

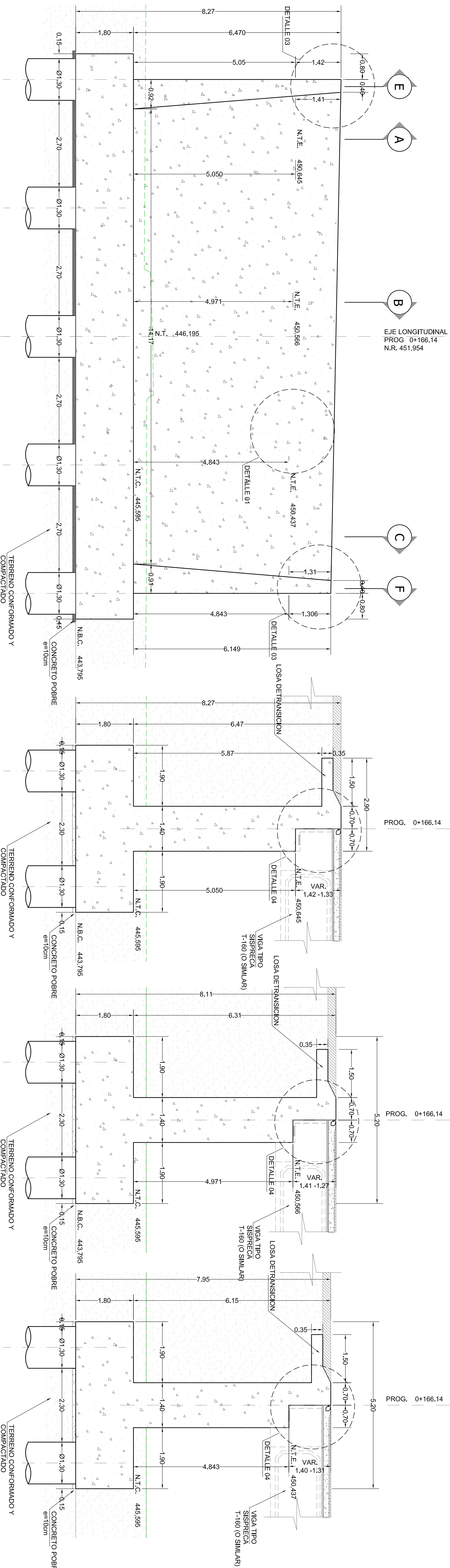
#### Additional description:

The bridge structure serves as a connection with an existing highway of 4 lanes. The deck has 7 precast concrete beams and a concrete deck slab (thickness = 20 cm) and 5 cm of asphalt surface. There are 2 abutments to connect the access ramps to the bridge and to the highway and 3 reinforcement concrete bents with two piers each. The abutments and the bents are supported by groups of drilled shafts. The shaft group of the bents has 15 piles and the shaft group of the abutments has 10 piles. The piles have a maximum depth of 18 m and the maximum diameter is 1.30 m. The retaining walls for the access ramps were designed and constructed with mechanically stabilized earth walls (MSE walls) supported on continuous footings.

The software GEO5 was very useful as a geotechnical and structural design tool and allowed to develop different alternatives for the soil/foundation system, abutments and the earth retaining walls.

According to the information reported on the Geotechnical Survey and the capabilities of GEO5, it was possible to analyse different solution alternatives connecting the geotechnical design proposals with the bridge structural project, specifically with the following infrastructure components: abutments, drilled shafts, retaining wall elements, mechanically stabilized earth walls (MSE) and footings, according to the requirements of the current codes, in this case: AASHTO LRFD Bridge, ACI-318 and the local seismic codes.

With GEO5 we were able to optimize the dimensions of the foundation systems and the retaining wall elements in real time and analyse different geotechnical and structural solutions together with the company in charge of the bridge construction.

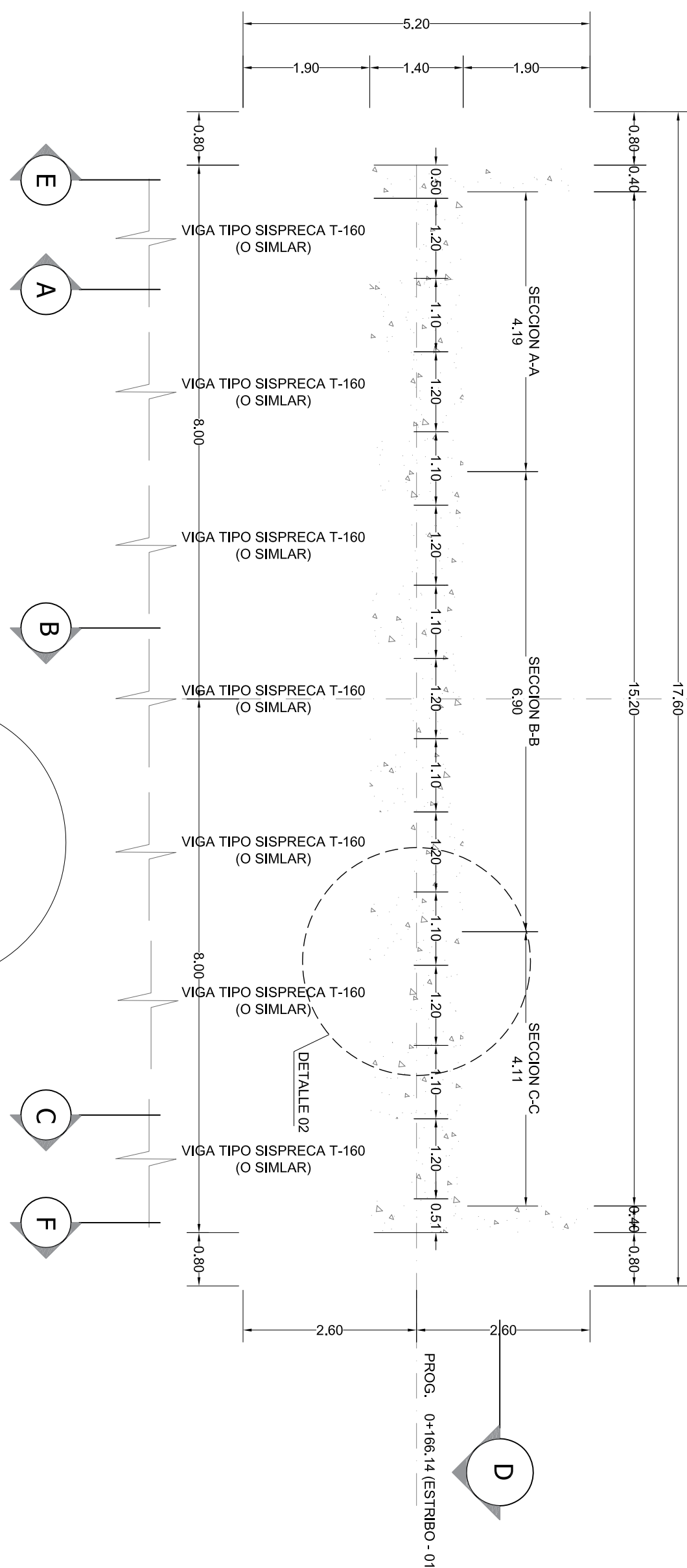


SECCION TRANSVERSAL D-D  
ESTRIBO - 01  
ESC. 1:125

SECCION LONGITUDINAL A-A  
ESTRIBO - 01  
ESC. 1:125

SECCION LONGITUDINAL B-B  
ESTRIBO - 01  
ESC. 1:125

SECCION LONGITUDINAL C-C  
ESTRIBO - 01  
ESC. 1:125



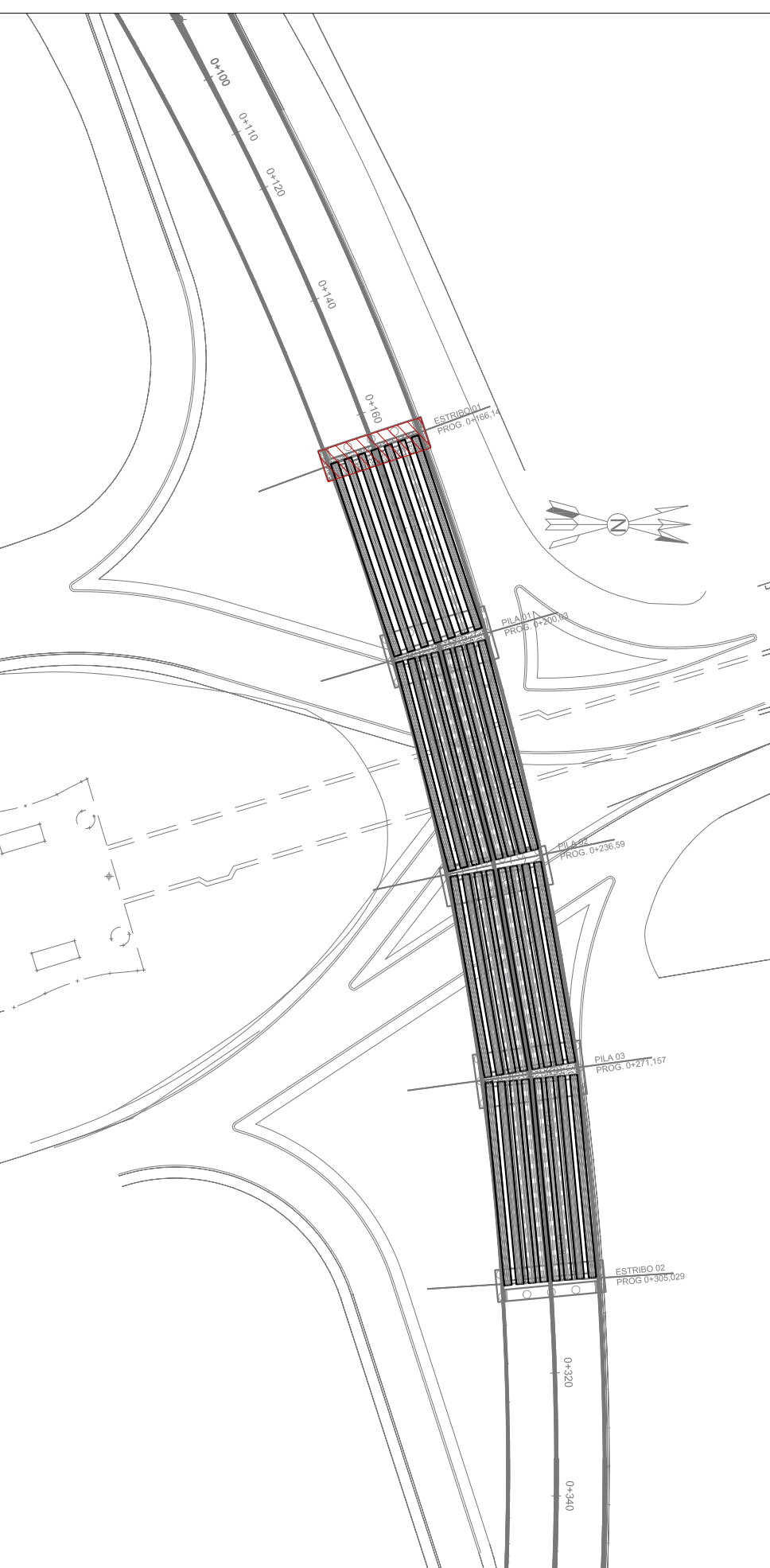
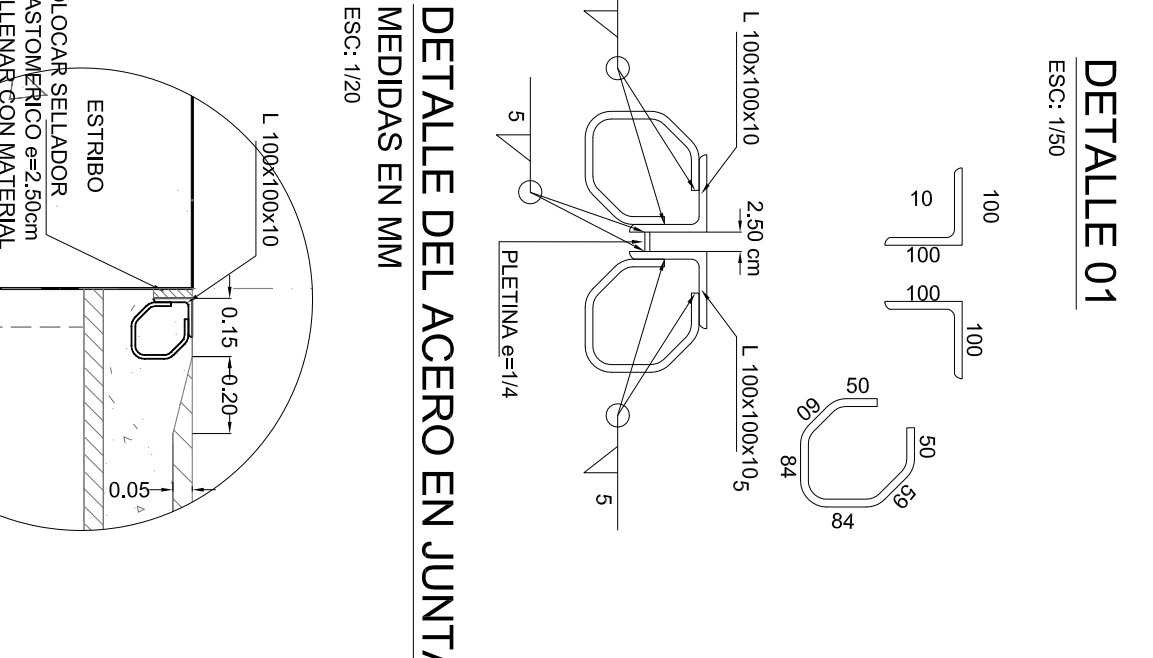
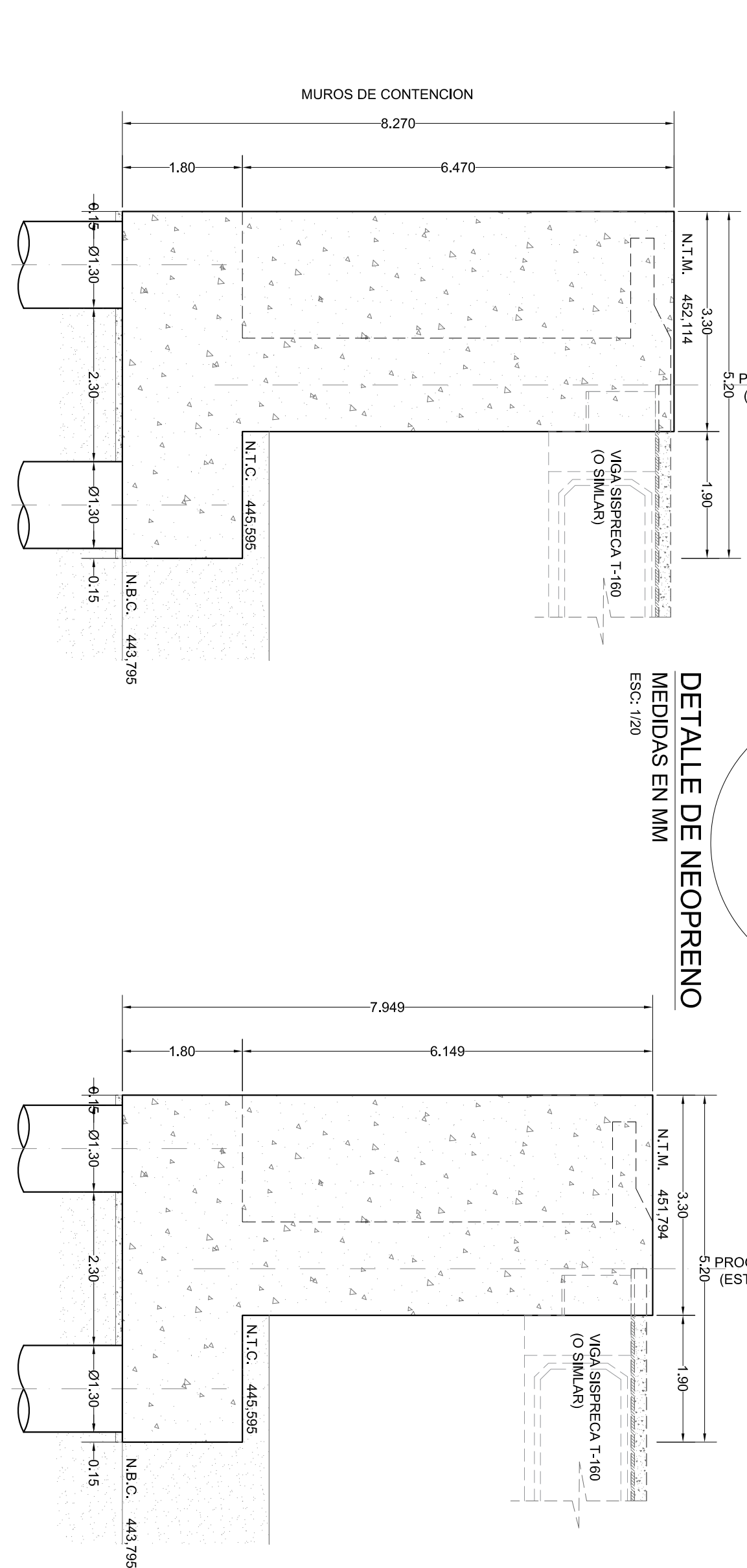
PLANTA TIPO  
ESTRIBO - 01  
ESC. 1:125

