



**BHARAT HEAVY ELECTRICALS LIMITED,
RANIPET 632 406
OUTSOURCING DEPARTMENT**

INSTRUCTION TO SUBCONTRACTOR FOR SUBMISSION OF OFFER FOR TENDER
ENQUIRY: 651003E dt 25.08.2022

Tender ID: **2022_BHEL_16853_1**

e-NIT: 651003E is Jobs (fabricated items of Yadadri, Bhadradi & Kothagudem projects) to be modified have to be collected from BHEL shipping & any additional raw materials required for completions as per GMS to be collected from BHEL stores. Completion of modification jobs as per respective BHEL drawings, Quality requirements & handover the finished jobs to BHEL. Rates are inclusive of transport charges for collection of materials & components and handing over to BHEL. Intermittent movement of jobs for blasting & painting will be paid extra as per existing MAIN ARC. Offcut & MAS norms for fresh materials will be as per MAIN ARC. Balance material arising from modification will be returned to BHEL stores on weight basis & treated as scrap.

1. This NIT is a Two part bid NIT.
 - **Part I** (Valid MSE document / EMD for non MSE vendors & Techno commercial offer)
 - **Part II** (Price bid)
2. Subcontractor shall ensure all the documents are uploaded in E-Procurement System (EPS) as per below instructions given below: (EPS Website: <https://eprocurebhel.co.in/nicgep/app>)

Sl. No.	Type	DESCRIPTION	REMARKS
Part I (Submission of valid MSE Document /EMD for Non MSE vendors) & Techno commercial offer			
1	Fill and upload	Valid MSE document /EMD	Firm shall scan and attach the valid MSE document (MSME certificate) for waiver of EMD. Firm to upload UDYAM REGISTRATION CERTIFICATE (URC) in EPS. Non MSE Vendors have to submit EMD for Rs. 2.00 Lakh in the form of Demand Draft favouring "Bharat Heavy Electricals Ltd., Ranipet – 632 406" payable at Ranipet Medium category vendor also need to submit the EMD.
2	Fill and upload	Annexure A-Check list for Cover –I	Firm shall fill the necessary details and upload along with the supporting documents
3	Fill and upload	Annexure C- Techno commercial bid	Firm shall fill up the required details and get authorized signatory as per attached annexure. Firm shall scan the document and upload the same in EPS.
4	Fill and upload	Annexure F- Eligibility criteria	Firm shall fill up the required details and get authorized signatory as per attached annexure. Firm shall scan the document and upload the same in EPS.
5	Fill and upload	Annexure I -Affidavit	Firm shall print the document in Bidders letter Head .Authorized signatory shall sign the document and company seal shall be affixed. Firm shall scan the document and upload the same in EPS
6	Fill and upload	Annexure –J Power of attorney (if applicable)	Firm shall fill up the required details and get authorized signatory as per attached format. Firm shall scan the document and upload the same in EPS.
7	Fill and upload	Annexure K - Vendor registration Forms for New vendor	Firm shall fill up the details along with supporting documents . Authorized signatory shall sign the document and company seal shall be affixed. Firm shall scan the document and upload the same in EPS.
Part II (Price bid)			
1	Fill and upload	(Price Bid)	Firm shall download the Price bid format from EPS. In the excel sheet, • Fill in their vendor code and name in the space provided. • Fill in the Rate in Rs. per MT in the appropriate space given. • Validate the Excel sheet • Save the excel sheet • The Excel sheet shall be uploaded in EPS. After uploading, firm has to digitally sign the document using the option available in EPS.

Note: All documents given above are mandatory.

3. In case of non-submission of above documents in requisite manner, offer submitted by subcontractor shall be rejected.
4. Conditional offers, offers which are incomplete or defective and offers not in accordance with the Tender conditions shall be rejected.
5. **As this tender enquiry is an E-Tender enquiry hence offer shall only be submitted in EPS only. No other mode of offer submission shall be entertained.**
6. **For participating in the e-tender, Digital Signature Certificate Class III is mandatory for the subcontractor to quote.**
7. The offer should be submitted on or before the due date & time mentioned in the E procurement portal. Further tender due date extension, if any, will be communicated through E-procurement portal only.
8. In order to enable subcontractor for submission of error-free offer, the following checklist has been provided. Subcontractor may refer the same before submission of offer.

No.	CHECKLIST FOR SUBMISSION OF OFFER BY SUBCONTRACTORS
1	Read and understand scope of work
2	Vendor to take care of the Unit of measurement in this tender before quoting price
3	Note the Offer validity and contract validity
4	Note that the Price to be quoted on "FIRM" price basis
5	Note the Conditions w.r.to BG requirement before submission of offer
6	Note that the price shall be finalized through RA
7	Declare % of local content (Make in India) along with offer
8	Note the applicability of extras for each RS
9	Note the Payment terms, Safe custody of materials issued by BHEL, Material accounting and other terms & conditions as given in all sections mentioned in this NIT
10	Read and Understand the BHEL Guidelines for Suspension of business dealings with suppliers/contractors (available at www.bhel.com) fully.
Note:	
1	The above checklist is only indicative and not exhaustive.
2	Subcontractor is strictly advised to read and understand terms & conditions given in all the sections of the NIT before submission of offer.
3	Any changes to offer after bid opening will NOT be entertained.

For any clarifications, kindly contact:

Manager / Contracts

III Floor, Outsourcing Department

Bharat Heavy Electricals Limited, Ranipet-632406

Phone : 04172-284030, 284158, 241170

E-Mail : bsmanian@bhel.in, ssvasan@bhel.in



BHEL: BAP: RANIPET
OUTSOURCING DEPARTMENT

MODIFICATION WORK ENQUIRY REF: 651003E dt : 25-08-2022

INDEX			PAGE NO
1	SECTION-I	NOTICE INVITING TENDER	2
2	SECTION-II	TECHNO COMMERCIAL TERMS & CONDITIONS	16
3	SECTION-III	List of Drawing	46
4	SECTION -IIID	List of Extra RS FOR REFERENCE PURPOSE	2
5	SECTION -IV	BANK GUARANTEE FORMAT	4
6	ANNEXURE A	CHECKLIST FOR COVER -I	1
7	ANNEXURE B	NOT APPLICABLE	-
8	ANNEXURE C	TECHNO COMMERCIAL BID FORMAT	1
9	ANNEXURE D	PRICE BID FORMAT IN EXCEL	1
10	ANNEXURE E	NOT APPLICABLE	-
11	ANNEXURE F	ELIGIBILITY CRITERIA	3
12	ANNEXURE I	AFFIDAVIT	1
13	ANNEXURE J	POWER OF ATTORNEY	2
14	ANNEXURE K	NEW VENDOR EVALUATION FORMAT	14

		BHARAT HEAVY ELECTRICALS LIMITED Boiler Auxiliaries Plant, Ranipet, Vellore Dist.,PIN: 632406.				
An ISO-9000 Company		Tel: 04172-284030 e-Mail: bsmanian@bhel.in , ssvasan@bhel.in			OS(Contracts-MAIN) ENQUIRY	
To, M/s. OPEN TENDER		Enq.No 651003E Enq.Dated 25-Aug-22 Due Date 5-Sep-22 Page: 01/01				
As the Payment/Deduction/MAS advices will only be sent through Email, indicate your email-ID to us Yr Email-ID available with us is Kindly confirm correctness						
This is only a REQUEST for Quotation and NOT AN ORDER. The above referred ENQUIRY NO is to be quoted in all your correspondence(s) hereafter. This Enquiry is for conversion work with BHEL's material for item(s) tabulated Your quotation shall be submitted in E procurement portal before DUE DATE						
Offer shall be submitted in e Tender portal before due date						
B		Your QUOTATION is invited in a sealed cover as per SAMPLE OFFER FORMAT addressed to Manager / Outsourcing Dept (Contracts), BHARAT HEAVY ELECTRICALS LIMITED				
Sl.No	Desc	Drg	Unit	Qty	Wt- in KG/No	Dely-DT
1	Column Modification: 1. Existing base plate removal / plugging of existing holes & drilling of new holes 2. Welding of new piece of Column 3. Welding of Base plate to Column 4. Column splice welding 5. Removal & welding of gussets.	various drawings	MT	152		with in 60 days from PO Date/Last issue of Materials
2	Ducts Welding: 1. Field joint weld modification 2. Corner angle welding 3. Flange welding	various drawings	MT	701		with in 60 days from PO Date/Last issue of Materials
3	Bracing Modification (increase in Length with or without Gusset Modification): 1. Cutting the brace section / support beam 2. Welding of new piece of bracing 3. Additional strengthening of bracing 4. Truss pipes trimming 5. Gusset plate cutting/ removal	various drawings	MT	71		with in 60 days from PO Date/Last issue of Materials
4	Bracing Modification (Decrease in Length with or without Gusset Modification): Cutting the brace section / support beam 2. Additional strengthening of bracing 3. Truss pipes trimming 4. Gusset plate cutting/ removal	various drawings	MT	350		with in 60 days from PO Date/Last issue of Materials
5	Cutting of hole: 1- Cutting of hole in Panel - Circular / Rectangular	various drawings	MT	29		with in 60 days from PO Date/Last issue of Materials
6	Panel Height Reduction 1. 12mm plate removal 2. Panel Height reduction 3. New 12mm plate welding 4. Cutting of hole in panel	various drawings	MT	816		with in 60 days from PO Date/Last issue of Materials
7	Panel Height Addition 12mm plate removal 2. Panel Height welding 3. Stiffeners welding 4. Splice for Stiffeners welding 5. New 12mm plate welding 6. Cutting hole in panel	various drawings	MT	593		with in 60 days from PO Date/Last issue of Materials

To, M/s. scope	OPEN TENDER	Enq.No	651003E
		Enq.Dated	25-Aug-22
	Jobs to be modified have to be collected from BHEL shipping & any additional raw materials required for completions as per GMS to be collected from BHEL stores. Completion of modification jobs as per respective BHEL drawings, Quality requirements & handover the finished jobs to BHEL. Rates are inclusive of transport charges for collection of materials & components and handing over to BHEL. Intermittent movement of jobs for blasting & painting will be paid extra as per existing MAIN ARC. Offcut & MAS norms for fresh materials will be as per MAIN ARC. Balance material arising from modification will be returned to BHEL stores on weight basis & treated as scrap.		
	Eligibility criteria :- Firms located with in 60 KM radius and having General fabrication facility are eligible to quote . Vendors declared / notified as defaulters / poor performers on quality / delivery grounds are not eligible to quote. The vendors with whom the material shortages were found during stock verification and not settled at the time of tender opening will not be considered. Offers if any received such vendors shall not be considered. Vendors under HOLD by BHEL and vendor delisted/banned are not eligible for whole tender.		
	All other terms and conditions as per terms and conditions are as per Main ARC 21-22		
Note:1	RAW materials to be collected from Shipping		
2	Ensure minimum BG amount of Rs 10 Lakhs to be available at the time of loading		
3	Finished component to be handed over to Shipping		
4	The safe unloading, Handling and reloading of finished jobs are in vendor's scope		
5	Indicative/Sample drawings for each RS description are attached in Section III. Kindly refer the drawing before quoting.		
6	GST @12% or as per Latest Govet norms is applicable and the amount is cenvatable . GST amount will be reimbursed on submission of proof of remittance challan , declaration if any and uploading of details in GSTN network with in statutory time period GST @12% is applicable and the amount is cenvatable . GST amount will be reimbursed on submission of proof of remittance challan , declaration if any and uploading of details in GSTN network with in statutory time period . Any other Taxes , if any, applicable from time to time will be extra, BHEL will not recognize any duties wrongly paid on account of ignorance of law or otherwise. MSME supplier can avail the intended benefits as per the MSMED Act 2006 & Public procurement policy for MSME for MSME, 2012, by following the guidelines referred in Cl. 4 of the Annexure-A to this enquiry.		
7	No.of vendor required:Maximum		
8	Your rates shall be kept valid for a period of 180 days from the date of TENDER OPENING and firm for one year .		
9	Delayed delivery will attract LD recovery as per BHEL terms as in Section II		
10	If necessary, Negotiations will be conducted only with the lowest tenderer(L1) only		
11	All other terms and conditions as per Section II		

	Bharat Heavy Electricals Limited (A Government of India Undertaking) Boiler Auxiliaries Plant, Ranipet – 632 406	☎: 04172-284030, 284158, 241170
AN ISO 9001 COMPANY	OUTSOURCING DEPARTMENT	
Enquiry No	651003E	Due Date & Time for submission of offers
Enq-Dated	25-08-2022	Date & Time of Tender opening
<u>SECTION II</u> Techno Commercial Terms & Conditions of the modification work		

1. Scope of the enquiry

Jobs (fabricated items of Yadadri, Bhadradi & Kothagudem projects) to be modified have to be collected from BHEL shipping & any additional raw materials required for completions as per GMS to be collected from BHEL stores. Completion of modification jobs as per respective BHEL drawings, Quality requirements & handover the finished jobs to BHEL. Rates are inclusive of transport charges for collection of materials & components and handing over to BHEL. Intermittent movement of jobs for blasting & painting will be paid extra as per existing MAIN ARC. Offcut & MAS norms for fresh materials will be as per MAIN ARC. Balance material arising from modification will be returned to BHEL stores on weight basis & treated as scrap.

The Total Tonnage for this enquiry is **2712 MT**

Indicative/Sample drawings for each RS description are attached in **Section III**. Kindly refer the drawing before quoting.

2.0 FIRM RATES :

- 2.1 Please quote **FIRM** rates per MT as called for in **Price Bid format ANNEXURE-D** which are applicable to the firm (for Conversion Work only). The rate shall include the following and the operations called for in the conditions indicated in the tender.
- The rate shall include all consumables for welding as stipulated in the drawings/QWIs /welding procedures and any indirect materials required for fabrication
 - The rate shall be inclusive of the Transport Charges (inclusive of Toll Charges, if any) for Collection of fabricated items/ Raw Material with allowances and other components from Stores at BHEL, Ranipet and Dispatch of finished goods to Shipping/Stores at BHEL, Ranipet. (The rate shall be common for all vendors irrespective of the location/distance of their factory from BHEL, Ranipet). No extra transport charges shall be allowed for multiple collection and deliveries.
 - Incase of transfer of raw material/semi-finished items from one vendor to another vendor, through IAWTV, the responsibility for collection of materials including the cost of transportation and handling etc. shall rest with Second Vendor (fabrication vendor dispatching the finished goods).
 - The Rate shall include Transport charges (inclusive of Toll Charges, if any) for Return of balance material to BHEL, Ranipet Stores.
 - The rate shall include safe delivery of the finished fabrications as per QWIs and Drawings to withstand transit damages by rail/road.

- (f) The rate shall include for protecting machined/threaded areas to avoid physical damages while handling, transportation and storage.
 - (g) Splicing of Structural, shall be done with prior permission from Outsourcing, BHEL, Ranipet.
 - (h) All Painting charges including Red Oxide painting / application of rust preventive oil as applicable shall be payable extra as per applicable extra Rate Schedule.
 - (i) Stenciling of Finished Product for Identification
 - (j) The rate shall include for rectification of raw materials such as straightening, removal of bend, twist, etc. wherever necessary.
 - (k) The rate shall include **LPI wherever required as per QWIs / Drgs /Sketches**. All other NDT charges like MPI/UT/RT etc payable extra as per prevailing ARC.
 - (l) Offering the jobs for inspection to BHEL /Customer or its authorized inspection agency is in Contractors scope and the quoted rate shall include the same.
 - (m) The description and PGMA's given in each Rate schedule is only indicative. Any items of similar nature shall be loaded against Rate Schedule based on the work content. For payment purpose, only Rate schedule numbers shall be considered.
 - (n) Wherever Trial assembly is called for in the drawings/QWIs or by Inspection, the charges as per extra rate schedule shall be payable extra. It should be indicated in IR subject to approval by the concerned field officer.
 - (o) Wherever jobs are beams etc., split in to two parts in view of ODC Constraints such as Columns in X48, Monorail the Trial assembly charges are not applicable unless specified in the drawing/certified by BHEL/QC.
- 2.2 The rates shall be FIRM and not subject to any variation/escalation on any account during the validity of this Contract period. The rates are operative for placement of job work orders valid for One Year from the date of finalization of the contract on Contract basis to be entered into between BHEL and the Contractor.
- 2.3 BHEL does not guarantee ordering of any minimum quantity or does not guarantee more share for the lowest tenderers.
- 2.4 "Notwithstanding anything to the contrary, including, but not limited to, provisions relating to extension of time and compensation/or delay, time shall be the essence of the Contract."
- 2.5 Job Work orders will be issued after entering into the contract with the Sub-Contractors. Discrepancy in the JWOs if any, has to be settled immediately then and there within 20 days from the date of Job Work Order.

3.0 Raw Material Issues and Accounting :

The weight indicated in GMS/DRG/ and or as per Scope indicated in the PO addendum will be the basis for accounting of raw materials issued. For billing conversion / transportation charges if any the weight indicated in GMS/Drawing only will be considered.

a) All the unusable materials to be returned as "Scrap" only, on weight basis at stores.

b) In case of any **unusable materials** of any size ie arising because of modification, returned by firms, stores will weigh the scrap and acknowledge the DC. Acknowledgement will be made for the actual weighment done at stores only. RSV will be made accordingly.

- c) Return of **unconsumed materials** of fresh issued materials to stores on RSV as per Off cut /Scrap norms mentioned below

Raw materials will normally be issued with process allowance as given below for economical operations.

Description	Invisible wastage	Working allowance	Total process allowance
Sheets	2%	1%	3%
Plates	2%	2%	4%
Structurals (Beams, Channel, Angles, Flats Rods, Pipes, Tubes, Packing etc.,)	0.5%	0.5%	1%
** Plates of PGMAs 7xx42, 7xx44, 7xx45, 7xx46, 7xx47, 7xx49 and 7xx50. The number of permitted joints for these PGMAs are detailed in ESP:SQP:284:(Latest revision)	0.5%	1.5%	2%

** Generally cutting plan need not be required to submit by the firm for the plates of PGMAs 7xx42, 7xx44, 7xx45, 7xx46, 7xx47, 7xx49 and 7xx50. However, Cutting plan for the plates of PGMAs 7xx42, 7xx44, 7xx45, 7xx46, 7xx47, 7xx49 and 7xx50 should be submitted,

- if the issued weight is less than the demanded weight (for the purpose of completion of job),
- if the Issued weight is more than the demanded weight (for the purpose of declaration of off-cut).

If the difference (between the Issued and demanded weight) is less than the off-cut norms(CI.5.0), cutting plan need not be submitted by the firm for the plates of PGMAs 7xx42, 7xx44, 7xx45, 7xx46, 7xx47, 7xx49 and 7xx50 even if the weight is more than 5MT.

For all other cases cutting plan is to be submitted before taking up the job for fabrication.

Cleared material shall be collected by the Contractors at the earliest without any delay. If BG limit becomes a constraint to issue the cleared materials, vendor shall arrange for additional BG within 2 weeks time from JWO date/material cleared date, prior to material collection.

- 3.1 The Cutting Plans should be of "Optimum only", in order to maximize the utilization of the material issued, specifically where the left out material can better be used for other jobs. The balance material, if any after Cutting Plan approval/ machining / fabrication shall be returned to our Stores at Contractor's cost. BHEL reserves the right to call for the returning of the balance material not withstanding its designation (ie. Whether Scrap / Big-size-Scrap).
- 3.2 Balance material arising out of issued quantity shall be returned by sub-contractor. However, if original issued quantity is insufficient due to the shape or size required to be cut, cutting plans may be furnished for BHEL approval WITHIN ONE WEEK OF DRAWAL of Raw materials.
- 3.3 Wherever firm comes across receipt of excess material due to the error in GMS/Drawings that is to be brought to the notice of SDGM/OS immediately. Since material is issued on weight basis, any excess material received on account of section weight variation or otherwise, the same is the property of BHEL, not withstanding the status of MAS. Such information shall be declared by the supplier to BHEL immediately.
- 3.4 Any act of Contractor resulting in dishonest misappropriation or conversion of the materials so issued for his own use shall constitute the offence of Criminal Breach of Trust under Indian Penal Code and /or such other offences under any other provisions of law and the Contractee shall have every right to proceed against the Contractor under Criminal Law in order to ensure proper punishment to such perpetrator/s for the said offence/s. In such cases, BHEL shall take all necessary steps to recover the material available with those firms.
- 3.5 Movement of BHEL materials from Contractor's premises to any other Firm(s), if necessary, for the purpose of production related work shall be documented properly, signed by the sender &

receiver and the same to be authenticated by the concerned OS official, otherwise such materials will be treated as shortage by BHEL Accounts.

- 3.6 Protecting the material issued by BHEL under safe custody until completing the delivery as required is vendor's responsibility. All the Government statutory requirements with regard to the issue of materials under GST rules shall be applicable for the entire duration of the contract. Any default by vendor towards the same will be adjusted from the subcontractors bills as per the GST rules.

4.0 Scrap / OFF–Cut Norms :

Sl	Description	Scrap Size (mm)	Off Cut Size (mm)
1	CS/AS Sheets & Plates	Below 500 X 250	500 X 250 & above
2	Rolled Sections Including Structural(other than CS/AS rods up to dia 40mm / tubes / pipes): Length	Below 1000	1000 & above
3	CS/AS Rods greater than dia 40mm, RHS, SHS, Tubes and Pipes: Length	Below 500	500 & above
4	Big Size scrap Length x Breadth CS/AS	(2500 & above)X (150-249)	-----

- a) Returning of Off-Cuts/Prime material to BHEL is mandatory. Failure to return the materials (prime material/off-cut) will entail recovery of the cost of materials along with GST & other Statutory levies as applicable plus departmental/administrative charges fixed from time-to-time from any of the running bills of the supplier/other means of recovery available for the non-returned quantum. The non returned quantum of material (Prime/off-cut) will be as per FMAS approved by BHEL.

- 5.0 Surface Preparation:** Surface preparation to a cleanliness level of Swedish Standard Protective Coating (SSPC) Sa 2 ½ (near white metal finish) i.e. " Removal of loose mill scale and loose paint, to the degree specified, by the impact of abrasive blast propelled through nozzles or by centrifugal wheels. Near white blasted surface shall be free of all visible oil, grease, dirt, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining limited to not more than 5% of the surface area. Such staining may consist of light shadows, slight streaks or minor discoloration caused by stains of rust mill scale, or stains of previously applied paint. The surface preparation to Sa 2 ½ (near white metal finish) and immediate painting is to be is to be done, only at the BHEL approved sources allocated by BHEL / with the approval of BHEL in case of Self blasting and painting.

- 6.0 PAINTING:** All painting works shall be part of main fabricators responsibility, including cost of paints. However extra rates are payable as per extra rate schedules (listed under Heading "Charges for Painting" in **Section-III-D** titled "List of Extra Rate Schedules").

- 7.0 UT/RT/HT/SR:** The Ultrasonic Testing, Radiographic Testing, Heat Treatment and Stress Relieving as called for in the drawing/QWI/JWO are to be carried out by the fabricator, through the approved agency of BHEL. For Charges for carrying out of the above operation is payable extra as per the extra rate schedules and allied To and Fro Transport charges are also payable extra as per the respective extra Rate Schedules. .

- 8.0 PAYMENT FOR EXTRA CHARGES :** 100% Payment will be made for extra charges against Invoice supported by acknowledged Delivery Chelan and Inspection Report (IR) issued by BHEL Inspector/agency. The payment of extra charges will be made only to the Extra RS Nos, UNIT, Qty mentioned in the IR duly concurred by BHEL Field Officers.

9.0 SAFE DELIVERY: The Contractor shall do at his cost the necessary packing for easy & safe handling and transportation as per BHEL drawing wherever specific packing arrangements are applicable and normal packing for the other items required for transit by rail/road transport wherever necessary.

10.0 TERMS OF DELIVERY: The price should be on "F.O.R- BHEL Stores/Shipping, Ranipet" basis only (Inclusive of packing, forwarding and freight charges).

The finished machining / fabrications on acceptance by BHEL, Ranipet inspector or by their authorized inspection agency shall be delivered to BHEL, Ranipet Stores / Shipping or to BHEL Sites / Customer as the case may be immediately.

11.0 TECHNICAL REQUIREMENTS :

11.1 The machining / fabrications shall strictly confirm to the dimensions and tolerances indicated in the drawings/QWI. Care must be taken to adhere strictly to the NOTES given in the drawings/Contract. It should be ensured that actual dimensions, and deviations if any, are recorded properly in the D.R. books and preserved at least for 5 years. The same shall be made available to BHEL Officials or their authorized agencies.

11.2 Any other work carried out outside the requirements of drawings/QWIs shall have the prior approval of the competent authority of Outsourcing / BHEL, Ranipet.

11.3 Adequate facilities like welding equipments, baking oven, handling facilities and measuring instruments as called for, must be available duly calibrated and kept with the Contractor for the manufacture of boiler components. All the above basic machining / fabrication facilities/equipments must be under working condition and the same be made available for verification by the BHEL officials or their authorized agencies whenever they are called for.

The instrument/gauges are to be calibrated periodically as follows:

Sl.No.	Type	Periodicity
01	Measuring instruments / gauges	One year
02	Limit Gauges (Eg. Plug/ring)	One year
03	Temperature , Pressure gauges	6 months
04	Measuring Steel tape	Once

Calibration status shall be displayed at the Contractors works in a conspicuous location. Calibration can be performed either at BHEL or at any Govt. approved labs traceable to National Standards.

11.4 For various Rate Schedules, the manufacturing, handling and testing facilities requirement as specified by BHEL from time to time shall be available with the Contractor.

11.5 Only the right kind of matching welding electrodes shall be used as called for in the drawings/QWIs after necessary baking and pre-heating mentioned in QWI. Welding electrodes shall be sourced only from approved vendors. The electrodes shall be suitably baked and preheated wherever applicable before use in addition to the general precautions that may be applicable for all electrodes in storing etc...

11.6 Welding to be carried out by Qualified Welders and as per BHEL Approved Welding Procedure Specification (WPS). Necessary raw material for conducting the pre-production test will be supplied by BHEL as supplementary materials. The welder qualification and welding procedure will be done by QC, BHEL or by their authorized agency.

11.7 All welds of Submerged Arc Welded components shall be carried out by certified welders and shall be dye-checked for root and by MPI for final welding.

12.0 PAYMENTS :

- 12.1 Payment will be made for IP wise 100% for the supplies made against submission of Vendor invoices in duplicate to Finance section furnishing the job work order Sl. No., W.O., IR & DC No. along with IR, giving details of work carried out as per Extra Rate Schedule applicable, if any supported by
- (a) Stores Receipt Voucher in case of Stock Work Order items.
 - (b) Delivery challan acknowledged by BHEL Stores/Shipping.
 - (c) Inspection Report (IR)
 - (d) If the claim is made for more than one job work order Sl. No., only one invoice have to be submitted with annexure giving the above details.
 - (e) Contractor MAS with challans duly signed with seal
- 12.2 The amount due to BHEL, Ranipet, if any, will also be recovered from the Contractor's running bills. No request for the refund of penalty/recovery will be entertained after final material accounting is done. Payment will be made only through 'Electronic Fund transfer/RTGS Transfer'. Acceptance for the same may be submitted in the prescribed format if not done already.
- 12.3 Owing to the substitution, if the raw material weight changes over and above (+) or (-) 5%, the conversion cost for the difference in weight shall be paid/recovered prior to the issue of FMAS. Since payment is made for notional design weight, any correction issued for the design weight after processing the original invoice, Contractor is entitled to raise another invoice for the difference in weight without any other supporting document except the copy of the original invoice.
- 12.4 GST as applicable for Contractor's can be claimed along with documents / certificates mentioned therein. However, one more bill per month against any one of the pending Work Orders will also be permitted as a special case and this should have the prior approval by competent authority.
- 12.5 The payment shall be subject to the deduction of any amount for which the fabricator is liable indirectly under this contract or any other contract of the fabricator or any other fabricator's contract where the proprietor / any of the partners / directors of the present fabricator is / are proprietor/director/s/partner/s, in respect of which BHEL / Ranipet is a contractee.
- 12.6 Request for delivery extension is to be made if there is a valid reason, in the format for that particular job work order Sl. No., failing which liquidated damages will automatically be levied .No request for extension/refund of penalty will be entertained there after.
- 12.7 Payment will be made in about 45 days after receipt of valid invoices raised and supported by full set of necessary documents at Accounts Department. No interest shall be payable by BHEL on any money due to the Contractor by BHEL.
- 12.8 For the purpose of payment, only the unit rates are to be considered based on the RATE SCHEDULE NUMBERS. The description of the item is only indicative and it is not binding. Any description given in the item column is only for the purpose of clarity for manufacturing the item. (the description may change designer to designer and/or drawing to drawing).

13.0 BANK GUARANTEE :

- 13.1 The Contractor for this enquiry shall ensure availability / execute a Bank Guarantee to a specified value not less than **Rs.10.00 Lakhs** (inclusive of blasting up to Sa2.5 - process by the fabricating vendor) from any one of the Scheduled or Nationalized banks on behalf of the Contractor for the safe custody of the materials supplied by the BHEL, Ranipet as free issue and for the satisfactory performance of the Contracts. The guarantee shall be executed on a non-judicial stamp paper or value Rs. 100/- as per our standard Bank Guarantee clauses and shall be kept valid for the full contract period & Claim period of additional THREE MONTHS over the contract period and extensible till final settlement of supply and payment **and BG to be submitted directly by Bankers to BHEL in a Standard format as per Section IV. BG format will be given by BHEL and it has to be filled in that format only.**
- 13.2 In place of Bank guarantee, Fixed Deposit Receipt (FDR) drawn in favour of BHEL, Ranipet can also be furnished. In any case BG/FDR shall be available at the time of signing the contract.
- 13.3 The Bank Guarantee should cover the recoveries to be made by BHEL towards Safe custody of Material Supplied, Scrap / Faulty workmanship, etc. also for which proper material accounting is not made within the stipulated time and shall cover all Contracts past, present and future placed / to be placed by the BHEL, Ranipet. If the recovery amount is more than the pending bills, the difference amount to be settled immediately submitting Demand Draft in favor of BHEL/ Ranipet.
- 13.4 Loading on the vendor shall be restricted in such a way that the value of the materials to be issued and the stock of BHEL materials already available with the vendor.

14.0 GUARANTEE OF FABRICATION / MACHINING:

The Contractor shall warrant that the conversion work comply fully with the drawings and other technical conditions. If the jobs are found defective owing to reasons attributable to the vendors like faulty workmanship / incomplete work within a period of eighteen months from the date of handing over to BHEL, the Contractor shall make good of it / replace the same free of cost. Alternatively, the rework / replacement charges will be recovered from the Contractor.

15.0 ACTION AND COMPENSATION IN CASE OF BAD WORKMANSHIP:

If any work has been executed with unsound, imperfect or bad workmanship or with materials of inferior quality, the Contractor shall on demand in writing from BHEL specifying the work, material/articles complained of, notwithstanding that the same may have been passed, certified and paid for, forthwith, rectify the work so specified in whole or in part as the case may require, at their own cost and in the event of his failure to do so within reasonable period. BHEL will rectify or remove and re-execute the work at the risk and expense of the Contractor.

16.0 Reverse auction (RA)

- 1.1 BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno commercially qualified bidders. Price bids of all techno commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.
- 1.2 The philosophy followed for reverse auction shall be English Reverse (No ties).
- 1.3 For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- 1.4 BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.

- 1.5 Before reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
- 1.6 Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
- 1.7 Bidders have to fax/E mail the Compliance form before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
- 1.8 Reverse auction will be conducted on scheduled date & time.
- 1.9 The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, to the Service provider within two working days of Auction without fail.
- 1.10 Bidders are required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the „Business Rules of Reverse Auction“, which will be communicated before the Reverse Auction.
- 1.11 If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
- 1.12 The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
- 1.13 . The calculation sheet e.g. excel sheet (which will help to arrive at 'Total Cost to BHEL') will be communicated to respective bidders of RA by BHEL. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Goods & Services Tax (GST) and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.]
- 1.14 This calculation sheet will be finalized based on the evaluation criteria specified in the NIT.
- 1.15 Start price for RA shall be lowest of sealed envelope price bid.
- 1.16 Wherever more than one lowest sealed envelope price bids are identical and lower than the estimate, the start price, would be that price arrived by reducing the lowest sealed envelope price bid by maximum of one decrement.
- 1.17 The start price & bid decrement will be decided by RA committee of BHEL and the same would be communicated to the service provider, to start the bidding process.
- 1.18 Only those bidders who have submitted the 'Process compliance form' duly signed and within the scheduled time would be eligible to participate in RA process.
- 1.19 Reverse Auction will be conducted if two or more bidders are techno commercially qualified. In case of two or three qualified bidders, there shall be no elimination of H1 bidder (whose quote is highest in sealed envelope price bid). In case of four qualified bidders, the H1 bidder shall be eliminated whereas in case of five qualified bidders, H1 & H2 bidders shall be eliminated. However, in case of six or more qualified bidders are available, RA would be conducted amongst first 50% of the bidders arranged in the order of prices from lowest to highest. Number of bidders eligible for participating in RA would be rounded off to next higher integer value if number of qualified bidders is odd (e.g. if 7 bids are qualified, then RA will be conducted amongst lowest four bidders). However, there will be no elimination of qualified bidders who are MSE or qualifying under PPP-MII, Order 2017, irrespective of the number of bidders qualifying techno-commercially.
- 1.20 In case of multiple H1 bidders, all H1 bidders (excluding MSEs and bidders qualifying under PPP-MII, Order 2017) shall be removed provided minimum two bidders remain in fray, else no H1 removal.
- 1.21 The lowest bidder in sealed envelope price bid shall be shown as current L1 automatically by the system. System shall have the provision to indicate this bid as current L1 for further bidding. This price can be displaced by an even lower bid of a competing bidder.

- 1.22 If the start price is lower than the lowest sealed envelope price bid, on acceptance of such start price by any bidder this bid would be indicated as current L1 for further bidding. However, if no bidder accepts the start price, RA shall be treated as cancelled for the respective line item(s) and the tender shall be processed accordingly.
- 1.23 In case of no further bidding, RA will be deemed to have been successful with current L1 bidder.
- 1.24 During RA, all bidders will see their rank and current L1 price on the screen. Once the RA is done, the ranking status would be based on the last quoted price of the bidder(s) irrespective of the quote received in RA or sealed envelope price bid.
- 1.25 No bidder shall be allowed to lower its bid below the current L1 by more than 5 decrements at one go.
- 1.26 Wherever the evaluation is done on total cost basis, after RA, prices of individual line items shall be reduced on pro-rata basis.
- 1.27 In case of splitting requirement, H1 bidder(s) who were removed from participation in RA may also be considered for counter offer if the pre-stated (NIT) number of suppliers do not accept the counter offer. However, the principle of splitting to N-1 bidder shall be maintained in line with extant Purchase Policy / Work Policy
- 1.28 Reasonability of rates received through RA to be ascertained as per extant Policy provisions.
- 1.29 In case of enquiry through e-Procurement, the sealed electronic price bid (e-bid) would be treated as sealed envelope price bid.

Note: In order to bring more transparency and to address any queries of Bidders on Reverse Auction, an abridged version of BHEL's "Common Guidelines for conducting Reverse Auction (RA)" has been hosted in BHEL's web site www.bhel.com under the links "Supplier Registration Page" and "Tender Notification". All Bidders are requested to visit the link and familiarize themselves with BHEL's RA procedures and guidelines before submission of their bid/s. Submission of Bid shall mean that the Bidder has read and understood BHEL's RA procedures and the bid is in agreement with the same.

17.0 SUBLETTING :

- 17.1 The Contractor shall not sublet or assign this Contract or any part thereof without the written permission of BHEL, RANIPET. Subletting or assigning this Contract or any part thereof without such permission BHEL, Ranipet shall be entitled to cancel the Contract and to execute the conversion work elsewhere at the risk and cost of the Contractor and the Contractor shall be liable for any loss or damage which BHEL, Ranipet may sustain in consequence of or arising out of such machining / fabrication elsewhere and also cancellation of registration/temporary suspension of further loading.
- 17.2 However, if the PO/PGMA loading demands part processing / Special Process (like Blast cleaning, Heat Treatment, Machining, Bending, Shearing, Threading, etc..) of certain items at, other BHEL OS-approved Contractor's works, the same may be allowed with the prior permission of BHEL in writing, indicating the period of returning.
- 17.3 "Movement of BHEL materials from our Contractor's premises to any other Firm(s), if necessary, for the purpose of production related work shall be documented properly, signed by the sender & receiver and the same to be authenticated by the concerned OS official, otherwise such materials will be treated as shortage by Accounts".
- 17.4 The vendors will be allowed to indicate alternate sources for carrying out these intermediate operation, wherein the said other sources shall seek approval from BHEL for carrying out these operations.
- 17.5 These intermediate operations are to be carried out only at the approved sources and addition/deletion to this list will be indicated to the vendors then and there.

18.0 TAXES & DUTIES-GST:

- 18.1.1 Taxes and duties as applicable from time to time, shall be paid extra over the quoted rates. (as per latest GST guidelines)
- 18.1.2 Vendors should provide a valid GST registration number and the same should be clearly mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer. Vendor should get themselves registered and obtain a valid GST registration number as per the GST guidelines
- 18.1.3 In case any changes in GST guidelines as per Gov. Notification , the same shall be applicable from time to time.
- 18.2 Taxes applicable if any will be reimbursed at actual on submission of necessary tax invoice mentioning the GSTN registration number and proof of payment to the statutory authorities.
- 18.3 BHEL will recover applicable GST along with cost of prime material, off cut, scrap including Turning & Boring (T and B) at the time of finalizing MAS wherever the property in the goods passed on to the Contractor. An Invoice will be issued under relevant rules of GST.
- 18.3.1 Wherever GST is claimed by Contractor as above BHEL shall reimburse the applicable GST presently @ 12% against submission of the following documents:-
 - i. GST Registration Certificate
 - ii. Original Tax Invoice (as per GST Rules)
 - iii. Certificate for payment of GST
 - iv. Abstract of GSTR-I & GSTR-3B or any other returns as prescribed from time to time
- 18.3.2 In case BHEL is not able to get input Tax credit (ITC) for the payment made by vendor for any of the reason attributable to vendor , the same shall not be reimbursed/recovered from the bills/claims of the vendor (if reimbursed)
- 18.4 GST TDS deduction at such percentage as prescribed under GST Law from time to time will be made on the value of invoices
- 18.5 Income Tax deduction and surcharge on IT at source at such percentage as prescribed in the Income Tax Act from time to time will be made on the value of the invoices in the absence of Income Tax Exemption Certificate from the concerned Income Tax Officer received and submitted by the Contractor. Contractor has to submit photocopy of PAN Card along with original for verification.
- 18.6 All statutory documents required for execution of contract to be finalized against this enquiry and required from time to time by State/central Govt. Authorities shall be submitted to BHEL, failing which appropriate recovery/actions as deemed fit will be levied from the running bills of the contractor.
- 18.7 Contractors are exempted from payment of GST as they are job workers as prescribed under Section 143(1) of GST Law as amended from time to time for the purpose of free issue of raw materials/semi finished goods to them for carrying out necessary operation and return the finished components without payment of duty to the BHEL RANIPET's factory for further processing. This is subject to subsequent statutory modifications and amendments in force from time to time. Contractors shall comply with the requirements of the said Section and also rules made under GST LAW . This is subject to subsequent statutory modifications and amendments in force from time to time. Besides, Taxes, duties, levies and any other govt. special levies as applicable from time to time, through notifications/amendments to original notification/orders, during the tenure of the contract, shall be extra as applicable against valid documentary

evidence. Any increase or decrease in this regard will be effected accordingly against valid documentary evidence.

- 18.8 The required raw materials will be issued under the cover of Delivery challan as prescribed under GST Law. The Contractor receiving the materials under above said challan (2 Copies) have to complete the work order and return the finished components and scrap under the cover delivery challan issued by BHEL within 60 days from the date of first issue of materials unless otherwise extended by BHEL and all materials shall be fully accounted for in FMAS. For this purpose Duplicate (ONE) copy of all the Challan shall be returned back to BHEL after duly signing in with seal with FMAS and DC copy. If the materials are not returned/ fully accounted for within three months or such extended period as may be allowed by BHEL, any financial implication on BHEL will be recovered from the Contractor's bills.
- (i) In case of failure of non submission of challan due to reasons not attributable to Contractor, (like non matching of materials, hold informed by BHEL, delay due to cycle time etc.,) is to be intimated to BHEL every month by the Contractor.
 - (ii) In case of direct dispatch to customer site (or) returning of material back to BHEL store, necessary GST formalities have to be complied with by Contractor and also necessary records as per GST Law have to be maintained by the Contractor.
 - (iii) FMAS is to be prepared immediately on dispatch in all cases based on which applicable GST on scrap/Off cut will be recovered from Contractor and paid to GST Dept.
 - (iv) BHEL, RANIPET will not be responsible for payment of any taxes and duties wrongly paid on account of ignorance of law or otherwise and also duty paid at a later date based on litigation.

19) Risk Purchase

Alternatively, the BHEL at his option will be entitled the contract and to manufacture elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefor. The supplier shall be liable for any loss which the BHEL may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in LD clause.

In case those vendors do not execute the orders, BHEL may get the job done through other sources at the Risk and cost of those vendors and the extra expenditure involved shall be recovered from these vendors from any amount due to them.

20) Evaluation of Price Bid

- i) The rates quoted shall be evaluated on the basis of "Rate quoted per MT
- ii) If the rates of Two vendors are equal resulting in same ranking, among the equal ranked vendors, the sub-ranking will be done to differentiate (a) to decide the L1-vendor eligible for negotiation and (b) to decide H1-vendor for elimination of higher ranked vendors.

The sub-ranking will be done in-the-order by providing lower ranking for vendors

- (1) Nearer to BHEL by location
- (2) Earlier date of commencement of activity as in MSME certificate
- (3) Having OWN land,
- (4) Become Sole-L1 for more number of Rate schedule,
- (5) Earlier date of receipt of offer and /or
- (6) Draw of lots as a final measure (in presence of such vendors, who may like to be present).

21) Abnormally Low Offers

If the prices offered by L1 Bidders are found to be unrealistic, unworkable with respect to BHEL's estimate or prevailing market rates, BHEL will ask for justification also demand the break up cost element for such rates from the vendors with appropriate documentary evidence and if not submitted it will be construed that the vendor has offered the rates with an intention to sabotage BHEL Tender process/ tamper Tendering procedure, affecting the process. In such cases, BHEL will have the discretion to reject the offer in line with BHEL procedures. Hence the bidders are advised to exercise abundant care in submitting a correct genuine offer.

22) Counter offer

- i) Once the L1 rate for the rate schedules are finalized by BHEL, then the L1 rate shall be counter offered to the other technically qualified vendors for their acceptance.
- ii) Based on the acceptance of vendors for the Rate Schedule, contract will be entered with them.
- iii) Counter offering will not be extended to top higher ranked (H1) eliminated vendors
- iv) If none of the vendors are accepting for the counter offer given by BHEL, then BHEL will place orders on the L1 ranked vendor for the tentative quantity mentioned against RS subject to the capacity availability indicated by the vendor.

23) Placement of Orders and Loading

- a) Contract will be entered only with the vendors who respond to this -Enquiry
- b) The contract is to be signed in Rs.100/- stamp paper. Hence after getting a confirmation on signing of contract, vendor shall get a stamp-paper for a value of Rs. 100/- and submit to BHEL for contract preparation.
- c) After finalization of tender, if the Contractor is awarded the Contract, Proprietor, Partners and Directors (as applicable) should physically present themselves and sign the contract in the presence of Head of OS Department with in the dates specified.
- d) Orders would be placed as Addenda's on the Contract signed by the vendors.
- e) *L1 vendor will be given TWO splits of load, when all other ranked vendors (other than L1) were given One(1) split , during every bulk loading cycle, subject to meeting all the basic requirements such as Tender ranking, Capacity availability, BG & Delivery Performance, Quality Performance, Legal compliances, validity of lease document if applicable and Validity of constitution., required as per contract. In case the above said requirements are not complied, loading of two splits for L1 vendor and one split for other ranked vendor will not be considered for subsequent loading.*
- f) If none of the vendors are accepting for the counter offer given by BHEL, then BHEL will place orders on the L1 ranked vendor for the tentative quantity mentioned against RS subject to the capacity availability indicated by the vendor.
- g) Purchase orders will be issued after entering into contract with the Contractors. Discrepancy in the PO's if any, has to be settled immediately then and there within 20 days from the date of release of PO.

24] Liquidated Damages:

BHEL will levy penalty as Liquidated Damages (LD), for delay in delivery. The damages shall be at the rate of ½% per week or part thereof subject to a maximum of 10% value of the particular Work Order in the addendum to the Contract for the undelivered portion. Delivery for purpose of L.D, will be reckoned as the date of clearance of the items for dispatch by BHEL. Supplier should quote a definite delivery period and any delay in delivery will attract penalty.

The delivery period includes time involved in material collection, cutting plan approval, collection of further materials if any and handing over of the finished goods to BHEL-Shipping. Finished goods items shall be door delivered at Shipping/Stores inside the factory, BHEL, Ranipet.

25] Termination of Inquiry / Orders:

- a) BHEL reserves the right to cancel any inquiry before opening of the tender, without assigning any reason.
- b) BHEL reserves the right to cancel any tender and refloat a fresh tender, at any time after opening of the tender, in case it finds the response to its tender as not meeting its requirement. This shall be at the sole discretion of BHEL.
- c) In the event of non-performance of the contract by the Supplier, BHEL reserves the right to cancel the order with issue of a written notice. BHEL would provide a curing period of 30 days, for the Supplier to rectify the situation. If the Supplier fails to rectify the reason/s that led to the issue of cancellation notice by BHEL, then the cancellation order would be issued automatically by BHEL, without further recourse to the Vendor. BHEL will not pay any cancellation charges or any other charges / damages to the Supplier, arising out such cancellation.
- d) In the event of the non-performance of the contract, by the Supplier, the rights of BHEL include, in addition to cancelling the order, to take alternate action at the cost and risk of the supplier. The additional expenditure to be incurred by BHEL in such alternate action would be to the account of the supplier.
- e) BHEL reserves the right to cancel the order for delay in supply beyond penalty period without any monetary or legal obligations and at the risk and cost of the Supplier

26) Suspension of Business Dealings with vendors

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.

1.0 Integrity commitment, performance of the contract and punitive action thereof:

1.1. Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

1.2. Commitment by Bidder/ Supplier/ Contractor:

1.2.1. The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under provision of the Indian Penal Code, 1860 or any other law in force in India.

1.2.2. The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

1.2.3. The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/

supplier/ contractor as per extant guidelines of the company available on www. bhel.com and/or under applicable legal provisions”.

If a vendor did not accept PO after becoming L1, suitable action will be initiated on the vendors as per the guidelines of Suspension of Business dealings” provided by BHEL.

27) Force Majeure

i) If at any time during the currency of this contract, the performance in whole or in part, by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events), then provided notice of happening of any such events is given by either party to other within ten days from the date of occurrence thereof, neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by the purchaser subject to prompt notification by the seller to the purchaser of the particulars of the events and supply to the purchaser if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

ii) If as a result of difficulty in procurement of raw materials or due to force majeure reasons or any other reasons what-so-ever the contractor is unable to keep the delivery schedule of the contractee, extension of time may be granted by the contractee at their discretion as may be necessary to the extent considered necessary should there be delay in supply beyond the extended date of delivery, it shall be open to the contractee to terminate the contract in part or full and make other arrangements for executing fabrication else where at the cost and risk of the contractor.

28) GENERAL :

- (a) BHEL reserves the right to recover the dues if any, from the contractor from any one of the running bills of this contract or any other contract with the contractor or from any other division of BHEL. Vendors disqualify themselves to be an approved vendor of BHEL, in the event , it is found that they carryout activities / business which are in direct competition to BHEL business and accordingly they will be delisted. Vendors / Firms indulging in business practices detrimental to BHEL, will be severely dealt with by the due process of law. In addition to the above conditions the following specific conditions also bound under this contract.
- (b) It is preferred that the Proprietor/Managing Partner/Director as applicable to the company should be easily accessible to BHEL official for day to day interaction and to have the residence within 30 KM from BHEL/BAP for the firms located in and around Ranipet. Any change in the constitution of the Contractor's unit or in shifting of works to a new location, the same shall be made only after getting specific approval from Outsourcing BHEL RANIPET. Any deviation found later will be dealt with as deemed fit including cancellation of registration. Also change of Banker requires the prior approval of BHEL, Ranipet.
- (c) Partnership firms should have the latest Form A (Rule 5) Declaration filed with the Registrar of Firms and private Limited firms should have the current MOA and the copy of the same should be produced at the time of signing the Contract.
- (d) The Contractor is liable for all statutory obligations, including but not limited to taxes and duties, ESI, PF, GST, Labour Acts, Factories Acts, Workmen Compensation Act, etc., for their workers. BHEL, RANIPET will have no liability in respect thereof. Notwithstanding the above, if any demand notice is served by the concerned Statutory authorities for recovery of any of their dues on BHEL, BHEL shall have the right to pay the same without notice to the Contractor and recover the same plus administrative charges of 15% of such amount from the Contractor either from the pending/future bills of the Contractor or otherwise. Such act of repeated default is liable for suspension/stoppage of further business till such time the

default/violations get vacated. Notwithstanding anything to the contrary, BHEL shall not be liable for any penalty or interest imposed by any statutory authority due to the action of the Contractor or his employees, workers, agents, etc. .

- (e) The Contractor has to devise suitable scheme whereby the employment of child labour should be regulated in line with the child Labour Act (prohibition and Employment Act 1986).
- (f) All the safety precautions and use of safety equipments are to be followed while carrying out the fabrication and despatch of the same. The Contractor must have proper tools and handling equipments. There should always be a responsible person available at the Contractor's works to oversee the operation and compliance of safety regulations. If any non-compliance with respect to proper safety conditions/requirements, BHEL may withhold visit/inspection, instruct stoppage of work till such time the desired safety requirements/conditions are met with.
- (g) All the documents (Inclusive of Drawings, GMS and Standards) of BHEL made available to the Contractor should be kept in a strict confidence and under no circumstance be made available to others or allow others to make use of them for any other commercial purpose whatsoever. This secrecy clause is binding on the employees of the Contractors also. Any contravention will be subjected to legal action besides suspending business with BHEL. Such documents should be returned to the BHEL, RANIPET destroyed with the prior approval of Outsourcing, BHEL, RANIPET.
- (h) Unauthorized act of engagement of any individual who is a full time employee of BHEL for part time/full time work by the Contractor will be viewed very seriously and such act is liable for suspension/total stoppage of further business dealings with the Contractor by BHEL, RANIPET.
- (i) Should a Contractor has a relation or relations in the case of a firm or a company of the Contractor, one or more of its shareholders or relation or relations of the shareholders employed in BHEL or any ex employee who has retired/resigned within a period of two years as on date of the Contract or at any subsequent date after award of this contract, BHEL shall be informed of the fact at the time of signing the contract and thereafter as applicable and obtain the permission of BHEL for such engagement, failing which BHEL may in its own discretion rescind the contract.
- (j) The Contractor shall not attempt any unethical acts and if they are found indulging in such acts, they are liable to be blacklisted apart from other actions. Contractors indulging in any business practices detrimental to BHEL either directly or Indirectly, will be dealt with severely by the due process of law.
- (k) In case of any internal dispute of the Contractor, such as but not limited to disputes between partners of the Contractor, dispute between Contractor and its employees, the same shall be intimated to BHEL within One Month from the date of dispute. Notwithstanding anything to the contrary, BHEL shall not be made a party any suit or legal proceeding in respect of such internal dispute. In case BHEL is made a party to the same, the Contractor and other party(ies) to the dispute, if signatories to this Agreement, shall indemnify BHEL for (a) all direct and indirect costs expended towards such legal proceedings immediately on the issue of a claim notice to that effect from BHEL and (b) any liability that may be imposed in such legal proceedings against BHEL.
- (l) Payment for all the invoices shall be effected by a crossed A/C payee cheque /EFT/RTGS in favor of the Banker which should be indicated in all invoices of the Contractor.
- (m) In order to ensure safe custody of our materials, leasee of those firms under lease shall ensure that their lease period is valid for minimum of 3 years (from date of signing the contract).
- (n) In addition to the above, our standard General Conditions enclosed shall also apply.
- (o) The entire terms and Conditions contained in this tender shall be deemed to form an integral part of the Contract to be entered.

29 Primary e-Mail-ID: Contractors are requested to indicate their own email-Id as "Primary e-Mail-ID", which will only be used for all correspondences (like for MAS and Payment etc..)

30 **Arbitration and Jurisdiction:**

- (a) Any dispute between BHEL and the Contractor arising out of or in connection with this Contract, other than those for which BHEL decision is final, shall be referred to arbitration by a sole arbitrator.
- (b) The parties hereto agree that the Sole Arbitrator shall be the Unit Head of BHEL, BAP, Ranipet or his nominee. The venue of Arbitration shall be Ranipet, Tamil Nadu. The arbitrator may hold meetings for convenience at such places as per his discretion.
- (c) The award of the Arbitrator shall be final, conclusive and binding on both parties to the Contract.
- (d) Subject to the above, the courts at Ranipet alone have the jurisdiction to decide any dispute arising out of or in respect of the Contract.

Vendors are requested to quote only for the Rate Schedules/Group of Rate Schedules applicable to their firm as per the Technical Bid (**Annexure-C**) and Price Bid format (**ANNEXURE-D**) enclosed.

The offers should be submitted as detailed in

BHEL, Ranipet is not responsible for any type of delay in receipt of tender.

BHEL, Ranipet reserves the right to reject any or all the tenders either in full or part thereof at their discretion without assigning any reason thereof.

