SANDRA GUADALUPE RUIZ MORALES

ANALISIS DE ESTRUCTURAS

AREAS DE ACERO

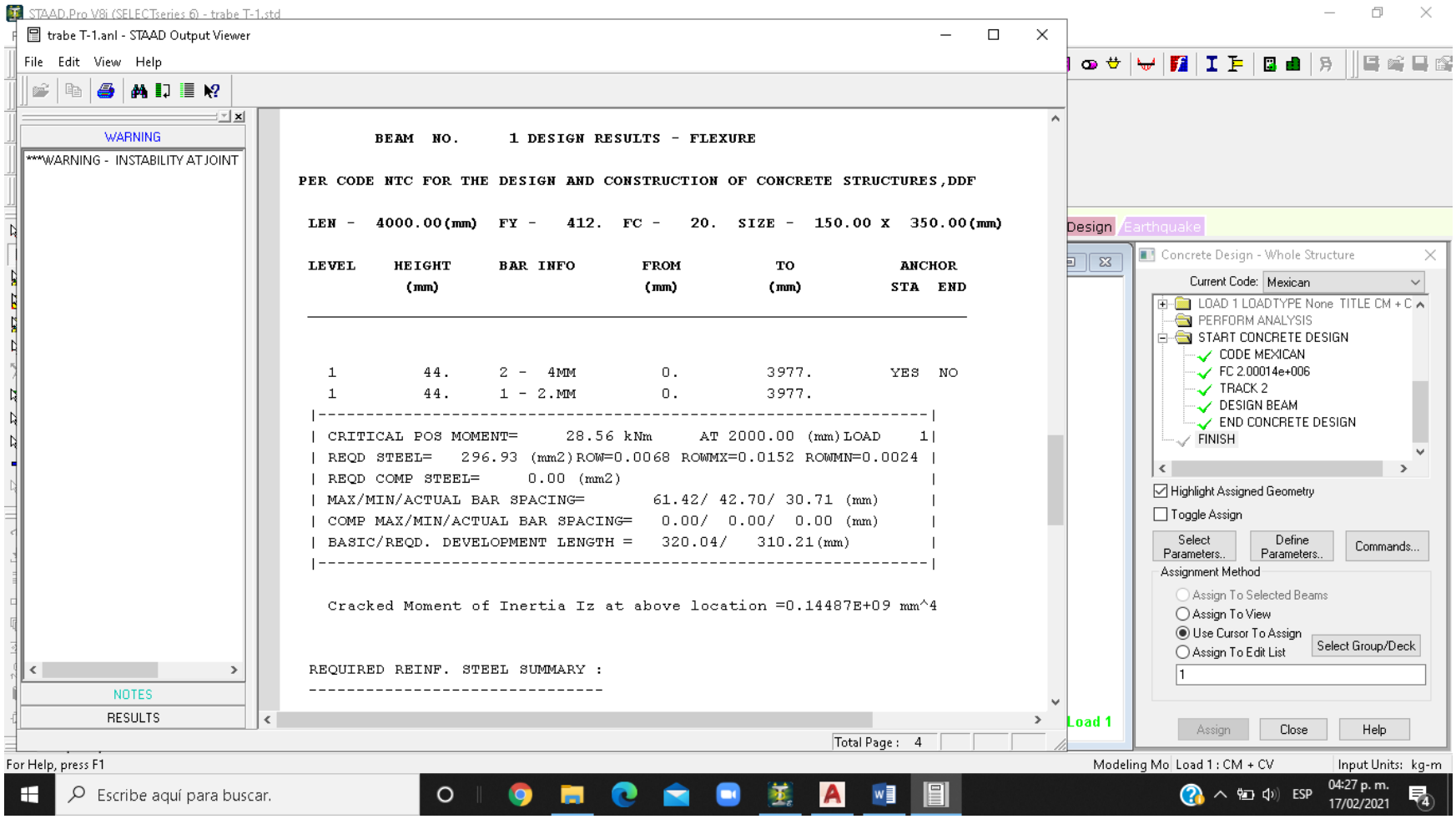
GARCÍA LÓPEZ PEDRO ALBERTO

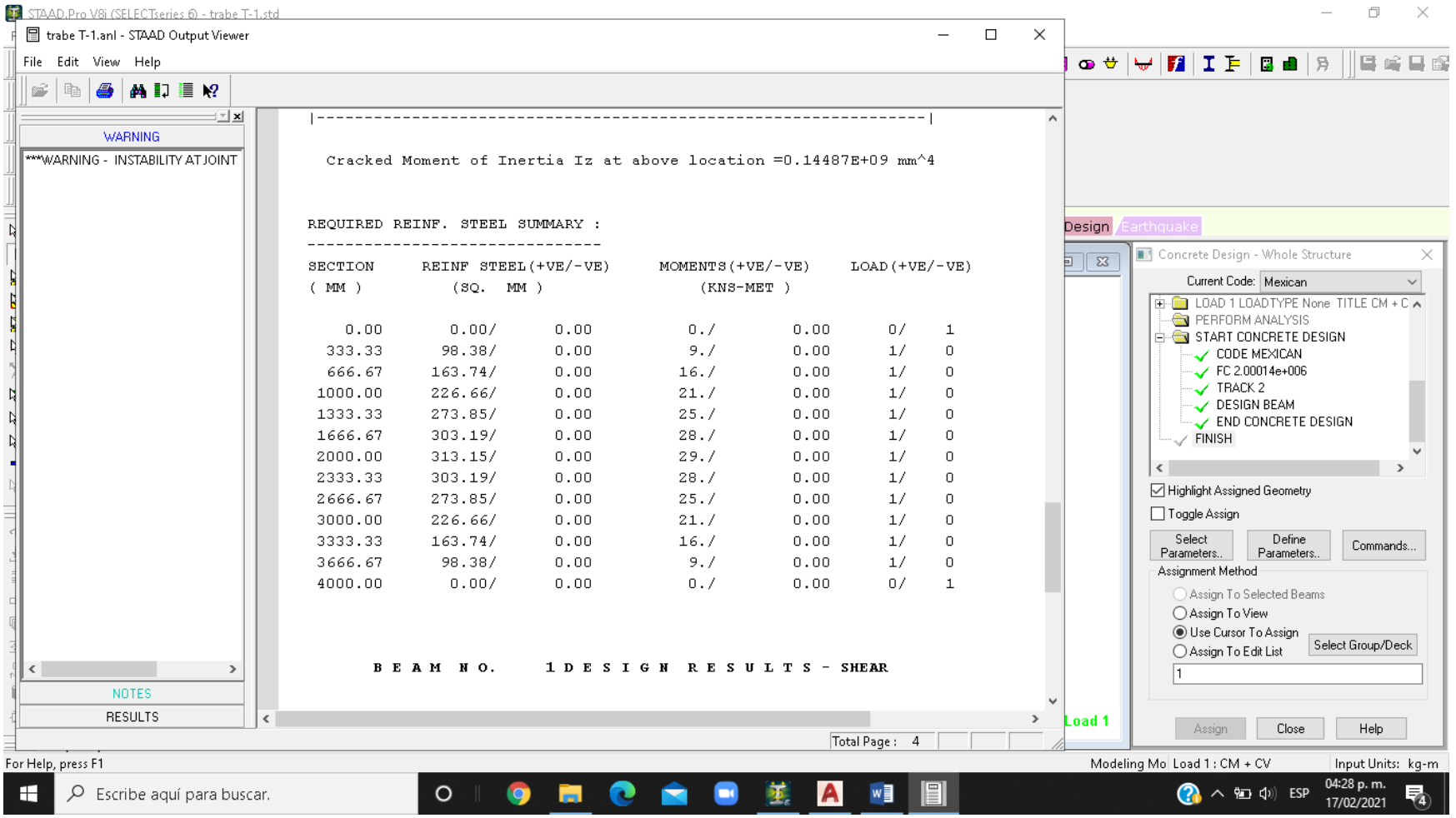
12 DE MARZO DEL 2021

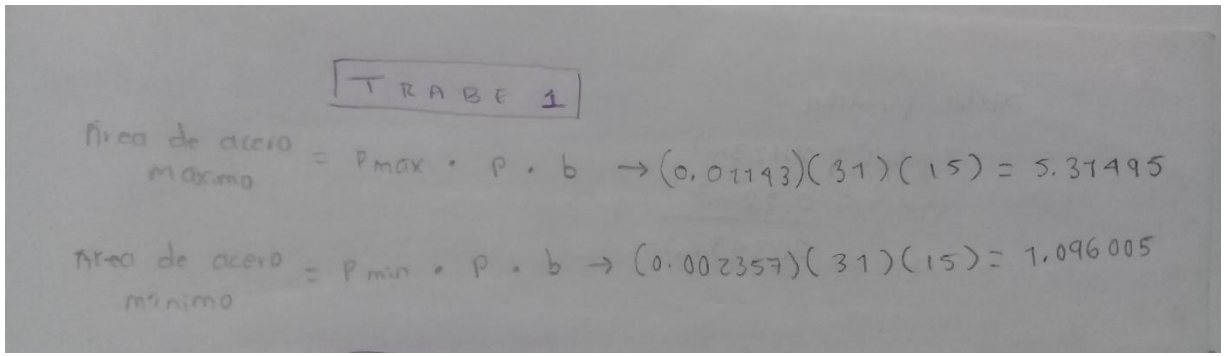
UDS

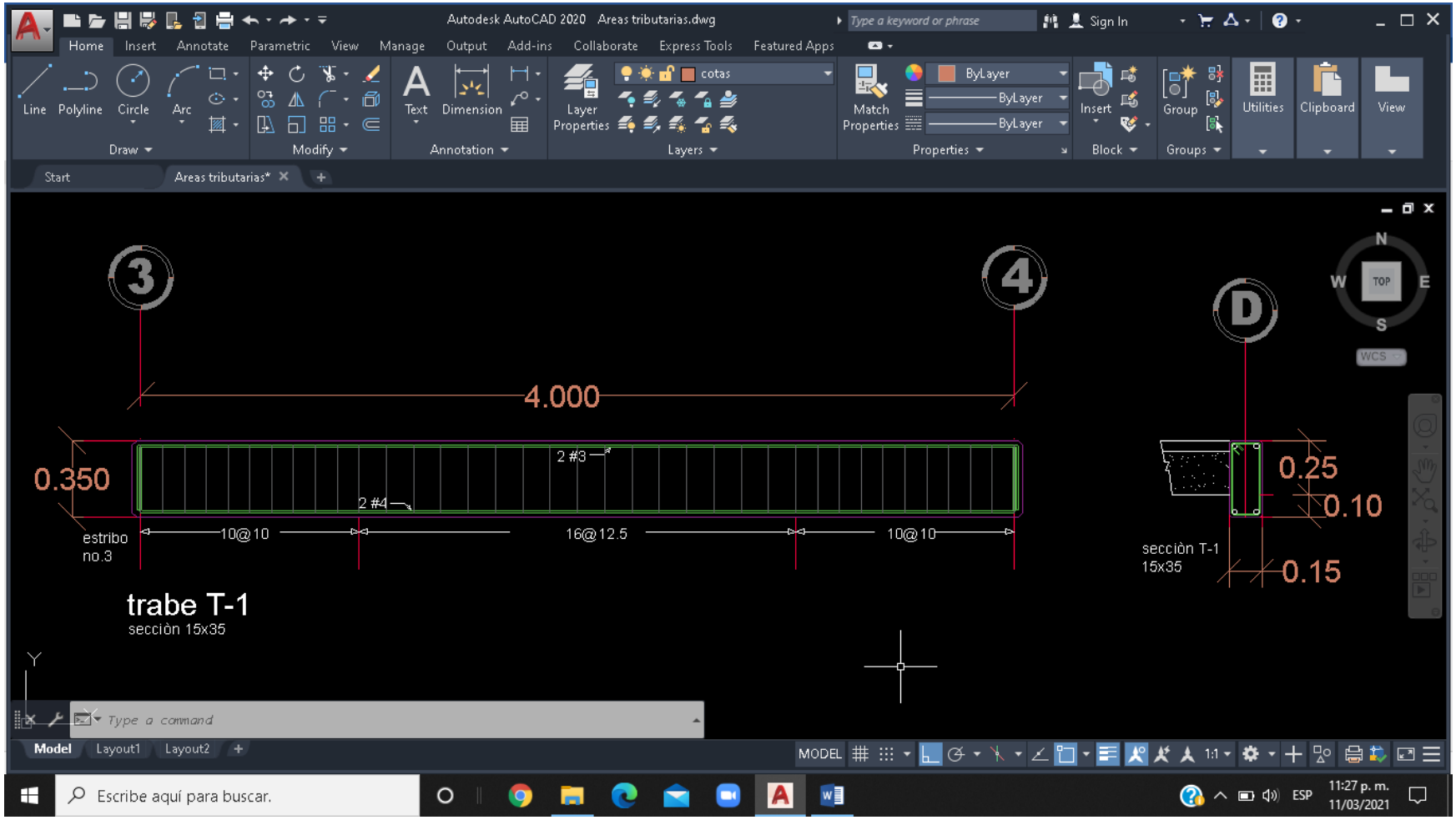
PASIÓN POR EDUCAR

Trabe 1

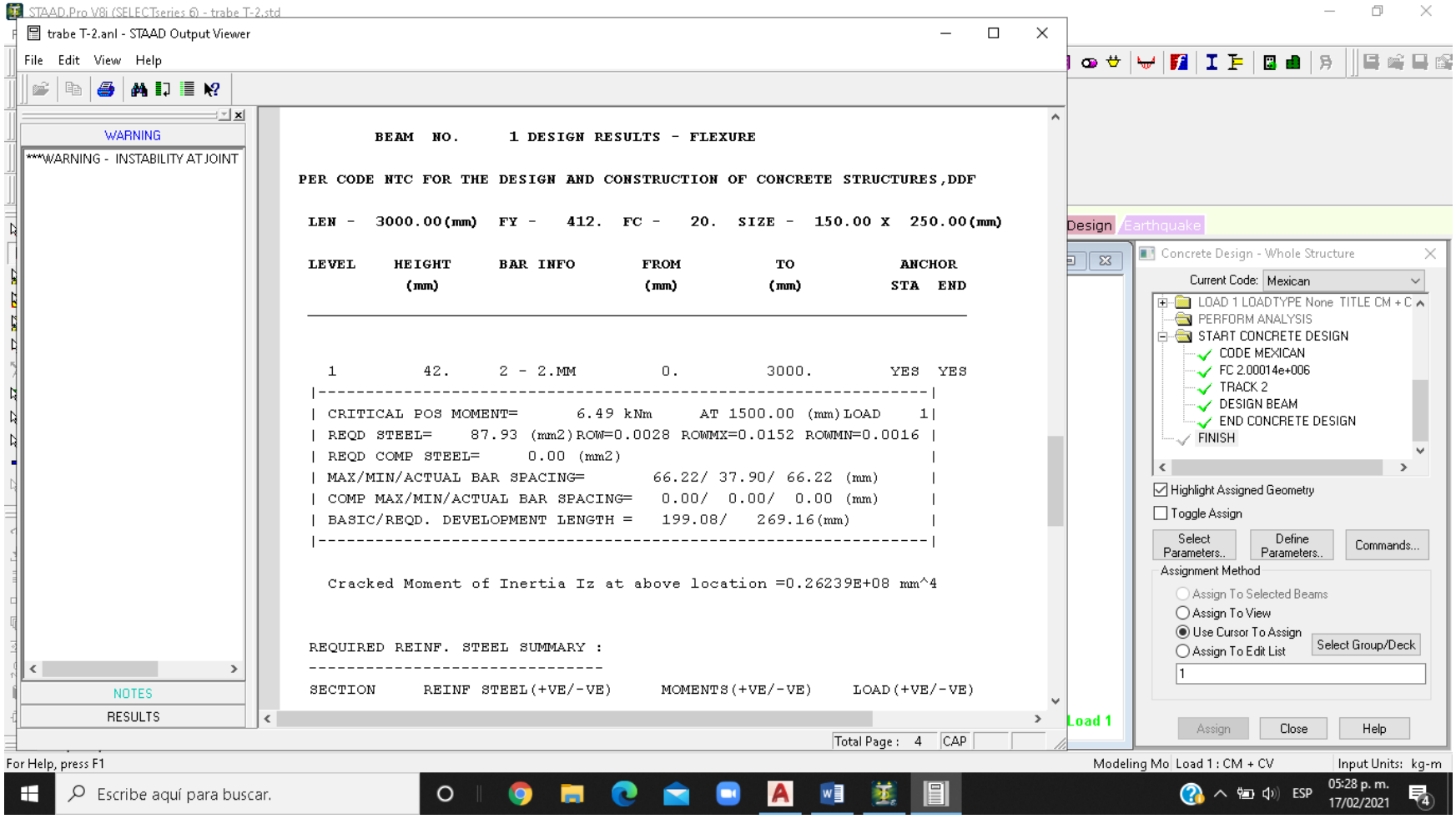

STAAD.Pro V8i (SELECTseries 6) - trabe T-1.std
trabe T-1.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
BEAM NO. 1 DESIGN RESULTS - FLEXURE
PER CODE NTC FOR THE DESIGN AND CONSTRUCTION OF CONCRETE STRUCTURES,DDF
LEN - 4000.00(mm) FY - 412. FC - 20. SIZE - 150.00 X 350.00(mm)
LEVEL HEIGHT (mm) BAR INFO FROM (mm) TO (mm) ANCHOR STA END
1 44. 2 - 4MM 0. 3977. YES NO
1 44. 1 - 2.MM 0. 3977.
| CRITICAL POS MOMENT= 28.56 kNm AT 2000.00 (mm)LOAD 1|
| REQD STEEL= 296.93 (mm2)ROW=0.0068 ROWMX=0.0152 ROWMN=0.0024 |
| REQD COMP STEEL= 0.00 (mm2) |
| MAX/MIN/ACTUAL BAR SPACING= 61.42/ 42.70/ 30.71 (mm) |
| COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |
| BASIC/REQD. DEVELOPMENT LENGTH = 320.04/ 310.21(mm) |
Cracked Moment of Inertia Iz at above location =0.14487E+09 mm^4
REQUIRED REINF. STEEL SUMMARY :
Total Page : 4
Concrete Design - Whole Structure
Current Code: Mexican
LOAD 1 LOADTYPE None TITLE CM + C
PERFORM ANALYSIS
START CONCRETE DESIGN
CODE MEXICAN
FC 2.00014e+006
TRACK 2
DESIGN BEAM
END CONCRETE DESIGN
FINISH
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo
Load 1 : CM + CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
04:27 p. m.
17/02/2021