DETALLE DE NEOPRENO  
MEDIDAS EN MM  
ESC. 1:20

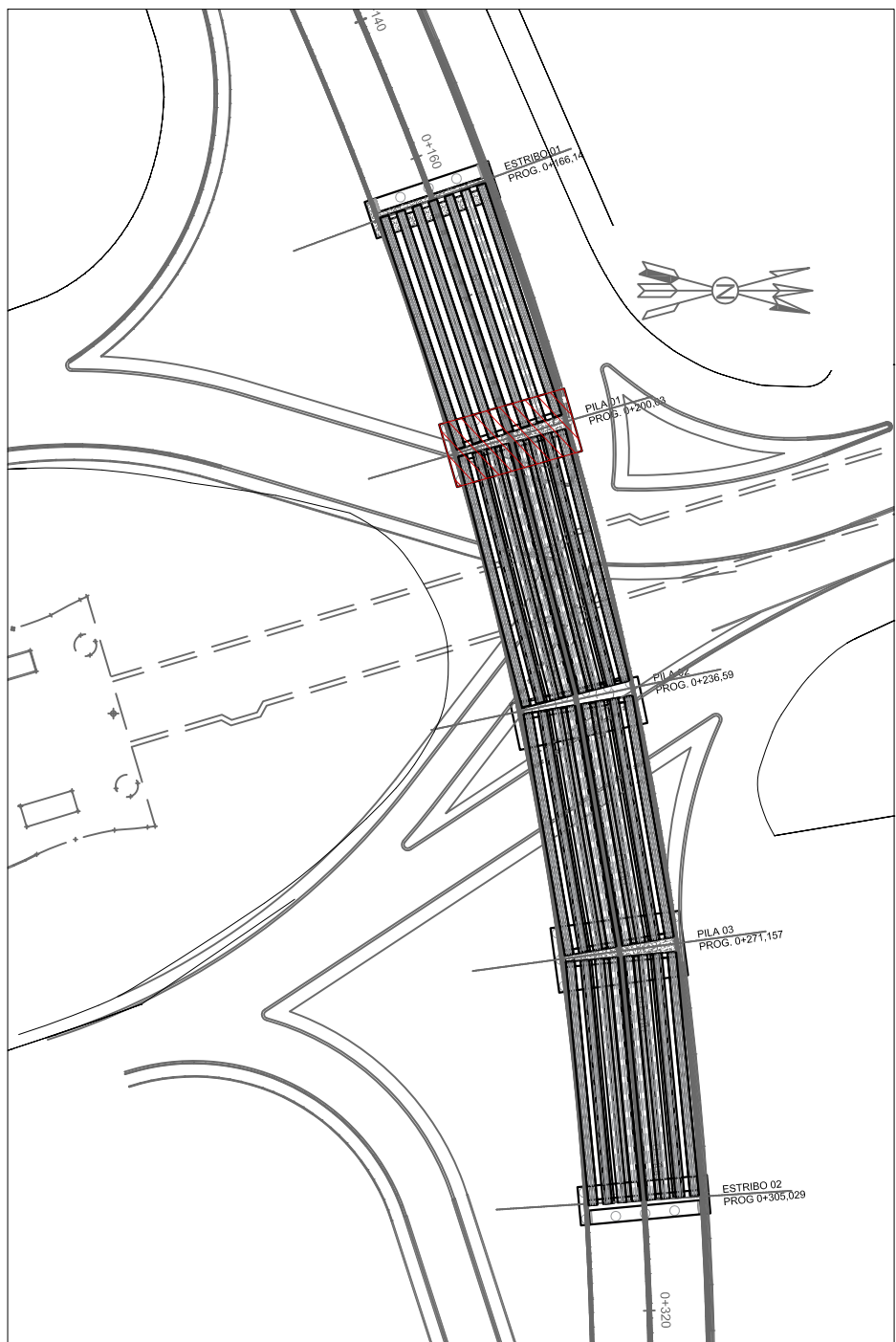
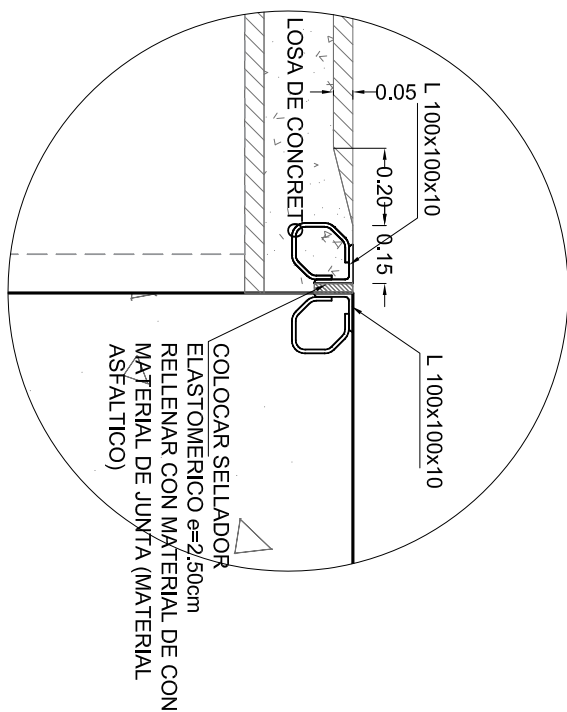
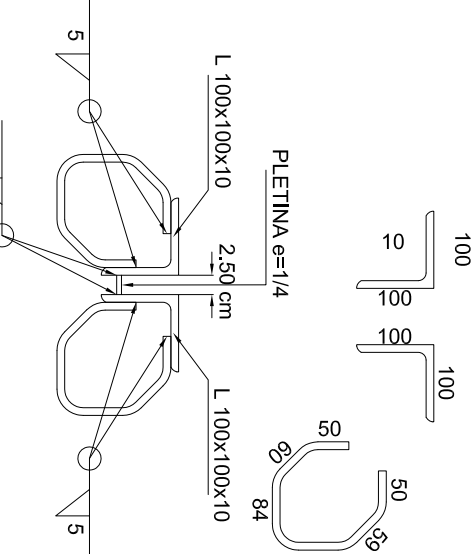
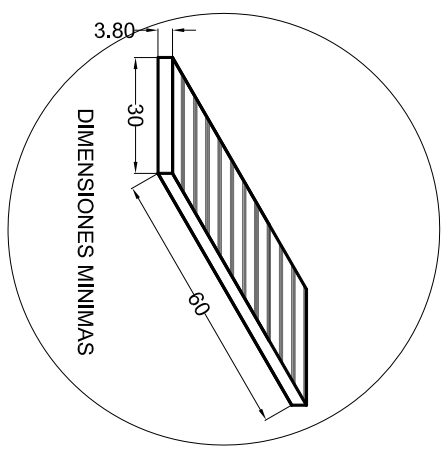
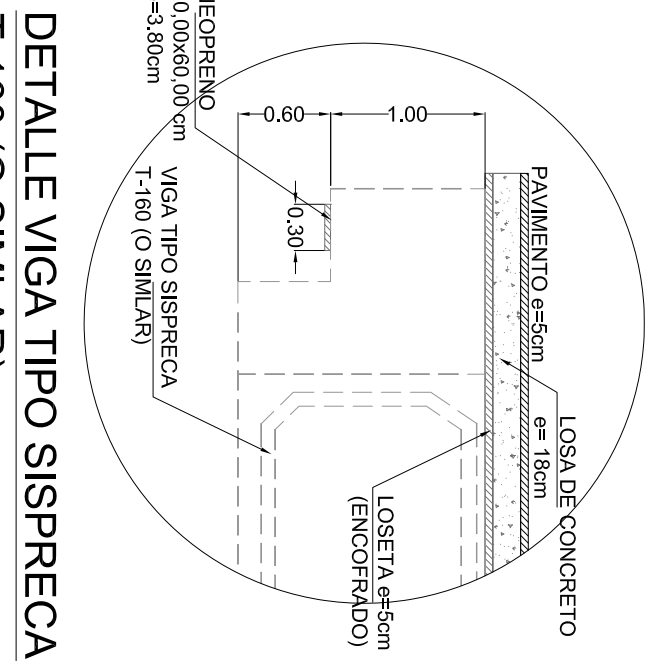