Thanking you,

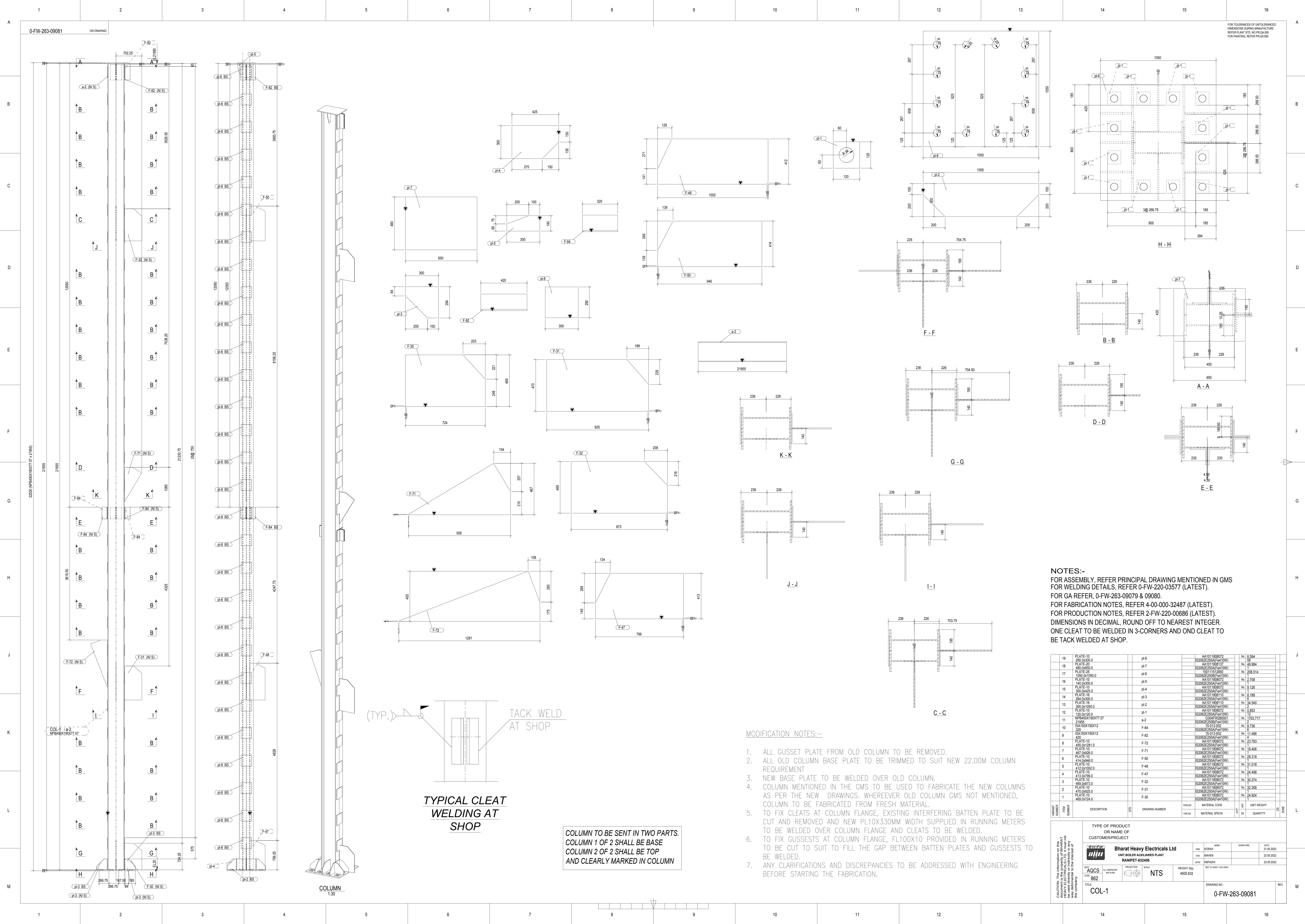
Yours truly,

For and on behalf of
BHARAT HEAVY ELECTRICALS LIMITED,

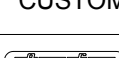
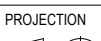
MANAGER (CONTRACTS) / OS

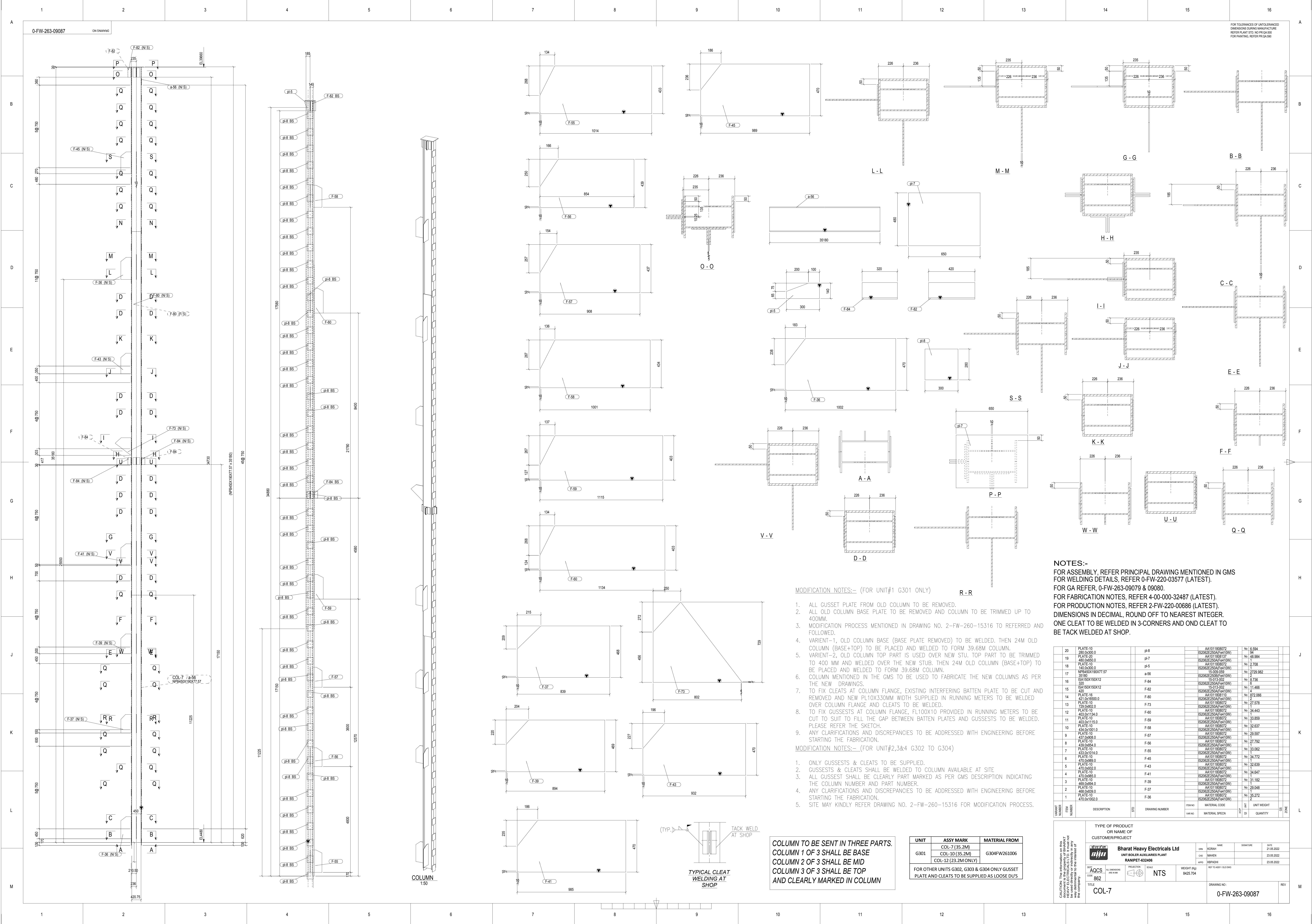
Section III

Column Modification



19	PLATE-10 280/1000.0	p#8	A-101/180072	N# 6.594	
18	PLATE-20 100/1000.0	p#7	S2002-220AF+4 (NW)	N# 48.864	
17	PLATE-25 150/1000.0	p#6	A-101/180073	N# 2.708	
16	PLATE-25 150/1000.0	p#5	S2002-220AF+4 (NW)	N# 208.514	
15	PLATE-10 100/1000.0	p#5	S2002-220AF+4 (NW)	N# 2.708	
14	PLATE-10 100/1000.0	p#4	A-101/180072	N# 9.126	
13	PLATE-10 100/1000.0	p#4	S2002-220AF+4 (NW)	N# 9.126	
12	PLATE-16 200/1000.0	p#3	A-101/180110	N# 8.189	
11	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 34.540	
10	PLATE-16 200/1000.0	p#1	S2002-220AF+4 (NW)	N# 2	
9	PLATE-16 200/1000.0	p#1	A-101/180072	N# 0.953	
8	PLATE-16 200/1000.0	p#1	S2002-220AF+4 (NW)	N# 1.703.117	
7	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 2	
6	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 8.206	
5	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 1.466	
4	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 2.708	
3	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 2.708	
2	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 2.708	
1	PLATE-16 200/1000.0	p#2	S2002-220AF+4 (NW)	N# 2.708	

CAUTION: The information on this document is the property of BHARAT ELECTRIC LIMITED. It is not to be used directly or indirectly in any form without the prior written consent of this company.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT							
			Bharat Heavy Electricals Ltd UNIT BOLSTER ADVULAKAS PLANT RAMPUR 624046		NAME KORAH		SIGNATURE	
					DATE 21.05.2022			
					DATE 23.05.2022			
					DATE 23.05.2022			
APPY ALL	REQS ALL	ISSUANCE DATE	PROJECTION	SCALE	WEIGHT	REV		
CODE 862				NTS	4500/632	REF TO ISEN / OLD DESG		
TITLE						DRAWING NO.:		REV
COL-1						0-FW-263-09081		



MODIFICATION NOTES:- (FOR UNIT#1 G301 ONLY)

- ALL GUSSET PLATE FROM OLD COLUMN TO BE REMOVED.
- ALL OLD COLUMN BASE PLATE TO BE REMOVED AND COLUMN TO BE TRIMMED UP TO 400MM.
- MODIFICATION PROCESS MENTIONED IN DRAWING NO. 2-FW-260-15316 TO REFERRED AND FOLLOWED.
- VARIANT-1, OLD COLUMN BASE (BASE PLATE REMOVED) TO BE WELDED. THEN 24M OLD COLUMN (BASE+TOP) TO BE PLACED AND WELDED TO FORM 39.68M COLUMN.
- VARIANT-2, OLD COLUMN TOP PART IS TO BE PLACED AND WELDED TO FORM 39.68M COLUMN. THEN 24M OLD COLUMN (BASE+TOP) TO BE PLACED AND WELDED TO FORM 39.68M COLUMN.
- COLUMN MENTIONED IN THE GMS TO BE USED TO FABRICATE THE NEW COLUMNS AS PER THE NEW DRAWINGS.
- TO FIX CLEATS AT COLUMN FLANGE, EXISTING INTERFERING BATTEN PLATE TO BE CUT AND REMOVED AND NEW PL10X330MM WIDTH SUPPLIED IN RUNNING METERS TO BE WELDED OVER COLUMN FLANGE AND CLEATS TO BE WELDED.
- TO FIX GUSSETS AT COLUMN FLANGE, FL100X10 PROVIDED IN RUNNING METERS TO BE CUT TO SUIT TO FILL THE GAP BETWEEN BATTEN PLATES AND GUSSETS TO BE WELDED. PLEASE REFER THE SKETCH.
- ANY CLARIFICATIONS AND DISCREPANCIES TO BE ADDRESSED WITH ENGINEERING BEFORE STARTING THE FABRICATION.

MODIFICATION NOTES:- (FOR UNIT#2,3&4 G302 TO G304)

- ONLY GUSSETS & CLEATS TO BE SUPPLIED.
- GUSSETS & CLEATS SHALL BE WELDED TO COLUMN AVAILABLE AT SITE.
- ALL GUSSET SHALL BE CLEARLY PART MARKED AS PER GMS DESCRIPTION INDICATING THE COLUMN NUMBER AND PART NUMBER.
- ANY CLARIFICATIONS AND DISCREPANCIES TO BE ADDRESSED WITH ENGINEERING BEFORE STARTING THE FABRICATION.
- SITE MAY KINDLY REFER DRAWING NO. 2-FW-260-15316 FOR MODIFICATION PROCESS.

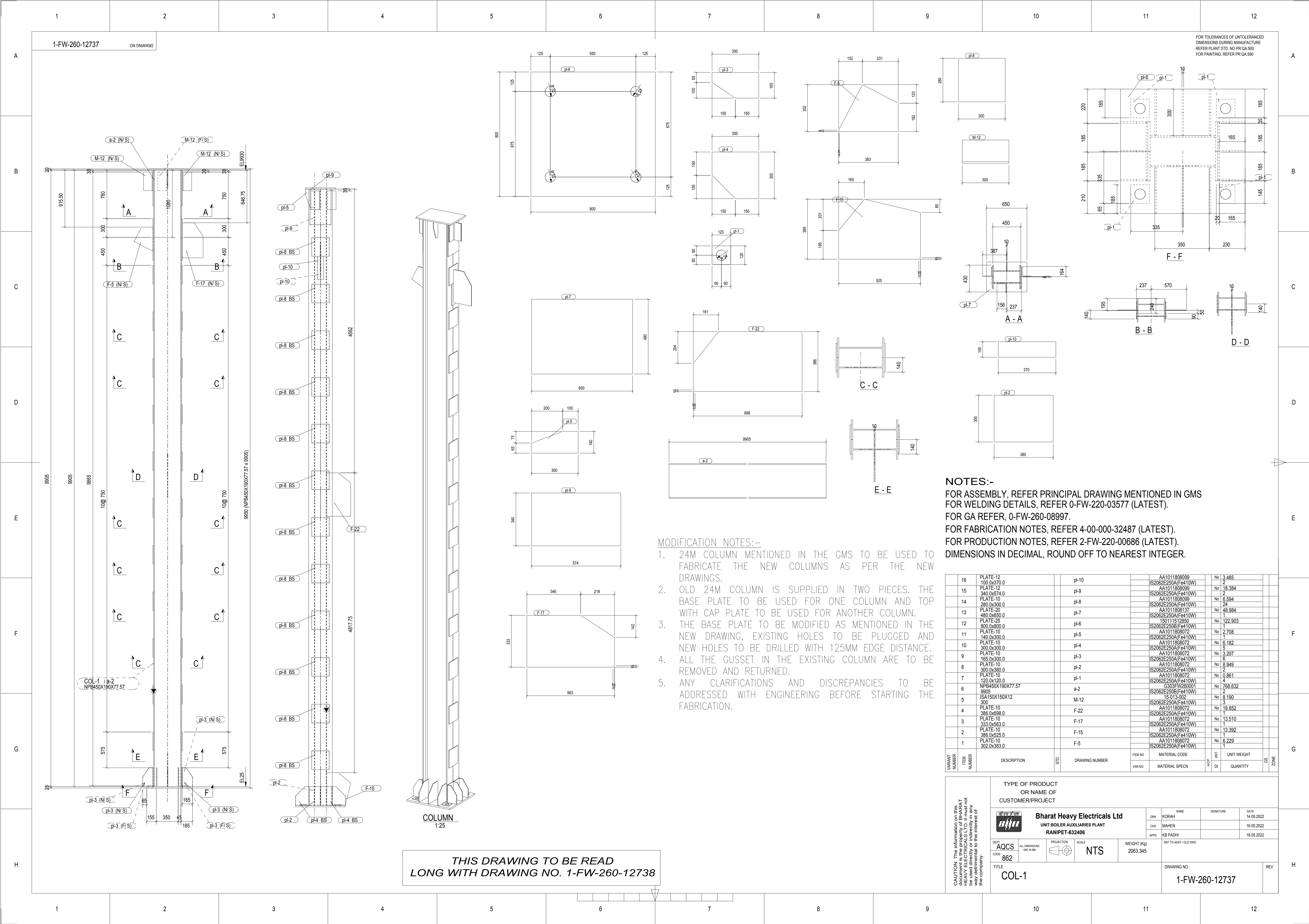
COLUMN TO BE SENT IN THREE PARTS.
COLUMN 1 OF 3 SHALL BE BASE
COLUMN 2 OF 3 SHALL BE MID
COLUMN 3 OF 3 SHALL BE TOP
AND CLEARLY MARKED IN COLUMN

UNIT	ASSY MARK	MATERIAL FROM
G301	COL-7 (35.2M) COL-10 (35.2M) COL-12 (23.2M ONLY)	G304FW261006
FOR OTHER UNITS G302, G303 & G304 ONLY GUSSET PLATE AND CLEATS TO BE SUPPLIED AS LOOSE D/U'S		

NOTES:-
FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS FOR WELDING DETAILS, REFER 0-FW-220-03577 (LATEST).
FOR GA REFER, 0-FW-263-09079 & 09080.
FOR FABRICATION NOTES, REFER 4-00-000-32487 (LATEST).
FOR PRODUCTION NOTES, REFER 2-FW-220-00686 (LATEST).
DIMENSIONS IN DECIMAL, ROUND OFF TO NEAREST INTEGER.
ONE CLEAT TO BE WELDED IN 3-CORNERS AND OND CLEAT TO BE TACK WELDED AT SHOP.

ITEM NO.	ITEM NAME	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO.	MATERIAL CODE	UNIT WEIGHT	QTY
20	PLATE-10	280x300x0	p-8	AA101180972	1	IS2062:250AF-64(W)	1.254	
19	PLATE-20	480x900x0	p-7	AA101180972	1	IS2062:250AF-64(W)	48.984	
18	PLATE-10	140x300x0	p-5	AA101180972	1	IS2062:250AF-64(W)	2.708	
17	NP6450X100X7.57	15.00x50	a-56	IS2062:250AF-64(W)	1	IS2062:250AF-64(W)	2720.882	
16	ISA150X150X12	15.00x50	F-84	IS2062:250AF-64(W)	1	IS2062:250AF-64(W)	6.736	
15	ISA150X150X12	15.00x50	F-82	IS2062:250AF-64(W)	1	IS2062:250AF-64(W)	11.466	
14	PLATE-16	421.0x16500.0	F-80	AA101180972	1	IS2062:250AF-64(W)	672.068	
13	PLATE-10	729.0x602.0	F-73	AA101180972	1	IS2062:250AF-64(W)	27.578	
12	PLATE-10	403.0x1134.0	F-60	AA101180972	1	IS2062:250AF-64(W)	34.443	
11	PLATE-10	403.0x1134.0	F-59	AA101180972	1	IS2062:250AF-64(W)	33.858	
10	PLATE-10	403.0x1134.0	F-58	AA101180972	1	IS2062:250AF-64(W)	32.637	
9	PLATE-10	430.0x984.0	F-57	AA101180972	1	IS2062:250AF-64(W)	29.597	
8	PLATE-10	430.0x984.0	F-56	AA101180972	1	IS2062:250AF-64(W)	27.792	
7	PLATE-10	430.0x1010.0	F-55	AA101180972	1	IS2062:250AF-64(W)	33.062	
6	PLATE-10	470.0x980.0	F-45	AA101180972	1	IS2062:250AF-64(W)	34.772	
5	PLATE-10	470.0x980.0	F-43	AA101180972	1	IS2062:250AF-64(W)	32.639	
4	PLATE-10	470.0x980.0	F-41	AA101180972	1	IS2062:250AF-64(W)	34.647	
3	PLATE-10	490.0x984.0	F-39	AA101180972	1	IS2062:250AF-64(W)	31.182	
2	PLATE-10	490.0x984.0	F-37	AA101180972	1	IS2062:250AF-64(W)	29.048	
1	PLATE-10	470.0x1002.0	F-36	AA101180972	1	IS2062:250AF-64(W)	35.272	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				DATE	21.05.2022
Bharat Heavy Electricals Ltd				DATE	23.05.2022
UNIT FOR SUPPLY/PROJECT				DATE	23.05.2022
RAINPET-632406				DATE	23.05.2022
DEPT	QA/QC	PRODUCTION	SCALE	WEIGHT (KG)	8425.704
CODE	862	NTS	REF TO SET/CLD/3RD	DRAWING NO.	0-FW-263-09087
TITLE					REV
COL-7					

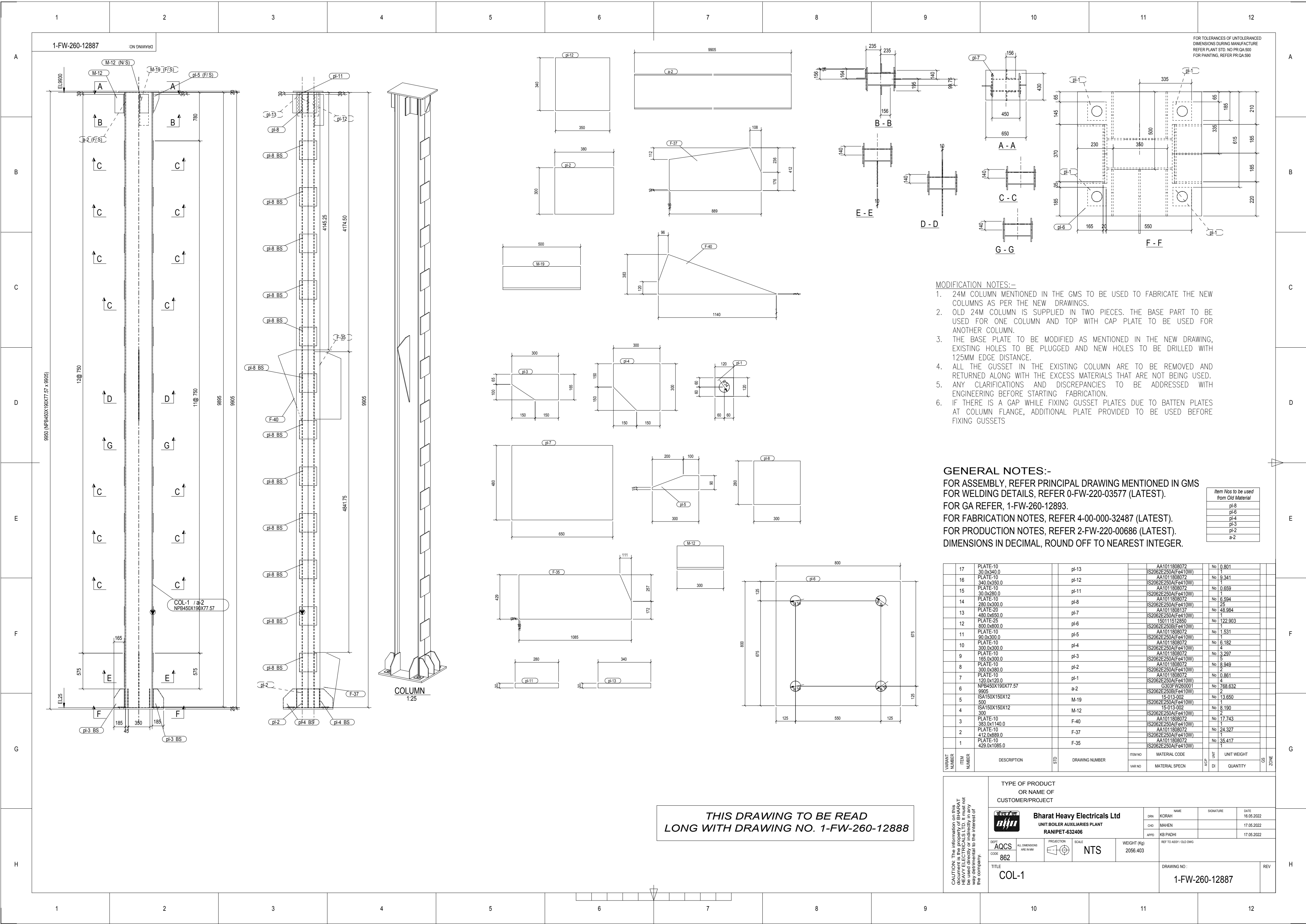


THIS DRAWING TO BE READ
LONG WITH DRAWING NO. 1-FW-260-12738

NOTES:-
FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS
FOR WELDING DETAILS, REFER 0-FW-220-03577 (LATEST).
FOR GA REFER, 0-FW-260-08997.
FOR FABRICATION NOTES, REFER 4-00-000-32487 (LATEST).
FOR PRODUCTION NOTES, REFER 2-FW-220-00686 (LATEST).
DIMENSIONS IN DECIMAL, ROUND OFF TO NEAREST INTEGER.

16	PLATE-12 100.0x370.0	pl-10	AA1011808099 IS2062E250A(Fe410W)	No 3.485		
15	PLATE-12 340.0x574.0	pl-9	AA1011808099 IS2062E250A(Fe410W)	No 18.384		
14	PLATE-10 280.0x300.0	pl-8	AA1011808099 IS2062E250A(Fe410W)	No 6.594		
13	PLATE-20 480.0x650.0	pl-7	AA1011808137 IS2062E250A(Fe410W)	No 48.984		
12	PLATE-25 800.0x800.0	pl-6	AA1011808072 IS2062E250A(Fe410W)	No 122.903		
11	PLATE-10 140.0x300.0	pl-5	AA1011808072 IS2062E250A(Fe410W)	No 2.708		
10	PLATE-10 300.0x300.0	pl-4	AA1011808072 IS2062E250A(Fe410W)	No 6.182		
9	PLATE-10 185.0x300.0	pl-3	AA1011808072 IS2062E250A(Fe410W)	No 3.297		
8	PLATE-10 300.0x300.0	pl-2	AA1011808072 IS2062E250A(Fe410W)	No 9.949		
7	PLATE-10 120.0x120.0	pl-1	AA1011808072 IS2062E250A(Fe410W)	No 0.861		
6	NPB450X190X77.57 9905	a-2	IS2062E250A(Fe410W) G303FW260001	No 768.632		
5	ISA150X150X12 300	M-12	IS2062E250A(Fe410W) 15-013-002	No 6.190		
4	PLATE-10 385.0x698.0	F-22	AA1011808072 IS2062E250A(Fe410W)	No 19.852		
3	PLATE-10 333.0x563.0	F-17	AA1011808072 IS2062E250A(Fe410W)	No 13.510		
2	PLATE-10 385.0x525.0	F-15	AA1011808072 IS2062E250A(Fe410W)	No 13.392		
1	PLATE-10 302.0x383.0	F-5	AA1011808072 IS2062E250A(Fe410W)	No 6.229		
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE
					VAR NO	MATERIAL SPECN
					A/CSP	UNIT
					DI	QUANTITY
						CS
						ZONE

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It is not to be used directly or indirectly in any way detrimental to the interest of the company.		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
		Bharat Heavy Electricals Ltd UNIT: BOILER AUXILIARIES PLANT RANIPET-632406	
DEPT AQCS	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE NTS
CODE 862	WEIGHT (Kg) 2063.345	REF TO ASSY / OLD DWG	
TITLE COL-1		DRAWING NO : 1-FW-260-12737	
		REV	



- MODIFICATION NOTES:-
- 24M COLUMN MENTIONED IN THE GMS TO BE USED TO FABRICATE THE NEW COLUMNS AS PER THE NEW DRAWINGS.
 - OLD 24M COLUMN IS SUPPLIED IN TWO PIECES. THE BASE PART TO BE USED FOR ONE COLUMN AND TOP WITH CAP PLATE TO BE USED FOR ANOTHER COLUMN.
 - THE BASE PLATE TO BE MODIFIED AS MENTIONED IN THE NEW DRAWING, EXISTING HOLES TO BE PLUGGED AND NEW HOLES TO BE DRILLED WITH 125MM EDGE DISTANCE.
 - ALL THE GUSSET IN THE EXISTING COLUMN ARE TO BE REMOVED AND RETURNED ALONG WITH THE EXCESS MATERIALS THAT ARE NOT BEING USED.
 - ANY CLARIFICATIONS AND DISCREPANCIES TO BE ADDRESSED WITH ENGINEERING BEFORE STARTING FABRICATION.
 - IF THERE IS A GAP WHILE FIXING GUSSET PLATES DUE TO BATTEN PLATES AT COLUMN FLANGE, ADDITIONAL PLATE PROVIDED TO BE USED BEFORE FIXING GUSSETS

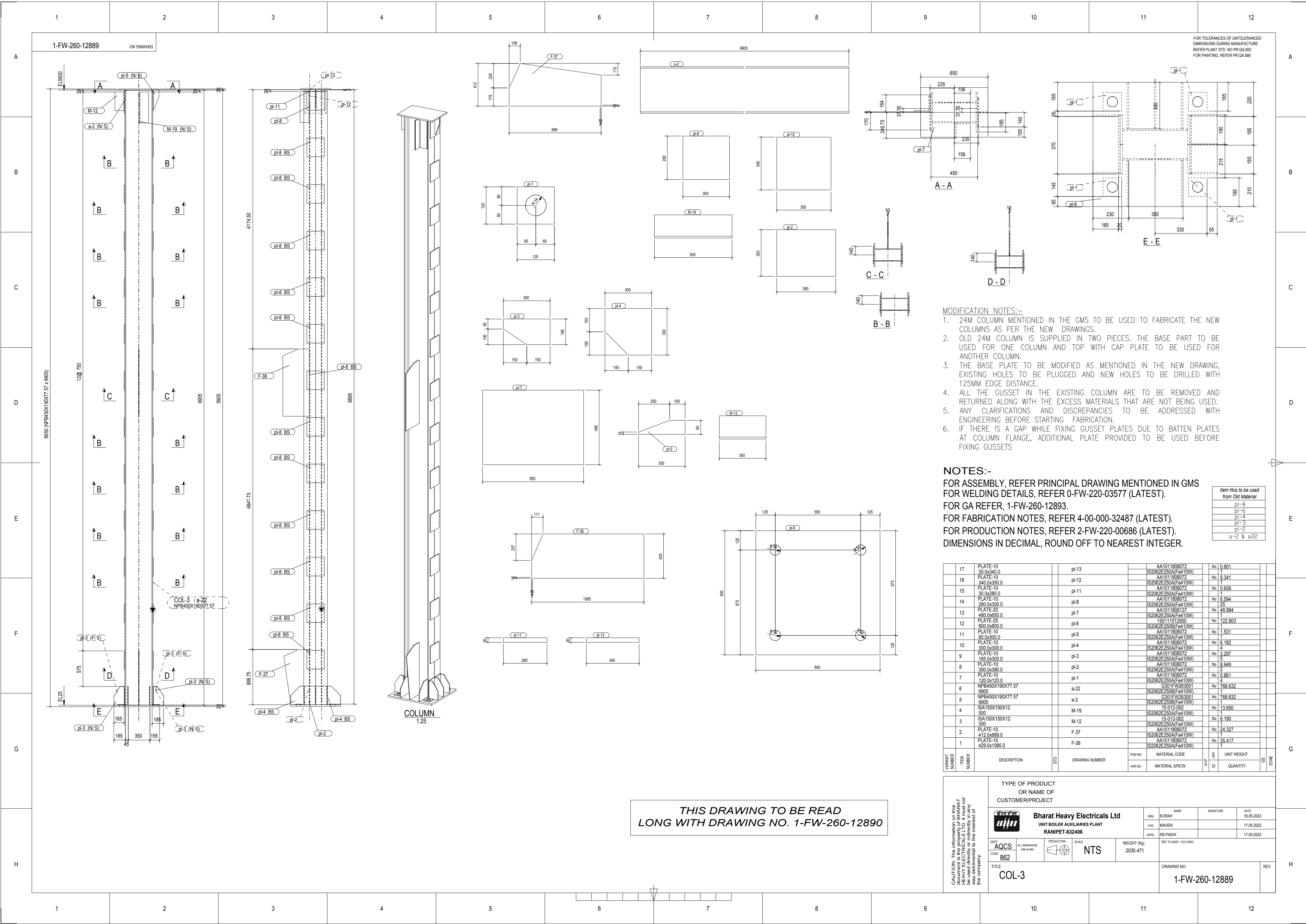
- GENERAL NOTES:-
- FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS FOR WELDING DETAILS, REFER 0-FW-220-03577 (LATEST).
- FOR GA REFER, 1-FW-260-12893.
- FOR FABRICATION NOTES, REFER 4-00-000-32487 (LATEST).
- FOR PRODUCTION NOTES, REFER 2-FW-220-00686 (LATEST).
- DIMENSIONS IN DECIMAL, ROUND OFF TO NEAREST INTEGER.

Item Nos to be used from Old Material	
pl-8	
pl-6	
pl-4	
pl-3	
pl-2	
a-2	

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	UNIT	UNIT WEIGHT	QTY	ISS	ZONE
					VAR NO	MATERIAL SPECN	QTY	DI	QUANTITY		
17	PLATE-10	30.0x340.0		pl-13	AA1011808072	IS2062E250A(F+410W)	No	0.801			
16	PLATE-10	340.0x350.0		pl-12	AA1011808072	IS2062E250A(F+410W)	No	9.341			
15	PLATE-10	30.0x280.0		pl-11	AA1011808072	IS2062E250A(F+410W)	No	0.659			
14	PLATE-10	280.0x300.0		pl-8	AA1011808072	IS2062E250A(F+410W)	No	6.594			
13	PLATE-20	480.0x650.0		pl-7	AA1011808137	IS2062E250A(F+410W)	No	48.984			
12	PLATE-10	90.0x300.0		pl-6	AA1011808072	IS2062E250A(F+410W)	No	1.531			
10	PLATE-10	300.0x300.0		pl-5	AA1011808072	IS2062E250A(F+410W)	No	6.182			
9	PLATE-10	165.0x300.0		pl-4	AA1011808072	IS2062E250A(F+410W)	No	3.287			
8	PLATE-10	300.0x380.0		pl-3	AA1011808072	IS2062E250A(F+410W)	No	8.949			
7	PLATE-10	120.0x120.0		pl-2	AA1011808072	IS2062E250A(F+410W)	No	0.861			
6	NPB450X190X77.57	9905		a-2	AA1011808072	IS2062E250A(F+410W)	No	768.632			
5	ISA150X150X12	500		M-19	15-013-002	IS2062E250A(F+410W)	No	13.650			
4	ISA150X150X12	300		M-12	15-013-002	IS2062E250A(F+410W)	No	8.190			
3	PLATE-10	363.0x1740.0		F-40	AA1011808072	IS2062E250A(F+410W)	No	17.743			
2	PLATE-10	412.0x889.0		F-37	AA1011808072	IS2062E250A(F+410W)	No	24.327			
1	PLATE-10	429.0x1085.0		F-35	AA1011808072	IS2062E250A(F+410W)	No	35.417			

THIS DRAWING TO BE READ
LONG WITH DRAWING NO. 1-FW-260-12888

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			
Bharat Heavy Electricals Ltd UNIT:BOILER AUXILIARIES PLANT RANIPET-632406			
DRN	KORAH	NAME	SIGNATURE
CHD	MAHEN		
APPD	KB PADHI		
DATE	16.05.2022		
DATE	17.05.2022		
DATE	17.05.2022		
DEPT	AQCS	ALL DIMENSIONS ARE IN MM	PROJECTION
CODE	862		NTS
WEIGHT (Kg)	2056.403		
REF TO ASSY / OLD DWG			
TITLE	COL-1	DRAWING NO :	1-FW-260-12888
REV			



- MODIFICATION NOTES:-
- 24M COLUMN MENTIONED IN THE GMS TO BE USED TO FABRICATE THE NEW COLUMNS AS PER THE NEW DRAWINGS.
 - OLD 24M COLUMN IS SUPPLIED IN TWO PIECES. THE BASE PART TO BE USED FOR ONE COLUMN AND TOP WITH CAP PLATE TO BE USED FOR ANOTHER COLUMN.
 - THE BASE PLATE TO BE MODIFIED AS MENTIONED IN THE NEW DRAWING, EXISTING HOLES TO BE PLUGGED AND NEW HOLES TO BE DRILLED WITH 125MM EDGE DISTANCE.
 - ALL THE GUSSET IN THE EXISTING COLUMN ARE TO BE REMOVED AND RETURNED ALONG WITH THE EXCESS MATERIALS THAT ARE NOT BEING USED.
 - ANY CLARIFICATIONS AND DISCREPANCIES TO BE ADDRESSED WITH ENGINEERING BEFORE STARTING FABRICATION.
 - IF THERE IS A GAP WHILE FIXING GUSSET PLATES DUE TO BATTEN PLATES AT COLUMN FLANGE, ADDITIONAL PLATE PROVIDED TO BE USED BEFORE FIXING GUSSETS

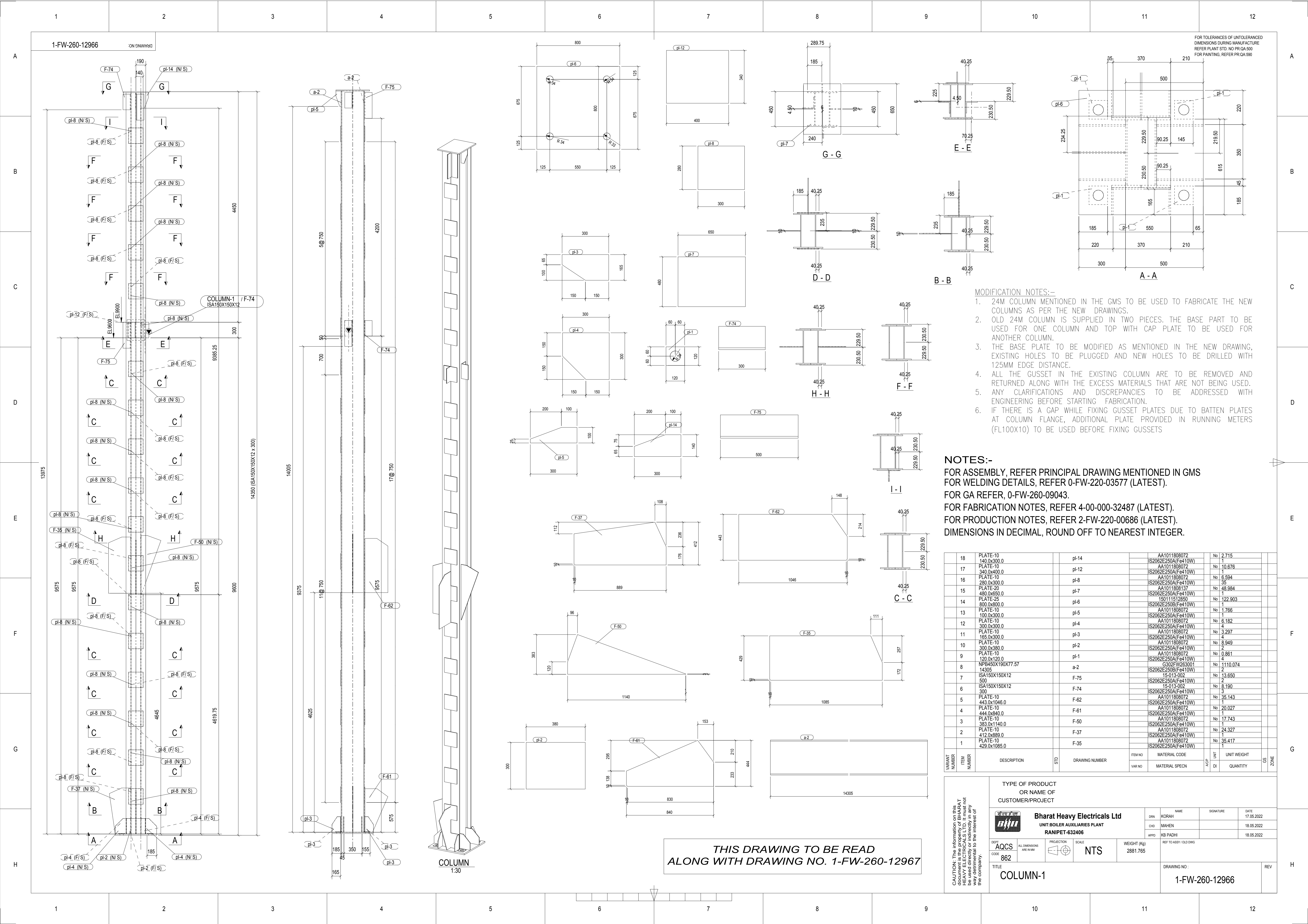
NOTES:-
FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS
FOR WELDING DETAILS, REFER 0-FW-220-03577 (LATEST).
FOR GA REFER, 1-FW-260-12893.
FOR FABRICATION NOTES, REFER 4-00-000-32487 (LATEST).
FOR PRODUCTION NOTES, REFER 2-FW-220-00686 (LATEST).
DIMENSIONS IN DECIMAL, ROUND OFF TO NEAREST INTEGER.

Item Nos to be used from Old Material	
pl-8	
pl-6	
pl-4	
pl-3	
pl-2	
a-2 & a22	

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	UNIT	UNIT WEIGHT	QUANTITY	ISS	ZONE
					VAR NO	MATERIAL SPECN	QTY	DI			
17	PLATE-10	30.0x340.0		pl-13	AA1011808072	IS2062E250A(F+410W)	No	0.801			
16	PLATE-10	340.0x350.0		pl-12	AA1011808072	IS2062E250A(F+410W)	No	9.341			
15	PLATE-10	30.0x280.0		pl-11	AA1011808072	IS2062E250A(F+410W)	No	0.659			
14	PLATE-10	280.0x300.0		pl-8	AA1011808072	IS2062E250A(F+410W)	No	6.594			
13	PLATE-20	480.0x650.0		pl-7	AA1011808137	IS2062E250A(F+410W)	No	48.984			
12	PLATE-10	150.0x115.0		pl-6	AA1011808072	IS2062E250B(F+410W)	No	122.903			
11	PLATE-10	90.0x300.0		pl-5	AA1011808072	IS2062E250A(F+410W)	No	1.531			
10	PLATE-10	300.0x300.0		pl-4	AA1011808072	IS2062E250A(F+410W)	No	6.182			
9	PLATE-10	165.0x300.0		pl-3	AA1011808072	IS2062E250A(F+410W)	No	3.287			
8	PLATE-10	300.0x380.0		pl-2	AA1011808072	IS2062E250A(F+410W)	No	8.949			
7	PLATE-10	120.0x120.0		pl-1	AA1011808072	IS2062E250A(F+410W)	No	0.861			
6	NPB450X190X77.57	9905		a-22	G301FW263001	IS2062E250B(F+410W)	No	768.632			
5	NPB450X190X77.57	9905		a-2	G301FW263001	IS2062E250B(F+410W)	No	768.632			
4	ISA150X150X12	500		M-19	15-013-002	IS2062E250A(F+410W)	No	13.650			
3	ISA150X150X12	300		M-12	15-013-002	IS2062E250A(F+410W)	No	8.190			
2	PLATE-10	412.0x889.0		F-37	AA1011808072	IS2062E250A(F+410W)	No	24.327			
1	PLATE-10	429.0x1085.0		F-36	AA1011808072	IS2062E250A(F+410W)	No	35.417			

THIS DRAWING TO BE READ
LONG WITH DRAWING NO. 1-FW-260-12890

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME		SIGNATURE		DATE	
Bharat Heavy Electricals Ltd		KORAH				16.05.2022	
UNIT:BOILER AUXILIARIES PLANT		CHD		MAHEN		17.05.2022	
RANIPET-632406		APPD		KB PADHI		17.05.2022	
DEPT	QACS	ALL DIMENSIONS ARE IN MM	PROJECTION	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG	
CODE	862		NTS		2030.471		
TITLE					DRAWING NO :		
COL-3					1-FW-260-12889		
					REV		



- MODIFICATION NOTES:-
- 24M COLUMN MENTIONED IN THE GMS TO BE USED TO FABRICATE THE NEW COLUMNS AS PER THE NEW DRAWINGS.
 - OLD 24M COLUMN IS SUPPLIED IN TWO PIECES. THE BASE PART TO BE USED FOR ONE COLUMN AND TOP WITH CAP PLATE TO BE USED FOR ANOTHER COLUMN.
 - THE BASE PLATE TO BE MODIFIED AS MENTIONED IN THE NEW DRAWING, EXISTING HOLES TO BE PLUGGED AND NEW HOLES TO BE DRILLED WITH 125MM EDGE DISTANCE.
 - ALL THE GUSSET IN THE EXISTING COLUMN ARE TO BE REMOVED AND RETURNED ALONG WITH THE EXCESS MATERIALS THAT ARE NOT BEING USED.
 - ANY CLARIFICATIONS AND DISCREPANCIES TO BE ADDRESSED WITH ENGINEERING BEFORE STARTING FABRICATION.
 - IF THERE IS A GAP WHILE FIXING GUSSET PLATES DUE TO BATTEN PLATES AT COLUMN FLANGE, ADDITIONAL PLATE PROVIDED IN RUNNING METERS (FL100X10) TO BE USED BEFORE FIXING GUSSETS

NOTES:-
FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS
FOR WELDING DETAILS, REFER 0-FW-220-03577 (LATEST).
FOR GA REFER, 0-FW-260-09043.
FOR FABRICATION NOTES, REFER 4-00-000-32487 (LATEST).
FOR PRODUCTION NOTES, REFER 2-FW-220-00686 (LATEST).
DIMENSIONS IN DECIMAL, ROUND OFF TO NEAREST INTEGER.

