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**ASSAM POWER GENERATION
CORPORATION LIMITED**



**BIDDING DOCUMENTS
(NATIONAL COMPETITIVE BIDDING)**

FOR

**HYDROMECHANICAL WORKS
CONTRACT PACKAGE FOR
KARBI LANGPI MIDDLE-II HYDRO
POWER PROJECT (24 MW)
(ASSAM, INDIA)**

Bid No: KLM-II-HPP/PKG-2

VOLUME-V

DRAWINGS

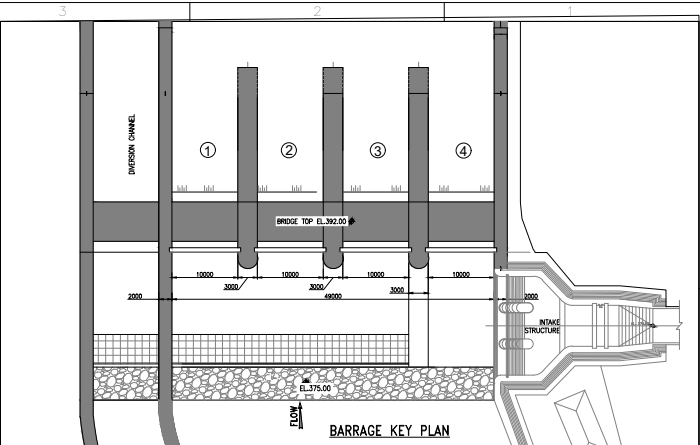
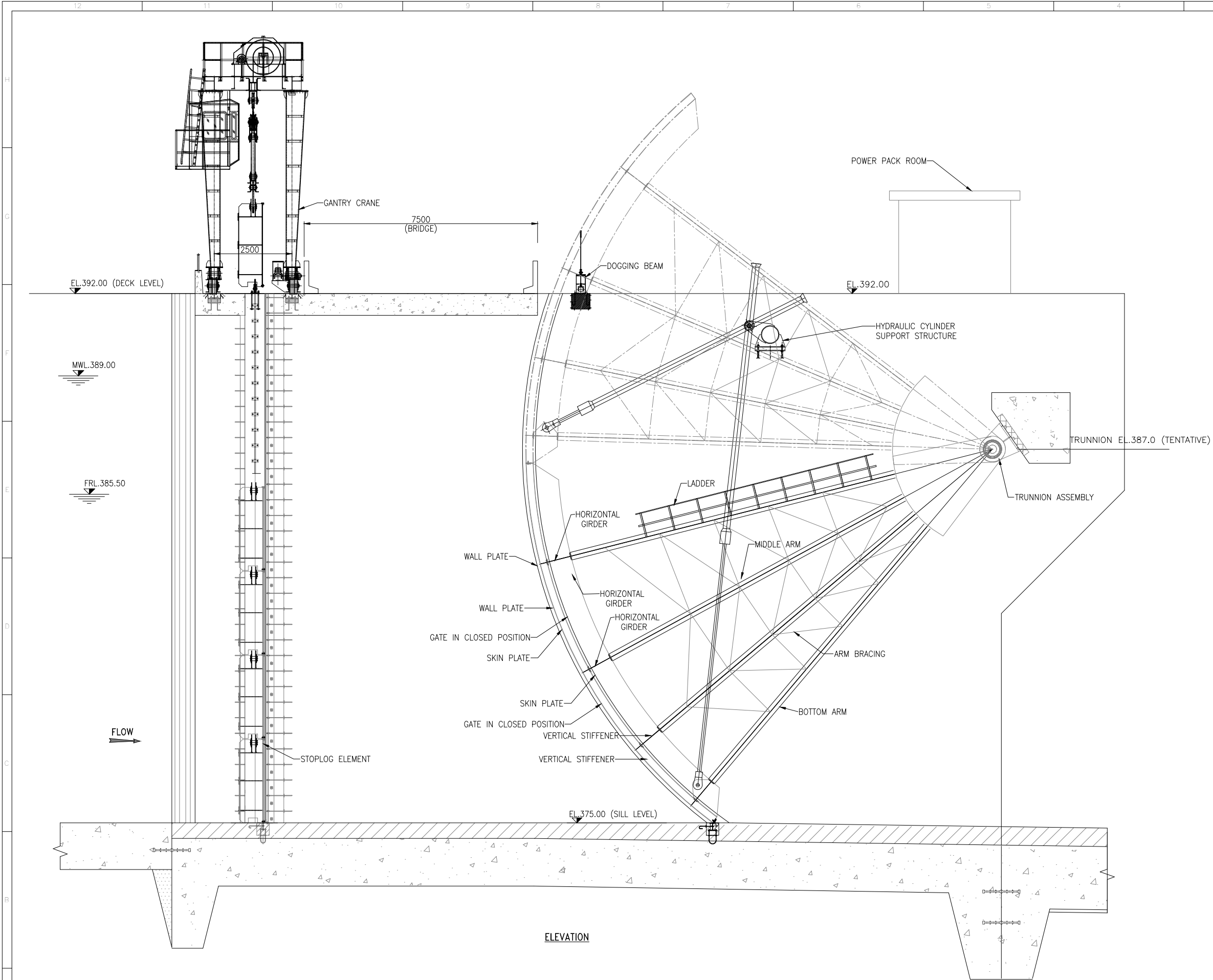
AUGUST 2025

LIST OF DRAWINGS

Hydromechanical Drawings

S NO.	TITLE	DRAWING NUMBER
1	Radial Gate (Elevation) General Arrangement	P.020318-TE-H&M-GAD-9551-sheet 1-2/R-1
2	Radial Gate (Plan) General Arrangement	P.020318-TE-H&M-GAD-9552-sheet 2-2/R-1
3	Stoplog for Barrage Gate general arrangement	P.020318-TE-H&M-GAD-9553-Sheet 1-1-R-1
4	Intake Trash Rack General Arrangement	P.020318-TE-H&M-GAD-9554-sheet 1-2-R-1
5	Intake Trash Rack General Arrangement	P.020318-TE-H&M-GAD-9554-sheet 2-2-R-1
6	Intake Service Gate General Arrangement	P.020318-TE-H&M-GAD-9555-sheet 1-1-R1
7	Intake Emergency Gate General Arrangement	P.020318-TE-H&M-GAD-9556-sheet 1-1-R1
8	Surge Shaft Gate General Arrangement	P.020318-TE-H&M-GAD-9557-sheet 1-1-R1
9	Draft Tube Gate General Arrangement	P.020318-TE-H&M-GAD-9558-sheet 1- 1-R0
10	Fish Pass Gate General Arrangement	P.020318-TE-H&M-GAD-9559-sheet 1- 1-R0
11	Pressure Shaft General Layout	P.020318-CD-PST--H&M-3001-sheet 1-1-R1
12	Pressure Shaft external pressure	P.020318-CD-PST--H&M-3002-sheet 1-1-R1
13	Pressure Shaft Steel Liner G.A	P.020318-CD-PST--H&M-3003-sheet 1-2-R1

14	Pressure Shaft Steel Liner G.A	P.020318-CD-PST--H&M-3003-sheet 2-2-R1
15	Streel Liner Details	P.020318-CD-PST--H&M-3004-sheet 1-3 -R1
16	Streel Liner Details	P.020318-CD-PST--H&M-3004-sheet 2-3 -R1
17	Streel Liner Details	P.020318-CD-PST--H&M-3004-sheet 3-3 -R1
18	Detail of Trifurcation	P.020318-CD-PST--H&M-3005-sheet 1-1 -R0
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20	Barrage GA Upstream & Downstream Section	P-020318-CD-BAR-GAD-3502-sheet 4-R1



- NOTES**
1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
 2. DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
 3. ALL THE TOLERANCE FOR GATES AND EMBEDDED PARTS SHALL CONFIRM TO IS:4623 (LATEST REVISION)
 4. ANCHORAGES FOR HYDRAULIC HOIST TRUNNION SUPPORT STRUCTURE SHALL BE SUPPLIED BY THE MANUFACTURER. HYDRAULIC HOIST SHALL BE LOCATED IN SUCH A WAY THAT A MINIMUM CLEARANCE OF 100MM IS ALWAYS AVAILABLE BETWEEN THE HOIST TRUNNION SUPPORT FRAME AND ARM OF RADIAL GATE IN ALL GATE POSITION.
 5. THE BLOCKOUT & GATE GROOVE DIMENSIONS ARE TENTATIVE AND FOR GUIDANCE ONLY. HOWEVER, THE ACTUAL SIZE BLOCKOUT DIMENSION DEPEND ON THE SIZE OF 2ND STAGE PARTS. AND SHALL BE FINALIZED AT DETAILED ENGINEERING STAGE.
 6. ALL SURFACES BETWEEN FIRST STAGE AND 2nd STAGE CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.
 7. TRUNNION ANCHOR ARRANGEMENT SHOWN TENTATIVE SHALL BE FINALIZED IN DETAIL DESIGN.

SALIENT FEATURES		
1	NO. OF OPENING	4 NOS.
2	CLEAR OPENING	10.50 M
3	CLEAR WIDTH	10.00 M
4	SILL LEVEL	375.00 M
5	DECK LEVEL	392.00 M
6	FRL	385.50 M
7	MWL	389.00 M
8	TRUNNION EL.	387.0 M (TENTATIVE.)
9	LOCATION OF SIDE SEAL & SKIN PLATE	U/S (UP STREAM)
10	OPERATING EQUIPMENT	HYD. HOIST

LEGEND	
	1ST STAGE CONCRETE (GRADE M-30)
	2ND STAGE CONCRETE (GRADE M-35)

REV.	DATE	DRAWN	DESIGNED	CHECKED	APPROVED	SUBJECT OF REVISION
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0	13-02-2025	SL	SS	SS	BSS	

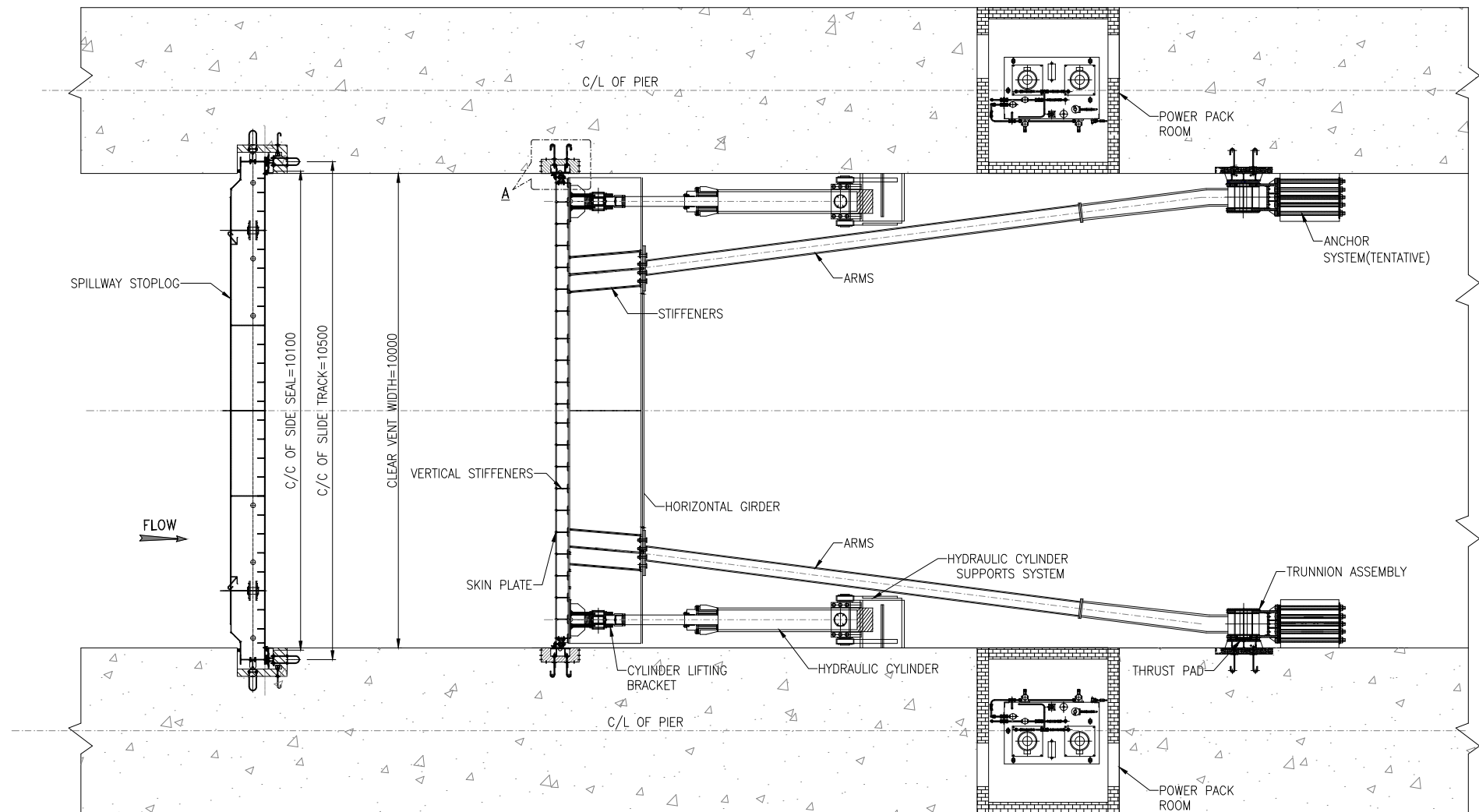
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 **ASSAM POWER GENERATION CORPORATION LTD.**

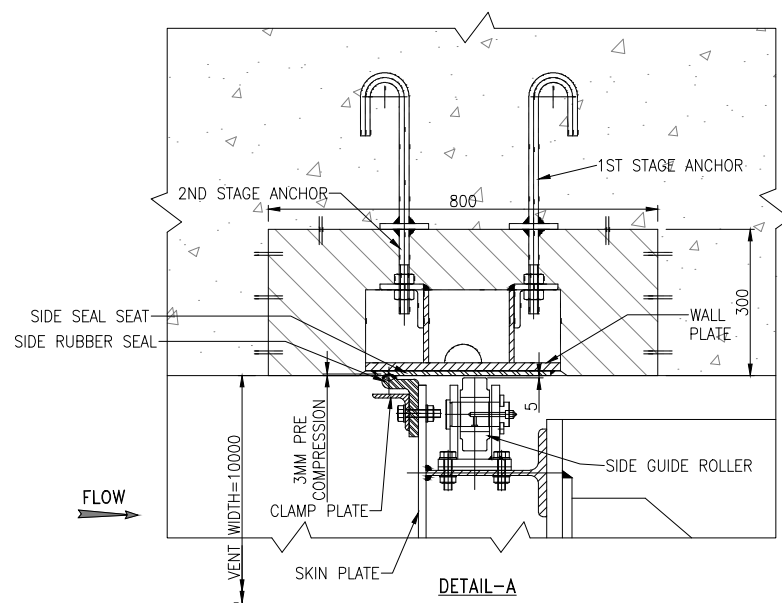
PROJECT : KARBI-LANGPI MIDDLE-II (3X8 MW)
ASSAM, INDIA

TITLE: RADIAL GATE (ELEVATION)
GENERAL ARRAGEMENT

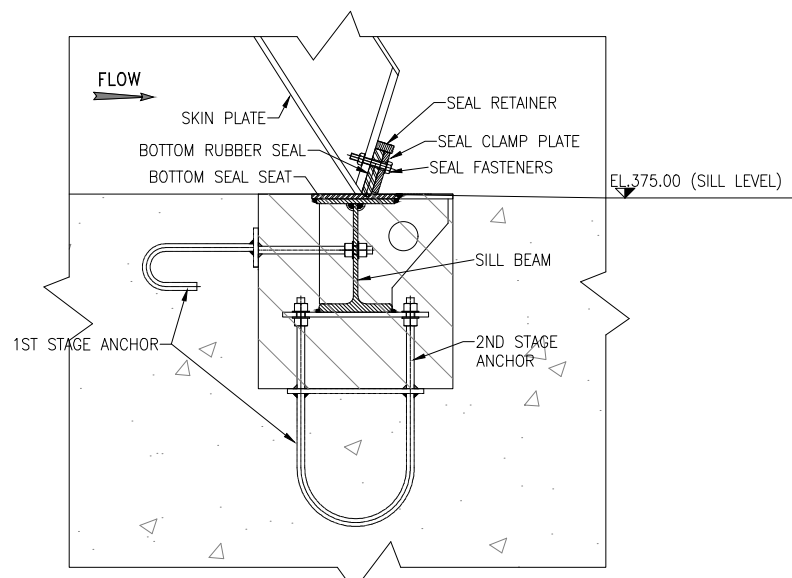
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TRACTEBEL Engineering pvt. Ltd.		Project No.	Discipline Code	Serial No.	
P.020318		TE-H&M-GAD	9551		



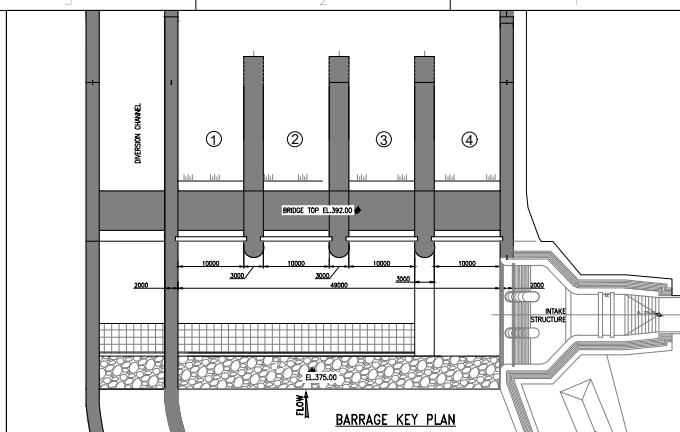
PLAN



DETAIL-A



DETAIL-B



BARRAGE KEY PLAN

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
2. DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
3. ALL THE TOLERANCE FOR GATES AND EMBEDDED PARTS SHALL CONFIRM TO IS:4623 (LATEST REVISION)
4. ANCHORAGES FOR HYDRAULIC HOIST TRUNNION SUPPORT STRUCTURE SHALL BE SUPPLIED BY THE MANUFACTURER. HYDRAULIC HOIST SHALL BE LOCATED IN SUCH A WAY THAT A MINIMUM CLEARANCE OF 100MM IS ALWAYS AVAILABLE BETWEEN THE HOIST TRUNNION SUPPORT FRAME AND ARM OF RADIAL GATE IN ALL GATE POSITION.
5. THE BLOCKOUT & GATE GROOVE DIMENSIONS ARE TENTATIVE AND FOR GUIDANCE ONLY. HOWEVER, THE ACTUAL SIZE BLOCKOUT DIMENSION DEPEND ON THE SIZE OF 2ND STAGE PARTS. AND SHALL BE FINALIZED AT DETAILED ENGINEERING STAGE.
6. ALL SURFACES BETWEEN FIRST STAGE AND 2nd STAGE CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.
7. TRUNNION ANCHOR ARRANGEMENT SHOWN TENTATIVE SHALL BE FINALIZED IN DETAIL DESIGN.