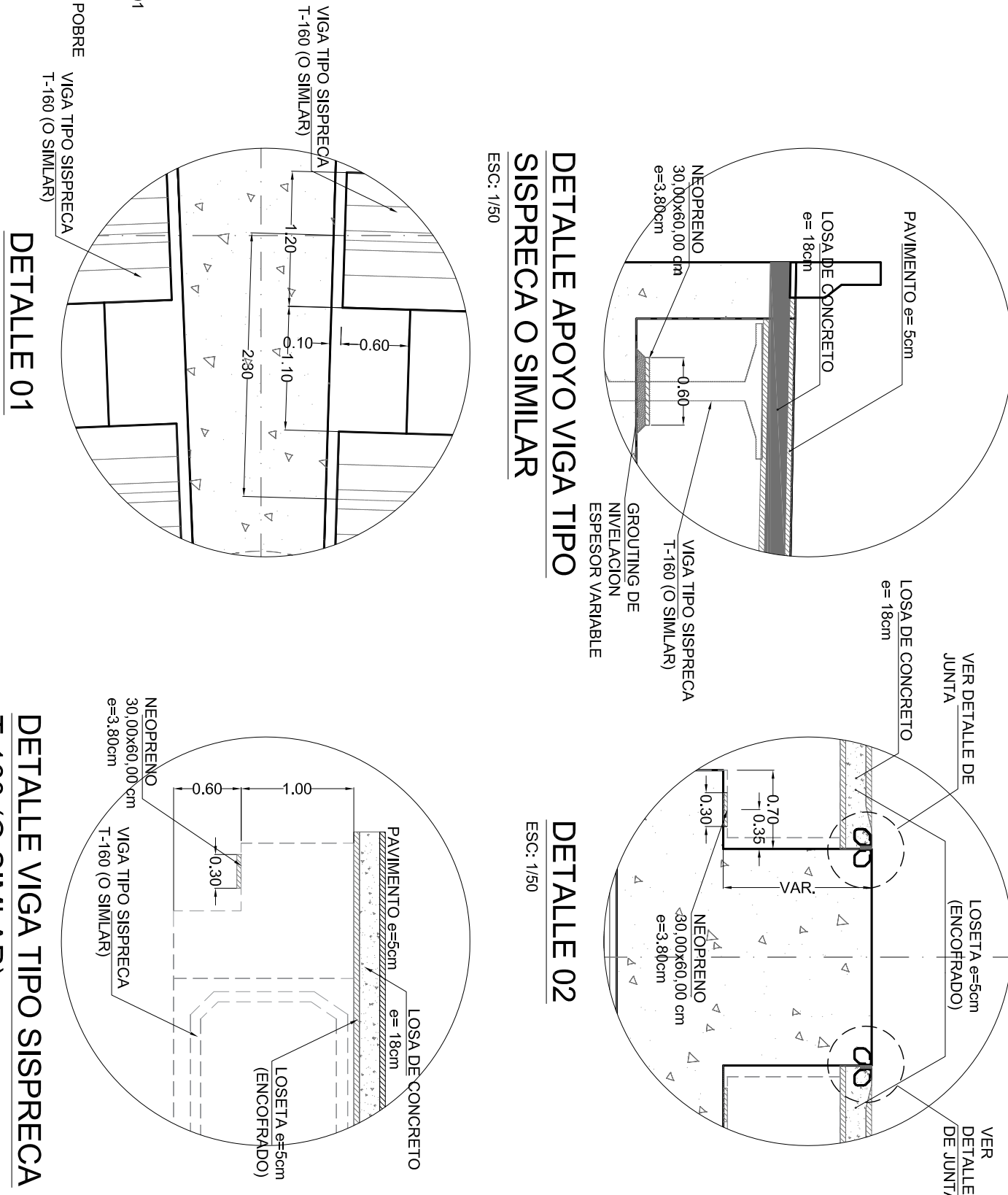
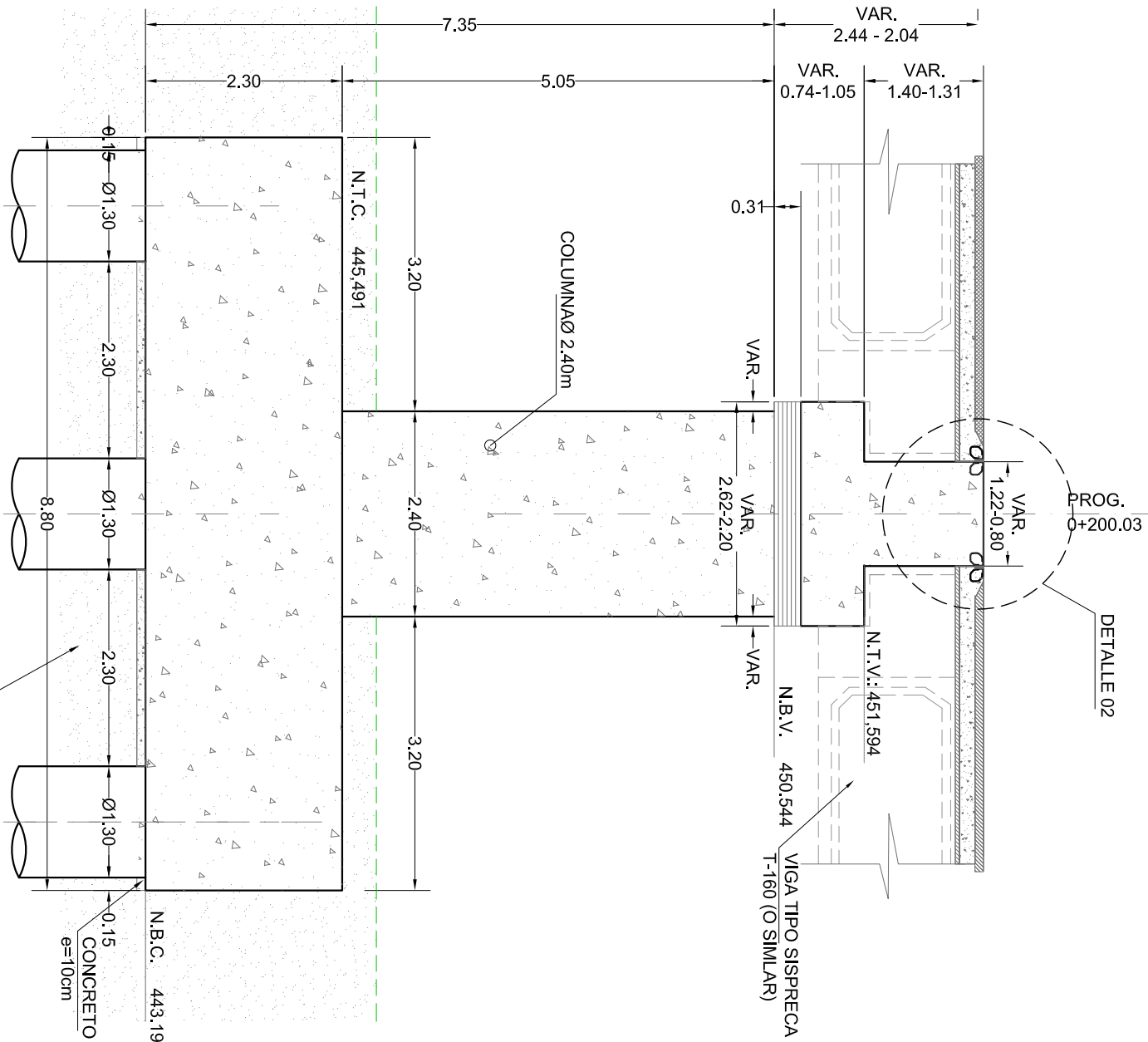
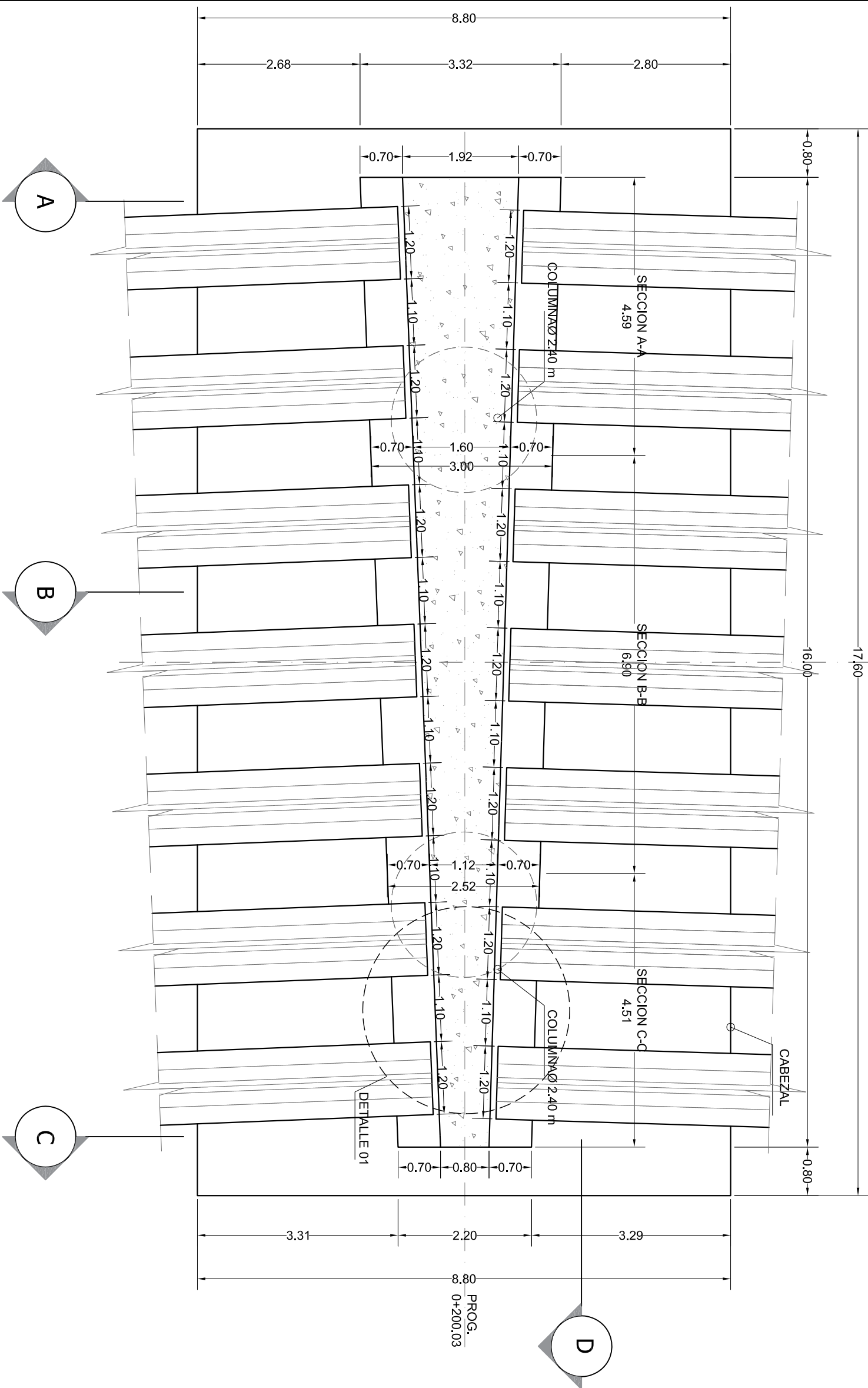
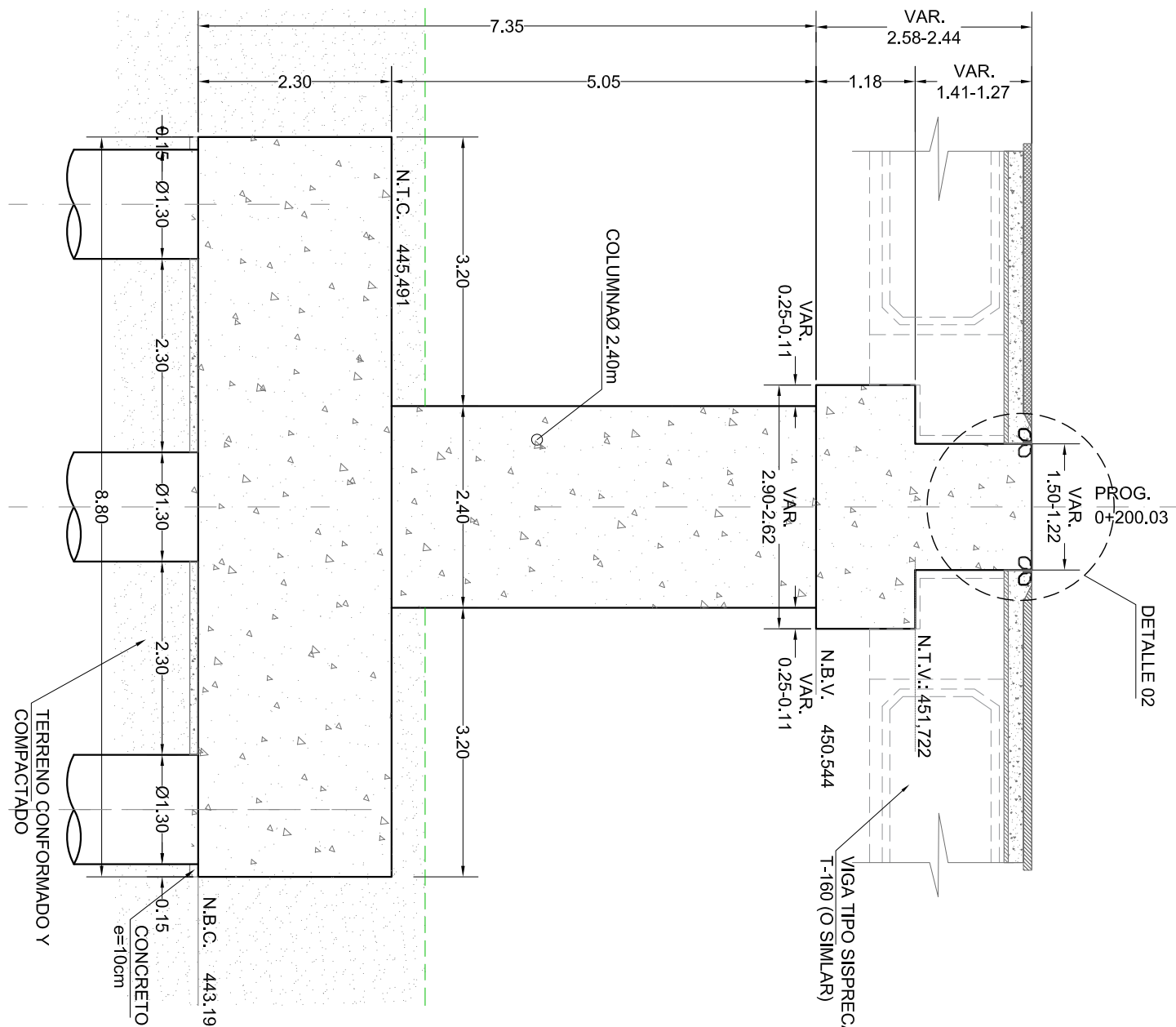
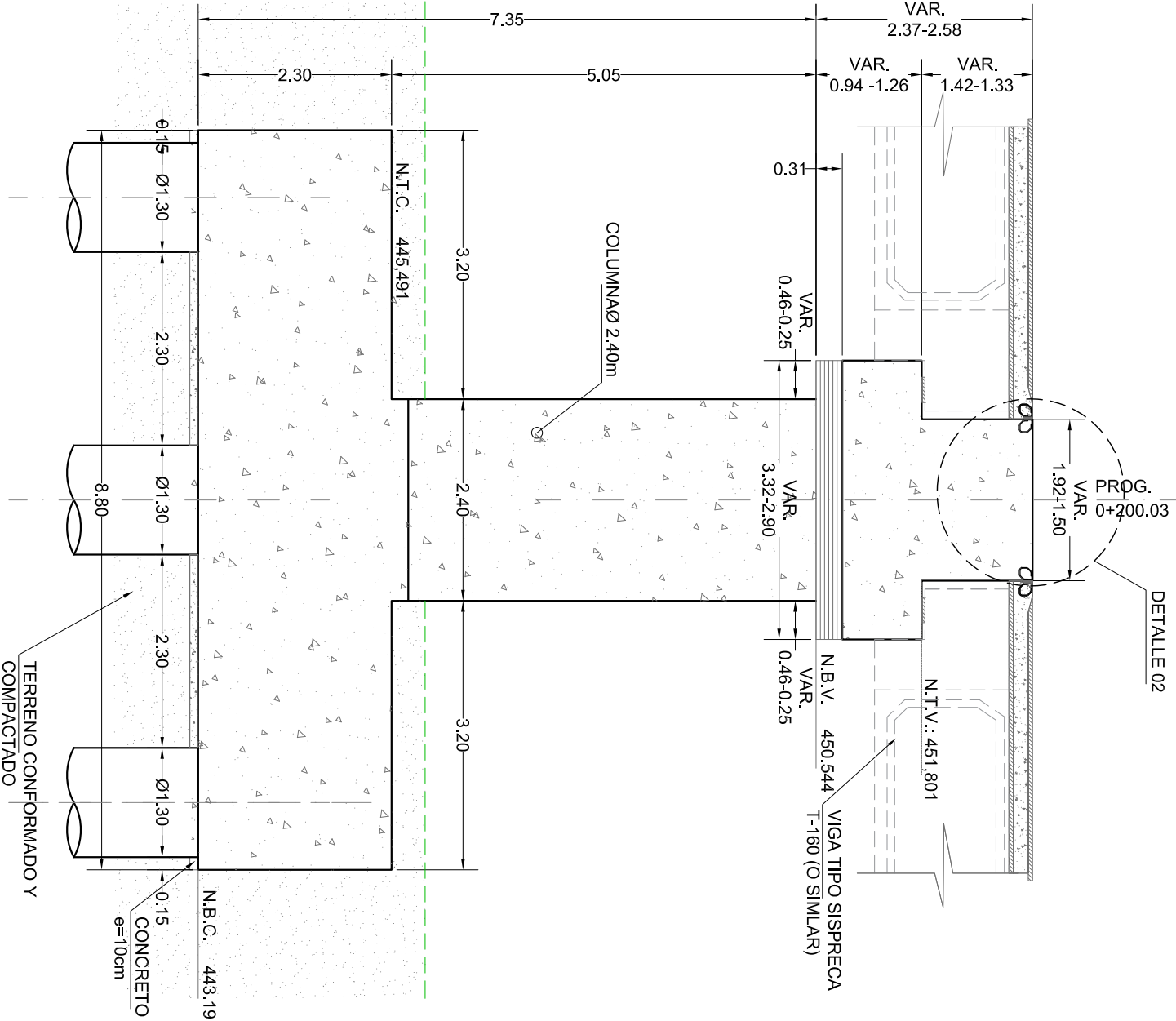
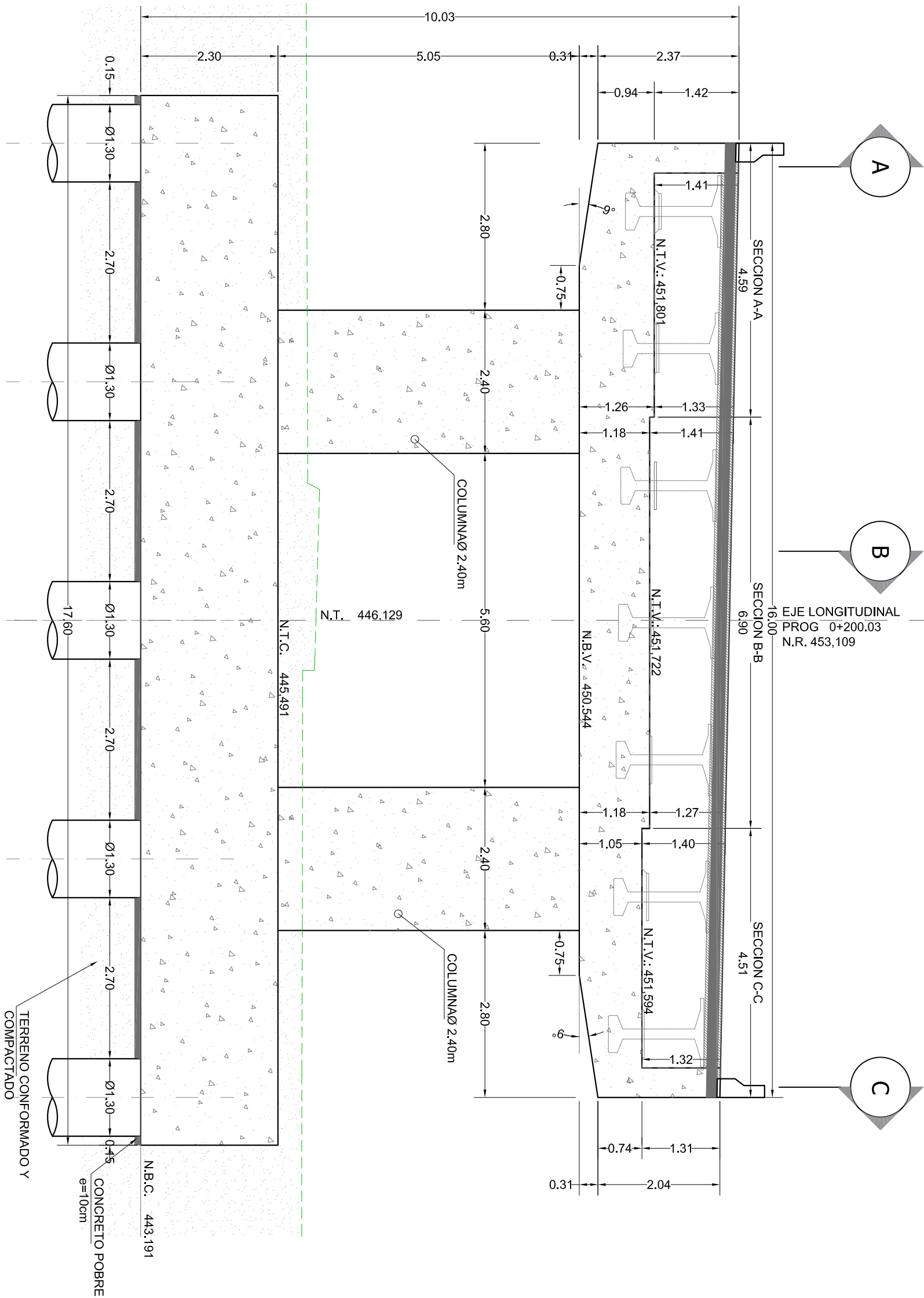
DETALLE 01  
ESC. 1:50