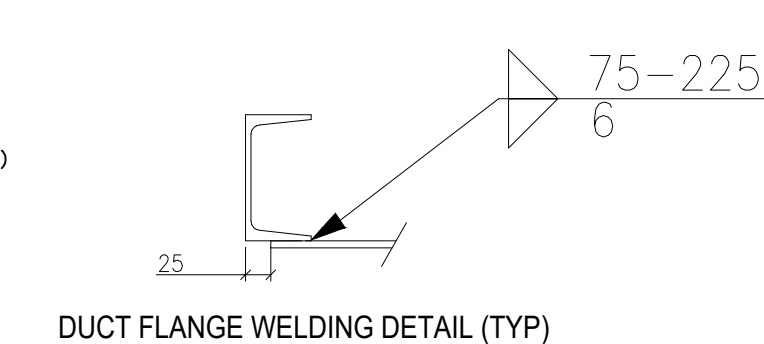
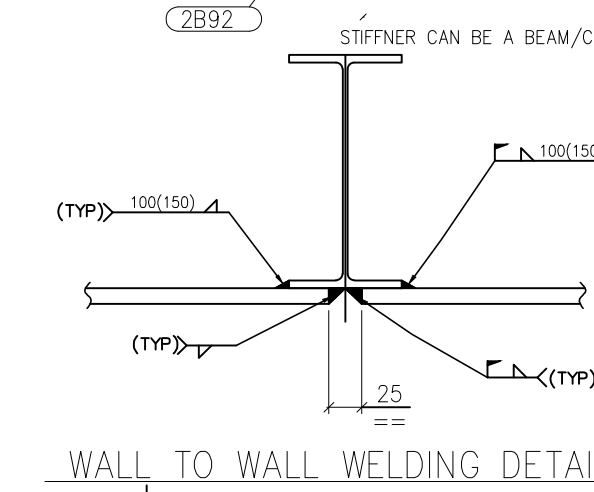
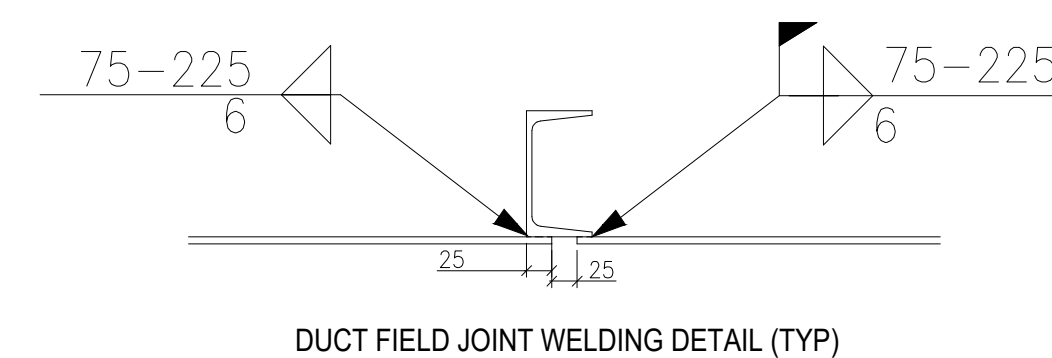
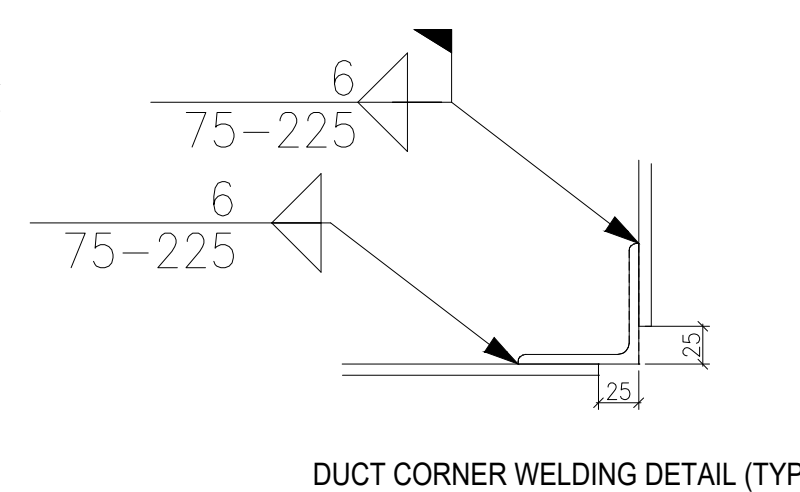
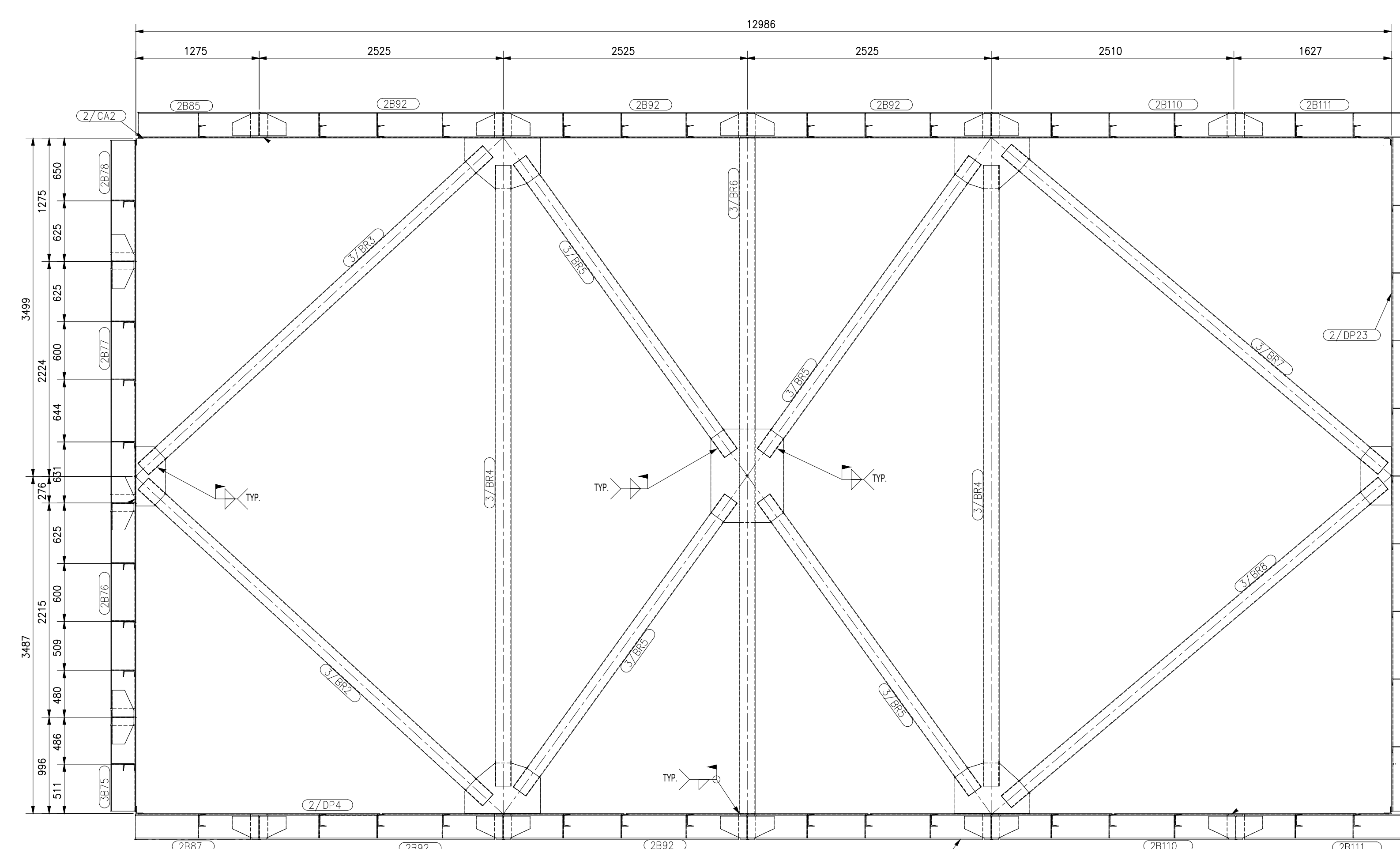
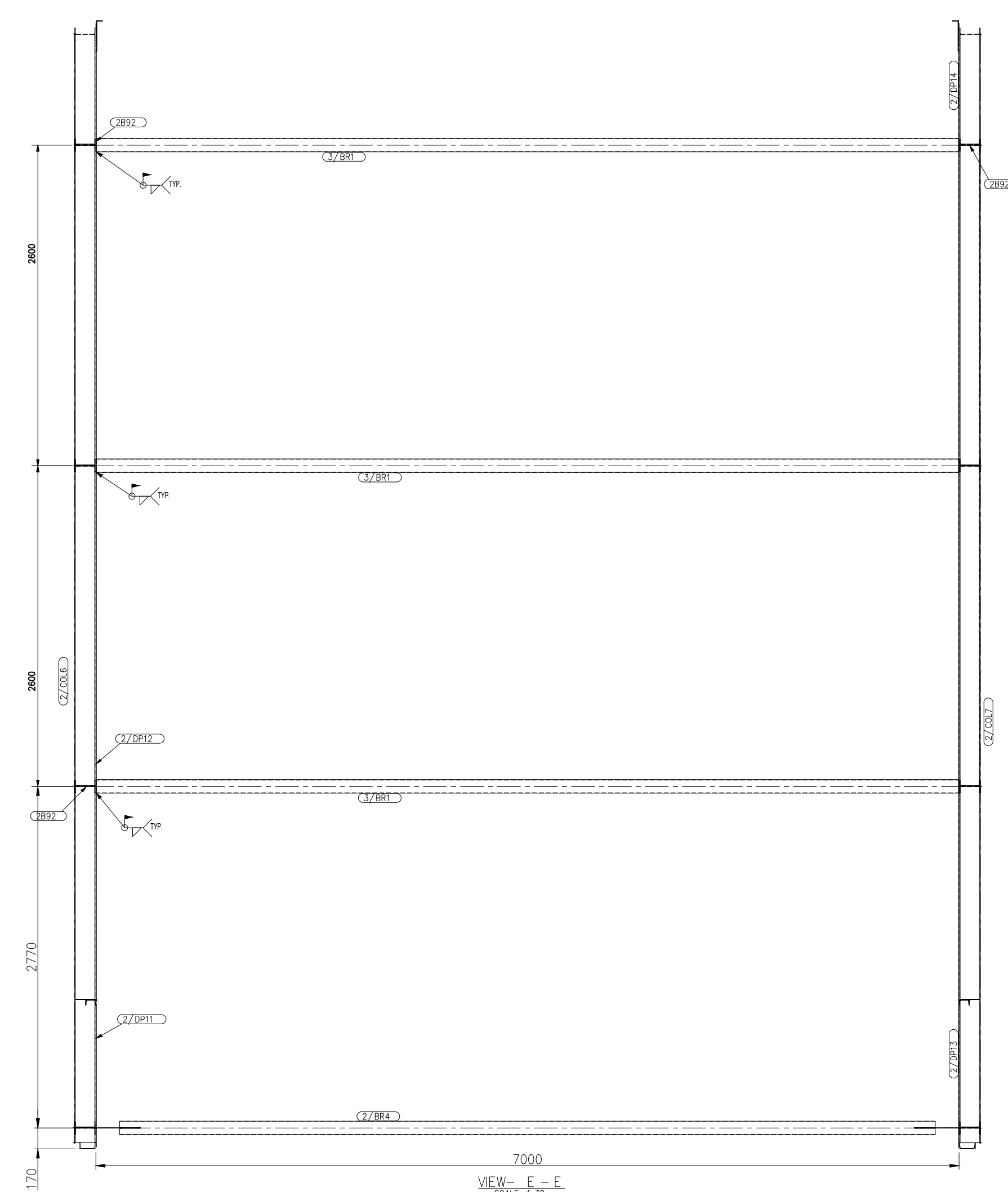
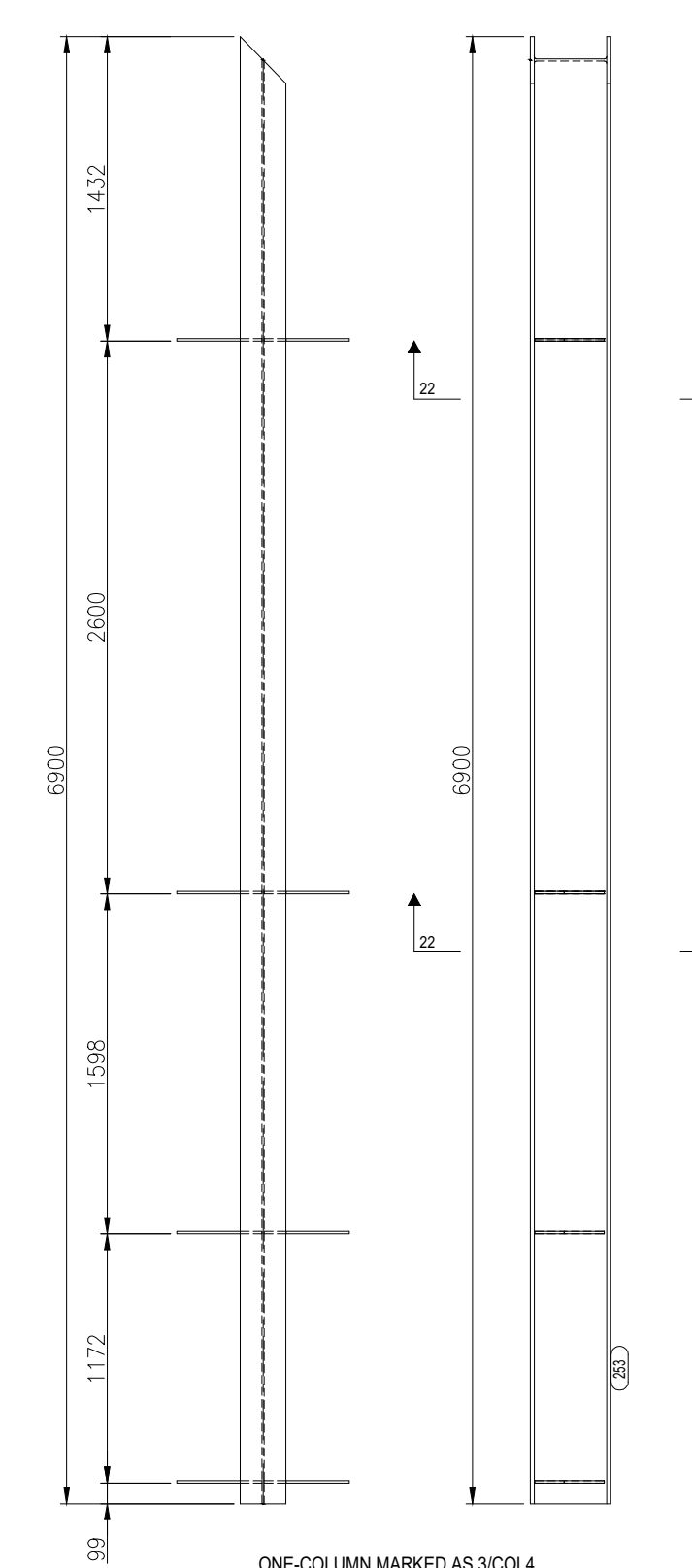
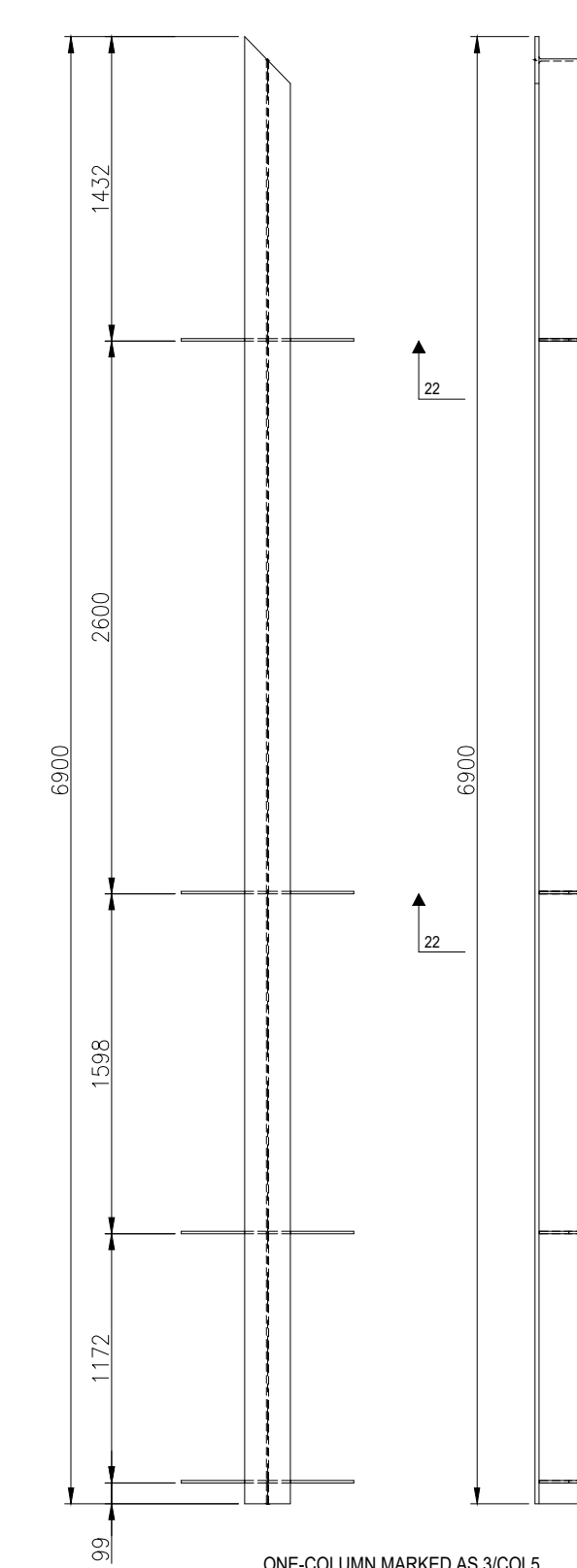
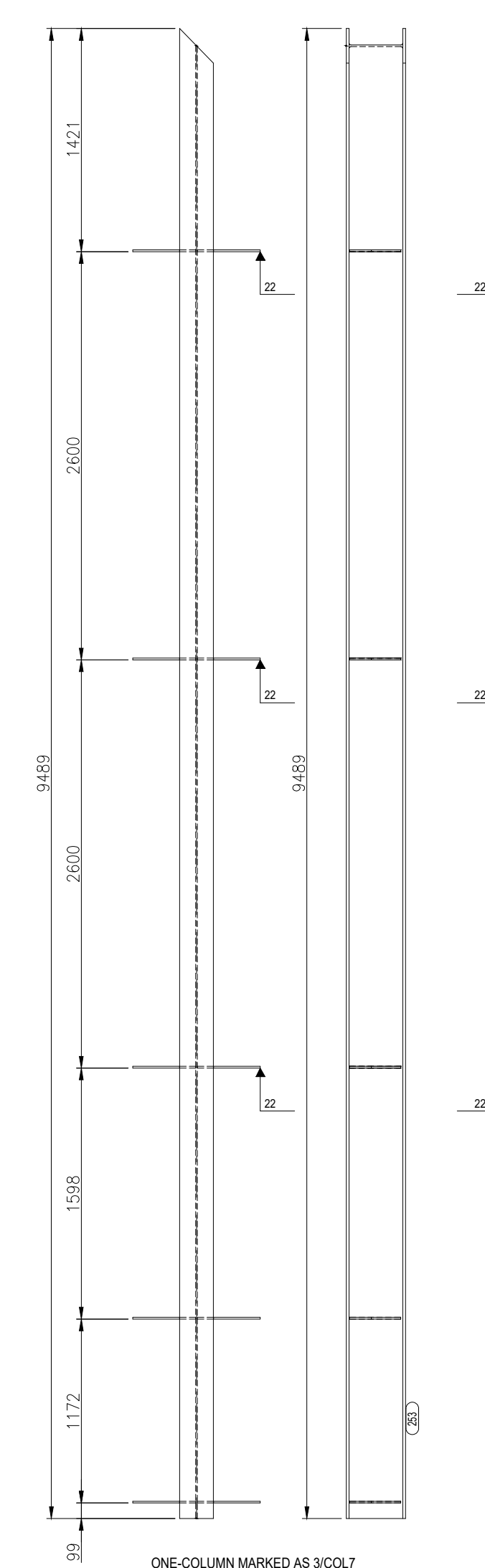
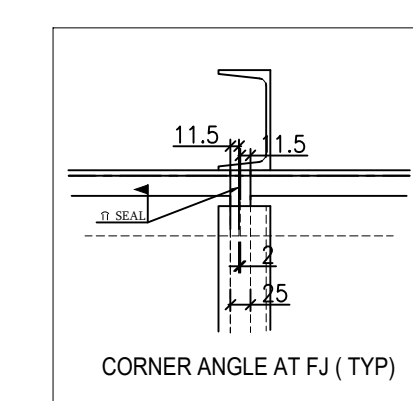
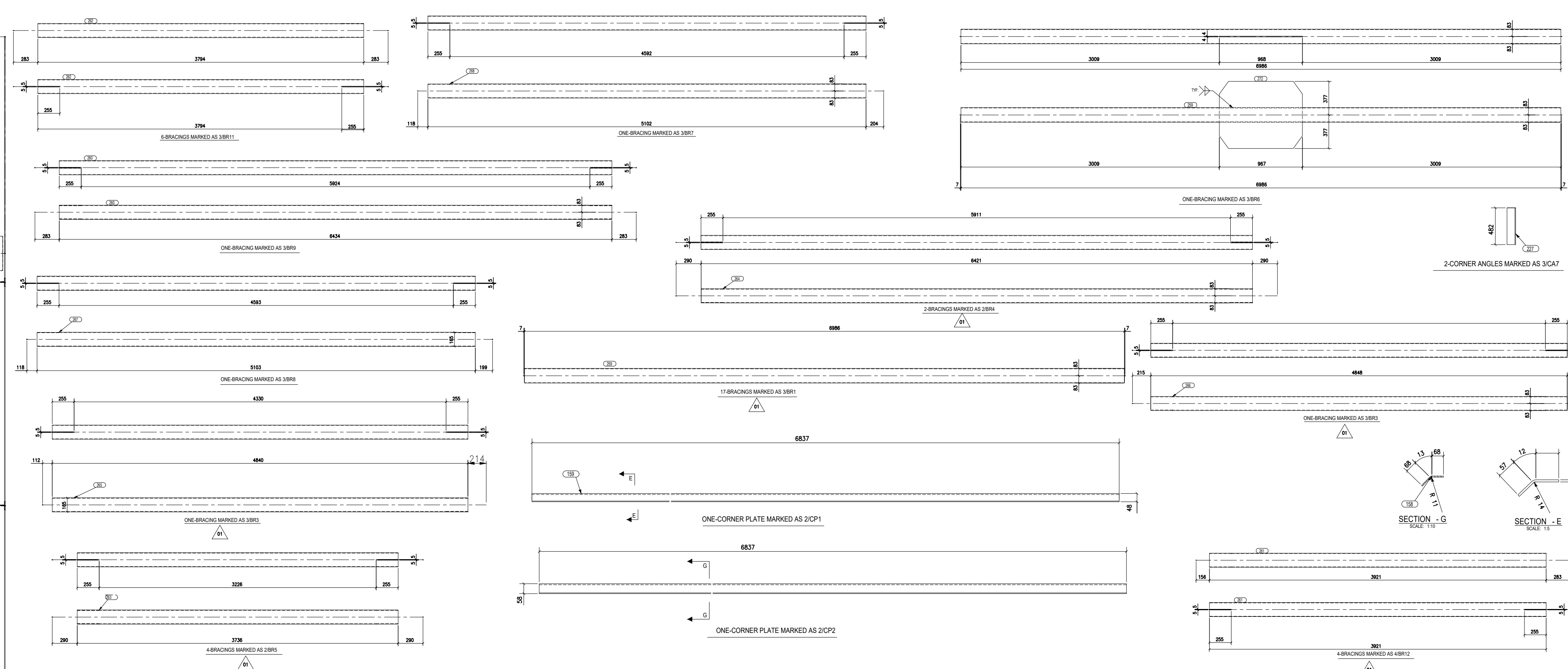
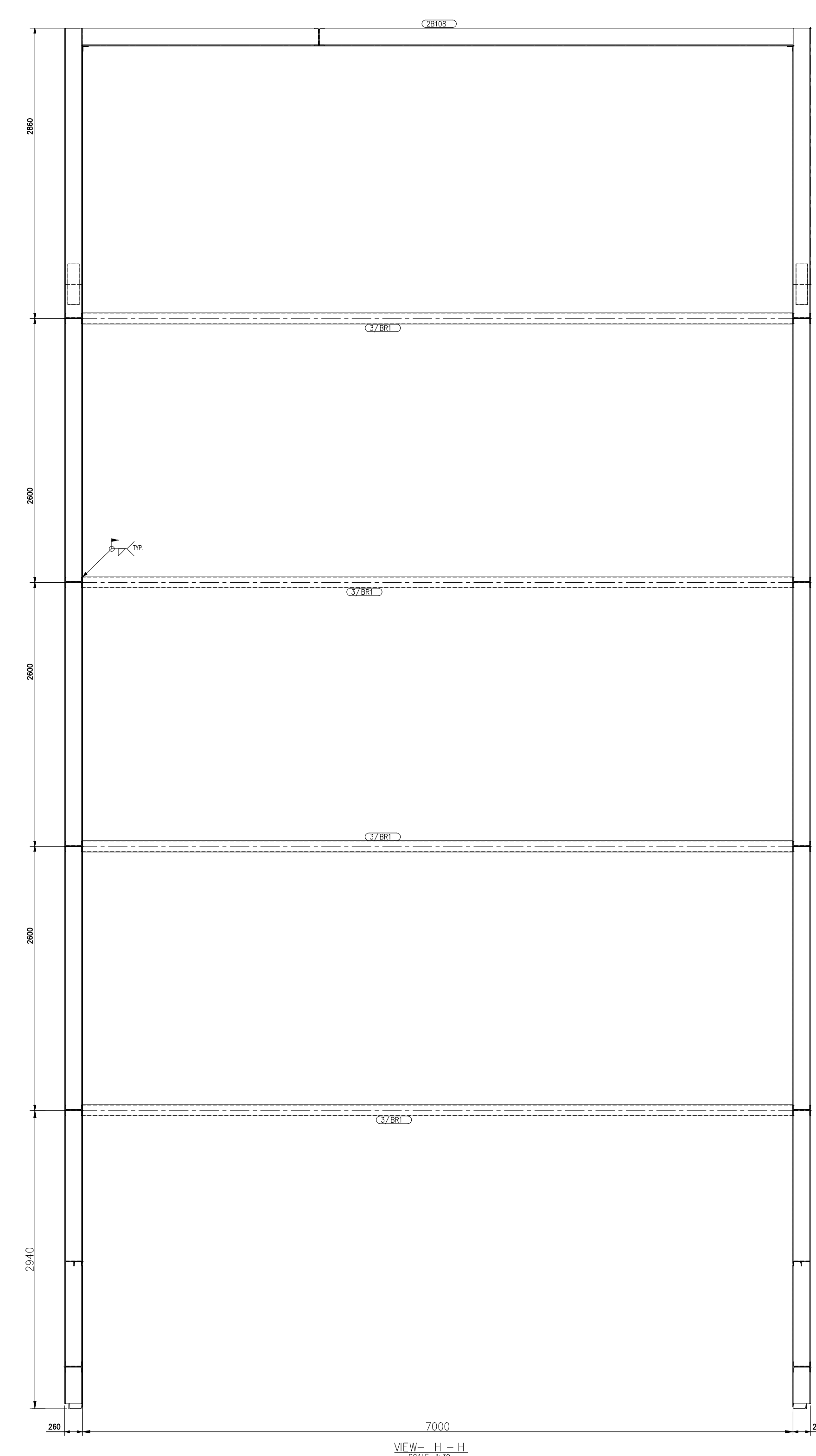
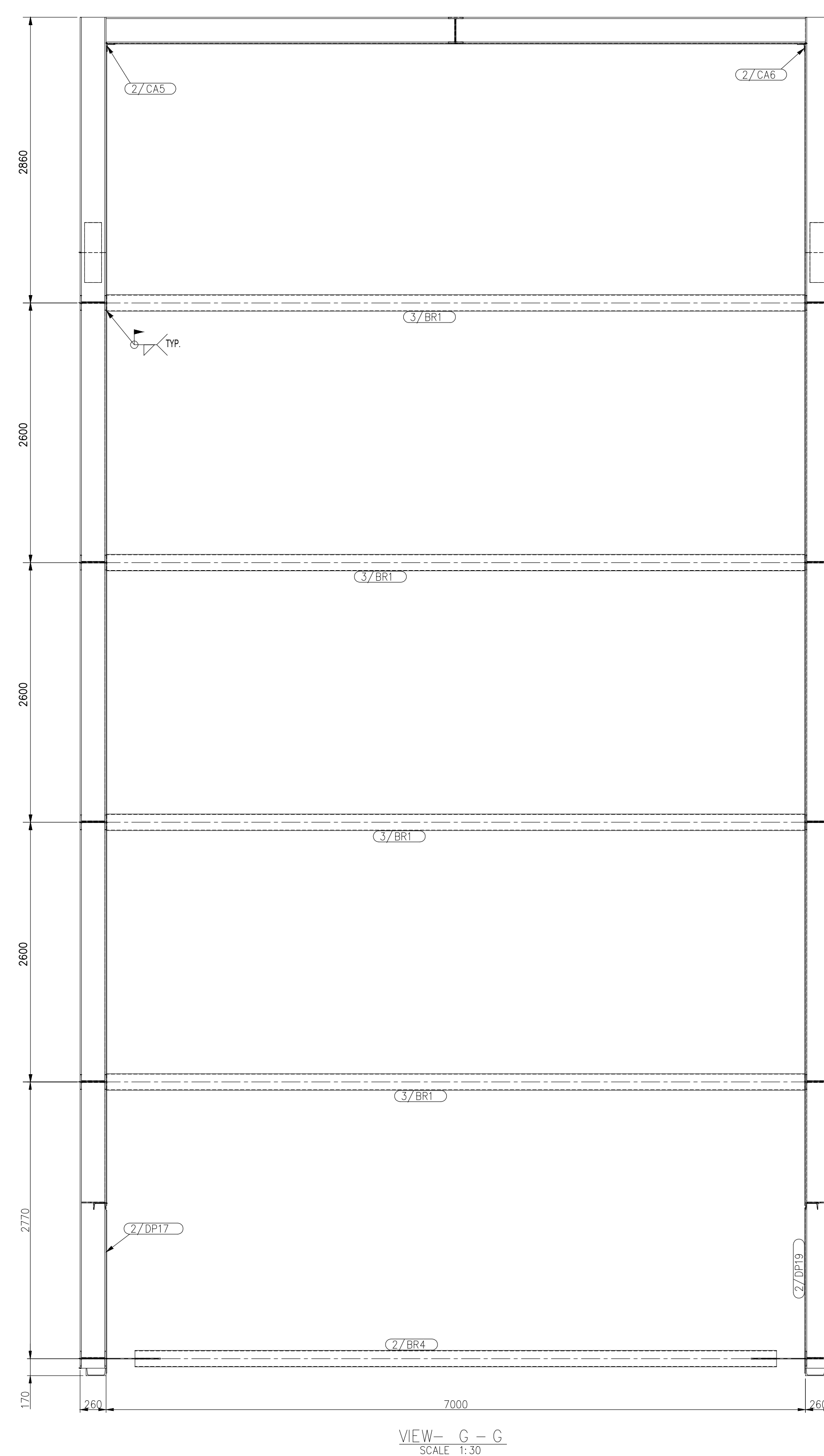
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	VAR NO	MATERIAL SPECN	UNIT	QUANTITY	CSS	ZONE
18	PLATE-10	140.0x300.0	pl-14	AA1011808072	No	2,715						
17	PLATE-10	340.0x400.0	pl-12	AA1011808072	No	10,676						
16	PLATE-10	280.0x300.0	pl-8	AA1011808072	No	6,594						
15	PLATE-20	480.0x600.0	pl-7	AA1011808137	No	48,984						
14	PLATE-25	800.0x800.0	pl-6	AA1011808137	No	122,903						
13	PLATE-10	100.0x300.0	pl-5	AA1011808072	No	1,766						
12	PLATE-10	300.0x300.0	pl-4	AA1011808072	No	6,182						
11	PLATE-10	165.0x300.0	pl-3	AA1011808072	No	3,297						
10	PLATE-10	300.0x380.0	pl-2	AA1011808072	No	8,949						
9	PLATE-10	120.0x120.0	pl-1	AA1011808072	No	0,861						
8	NP6450X150X77.57	14305	a-2	AA1011808072	No	1,110,074						
7	ISA150X150X12	500	F-75	AA1011808072	No	13,650						
6	ISA150X150X12	300	F-74	AA1011808072	No	8,190						
5	PLATE-10	443.0x1046.0	F-62	AA1011808072	No	35,143						
4	PLATE-10	444.0x840.0	F-61	AA1011808072	No	20,027						
3	PLATE-10	383.0x1140.0	F-50	AA1011808072	No	17,743						
2	PLATE-10	412.0x889.0	F-37	AA1011808072	No	24,327						
1	PLATE-10	429.0x1085.0	F-35	AA1011808072	No	35,417						

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			
Bharat Heavy Electricals Ltd UNIT-BOILER AUXILIARIES PLANT RANIPET-632406			
DRN	KORAH	SIGNATURE	DATE
CHD	MAHEN		18.05.2022
APPD	KB PADHI		18.05.2022
DEFA	AQCS	PROJECTION	SCALE
CODE	862	ALL DIMENSIONS ARE IN MM	NTS
WEIGHT (Kg)		2881.785	
REF TO ASSY / OLD DWG			
TITLE		DRAWING NO :	
COLUMN-1		1-FW-260-12966	
REV			

Duct welding



Size A



THIS DRAWING SHALL BE READ ALONG WITH

0-FW-255-08005	
0-FW-255-08007	
0-FW-255-08008	
0-FW-255-08009	
0-FW-255-08010	
0-FW-255-08011	
0-FW-255-08012	
0-FW-255-08013	
0-FW-255-08014	
0-FW-255-08015	
0-FW-255-08016	
0-FW-255-08017	
0-FW-255-08018	FOR R4R8 BOM
0-FW-255-08224	FOR R4R9 BOM
0-FW-255-08225	FOR R4S0 BOM
0-FW-255-08226	FOR R4S1 BOM

TYPICAL WALL AND STIFFENER WELDING DETAILS

REV	DATE	ALTERED:
		CHECKED:
ZONE		

CAUTION: The information on this drawing is the property of BHARAT HEAVY ELECTRICALS LTD. It is not to be used directly or indirectly in any form without the written consent of the company.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT									
			BHARAT HEAVY ELECTRICALS LTD.		DESI	NAME ECO./STN.	SIGN	DATE 02/02/72	NO 02	V
			UNIT: BOILER AUXILIARIES PLANT RAIPUR - 632 406.			C/DESIGNER/ASHISH		03/02/72		
						C/ENGINEER/K. KUMAR		03/02/72		
						REF. TO ASSY/OLD DRG.				
	DEPT AOC'S	GRADE OF UNIT/D. NO. PR-400.500	SCALE 	WEIGHT (KG). -						
	TITLE BYPASS DUCT TO GGH						CARD CODE O 01	DRAWING NO. O-FW-255-08006		RE

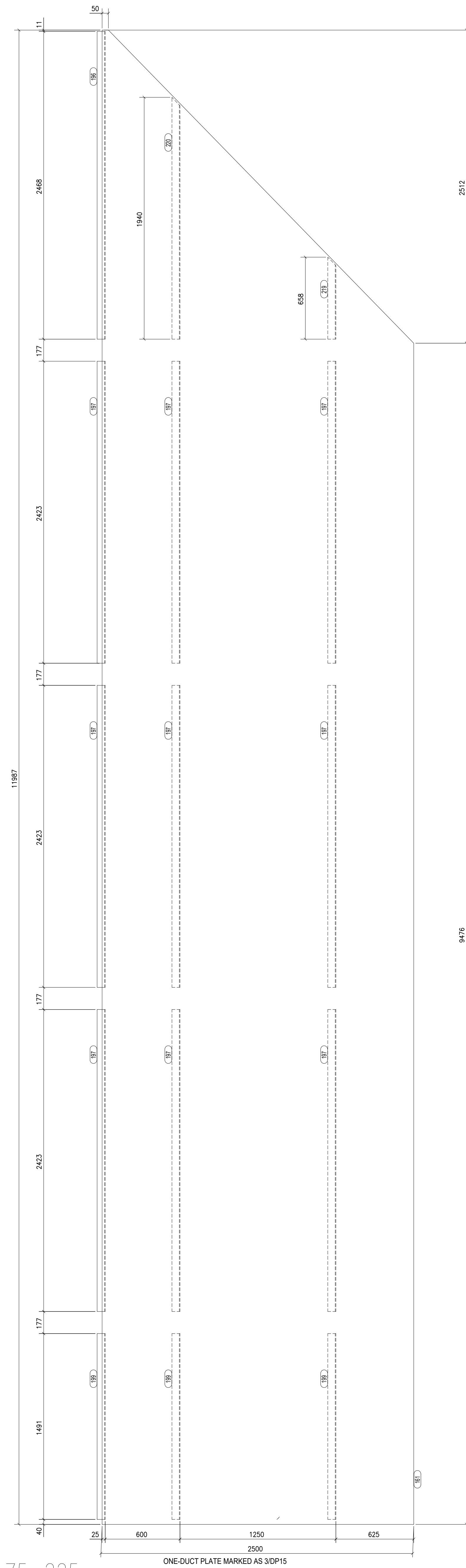
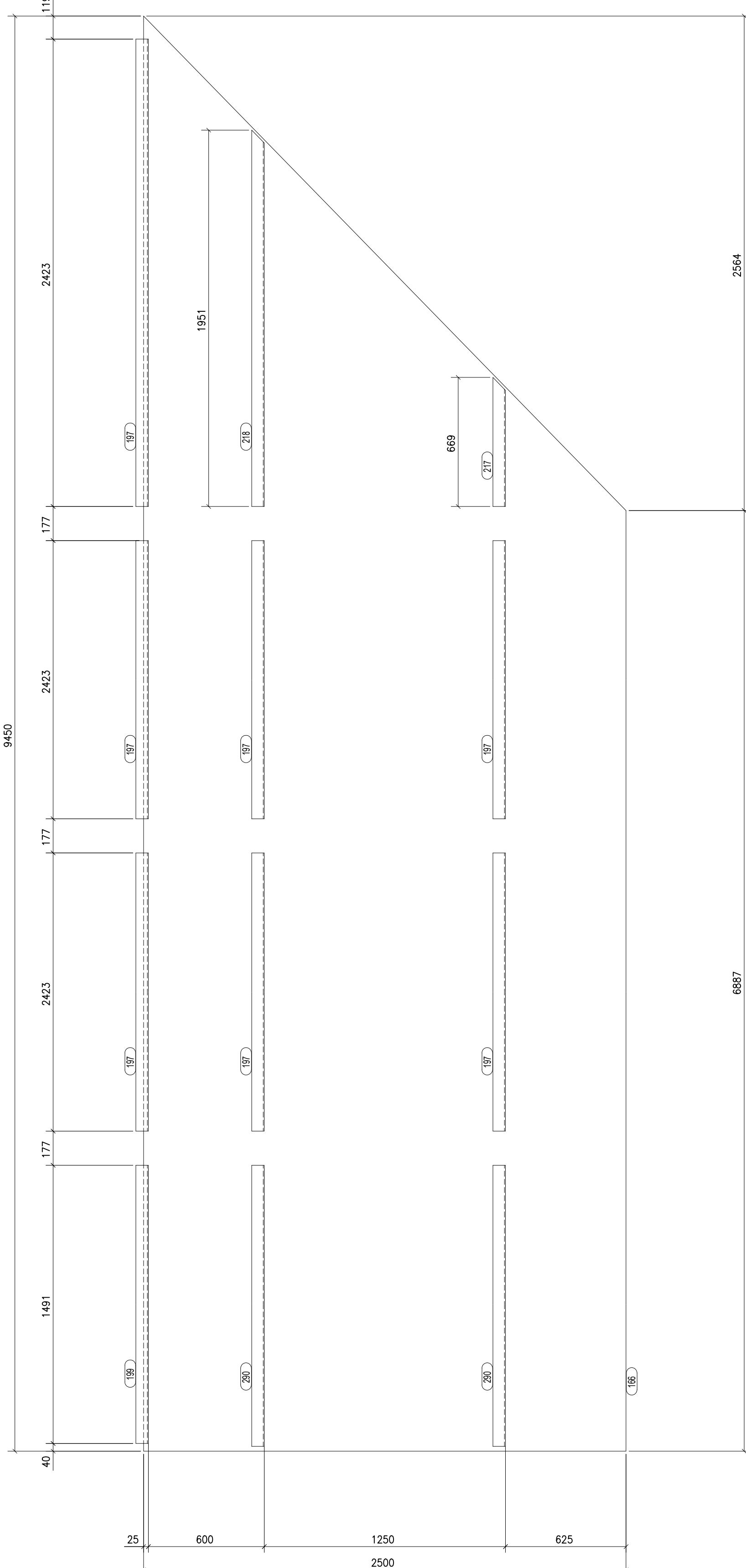
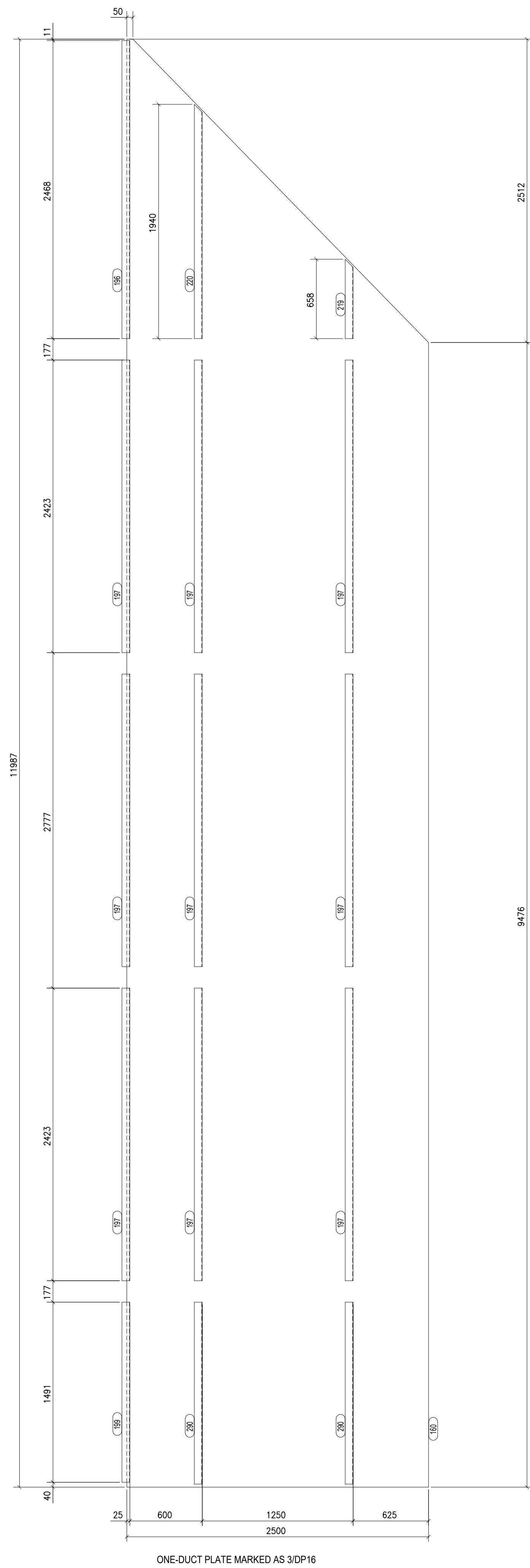
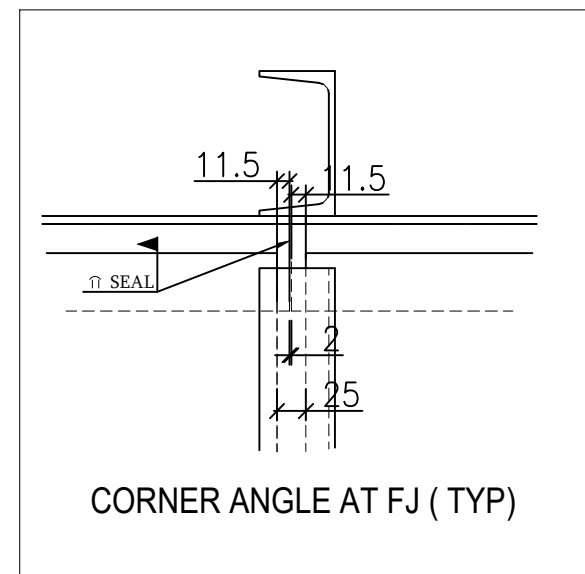
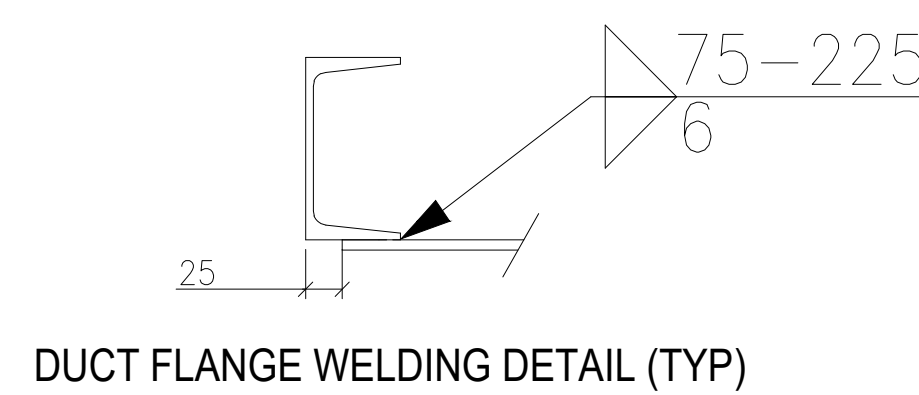
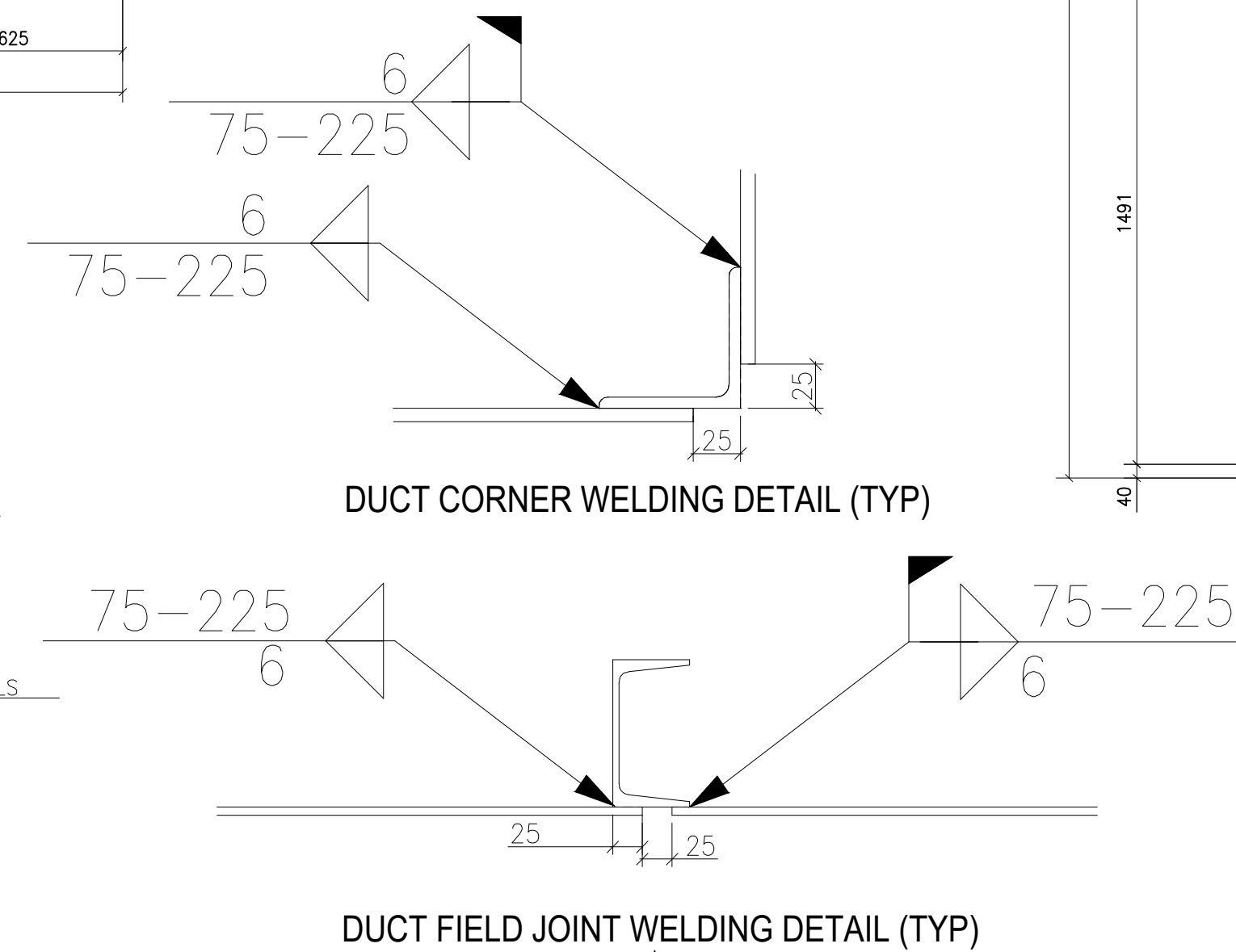


Figure 10: Typical Gusset Plate Welding Details. The figure consists of three diagrams illustrating different welding details for gusset plates.

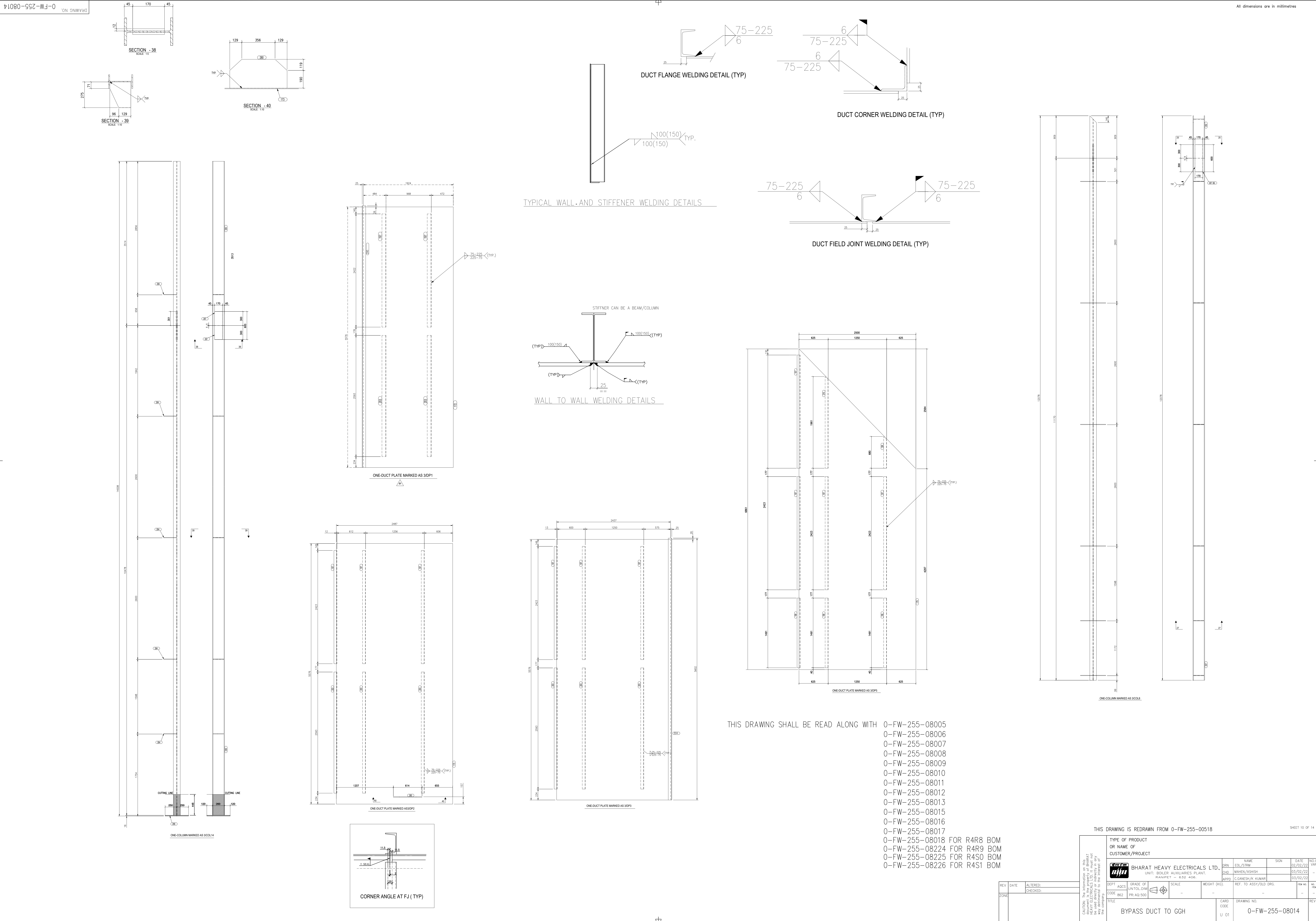
- Top Diagram:** Shows a gusset plate (GUSSET PLATE) with a tack weld detail (GUSSET PLATE TACK WELD DETAIL WITH DUCT PLATE FOR TRANSPORT) and a duct plate (DUCT PLATE). The diagram is labeled "TYP TACK WELDING ORIENTATION OF GUSSET PLATE".
- Middle Diagram:** Shows a wall-to-wall welding detail (WALL TO WALL WELDING DETAILS) with a former (FORMER CON BE & BEAM/COLUMN). The diagram includes dimensions: $C=100(150)mm$, $C=25mm$, and $C=100(150)mm$. The diagram is labeled "WALL TO WALL WELDING DETAILS".
- Bottom Diagram:** Shows a typical wall and stiffener welding detail (TYPICAL WALL AND STEIFFER WELDING DETAIL) with a one-duct plate marked as 3/DP14. The diagram includes a dimension: $N100(150)mm$.



THIS DRAWING IS REDRAWN FROM O-FW-255-00517

SHEET 9 OF 1

CAUTION: This drawing or this document is the property of BHARAT HEAVY ELECTRICALS LTD. It is to be used strictly for reference in any way. Any documents to the interest of	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT									
	 BHARAT HEAVY ELECTRICALS LTD. UNIT: BOILER AUXILIARIES PLANT. RANIPET - 632 406.									
	DRN	NAME			SIGN	DATE	NO.	VAR		
	CHD	EOL/371RM				03/09/92				
	APSD	MAHEN/ASHISH				03/09/92				
C.GANESH/K.KUMAR REF. TO ASSY/OLD DRG.										
DEPT	NOCS	GRADE OF UNIT/DWG.	SCALE	WEIGHT (KG)						
662		RA: AQ-50		-						
TITLE					CARD CODE	DRAWING NO.		REV		
BYPASS DUCT TO GGH					U 01	O-FW-255-08013				



THIS DRAWING SHALL BE READ ALONG WITH

- 0-FW-255-08005
- 0-FW-255-08006
- 0-FW-255-08007
- 0-FW-255-08008
- 0-FW-255-08009
- 0-FW-255-08010
- 0-FW-255-08011
- 0-FW-255-08012
- 0-FW-255-08013
- 0-FW-255-08015
- 0-FW-255-08016
- 0-FW-255-08017
- 0-FW-255-08018 FOR R4R8 BOM
- 0-FW-255-08224 FOR R4R9 BOM
- 0-FW-255-08225 FOR R4S0 BOM
- 0-FW-255-08226 FOR R4S1 BOM

THIS DRAWING IS REDRAWN FROM 0-FW-255-00518

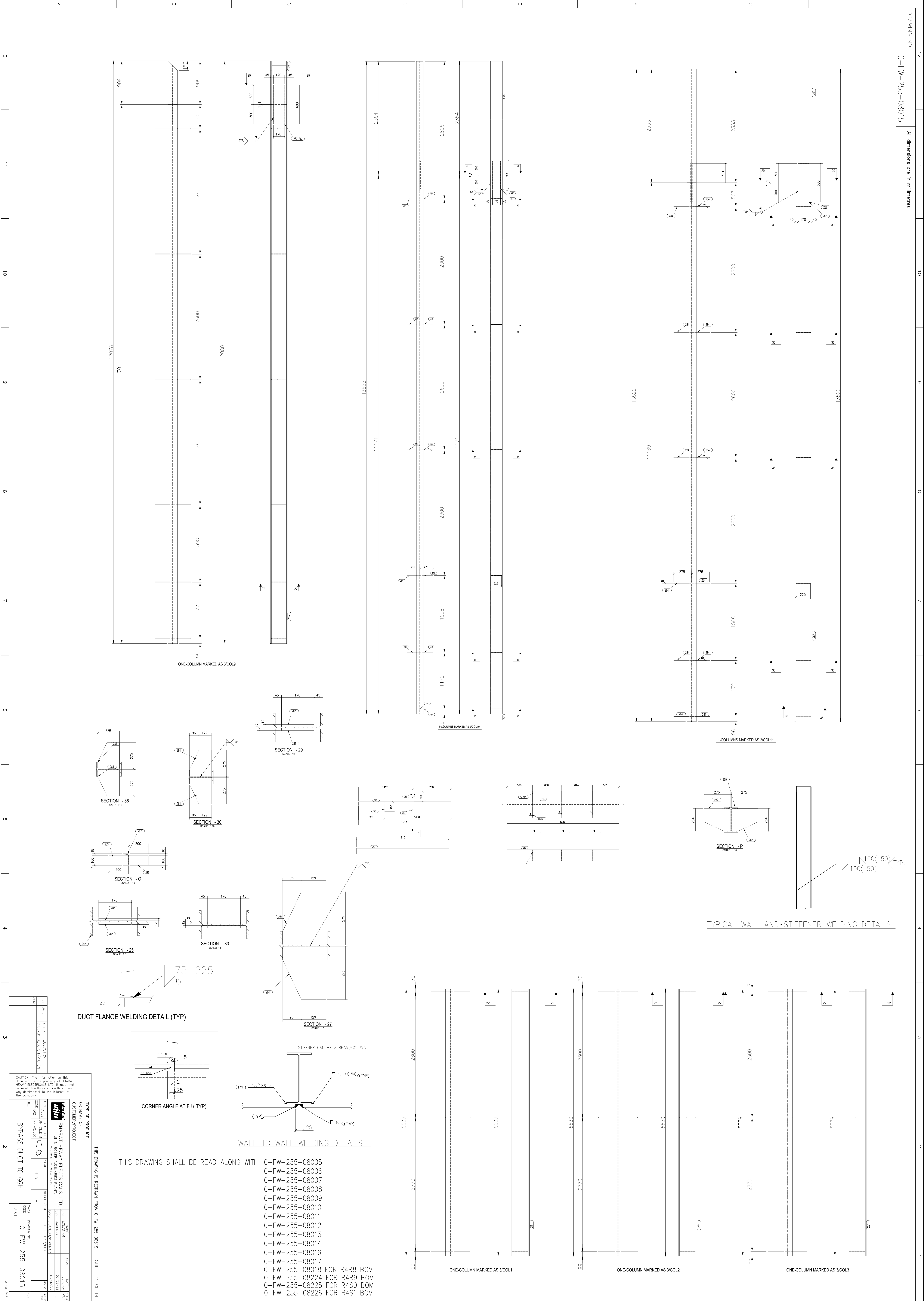
SHEET 10 OF 14

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		DEPT	APPS	GRADE OF UNITS/DIM CODE	SCALE	WEIGHT (KG)	REF. TO ASSY/OLD DRG.	REV NO.	NO. OF PAGES	REV
BHARAT HEAVY ELECTRICALS LTD. UNIT: BOILER AUXILIARIES PLANT. PANIPET - 632 008.		862	PR AG 500	PR AG 500						
BYPASS DUCT TO GGH		CARD CODE U 01		DRAWING NO. 0-FW-255-08014						

CAUTION: The information on this drawing is the property of BHARAT HEAVY ELECTRICALS LTD. and shall not be used directly or indirectly in any way without the written consent of the company.