SALIENT FEATURES

	NO. OF OPENING	4 NOS.
1	CLEAR OPENING	10.50 M
2	CLEAR WIDTH	10.00 M
3	SILL LEVEL	375.00 M
4	DECK LEVEL	392.00 M
5	FRL	385.50 M
6	MWL	389.00 M
7	TRUNNION EL.	387.00M (TENTATIVE.)
8	LOCATION OF SIDE SEAL & SKIN PLATE	U/S (UP STREAM)
9	OPERATING EQUIPMENT	HYD. HOIST

LEGEND

	1ST STAGE CONCRETE (GRADE M-30)		2ND STAGE CONCRETE (GRADE M-35)
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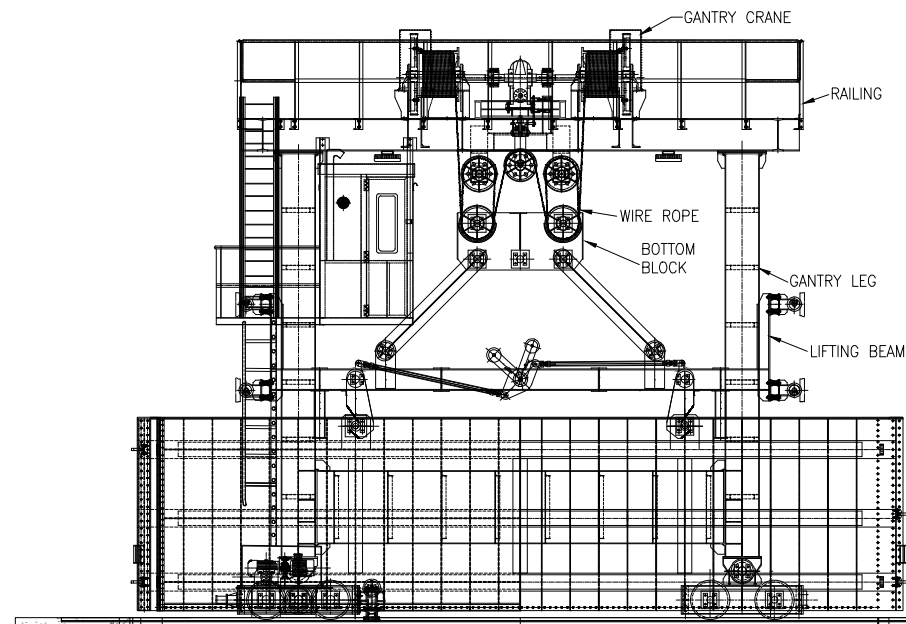
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0	13-02-2025	SL	SS	SS	BSS	

OWNER : **ASSAM POWER GENERATION CORPORATION LTD.**

PROJECT : **KARBI-LANGPI MIDDLE-II (3X8 MW)**
ASSAM, INDIA

TITLE: **RADIAL GATE (PLAN)**
GENERAL ARRANGEMENT

Size	Scale	Sheet	Rev.
A1	AS SHOWN	2 OF 2	1
Project No.	Discipline Code	Serial No.	
TRACTEBEL Engineering pvt. Ltd.	P.020318	TE-H&M-GAD	9552



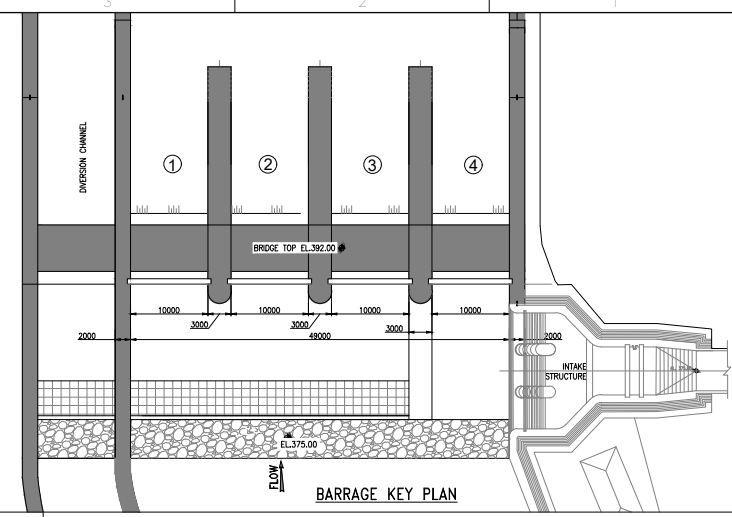
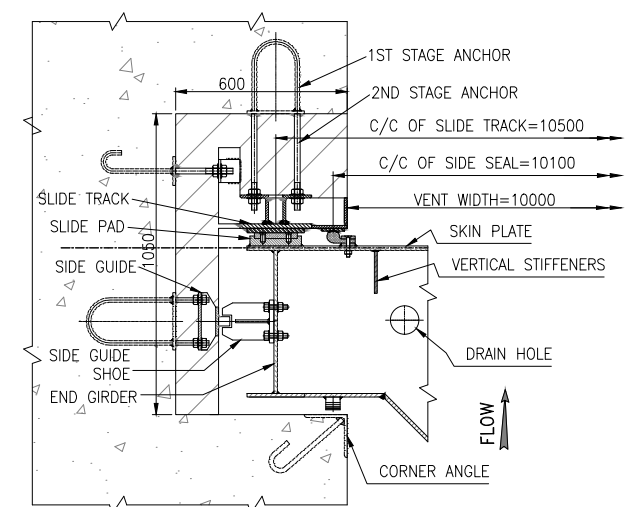
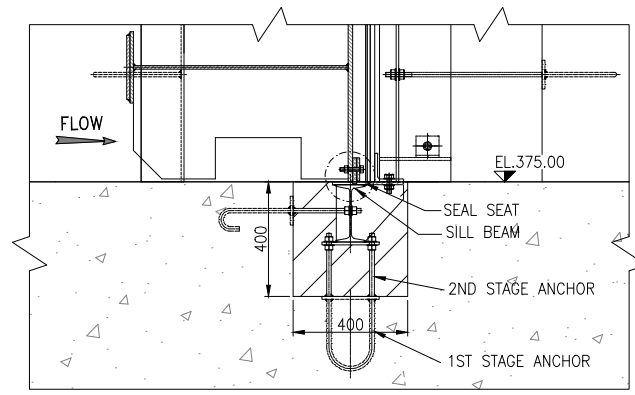
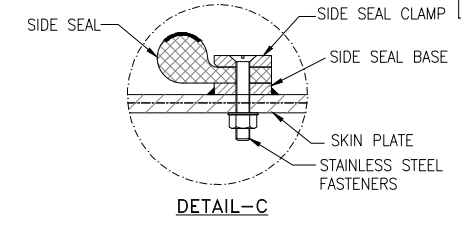
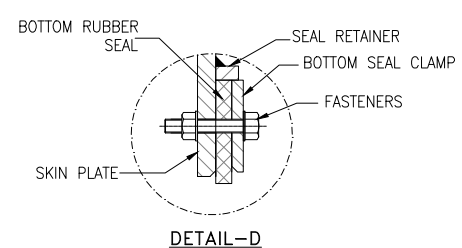
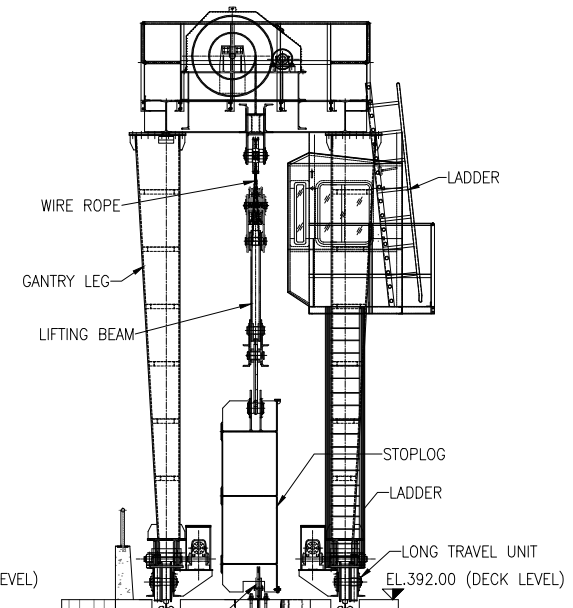
MWL.389.00
FRL.385.50

FRL.385.50

MWL.389.00

FLOW

EL.375.00



NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
- DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
- ALL THE TOLERANCE FOR GATES AND EMBEDDED PARTS SHALL CONFIRM TO IS:5620 (LATEST REVISION)
- FACES OF TRACKS, SEAL SEATS AND GUIDES SHALL BE IN TRUE PLANE WITHIN THE TOLERANCES AS SPECIFIED IN IS:5620 (LATEST REVISION)
- SUITABLE REMOVAL GRATING SHALL BE PROVIDED AT EL390.80M
- ALL SURFACES BETWEEN FIRST STAGE AND 2nd STAGE CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE. ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.
- THE SIZE OF BLOCKOUTS SHOWN ARE TENTATIVE.

SALIENT FEATURES

NO.	DESCRIPTION	UNIT
1	NO. OF OPENING	4 NOS.
2	CLEAR OPENING HEIGHT	10.50 M
3	CLEAR WIDTH	10.00 M
4	SILL LEVEL	375.00 M
5	DECK LEVEL	392.00 M
6	FRL	385.50 M
7	MWL	389.00 M
8	GATE TYPE	SLIDE TYPE
9	LOCATION OF SIDE SEAL & SKIN PLATE	DOWN STREAM
10	OPERATING EQUIPMENT	GANTRY CRANE

LEGEND

	1ST STAGE CONCRETE (GRADE M-30)		2ND STAGE CONCRETE (GRADE M-35)
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REV.	DATE	DRAWN	DESIGNED	CHECKED	APPROVED	SUBJECT OF REVISION
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0	13.02.25	SL	SS	SS	BSS	

OWNER :

ASSAM POWER GENERATION CORPORATION LTD.

PROJECT :

KARBI-LANGPI MIDDLE-II (3X8 MW)
ASSAM, INDIA

TITLE:

STOPLOG FOR BARRAGE GATE
GENERAL ARRANGEMENT

TRACTEBEL

TRACTEBEL Engineering pvt. Ltd. P.020318 TE-H&M-GAD 9553

Size Scale Sheet Rev.
A1 AS SHOWN 1 OF 1 1
Project No. Discipline Code System Code Serial No.

ELEVATION

PLAN

SECTION THROUGH C/L OF BAY

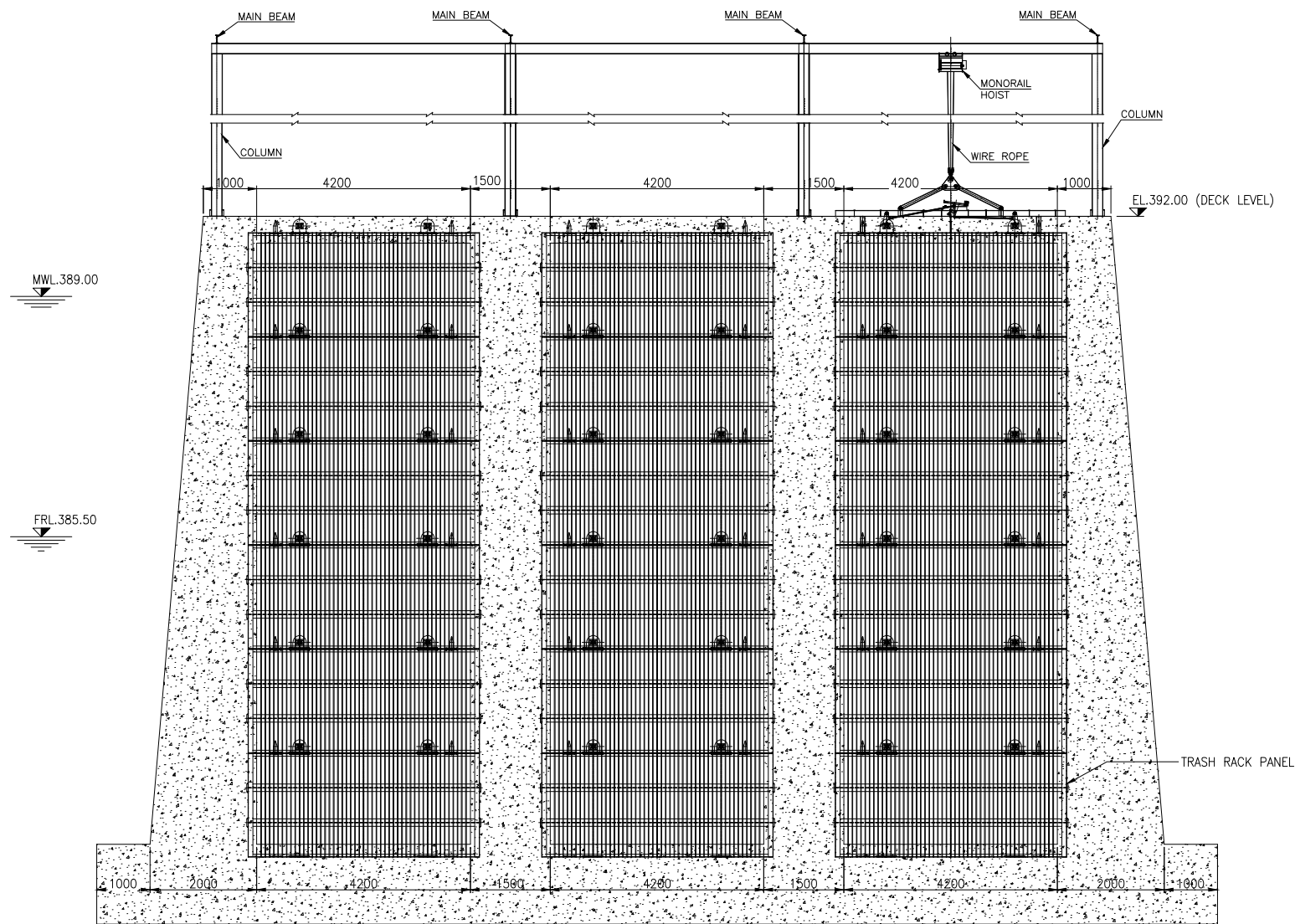
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DETAIL-A

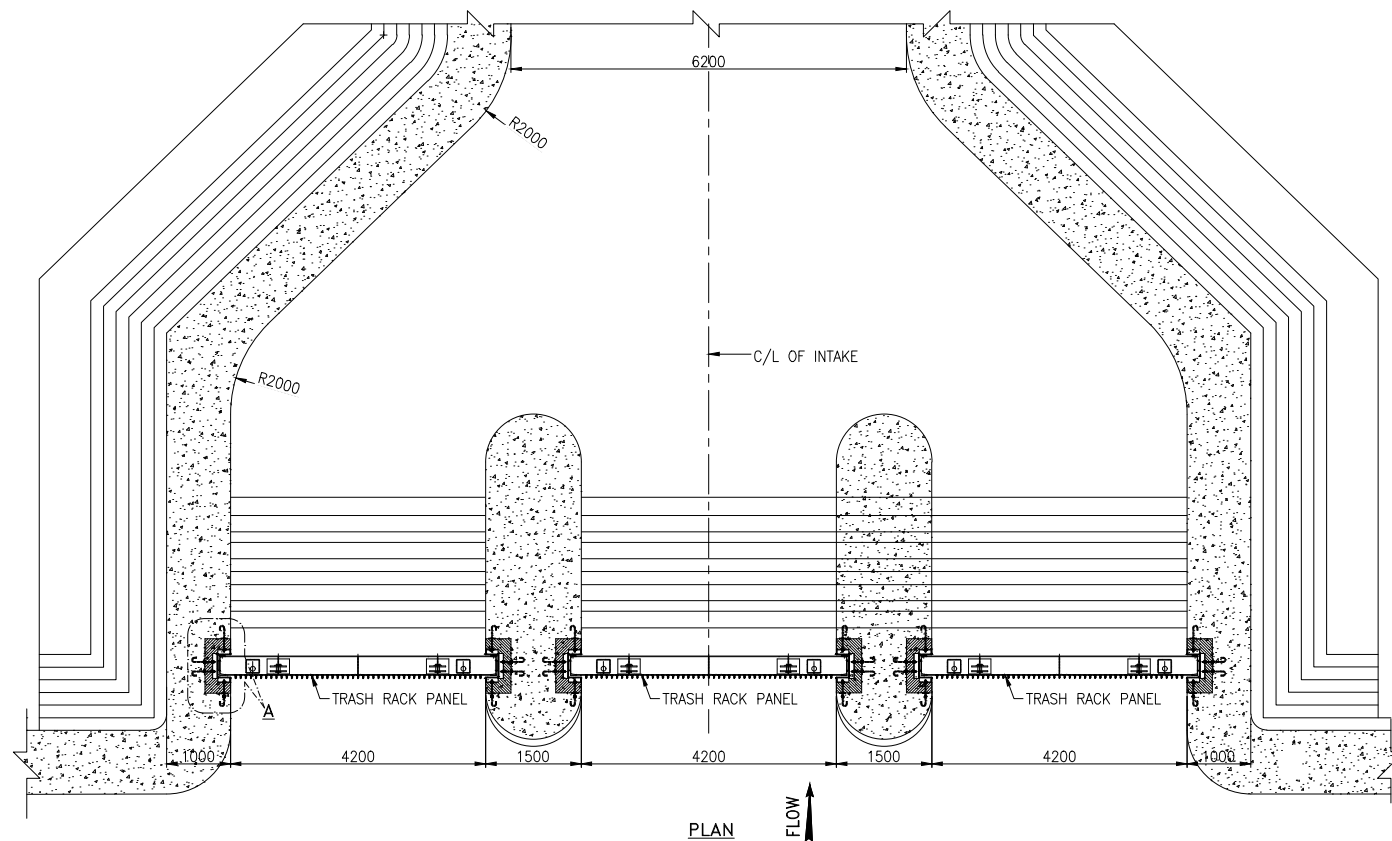
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DETAIL-C

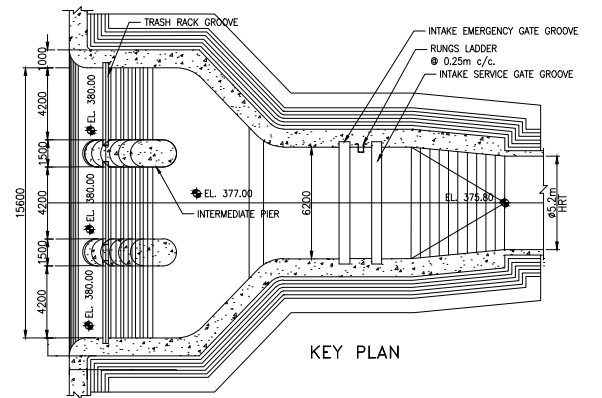
BARRAGE KEY PLAN



ELEVATION



PLAN



KEY PLAN

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
2. DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
3. ALL THE TOLERANCE FOR TRASH RACK AND EMBEDDED PARTS SHALL CONFIRM TO IS:11388 (LATEST REVISION)
4. ALL SURFACES BETWEEN FIRST STAGE AND 2nd CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.
5. THE SIZE OF BLOCK OUTS SHOWN ARE TENTATIVE.

SALIENT FEATURES

1	NO. OF OPENING	3 NOS.
2	CLEAR OPENING HEIGHT	4.20 M
3	CLEAR WIDTH	12.00 M (VERTICAL)
4	SILL LEVEL	380.00 M
5	DECK LEVEL	392.00 M
6	FRL	385.50 M
7	MWL	389.00 M
8	TYPE	INCLINED TYPE
9	ANGLE OF INCLINATION	12°
10	CLEANING TYPE	BY TRCM

LEGEND

4	1ST STAGE CONCRETE (GRADE M-30)	4	2ND STAGE CONCRETE (GRADE M-35)
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1	25.04.25	SL	SS	SS	BSS	AS PER APGCL COMMENT
0	13.02.25	SL	SS	SS	BSS	
REV.	DATE	DRAWN	DESIGNED	CHECKED	APPROVED	SUBJECT OF REVISION

OWNER :

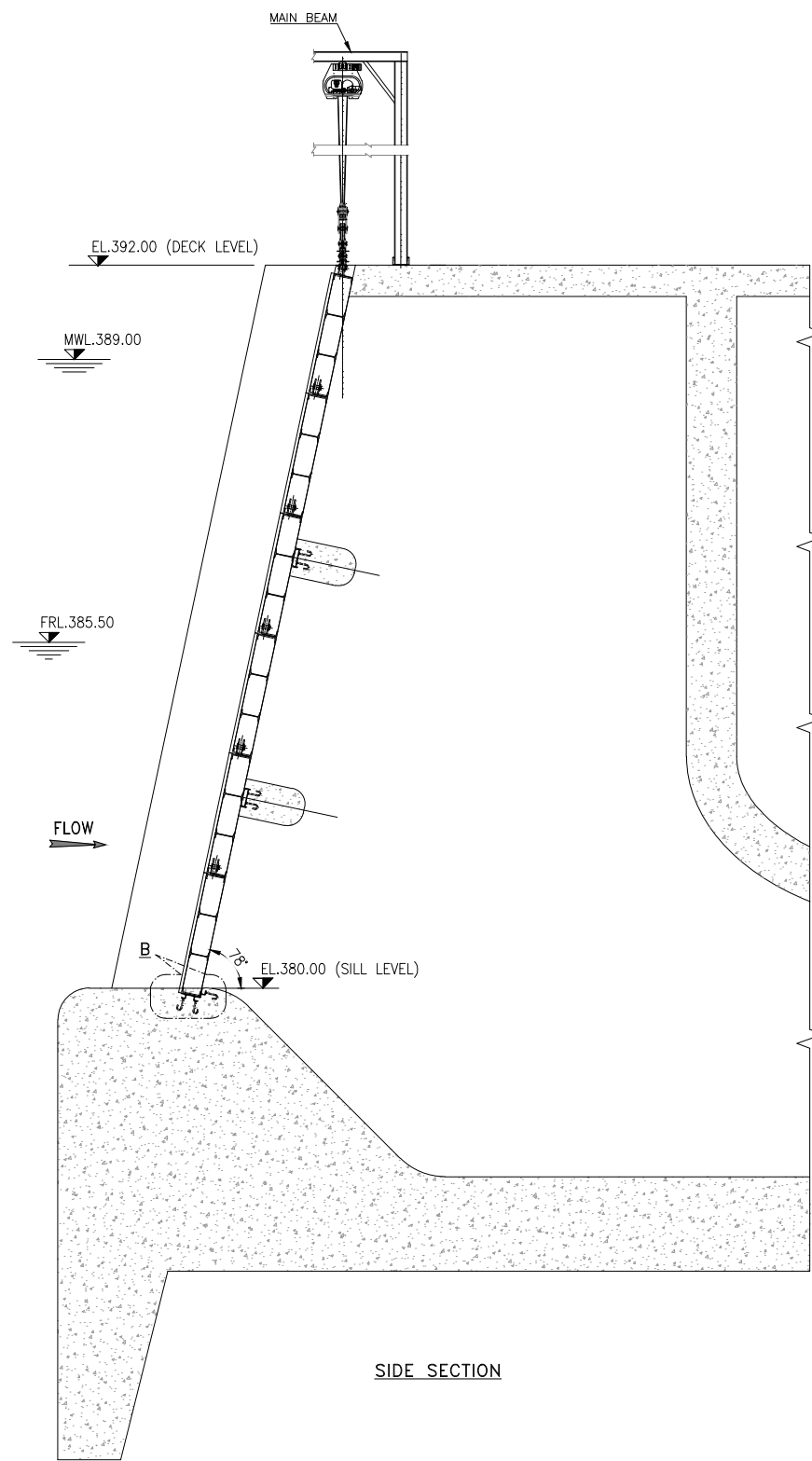


ASSAM POWER GENERATION CORPORATION LTD.

