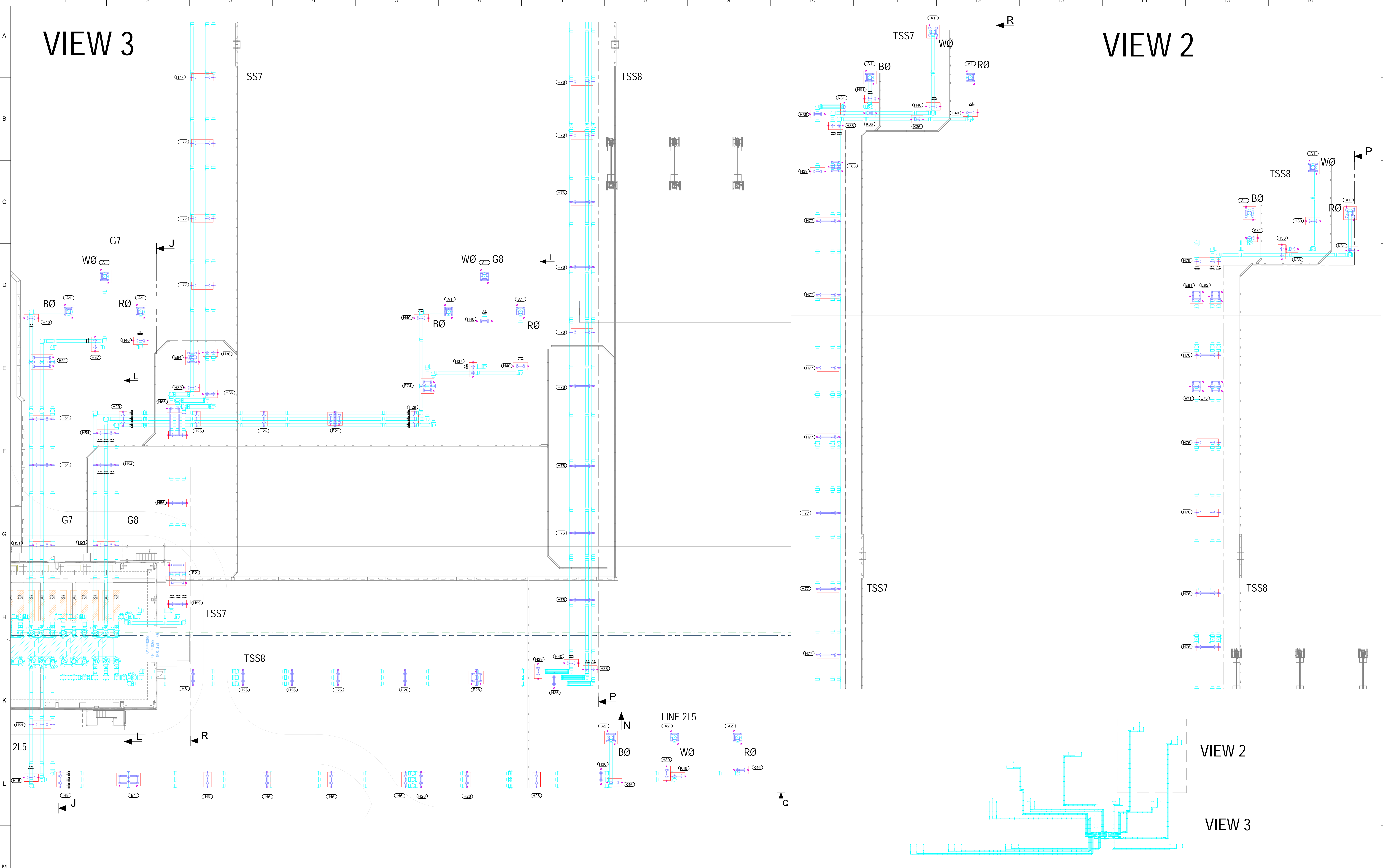


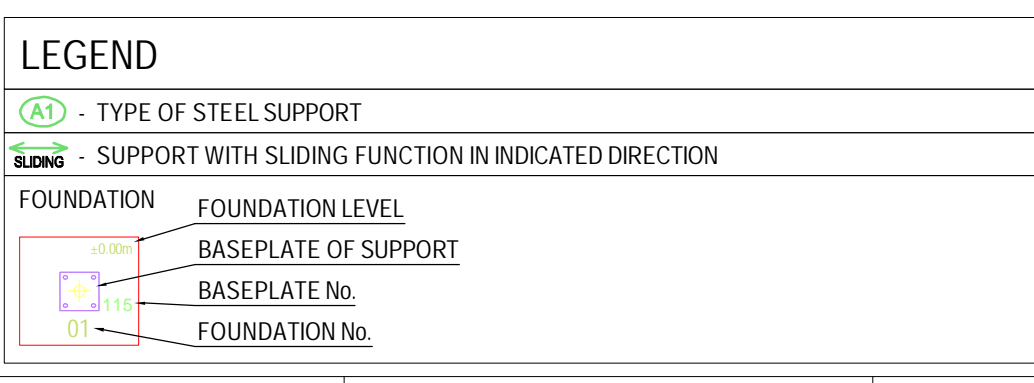
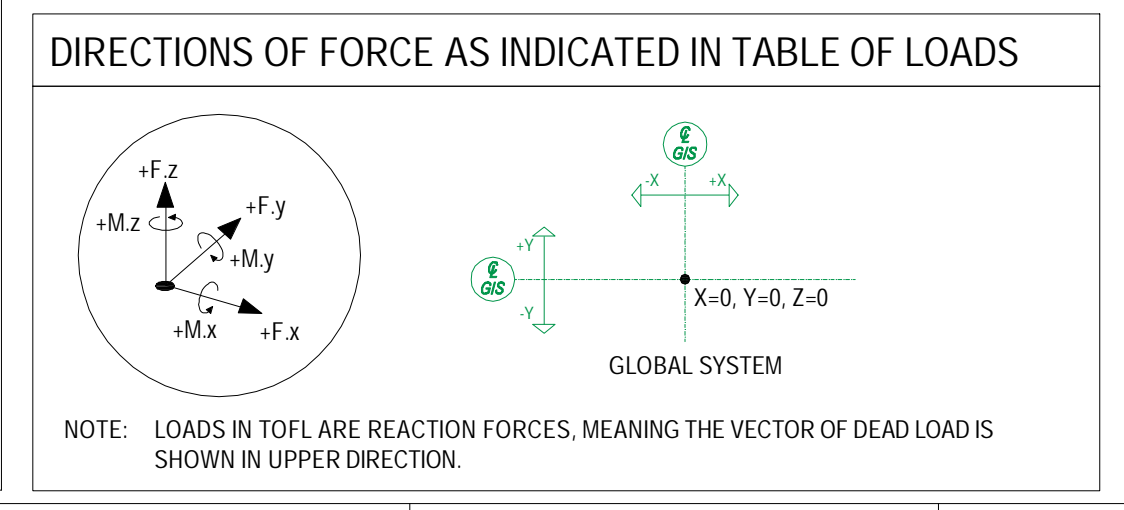
VIEW 3

VIEW 2



NOTES

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- SEE:
 - SHEET 001.003 FOR TOP VIEW
 - SHEET 004 FOR SECTIONS A-A, B-B, C-C, D-D
 - SHEET 005 FOR SECTIONS E-E, F-F, J-J, L-L
 - SHEET 006 FOR SECTIONS M-M, P-P, Q-Q, R-R
 - SHEET 007 FOR SECTIONS S-S, T-T AND DETAILS
- SUMMARY WEIGHT OF GIS SUPPORT STRUCTURES IS APPROXIMATELY 144 TONS.



REFERENCE DOCUMENTS

Document Title	ABB Doc. No.	CUSTOMER Doc. No.
PROJECT SPECIFIC GIS PARAMETERS	THC0158093	-
SINGLE LINE & GAS SCHEMATIC DIAGRAM	THC0158090	-
GIS LAYOUT INDOOR	THC0158091	-
GIS LAYOUT OUTDOOR	THC0160279	-
CIVIL WORK REQUIREMENTS INDOOR	THC0158092	-
CIVIL WORK REQUIREMENTS OUTDOOR	THC0163561	-
GIS SUPPORT LAYOUT INDOOR	THC0158481	-
TABLE OF LOADS OUTDOOR	THC0164918	-
TABLE OF FOUNDATIONS	THC0164909	-
PRE-EMBEDDED ANCHORS BOM	THC0165027	-

REV	DATE	NAME	MODIFICATION
AB	2021-03-02	SKROB	ISSUED FOR ASSEMBLING
AA	2020-05-22	TICHY	FIRST ISSUE
REV	DATE	NAME	MODIFICATION