DATE	ALTERED:	CHECKED:	DATE	NAME	SIGN	DATE	NO. OF PAGES
			03/02/22	EDL/2/PM		03/02/22	1
			03/02/22	MAHENDRASHISH		03/02/22	1
			03/02/22	C.GANESH/K. KUMAR		03/02/22	1

Size A0

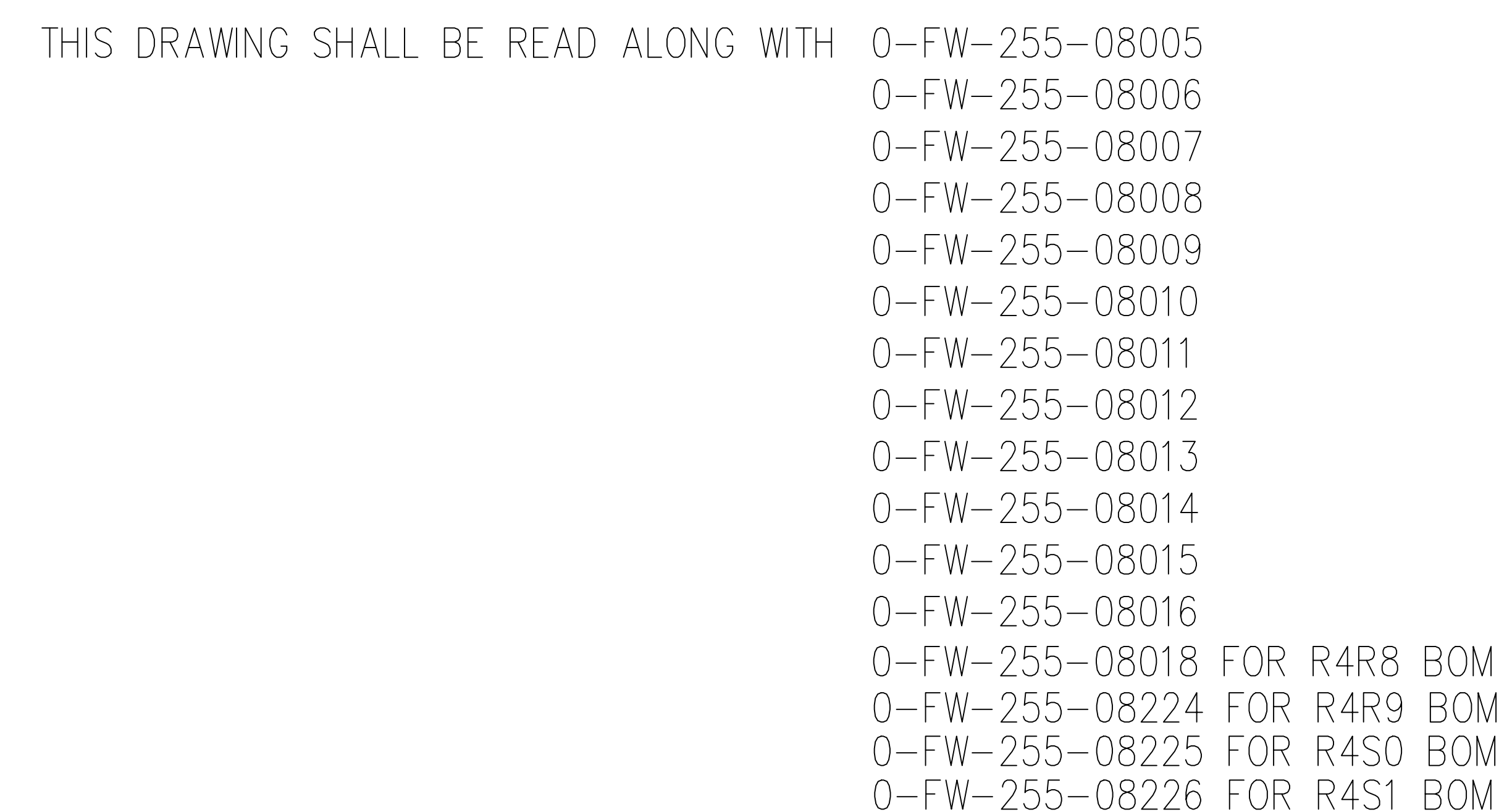


12 11 10 9 8 7 6 5 4 3 2 1

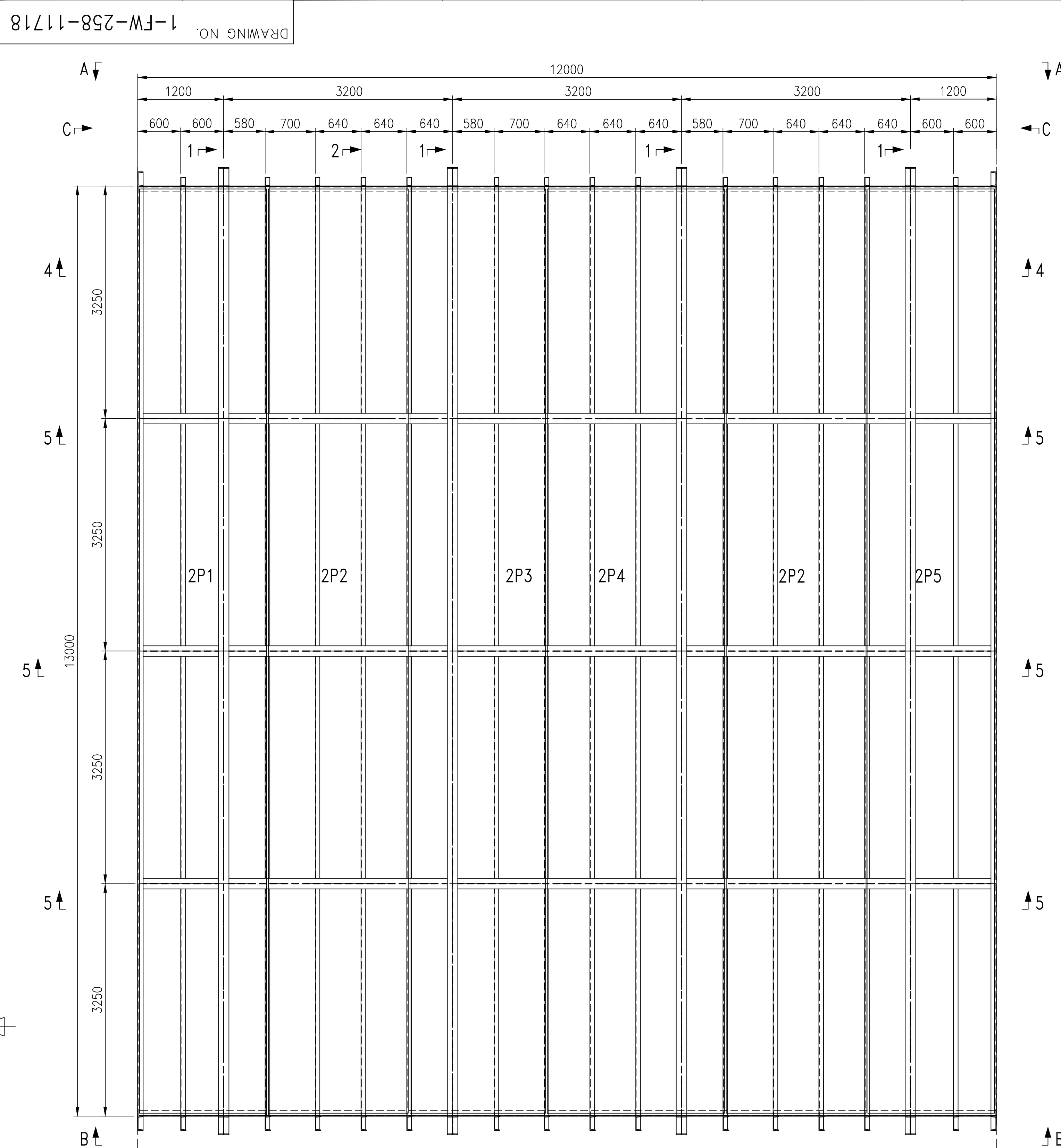
12 11 10 9 8 7 6 5 4 3 2 1

REF	DATE	REVISION	BY	CHKD
001	10/01/2022	1	001	001

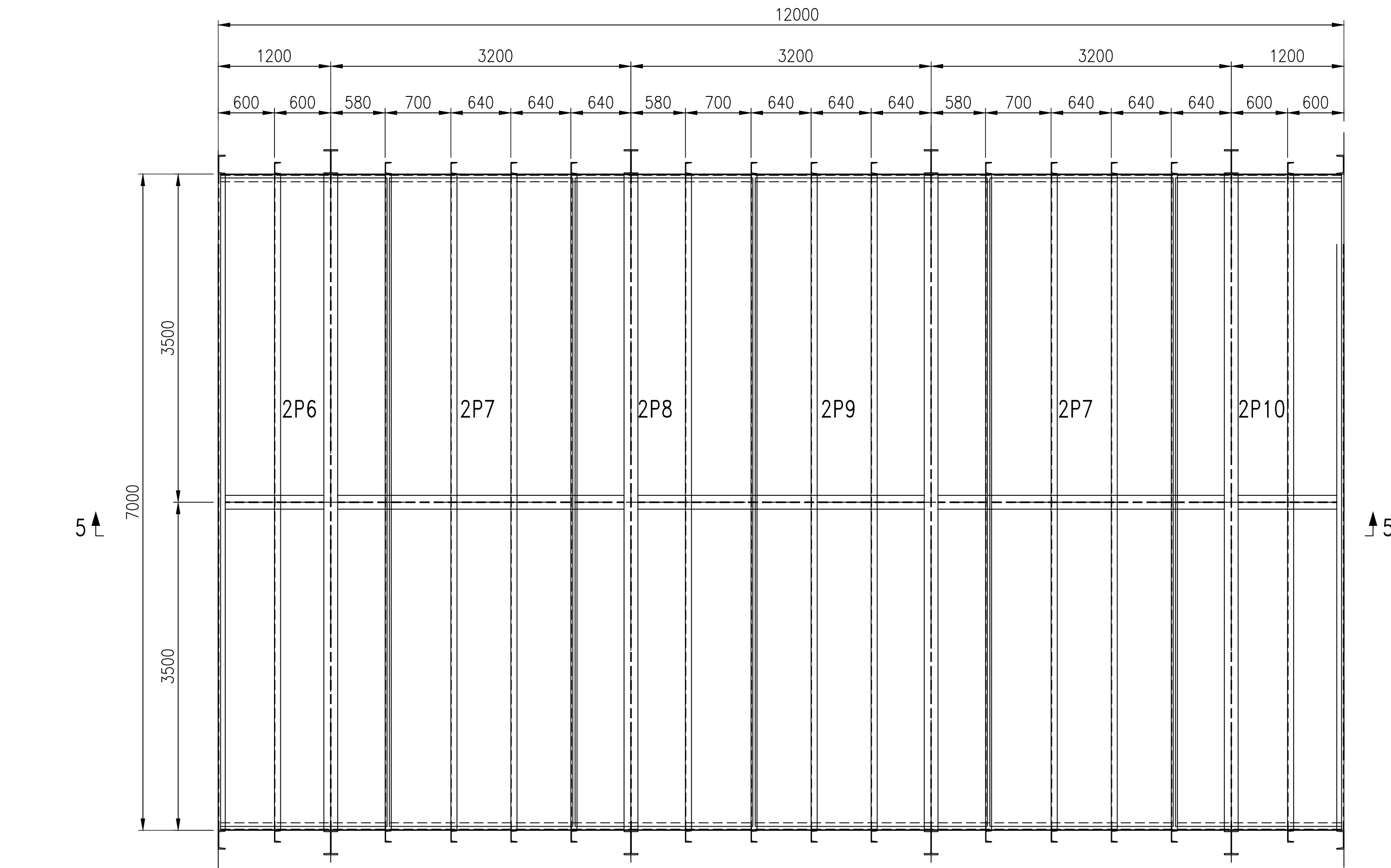
CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.									
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT									
BHARAT HEAVY ELECTRICALS LTD.									
UNIT: BHARAT ALUMINIUMS PLANT									
SCALE: 1:10									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									
DATE: 10/01/2022									
BY: 001									
CHKD: 001									



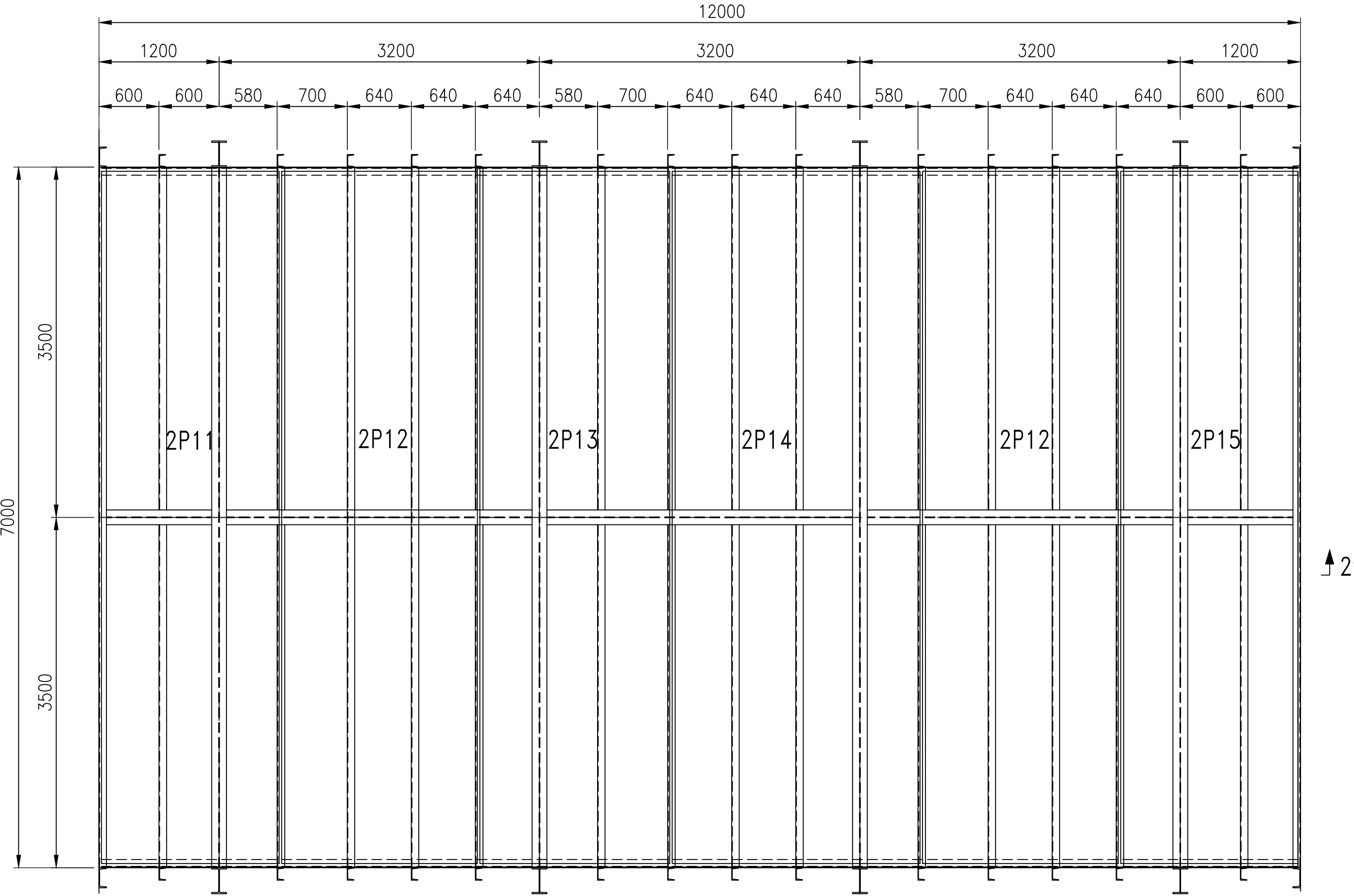
A diagram of a beam of length 6 units. A triangular load is applied to the beam, starting at 0 at the left end and increasing linearly to 75 at the right end. The load is represented by a triangle with a peak of 75 and a base of 6. A reaction force is shown at the left end of the beam, pointing upwards.



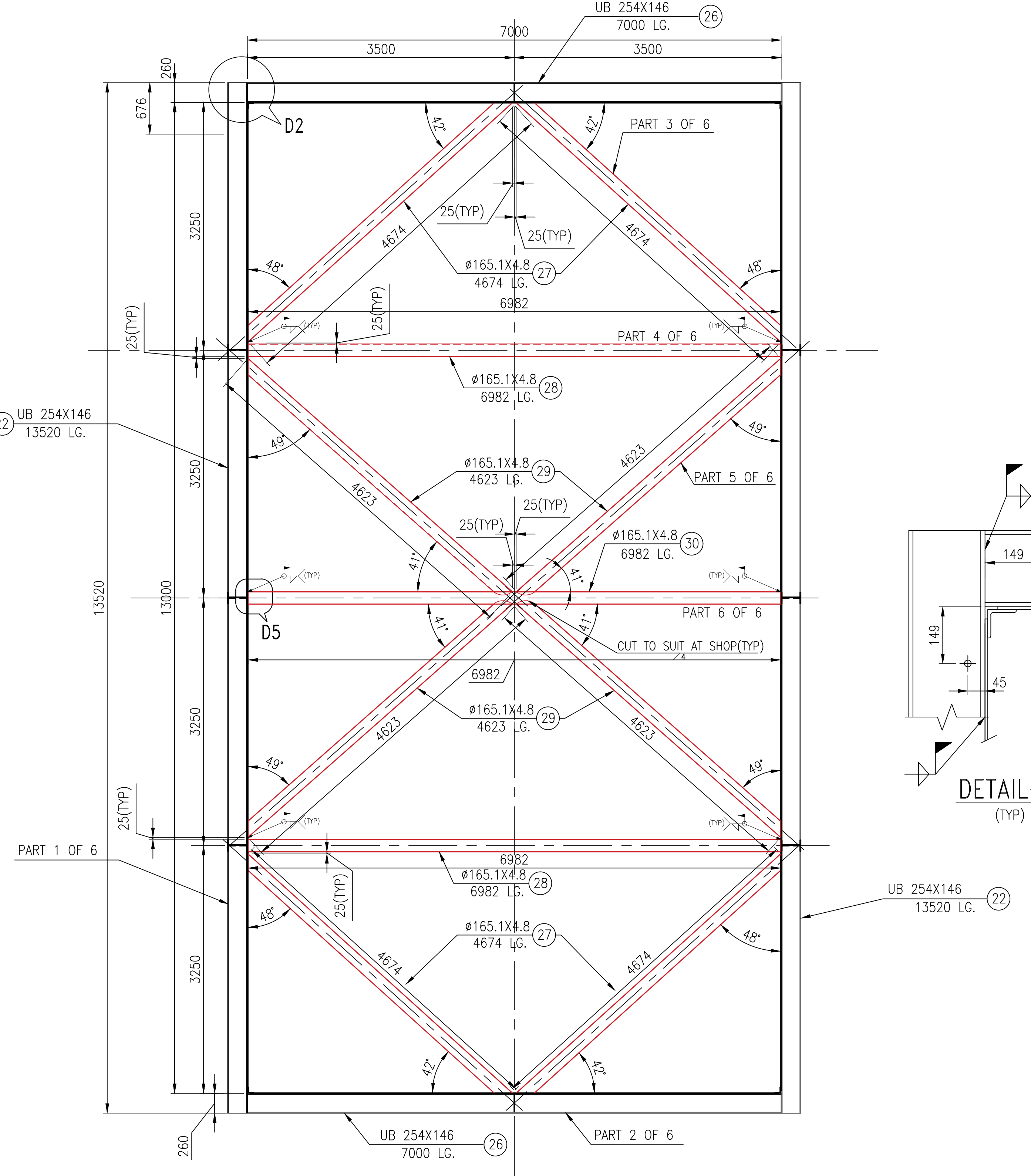
ELEVATION OF SECOND VERTICAL DUCT OUTLET FOR UNIT-1,2,3,4



VIEW A-A

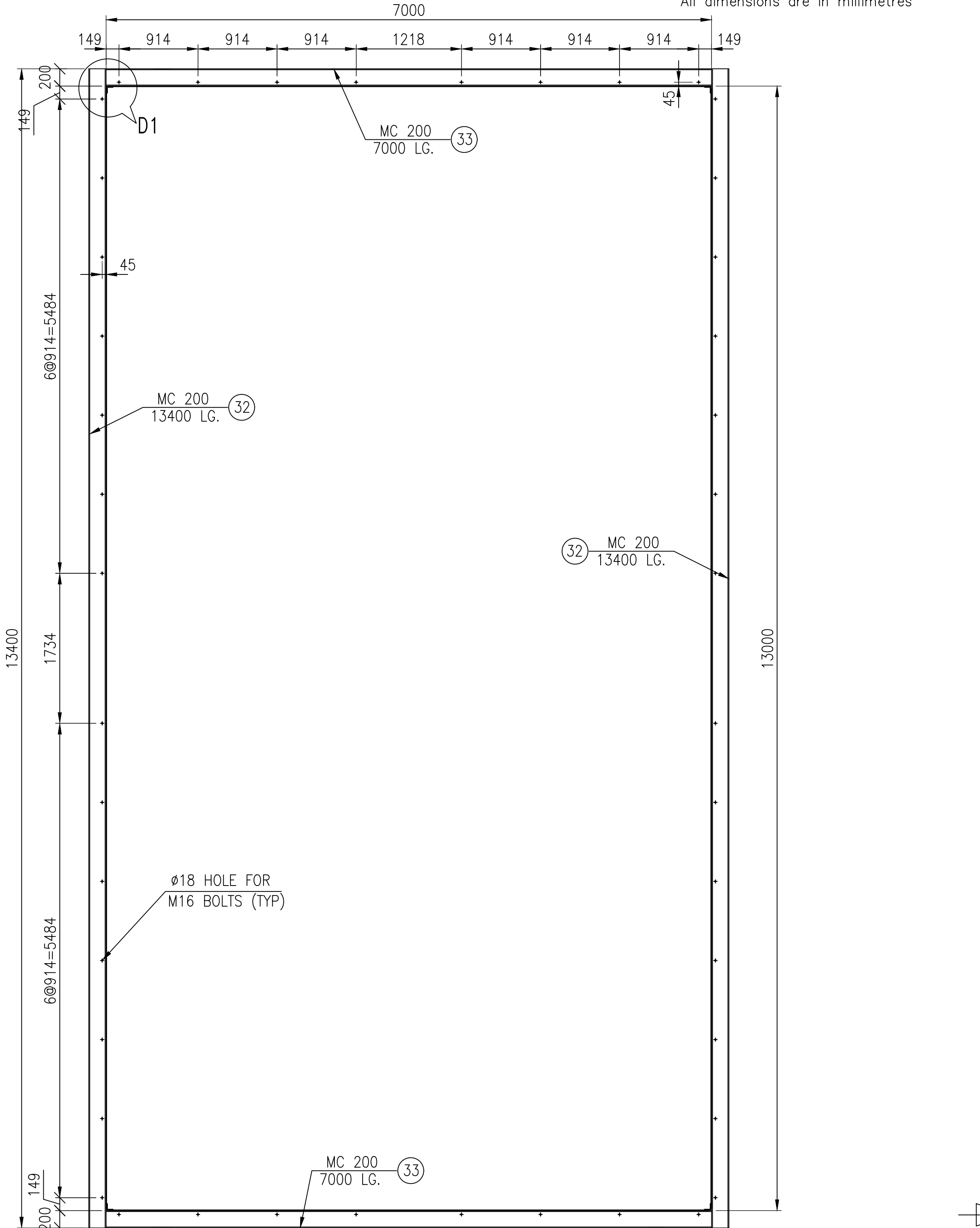


VIEW B-B

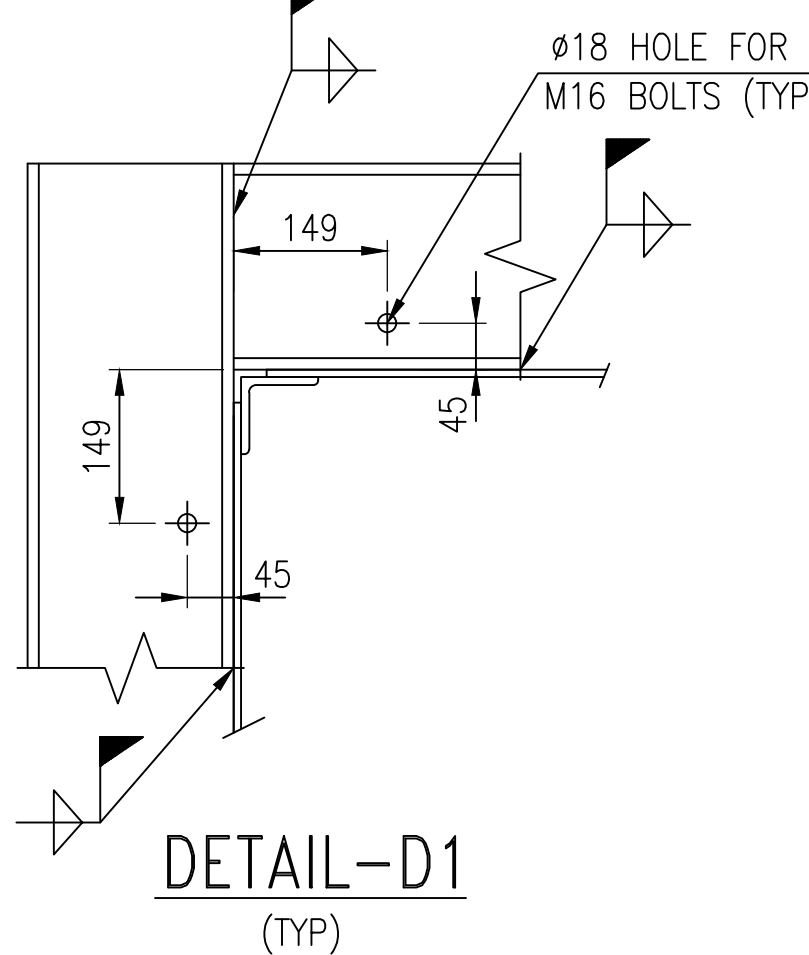


SECTION 1-1

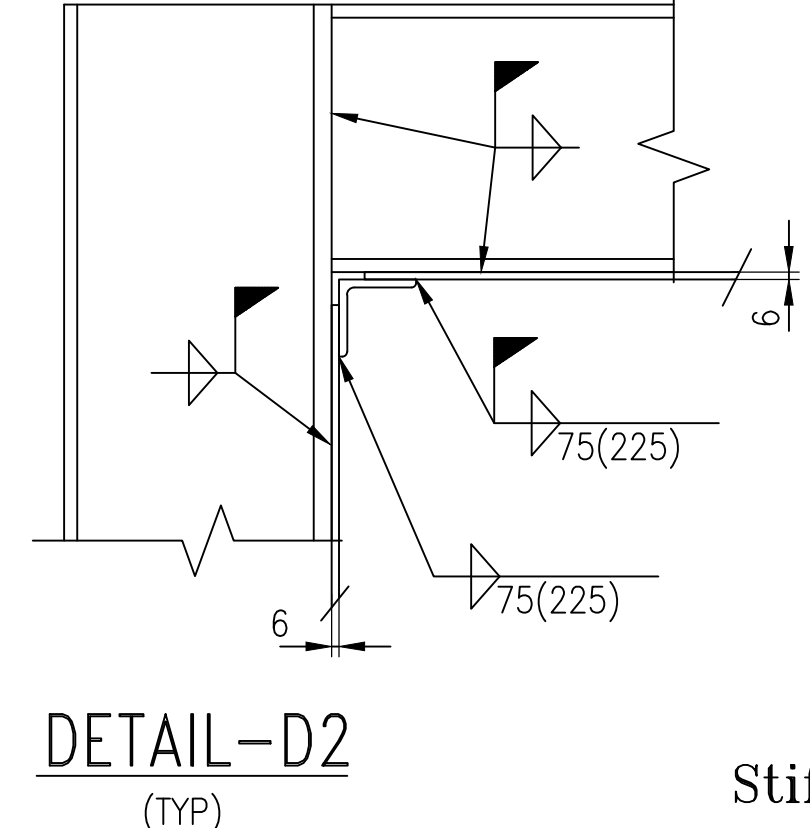
IMPORTANT NOTE:
THIS IS ABSORBER OUTLET DUCT.
TO BE LINED WITH GLASS FLAKE LINING AT SITE.
SUITABLE PREPARATION ON ALL WELDINGS INSIDE THE
DUCT SURFACES AT SHOP SHALL BE CARRIED OUT BY SHOP
AS PER THE DRAWING 3-FW-257-07356.



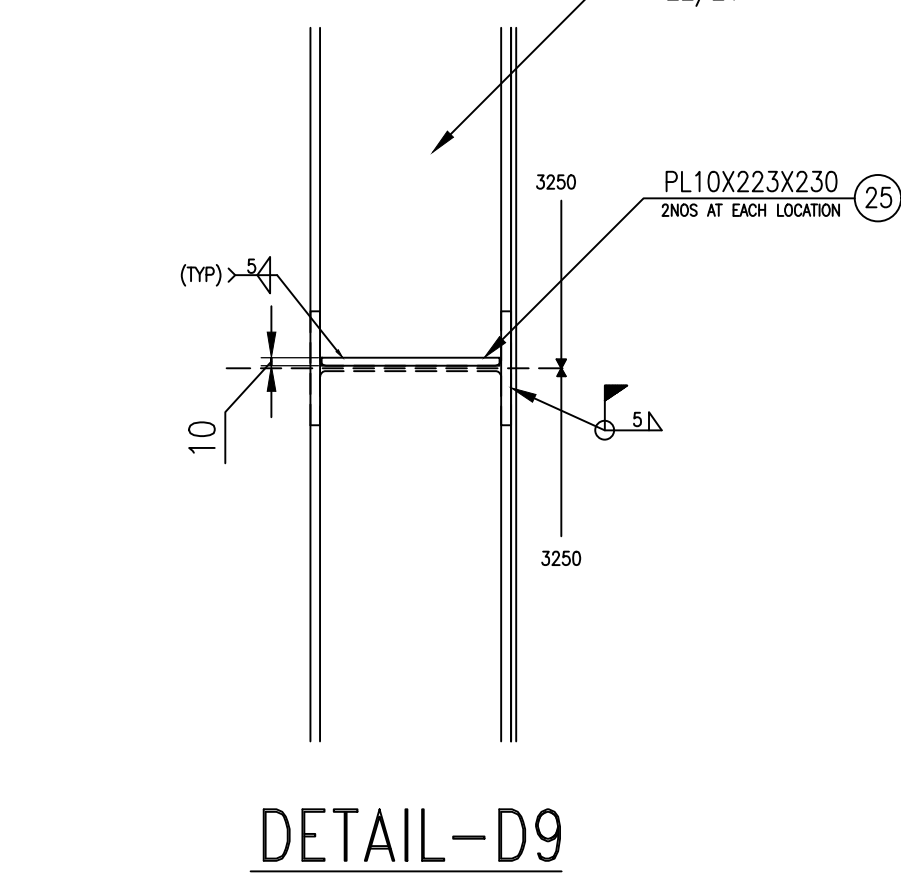
VIEW C-C



DETAIL-D1



DETAIL-D2

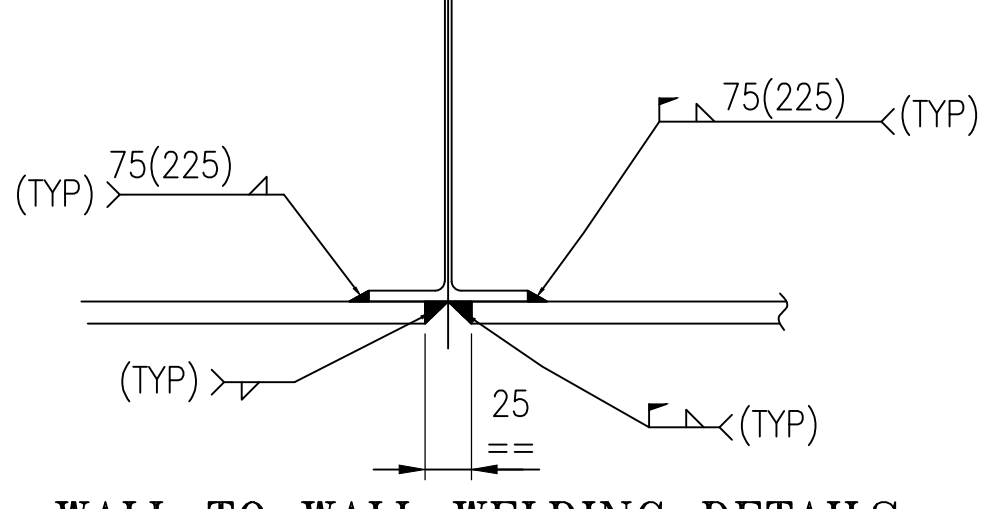


DETAIL-D9

THIS DRAWING HAS BEEN REDRAWN FROM
1-FW-255-00673

THIS DRAWING SHALL BE READ ALONG WITH
1-FW-258-11719
1-FW-258-11720
1-FW-258-11721
1-FW-258-11722
1-FW-258-11723 (FOR R4R8 BOM)
1-FW-258-11736 (FOR R4R9 BOM)
1-FW-258-11737 (FOR R4S0 BOM)
1-FW-258-11738 (FOR R4S1 BOM)

Stiffener can be a channel or a Beam



WALL TO WALL WELDING DETAILS

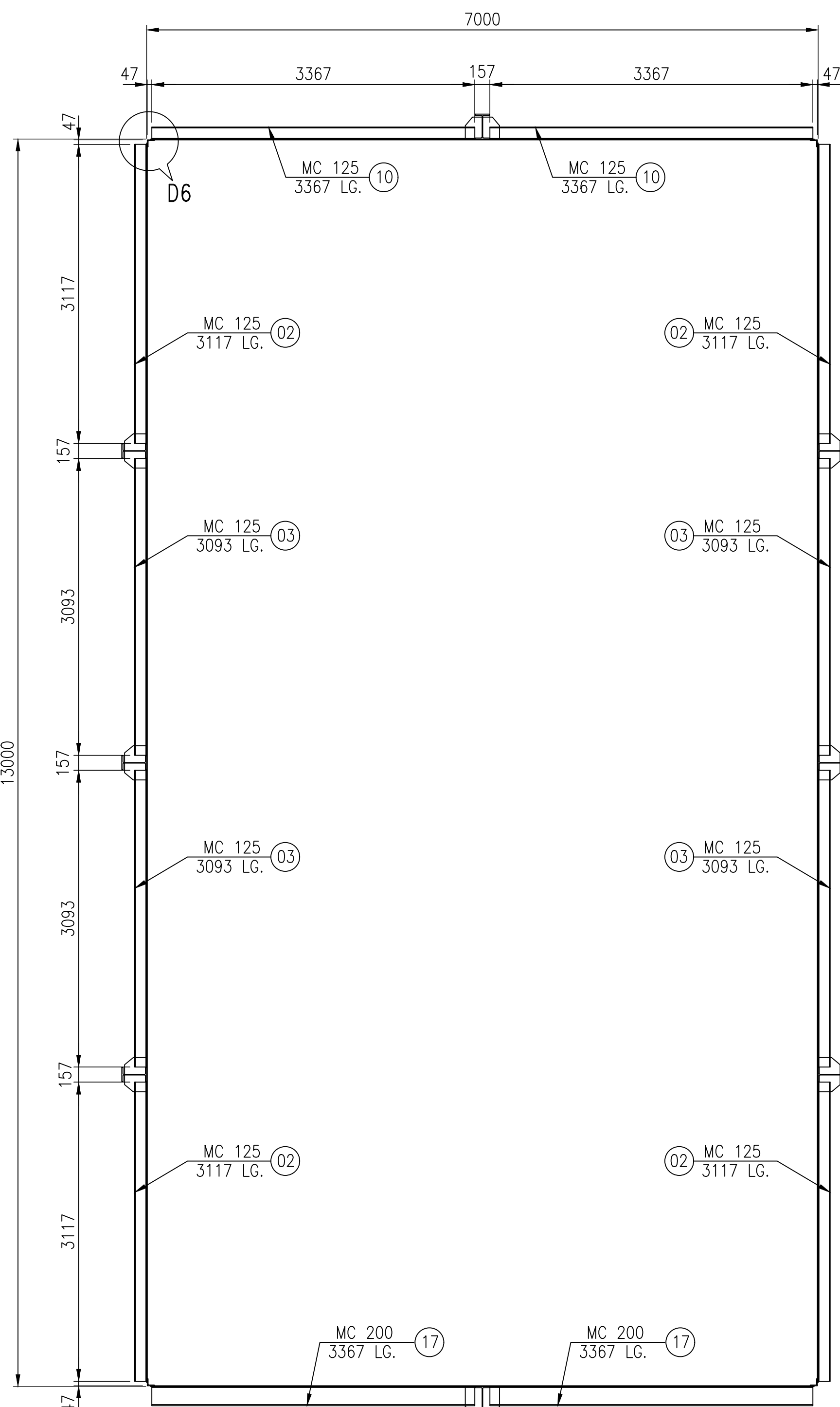
CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		YADADRI 5X800MW CUSTOMER NOS: R4R8, R4R9, R4S0, R4S1						
			BHARAT HEAVY ELECTRICALS LTD., UNIT: BOILER AUXILIARIES PLANT. RANIPET — 632 406.		DRN	NAME EOL/STRM	SIGN	DATE 06.03.19	NO. OF VAR.
			CHD	M.K.NAHAK/PKB		02.03.22		03.03.22	
				APPD	C.GANESH/K. KUMAR		03.03.22		
	DEPT A0CS CODE 862	GRADE OF UNTOL.DIM PR: QA: 500		SCALE	WEIGHT (KG.) —	REF. TO ASSY/OLD DRG. —			ITEM NO. —
TITLE <u>DUCT BETWEEN GGH AND DUCT OUT</u> DUCT-2 (VERTICAL)				CARD CODE U 01	DRAWING NO. 1-FW-258-11718			REV 00	

SHEET 1 OF 6

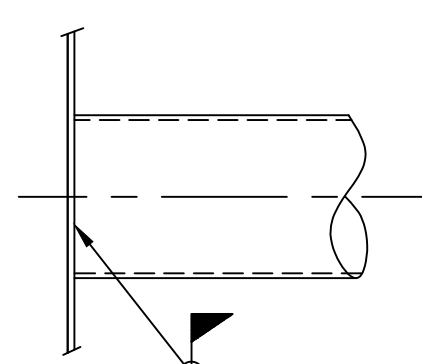
1-FW-258-11719

DRAWING NO.

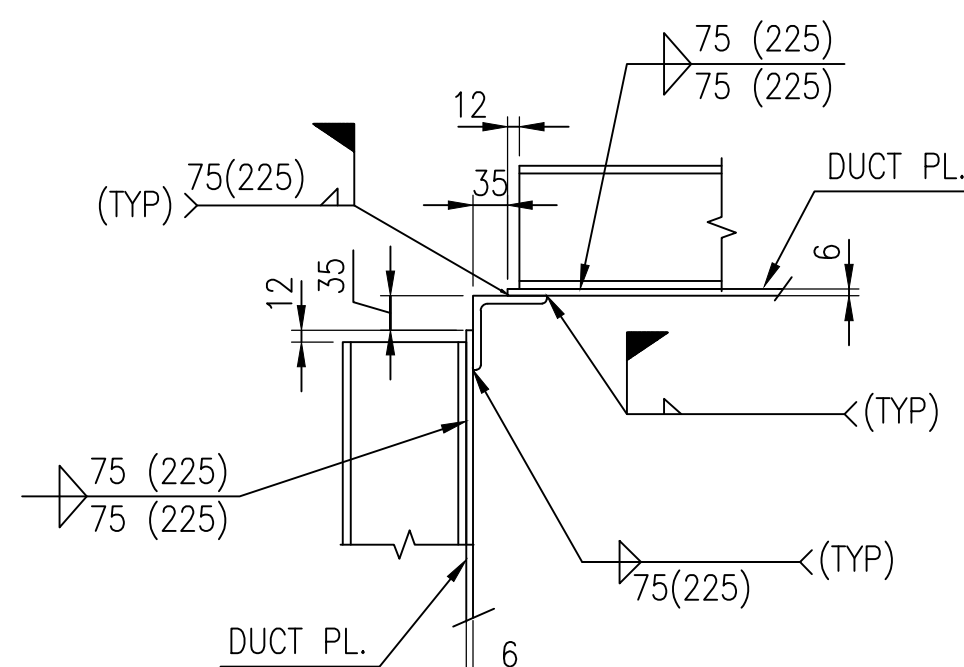
All dimensions are in millimetres



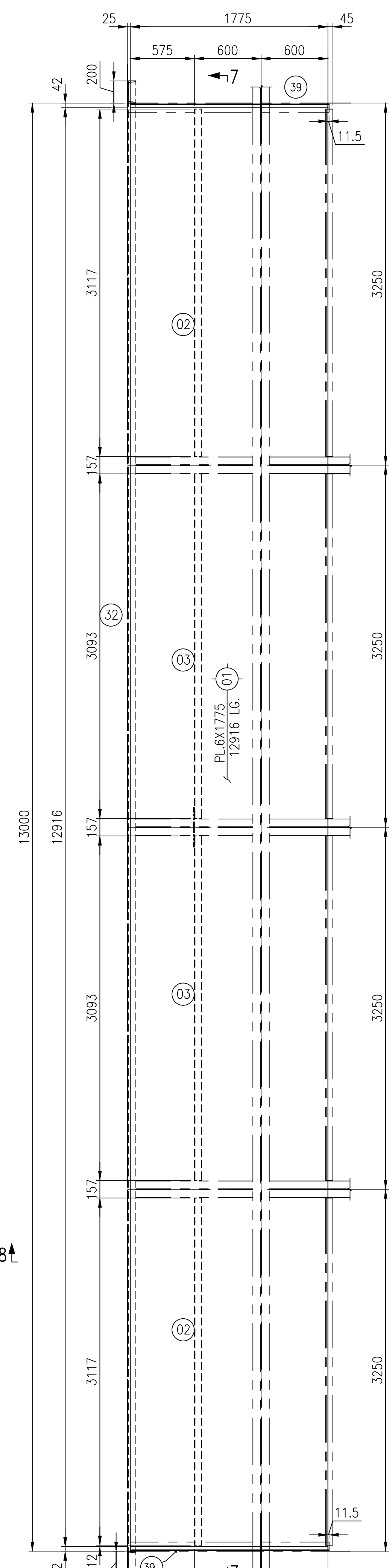
SECTION 2-2



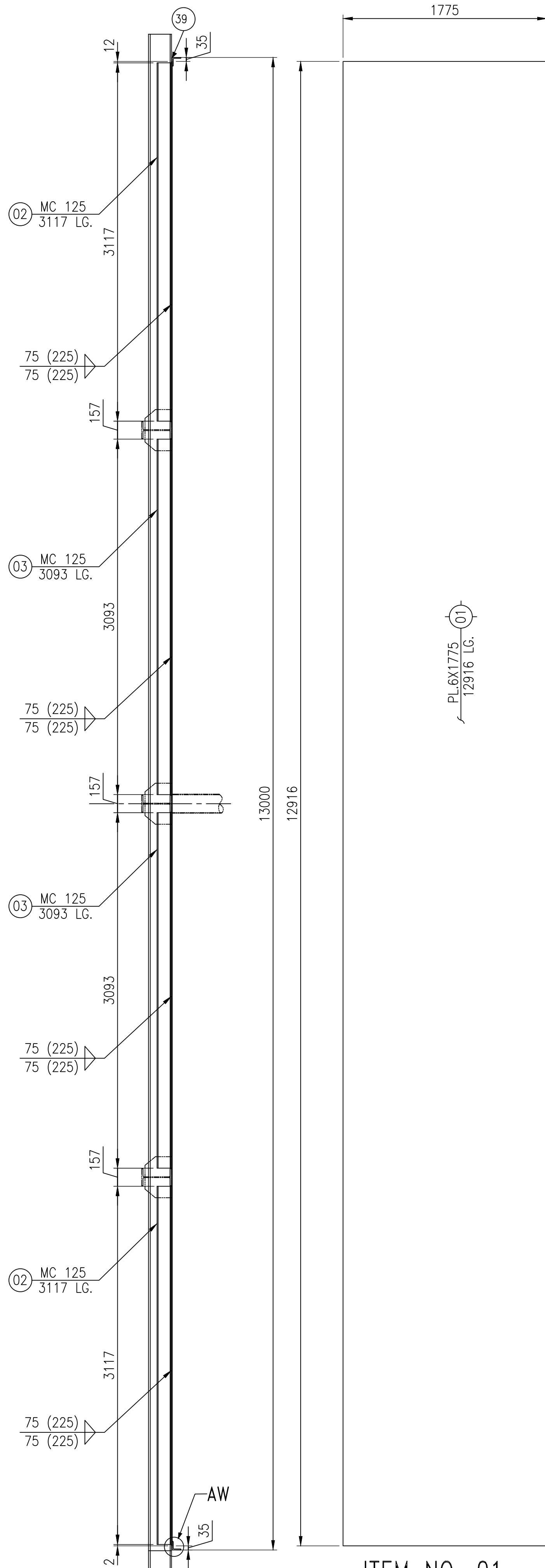
DETAIL-D5
(TYP)



DETAIL-D6
(TYP)

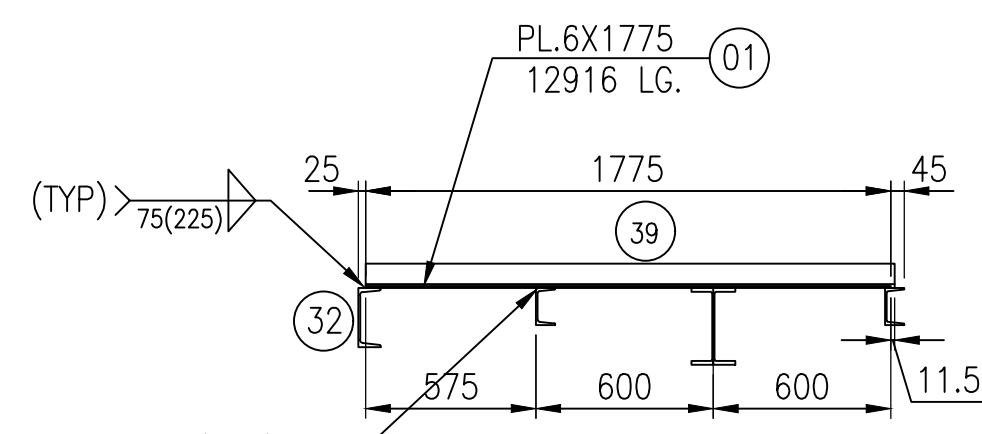


2NOs. PLATES - 2P1

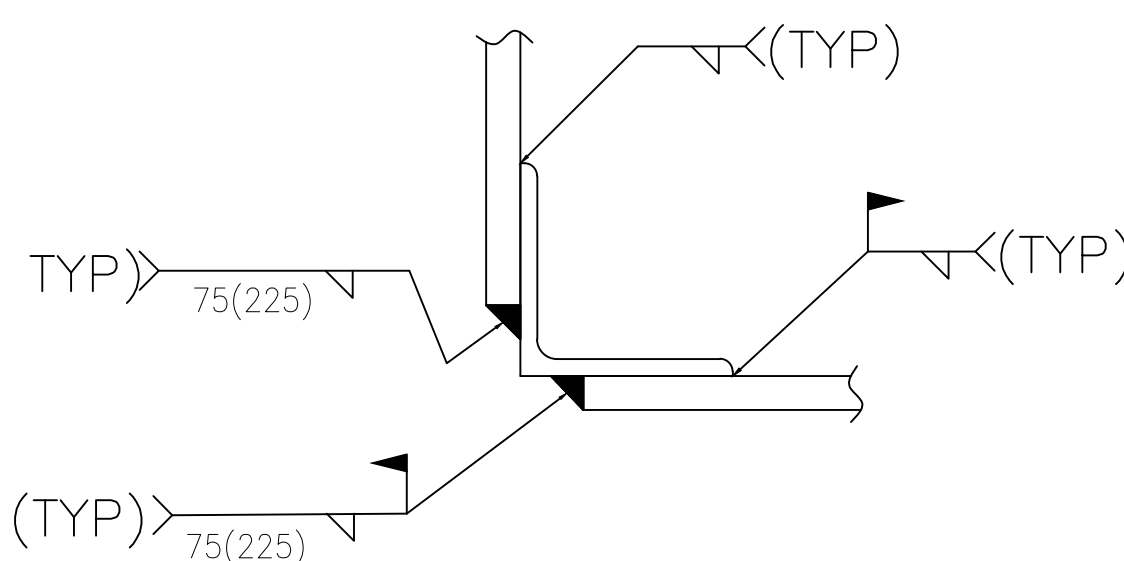


SECTION 7-7

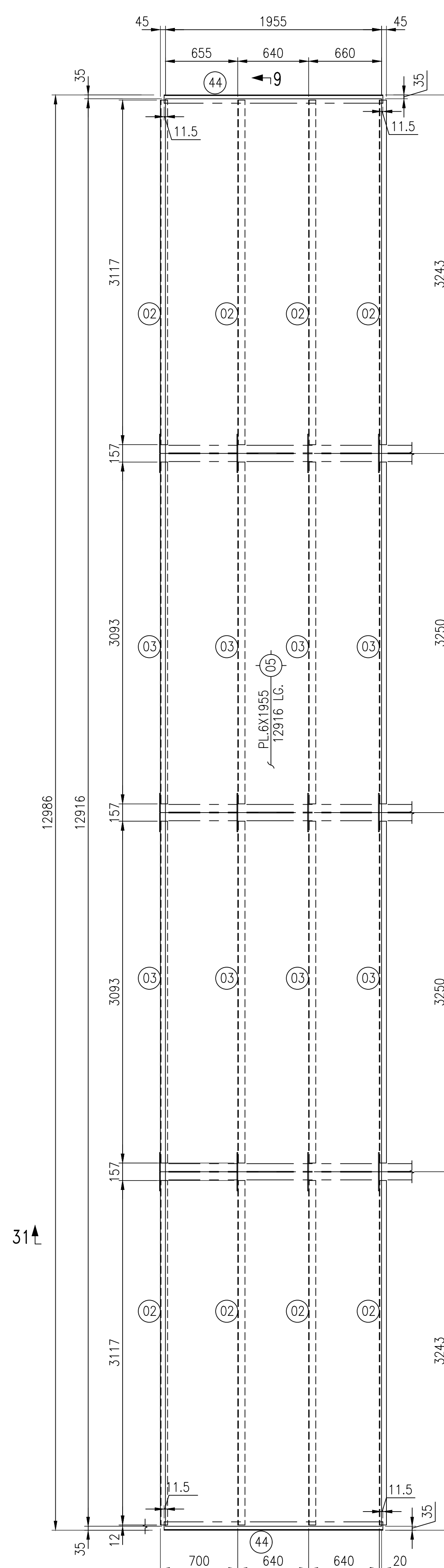
ITEM NO. 01



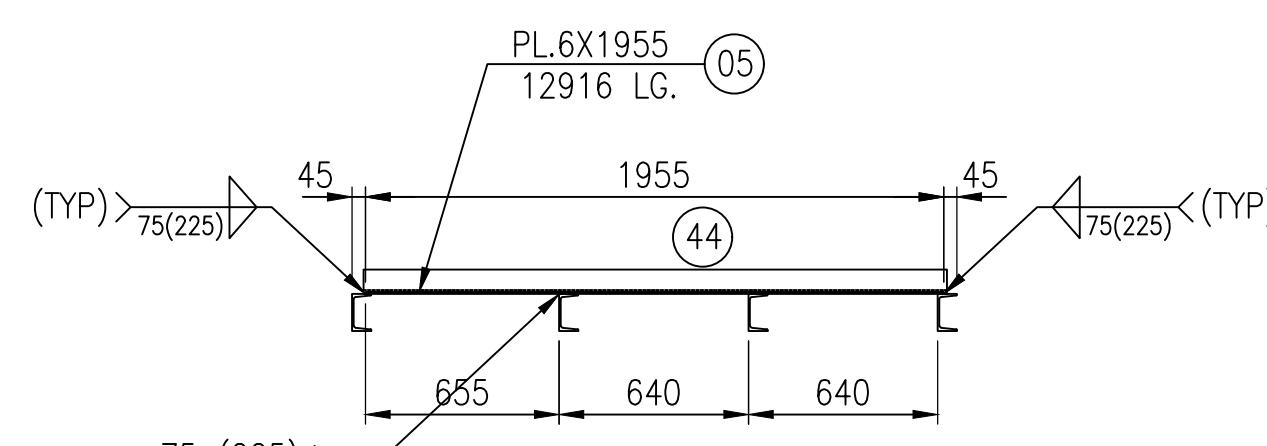
SECTION 8-8



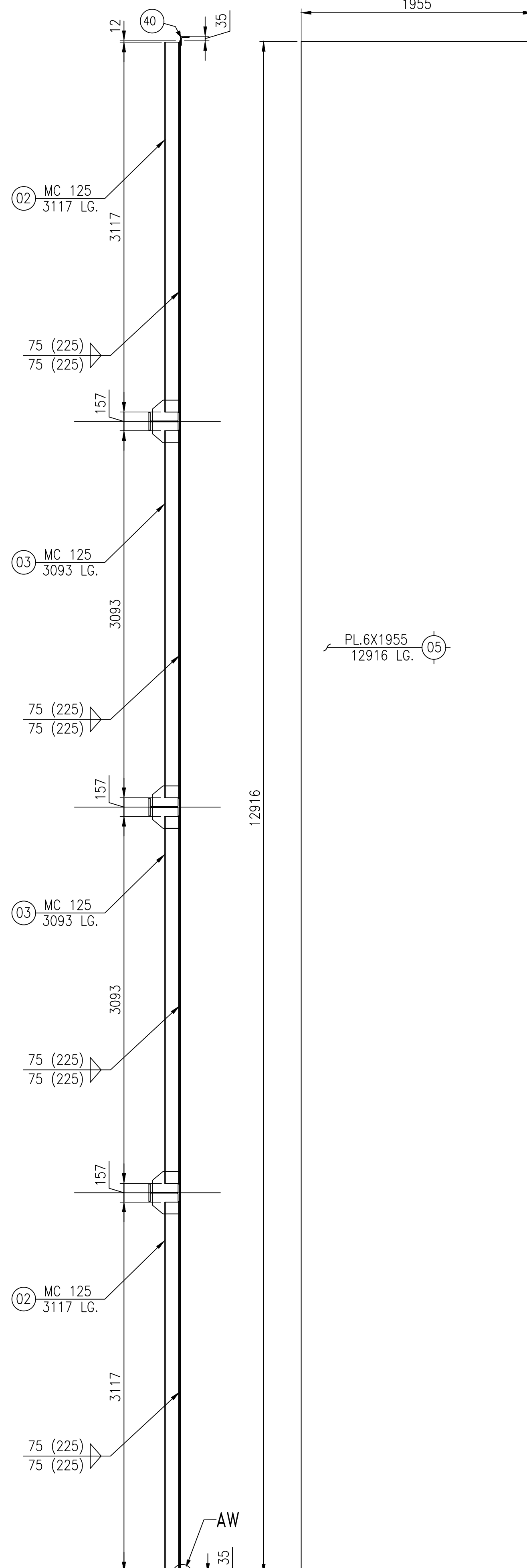
DETAIL-AW
(TYP)



4NOs. PLATE - 2P2



SECTION 31-31



SECTION 9-9

ITEM NO. 05

THIS DRAWING HAS BEEN REDRAWN FROM

1-FW-255-00674

THIS DRAWING SHALL BE READ ALONG WITH

1-FW-258-11718

1-FW-258-11720

1-FW-258-11721

1-FW-258-11722

1-FW-258-11723 (FOR R4R8 BOM)

1-FW-258-11736 (FOR R4R9 BOM)

1-FW-258-11737 (FOR R4S0 BOM)

1-FW-258-11738 (FOR R4S1 BOM)

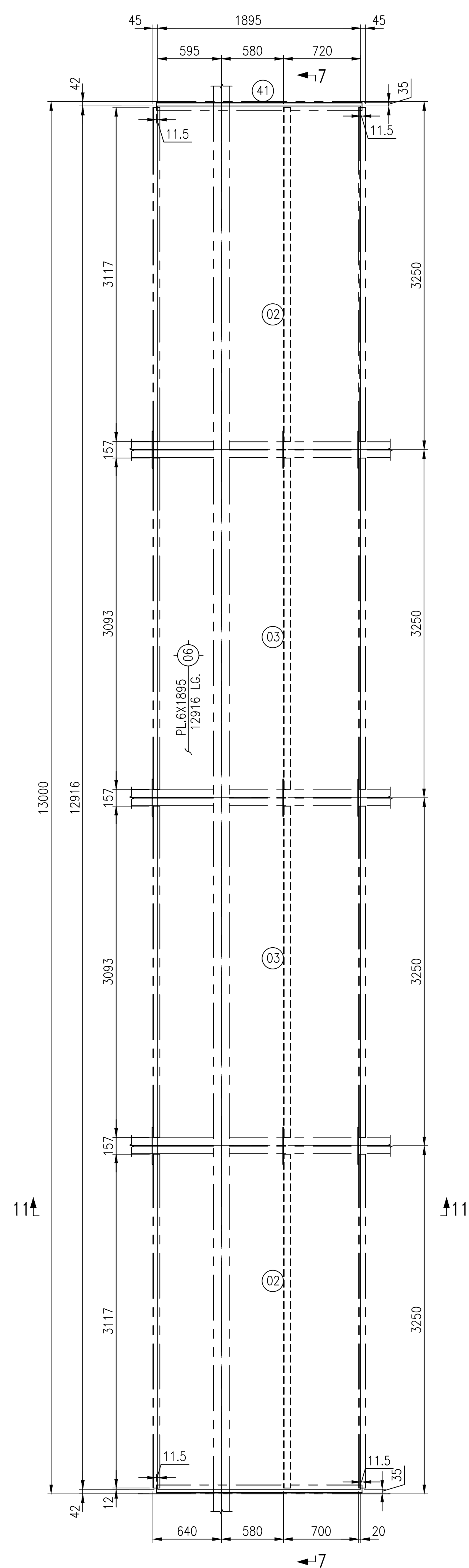
SHEET 2 OF 6

CAUTION: The information on this drawing is for the use of the customer only. It must not be used directly or indirectly in any way detrimental to the interest of the company.		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		YADADRI 5X800MW CUSTOMER NOS: R4R8, R4R9, R4S0, R4S1			
		BHARAT HEAVY ELECTRICALS LTD., UNIT: BOILER AUXILIARIES PLANT, RANIPET - 632 406.		DRN EOL/STRM NAME M.K.NAHAK/PKB	SIGN DATE 06.03.19	NO.OF VAR.	
DEPT AQC3	GRADE OF UNTOL.DIM PR: QA:500	SCALE	WEIGHT (KG).	REF. TO ASSY/OLD DRG.	ITEM NO.	NO. OF ITEM	
CODE 862							
TITLE DUCT BETWEEN GGH & DUCT OUT DUCT-2 (VERTICAL)		CARD CODE U 01	DRAWING NO. 1-FW-258-11719	REV 00			

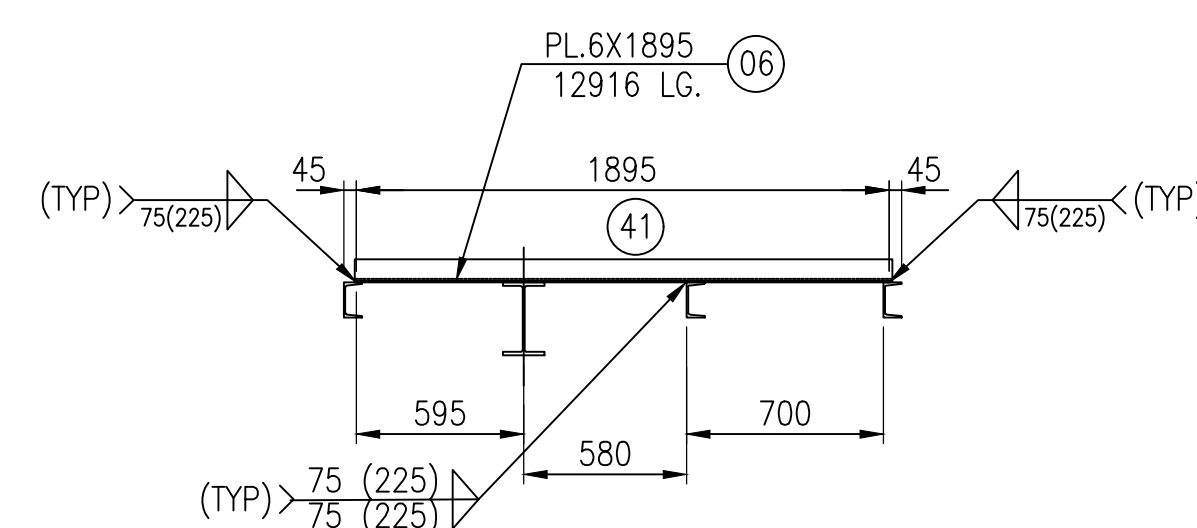
IMPORTANT NOTE:
THIS IS ABSORBER OUTLET DUCT.
TO BE LINED WITH GLASS FLAKE LINING AT SITE.
SUITABLE PREPARATION ON ALL WELDINGS INSIDE THE
DUCT SURFACES AT SHOP SHALL BE CARRIED OUT BY SHOP
AS PER THE DRAWING 3-FW-257-07356.