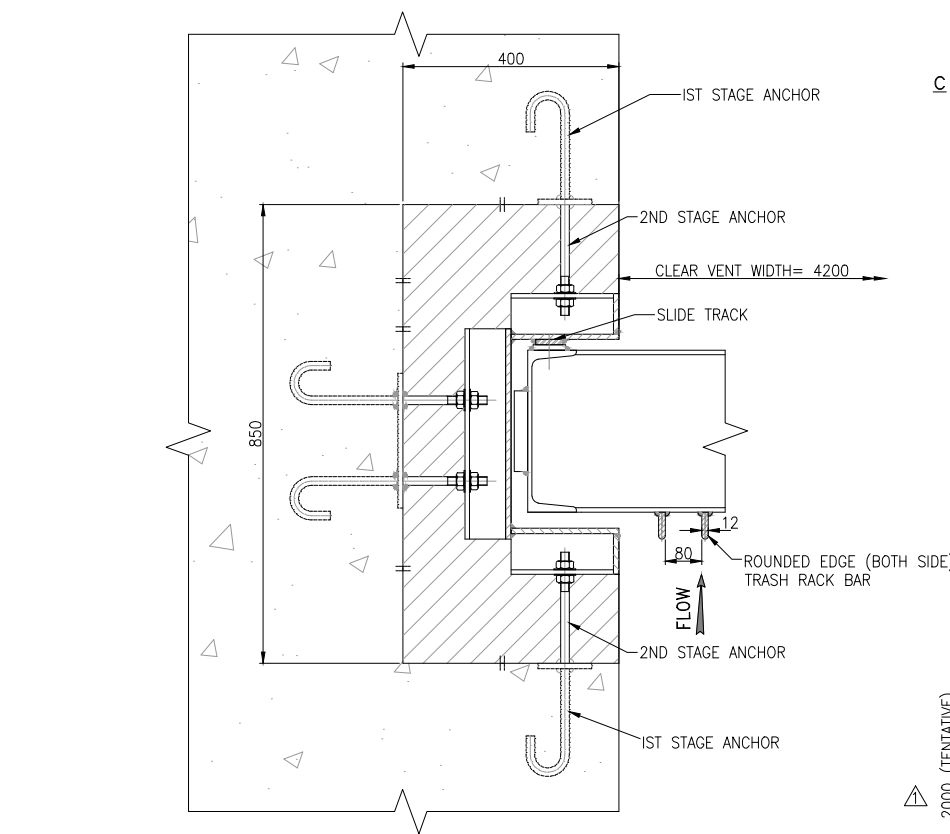
PROJECT : KARBI-LANGPI MIDDLE-II (3X8 MW)
ASSAM, INDIA

TITLE: INTAKE TRASH RACK
GENERAL ARRANGEMENT

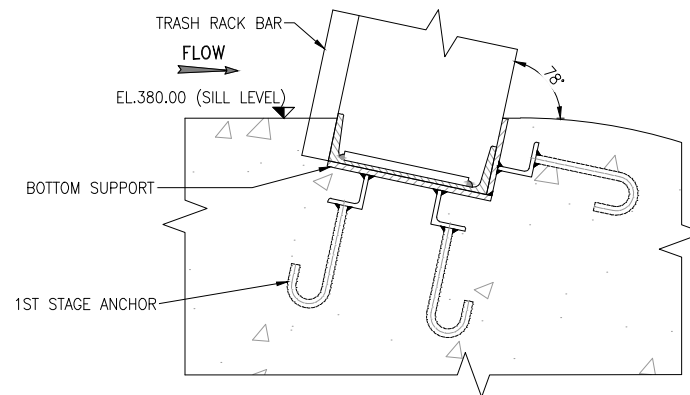
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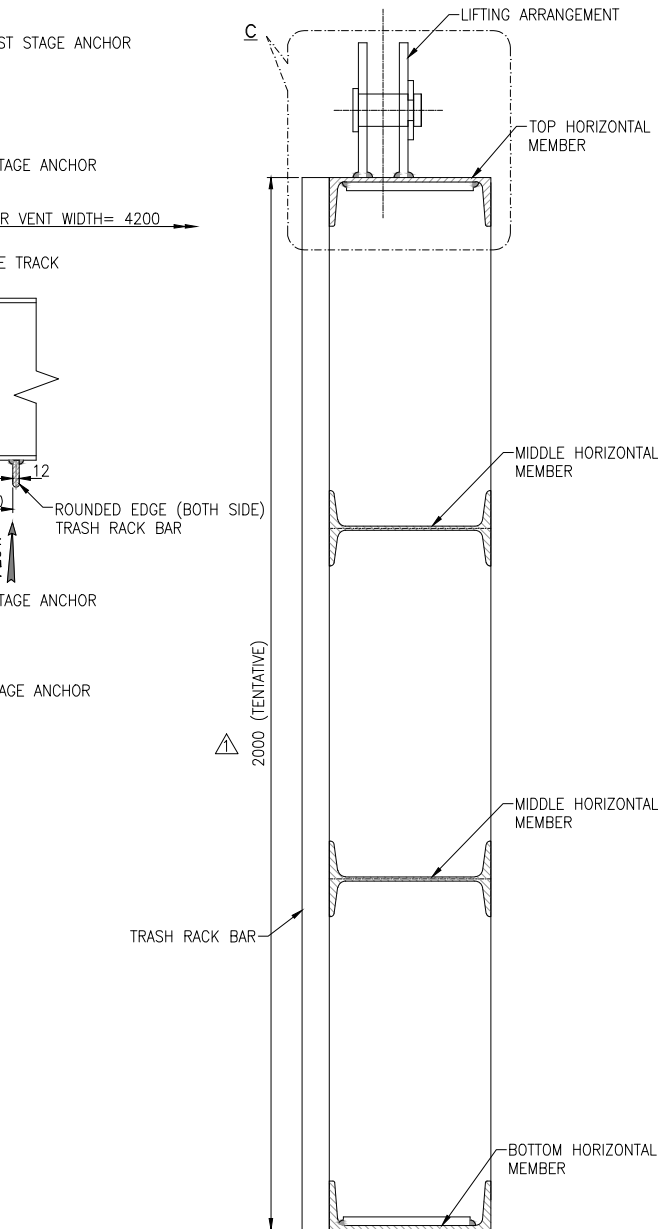
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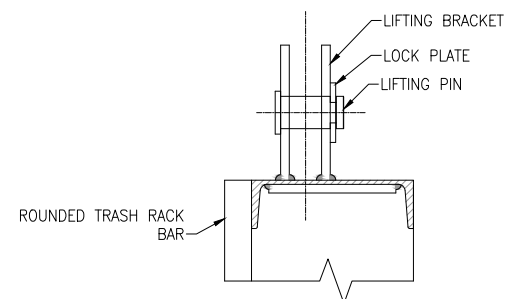
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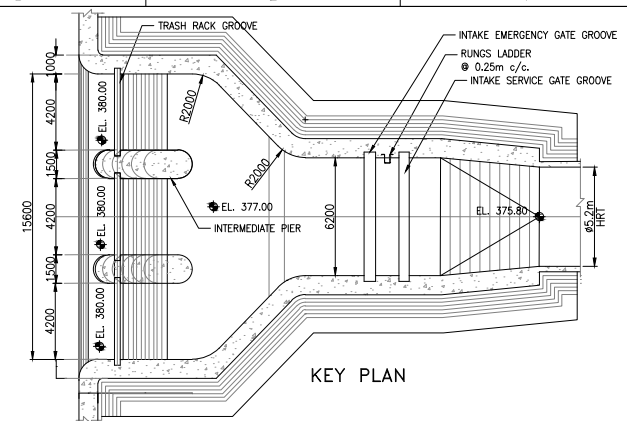
DETAIL-B



TRASH RACK PANEL



DETAIL-C



KEY PLAN

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
2. DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
3. ALL THE TOLERANCE FOR TRASH RACK AND EMBEDDED PARTS SHALL CONFIRM TO IS:11388 (LATEST REVISION)
4. ALL SURFACES BETWEEN FIRST STAGE AND 2nd STAGE CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.
5. THE SIZE OF BLOCK OUTS SHOWN ARE TENTATIVE.
6. TRASH RACK BAR SPACING SHOWN TENTATIVE SHALL BE CONFIRMED BY EM VENDOR LATER.

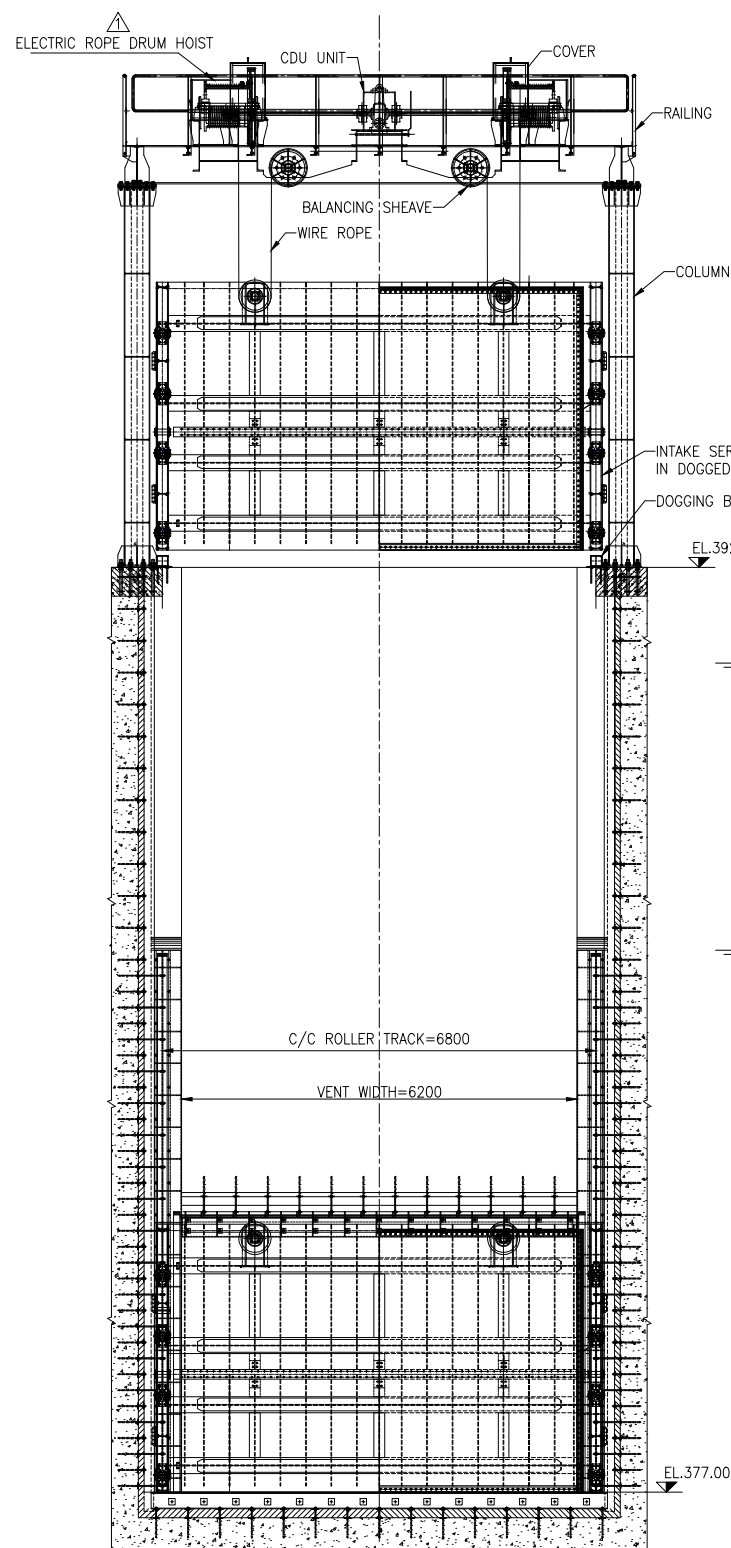
LEGEND

	1ST STAGE CONCRETE (GRADE M-30)		2ND STAGE CONCRETE (GRADE M-35)
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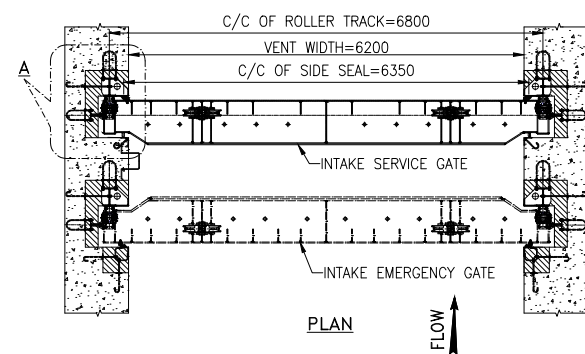
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OWNER :						
ASSAM POWER GENERATION CORPORATION LTD.						
PROJECT :						
KARBI-LANGPI MIDDLE-II (3X8 MW) ASSAM, INDIA						
TITLE:						
INTAKE TRASH RACK GENERAL ARRANGEMENT						

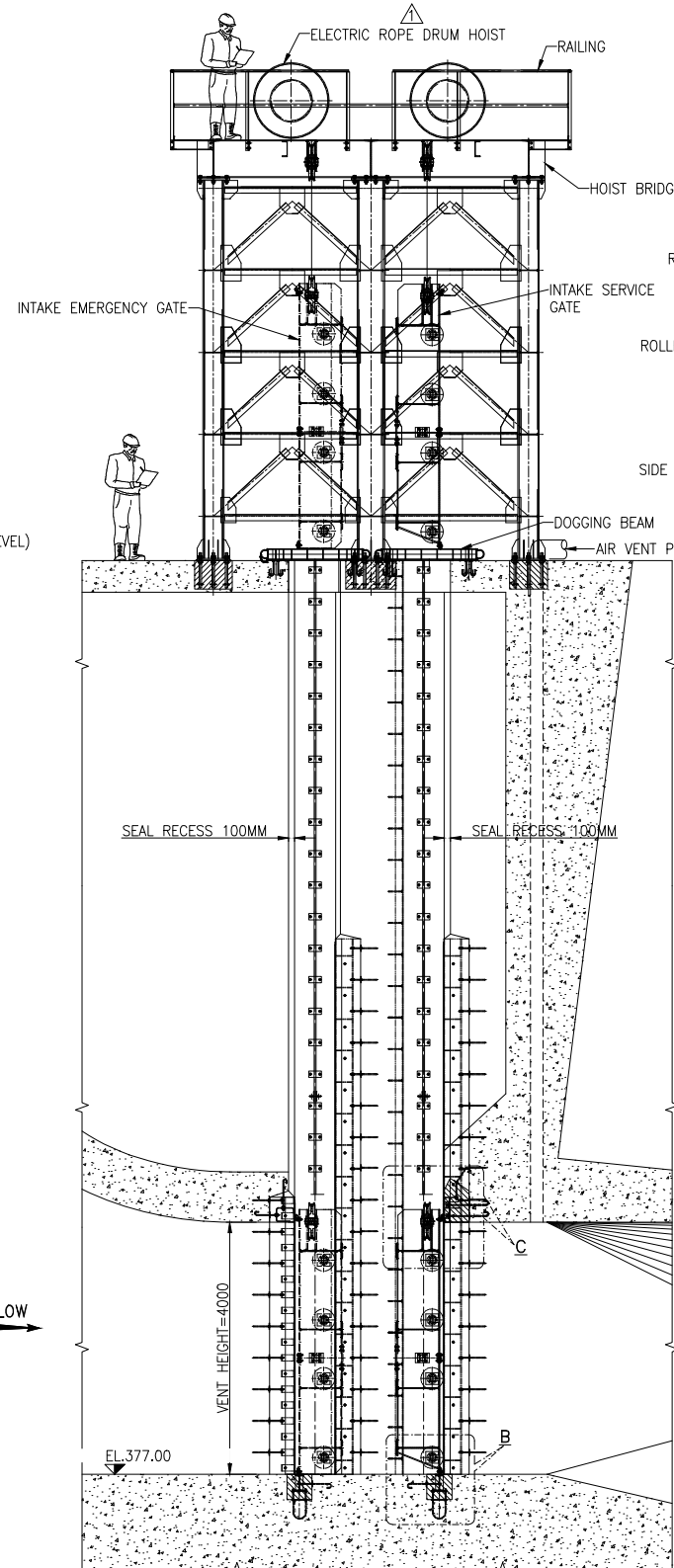
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Project No.		Discipline Code		Serial No.		
TRACTEBEL Engineering pvt. Ltd.		P.020318		TE-H&M-GAD		9554