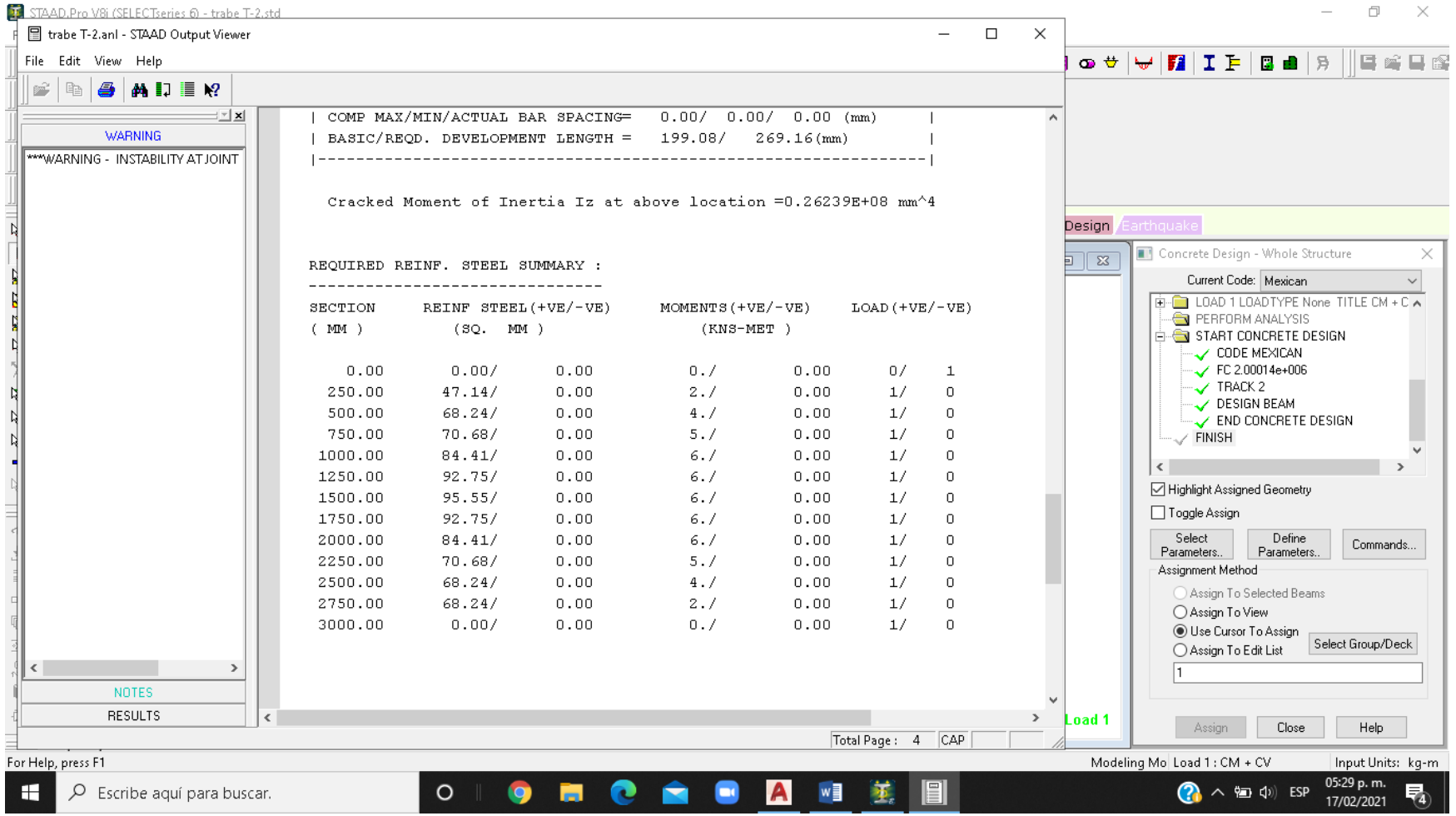

STAAD.Pro V8i (SELECTseries 6) - trabe T-1.std
trabe T-1.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
Cracked Moment of Inertia Iz at above location =0.14487E+09 mm^4
REQUIRED REINF. STEEL SUMMARY :
SECTION (MM) REINF STEEL(+VE/-VE) (SQ. MM) MOMENTS(+VE/-VE) (KNS-MET) LOAD(+VE/-VE)
0.00 0.00/ 0.00 0./ 0.00 0/ 1
333.33 98.38/ 0.00 9./ 0.00 1/ 0
666.67 163.74/ 0.00 16./ 0.00 1/ 0
1000.00 226.66/ 0.00 21./ 0.00 1/ 0
1333.33 273.85/ 0.00 25./ 0.00 1/ 0
1666.67 303.19/ 0.00 28./ 0.00 1/ 0
2000.00 313.15/ 0.00 29./ 0.00 1/ 0
2333.33 303.19/ 0.00 28./ 0.00 1/ 0
2666.67 273.85/ 0.00 25./ 0.00 1/ 0
3000.00 226.66/ 0.00 21./ 0.00 1/ 0
3333.33 163.74/ 0.00 16./ 0.00 1/ 0
3666.67 98.38/ 0.00 9./ 0.00 1/ 0
4000.00 0.00/ 0.00 0./ 0.00 0/ 1
B E A M N O. 1 D E S I G N R E S U L T S - SHEAR
Total Page : 4
Concrete Design - Whole Structure
Current Code: Mexican
LOAD 1 LOADTYPE None TITLE CM + C
PERFORM ANALYSIS
START CONCRETE DESIGN
CODE MEXICAN
FC 2.00014e+006
TRACK 2
DESIGN BEAM
END CONCRETE DESIGN
FINISH
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo
Load 1 : CM + CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
04:28 p. m.
17/02/2021

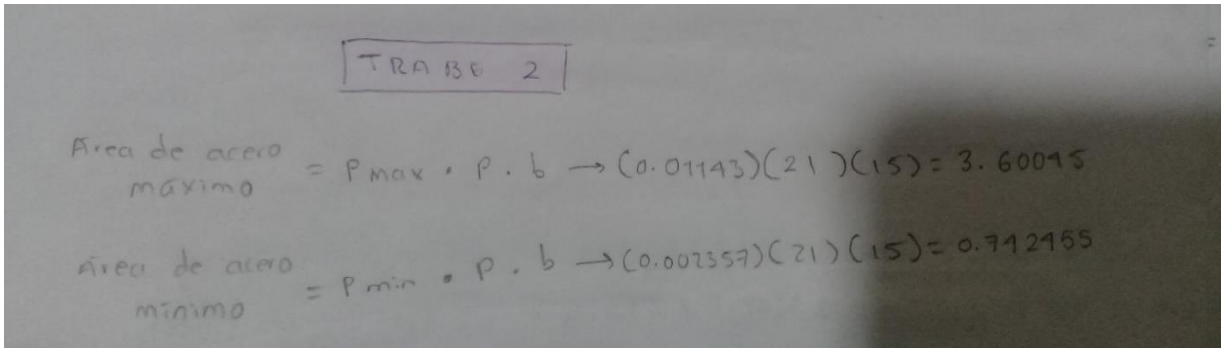

TRABE 1
Área de acero máximo = Pmax · P · b → (0,01143)(31)(15) = 5,31495
Área de acero mínimo = Pmin · P · b → (0,002357)(31)(15) = 1,096005

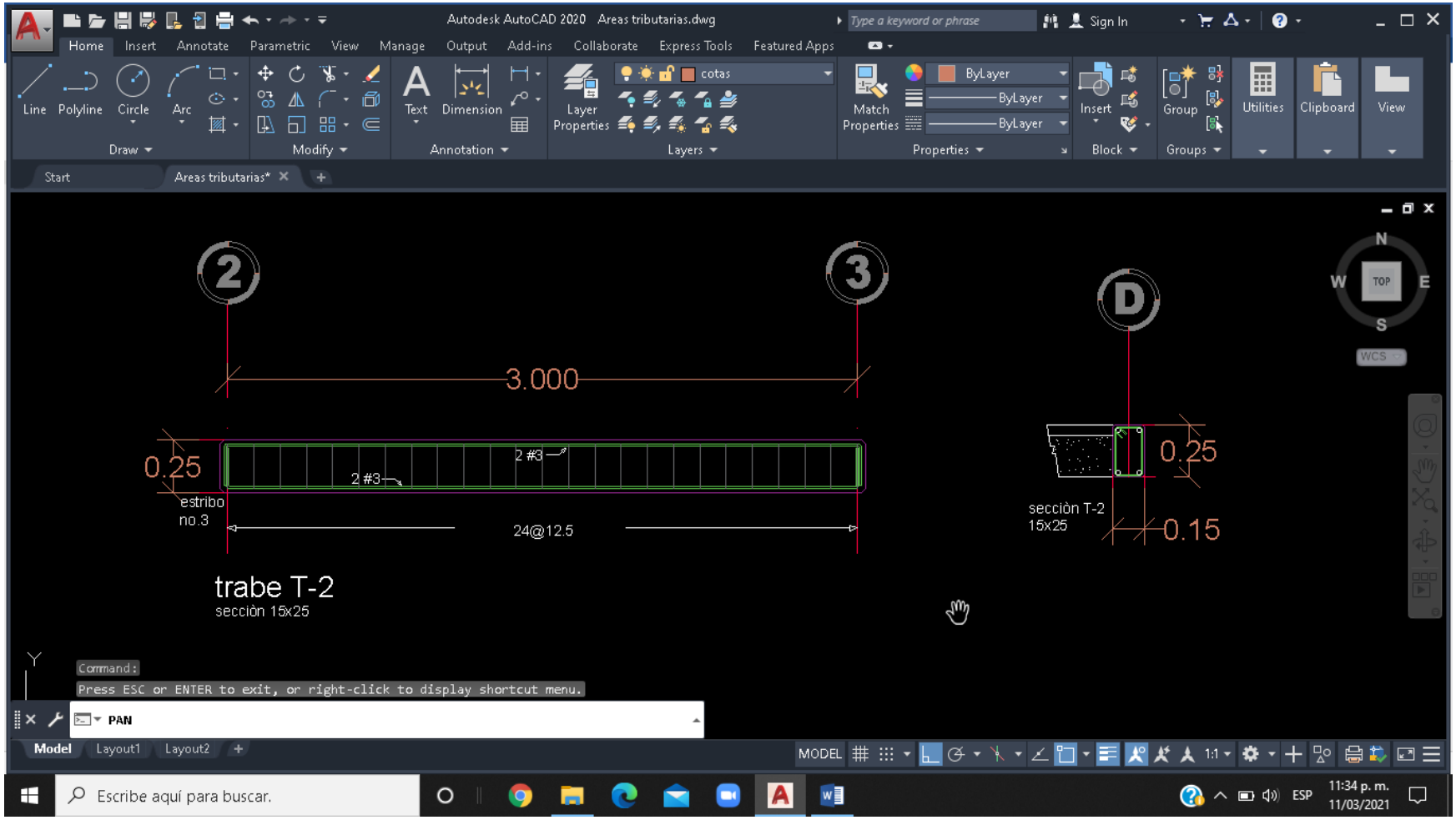

Autodesk AutoCAD 2020 Areas tributarias.dwg
Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps
Line Polyline Circle Arc
Draw
Modify
Text Dimension
Annotation
Layer Properties
cotas
Layers
Match Properties
ByLayer
Properties
Insert
Block
Group
Groups
Utilities
Clipboard
View
Start
Areas tributarias*
3
4
D
4.000
0.350
2 #3
2 #4
10@10
16@12.5
10@10
estribo no.3
trabe T-1
sección 15x35
0.25
0.10
0.15
sección T-1
15x35
N
W
TOP
E
S
WCS
Type a command
Model
Layout1
Layout2
MODEL
Escribe aquí para buscar.
ESP
11:27 p. m.
11/03/2021