DRAWING NO. 1-FW-258-11720

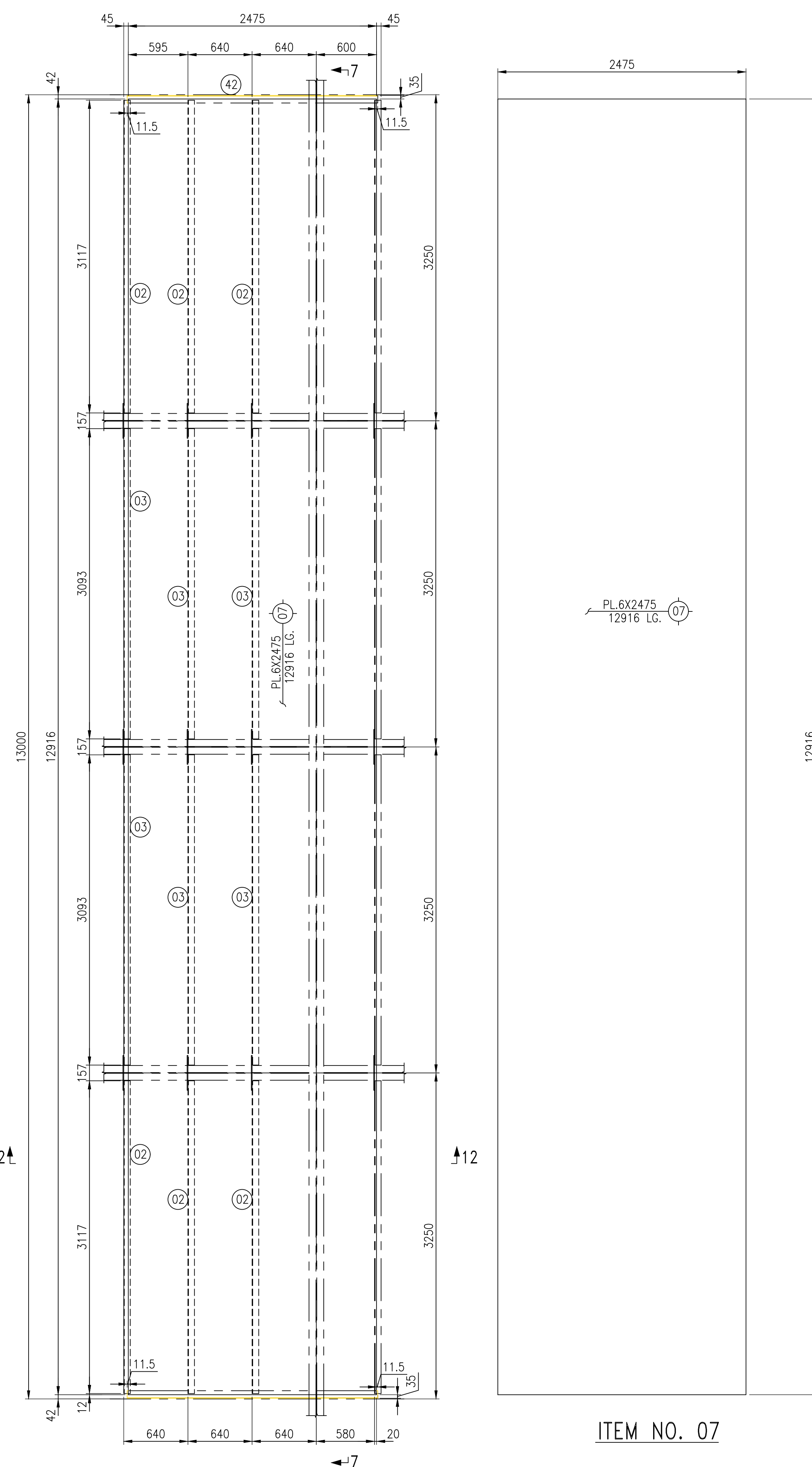
All dimensions are in millimetres



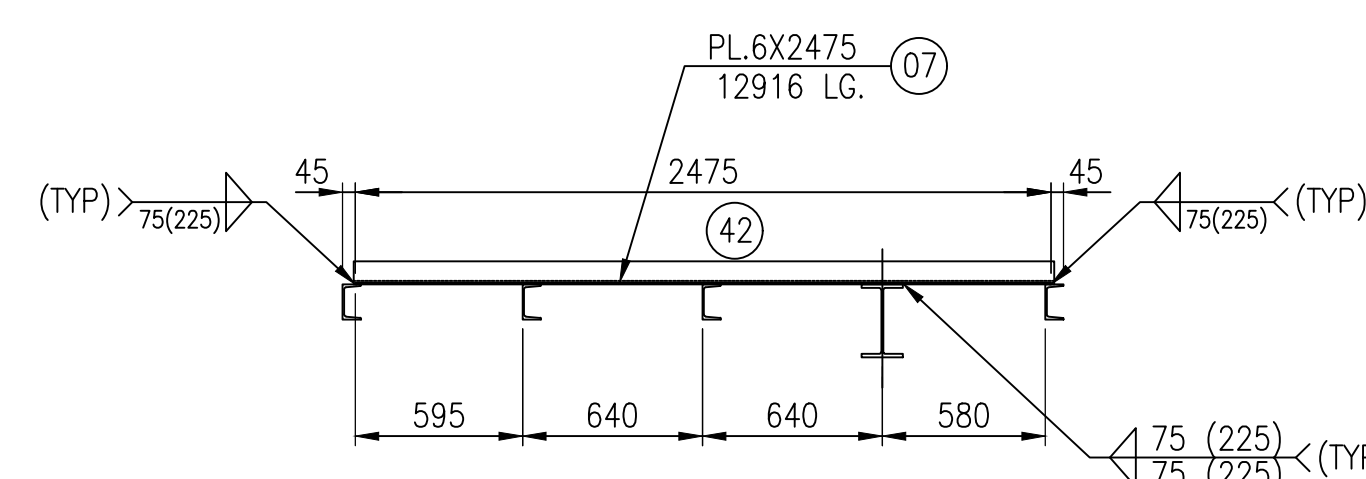
2N0s. PLATE - 2P3



SECTION 11-11



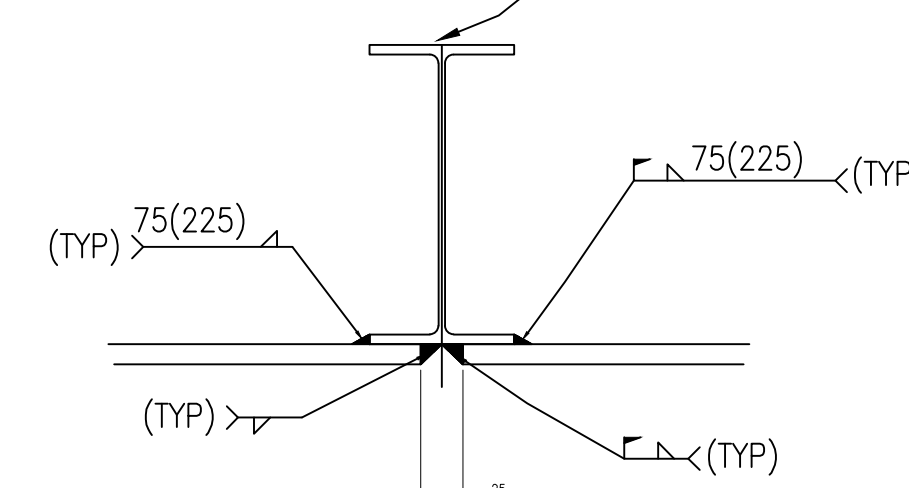
ITEM NO. 07



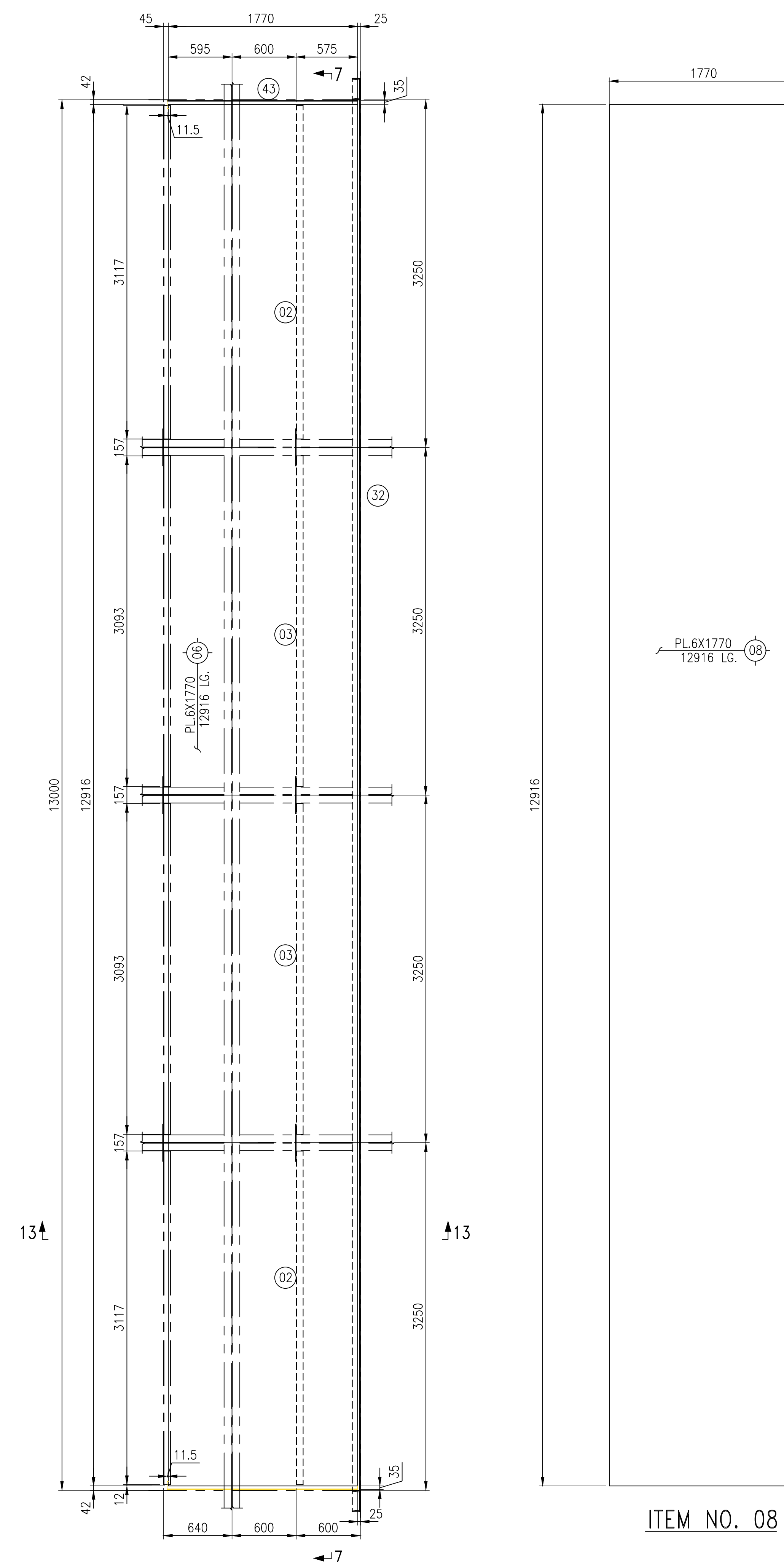
SECTION 12-12

IMPORTANT NOTE:
THIS IS ABSORBER OUTLET DUCT.
TO BE LINED WITH GLASS FLAKE LINING AT SITE.
SUITABLE PREPARATION ON ALL WELDINGS INSIDE THE
DUCT SURFACES AT SHOP SHALL BE CARRIED OUT BY SHOP
AS PER THE DRAWING 3-FW-257-07356.

Stiffener can be a channel or a Beam

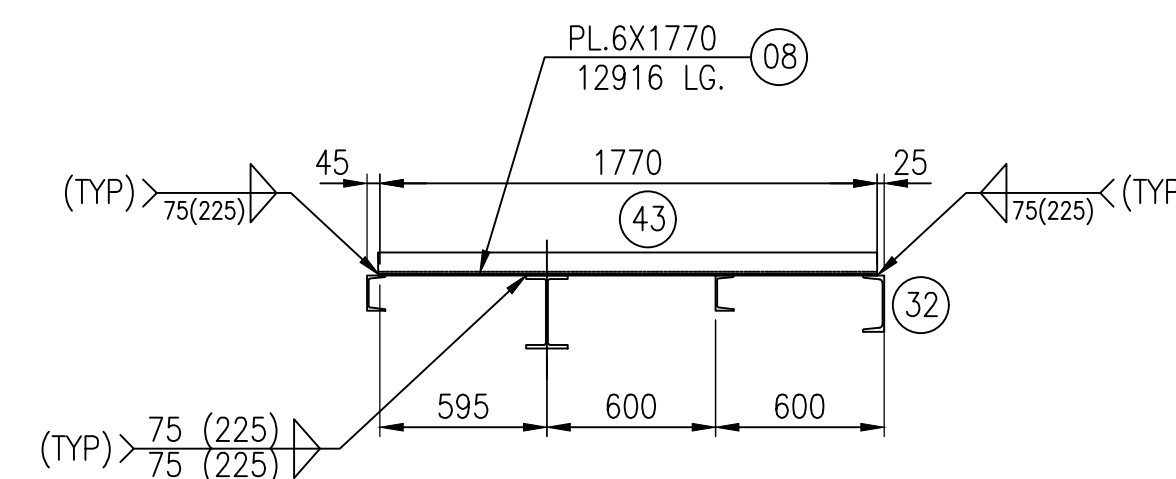


WALL TO WALL WELDING DETAILS



ITEM NO. 08

2N0s. PLATE - 2P5



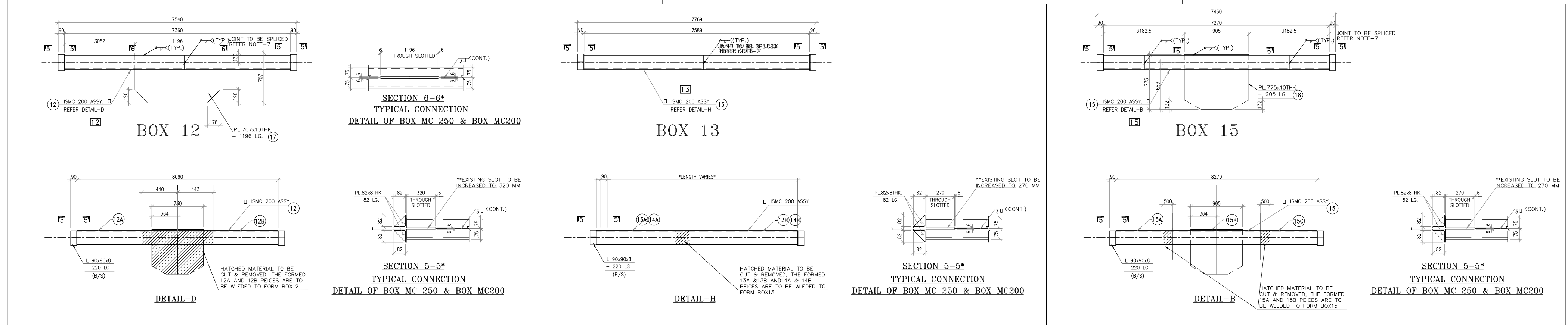
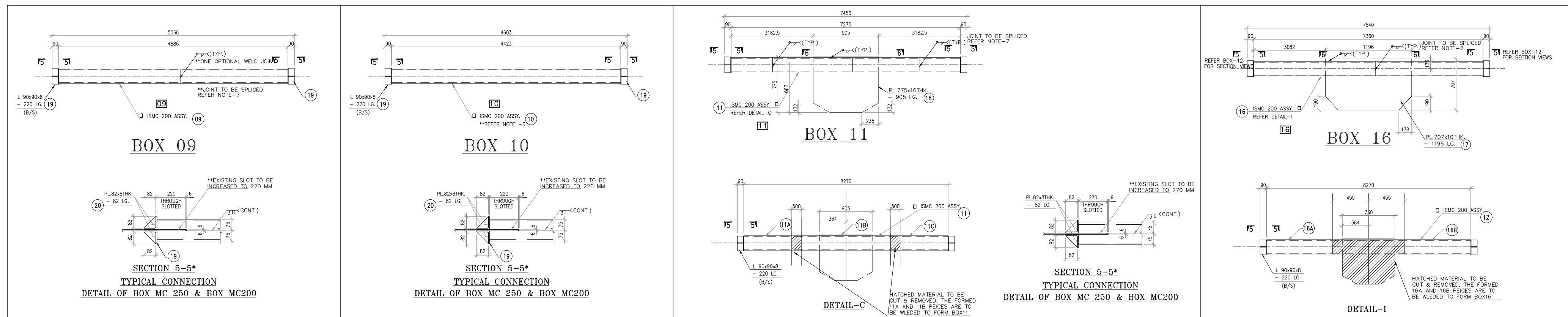
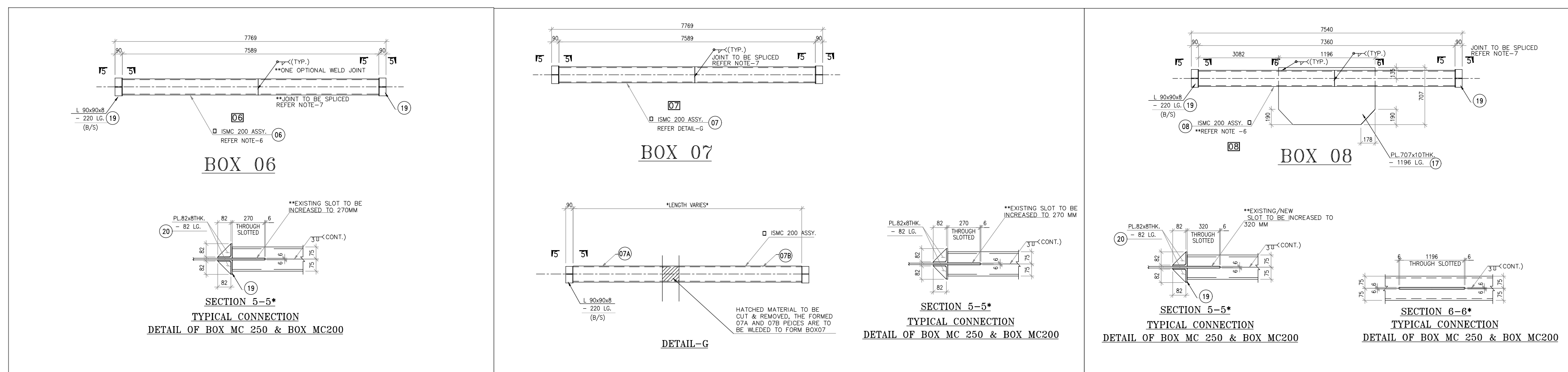
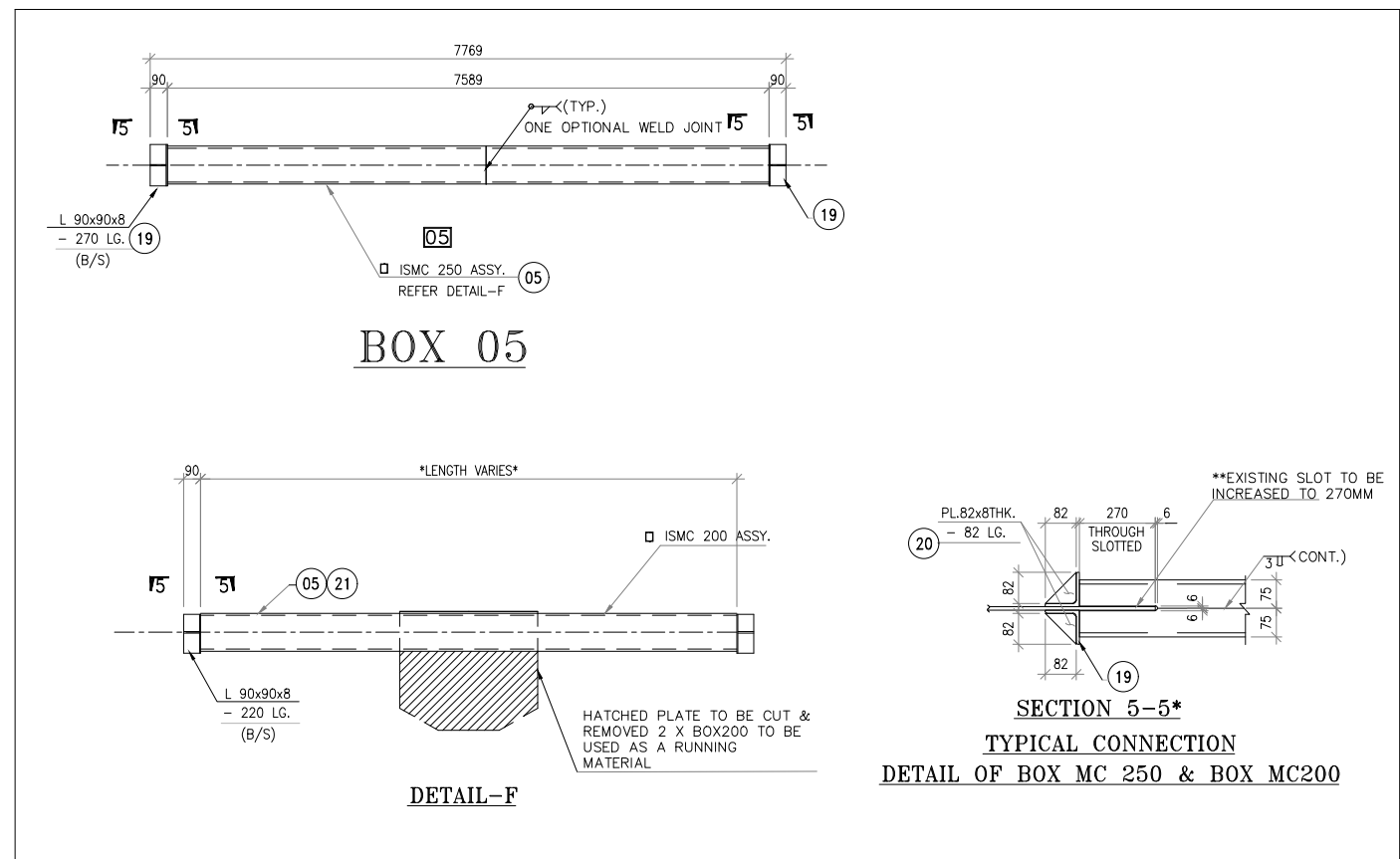
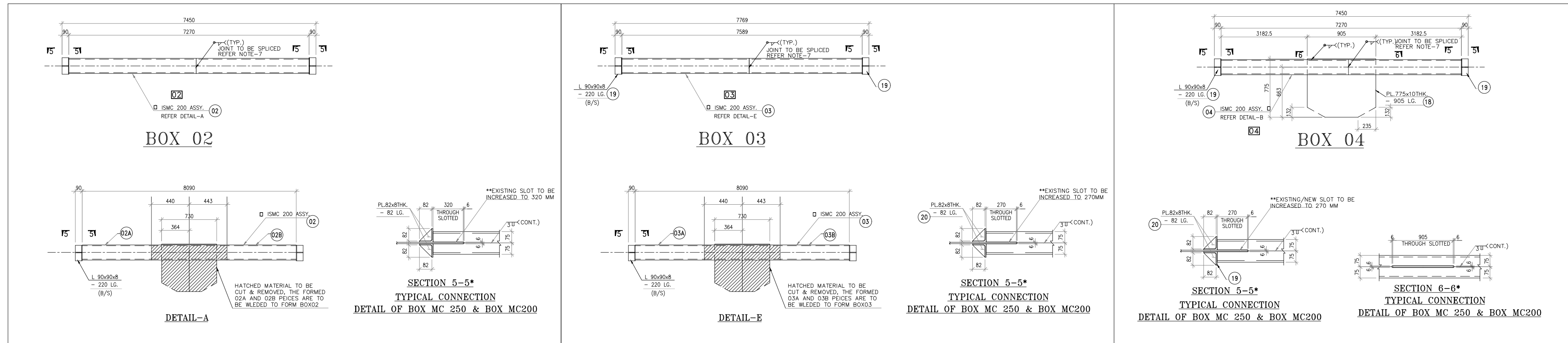
SECTION 13-13

THIS DRAWING HAS BEEN REDRAWN FROM
1-FW-255-00675

THIS DRAWING SHALL BE READ ALONG WITH

1-FW-258-11718
1-FW-258-11719
1-FW-258-11721
1-FW-258-11722
1-FW-258-11723 (FOR R4R8 BOM)
1-FW-258-11736 (FOR R4R9 BOM)
1-FW-258-11737 (FOR R4S0 BOM)
1-FW-258-11738 (FOR R4S1 BOM)

Bracing Modification
(Increase in length)



BILL OF MATERIALS							TOTAL WT. .	167572.43			
ERECTION MKD.	PART MKD.	ITEM NO.	SECTION	LENGTH	Qty FOR ONE ASSEMBLY	UNIT/WT. (Kgs.)	WEIGHT FOR ONE ASSEMBLY (Kgs.)	QTY REQUIRED	WEIGHT FOR TOTAL ASSEMBLY (Kgs.)	AREA (Sqmm.)	REMARKS
	1	1	INPB 450 ASSY.	40000	1	-	8431.67		101180.04		DIVERTED
							8431.67	12	101180.04		
	2	2	ISMC 200 ASSY.	7270	1	-	335.44		335.44		DIVERTED
							335.44	1	335.44		
	3	3	ISMC 200 ASSY.	7589	1	-	349.66		1398.65		DIVERTED
							349.66	4	1398.65		
	4	4	ISMC 200 ASSY.	7270	1	-	324.24		4215.15		DIVERTED
	18	PL775x10	905	1	78.50	52.51		682.66	668947.00		
	19	L90x90x8	220	4	10.80	9.50		123.55			
	20	PL82x8	82	4	62.80	1.69		21.96			
							386.26	13	5043.32		
	5	5	ISMC 250 ASSY.	7589	14	464.45	6502.26		6502.26		DIVERTED
	21	ISMC 250 ASSY.	7589	10	464.45	4644.47		4644.47		DIVERTED	
	19	L90x90x8	270	96	10.80	279.94		279.94			
	20	PL82x8	82	96	62.80	40.54		40.54			
							11467.20	1	11467.20		QTY: 24
	6	6	ISMC 200 ASSY.	7589	1	-	338.47		2030.62		DIVERTED
		19	L90x90x8	220	4	10.80	9.50		37.02		
		20	PL82x8	82	4	62.80	1.69		10.13		
							349.66	6	2097.97		
7	7	ISMC 200 ASSY.	7589	1	-	338.47		5415.51		DIVERTED	
	19	L90x90x8	220	4	10.80	9.50		152.06			
	20	PL82x8	82	4	62.80	1.69		27.03			
						349.66	16	5594.60			
8	8	ISMC 200 ASSY.	7360	1	-	328.26		5252.10		DIVERTED	
	17	PL707x10	1196	1	78.50	63.72		1019.56	811752.00		
	19	L90x90x8	220	4	10.80	9.50		152.06			
	20	PL82x8	82	4	62.80	1.69		27.03			
						403.17	16	6450.75			
9	9	ISMC 200 ASSY.	4886	1	-	217.92		4794.14		DIVERTED	
	19	L90x90x8	220	2	10.80	4.75		104.54		QTY 2 to be used from	
	20	PL82x8	82	2	62.80	0.84		18.58		existing	
						223.51	22	4917.27			
10	10	ISMC 200 ASSY.	4423	16	-	3156.25		3156.25		DIVERTED	
	22	ISMC 200 ASSY.	4423	8	-	1578.13		1578.13		DIVERTED	
	19	L90x90x8	220	48	10.80	114.05		114.05		QTY to be used from existing	
	20	PL82x8	82	48	62.80	20.27		20.27			
						4868.70	1	4868.70		QTY: 24	
11	11	ISMC 200 ASSY.	7589	1	-	386.26		3090.07		DIVERTED	
						386.26	8	3090.07			
12	12	ISMC 200 ASSY.	7360	1	-	463.14		1389.41		DIVERTED	
	17	PL707x10	1196	1	78.50	63.72		191.17	811752.00		
13	13	ISMC 200 ASSY.	7589	1	-	349.66		1580.58		DIVERTED	
						349.66	32	11189.20			
15	11	ISMC 200 ASSY.	7589	1	-	386.26		3090.07		DIVERTED	
						386.26	8	3090.07			
16	16	ISMC 200 ASSY.	7360	1	-	463.14		4631.37		DIVERTED	
17	17	PL707x10	1196	1	78.50	63.72		637.23	811752.00		
						526.86	10	5268.60			

- NOTES:-
1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
 2. ALL FILLET SHAP WELD ARE 6MM. THICK AND 50% WELD ARE 6MM. THICK. UNDO
 3. SECTION DETAILS 5-5 & 6-6 ARE TO BE REFERRED FOR THE PARTICULAR BOX ONLY.
 4. FOR ITEM NO 02 AND 21, GUSSET PLATE TO BE CUT AND BOX CHANNEL TO BE USED AS RUNNING MATERIAL.
 5. THROUGH SLOTTED LENGTH TO BE MAINTAINED IN EACH BOX AS PER SECTION 5-5* DETAILS CORRESPONDINGLY.
 6. FOR BOX 6, BOX 8 & BOX10, RAW MATERIAL TO BE TAKEN AS RUNNING MATERIAL.
 7. ALL SHOT JOINTS IN THE BOX 250/ 800200 ARE TO BE SPLICED.

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be reproduced or used in any way detrimental to the interest of the company.

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



BHARAT HEAVY ELECTRICALS LTD.,
UNIT: BOILER AUXILIARIES PLANT,
RANIPET - 632 406.

DEPT
ACCS
CODE 862

GRADE OF
UNTO/LDIM
PR:QA:500



SCALE
WEIGHT (KG.)

REF. TO ASSY/OLD DRG.

CARD
CODE
U 01

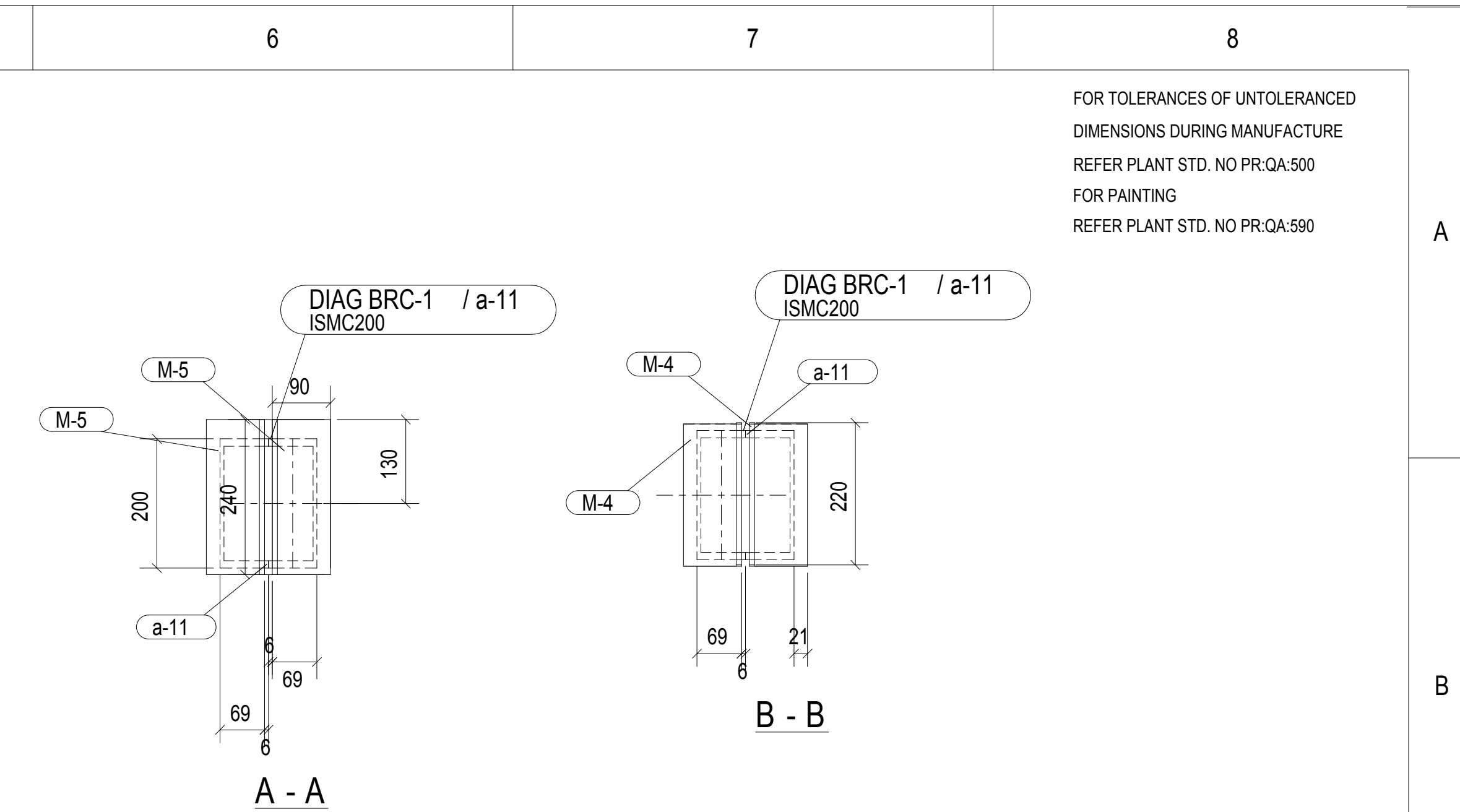
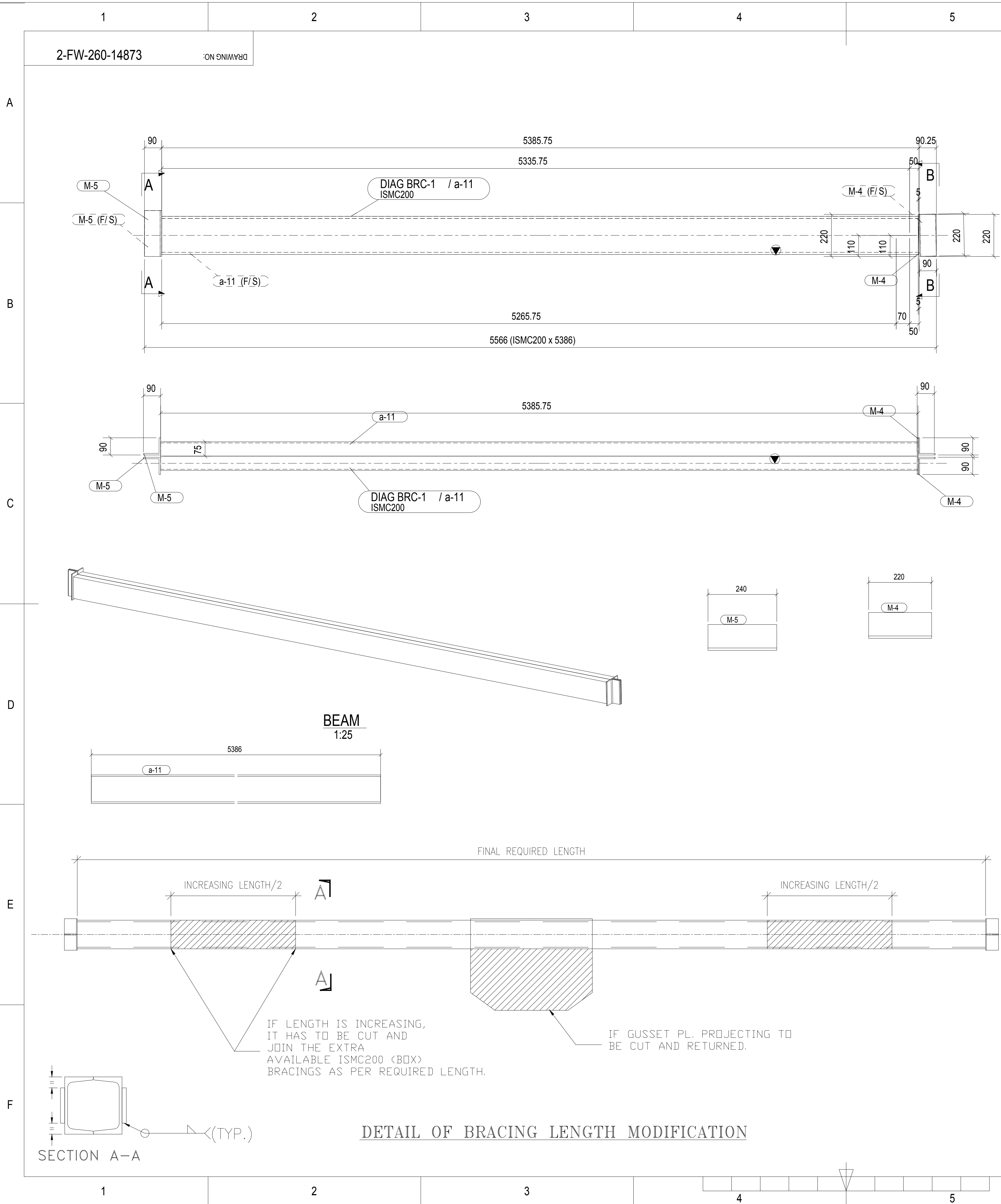
DRAWING NO.

1-FW-260-12017

REV

00

REV DATE ALTERED
ZONE CHECKED



MODIFICATION NOTES:-

1. VERTICAL BRACING'S ARE TO BE MODIFIED FROM OLD AVAILABLE BRACING SHORTFALL IN LENGTH TO BE ADJUSTED WITH THE JOINT PIECE PROVIDED IN GMS.
2. IF OLD HORIZONTAL BRACING IS USED FOR NEW DIAGONAL BRACING GUSSET PLATE PROJECTING OUTSIDE THE MEMBER TO BE CUT AND RETURNED.
3. ANY CLARIFICATIONS AND DISCREPANCIES TO BE ADDRESSED WITH ENGINEERING BEFORE STARTING THE FABRICATION.

NOTES:-

FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS
FOR WELDING DETAILS, REFER 0-FW-220-03577 (LATEST).

FOR GA REFER, 0-FW-260-08997.

FOR FABRICATION NOTES, REFER 4-00-000-32487 (LATEST).

FOR PRODUCTION NOTES, REFER 2-FW-220-00686 (LATEST).

DIMENSIONS IN DECIMAL, ROUND OFF TO NEAREST INTEGER.

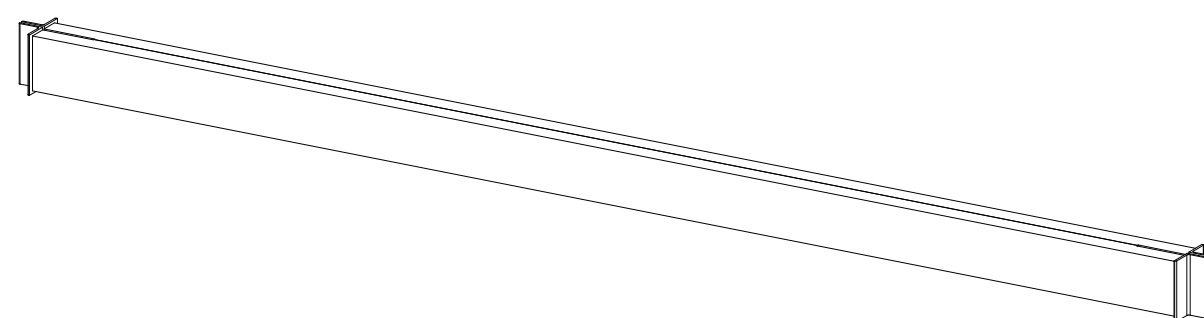
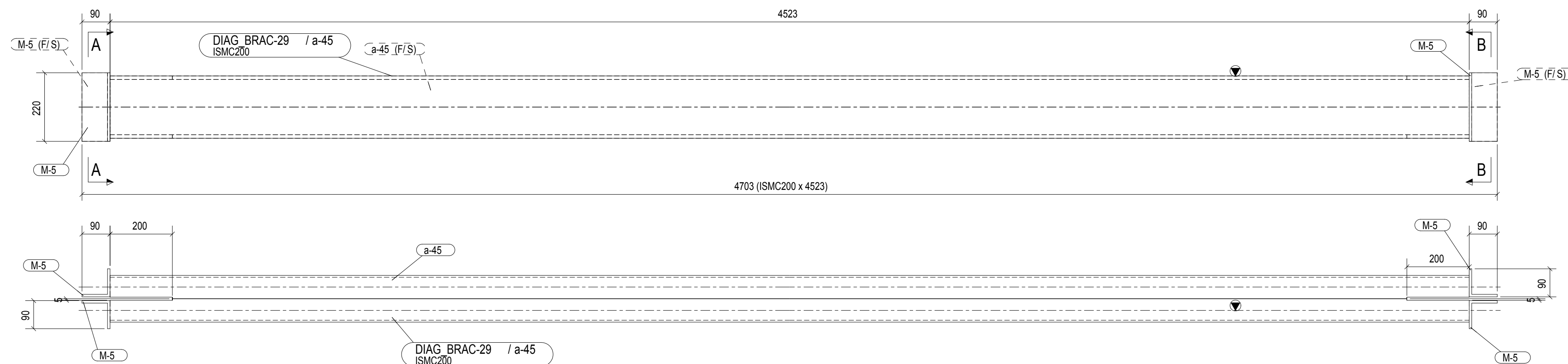
	3	ISMC200 5386		a-11		G303FW261008		No	120.101		
	2	ISA90X90X8 240		M-5		IS2062E250A(Fe410W)		No	2 600		
	1	ISA90X90X8 220		M-4		IS2062E250A(Fe410W)		No	2 383		
						IS2062E250A(Fe410W)			2		
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS	ZONE
					VAR NO	MATERIAL SPECN		DI	QUANTITY		

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

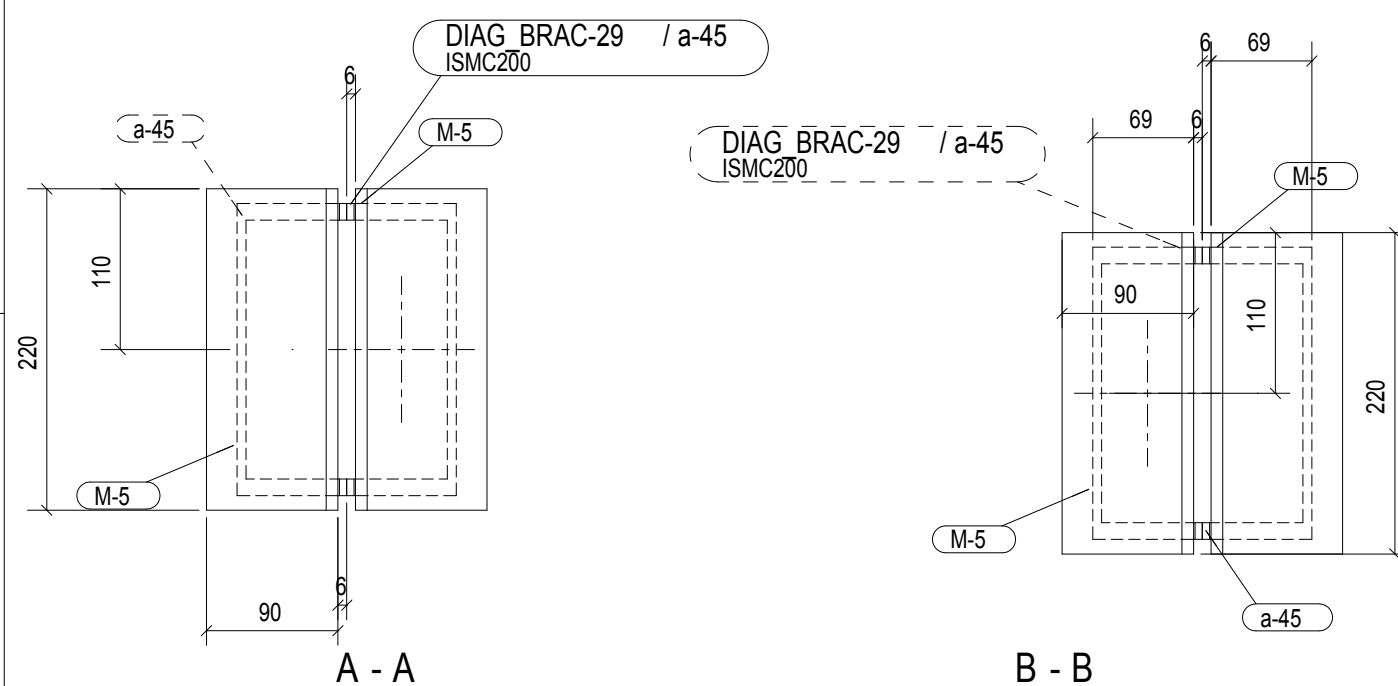
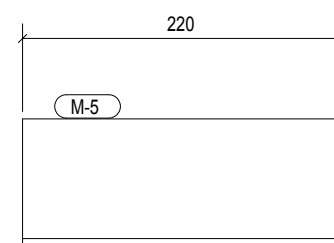
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT							
	Bharat Heavy Electricals Ltd UNIT:BOILER AUXILIARIES PLANT RANIPET-632406			DRN	NAME	SIGNATURE	DATE
				CHD	MAHEN		16.05.2022
				APPD	KB PADHI		16.05.2022
DEPT AQCS	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE NTS	WEIGHT (Kg) 250.168	REF TO ASSY / OLD DWG		
CODE 862							
TITLE DIAG BRC-1					DRAWING NO : 2-FW-260-14873		REV

6	7	8
---	---	---

FOR TOLERANCES OF UNTOLERANCED
DIMENSIONS DURING MANUFACTURE
REFER PLANT STD. NO PR:QA:500
FOR PAINTING
REFER PLANT STD. NO PR:QA:590



BEAM
1:25



UNIT	MATERIAL FROM	QTY
G301	G303FW261004	1
G302	G303FW261009	1
G303	G304FW261009	1
G304	G304FW260005	1

NOTES:-

FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS
FOR WELDING DETAILS, REFER 0-FW-220-03577 (LATEST).

FOR GA REFER, 0-FW-263-09079 & 09080.

FOR FABRICATION NOTES, REFER 4-00-000-32487 (LATEST).

FOR PRODUCTION NOTES, REFER 2-FW-220-00686 (LATEST).

DIMENSIONS IN DECIMAL, ROUND OFF TO NEAREST INTEGER.

ONE CLEAT TO BE WELDED IN 3-CORNERS AND OND CLEAT TO BE TACK WELDED AT SHOP.

MODIFICATION PROCESS MENTIONED IN DRAWING NO.
2-FW-260-15316 TO REFERRED AND FOLLOWED.

	2	ISMC200 4523		a-45		IS2062E250A(Fe410W)		No	100.865		
	1	ISA90X90X8 220		M-5		15-013-004		No	2.383		
						IS2062E250A(Fe410W)		No	4		
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	ACPD	UNIT	UNIT WEIGHT	GS	ZONE
					VAR NO	MATERIAL SPECN		DI	QUANTITY		

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd
UNIT:BOILER AUXILIARIES PLANT
RANIPET-632406

DRN	NAME KORAH	SIGNATURE	DATE 21.05.2022
CHD	MAHEN		23.05.2022
APPD	KBPADHI		23.05.2022

DEPT	AQCS
CODE	862

5	ALL DIMENSIONS ARE IN MM
---	-----------------------------

	SCALE
--	-------

NTS

WEIGHT (Kg)	211.263
-------------	---------

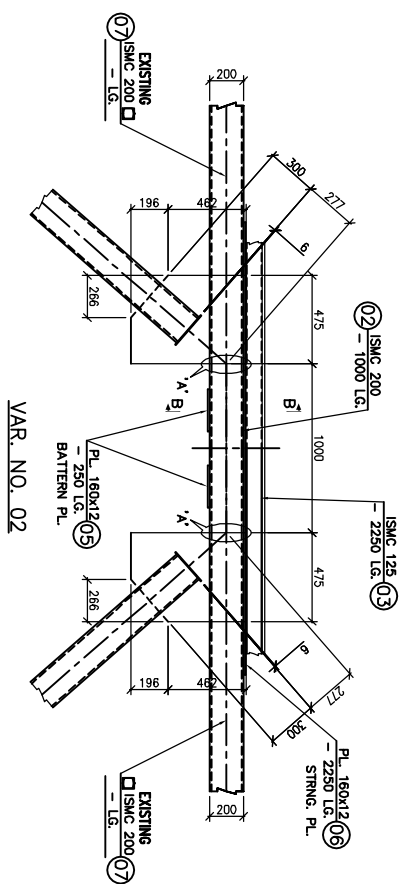
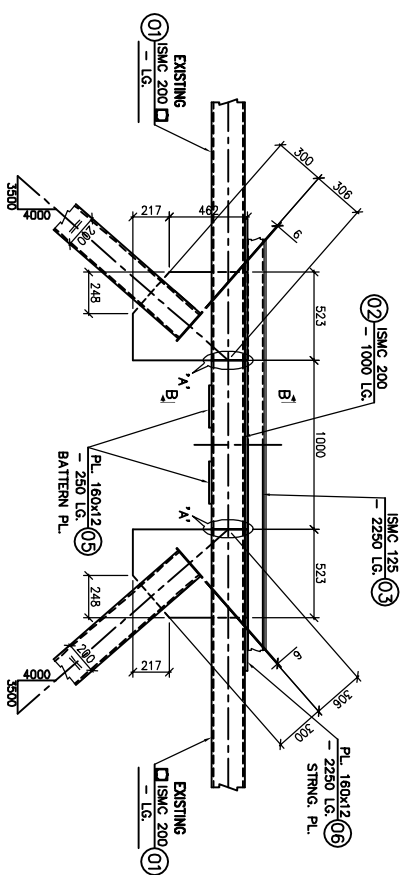
REF TO ASSY / OLD DWG	
-----------------------	--

TITLE	DIAG BRAC-29
-------	--------------

DRAWING NO :
2-FW-263-15229

[illegible]

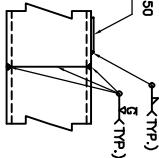
LENGTH MODIFICATION (INCREASING) DETAILS OF HORIZONTAL BRACING



VAR. NO. 01

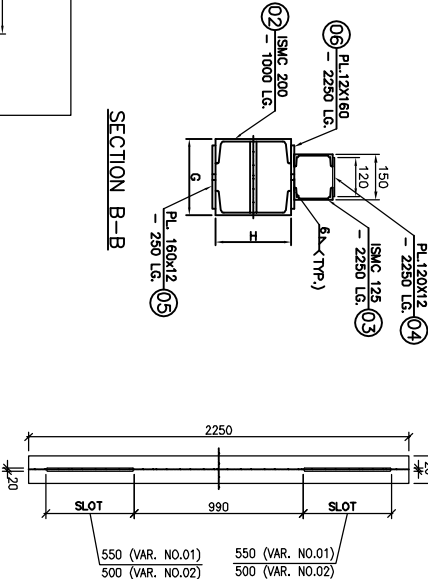
VAR. NO. 02

ITEM NO. 05 - PL 12X160X950
ADDITIONAL STRENGTHEN
PLATE (TOP SIDE ONLY)

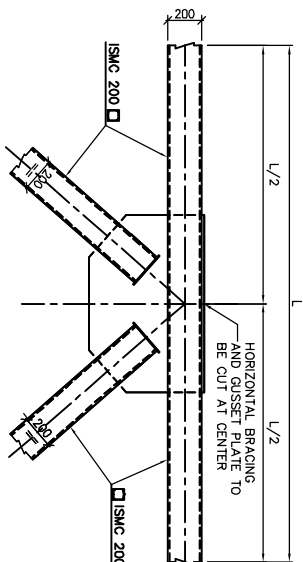


DETAIL - A

SECTION B-B



DETAIL OF ITEM NO.06



CUTTING DETAIL FOR EXISTING HORIZONTAL BRACING

- ERECTION NOTES:-**
01. FOR ERECTION REFER RELEVANT QUALITY CHECK LIST.
 02. THE HORIZONTAL AND DIAGONAL BRACING SHALL BE ERECTED ACCORDING TO SITE CONDITION.
 03. GUSSET POSITION ARE TO BE DISAPED BEFORE ERECTION COLUMNS.