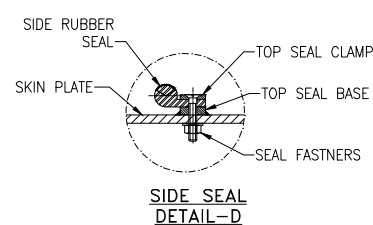
ELEVATION



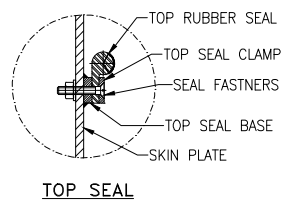
PLAN



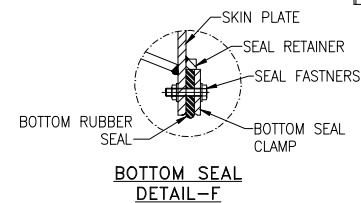
SECTION THROUGH C/L OF BAY



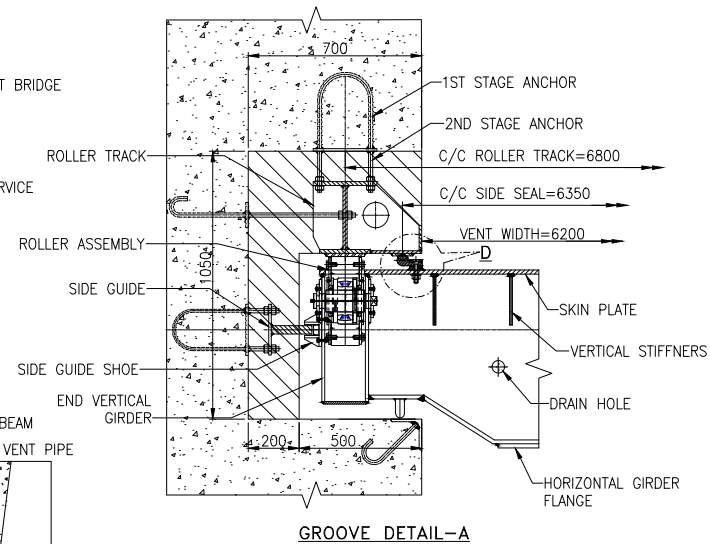
SIDE SEAL
DETAIL-D



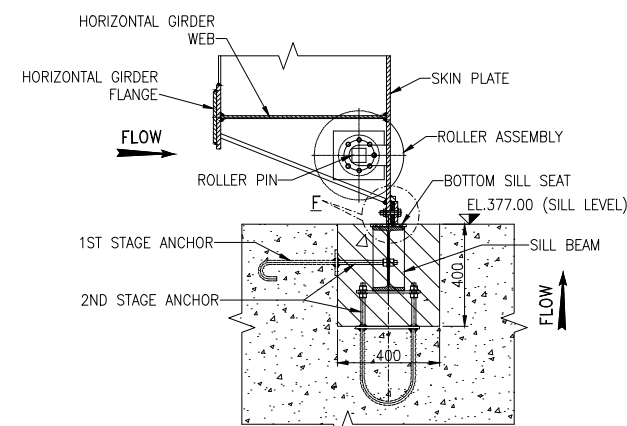
TOP SEAL
DETAIL-E



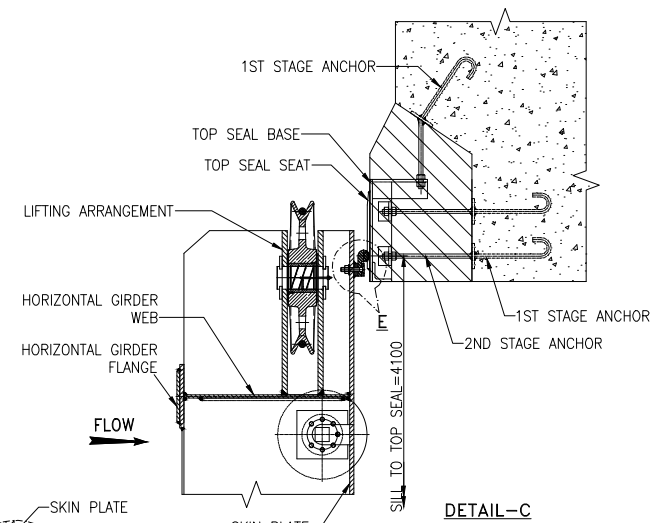
BOTTOM SEAL
DETAIL-F



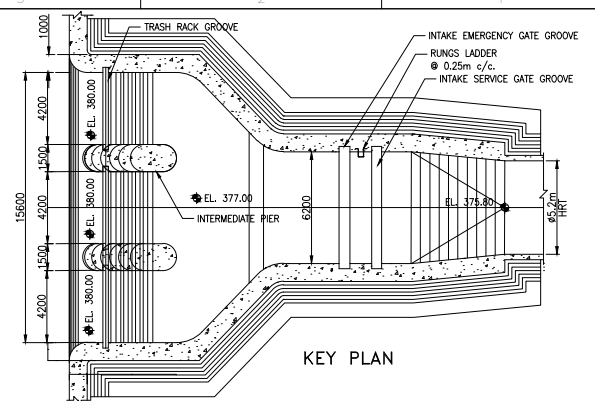
GROOVE DETAIL-A



DETAIL-B



DETAIL-C



KEY PLAN

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
2. DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
3. ALL THE TOLERANCE FOR GATES AND EMBEDDED PARTS SHALL CONFIRM TO IS:4623 (LATEST REVISION)
4. B.H.N VALUE OF TRACK PLATES SHALL BE KEPT AT LEAST 50 POINTS HIGHER THAN THAT OF ROLLERS.
5. FACES OF TRACKS, SEAL SEATS AND GUIDES SHALL BE IN TRUE PLANE WITHIN THE TOLERANCES AS SPECIFIED IN IS:4622 (LATEST REVISION)
6. SUITABLE REMOVAL GRATING SHALL BE PROVIDED AT EL.391.50M
7. ALL SURFACES BETWEEN FIRST STAGE AND 2nd STAGE CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.
8. THE SIZE OF BLOCKOUTS ARE TENTATIVE.

SALIENT FEATURES

1	NO. OF OPENING	1 NOS.
2	CLEAR OPENING HEIGHT	4.00 M
3	CLEAR WIDTH	6.20 M
4	SILL LEVEL	377.00 M
5	DECK LEVEL	392.00 M
6	FRL	385.50 M
7	MWL	389.00 M
8	GATE TYPE	VERTICAL LIFT TYPE
9	LOCATION OF SIDE SEAL & SKIN PLATE	DOWN STREAM
10	OPERATING EQUIPMENT	ELECTRIC ROPE DRUM HOIST

LEGEND

4	1ST STAGE CONCRETE (GRADE M-30)	8	2ND STAGE CONCRETE (GRADE M-35)
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1	30.04.25	SL	SS	SS	BSS	AS PER APCL. COMMENT
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REV.	DATE	DRAWN	DESIGNED	CHECKED	APPROVED	SUBJECT OF REVISION

OWNER :



ASSAM POWER GENERATION CORPORATION LTD.

PROJECT :

**KARBI-LANGPI MIDDLE-II (3X8 MW)
ASSAM, INDIA**

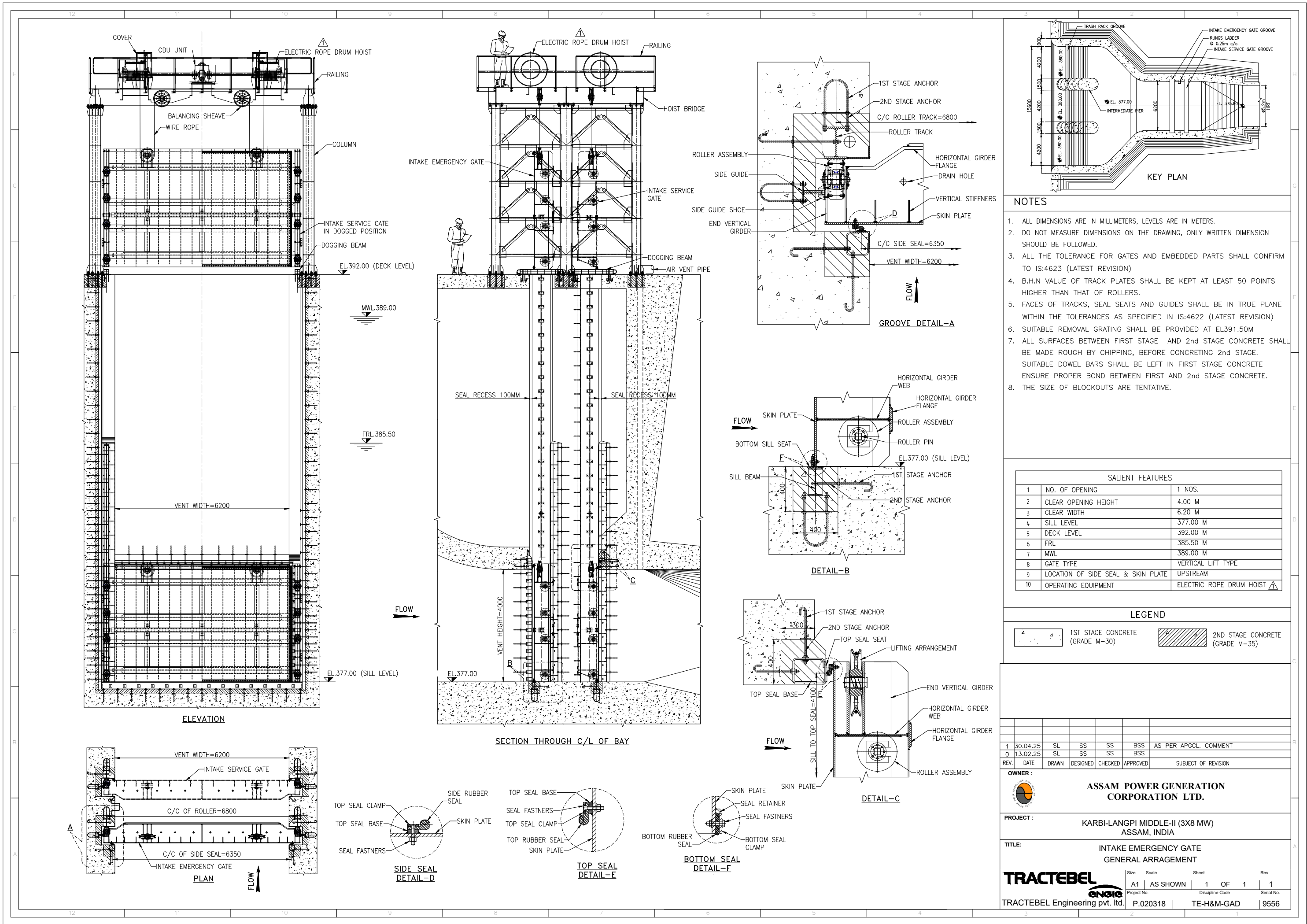
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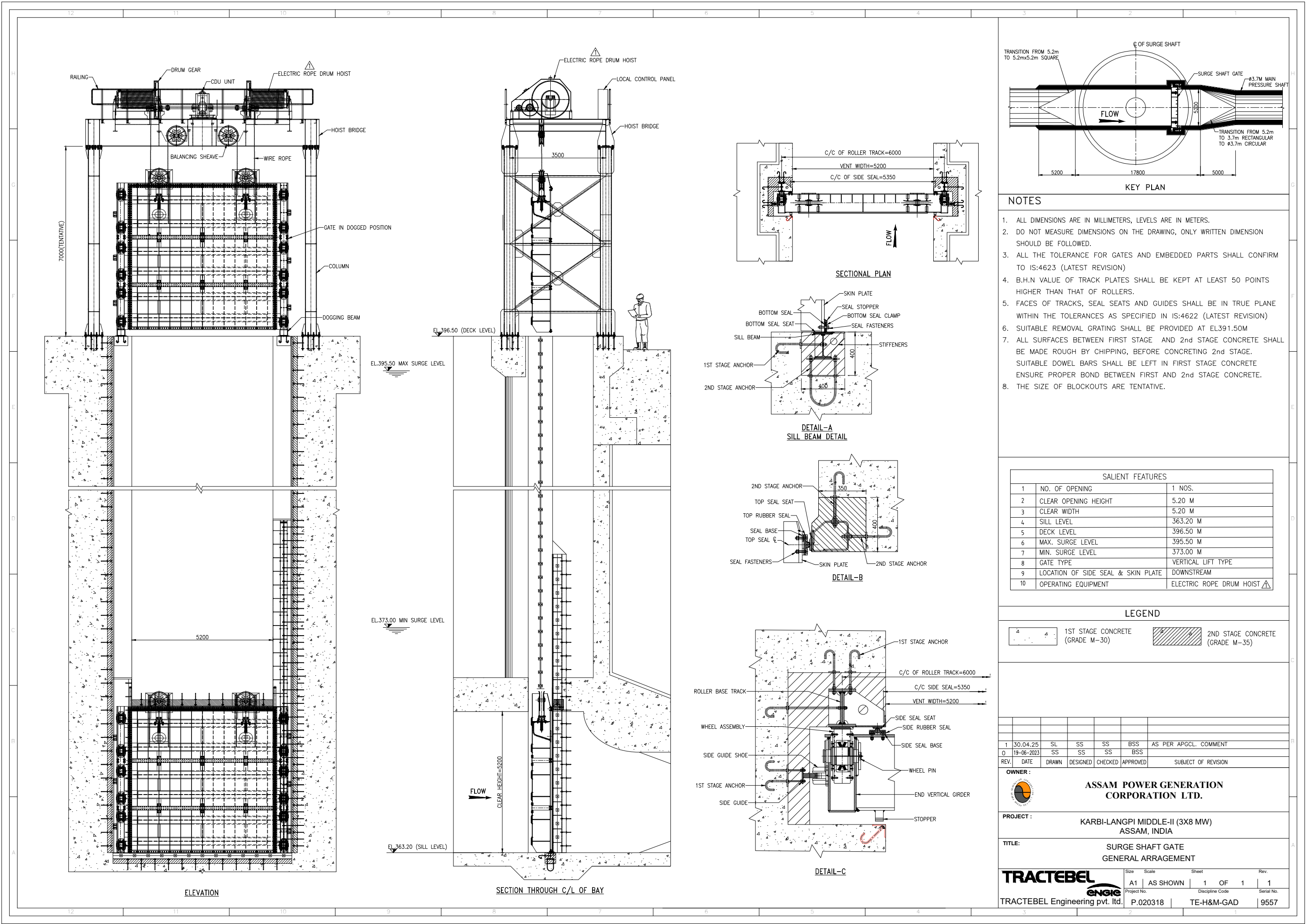
**INTAKE SERVICE GATE
GENERAL ARRANGEMENT**

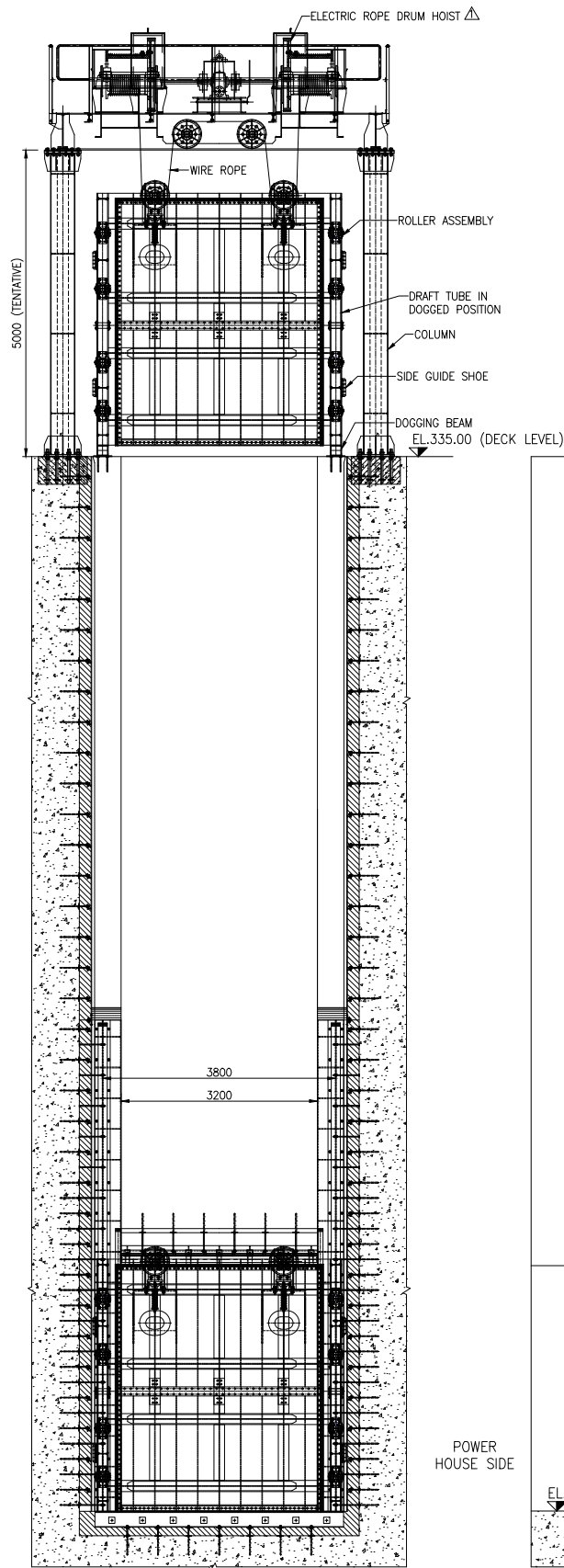
TRACTEBEL
enece

TRACTEBEL Engineering pvt. Ltd.

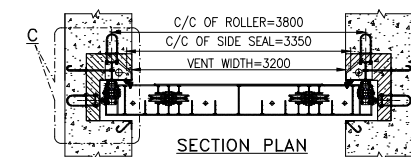
Size	Scale	Sheet	Rev.
A1	AS SHOWN	1 OF 1	1
Project No.	Discipline Code	Serial No.	
P.020318	TE-H&M-GAD	9555	



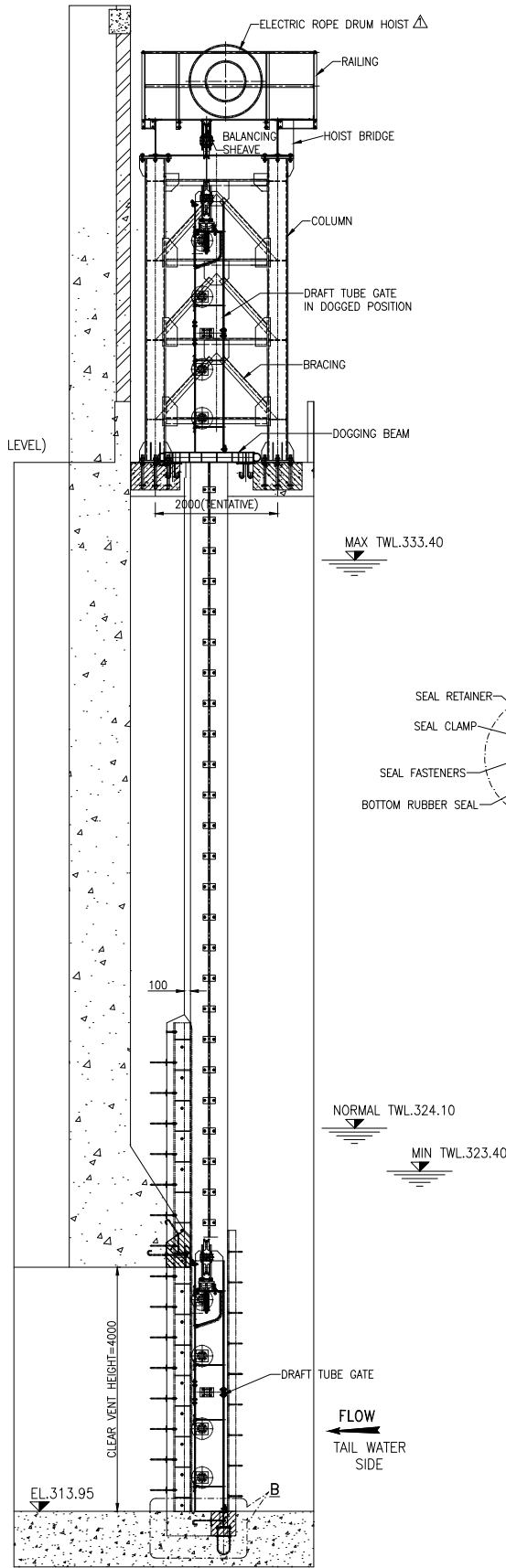




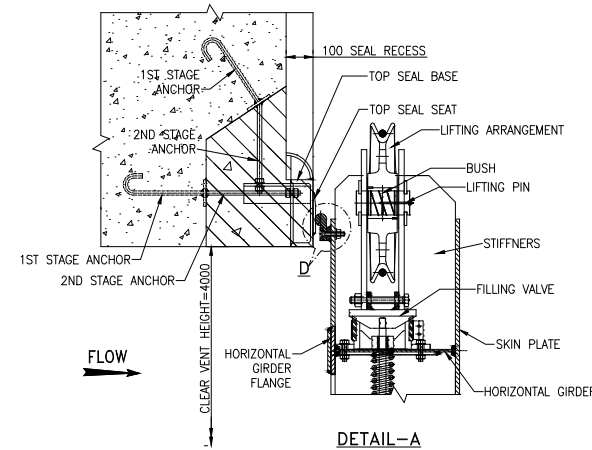
ELEVATION



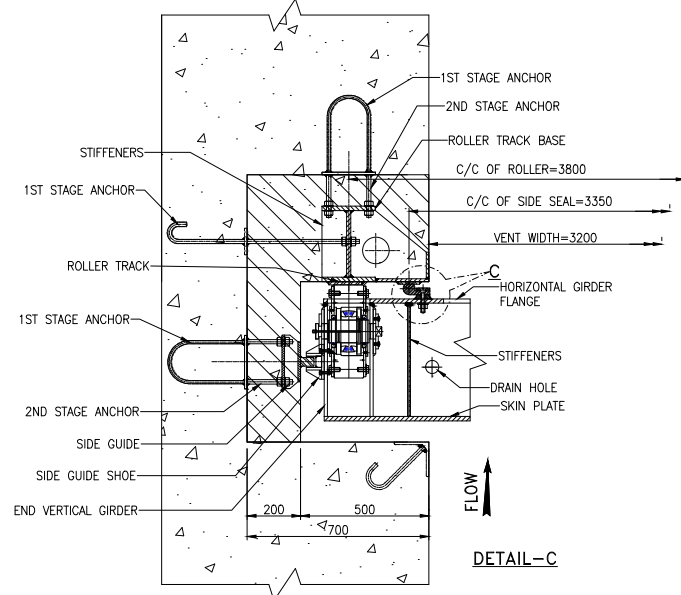
SECTION PLAN



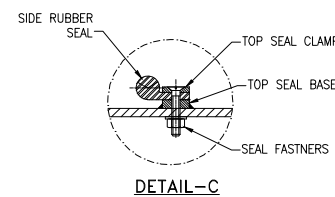
SECTION THROUGH
C/L OF BAY



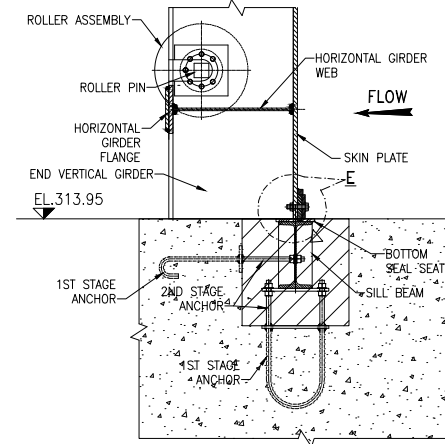
DETAIL-A



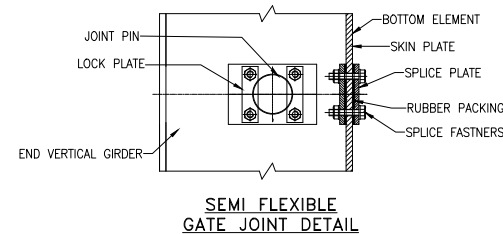
DETAIL-C



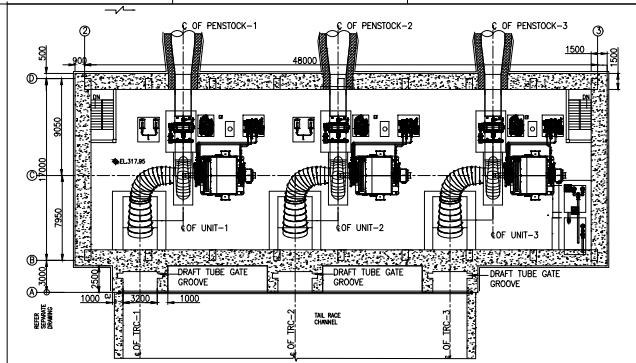
DETAIL-D



DETAIL-B



SEMI FLEXIBLE
GATE JOINT DETAIL



KEY PLAN

NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
- DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
- ALL THE TOLERANCE FOR GATES AND EMBEDDED PARTS SHALL CONFIRM TO IS:4623 (LATEST REVISION)
- B.H.N VALUE OF TRACK PLATES SHALL BE KEPT AT LEAST 50 POINTS HIGHER THAN THAT OF ROLLERS.
- FACES OF TRACKS, SEAL SEATS AND GUIDES SHALL BE IN TRUE PLANE WITHIN THE TOLERANCES AS SPECIFIED IN IS:4622 (LATEST REVISION)
- SUITABLE REMOVAL GRATING SHALL BE PROVIDED AT EL391.50M
- ALL SURFACES BETWEEN FIRST STAGE AND 2nd STAGE CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.
- THE SIZE OF BLOCKOUTS ARE TENTATIVE.

