

Volume - VI

Package - 4

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NAME	SIGN	PROJECT:-	NORTH:-	TITLE:-					
DRAWN BY		MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY	MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING		INDEX OF DRAWINGS				
CHECKED BY					DATE:	DRAWING NO.	PAPER SIZE:	REV.	
APPROVED BY					06.03.2021	GN-AR-01	A3	A	

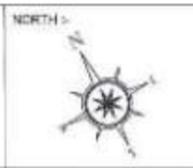


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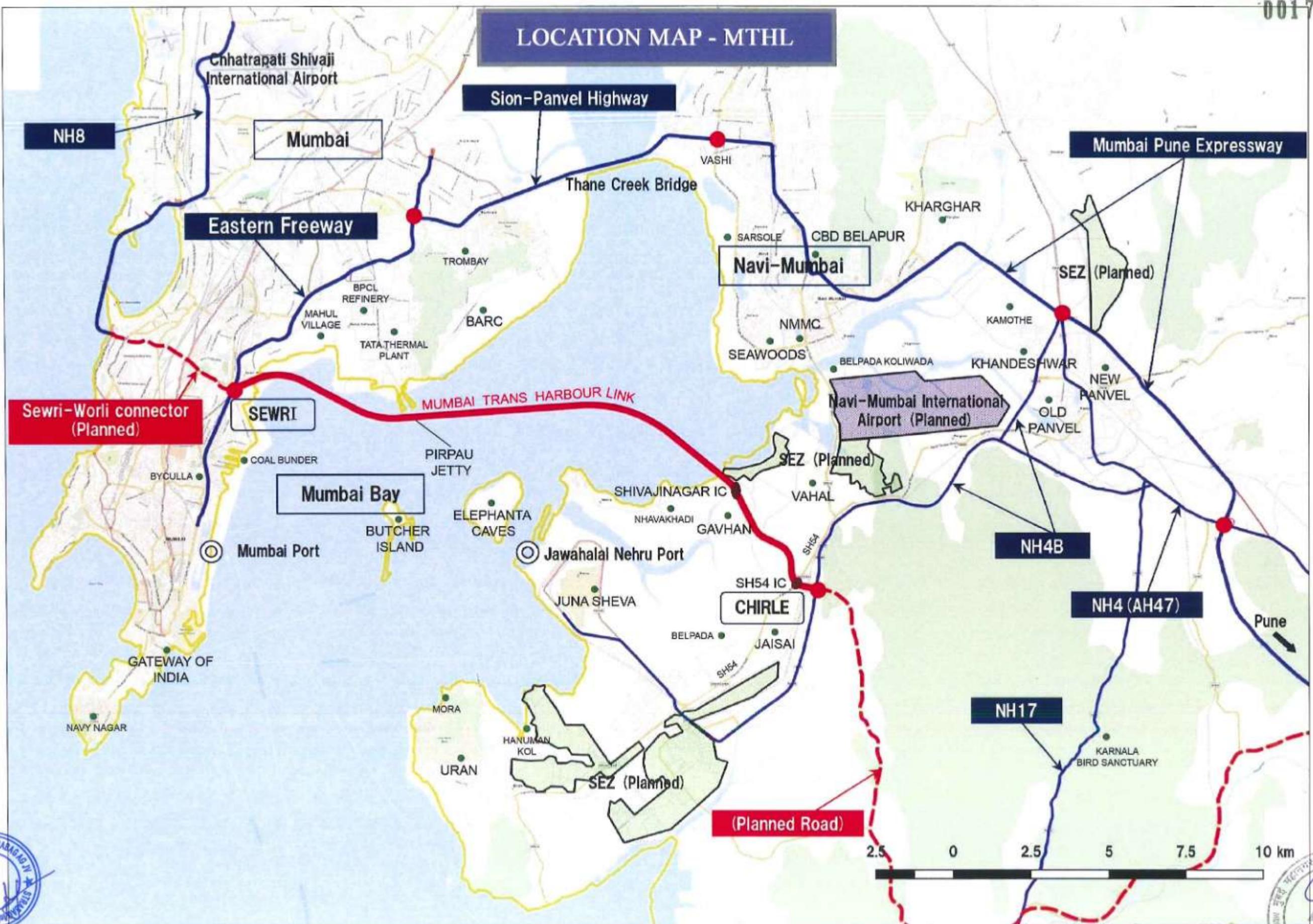
PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE >			
MUMBAI TRANS HARBOUR LINK LOCATION MAP			
DATE	DRAWING NO.	PAPER SIZE	REV.
20.01.2021	GN-AR-02 (1/2)	A1	A

LOCATION MAP - MTHL



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CHECKED BY	
APPROVED BY	

MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT : **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**

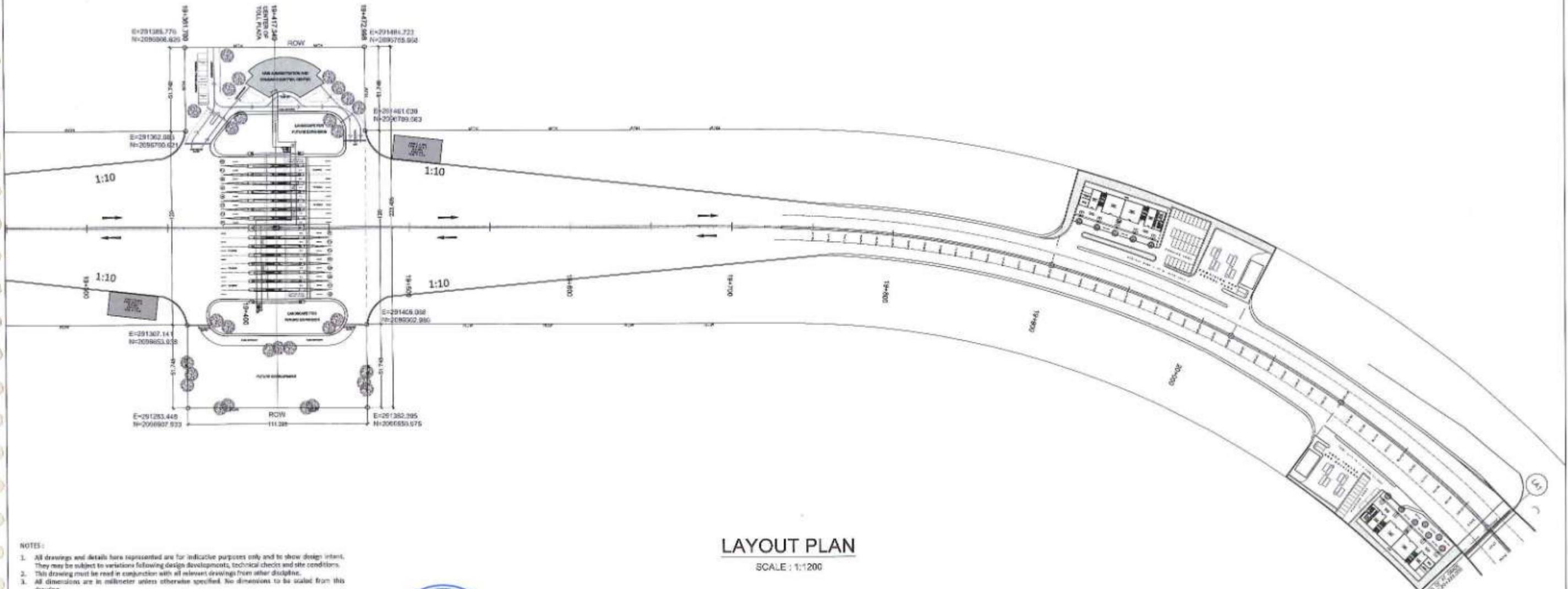


TITLE : MUMBAI TRANS HARBOUR LINK LOCATION MAP			
DATE : 05.03.2021	DRAWING NO. : GN-AR-02 (2/2)	PAPER SIZE : A1	REV. : A

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← TO SEWRI (MUMBAI)

TO CHIRLE (NAVI MUMBAI) →



LAYOUT PLAN

SCALE : 1:1200

NOTES:

1. All drawings and details here represented are for indicative purposes only and to show design intent. They may be subject to variations following design developments, technical checks and site conditions.
2. This drawing must be read in conjunction with all relevant drawings from other disciplines.
3. All dimensions are in millimeter unless otherwise specified. No dimensions to be scaled from this drawing.
4. Ground level, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
5. Information on actual size of cutout and openings shall be as per MEP design.
6. Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their PE drawings to be as per MEP drawings.
7. The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 'Development Control Rules and General Building Requirements' of the Code.
8. The dimensions on toll booths / Toll Plazas are indicative only. The contractor is required to design the toll booths / Toll Plazas as per relevant IRC codes (IRC SP-87-2015, IRC SP-99-2013).
9. Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
10. This drawing should be superseded immediately when a revised version will be issued.
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CHECKED BY	SB	
APPROVED BY	TKS	



PROJECT -

MUMBAI TRANS HARBOUR LINK PROJECT

PACKAGE 4 - TENDER DRAWING



TITLE		DATE		DRAWING NO.		PAPER SIZE		REV.	
FACILITIES LAYOUT PLAN		08.03.2021		GV-AR-01		A1		A	

← TO SEWRI (MUMBAI)

TO CHIRLE (NAVI MUMBAI) →

E=291385.776
N=2096806.626

19+417.349
CENTER OF
TOLL PLAZA

19+472.998
E=291484.723
N=2096755.668

ROW

MAIN ADMINISTRATION AND
COMMAND CONTROL CENTER

LANDSCAPE FOR
FUTURE EXPANSION

E=291461.030
N=2096709.663

PROVISION
FOR STATIC
WEIGH
BRIDGE
30M X 12M

E=291362.083
N=2096760.621

1:10

1:10

1:10

1:10

PROVISION
FOR STATIC
WEIGH
BRIDGE
30M X 12M

LANDSCAPE FOR
FUTURE EXPANSION

E=291406.088
N=2096602.980

E=291307.141
N=2096653.938

FUTURE DEVELOPMENT

E=291382.395
N=2096556.975

E=291283.448
N=2096607.933

ROW
111.298



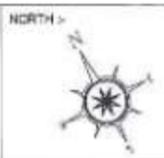
SCALE - 1: 1000

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 4. Ground level, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
 5. Information on actual size of cutout and openings shall be as per MEP design.
 6. LRV sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drainage to be as per MEP drawings.
 7. The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with IS of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 8. The dimensions on toll booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC SP-87-2013, IRC SP-89-2013).
 9. Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
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NO.	DATE	BY	CHKD BY