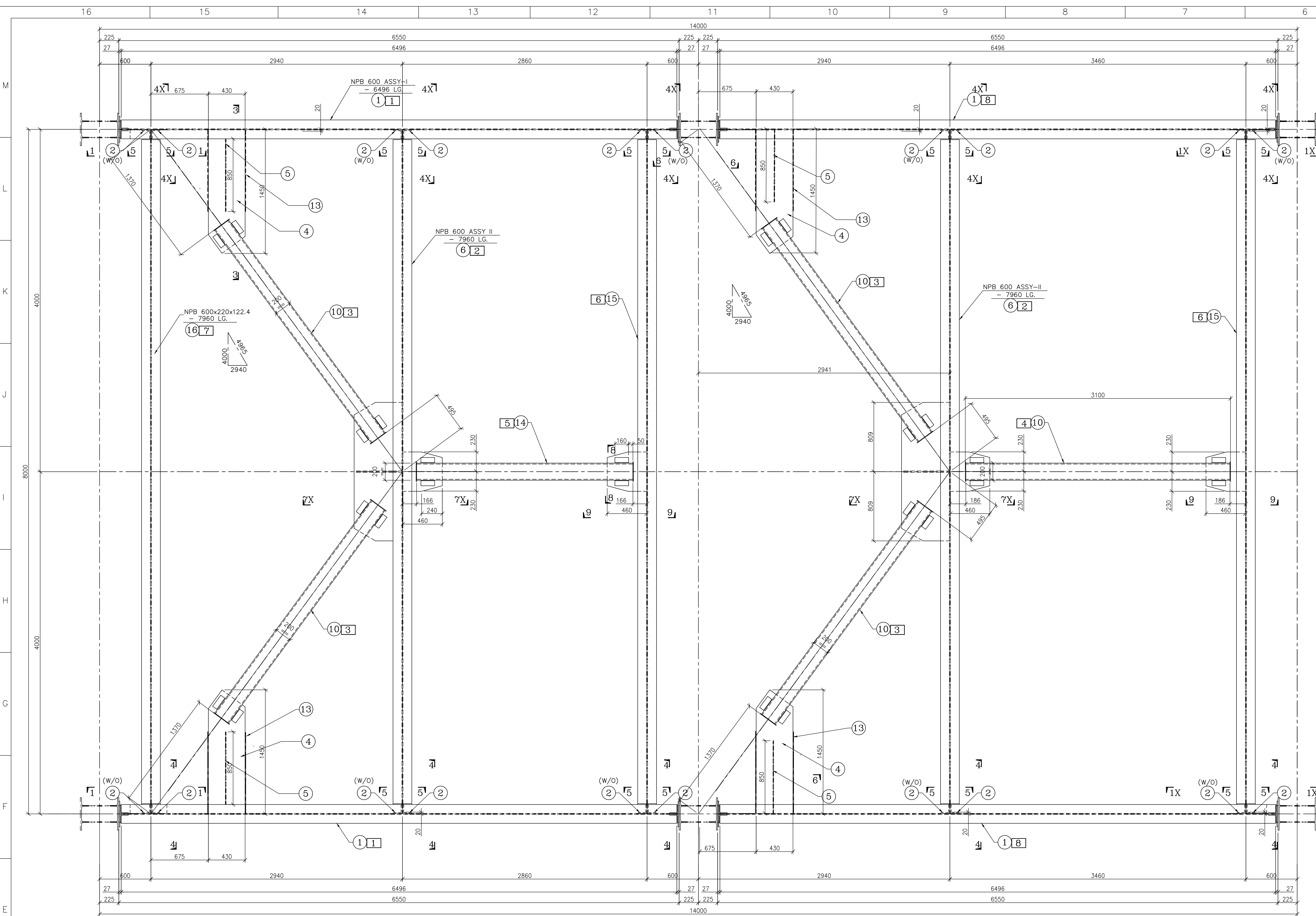
- NOTES:-**
1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
 2. ALL FILLET SHOP WELD ARE 8mm. THICK AND SITE WELD ARE 8mm. THICK. UNL.O

FOR MORE DETAILS REFER FOLLOWING DRAWING NUMBERS
0-FW-260-00244/02
1-78-881-04093

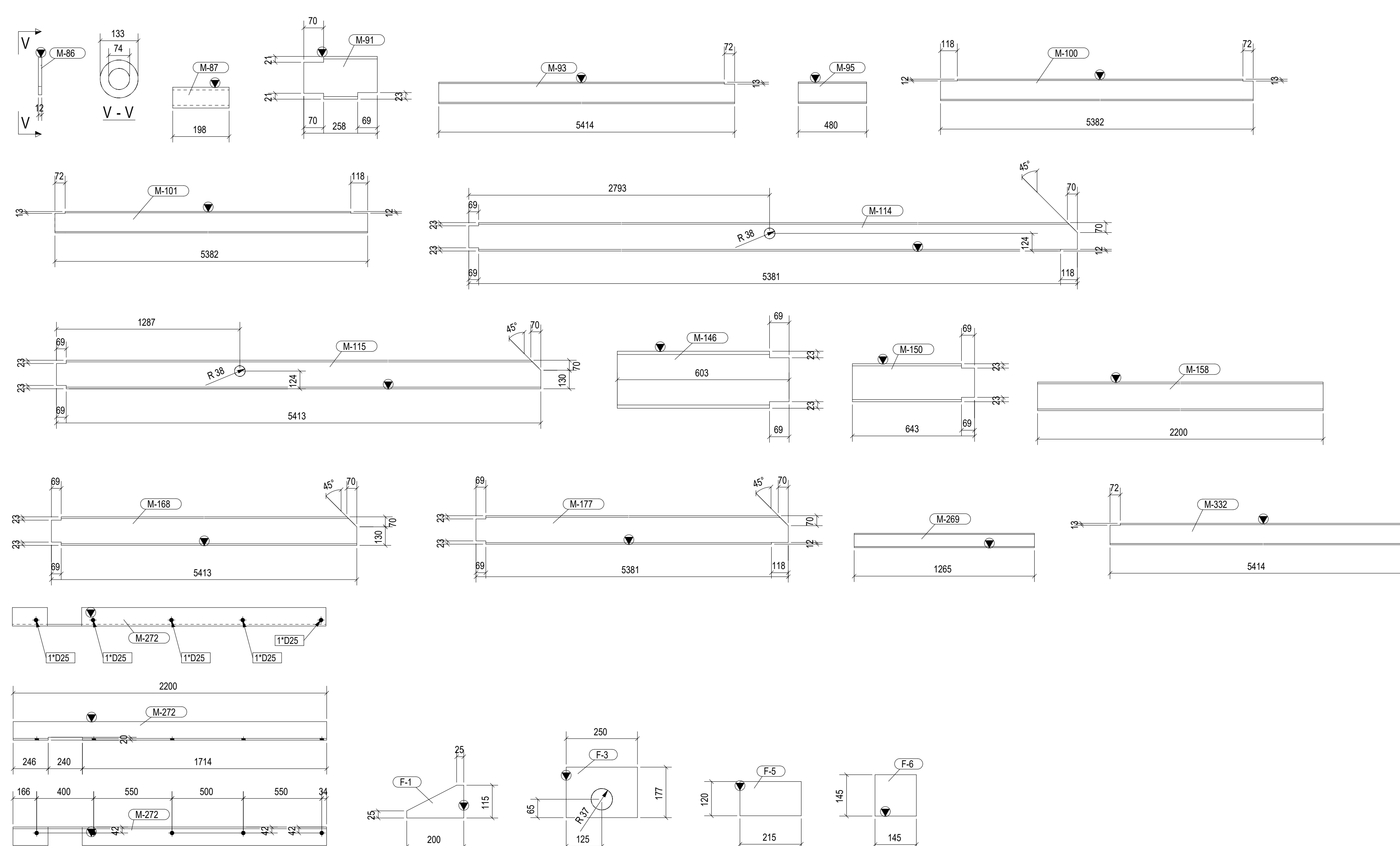
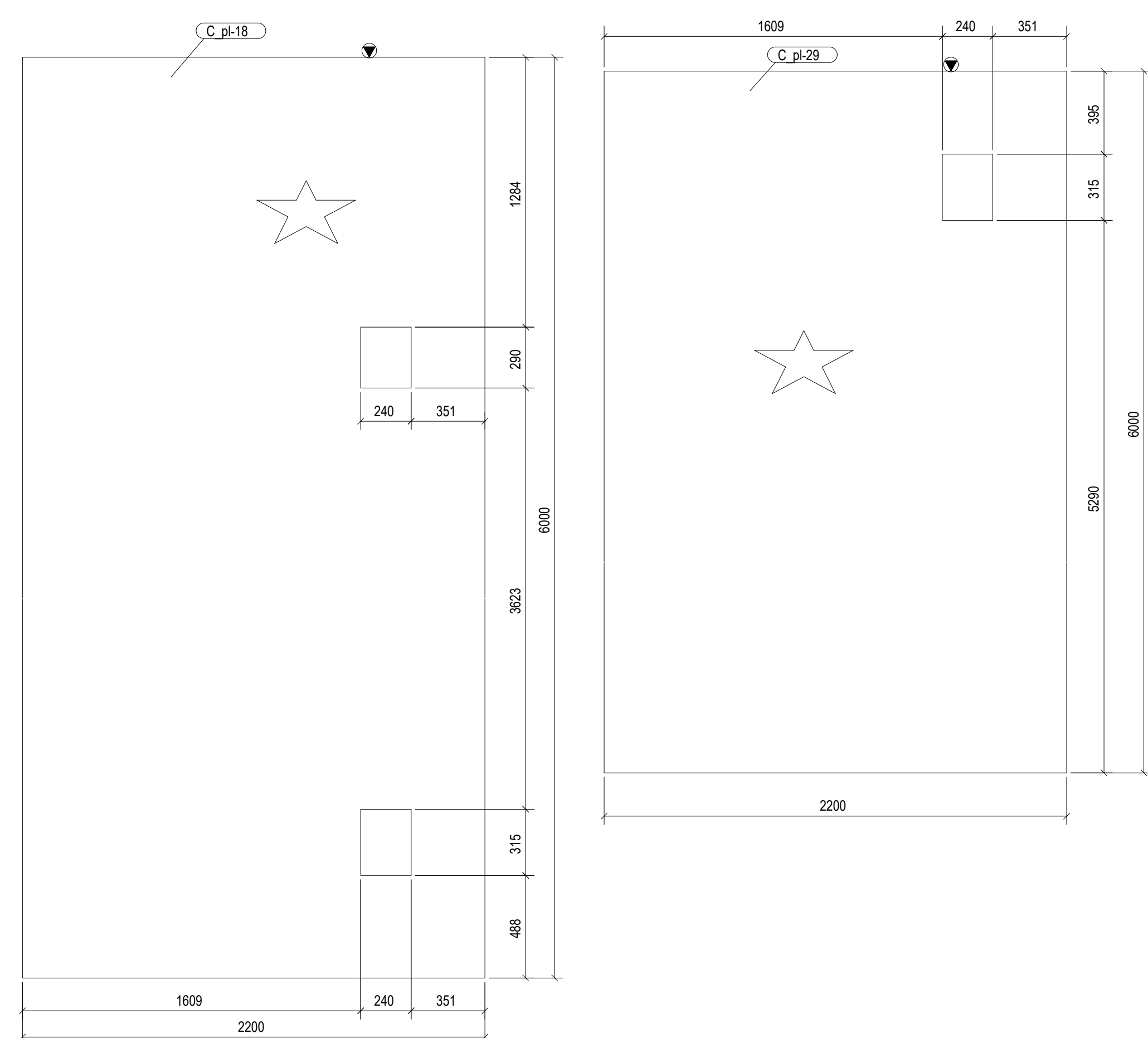
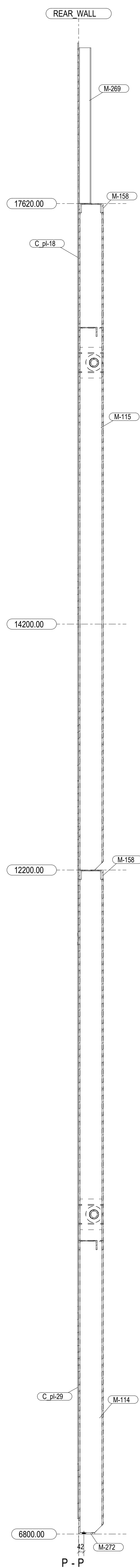
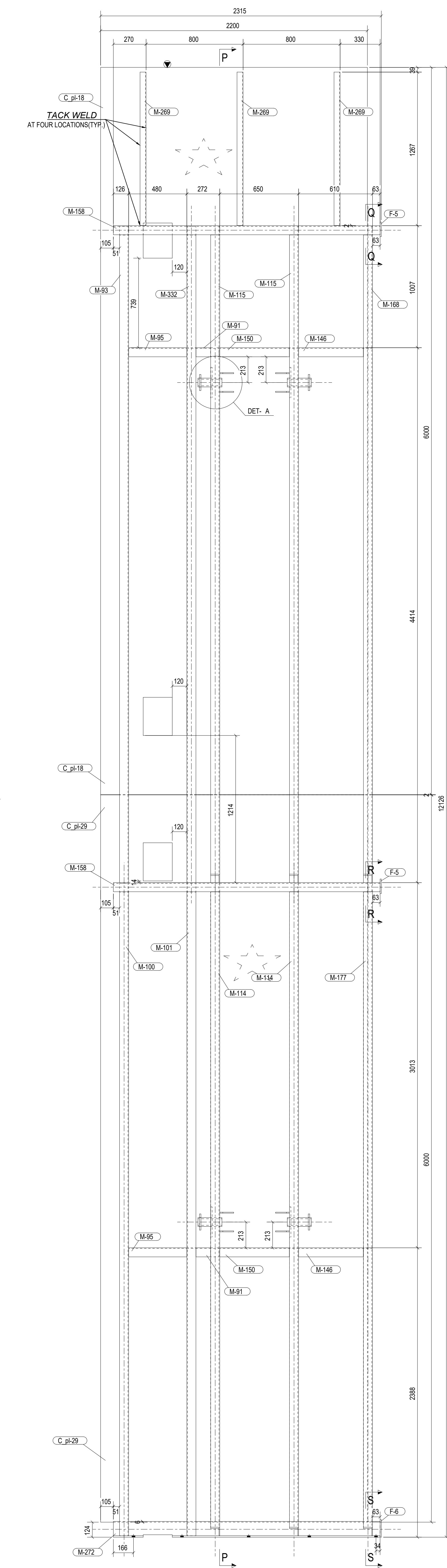
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER/SIZE	ITEM NO	MATERIAL CODE	MATERIAL SPECN	UNIT WEIGHT	QUANTITY	ZONE
02	06	PLATE 12 160X2250				AA1011808099		33.912		
02	05	PLATE 12 160X250				AA1011808099		3.768		
02	04	PLATE 12 120X2250				AA1011808099		25.434		
02	03	ISMC 125				AA1012708047		29.475		
02	02	ISMC 200				AA1012708101		22.30		
02	01	ISMC 200 (BOX)				IS 2062 G.R.A		321.386		
02	07	6448				G801FW260006D		1		
01	06	PLATE 12 160X2250				AA1011808099		33.912		
01	05	PLATE 12 160X250				AA1011808099		3.768		
01	04	PLATE 12 120X2250				AA1011808099		25.434		
01	03	ISMC 125				AA1012708047		29.475		
01	02	ISMC 200				AA1012708101		22.30		
01	01	ISMC 200 (BOX)				IS 2062 G.R.A		321.386		
01	07	6448				G801FW260006D		1		

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
BHARAT HEAVY ELECTRICALS LTD. UNIT: ROHTAS KANUNJES PLANT.		BHARAT HEAVY ELECTRICALS LTD. UNIT: ROHTAS KANUNJES PLANT.	
REV	DATE	REV	DATE
01	01/01/2024	01	01/01/2024
DUCST SUPPORT MODIFICATION		DUCST SUPPORT MODIFICATION	
3-FW-260-08583 00		3-FW-260-08583 00	

Bracing Modification
(Decrease in length)



Cutting of hole



NOTES:-

FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS.
01.FOR ALL SHOP WELDS REFER TO STANDARD DRG.0-FW-221-05774
02.FOR ALL SITE WELDS EDGE PREPARATION TO BE DONE AT SHOP
03.ALL HORIZONTAL CHANNELS AND ANGLES WHICH WILL HAVE CONTINUITY
ARE TO BE EDGE PREPARED AT SHOP
04.ALL C276 PLATES ARE TO BE EDGE PREPARED AT SHOP FOR SITE WELD
05.ALL THE MATERIALS USED ARE IS2062 GRADE UNLESS NOTED
06.FOR TOLERANCES AND TRANSPORTATION DETAILS REFER THE STD DRG.
0-FW-221-02167
07.FOR ALL MATERIAL CODES REFER RESPECTIVE GMS.

★ C276 SIDE OF CLAD PLATE

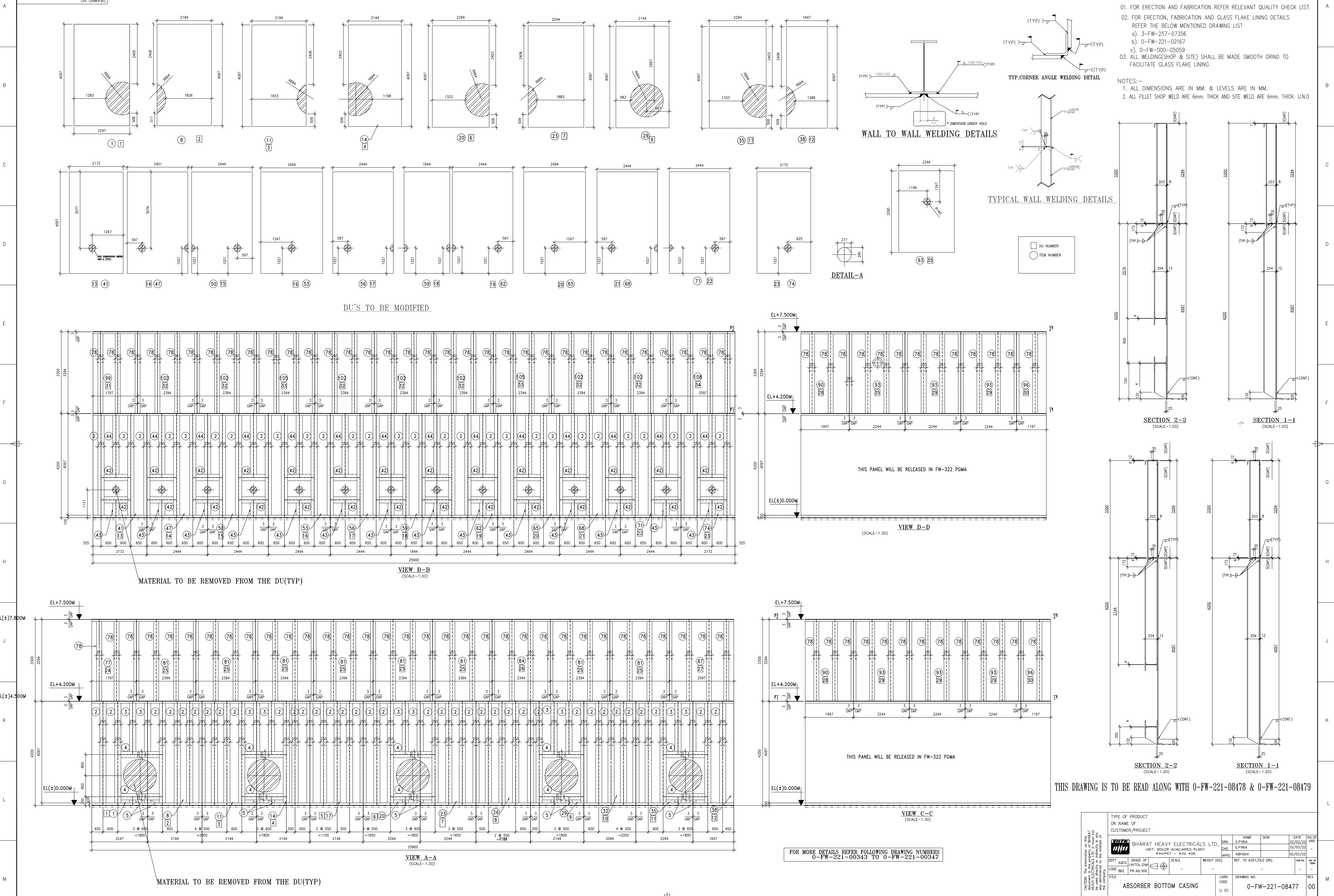
 CARBON STEEL OF CLAD PLATE

NOTES:-

FOR ASSEMBLY, REFER PRINCIPAL DRAWING MENTIONED IN GMS

SHEET NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	UNIT	WEIGHT	GS
					UNIT NO	MATERIAL SPECN	QTY	QTY	
23	ISMC150 5414	M-332					No	90.954	
22	ISA100X130X12 2200	M-272					No	51.700	
21	ISMC100 1085	M-269					No	12.592 3	
20	ISMC200 5381	M-177					No	119.994	
19	ISMC200 5413	M-168					No	120.708	
18	ISMC200 2200	M-158					No	49.060	
17	ISMC200 66	M-150					No	14.337	
16	ISMC200 66	M-146					No	13.445	
15	ISMC200 5413	M-115					No	120.708	
14	ISMC200 5381	M-114					No	119.994	
13	ISMC150 5382	M-101					No	90.416	
12	ISMC150 5382	M-100					No	90.416	
11	ISMC150 480	M-95					No	8.064	
10	ISMC150 5414	M-93					No	90.954	
9	ISMC150 220	M-91					No	4.334	
8	OT39 S3 18	M-87					No	2.877	
7	PLATE 12 153 X 103	M-86					No	0.889	
6	PLATE-10 16.0x145.0	F-6					No	1.650	
5	PLATE-10 120.0x15.0	F-5					No	2.025	
4	PLATE-12 177.0x250.0	F-3					No	3.798	
3	PLATE-9 115.0x200.0	F-1					No	0.950 8	
2	PLATE-9 200.0x600.0	C-pl-29					No	927.197	
1	PLATE-9 200.0x600.0	C-pl-18					No	922.280	

CAPTION: The information on this document is the property of BHS&T and is not to be distributed outside of BHS&T. It may not be used directly or indirectly in any way that would reflect on the interest of that company.	TYPE OF PRODUCT		OR NAME OF CUSTOMER/PROJECT					
			Bharat Heavy Electricals Ltd		DIN	NAME	IDENTIFY	DATE
			UNIT-BOILER AUXILIARIES PLANT		CO	NAME		DATE
			RANIPET-632406		APD	PADH		DATE
					REF TO: ASST. LD. DWG			
QTY	AQCS	ALL DIMENSIONS ARE IN MM	WEGEET	SCALE	WEIGHT (Kg)			
CODE	862			NTS	3244.210			
TITLE					DRAWING NO:			REV
AB_CA_321-134					0-FW-322-08471			

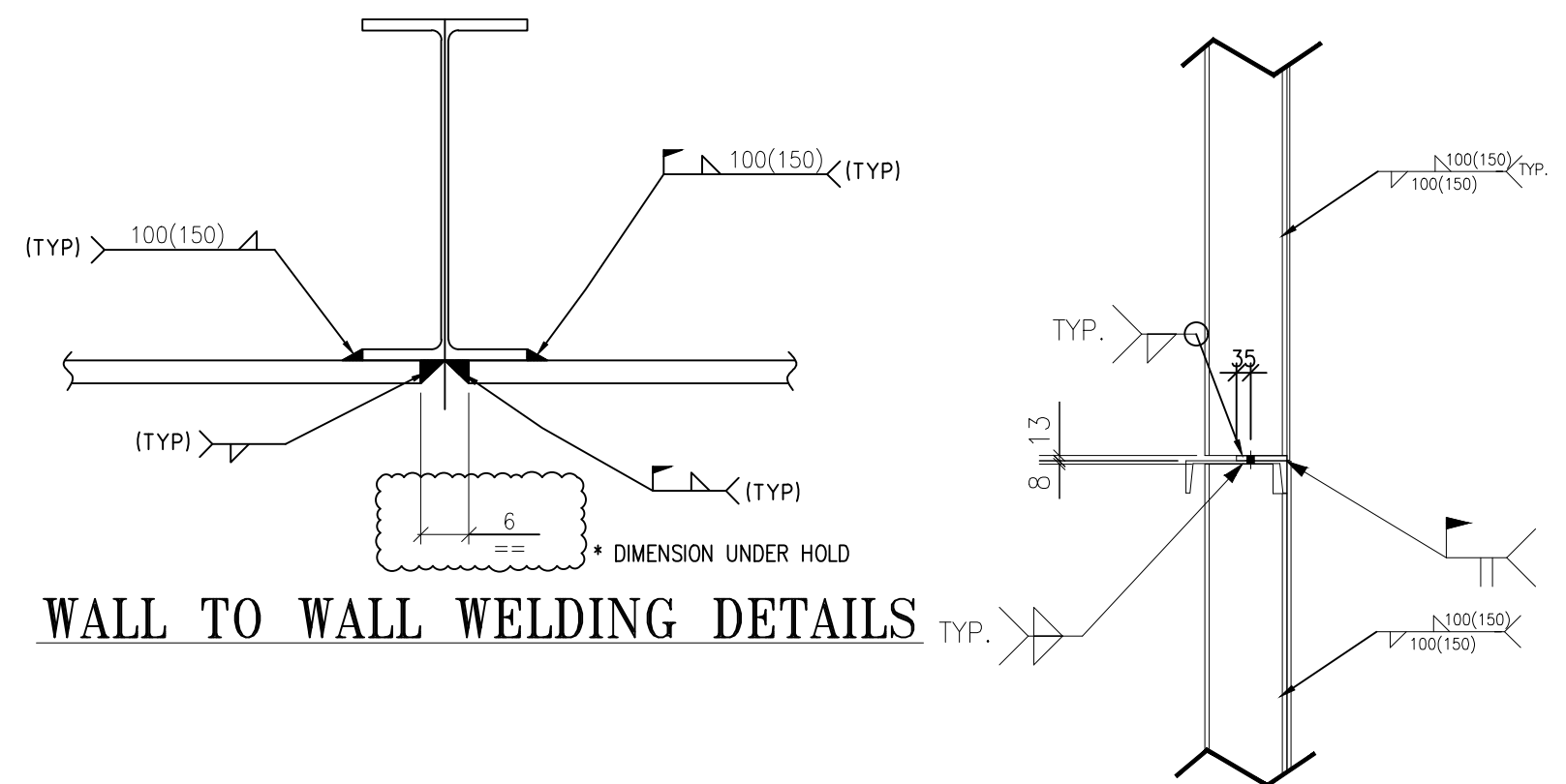
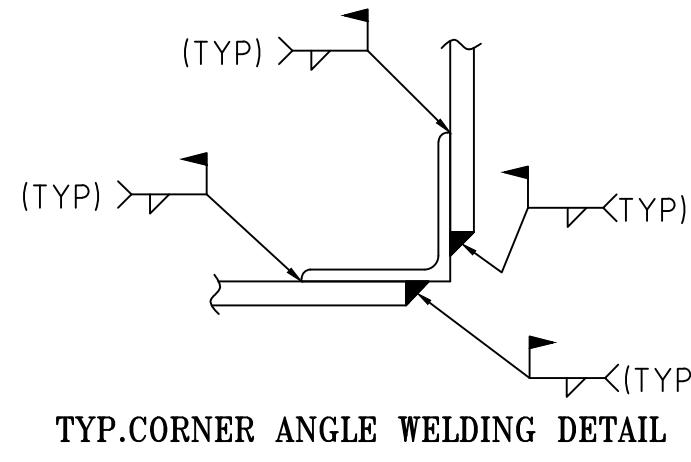


IMPORTANT NOTES:-

01. FOR ERECTION AND FABRICATION REFER RELEVANT QUALITY CHECK LIST.
02. FOR ERECTION, FABRICATION AND GLASS FLAKE LINING
REFER THE BELOW MENTIONED DRAWING LIST
a). 3-FW-257-07356
b). 0-FW-221-02167
c). 0-FW-000-05059
03. ALL WELDING(SHOP & SITE) SHALL BE MADE SMOOTH GRIND TO
FACILITATE GLASS FLAKE LINING

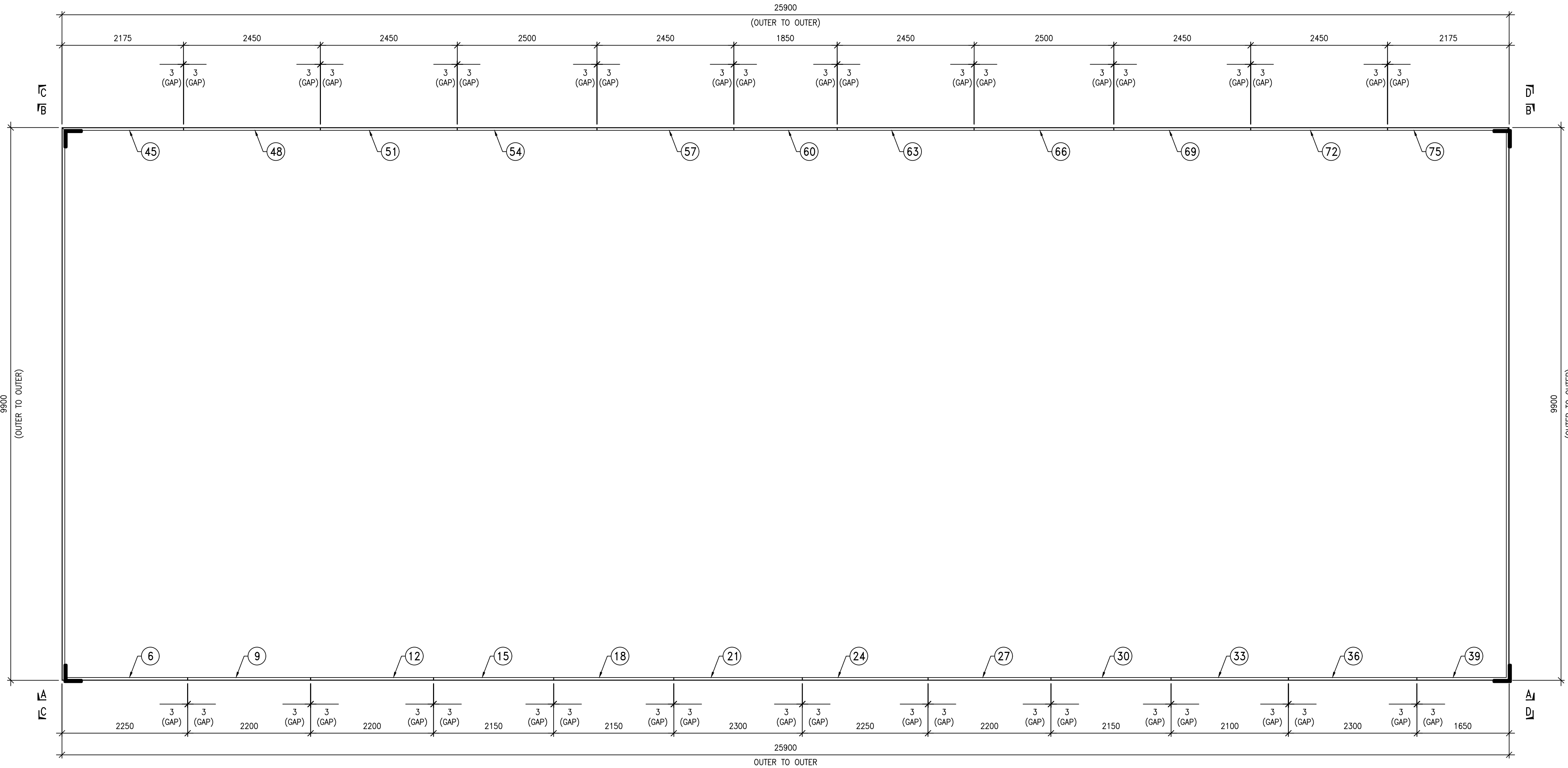
NOTES:-

1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
2. ALL FILLET SHOP WELD ARE 6mm. THICK AND SITE WELD ARE 6mm. THICK. U.N.O

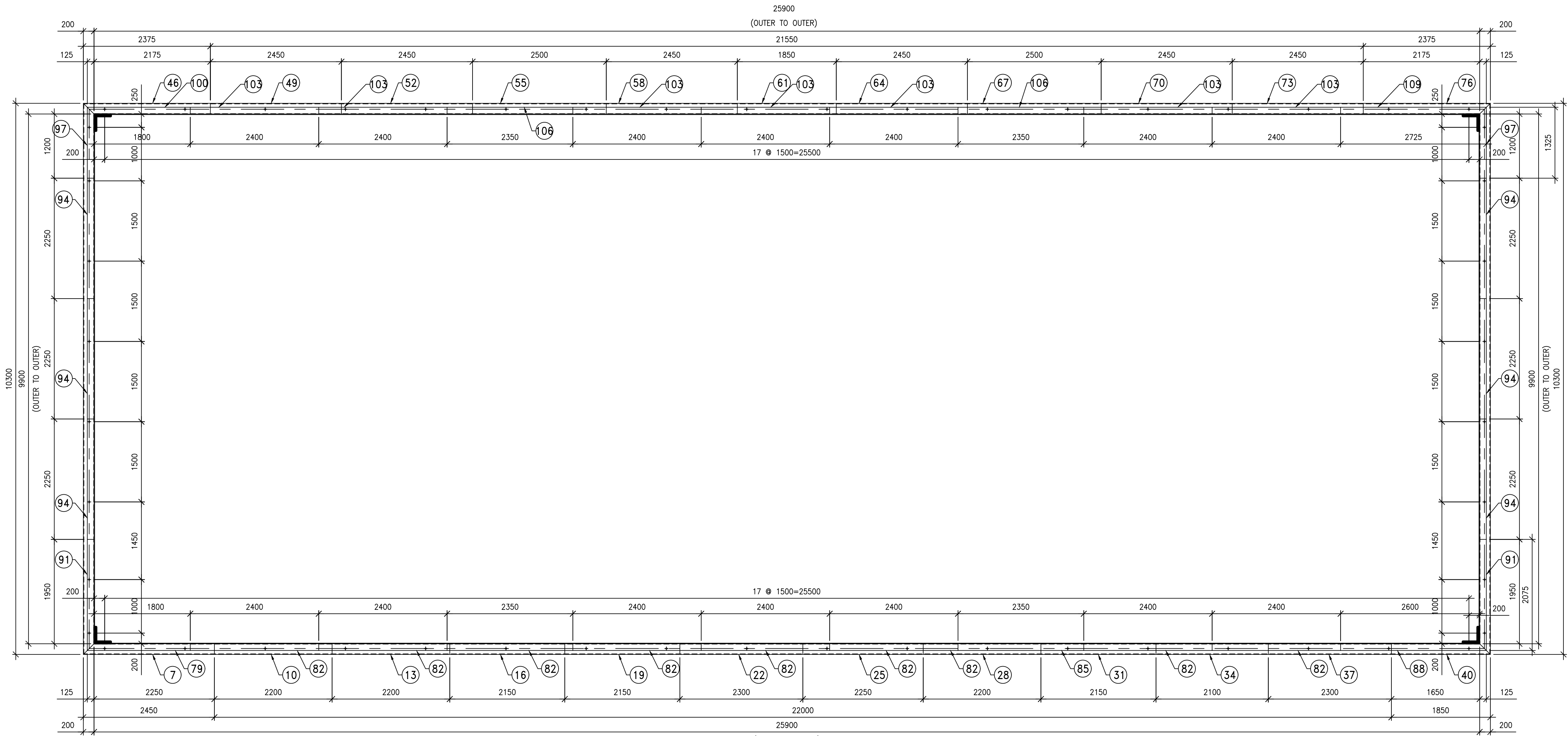


TYPICAL WALL WELDING DETAILS

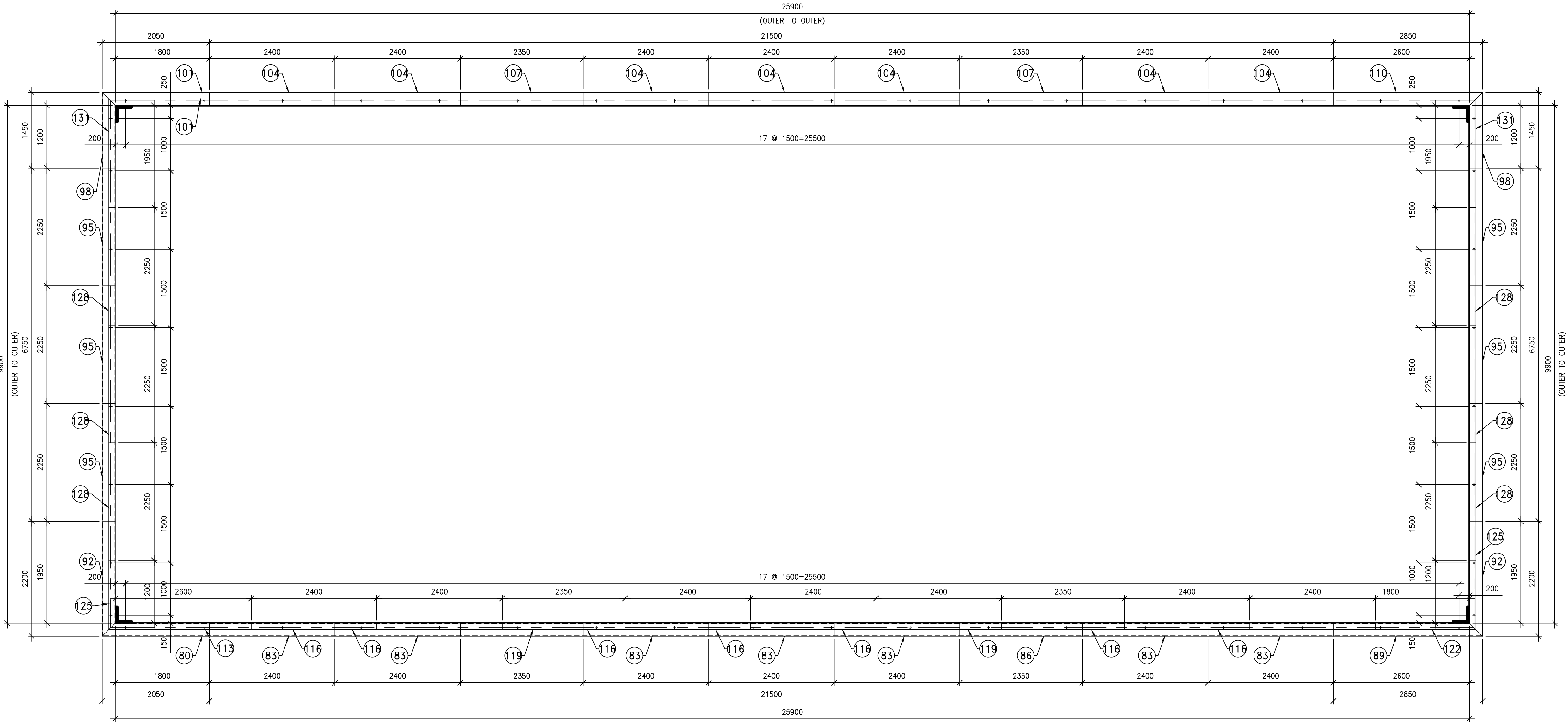
THIS DRAWING IS TO BE READ ALONG WITH 0-FW-221-08477 & 0-FW-221-08478



MARKING PLAN OF ABSORBER BOTTOM CASING
(SCALE=1:40)



SECTION 1-1
(SCALE=1:40)

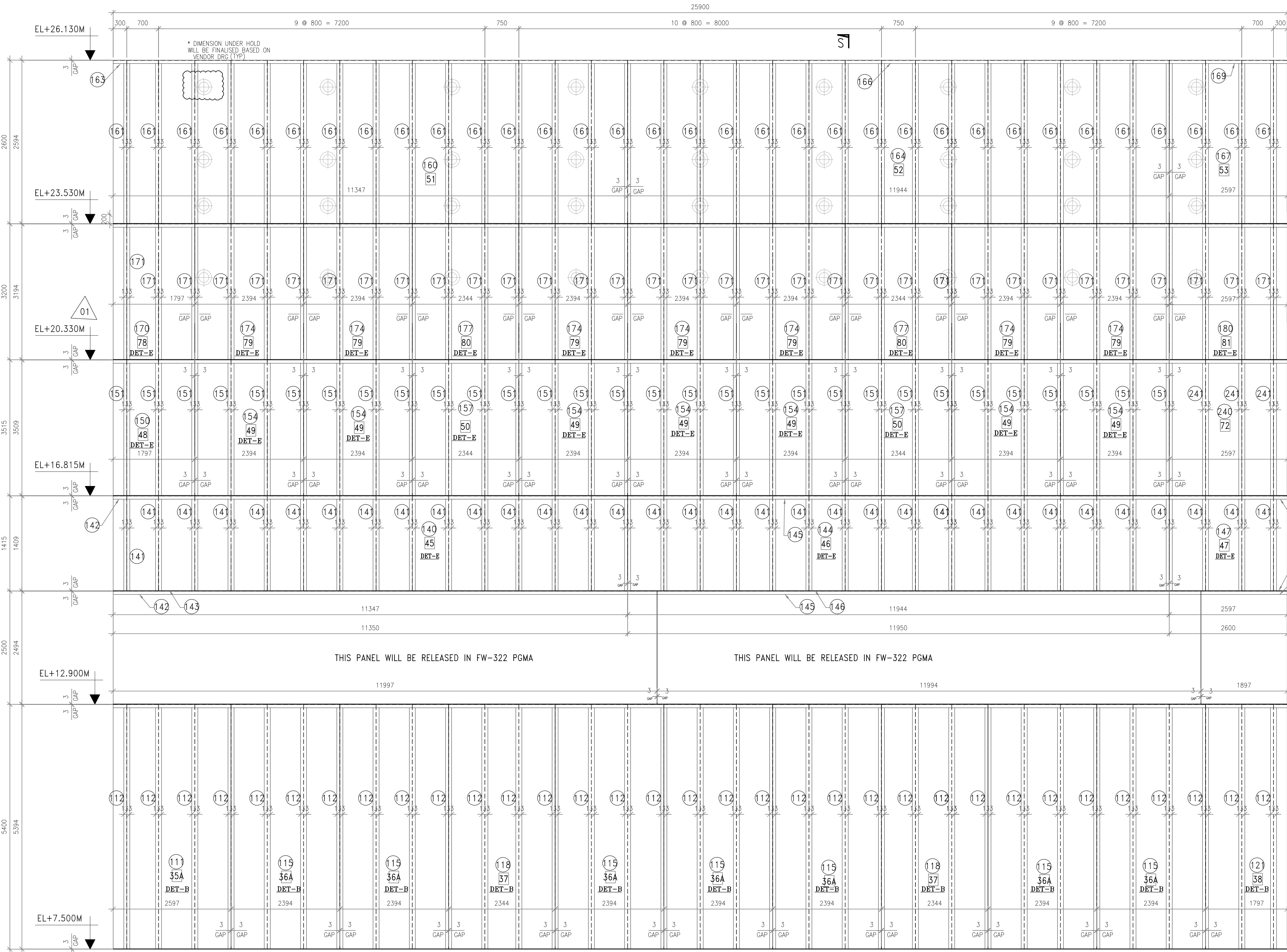


SECTION 2-2
(SCALE=1:40)

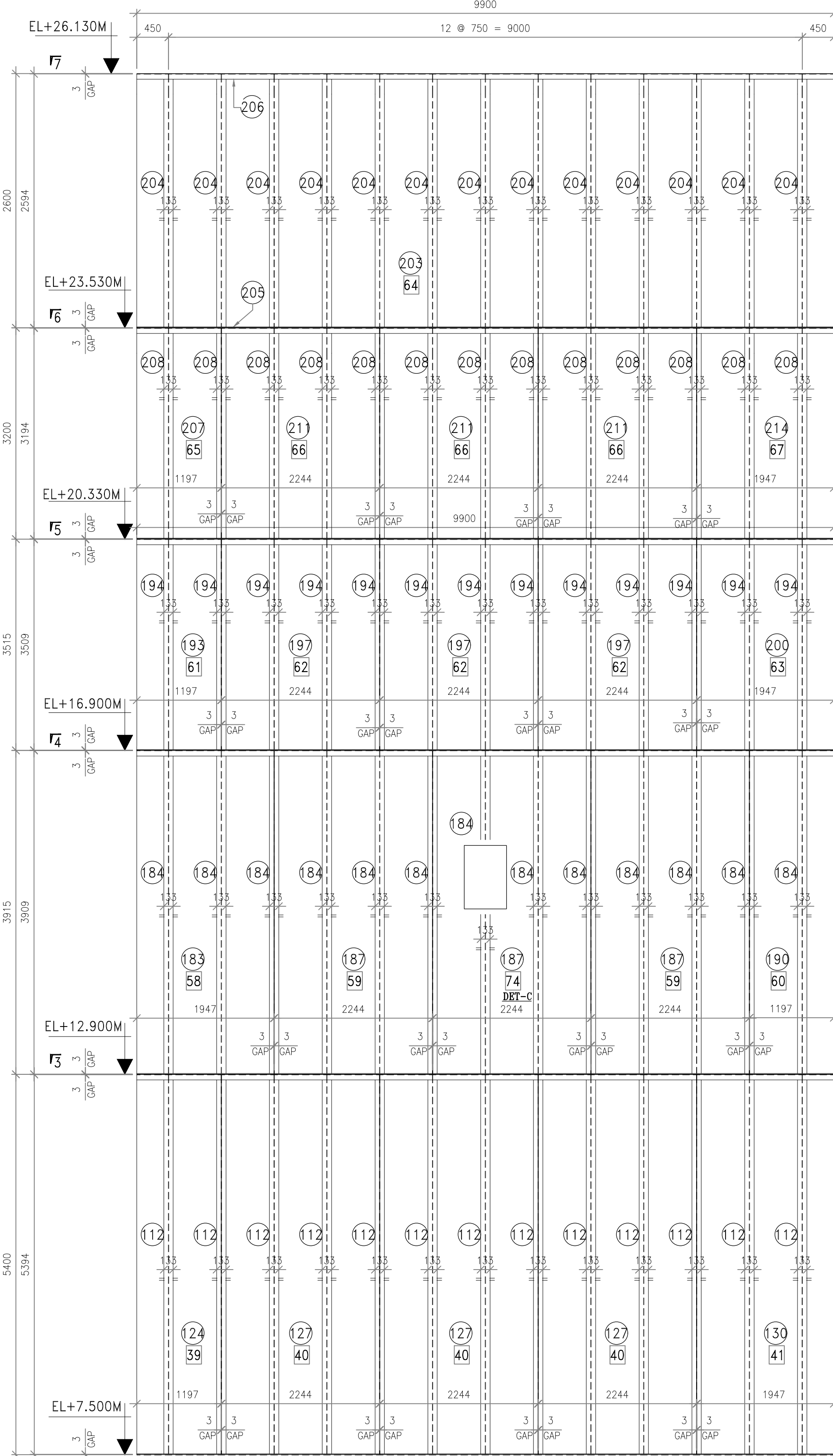
CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

TYPE OF PRODUCT		OR NAME OF	
CUSTOMER/PROJECT		BHARAT HEAVY ELECTRICALS LTD.	
UNIT: BOILER AUXILIARIES PLANT.		SCALE: 1:40	
DRAWING NO.		0-FW-221-08478	
DATE		12/02/2022	
BY		12/02/22	
CHECKED		12/02/22	
APPROVED		12/02/22	
SCALE		1:40	
WEIGHT (KG)		REF TO ASSY/OLD Dwg	
CADD CODE		U 01	
DRAWING NO.		00	
REV		1	

Panel Height Addition & Reduction

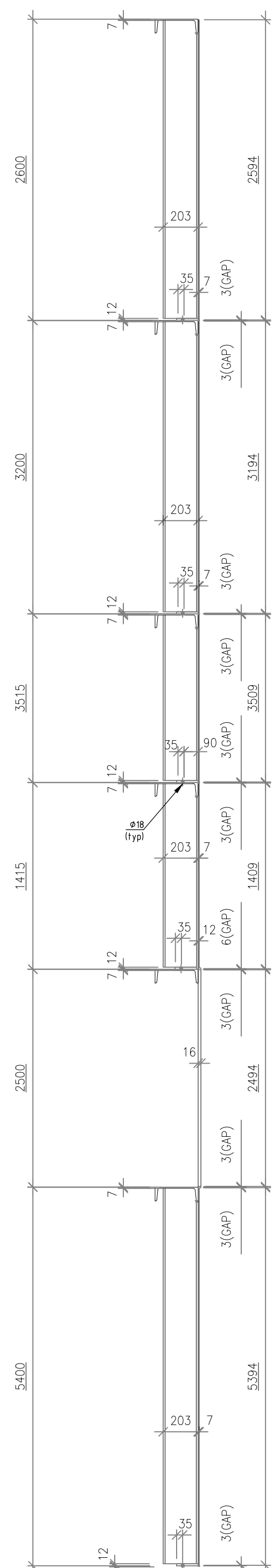


VIEW A-A
(SCALE=1:30)

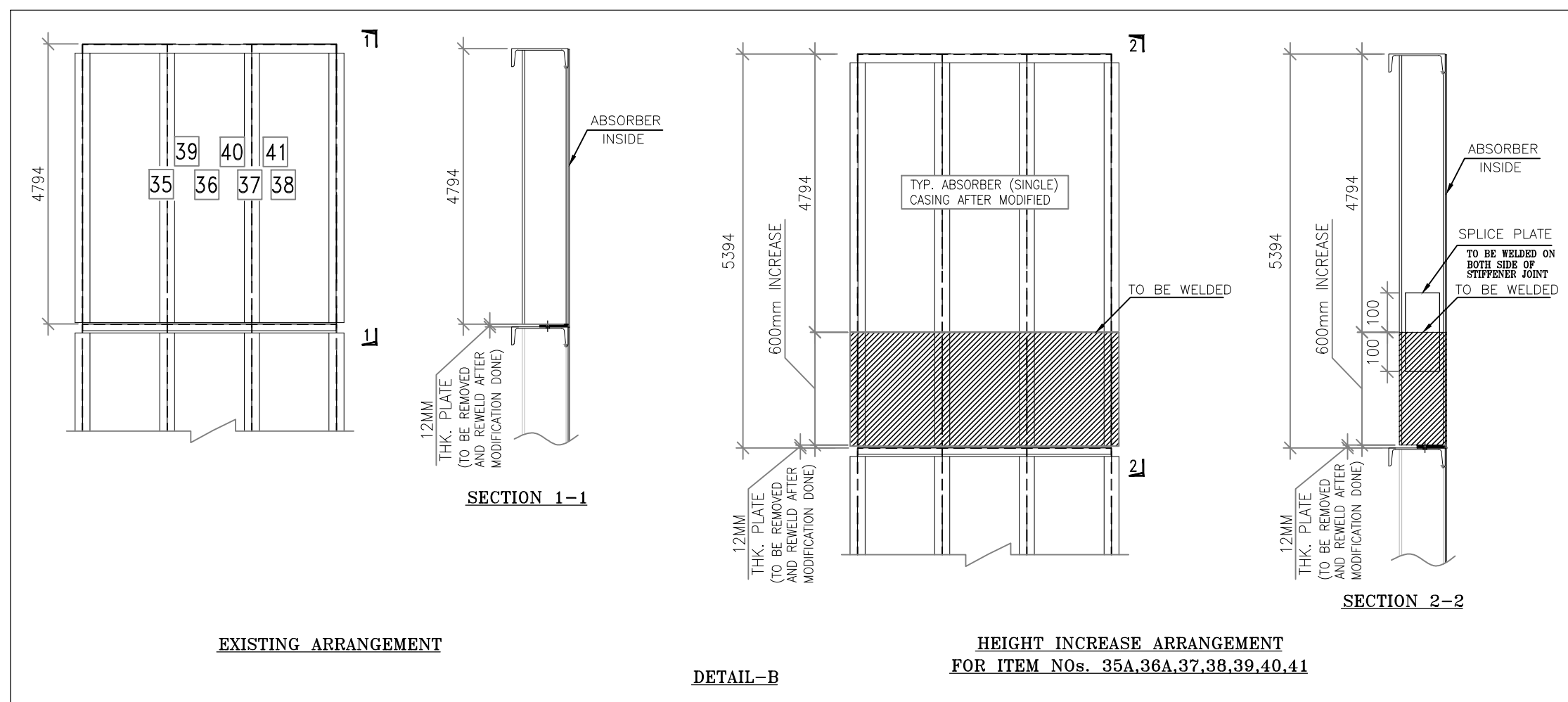


VIEW D-D
(SCALE=1:30)

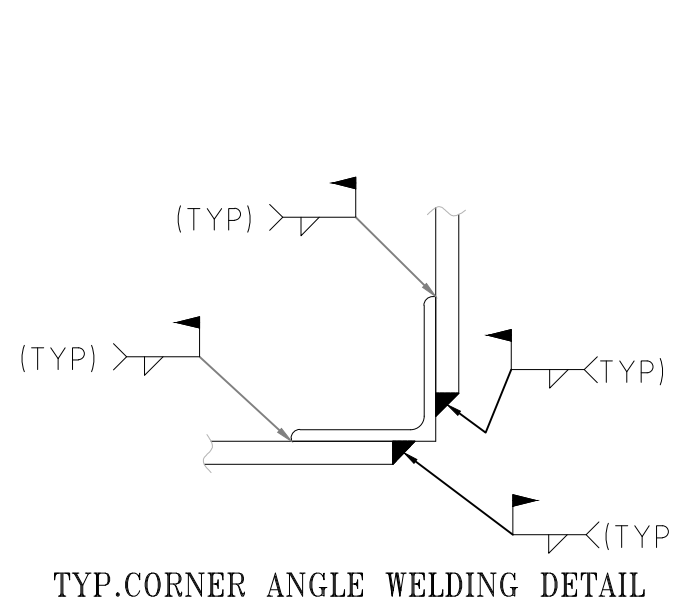
REAR VIEW



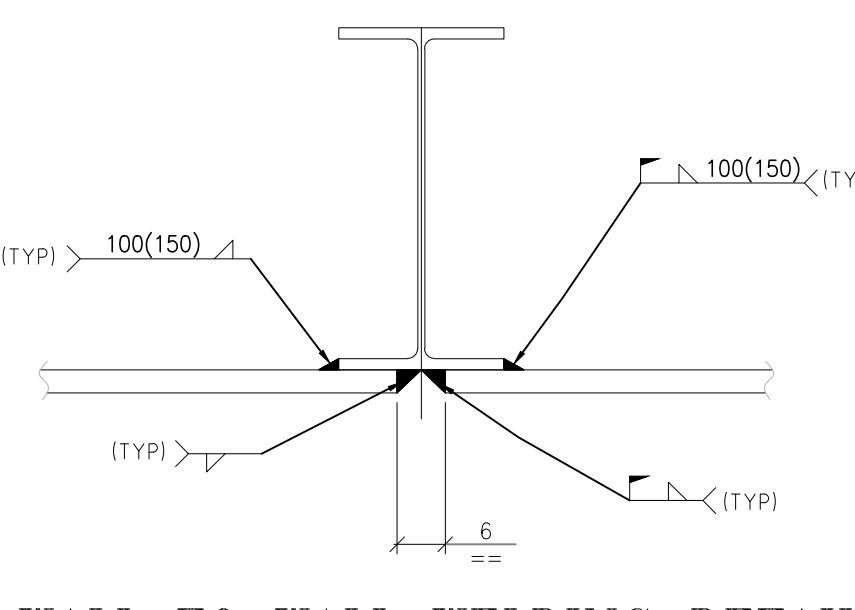
SECTION S-S
(SCALE=1:20)