SALIENT FEATURES

1	NO. OF OPENING	3 NOS.
2	CLEAR OPENING HEIGHT	4.00 M
3	CLEAR WIDTH	3.20 M
4	SILL LEVEL	313.95 M
5	DECK LEVEL	335.00 M
6	MAX. TWL	333.40 M
7	MIN. TWL	323.40 M
8	GATE TYPE	VERTICAL LIFT TYPE
9	LOCATION OF SKIN PLATE	UPSTREAM (TRT SIDE)
9a	LOCATION OF SEAL	DOWNSTREAM (PH SIDE)
10	OPERATING EQUIPMENT	ELECTRIC ROPE DRUM HOIST

LEGEND

1ST STAGE CONCRETE (GRADE M-30)	2ND STAGE CONCRETE (GRADE M-35)
---------------------------------	---------------------------------

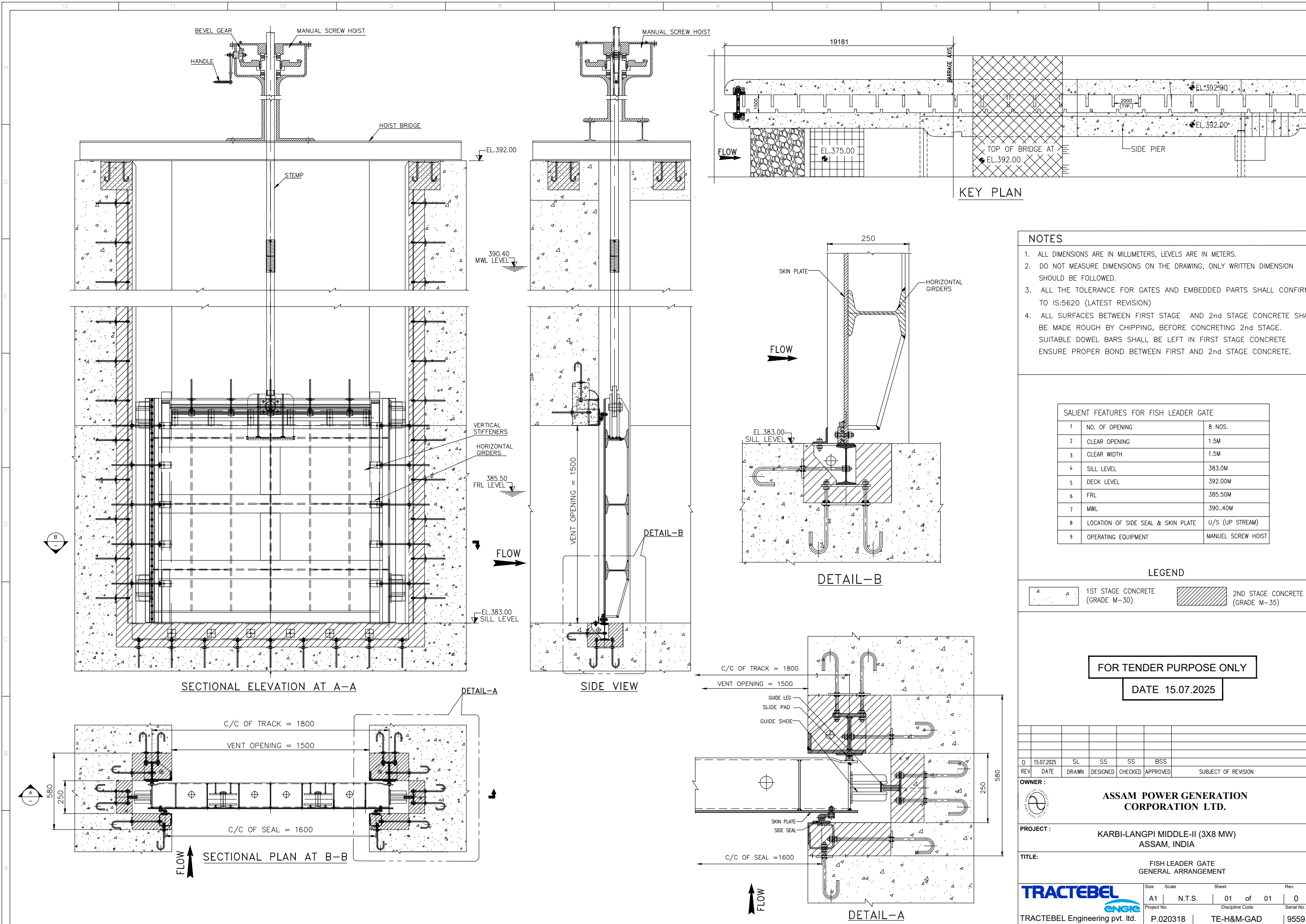
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1	30.04.2025	SL	SS	SS	BSS	AS PER APGCL. COMMENT
0	19.06.2023	SL	SS	SS	BSS	

OWNER :	ASSAM POWER GENERATION CORPORATION LTD.
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PROJECT :	KARBI-LANGPI MIDDLE-II (3X8 MW) ASSAM, INDIA
-----------	---

TITLE:	DRAFT TUBE GATE GENERAL ARRANGEMENT
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TRACTEBEL	Size	Scale	Sheet	Rev.
	A1	AS SHOWN	1 OF 1	0
TRACTEBEL Engineering pvt. Ltd.	Project No.	Discipline Code	Serial No.	
	P.020318	TE-H&M-GAD	9558	



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS.
2. DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
3. ALL THE TOLERANCE FOR GATES AND EMBEDDED PARTS SHALL CONFIRM TO IS:5620 (LATEST REVISION)
4. ALL SURFACES BETWEEN FIRST STAGE AND 2nd STAGE CONCRETE SHALL BE MADE ROUGH BY CHIPPING, BEFORE CONCRETING 2nd STAGE. SUITABLE DOWEL BARS SHALL BE LEFT IN FIRST STAGE CONCRETE. ENSURE PROPER BOND BETWEEN FIRST AND 2nd STAGE CONCRETE.

SALIENT FEATURES FOR FISH LEADER GATE

1	NO. OF OPENING	8 NOS.
2	CLEAR OPENING	1.5M
3	CLEAR WIDTH	1.5M
4	SILL LEVEL	383.0M
5	DECK LEVEL	392.00M
6	FRL	385.50M
7	MWL	390.40M
8	LOCATION OF SIDE SEAL & SKIN PLATE	U/S (UP STREAM)
9	OPERATING EQUIPMENT	MANUEL SCREW HOIST

LEGEND

	1ST STAGE CONCRETE (GRADE M-30)		2ND STAGE CONCRETE (GRADE M-35)
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FOR TENDER PURPOSE ONLY

DATE 15.07.2025

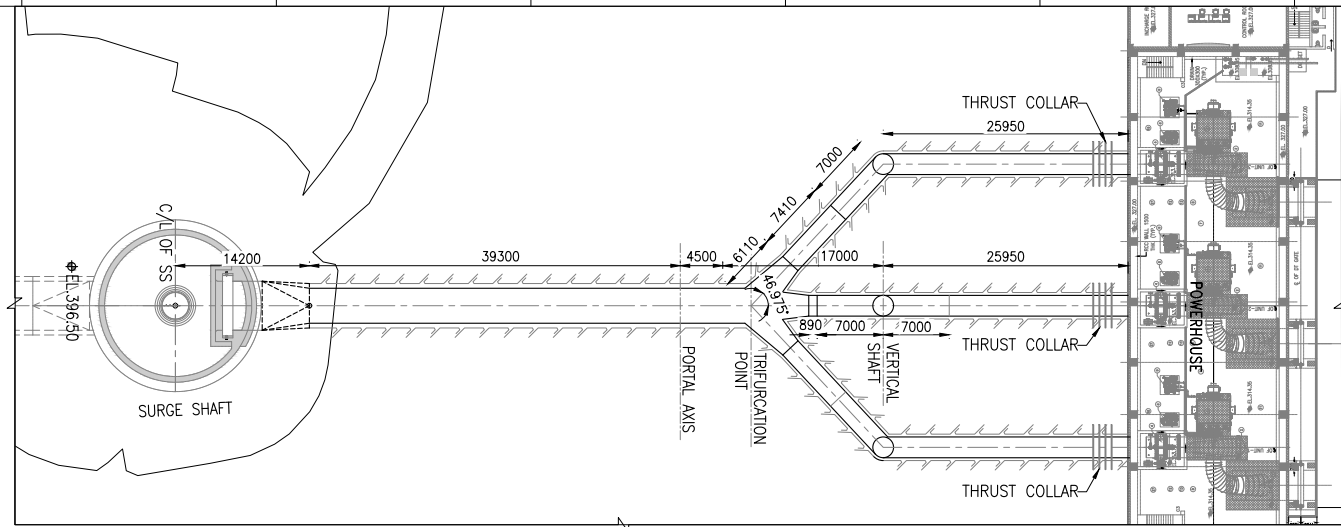
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OWNER :
 ASSAM POWER GENERATION CORPORATION LTD.

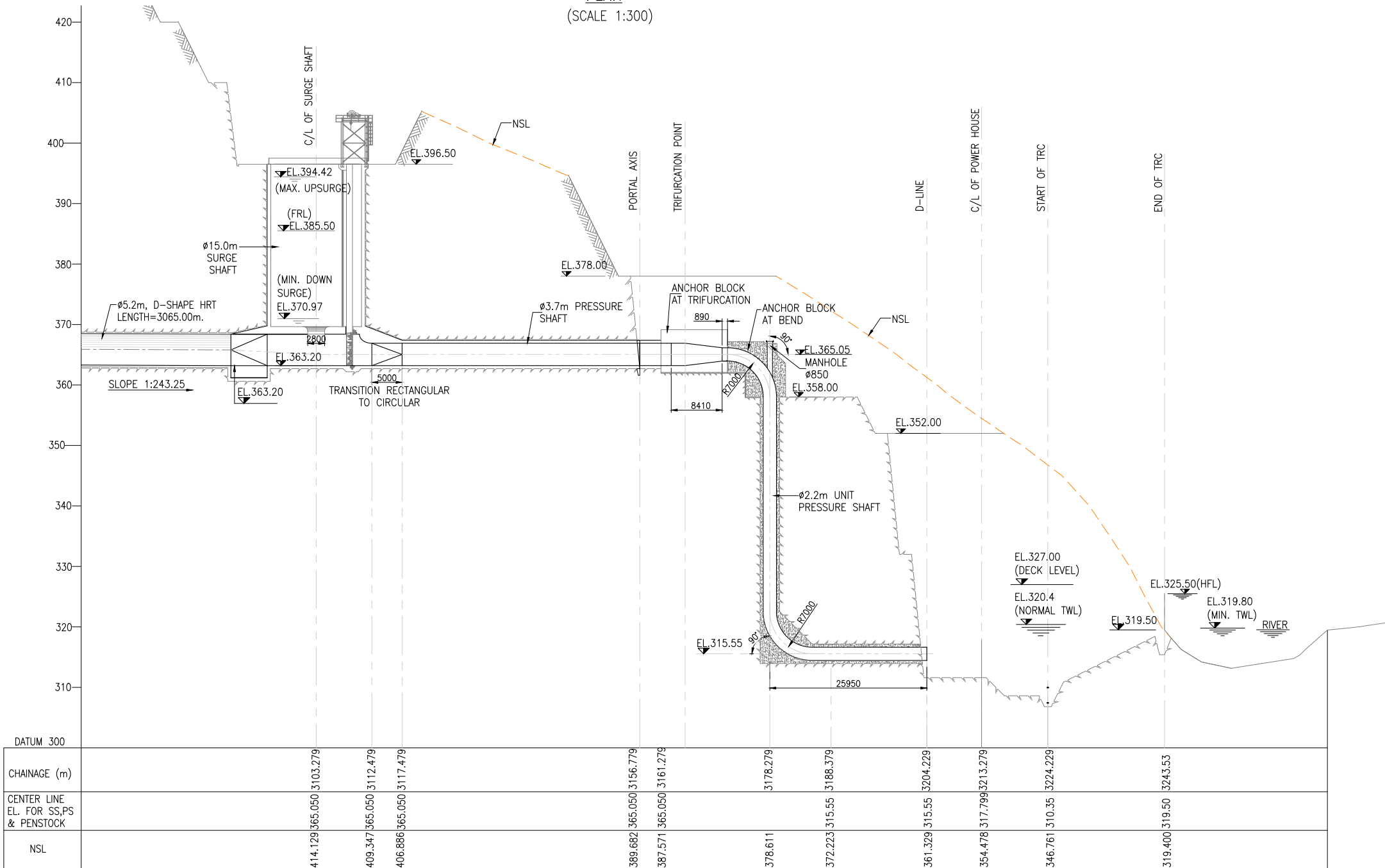
PROJECT :
**KARBI-LANGPI MIDDLE-II (3X8 MW)
ASSAM, INDIA**

TITLE:
**FISH LEADER GATE
GENERAL ARRANGEMENT**

TRACTEBEL Engineering pvt. Ltd.	Size	Scale	Sheet	Rev.
	A1	N.T.S.	01 of 01	0
Project No.		Discipline Code		Serial No.
P.020318		TE-H&M-GAD		9559



PLAN
(SCALE 1:300)



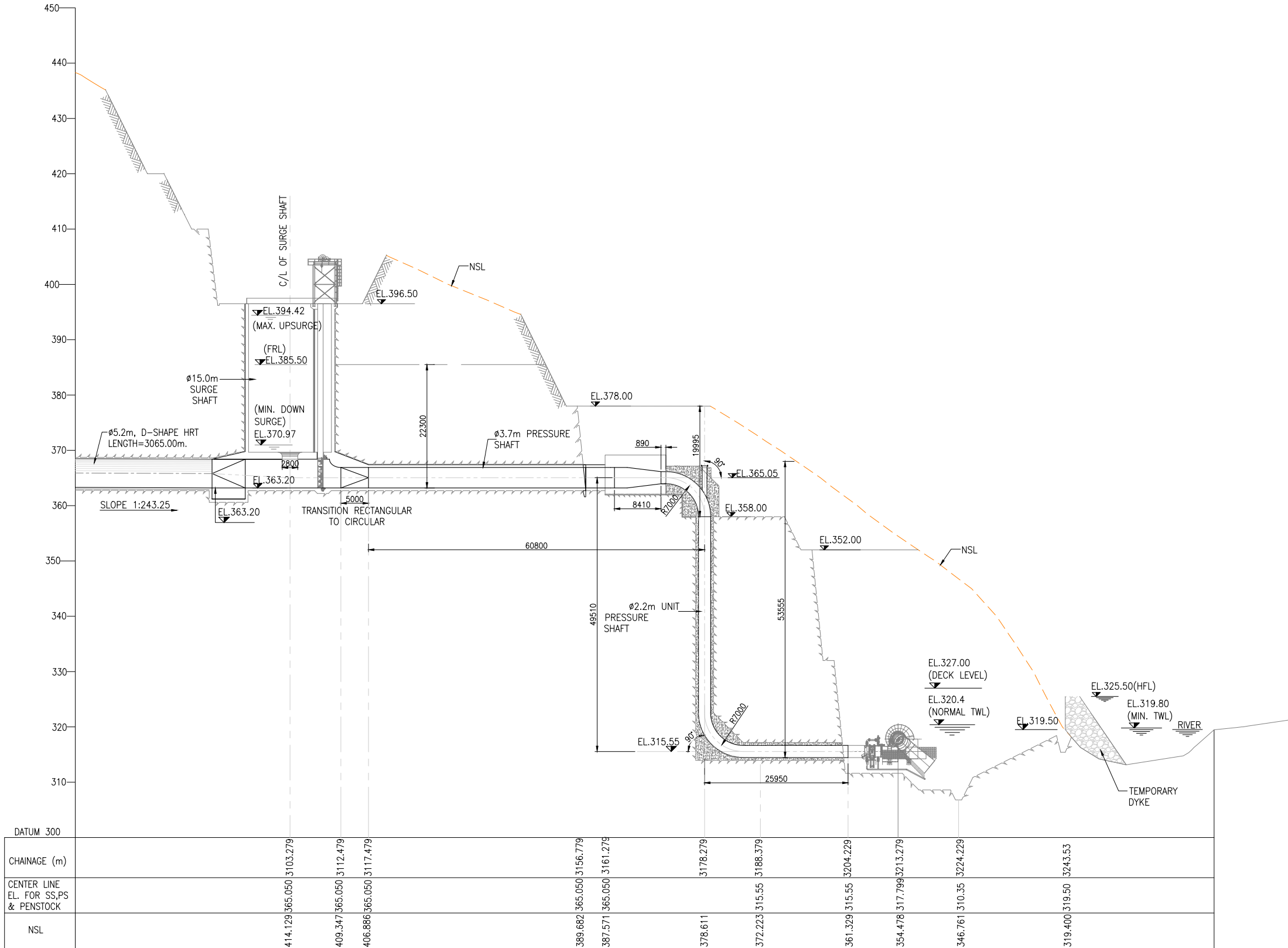
(LONGITUDINAL SECTION SURGE
SHAFT TO TAIL RACE CHANNEL)
(SCALE 1:400)

-	-	-	-	-	-	-	-	-
14-07-2025	A1	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-	-
06-03-2024	A0	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-	-
DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE	

NOTES:-

- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS IN METERS, UNLESS OTHERWISE SPECIFIED.
- DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
- THIS DRAWING IS FOR REFERENCE PURPOSE ONLY.

BASED ON DRAWING / DOCUMENTS			
DRG / DOCUMENT NO.		SUBJECT	
REFERENCE DRAWING			
DRG. NO.		SUBJECT	
SCALE	04.010.020.040.0M		
CLIENT :			
 ASSAM POWER GENERATION CORPORATION LTD			
OE & PMC			
 TRACTEBEL ENGINEERING PVT. LTD. Intec House, 37 Institutional Area, Sector 44 122002, Gurugram-INDIA			
PROJECT :			
KARBI LANGPI MIDDLE-II HPP (3X8 MW) ASSAM, INDIA			
TITLE:			SHEET
PRESSURE SHAFT - GENRAL LAYOUT DRAWING			1 OF 1
DRG. No.			SCALE
P.020318-CD-PST-H&M-3001			1 : 400
			SIZE
			A1
			REV.
			A1



LONGITUDINAL SECTION
ALONG PRESSURE SHAFT
(SCALE 1:400)

-	-	-	-	-	-	-	-	-
14-07-2025	A1	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-	-
06-03-2024	A0	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-	-
DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE	

- NOTES:-
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DRG / DOCUMENT NO.