DETALLE 02  
ESC. 1:50

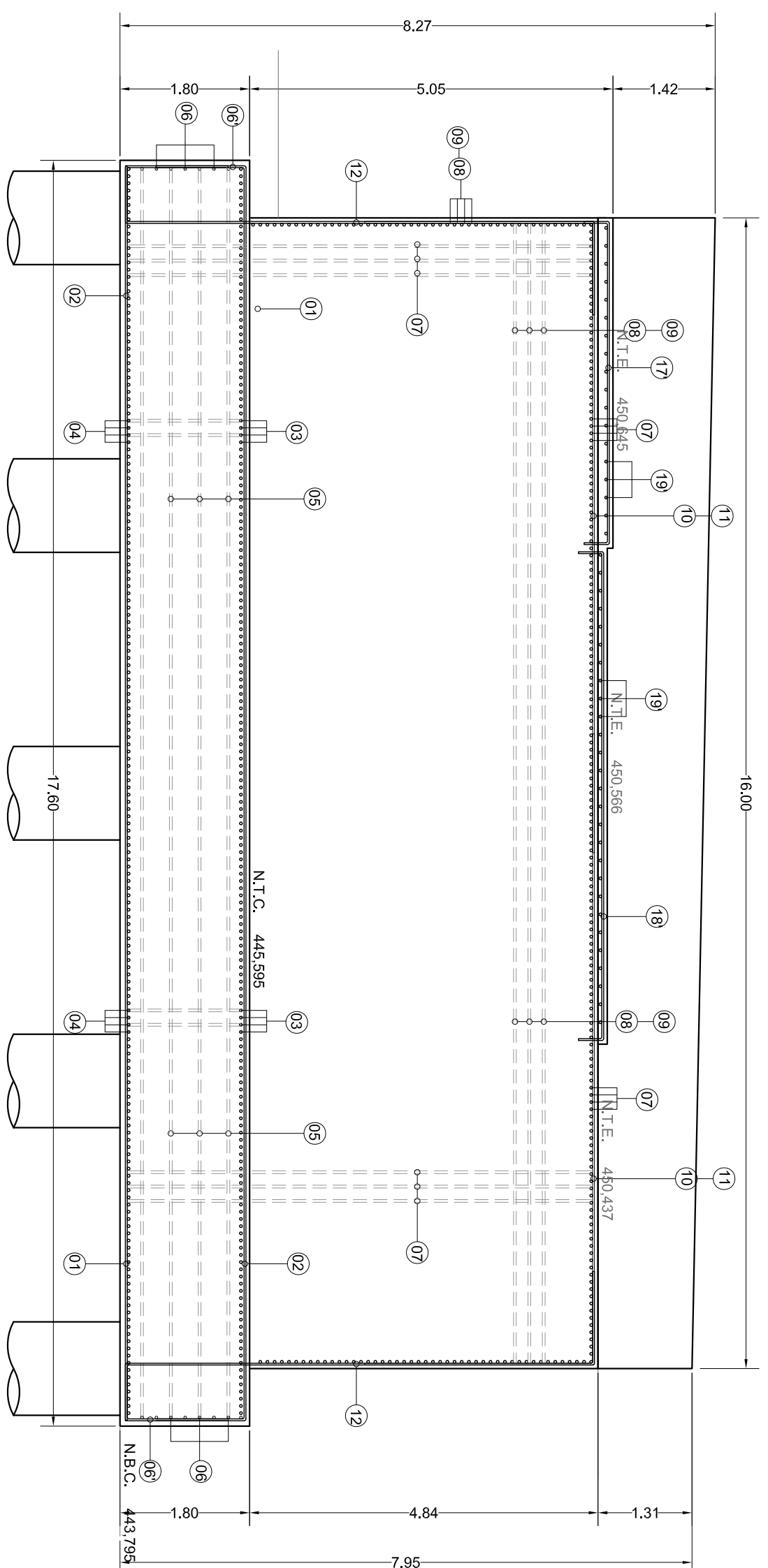
DETALLE 03  
ESC. 1:50





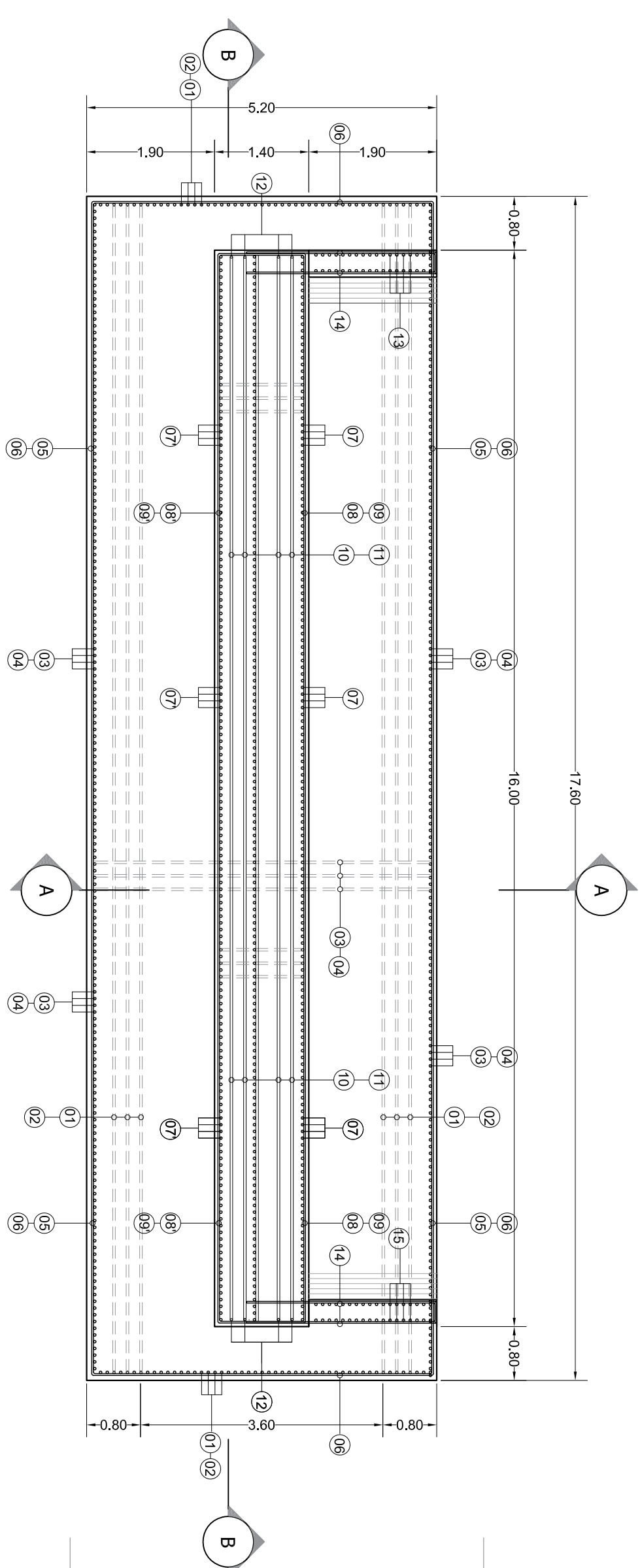
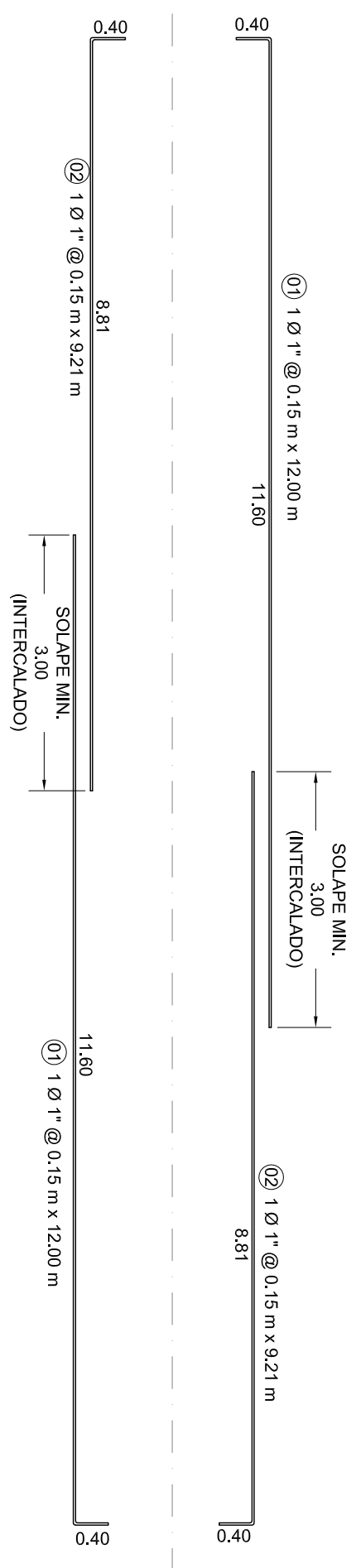






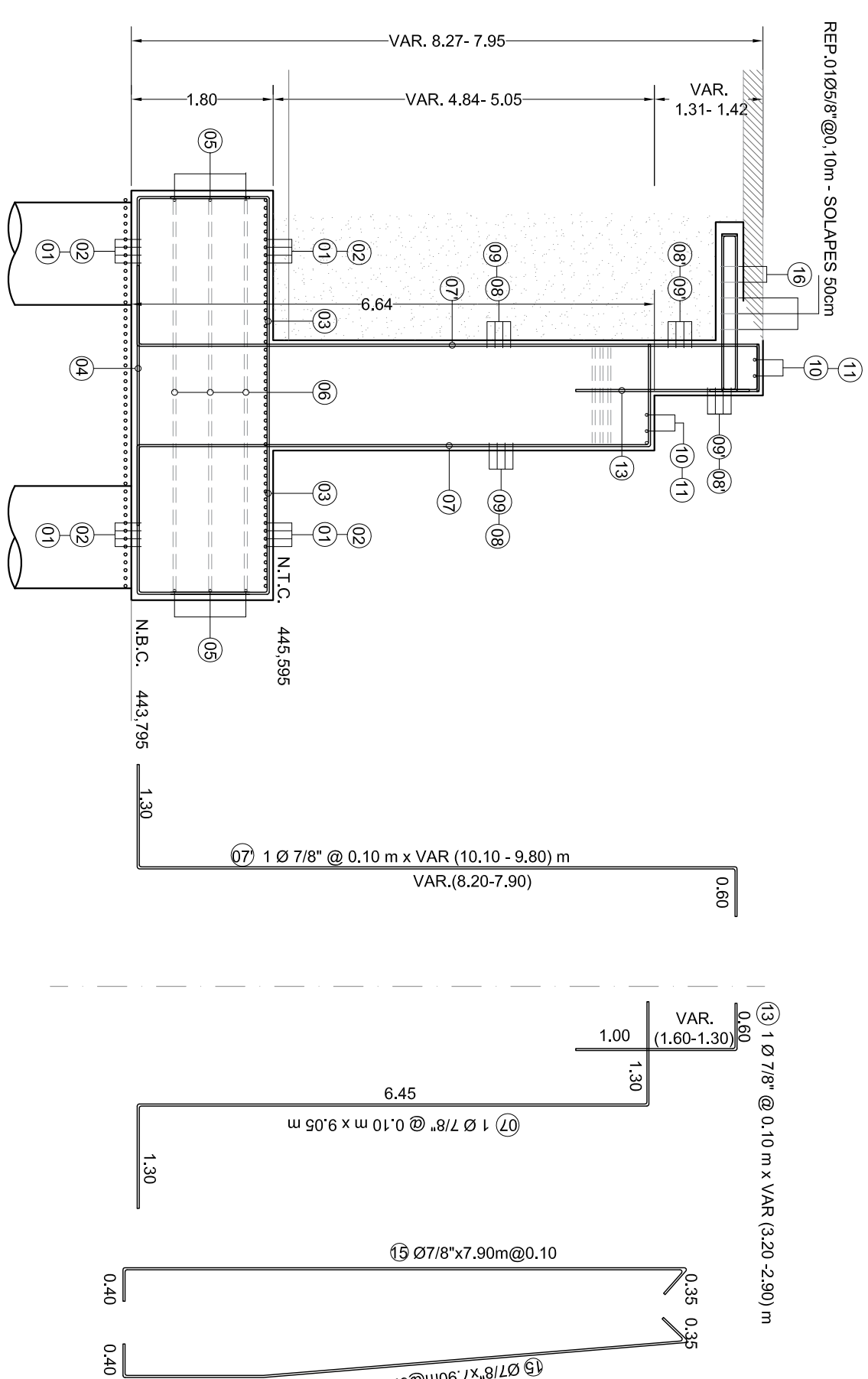
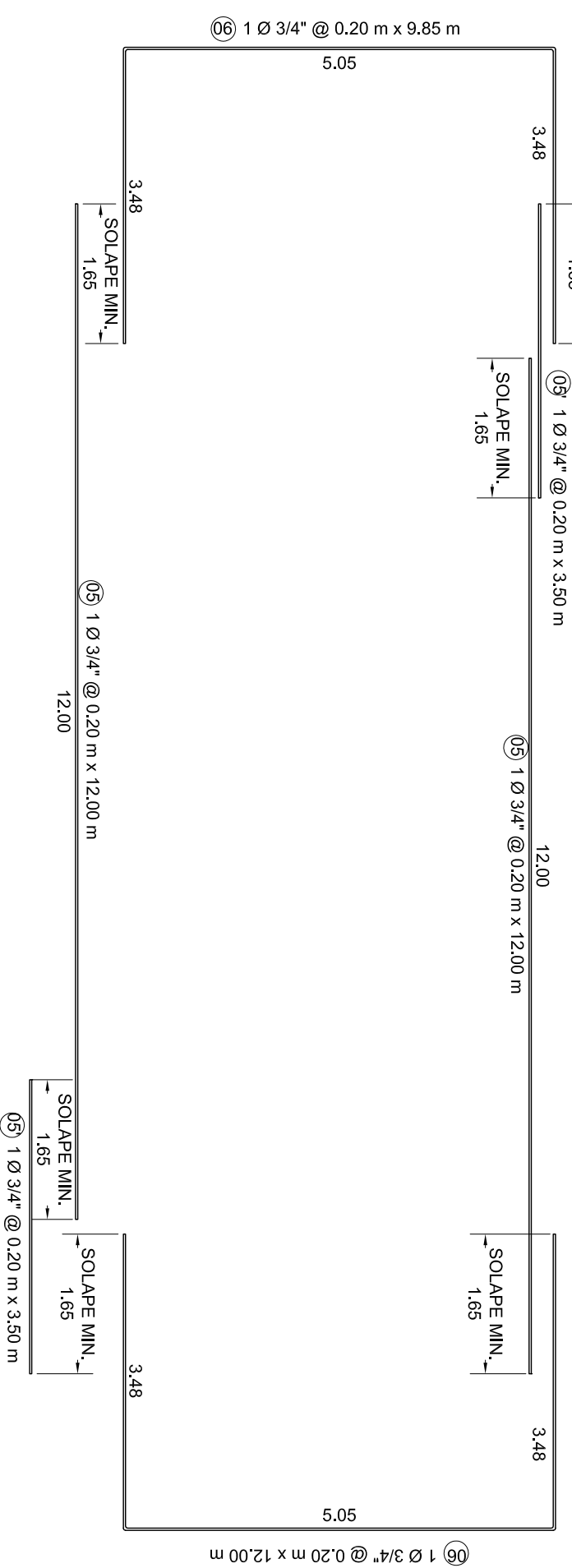
**SECCION B-B**  
**ESTRIBO-01**

