Resistencia a compresión requerida para las combinaciones de carga LRFD. **P_f** : *13.75* kN

P_c: Resistencia de diseño a compresión.

P_c : *185.71* kN

Donde:

φ_c: Factor de resistencia para compresión. φ_c : *0.85*

P_n: Resistencia nominal a compresión, tomada como el menor de los valores E2, E3 y E4. **P_n** : *218.48* kN

E2 Resistencia nominal a compresión, considerando el efecto del pandeo por flexión, flexotorsión o torsión.

E3 Interacción entre el pandeo local, la deformación plástica y el pandeo global

P_n : *218.48* kN

Donde:

A_e: Área de la sección eficaz. **A_e** : *7.98* cm²

Para

F_n : *273.79* MPa

Donde:

F_y: Límite elástico del acero. F_y : *350.00* MPa

λ_c : *0.77*

Donde:

F_y: Límite elástico del acero. F_y : *350.00* MPa

F_{cre}: Tensión elástica de pandeo a flexión calculada según las Secciones E2.1 a E2.4. F_{cre} : *596.50* MPa

E2.1 Secciones no sometidas a pandeo por torsión o por flexotorsión.

F_{crit}: Tensión crítica de pandeo, tomada como la menor de F_{crex} y F_{crey}. F_{crit} : *596.50* MPa

Donde:

Ya que esta norma no considera la posibilidad de combinaciones de compresión y otros esfuerzos para secciones compuestas, las esbelteces han sido modificadas según el método descrito al inicio de este listado. Para las reglas especificadas en la norma, se puede consultar el Capítulo D1.

F_{crex} : *1473.51* MPa

Donde:

E: Módulo de Young. **E** : *203000.00* MPa

λ: Esbeltez modificada de la pieza compuesta respecto al eje X. λ : *36.87*

F_{crey} : *596.50* MPa

Donde:

E: Módulo de Young. **E** : *203000.00* MPa

λ: Esbeltez modificada de la pieza compuesta respecto al eje Y. λ : *57.96*

E2.2 Secciones con uno o dos ejes de simetría sometidas a pandeo por torsión o por flexotorsión.

(i) Para secciones con un eje de simetría, y angulares con alas iguales en los que el área eficaz no es igual al área bruta de la sección.

Las comprobaciones de la Sección E2.2 no proceden, ya que las longitudes efectivas de pandeo lateral de este elemento son nulas.

E4 Resistencia a pandeo por distorsión.

La comprobación de la Sección E4 no procede, ya que la longitud efectiva de pandeo por distorsión es cero.

Resistencia a torsión (Comprobación adicional)

La comprobación no procede, ya que no hay torsión.

Resistencia a flexión alrededor del eje X (F3.1, F2, F4)

Se debe satisfacer:

η_B : ***0.704*** ✓

M_f: Resistencia a flexión crítica requerida para las combinaciones de carga LRFD. M_f : *13.77* kN·m

Para flexión positiva:

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

M_f^+: Resistencia requerida para flexión positiva. M_f^+ : *13.77* kN·m

Para flexión negativa:

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 0.9·PP+0.9·D+W.

M_f^-: Resistencia requerida para flexión negativa. M_f^- : *1.31* kN·m

M_c: Resistencia de diseño a flexión.

M_c : *19.56* kN·m

Donde:

φ_b: Factor de resistencia para flexión. φ_b : *0.95*

M_n: La resistencia a flexión nominal mínima se calcula como la menor de las calculadas en los apartados aplicables del Capítulo F3.1, F2, F4. M_n : *20.59* kN·m

Donde:

M_n^+: La resistencia a flexión nominal se calcula como la menor de las calculadas en los apartados aplicables del Capítulo F3.1, F2, F4 para flexión positiva. M_n^+ : *20.59* kN·m

M_n^-: La resistencia a flexión nominal se calcula como la menor de las calculadas en los apartados aplicables del Capítulo F3.1, F2, F4 para flexión negativa. M_n^- : *20.59* kN·m

F3.1 Resistencia nominal de la sección.

M_{nl} : *20.59* kN·m

Donde:

S_{etx} : *58.83* cm³

Donde:

- I_{ex}: Momento eficaz de inercia respecto al eje X. — I_{ex} : *588.29* cm4
- I_{ey}: Momento eficaz de inercia respecto al eje Y. — I_{ey} : *45.90* cm4
- I_{exy}: Producto eficaz de inercia. — I_{exy} : *0.00* cm4
- **x**: Distancia a la fibra extrema en flexión. — **x** : *-10.59* mm
- **y**: Distancia a la fibra extrema en flexión. — **y** : *-100.00* mm

F_y: Límite elástico del acero. — F_y : *350.00* MPa

F2 Resistencia a pandeo lateral-torsional.

