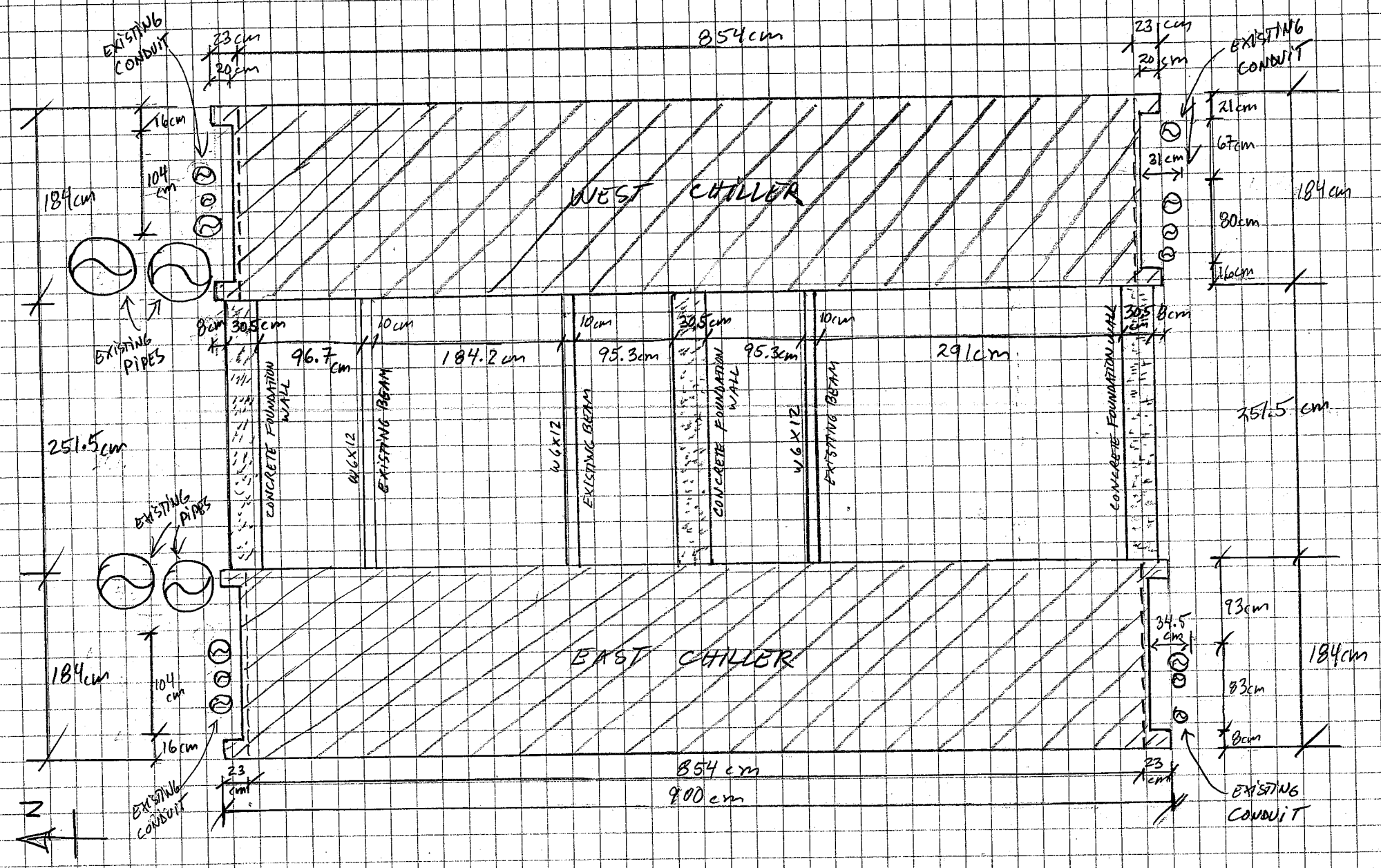
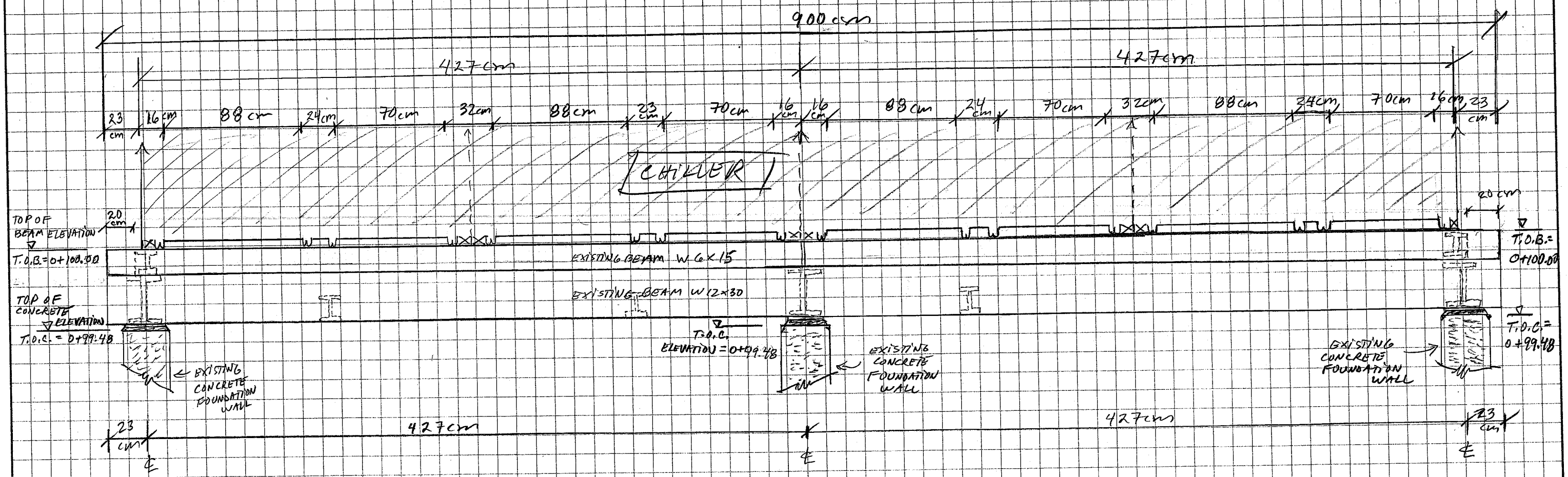


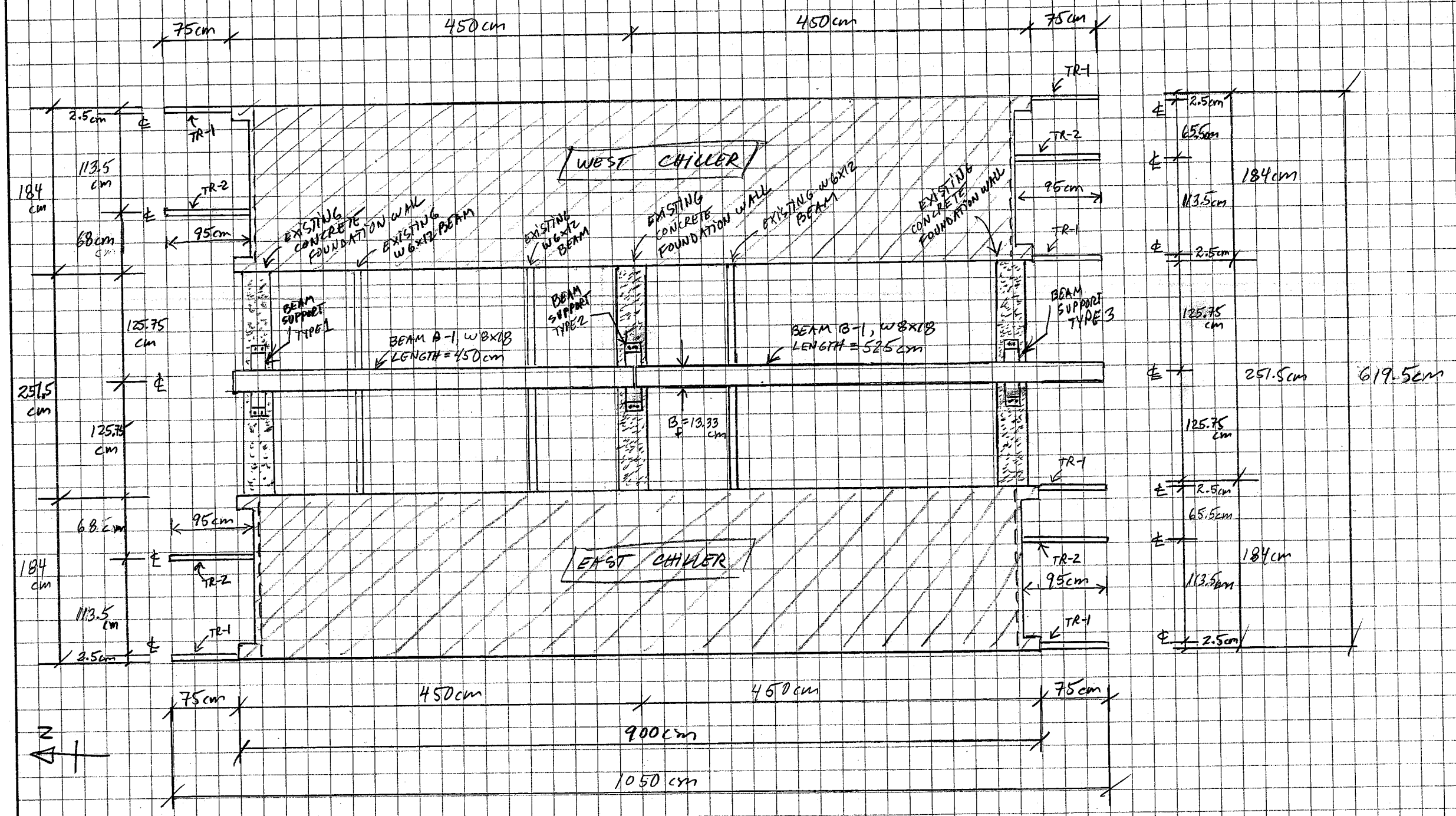
SCALE = 1:50

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	EXISTING DIMENSION GENERAL PLAN VIEW
PROYECTO CHILLER WORKING PLATFORM	HOJA 1 DE 15 HECHO POR L.H. FECHA MARCH 2013



SCALE 1:25

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	EAST ELEVATION EXISTING DIMENSIONS
PROYECTO CHILLER WORKING PLATFORM	HOJA 2 DE 15 HECHO POR L.H. FECHA 03-2013



SCALE 1:50

SUPPORTING STRUCTURE:

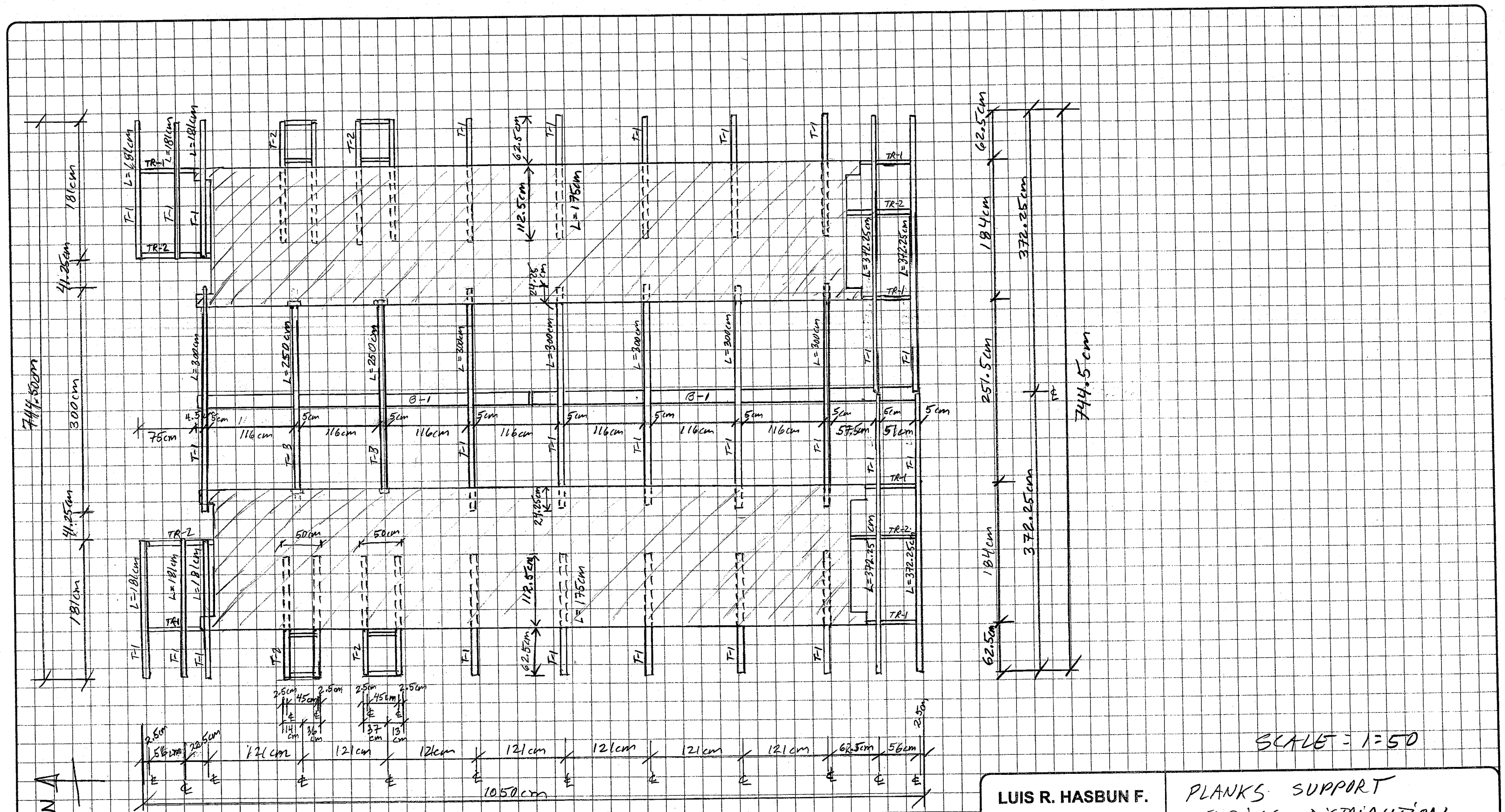
BEAM B-1 = W8x18

TRUSS TR-1 = 75cm long HSS TRUSS WITH 2"x2"x 1/8" TUBING

TRUSS TR-2 = 95cm long HSS TRUSS WITH 2"x2"x 1/8" TUBING

- TOP OF SUPPORTING STRUCTURE (B-1, TR-1, TR-2) ELEVATION = 0 + 100.00
- TOP OF EXISTING CONCRETE FOUNDATION WALL ELEVATION = 0 + 99.48

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	SUPPORTING STRUCTURE, BEAM AND TRUSSES PLAN VIEW
PROYECTO CHILLER WORKING PLAT FORM	HOJA 3 DE 15 HECHO POR L.H. FECHA 03-2013



TUBING:

T-1 = HSS SQUARE TUBING 2"x2"x 1/8" (5cm x 5cm x 0.3cm)