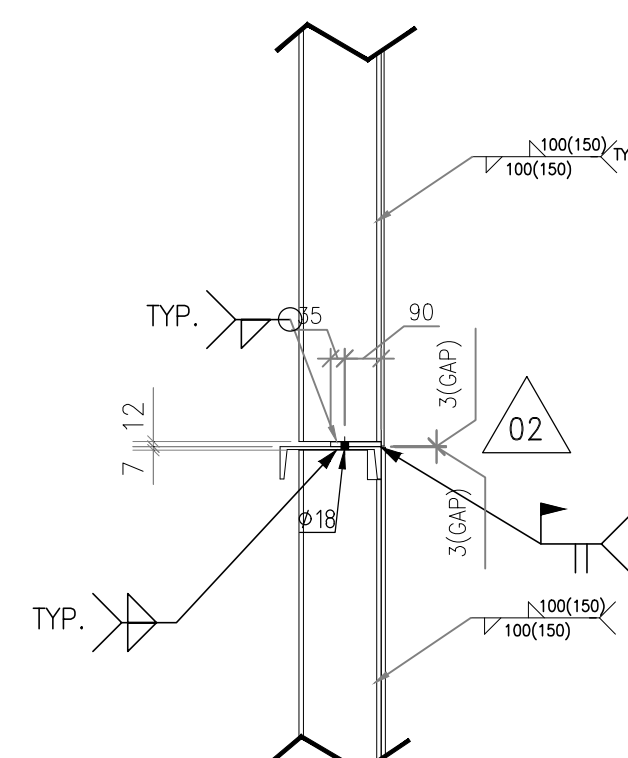
DETAIL-B
HEIGHT INCREASE ARRANGEMENT
FOR ITEM NOS. 35A, 36A, 37, 38, 39, 40, 41



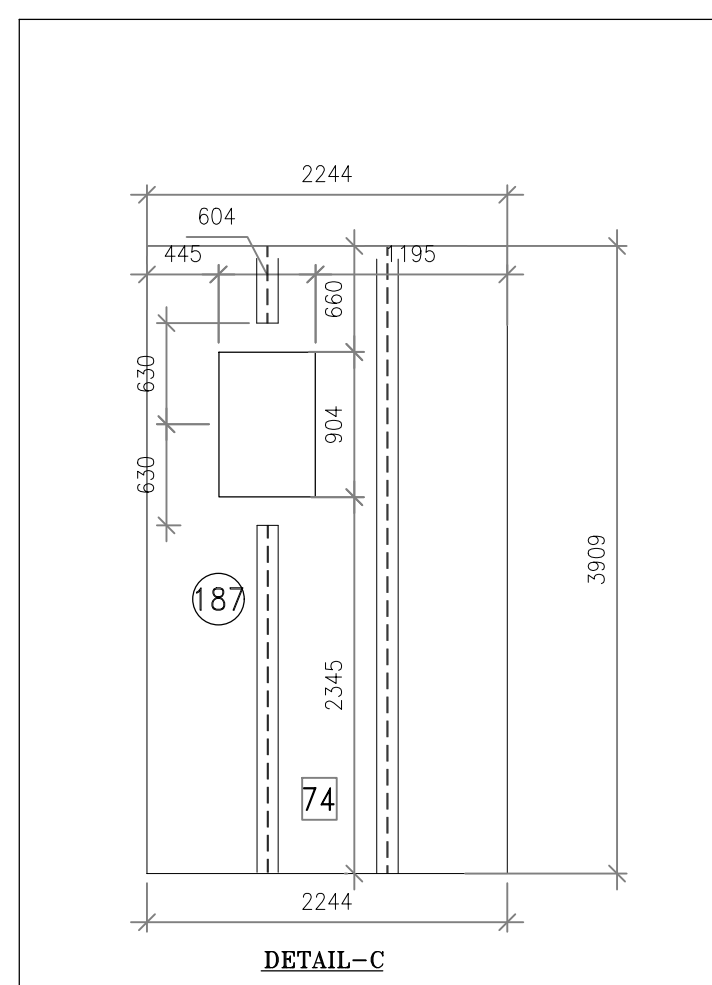
TYP. CORNER ANGLE WELDING DETAIL



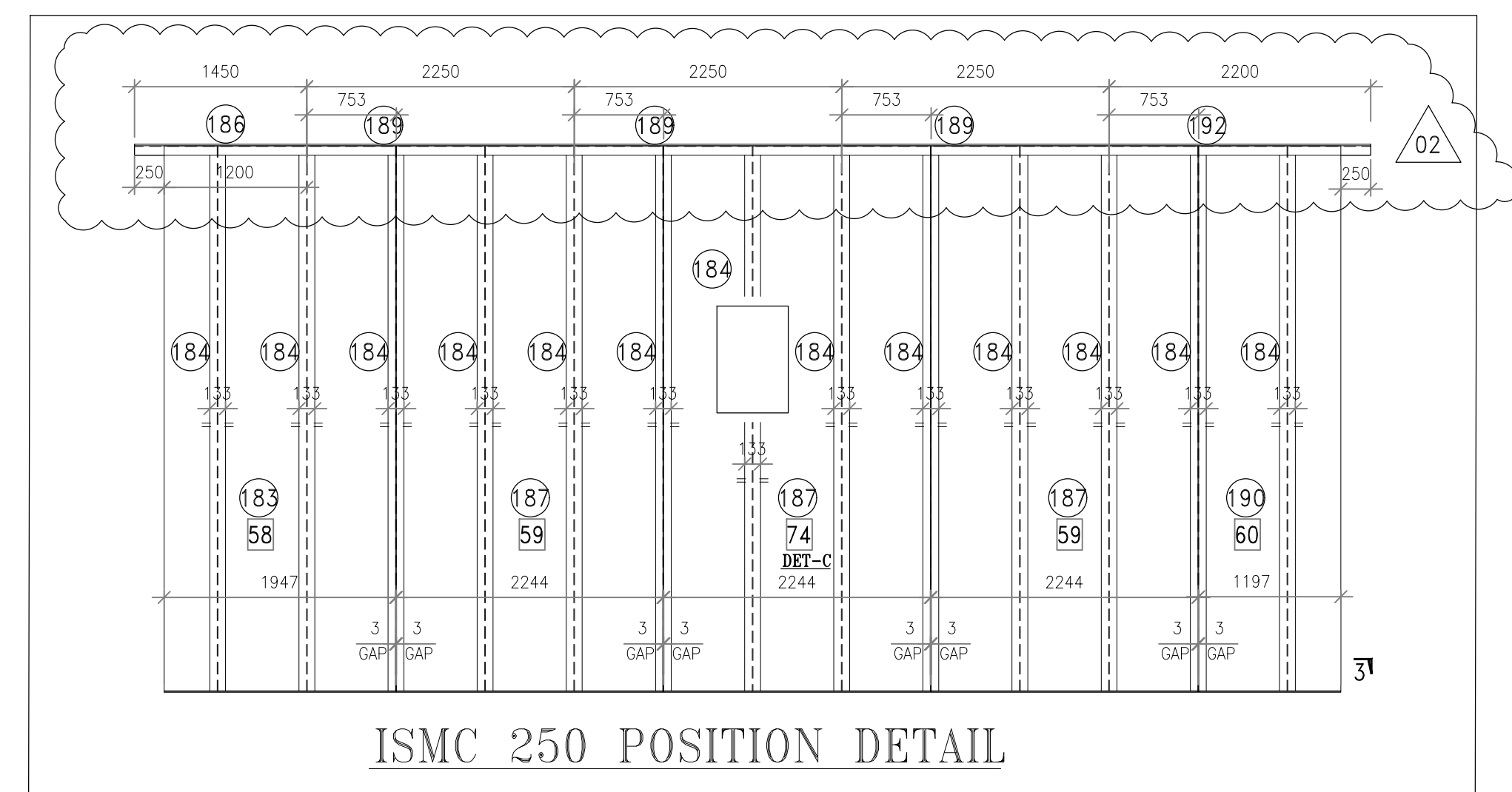
WALL TO WALL WELDING DETAILS



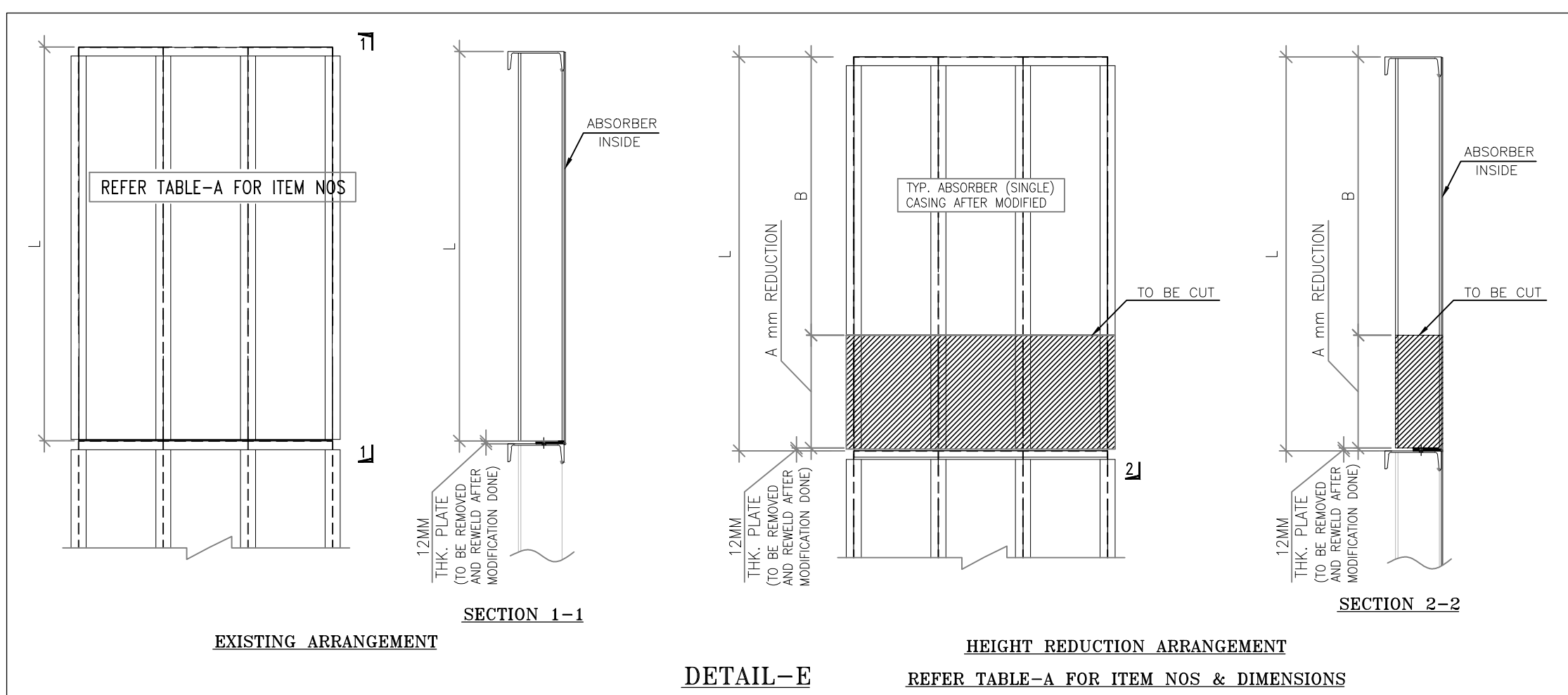
TYPICAL WALL WELDING DETAILS



DETAIL-C



ISC 250 POSITION DETAIL



DETAIL-E
HEIGHT REDUCTION ARRANGEMENT
REFER TABLE-A FOR ITEM NOS. & DIMENSIONS

ITEM NOS	TABLE-A		
	Length	EXISTING	REDUCTION FINAL
	L	A	B
	mm	mm	mm
45, 46, 47	2094	685	1409
54, 55, 56, 57, 65, 66, 67	3604	410	3194
48, 49, 50, 61, 62, 63	3794	285	3509
58, 59, 60, 74	4594	685	3909
51, 52, 53, 64	2994	400	2594

THIS DRAWING IS TO BE READ ALONG WITH
0-FW-222-08998 TO 0-FW-222-09001
FOR ERECTION & FABRICATION

IMPORTANT NOTES:-

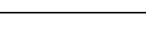
- FOR ERECTION AND FABRICATION REFER RELEVANT QUALITY CHECK LIST.
- FOR ERECTION, FABRICATION AND GLASS FLAKE LINING DETAILS REFER THE BELOW MENTIONED DRAWING LIST
 - 3-FW-257-07356
 - 0-FW-221-02167
 - 0-FW-000-05059
 - 2-FW-000-06869
- ALL WELDING (SHOP & SITE) SHALL BE MADE SMOOTH GRIND TO FACILITATE GLASS FLAKE LINING

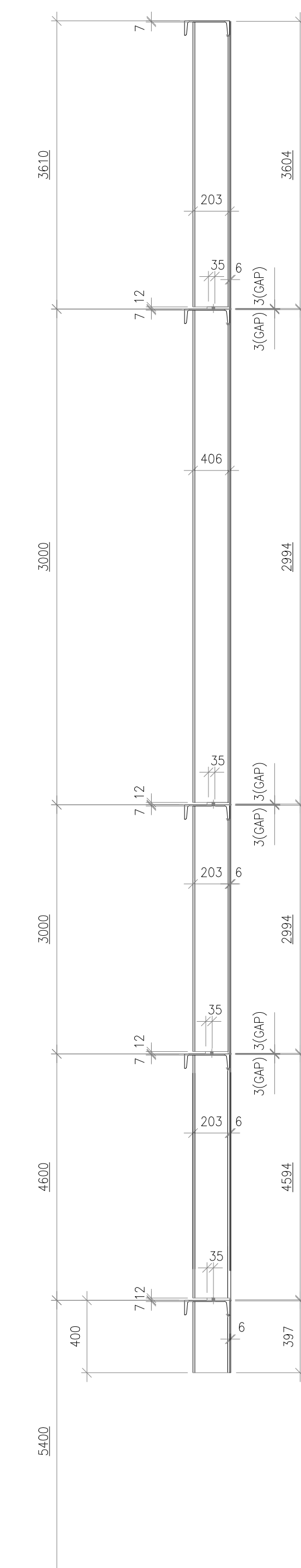
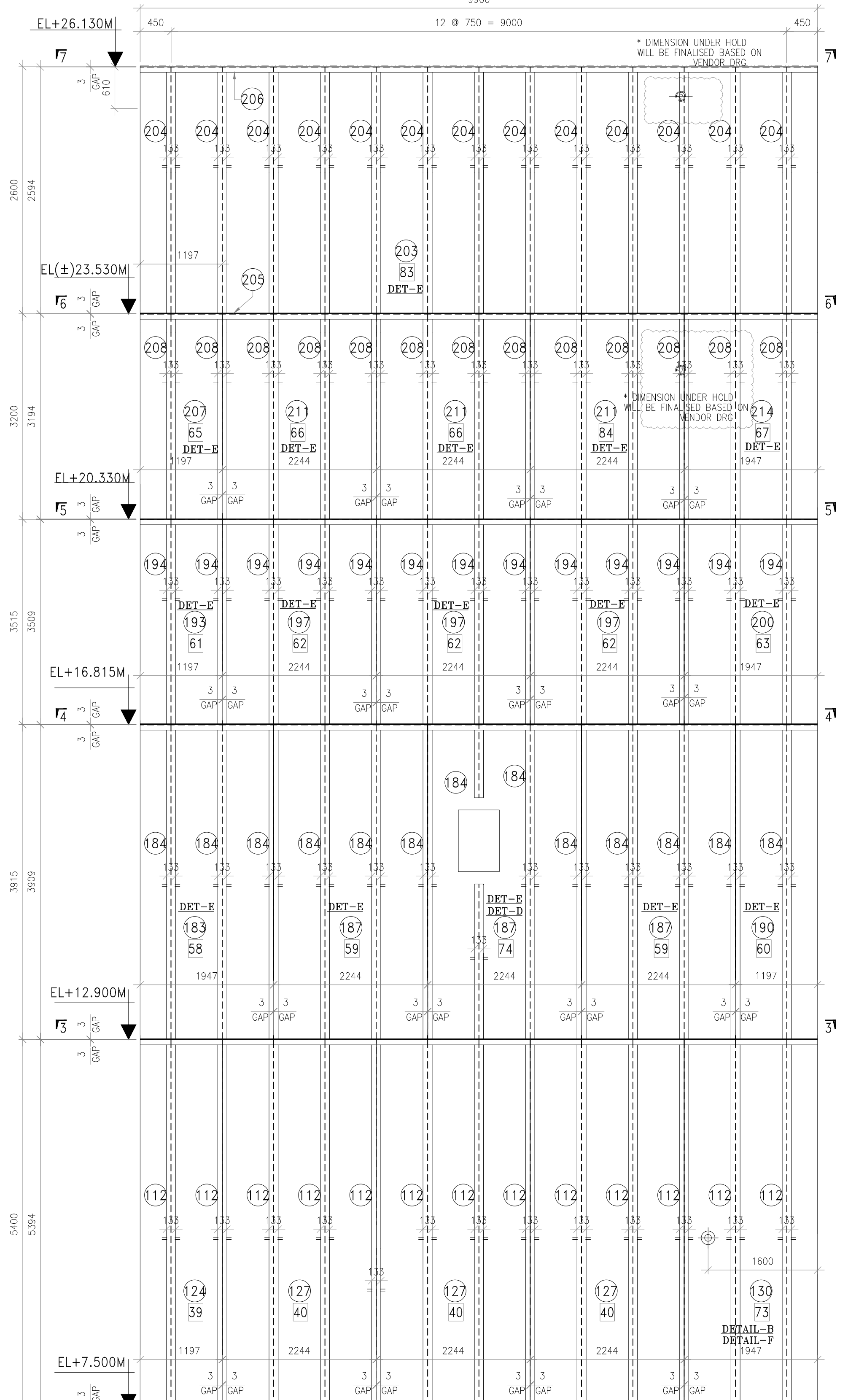
NOTES:-

- ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
- ALL FILLET SHOP WELD ARE 6mm. THICK AND SITE WELD ARE 6mm. THICK. U.N.O

FOR FABRICATION REFER FOLLOWING DRAWING NUMBERS
0-FW-221-00343 TO 0-FW-221-00347

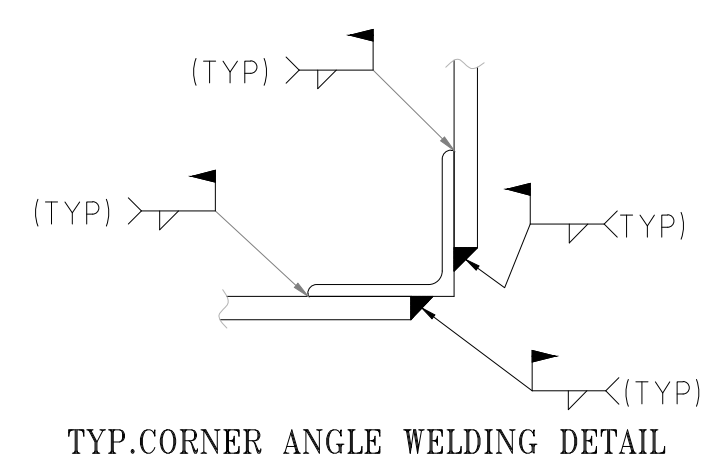
UNIT NOS: R4R8, R4S0, R4S2

REV		DATE	ALTERNATIVE	P.R.R	OR NAME OF CUSTOMER/PROJECT											
02		06/07/22	CHECKED	PH/RA	BHARAT HEAVY ELECTRICALS LTD.											
ZONE		ISC 250 REFERENCE DIMENSIONS ADDED FOR BOX NOS 38, 59 & 60						BHARAT HEAVY ELECTRICALS LTD.		NAME		SIGN	DATE	NO. OF		
								UNIT: BOLAR AUXILIARIES PLANT.		P. RAJAN			16/05/22	02		
								MANUFACTURED BY: BOLAR		M. KHAJHA			16/05/22			
								K. P. RADHI		APPD			16/05/22			
REV		DATE	ALTERNATIVE	P.R.R	DEPT		AGCS	GRADE OF	SCALE	WEIGHT (KG)		REF. TO ASSY/OLD DRS.			REV NO.	
02		25/05/22	CHECKED	PH/RA	CODE		862	PI-AD-150		10		16/05/22			02	
ZONE		ITEM NOS 54, 55, 56, 57 REVISED TO 78,79,80,81 RESPECTIVELY				TITLE		ABSORBER BOTTOM CASING								REV
		2-FW-000-06869 ADDED IN REF. Dwg LIST						CARD CODE								
								U 01								
								0-FW-222-08998								02

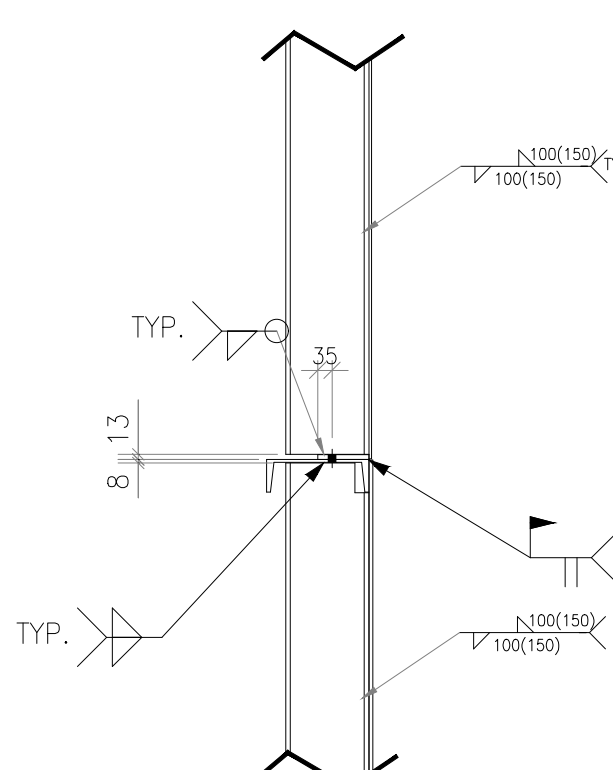


VIEW C-C
(SCALE=1:30)
FRONT VIEW

SECTION R-R
(SCALE-1:20)



WALL TO WALL WELDING DETAILS



Length	EXISTING	REDUCTION	FINAL
ITEM NOS	L	A	B
	mm	mm	mm
58, 59, 60, 68, 69, 70, 71	4594	685	3909
48, 49, 50, 61, 62, 63	3794	285	3509
54, 55, 56, 57, 65, 66, 67	3604	410	3194
51 52 53 64	2994	400	2594

THIS DRAWING IS TO BE READ ALONG WITH
0-FW-222-08998 TO 0-FW-222-09001
FOR ERECTION & FABRICATION

IMPORTANT NOTES:-

01. FOR ERECTION AND FABRICATION REFER RELEVANT QUALITY CHECK LIST.
02. FOR ERECTION, FABRICATION AND GLASS FLAKE LINING DETAILS
REFER THE BELOW MENTIONED DRAWING LIST
 - a). 3-FW-257-07356
 - b). 0-FW-221-02167
 - c). 0-FW-000-05059
03. ALL WELDING(SHOP & SITE) SHALL BE MADE SMOOTH GRIND TO FACILITATE GLASS FLAKE LINING

NOTES:—

- NOTES:-
1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
 2. ALL FILLET SHOP WELD ARE 6mm. THICK AND SITE WELD ARE 6mm. THICK. U.N.O

FOR FABRICATION REFER FOLLOWING DRAWING NUMBERS
0-FW-221-00343 TO 0-FW-221-00347

UNIT NOS: R4R8, R4S0, R4S2

REV	DATE	ALTERED (CHECKED)	The information on this drawing was prepared by the Heavy Electricals Unit of the Engineering Department of the Ministry of Defence.		DEPT	AQCS	GRADE OF UNTL.DIM	SCALE	WEIGHT (KG)	APPD.	REF. TO ASSY/OLD DRG.	NEW NO.	NO. OF SHEETS
ZONE					CODE	862	PR: AQ-500		-			-	-
CAUTION: HEAVY ELECTRICALS UNIT OF THE ENGINEERING DEPARTMENT OF THE MINISTRY OF DEFENCE HAS APPROVED THIS DRAWING FOR THE PURPOSES OF THE DRAWING.					TITLE		ABSORBER BOTTOM CASING			CARD CODE	DRAWING NO.	REV	
										U 01	0-FW-222-08999	00	



TYP.CORNER ANGLE WELDING DETAIL

Architectural drawing of Section 3-3 of a building, showing a cross-section of a large hall with a central staircase. The drawing includes dimensions for various components, such as the staircase width (25900), the hall width (25900), and the hall depth (25900). The drawing is labeled "SECTION 3-3" and "SCALE: 1:40".

SECTION 4-4
(SCALE=1:40)

[illegible]

NOTES:-

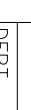
1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
2. ALL FILLET SHOP WELD ARE 6mm. THICK AND SITE WELD ARE 6mm. THICK. U.N.O

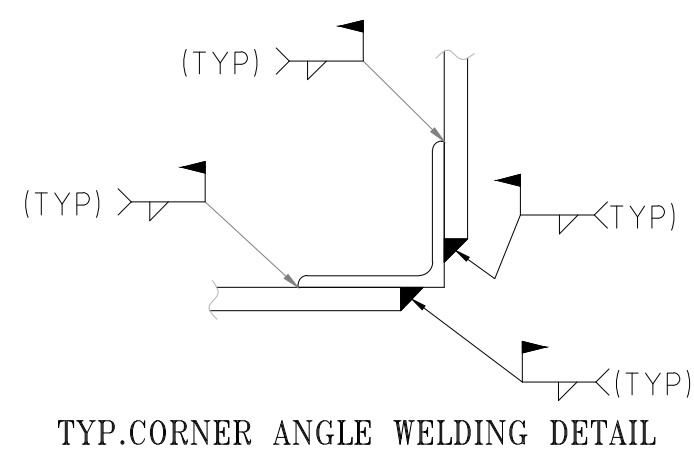
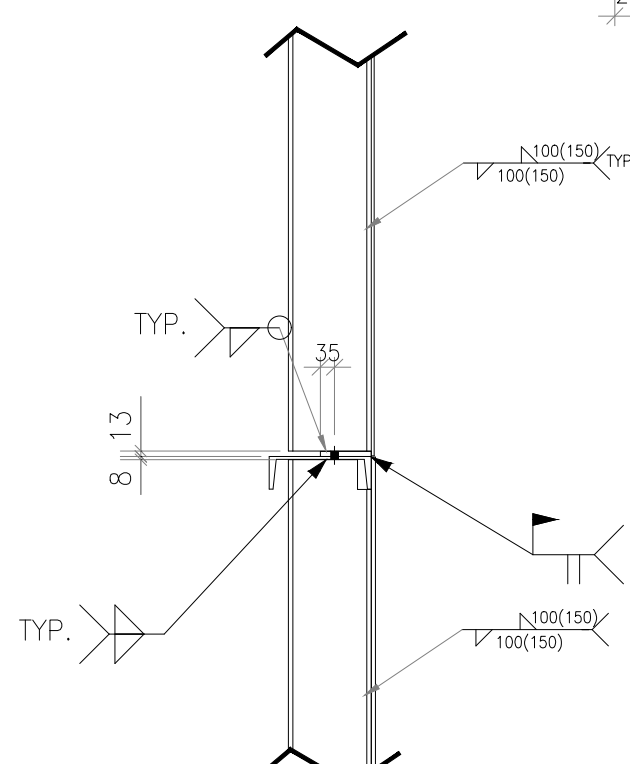
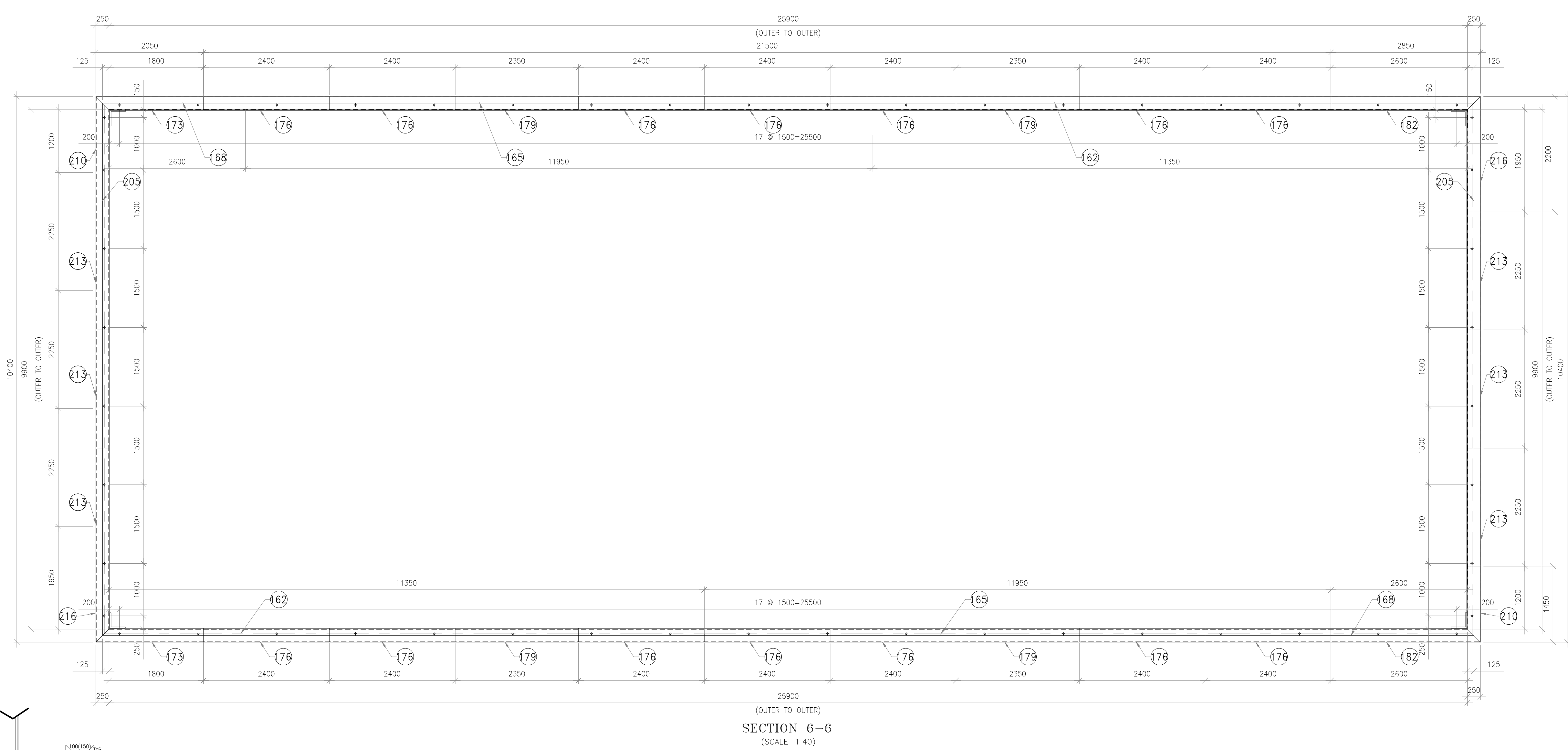
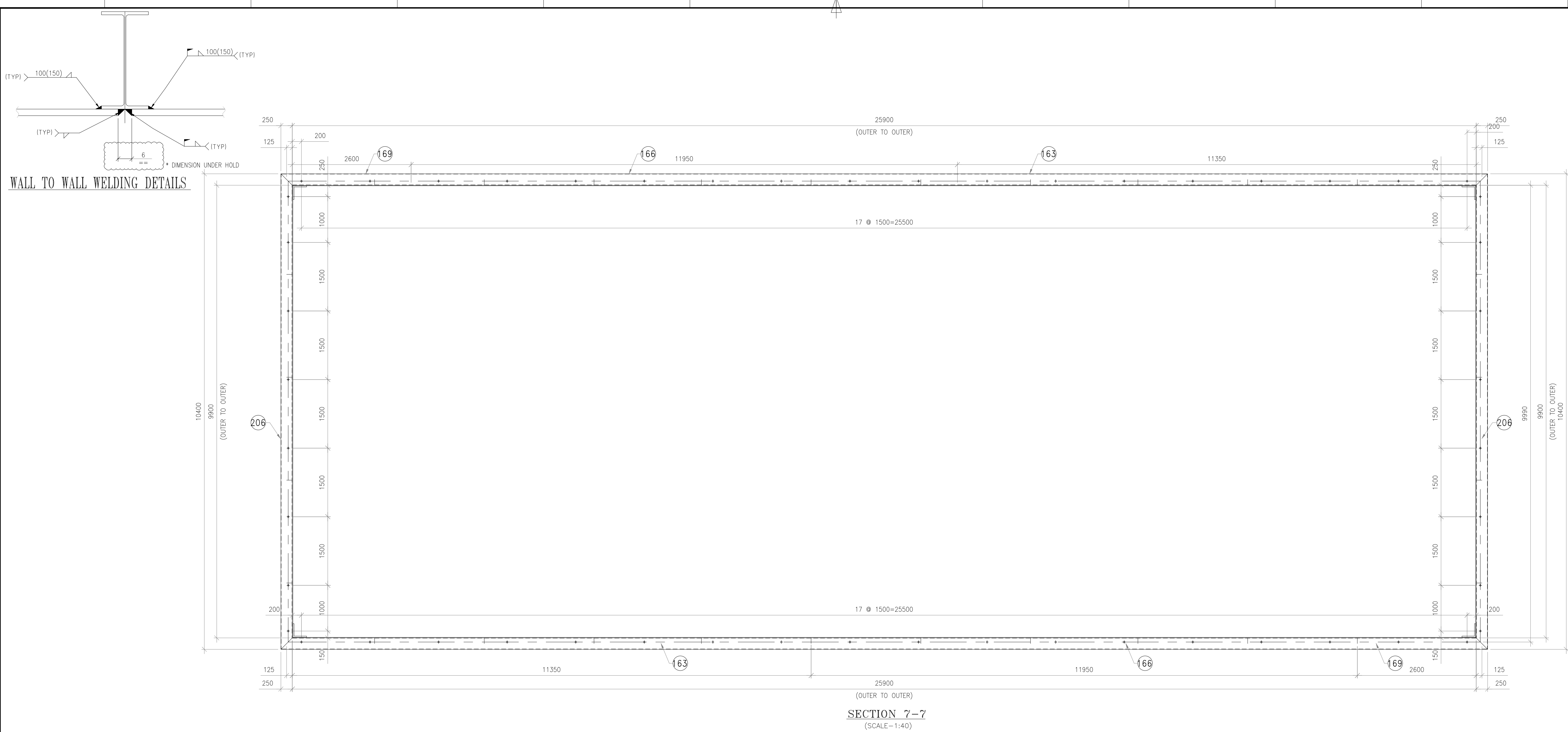
IMPORTANT NOTES:-

01. FOR ERECTION AND FABRICATION REFER RELEVANT QUALITY CHECK LIST
02. FOR ERECTION, FABRICATION AND GLASS FLAKE LINING DETAILS REFER THE BELOW MENTIONED DRAWING LIST
 - a). 3-FW-257-07356
 - b). 0-FW-221-02167
 - c). 0-FW-000-05059
03. ALL WELDING(SHOP & SITE) SHALL BE MADE SMOOTH GRIND TO FACILITATE GLASS FLAKE LINING

FOR FABRICATION REFER FOLLOWING DRAWING NUMBERS
0-FW-221-00343 TO 0-FW-221-00347

THIS DRAWING IS TO BE READ ALONG WITH
0-FW-222-08998 TO 0-FW-222-09001
FOR ERECTION & FABRICATION

CAUTION: The information on this document is the property of BSHART. If this document is used in any way, it must not be used directly or indirectly in any way detrimental to the interest of the company.									
TYPE OF PRODUCT OR NAME OF COMPANY/PROJECT		 BSHART HEAVY ELECTRICALS LTD. UNIT 10, INDUSTRIAL ESTATE, PLOT NO. 10, SECTOR 10, PHASE 1, Gurgaon, Haryana, India.		NAME		SIGN		DATE	
1. JOB NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS	1. ORDER NO. 2. DATE OF ORDER 3. NO. OF PAGES 4. NO. OF SHEETS
ASSORBER BOTTOM CASING									
0-FW-222-09000									
00									



CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

TYPE OF PRODUCT		CUSTOMER/PRODUCT	
NO. OF PAGES		BRIKAT HEAVY ELECTRICALS LTD.	
UNIT: MILLER ELECTRIC MFG. PLANT		UNIT: MILLER ELECTRIC MFG. PLANT	
COUNTRY OF ORIGIN: INDIA		COUNTRY OF ORIGIN: INDIA	
SCALE: 1:1		SCALE: 1:1	
DRAWING NO.		DRAWING NO.	
O-TW-222-09001		O-TW-222-09001	
REV		REV	
00		00	

THIS DRAWING IS TO BE READ ALONG WITH
0-FW-222-08998 TO 0-FW-222-09001
FOR ERECTION & FABRICATION

IMPORTANT NOTES:-

01. FOR ERECTION AND FABRICATION REFER RELEVANT QUALITY CHECK LIST.
02. FOR ERECTION, FABRICATION AND GLASS FLAKE LINING DETAILS
REFER THE BELOW MENTIONED DRAWING LIST
 - a). 3-FW-257-07356
 - b). 0-FW-221-02167
 - c). 0-FW-000-05059
03. ALL WELDING(SHOP & SITE) SHALL BE MADE SMOOTH GRIND TO FACILITATE GLASS FLAKE LINING

NOTES:—

1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
2. ALL FILLET SHOP WELD ARE 6mm. THICK AND SITE WELD ARE 6mm. THICK. U.N.O

FOR FABRICATION REFER FOLLOWING DRAWING NUMBERS
0-FW-221-00343 TO 0-FW-221-00347

BILL OF MATERIALS											
ERECTION MKD.	PART MKD.	ITEM NO.	SECTION	LENGTH IN mm.	NOS. REQD.	UNIT WT. (Kgs.)	TOTAL WT. (Kgs.)	QTY. REQD.	ERE. MKD. WT. (Kgs.)	MATL. SPCN.	REMARKS
ABSORBER	35A	35	ABSORBER-35A				1293.80				DIVERTED
		111	PL 2597x7	600	1	54.95	85.62				
		112	UB 203x133x25	600	4	25.10	60.24				
		113	PL 125x12	2725	1	94.20	32.09				
		246	PL 200x12	180	8	94.20	27.13				
	36A						1498.88	1	1498.88		
		36	ABSORBER-36A				1101.08				DIVERTED
		115	PL 2394x7	600	1	54.95	78.93				
		112	UB 203x133x25	600	3	25.10	45.18				
		116	PL 125x12	2400	1	94.20	28.26				
	37	246	PL 200x12	180	6	94.20	20.35				
							1273.79	7	8916.55		
		37	ABSORBER-37	5394			1085.61				DIVERTED
		118	PL 2344x7	600	1	54.95	77.28				
		112	UB 203x133x25	600	3	25.10	45.18				
	38	119	PL 125x12	2350	1	94.20	27.67				
		246	PL 200x12	180	6	94.20	20.35				
							1256.09	2	2512.17		
		38	ABSORBER-38				806.22				DIVERTED
		121	PL 1797x7	600	1	54.95	59.25				
	39	112	UB 203x133x25	660	2	25.10	33.13				
		122	PL 125x12	1925	1	94.20	22.67				
		246	PL 200x12	180	4	94.20	13.56				
							934.83	1	934.83		
		39	ABSORBER-39				646.22				DIVERTED
	40	124	PL 1197x7	600	1	54.95	39.47				
		112	UB 203x133x25	600	2	25.10	30.12				
		125	PL 125x12	1325	1	94.20	15.60				
		246	PL 200x12	180	4	94.20	13.56				
							744.98	2	1489.95		
	40	40	ABSORBER-40				1054.67				DIVERTED
		127	PL 2244x7	600	1	54.95	73.98				
		112	UB 203x133x25	600	3	25.10	45.18				
		128	PL 125x12	2250	1	94.20	26.49				
		246	PL 200x12	180	6	94.20	20.35				
							1220.67	6	7324.03		

REFER GMS

IMPORTANT NOTES:-

01. FOR ERECTION AND FABRICATION REFER RELEVANT QUALITY CHECK LIST.
02. FOR ERECTION, FABRICATION AND GLASS FLAKE LINING DETAILS

REFER THE BELOW MENTIONED DRAWING LIST

- a). 3-FW-257-07356
- b). 0-FW-221-02167
- c). 0-FW-000-05059

03. ALL WELDING(SHOP & SITE) SHALL BE MADE SMOOTH GRIND TO FACILITATE GLASS FLAKE LINING

NOTES:-

1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN MM.
2. ALL FILLET SHOP WELD ARE 6mm. THICK AND SITE WELD ARE 6mm. THICK. U.N.O

THIS DRAWING IS TO BE READ ALONG WITH
0-FW-222-08998 TO 0-FW-222-09001
FOR ERECTION & FABRICATION

FOR FABRICATION REFER FOLLOWING DRAWING NUMBERS
0-FW-221-00343 TO 0-FW-221-00347

BILL OF MATERIALS											
ERECTION MKD.	PART MKD.	ITEM NO.	SECTION	LENGTH IN mm.	NOS. REQD.	UNIT WT. (Kgs.)	TOTAL WT. (Kgs.)	QTY. REQD.	ERE. MKD. WT. (Kgs.)	MATL. SPCN.	REMARKS
ABSORBER	41 & 73	41	ABSORBER-41				818.36				DIVERTED
		130	PL 1947x7	600	1	54.95	64.19				
		112	UB 203x133x25	600	2	25.10	30.12				
		131	PL 125x12	2069	1	94.20	24.36				
		246	PL 200x12	180	4	94.20	13.56				
	42						950.60	1+1	1901.19		
		42	ABSORBER-42				743.19				DIVERTED
							743.19	1	743.19		
	43	43	ABSORBER-43				774.57	1	774.57		DIVERTED
							774.57	1	774.57		
	44	44	ABSORBER-44				165.88				DIVERTED
							165.88	1	165.88		
	45	45	ABSORBER-45				2099.13				DIVERTED
		143	PL 125x12	11350	1	94.20	133.65				
							2232.77	1	2232.77		
	46	46	ABSORBER-46				2181.76				DIVERTED
		146	PL 125x12	11950	1	94.20	140.71				
	47						2322.47	1	2322.47		
		147	PL 1409x7	2597	1	54.95	201.07				
		141	UB 203x133x25	1397	3	25.10	105.19				
		148	ISMC250	2600	2	30.60	159.12				
		149	PL 125x12	2600	1	94.20	30.62				
	48						496.00	1	496.00		
		150	PL 1797x7	3509	1	54.95	346.50				
		151	UB 203x133x25	3497	3	25.10	263.32				
		152	PL 125x12	1925	1	94.20	22.67				
		153	ISMC250	2050	1	30.60	62.73				
	49						695.22	2	1390.44		
		154	PL 2394x7	3509	1	54.95	461.61				
		151	UB 203x133x25	3497	3	25.10	263.32				
		155	PL 125x12	2400	1	94.20	28.26				
		156	ISMC250	2400	1	30.60	73.44				
	50	50	ABSORBER-50				808.66				DIVERTED
		158	PL 125x12	2350	1	94.20	27.67				
	51 & 75						836.33	4	3345.34		
		51	ABSORBER-51				2936.84				DIVERTED
	52 & 76	162	PL 125x12	11350	1	94.20	133.65				
							3070.48	1+1	6140.97		
	53 & 77	52	ABSORBER-52				3040.29				DIVERTED
		165	PL 125x12	11950	1	94.20	140.71				
							3181.01	1+1	6362.01		
		167	PL 2597x7	2594	1	54.95	370.18				
		161	UB 203x133x25	2582	3	25.10	194.42				
ABSORBER	54 & 78	168	PL 125x12	2725	1	94.20	32.09				
		169	ISMC250	2725	1	30.60	83.39				
							680.07	1+1	1360.15		
		170	PL 1797x7	3194	1	54.95	315.39				
		171	UB 203x133x25	3182	3	25.10	239.60				
	55 & 79	172	PL 125x12	1925	1	94.20	22.67				
		173	ISMC250	2043	1	30.60	62.52				
							640.18	1+1	1280.36		
		174	PL 2394x7	3194	1	54.95	420.17				
		171	UB 203x133x25	3182	3	25.10	239.60				
	56 & 80	175	PL 125x12	2400	1	94.20	28.26				
		176	ISMC250	2400	1	30.60	73.44				
							761.48	7+7	10660.67		
		177	PL 2344x7	3194	1	54.95	411.40				
		171	UB 203x133x25	3182	3	25.10	239.60				
	57 & 81	178	PL 125x12	2350	1	94.20	27.67				
		179	ISMC250	2350	1	30.60	71.91				
							750.58	2+2	3002.33		
		180	PL 2597x7	3194	1	54.95	455.80				
		171	UB 203x133x25	3182	3	25.10	239.60				
	58	181	PL 125x12	2725	1	94.20	32.09				
		182	ISMC250	2850	1	30.60	87.21				
							814.70	1+1	1629.40		
		183	PL 1647x7	3909	1	54.95	353.77				
		184	UB 203x133x25	3897	3	25.10	293.44				
	59 & 74	185	PL 125x12	1325	1	94.20	15.60				
		186	ISMC250	1450	1	30.60	44.37				
							707.19	2	1414.38		
		187	PL 2244x7	3909	1	54.95	482.01				
		184	UB 203x133x25	3897	3	25.10	293.44				
	60	188	PL 125x12	2250	1	94.20	26.49				
		189	ISMC250	2250	1	30.60	68.85				
							870.80	4+2	5224.79		
		190	PL 1197x7	3909	1	54.95	257.12				
		184	UB 203x133x25	3897	1	25.10	97.81				
	60	191	PL 125x12	2075	1	94.20	24.43				
		192	ISMC250	2200	1	30.60	67.32				
							446.68	2	893.37		

REFER GMS

BILL OF MATERIALS												
ERECTION MKD.	PART MKD.	ITEM NO.	SECTION	LENGTH IN mm.	NOS. REQD.	UNIT WT. (Kgs.)	TOTAL WT. (Kgs.)	QTY. REQD.	EREC. MKD. WT. (Kgs.)	MATL. SPCN.	REMARKS	
ABSORBER	61	193	PL 1197x7	3509	1	54.95	230.81					
		194	UB 203x133x25	3497	2	25.10	175.55					
		195	PL 125x12	1325	1	94.20	15.60					
		196	ISMC250	1450	1	30.60	44.37					
	62						466.33		2	932.65		
		197	PL 2244x7	3509	1	54.95	432.69					
		194	UB 203x133x25	3497	3	25.10	263.32					
		198	PL 125x12	2250	1	94.20	26.49					
	63	199	ISMC250	2250	1	30.60	68.85					
							791.35		6	4748.13		
		200	PL 1947x7	3509	1	54.95	375.42					
		194	UB 203x133x25	3497	2	25.10	175.55					
	64 & 83	201	PL 125x12	1320	1	94.20	15.54					
		202	ISMC250	2200	1	30.60	67.32					
							633.83		2	1267.66		
		203	PL 2594x7	9900	1	54.95	1411.15					
	65	204	UB 203x133x25	2581	13	25.10	842.18					
		205	PL 125x12	9900	1	94.20	116.57					
		206	ISMC250	9900	1	30.60	302.94					
							2672.84		1+1	5345.68		
	66 & 84	207	PL 1197x7	3194	1	54.95	210.09					
		208	UB 203x133x25	3181	2	25.10	159.69					
		209	PL 125x12	1320	1	94.20	15.54					
		210	ISMC250	1450	1	30.60	44.37					
	67						429.69		2	859.37		
		211	PL 2244x7	3194	1	54.95	393.85					
		208	UB 203x133x25	3181	3	25.10	239.53					
		212	PL 125x12	2250	1	94.20	26.49					
	68	213	ISMC250	2250	1	30.60	68.85					
							728.72		5+1	4372.31		
		214	PL 1947x7	3194	1	54.95	341.72					
		208	UB 203x133x25	3181	2	25.10	159.69					
69	215	PL 125x12	2075	1	94.20	24.43						
	216	ISMC250	2200	1	30.60	67.32						
						593.16		2	1186.32			
	217	PL 997x7	3909	1	54.95	214.16						
70	218	UB 203x133x25	3897	2	25.10	195.63						
	219	PL 125x12	1000	1	94.20	11.78						
	220	ISMC250	1250	1	30.60	38.25						
						459.81		1	459.81			
71	69	ABSORBER-69					881.11				DIVERTED	
	222	PL 125x12	2400		1	94.20	28.26					
							909.37		8	7274.99		
72	70	ABSORBER-70					868.84				DIVERTED	
	225	PL 125x12	2350		1	94.20	27.67					
							896.52		2	1793.03		
73	71	ABSORBER-71					350.22				DIVERTED	
	228	PL 125x12	1000		1	94.20	11.78					
							361.99		1	361.99		
74	240	PL 2597x7	3509	1	54.95	500.75						
	151	UB 203x133x25	3497	3	25.10	263.32						
	158	PL 125x12	2600	1	94.20	30.62						
	159	ISMC250	2600	1	30.60	79.56						
75						874.25		2	1748.50			
TOTAL =									115940.02	Kg.		

Section - III D Extra RS LIST

Enq .No:- 651003E		Dt 25/08/2022		
SI No	E_RS No	Extra RS Desc	Unit	Rate
1	E01	CONVERSION CHARGES FOR FLAT OUT OF PLATES .	MT	55
2	E03	MAGNETIC PARTICLE INSPECTION/TESTING [MPI].	MR	30
3	E04	RADIOGRAPHY [RT]	MR	677
4	E07X	DEDUCTION OF TRANSPORT CHAGES FOR DTS 0 TO 100 KMS	MT	1200
5	E07Y	DEDUCTION OF TRANSPORT CHAGES FOR DTS 101 TO 350 KMS	MT	1500
6	E07Z	DEDUCTION OF TRANSPORT CHAGES FOR DTS 351 TO 450	MT	1750
7	E11	25 MIC OF EPOXYZINC RICH PRIMER [EXCEPT WM XXX]	SM	83
8	E13	25 MIC OF EPOXY ZINC PHOSPHATE PRIMER	SM	62
9	E14	40 MIC OF WHITE ENAMEL PAINT	SM	50
10	E16	25 MIC OF HEAT RESISTANT BLACK BITUMINOUS PAINT TO IS-158	SM	23
11	E17A	TRANSPORT CHARGES FOR TO AND FRO MOVEMENT OF SEMIFINISHED COMPONENTS FROM YOUR WORKS TO THE WORKS OF CONTRACTOR SITUATED WITH IN 60 KMS FROM YOUR WORKS DOING THE INTERMITTENT OPERATION SUCH AS GALVANIZING/BLAST CLEANING / BALANCING / HEATTREATMENT/ OTHER SPECIFIC OPERATION ETC AS PER ENQUIRY.	MT	400
12	E17B	TRANSPORT CHARGES FOR TO AND FRO MOVEMENT OF SEMIFINISHED COMPONENTS FROM YOUR WORKS TO THE WORKS OF CONTRACTOR SITUATED BETWEEN 61 KMS AND 160 KMS FROM YOUR WORKS DOING THE INTERMITTENT OPERATION SUCH AS GALVANIZING/BLAST CLEANING/BALANCING/HEATTREATMENT/ OTHER SPECIFIC OPERATION ETC AS PER ENQUIRY	MT	900
13	E17C	TRANSPORT CHARGES FOR TO AND FRO MOVEMENT OF SEMIFINISHED COMPONENTS FROM YOUR WORKS TO THE WORKS OF CONTRACTOR SITUATED BETWEEN 161 KMS AND 350 KMS FROM YOUR WORKS DOING THE INTERMITTENT OPERATION SUCH AS GALVANIZING/ BLAST CLEANING/ BALANCING/ HEATTREATMENT/ OTHER SPECIFIC OPERATION ETC AS PER ENQUIRY	MT	2200
14	E18	40 MIC OF HIGH BUILD CHLORINATED RUBBER ZINCPHOSPHATE PRIMER.	SM	65
15	E19	5 MIC OF ETCH PRIMER/WASH PRIMER	SM	55
16	E20	20 MIC OF SYNTHETIC ENAMEL LONG OIL ALKYD TOIS-2932 [SMOKE GREY]	SM	25
17	E23	25 MIC RED OXIDE ZINC CHROME PRIMER TO IS 2074/RUST PREVENTIVE OIL.	SM	11
18	E24	20 MIC BLACK ENAMEL PAINT TO IS - 2932	SM	25
19	E27	50 MIC HIGH BUILD EPOXY PAINT DARK GREY.	SM	66
20	E28	30 MIC EPOXY FINISH PAINT LIGHT GREY	SM	60
21	E29	75 MIC INORGANIC ZINC SILICATE PRIMER	SM	73
22	E30	30 MIC CHLOROKOTE ZINC PHOSPHATE TO IS 8632.	SM	30
23	E40	TRIAL ASSY OF TOTAL INLET/OUTLET FUNNEL ASSY[PYRAMID SHAPE] COLUMNS, LONGITUDINAL ROOF BEAMS, TRUSSES (X55), SPIRALCASINGS, TURBINE HALL STRUCTURES, DUCTS ,SILENCERS (ASSEMBLED FROM MULTIPLE BLOCKS), BRACKETS IN X25, SUCTION HOOD OF FANS AND ROOF ASSEMBLY OF FANS ETC.	MT	725
24	E41	RECOVERY RATE FOR CS/AS, ASBESTOS , WOOL , CAF SCRAP ETC.	MT	19000
25	E42	BIG SIZE SCRAP [CS/AS SHEETS/ PLATES]	MT	23500
26	E43	RECOVERY RATE FOR STAINLESS STEEL [NON-MAGNETIC], NONFERROUS METAL SCRAP .	MT	96000
27	E51	HR ALUMINIUM PAINT [20 MIC] [UP TO 200 DEGREE C] IS 13183 / 1991 GRADE - III	SM	30
28	E52	HR ALUMINIUM PAINT [20 MIC] [ABOVE 200 DEGREE C] IS 13183 / 1991 GRADE - II	SM	50
29	E54	HR CHIMNEY BLACK PAINT [>250 DEGREE C] / FERROTOL BLACK CHIMNEY [50 MIC]	SM	50
30	E55	EPOXY HB MIO INTERCOAT [125 MIC]	SM	55
31	E56	ALIPHATIC PU FINISH OR EQVT. [75 MIC]	SM	60
32	E57	CHLORINATED RUBBER FINISH PAINT DARK GREY [40 MIC]	SM	61
33	E59	ETHYL ZINC SILICATE/ZINC DUST ETHYL SILICATE[75 MIC]	SM	64
34	E60	HB EPOXY ZINC RICH PRIMER [50 MIC]	SM	68
35	E61	CHLORINATED RUBBER BASED TITANIUM OXIDE PIGMENTED INTERMEDIATE PAINT [WHITE] - [50 MIC]	SM	115

Section - III D Extra RS LIST

Enq .No:- 651003E		Dt 25/08/2022		
SI No	E_RS No	Extra RS Desc	Unit	Rate
36	E62	EPOXY RESIN BASED TWO PACK, TITANIUM OXIDEPIGMENTED INTER- MEDIATE PAINT [WHITE] -[100 MIC]	SM	50
37	E63	ZINC CHROME PRIMER IS104 40 MICRONS	SM	29
38	E64	RED OXIDE ZINC PHOSPHATE PRIMER 80 MICRONS	SM	40
39	E65	UT OF WELD,BUTT JOINTS OR FILLET WELDS OF COLUMN BASE [ALL WELDS] THICKNESS 12 TO 32MM ASPER AWS D.1.1	MR	48
40	E68	LABOUR COST FOR ONE COAT OF PAINTING. [PAINT- BHEL SUPPLY].	SM	5.5
41	E69	SYNTHETIC ENAMEL TO IS 2932 GREY SHADE RAL 9002 [20 MICRONS].	SM	26
42	E71	ULTRASONIC TESTING [UT] OF PLATES / STRUCTURALS	SM	33
43	E72	CONVERSION CHARGES FOR EXPORT PACKING [FOR FINISHED COMPONENT WEIGHT [DU WEIGHT]]	MT	1113
44	E73	RECOVERY RATE FOR STAINLESS STEEL [MAGNETIC] SCRAP	MT	52000
45	E76	CONVERSION CHARGES FOR STRUCTURALS TO STRUCTURALS	MT	1010
46	E77	JOINTS OF CS/ HIGH TENSILE PLATES UPTO 4 MM/RM	MR	55
47	E78	JOINTS OF CS/HIGH TENSILE PLATES 5MM TO 10 MM/RM	MR	175
48	E79	JOINTS OF PLATES 12 TO 20 MM /RM	MR	290
49	E80	JOINTS OF BEAM/CHANNEL UPTO 200 MM /JT.	NO	95
50	E81	JOINTS OF BEAM/CHANNEL 201MM - 300 MM /JT.	NO	116
51	E82	JOINTS OF BEAM/CHANNEL 301- 450 MM /JT.	NO	149
52	E83	JOINTS OF ANGLES UPTO 75X75X8	NO	42
53	E84	JOINTS OF ANGLES ABOVE 75X75X8 UPTO 100X100X12	NO	78
54	E85	JOINTS OF ANGLES ABOVE 100X100X12	NO	110
55	E86	JOINTS IN BEAM /CHANNEL ABOVE 450 MM	NO	291
56	E87	ADDITIONA JOINTS FOR PLATES 21-25 MM/RM	MR	575
57	E88	ADDITIONAL JOINTS FOR PLATES 26-32MM/RM	MR	665
58	E89	ADDITIONAL JOINTS FOR PLATES 33-36 MM /RM	MR	150
59	E90	ADDITIONAL JOINTS FOR PLATES 37-40 MM/RM	MR	980
60	E91	ADDITIONAL JOINTS FOR PLATES 41 - 50 MM /RM	MR	880
61	E92	ADDITIONAL JOINTS FOR PLATES 51-56 MM /RM	MR	1001
62	E93	ADDITIONAL JOINTS FOR PLATES 57 MM AND ABOVE/RM	MR	1600
63	E94	CHLORINATED RUBBER PAINT (RAL)- 40 MICRONS	SM	35
64	E95	TESTING CHARGES OF GATE/DAMPER ASSEMBLY ELECTRICALLY OPERATED UPTO 7 MT	NO	5000
65	E96	TESTING CHARGES OF GATE / DAMPER ASSY ELECTRICALLY OPERATED ABOVE 7 AND UPTO 10 MT.	NO	6000
66	E97	TESTING CHARGES OF GATE / DAMPER ASSY ELECTRICALLY OPERATED ABOVE 10 MT.	NO	10800
67	E98	EXTRA CHARGES PAYABLE FOR FIXING OF BULB SEALS (BULB SEALS ISSUED AS FREE BY BHEL AND APPLICABLE FOR GATE ASSEMBLIES LOADED UNDER RS-NO 117E, 117F, 117G, 118B, 118C,119A)	MT	27000
68	E99	JOINTS OF Stainless Steel PLATES UPTO 4 MM/RM	MR	150
69	E100	JOINTS OF Stainless Steel PLATES 5 mm TO 10 MM/RM	MR	340
70	E102	Painting - Zinc phosphate primer - grey shade 35 microns	SM	46
71	E103	% for full CORTEN - A material fabrication - all Rate schedules in Gen , CHIM A , B & C	%	33

Section IV

BANK GUARANTEE FOR SUPPLY FREE ISSUE MATERIAL

Bank Guarantee No:

Date:

NAME OF ISSUING BANK

& ADDRESSES OF THE BENEFICIARY

NAME OF ISSUING BANK

& ADDRESS

BANK EMAIL ID:

BANK PHONE NO:

SFMS Serial No* :

AUTHORISED SIGNATORIES CELL PHONE NO:

BANK FAX NO:

IFSC AND MICR CODE

Dear Sirs,

1. In consideration of Bharat Heavy Electricals Limited¹ (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____¹ through its Unit at.....(name of the Unit) having awarded to.....² (Name of the Vendor / Contractor / Supplier) (**VENDOR CODE**), with its registered office at _____² (hereinafter called "the Vendor/Contractor/Supplier" which expression shall include its successors and permitted assigns) a contract Ref No.....dated ³valued at Rs.....(Rupees -----) /FC.....(in words.....) for ⁴(hereinafter called the 'Contract')

AND WHEREAS the Employer having agreed as per the terms and conditions of the Contract to supply free issue materials for the manufacture/fabrication of the equipment at the 'Contractor/Supplier/Fabricator's' site on furnishing of a Bank Guarantee for Rs. _____ (Rupees.....)⁵ in the manner hereinafter specified for the due safeguard of the free issue material,

2. we, ..., (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount but not exceeding Rs ----- (Rupees -----) without any demur, merely on a demand from the Employer and without any reservation, protest and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

3. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

4. We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the 'Contractor/Supplier/Fabricator in any suit or proceeding pending before any Court or Tribunal or Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

5. The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the 'Contractor/Supplier/Fabricator' shall have no claim against us for making such payment.