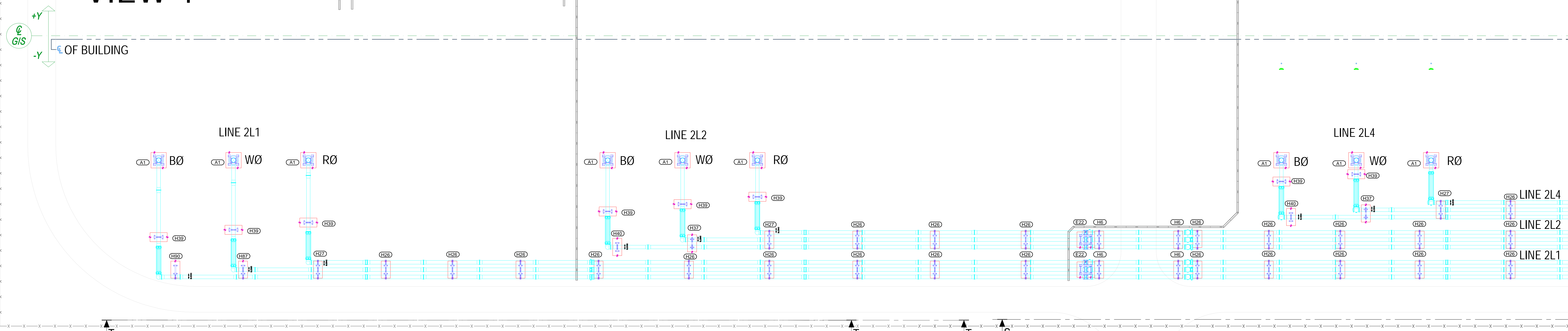
Draft:	2020-05-22	TICHY	Derived from:	-	Scale:	1:200	Doc type:	ZEI	Format:	A0
Approved:	2020-05-22	QUARESMA	Replaces:	-	Language:	EN	SF6 SWITCHGEAR ELK-3 BRUCE B 550kV			
Released:	2020-05-22	PANGANIBAN	Responsible department:	PGHV-SFE	TOP VIEW (part 2)		GIS SUPPORT LAYOUT OUTDOOR			
Order number:	22934	Revision:	AB	2021-03-02	Document number:	1HC0158482	Sheet no.: 002			
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1HC0158482

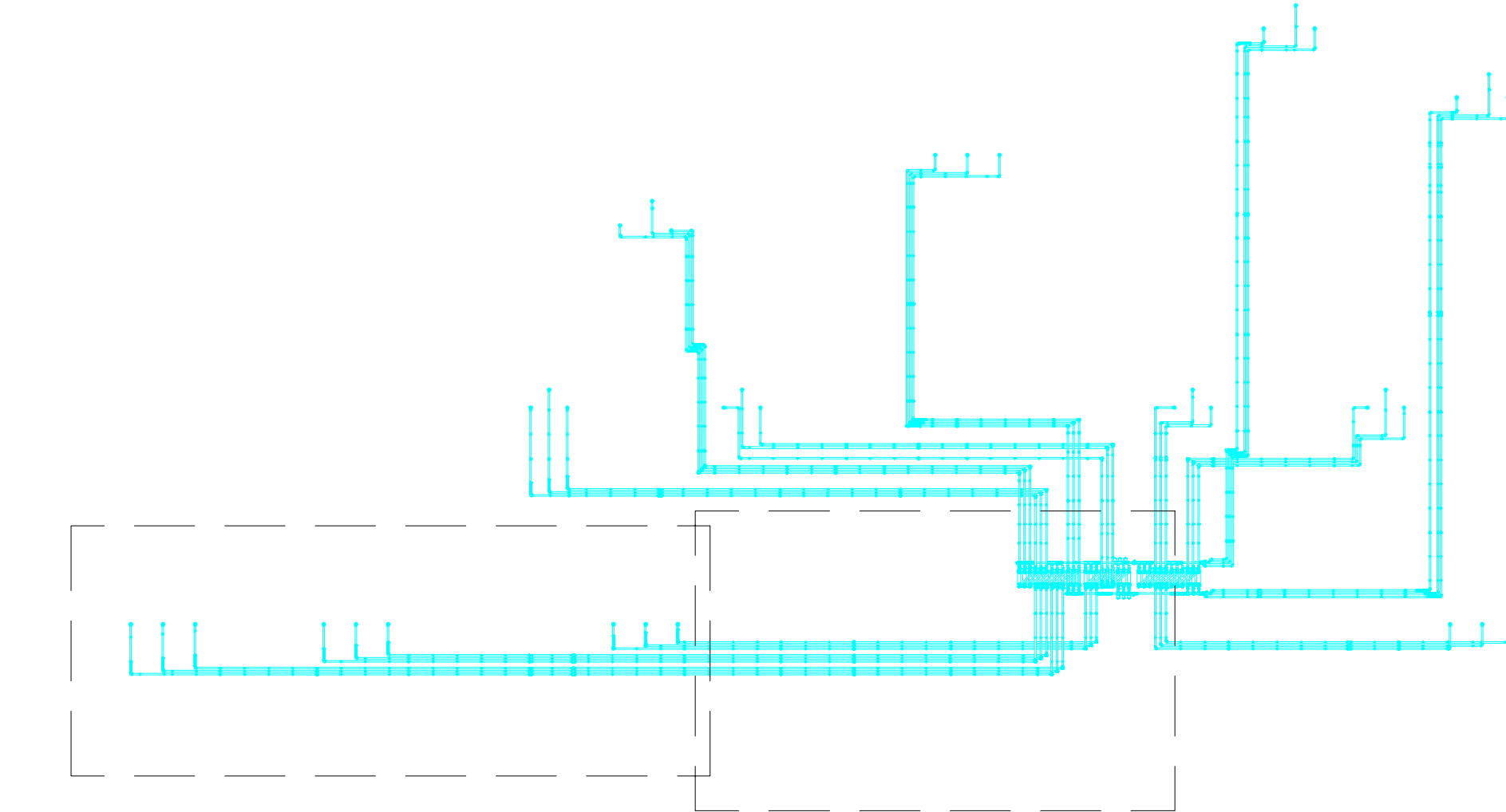
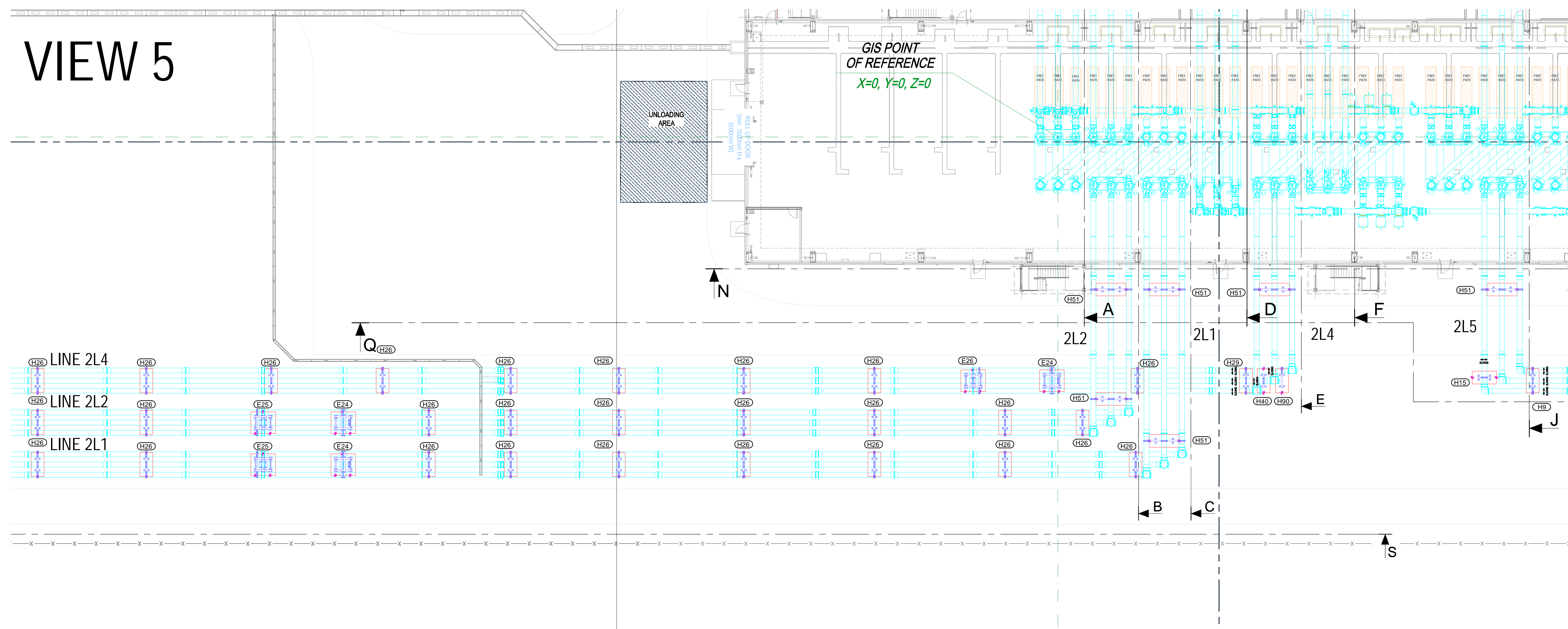
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VIEW 4



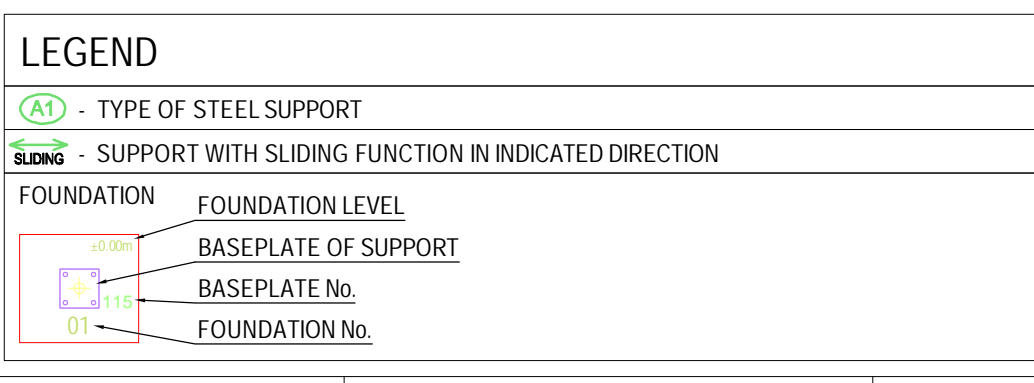
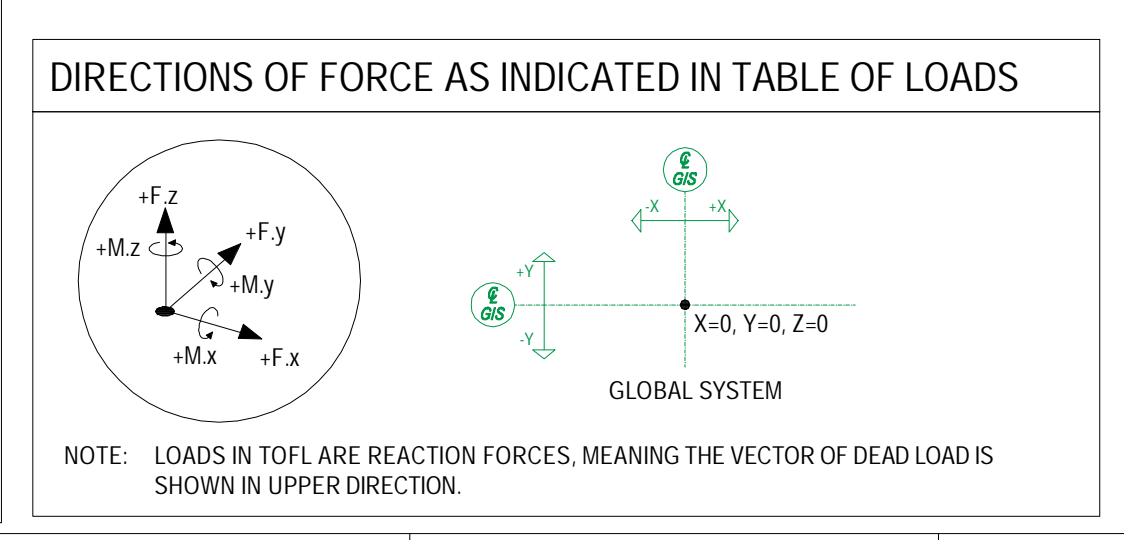
VIEW 5



VIEW 4

VIEW 5

- NOTES**
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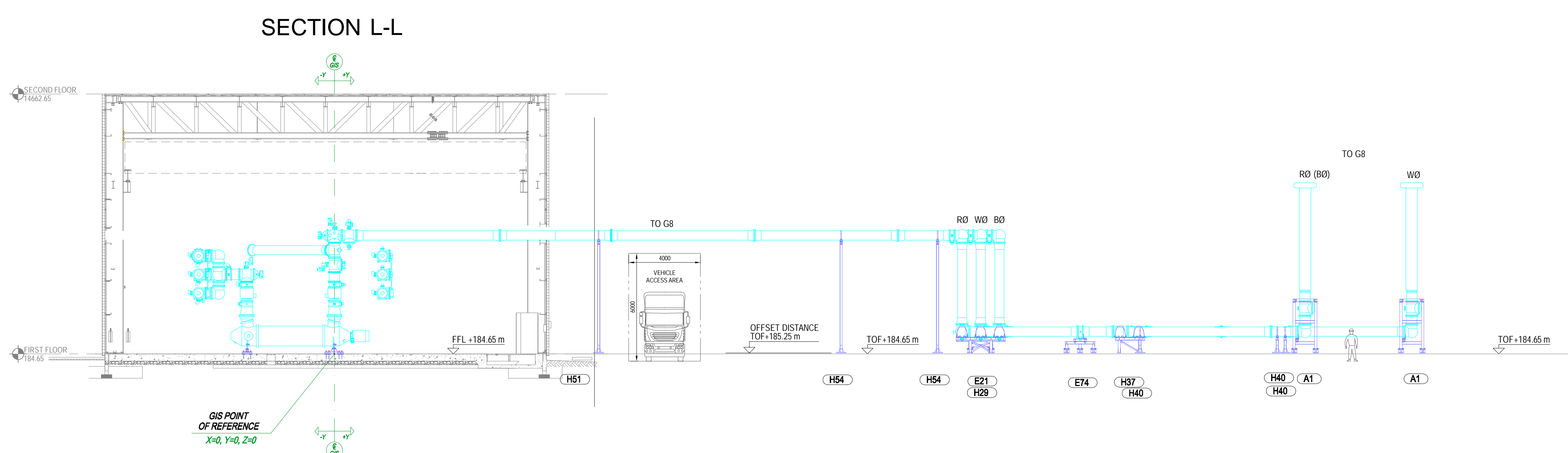
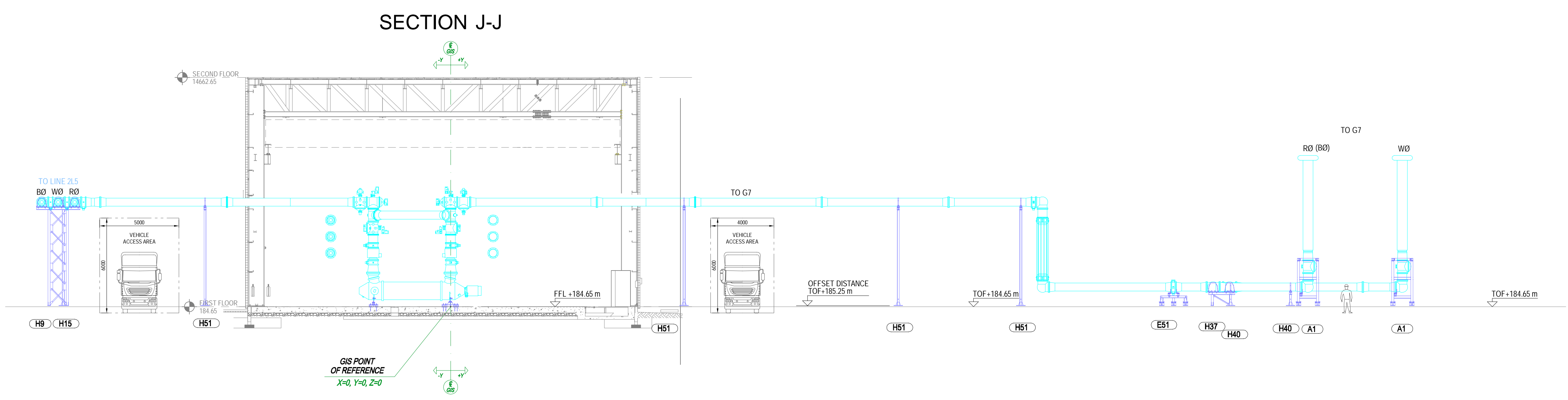
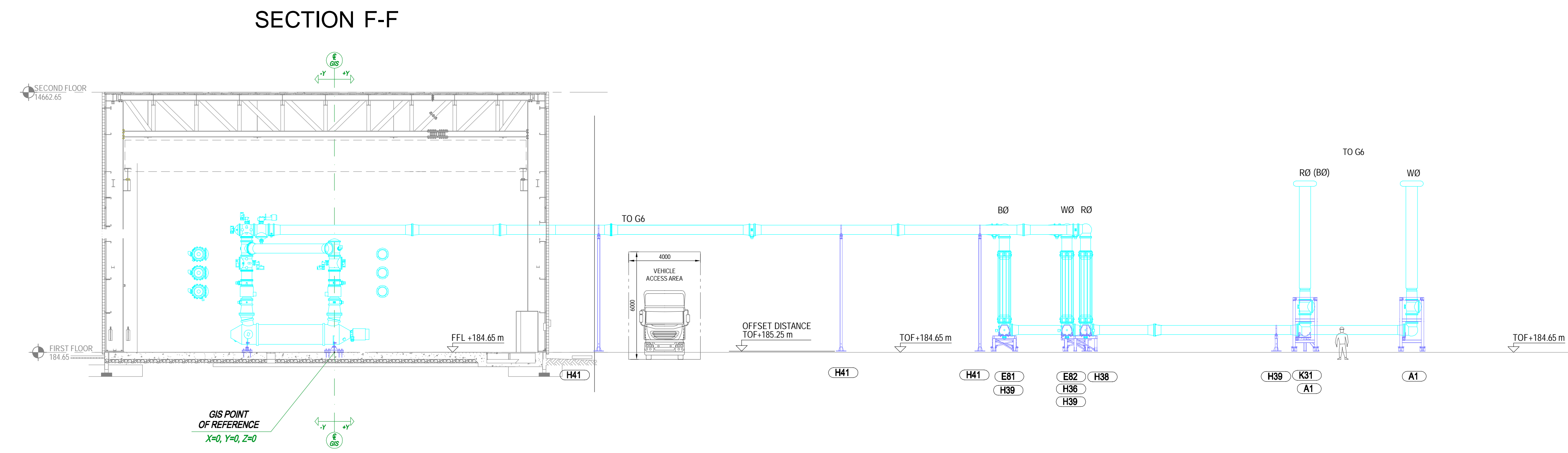
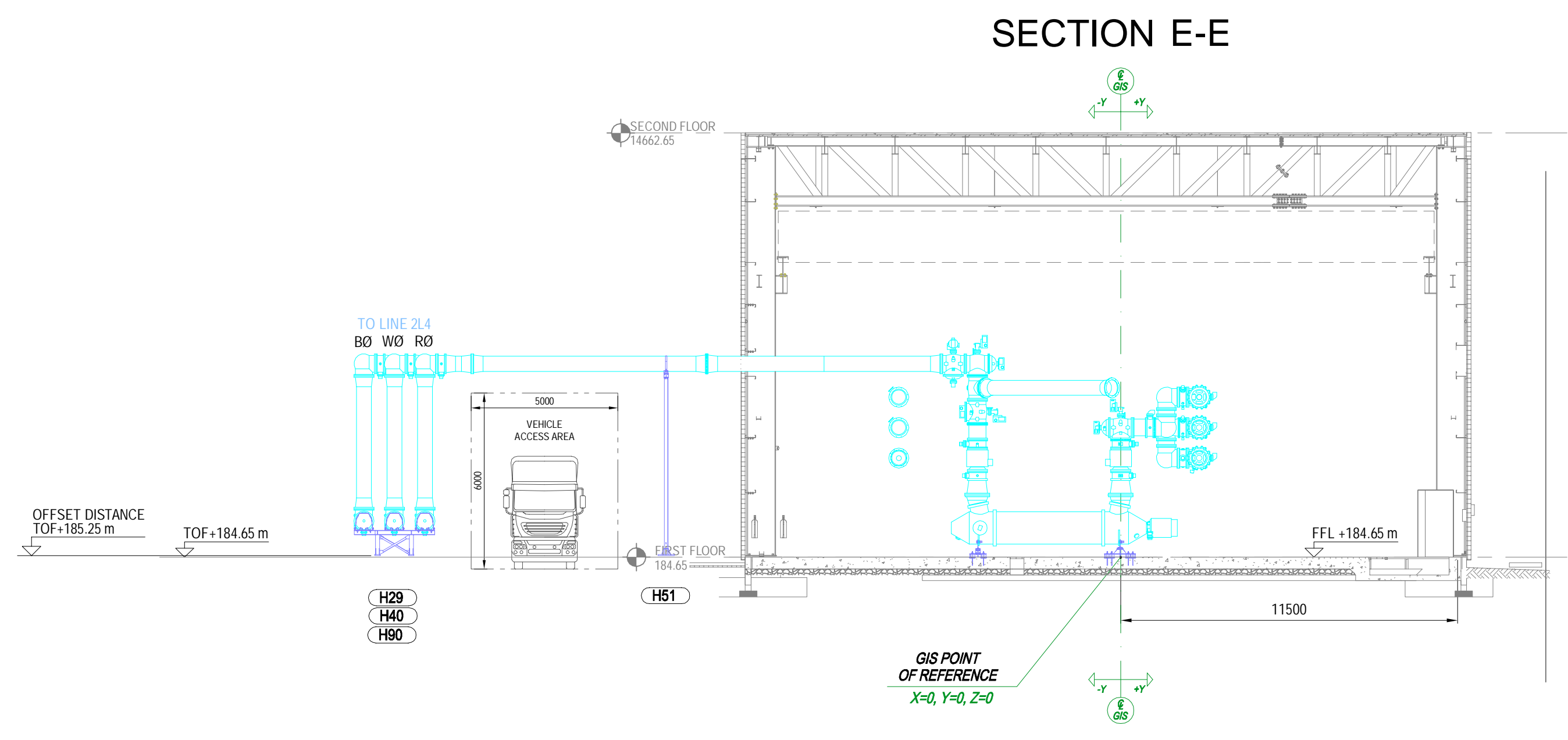


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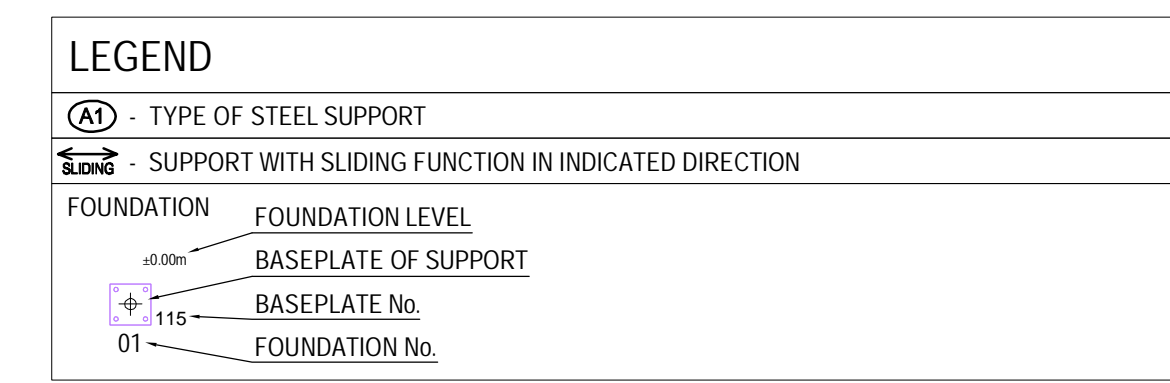
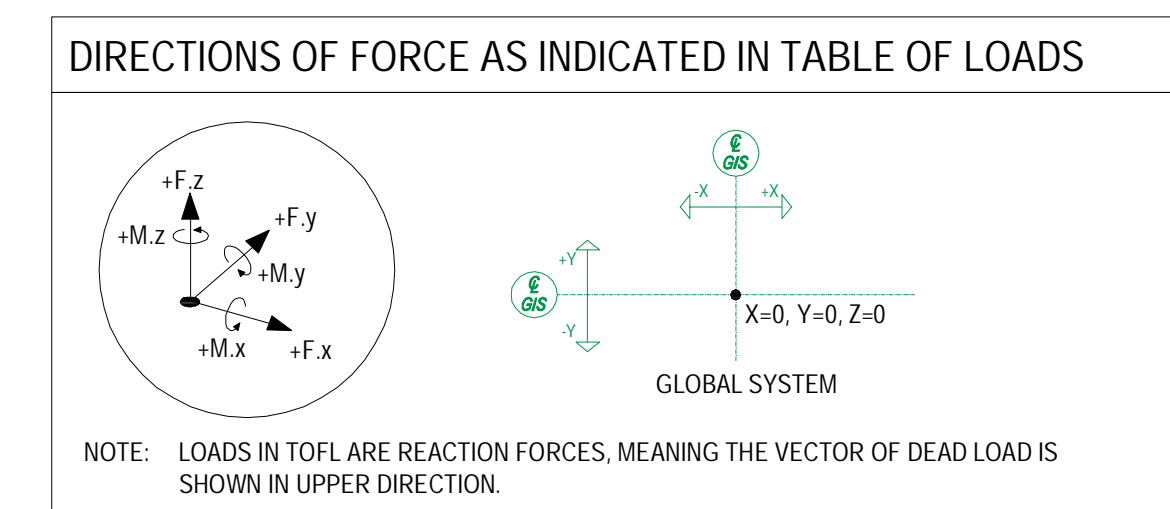
Document Title	ABB Doc. No.	CUSTOMER Doc. No.
PROJECT SPECIFIC GIS PARAMETERS	1HC0158093	-
SINGLE LINE & GAS SCHEMATIC DIAGRAM	1HC0158090	-
GIS LAYOUT INDOOR	1HC0158091	-
GIS LAYOUT OUTDOOR	1HC0160279	-
CIVIL WORK REQUIREMENTS INDOOR	1HC0158092	-
CIVIL WORK REQUIREMENTS OUTDOOR	1HC0163561	-
GIS SUPPORT LAYOUT INDOOR	1HC0158481	-
TABLE OF LOADS OUTDOOR	1HC0164918	-
TABLE OF FOUNDATIONS	1HC0164909	-
PRE-EMBEDDED ANCHORS BOM	1HC0165037	-

REV.	DATE	NAME	MODIFICATION
AB	2021-03-02	SKROB	ISSUED FOR ASSEMBLING
AA	2020-05-22	TICHY	FIRST ISSUE
REV.	DATE	NAME	MODIFICATION

Draft: 2020-05-22	TICHY	Derived from: -	Separate BOM: -	Scale: 1:200	Doc type: ZE1	Format: A0
Approved: 2020-05-22	QUARESMA	Replaces: -				
Released: 2020-05-22	PANGANIBAN	Responsible department: PGHV-SFE				
Order number: 22934		Revision: AB 2021-03-02				
ABB Switzerland Ltd under license of ABB Technology Ltd			SF6 SWITCHGEAR ELK-3 BRUCE B 550kV TOP VIEW (part 3) GIS SUPPORT LAYOUT OUTDOOR Document number: 1HC0158482			
1HC0158482			Language: EN No. of Sheets: 007 Sheet no.: 003			



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 - SHEET 006 FOR SECTIONS H-H, P-P, Q-Q, R-R
 - SHEET 007 FOR SECTIONS S-S, T-T AND DETAILS
 - SUMMARY WEIGHT OF GIS SUPPORT STRUCTURES IS APPROXIMATELY 144 TONS.



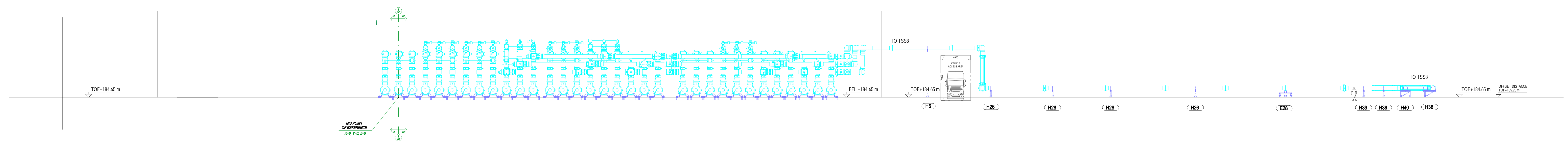
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SINGLE LINE & GAS SCHEMATIC DIAGRAM	1HC0158090	-
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GIS LAYOUT OUTDOOR	1HC0160279	-
CIVIL WORK REQUIREMENTS INDOOR	1HC0158092	-
CIVIL WORK REQUIREMENTS OUTDOOR	1HC0163561	-
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PRE-EMBEDDED ANCHORS BOM	1HC0165037	-

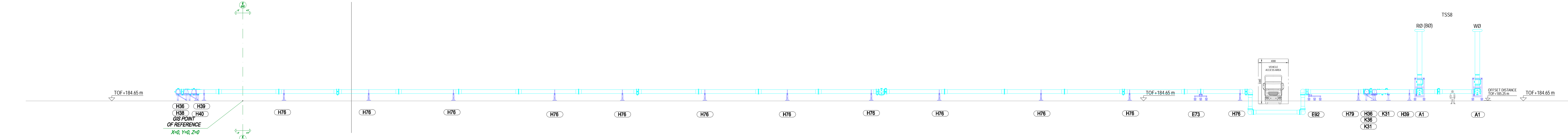
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AA	2020-05-22	TICHY	FIRST ISSUE

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Approved:	2020-05-22	QUARESMA	Replaces:	-	SF6 SWITCHGEAR ELK-3 BRUCE B 550kV						
Released:	2020-05-22	PANGANIBAN	Responsible department:	PGHV-SFE	SECTIONS E-E, F-F, J-J, L-L						
Order number:	22934		Revision:	AB 2021-03-02	GIS SUPPORT LAYOUT OUTDOOR						
				ABB Switzerland Ltd under license of ABB Technology Ltd		Document number: 1HC0158482				Sheet no.: 005	

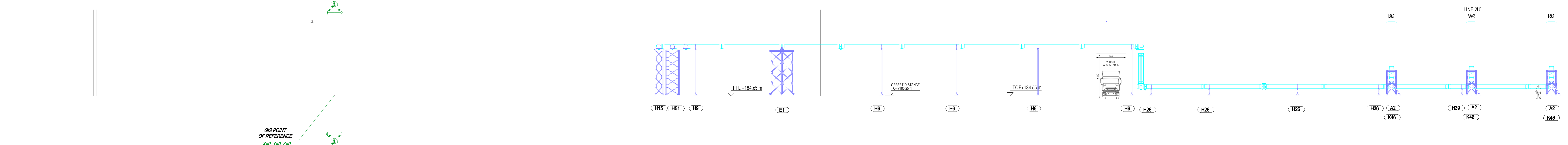
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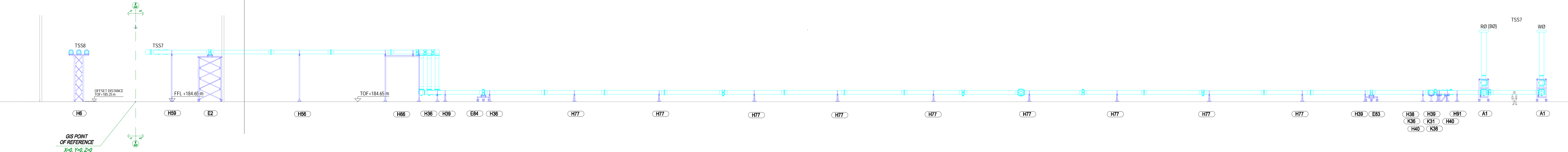
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SECTION Q-Q

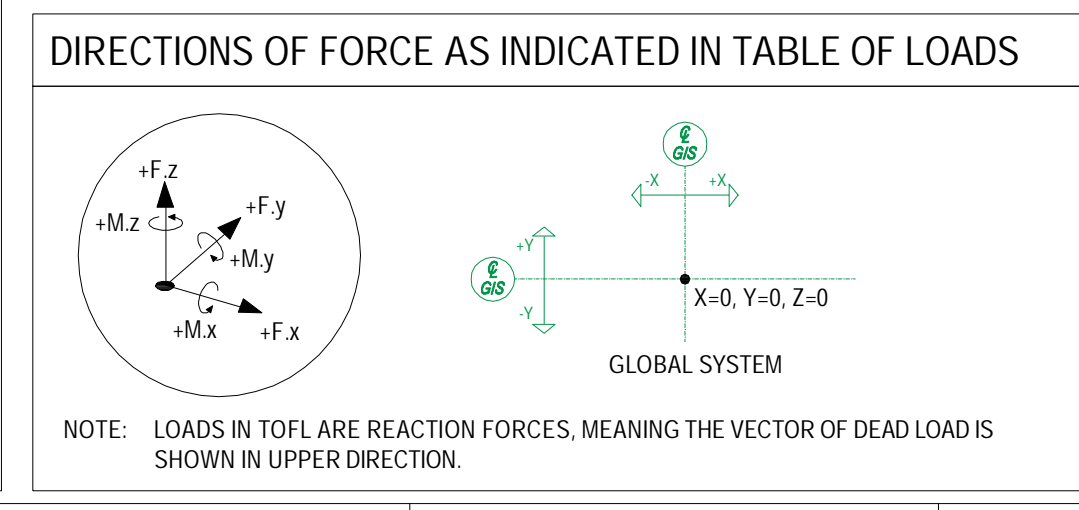


SECTION R-R



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 - SHEET 005 FOR SECTIONS E-E, F-F, J-J, L-L
 - SHEET 006 FOR SECTIONS N-N, P-P, Q-Q, R-R
 - SHEET 007 FOR SECTIONS S-S, T-T AND DETAILS
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LEGEND

- (H) - TYPE OF STEEL SUPPORT
- (S) - SUPPORT WITH SLIDING FUNCTION IN INDICATED DIRECTION
- FOUNDATION
- FOUNDATION LEVEL
- BASEPLATE OF SUPPORT
- BASEPLATE No.
- FOUNDATION No.

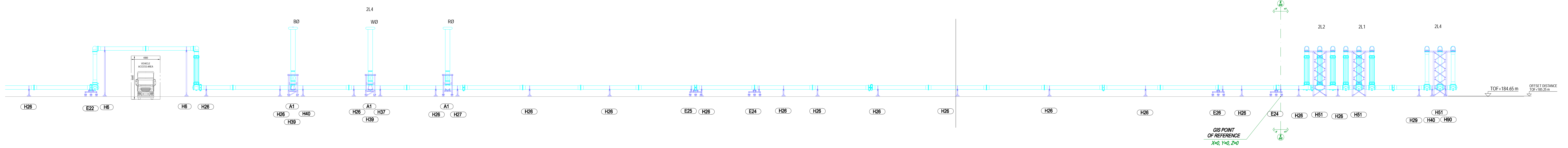
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SINGLE LINE & GAS SCHEMATIC DIAGRAM	1HC0158090	-
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CIVIL WORK REQUIREMENTS OUTDOOR	1HC0163561	-
GIS SUPPORT LAYOUT INDOOR	1HC0158481	-
TABLE OF LOADS OUTDOOR	1HC0164918	-
TABLE OF FOUNDATIONS	1HC0164909	-
PRE-EMBEDDED ANCHORS BOM	1HC0165037	-

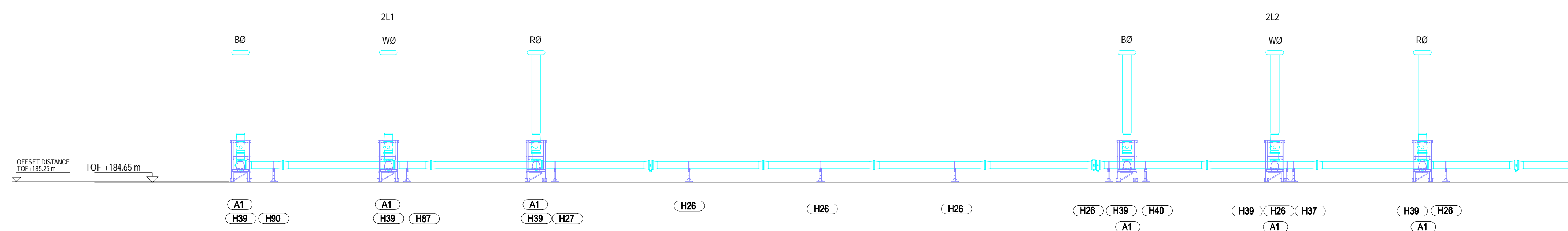
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Approved: 2020-05-22	QUARESMA	Replaces: -				
Released: 2020-05-22	PANGANIBAN	Responsible department: PGHV-SFE				
Order number: 22934		Revision: AB 2021-03-02				
ABB Switzerland Ltd under license of ABB Technology Ltd			SF6 SWITCHGEAR ELK-3 BRUCE B 550kV SECTIONS N-N, P-P, Q-Q, R-R GIS SUPPORT LAYOUT OUTDOOR Document number: 1HC0158482			
1HC0158482			Language: EN No. of Sheets: 007 Sheet no: 006			

SECTION S-S



SECTION T-T



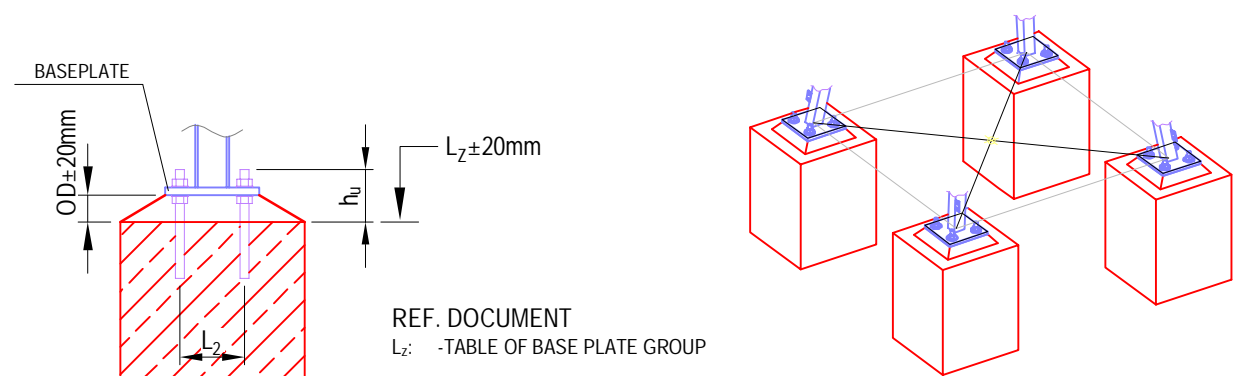
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000_22 PRE-EMBEDDED ANCHORS INFORMATION

RATED FOOT LEVEL (RFL)

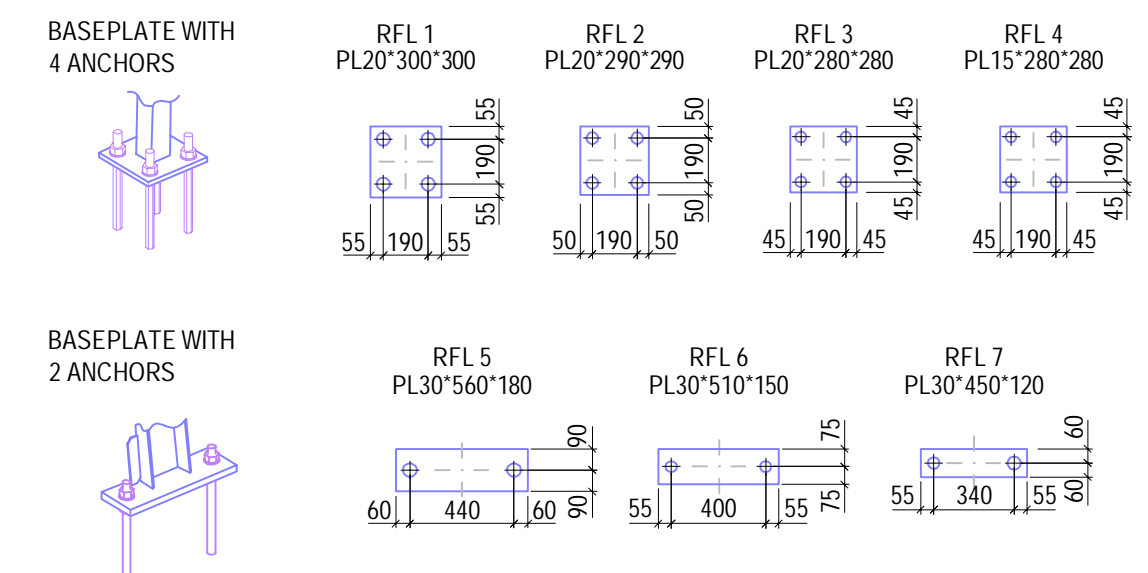
- CLASS, WHICH DEFINES PARAMETERS OF BASEPLATE, ANCHOR, NUT AND WASHER ACCORDING TYPE OF SUPPORT AND REACTION FORCES IN BASEPLATE
- EACH CLASS IS DEFINED BY MAXIMAL FORCES FROM COMBINATIONS OF THE LOAD CASES



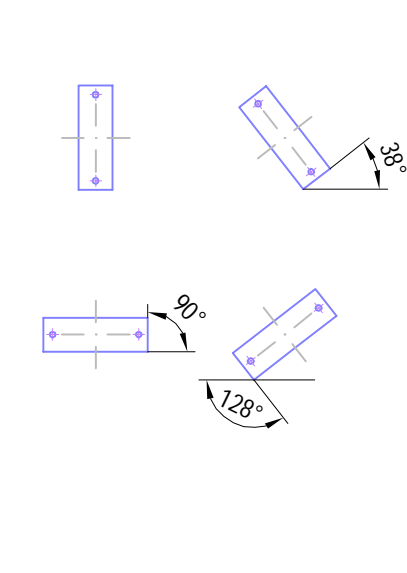
ANCHOR LEVEL	QUALITY	ANCHOR STANDARD	OFFSET DISTANCE	USABLE HEIGHT	INTERNAL DISTANCE	NUT STANDARD	SPECIAL WASHER
RFL1	1.14"	ASTM A193 G105	60	160	190	ASTM A563 G.DH	2
RFL2	1.14"	ASTM A193 G105	60	150	190	ASTM A563 G.DH	3
RFL3	3/4"	ASTM A193 G105	60	150	190	ASTM A563 G.DH	4
RFL4	3/4"	ASTM A193 G105	60	140	190	ASTM A563 G.DH	4
RFL5	1.38"	ASTM A193 G105	60	170	440	ASTM A563 G.DH	1
RFL6	1.14"	ASTM A193 G105	60	170	400	ASTM A563 G.DH	2
RFL7	1.14"	ASTM A193 G105	60	170	340	ASTM A563 G.DH	2

ABB has only defined the anchor bolt diameter with respect to the base plate. The design of anchor bolt with respect to foundation, procurement, construction and erection as per ABB defined location is not ABB scope. The anchor length design with respect to pull out from concrete, shearing of edges and bending etc. of foundation is not ABB scope. The pedestal and foundation size calculations are not in ABB scope.

SHAPE OF BASEPLATE ACC. RFL

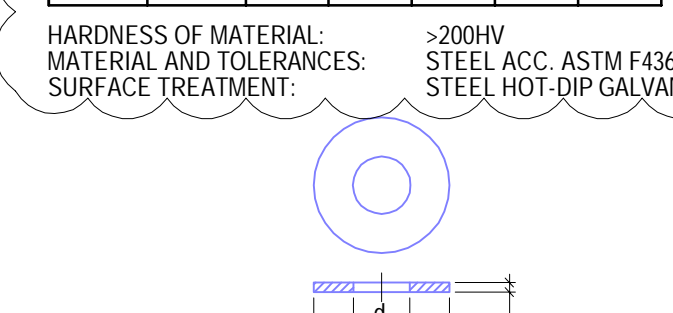


ROTATION EXAMPLES



PARAMETERS FOR SPECIAL WASHER

TYPE	FOR THREAD	d1	d2	NOM	MAX	MIN
1	1.38"	1.12"	3.58"	13/16"	7/8"	3/4"
2	1.14"	1.38"	3.716"	13/16"	7/8"	3/4"
3	1"	1.116"	3.114"	13/16"	7/8"	3/4"
4	3/4"	1.316"	3.10"	13/16"	7/8"	3/4"

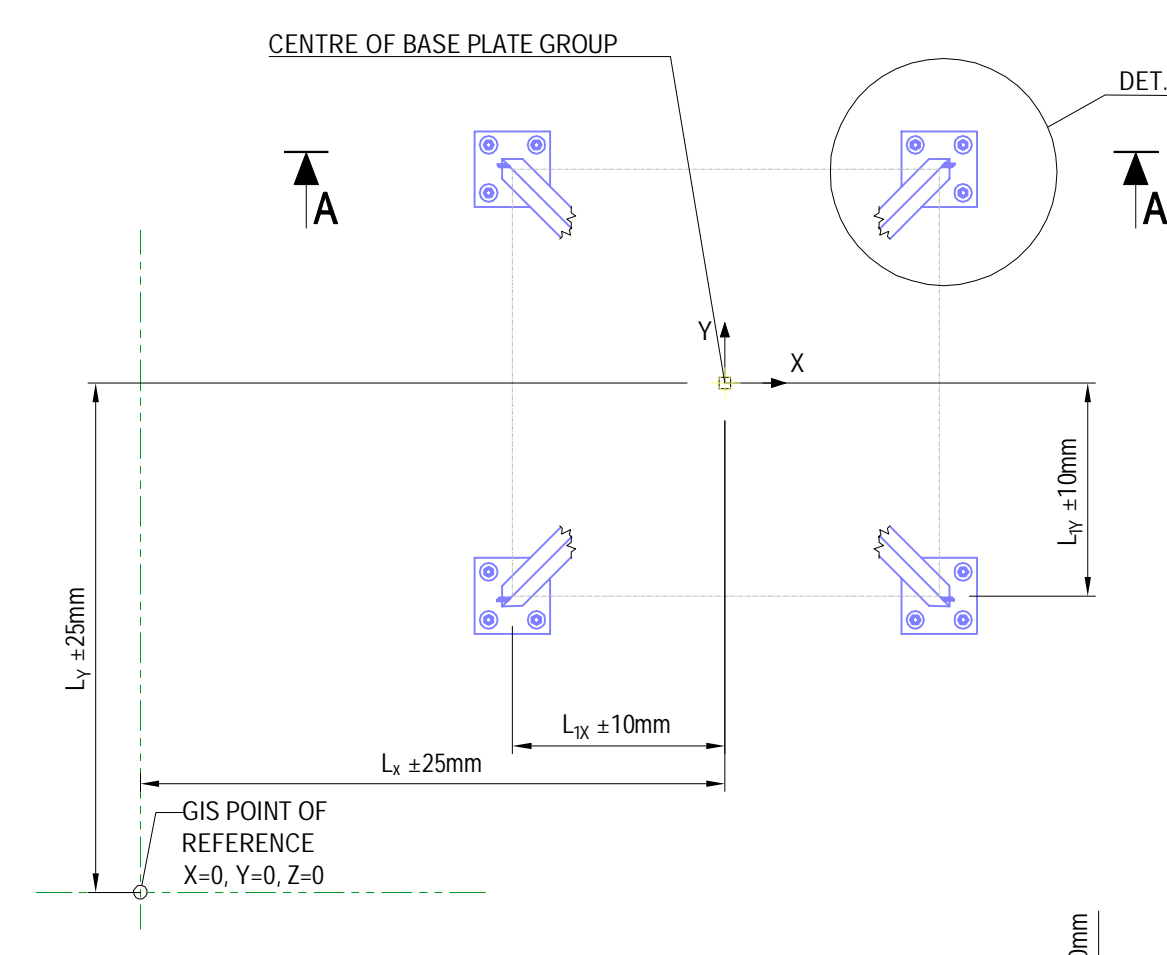


- NOTES
- ANCHOR BOLTS, NUTS, WASHERS AND GROUTING IN CIVIL CONTRACTOR SCOPE OF SUPPLY
 - LENGTH OF THE ANCHORS TO BE DESIGNED BY CIVIL CONTRACTOR
 - ANCHOR SURFACE TREATMENT: STEEL HOT-DIP GALVANIZED
 - REFERENCE POINT TO CENTRE OF BASE PLATE GROUP. SEE TABLE OF BASE PLATE GROUP
 - VERTICAL AND HORIZONTAL TOLERANCES, SEE DETAIL TOLERANCE REQUIREMENTS
 - TOLERANCES ACC. EC 13670 AND ACI 117-10
 - ABB IS NOT RESPONSIBLE FOR DESIGN PRE-EMBEDDED ANCHORS, IF ANY SPECIFICATION DOESN'T MATCH WITH THE REFERRED DESIGN VALUES

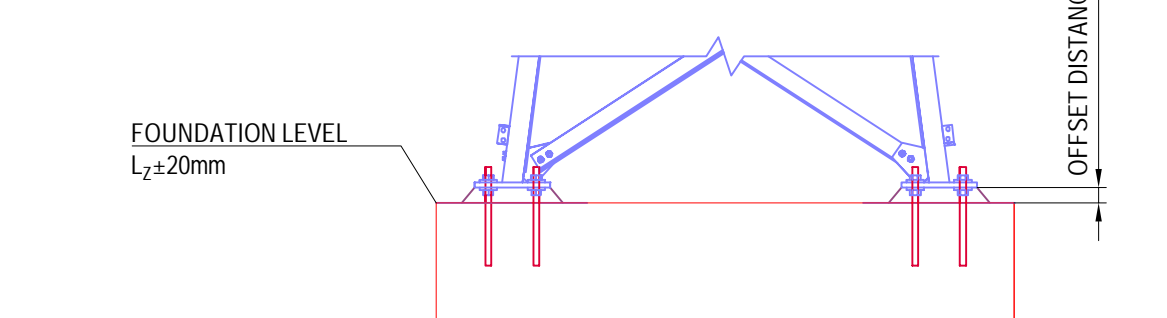
000_23 TOLERANCE REQUIREMENTS FOR ANCHOR PLAN ACC. EN 13670

TOP VIEW

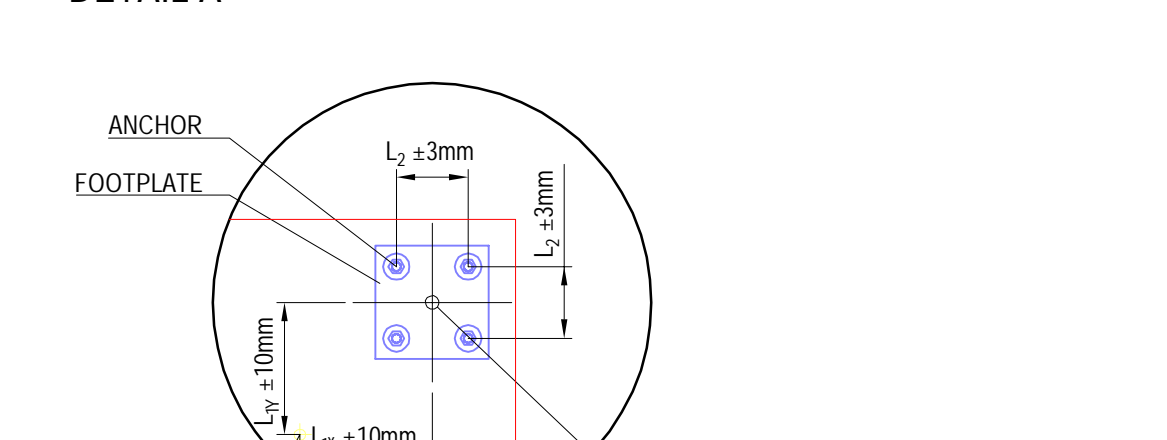
- NOTES:
- ALL TOLERANCES ARE USED ACCORDING EC 13670 - EXECUTION OF CONCRETE STRUCTURES