Trabe 2

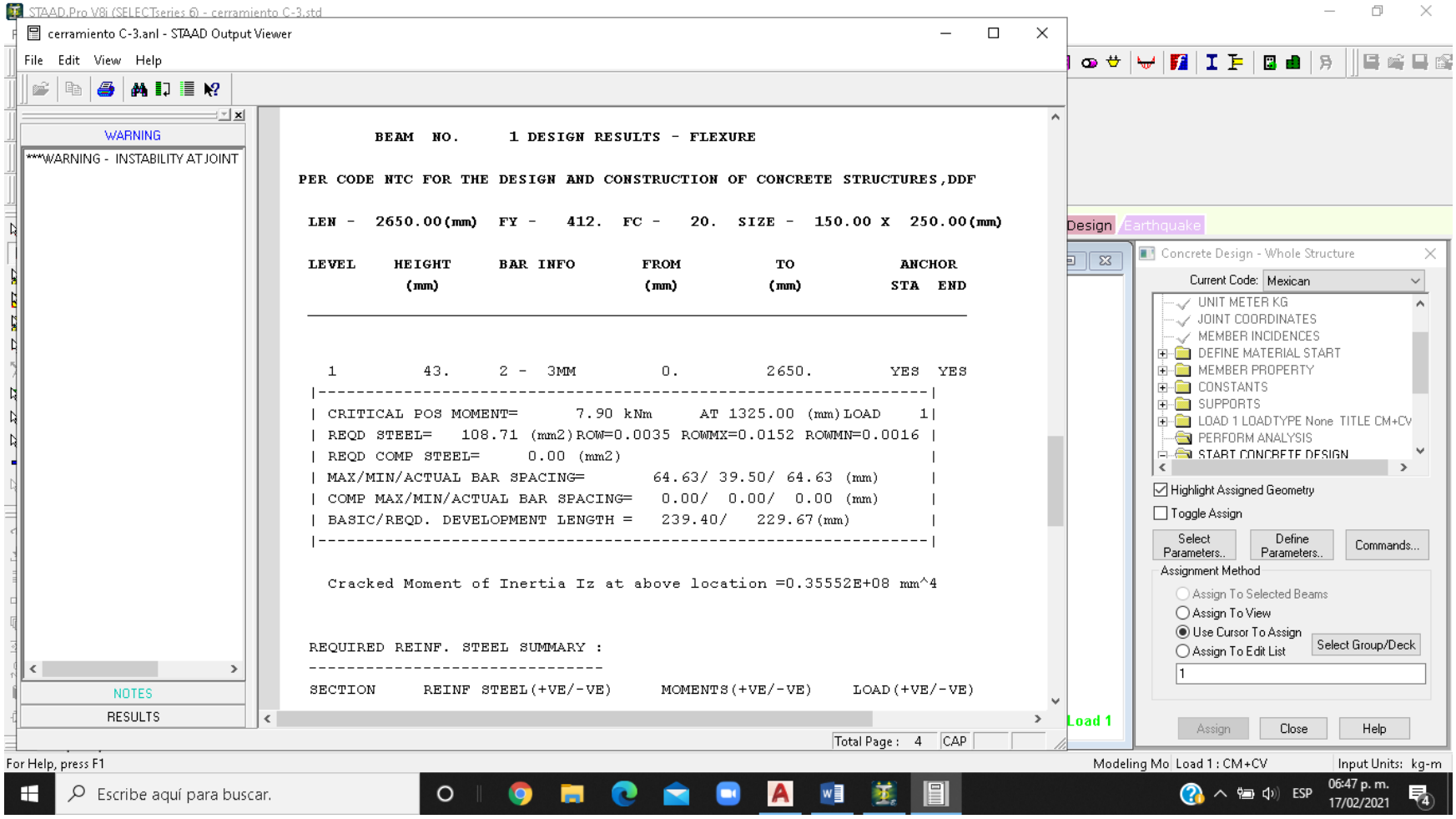

STAAD.Pro V8i (SELECTseries 6) - trabe T-2.std
trabe T-2.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
BEAM NO. 1 DESIGN RESULTS - FLEXURE
PER CODE NTC FOR THE DESIGN AND CONSTRUCTION OF CONCRETE STRUCTURES,DDF
LEN - 3000.00(mm) FY - 412. FC - 20. SIZE - 150.00 X 250.00(mm)
LEVEL HEIGHT BAR INFO FROM TO ANCHOR
(mm) (mm) (mm) STA END
1 42. 2 - 2.MM 0. 3000. YES YES
| CRITICAL POS MOMENT= 6.49 kNm AT 1500.00 (mm) LOAD 1|
| REQD STEEL= 87.93 (mm2) ROW=0.0028 ROWMX=0.0152 ROWMN=0.0016 |
| REQD COMP STEEL= 0.00 (mm2) |
| MAX/MIN/ACTUAL BAR SPACING= 66.22/ 37.90/ 66.22 (mm) |
| COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |
| BASIC/REQD. DEVELOPMENT LENGTH = 199.08/ 269.16(mm) |
Cracked Moment of Inertia Iz at above location =0.26239E+08 mm^4
REQUIRED REINF. STEEL SUMMARY :
SECTION REINF STEEL(+VE/-VE) MOMENTS(+VE/-VE) LOAD(+VE/-VE)
Total Page : 4 CAP
Design Earthquake
Concrete Design - Whole Structure
Current Code: Mexican
LOAD 1 LOADTYPE None TITLE CM + C
PERFORM ANALYSIS
START CONCRETE DESIGN
CODE MEXICAN
FC 2.00014e+006
TRACK 2
DESIGN BEAM
END CONCRETE DESIGN
FINISH
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
1
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo Load 1 : CM + CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
05:28 p. m.
17/02/2021

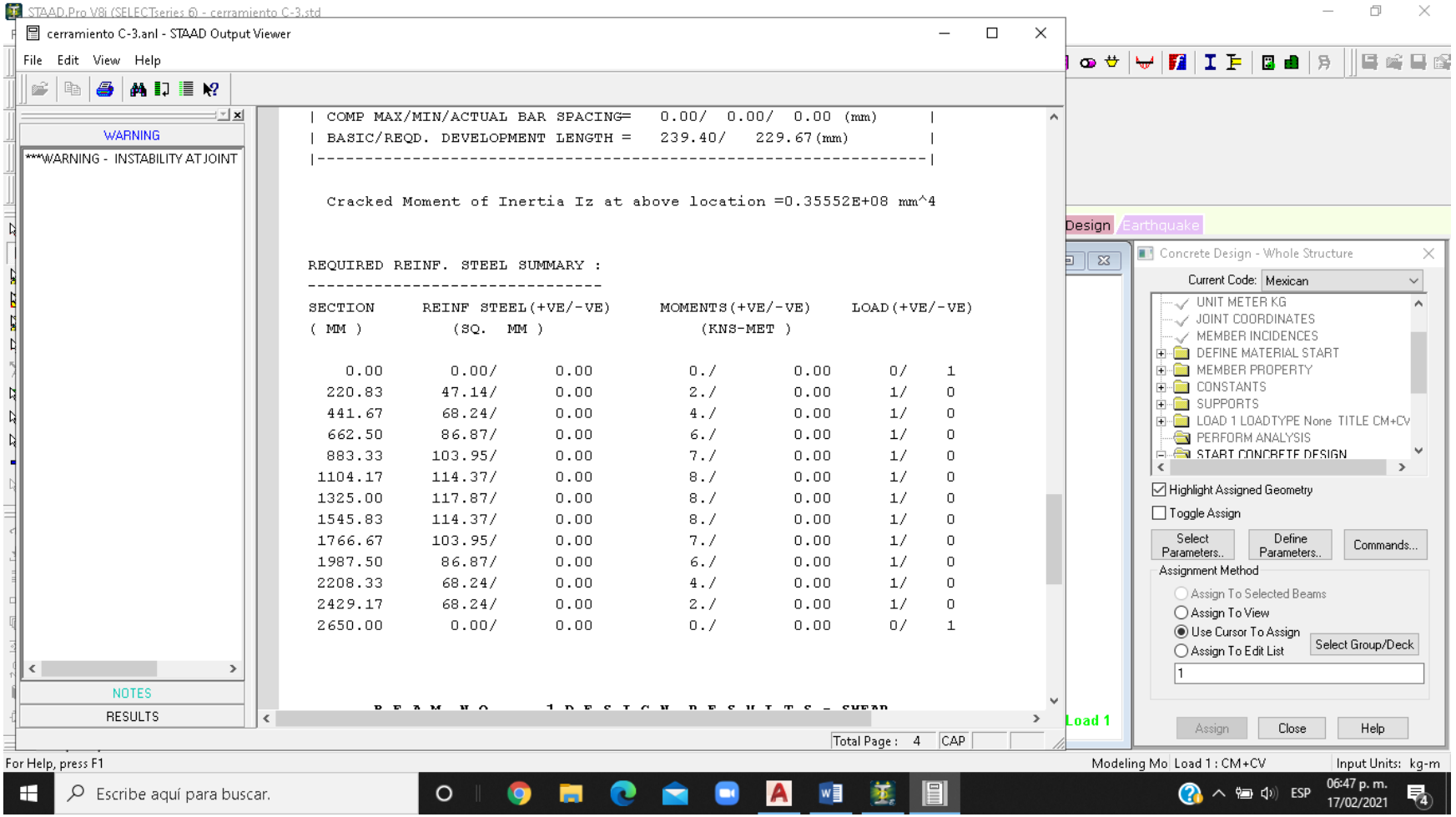

STAAD.Pro V8i (SELECTseries 6) - trabe T-2.std
trabe T-2.anl - STAAD Output Viewer
File Edit View Help
WARNING
****WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
| COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |
| BASIC/REQD. DEVELOPMENT LENGTH = 199.08/ 269.16(mm) |
Cracked Moment of Inertia Iz at above location =0.26239E+08 mm^4
REQUIRED REINF. STEEL SUMMARY :
SECTION (MM) REINF STEEL(+VE/-VE) (SQ. MM) MOMENTS(+VE/-VE) (KNS-MET) LOAD(+VE/-VE)
0.00 0.00/ 0.00 0./ 0.00 0/ 1
250.00 47.14/ 0.00 2./ 0.00 1/ 0
500.00 68.24/ 0.00 4./ 0.00 1/ 0
750.00 70.68/ 0.00 5./ 0.00 1/ 0
1000.00 84.41/ 0.00 6./ 0.00 1/ 0
1250.00 92.75/ 0.00 6./ 0.00 1/ 0
1500.00 95.55/ 0.00 6./ 0.00 1/ 0
1750.00 92.75/ 0.00 6./ 0.00 1/ 0
2000.00 84.41/ 0.00 6./ 0.00 1/ 0
2250.00 70.68/ 0.00 5./ 0.00 1/ 0
2500.00 68.24/ 0.00 4./ 0.00 1/ 0
2750.00 68.24/ 0.00 2./ 0.00 1/ 0
3000.00 0.00/ 0.00 0./ 0.00 1/ 0
Total Page : 4 CAP
Design Earthquake
Concrete Design - Whole Structure
Current Code: Mexican
LOAD 1 LOADTYPE None TITLE CM + C
PERFORM ANALYSIS
START CONCRETE DESIGN
CODE MEXICAN
FC 2.00014e+006
TRACK 2
DESIGN BEAM
END CONCRETE DESIGN
FINISH
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
1
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo
Load 1 : CM + CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
05:29 p. m.
17/02/2021

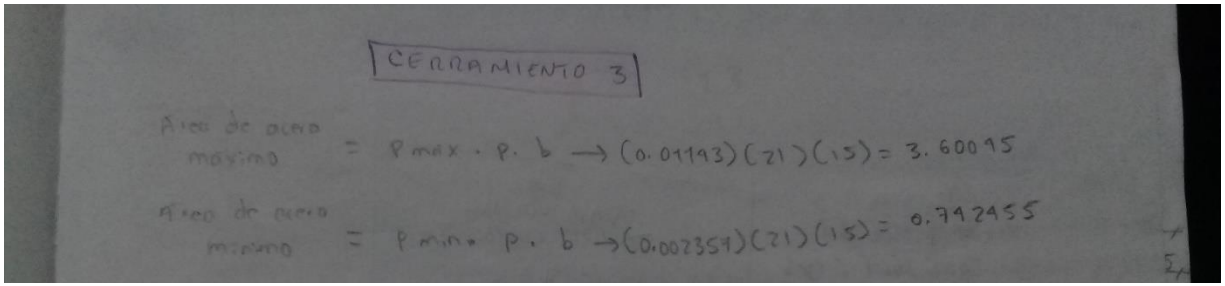

TRABE 2
Area de acero máximo = Pmax · P · b → (0.01143)(21)(15) = 3.60015
Area de acero mínimo = Pmin · P · b → (0.002357)(21)(15) = 0.742155

