

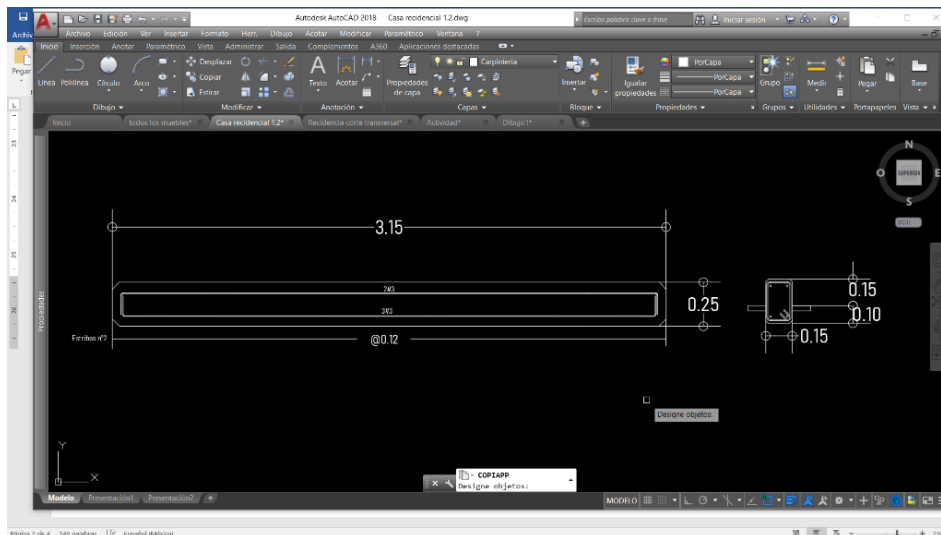
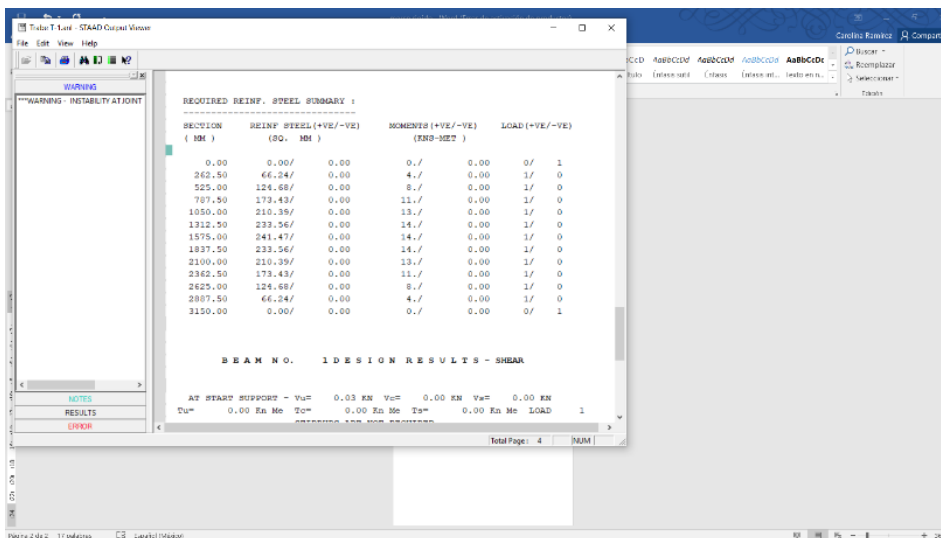
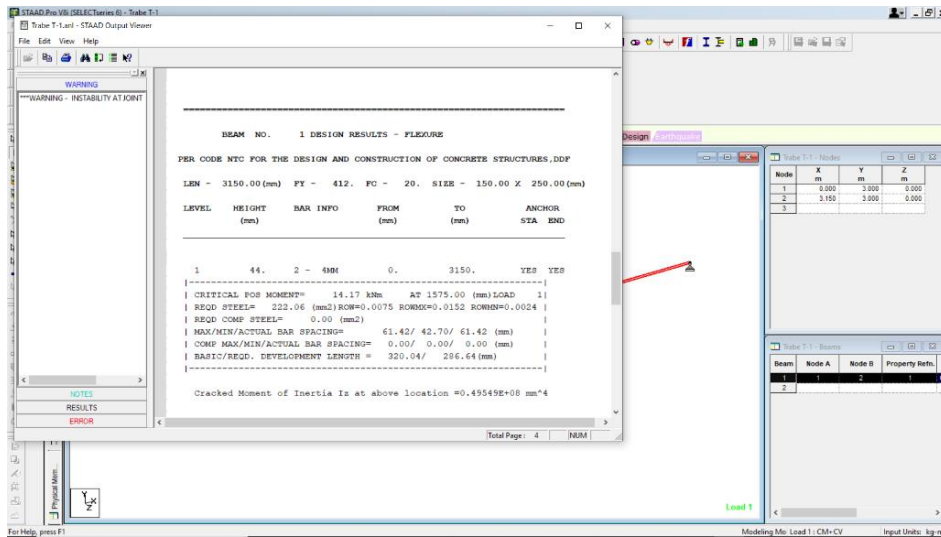
AREA DE ACERO