SUBJECT

REFERENCE DRAWING

DRG. NO.

SUBJECT

SCALE

0 4.0 10.0 20.0 40.0M

CLIENT :

ASSAM POWER GENERATION CORPORATION LTD

OE & PMC

TRACTEBEL ENGINEERING PVT. LTD.
Intec House, 37
Institutional Area, Sector 44
122002, Gurugram-INDIA

PROJECT :

KARBI LANGPI MIDDLE-II HPP (3X8 MW)
ASSAM, INDIA

TITLE:

PRESSURE SHAFT -
EXTERNAL PRESSURE DRAWING

SHEET
1 OF 1

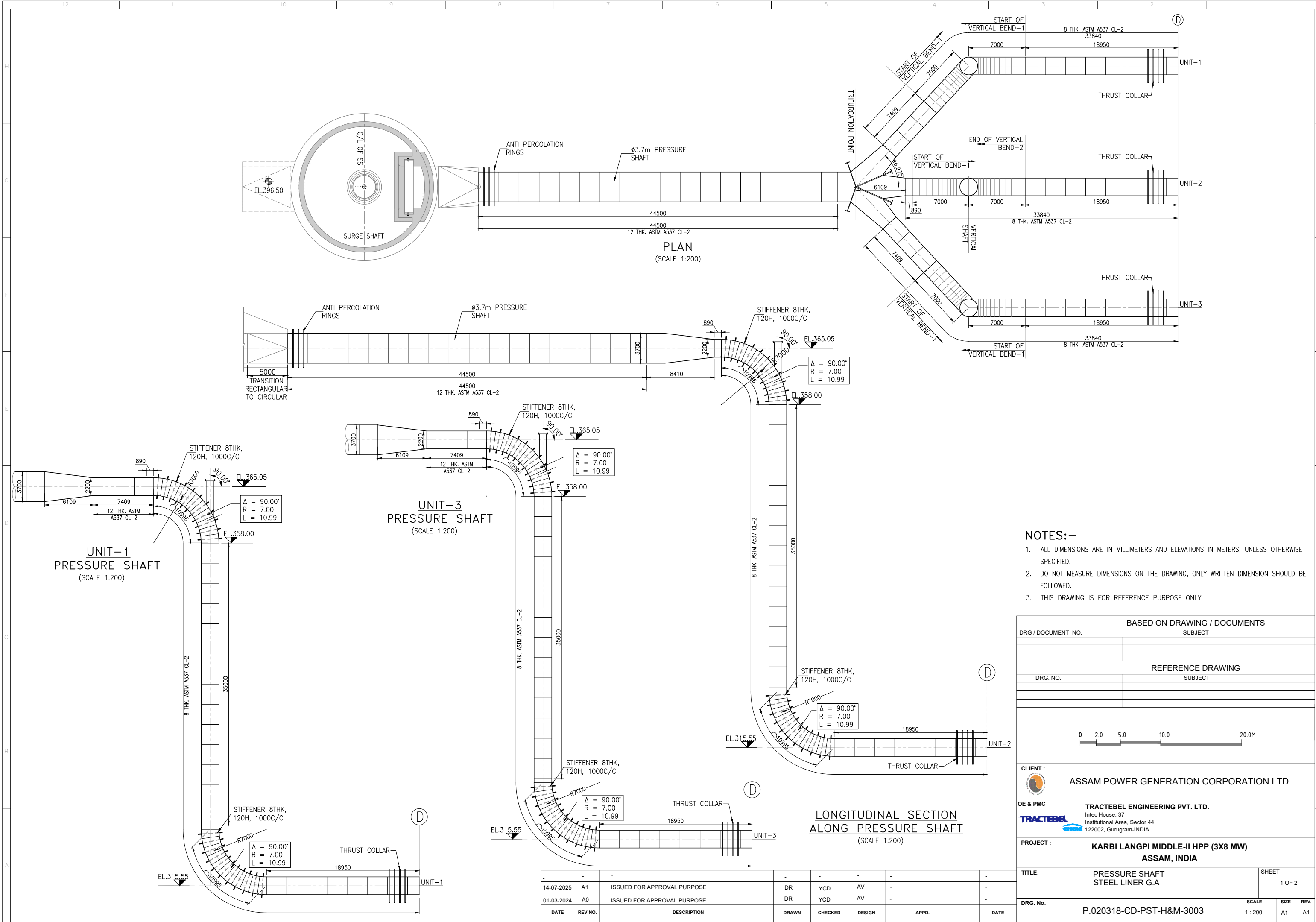
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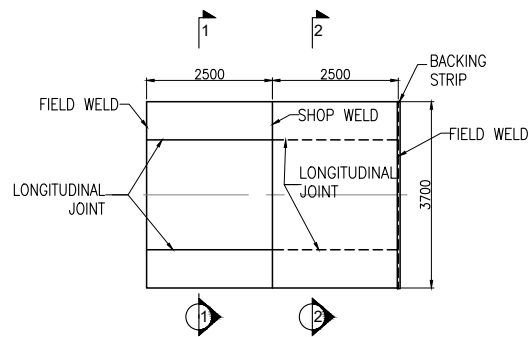
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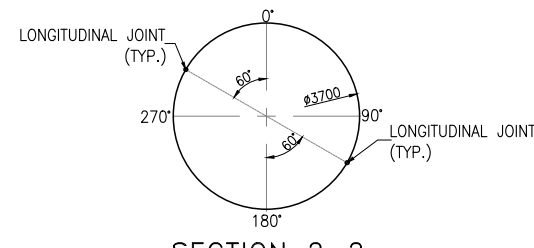
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A1

REV.
A1

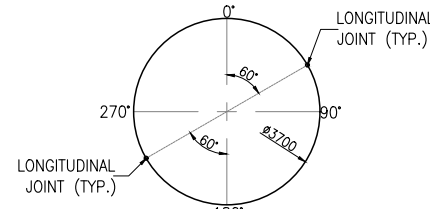




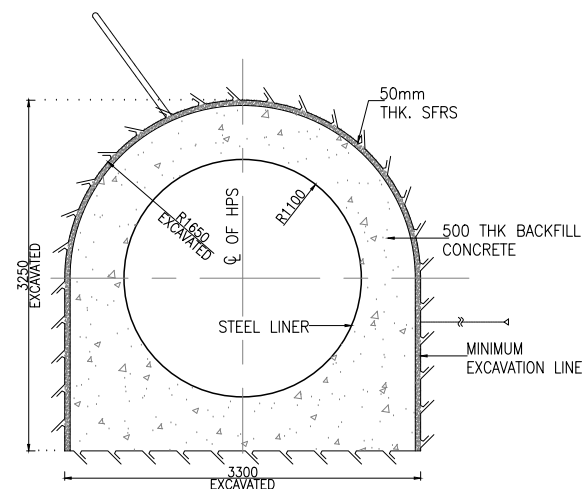
JOINT DETAIL OF TYP. SHELL
(SCALE 1:50)



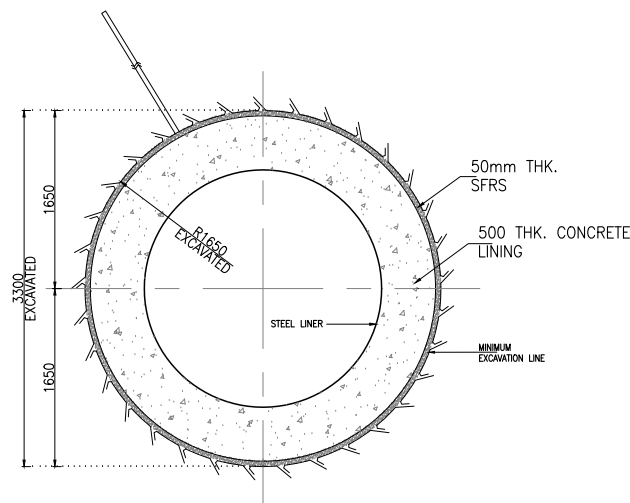
SECTION 2-2
(SCALE 1:75)



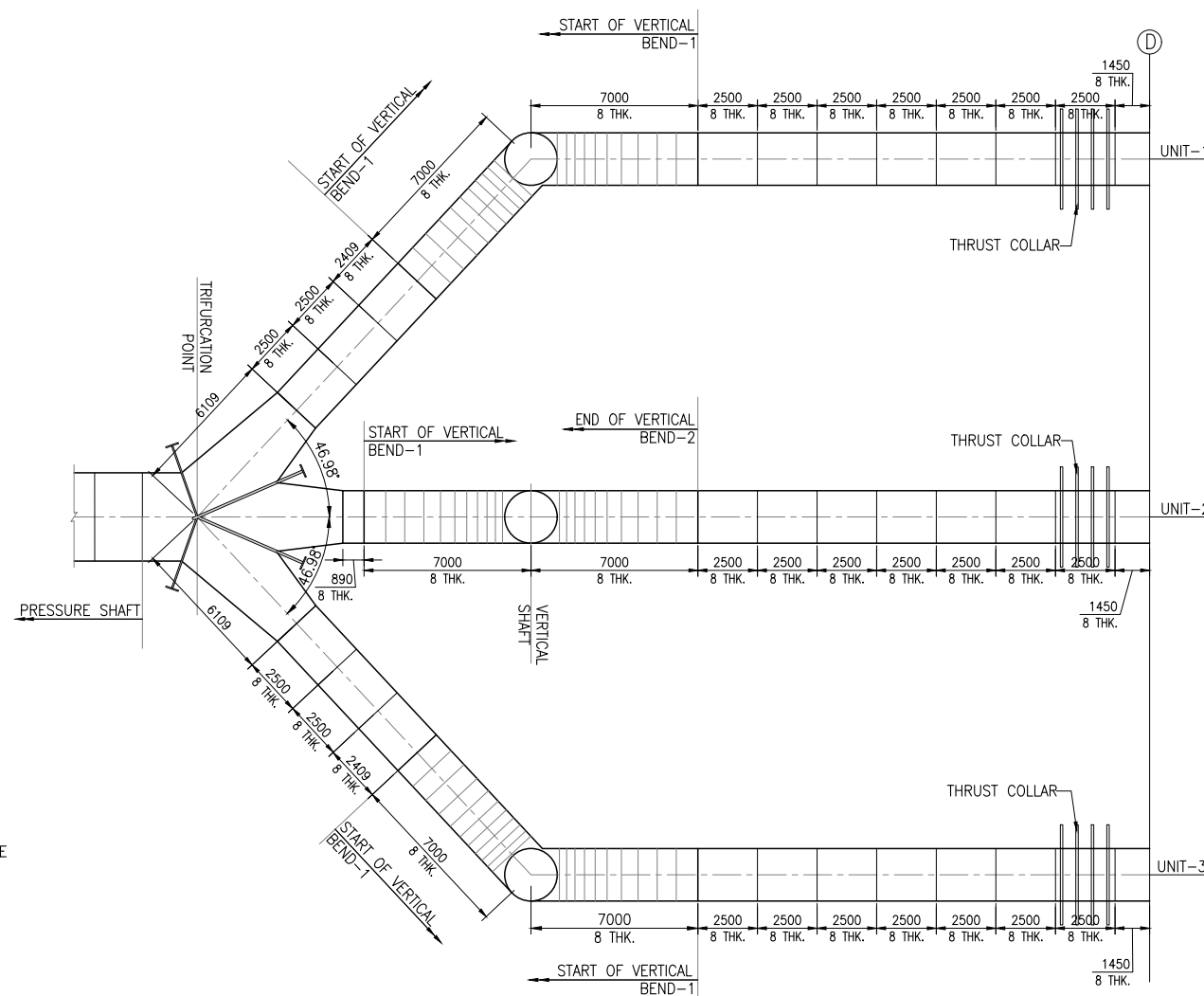
SECTION 1-1
(SCALE 1:75)



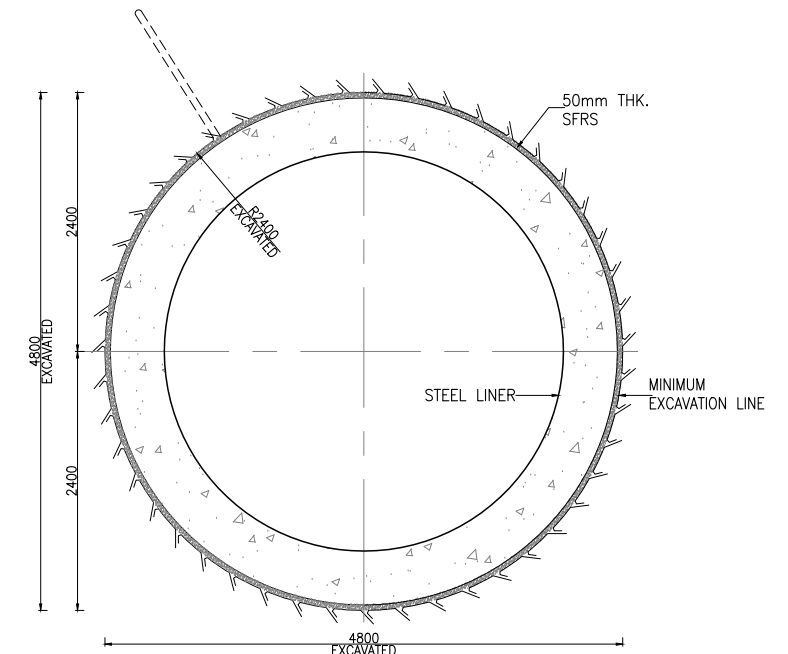
Ø2.2m HORIZONTAL PRESSURE SHAFT
(SCALE 1:35)



Ø2.2m VERTICAL PRESSURE SHAFT
(SCALE 1:35)



TYPICAL PLAN OF UNIT PRESSURE SHAFT
(SCALE 1:150)



Ø3.7m HORIZONTAL PRESSURE SHAFT
(SCALE 1:35)

NOTES:-

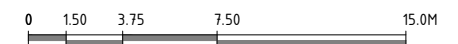
- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS IN METERS, UNLESS OTHERWISE SPECIFIED.
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BASED ON DRAWING / DOCUMENTS

DRG / DOCUMENT NO. SUBJECT

REFERENCE DRAWING

DRG. NO. SUBJECT



CLIENT :



ASSAM POWER GENERATION CORPORATION LTD

OE & PMC



TRACTEBEL ENGINEERING PVT. LTD.
Intec House, 37
Institutional Area, Sector 44
122002, Gurugram-INDIA

PROJECT :

KARBI LANGPI MIDDLE-II HPP (3X8 MW)
ASSAM, INDIA

TITLE:

STEEL LINER DETAILS

SHEET

2 OF 2

DRG. No.

P.020318-CD-PST-H&M-3003

SCALE

1 : 150

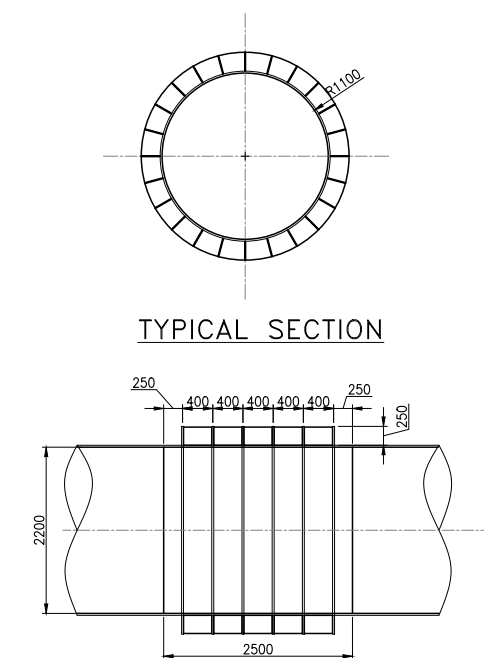
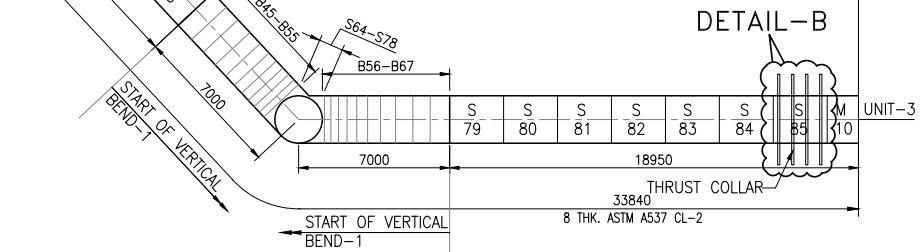
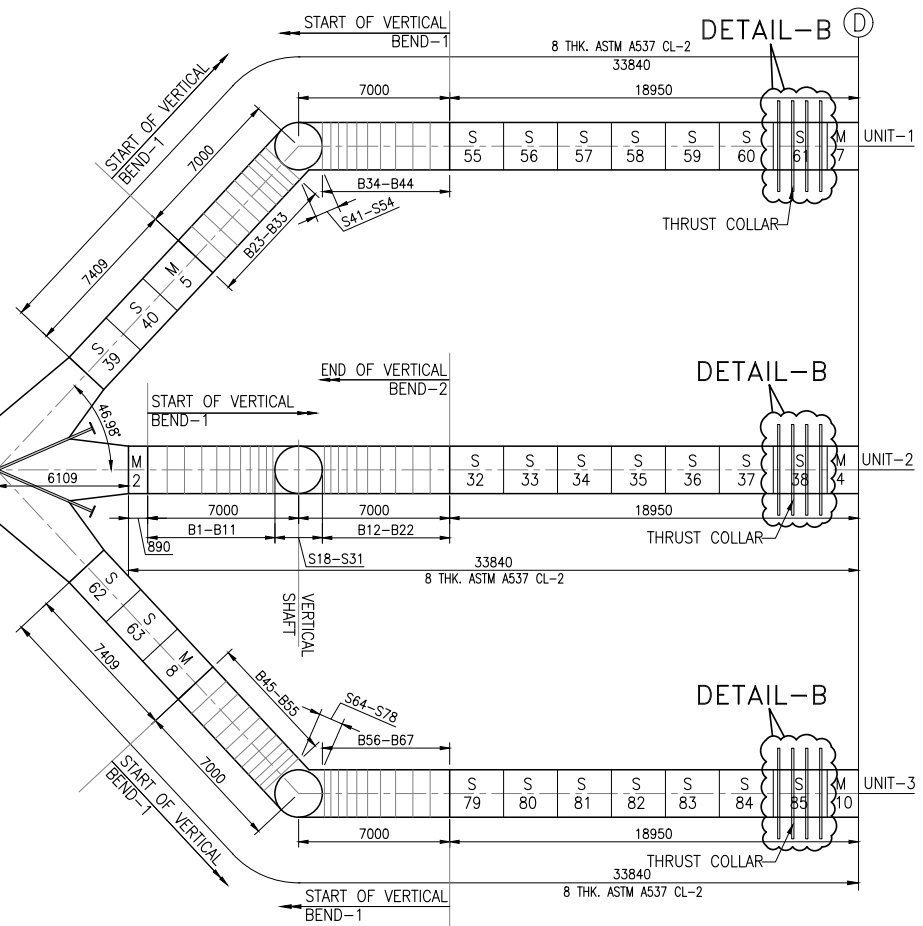
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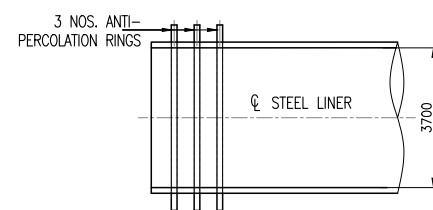
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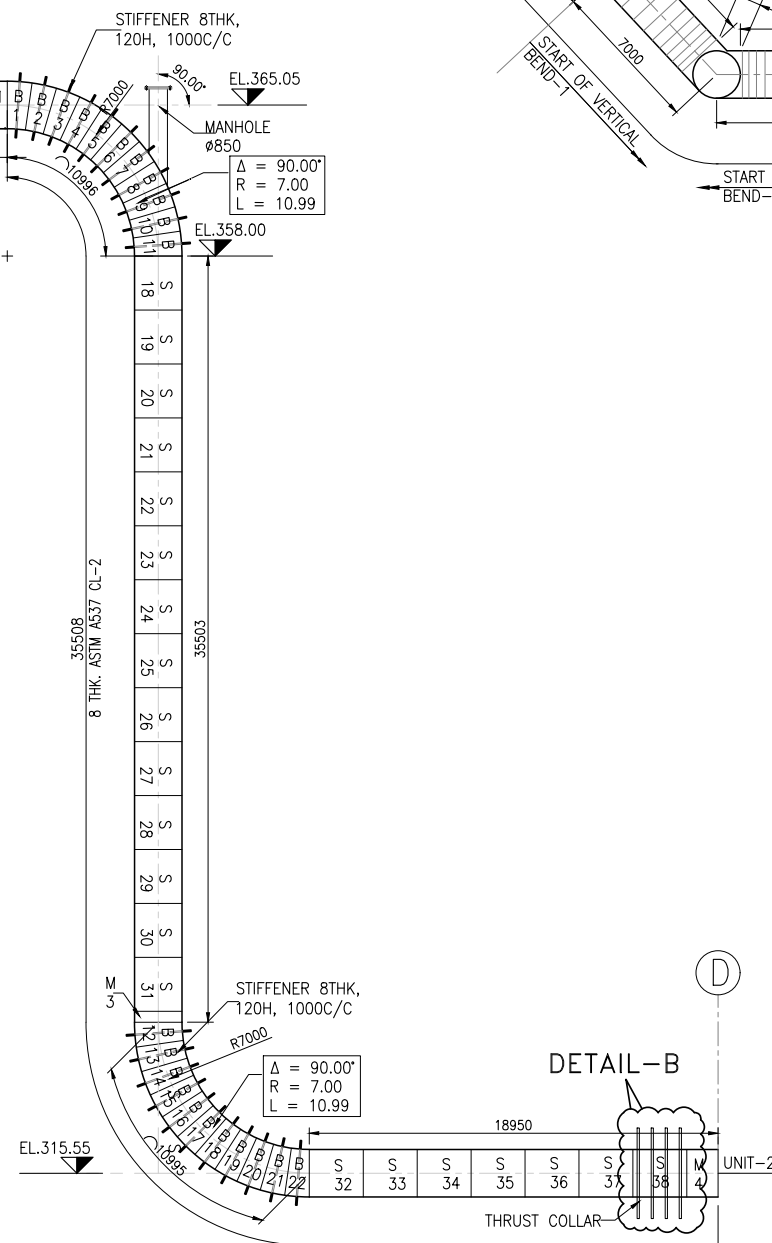
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01-03-2024	A0	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-
DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE



(SCALE 1:50)
THRUST RINGS NEAR MIV
(6 RING @ 400mm C/C)



DETAIL-A
(SCALE 1:100)

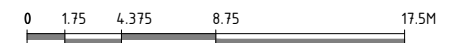


DETAIL-B

THRUST COLLAR-

-	-	-	-	-	-	-	-
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01-03-2024	A0	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-
DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE

BASED ON DRAWING / DOCUMENTS	
DRG / DOCUMENT NO.	SUBJECT
REFERENCE DRAWING	
DRG. NO.	SUBJECT

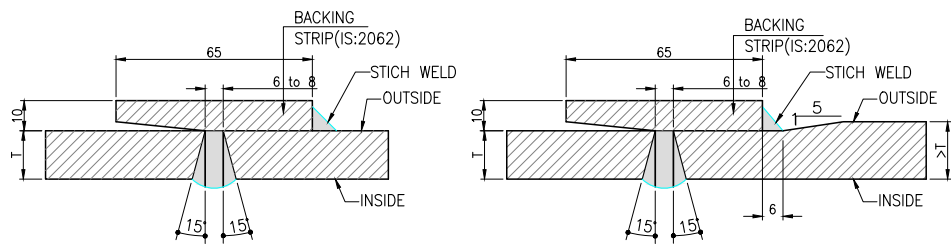


P.020318-CD-PST-H&M-3004

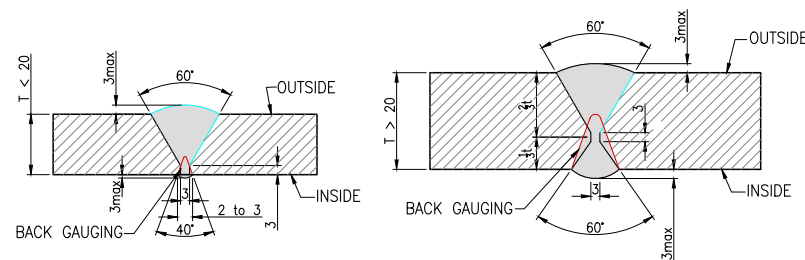
SHEET

1 OF 3

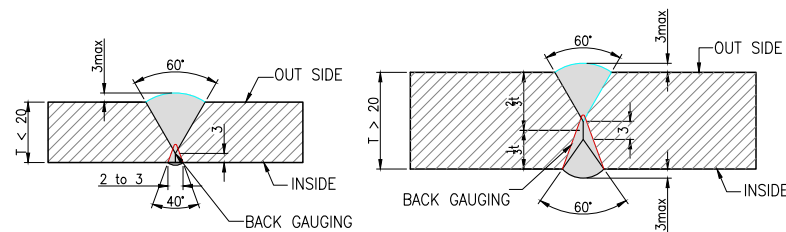
SCALE	SIZE	REV.
1 : 175	A1	A1



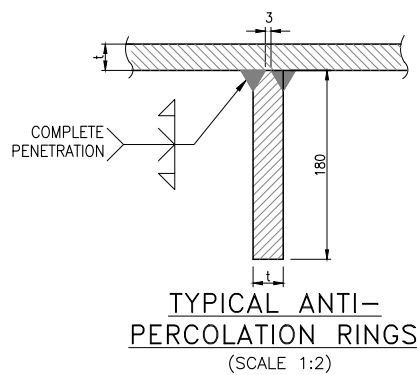
DETAIL OF FIELD WELD CIRCULAR JOINTS (PLATES WITH DIFFERENT THICKNESS)



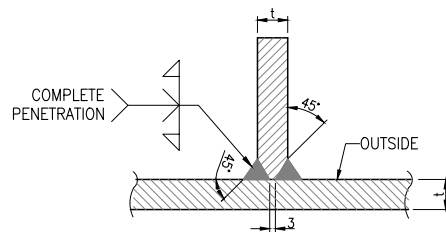
DETAIL OF SHOP WELD - CIRCULAR JOINTS FOR SHIELDED METAL ARC WELDING (SMAW) (SUCH JOINTS SHALL BE PROVIDED ONLY WHERE SAW IS NOT POSSIBLE)



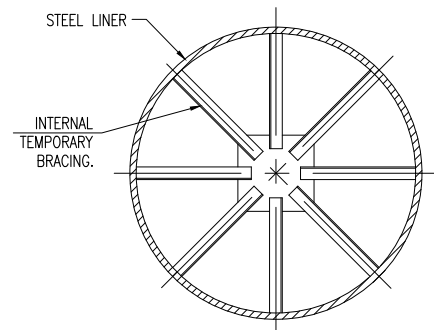
DETAIL OF SHOP WELD - LONG & CIRCULAR JOINTS FOR SUBMERGED ARC WELDING (SAW) TYPICAL DETAIL (NTS)



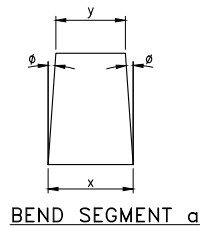
TYPICAL ANTI-PERCOLATION RINGS (SCALE 1:2)



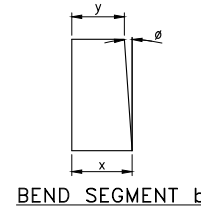
TYPICAL STIFFENER DETAIL (SCALE 1:2)



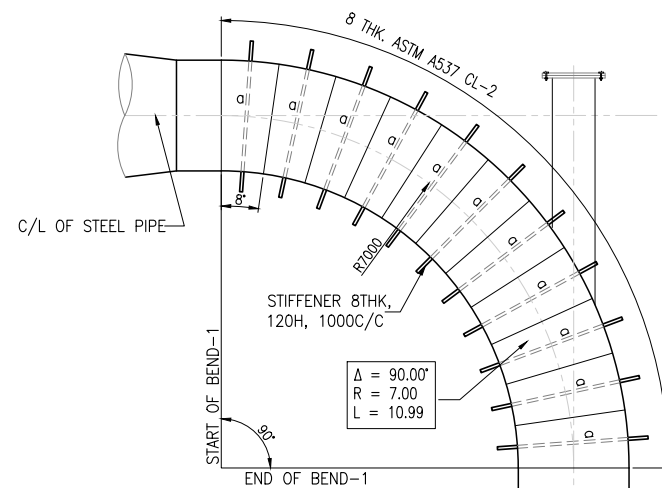
INTERNAL TEMPORARY BRACING FOR STEEL LINER (SCALE 1:50)



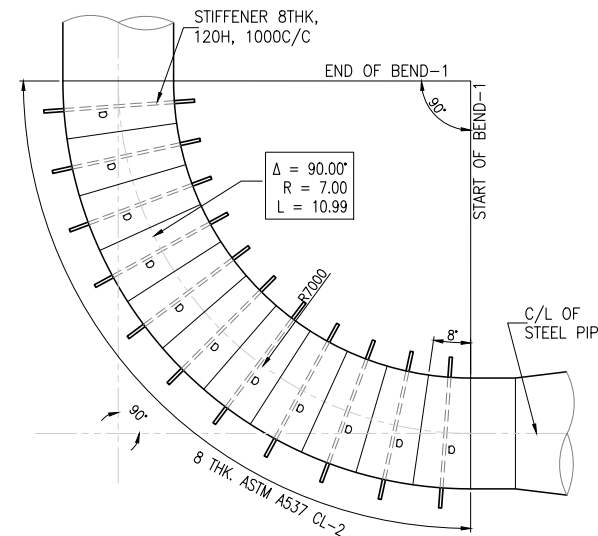
BEND SEGMENT a



BEND SEGMENT b



VERTICAL BEND-1 (SCALE 1:75)



VERTICAL BEND-2 (SCALE 1:75)

NOTES:-

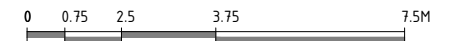
1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS IN METERS, UNLESS OTHERWISE SPECIFIED.
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3. THIS DRAWING IS FOR REFERENCE PURPOSE ONLY.

BASED ON DRAWING / DOCUMENTS

DRG / DOCUMENT NO. SUBJECT

REFERENCE DRAWING

DRG. NO. SUBJECT



CLIENT : ASSAM POWER GENERATION CORPORATION LTD

OE & PMC TRACTEBEL ENGINEERING PVT. LTD.
Intec House, 37
Institutional Area, Sector 44
122002, Gurugram-INDIA

PROJECT : KARBI LANGPI MIDDLE-II HPP (3X8 MW)
ASSAM, INDIA

TITLE: STEEL LINER DETAILS SHEET 2 OF 3

DRG. No. P.020318-CD-PST-H&M-3004 SCALE 1:75 SIZE A1 REV. A1

DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE
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01-03-2024	A0	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-

[illegible]

BEND NO.	BEND SEGMENT	INTERNAL DIA	RADIUS	THICKNES S	DIMENSIONS		SEGMENT ANGLE	TOTAL NUMBER OF SEGMENTS REQUIRED	Qty.	MEAN CIRCUM FERENC E	Stiffner Wt. (Same Thk & 120mm H)	CONSIDERATION OF STEEL PLATE SIZES		PLATES REQUIRE D	FINISHED WT. (MT)	RAW WT. (MT)	
UPPER VERTICAL BEND	b	2200	7000	8	579	422	4.091	2	3	6937	0.1	ASTMA - 537 CLASS 2	6990 X 2500 X 8	2	0.99	2.33	
	a	2200	7000	8	1165	848	8.182	10	3		0.6			15	14.81	17.12	
BOTTOM VERTICAL BEND	b	2200	7000	8	579	422	4.091	2	3	6937	0.1	ASTMA - 537 CLASS 2	6990 X 2500 X 8	2	0.99	2.33	
	a	2200	7000	8	1165	848	8.182	10	3		0.6			15	14.81	17.12	
														Total		Finished	RawWT.
														ASTM A-537 CLASS 2		31.59	38.90

NOTES:—

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2. DO NOT REMOVE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
3. THIS SHEET IS FOR REFERENCE PURPOSES ONLY. AND IS GIVEN FOR BETTER UNDERSTANDING OF THE BIDDERS.
4. NO MATERIAL WASTAGE CONSIDERED IN ABOVE QUANTITIES.
5. MATERIAL REQUIRED FOR SPECIALS/MANIFOLDS,MANHOLES,THRUST COLLAR IS NOT INCLUDED.
6. PROVISION FOR HYDROSTATIC PRESSURE TEST, BULKHEADS ETC. ARE NOT INCLUDED IN ABOVE.
7. THE MATERIAL SIZES AND WEIGHTS ARE INDICATIVE ONLY/PURELY TENTATIVE.
8. THE BIDDER SHALL CARRY OUT THEIR OWN PLANNING, DESIGNING AND QUANTITY ESTIMATION BASED ON HIS ASSESSMENT OF THE SITE CONDITIONS AND TECHNICAL REQUIREMENTS AS PER THE BID PROVISIONS.

BASED ON DRAWING / DOCUMENTS					
DRG. / DOCUMENT NO.		SUBJECT			
REFERENCE DRAWING					
DRG. NO.		SUBJECT			
CLIENT :					
ASSAM POWER GENERATION CORPORATION LTD					
OE & PMC					
TRACTEBEL ENGINEERING PVT. LTD. Intec House, 37 Institutional Area, Sector 44 122002, Gurugram-INDIA					
PROJECT :					
KARBI LANGPI MIDDLE-II HPP (3X8 MW) ASSAM, INDIA					
TITLE:					SHEET
STEEL LINER DETAILS					3 OF 3
DRG. No.				SCALE	SIZE REV.
P.020318-CD-PST-H&M-3004				1 : 125	A1 A1

-	-	-	-	-	-	-	-
14-07-2025	A1	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-
01-03-2024	A0	ISSUED FOR APPROVAL PURPOSE	DR	YCD	AV	-	-
DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE

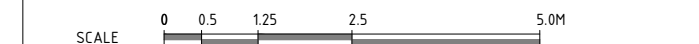
NOTES:-

- ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRES.
- STEEL PLATES:-
 - PRESSURE SHAFT LINER (DOWNSTREAM OF SURGE SHAFT) CONFORMING TO ASTM A537 CL-2, ASTM A517 GR-F
- ELECTRODES :- COMPATIBLE TO STEEL TO BE WELDED.
- NON DESTRUCTIVE :- IN SHOP - (i) ALL LONGITUDINAL JOINTS SHALL BE 100 % RADIOGRAPHED.
(ii) ALL CIRCULAR JOINTS SHALL BE 100 % RADIOGRAPHED.

IN FIELD- (i) ALL CIRCULAR JOINTS SHALL BE 100% RADIOGRAPHED EXCEPT FOR THOSE JOINTS WHICH SHALL COME IN THE ALLAIN AND DUHANGAN TUNNEL PORTION (i.e. UPSREAM OF THE VALVE HOUSE) THESE JOINTS SHALL BE 100% ULTRASONICALLY TESTED.
- SURFACE PREPARATION :- ALL INTERIOR SURFACES SHALL BE 100% SAND BLASTED.
:- ALL EXTERIOR SURFACES SHALL BE CLEANED BY WIRE BRUSH.
- PAINTING :- A. EXTERIOR SURFACES
(i) SURFACES OF PENSTOCK TO BE EMBEDDED IN CONCRETE. CEMENT WASH WITH 5% POTASSIUM DICHROMATE - 1 COAT IN SHOP.
(ii) EXPOSED SURFACE OF PENSTOCK
(a) RED OXIDE PRIMER ---- 1COAT (IN SHOP)
(b) ALUMINIUM PAINT ---- 2COATS (1COAT IN SHOP & 1 COAT AT SITE).

B. INTERIOR SURFACES :- (i) ZINC RICH PRIMER-2 COAT (IN SHOP)
(ii) COLD APPLIED COALTAR EPOXY PAINT - 3 COATS(2 COAT IN SHOP & 1 COAT AT SITE).
- EACH SHELL SHALL BE LEFT UNPAINTED FROM INSIDE FOR A LENGTH OF 150MM. FROM BOTH THE ENDS ON WHICH ONE COAT OF PRIMER SHALL BE APPLIED IN SHOP. THE PORTION LEFT UNPAINTED IN SHOP, SHALL BE PAINTED WITH REQUISITE PAINT AFTER ERRECTION.