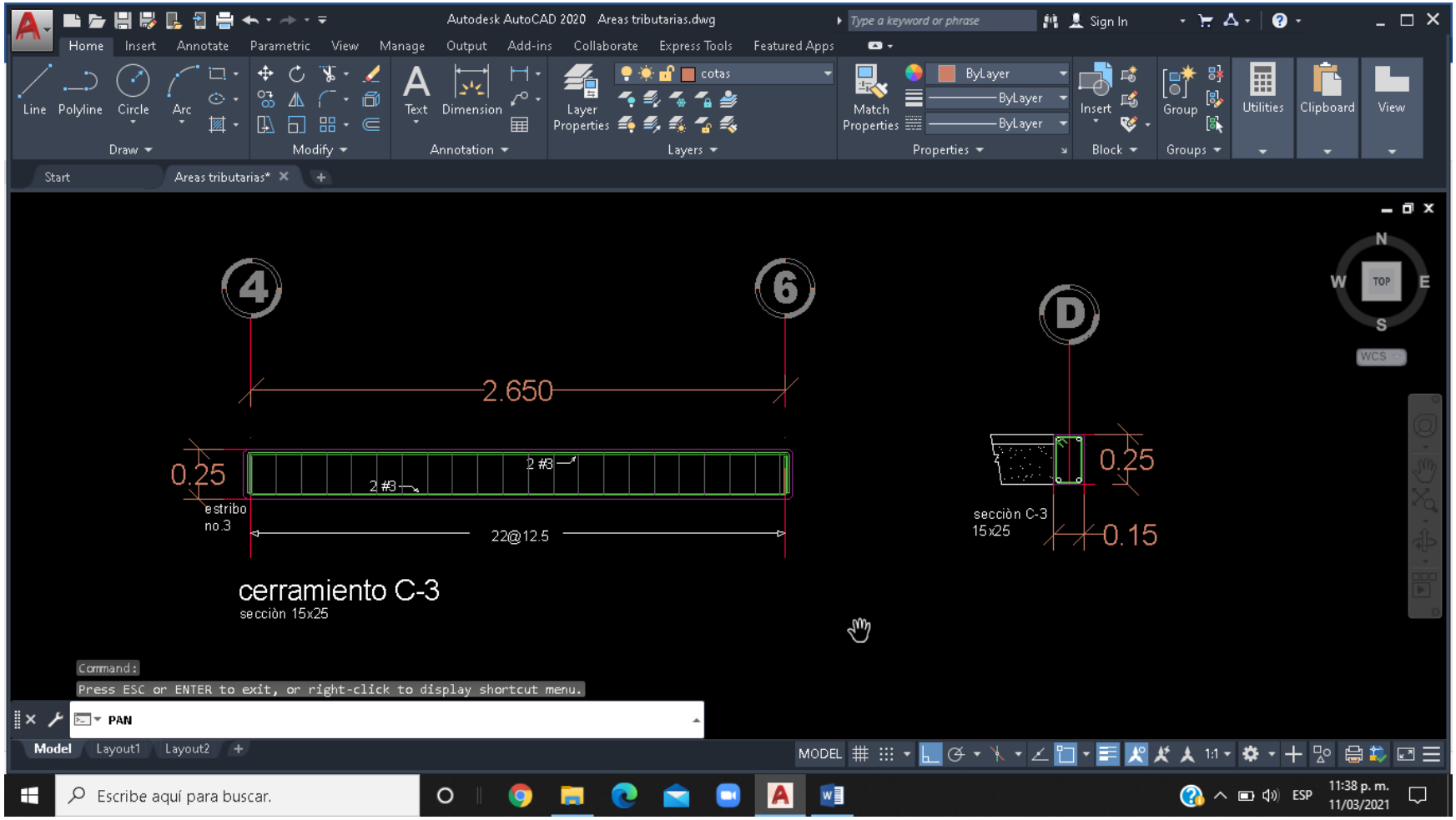

Autodesk AutoCAD 2020 Areas tributarias.dwg
Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps
Line Polyline Circle Arc
Draw
Modify
Text Dimension
Annotation
Layer Properties
cotas
Layers
Match Properties
ByLayer
Properties
Insert
Block
Group
Groups
Utilities
Clipboard
View
Start
Areas tributarias*
2
3
D
3.000
0.25
2 #3
2 #3
estribo no.3
24@12.5
trabe T-2
sección 15x25
sección T-2
15x25
0.25
0.15
N
W
TOP
E
S
WCS
Command:
Press ESC or ENTER to exit, or right-click to display shortcut menu.
PAN
Model
Layout1
Layout2
MODEL
Escribe aquí para buscar.
ESP
11:34 p. m.
11/03/2021