Análisis de estructuras

Carolina Del Rocío Ramírez Hernández

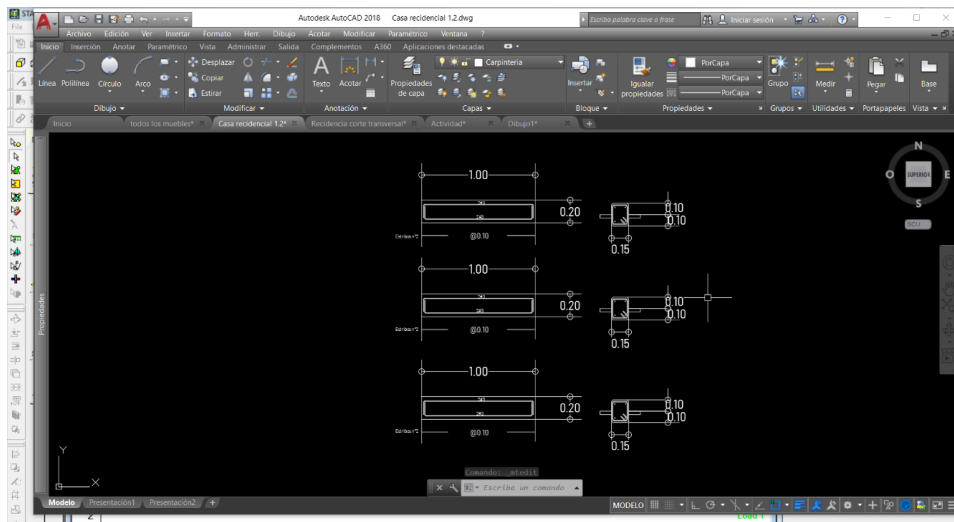
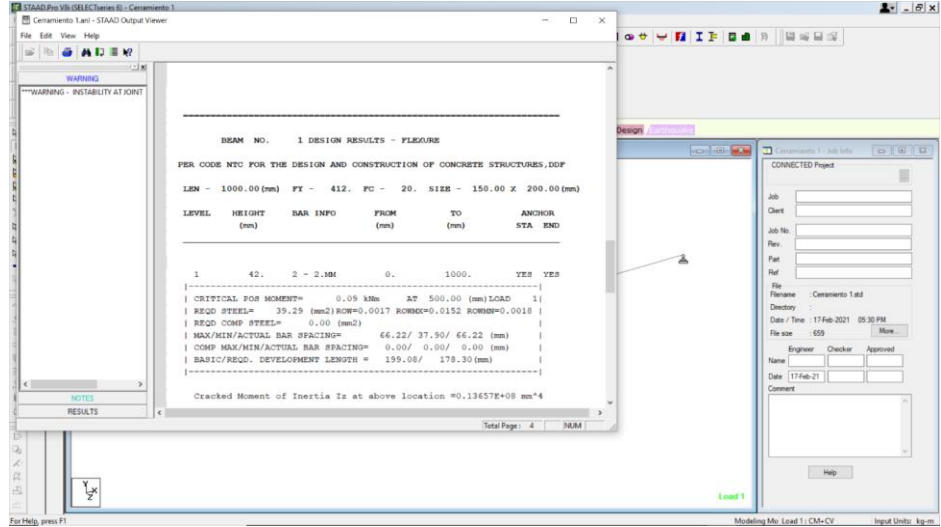
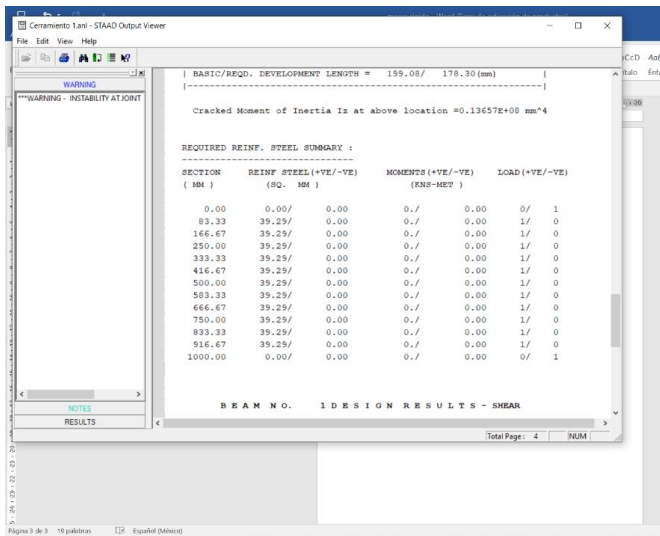
ARQ. PEDRO ALBERTO GARCÍA LÓPEZ