6. We the Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and till the reconciliation of the free issue material has been carried out and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

7. We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said

Contract or to extend time of performance by the said 'Contractor/Supplier/Fabricator' from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier/Fabricator and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said 'Contractor/Supplier/Fabricator' or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said 'Contractor/Supplier/Fabricator' or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

8. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor/Supplier/ Fabricator and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's/Supplier's/ Fabricator's liabilities.

9. This Guarantee shall remain in force upto and including.....⁶ and shall be extended from time to time for such period as may be desired by Employer.

10. This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/ Supplier/ Fabricator but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

11. Unless a demand or claim under this guarantee is made on us in writing on or before the **claim period last date** we shall be discharged from all liabilities under this guarantee thereafter.

12. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Ranipet.

We, ... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁵
- b) This Guarantee shall be valid up to ⁶
- c) Unless the Bank is served a written claim or demand on or before (minimum 3 to 6 months from the expiry date) ⁷ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

13. We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

NAME AND ADDRESS OF THE EMPLOER. i.e Bharat Heavy Electricals Limited

¹ NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER AND VENDOR CODE ASSIGNED BY BHEL . .

² DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

³ PROJECT/SUPPLY DETAILS AND CONTRACT VALUE

⁴ BG AMOUNT IN FIGURES AND WORDS

⁵ VALIDITY DATE (dd /mmm /yyyy)

⁶ DATE OF EXPIRY OF CLAIM PERIOD (dd /mmm /yyyy)

* **Structured Financial Messaging System (SFMS)** has been/ is being implemented by the Banks as per the Ministry of Finance's instructions for Sending and receiving Bank Guarantee and also Inland Letter of Credit Instruments. The SFMS provides a platform for secure communication within the Bank and between Banks. As such, SFMS can prove to be an excellent IT enabled platform for getting secure confirmations from the Banks in respect of Bank Guarantees issued in favor of BHEL.

List of Consortium Banks

Sl. No	Nationalised Banks	Sl. No	Public Sector Banks
1	State Bank of India	18	IDBI
2	Allahabad bank		
3	Andhra bank	Sl. No	Private banks
4	Bank of Baroda	19	Axis Bank
5	Canara Bank	20	HDFC
6	Corporation bank	21	ICICI
7	Central bank	22	The Federal Bank Limited
8	Indian Bank	23	Kotak Mahindra Bank
9	Indian Oversea Bank	24	Indusind Bank
10	Oriental bank of Commerce	25	Yes Bank
11	Punjab National Bank		
12	Punjab & Sindh Bank	Sl. No	Foreign banks
13	Syndicate Bank	26	CITI Bank N.A
14	UCO Bank	27	Deutsche Bank AG
15	Union Bank of India	28	HSBC
16	United Bank of India	29	Standard Chartered Bank
17	Vijaya Bank	30	J P Morgan



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
பாரத ஹீவ் எலக்ட்ரிகல்ஸ் லிமிடெட்
BOILER AUXILIARIES PLANT,
RANIPET- 632 406 (Tamil Nadu)

Ph: 04172-284158, 284030, 241170
Email: bsmanian@bhel.in ;
ssvasan@bhel.in

Tender NO: 651003E

Dt.25.08.2022

Annexure-A (TO BE FILLED , SCANNED & UPLOADED in e procurement site)
Along with Land document/Lease doc with EC for 20 years for new firms .
Partnership & PVT limited firms to submit requisite documents as called for 14 & 15

CHECK-LIST FOR COVER -I (Techno Commercial Bid)	
S.No	Description - Details to be Filled by the Vendor
1	Name of the Vendor with Office Address
2	Vendor Code / Vendor Reference Code
3	Offer Reference
4	Declare the Value of Immovable property of the Proprietor/Partners/Board of Directors in Lakh
5	Distance of the vendor works from BHEL Ranipet in Kilometers
6	Whether your firm falls under (Please put tick mark) Micro/Small/Medium/Others
7	Enclose the valid MSE document YES / NO
8	EMD Details (To be submitted by Non MSE Vendor/Medium category vendor) : Demand Draft Number/Receipt No....., Date , Value Rs.2.00 Lakh Bank Name....., Branch.....
9	Firms Capacity to be spared to BHEL Jobs for Fabrication - In terms of Metric Ton per Month
10	Signed in Technical Bid (Annexure-C) (without Price) YES / NO
11	Manufacturing Facilities Available with Firm as per format given in Annexure-F YES / NO
12	Affidavit in bidders letter head as per Annexure-I YES / NO
13	Own land - Document copy / Lease Land - Self attested Copy of Registered Lease Agreement for 3 Year period - Only new vendors to be submitted YES / NO
14	Documents to be enclosed for Partnership Firm – Self Attested Copies i) Latest Form- A, issued after 01.04.2022 YES / NO ii) Partnership Deed Copy (AT WILL). YES / NO
15	Documents to be enclosed for Limited Firm (Private Firm) – Self Attested Copies i) Latest resolution by Board of Directors. YES / NO ii) Memorandum of Article of Association. YES / NO iii) Company's Affidavit for existence YES / NO iv) Latest Annual Report. YES / NO v) Directors Share details YES / NO
16	Power of Attorney if required as per Annexure-J YES / NO
17	Vendor Registration Form given as Annexure-K along with all necessary documents (For New Firm) YES / NO

We have gone through all the terms and conditions of the tender and fully understood all the technical and commercial requirements and quoted for the tender without taking any deviation.

Signature of Vendor (Authorized person) with seal

ANNEXURE-C				
TECHNO-COMMERCIAL OFFER				
BHEL: ENQ.No. : 651003E		Offer Ref :		
Enq. Dated. : 25-08-2022		Offer Date:		
Due on : 05-09-2022		Offer is Valid upto: 180 days from the date of Price Bid opening and Firm for one year contract.		
A1	Name & address (Head office)			
A2	Contact person's Names, Designation, Phone No(office & Resi'), Cell No, Email ID			
B1	Description & Drg.No	Qty(MT.)	Unit Weight in Kg	Rate per No. in Rs.
1	Column Modification: 1. Existing base plate removal / plugging of existing holes & drilling of new holes 2. Welding of new piece of Column 3. Welding of Base plate to Column 4. Column splice welding 5. Removal & welding of gussets.	152	1.00	Rate Quoted in the Price Bid
2	Ducts Welding: 1. Field joint weld modification 2. Corner angle welding 3. Flange welding	701	1.00	
3	Bracing Modification (Increase in Length with or without Gusset Modification): 1. Cutting the brace section / support beam 2. Welding of new piece of bracing 3. Additional strengthening of bracing 4. Truss pipes trimming 5. Gusset plate cutting/ removal	71	1.00	
4	Bracing Modification (Decrease in Length with or without Gusset Modification): 1. Cutting the brace section / support beam 2. Additional strengthening of bracing 3. Truss pipes trimming 4. Gusset plate cutting/ removal	350	1.00	
5	Cutting of hole: 1- Cutting of hole in Panel - Circular / Rectangular	29	1.00	
6	Panel Height Reduction 1. 12mm plate removal 2. Panel Height reduction 3. New 12mm plate welding 4. Cutting of hole in panel	816	1.00	
7	Panel Height Addition 12mm plate removal 2. Panel Height welding 3. Stiffeners welding 4. Splice for Stiffeners welding 5. New 12mm plate welding 6. Cutting hole in panel	593	1.000	

ANNEXURE-C		
TECHNO-COMMERCIAL OFFER		
BHEL: ENQ.No. : 651003E		Offer Ref :
Enq. Dated. : 25-08-2022		Offer Date:
Due on : 05-09-2022		Offer is Valid upto: 180 days from the date of Price Bid opening and Firm for one year contract.
B2	Scope of Work:- Jobs (fabricated items of Yadadri, Bhadradi & Kothagudem projects) to be modified have to be collected from BHEL shipping & any additional raw materials required for completions as per GMS to be collected from BHEL stores. Completion of modification jobs as per respective BHEL drawings, Quality requirements & handover the finished jobs to BHEL. Rates are inclusive of transport charges for collection of materials & components and handing over to BHEL. Intermittent movement of jobs for blasting & painting will be paid extra as per existing MAIN ARC. Offcut & MAS norms for fresh materials will be as per MAIN ARC. Balance material arising from modification will be returned to BHEL stores on weight basis & treated as scrap.	
	All other terms and conditions as per terms and conditions are as per Main ARC 21-22	
B3	Payment term: 100% after IR,DC within 45 days for MSE vendors, for non MSE vendor in 90 days.	
B4	UDYAM certificate to be scanned and uploaded in the e tender portal	
Sl	Aspects	Accepted YES/NO
C1	All the requisite manufacturing Machines, Equipments, Tools & Accessories, consumables, Safety Equipments and accessories to Labour will be made available at the manufacturing site.	YES
C2	Delivery Period:One month from P.O date /Last material clearance date including further materials which ever is later.	YES
C3	Eligibility criteria GENERAL FABRICATION facility is available.	YES
C4	Commercial Terms and Conditions as per prevailing MAIN ARC	YES
C5	Rate quoted is on F.O.R destination basis only. Freight charges are included in the price. Rate quoted shall be exclusive of GST	YES
C6	Delivery as per BHEL requirement will be meet	YES
C7	Submission/ ensuring availability of Bank Gurantee for Rs 10,00,000 before relase of P .O is accepted .	YES
C8	A separate Sheet is to be enclosed for Deviation proposed if any. Is such a sheet enclosed now.	No
C9	Is levying of BHEL's Std-LD on delayed dely is acceptable. Viz. @ 0.5% per week of delay subject to maximum of 10% of the particular Work Order in the addendum to the Contract for the undelivered portion.	YES
C10	All the unusable materials to be returned as "Scrap" only, on weight basis at stores. In case of any unusable materials of any size , i.e arising because of modification , returned by Firms , stores will weigh the scrap and acknowledge the DC . Acknowledgement will be made for the actual weighment done at Stores only. RSV will be made accordingly.	YES

ANNEXURE-C			
TECHNO-COMMERCIAL OFFER			
BHEL: ENQ.No. : 651003E		Offer Ref :	
Enq. Dated. : 25-08-2022		Offer Date:	
Due on : 05-09-2022		Offer is Valid upto:	180 days from the date of Price Bid opening and Firm for one year contract.
C10	Aspects	Yes/No	GST No
C10a	Is GST payable extra	YES	
<u>GST certificate to be scanned and uploaded in the e tender portal for new vendor</u>			
C11	Rate shall be quoted Exclusive of GST,		YES
C12	Manufacture & Supply as per BHEL Drawing is to be Confirmed		YES
Signature with date of authorised signatory			
Name & Designation of Authorised Signatory			
List of Enclosures			

**BHARAT HEAVY ELECTRICALS LIMITED**

(A Government of India Undertaking)
BOILER AUXILIARIES PLANT,
Indira Gandhi Industrial Complex,
RANIPET- 632 406 (Tamil Nadu)

Ph: 04172-284030, 284158, , 241170

Email: bsmanian@bhel.in

Enquiry : 651003E dt : 25/08/2022

Annexure-F- Eligibility Criteria and General Information for MODIFICATION WORKS

Manufacturing Facilities Available with Firm and other General Information (Details to be filled by the Vendor)		Vendor Reference code
General Information about Firm		
1 Name of Firm		
2 Place		
3 Office Room with facilities like Computer, Printer, Internet access etc..		
4 Bank Account Number and Name of the Bank		
5 Proprietor/Partnership/Limited company		
6 Name of Proprietor/Partners/Director with Age and Contact Number		
7 Educational & Technical qualifications of Proprietor/partners		
8 Educational & Technical qualifications of Supervisors		
9 Number of in house Quality Inspectors, Manpower details with Educational Details		
10 Availability of qualified NDT personnel		
11 ISO 9001 certification :		
12 GST No.: (For new vendor attach GST certificate)		
General Mandatory Facilities Required for all Groups		
13 Distance from BHEL, Ranipet in KM. Within the radial distance of 60 KM for all items is allowed.		
14 Electrical power availability (EB) in KW - Minimum 50 KW required. Attach EB Service card copy		
15 Indicate Land area - Minimum 1 Acre in single location - own/Lease - Document (title deed with encumbrance certificate) to be furnished (If lease, lease should be minimum for a period of 3 years on the date of Tender opening)		

16	Availability of approach road	
17	Availability of Fencing/Compund wall all around the land	
18	Covered Area for working (concrete/ Asbestos/ Metallic Sheet) in Sq.ft - Minimum shed size shall be Area 2400 sq.ft.	
19	Compliance of Statutory requirements such as Insurance,ESI and PF facility for employees, Safety requirements, Non usage of Child Labour, License from Government Agency (Inspector of Factories) etc..	Yes / No
	Mandatory Fabrication Facilities required for all Groups	
20	Welding Gen / Rect /transformer 400 A(Make)/ CO2 weld equipment : Minimum 3 Sets.	
21	Manual Gas Cutting Set with blow pipe: Minimum 2 Sets	
22	Pug Cutting machine with Accessories : Minimum 2 Sets	
23	Electrode Baking Oven upto 300 degree c ; Minimum 1 No.	
24	Thermal Flask : Minimum 3 No's.	
25	Pedestal grinder : Minimum 1 No.	
26	Angular grinding machines : Minimum 2 No's	
27	Mechanical / Hydraulic press: Minimum 1 No.	
28	Portable Drilling Machine (Min 25mm): Minimum 1 No.	
29	Painting Facility - Compressor with Gun: Minimum 1 Set.	
30	Crane to handle 10 MT Job either self owned or on hire basis. Vendor has to give self declaration / confirmation	
31	MPI Test Unit owned or hired: Minimum 1 Set.	
32	Availability of Paint Coating Thickness Measuring Guage: Minimum 1 No.	
	General Facilities available with Firm	
33	Measuring Instruments : Measuring Tape 3 mtr., 15 mtr., 30mtr., Vernier Caliper each 1 No. and Try Square 2 No's.	
34	Availability of alternate power source (Diesel /inverter) Indicate the capacity	
35	Concrete platform inside covered area in Sq.ft	
36	Plate Rolling machine capacity (width & thickness) in mm	
37	Availability of level bed (Flatness 1mm)	
38	Availability of straight edge	
39	Availability of bending machine width & thickness	
40	Availability of Section Rolling Facility with size	

41	Availability of shearing machine - Specify Width and Thickness	
42	Availability of power saw	
43	Availability of Lathe with size - Maximum Dia to be held and Length of Bed	
44	Availability of Milling Machine - Spindle size and Table size	
45	Availability of Dynamic Balancing Machine with size	
46	Heat Treating Furnace with capacity	
47	Special Machines/Facilities if any other than specified above	
	I/We certify that the details furnished above is true and correct	
Signature of the Vendor with Firm Seal		
	Meeting the Eligibility Criteria	Not Meeting the Eligibility Criteria
Signature of the Assessors		

AFFIDAVIT

I/We M/s do hereby undertake the following

01. We have not been put on hold ,suspended, delisted, banned or black listed by any of the BHEL units
02. We have not been booked by CBI and/or indicted by a court of law in any criminal case relating to any manufacturing related activity during last 5 years .
03. Tick which ever is applicable

- i) ☐ One or more partners/directors/proprietor of us DO HAVE a relation or relations employed in the capacity of an officer of BHEL. The details are given below

Name:-

Staff.No:-

Designation:-

Department:-

(or)

- ii) ☐ One or more partners/directors/proprietor of us DO NOT HAVE a relation or relations employed in the capacity of an officer of BHEL. Concealing the above information , & if found by BHEL, BHEL may cancel the contract & forfeit EMD/Bank Guarantee forthwith .

04. All scope , Terms , conditions ,annexures ,technical/operational requirements of BHEL read understood, accepted with out any deviation and then submitted offer unconditionally .
05. In case it comes to notice of BHEL during the finalization of Tender/after placement of contract and while executing the contract that vendor has given incomplete ,false, incorrect, suppressed information & data, forged documents fake documents/ certificates ,fake certificated or any information prejudicial to BHEL's interest, BHEL will suspend the business with the vendor at any stage and the EMD/Bank Guarantee will be forfeited .
06. I/We undertake that the required Bank Guarantee will be submitted within 15 Days of finalization of the contract, else non submission of BG can be treated as *"not honoring his own offer or any of the condition "* stated/agreed in the tender and declared fit for taking penal action by BHEL as per *"suspension of Business dealings vide Clause R of section IV "* against me/us.
07. I/We declare and certify that % of local content as defined in Public Procurement (Preference to Make in India), Order 2017 dated 16.09.2020 issued by DPIIT is _____%.

Signature of authorized person with Seal

(if required to be filled, scanned and uploaded in e procurement site or not required to be submitted)

[to be printed on stamp paper of Rs. 20]

KNOW ALL MEN BY THESE PRESENTS that, I,
 _____(**name of the person authorizing the other person**) have been authorised by _____ (refer to the persons/Board of Directors as the case may be vide _____
dated _____ (**refer to the authorizing documents**), inter alia, to submit bid, quote price, submit documents, negotiate and execute contracts and do all acts and in deed in relation to the said acts in the name of and for and on behalf of M/s _____ (hereinafter “Principal”).

I consider it is necessary and expedient to appoint _____

_____ (**Name, Designation/Related as, Residential Address**), to be my Attorney for me and in my name to do the following acts on behalf of the Principal, namely:

1. To receive Notice Inviting Tender/ Enquiry or any other document from or in relation to Bharat Heavy Electricals Limited, Ranipet (“BHEL”).
2. To submit bids, clarifications, quotations, prices, drawings, documents, or any other information in relation to the above;
3. To negotiate and execute contracts with BHEL.
4. To respond to queries or request for clarifications from BHEL and furnish documents in support of such response.
5. To do all acts, deeds and things which are necessary for the above acts or incidental thereto.

-/ Page 2 /-

I hereby agree and undertake to ratify all acts, deeds, assurances done, given, executed or made by my said Attorney in connection with the above as if the same were done or made by ~~me~~. _____ (the principal)

IN WITNESS whereof I sign and execute this Power of Attorney on this _____ day of _____ 2022 at _____.

(Signature and Seal of the Principal)
With Land-line, Mobile, email, Address

=====

The Stamp size photo and specimen signature of the Attorney

Affix Photo here

Specimen signature of the Attorney

=====

SIGNED and delivered by the above named _____
(Principal) in the presence of _____ (*Name of Witness*),
_____ (*address of witness*).

(Signature and Seal of the Witness)

=====

Signature & Seal of the Notary

=====

[Note:

1. *In case of a company, the Managing Director of the Company shall sign on behalf of the Principal. The company's common seal shall also be affixed in the power of attorney*
2. *In case of Hindu Undivided Family, karta shall sign on behalf of the HUF.*
3. *In case of a partnership, all the partners of the Firm shall sign and affix seal on behalf of the Principal.*
4. *In case of a proprietorship, the proprietor shall be the Principal.]*

Guidelines for Filling the Supplier Registration Form

Applicants need to comply with the requirements of the registration process. The information/ documents furnished will be treated in strict confidence.

A. Instructions for filling the Registration Form

- Supplier registration is only through online portal at <https://supplier.bhel.in>.
- All columns in the Registration Form are to be duly filled up. Indicate, '**NIL**'/ '**Not Applicable**', wherever details are not available or not relevant respectively.
- All sheets of the Registration Form are to be signed & stamped/ digitally signed by the authorized signatory.
- Expedition of any clarification/ information required during registration to be ensured, failure of which may affect the registration process.
- PO copies/ Experience certificates/ Test certificates or any other required document will be sent for verification to the concerned issuing authority. Registration will be liable to be cancelled if any document is found to be fake/ false/ forged on verification.
- Submission of fake/ false/ forged documents will invite action by BHEL as per extant Guidelines for Suspension of Business Dealings and Fraud Prevention Policy (both as available on www.bhel.com).
- Just submission of supplier registration form does not mean automatic registration. Registration shall be done, after due evaluation and will be intimated accordingly.
- Registration of supplier will be done on the basis of the following criteria depending upon the applicability

SNO	Criteria	Max. Marks	Min. Qualifying Marks	Applicable for
1.	Organizational soundness	50	30	Manufacturers/ EPC Contractors/ Non-Manufacturers/ Subcontractor
2.	Financial information			
3.	Quality system	25	15	Manufacturers/ Subcontractor
4.	Technical competence	25	15	
	Total	100	60	

**Minimum qualifying marks for financial information shall be 10 within the ambit of 30 marks put together for Organisational soundness & Financial information.*

- For a document in language other than Hindi/ English, a self-attested Hindi/ English translated document to be attached
- Class 3, Signing & Encryption Digital Signature has to be obtained.

B. List of documents to be uploaded by the prospective Supplier(s) seeking registration with BHEL.

PART-A ORGANISATIONAL SOUNDNESS

SRF Parameters	DOCUMENTS TO BE FURNISHED
2.2 Details of Directors in Case of Private Ltd., One Person Company, Public Ltd. And Partners In Case of Limited Liability Partnership/ Partnership Firms, Office Bearers In Case Of Co-Operative Society, Trustees In Case of Trust, Proprietor in Case of Proprietorship Firm, Karta of HUF	Organization chart
3.1 TYPE OF OWNERSHIP: Govt./ State/ Pvt./ Co-Operative Society/ Trust/ Others	
Govt. of India Undertaking	NA
State Govt. Undertaking	NA
Public Limited Company/ Private Limited Company	Memorandum of Association, Articles of Association and Certificate of Incorporation
One Person Company	
Limited Liability Partnership	Memorandum of Association, Articles of Association, LLP partnership agreement, Certificate of Incorporation (LLPIN)

Partnership Firm	Registered Partnership Deed duly signed by Registrar of Firms
Proprietorship	Profession Tax Regn./ Municipal Regn/ PAN of Firm (Proprietor)
Co-Operative Society	Certificate of Registration of society issued by Registrar of Societies along with its Society Rules and Bye Laws (as per Extant Act)
Trust	Registered Trust Deed
Others (please specify)	Attach a copy of the relevant Statutory document
3.2 NATURE OF BUSINESS	
Manufacturer/ Engg. Consultant/ EPC Contractor/ System Integrator / Subcontractor - Machinist / Fabricator/ Non-manufacturer(s)/ Agents	Documentary Evidence
Non Manufacturers: Dealer/ Trader*/ Distributor/ Stockist / Channel Partner/ Indian sales office or subsidiary of registered Foreign Principal etc.	Non-Manufacturer needs to submit an Authorization Certificate, clearly indicating the validity period as well as rights granted by respective OEMs to them i.e. to negotiate/ quote/ supply/ after sales service etc. in line with scope matrix submitted.
Indian Agents	attach authorization certificate of principal, third party business rating report of foreign principal from Dun & Bradstreet/ Credit reform etc. & deed of agency agreement)
4.0 REGISTRATION PARTICULARS	
4.1	Permanent Account No (PAN)
4.2	GSTIN
4.3.1	Category as per extant MSME Act (Micro/ Small/ Medium)
4.3.2	MSE Ownership w.r.t. SC/ ST
• Udyam Registration Number • Proprietor: SC/ ST Certificate • Partnership Firm: SC/ ST Certificate of partners holding 51% shares & above • Limited Company: SC/ ST Certificate of Directors/ Owners holding 51% shares & above	
5.0 OTHER PARTICULARS	
5.1 IF REGISTERED WITH ANY OF BHEL UNITS	Copy of at least one or more successfully executed purchase orders
5.2 Whether approved by ASME / NTPC/ NPC/ EIL/ DGS&D/ RAILWAYS/ IBR/ LLOYDS/ ONGC/ PGCIL/ BARC/ RITES/ IOCL/ PDIL/ CPWD/ Any other CPSU for similar items, for which registration is sought?	Documentary Evidence
5.3 Whether Supplier is ISO 9001 Certified	ISO 9001 Certificate, approved QMS manual (latest)
5.4 Whether Supplier is ISO 14000 Certified	ISO 14000 Certificate
5.5 Whether Supplier is OHSAS 18000 Certified	OSHAS Certificate
5.6 Experience list	Attach list of present customers with name & address for offered/ similar type & size of item/ equipment for which registration has been sought and with whom applicant has continuous business since last three years. Copies of latest previous two purchase orders executed to be attached. <i>(Attach performance certificates issued by its customers for successful execution of the contracts)</i>

Part- B FINANCIAL INFORMATION

1. Audited copies of annual reports/ complete set of annual accounts for the last four years (or from date of incorporation whichever is less) are to be submitted.
2. If the supplier is new in business and does not have past data, then the financial evaluation will be done on the basis of information provided.

Part-C QUALITY SYSTEM

Sl	Parameters	Suggested documents to be furnished
9.1	Incoming Material Control System	System and documentary evidence of control over sub-suppliers in the form of Quality Plan/ Checklist (Customer Hold Point (CHP), In-Stage Inspection etc.) at sub supplier works, inspection on receipt
9.2.1	In Process Control	Work instructions/ checklist/ job card & record of process control parameter, log sheets, log book
9.2.2	Control on Outsourced Processes, if applicable	Documentary evidence of control over suppliers in the form of Quality Plan/ Checklist (Customer Hold Point (CHP), In-Stage Inspection etc.)
9.3	Manufacturing Process/ Testing Procedure Qualification	Copy of Manufacturing process work flow/ Testing Procedure Qualification
9.4	Personnel qualification for cl. 9.3 (above).	Copy of Record of Personnel qualification for critical/ special processes (welding, painting, NDT, heat treatment, etc.)
9.5	Calibration system	Copy of list of instruments & their calibration status(certificate from NABL/ any other Govt. approved & accredited lab) In case of Test Lab accreditation, Certification of own test labs from Govt agencies
9.6	System of Identification & Traceability of materials at incoming stage, during processing and finished goods, tools, jigs, fixtures & processed components, etc.	Copy of procedure
9.7 a	System of Storage, Preservation, Painting & packing	Copy of procedure
9.7 b	Application of 5S	Details of 5S practices/ procedure
9.8	System of Non Conformity Report (NCR) disposition, corrective and preventive action (CAPA)	Copy of System for NCR handling and list of NCRs observed in the last three years along with details of disposition and CAPA.
9.9	Customer complaints (CC) handling system, CC disposition, corrective and preventive action (CAPA)	Copy of System for CC handling and list of customer complaints in the last three years along with details of disposition and CAPA.
9.10	HSE measures	Copy of health, safety and environment procedure/ guideline (record of accidents for last three years, environment and health related initiatives).
9.12	Details of sub suppliers, outsourced agency	List of facilities, systems with sub suppliers

PART-D TECHNICAL COMPETENCE

Parameters	(DOCUMENTS TO BE FURNISHED)
Supplier understands the product specification.	e.g. Technical Catalogue
Supplier understands the inspection requirements.	e.g. Inspection Report
Supplier has process capability to achieve the product specification/dimensional requirement.	e.g. Type test report
Supplier has experienced manpower to carry out the job.	e.g. skill matrix of the personnel

**BHARAT HEAVY ELECTRICALS LIMITED
SUPPLIER REGISTRATION FORM
(INDIAN SUPPLIER)**

Doc. No. AA:SSP:SR:01 Rev:02

Date: 26.09.2016

amdt. 04 dated 11.12.2020

Annexure-C

PART- A: ORGANISATIONAL SOUNDNESS

1.0 ORGANISATIONAL INFORMATION					
1.1 NAME AND CORRESPONDENCE ADDRESS OF THE FIRM/ COMPANY TO BE REGISTERED:					
1.2 REGISTERED OFFICE ADDRESS					
1.3 Address, Contact person & Telephone no for:					
• WORKS N/ DIVISION N/ BRANCH N/ SISTER CONCERN N:					
1.4 PRODUCTS/ SYSTEMS/ SERVICES FOR WHICH REGISTRATION IS APPLIED FOR (ATTACH BROCHURES & CATALOGUES)					
SNO	DESCRIPTION	SIZE & RANGE	MANUFACTURING STANDARD (IS/ DIN/ BS/ ASME etc.)	WORKS/ DIVISION (as per cl 1.3)	
2.0 GENERAL INFORMATION					
2.1 DETAILS OF CONTACT PERSON FOR ANY CLARIFICATION (S): (Name, email id, Tel: Landline, mobile no:)					
2.2 DETAILS OF DIRECTORS IN CASE OF PRIVATE LTD., ONE PERSON COMPANY, PUBLIC LTD. AND PARTNERS IN CASE OF LIMITED LIABILITY PARTNERSHIP/ PARTNERSHIP FIRMS, OFFICE BEARERS IN CASE OF CO-OPERATIVE SOCIETY, TRUSTEES IN CASE OF TRUST, PROPRIETOR IN CASE OF PROPRIETORSHIP FIRM, Karta of HUF:					
Name	Gender	% Share of Ownership	PAN	Aadhar No	DIN No. (if applicable)
2.3 DIRECTORS / PARTNERS/ PROPRIETOR, IF RELATED TO ANY BHEL EMPLOYEE					
Name of BHEL Employee	Staff Designation	No.&	Unit & Department	Relationship	
2.4 IF ANY EX-BHEL PERSONNEL IS EMPLOYED/ ENGAGED BY THE COMPANY					
Name of Ex. BHEL Employee	Staff No.& last Designation held	Place of last posting (Unit & Dept.)	Date of leaving Service from BHEL		
2.5 DETAILS OF FAMILY MEMBERS, RELATED FIRMS, GROUP COMPANIES ETC. REGISTERED WITH BHEL					
Name of The Firm/ Family Member	Nature of Business	Relationship	Item/s for which supplier is registered	Common/ Supplier ID	Unit
3.0 OWNERSHIP INFORMATION					
3.1 TYPE OF OWNERSHIP: Govt./ State/ Pvt./ Co-Operative Society/ Trust/ Others					
3.2 Nature of Business: Manufacturer/ / Engg. Consultant/ EPC Contractor/ System Integrator Subcontractor - Machinist / Fabricator/ Non-manufacturer(s)/ Agents					
3.3 Year of Commencement of Business (attach relevant documents)					
4.0 REGISTRATION PARTICULARS (COPY OF RELEVANT DOCUMENTS TO BE ATTACHED)					
4.1*	Permanent Account No (PAN) (Mandatory)				
4.2	GSTIN: applicable/ exempted		(If applicable give details: State-wise GSTIN: Name of State/ UT: GSTIN: Copy of Registration Certificate)		
4.3	Whether Company is Micro/ Small Enterprise (MSE) Category		YES/ NO If yes, provided Udyam Registration Number		
4.3.1	Category as per extant MSME Act		Micro/ Small/ Medium		
4.3.2	MSE Ownership w.r.t. SC/ ST, if applicable, documents to be furnished				
4.4*	Registered with GeM - (provide GeM ID) (Mandatory)				
5.0 OTHER PARTICULARS					
5.1 IF REGISTERED WITH ANY OF BHEL UNITS					

BHARAT HEAVY ELECTRICALS LIMITED
SUPPLIER REGISTRATION FORM
(INDIAN SUPPLIER)

Doc. No. AA:SSP:SR:01 Rev:02

Date: 26.09.2016

amdt. 04 dated 11.12.2020

Annexure-C

Name of BHEL unit & Common/ Unit Supplier ID	
Common/ Unit Supplier Identification (ID) Number	
Items for which supplier is registered & its specifications	
5.2 Whether approved by ASME / NTPC/ NPC/ EIL/ DGS&D/ RAILWAYS/ IBR/ LLOYDS/ ONGC/ PGCIL/ BARC/ RITES/ IOCL/ PDIL/ CPWD/ Any other CPSU for similar items, for which registration is sought?	YES/ NO
5.3 Whether Supplier is ISO 9001 Certified	YES/ NO
5.4 Whether Supplier is ISO 14000 Certified	YES/ NO
5.5 Whether Supplier is OHSAS 18000 Certified	YES/ NO
5.6 Experience List:	
5.7 Details of Pending Legal/ Arbitrations issues on contractual aspects with customer, if any? (If Yes, kindly furnish details with latest status on a separate sheet)	YES/ NO

6.0 MANUFACTURING FACILITIES:

6.1 LIST OF MANUFACTURING FACILITIES/EQUIPMENTS INCLUDING MATERIAL HANDLING FACILITY (RELATED TO THE ITEMS APPLIED FOR REGISTRATION)

Sl. No	Works/ Division (as per cl. 1.)	Description of Machine/Equipment	Quantity	Make & Year of Installation	Remarks

6.2 IF IN-HOUSE MFG FACILITIES NOT AVAILABLE, INFORM SOURCE OF MFG. DETAILS ALONG WITH THEIR FACILITIES (RELATED TO THE ITEMS APPLIED FOR REGISTRATION)

Sl. No	Process Outsourced	Name & address of The Company	Description of Machine / Equipment	Remarks

6.3 RATIO OF OUTSOURCED COST TO TOTAL PRODUCTION VALUE: _____.

6.4 POWER BACK UP (Furnish details on separate sheet) YES/ NO

7.0 INSPECTION & TESTING FACILITIES

7.1 LIST OF INSPECTION & TESTING FACILITIES / EQUIPMENT AVAILABLE (RELATED TO THE ITEMS APPLIED FOR REGISTRATION)

Sl. No	Works/ Division(as per cl. 1.2)	Description of Facility/ Equipment & Capacity	Nos.	Make & Year of Manufacturing	Last Date of Calibration(With Traceability)

7.2 IF IN-HOUSE TESTING FACILITIES NOT AVAILABLE, INDICATE SOURCE OF TESTING ALONGWITH THEIR FACILITIES (RELATED TO THE ITEMS APPLIED FOR REGISTRATION)

Sl. No	Test	Source of Testing	Description of Facility/ Equipment & Capacity	Approval of Equipment/ Process/ Personnel Qualification

Note: In case of outsourcing of major testing such as NDT, Electrical & Mechanical Testing, no marks will be awarded. However, material composition testing by chemical method from recognized laboratory shall not attract negative marking.

PART- B: FINANCIAL INFORMATION (to be certified by a Chartered Accountant)

1. Scanned copy of the financial information as below signed by a Chartered Accountant is to be uploaded.					
FINANCIAL INFORMATION FOR THE PREVIOUS FOUR YEARS "Figures to be as per Revised Schedule 6 of the Companies Act 2013, as applicable"					
8.0	Parameter	Year 1	Year 2	Year 3	Year 4
(Years in ascending order, Money value in Rs. Lakhs)					
8.1	NET WORTH (Share Capital + Reserves)				

BHARAT HEAVY ELECTRICALS LIMITED
SUPPLIER REGISTRATION FORM
(INDIAN SUPPLIER)

Doc. No. AA:SSP:SR:01 Rev:02

Date: 26.09.2016

amdt. 04 dated 11.12.2020

Annexure-C

8.2	LONG TERM DEBT/ LOAN				
8.3	DEBT EQUITY RATIO Long term Debt (8.2) Net worth (8.1)				
8.4	INVESTMENT IN: Land & Building				
	Plant & Machinery				
	Other Fixed Assets				
8.5	NET CURRENT ASSETS				
	a) Cash on hand				
	b) Account receivable				
	1 c) Inventories				
	d) Loans and advances				
	e) Other current assets				
	Total				
	CURRENT LIABILITY & PROVISIONS				
	a) Sundry creditors				
	2 b) Advances from customers				
c) Other liabilities					
d) Provisions					
Total					
3	QUICK RATIO CA - Inventory {8.5(1)-8.5(1)c}/ Current liability {8.5 (2)}				
8.6	SALES (excluding other income)				
8.7	PROFIT BEFORE TAX				
8.8	Contingent Liabilities				
8.9	Whether the supplier has been referred to BIFR/ NCLT/ any other Govt agency (If YES, enclose details)				YES / NO
8.10	Whether the supplier is a potential sick company.(If YES, enclose details)				YES / NO

Date:

Name:

Membership number & Seal of Chartered Accountant

Signature -----

Part C: (QUALITY SYSTEM):

9.0	Parameters	System in effect Written Procedure Yes/ No (If Yes, upload document)
9.1	Incoming Material Control System	
9.2.1	In Process Control	
9.2.2	Control on Outsourced Processes, if applicable	
9.3	Manufacturing Process/ Testing Procedure Qualification	
9.4	Personnel qualification for critical processes for cl. 9.3 (above).	
9.5	Calibration system	
9.6	System of Identification & Traceability of materials at incoming stage, during processing and finished goods, tools, jigs, fixtures & processed components, etc.	
9.7 a	System of Storage, Preservation, Painting & packing	
9.7 b	Application of 5S	
9.8	System of Non Conformity Report (NCR) disposition, corrective	

BHARAT HEAVY ELECTRICALS LIMITED
SUPPLIER REGISTRATION FORM
(INDIAN SUPPLIER)

Doc. No. AA:SSP:SR:01 Rev:02

Date: 26.09.2016

amdt. 04 dated 11.12.2020

Annexure-C

	and preventive action (CAPA)	
9.9	Customer complaints (CC) handling system, CC disposition, corrective and preventive action (CAPA)	
9.10	HSE measures	
9.11	Any other quality initiative/ Quality manual	
9.12	Details of sub suppliers, outsourced agency	

Part D: TECHNICAL COMPETENCE (MARKS SHEET)

Technical competence shall be evaluated in two parts viz. common competence and product/ material category/ item specific competence.

a) COMMON TECHNICAL COMPETENCE

TECHNICAL COMPETENCE (where design specification is given by BHEL)	Marking range	Marking range, if product specific technical competency not required	Marks by BHEL
Supplier understands the product specification.	(0-3)	(0-8)	
Supplier understands the inspection requirements.	(0-2)	(0-5)	
Supplier has process capability to achieve the product specification/dimensional requirement.	(0-3)	(0-8)	
Supplier has experienced manpower to carry out the job.	(0-2)	(0-4)	
TOTAL MARKS OUT OF POSSIBLE	10	25	

OR

TECHNICAL COMPETENCE (where performance specification is given by BHEL)	MARKING RANGE	Marking range, if product specific technical competency not required	PROCEDURE		SYSTEM IN EFFECT		RECORDS	
			Supplier to attach supporting documents	Marks by BHEL	Supplier to attach supporting documents	Marks by BHEL	Supplier to attach supporting documents	Marks by BHEL
Design capability	(0-3)	(0-8)						
Adequacy of quality assurance plan	(0-2)	(0-5)						
Process capability for components	(0-3)	(0-8)						
Adequacy of testing facilities	(0-2)	(0-4)						
TOTAL MARKS OUT OF POSSIBLE	10	25						
Average of Total (Total/3) = -----								

b) PRODUCT/ MATERIAL CATEGORY/ ITEM SPECIFIC TECHNICAL COMPETENCE

(Max. marks 15)

Unit MISCC to structure the parameters to be considered for technical competence and score of individual parameter depending on material category/ item. MISCC shall identify the requirement of enclosures to be furnished by supplier.

Product:

S.no	Mat. category/ item	Tech Parameter	Supplier's response with relevant documents	Remarks

To be filled up by supplier only on receipt of technical requirements/ Specification/ Drawings/ Standards from BHEL and to be sent to BHEL for further scrutiny.

(To be executed on Non-judicial Stamp Paper for an appropriate value. (Rs.100)
To be stamped as an agreement)

(For Suppliers on Unit's/Division's PMD)

Framework Confidentiality Agreement cum Undertaking

This Agreement made on this the _____ day of (month) _____ 20__ (“Effective Date”) by and between

M/s BHARAT HEAVY ELECTRICALS LIMITED, having registered office at “BHEL House”, Siri Fort, New Delhi – 110049 (India), acting through its _____ Unit (hereinafter may be referred to as “BHEL” or “the Company”).

And

M/s _____ (address) _____
represented by authorized representative Sri _____ (herein after referred to as the “Supplier”).

The Supplier and the Company may, unless the context otherwise requires, hereinafter be collectively referred to as “Parties” or singly as the “Party”.

RECITALS

Whereas, BHEL is engaged in the design, engineering, manufacturing, construction, testing, commissioning and servicing of a wide range of products, systems and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable energy, Oil & Gas and Defence and providing associated services to varied customers in relation to which BHEL/its affiliates own valuable information of a secret and confidential nature.

Whereas the Company may, in connection with Contract(s) (as defined hereunder) placed or to be placed upon the Supplier, or otherwise, from time to time, make available, Technical Information as is defined hereunder.

And Whereas BHEL is willing to provide such Technical Information to the Supplier from time to time and the Supplier understands and acknowledges that such Technical Information is valuable for the Company and as such is willing to protect confidentiality of such information, subject to the terms and conditions set out hereunder.

Now therefore, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, the Parties agree as under:

1. Definitions:

Unless the context so requires, in this Agreement, the following terms will bear the meaning ascribed to the said term in this clause.

- A. **“Contract”** means the Contract entered into with a Supplier and includes a Purchase Order, or a Work Order for procurement of any goods or for provision of any services.
- B. **“Effective Date”** means the date of this Agreement as mentioned in the preamble of this Agreement.

- C. **“Supplier”** includes a Contractor or a Vendor of the Company whether for supplying of goods or for providing any services under a Contract or both.
 - D. **“Technical Information”** includes Drawings, and/or Product Standards and/or Specifications and/or Corporate / Plant Specifications and/or Technological Process Sheets and/or Technical Data Sheets and/or Jigs & Fixtures and/or Pattern & Dies and/or Special Gauges and/or Tools etc. belonging to or wherein the Company has acquired from a third party a right of user and includes any improvement thereto from time to time whether carried out by the Company or by the Supplier.
 - E. **“Intended Purpose”** means the purpose for which the Technical Information is provided to the Supplier under or in connection with a Contract.
 - F. **“Improvement”** includes any modification made to, or adaptation of, the Technical Information which enhances or is calculated to enhance the performance (whether in terms of effectiveness or in terms of efficiency or both) of the product and/or the service to be provided by the Supplier under a Contract.
2. This Agreement shall come into force/deemed to have come into force, as the case may be, on the Effective Date; or, on the first date when the Technical Information or any part thereof is provided by BHEL to the Supplier; whichever is earlier.
3. **Agreement deemed to be incorporated in each Contract:** Unless and to the extent otherwise stipulated in the Contract, the conditions of this Agreement are deemed to be incorporated in all Contracts which may be entered into between the Company and the Supplier. Further, unless otherwise stipulated, the obligations under this Agreement are and will be independent of the obligations under the Contracts and such obligations of the Supplier hereunder will remain of full effect and validity notwithstanding that the period of validity of the Contracts has expired by efflux of time stipulated therein; or, the contract has been discharged by performance or breach; or, the termination of the Contracts for any reason whatsoever.
4. **Ownership:**
- 4.1 The Company may, from time to time, make available to the Supplier, Technical Information on a non-exclusive basis by way of loan.
- 4.2 The Supplier acknowledges and agrees that all Technical Information and copies thereof that are or may be provided by the Company to the Supplier, are and shall remain the property of BHEL or that of the concerned entity from whom BHEL has obtained the Technical Information and such Technical Information are and shall constitute trade secrets of the BHEL. Nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any patent, copyright or design or any other intellectual property rights of whatsoever description that subsists or may hereinafter exist in the Technical Information. Furthermore, nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any license or rights of use of such patent,

Annexure-G

- copyright or design or any other intellectual property rights of whatsoever description which may now or hereafter exist in the Technical Information except for use of the Technical Information strictly in accordance with this Agreement and the Contract and/or as directed in writing by the Company, solely for the Intended Purpose under the Contract.
- 4.3 Neither Party is obligated by or under this Agreement to purchase from or provide to the other Party any service or product and that any such purchase/sale of any product and/or service by one Party to the other Party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.
- 4.4 The Supplier is/has been made well aware and acknowledges that the Technical Information being/which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.
- 4.5 The Supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors/suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the Supplier or its employees or sub-contractors/suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.
- 4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights/title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings/documents or other materials connected with such Improvement to the Company and also agrees to fully cooperate with the Company for protecting the Company's interests in such Improvement in the Technical Information including but not limited to obtaining necessary protection for the intellectual property rights in such improvement, if so desired by the Company. If a question arises whether a modification amounts to Improvement to the Technical Information, the same shall be decided by the Company and such decision shall be final and binding upon the Supplier.
- 5. Use and Non-Disclosure:**
- 5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the Supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.

Annexure-G

- 5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.
- 5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the Product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and/or service to any third party, without the prior written consent of the Company.
- 5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the Supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is/was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the Supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.
- 5.5 The Supplier undertakes and agrees not to make copies or extracts of and not to disclose to others any or all of the Technical Information in its possession, except as follows:
- (a) The Supplier may disclose the Technical Information to such of its officers and employees strictly to the extent as is necessary for such officer or employee for the Intended Purpose, provided that the Confidential Information (or copies thereof) disclosed shall be marked clearly as the confidential and proprietary information of Company and that such officers and employees shall similarly be bound by undertakings of confidence, restricted use and non-disclosure in respect of the Technical Information. The Supplier shall be responsible for any breach of such confidentiality provisions by such officers and employees.
 - (b) With the prior written consent of Company, the Supplier may disclose for the Intended Purpose such Technical Information as is provided for in such consent to such of its professional advisers: consultants, insurers and subcontractors who shall be similarly bound by undertakings of confidence, restricted use and non-disclosure in respect of such Technical Information.
 - (c) The Supplier shall not be prevented to make any disclosure required by (i) order of a court of competent jurisdiction or (ii) any competent regulatory authority or agency where such disclosure is required by law, provided that where the Supplier intends to

make such disclosure, it shall first consult Company and take all reasonable steps requested by it to minimize the extent of the Technical Information disclosed and to make such disclosure in confidence and also shall cooperate with the Company in seeking any protective order or any other remedy from proper authority in this matter.

6. Exceptions:

The obligations of the Supplier pursuant to the provisions of this agreement shall not apply to any Confidential Information that:

- a) was/is known to, or in the possession of the Supplier prior to disclosure thereof by the Company;
- b) is or becomes publicly known, otherwise than as a result of a breach of this agreement by the Supplier.
- c) is developed independently of the Disclosing Party by the Supplier in circumstances that do not amount to a breach of the provisions of this Agreement or the Contract;
- d) is received from a third party in circumstances that do not result in a breach of the provisions of this Agreement.

7. The obligation of maintaining confidentiality of the Technical Information on each occasion, shall subsist for the entire duration during which the Technical Information / equipment is in possession of the Supplier and shall thereafter subsist for a further period of ----- years from the date when the complete Technical Information has been returned to the Company and if Technical Information has been returned in portions on different dates then, the period of ---- years will be reckoned from the date when the last portion of the Technical Information has been returned. Notwithstanding the expiry of the confidentiality obligation, the obligation of the Supplier under clause 5.4 shall continue to subsist for a further period of ----- years.

8. Warranties & Undertakings:

a) The Supplier undertakes to ensure the due observance of the undertakings of confidence, restricted use and non-disclosure by its persons to whom it discloses or releases copies or extracts of the Technical Information.

b) The Supplier shall keep the Technical Information or improvement made therein properly segregated and not mix up the same with any other material/documents belonging to him/it or to any other third party.

c) The Supplier further undertakes that he/it shall not hypothecate or give on lease or otherwise alienate or do away with any of the Technical Information and/or equipment of the Company, made available to him/it, and undertakes that he/it shall hold the same as a trustee, in capacity of custodian thereof and use/utilise the same solely for the purpose of executing the Contract awarded by the Company.

d) The Supplier further undertakes that he/it shall return all the equipment and/or Technical Information as far as practicable in the same condition in which the same was made available to him/it by the Company together with any Improvement thereon and the documents connected with such Improvement, to the Company forthwith upon completion of the scope of work or

Annexure-G

Contract for which such Technical Information was provided by the Company to it or as directed by the Company together with a confirmation by way of an affidavit or in such manner as directed by the Company that it has not retained any equipment and/or Technical Information/Improvement thereof. In case any such equipment and/or Technical Information or Improvement thereof shall remain in his possession or is not capable of being returned, the retention and use of such Technical Information or Improvement thereto shall continue to be governed by this Agreement.

e) The Supplier undertakes to indemnify the Company for all the direct, indirect and/or consequential losses, damages, expenses whatsoever including any consequential loss of business, profits suffered by the Company owing to breach by the Supplier of its obligations under this Agreement and/or the confidentiality requirements, if any, contained in the Contract and that the Supplier hereby agrees that the decision of the Company in all such or any such matter/s shall be final and binding on the Supplier. On mere written demand of the Company, the Supplier shall forthwith and without demur or delay pay to the Company any such sum as determined by the Company as the amount of loss or damage or expense which has been suffered by the Company. The Supplier agrees that the Company shall be entitled to withhold and appropriate any amount payable to the Supplier under any Contract then existing between the Company and the Supplier, in case the Supplier fails to make payment, in terms of the written demand, within 7 days thereof. Without prejudice to the foregoing actions, in respect to any breach of this Agreement, the Company shall be entitled to take any other action against the Supplier as per applicable laws, the Contract, Company's applicable policies, guidelines rules, procedures, etc.

9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 9(f) hereinabove, the Company shall have a right to withhold, recover and appropriate the amount due towards such losses, damages, expenses, from any amount due to the Supplier in respect of any other Contract (s) placed on him/it by any department/office/Unit/Division of the said Company.

10. Arbitration & Conciliation:

a) In case amicable settlement is not reached between the Parties, in respect of any dispute or difference or claim or controversy arising out of the formation, breach, termination, validity or execution of the Contract(or Agreement) or the respective rights and liabilities of the parties or in relation to interpretation of any provision of the Contract or in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference or controversy or claim, (except as to any matters, the decision of which is specifically provided for therein) to the sole arbitration by the arbitrator appointed by Head/In-Charge of the Unit/Division/Region.

b) The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties to the dispute.

c) Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India), or other statutory modifications or re enactments thereof and the rules made thereunder and for the time

being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be at ----- **(Insert the name of the city/town of the concerned Unit/Division).**

d) In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators in the department of public enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties hereto finally and conclusively.

f) Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Supplier shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner.

11. Governing Law & Jurisdiction:

This Agreement shall be governed by and be construed as per applicable Indian Laws in force at the relevant time.

Subject to clauses 10(a) and 10(d) hereinabove, all matters in connection with the subject agreement shall be subject to exclusive jurisdiction of Courts situated at -----**(insert the name of the place where the Unit/Division is located)**

SIGNATURE

WITNESSES

1

Name
Address:

2.

Name:
Address: