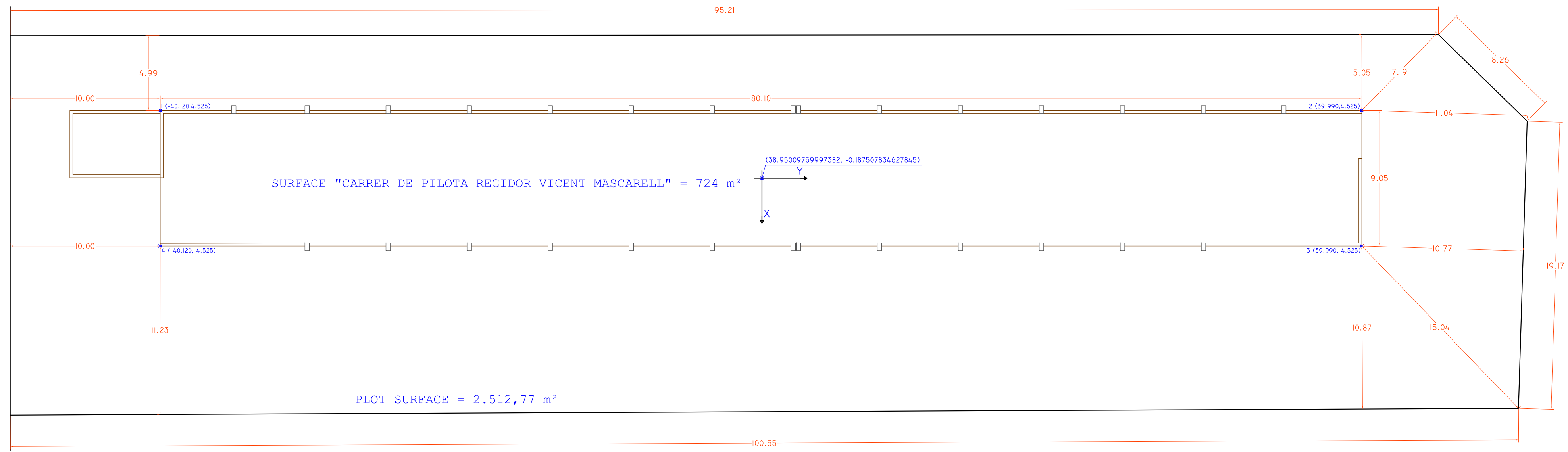
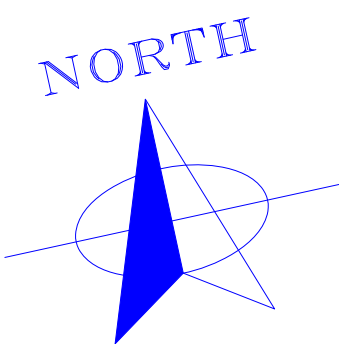
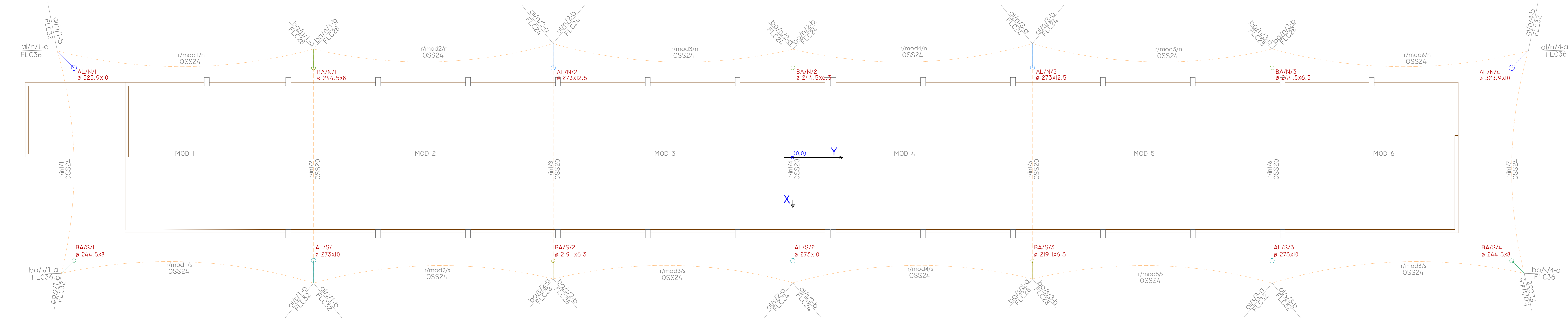


|   |  |  |  |
|---|--|--|--|
| SCALE<br>1:2000                                   | DRAWING NAME<br>SITUATION AND LOCATION |  | BASIC STRUCTURAL PROJECT OF A<br>LIGHTWEIGHT TENSILE FABRIC ROOF<br>FOR THE VALENCIAN PILOTA COURT<br>"REGIDOR VICENT MASCARELL" |
| UNITS<br>--                                       | SIGNATURE<br>                          | DATE<br>JULY 2022  |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |  | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |  | UNIVERSITAT<br>POLITÈCNICA<br>DE VALÈNCIA  | ESCUELA TÉCNICA SUPERIOR<br>DE INGENIEROS DE CAMINOS,<br>CANALES Y PUERTOS   |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |  |  |  |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |  | UNIVERSITÀ<br>DI TRENTO  | SHEET<br>1/1   |



|   |   |  |  |                     |
|---|---|--|--|---------------------|
| SCALE<br>1:200                                    | DRAWING NAME<br>GENERAL PLAN<br>LAYOUT AND DIMENSIONS |  | BASIC STRUCTURAL PROJECT OF A<br>LIGHTWEIGHT TENSILE FABRIC ROOF<br>FOR THE VALENCIAN PILOTA COURT<br>"REGIDOR VICENT MASCARELL" |                     |
| UNITS<br>METERS                                   | SIGNATURE<br>   | DATE<br>JULY 2022  |  |                     |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |  |                     |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   |  |  | DRAWING NUMBER<br>2 |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |  |  | SHEET<br>1/1        |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   |  |  |                     |



**BILL MASTS**

| MASTS  | SECTION     | L(mm) |
|--------|-------------|-------|
| BA/S/1 | ø 244.5x8   | 6799  |
| AL/S/1 | ø 273x10    | 8444  |
| BA/S/2 | ø 219.1x6.3 | 6824  |
| AL/S/2 | ø 273x10    | 8444  |
| BA/S/3 | ø 219.1x6.3 | 6824  |
| AL/S/3 | ø 273x10    | 8444  |
| BA/S/4 | ø 244.5x8   | 6799  |
| AL/S/4 | ø 273x10    | 8444  |
| AL/N/1 | ø 323.9x10  | 9129  |
| BA/N/1 | ø 244.5x6.3 | 7026  |
| AL/N/2 | ø 273x12.5  | 9154  |
| BA/N/2 | ø 244.5x6.3 | 7026  |
| AL/N/3 | ø 273x12.5  | 9154  |
| BA/N/3 | ø 244.5x6.3 | 7026  |
| AL/N/4 | ø 323.9x10  | 9129  |
| BA/N/4 | ø 244.5x6.3 | 7026  |

**BILL BOUNDARY CABLES**

| CABLE    | TYPE  | L <sub>PRIM</sub> (mm) | L <sub>SEC</sub> (mm) | L <sub>TOT</sub> (mm) |
|----------|-------|------------------------|-----------------------|-----------------------|
| r/mod1/s | OSS24 | 15116                  | 15165                 | 30281                 |
| r/mod2/s | OSS24 | 14356                  | 14401                 | 28757                 |
| r/mod3/s | OSS24 | 14354                  | 14399                 | 28753                 |
| r/mod4/s | OSS24 | 14354                  | 14401                 | 28753                 |
| r/mod5/s | OSS24 | 14356                  | 14401                 | 28757                 |
| r/mod6/s | OSS24 | 15116                  | 15165                 | 30281                 |
| r/int1   | OSS24 | 13437                  | 13476                 | 26913                 |
| r/int2   | OSS20 | 13866                  | 13898                 | 27764                 |
| r/int3   | OSS20 | 14073                  | 14094                 | 28167                 |
| r/int4   | OSS20 | 13853                  | 13871                 | 27724                 |
| r/int5   | OSS20 | 14073                  | 14094                 | 28167                 |
| r/int6   | OSS20 | 13866                  | 13898                 | 27764                 |
| r/int7   | OSS24 | 13437                  | 13476                 | 26913                 |

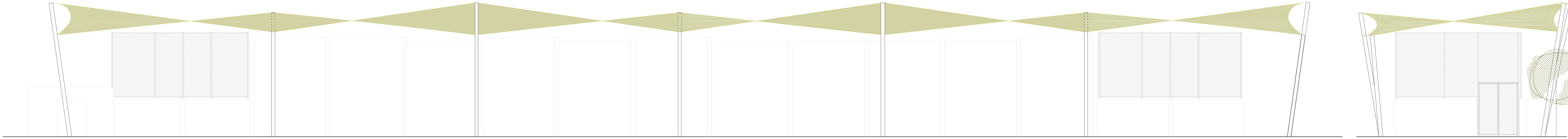
**BILL STAY CABLES**

| CABLE    | TYPE  | L <sub>PRIM</sub> (mm) | L <sub>SEC</sub> (mm) | L <sub>TOT</sub> (mm) |
|----------|-------|------------------------|-----------------------|-----------------------|
| ba/s/1-a | FLC36 | 7029                   | 7056                  | 14085                 |
| ba/s/1-b | FLC32 | 7029                   | 7056                  | 14085                 |
| al/s/1-a | FLC32 | 8702                   | 8723                  | 17425                 |
| al/s/1-b | FLC32 | 8702                   | 8722                  | 17424                 |
| ba/s/2-a | FLC28 | 7029                   | 7046                  | 14075                 |
| ba/s/2-b | FLC28 | 7029                   | 7046                  | 14075                 |
| al/s/2-a | FLC24 | 8702                   | 8729                  | 17431                 |
| al/s/2-b | FLC24 | 8702                   | 8729                  | 17431                 |
| ba/s/3-a | FLC28 | 7029                   | 7046                  | 14075                 |
| ba/s/3-b | FLC28 | 7029                   | 7046                  | 14075                 |
| al/s/3-a | FLC32 | 8702                   | 8722                  | 17424                 |
| al/s/3-b | FLC32 | 8702                   | 8723                  | 17425                 |
| ba/s/4-a | FLC32 | 7029                   | 7056                  | 14085                 |
| ba/s/4-b | FLC36 | 7029                   | 7056                  | 14085                 |
| al/n/1-a | FLC36 | 9434                   | 9469                  | 18903                 |
| al/n/1-b | FLC32 | 9434                   | 9469                  | 18903                 |
| ba/n/1-a | FLC28 | 7238                   | 7256                  | 14494                 |
| ba/n/1-b | FLC28 | 7238                   | 7256                  | 14494                 |
| al/n/2-a | FLC24 | 9434                   | 9456                  | 18890                 |
| al/n/2-b | FLC24 | 9434                   | 9456                  | 18890                 |
| ba/n/2-a | FLC24 | 7238                   | 7261                  | 14499                 |
| ba/n/2-b | FLC24 | 7238                   | 7261                  | 14499                 |
| al/n/3-a | FLC24 | 9434                   | 9456                  | 18890                 |
| al/n/3-b | FLC24 | 9434                   | 9456                  | 18890                 |
| ba/n/3-a | FLC28 | 7238                   | 7256                  | 14494                 |
| ba/n/3-b | FLC28 | 7238                   | 7256                  | 14494                 |
| al/n/4-a | FLC32 | 9434                   | 9469                  | 18903                 |
| al/n/4-b | FLC36 | 9434                   | 9469                  | 18903                 |

AL: High  
 BA: Low  
 N: North  
 S: South

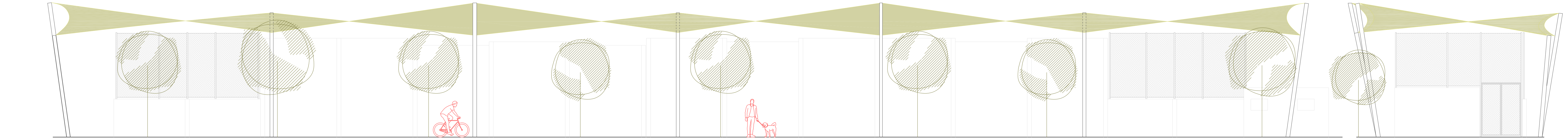
L<sub>PRIM</sub>: Length of unstressed primary cable  
 L<sub>SEC</sub>: Length of unstressed secondary cable  
 L<sub>TOT</sub>: Total length

|   |  |  |                     |
|---|--|--|---------------------|
| SCALE<br>1:100                                    | DRAWING NAME<br>GENERAL PLAN<br>LAYOUT OF MAST AND CABLES  | BASIC STRUCTURAL PROJECT OF A<br>LIGHTWEIGHT TENSILE FABRIC ROOF<br>FOR THE VALENCIAN PILOTA COURT<br>"REGIDOR VICENT MASCARELL" |                     |
| UNITS<br>METERS                                   | SIGNATURE<br>  | DATE<br>JULY 2022  |                     |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRAL EN INGENIERÍA CIVIL |  |                     |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ | UNIVERSITAT POLITÈCNICA DE VALÈNCIA  | CAM MASTERS  | DRAWING NUMBER<br>3 |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               | UNIVERSITÀ DI TRENTO   |  | SHEET<br>1/1        |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |  |  |                     |