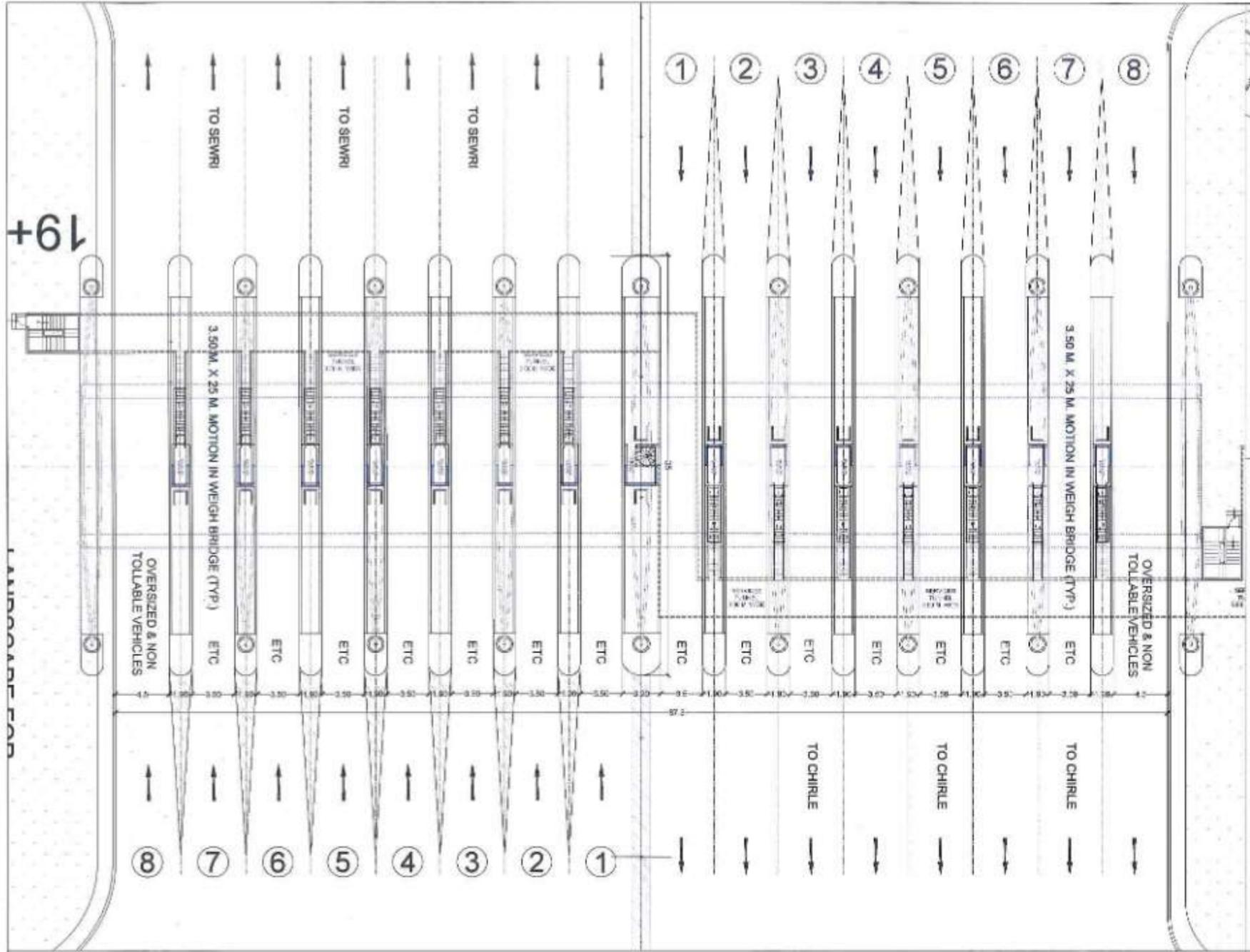


PROJECT: **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



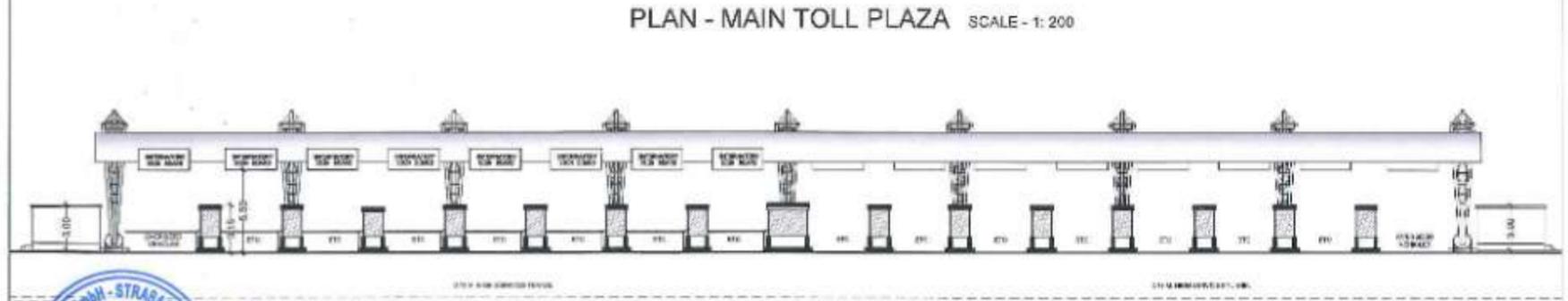
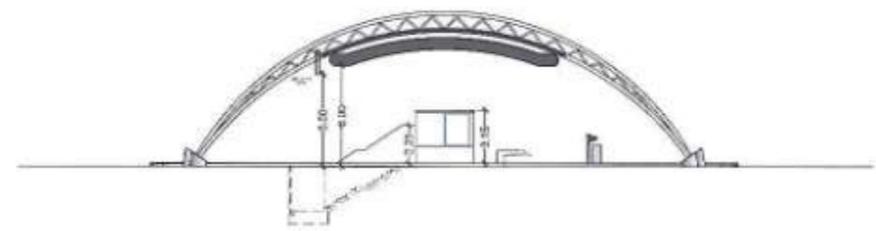
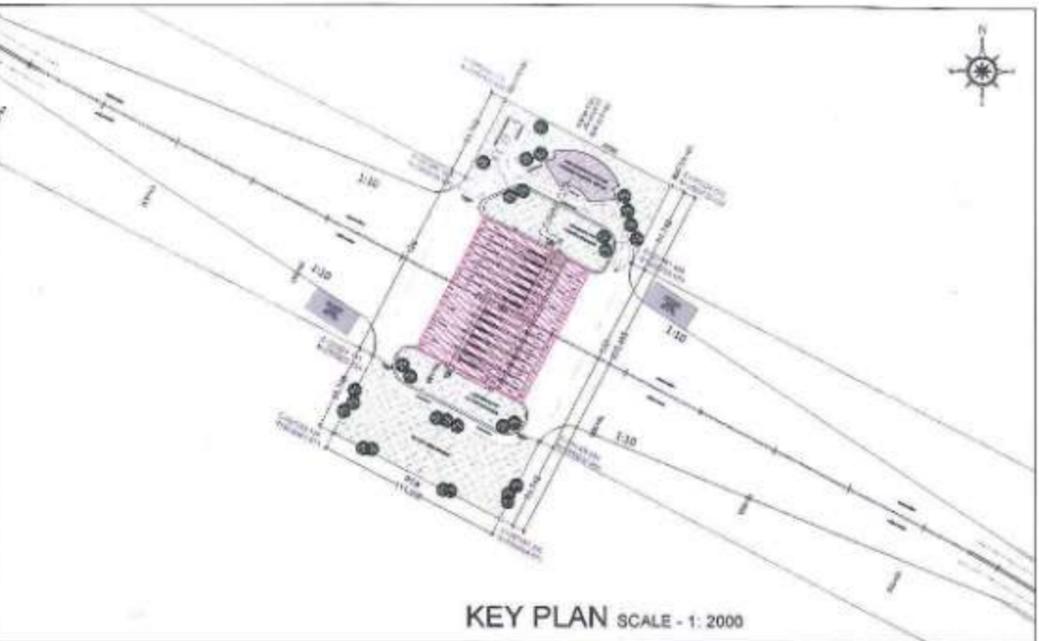
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08.03.2021	GV-AR-02	A1





+61

LAUNDRY FOR

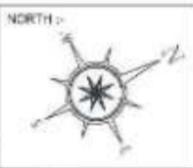


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 4. Ground levels, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
 5. Information on actual size of cutout and openings shall be as per MEP design.
 6. U/R sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their p/c drainage to be as per MEP drawings.
 7. The maximum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 8. The dimensions on 1:1 booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC: SP-87-2013, IRC: SP-99-2013).
 9. Any discrepancy found between this drawing and other documents should be referred immediately to the architect.
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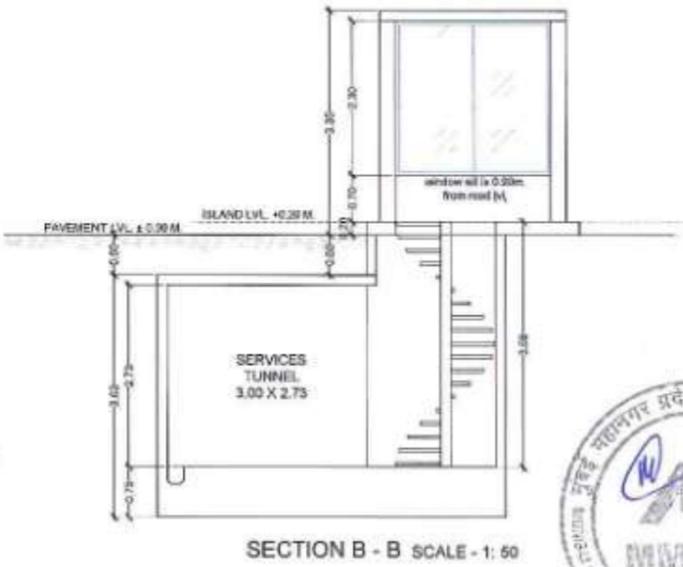
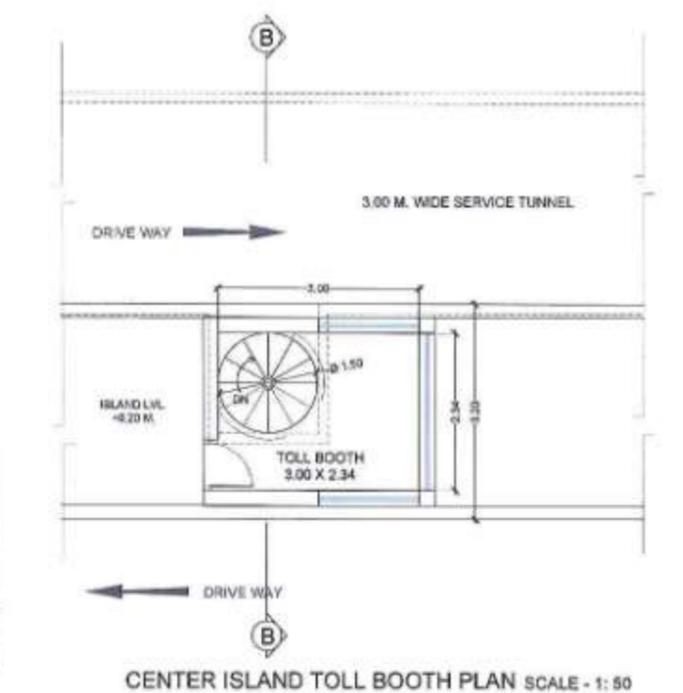
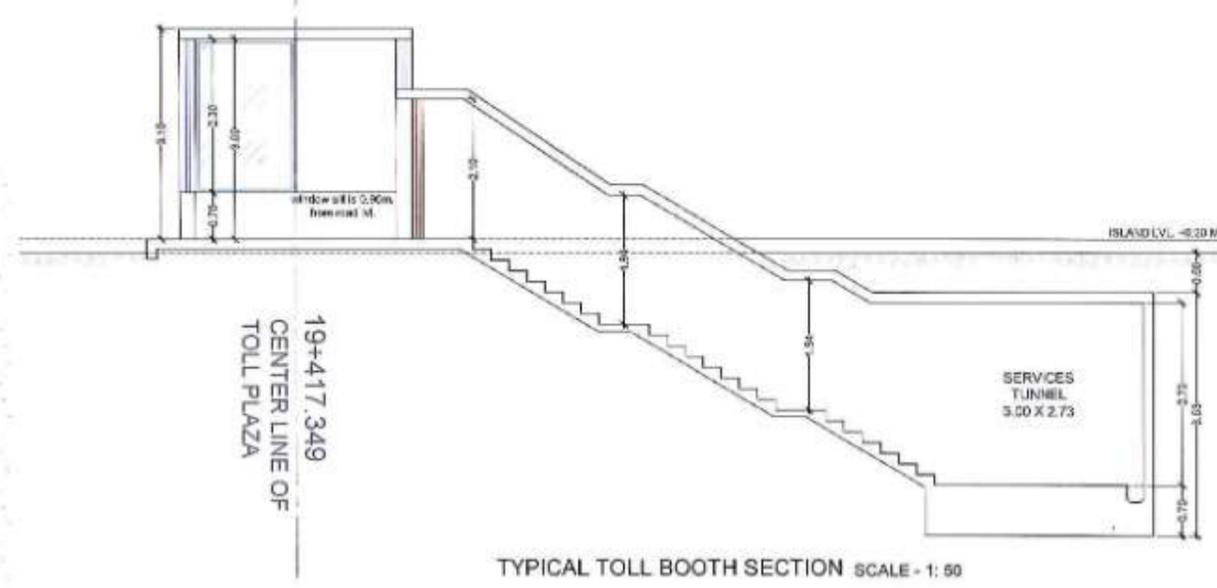
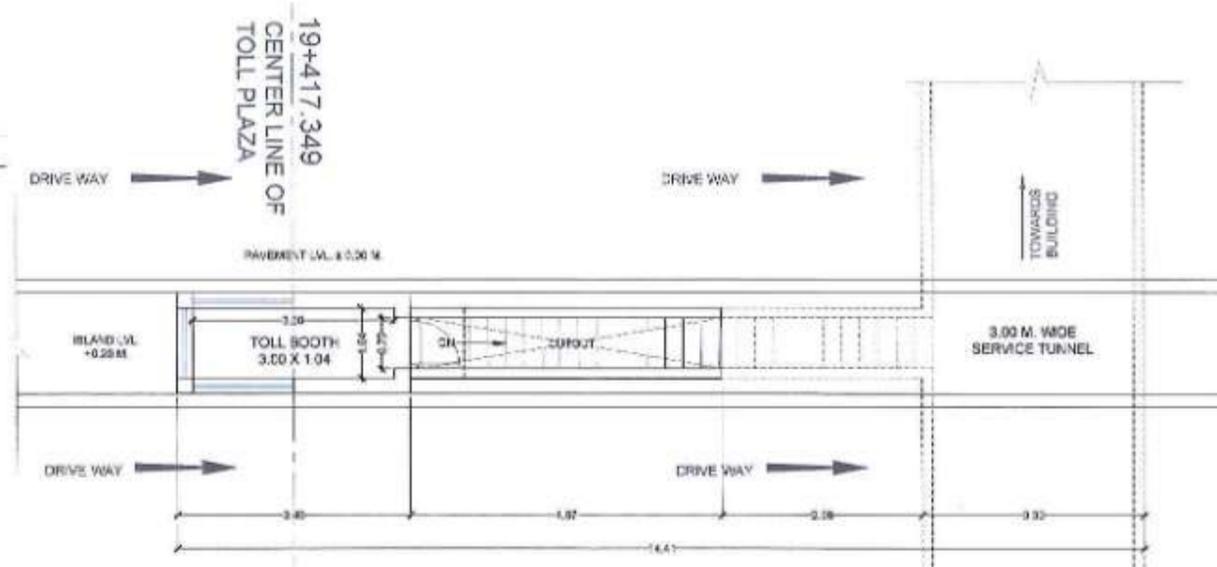
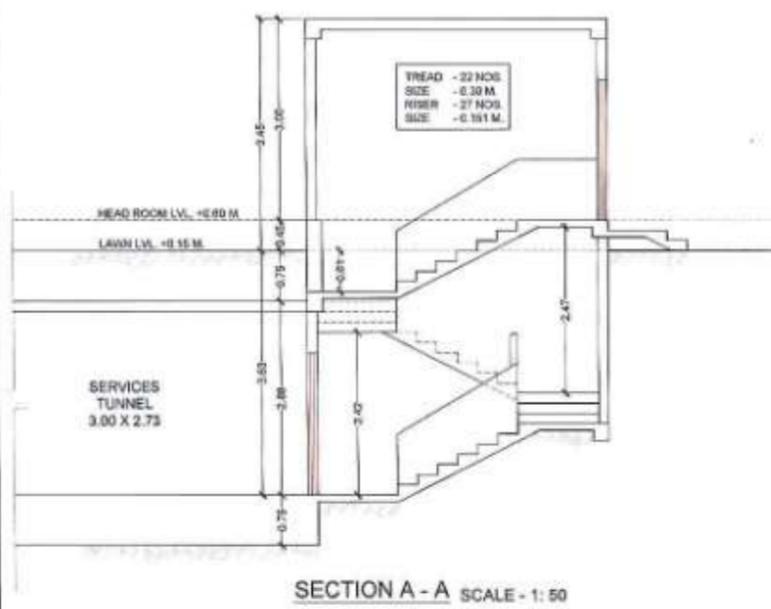
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APPROVED BY	



PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING



TITLE - MAIN TOLL PLAZA PLAN, SECTION AND ELEVATION			
DATE	DRAWING NO.	PAPER SIZE	REV.
06.03.2021	GV-AR-03	A1	A



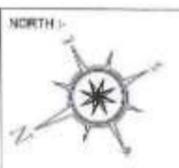
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 - Information on actual size of cutout and openings shall be as per MEP design.
 - IFD sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drawings to be as per MEP drawings.
 - The minimum size of the BT car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 - The dimensions on toll booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC: SP-67-2015, IRC: SP-69-2012).
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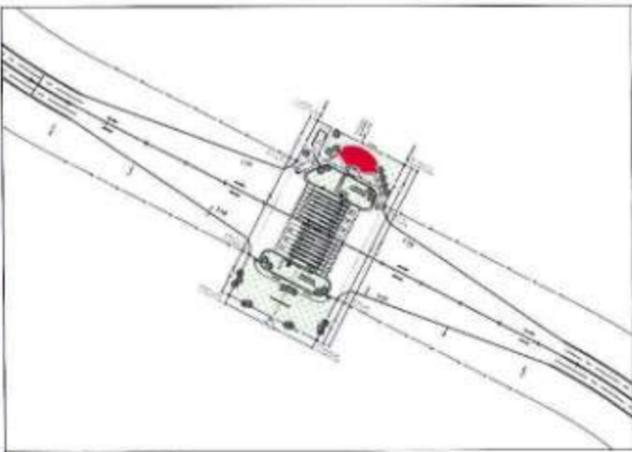
DATE	NAME	BOX
DESIGNED BY		
CHECKED BY		
APPROVED BY		



PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING



TITLE - MAIN TOLL PLAZA TOLL BOOTH & TUNNEL DETAILS			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	GV-AR-04	A1	A

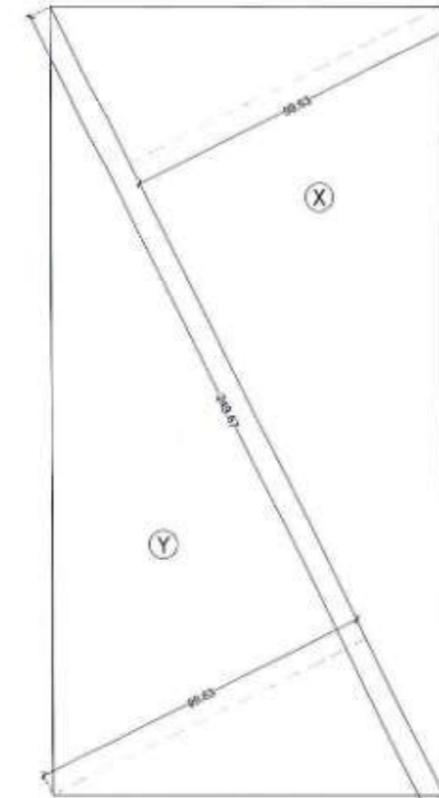


KEY PLAN SCALE - 1:4000

BUILD UP AREA STATEMENT		
SR.NO.	FLOOR	AREA (SQMT)
1.	GROUND FLOOR	320.88
2.	FIRST FLOOR	740.38
3.	SECOND FLOOR	815.08
4.	THIRD FLOOR	815.08
5.	FOURTH FLOOR	824.68
6.	TERRACE FLOOR	56.90
TOTAL		3583.76
TOTAL BUILD UP AREA		3583.76

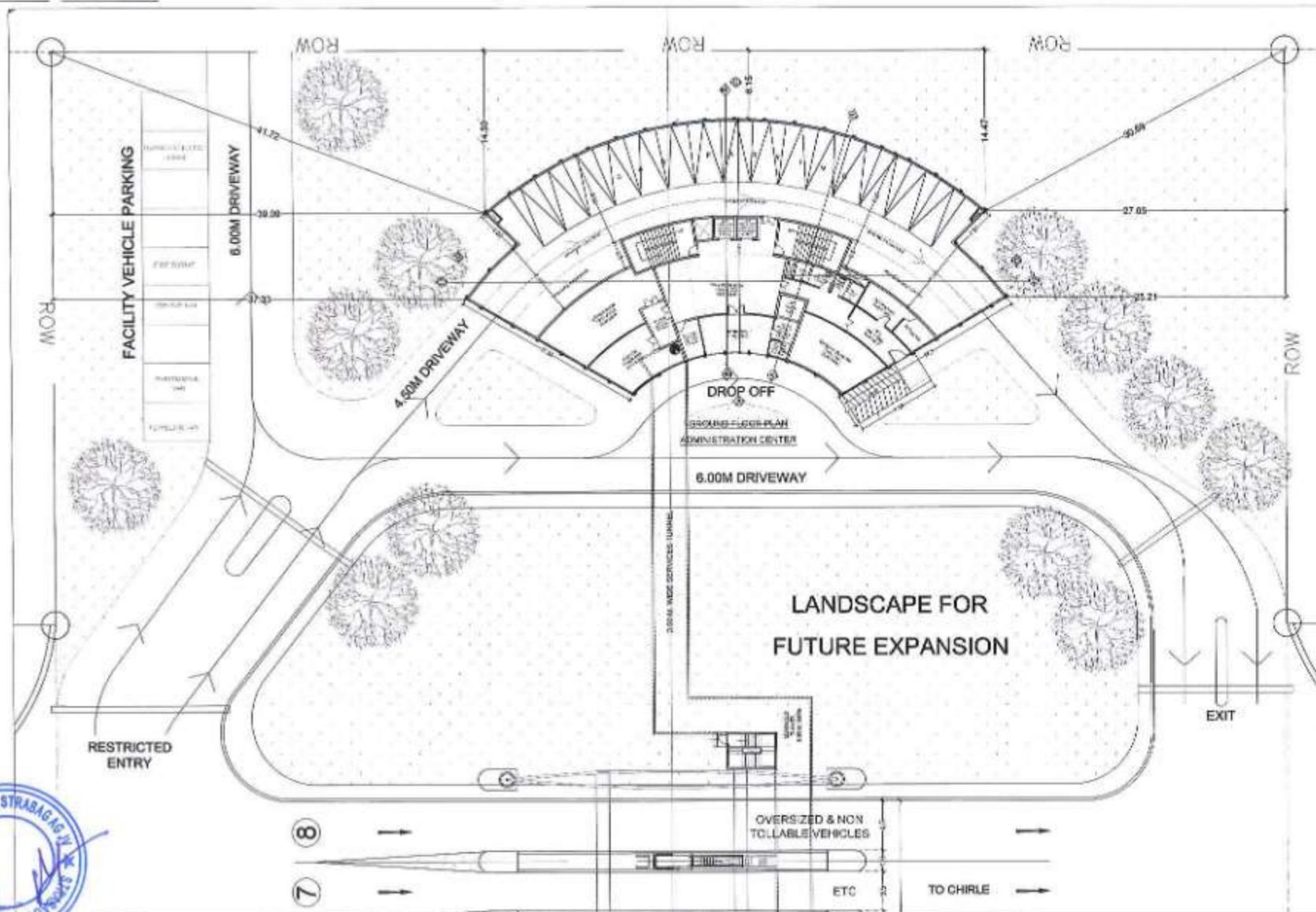
F.S.I. CALCULATION

TOTAL PLOT AREA = 24874.82 SQMT.
 FLOOR SPACE INDEX = 1.50
 PERMISSIBLE BUILD UP AREA = 37311.93 SQMT.
 PROPOSED BUILD UP AREA = 3583.76 SQMT.



PLOT AREA DIAGRAM SCALE - 1:250

PLOT AREA CALCULATION			
SR.NO.	TRIANGLE	SIZE	AREA (SQMT)
1.	X	1/2 X 249.67 X 99.63	12437.311
2.	Y	1/2 X 249.67 X 99.63	12437.311
TOTAL			24874.622
TOTAL PLOT AREA			24874.622



SITE PLAN SCALE : 1:250

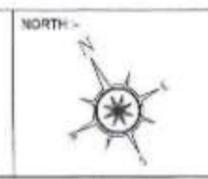
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 - Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drawings to be as per MEP drawings.
 - The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 33 of Part 3 'Development Control Rules and General Building Requirements' of the Code.
 - The dimensions on toll booths / Toll Plazas are indicative only. The contractor is required to design the toll booths / Toll Plazas as per relevant IRC codes (IRC SP:37-2015, IRC SP:59-2013).
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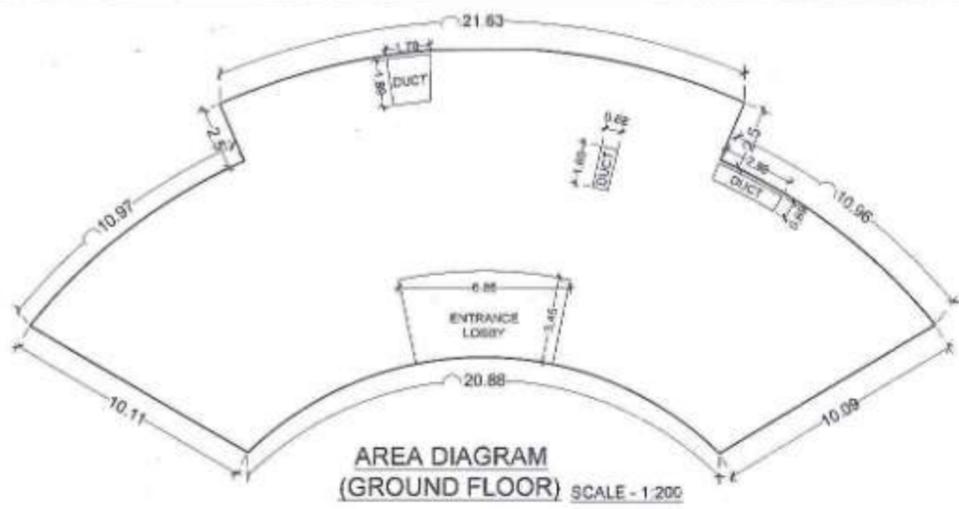
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CHECKED BY: SB	
APPROVED BY: TK2	



PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**

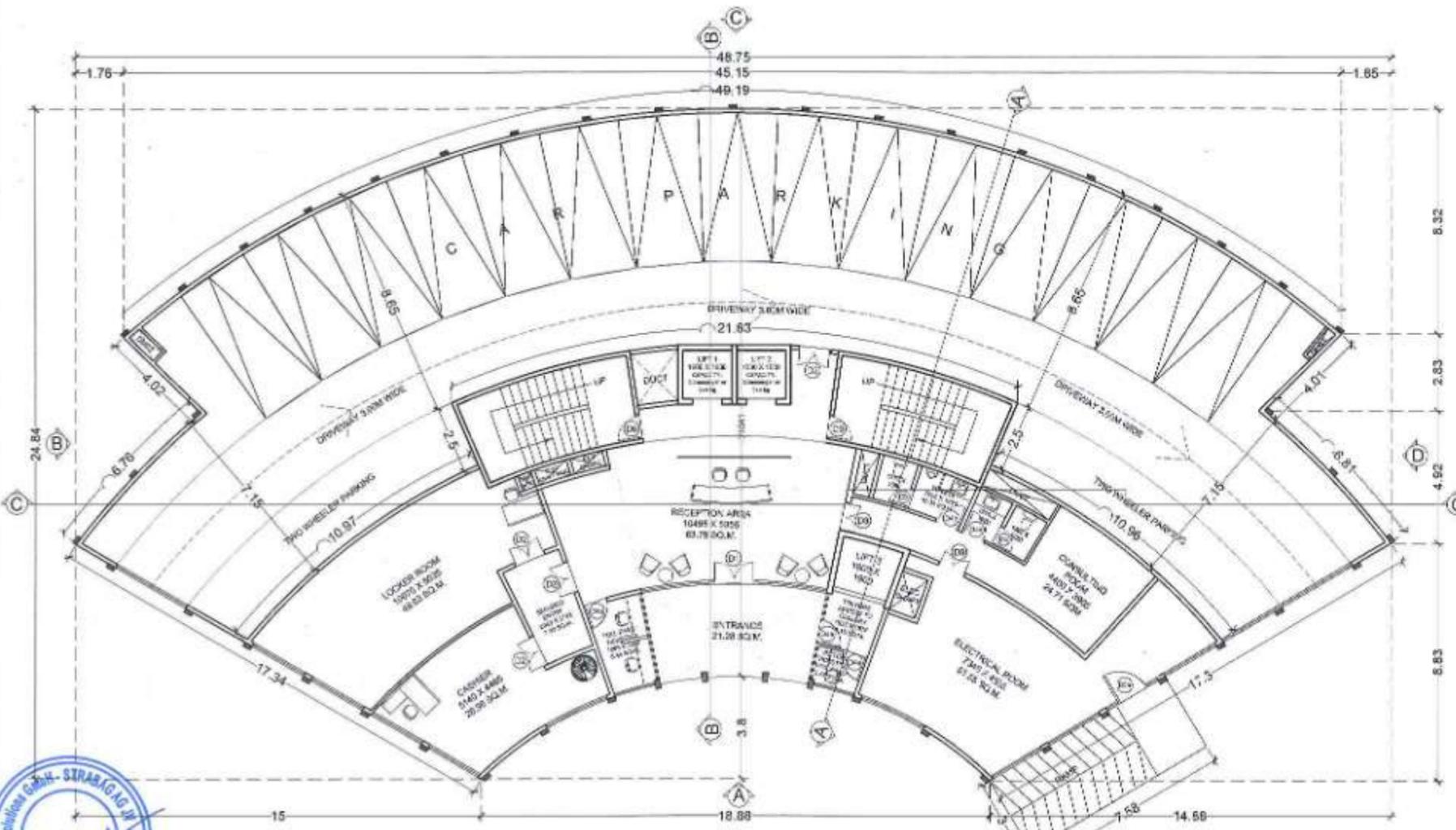
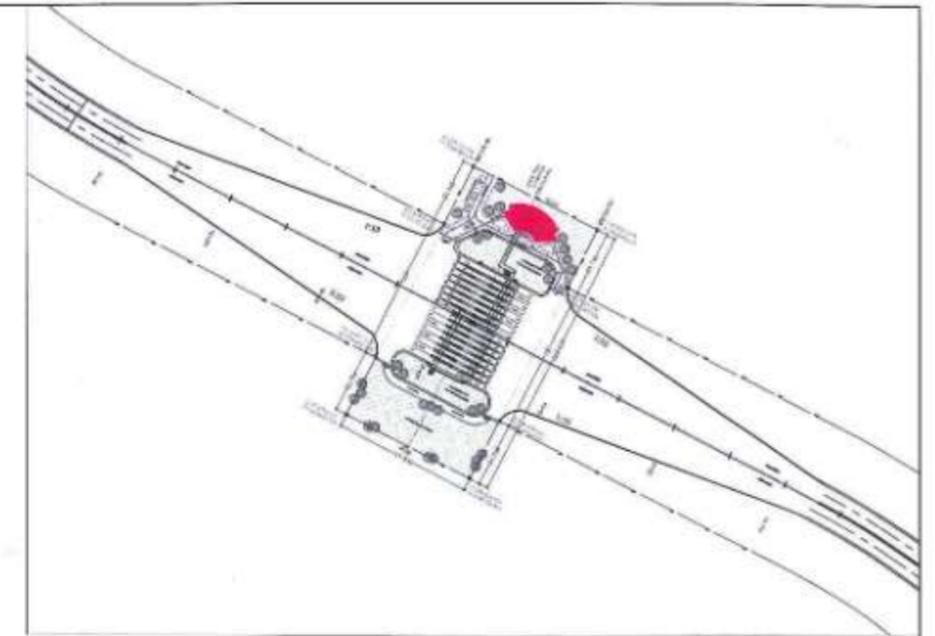


TITLE :- MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER SITE PLAN			
DATE: 08.03.2021	DRAWING NO: GV-AR-05	PAPER SIZE: A1	REV: A



GROUND FLOOR AREA CALCULATION

GROUND FLOOR AREA (sq)		IN SQ. MET.	
DEDUCTION			
SR.NO	BLOCK	SIZE	AREA (SQM)
1	DUCT	1.76 X 1.49	2.62
2	DUCT	1.69 X 0.85	1.44
3	DUCT	3.58 X 0.88	3.15
4	ENTRANCE LOBBY	6.88 X 3.45	23.64
TOTAL (sq)			28.17
TOTAL GROUND FLOOR B.L. AREA (sq)			30985



DOOR SCHEDULE

DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.80 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.20 X 2.10
D2a	GLASS DOOR (single shutter)	1.20 X 2.10
D3	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.05 X 2.10
D4	WOODEN FLUSH DOOR WITH VISION PANEL (single shutter)	0.90 X 2.10
D4a	GLASS DOOR (single shutter)	0.90 X 2.10
D4b	WOODEN FLUSH DOOR WITH LOUVERS	0.90 X 2.10
D5	FLUSH DOOR	0.75 X 2.10
D6	WOODEN FLUSH DOOR	0.90 X 2.10

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 - Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drainage to be as per MEP drawings.
 - The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
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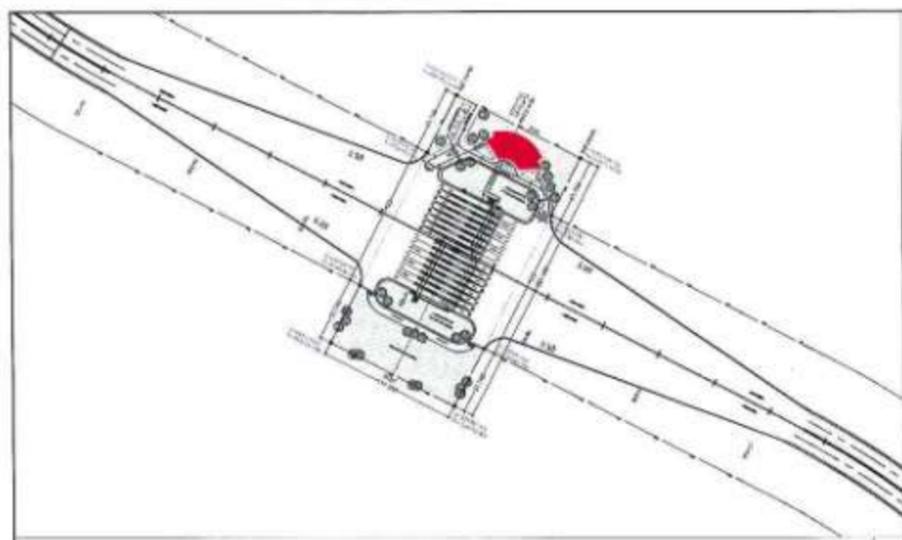
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DRAWN BY: PD	
CHECKED BY: SB	
APPROVED BY: TG	



PROJECT >
**MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING**



TITLE >			
MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER GROUND FLOOR PLAN			
DATE: 08.03.2021	DRAWING NO: GV-AR-06	PAPER SIZE: A2	REV: A

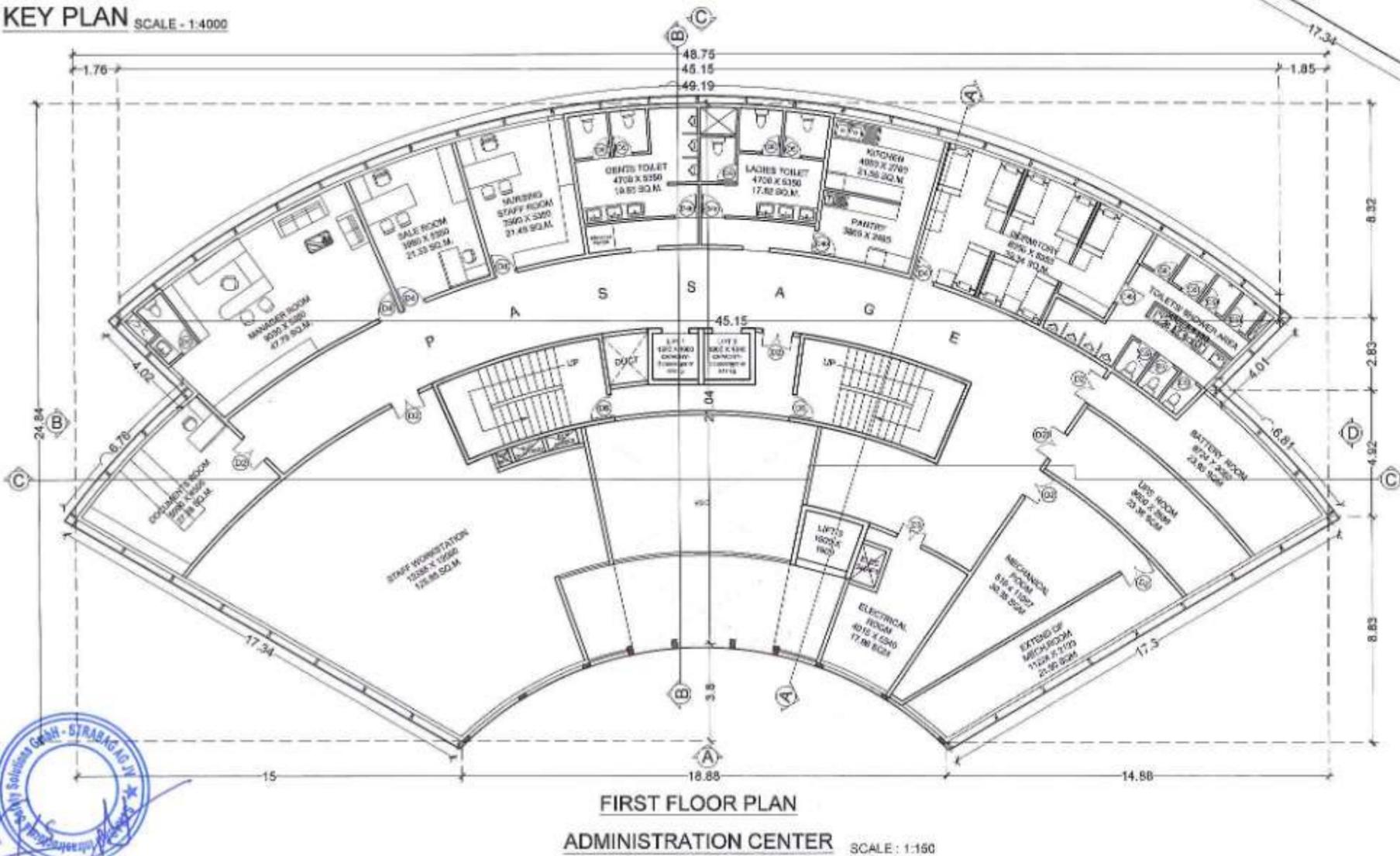


KEY PLAN SCALE - 1:4000

FIRST FLOOR AREA CALCULATION			
FIRST FLOOR AREA (sq)			842.08 SQM
DEDUCTION			
BLNO	BLOCK	SIZE	AREA (SQM)
1.	DUCT	1.22 X 4.50	5.52
2.	DUCT	1.42 X 1.28	1.82
3.	DUCT	1.26 X 0.58	0.73
4.	DUCT	1.78 X 1.58	2.81
5.	LIFT 1	1.69 X 1.09	1.84
6.	LIFT 2	1.96 X 1.90	3.72
7.	LIFT 3	2.25 X 2.05	4.61
8.	VOID	9.12 X 8.94	81.52
9.	M.E. DUCT	3.59 X 0.89	3.19
10.	ELE DUCT	1.82 X 1.82	3.31
TOTAL, (sq)			100.08
TOTAL FIRST FLOOR S.L. AREA (sq)			742.00