Cerramiento 3

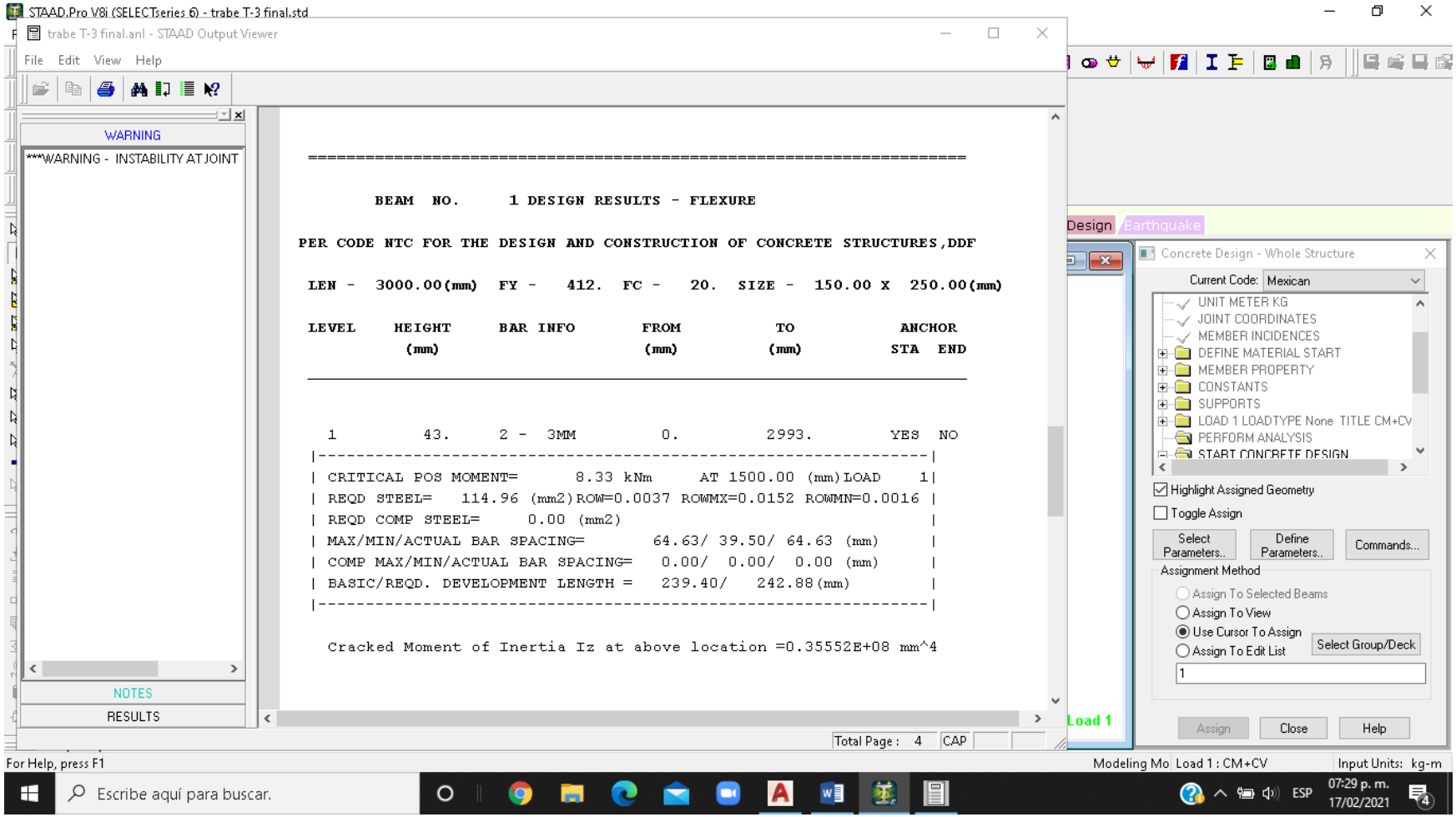


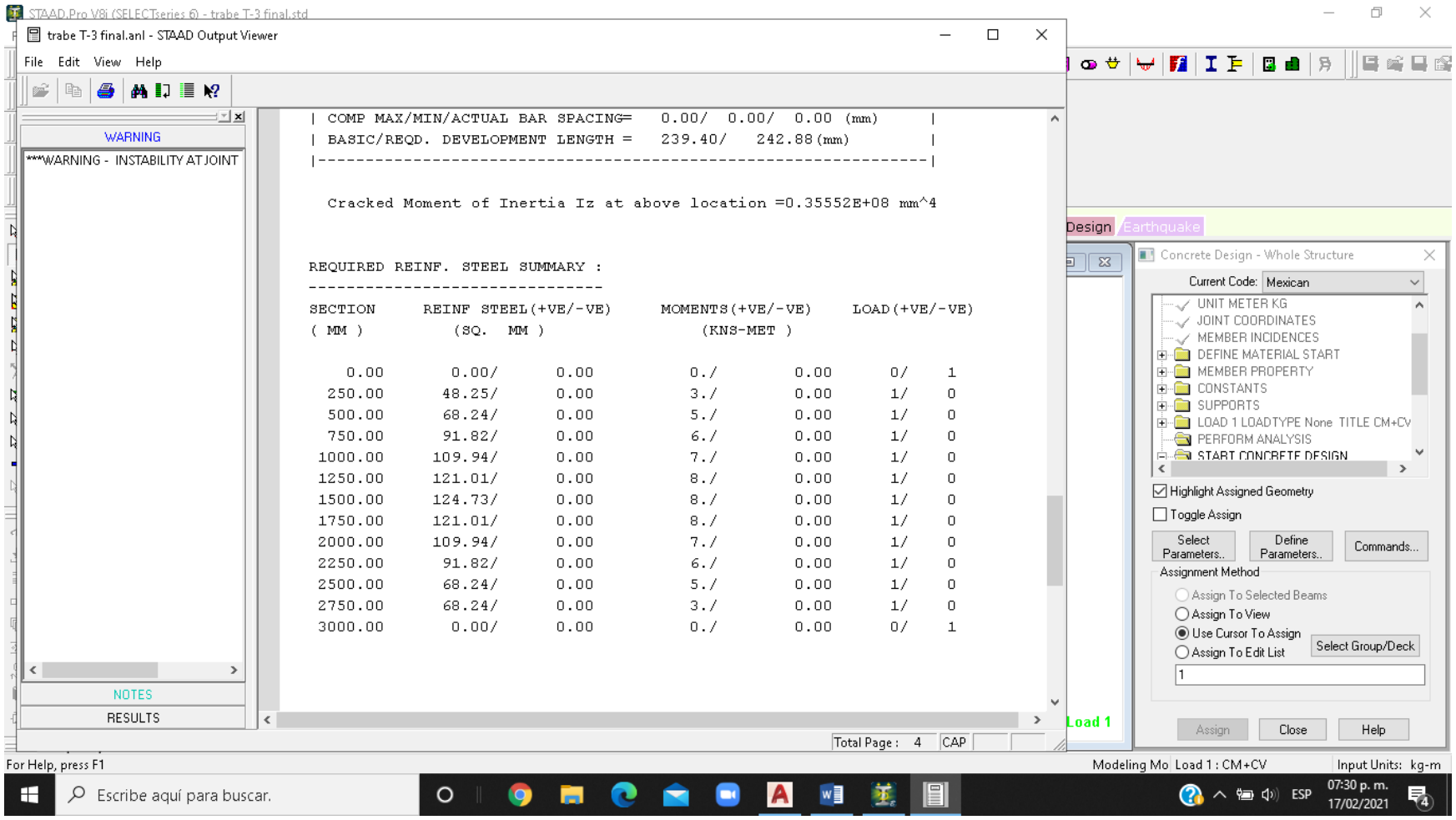

STAAD.Pro V8i (SELECTseries 6) - cerramiento C-3.std
cerramiento C-3.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
| COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |
| BASIC/REQD. DEVELOPMENT LENGTH = 239.40/ 229.67(mm) |
Cracked Moment of Inertia Iz at above location =0.35552E+08 mm^4
REQUIRED REINF. STEEL SUMMARY :
SECTION (MM) REINF STEEL(+VE/-VE) (SQ. MM) MOMENTS(+VE/-VE) (KNS-MET) LOAD(+VE/-VE)
0.00 0.00/ 0.00 0./ 0.00 0/ 1
220.83 47.14/ 0.00 2./ 0.00 1/ 0
441.67 68.24/ 0.00 4./ 0.00 1/ 0
662.50 86.87/ 0.00 6./ 0.00 1/ 0
883.33 103.95/ 0.00 7./ 0.00 1/ 0
1104.17 114.37/ 0.00 8./ 0.00 1/ 0
1325.00 117.87/ 0.00 8./ 0.00 1/ 0
1545.83 114.37/ 0.00 8./ 0.00 1/ 0
1766.67 103.95/ 0.00 7./ 0.00 1/ 0
1987.50 86.87/ 0.00 6./ 0.00 1/ 0
2208.33 68.24/ 0.00 4./ 0.00 1/ 0
2429.17 68.24/ 0.00 2./ 0.00 1/ 0
2650.00 0.00/ 0.00 0./ 0.00 0/ 1
Total Page : 4 CAP
Design Earthquake
Concrete Design - Whole Structure
Current Code: Mexican
UNIT METER KG
JOINT COORDINATES
MEMBER INCIDENCES
DEFINE MATERIAL START
MEMBER PROPERTY
CONSTANTS
SUPPORTS
LOAD 1 LOADTYPE None TITLE CM+CV
PERFORM ANALYSIS
START CONCRETE DESIGN
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
1
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo
Load 1 : CM+CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
06:47 p. m.
17/02/2021

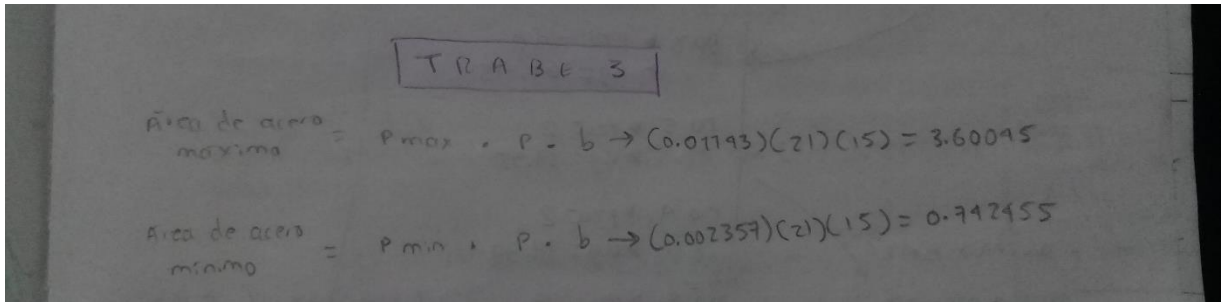

CERRAMIENTO 3
Área de acero máximo = Pmax . P. b → (0.01193)(21)(15) = 3.60195
Área de acero mínimo = Pmin. P. b → (0.002354)(21)(15) = 0.741455

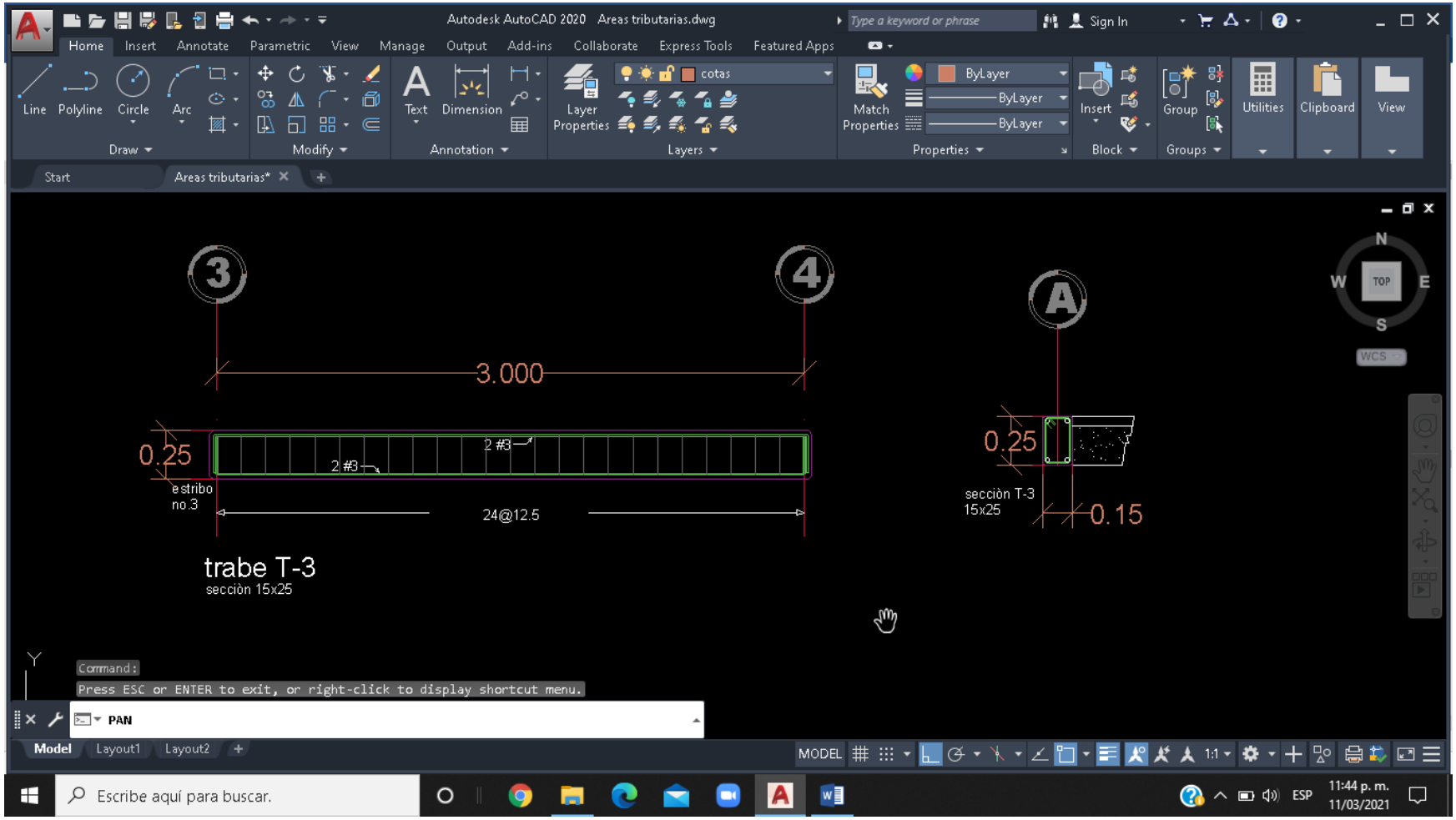

Autodesk AutoCAD 2020 Areas tributarias.dwg
Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps
Line Polyline Circle Arc
Draw
Modify
Text Dimension
Annotation
Layer Properties
cotas
Layers
Match Properties
ByLayer
Properties
Insert
Block
Group
Groups
Utilities
Clipboard
View
Start
Areas tributarias*
4
6
2.650
0.25
2 #3
2 #3
estribo no.3
22@12.5
cerramiento C-3
secciòn 15x25
D
0.25
0.15
secciòn C-3
15x25
N
W
TOP
E
S
WCS
Command:
Press ESC or ENTER to exit, or right-click to display shortcut menu.
PAN
Model
Layout1
Layout2
MODEL
Escribe aquí para buscar.
ESP
11:38 p. m.
11/03/2021

Trabe 3

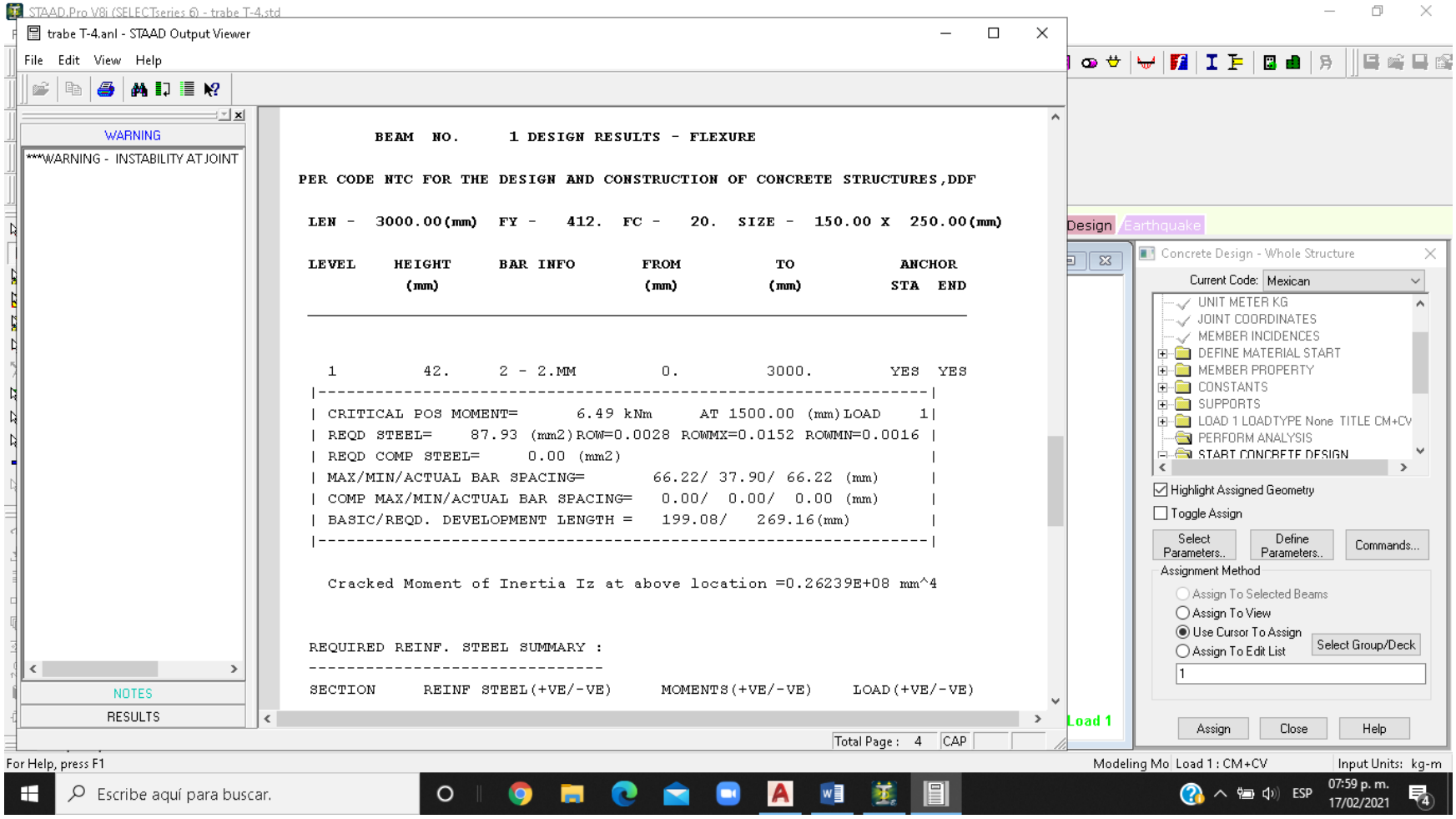

STAAD.Pro V8i (SELECTseries 6) - trabe T-3 final.std
trabe T-3 final.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
BEAM NO. 1 DESIGN RESULTS - FLEXURE
PER CODE NTC FOR THE DESIGN AND CONSTRUCTION OF CONCRETE STRUCTURES,DDF
LEN - 3000.00(mm) FY - 412. FC - 20. SIZE - 150.00 X 250.00(mm)
LEVEL HEIGHT (mm) BAR INFO FROM (mm) TO (mm) ANCHOR STA END
1 43. 2 - 3MM 0. 2993. YES NO
CRITICAL POS MOMENT= 8.33 kNm AT 1500.00 (mm) LOAD 1
REQD STEEL= 114.96 (mm2) ROW=0.0037 ROWMX=0.0152 ROWMN=0.0016
REQD COMP STEEL= 0.00 (mm2)
MAX/MIN/ACTUAL BAR SPACING= 64.63/ 39.50/ 64.63 (mm)
COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm)
BASIC/REQD. DEVELOPMENT LENGTH = 239.40/ 242.88(mm)
Cracked Moment of Inertia Iz at above location =0.35552E+08 mm^4
Total Page : 4 CAP
Design Earthquake
Concrete Design - Whole Structure
Current Code: Mexican
UNIT METER KG
JOINT COORDINATES
MEMBER INCIDENCES
DEFINE MATERIAL START
MEMBER PROPERTY
CONSTANTS
SUPPORTS
LOAD 1 LOADTYPE None TITLE CM+CV
PERFORM ANALYSIS
START CONCRETE DESIGN
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
1
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo
Load 1 : CM+CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
07:29 p. m.
17/02/2021

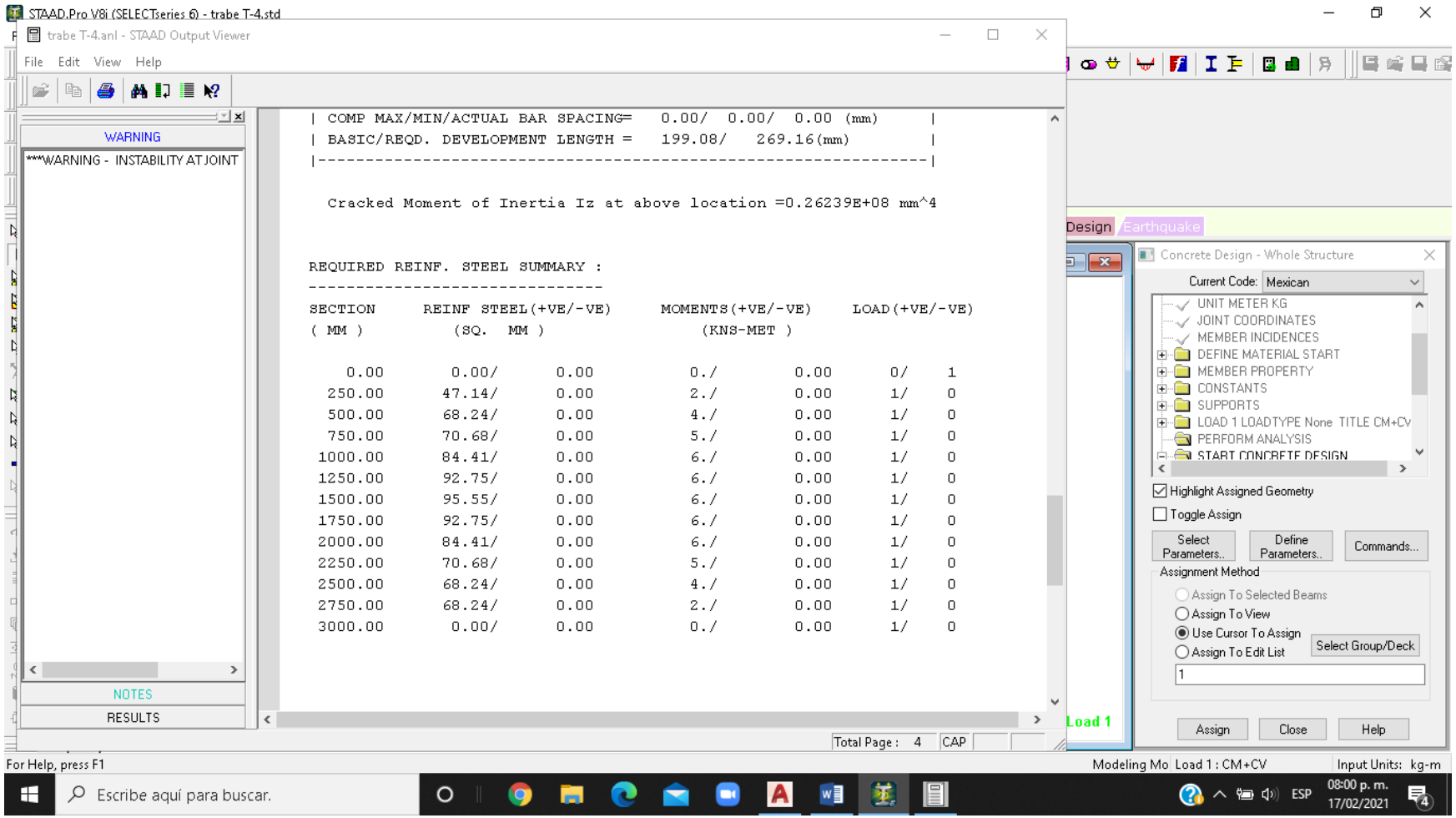

STAAD.Pro V8i (SELECTseries 6) - trabe T-3 final.std
trabe T-3 final.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
| COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |
| BASIC/REQD. DEVELOPMENT LENGTH = 239.40/ 242.88(mm) |
Cracked Moment of Inertia Iz at above location =0.35552E+08 mm^4
REQUIRED REINF. STEEL SUMMARY :
SECTION (MM) REINF STEEL(+VE/-VE) (SQ. MM) MOMENTS(+VE/-VE) (KNS-MET) LOAD(+VE/-VE)
0.00 0.00/ 0.00 0./ 0.00 0/ 1
250.00 48.25/ 0.00 3./ 0.00 1/ 0
500.00 68.24/ 0.00 5./ 0.00 1/ 0
750.00 91.82/ 0.00 6./ 0.00 1/ 0
1000.00 109.94/ 0.00 7./ 0.00 1/ 0
1250.00 121.01/ 0.00 8./ 0.00 1/ 0
1500.00 124.73/ 0.00 8./ 0.00 1/ 0
1750.00 121.01/ 0.00 8./ 0.00 1/ 0
2000.00 109.94/ 0.00 7./ 0.00 1/ 0
2250.00 91.82/ 0.00 6./ 0.00 1/ 0
2500.00 68.24/ 0.00 5./ 0.00 1/ 0
2750.00 68.24/ 0.00 3./ 0.00 1/ 0
3000.00 0.00/ 0.00 0./ 0.00 0/ 1
Total Page : 4 CAP
Concrete Design - Whole Structure
Current Code: Mexican
UNIT METER KG
JOINT COORDINATES
MEMBER INCIDENCES
DEFINE MATERIAL START
MEMBER PROPERTY
CONSTANTS
SUPPORTS
LOAD 1 LOADTYPE None TITLE CM+CV
PERFORM ANALYSIS
START CONCRETE DESIGN
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo Load 1 : CM+CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
07:30 p. m.
17/02/2021