Trabe T-1



- Trabe T-1 uso de varillas: 3#3 en lecho inferior y 2#3 en lecho superior con estribos n°2 @0.12

Cerramiento C-1, C-3 Y C-4



Cerramiento 1,3 y 4 mismo análisis ya que contienen la misma base, peralte y distancia. (4#3, 2 en cada lecho y estribos n°2 @0.10m)

- Nota: su acero máximo consta de: 2.7432, pero la cantidad mínima de varillas a usar son 4 debido a la longitud de base, por lo que se usó 4#3 debido a que la varilla n°2 solo es usada en estribos, con esto se rebasa el acero máximo con una diferencia de 0.10

Cerramiento C-2

STAAD.Pro V8i (SELECTseries) - Cerramiento 2

WARNING - INSTABILITY AT JOINT

DESIGN RESULTS - FLEXURE

PER CODE NTC FOR THE DESIGN AND CONSTRUCTION OF CONCRETE STRUCTURES, DDF

LEN - 1075.00 (mm) FY - 412. FC - 20. SIZE - 150.00 X 200.00 (mm)

LEVEL	HEIGHT (mm)	BAR INFO	FROM (mm)	TO (mm)	ANCHOR STA	END
1	42.	2 - 2.0M	0.	1075.	YES	YES

CRITICAL POS MOMENT= 1.64 kNm AT 537.50 (mm) LOAD 1 |

REQD STEEL= 39.29 (mm²) ROW=0.0017 ROWM=0.0152 ROWN=0.0018 |

REQD COMP STEEL= 0.00 (mm²) |

MAX/MIN/ACTUAL BAR SPACING= 66.22/ 37.50/ 66.22 (mm) |

COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |

BASIC/REQD. DEVELOPMENT LENGTH = 159.08/ 178.30 (mm) |

Cracked Moment of Inertia Is at above location = 0.13657E+08 mm⁴

WARNING - INSTABILITY AT JOINT

COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |

BASIC/REQD. DEVELOPMENT LENGTH = 159.08/ 178.30 (mm) |

Cracked Moment of Inertia Is at above location = 0.13657E+08 mm⁴

REQUIRED REINF. STEEL SUMMARY :

SECTION (MM)	REINF STEEL (+VE/-VE) (SQ. MM)	MOMENTS (+VE/-VE) (KN-MET)	LOAD (+VE/-VE)
0.00	0.00/ 0.00	0./ 0.00	0/ 1
89.58	39.29/ 0.00	1./ 0.00	1/ 0
179.17	39.29/ 0.00	1./ 0.00	1/ 0
268.75	39.29/ 0.00	1./ 0.00	1/ 0
358.33	39.29/ 0.00	1./ 0.00	1/ 0
447.92	40.97/ 0.00	2./ 0.00	1/ 0
537.50	42.17/ 0.00	2./ 0.00	1/ 0
627.08	42.17/ 0.00	2./ 0.00	1/ 0
716.67	42.17/ 0.00	1./ 0.00	1/ 0
806.25	42.17/ 0.00	1./ 0.00	1/ 0
895.83	42.17/ 0.00	1./ 0.00	1/ 0
985.42	42.17/ 0.00	1./ 0.00	1/ 0
1075.00	0.00/ 0.00	0./ 0.00	1/ 0

Autodesk AutoCAD 2018 Casa residencial 1.2.dwg

1.07

2#3

2#3

Estribos n°2

@0.10

0.20

0.15

0.10

0.10

Uso de varilla n°3: 4#3(2 piezas en cada lecho) y estribos n°2 @0.10m.

- Nota. Mismo caso que cerramiento 1,3 y 4 donde se rebasa el acero máximo por 0.10.