SECTION A-A

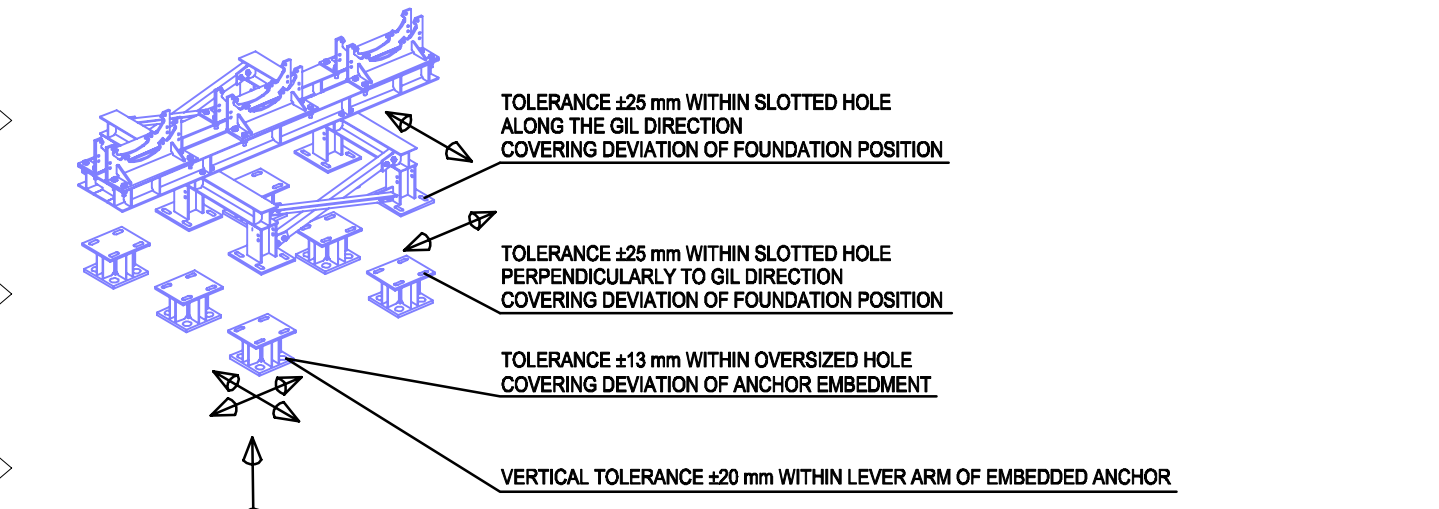


DETAIL A

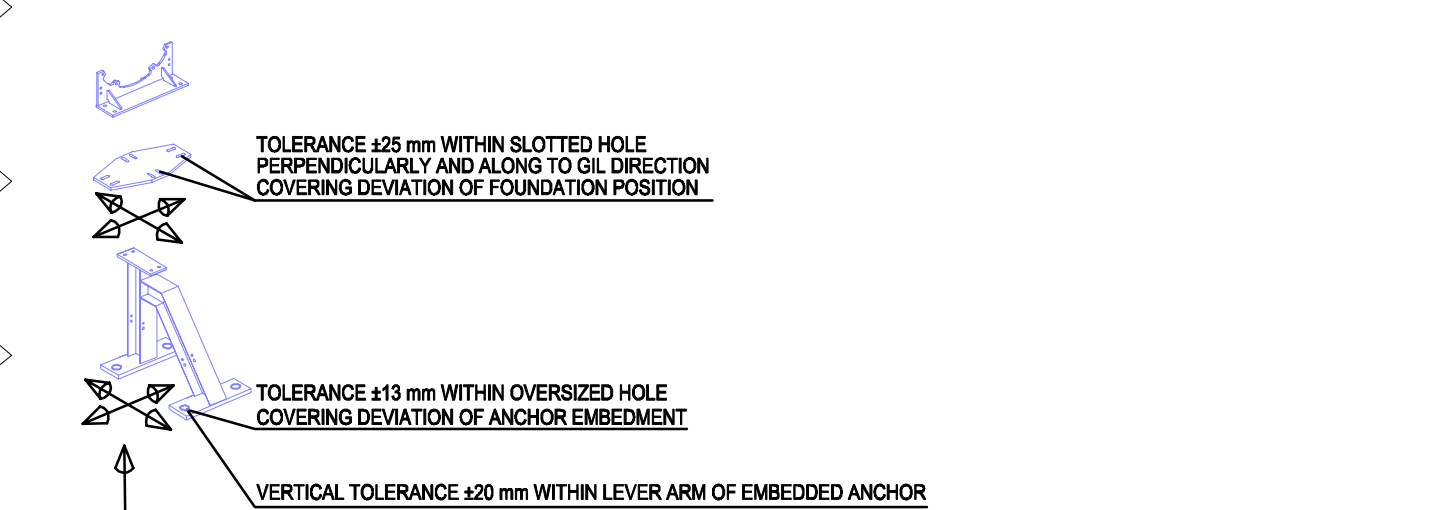


TOLERANCE ADJUSTING FOR OUTDOOR SUPPORTS

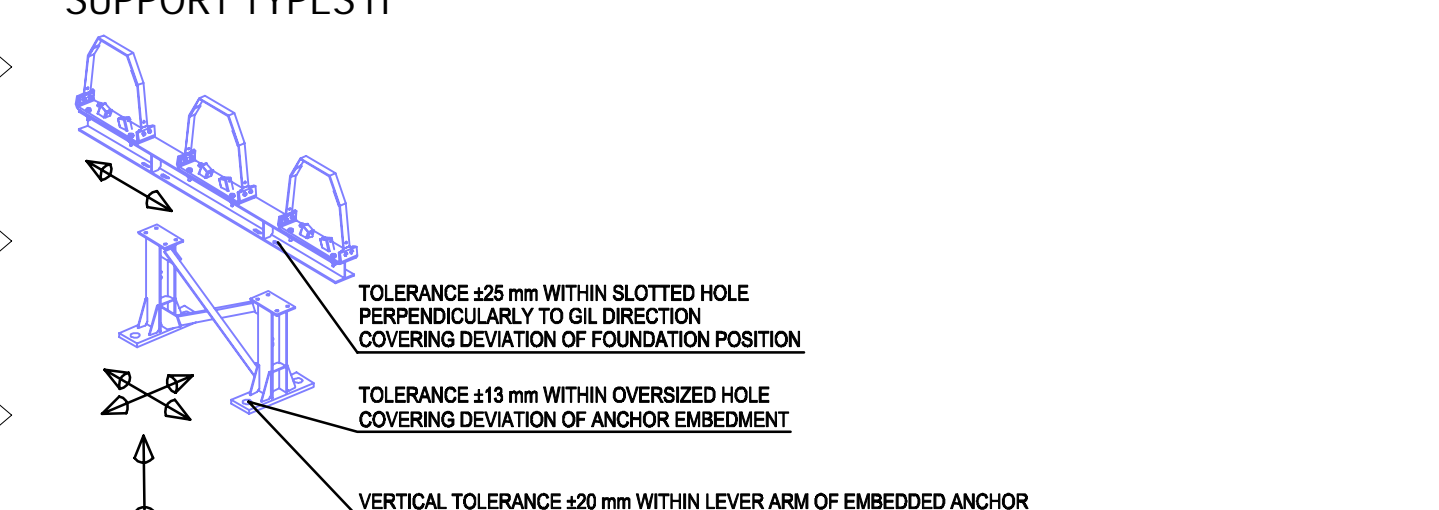
SUPPORT TYPES A E



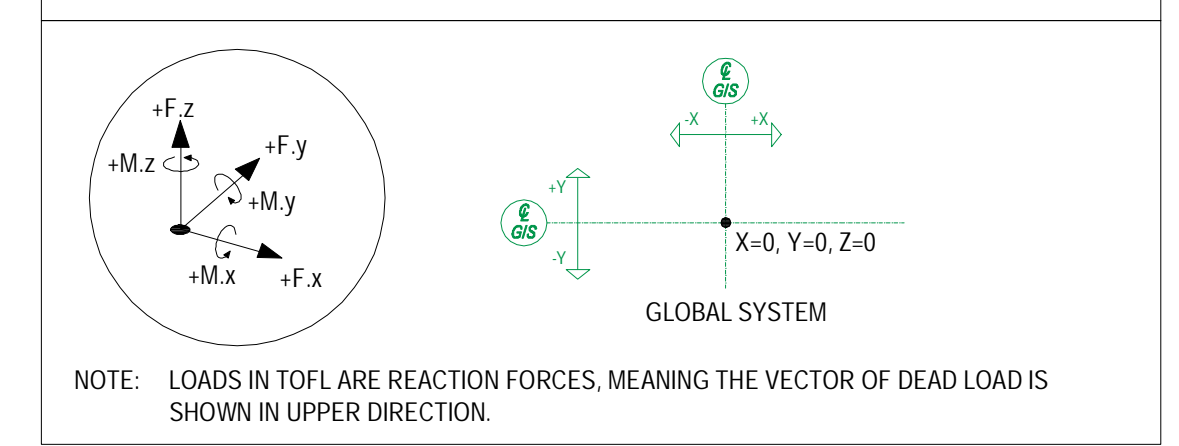
SUPPORT TYPES K



SUPPORT TYPES H



DIRECTIONS OF FORCE AS INDICATED IN TABLE OF LOADS



NOTE: LOADS IN TOFL ARE REACTION FORCES, MEANING THE VECTOR OF DEAD LOAD IS SHOWN IN UPPER DIRECTION.

LEGEND

AD	TYPE OF STEEL SUPPORT
SD	SUPPORT WITH SLIDING FUNCTION IN INDICATED DIRECTION
FOUNDATION	FOUNDATION LEVEL
BASEPLATE	BASEPLATE OF SUPPORT
BASEPLATE No.	BASEPLATE No.
FOUNDATION No.	FOUNDATION No.

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CIVIL WORK REQUIREMENTS OUTDOOR	1HC0143561	-
GIS SUPPORT LAYOUT INDOOR	1HC0158481	-
TABLE OF LOADS OUTDOOR	1HC0144918	-
TABLE OF FOUNDATIONS	1HC0144909	-
PRE-EMBEDDED ANCHORS BOM	1HC0145037	-

Draft:	2020-05-22	TICHY	Derived from:	-	Separate BOM	Scale:	1:200	Doc type:	ZEI	Format:	A0
Approved:	2020-05-22	QUARESMA	Replaces:	-	SF6 SWITCHGEAR ELK-3 BRUCE B 550kV						
Released:	2020-05-22	PANGANIBAN	Responsible department:	PGHV-SFE	GIS SUPPORT LAYOUT OUTDOOR						
Order number:	22934		Revision:	AB 2021-03-02	SECTIONS S-S, T-T AND DETAILS						
					GIS SUPPORT LAYOUT OUTDOOR						
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