AREA DIAGRAM (FIRST FLOOR) SCALE - 1:200



FIRST FLOOR PLAN ADMINISTRATION CENTER SCALE: 1:150

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.80 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.20 X 2.10
D2a	GLASS DOOR (single shutter)	1.20 X 2.10
D3	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.05 X 2.10
D4	WOODEN FLUSH DOOR WITH VISION PANEL (single shutter)	0.90 X 2.10
D4a	GLASS DOOR (single shutter)	0.90 X 2.10
D4b	WOODEN FLUSH DOOR WITH LIDGERS	0.90 X 2.10
D5	FLUSH DOOR	0.75 X 2.10
D6	WOODEN FLUSH DOOR	0.90 X 2.10

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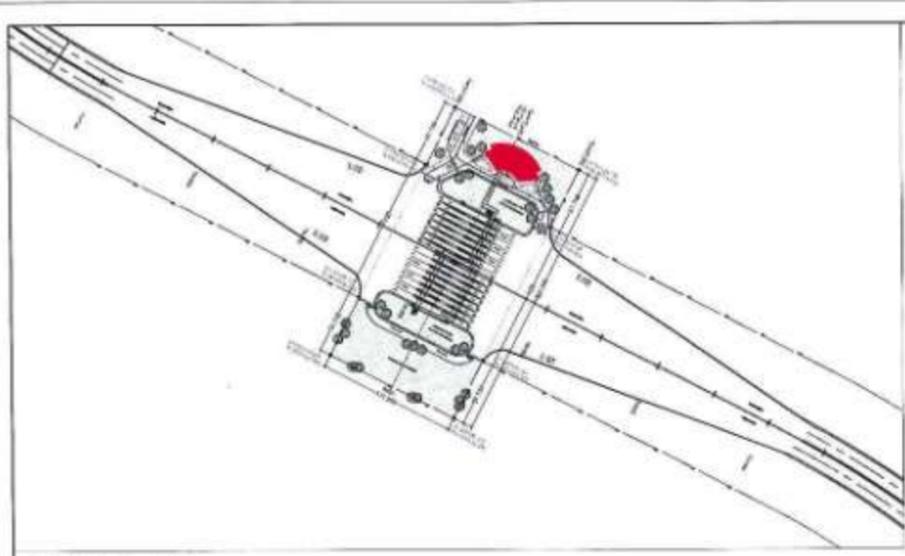
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CHECKED BY: SB	
APPROVED BY: TNS	



PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING

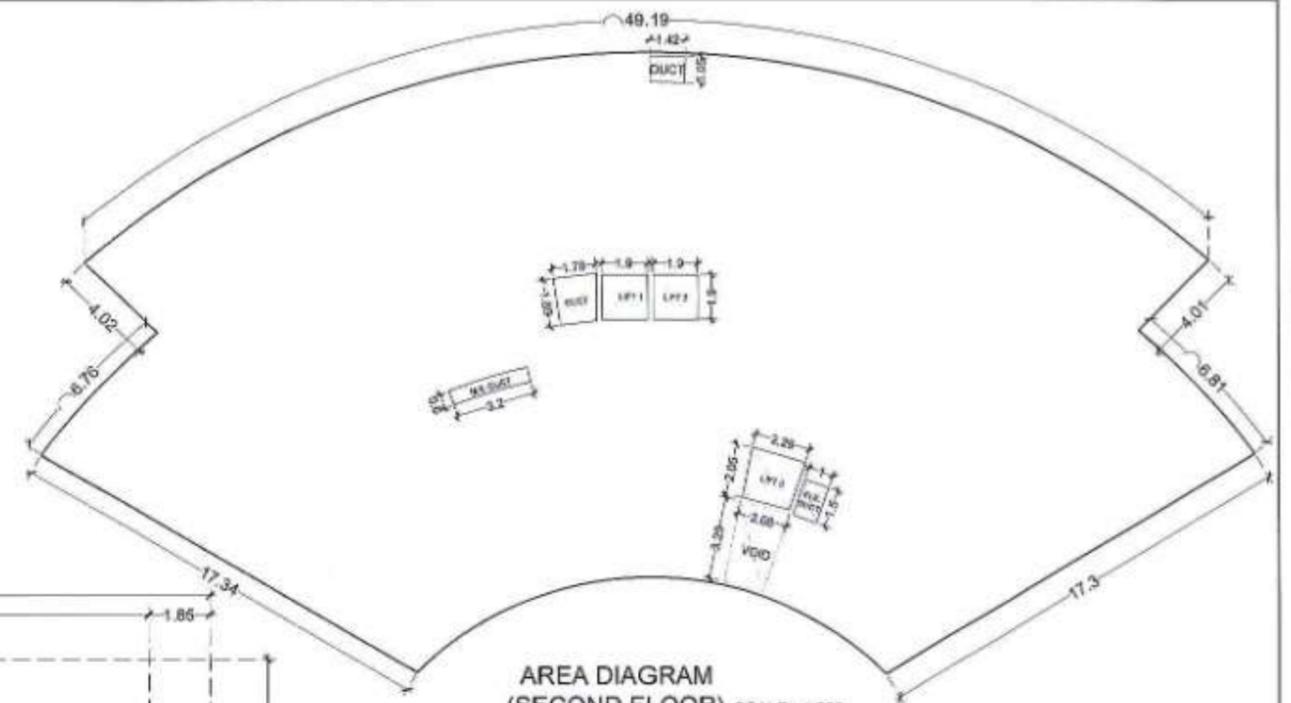


TITLE - MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER FIRST FLOOR PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	GV-AR-07	A2	A

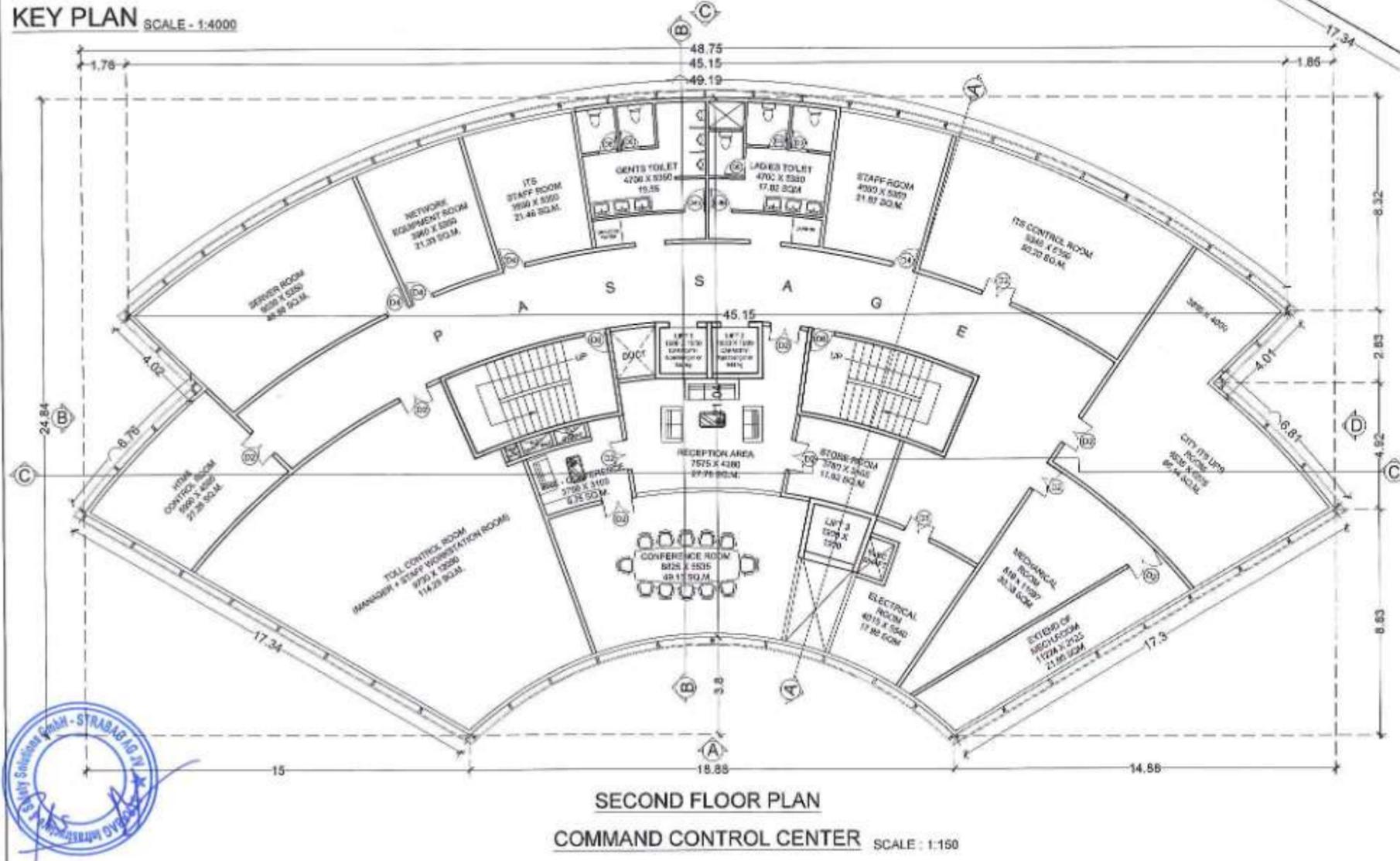


KEY PLAN SCALE - 1:4000

SECOND FLOOR AREA CALCULATION			
SECOND FLOOR AREA (m)			842.58 SQM
DEDUCTION			
SR.NO	BLOCK	SIZE	AREA (SQM)
1.	DUCT	1.42 X 1.05	1.49
2.	DUCT	1.78 X 1.59	2.84
3.	LIFT 1	1.83 X 1.59	2.91
4.	LIFT 2	1.83 X 1.59	2.91
5.	LIFT 3	2.22 X 2.05	4.55
6.	V.D.C	3.22 X 2.05	6.60
7.	M.S. DUCT	3.22 X 0.60	1.93
8.	E.L.E. DUCT	1.63 X 1.63	2.67
TOTAL, (m)			27.02
TOTAL SECOND FLOOR B.L. AREA (m ²)			815.56



AREA DIAGRAM (SECOND FLOOR) SCALE - 1:200



SECOND FLOOR PLAN
COMMAND CONTROL CENTER SCALE : 1:150

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.80 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.20 X 2.10
D2a	GLASS DOOR (single shutter)	1.20 X 2.10
D3	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.05 X 2.10
D4	WOODEN FLUSH DOOR WITH VISION PANEL (single shutter)	0.90 X 2.10
D4a	GLASS DOOR (single shutter)	0.90 X 2.10
D4b	WOODEN FLUSH DOOR WITH LOUVERS	0.90 X 2.10
D5	FLUSH DOOR	0.75 X 2.10
D6	WOODEN FLUSH DOOR	0.90 X 2.10