Como el factor de longitud eficaz para pandeo lateral es cero, la barra no está sometida a pandeo lateral-torsional. La resistencia a flexión se calcula según la Sección F3.1.

F4.1 Resistencia a pandeo por distorsión.

La comprobación de la Sección F4.1 no procede, ya que la longitud efectiva de pandeo por distorsión es cero.

Resistencia a flexión alrededor del eje Y (F3.1, F2, F4)

Se debe satisfacer:

η_B : ***0.002*** ✓

M_f: Resistencia a flexión crítica requerida para las combinaciones de carga LRFD. — M_f : *0.01* kN·m

Para flexión positiva:

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 0.9·PP+0.9·D+W.

M_f^+: Resistencia requerida para flexión positiva. — M_f^+ : *0.00* kN·m

Para flexión negativa:

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

M_f^-: Resistencia requerida para flexión negativa. — M_f^- : *0.01* kN·m

M_c: Resistencia de diseño a flexión.

M_c : *3.34* kN·m

Donde:

φ_b: Factor de resistencia para flexión. φ_b : *0.95*

M_n: La resistencia a flexión nominal mínima se calcula como la menor de las calculadas en los apartados aplicables del Capítulo F3.1, F2, F4. M_n : *3.52* kN·m

Donde:

M_n^+: La resistencia a flexión nominal se calcula como la menor de las calculadas en los apartados aplicables del Capítulo F3.1, F2, F4 para flexión positiva. M_n^+ : *3.70* kN·m

M_n^-: La resistencia a flexión nominal se calcula como la menor de las calculadas en los apartados aplicables del Capítulo F3.1, F2, F4 para flexión negativa. M_n^- : *3.52* kN·m

F3.1 Resistencia nominal de la sección.

M_{nl}^+ : *3.70* kN·m

M_{nl}^- : *3.52* kN·m

Donde:

S_{ety}^+ : *10.57* cm³

S_{ety}^- : *10.05* cm³

Donde:

I_{ex}: Momento eficaz de inercia respecto al eje X. I_{ex}^+ : *588.29* cm4

I_{ex}^- : *578.12* cm4

I_{ey}: Momento eficaz de inercia respecto al eje Y. I_{ey}^+ : *45.90* cm4

I_{ey}^- : *39.41* cm4

I_{exy}: Producto eficaz de inercia. I_{exy} : *0.00* cm4

x: Distancia a la fibra extrema en flexión. x^+ : *43.41* mm

x^- : *39.20* mm

y: Distancia a la fibra extrema en flexión. **y** : *80.00* mm

F_y: Límite elástico del acero. F_y : *350.00* MPa

Resistencia a corte en la dirección del eje X (G2)

Se debe satisfacer:

$\eta_V <$ ***0.001*** ✓

El esfuerzo solicitante de cálculo pésimo se produce para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

Donde:

V_f: Resistencia a cortante requerida para las combinaciones de carga LRFD. V_f : *0.01* kN

La resistencia a corte requerida se ha reducido de forma que la fuerza aplicada se distribuye entre todos los elementos, puesto que la sección tiene más de un elemento que resiste cortante.

V_c: Resistencia de diseño a cortante.

V_c : *28.73* kN

Donde:

φ_v: Factor de resistencia para cortante. **φ_v** : *0.95*

V_n: La resistencia nominal a cortante es el menor de los valores calculados según la Sección G2.1, G2.2 y G2.3. **V_n** : *30.24* kN

Sección G2.1. La resistencia a cortante, V_n, de miembros flexados sin rigidizadores transversales en las almas será calculada de la siguiente manera:

(a) Para $\lambda_v \leq 0.815$

Donde:

E: Módulo de Young. **E** : *203000.00* MPa

F_y: Límite elástico del acero. **F_y** : *350.00* MPa

K_v: Coeficiente de abolladura por cortante. **K_v** : *5.34*

λ_v : *0.234*

Siendo:

V_y: Esfuerzo cortante de fluencia de la sección transversal **V_y** : *30.24* kN

Donde:

A_w: Área de los elementos paralelos a la dirección del cortante.

A_w : *1.44* cm²

Donde:

h: Altura del tramo recto del alma. **h** : *48.00* mm

t: Espesor de los elementos paralelos a la dirección del cortante. **t** : *3.00* mm

V_{cr}: Fuerza de abolladura por cortante elástico definida en la Sección G2.3 para sólo almas planas, o determinada de acuerdo con Apéndice 2 para todas secciones transversales de elementos precalificados (Tabla B4.1-1). **V_{cr}** : *551.11* kN

Sección G2.3. Fuerza de abolladura por cortante elástico crítico del alma, V_{cr}.

La fuerza de abolladura por cortante, V_{cr}, de un alma se debe determinar de acuerdo con esta sección:

Donde:

F_{cr}: tensión a la abolladura por cortante elástico.

F_{cr} : *3827.14* MPa

η: Coeficiente de Poisson. **η** : *0.3*

E: Módulo de Young. **E** : *203000.00* MPa

K_v: Coeficiente de abolladura por cortante. **K_v** : *5.34*

Resistencia a corte en la dirección del eje Y (G2)

Se debe satisfacer:

η_V : ***0.086*** ✓

El esfuerzo solicitante de cálculo pésimo se produce para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

Donde:

V_f: Resistencia a cortante requerida para las combinaciones de carga LRFD. **V_f** : *8.64* kN

V_c: Resistencia de diseño a cortante.

V_c : *99.95* kN

Donde:

φ_v: Factor de resistencia para cortante. **φ_v** : *0.95*

V_n: La resistencia nominal a cortante es el menor de los valores calculados según la Sección G2.1, G2.2 y G2.3. **V_n** : *105.21* kN

Sección G2.1. La resistencia a cortante, V_n, de miembros flexados sin rigidizadores transversales en las almas será calculada de la siguiente manera:

(b) Para $0.815 < \lambda_v \leq 1.227$

Donde:

E: Módulo de Young. **E** : *203000.00* MPa

F_y: Límite elástico del acero. **F_y** : *350.00* MPa

K_v: Coeficiente de abolladura por cortante. **K_v** : *5.34*

λ_v : *0.917*

Siendo:

V_y: Esfuerzo cortante de fluencia de la sección transversal **V_y** : *118.44* kN

Donde:

A_w: Área de los elementos paralelos a la dirección del cortante.

A_w : *5.64* cm²

Donde:

h: Altura del tramo recto del alma. **h** : *188.00* mm

t: Espesor de los elementos paralelos a la dirección del cortante. **t** : *3.00* mm

V_{cr}: Fuerza de abolladura por cortante elástico definida en la Sección G2.3 para sólo almas planas, o determinada de acuerdo con Apéndice 2 para todas secciones transversales de elementos precalificados (Tabla B4.1-1). **V_{cr}** : *140.71* kN

Sección G2.3. Fuerza de abolladura por cortante elástico crítico del alma, V_{cr}.

La fuerza de abolladura por cortante, V_{cr}, de un alma se debe determinar de acuerdo con esta sección:

Donde:

F_{cr}: tensión a la abolladura por cortante elástico.

F_{cr} : *249.48* MPa

η: Coeficiente de Poisson. **η** : *0.3*

E: Módulo de Young. **E** : *203000.00* MPa

K_v: Coeficiente de abolladura por cortante. **K_v** : *5.34*

Resistencia a flexión alrededor del eje X combinada con torsión (H4)

No hay interacción entre torsión y flexión alrededor del eje X para ninguna combinación. Por lo tanto, la comprobación no procede.

Resistencia a flexión alrededor del eje Y combinada con torsión (H4)

No hay interacción entre torsión y flexión alrededor del eje Y para ninguna combinación. Por lo tanto, la comprobación no procede.

Resistencia a flexión alrededor del eje X combinada con corte en la dirección del eje Y (H2)

Se debe satisfacer:

η : ***0.503*** ✓

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

Donde:

(a) Para vigas sin rigidizadores transversales.

η : *0.503*

Donde:

M_{fx}: Resistencia requerida a flexión respecto al eje X para las combinaciones de carga LRFD. **M_{fx}** : *13.77* kN·m

M_{cx}: Resistencia de diseño a flexión alrededor del eje X. **M_{cx}** : *19.56* kN·m

V_{fy}: Resistencia a cortante requerida en la dirección del eje Y para las combinaciones de carga LRFD. **V_{fy}** : *8.64* kN

V_{cy}: Resistencia de diseño a cortante en la dirección del eje Y. **V_{cy}** : *99.95* kN

Resistencia a flexión alrededor del eje Y combinada con corte en la dirección del eje X (H2)

Se debe satisfacer:

η < ***0.001*** ✓

El esfuerzo solicitante de cálculo pésimo se produce en el nudo N204, para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

Donde:

(a) Para vigas sin rigidizadores transversales.

η : *0.000*

Donde:

M_{fy}: Resistencia requerida a flexión respecto al eje Y para las combinaciones de carga LRFD. **M_{fy}** : *0.01* kN·m

M_{cy}: Resistencia de diseño a flexión alrededor del eje Y. **M_{cy}** : *3.52* kN·m

V_{fx}: Resistencia a cortante requerida en la dirección del eje X para las combinaciones de carga LRFD. **V_{fx}** : *0.01* kN

V_{cx}: Resistencia de diseño a cortante en la dirección del eje X. **V_{cx}** : *28.73* kN

Resistencia a flexión combinada con tracción (H1.1)

Se debe satisfacer:

η_f : ***0.071*** ✓

η : ***0.064*** ✓

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 0.9·PP+0.9·D+W.

Donde:

η_f : *0.071*

Donde:

φ_{bx}: Factor de resistencia para flexión alrededor del eje X. **φ_{bx}** : *0.95*

M_{fx}: Resistencia requerida a flexión respecto al eje X para las combinaciones de carga LRFD. **M_{fx}** : *1.31* kN·m

M_{nxt} : *20.59* kN·m

Donde:

S_{ftx} : *58.83* cm³

Donde:

I_x: Momento de inercia respecto al eje X. **I_x** : *588.29* cm4

I_y: Momento de inercia respecto al eje Y. **I_y** : *45.90* cm4

I_{xy}: Producto de inercia. I_{xy} : 0.00 cm4

x_t: Distancia a la fibra extrema traccionada en flexión alrededor del eje X. x_t : 37.41 mm

y_t: Distancia a la fibra extrema traccionada en flexión alrededor del eje X. y_t : 100.00 mm

F_y: Límite elástico del acero. F_y : 350.00 MPa

φ_{by}: Factor de resistencia para flexión alrededor del eje Y. φ_{by} : 0.95

M_{fy}: Resistencia requerida a flexión respecto al eje Y para las combinaciones de carga LRFD. M_{fy} : 0.00 kN·m

M_{nyt} : 3.70 kN·m

Donde:

S_{fty} : 10.57 cm³

Donde:

I_x: Momento de inercia respecto al eje X. I_x : 588.29 cm4

I_y: Momento de inercia respecto al eje Y. I_y : 45.90 cm4

I_{xy}: Producto de inercia. I_{xy} : 0.00 cm4

x_t: Distancia a la fibra extrema traccionada en flexión alrededor del eje Y. x_t : 43.41 mm

y_t: Distancia a la fibra extrema traccionada en flexión alrededor del eje Y. y_t : 80.00 mm

F_y: Límite elástico del acero. F_y : 350.00 MPa

φ_t: Factor de resistencia para tracción. φ_t : 0.90

T_f: Resistencia a tracción requerida para las combinaciones de carga LRFD. T_f : 1.18 kN

T_n: Resistencia nominal a tracción, según la Sección D1. T_n : 357.10 kN

η : 0.064

Donde:

φ_{bx}: Factor de resistencia para flexión alrededor del eje X. φ_{bx} : 0.95

M_{fx}: Resistencia requerida a flexión respecto al eje X para las combinaciones de carga LRFD. M_{fx} : 1.31 kN·m

M_{nx}: Resistencia nominal a flexión alrededor del eje X según la Sección F. M_{nx} : 20.59 kN·m

φ_{by}: Factor de resistencia para flexión alrededor del eje Y. φ_{by} : 0.95

M_{fy}: Resistencia requerida a flexión respecto al eje Y para las combinaciones de carga LRFD. M_{fy} : 0.00 kN·m

M_{ny}: Resistencia nominal a flexión alrededor del eje Y según la Sección F. M_{ny} : 3.52 kN·m

φ_t: Factor de resistencia para tracción. φ_t : *0.90*

T_f: Resistencia a tracción requerida para las combinaciones de carga LRFD. T_f : *1.18* kN

T_n: Resistencia nominal a tracción, según la Sección D1. T_n : *357.10* kN

Resistencia a flexión combinada con compresión (H1.2)

(b) Se debe satisfacer el siguiente criterio si

η : ***0.779*** ✓

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

Donde:

φ_c: Factor de resistencia para compresión. φ_c : *0.85*

P_f: Resistencia a compresión requerida para las combinaciones de carga LRFD. P_f : *13.52* kN

P_n: Resistencia nominal a compresión según la Sección E1. P_n : *218.48* kN

φ_{bx}: Factor de resistencia para flexión alrededor del eje X. φ_{bx} : *0.95*

M_{fx}: Resistencia requerida a flexión respecto al eje X para las combinaciones de carga LRFD. M_{fx} : *13.77* kN·m

M_{nx}: Resistencia nominal a flexión alrededor del eje X según la Sección F. M_{nx} : *20.59* kN·m

φ_{by}: Factor de resistencia para flexión alrededor del eje Y. φ_{by} : *0.95*

M_{fy}: Resistencia requerida a flexión respecto al eje Y para las combinaciones de carga LRFD. M_{fy} : *0.01* kN·m

M_{ny}: Resistencia nominal a flexión alrededor del eje Y según la Sección F. M_{ny} : *3.70* kN·m

Flexión combinada con cortante, axil y torsión - Comprobación de Von Mises (Comprobación adicional)

Ya que la norma no proporciona una comprobación general para secciones sometidas a torsión combinada con otros esfuerzos, se considera que este elemento debe cumplir, además, el siguiente criterio de rotura de Von Mises:

η : ***0.778*** ✓

η : ***0.050*** ✓

η : ***0.607*** ✓

El esfuerzo solicitante de cálculo pésimo se produce en un punto situado a una distancia de 2.697 m del nudo N204, para la combinación de acciones 1.2·PP+1.2·D+1.6·L.

Donde:

f_a: Tensión normal debida a compresión, calculada utilizando el área de la sección bruta.

f_a : *16.94* MPa

Donde:

P_f: Resistencia a compresión requerida para las combinaciones de carga LRFD. **P_f** : *13.52* kN

A_e: Área de la sección eficaz. **A_e** : *7.98* cm²

Las tensiones utilizadas en esta comprobación se han calculado en el siguiente punto, en el cual se produce la combinación pésima de tensiones normales y tangenciales.

x: Coordenada X del punto de cálculo respecto al centro de gravedad. **x** : *-10.59* mm

y: Coordenada Y del punto de cálculo respecto al centro de gravedad. **y** : *-100.00* mm

f_{bx}: Tensión normal debida a la flexión alrededor del eje X.

f_{bx} : *234.15* MPa

Donde:

M_{fx}: Resistencia requerida a flexión respecto al eje X para las combinaciones de carga LRFD. **M_{fx}** : *13.77* kN·m

I_x: Momento de inercia respecto al eje X. **I_x** : *588.29* cm4

f_{by}: Tensión normal debida a la flexión alrededor del eje Y.

f_{by} : *0.17* MPa

Donde:

M_{fy}: Resistencia requerida a flexión respecto al eje Y para las combinaciones de carga LRFD. **M_{fy}** : *0.01* kN·m

I_y: Momento de inercia respecto al eje Y. **I_y** : *45.90* cm4

f_{Vx}: Tensión tangencial debida al esfuerzo cortante en la dirección del eje X. **f_{Vx}** : *-0.05* MPa

f_{Vy}: Tensión tangencial debida al esfuerzo cortante en la dirección del eje Y. **f_{Vy}** : *9.73* MPa

f_{Tr}: Tensión tangencial debida a la torsión. **f_{Tr}** : *0.00* MPa

F_a: Resistencia a compresión de la sección.

F_a : *232.72* MPa

Donde:

φ_c: Factor de resistencia para compresión. φ_c : *0.85*

F_n: Tensión crítica nominal de pandeo, calculada según el Capítulo E2. **F_n** : *273.79* MPa

F_{bx}, F_{by}: Resistencia de la sección a flexión alrededor de los ejes X y Y, respectivamente.

F_{bx} : *332.50* MPa

F_{by} : *332.50* MPa

Donde:

φ_b: Factor de resistencia para flexión. φ_b : *0.95*

F_y: Límite elástico del acero. **F_y** : *350.00* MPa

F_{Vx}, F_{Vy}: Resistencia de la sección a cortante en las direcciones X y Y, respectivamente.

F_{Vx} : *191.97* MPa

F_{Vy} : *191.97* MPa

Donde:

φ_v: Factor de resistencia para cortante. φ_v : *0.95*

F_y: Límite elástico del acero. **F_y** : *350.00* MPa

F_{Tr}: Resistencia a torsión de la sección.

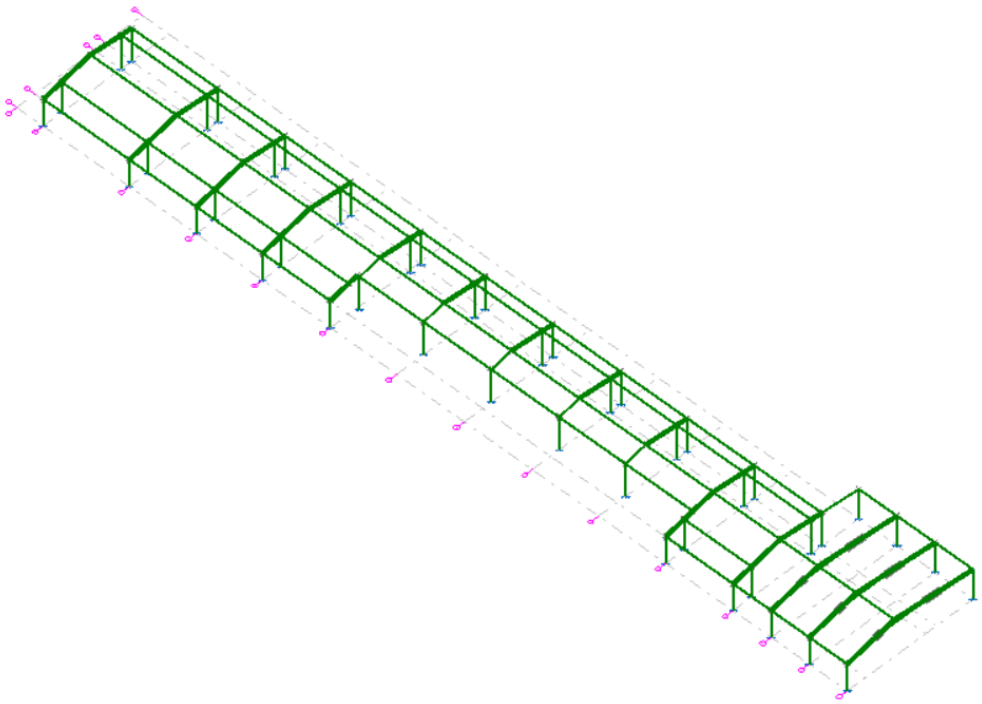
F_{Tr} : *181.87* MPa

Donde:

φ_{Tr}: Factor de resistencia para torsión. φ_{Tr} : *0.90*

F_y: Límite elástico del acero. **F_y** : *350.00* MPa

Con esta propuesta se observa que todos los perfiles están dentro de un índice de sobre esfuerzo menor de la unidad. Se puede observar que los perfiles en color verde cumplen esta condición.



Nota 1: Durante la inspección en obra se evidenció que las columnas ubicadas en los ejes extremos (ejes 1 y 4, conforme a la figura anexa) no se prolongan hasta el nivel inferior de la losa, sino que se encuentran apoyadas sobre una viga estructural existente. La transferencia de cargas se realiza mediante una platina de base con dimensiones de 250 × 200 × 12.7 mm, la cual actúa como elemento de conexión y distribución de esfuerzos entre la columna metálica y el elemento de apoyo.

A partir de la revisión del modelo estructural y del análisis de las condiciones de carga, se verificó que estas columnas corresponden a elementos secundarios dentro del sistema de reforzamiento, presentando una participación menor en la resistencia global del sistema en comparación con las columnas centrales, las cuales constituyen los principales elementos resistentes y de transferencia de cargas verticales y laterales. En consecuencia, las solicitaciones transmitidas a través de las platinas de apoyo de las columnas extremas se encuentran dentro de la capacidad resistente de los elementos existentes, por lo que no se requiere el encamisado ni el reforzamiento estructural de las platinas de base desde el punto de vista de capacidad estructural.

No obstante, durante la inspección visual se identificaron indicios de corrosión superficial en algunas de las platinas y elementos metálicos de apoyo. Si bien esta condición no compromete actualmente la capacidad estructural del sistema, se recomienda realizar un tratamiento de protección anticorrosiva, el cual deberá incluir, como mínimo, la limpieza mecánica de las superficies afectadas para la remoción de óxido suelto, seguida de la aplicación de un recubrimiento anticorrosivo (primer inhibidor de corrosión) y un sistema de

pintura de protección adecuado, con el fin de detener el avance de la patología y garantizar la durabilidad del elemento en el tiempo.

En conclusión, desde el punto de vista estructural, las platinas de apoyo existentes cumplen con los requerimientos de resistencia y no requieren medidas de reforzamiento; sin embargo, se recomienda la implementación de medidas de mantenimiento preventivo consistentes en la protección anticorrosiva de los elementos que presenten signos de oxidación.

Nota 2: En los casos donde la placa base de las columnas metálicas no apoya completamente sobre el elemento estructural existente, debido a que el ancho de la viga de soporte es inferior a las dimensiones de la placa, se recomienda la construcción de un pedestal en concreto reforzado con una resistencia mínima a la compresión de f'c = 21 MPa, el cual deberá garantizar el área completa de apoyo de la placa base y permitir una adecuada transferencia de las cargas por compresión.

Previamente a la construcción del pedestal, la superficie del concreto existente deberá prepararse mediante picado mecánico hasta exponer agregado sano, eliminando lechada superficial, partículas sueltas, polvo, grasa o cualquier material que afecte la adherencia. Posteriormente, se deberá aplicar un puente de adherencia epóxico estructural, tal como Sikadur®-32 Gel o equivalente técnico, el cual garantiza la adherencia monolítica entre el concreto existente y el concreto nuevo, permitiendo la adecuada transferencia de esfuerzos en la interfaz.

El adhesivo epóxico deberá aplicarse conforme a las recomendaciones del fabricante, sobre la superficie limpia y seca, asegurando una cobertura uniforme. El vaciado del concreto del pedestal deberá realizarse dentro del tiempo abierto del producto, de modo que se garantice la adherencia química y mecánica entre ambos materiales.

Es importante precisar que el pedestal tendrá como función principal proporcionar área de apoyo adecuada para la placa base, por lo que los pernos de anclaje deberán permanecer anclados al elemento estructural existente, el cual constituye el elemento resistente principal. El pedestal no deberá considerarse como elemento primario de anclaje, sino como elemento de apoyo y transferencia de compresión.

Finalmente, se recomienda la colocación de un mortero de nivelación sin contracción (grout estructural), como SikaGrout®-212 o equivalente, entre la placa base y el pedestal, con el fin de garantizar el contacto uniforme en toda el área de apoyo y asegurar una adecuada transmisión de cargas.

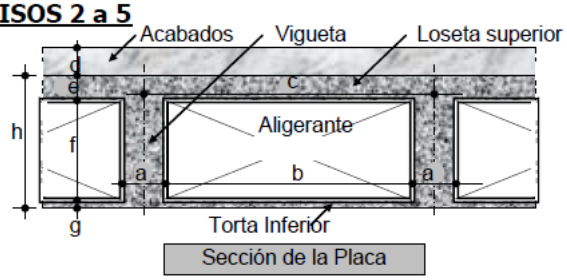
7.2.2. DEFINICIÓN DEL ALTURA DEL MORTERO EN EL PISO 13

Para la evaluación estructural de la placa correspondiente al piso 13, se adoptaron las cargas muertas indicadas en la figura anexa, dentro de las cuales se consideró una capa de mortero (torta de nivelación y acabados) con un espesor de 7 cm. En consecuencia, y con el fin de garantizar la coherencia entre las condiciones reales de servicio y las hipótesis empleadas en el modelo estructural, se establece que la altura máxima del mortero no deberá exceder los 7 cm.

Esta limitación se fundamenta en que el espesor mencionado forma parte de la carga muerta considerada en el análisis estructural, equivalente a los valores incorporados en el modelo numérico y en la verificación de la capacidad resistente de los elementos estructurales. Cualquier incremento en el espesor del mortero generaría un aumento en la carga muerta actuante, lo cual modificaría las solicitaciones originalmente evaluadas y podría afectar las condiciones de seguridad estructural previstas en el diseño.

Por lo tanto, desde el punto de vista estructural, el espesor de la capa de mortero deberá limitarse a un valor máximo de 7 cm, conforme a las cargas adoptadas en la evaluación, garantizando así la validez de los resultados obtenidos y el adecuado desempeño de la estructura bajo las condiciones de carga consideradas.

PISOS 2 a 5



Sección de la Placa

a =	0.12 m	e =	0.05 m
b =	1.00 m	f =	0.40 m
c =	1.12 m	g =	0.00 m
d =	0.07 m	h =	0.45 m

Consumo = 0.093 m³/m²
t= 0.03 m Espesor Alig Reticular Celulado

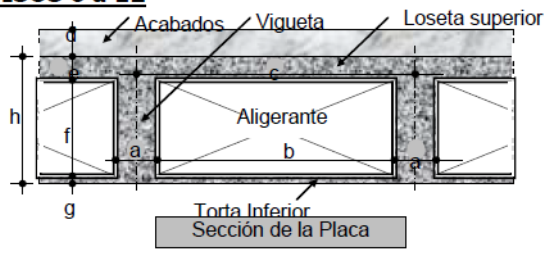
Sentidos de armado de viguetas:	
	1 dirección

Carga muerta	
Peso propio	222.9 kg{f}/m²
Acabados piso	154.0 kg{f}/m²
Aligerante	157.9 kg{f}/m²
Mampostería	400.0 kg{f}/m²
Cielo Raso	15.0 kg{f}/m²
Instalaciones y Otros	50.2 kg{f}/m²
	1,000.0 kg{f}/m²

Carga viva	
Cuartos	**200.0 kg{f}/m²**
Salas de Operaciones	**400.0 kg{f}/m²**
Escaleras	**400.0 kg{f}/m²**

Datos para el archivo de ETABS					
Peso del material :	2,400 kg{f}/m³	Espesor 1 del Floor :	0.093 m	Carga Muerta :	777.1 kg{f}/m²
Masa equivalente del materi	1,098 kg{m}/m³	Espesor 2 del Floor :	0.000 m	Carga Viva :	200.0 kg{f}/m²

PISOS 6 a 12



a =	0.10 m	e =	0.05 m
b1 =	0.50 m	f =	0.30 m
c1 =	0.60 m	g =	0.00 m
b2=	0.50 m	h =	0.35 m
c2=	0.60 m	Consumo =	0.142 m³/m²
d =	0.07 m		
t=	0.03 m	Espesor Alig Reticular Celulado	