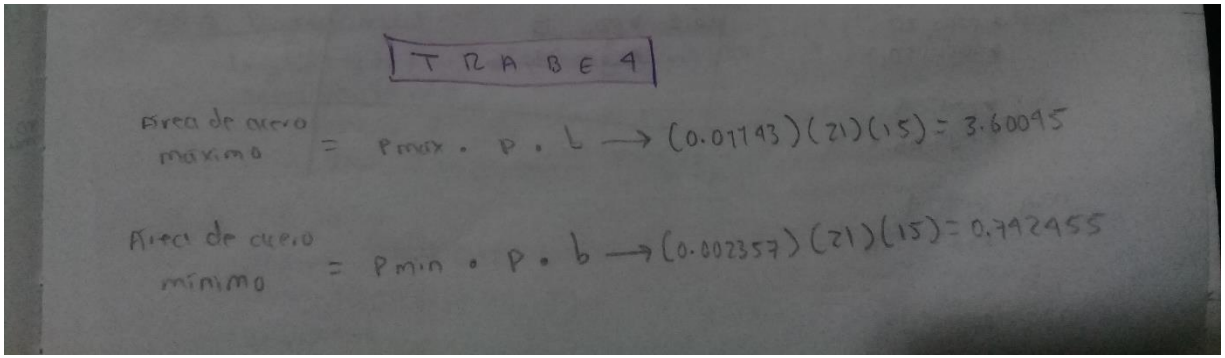

TRABE 3
Área de acero máxima = Pmax . P . b → (0.01193)(21)(15) = 3.60095
Área de acero mínimo = Pmin . P . b → (0.002357)(21)(15) = 0.712455

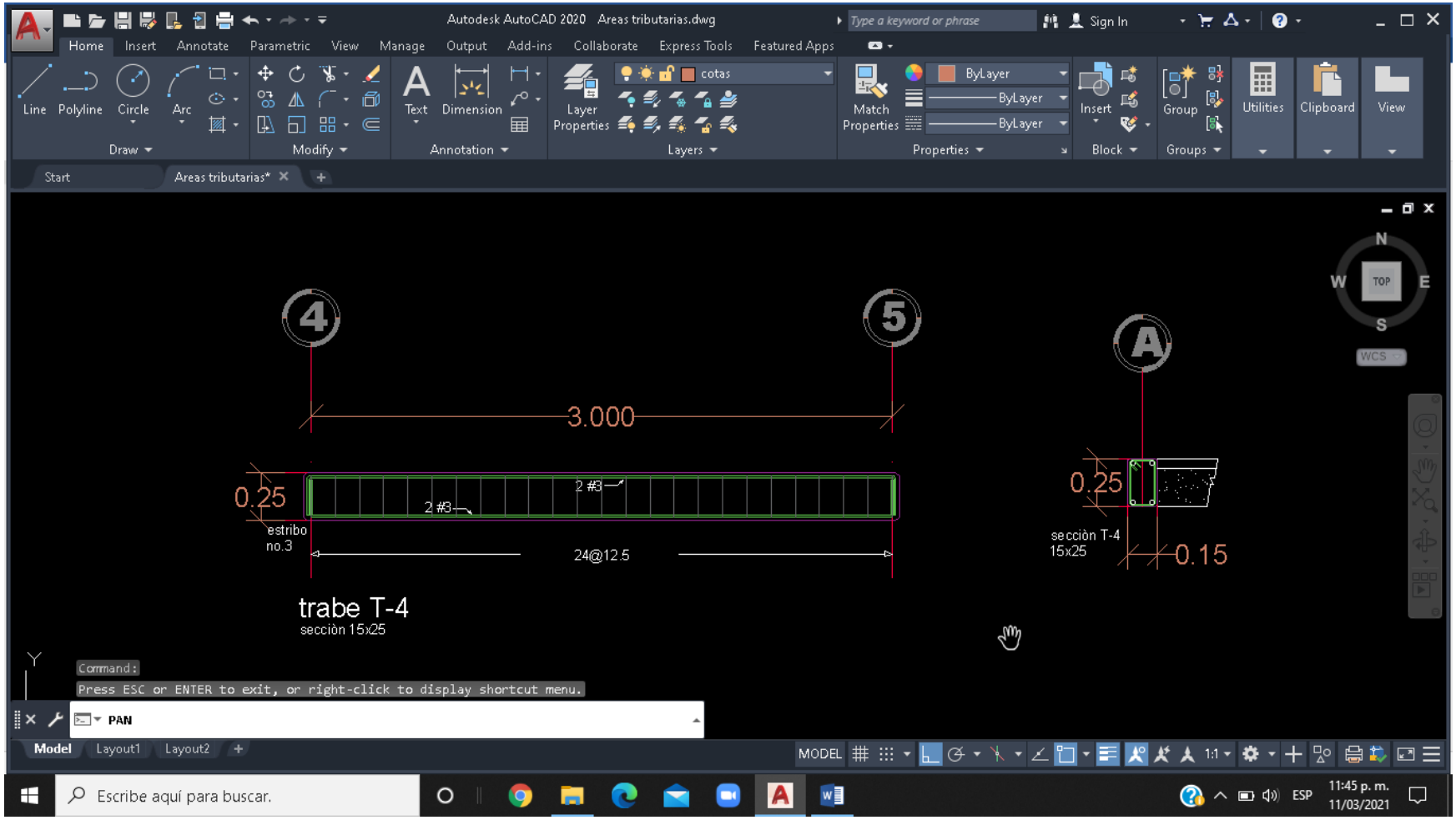

Autodesk AutoCAD 2020 Areas tributarias.dwg
Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps
Line Polyline Circle Arc
Draw
Modify
Text Dimension
Annotation
Layer Properties
cotas
Layers
Match Properties
ByLayer
Properties
Insert
Block
Group
Groups
Utilities
Clipboard
View
Start
Areas tributarias*
3
4
A
3.000
0.25
2 #3
2 #3
estribo no.3
24@12.5
trabe T-3
sección 15x25
0.25
sección T-3
15x25
0.15
N
W
TOP
E
S
WCS
Command:
Press ESC or ENTER to exit, or right-click to display shortcut menu.
PAN
Model
Layout1
Layout2
MODEL
1:1
Escribe aquí para buscar.
ESP
11:44 p. m.
11/03/2021

trabe 4


STAAD.Pro V8i (SELECTseries 6) - trabe T-4.std
trabe T-4.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
BEAM NO. 1 DESIGN RESULTS - FLEXURE
PER CODE NTC FOR THE DESIGN AND CONSTRUCTION OF CONCRETE STRUCTURES,DDF
LEN - 3000.00(mm) FY - 412. FC - 20. SIZE - 150.00 X 250.00(mm)
LEVEL HEIGHT BAR INFO FROM TO ANCHOR
(mm) (mm) (mm) STA END
1 42. 2 - 2.MM 0. 3000. YES YES
| CRITICAL POS MOMENT= 6.49 kNm AT 1500.00 (mm) LOAD 1|
| REQD STEEL= 87.93 (mm2) ROW=0.0028 ROWMX=0.0152 ROWMN=0.0016 |
| REQD COMP STEEL= 0.00 (mm2) |
| MAX/MIN/ACTUAL BAR SPACING= 66.22/ 37.90/ 66.22 (mm) |
| COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |
| BASIC/REQD. DEVELOPMENT LENGTH = 199.08/ 269.16(mm) |
Cracked Moment of Inertia Iz at above location =0.26239E+08 mm^4
REQUIRED REINF. STEEL SUMMARY :
SECTION REINF STEEL(+VE/-VE) MOMENTS(+VE/-VE) LOAD(+VE/-VE)
Total Page : 4 CAP
Design Earthquake
Concrete Design - Whole Structure
Current Code: Mexican
UNIT METER KG
JOINT COORDINATES
MEMBER INCIDENCES
DEFINE MATERIAL START
MEMBER PROPERTY
CONSTANTS
SUPPORTS
LOAD 1 LOADTYPE None TITLE CM+CV
PERFORM ANALYSIS
START CONCRETE DESIGN
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
1
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo
Load 1 : CM+CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
07:59 p. m.
17/02/2021


STAAD.Pro V8i (SELECTseries 6) - trabe T-4.std
trabe T-4.anl - STAAD Output Viewer
File Edit View Help
WARNING
***WARNING - INSTABILITY AT JOINT
NOTES
RESULTS
| COMP MAX/MIN/ACTUAL BAR SPACING= 0.00/ 0.00/ 0.00 (mm) |
| BASIC/REQD. DEVELOPMENT LENGTH = 199.08/ 269.16(mm) |
Cracked Moment of Inertia Iz at above location =0.26239E+08 mm^4
REQUIRED REINF. STEEL SUMMARY :
SECTION (MM) REINF STEEL(+VE/-VE) (SQ. MM) MOMENTS(+VE/-VE) (KNS-MET) LOAD(+VE/-VE)
0.00 0.00/ 0.00 0./ 0.00 0/ 1
250.00 47.14/ 0.00 2./ 0.00 1/ 0
500.00 68.24/ 0.00 4./ 0.00 1/ 0
750.00 70.68/ 0.00 5./ 0.00 1/ 0
1000.00 84.41/ 0.00 6./ 0.00 1/ 0
1250.00 92.75/ 0.00 6./ 0.00 1/ 0
1500.00 95.55/ 0.00 6./ 0.00 1/ 0
1750.00 92.75/ 0.00 6./ 0.00 1/ 0
2000.00 84.41/ 0.00 6./ 0.00 1/ 0
2250.00 70.68/ 0.00 5./ 0.00 1/ 0
2500.00 68.24/ 0.00 4./ 0.00 1/ 0
2750.00 68.24/ 0.00 2./ 0.00 1/ 0
3000.00 0.00/ 0.00 0./ 0.00 1/ 0
Total Page : 4 CAP
Design Earthquake
Concrete Design - Whole Structure
Current Code: Mexican
UNIT METER KG
JOINT COORDINATES
MEMBER INCIDENCES
DEFINE MATERIAL START
MEMBER PROPERTY
CONSTANTS
SUPPORTS
LOAD 1 LOADTYPE None TITLE CM+CV
PERFORM ANALYSIS
START CONCRETE DESIGN
Highlight Assigned Geometry
Toggle Assign
Select Parameters..
Define Parameters..
Commands...
Assignment Method
Assign To Selected Beams
Assign To View
Use Cursor To Assign
Assign To Edit List
Select Group/Deck
1
Assign
Close
Help
Load 1
For Help, press F1
Modeling Mo
Load 1 : CM+CV
Input Units: kg-m
Escribe aquí para buscar.
ESP
08:00 p. m.
17/02/2021


TRABE 4
Area de acero máximo = Pmax . P . b → (0.07143)(21)(15) = 3.60095
Area de acero mínimo = Pmin . P . b → (0.002357)(21)(15) = 0.792455


Autodesk AutoCAD 2020 Areas tributarias.dwg
Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps
Line Polyline Circle Arc
Draw
Modify
Text Dimension
Annotation
Layer Properties
cotas
Layers
Match Properties
ByLayer
Properties
Insert
Block
Group
Groups
Utilities
Clipboard
View
Start
Areas tributarias*
4
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2 #3
2 #3
estribo no.3
24@12.5
trabe T-4
sección 15x25
A
0.25
sección T-4
15x25
0.15
N
W
TOP
E
S
WCS
Command:
Press ESC or ENTER to exit, or right-click to display shortcut menu.
PAN
Model
Layout1
Layout2
MODEL
1:1
Escribe aquí para buscar.
ESP
11:45 p. m.
11/03/2021