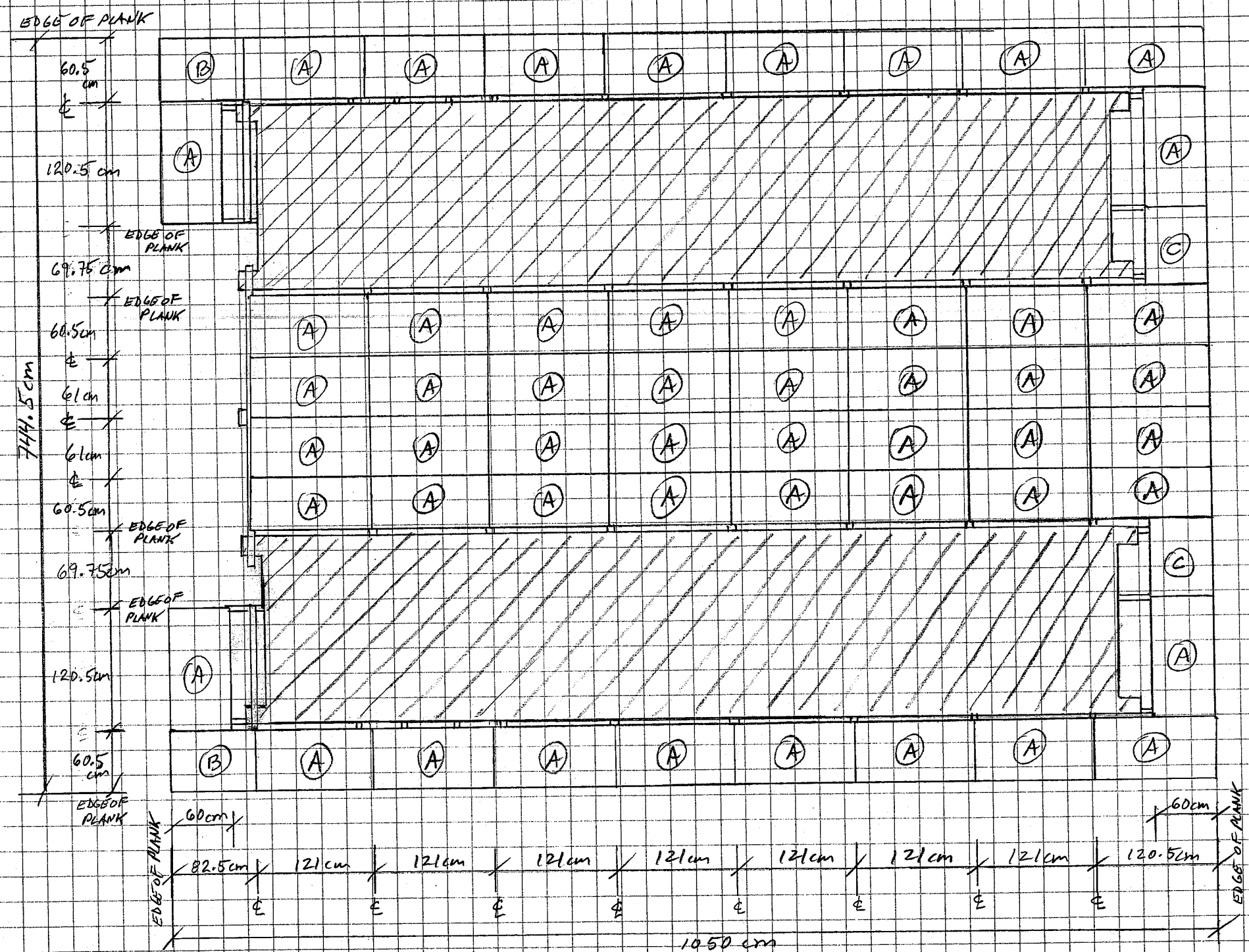
T-2 = DOUBLE FRAME WITH TWO HSS SQUARE TUBING MEMBERS HSS 2"x2"x 1/8"

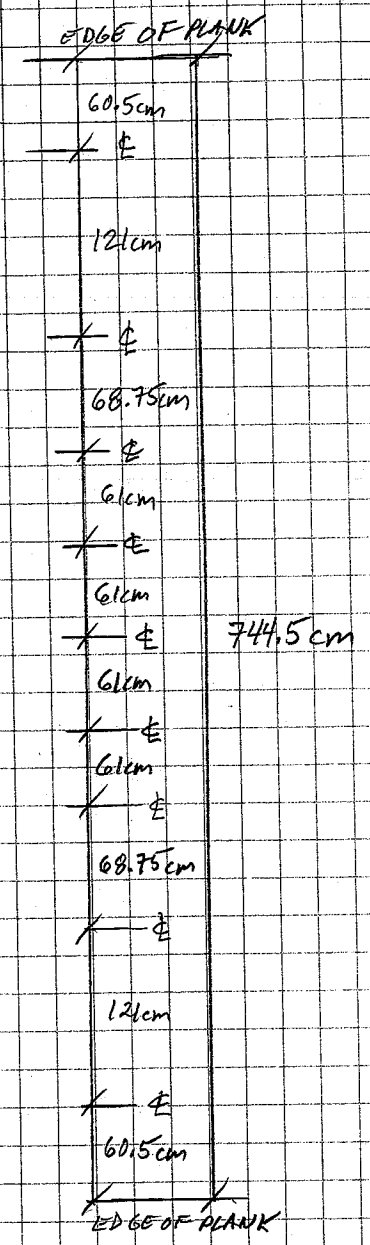
T-3 = HSS SQUARE TUBING 2"x2"x 1/8" WITH MODIFIED END SUPPORTS.

TUBING ELEVATION = BOTTOM OF TUBING (T-1, T-2, T-3) ELEVATION = 0+100.00

BOTTOM OF TUBING IS WELDED TO TOP OF SUPPORTING STRUCTURE, BEAMS AND TRUSSES (B-1, TR-1, AND TR-2)

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	PLANKS SUPPORT TUBING DISTRIBUTION PLAN VIEW
PROYECTO CHILLER WORKING PLATFORM	HOJA 4 DE 15 HECHO POR L.H. FECHA 03-2013





PLANK TYPE:

(A) = STANDARD PLANK WITH OUTSIDE DIMENSIONS (OUT-OUT) 120 cm x 60 cm. LEAVE A 1cm GAP BETWEEN ADJACENT PLANKS. (52 TOTAL PLANKS)

(B) = NORTH SIDE CORNER PLANK WITH OUTSIDE DIMENSIONS (OUT-OUT) 82 cm x 60 cm (NEED TO FIELD RECTIFY THIS DIMENSION BEFORE FABRICATION). LEAVE A 1cm GAP BETWEEN ADJACENT PLANKS. (2 TOTAL PLANKS)

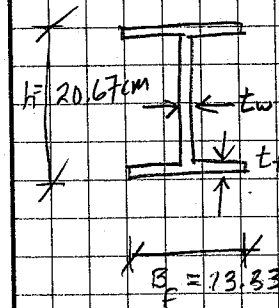
(C) = SOUTH SIDE INTERIOR PLANK WITH OUTSIDE DIMENSIONS (OUT-OUT) 67.75 cm x 60cm (NEED TO FIELD RECTIFY THIS DIMENSION BEFORE FABRICATION). LEAVE A 1 cm GAP BETWEEN ADJACENT PLANKS. (2 TOTAL PLANKS)

SCALE 1:50

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	PLANKS DISTRIBUTION PLAN VIEW
PROYECTO CHILLER WORKING PLATFORM	HOJA 5 DE 15 HECHO POR L.H. FECHA 03-2013

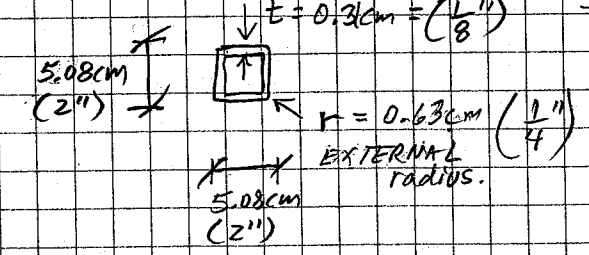
BEAM B-1:

WIDE FLANGE W 8×18
ASTM A-572, F_y = 3500 kg/cm² (50 ksi)



HSS 2"×2"×1/8" = HOLLOW STRUCTURAL SECTION, SQUARE TUBING 2"×2"×1/8"

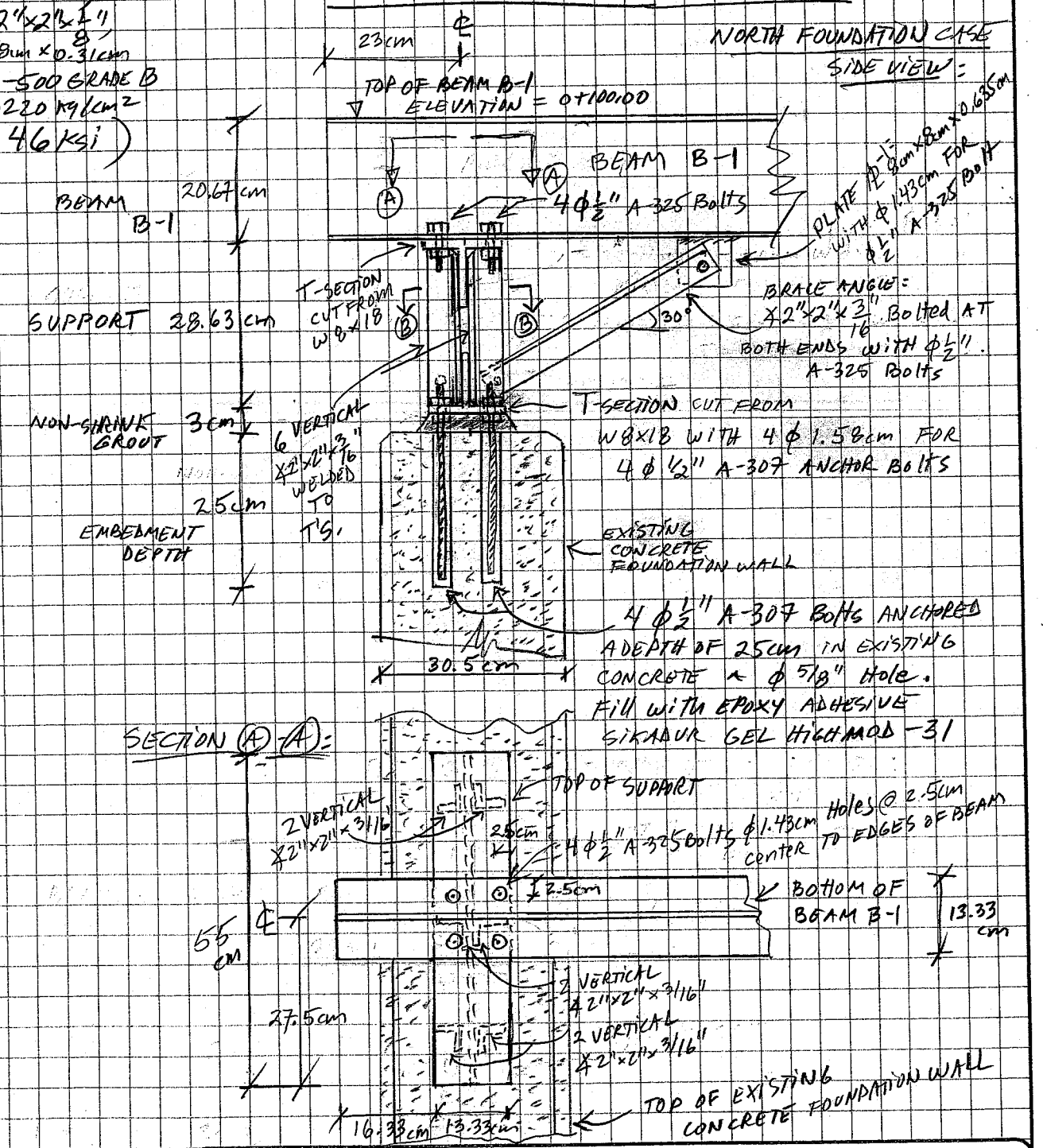
5.08cm × 5.08cm × 0.31cm
ASTM A-500 GRADE B
F_y = 3220 kg/cm² (46 ksi)



BEAM B-1 SUPPORTS TYPE 1:

NORTH FOUNDATION CASE

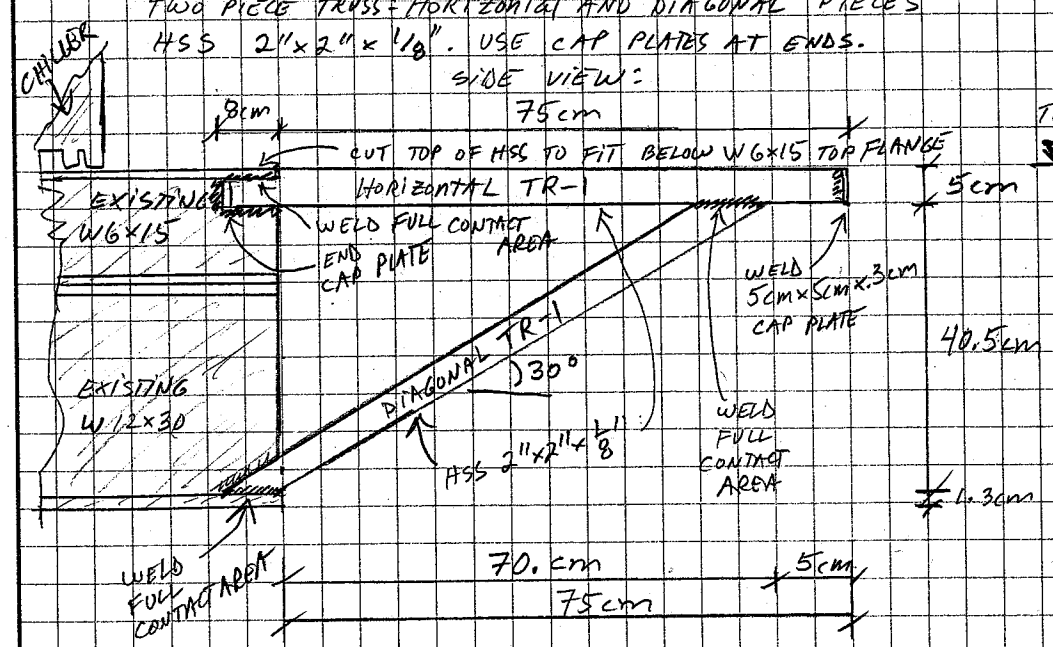
SIDE VIEW:



TRUSS TR-1:

TWO PIECE TRUSS: HORIZONTAL AND DIAGONAL PIECES HSS 2"×2"×1/8". USE CAP PLATES AT ENDS.