Sentidos de armado de viguetas: **2 direcciones**

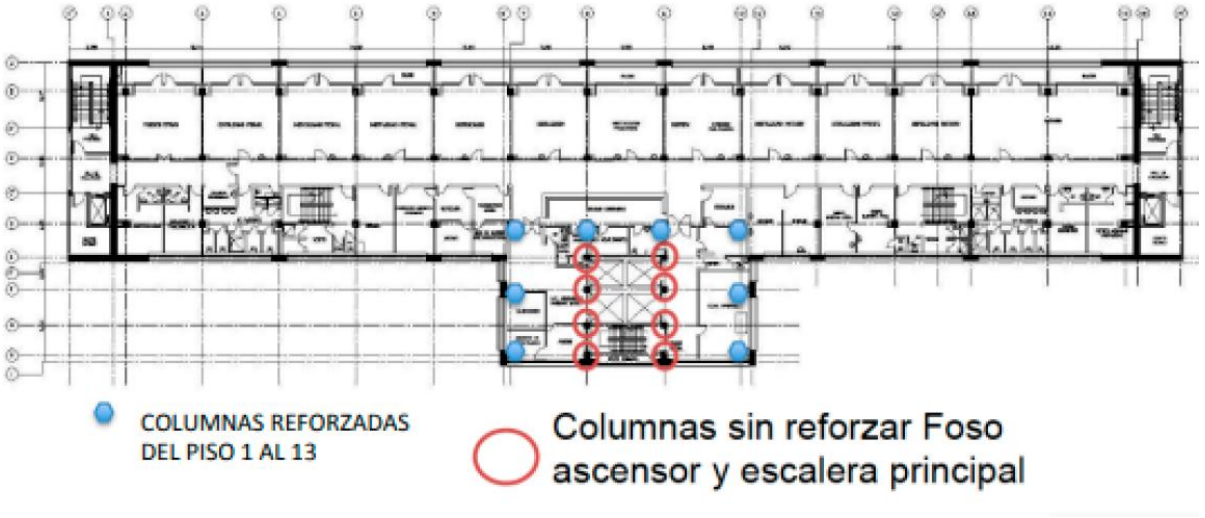
Carga muerta	
Peso propio	340.0 kg{f}/m²
Acabados piso	154.0 kg{f}/m²
Aligerante	179.7 kg{f}/m²
Mampostería	400.0 kg{f}/m²
Cielo Raso	15.0 kg{f}/m²
Instalaciones y Otros	16.3 kg{f}/m²
	1,105.0 kg{f}/m²

Carga viva	
Cuartos	**200.0 kg{f}/m²**
Salas de Operaciones	**400.0 kg{f}/m²**
Escaleras	**400.0 kg{f}/m²**

Datos para el archivo de ETABS

Peso del material :	2,400 kg{f}/m³	Espesor 1 del Floor :	0.142 m	Carga Muerta :	765.0 kg{f}/m²
Masa equivalente del materi	795 kg{m}/m³	Espesor 2 del Floor :	0.000 m	Carga Viva :	200.0 kg{f}/m²

7.3. COLUMNAS NO REFORZADAS



Durante la inspección visual y la medición de los elementos estructurales en campo, se evidenció que no todas las columnas contempladas dentro del alcance del proyecto de reforzamiento estructural fueron intervenidas conforme a lo establecido en el Contrato No. 341, cuyo objeto corresponde a la “Elaboración de los Estudios de Vulnerabilidad Sísmica Estructural y rediseño del refuerzo del edificio en el cual funciona la Empresa Social del Estado Hospital Universitario de Santander”.

De acuerdo con la revisión de la información disponible, incluyendo los planos estructurales, memorias de cálculo y el informe final emitido por la empresa OTECO, así como la verificación directa en sitio, se identificó que un total de ocho (8) columnas no fueron reforzadas, pese a estar contempladas dentro del alcance del proyecto de reforzamiento estructural. Las imágenes anexas

permiten identificar y localizar dichas columnas, diferenciándolas de aquellas que sí fueron intervenidas.

Considerando que el diseño de reforzamiento estructural fue desarrollado con el fin de mejorar el desempeño sísmico global de la edificación y reducir su vulnerabilidad estructural, se recomienda ejecutar el reforzamiento de las columnas que no fueron intervenidas, conforme a las especificaciones técnicas, detalles constructivos, planos estructurales y memorias de cálculo correspondientes al Contrato No. 341. Lo anterior con el propósito de garantizar la continuidad del sistema resistente, el cumplimiento de los criterios de diseño establecidos y el adecuado comportamiento estructural de la edificación ante solicitaciones gravitacionales y sísmicas.

La ejecución del reforzamiento pendiente deberá realizarse siguiendo estrictamente las disposiciones del diseño estructural existente, los procedimientos constructivos aplicables y las recomendaciones técnicas correspondientes, asegurando la correcta integración de los elementos reforzados con el sistema estructural actual.

8. ANEXO 1