ESC. 1:75



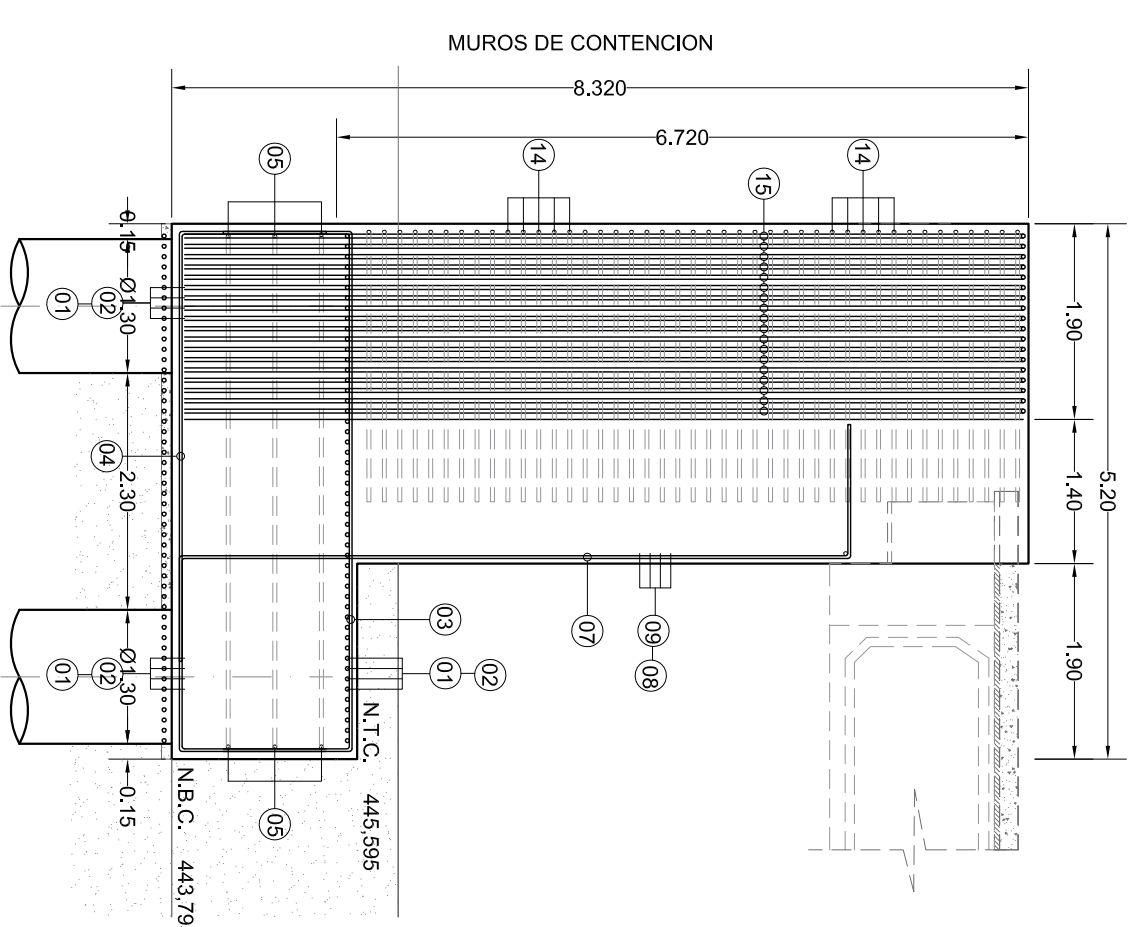
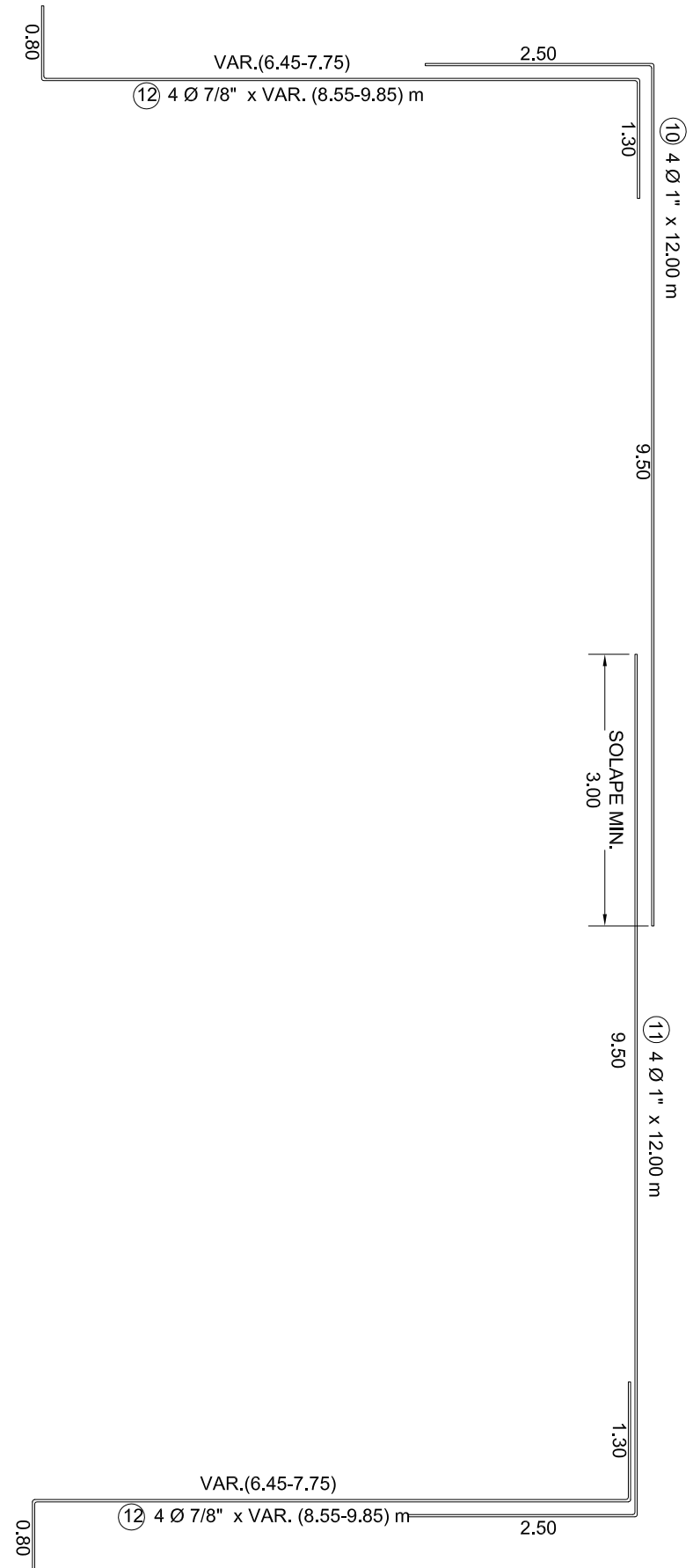
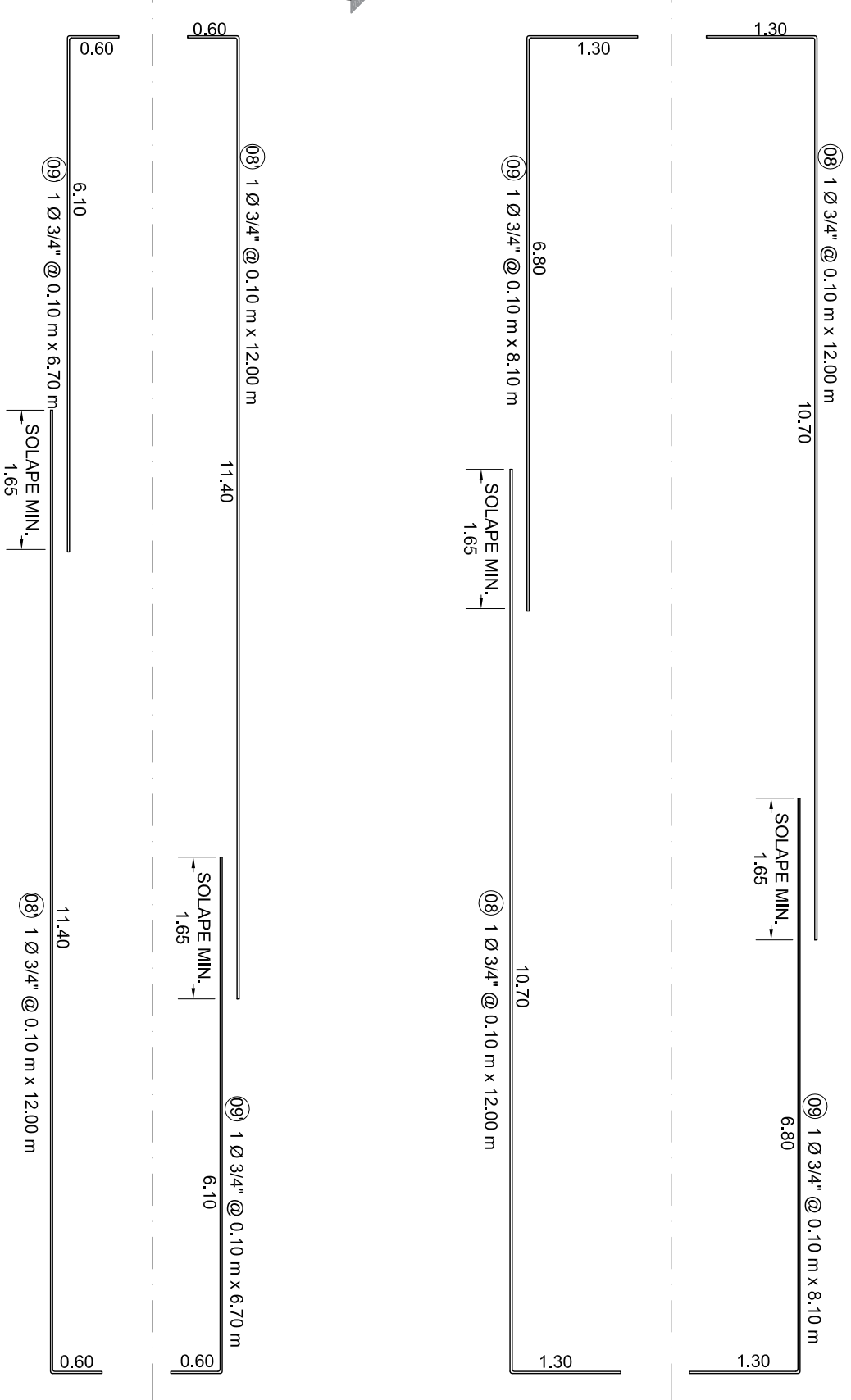
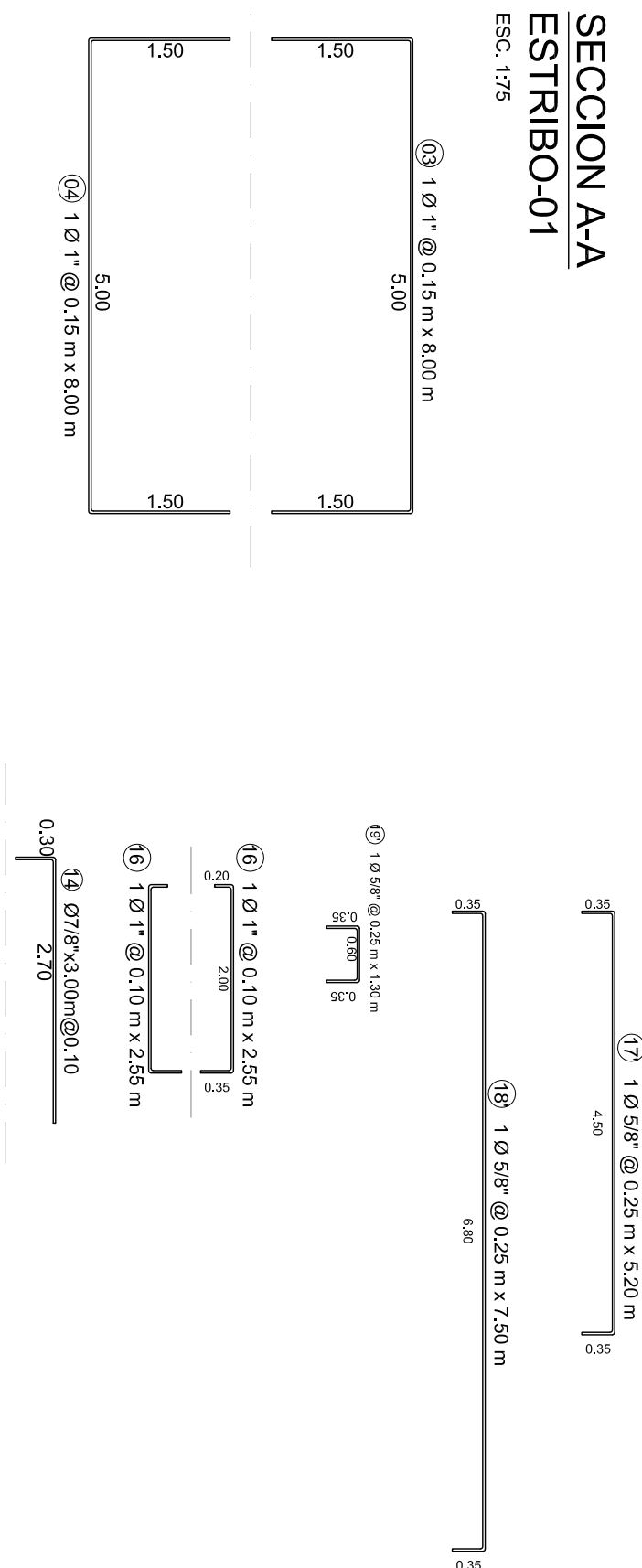
VISTA DE PLANTA CABEZAL

ESC. 1:75



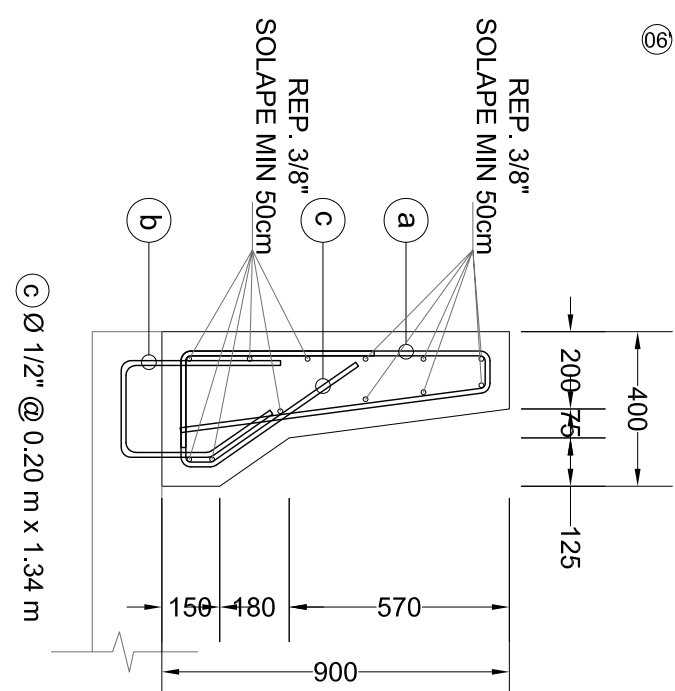
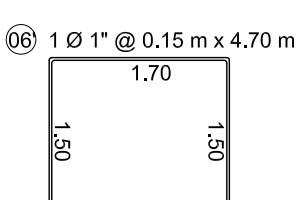
SECCION A-A  
ESTRIBO-01

ESC. 1:75



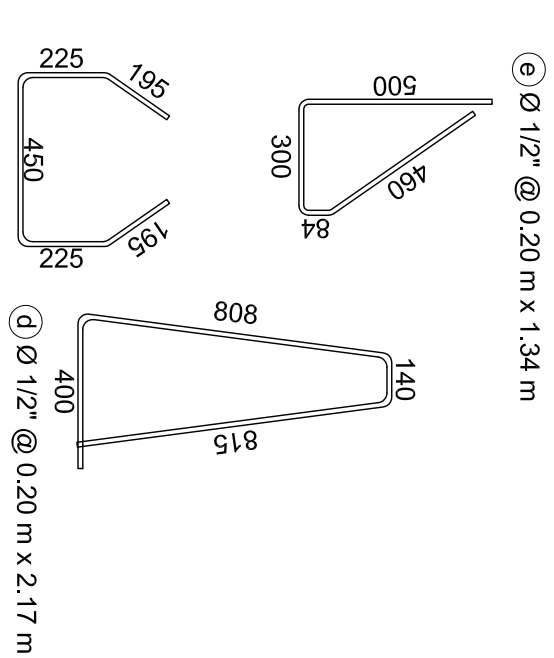
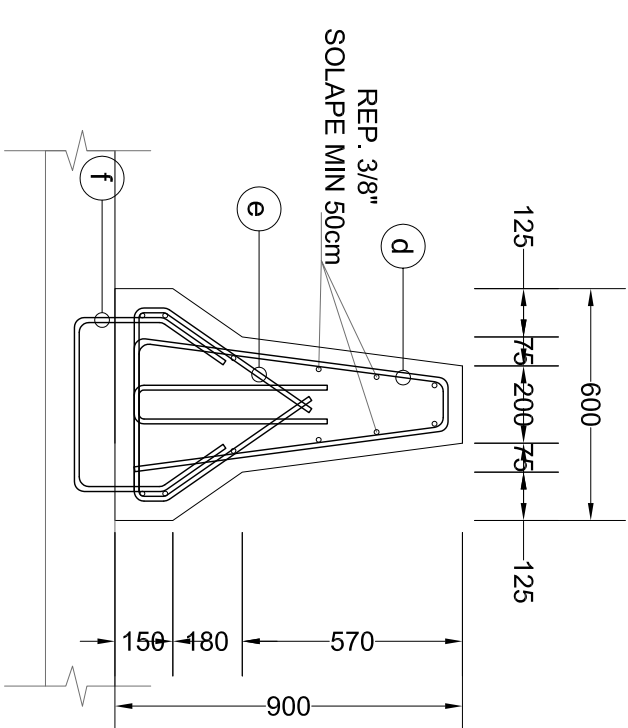
**SECCION TIPO - ALETA ESTRIBO**  
**ESTRIBO - 01**

ESC. 1:125



**ACERO DE REFUERZO DEFENSA  
NEW JERSEY**

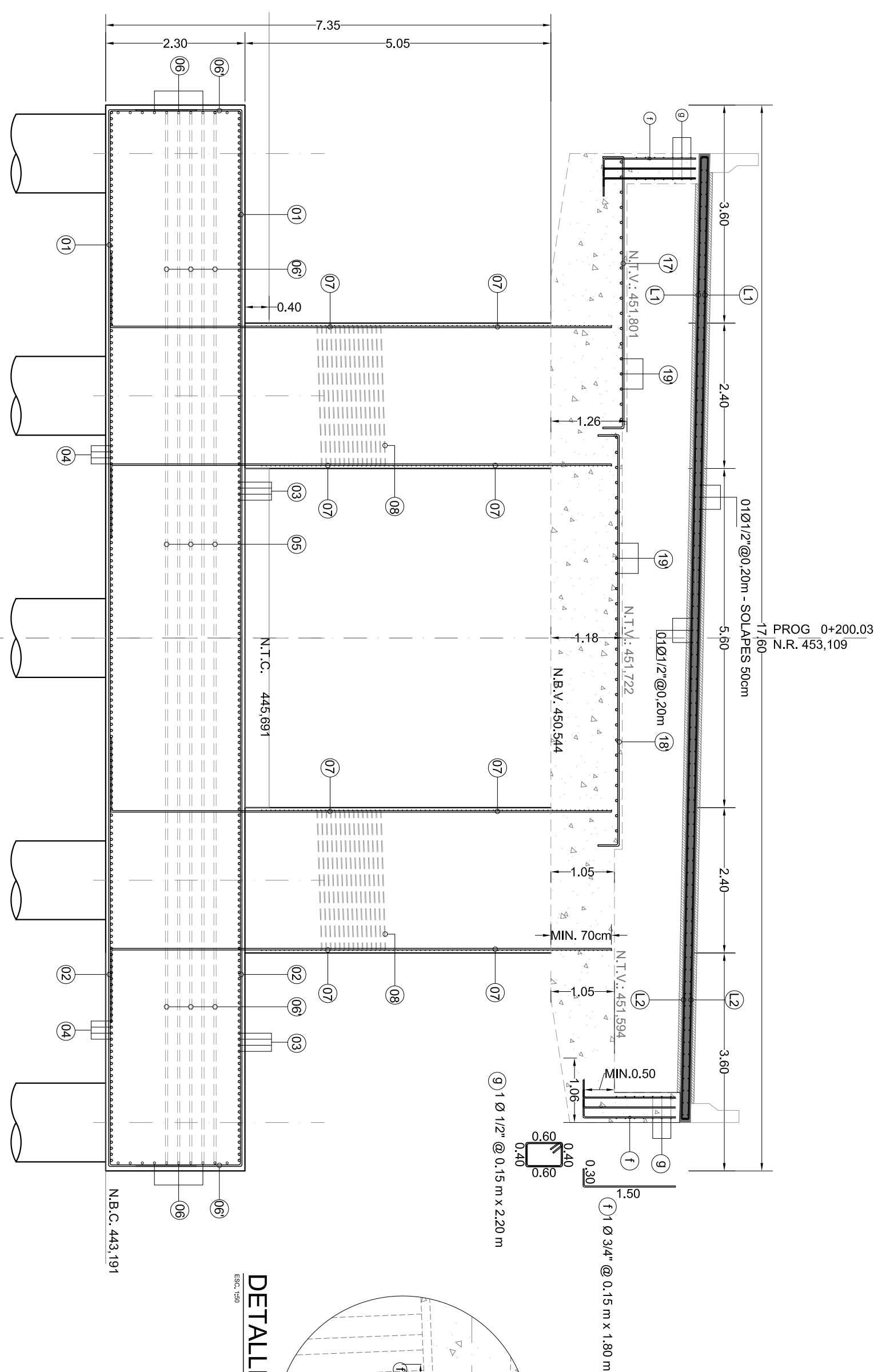
ESC. 1:5



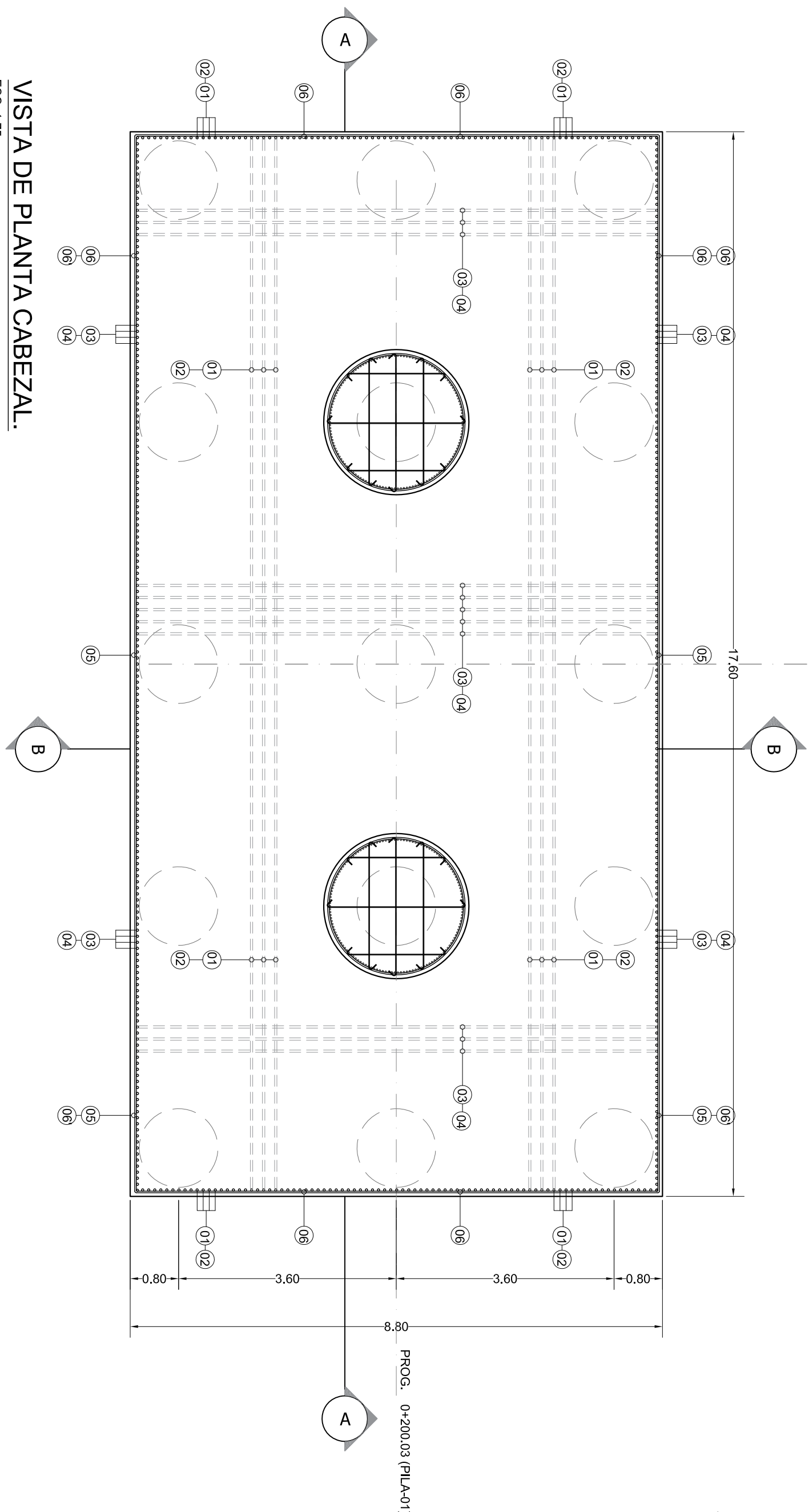
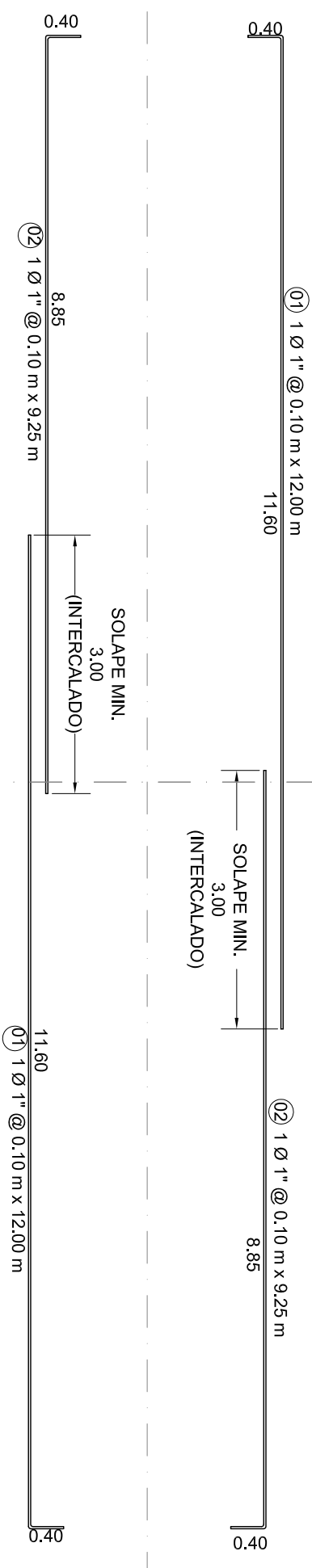
ACERO DE REFUERZO DEFENSA  
NEW JERSEY - CENTRAL

ESC.1:5

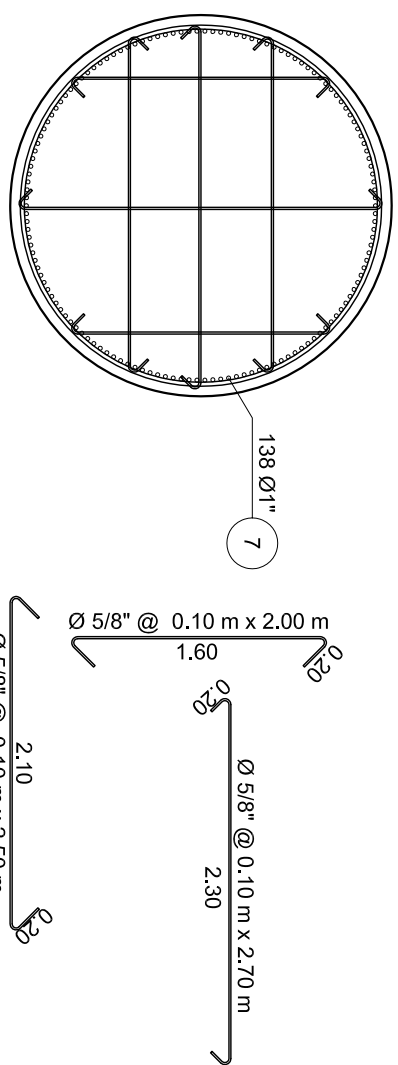




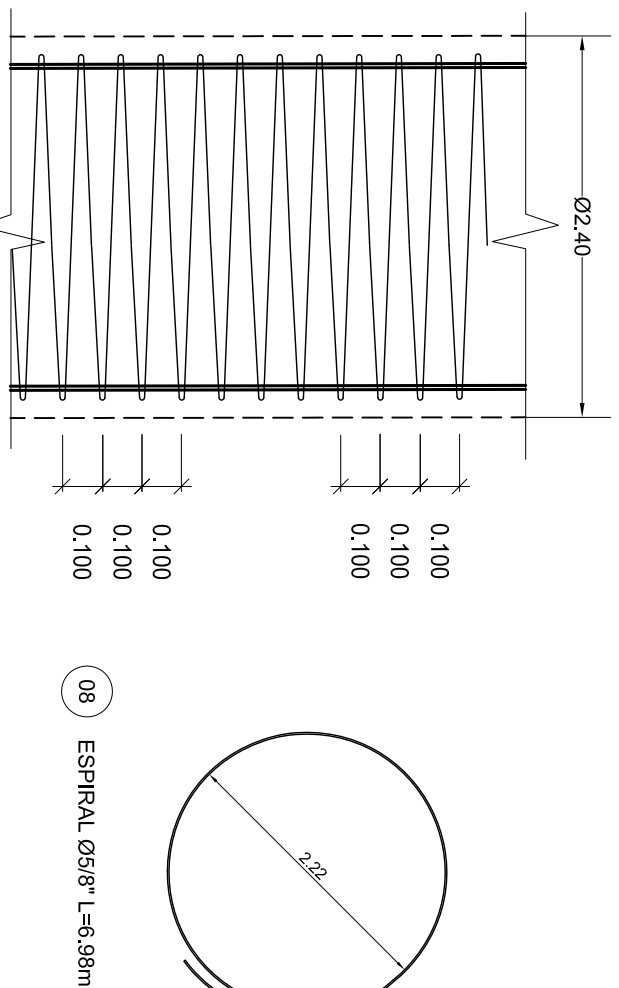
## SECCION A-A



VISTA DE PLANTA CABEZAL.

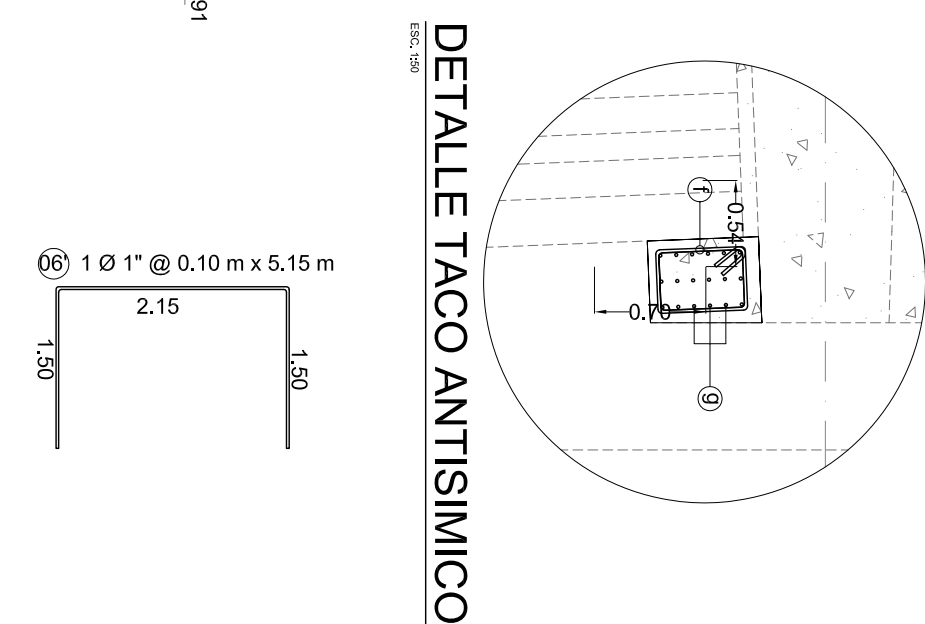


### DETALLE DE COLUMNA

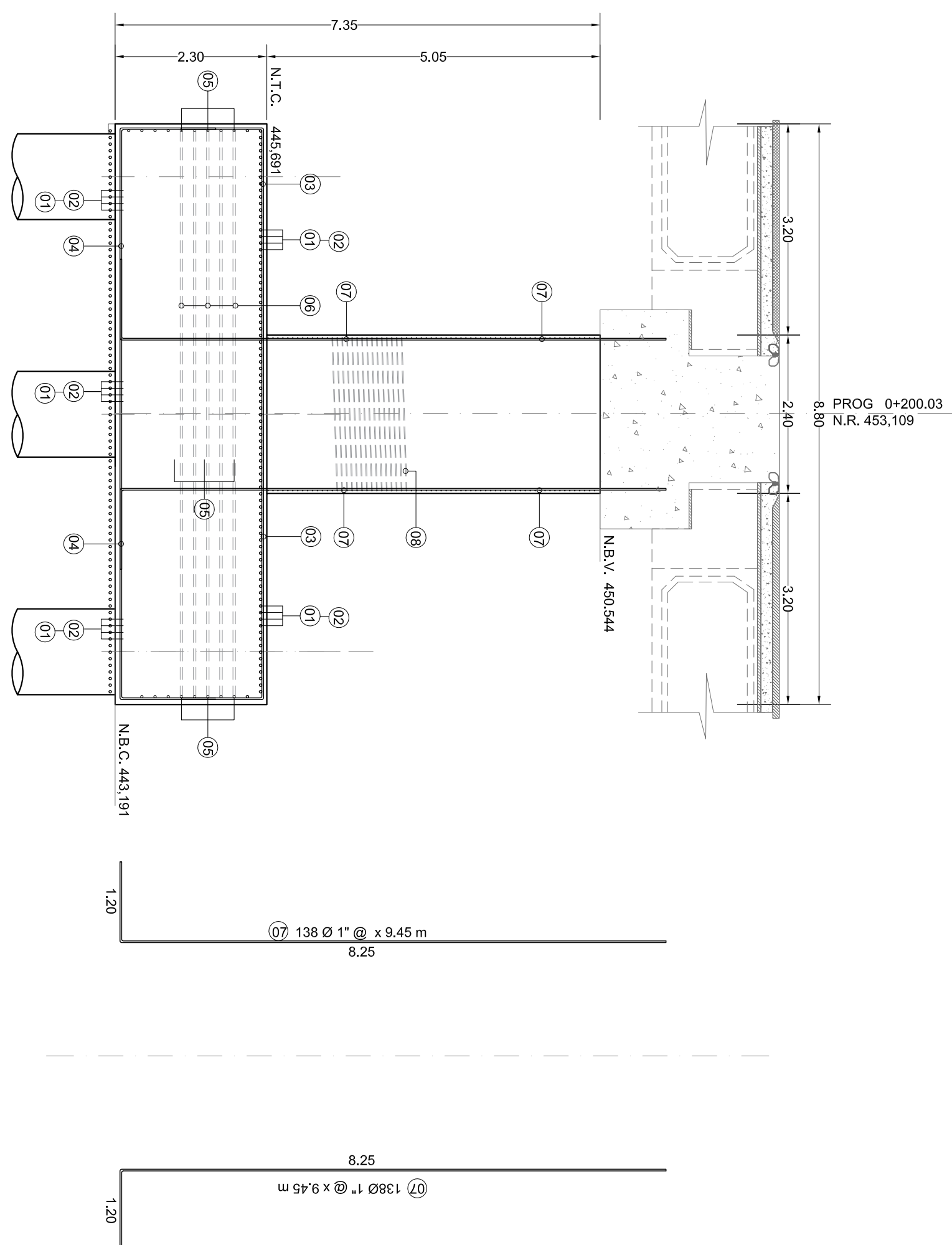
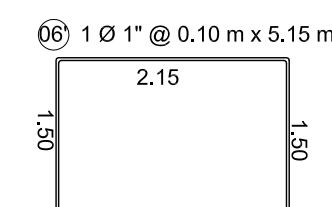


## DETALLE DE ESPIRAL

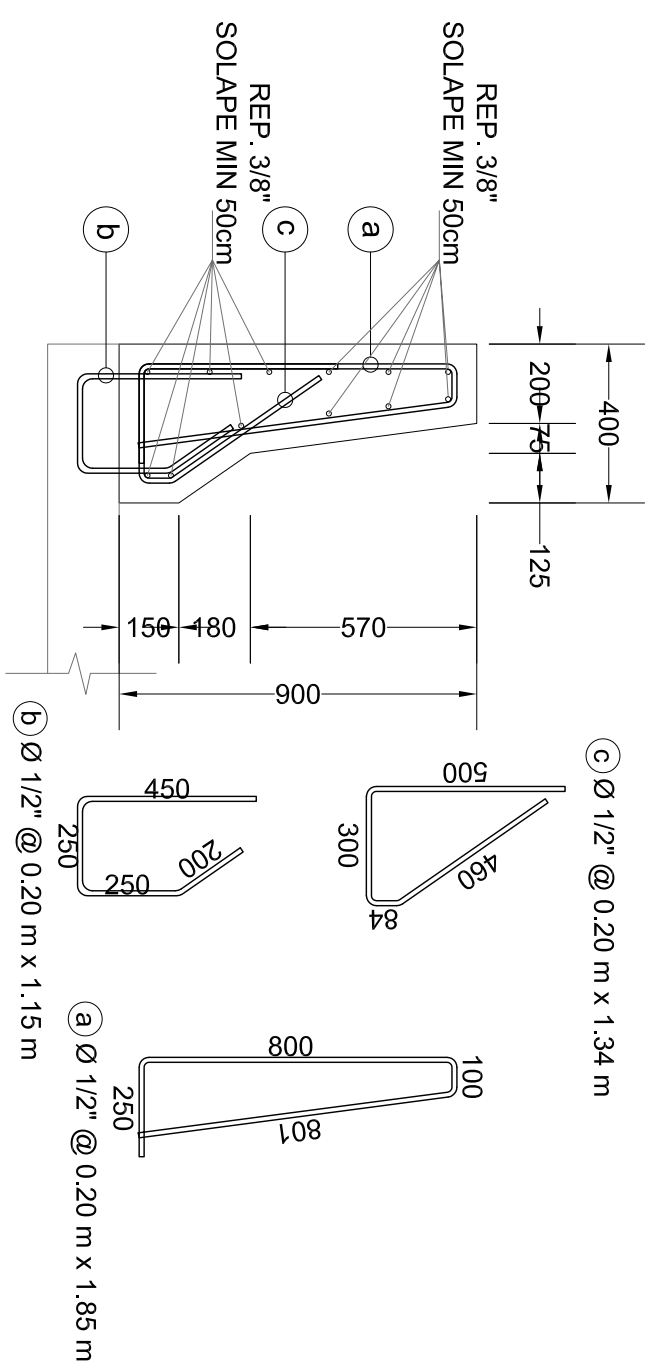
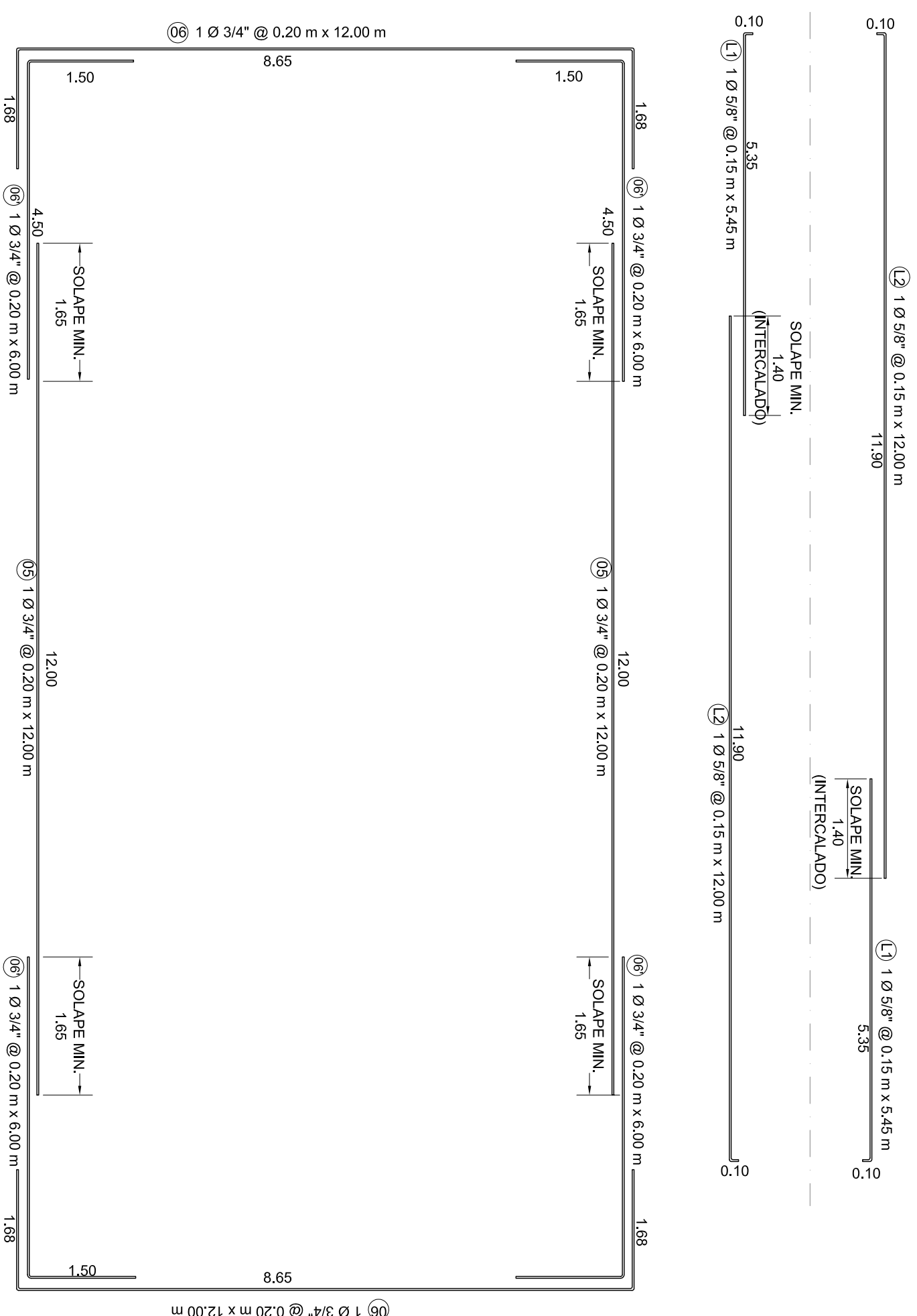
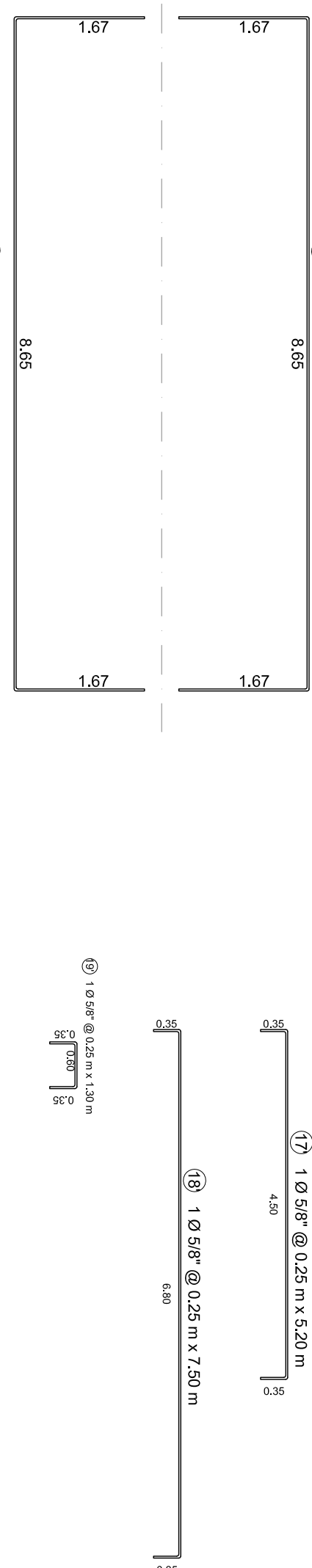
## SECCIÓ B - B



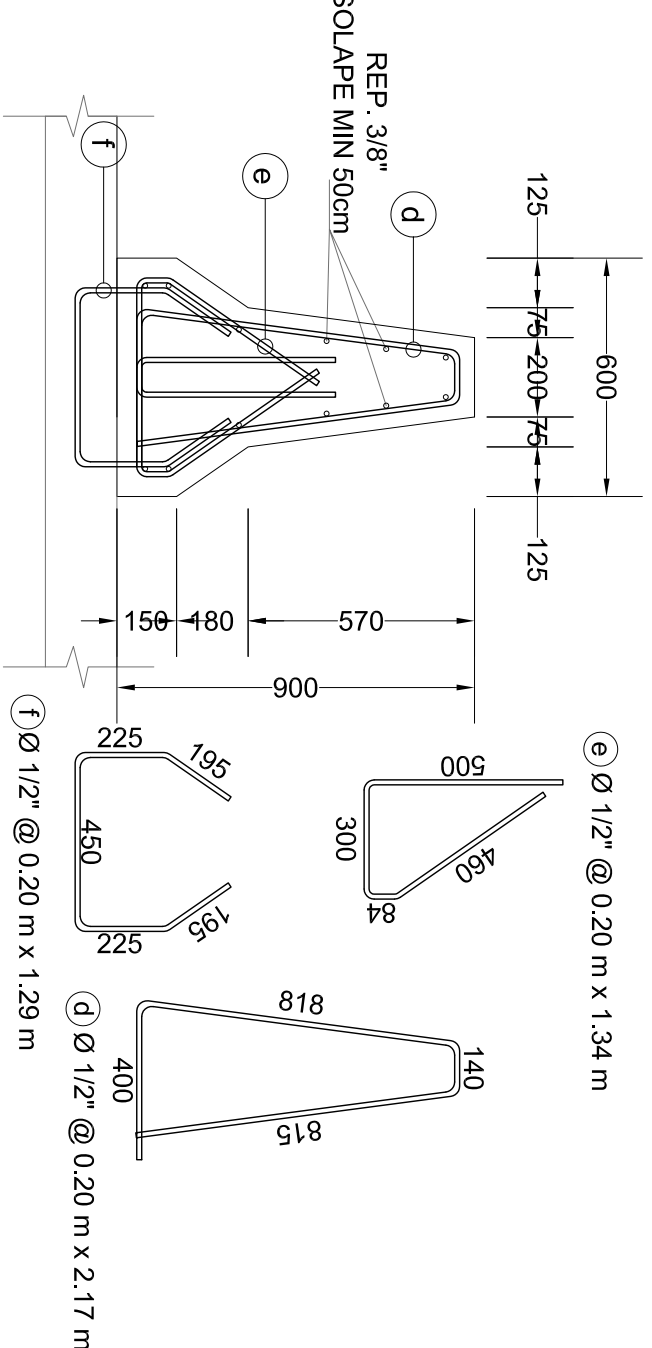
# DETALLE TACO ANTISIMICO



## SECCION B-B

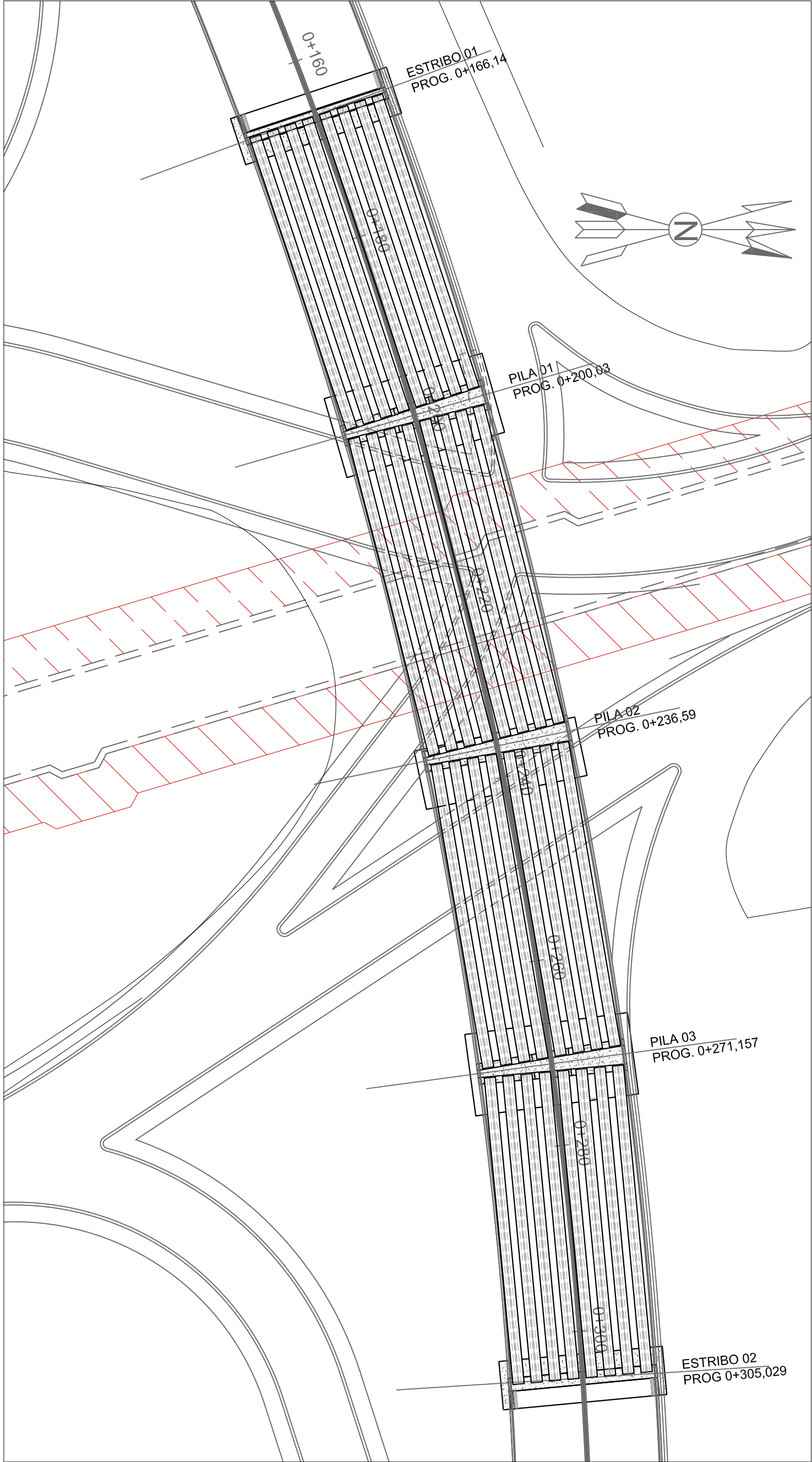


## ACERO DE REFUERZO DEFENSA



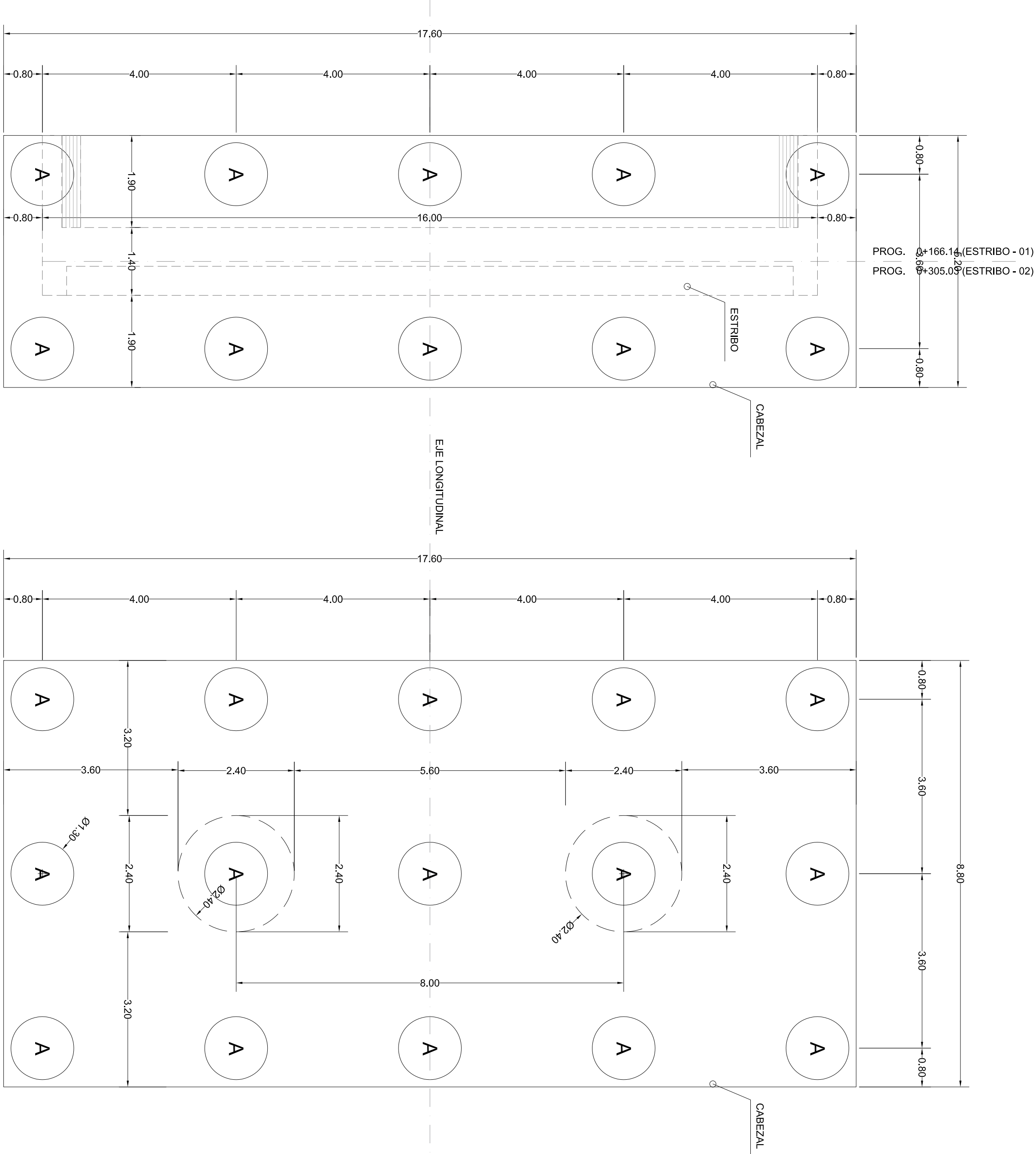
## NEW JERSEY - CENTRAL





PLANTA UBICACION DE CABEZALES, PILAS Y PILOTES

ESC. 1:500



SECCION TIPICA - CABEZAL

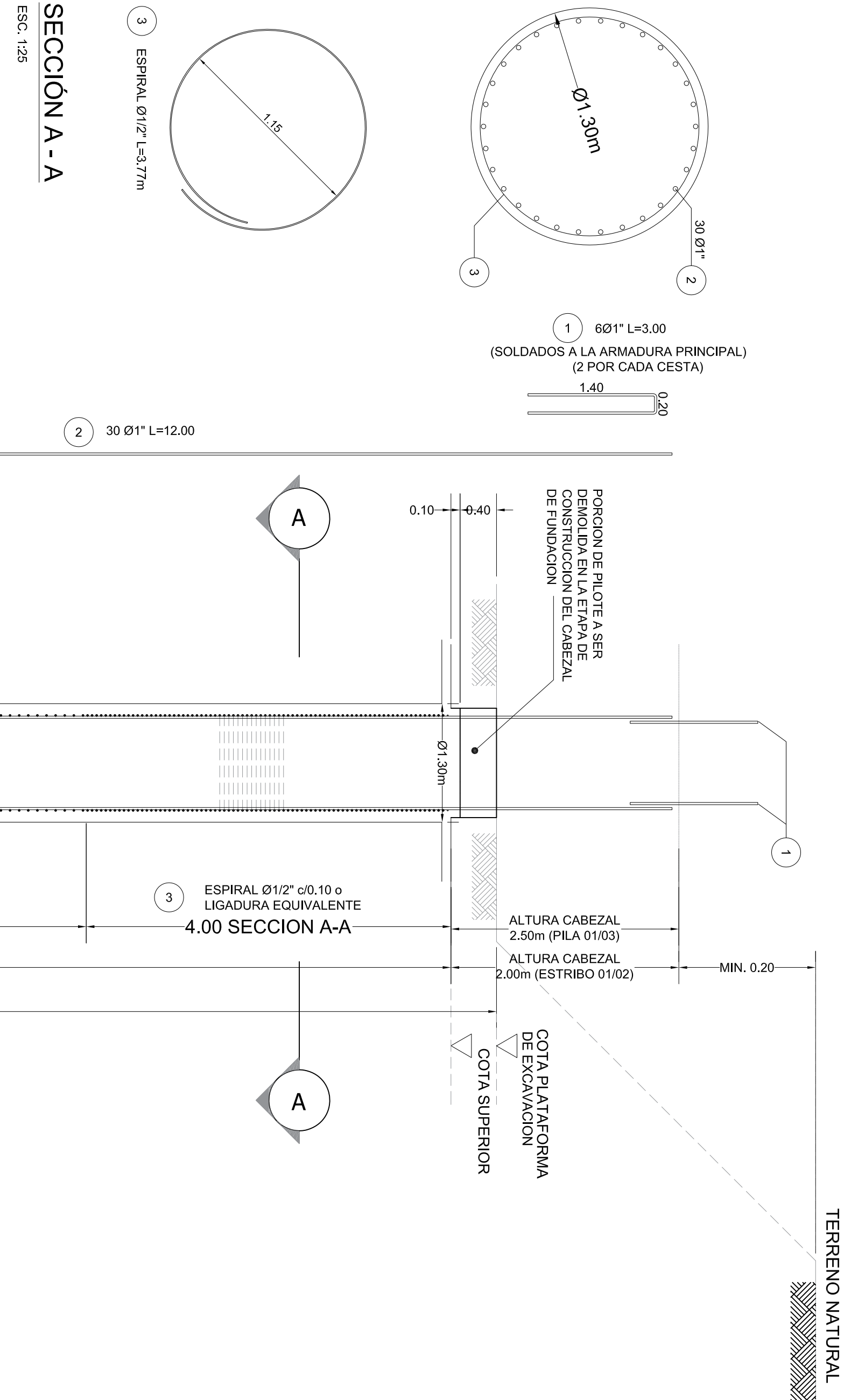
ESTRIBO

ESC. 1:100

SECCION TIPICA - PILA 1 - 3

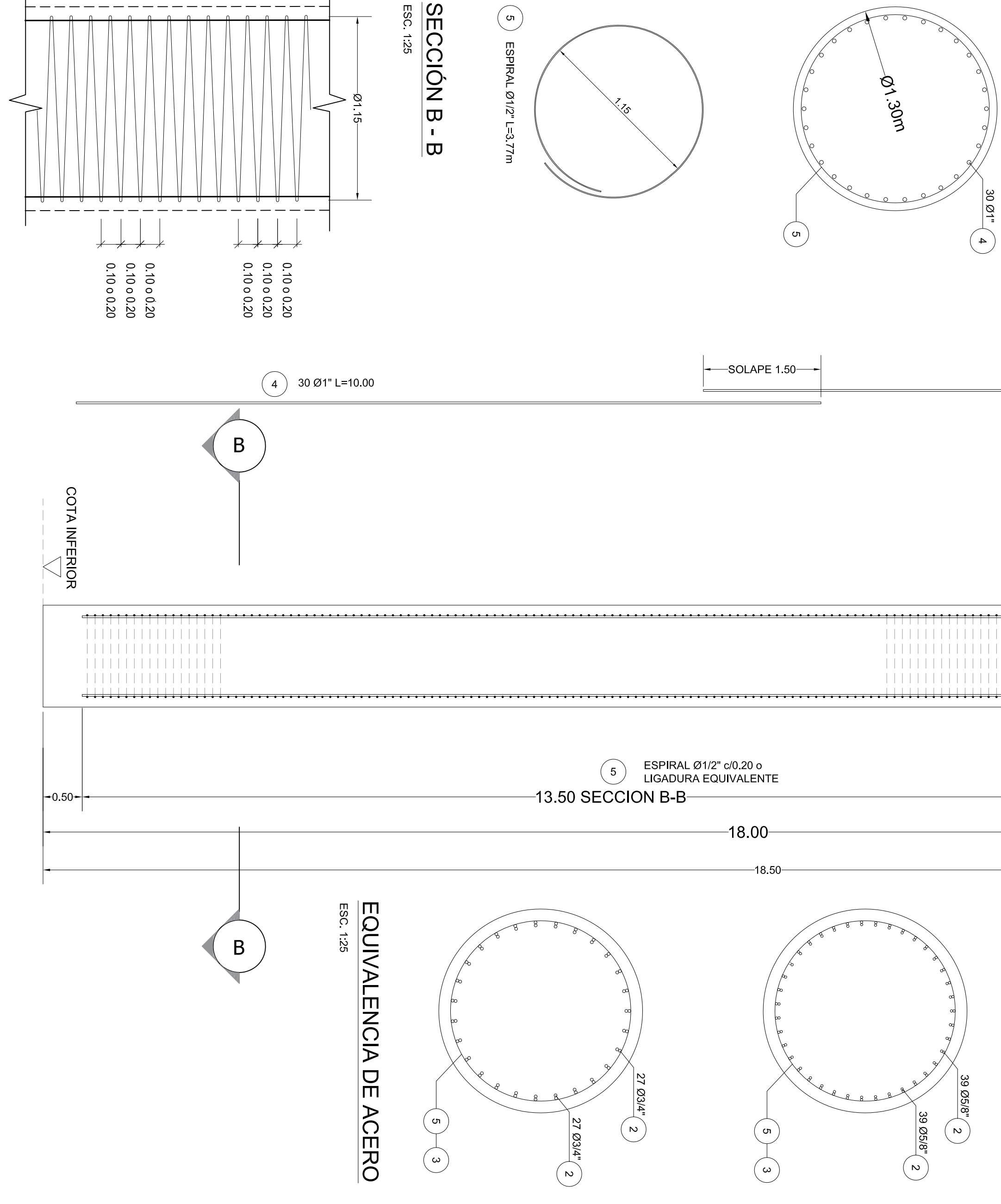
COLUMNA

ESC. 1:100



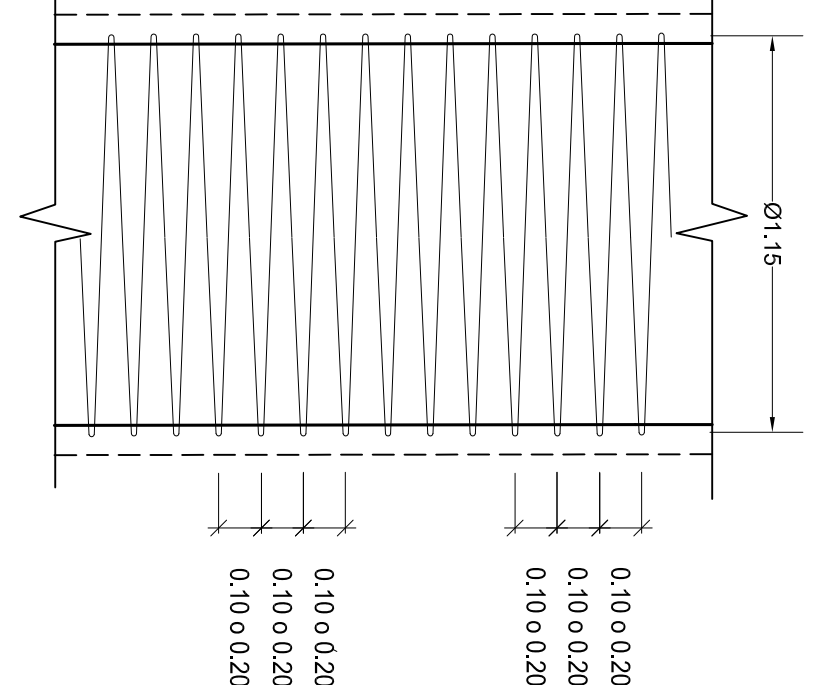
SECCION A - A

ESC. 1:25



SECCION B - B

ESC. 1:25



DETALLE DE ESPIRAL

ESC. 1:20

PILOTE TIPO A - DIAMETRO Ø1,30 m LONGITUD 18m

ESC. 1:50

EQUIVALENCIA DE ACERO

ESC. 1:25