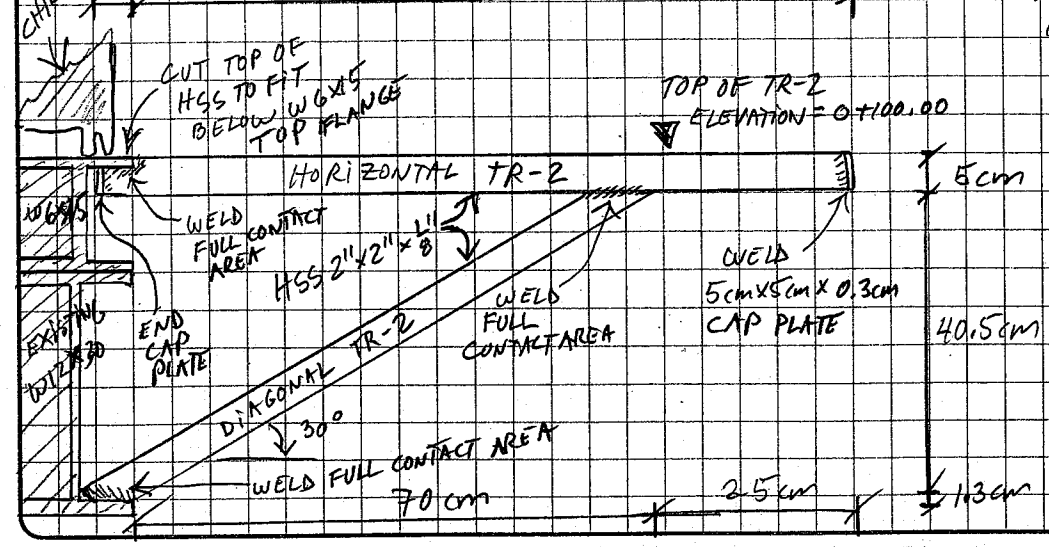
SIDE VIEW:



TOP OF TR-1
ELEVATION = 0+100.00

TRUSS TR-2:

SIDE VIEW:



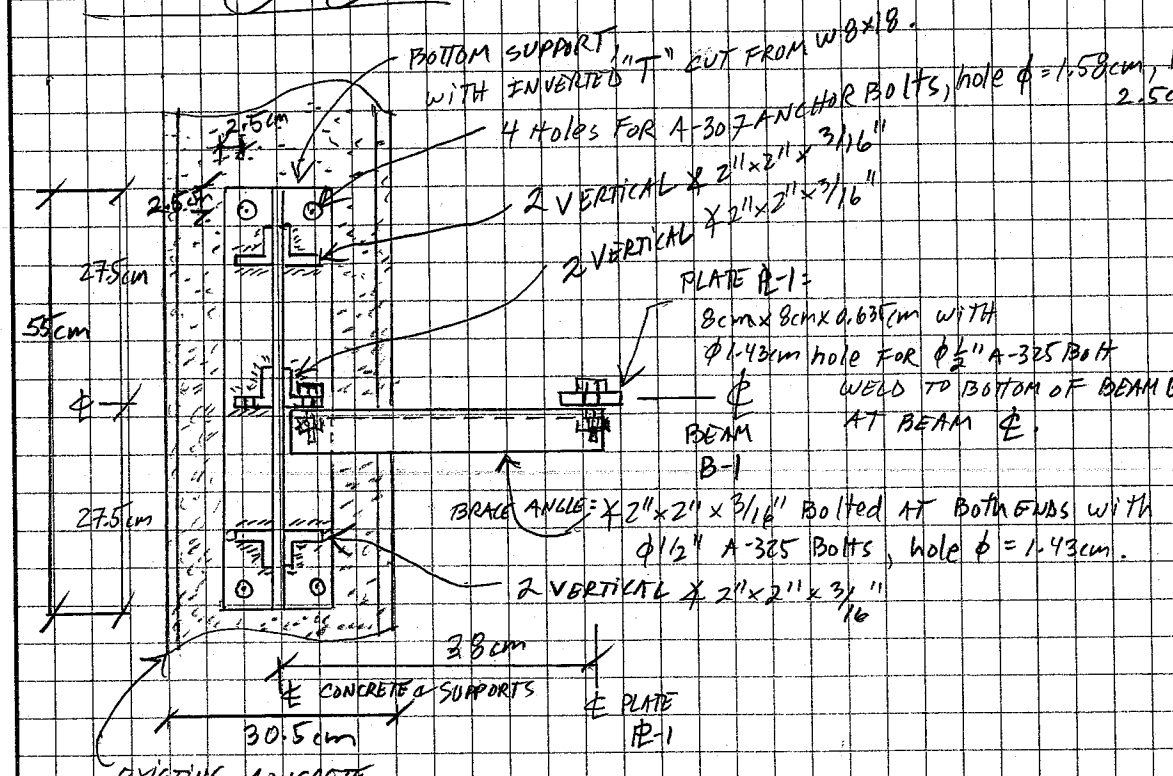
TR-2 TWO PIECE TRUSS: HORIZONTAL AND DIAGONAL PIECES HSS 2"×2"×1/8". USE CAP PLATES AT ENDS.

SCALE 1:10

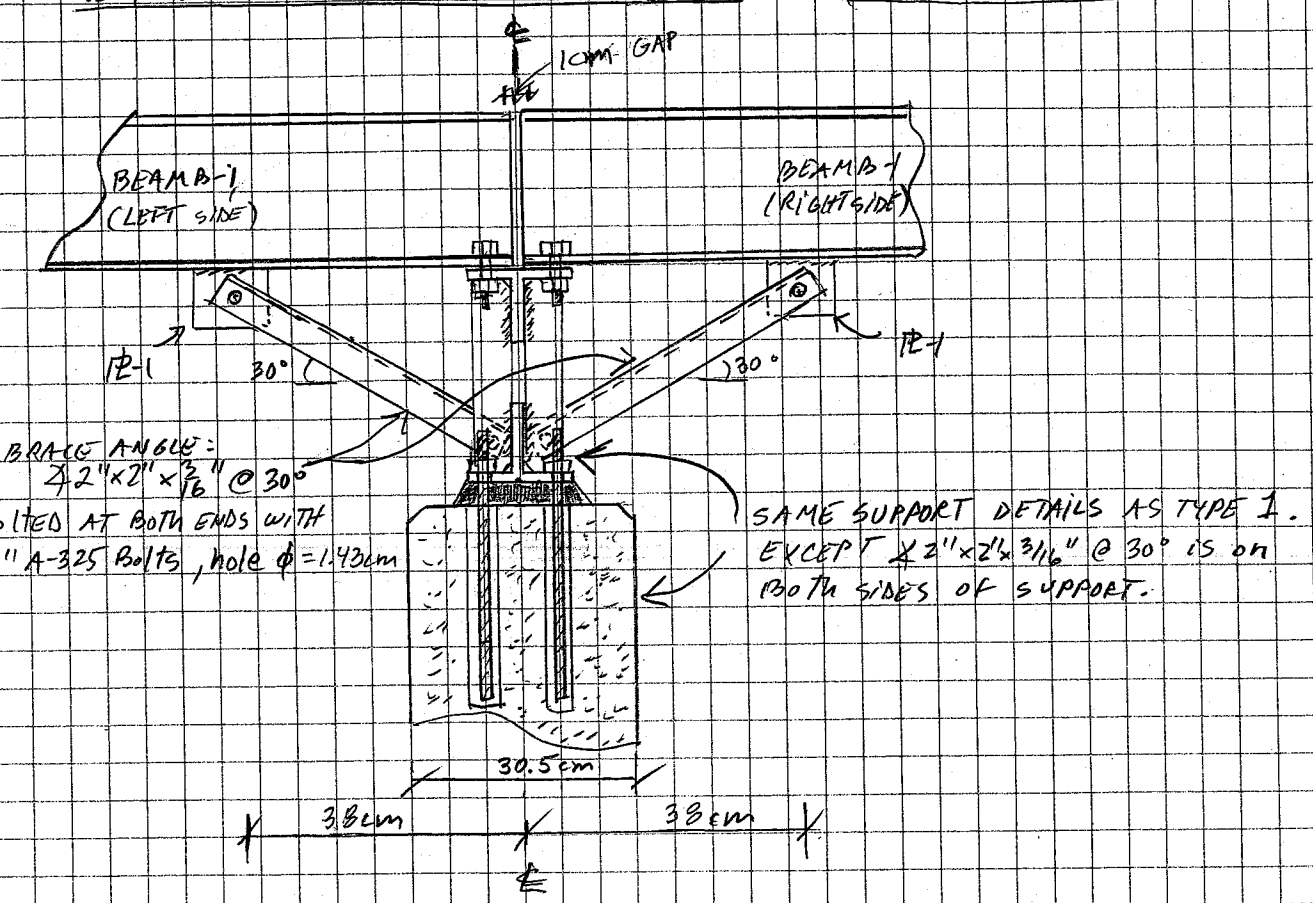
LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	STRUCTURAL DETAILS SUPPORT BEAM B-1, TR-1, TR-2
PROYECTO: CHILLER WORKING PLATFORM	HOJA 6 DE 15 HECHO POR L.H. FECHA 03-2013

BEAM B-1 SUPPORTS TYPE 1:

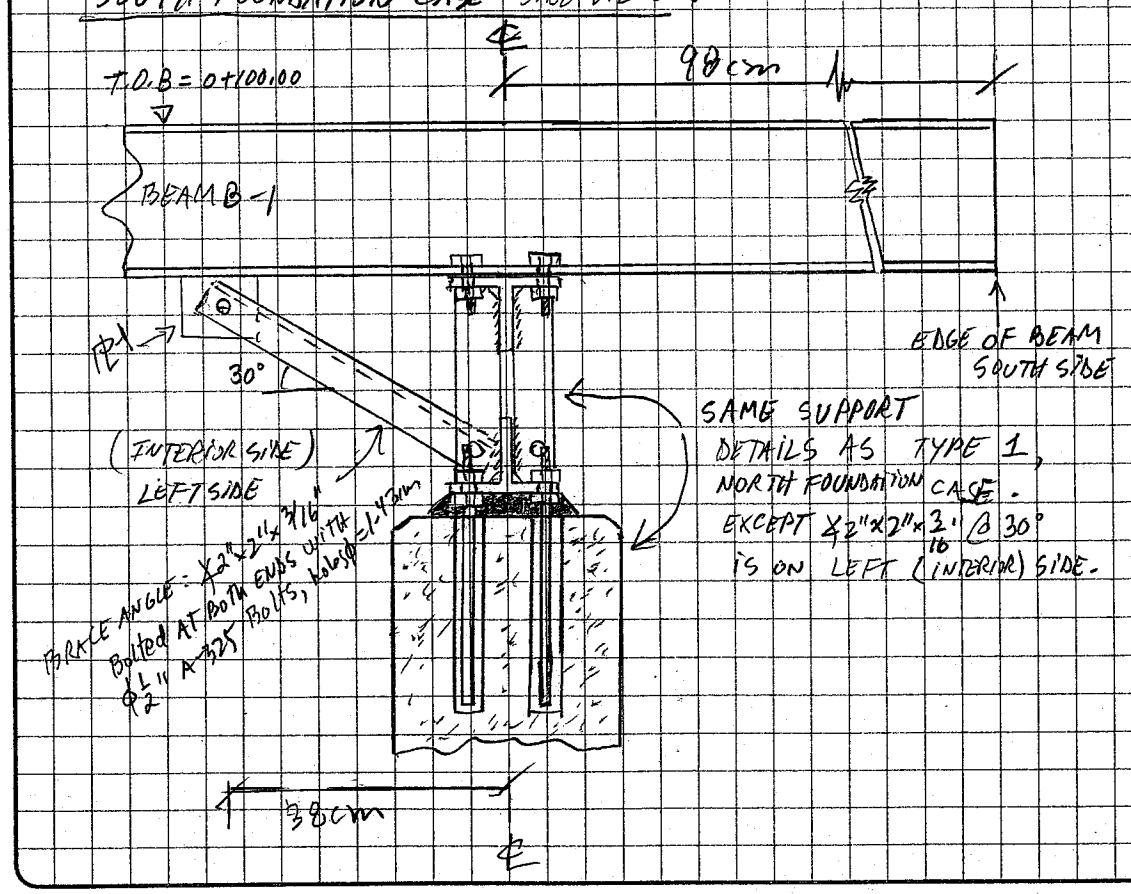
SECTION (B) - (B) =



BEAM B-1 SUPPORTS TYPE 2 = CENTRAL SUPPORT CASE

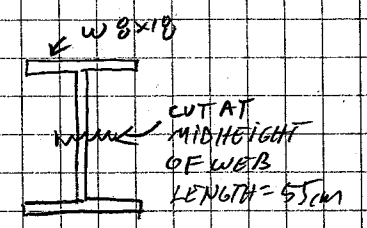


BEAM B-1 SUPPORTS TYPE 3 = SOUTH FOUNDATION CAGE SIDE VIEW:

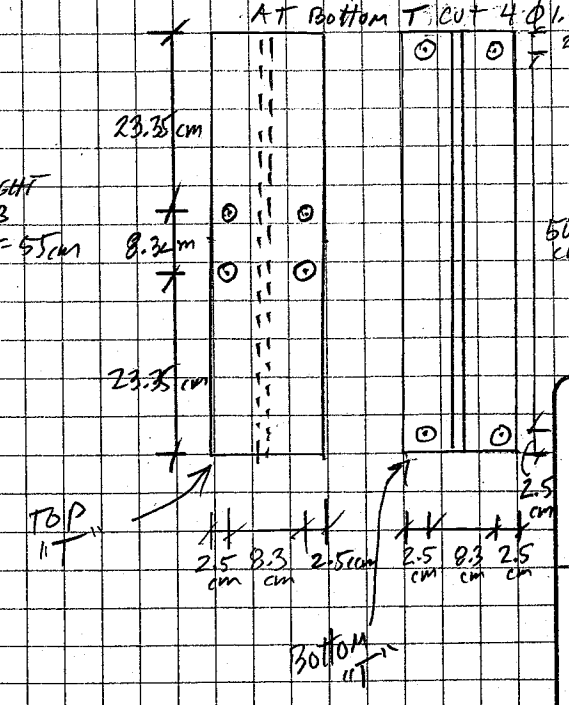


SUPPORTS DETAILS: (SAME FOR TYPE 1, 2, 3)

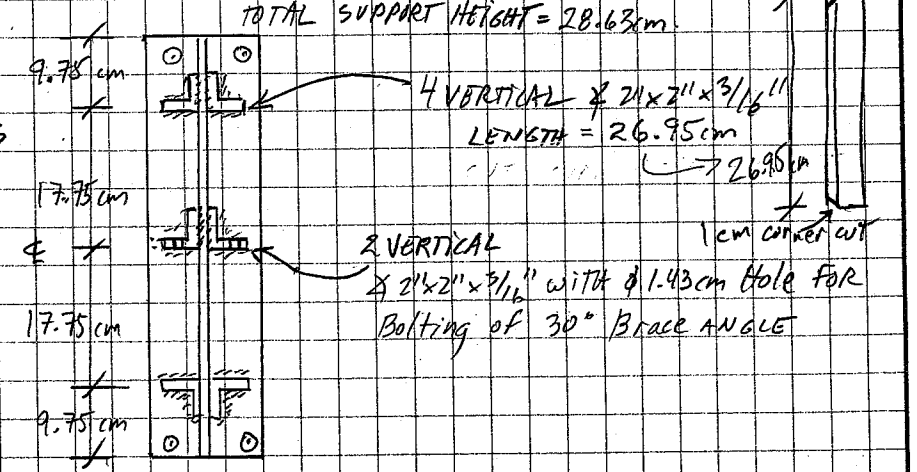
STEP 1:
CUT AT CENTER OF
WEB A 55cm LONG SECTION
OF W8x18



STEP 2 =
AT TOP T CUT 4 ϕ1.43cm Holes
FOR 4 ϕ1/2" A-325 Bolts.
AT Bottom T CUT 4 ϕ1.58cm Holes



STEP 3 = WELD 6 VERTICAL ∡2"x2"x3/16" TO JOIN
TOP T with Bottom T.
TOTAL SUPPORT HEIGHT = 28.63cm