SOUTH VIEW

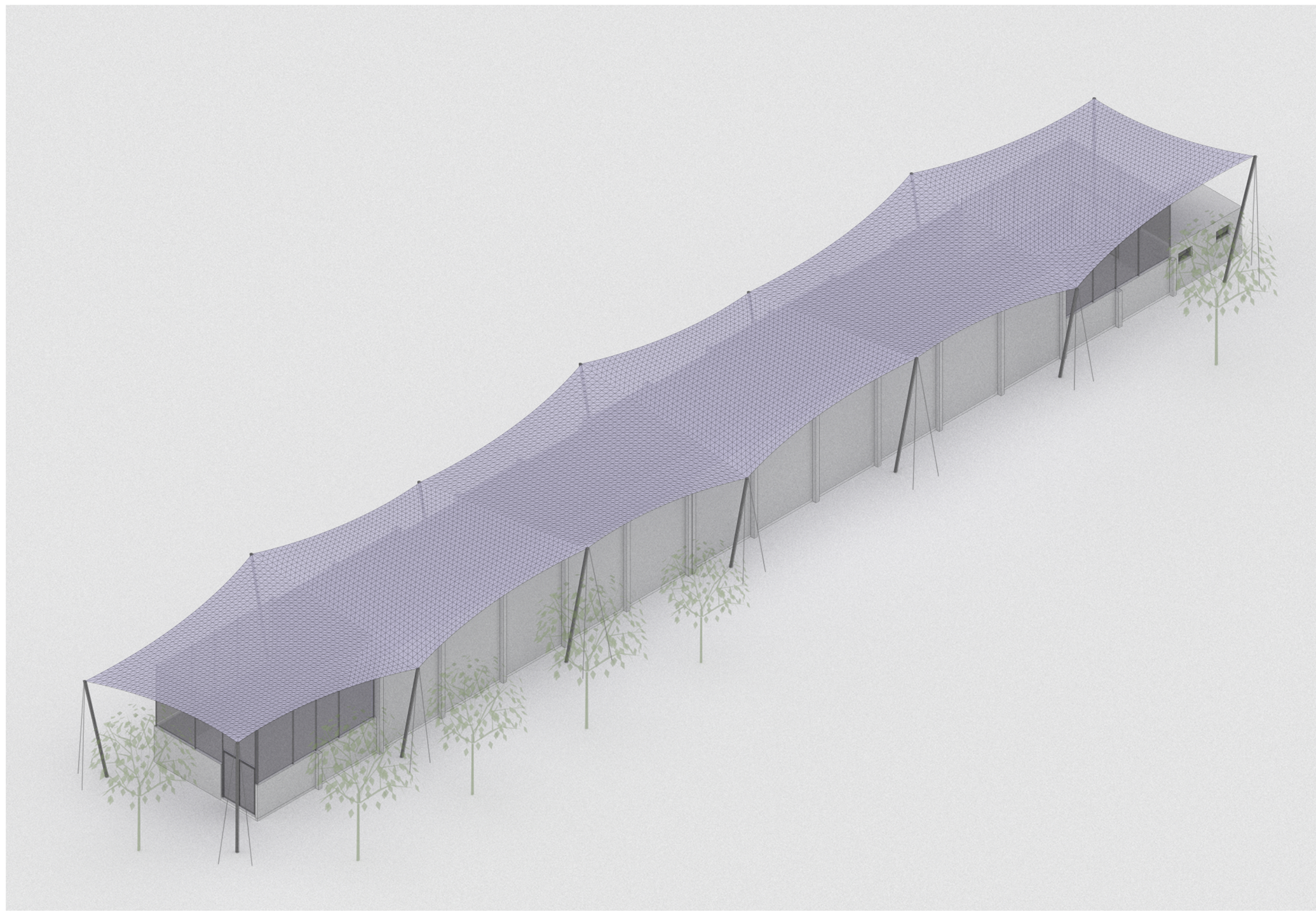
EAST VIEW



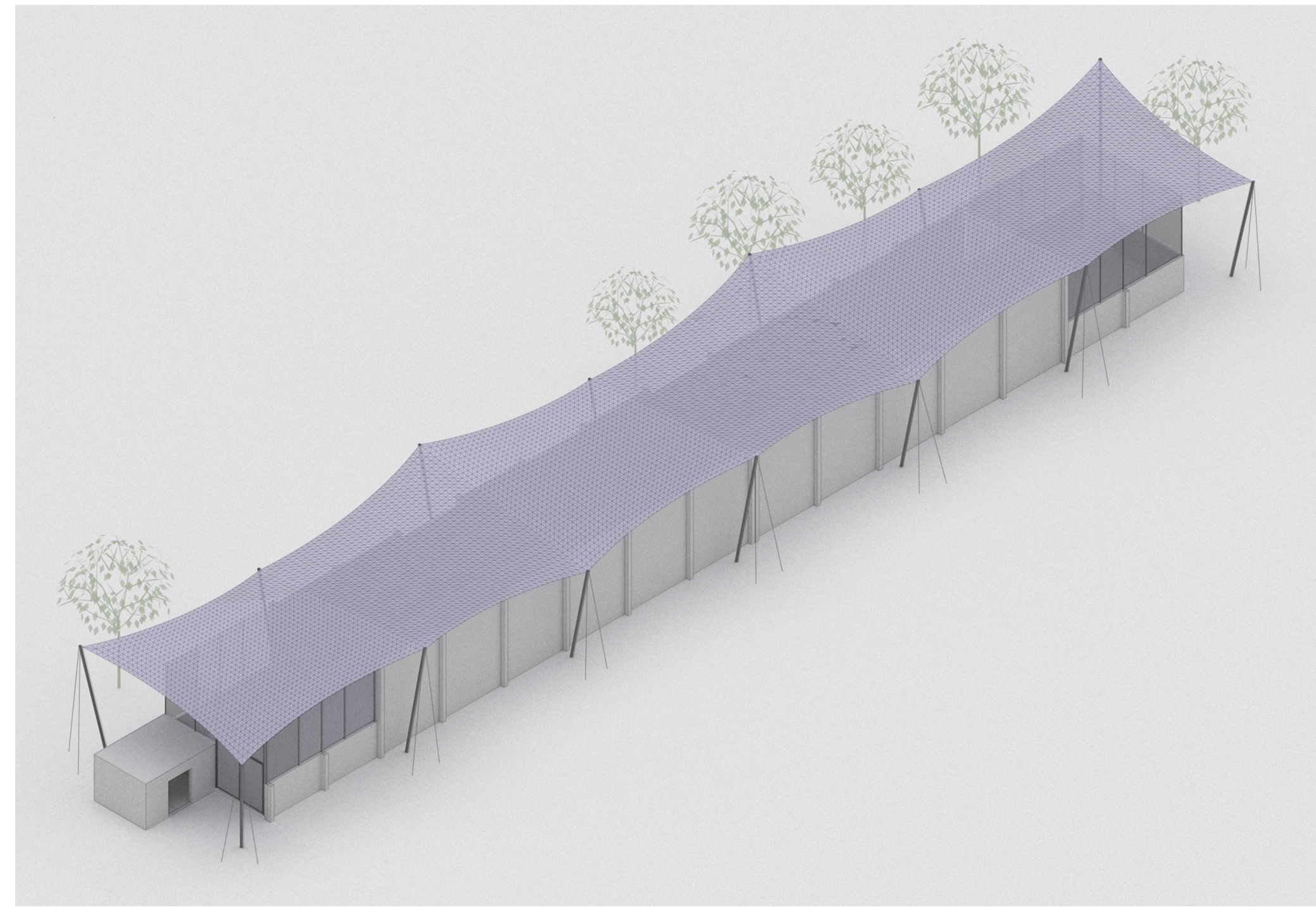
NORTH VIEW

WEST VIEW

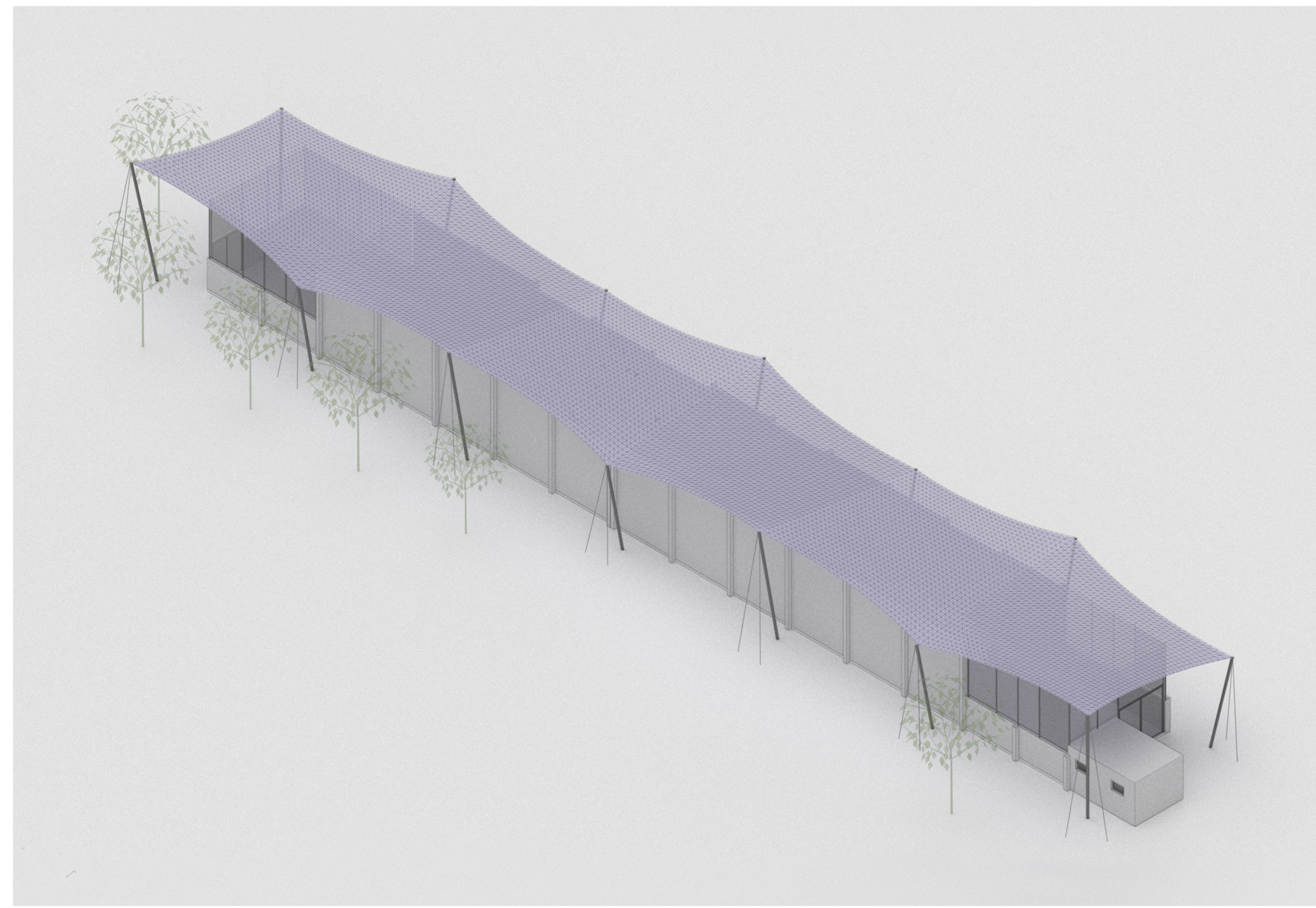
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|---|---------------------------------|--|--|--|
| SCALE<br>1:100                                    | DRAWING NAME<br>VIEWS. 2D VIEWS |  | BASIC STRUCTURAL PROJECT OF A<br>LIGHTWEIGHT TENSILE FABRIC ROOF<br>FOR THE VALENCIAN PILOTA COURT<br>"REGIDOR VICENT MASCARELL" |  |
| UNITS<br>--                                       | SIGNATURE<br>                   | DATE<br>JULY 2022  |  |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |                                 | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |  |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |                                 |  | DRAWING NUMBER<br>4  |  |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |                                 |  | SHEET<br>1/2   |  |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |                                 |  |  |  |



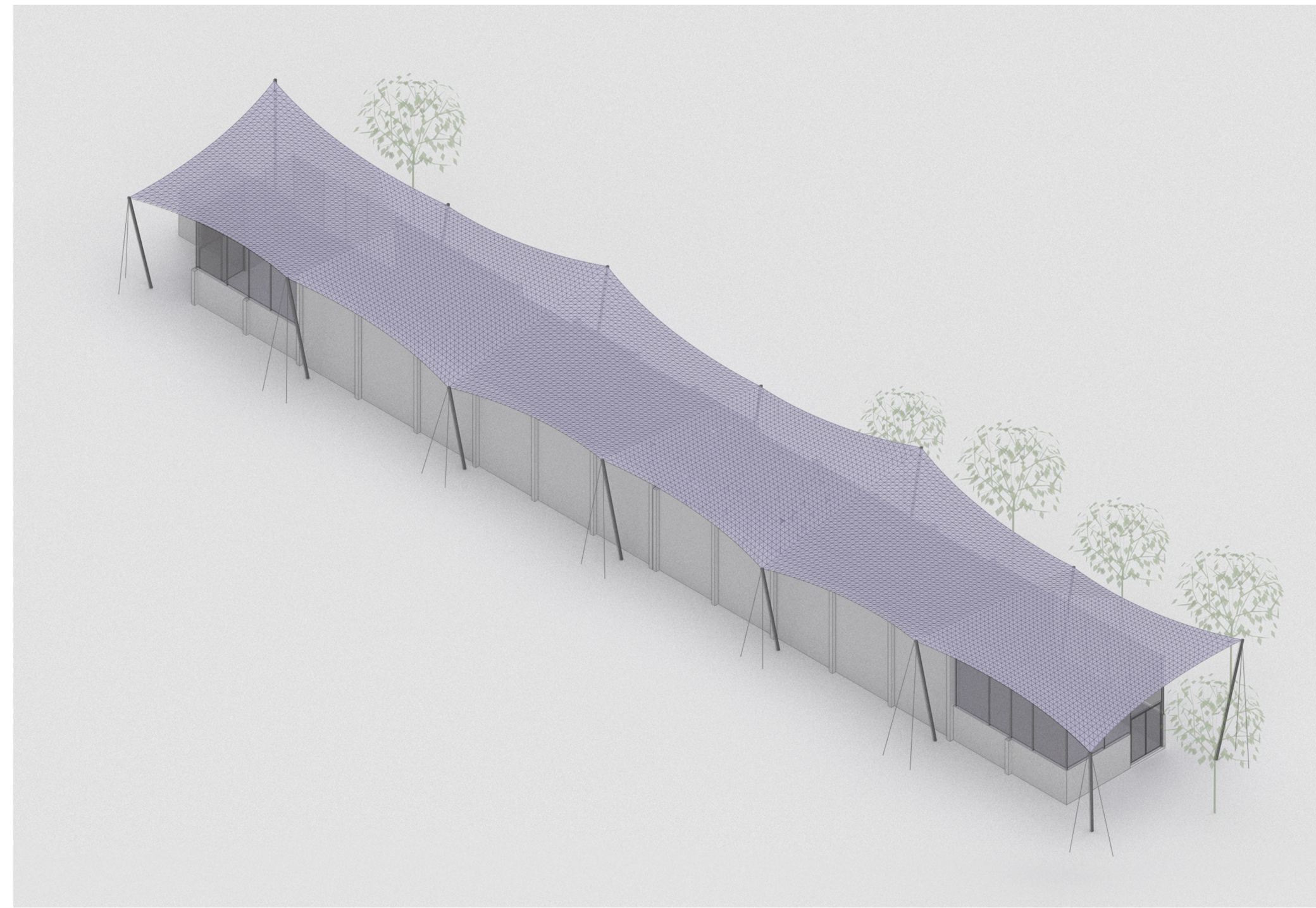
NORTHEAST VIEW







SOUTHWEST VIEW

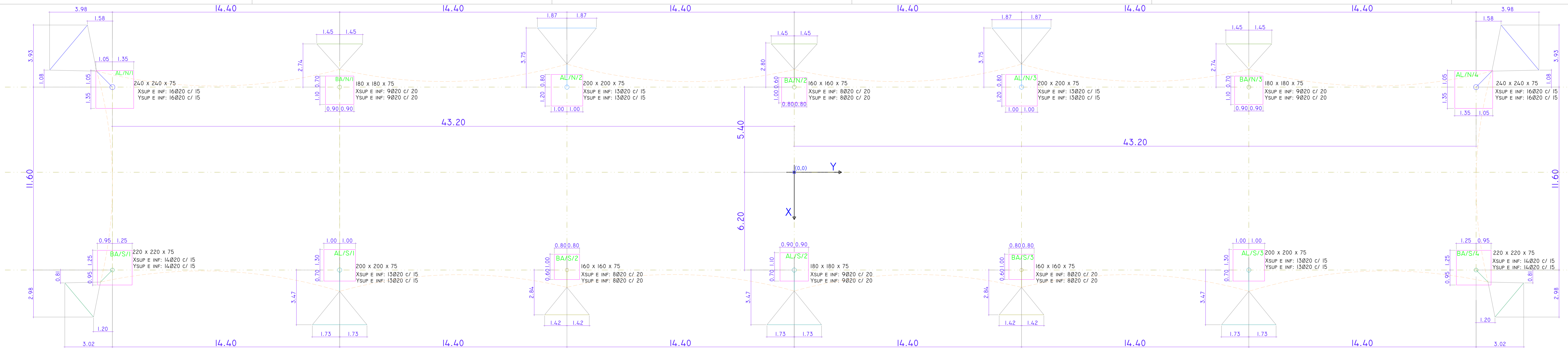


NORTHWEST VIEW



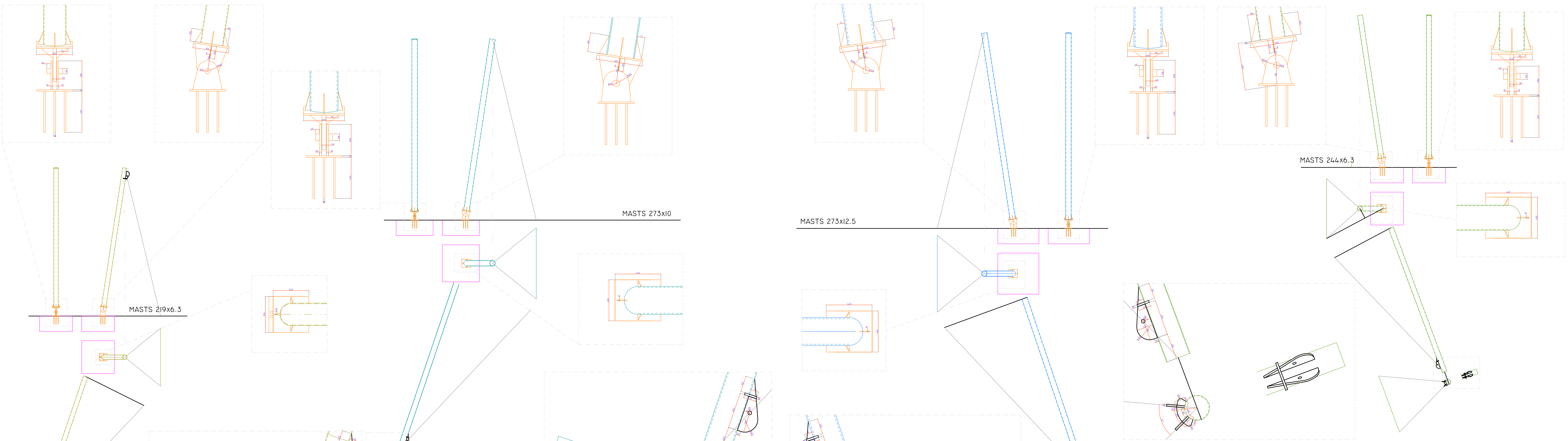
SOUTHEAST VIEW

|   |   |   |  |
|---|---|---|--|
| SCALE<br>1:100                                    | DRAWING NAME<br>VIEWS. 3D VIEWS   |   | BASIC STRUCTURAL PROJECT OF A<br>LIGHTWEIGHT TENSILE FABRIC ROOF<br>FOR THE VALENCIAN PILOTA COURT<br>"REGIDOR VICENT MASCARELL" |
| UNITS<br>METERS                                   | SIGNATURE<br>  | DATE<br>JULY 2022   |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE  |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   |  <b>UNIVERSITÀ<br/>DI TRENTO</b> | DRAWING NUMBER<br>4  |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |   | SHEET<br>2/2   |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   |   |  |

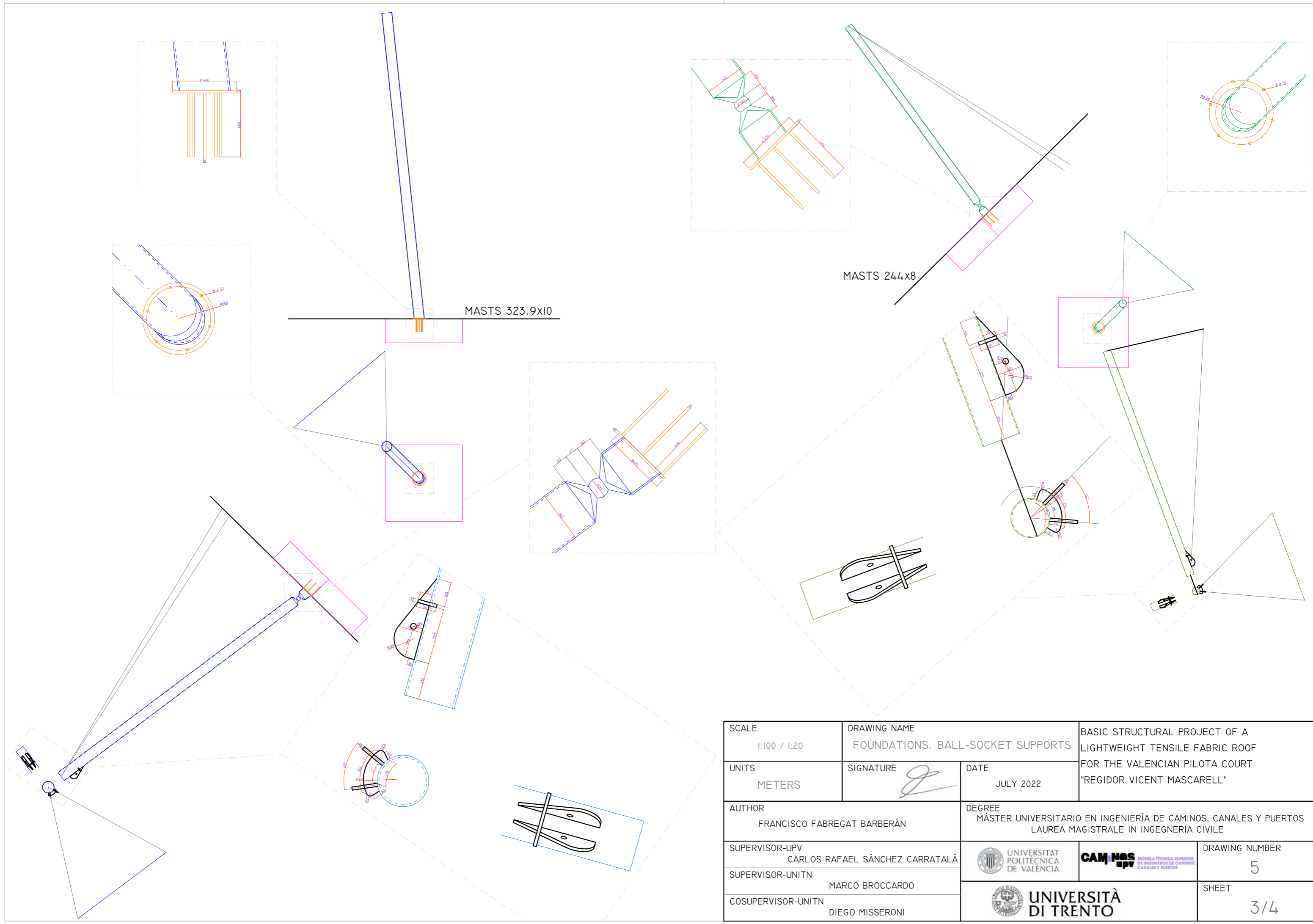


| FOUNDATIONS TABLE              |                 |             |                 |                 |              |              |
|--------------------------------|-----------------|-------------|-----------------|-----------------|--------------|--------------|
| Foundings                      | Dimensions (cm) | Height (cm) | Bottom reinf. X | Bottom reinf. Y | Top reinf. X | Top reinf. Y |
| Z1:BA/N/2,BA/S/2,BA/S/3        | 160x160         | 75          | 8Ø20c/20        | 8Ø20c/20        | 8Ø20c/20     | 8Ø20c/20     |
| Z2:BA/N/1,BA/N/3,AL/S/2        | 180x180         | 75          | 9Ø20c/20        | 9Ø20c/20        | 9Ø20c/20     | 9Ø20c/20     |
| Z3:AL/N/2,AL/N/3,AL/S/1,AL/S/3 | 200x200         | 75          | 13Ø20c/15       | 13Ø20c/15       | 13Ø20c/15    | 13Ø20c/15    |
| Z4:BA/S/1,BA/S/4               | 220x220         | 75          | 14Ø20c/15       | 14Ø20c/15       | 14Ø20c/15    | 14Ø20c/15    |
| Z5:AL/N/1,AL/N/4               | 240x240         | 75          | 16Ø20c/15       | 16Ø20c/15       | 16Ø20c/15    | 16Ø20c/15    |

|   |  |   |                     |
|---|--|---|---------------------|
| SCALE<br>1:100                                    | DRAWING NAME<br>FOUNDATIONS. FOOTINGS LAYOUT   | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |                     |
| UNITS<br>SEVERAL                                  | SIGNATURE<br>  | DATE<br>JULY 2022   |                     |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |   |                     |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ | UNIVERSITAT POLITÈCNICA DE VALÈNCIA  | CAM<br>SPT<br>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS                                      | DRAWING NUMBER<br>5 |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               | UNIVERSITÀ DI TRENTO   |   | SHEET<br>1/4        |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |  |   |                     |

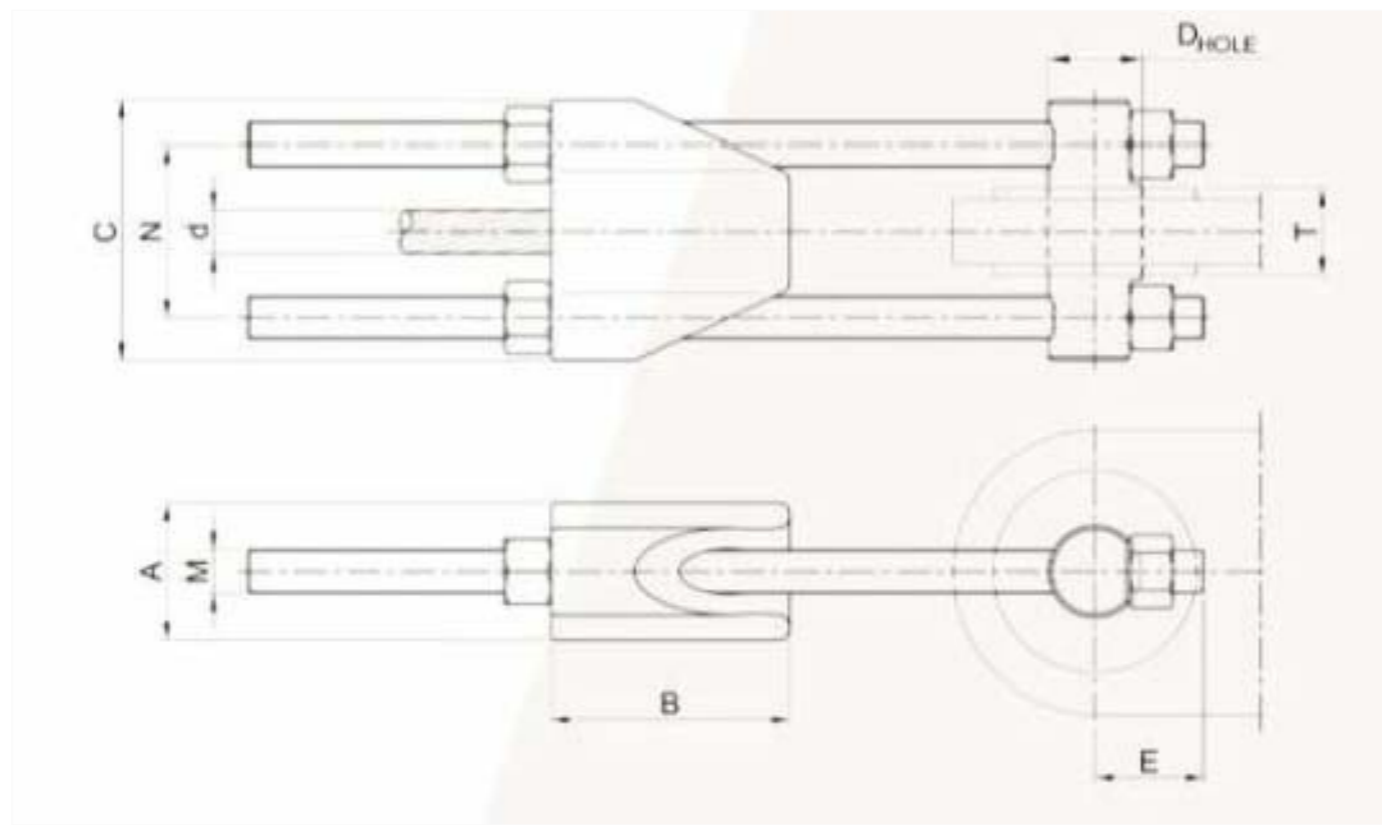


|   |   |  |  |
|---|---|--|--|
| SCALE<br>1:100 / 1:20                             | DRAWING NAME<br>FOUNDATIONS. PIN SUPPORTS |  | BASIC STRUCTURAL PROJECT OF A<br>LIGHTWEIGHT TENSILE FABRIC ROOF<br>FOR THE VALENCIAN PILOTA COURT<br>"REGIDOR VICENT MASCARELL" |
| UNITS<br>MILLIMETERS                              | SIGNATURE<br>                             | DATE<br>JULY 2022  |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE       |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   | UNIVERSITAT POLITÈCNICA DE VALÈNCIA<br><small>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS</small> | DRAWING NUMBER<br>5  |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |  | SHEET<br>2/4   |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   | UNIVERSITÀ DI TRENTO   |  |



|   |   |  |  |                     |
|---|---|--|--|---------------------|
| SCALE<br>1:100 / 1:20                             | DRAWING NAME<br>FOUNDATIONS. BALL-SOCKET SUPPORTS |  | BASIC STRUCTURAL PROJECT OF A<br>LIGHTWEIGHT TENSILE FABRIC ROOF<br>FOR THE VALENCIAN PILOTA COURT<br>"REGIDOR VICENT MASCARELL" |                     |
| UNITS<br>METERS                                   | SIGNATURE<br>                                     | DATE<br>JULY 2022  |  |                     |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |  |                     |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   |  |  | DRAWING NUMBER<br>5 |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |  |  | SHEET<br>3/4        |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   |  |  |                     |





ADJUSTABLE BRIDGE SOCKET



HIGH-STRENGTH STEEL ADJUSTABLE BRIDGE SOCKET BRC

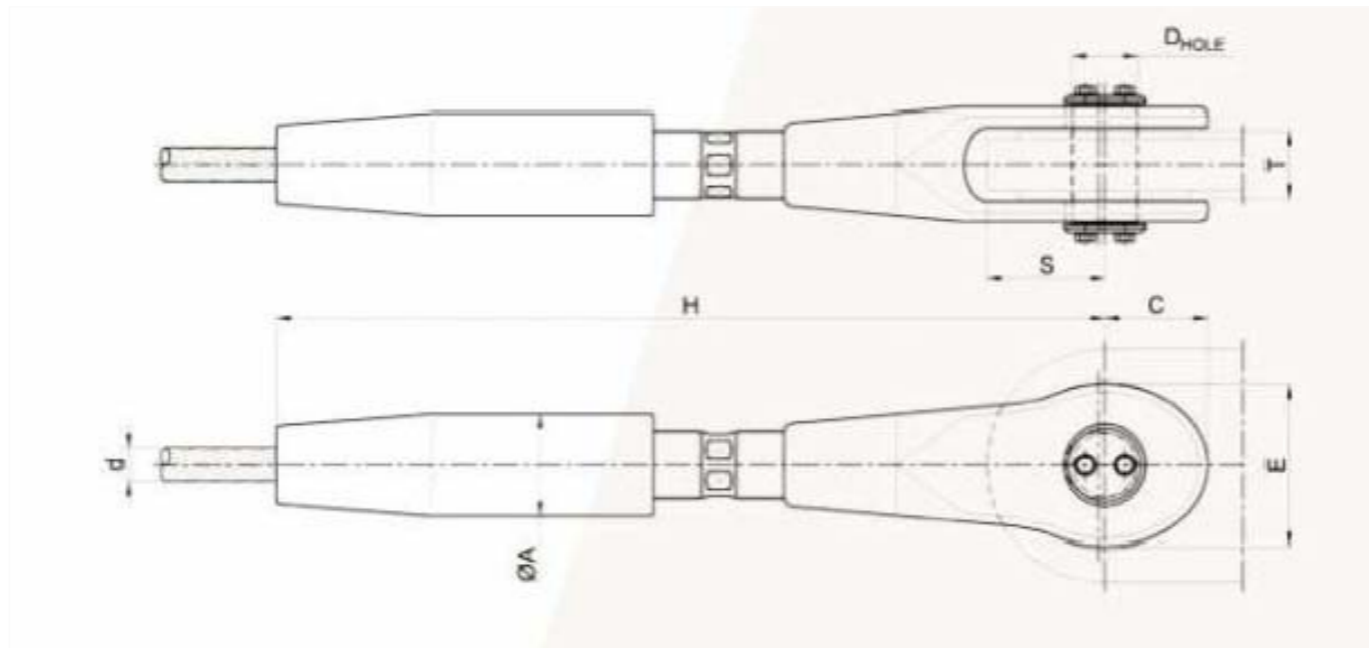
$d_{max}$  Max. Strand Diameter  
 $N_{ch}$  Characteristic Breaking Strength  
 $N_{des}$  Design Resistance  
 $D_{hole}$  Hole Diameter  
 Adj. Adjustment

| PRODUCT CODE | $d_{max}$ (mm) | $N_{ch}$ (kN) | $N_{des}$ (kN) | A (mm) | B (mm) | C (mm) | $D_{hole}$ (mm) | E (mm) | M (mm)  | N (mm) | $T_{max}$ (mm) | $T_{min}$ (mm) | Adj. (mm) | Mass (kg) |
|--------------|----------------|---------------|----------------|--------|--------|--------|-----------------|--------|---------|--------|----------------|----------------|-----------|-----------|
| BRC 12       | 15             | 150           | 107            | 40     | 68     | 80     | 32              | 27     | 16 x 2  | 56     | 46             | 22             | ±150      | 3,5       |
| BRC 16       | 19             | 280           | 187            | 55     | 88     | 104    | 38              | 45     | 20 x 3  | 72     | 24             | 30             | ±150      | 7,0       |
| BRC 20       | 24             | 440           | 293            | 65     | 110    | 126    | 47              | 55     | 24 x 3  | 86     | 30             | 37             | ±150      | 11        |
| BRC 24       | 28             | 620           | 413            | 80     | 132    | 150    | 56              | 65     | 27 x 3  | 102    | 38             | 45             | ±150      | 18        |
| BRC 28       | 32             | 850           | 567            | 90     | 154    | 174    | 66              | 78     | 33 x 4  | 118    | 50             | 56             | ±150      | 27        |
| BRC 32       | 36             | 1150          | 767            | 105    | 176    | 198    | 72              | 85     | 36 x 3  | 134    | 55             | 60             | ±200      | 39        |
| BRC 36       | 40             | 1400          | 953            | 120    | 198    | 220    | 80              | 94     | 39 x 3  | 148    | 65             | 70             | ±200      | 50        |
| BRC 40       | 44             | 1750          | 1187           | 130    | 220    | 242    | 91              | 104    | 42 x 4  | 162    | 70             | 75             | ±200      | 70        |
| BRC 44       | 48             | 2100          | 1400           | 140    | 242    | 268    | 97              | 114    | 46 x 3  | 180    | 80             | 85             | ±200      | 92        |
| BRC 48       | 52             | 2500          | 1657           | 150    | 254    | 292    | 107             | 125    | 52 x 3  | 195    | 90             | 95             | ±200      | 114       |
| BRC 52       | 56             | 2950          | 1957           | 170    | 286    | 316    | 117             | 136    | 56 x 4  | 212    | 95             | 105            | ±200      | 139       |
| BRC 56       | 60             | 3400          | 2267           | 180    | 308    | 338    | 122             | 144    | 60 x 4  | 225    | 105            | 110            | ±200      | 164       |
| BRC 60       | 64             | 3900          | 2600           | 190    | 330    | 358    | 131             | 150    | 60 x 4  | 235    | 115            | 120            | ±200      | 181       |
| BRC 64       | 68             | 4500          | 3000           | 200    | 352    | 384    | 141             | 165    | 68 x 4  | 256    | 125            | 130            | ±250      | 228       |
| BRC 68       | 72             | 5000          | 3333           | 220    | 374    | 408    | 151             | 176    | 72 x 4  | 272    | 130            | 135            | ±250      | 270       |
| BRC 72       | 76             | 5600          | 3733           | 230    | 396    | 434    | 157             | 184    | 76 x 4  | 290    | 140            | 145            | ±250      | 310       |
| BRC 76       | 80             | 6300          | 4200           | 240    | 418    | 456    | 171             | 196    | 80 x 4  | 304    | 150            | 155            | ±250      | 359       |
| BRC 80       | 84             | 7000          | 4667           | 250    | 440    | 480    | 182             | 210    | 85 x 4  | 320    | 155            | 165            | ±250      | 406       |
| BRC 84       | 88             | 7700          | 5133           | 270    | 462    | 504    | 191             | 221    | 90 x 6  | 335    | 165            | 170            | ±250      | 561       |
| BRC 88       | 92             | 8500          | 5667           | 280    | 484    | 530    | 202             | 233    | 95 x 6  | 354    | 175            | 180            | ±250      | 638       |
| BRC 92       | 96             | 9300          | 6200           | 290    | 506    | 556    | 212             | 251    | 105 x 6 | 375    | 185            | 190            | ±250      | 781       |
| BRC 96       | 100            | 10100         | 6733           | 300    | 528    | 584    | 222             | 263    | 110 x 6 | 392    | 190            | 200            | ±250      | 852       |
| BRC 100      | 104            | 10900         | 7267           | 310    | 550    | 608    | 232             | 274    | 115 x 6 | 408    | 195            | 205            | ±300      | 949       |
| BRC 104      | 108            | 11800         | 7867           | 330    | 572    | 632    | 242             | 286    | 120 x 6 | 424    | 205            | 215            | ±300      | 1063      |
| BRC 108      | 112            | 12700         | 8467           | 340    | 594    | 652    | 252             | 293    | 120 x 6 | 435    | 210            | 225            | ±300      | 1125      |
| BRC 112      | 116            | 13900         | 9267           | 350    | 616    | 682    | 272             | 317    | 130 x 6 | 458    | 215            | 230            | ±300      | 1314      |
| BRC 116      | 120            | 14900         | 9933           | 360    | 638    | 702    | 282             | 324    | 130 x 6 | 470    | 225            | 240            | ±300      | 1367      |
| BRC 120      | 124            | 15900         | 10600          | 380    | 660    | 726    | 292             | 338    | 135 x 6 | 485    | 230            | 250            | ±300      | 1533      |
| BRC 124      | 128            | 17000         | 11333          | 390    | 682    | 750    | 303             | 348    | 140 x 6 | 502    | 240            | 255            | ±300      | 1674      |
| BRC 128      | 132            | 18100         | 12067          | 400    | 704    | 774    | 313             | 360    | 145 x 6 | 518    | 250            | 265            | ±300      | 1822      |
| BRC 132      | 136            | 19200         | 12800          | 410    | 726    | 800    | 323             | 372    | 150 x 6 | 535    | 255            | 270            | ±300      | 1981      |
| BRC 136      | 140            | 20400         | 13600          | 430    | 748    | 830    | 333             | 388    | 160 x 6 | 558    | 265            | 280            | ±300      | 2232      |
| BRC 140      | 144            | 21600         | 14400          | 440    | 770    | 858    | 343             | 406    | 170 x 6 | 578    | 270            | 290            | ±300      | 2479      |
| BRC 144      | 148            | 22900         | 15257          | 450    | 792    | 890    | 353             | 423    | 180 x 6 | 602    | 280            | 300            | ±300      | 2749      |
| BRC 148      | 152            | 24300         | 16200          | 460    | 814    | 914    | 363             | 435    | 185 x 6 | 618    | 290            | 310            | ±300      | 2948      |
| BRC 152      | 156            | 25600         | 17067          | 480    | 836    | 938    | 373             | 446    | 190 x 6 | 634    | 300            | 320            | ±300      | 3178      |
| BRC 156      | 160            | 26900         | 17933          | 490    | 858    | 962    | 383             | 458    | 195 x 6 | 650    | 310            | 330            | ±300      | 3398      |

(1) Characteristic Breaking Strength  $F_{ch} = N_{ch}$  (2) Design Resistance  $F_{des} = F_{ch} / 1,5 / \gamma_s$   $F_{ch} = N_{ch}$   
 For European Standard EN 1993-1-1:  $\gamma_s = 1,0$   
 Upon request, we can suggest the effective diameter and the breaking strength of the cable for the specific project.

ADJUSTABLE BRIDGE SOCKET CHART

|   |  |  |   |  |
|---|--|--|---|--|
| SCALE<br>1:100                                    | DRAWING NAME<br>FOUNDATIONS. CABLES' ANCHORING |  | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |  |
| UNITS<br>MILLIMETERS                              | SIGNATURE<br>                                  | DATE<br>JULY 2022  |   |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |  | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |   |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |  |  | DRAWING NUMBER<br>5   |  |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |  |  | SHEET<br>4/4  |  |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |  |  |   |  |



ADJUSTABLE FORK SOCKET



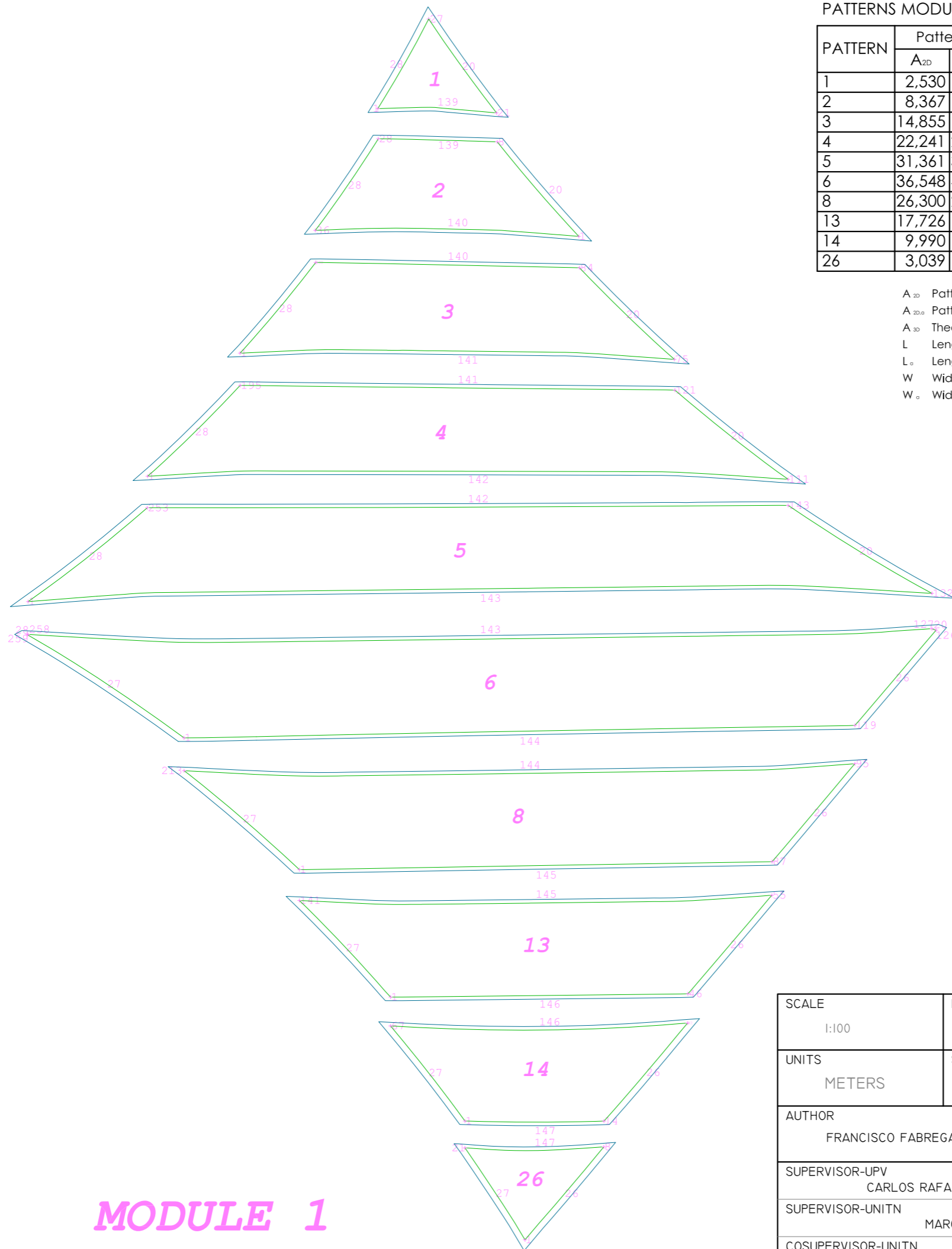
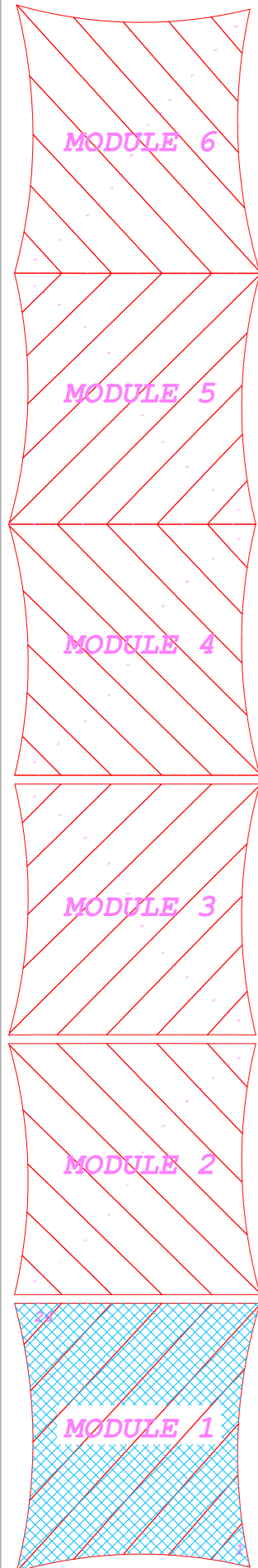
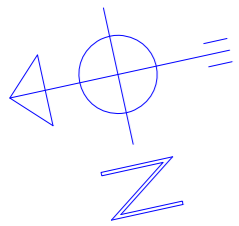
HIGH STRENGTH STEEL ADJUSTABLE FORK SOCKET TBF

$d_{max}$  Max Strand Diameter  
 $N_{ch}$  Characteristic Breaking Strength  
 $N_{des}$  Design Resistance  
 $D_{hole}$  Hole Diameter  
 $S_{max}$  Considering  $T = T_{max}$   
 $A_d$  Adjustment

| PRODUCT CODE | $d_{max}$ (mm) | $N_{ch}$ (kN) | $N_{des}$ (kN) | C (mm) | $D_{hole}$ (mm) | E (mm) | ØA (mm) | H (mm) | $S_{max}$ (mm) | $T_{max}$ (mm) | $T_{min}$ (mm) | Adj. (mm) | Mass (kg) |
|--------------|----------------|---------------|----------------|--------|-----------------|--------|---------|--------|----------------|----------------|----------------|-----------|-----------|
| TBF 12       | 15             | 190           | 127            | 38     | 25,5            | 60     | 40      | 313    | 60             | 16             | 22             | ± 30      | 2,3       |
| TBF 15       | 19             | 320           | 213            | 48     | 32              | 78     | 55      | 398    | 60             | 24             | 30             | ± 40      | 5,3       |
| TBF 20       | 24             | 490           | 327            | 60     | 39              | 94     | 65      | 483    | 75             | 30             | 37             | ± 50      | 9,2       |
| TBF 24       | 28             | 700           | 467            | 72     | 46              | 112    | 75      | 588    | 85             | 38             | 45             | ± 65      | 15        |
| TBF 28       | 32             | 970           | 647            | 84     | 54              | 132    | 90      | 675    | 100            | 50             | 56             | ± 75      | 24        |
| TBF 32       | 36             | 1285          | 857            | 95     | 61              | 150    | 100     | 779    | 110            | 55             | 60             | ± 90      | 35        |
| TBF 36       | 40             | 1615          | 1077           | 104    | 67              | 164    | 110     | 873    | 120            | 65             | 70             | ± 100     | 49        |
| TBF 40       | 44             | 1955          | 1303           | 120    | 75              | 188    | 120     | 988    | 135            | 70             | 75             | ± 110     | 65        |
| TBF 44       | 48             | 2350          | 1567           | 130    | 83              | 205    | 130     | 1057   | 145            | 80             | 85             | ± 120     | 87        |
| TBF 48       | 52             | 2765          | 1843           | 140    | 90              | 220    | 145     | 1152   | 155            | 90             | 95             | ± 130     | 117       |
| TBF 52       | 56             | 3300          | 2200           | 154    | 98              | 242    | 155     | 1247   | 170            | 95             | 105            | ± 140     | 143       |
| TBF 56       | 60             | 3900          | 2600           | 172    | 109             | 270    | 165     | 1347   | 185            | 105            | 110            | ± 150     | 179       |
| TBF 60       | 64             | 4400          | 2933           | 182    | 116             | 286    | 180     | 1432   | 205            | 115            | 120            | ± 160     | 221       |
| TBF 64       | 68             | 5000          | 3333           | 196    | 124             | 308    | 190     | 1547   | 215            | 125            | 130            | ± 180     | 269       |
| TBF 68       | 72             | 5550          | 3700           | 208    | 131             | 325    | 200     | 1662   | 230            | 130            | 135            | ± 200     | 317       |
| TBF 72       | 76             | 6250          | 4167           | 218    | 138             | 345    | 210     | 1752   | 240            | 140            | 145            | ± 200     | 370       |
| TBF 76       | 80             | 7000          | 4667           | 232    | 146             | 365    | 225     | 1826   | 255            | 150            | 155            | ± 200     | 440       |
| TBF 80       | 84             | 7700          | 5133           | 245    | 154             | 386    | 235     | 1917   | 270            | 155            | 165            | ± 200     | 509       |
| TBF 84       | 88             | 8500          | 5667           | 256    | 161             | 404    | 245     | 1992   | 280            | 165            | 170            | ± 200     | 584       |
| TBF 88       | 92             | 9400          | 6267           | 282    | 179             | 442    | 260     | 2082   | 300            | 175            | 180            | ± 200     | 692       |
| TBF 92       | 96             | 10200         | 6800           | 293    | 187             | 462    | 270     | 2196   | 315            | 185            | 190            | ± 200     | 789       |
| TBF 96       | 100            | 11100         | 7400           | 306    | 194             | 482    | 280     | 2266   | 325            | 190            | 200            | ± 200     | 877       |
| TBF 100      | 104            | 12000         | 8000           | 320    | 202             | 502    | 295     | 2346   | 345            | 195            | 205            | ± 200     | 999       |
| TBF 104      | 108            | 13000         | 8667           | 332    | 210             | 522    | 305     | 2416   | 355            | 205            | 215            | ± 200     | 1104      |
| TBF 108      | 112            | 14000         | 9333           | 345    | 218             | 544    | 315     | 2491   | 370            | 210            | 225            | ± 200     | 1218      |
| TBF 112      | 116            | 15200         | 10133          | 362    | 227             | 570    | 325     | 2561   | 385            | 215            | 230            | ± 200     | 1346      |
| TBF 116      | 120            | 16150         | 10767          | 375    | 236             | 592    | 340     | 2626   | 400            | 225            | 240            | ± 200     | 1499      |
| TBF 120      | 124            | 17400         | 11600          | 388    | 243             | 612    | 350     | 2691   | 410            | 230            | 250            | ± 200     | 1646      |
| TBF 124      | 128            | 18450         | 12300          | 400    | 252             | 632    | 360     | 2766   | 430            | 240            | 255            | ± 200     | 1798      |
| TBF 128      | 132            | 19800         | 13200          | 412    | 259             | 650    | 370     | 2861   | 440            | 250            | 265            | ± 210     | 1968      |
| TBF 132      | 136            | 20900         | 13933          | 425    | 267             | 672    | 380     | 2920   | 450            | 255            | 270            | ± 210     | 2123      |
| TBF 136      | 140            | 22200         | 14800          | 438    | 275             | 692    | 390     | 2968   | 465            | 265            | 280            | ± 210     | 2304      |
| TBF 140      | 144            | 23500         | 15667          | 452    | 283             | 715    | 410     | 3065   | 475            | 270            | 290            | ± 210     | 2545      |
| TBF 144      | 148            | 24850         | 16567          | 466    | 292             | 736    | 420     | 3128   | 490            | 280            | 300            | ± 210     | 2791      |
| TBF 148      | 152            | 26250         | 17500          | 479    | 300             | 756    | 430     | 3181   | 500            | 290            | 310            | ± 210     | 2965      |
| TBF 152      | 156            | 27700         | 18487          | 492    | 308             | 776    | 445     | 3249   | 515            | 295            | 320            | ± 210     | 3225      |
| TBF 156      | 160            | 29150         | 19433          | 506    | 316             | 796    | 455     | 3317   | 525            | 300            | 330            | ± 210     | 3467      |

ADJUSTABLE FORK SOCKET CHART

|   |   |  |   |                     |
|---|---|--|---|---------------------|
| SCALE<br>1:100                                    | DRAWING NAME<br>JOINTS. CABLES' SOCKETS |  | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |                     |
| UNITS<br>MILLIMETERS                              | SIGNATURE<br>                           | DATE<br>JULY 2022  |   |                     |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |   |                     |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   |  |   | DRAWING NUMBER<br>6 |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |  |   |                     |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   |  |   |                     |



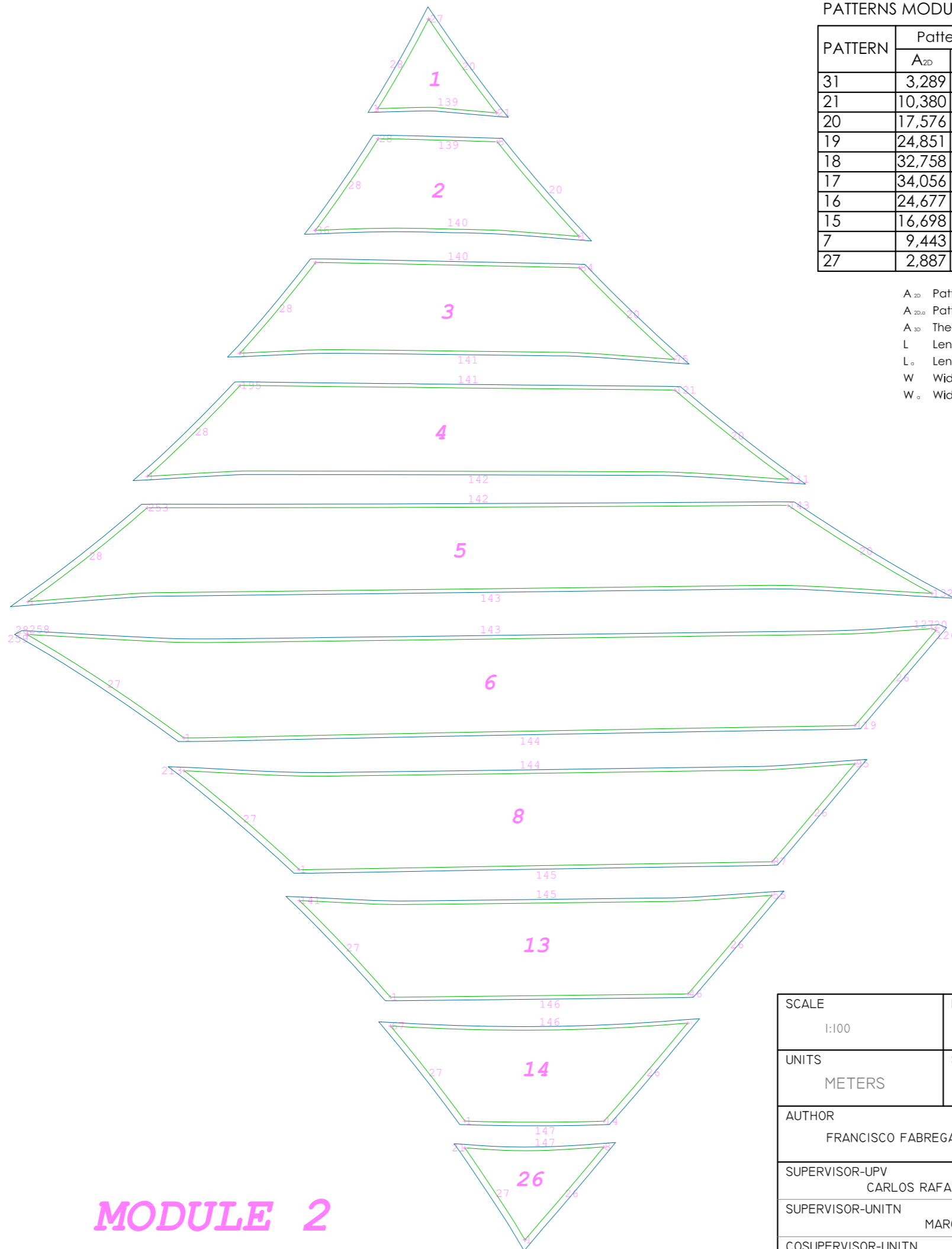
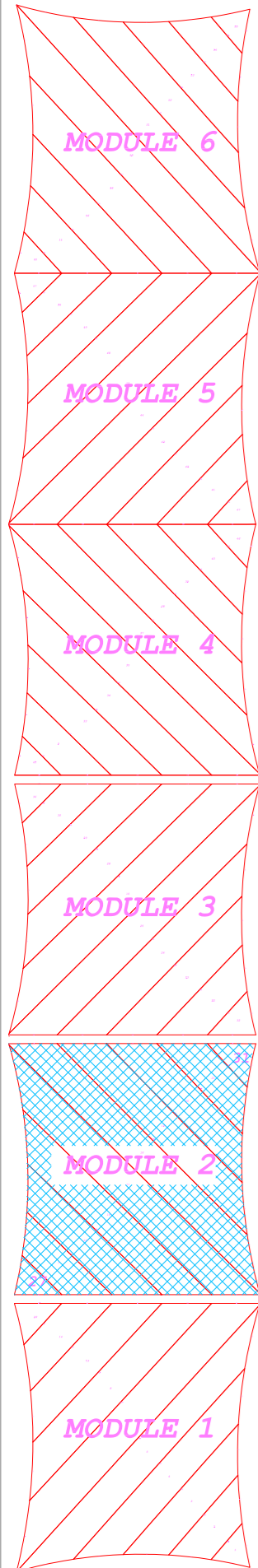
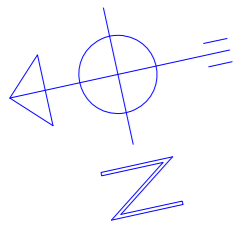
**MODULE 1**

PATTERNS MODULE 1

| PATTERN | Pattern area [m <sup>2</sup> ] |                   |                 | Length [m] |                | Width [m] |                |
|---------|--------------------------------|-------------------|-----------------|------------|----------------|-----------|----------------|
|         | A <sub>2D</sub>                | A <sub>2D,a</sub> | A <sub>3D</sub> | L          | L <sub>a</sub> | W         | W <sub>a</sub> |
| 1       | 2,530                          | 3,507             | 2,675           | 2,651      | 3,132          | 2,096     | 2,466          |
| 2       | 8,367                          | 9,852             | 8,837           | 5,886      | 6,416          | 2,179     | 2,363          |
| 3       | 14,855                         | 16,955            | 15,688          | 9,703      | 10,310         | 2,164     | 2,347          |
| 4       | 22,241                         | 25,099            | 23,487          | 14,308     | 15,021         | 2,097     | 2,282          |
| 5       | 31,361                         | 35,222            | 33,113          | 20,192     | 21,086         | 2,152     | 2,343          |
| 6       | 36,548                         | 40,421            | 38,586          | 20,296     | 20,816         | 2,439     | 2,610          |
| 8       | 26,300                         | 29,291            | 27,772          | 14,982     | 15,608         | 2,364     | 2,542          |
| 13      | 17,726                         | 19,988            | 18,719          | 10,554     | 11,121         | 2,273     | 2,448          |
| 14      | 9,990                          | 11,613            | 10,549          | 6,636      | 7,164          | 2,213     | 2,392          |
| 26      | 3,039                          | 4,091             | 3,206           | 3,102      | 3,607          | 2,077     | 2,416          |

- A<sub>2D</sub> Pattern area
- A<sub>2D,a</sub> Pattern area including allowances
- A<sub>3D</sub> Theoretical pattern area in 3D position
- L Length of the pattern in warp direction
- L<sub>a</sub> Length of the pattern in warp direction considering allowances
- W Width of the pattern in weft direction
- W<sub>a</sub> Width of the pattern considering allowances

|   |   |  |   |  |
|---|---|--|---|--|
| SCALE<br>1:100                                    | DRAWING NAME<br>CUTTING-PATTERN. MODULE 1 |  | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |  |
| UNITS<br>METERS                                   | SIGNATURE<br>                             | DATE<br>JULY 2022  | "REGIDOR VICENT MASCARELL"  |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |   |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   | UNIVERSITAT POLITÈCNICA DE VALÈNCIA<br>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS          | DRAWING NUMBER<br>7   |  |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |  | SHEET<br>1/6  |  |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   | UNIVERSITÀ DI TRENTO   |   |  |



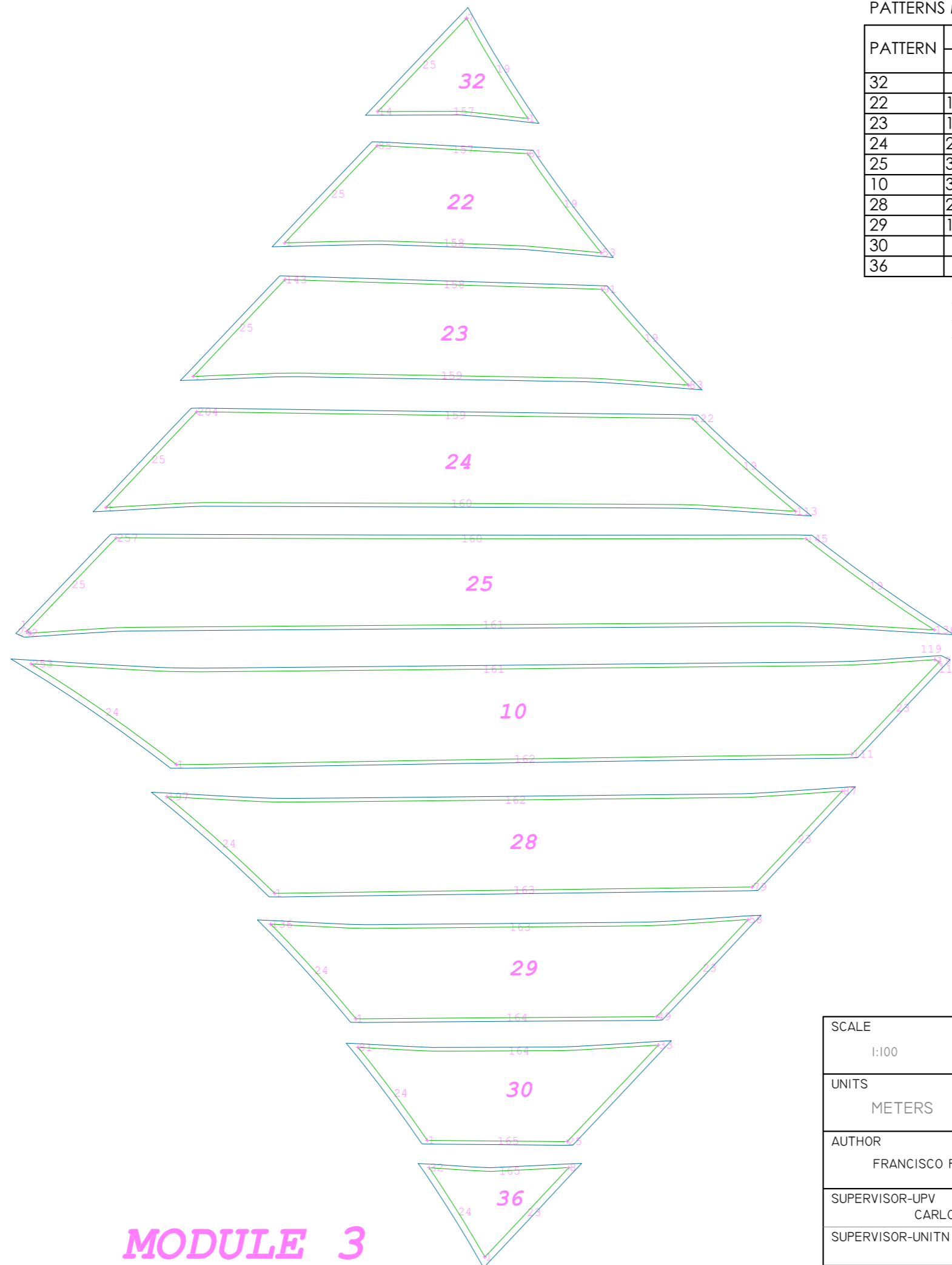
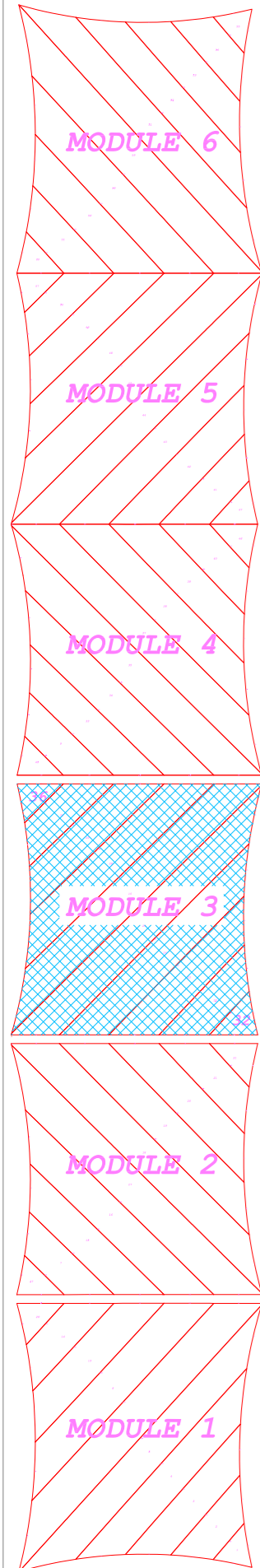
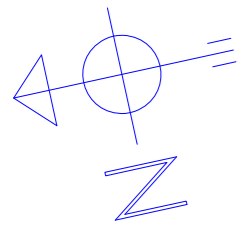
**MODULE 2**

**PATTERNS MODULE 2**

| PATTERN | Pattern area [m <sup>2</sup> ] |                   |                 | Length [m] |                | Width [m] |                |
|---------|--------------------------------|-------------------|-----------------|------------|----------------|-----------|----------------|
|         | A <sub>2D</sub>                | A <sub>2D,0</sub> | A <sub>3D</sub> | L          | L <sub>0</sub> | W         | W <sub>0</sub> |
| 31      | 3,289                          | 4,383             | 3,476           | 3,278      | 3,787          | 2,188     | 2,529          |
| 21      | 10,380                         | 12,047            | 10,962          | 6,912      | 7,451          | 2,331     | 2,519          |
| 20      | 17,576                         | 19,866            | 18,561          | 10,819     | 11,402         | 2,295     | 2,476          |
| 19      | 24,851                         | 27,822            | 26,242          | 15,058     | 15,700         | 2,178     | 2,349          |
| 18      | 32,758                         | 36,509            | 34,586          | 19,820     | 20,483         | 2,077     | 2,247          |
| 17      | 34,056                         | 37,835            | 35,957          | 19,817     | 20,491         | 2,297     | 2,467          |
| 16      | 24,677                         | 27,604            | 26,058          | 14,734     | 15,364         | 2,234     | 2,412          |
| 15      | 16,698                         | 18,919            | 17,633          | 10,425     | 11,005         | 2,166     | 2,340          |
| 7       | 9,443                          | 11,038            | 9,973           | 6,581      | 7,126          | 2,092     | 2,271          |
| 27      | 2,887                          | 3,919             | 3,051           | 3,092      | 3,606          | 1,987     | 2,313          |

- A<sub>2D</sub> Pattern area
- A<sub>2D,0</sub> Pattern area including allowances
- A<sub>3D</sub> Theoretical pattern area in 3D position
- L Length of the pattern in warp direction
- L<sub>0</sub> Length of the pattern in warp direction considering allowances
- W Width of the pattern in weft direction
- W<sub>0</sub> Width of the pattern considering allowances

|   |   |   |                            |
|---|---|---|----------------------------|
| SCALE<br>1:100                                    | DRAWING NAME<br>CUTTING-PATTERN. MODULE 2 | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |                            |
| UNITS<br>METERS                                   | SIGNATURE<br>                             | DATE<br>JULY 2022   | "REGIDOR VICENT MASCARELL" |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE    |                            |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   | UNIVERSITAT POLITÈCNICA DE VALÈNCIA<br>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS             | DRAWING NUMBER<br>7        |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |   | SHEET<br>2/6               |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   | UNIVERSITÀ DI TRENTO  |                            |



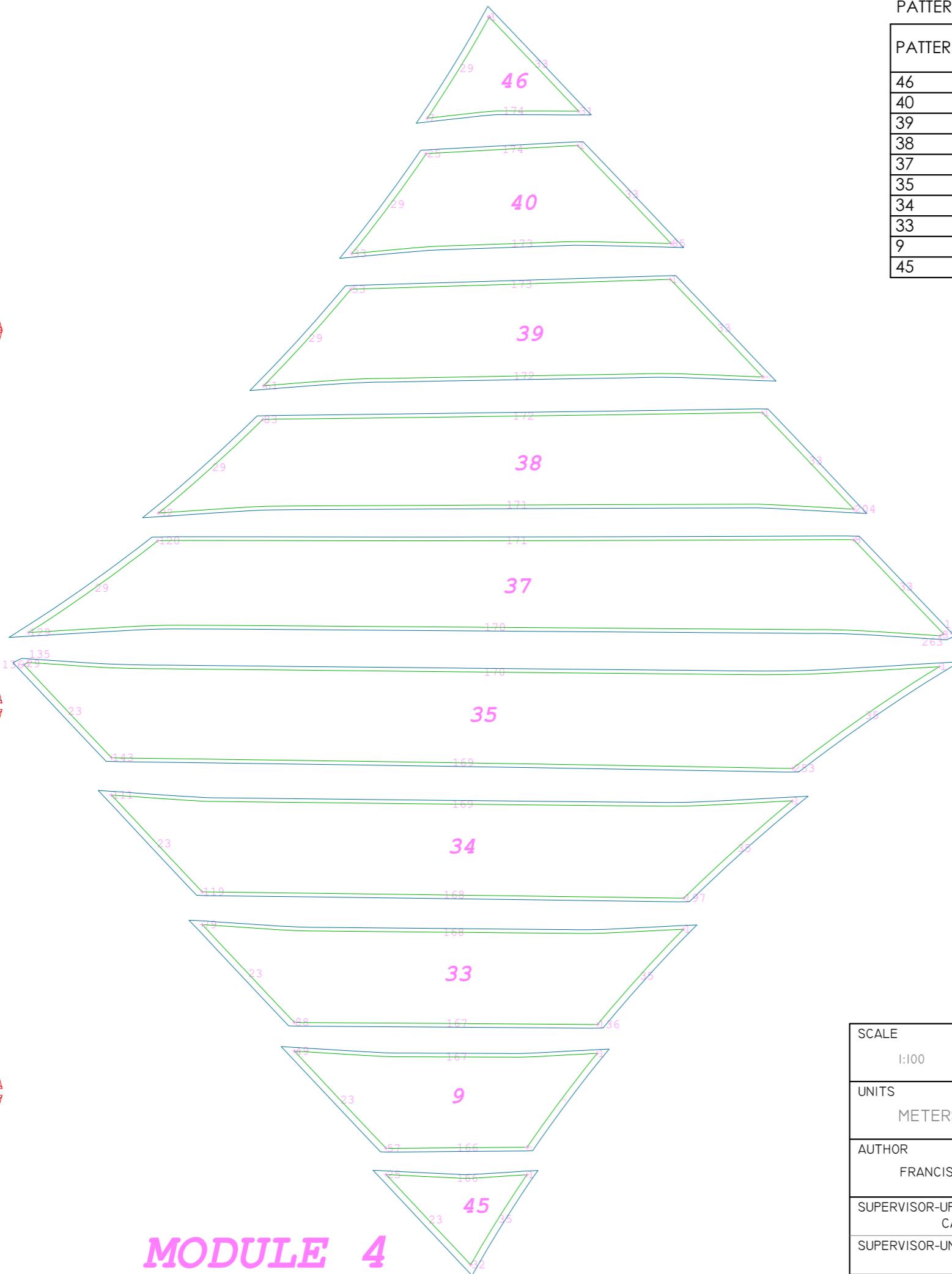
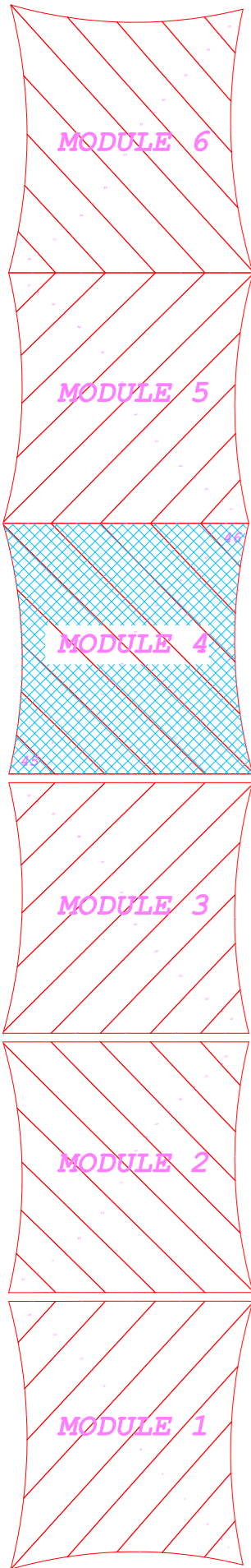
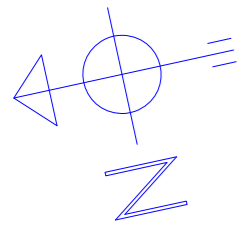
**MODULE 3**

**PATTERNS MODULE 3**

| PATTERN | Pattern area [m <sup>2</sup> ] |                   |                 | Length [m] |                | Width [m] |                |
|---------|--------------------------------|-------------------|-----------------|------------|----------------|-----------|----------------|
|         | A <sub>2D</sub>                | A <sub>2D,a</sub> | A <sub>3D</sub> | L          | L <sub>a</sub> | W         | W <sub>a</sub> |
| 32      | 3,282                          | 4,378             | 3,469           | 3,271      | 3,780          | 2,187     | 2,529          |
| 22      | 10,366                         | 12,031            | 10,947          | 6,901      | 7,441          | 2,336     | 2,524          |
| 23      | 17,546                         | 19,832            | 18,529          | 10,800     | 11,377         | 2,299     | 2,486          |
| 24      | 24,803                         | 27,769            | 26,192          | 15,035     | 15,666         | 2,172     | 2,354          |
| 25      | 32,732                         | 36,478            | 34,559          | 19,792     | 20,456         | 2,079     | 2,248          |
| 10      | 34,017                         | 37,793            | 35,915          | 19,804     | 20,478         | 2,288     | 2,458          |
| 28      | 24,677                         | 27,604            | 26,058          | 14,725     | 15,354         | 2,229     | 2,407          |
| 29      | 16,714                         | 18,934            | 17,650          | 10,411     | 10,988         | 2,164     | 2,338          |
| 30      | 9,398                          | 10,989            | 9,926           | 6,550      | 7,091          | 2,104     | 2,282          |
| 36      | 2,809                          | 3,828             | 2,969           | 3,048      | 3,566          | 1,951     | 2,275          |

- A<sub>2D</sub> Pattern area
- A<sub>2D,a</sub> Pattern area including allowances
- A<sub>3D</sub> Theoretical pattern area in 3D position
- L Length of the pattern in warp direction
- L<sub>a</sub> Length of the pattern in warp direction considering allowances
- W Width of the pattern in weft direction
- W<sub>a</sub> Width of the pattern considering allowances

|   |   |   |                            |
|---|---|---|----------------------------|
| SCALE<br>1:100                                    | DRAWING NAME<br>CUTTING-PATTERN. MODULE 3 | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |                            |
| UNITS<br>METERS                                   | SIGNATURE<br>                             | DATE<br>JULY 2022   | "REGIDOR VICENT MASCARELL" |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE    |                            |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   | UNIVERSITAT POLITÈCNICA DE VALÈNCIA<br>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS             | DRAWING NUMBER<br>7        |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |   | SHEET<br>3/6               |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   | UNIVERSITÀ DI TRENTO  |                            |



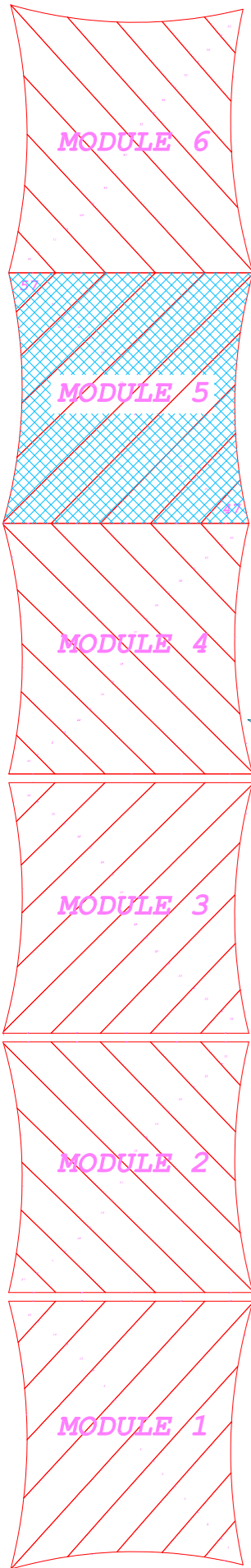
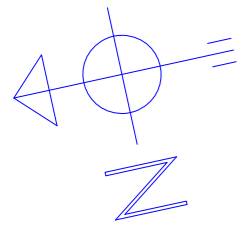
**MODULE 4**

PATTERNS MODULE 4

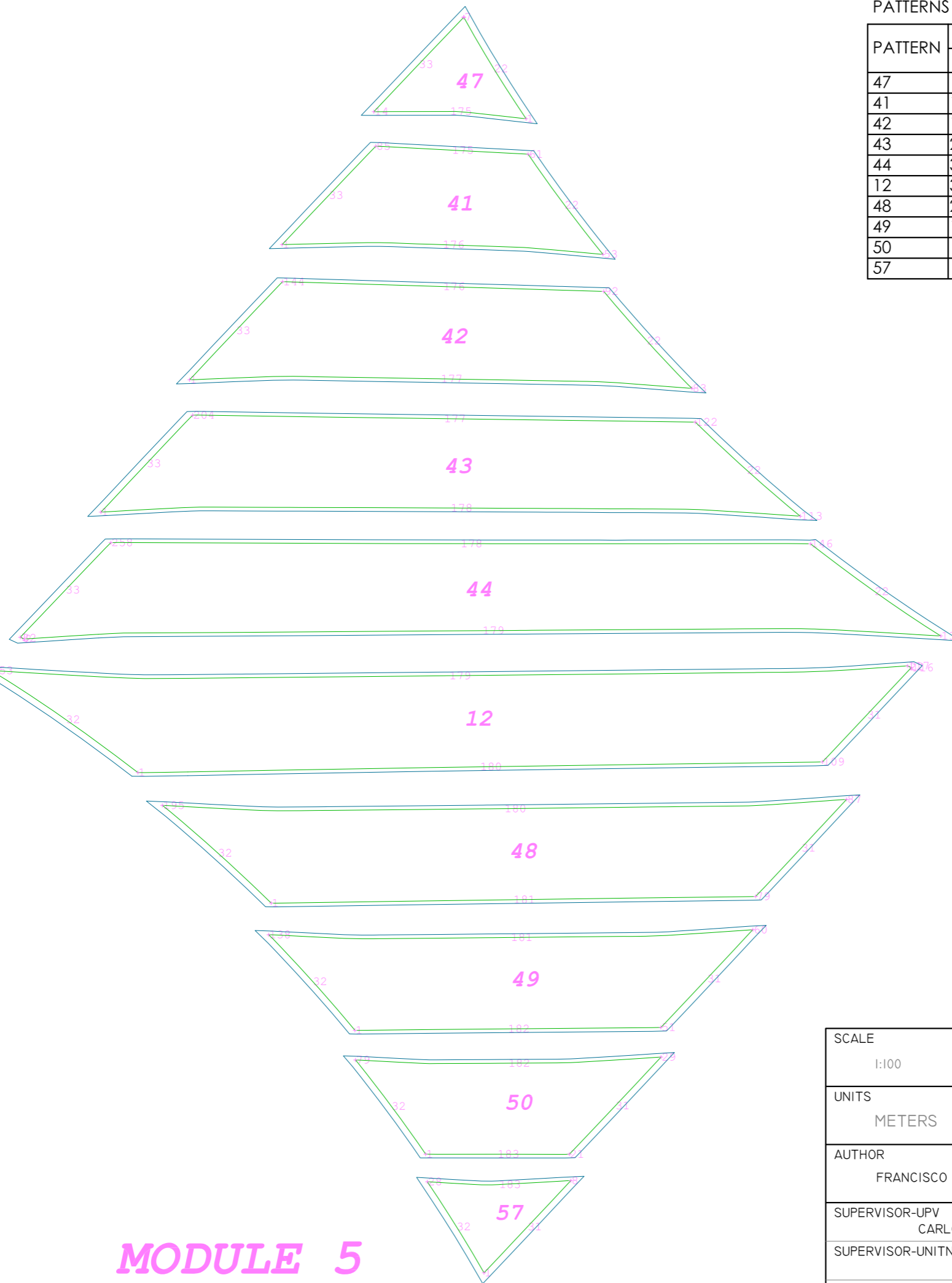
| PATTERN | Pattern area [m <sup>2</sup> ] |                   |                 | Length [m] |                | Width [m] |                |
|---------|--------------------------------|-------------------|-----------------|------------|----------------|-----------|----------------|
|         | A <sub>2D</sub>                | A <sub>2D,a</sub> | A <sub>3D</sub> | L          | L <sub>a</sub> | W         | W <sub>a</sub> |
| 46      | 3,282                          | 4,375             | 3,469           | 3,271      | 3,780          | 2,187     | 2,528          |
| 40      | 10,366                         | 12,031            | 10,947          | 6,901      | 7,441          | 2,336     | 2,524          |
| 39      | 17,545                         | 19,831            | 18,527          | 10,800     | 11,377         | 2,299     | 2,486          |
| 38      | 24,804                         | 27,771            | 26,193          | 15,035     | 15,666         | 2,172     | 2,355          |
| 37      | 32,732                         | 36,478            | 34,559          | 19,792     | 20,456         | 2,079     | 2,248          |
| 35      | 34,015                         | 37,792            | 35,913          | 19,804     | 20,478         | 2,289     | 2,458          |
| 34      | 24,687                         | 27,613            | 26,069          | 14,725     | 15,354         | 2,230     | 2,408          |
| 33      | 16,702                         | 18,922            | 17,637          | 10,409     | 10,987         | 2,162     | 2,336          |
| 9       | 9,403                          | 10,995            | 9,931           | 6,551      | 7,093          | 2,105     | 2,283          |
| 45      | 2,808                          | 3,827             | 2,968           | 3,047      | 3,566          | 1,951     | 2,275          |