BASED ON DRAWING / DOCUMENTS	
DRG / DOCUMENT NO.	SUBJECT
REFERENCE DRAWING	
DRG. NO.	SUBJECT



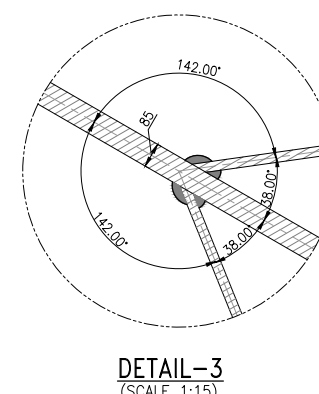
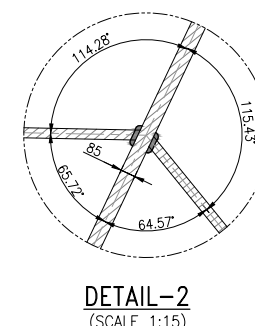
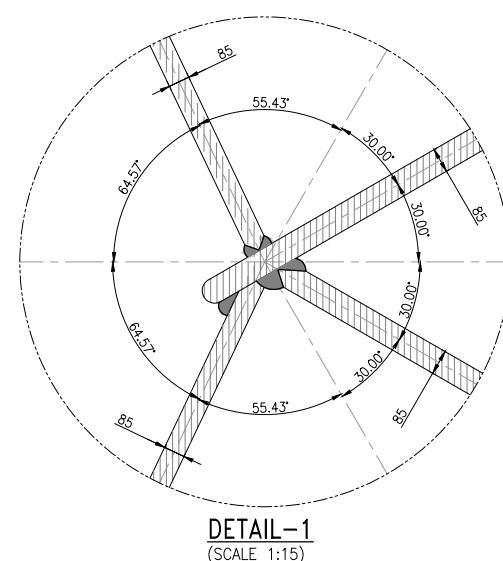
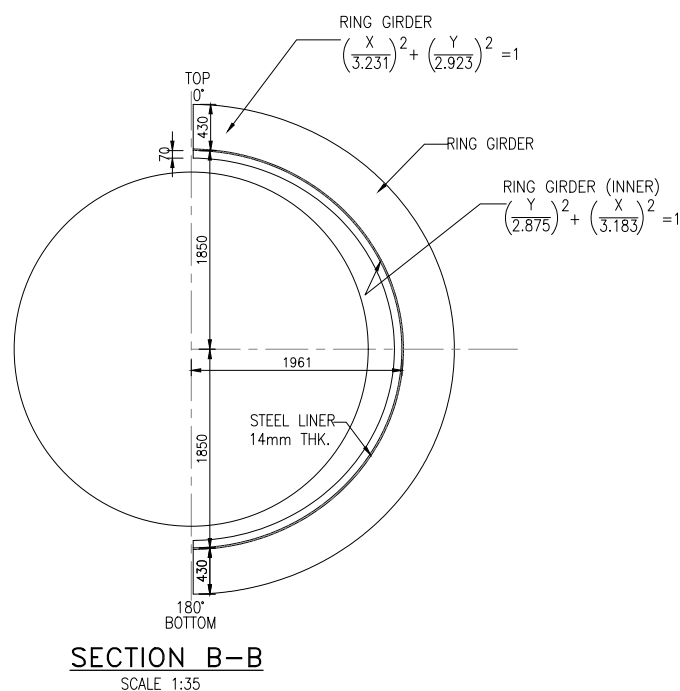
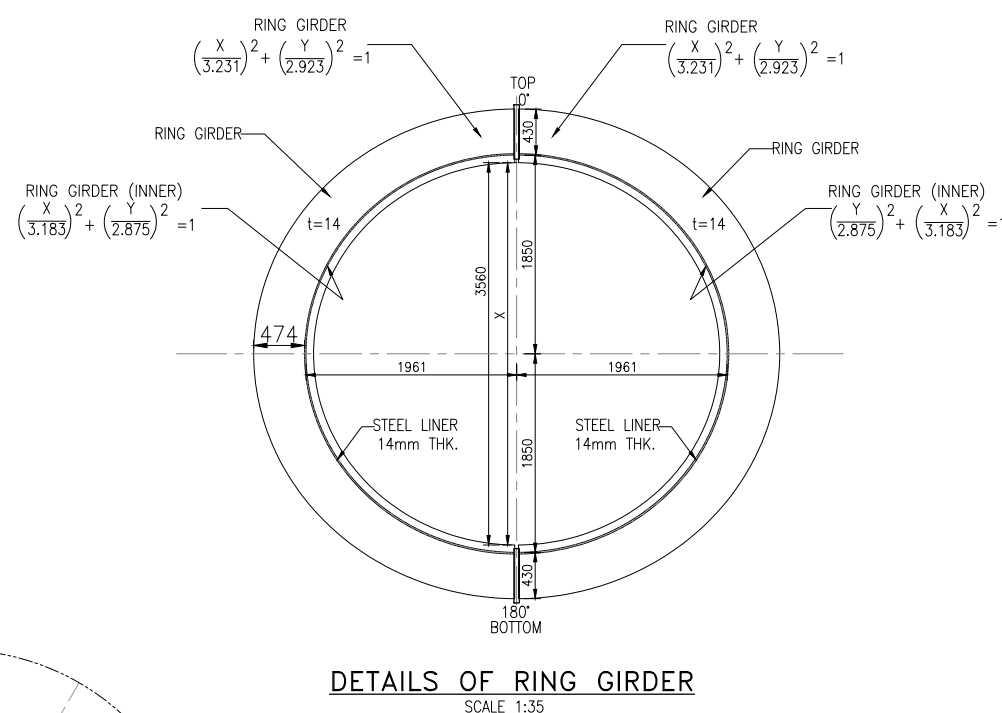
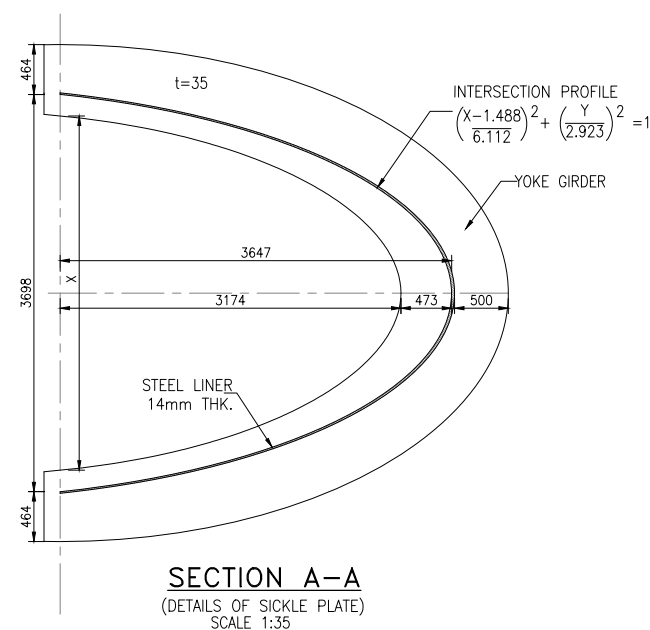
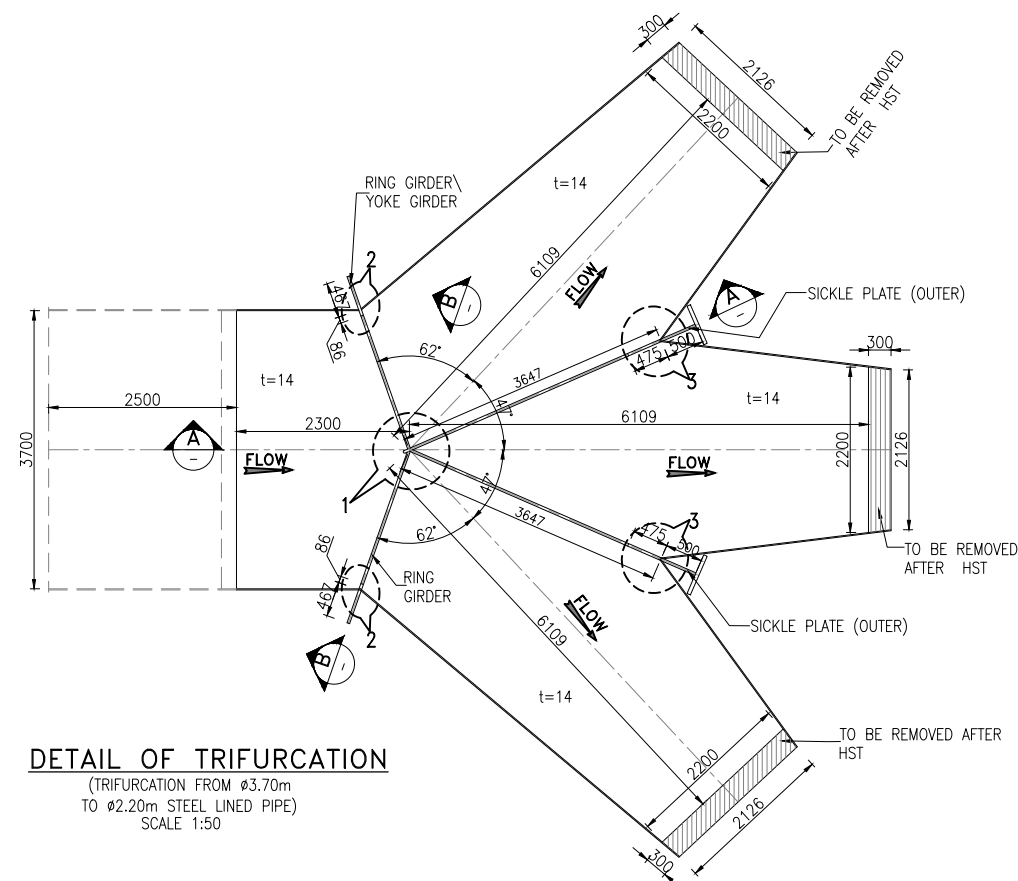
CLIENT : ASSAM POWER GENERATION CORPORATION LTD

OE & PMC TRACTEBEL ENGINEERING PVT. LTD.
Intec House, 37
Institutional Area, Sector 44
122002, Gurugram-INDIA

PROJECT : **KARBI LANGPI MIDDLE-II HPP (3X8 MW)**
ASSAM, INDIA

TITLE: DETAILS OF TRIFURCATION SHEET
1 OF 1

DRG. No. P.020318-CD-PST-H&M-3005 SCALE 1: 50 SIZE A1 REV. A0



TENDER PURPOSE

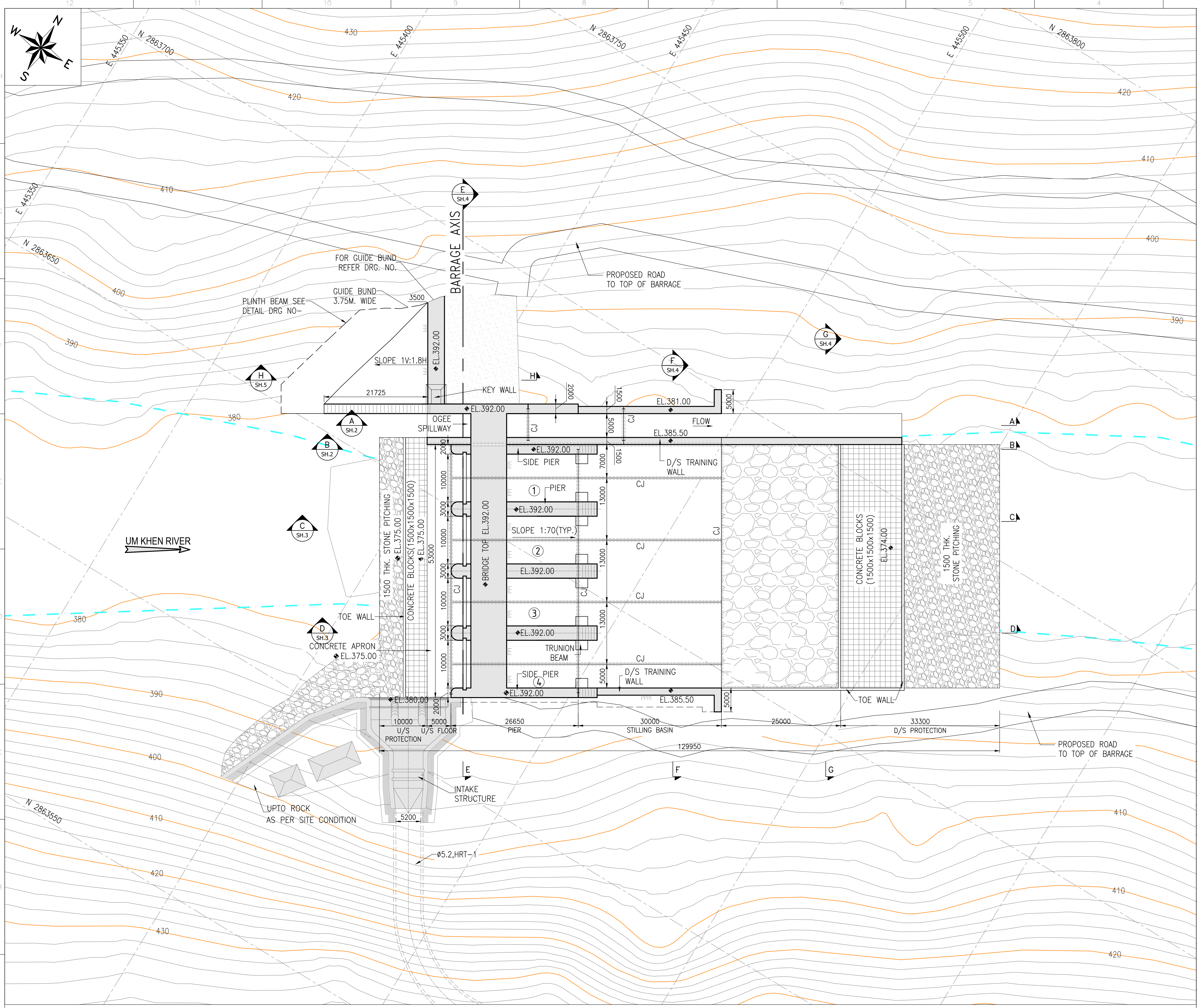
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05-04-2024	A0	ISSUED FOR APPROVAL PURPOSE	-	-	-	-	-
DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETER AND ELEVATIONS ARE IN METERS, UNLESS OTHERWISE SPECIFIED
2. DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.
3. FOR DETAILS OF EXCAVATED SLOPES, GEOLOGICAL INFORMATION, EXCAVATION AND ROCK SUPPORT SYSTEM, CONCRETE, REINFORCEMENT, WATER STOPS, CONSTRUCTION JOINTS, ROADS, HYDRO-MECHANICAL GATES DETAILS, TECHNICAL SPECIFICATION OF MATERIALS, REFER SEPARATE DRAWINGS.

LEGEND:-

- CONCRETE
- CONCRETE BLOCKS
- STONE PITCHING



BARRAGE COMPLEX LAYOUT PLAN
(SCALE 1:400)

-	-	-	-	-	-	-	-	-
03-05-2024	R1	ISSUED FOR APPROVAL PURPOSE	-	-	-	-	-	-
01-03-2024	R0	ISSUED FOR APPROVAL PURPOSE	-	-	-	-	-	-
DATE	REV.NO.	DESCRIPTION	DRAWN	CHECKED	DESIGN	APPD.	DATE	

BASED ON DRAWING / DOCUMENTS
DRG / DOCUMENT NO. SUBJECT

REFERENCE DRAWING
DRG. NO. SUBJECT

SCALE 1:100
0 4.0 10.0 20.0 40.0M

CLIENT :
ASSAM POWER GENERATION CORPORATION LTD

OE & PMC
TRACTEBEL ENGINEERING PVT. LTD.
Intec House, 37
Institutional Area, Sector 44
122002, Gurugram-INDIA

PROJECT :
KARBI LANGPI MIDDLE-II HPP (3X8 MW)
ASSAM, INDIA

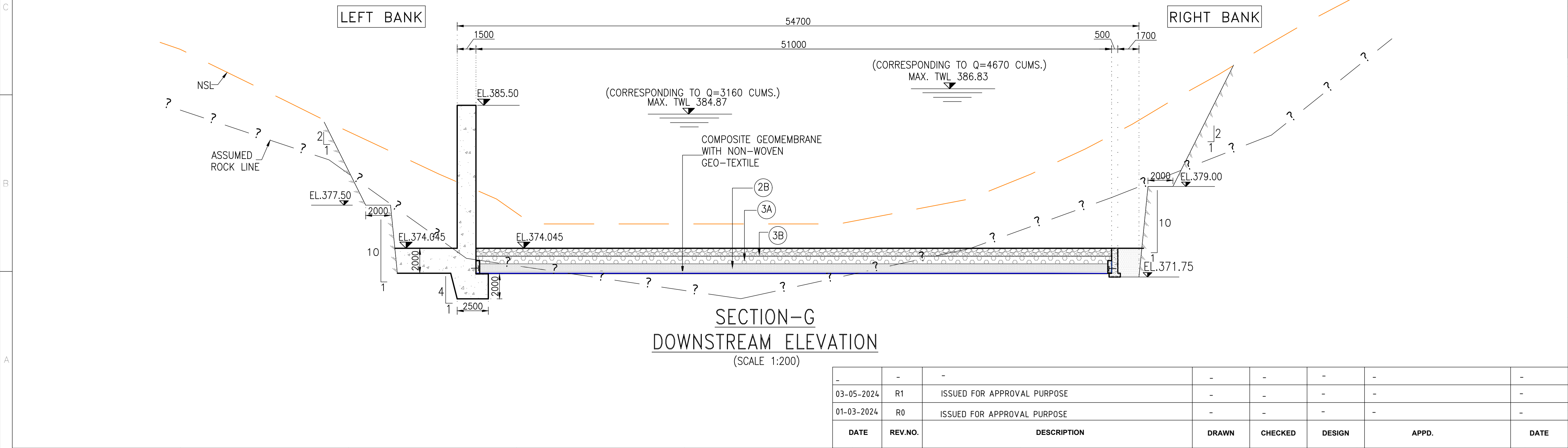
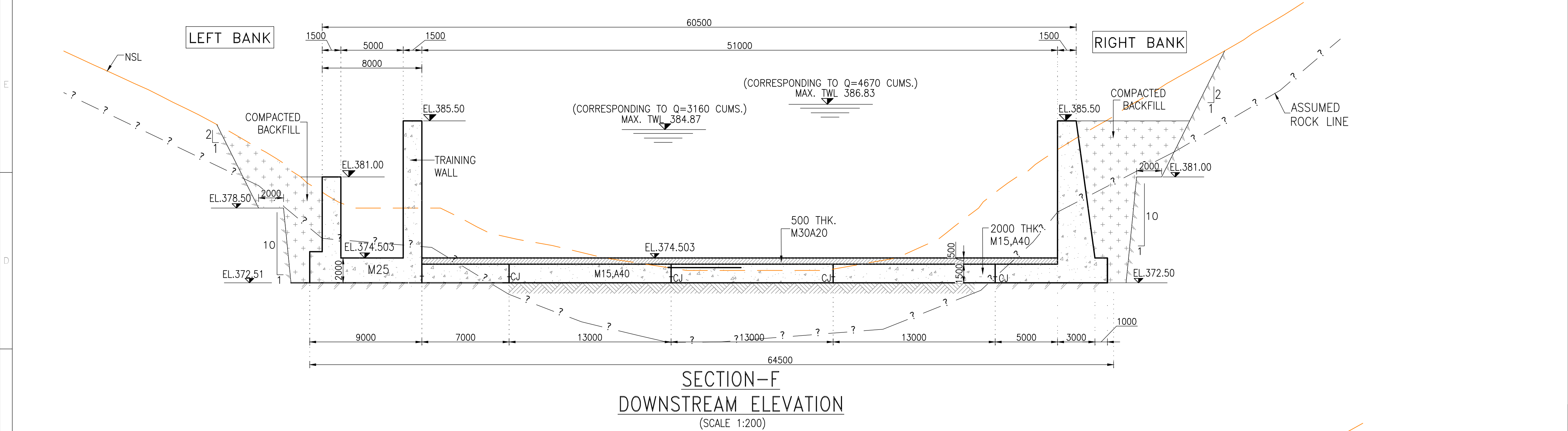
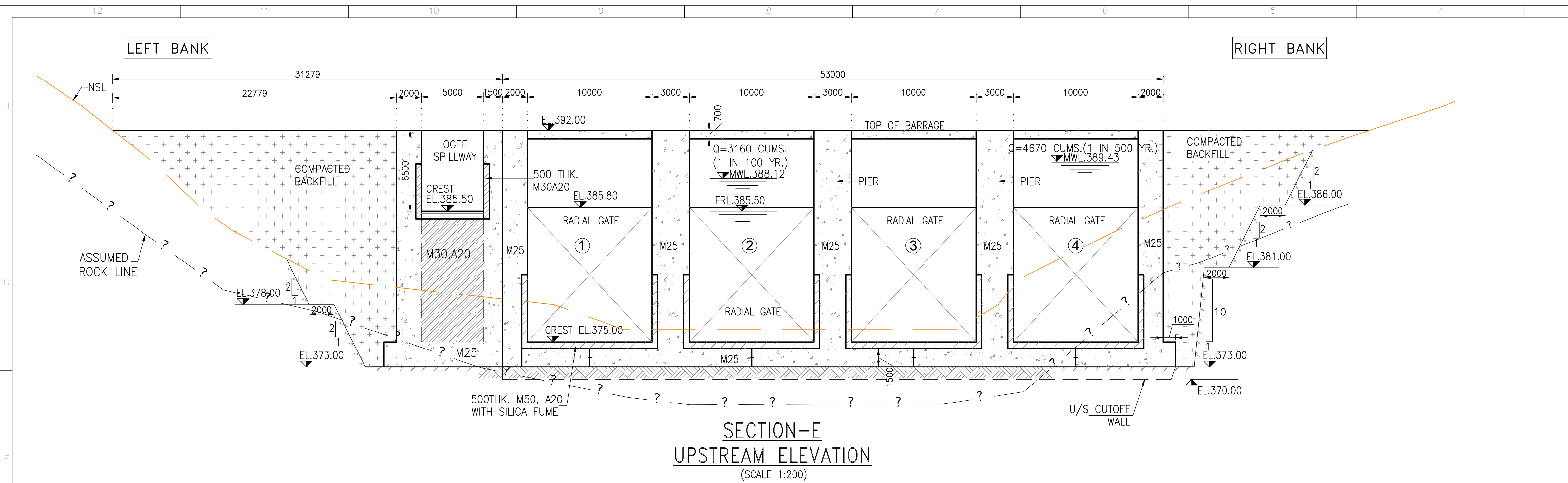
TITLE:
BARRAGE COMPLEX
LAYOUT PLAN

DRG. No.
P.020318-CD-BAR-GAD-3502

SCALE
1 : 400

SIZE
A1

REV.
R1



NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS IN METERS, UNLESS OTHERWISE SPECIFIED.
- DO NOT MEASURE DIMENSIONS ON THE DRAWING, ONLY WRITTEN DIMENSION SHOULD BE FOLLOWED.

LEGEND:-

- | | | | |
|--|----------------------------------|--|-------------------|
| | CONCRETE | | 500 THK. M30A20 |
| | COMPACTED BACKFILL | | NSL |
| | STONE PITCHING | | ASSUMED ROCK LINE |
| | 500 THK. M50A20 WITH SILICA FUME | | |
- (2B) SANDY GRAVEL (PROCESS ROCK OR SAND)(MAX.SIZE 75mm)
- (3A) WELL GRADED,SMALL QUARRY RUN ROCKFILL (50-60cm)
- (3B) FIRST CLASS ROCKFILL SLIGHTLY TO MEDIUM WEATHERED, WELL GRADED,QUARRY RUN ROCKFILL, UCS 75 MPA(60-80cm)

BASED ON DRAWING / DOCUMENTS			
DRG / DOCUMENT NO.		SUBJECT	
REFERENCE DRAWING			
DRG. NO.		SUBJECT	
SCALE		0 2.0 5.0 10.0 20.0M	
CLIENT :			
 ASSAM POWER GENERATION CORPORATION LTD			
OE & PMC			
  TRACTEBEL ENGINEERING PVT. LTD. Intec House, 37 Institutional Area, Sector 44 122002, Gurugram-INDIA			
PROJECT :			
KARBI LANGPI MIDDLE-II HPP (3X8 MW) ASSAM, INDIA			
TITLE:			SHEET
BARRAGE GENERAL ARRANGEMENT UPSTREAM & DOWNSTREAM SECTIONS			SHEET 4
DRG. No.		SCALE	SIZE
P.020318-CD-BAR-GAD-3502		1 : 200	A1
			REV
			R1