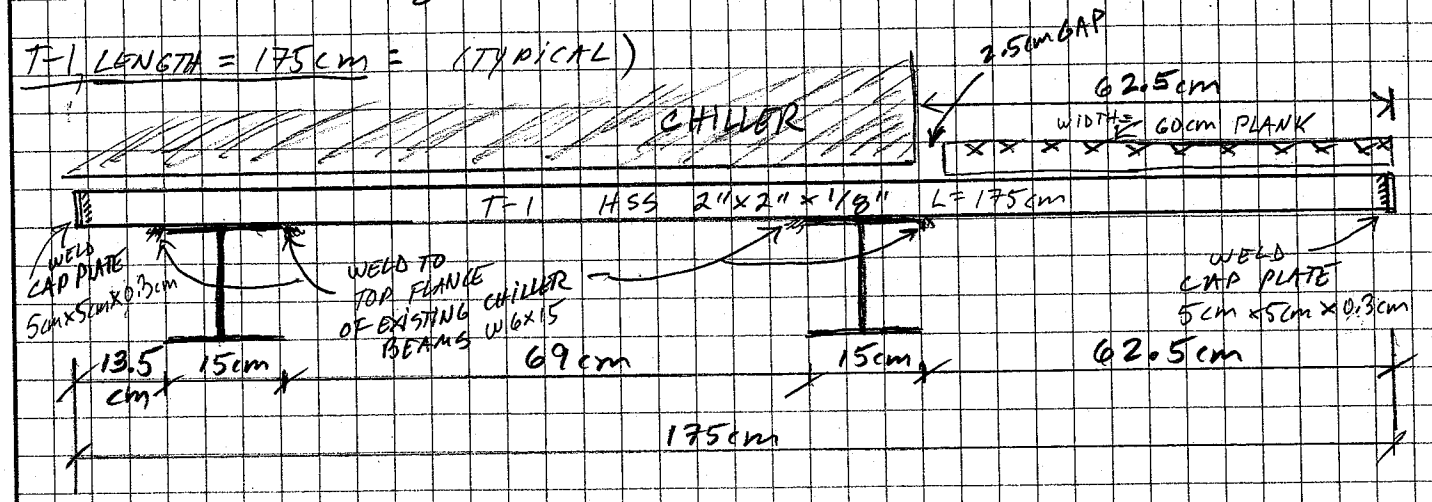


SCALE 1=10

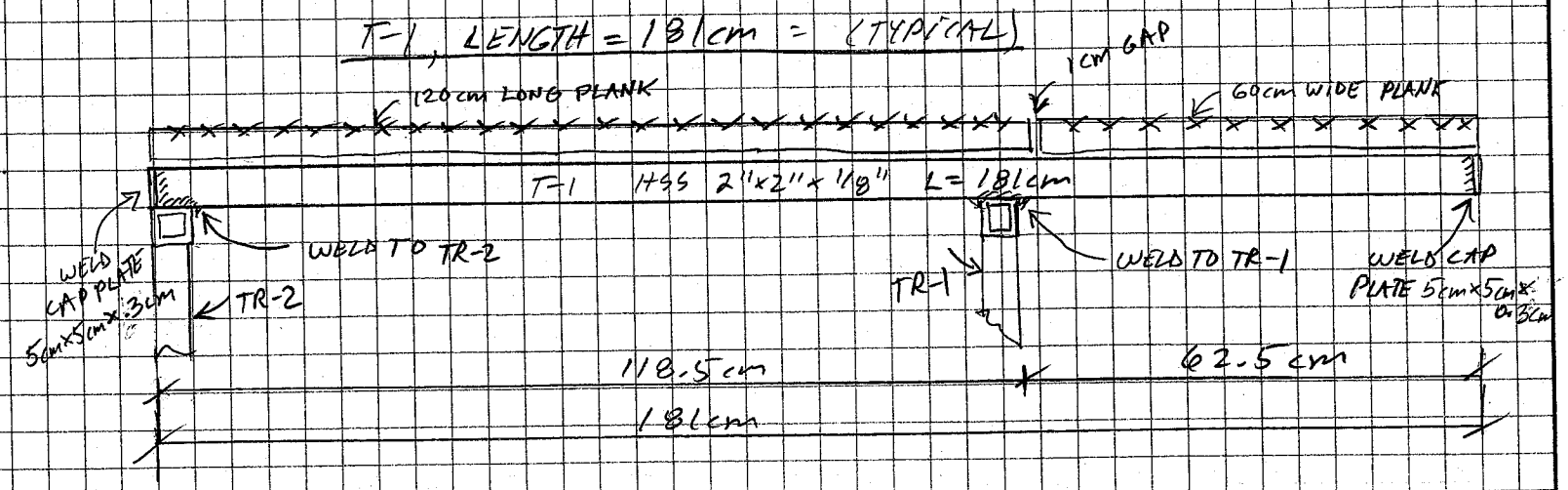
LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	BEAM B-1 SUPPORTS DETAILS
PROYECTO: CHILLER WORKING PLATFORM	HOJA 7 DE 15 HECHO POR L.H. FECHA 03-2013

TUBING T-1:
HSS 2"x2"x 1/8" SQUARE TUBING. CAP BOTH ENDS OF TUBING WITH 5cm x 5cm x 0.3cm CAP PLATE. WELD TUBING TO SUPPORT BEAMS AND TRUSSES. (B-1, TR-1, TR-2, EXISTING BEAMS)

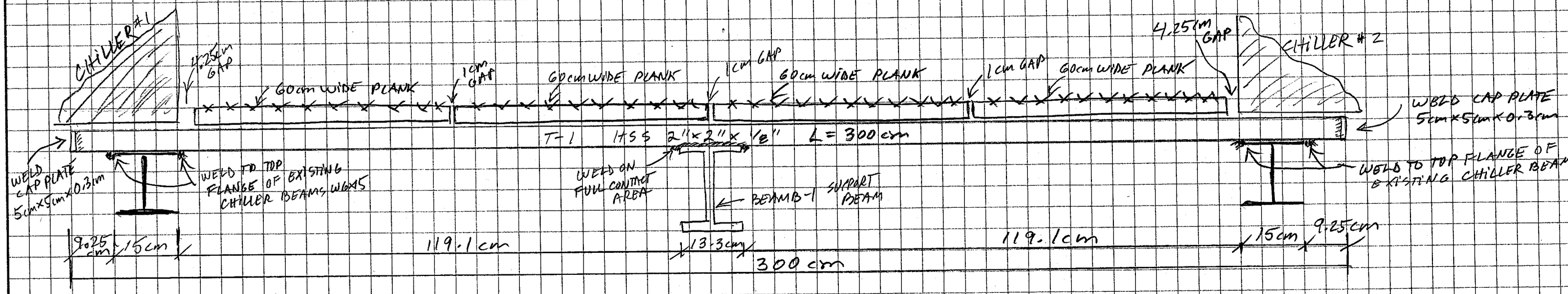
T-1, LENGTH = 175 cm : (TYPICAL)



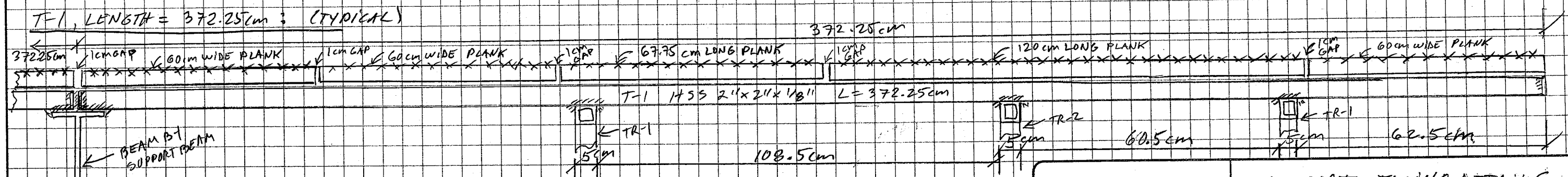
T-1, LENGTH = 181 cm : (TYPICAL)



T-1, LENGTH = 300 cm : (TYPICAL)



T-1, LENGTH = 372.25 cm : (TYPICAL)



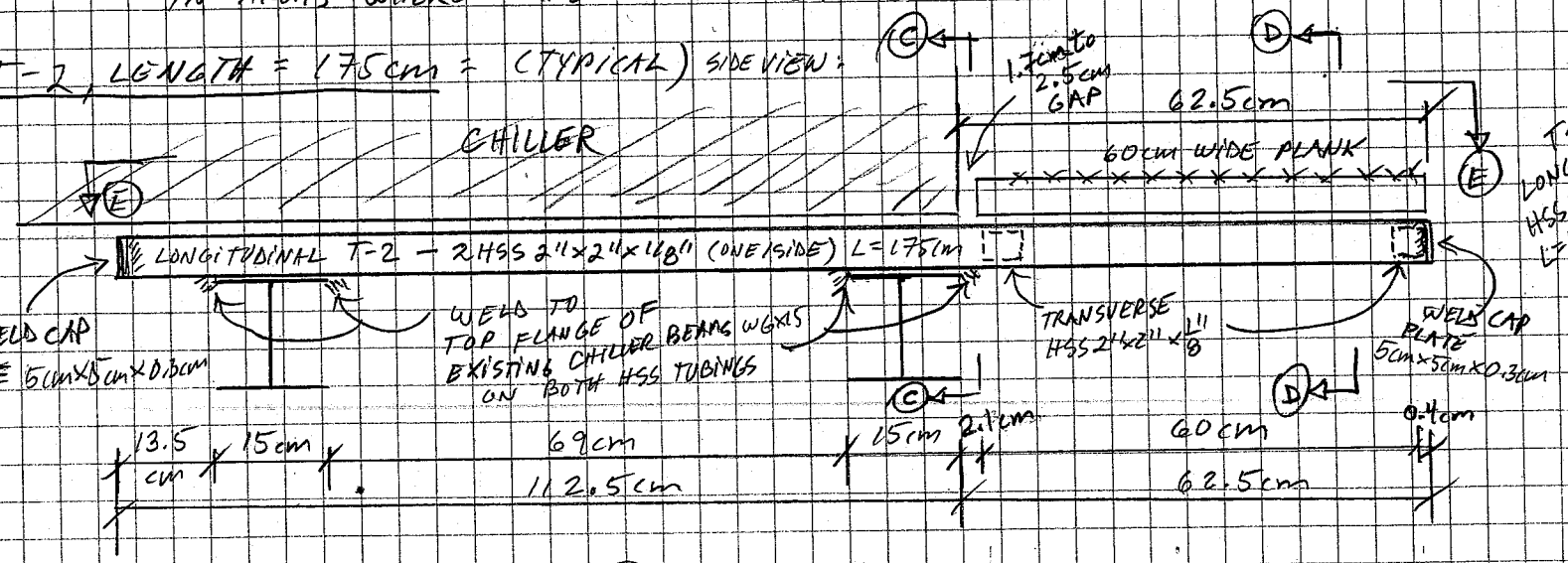
SCALE 1:10

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	SUPPORT TUBING DETAILS T-1
PROYECTO CHILLER WORKING PLATFORM	HOJA 8 DE 15 HECHO POR L.H. FECHA 03-2013

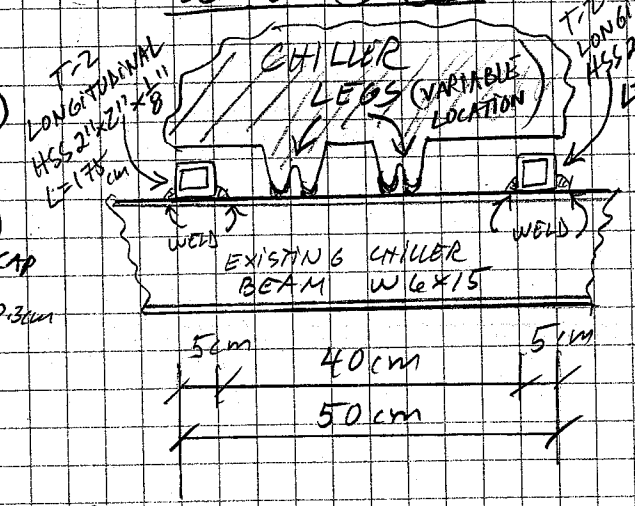
TUBING T-2:

HORIZONTAL FRAME WITH TWO HSS 2"x2"x1/8" LONGITUDINAL SQUARE TUBING CONNECTED TO EACH OTHER BY TWO TRANSVERSE HSS 2"x2"x1/8" SHORT PIECES. locate as indicated in GENERAL PLAN VIEW. T-2 PIECE IS NECESSARY IN AREAS WHERE CHILLER LEGS COINCIDE WITH PLANK JOINT CENTER LINE.

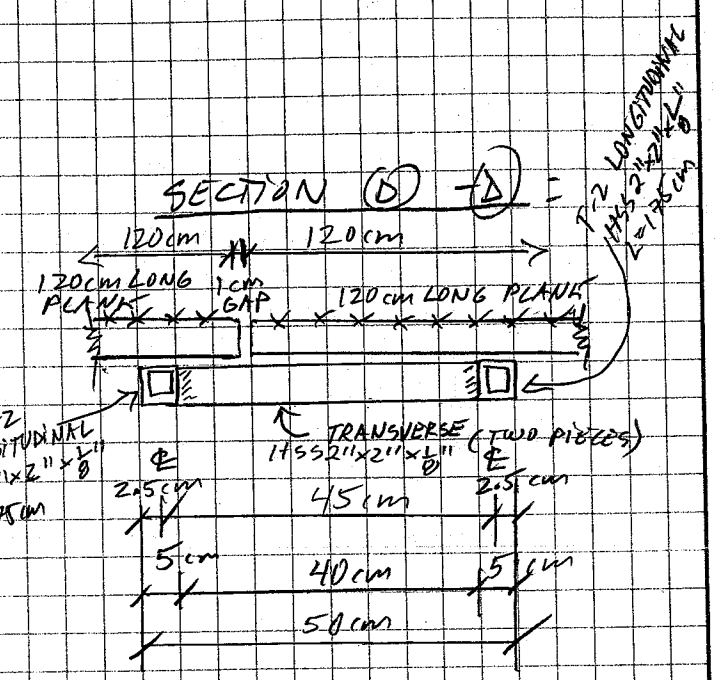
T-2, LENGTH = 175 cm = (TYPICAL) SIDE VIEW:



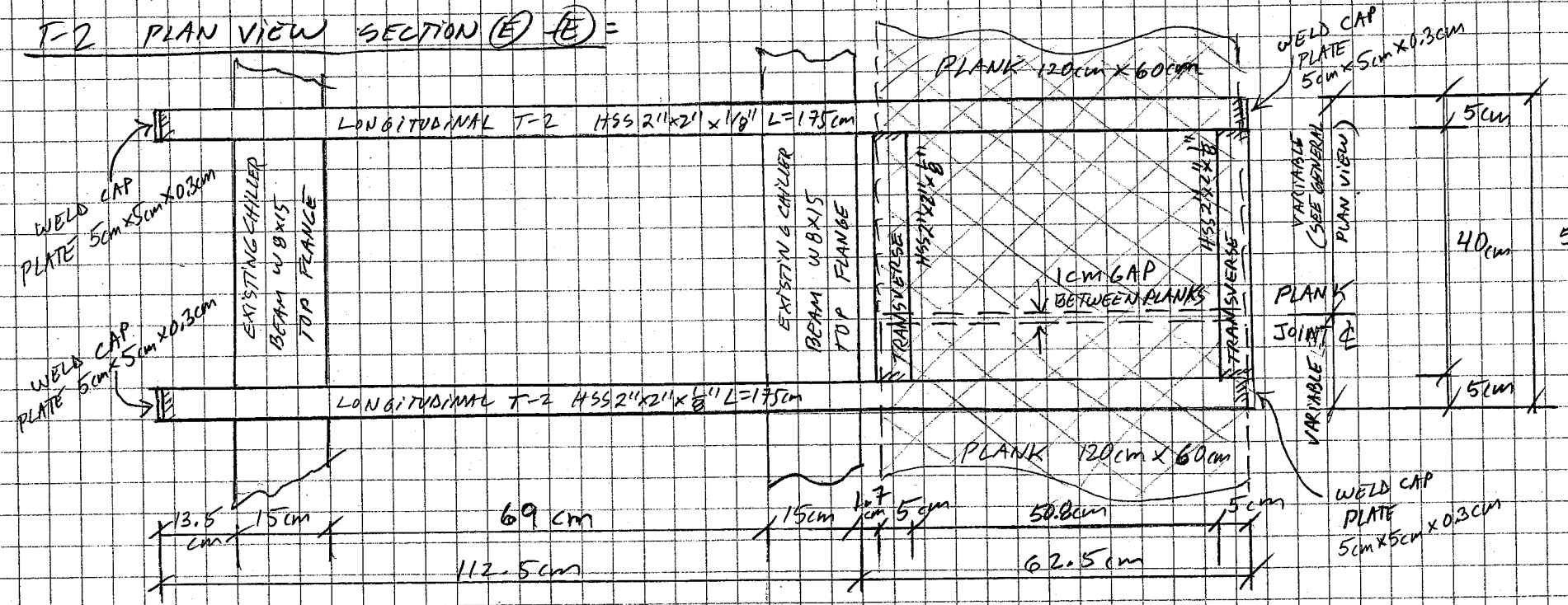
SECTION (C) (E):



SECTION (D) (D):



T-2 PLAN VIEW SECTION (E) (E):

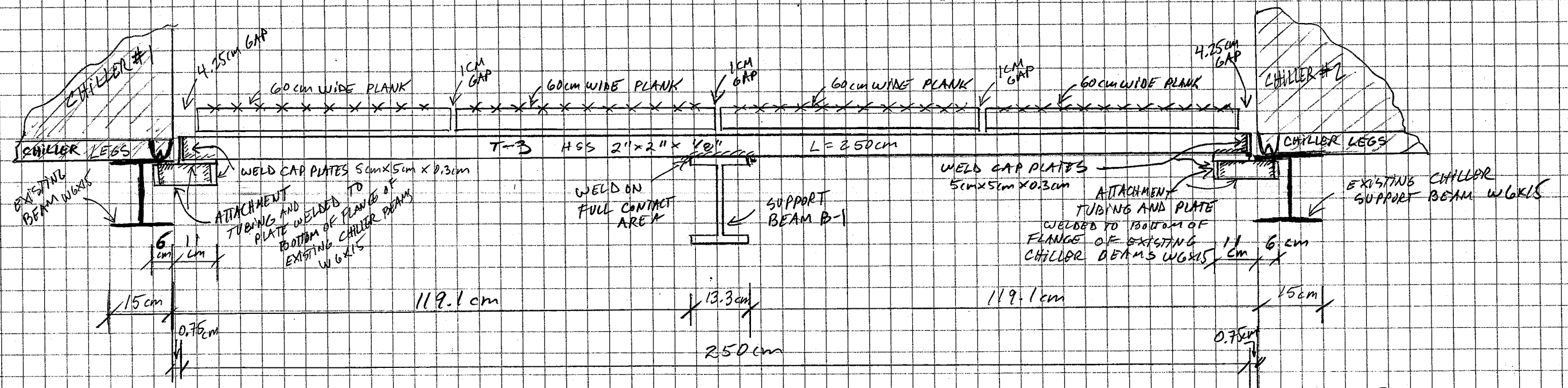


LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	SUPPORT TUBING DETAILS T-2
PROYECTO CHILLER WORKING PLATFORM	HOJA 9 DE 15 HECHO POR L.H. FECHA 03-2013

TUBING T-3 :

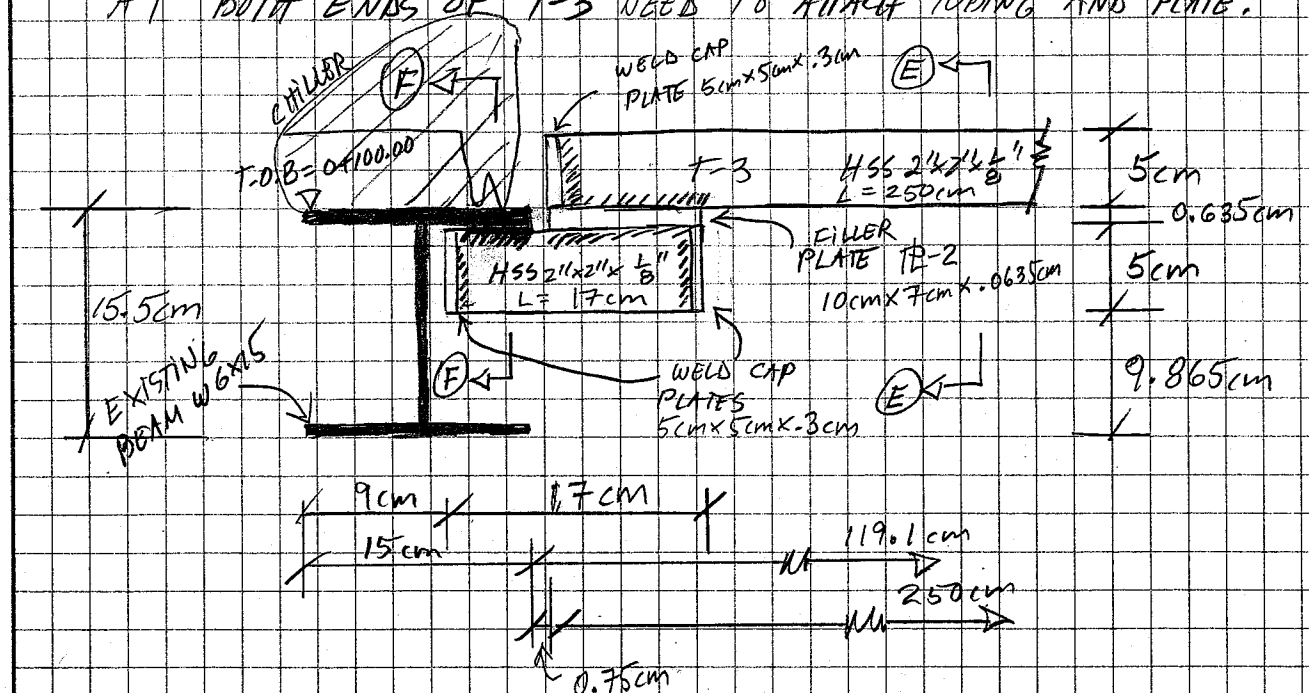
HSS 2"x2"x 1/8" SQUARE TUBING CAP BOTH ENDS WITH 5cm x 5cm x 0.3cm CAP PLATE. T-3 is used in cases where ℄ of T-3 coincides with location of Chiller legs.

T-3, LENGTH = 250 cm : (TYPICAL) SCALE 1:10

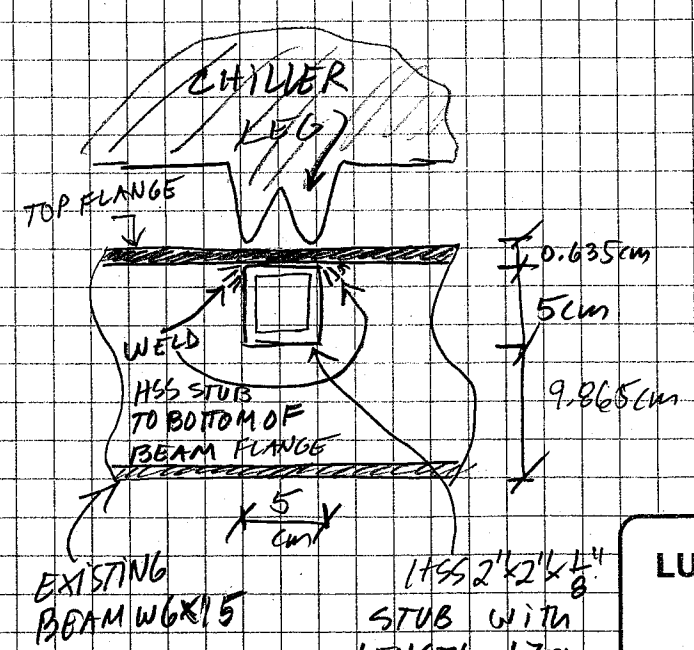


T-3 ATTACHMENT TUBING AND PLATES : SCALE 1:5

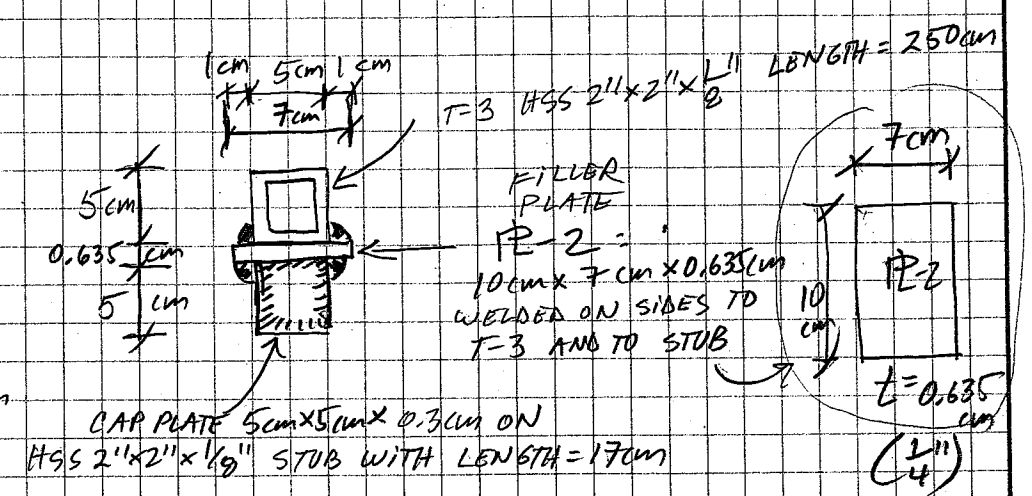
AT BOTH ENDS OF T-3 NEED TO ATTACH TUBING AND PLATE.



SECTION (E)-(E) : SCALE 1:5



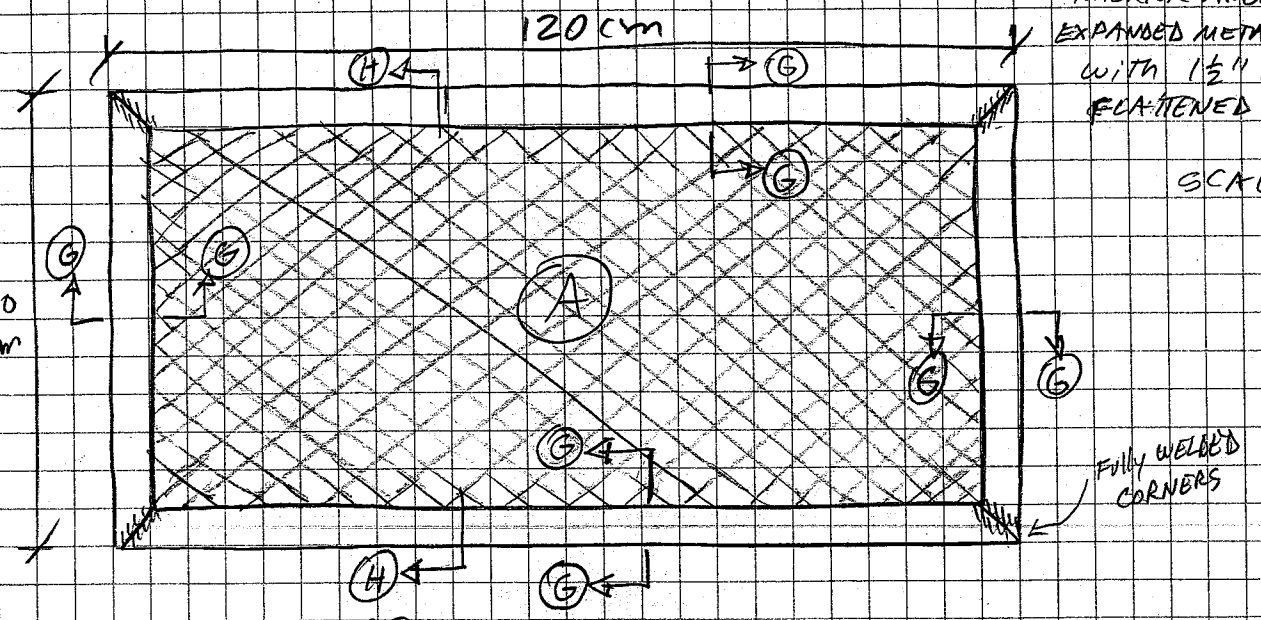
SECTION (F)-(F) : SCALE 1:5



LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	SUPPORT TUBING DETAILS T-3	
PROYECTO CHILLER WORKING PLATFORM		HOJA 10 DE 15 HECHO POR L.H. FECHA 03-2013

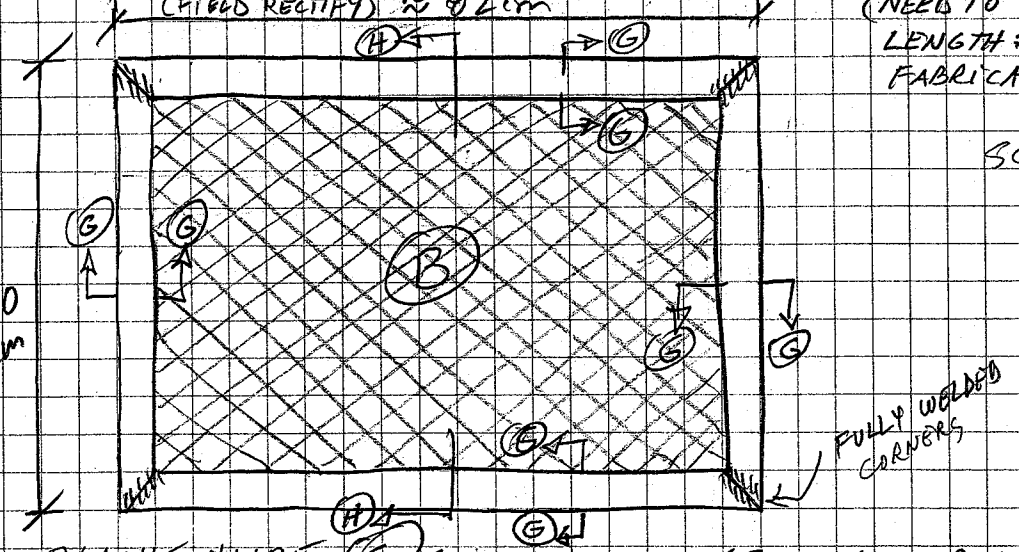
PLANK TYPE (A): 120cm × 60cm PLANK. EXTERIOR FRAME: OUTSIDE ANGLE = ∡ 2"×2"×1/8"
INTERIOR ANGLE = ∡ 1½"×1½"×1/8"
EXPANDED METAL MESH: PR-9, with 1½" Holes, Thickness = 1/8", FLATTENED GALVANIZED MESH.

SCALE 1:10



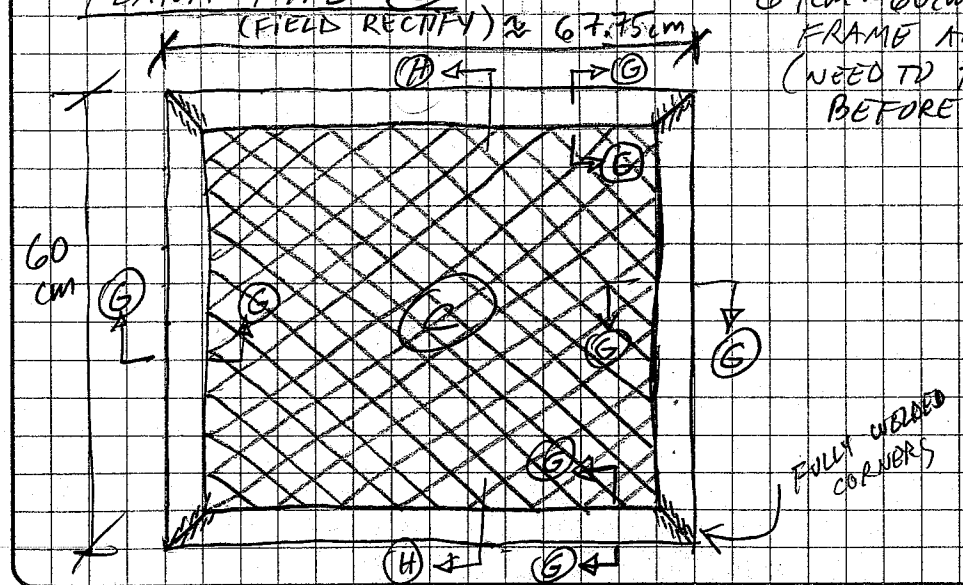
PLANK TYPE (B): 82cm × 60cm PLANK. FRAME AND MESH SAME AS TYPE (A)
(FIELD RECTIFY) ≈ 82cm
(NEED TO FIELD RECTIFY LENGTH ≈ 82cm BEFORE FABRICATION STARTS)

SCALE 1:10

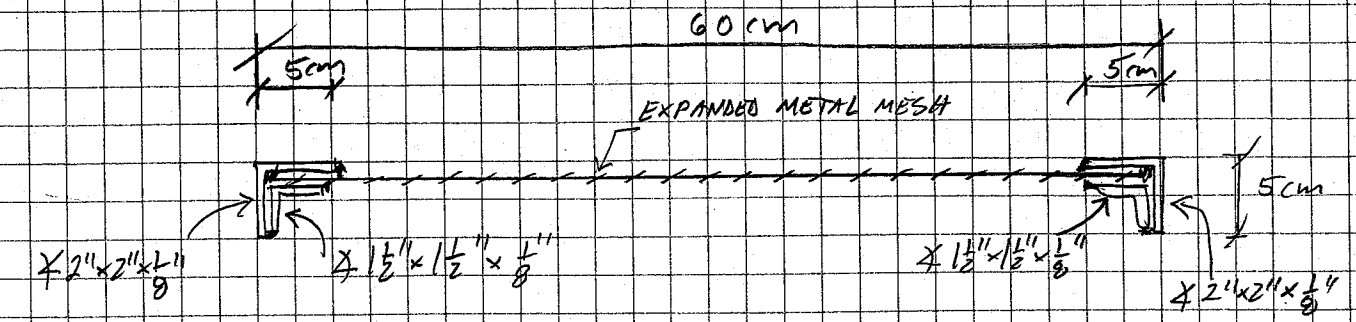


PLANK TYPE (C): 67cm × 60cm PLANK.
(FIELD RECTIFY) ≈ 67.75cm
FRAME AND MESH SAME AS TYPE (A)
(NEED TO FIELD RECTIFY LENGTH = 67.75cm BEFORE FABRICATION STARTS)

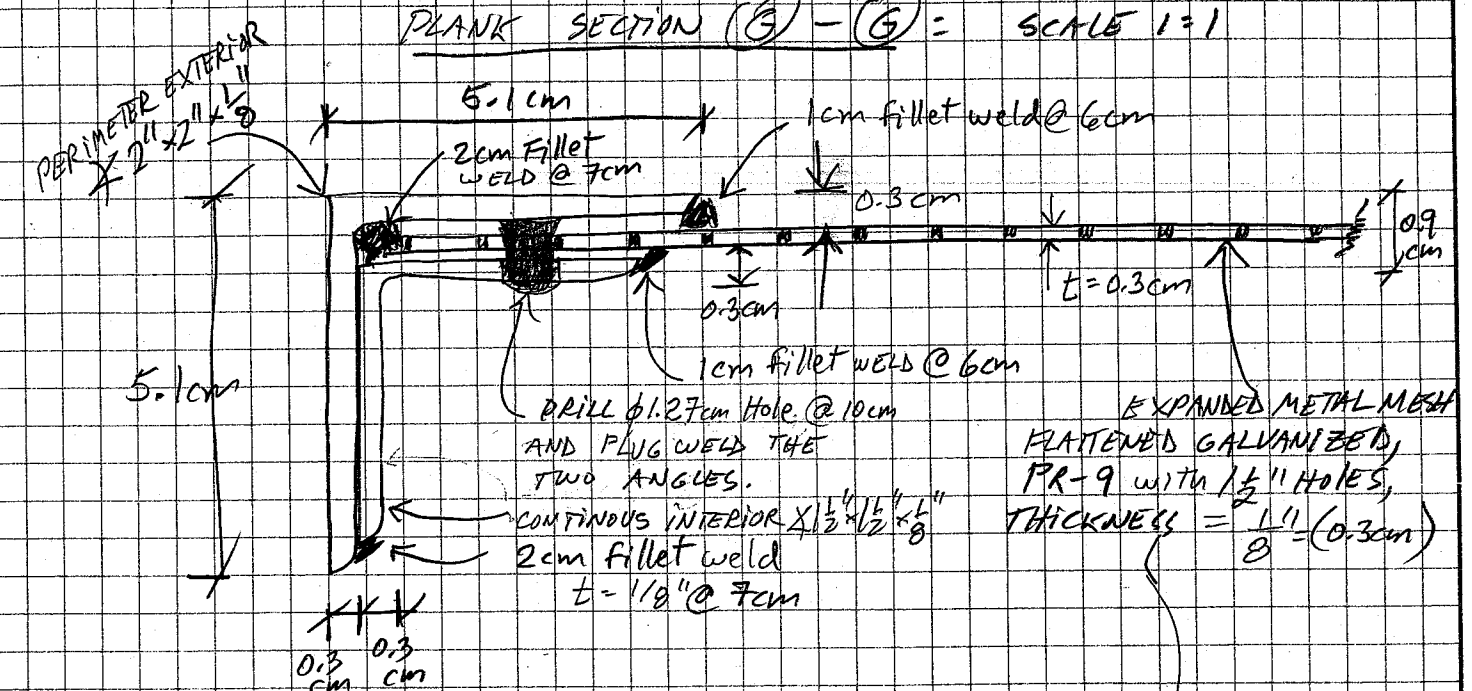
SCALE 1:10

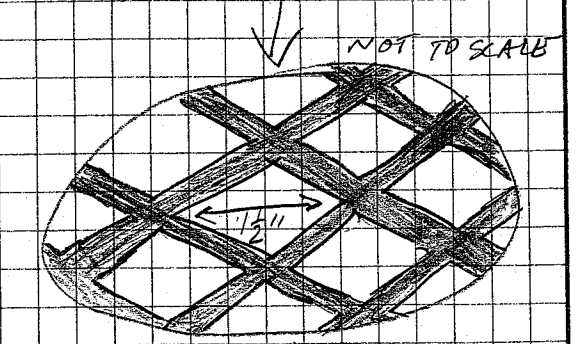


PLANK SECTION (H)-(H): SCALE 1:5



PLANK SECTION (G)-(G): SCALE 1:1



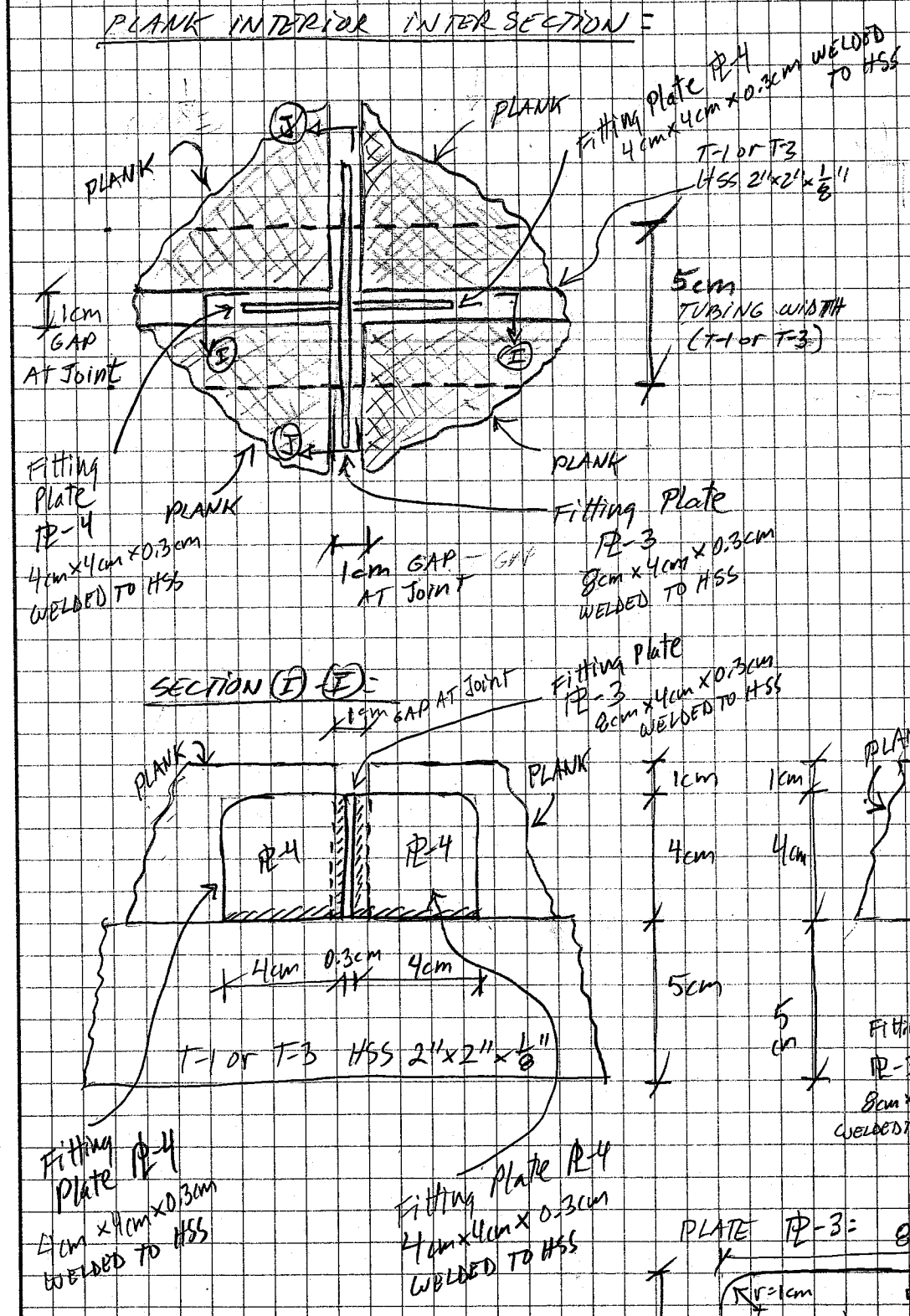


LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	PLANKS DETAILS
PROYECTO: CHILLER WORKING PLATFORM	HOJA 11 DE 15 HECHO POR L.H. FECHA 03-2013

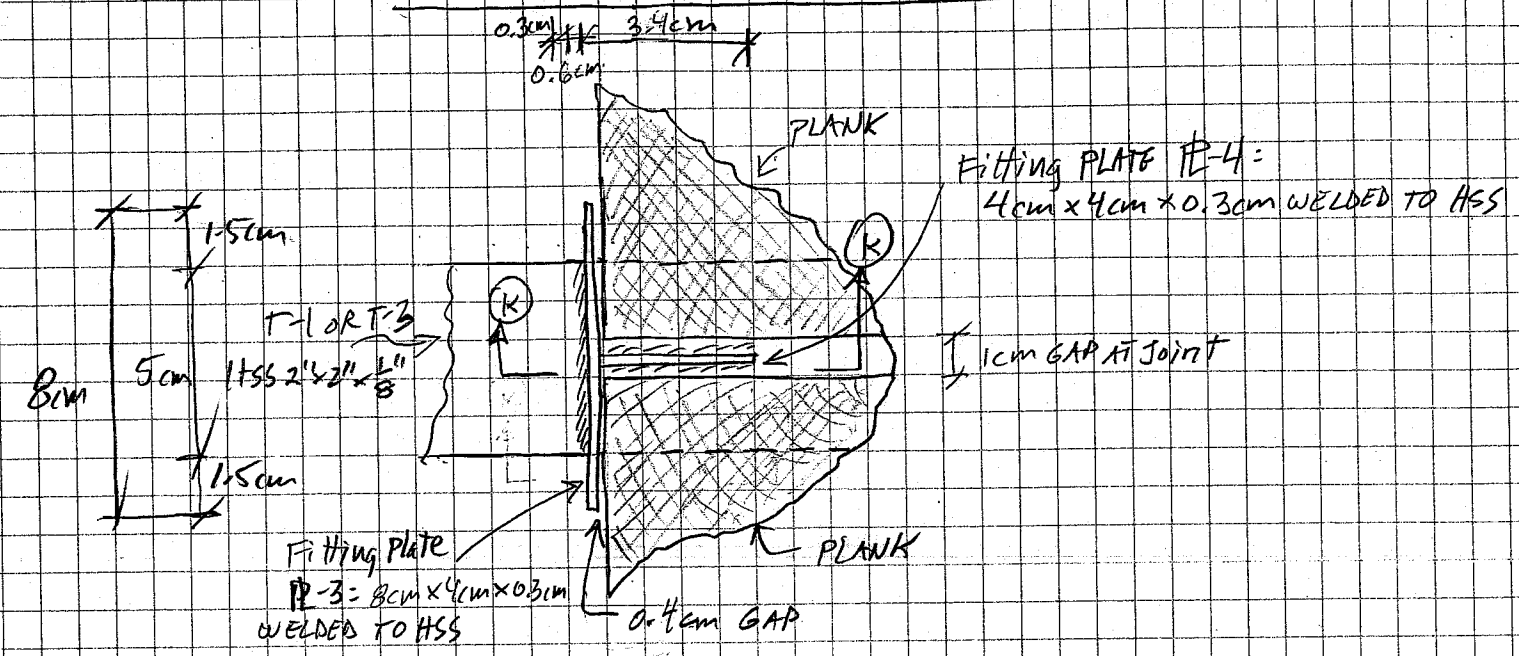
PLANK FITTING PLATES:

WELD FITTING PLATES AT PLANK JOINTS INTERSECTIONS AND AT PLANK TERMINATIONS. PLATE THICKNESS = 0.3cm (1/8")

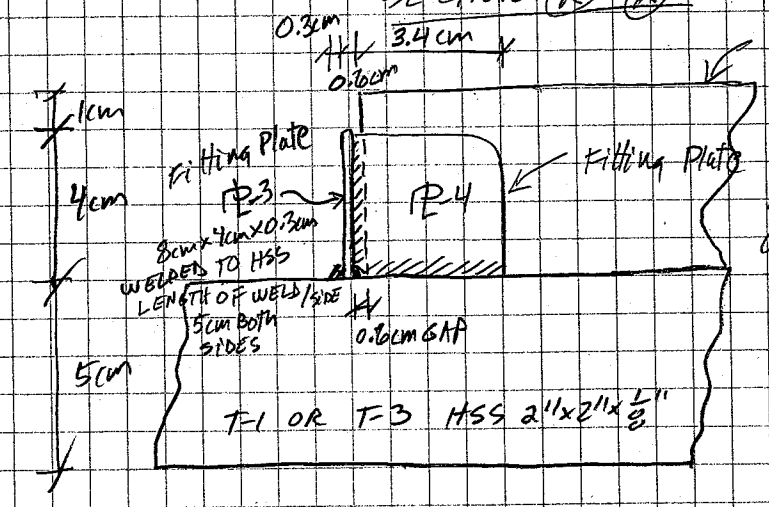
PLANK INTERIOR INTERSECTION:



PLANK EXTERIOR INTERSECTION WITH TRANSVERSE TUBING:



SECTION (K)-(K):



SCALE: 1:2

PLATE PL-3:

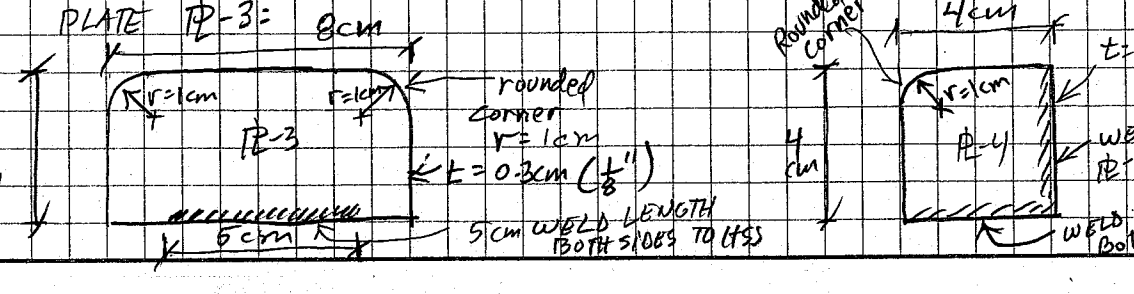
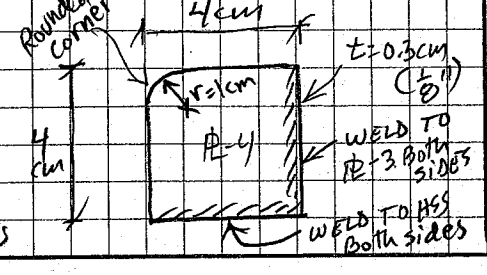
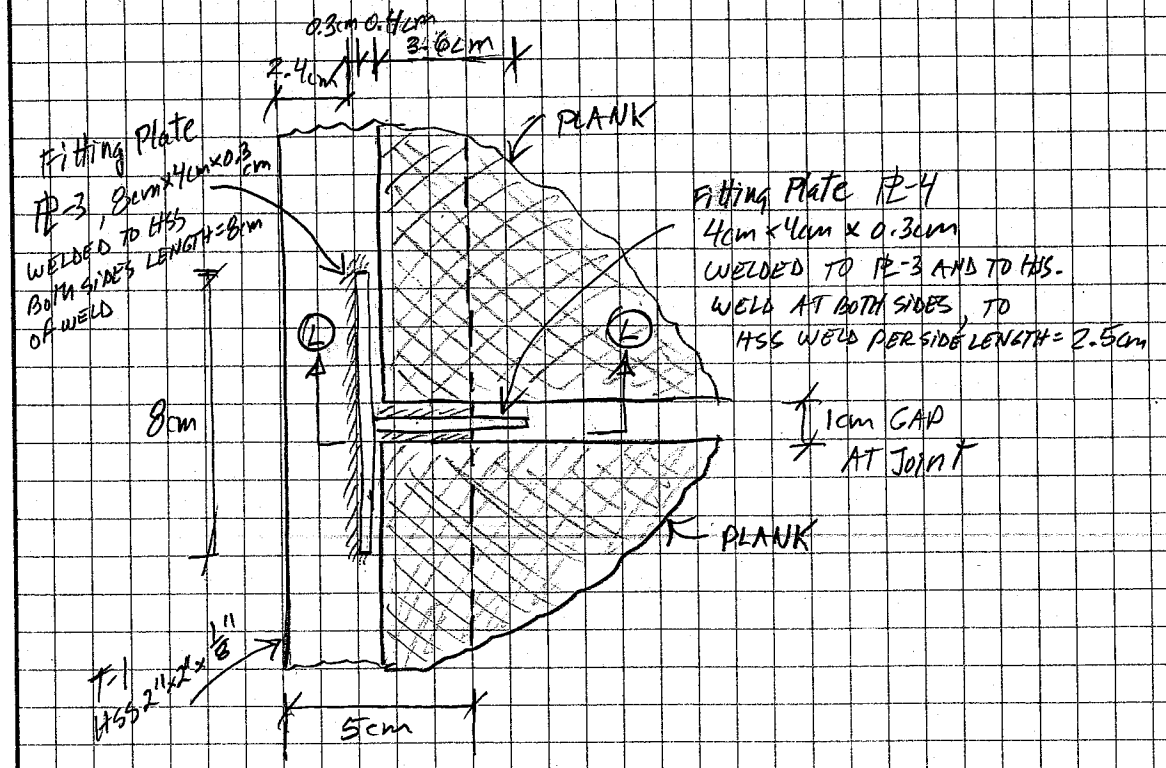


PLATE PL-4:

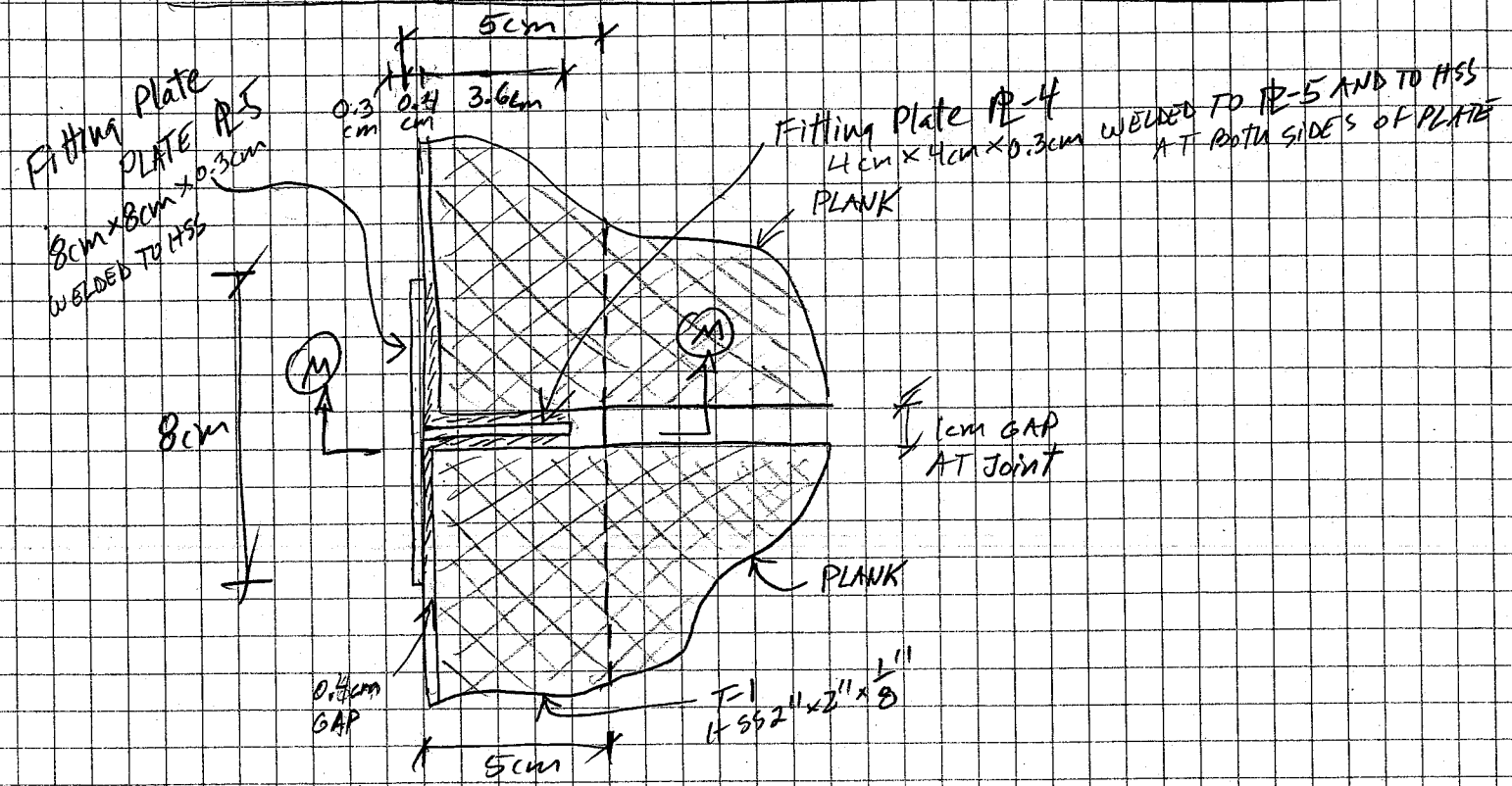


LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	PLANK FITTING PLATES	
PROYECTO CHILLER WORKING PLATFORM		HOJA 12 DE 15 HECHO POR L.H. FECHA 03-2013

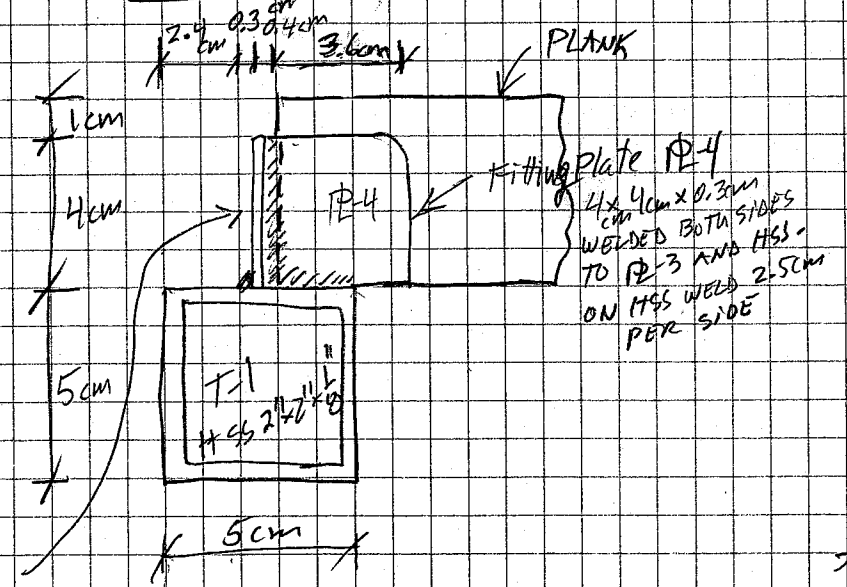
PLANK EXTERIOR INTERSECTION WITH LONGITUDINAL TUBING AT ℄ :



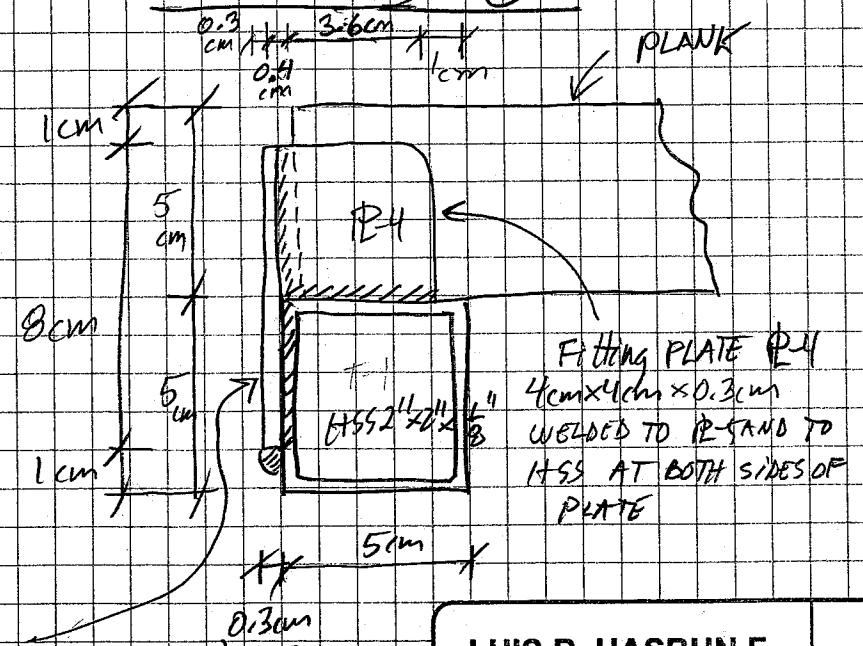
PLANK EXTERIOR INTERSECTION WITH LONGITUDINAL TUBING AT PLANK EDGE



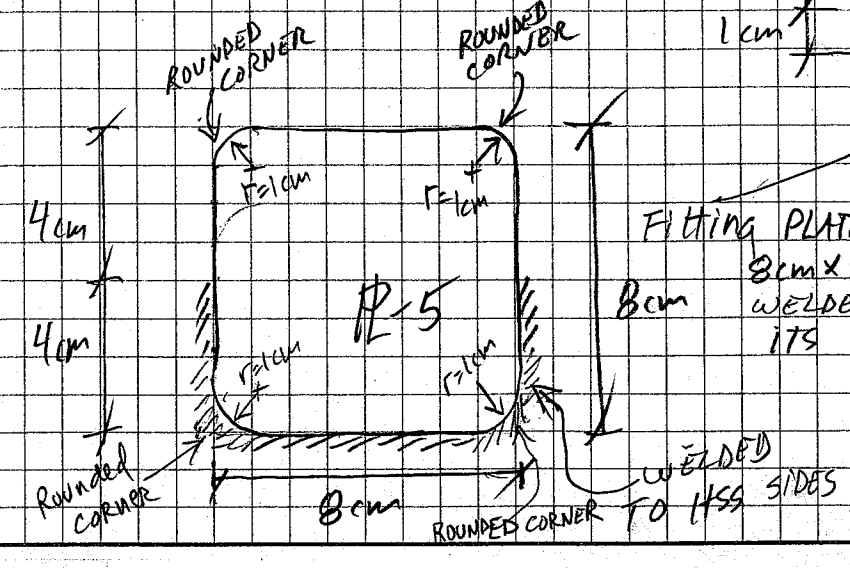
SECTION (K)-(K) :



SECTION (M)-(M) :



SCALE = 1:2

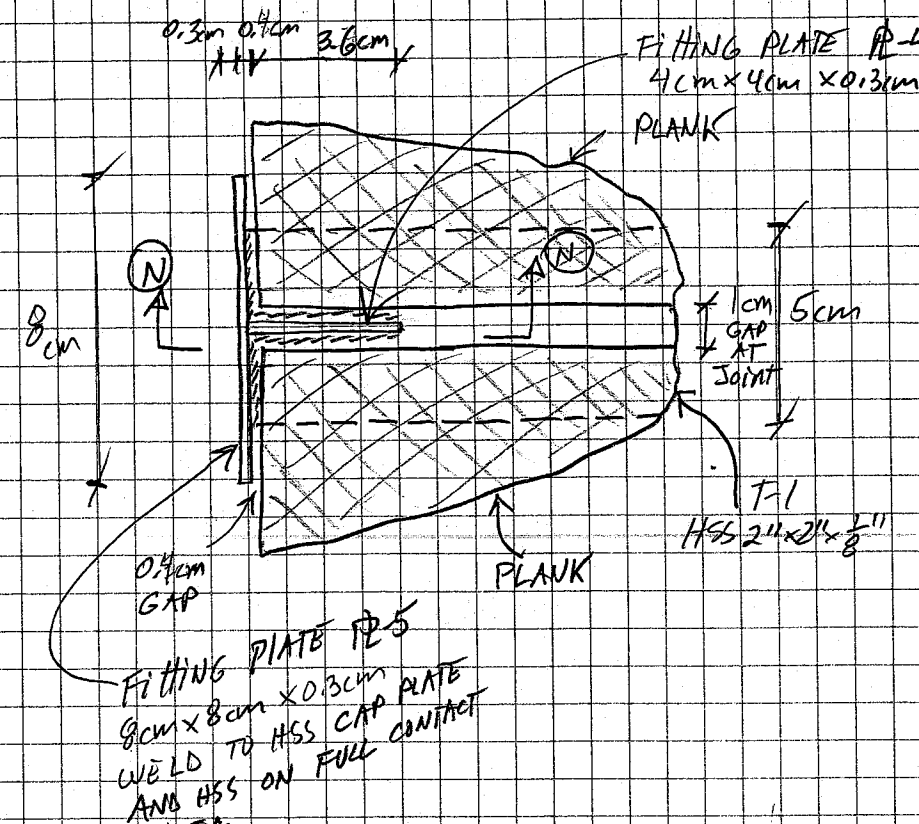


Fitting PLATE PL-5
8cm×8cm×0.3cm
WELDED TO HSS on
ITS SIDE.

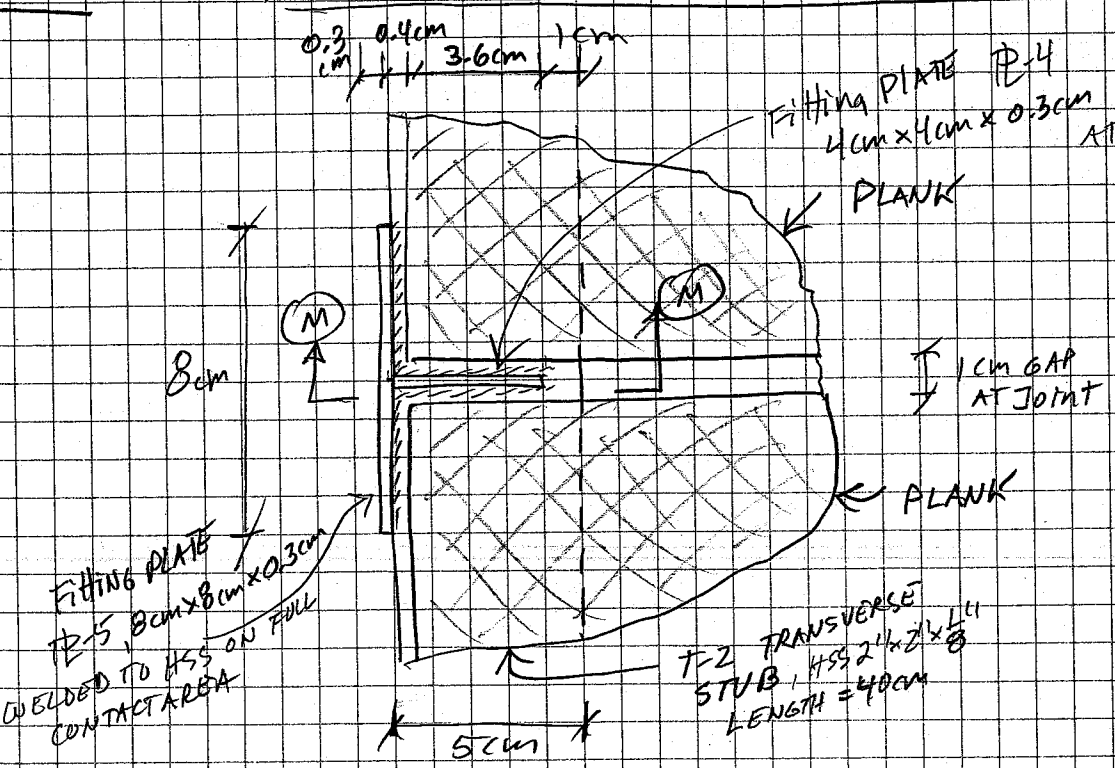
Fitting
Plate PL-3
8cm×4cm×0.3cm
WELDED TO HSS
BOTH SIDES, 8cm weld/side

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	PLANK FITTING PLATES
PROYECTO CHILLER WORKING PLATFORM	HOJA 13 DE 15 HECHO POR L.H. FECHA 03-2013

PLANK EXTERIOR INTERSECTION WITH TRANSVERSE TUBING AT PLANK EDGE:

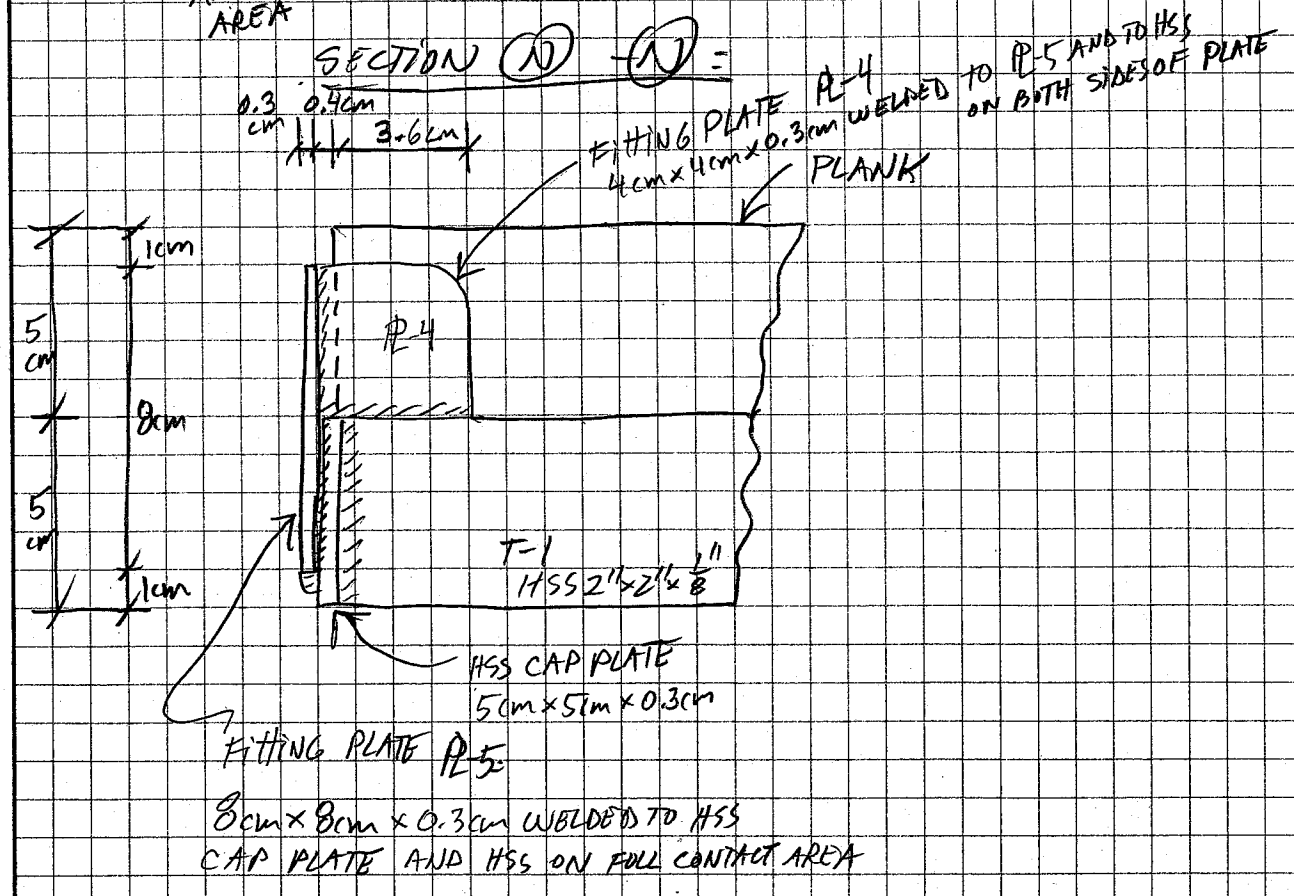


PLANK EXTERIOR INTERSECTION WITH T-2 TUBING STUBS

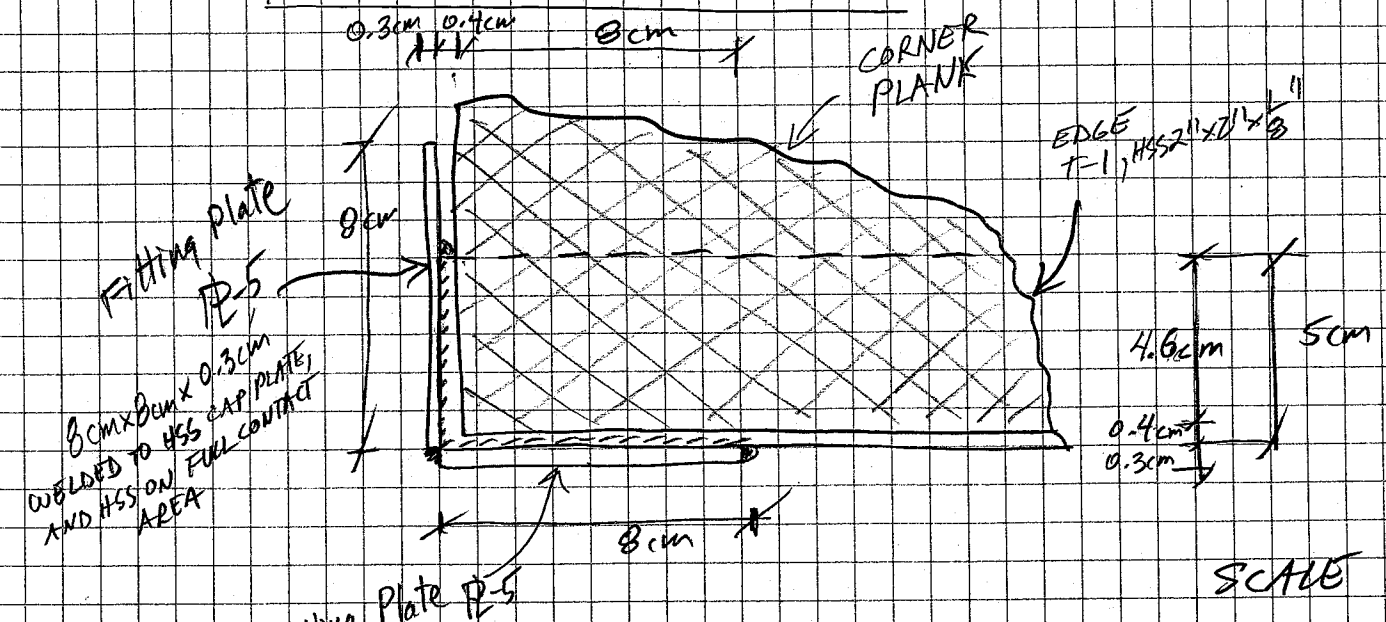


NOTE: SECTION (M)-(M) SAME SECTION EXCEPT HSS 2"x2"x1/8" IS THE T-2 TRANSVERSE STUB WITH LENGTH = 40cm.

SECTION (N)-(N):



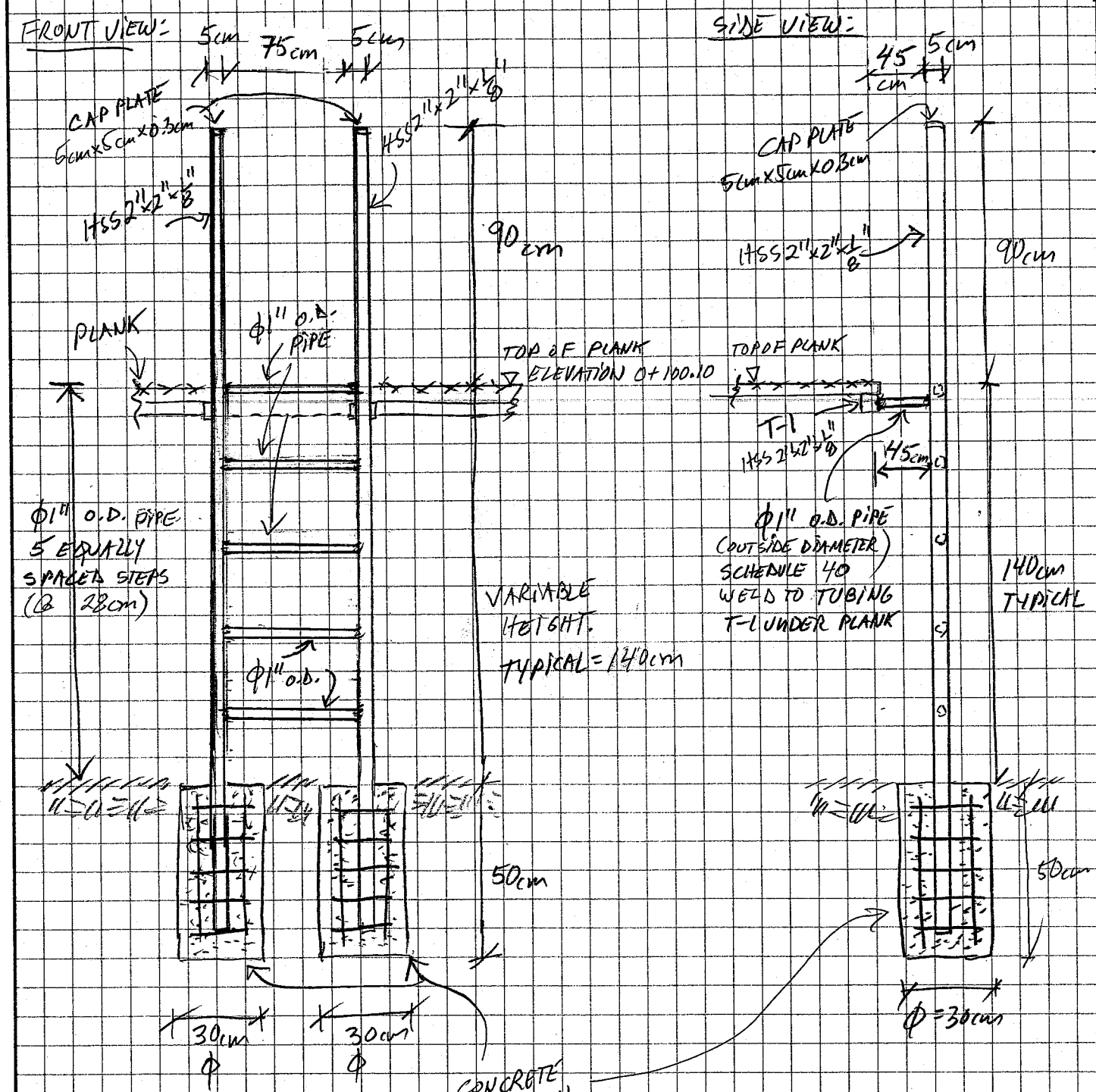
PLANK EXTERIOR CORNER:



SCALE 1:2

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	PLANK FITTING PLATES
PROYECTO CHILLER WORKING PLATFORM	HOJA 14 DE 15 HECHO POR L.H. FECHA 03-2013

LADDER DETAILS = SCALE = 1:20



STRUCTURAL NOTES:

1- CONCRETE COMPRESSIVE 28 DAY STRENGTH = $f_c' = 210\ kg/cm^2$
2- CORRUGATED REINFORCING STEEL, RE-BAR YIELD STRENGHT $f_y = 4200\ kg/cm^2$ (60 KSI)
3- STRUCTURAL STEEL PLATES AND ANGLES A-36, $f_y = 2520\ kg/cm^2$ (36 KSI)
4- STRUCTURAL STEEL HSS SQUARE TUBING A-500 GRADE B, $f_y = 3220\ kg/cm^2$ (46 KSI)
5- CONNECTION BOLTS A-325, WASHER ASTM F436, NUT ASTM A-563 GALVANIZED
6- ANCHOR BOLTS A-307 $F_U > 60$ KSI ($4200\ kg/cm^2$), WASHER ASTM F844, NUT ASTM A563
7- WELDING ELECTRODE = E 7018 $F_E = 4900\ kg/cm^2$
8- ALL STEEL ITEMS SHALL BE GALVANIZED BY THE ELECTROLYSIS METHOD. FIELD TOUCH IS PERMITED WITH GALVANIC TYPE PAINT OR SIMILAR ANTI-RUST TREATMENT.
9- NON-SHRINK GROUT = SIKA GROUT (OR SIMILAR) TO BE USED UNDER BASE PLATE
10- EPOXY EMBEDMENT OF ANCHOR BOLTS WITH: SIKADUR HIGH MOD GEL 31 OR SIMILAR. MADE IN USA WITH $f_s \geq 1500$ psi.
11- IT IS NECESSARY PRIOR TO FABRICATION AND TO FIELD WORK TO DO AN ELEVATIONS AND HORIZONTAL DIMENSIONS SURVEY TO FIELD CHECK ALL ESTABLISHED DIMENSIONS. IF NECESSARY MAKE THE ADJUSTMENTS IN FINAL ELEVATIONS AND DIMENSIONS TO ASSURE THE CORRECT FIT OF ALL THE PLANKS.
12- A ONE PLANK MOCK-UP SHALL BE DONE FIRST THING TO MAKE SURE ALL ELEMENTS FIT ADEQUATELY.
13- PLANK MESH: EXPANDED METAL MESH PR-9 with 1½" Holes on long side, Thickness of plate = 1/8" GALVANIZED (FROM VIDRI SA de CV. OR similar)
14- LIVE LOADS (FBC-2005)
    CONCENTRATED LOADS = 300 # = 136 Kg.
    Uniform LOADS = 40 psf = 196 Kg/m²
15- INSTALL TWO LADDERS AS INDICATED ON DETAILS. LOCATION TO BE DIRECTED BY COR.

NOTE:
- INSTALL 2 LADDERS ON SOUTH SIDE OF PLATFORM, EXACT LOCATION WILL BE INDICATED BY COR.
- LADDER STEPS ARE φ1" OUTSIDE DIAMETER PIPE SCHEDULE 40.

LUIS R. HASBUN F. INGENIERO CIVIL BSCE, MSCE, MSM CERTIFICADO ACI	LADDER DETAILS AND STRUCTURAL NOTES
PROYECTO CHILLER WORKING PLATFORM	HOJA 15 DE 15 HECHO POR L-H- FECHA 03-2013