- A<sub>2D</sub> Pattern area
- A<sub>2D,a</sub> Pattern area including allowances
- A<sub>3D</sub> Theoretical pattern area in 3D position
- L Length of the pattern in warp direction
- L<sub>a</sub> Length of the pattern in warp direction considering allowances
- W Width of the pattern in weft direction
- W<sub>a</sub> Width of the pattern considering allowances

|   |   |   |                            |
|---|---|---|----------------------------|
| SCALE<br>1:100                                    | DRAWING NAME<br>CUTTING-PATTERN. MODULE 4 | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |                            |
| UNITS<br>METERS                                   | SIGNATURE<br>                             | DATE<br>JULY 2022   | "REGIDOR VICENT MASCARELL" |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE    |                            |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   | UNIVERSITAT POLITÈCNICA DE VALÈNCIA<br>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS             | DRAWING NUMBER<br>7        |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |   | SHEET<br>4/6               |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   | UNIVERSITÀ DI TRENTO  |                            |



**MODULE 5**

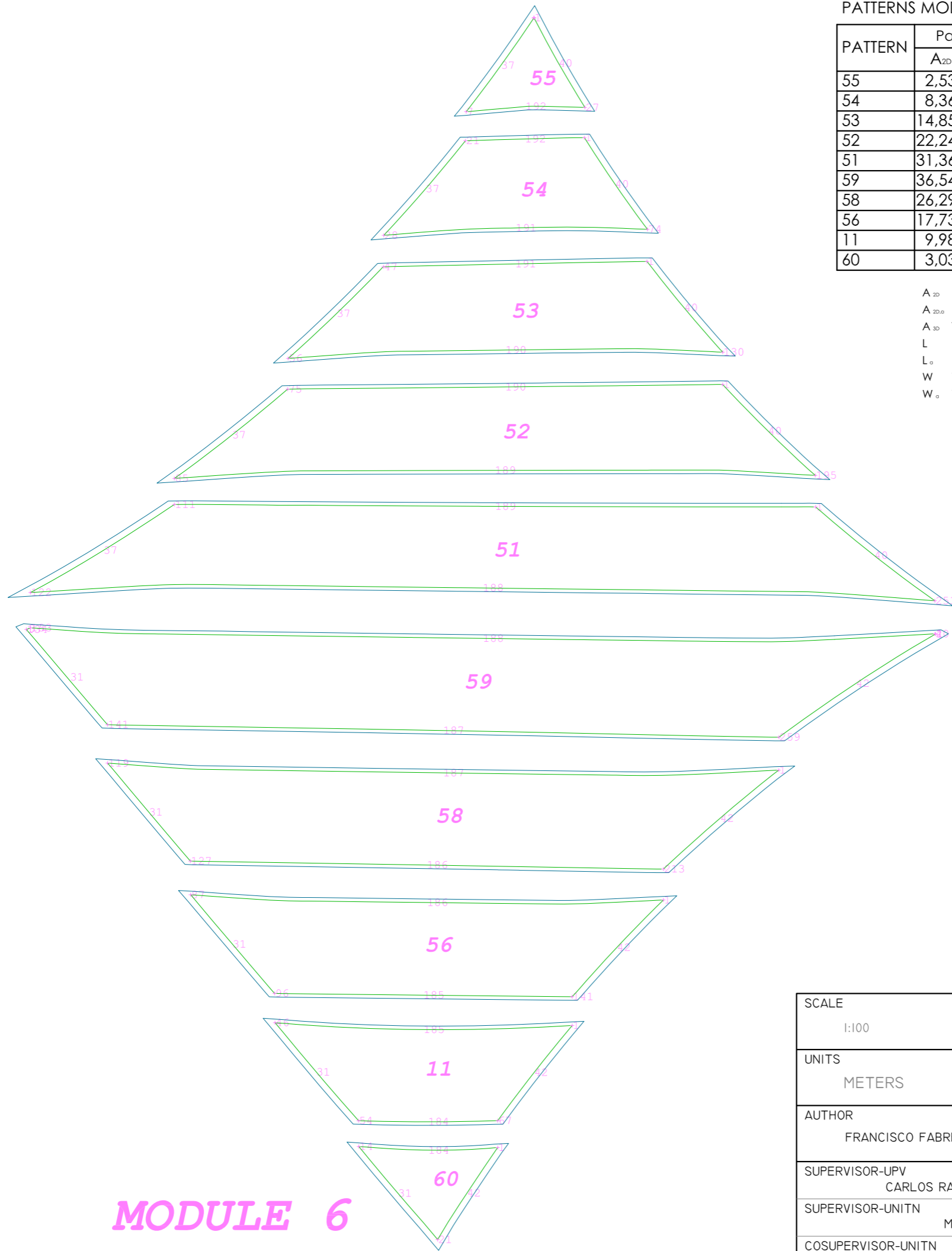
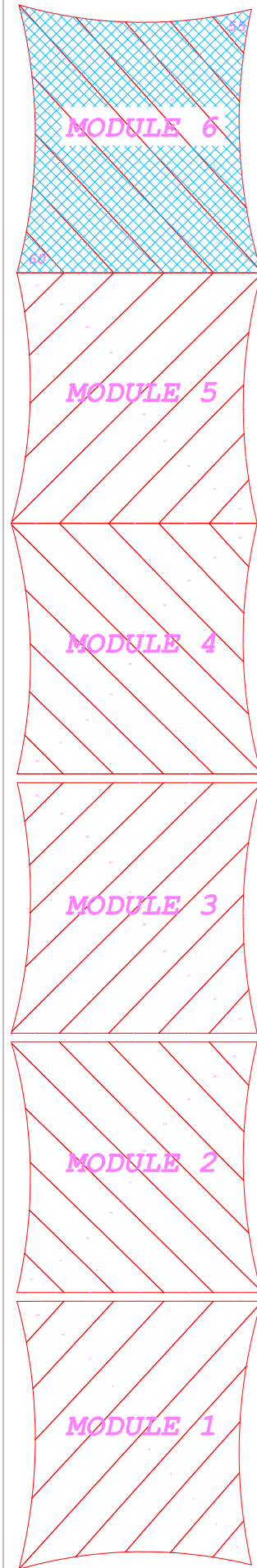
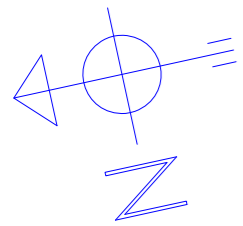


**PATTERNS MODULE 5**

| PATTERN | Pattern area [m <sup>2</sup> ] |                   |                 | Length [m] |                | Width [m] |                |
|---------|--------------------------------|-------------------|-----------------|------------|----------------|-----------|----------------|
|         | A <sub>2D</sub>                | A <sub>2D,a</sub> | A <sub>3D</sub> | L          | L <sub>a</sub> | W         | W <sub>a</sub> |
| 47      | 3,289                          | 4,383             | 3,476           | 3,278      | 3,787          | 2,188     | 2,529          |
| 41      | 10,368                         | 12,034            | 10,950          | 6,909      | 7,448          | 2,329     | 2,519          |
| 42      | 17,588                         | 19,878            | 18,574          | 10,819     | 11,402         | 2,297     | 2,478          |
| 43      | 24,851                         | 27,822            | 26,242          | 15,058     | 15,700         | 2,177     | 2,349          |
| 44      | 32,758                         | 36,509            | 34,586          | 19,820     | 20,483         | 2,077     | 2,247          |
| 12      | 34,059                         | 37,838            | 35,960          | 19,817     | 20,491         | 2,298     | 2,467          |
| 48      | 24,674                         | 27,601            | 26,055          | 14,733     | 15,363         | 2,234     | 2,413          |
| 49      | 16,697                         | 18,917            | 17,632          | 10,425     | 11,005         | 2,166     | 2,341          |
| 50      | 9,447                          | 11,042            | 9,977           | 6,582      | 7,126          | 2,094     | 2,272          |
| 57      | 2,885                          | 3,917             | 3,049           | 3,091      | 3,605          | 1,986     | 2,312          |

- A<sub>2D</sub> Pattern area
- A<sub>2D,a</sub> Pattern area including allowances
- A<sub>3D</sub> Theoretical pattern area in 3D position
- L Length of the pattern in warp direction
- L<sub>a</sub> Length of the pattern in warp direction considering allowances
- W Width of the pattern in weft direction
- W<sub>a</sub> Width of the pattern considering allowances

|   |   |  |   |  |
|---|---|--|---|--|
| SCALE<br>1:100                                    | DRAWING NAME<br>CUTTING-PATTERN. MODULE 5 |  | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |  |
| UNITS<br>METERS                                   | SIGNATURE<br>                             | DATE<br>JULY 2022  | "REGIDOR VICENT MASCARELL"  |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |   |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   | UNIVERSITAT POLITÈCNICA DE VALÈNCIA<br>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS          | DRAWING NUMBER<br>7   |  |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |  | SHEET<br>5/6  |  |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   | UNIVERSITÀ DI TRENTO   |   |  |



**MODULE 6**

PATTERNS MODULE 6

| PATTERN | Pattern area [m <sup>2</sup> ] |                   |                 | Length [m] |                | Width [m] |                |
|---------|--------------------------------|-------------------|-----------------|------------|----------------|-----------|----------------|
|         | A <sub>2D</sub>                | A <sub>2D,a</sub> | A <sub>3D</sub> | L          | L <sub>a</sub> | W         | W <sub>a</sub> |
| 55      | 2,530                          | 3,507             | 2,675           | 2,651      | 3,132          | 2,096     | 2,466          |
| 54      | 8,367                          | 9,852             | 8,837           | 5,886      | 6,416          | 2,179     | 2,363          |
| 53      | 14,855                         | 16,955            | 15,688          | 9,703      | 10,310         | 2,164     | 2,347          |
| 52      | 22,241                         | 25,099            | 23,487          | 14,308     | 15,021         | 2,097     | 2,282          |
| 51      | 31,362                         | 35,223            | 33,114          | 20,192     | 21,087         | 2,152     | 2,344          |
| 59      | 36,543                         | 40,416            | 38,581          | 20,296     | 20,816         | 2,441     | 2,611          |
| 58      | 26,297                         | 29,288            | 27,769          | 14,982     | 15,608         | 2,364     | 2,542          |
| 56      | 17,734                         | 19,987            | 18,728          | 10,555     | 11,122         | 2,274     | 2,449          |
| 11      | 9,989                          | 11,612            | 10,547          | 6,635      | 7,164          | 2,212     | 2,392          |
| 60      | 3,039                          | 4,091             | 3,206           | 3,102      | 3,607          | 2,077     | 2,416          |

- A<sub>2D</sub> Pattern area
- A<sub>2D,a</sub> Pattern area including allowances
- A<sub>3D</sub> Theoretical pattern area in 3D position
- L Length of the pattern in warp direction
- L<sub>a</sub> Length of the pattern in warp direction considering allowances
- W Width of the pattern in weft direction
- W<sub>a</sub> Width of the pattern considering allowances

|   |   |  |   |  |
|---|---|--|---|--|
| SCALE<br>1:100                                    | DRAWING NAME<br>CUTTING-PATTERN. MODULE 6 |  | BASIC STRUCTURAL PROJECT OF A LIGHTWEIGHT TENSILE FABRIC ROOF FOR THE VALENCIAN PILOTA COURT "REGIDOR VICENT MASCARELL" |  |
| UNITS<br>METERS                                   | SIGNATURE<br>                             | DATE<br>JULY 2022  | "REGIDOR VICENT MASCARELL"  |  |
| AUTHOR<br>FRANCISCO FABREGAT BARBERÁN             |   | DEGREE<br>MÁSTER UNIVERSITARIO EN INGENIERÍA DE CAMINOS, CANALES Y PUERTOS<br>LAUREA MAGISTRALE IN INGEGNERIA CIVILE |   |  |
| SUPERVISOR-UPV<br>CARLOS RAFAEL SÁNCHEZ CARRATALÁ |   | UNIVERSITAT POLITÈCNICA DE VALÈNCIA<br>ESCUELA TÉCNICA SUPERIOR DE INGENIEROS DE CAMINOS, CANALES Y PUERTOS          | DRAWING NUMBER<br>7   |  |
| SUPERVISOR-UNITN<br>MARCO BROCCARDO               |   |  | SHEET<br>6/6  |  |
| COSUPERVISOR-UNITN<br>DIEGO MISSERONI             |   | UNIVERSITÀ DI TRENTO   |   |  |