NOTES:

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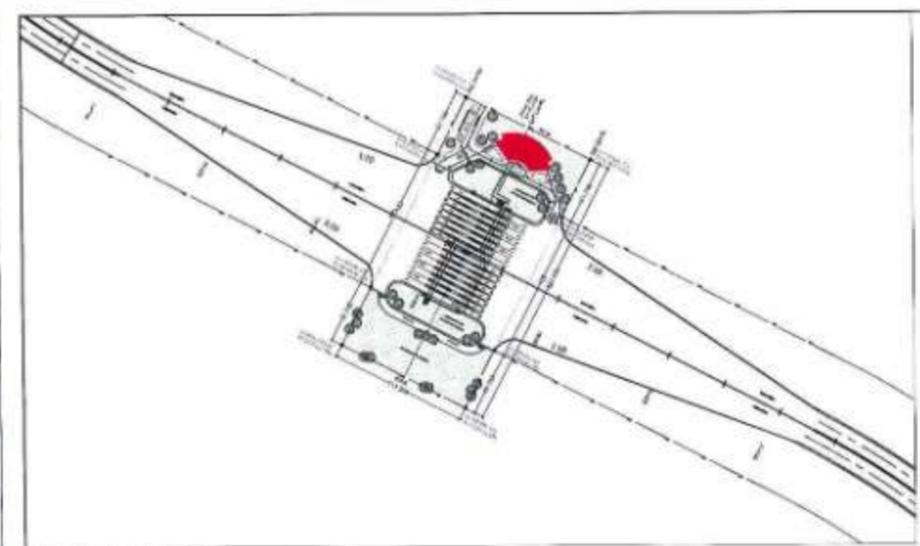
NAME	SKIN
DESIGNED BY	PS
CHECKED BY	SS
APPROVED BY	TSS



PROJECT:-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE:-			
MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER SECOND FLOOR PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
06.03.2021	GV-AR-08	A2	A



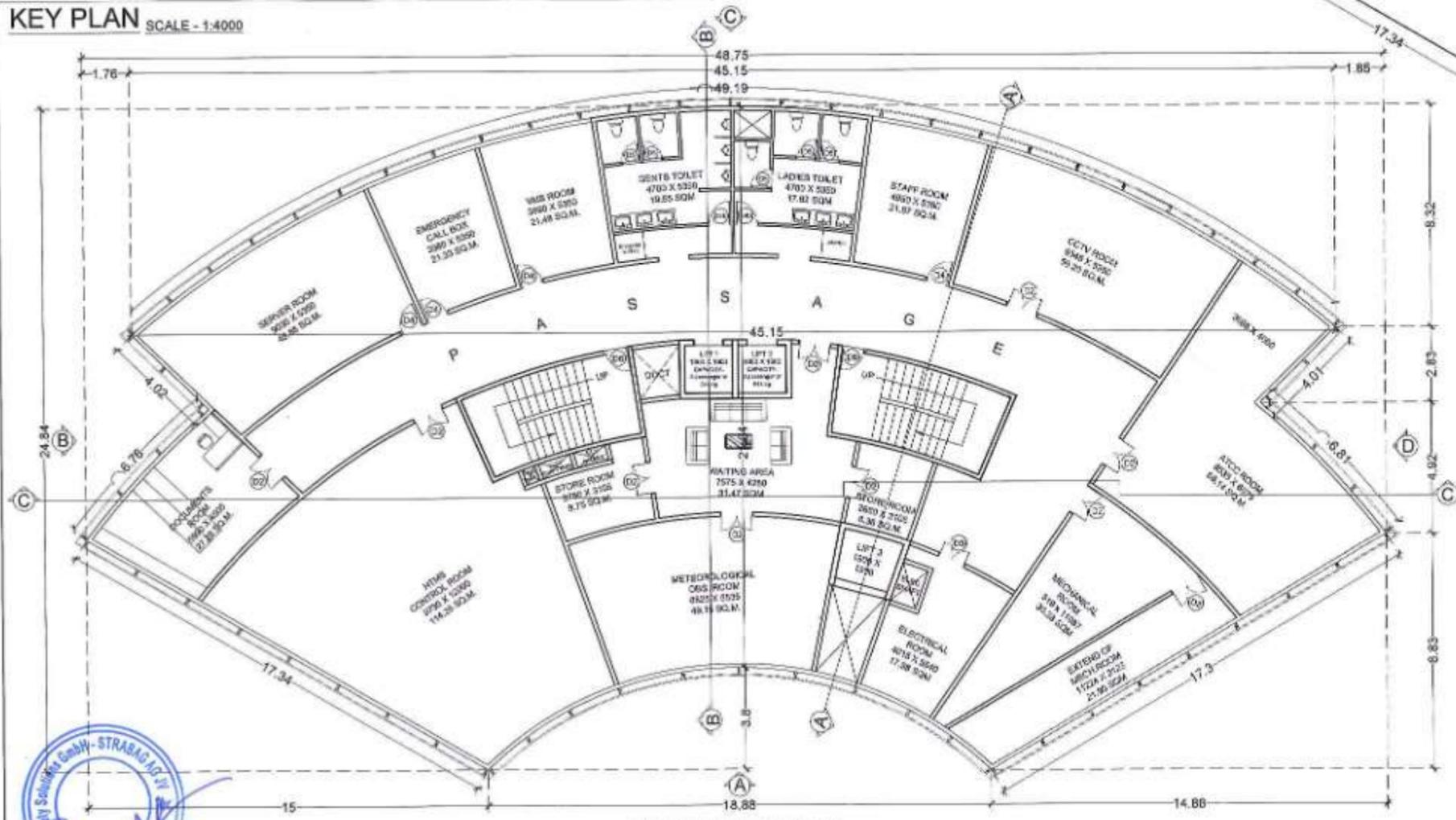
KEY PLAN SCALE - 1:4000

THIRD FLOOR AREA CALCULATION

THIRD FLOOR AREA (M)			
DEDUCTION			
SL. NO.	BLOCK	SIZE	AREA (SQM)
1.	DUCT	1.42 X 1.05	1.48
2.	DUCT	1.70 X 1.00	1.70
3.	LIFT 1	1.82 X 1.50	2.73
4.	LIFT 2	1.90 X 1.00	1.90
5.	LIFT 3	2.25 X 2.05	4.61
6.	VOID	3.20 X 2.00	6.40
7.	M.E. DUCT	3.20 X 0.80	2.56
8.	ELE DUCT	1.00 X 1.00	1.00
TOTAL (B)			27.30
TOTAL THIRD FLOOR B.U. AREA (A+B)			815.95



AREA DIAGRAM (THIRD FLOOR) SCALE - 1:200



THIRD FLOOR PLAN
COMMAND CONTROL CENTER SCALE : 1:150

DOOR SCHEDULE

DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.80 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.20 X 2.10
D2a	GLASS DOOR (single shutter)	1.20 X 2.10
D3	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.05 X 2.10
D4	WOODEN FLUSH DOOR WITH VISION PANEL (single shutter)	0.90 X 2.10
D4a	GLASS DOOR (single shutter)	0.90 X 2.10
D4b	WOODEN FLUSH DOOR WITH LOUVERS	0.90 X 2.10
D5	FLUSH DOOR	0.75 X 2.10
D6	WOODEN FLUSH DOOR	0.90 X 2.10

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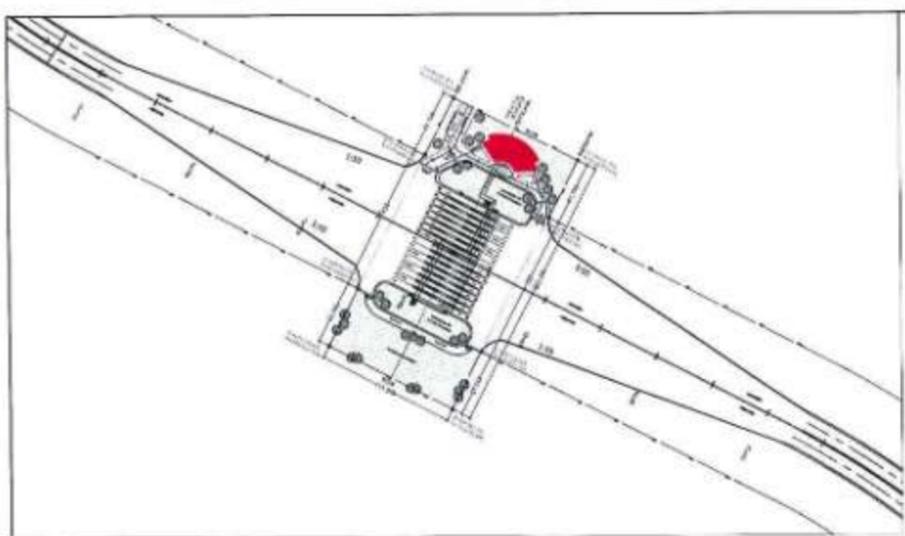
NAME	SIGN
DRAWN BY: PD	
CHECKED BY: SA	
APPROVED BY: TH	



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

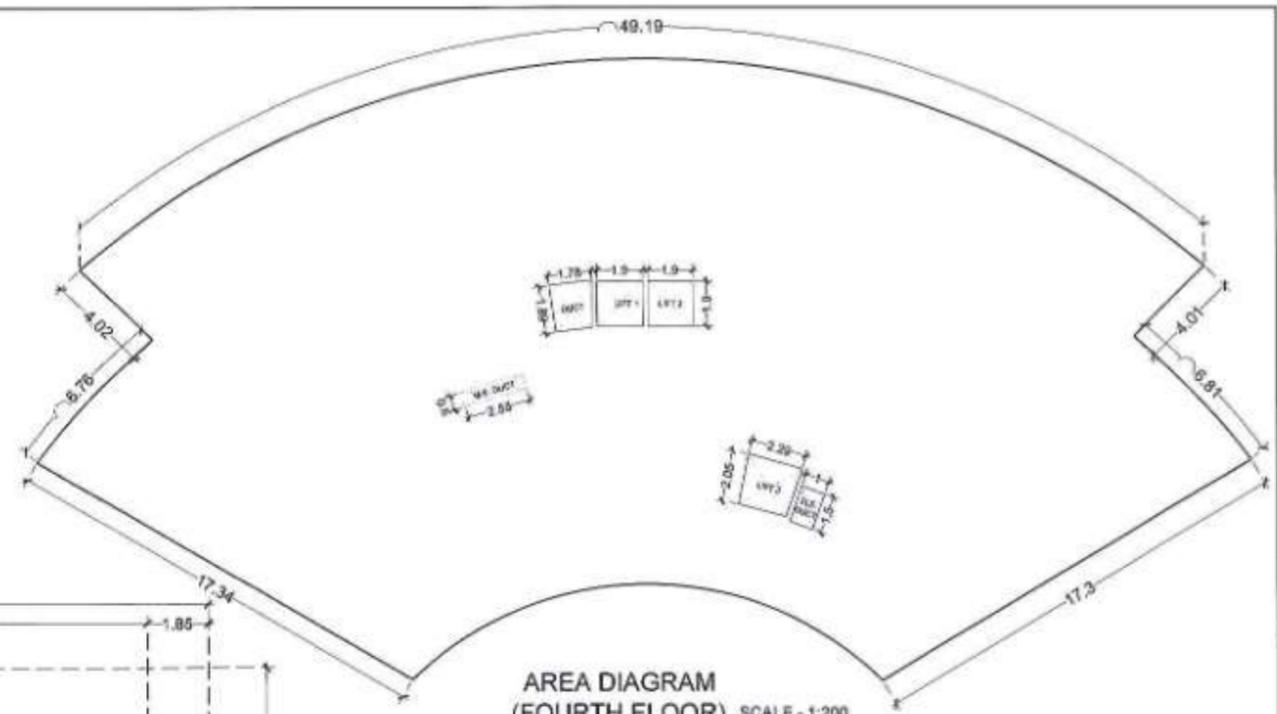


TITLE - MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER THIRD FLOOR PLAN			
DATE: 05.03.2021	DRAWING NO: GV-AR-09	PAPER SIZE: A2	REV: A



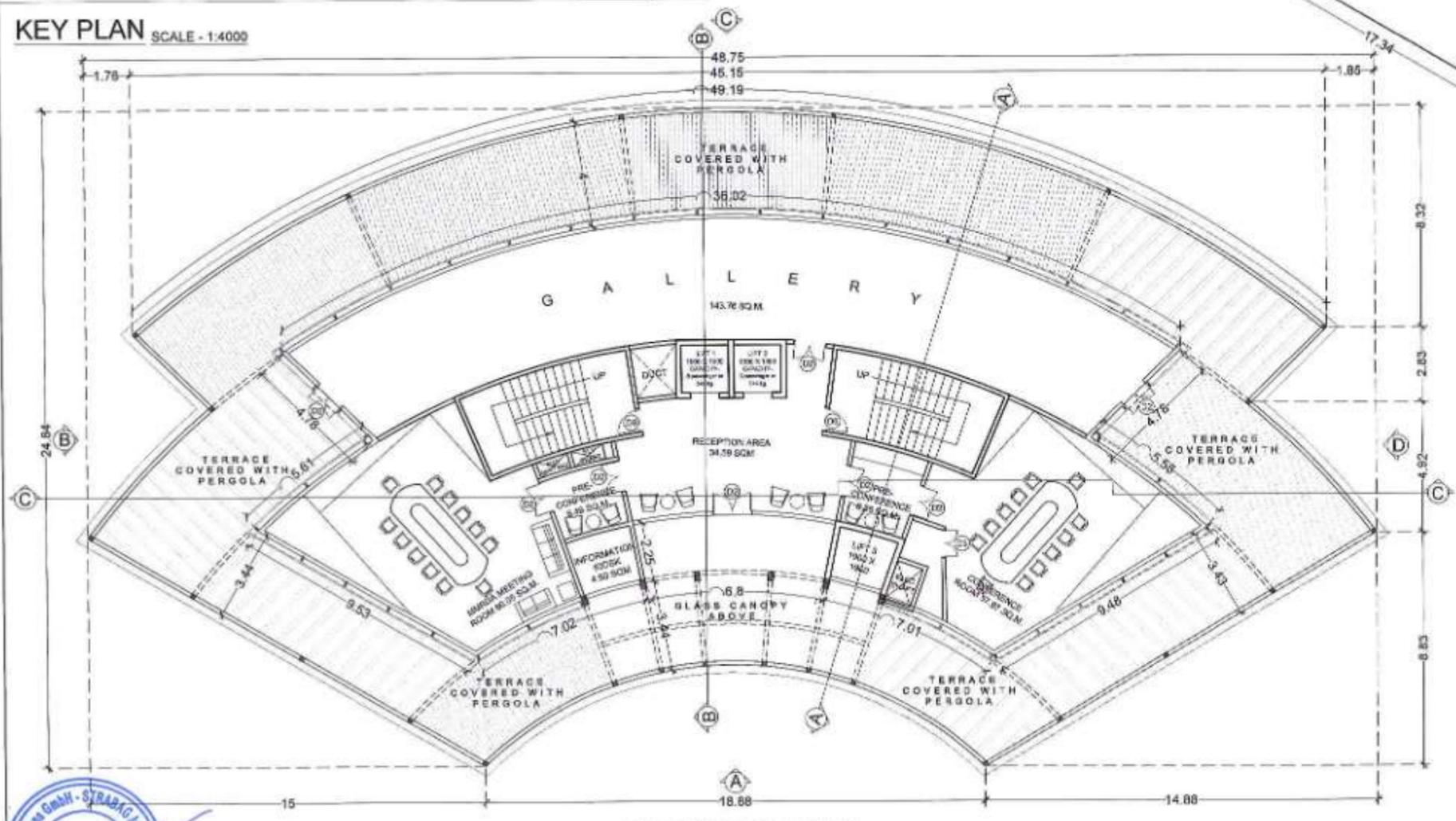
KEY PLAN SCALE - 1:4000

FOURTH FLOOR AREA CALCULATION			
FOURTH FLOOR AREA (G)			842.88 SQM
DEDUCTION			
SR NO.	BLOCK	SIZE	AREA (SQM)
1	DUCT	1.72 X 1.95	3.35
2	LIFT 1	1.30 X 1.30	1.69
3	LIFT 2	1.30 X 1.30	1.69
4	LIFT 3	2.28 X 2.28	5.19
5	M.E. DUCT	2.50 X 2.00	5.00
6	E.L.E. DUCT	1.30 X 1.95	2.54
TOTAL (-)			19.30
TOTAL FOURTH FLOOR (G) AREA (G)			824.58



AREA DIAGRAM (FOURTH FLOOR) SCALE - 1:200

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.20 X 2.10
D2a	GLASS DOOR (single shutter)	1.30 X 2.10
D2b	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.85 X 2.10
D4	WOODEN FLUSH DOOR WITH VISION PANEL (single shutter)	8.80 X 2.10
D4a	GLASS DOOR (single shutter)	0.90 X 2.10
D4b	WOODEN FLUSH DOOR WITH LUNETS	8.80 X 2.10
D5	FLUSH DOOR	0.75 X 2.10
D6	WOODEN FLUSH DOOR	0.90 X 2.10



FOURTH FLOOR PLAN GALLERY AND CONFERENCE SCALE: 1:150

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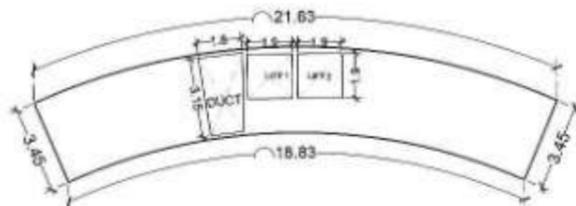
NAME	DESIGN
DRAWN BY: JG	
CHECKED BY: SH	
APPROVED BY: TH	



PROJECT: MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING

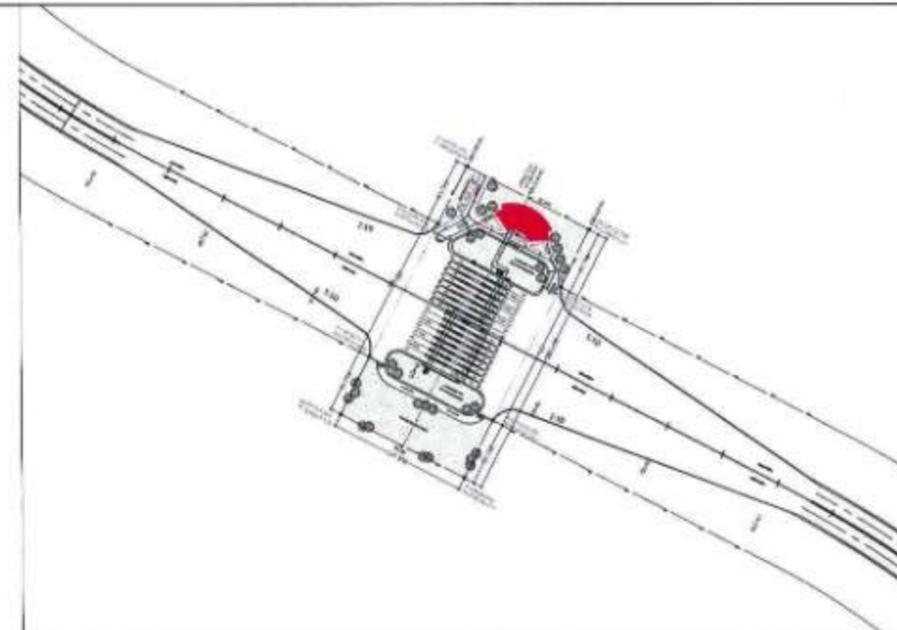


TITLE: MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER FOURTH FLOOR PLAN			
DATE: 08.03.2021	DRAWING NO: GV-AR-10	PAPER SIZE: A2	REV: A

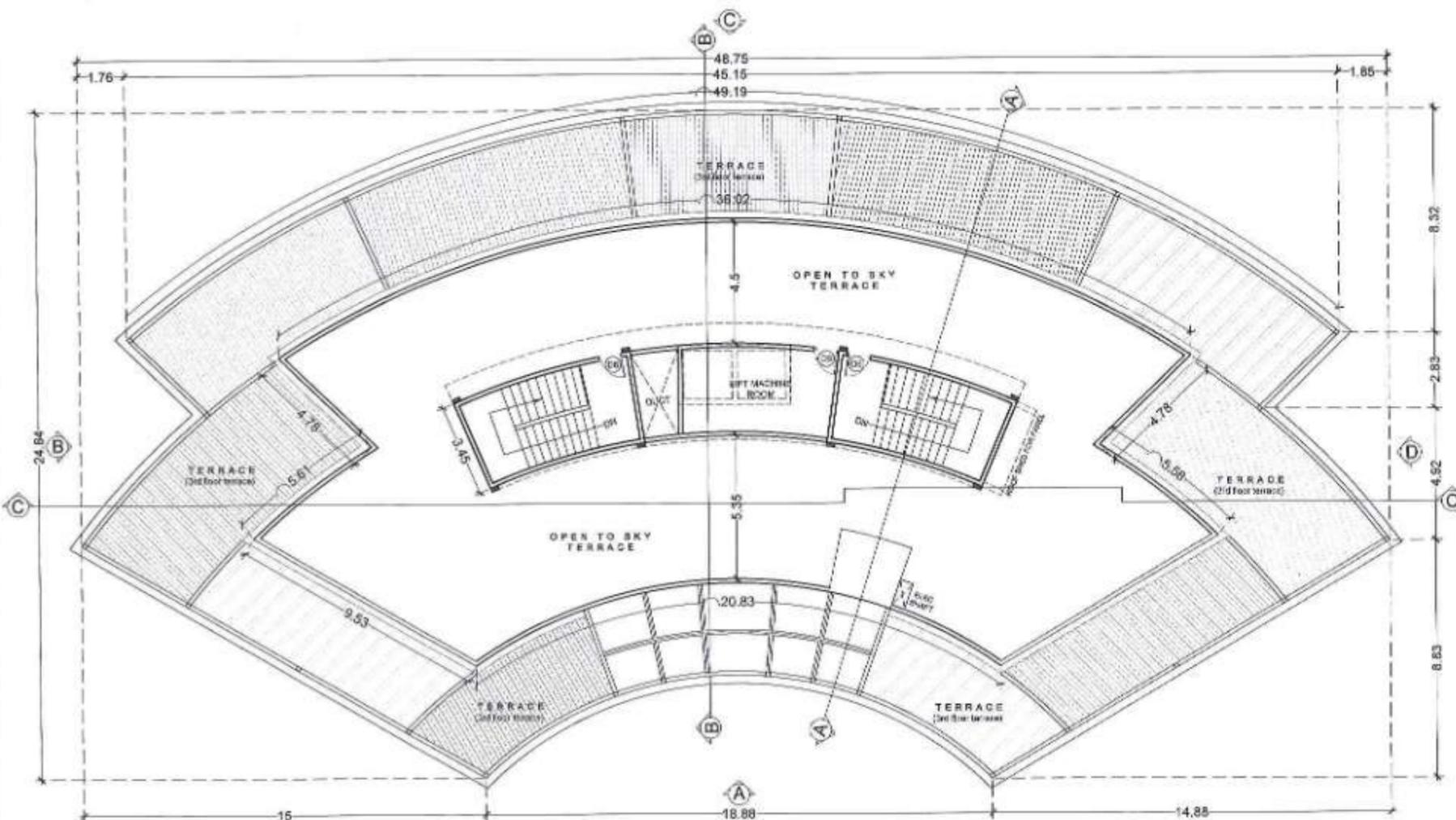


AREA DIAGRAM
(TERRACE FLOOR) SCALE - 1:200

TERRACE FLOOR AREA CALCULATION			
TERRACE FLOOR AREA (M ²)			89.79 SQM
DEDUCTION			
SER NO	BLOCK	SIZE	AREA (SQM)
1	DUCT	1.80 X 3.15	5.67
2	LIFT 1	1.80 X 1.80	3.24
3	LIFT 2	1.80 X 1.80	3.24
TOTAL (G)			12.15
TOTAL FOURTH FLOOR B.L. AREA (G+G)			65.36



KEY PLAN SCALE - 1:4000



TERRACE FLOOR PLAN SCALE : 1:150

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.80 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.20 X 2.10
D2a	GLASS DOOR (single shutter)	1.20 X 2.10
D3	WOODEN FLUSH DOOR WITH VISION PANEL (double shutter)	1.05 X 2.10
D4	WOODEN FLUSH DOOR WITH VISION PANEL (single shutter)	0.90 X 2.10
D4a	GLASS DOOR (single shutter)	0.90 X 2.10
D5	WOODEN FLUSH DOOR WITH LOUVERS	0.90 X 2.10
D6	FLUSH DOOR	0.75 X 2.10
D6	WOODEN FLUSH DOOR	0.90 X 2.10

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NAME	REV
DRAWN BY: PG	
CHECKED BY: SB	
APPROVED BY: TNS	

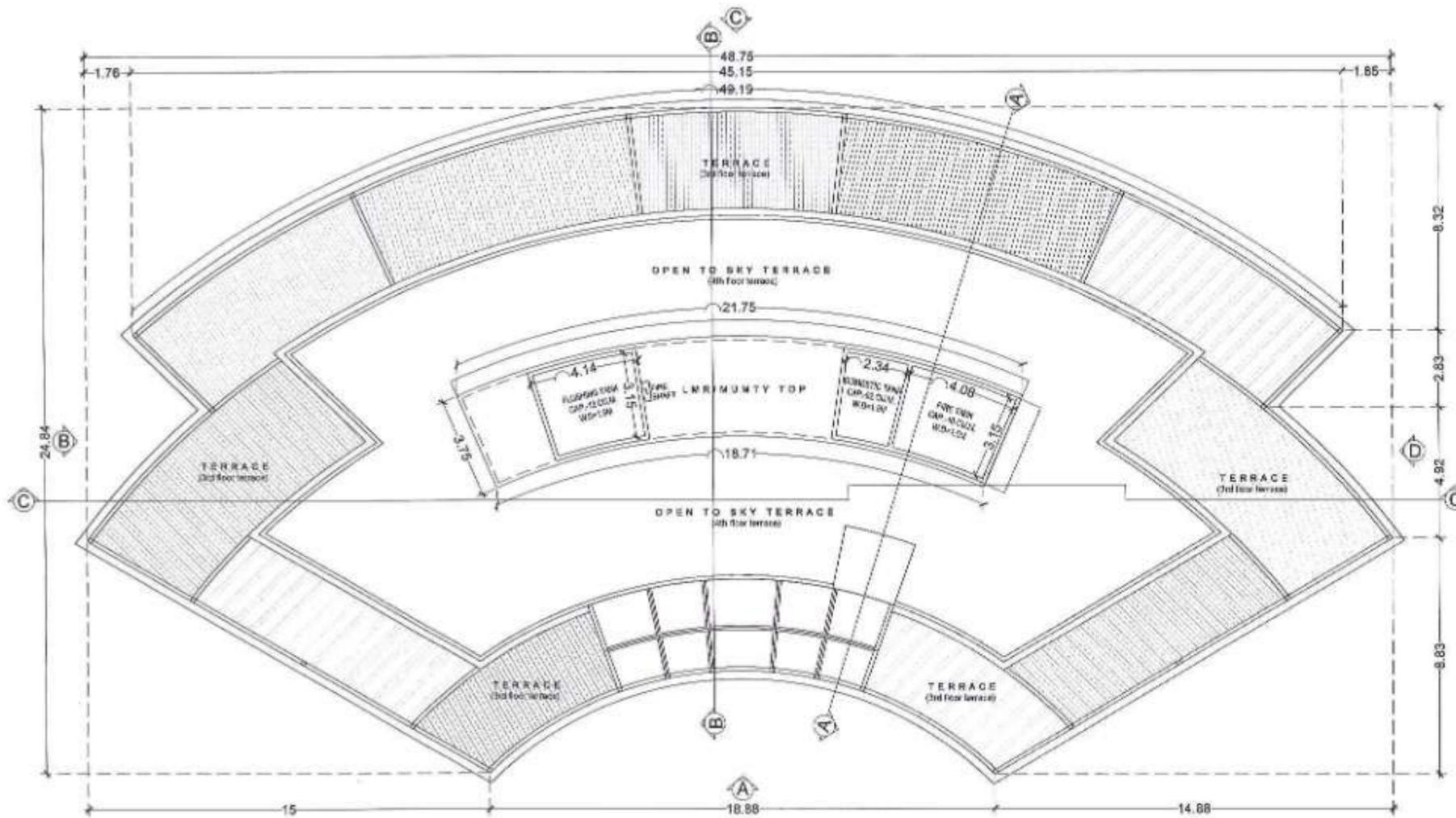


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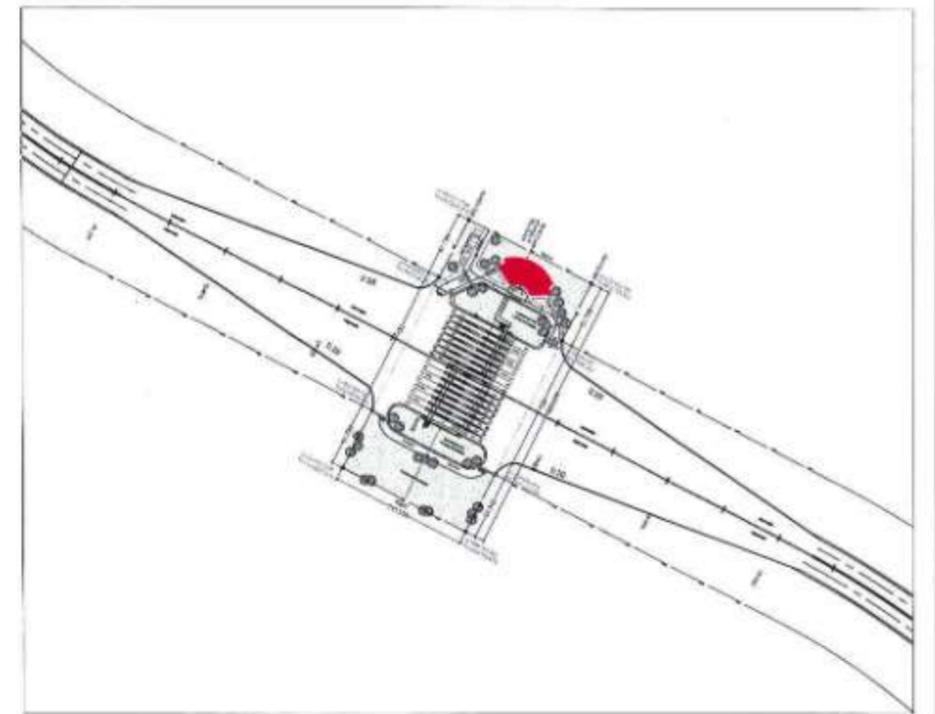
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :			
MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER TERRACE FLOOR & LMR LEVEL PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	GV-AR-11	A2	A



LMR/ MUMTY TOP FLOOR PLAN SCALE : 1:150



KEY PLAN SCALE - 1:4000

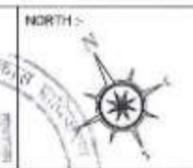
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	NAME	SIGN
DRAWN BY		
CHECKED BY		
APPROVED BY		



PROJECT > **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE >			
MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER OVER HEAD TANK & LMR / MUMTY TOP FLOOR PLAN			
DATE:	DRAWING NO.	PAPER SIZE:	REV.
08.03.2021	GV-AR-12	A2	A





ELEVATION C

ELEVATION D



ELEVATION A

ELEVATION B

SCALE - 1:150

IMPORTANT NOTE: ALL DRAWINGS ARE INDICATIVE

NAME	IGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER ELEVATION A, B, C & D			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	GV-AR-13	A2	A

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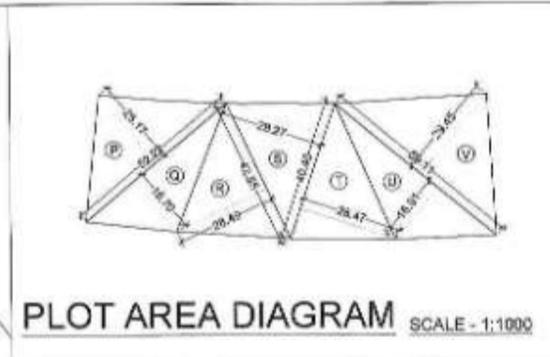
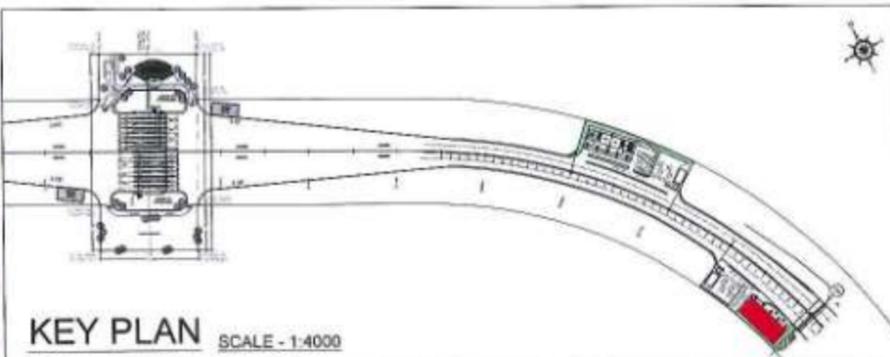
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SCALE - 1:150

DRAWN BY CHECKED BY APPROVED BY	NAME	SION	PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH - 	TITLE - MAIN TOLL PLAZA ADMINISTRATION AND COMMAND CONTROL CENTER SECTION A-A, B-B & C-C			
	MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY				DATE	DRAWING NO.	PAPER SIZE	REV.
					08.03.2021	GV-AR-14	A2	A



PLOT AREA CALCULATION

SR.NO.	TRIANGLE	SIZE	AREA (SQMT)
1.	P	3 X 52.22 X 25.17	657.19
2.	Q	3 X 52.22 X 15.70	456.26
3.	R	3 X 42.66 X 28.48	606.12
4.	S	3 X 40.48 X 29.27	681.25
5.	T	3 X 40.48 X 28.47	675.09
6.	U	3 X 59.11 X 12.91	655.86
7.	V	3 X 59.11 X 28.45	676.39
TOTAL			4247.15
TOTAL PLOT AREA			4347.15

BUILD UP AREA STATEMENT

SR.NO.	FLOOR	AREA (SQMT)
1.	GROUND FLOOR	606.70
2.	FIRST FLOOR	1134.00
TOTAL BUILD UP AREA		1740.70

F.S.I. CALCULATION

TOTAL PLOT AREA = 4347.18 SQMT.
 FLOOR SPACE INDEX = 1.50
 PERMISSIBLE BUILD UP AREA = 6520.77 SQMT.
 PROPOSED BUILD UP AREA = 1740.70 SQMT.

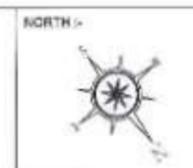
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NAME	SIGN
DRAWN BY: NS	
CHECKED BY: SB	
APPROVED BY: TNS	

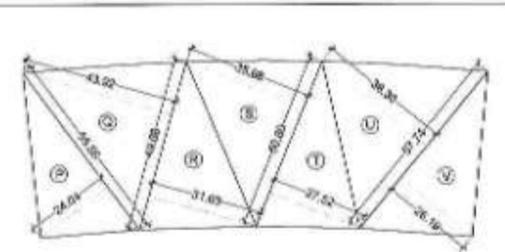
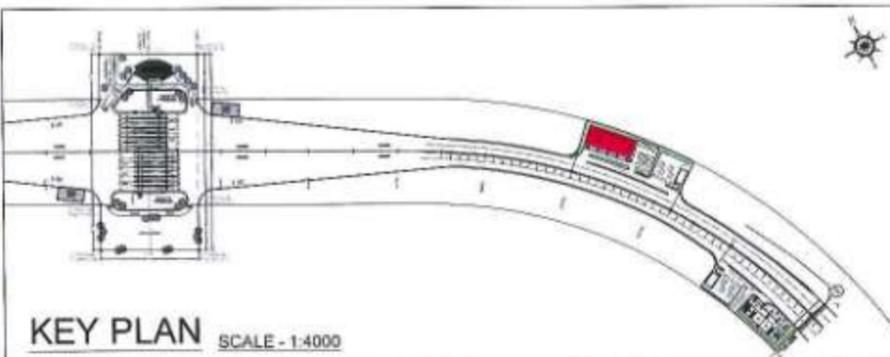


PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



TITLE: MAIN TOLL PLAZA FOOD PLAZA 1 - SITE PLAN

DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	GV-AR-15	A1	A



PLOT AREA CALCULATION

SER. NO.	TRIANGLE	SIZE	AREA (SQMT)
1.	P	1/2 X 55.56 X 24.04	667.23
2.	Q	1/2 X 49.58 X 43.30	1080.59
3.	R	1/2 X 45.85 X 31.50	784.56
4.	S	1/2 X 50.80 X 35.58	902.71
5.	T	1/2 X 50.60 X 27.32	696.26
6.	U	1/2 X 57.74 X 28.30	1305.72
7.	V	1/2 X 57.74 X 28.18	796.11
TOTAL			6004.56
TOTAL PLOT AREA			6004.56

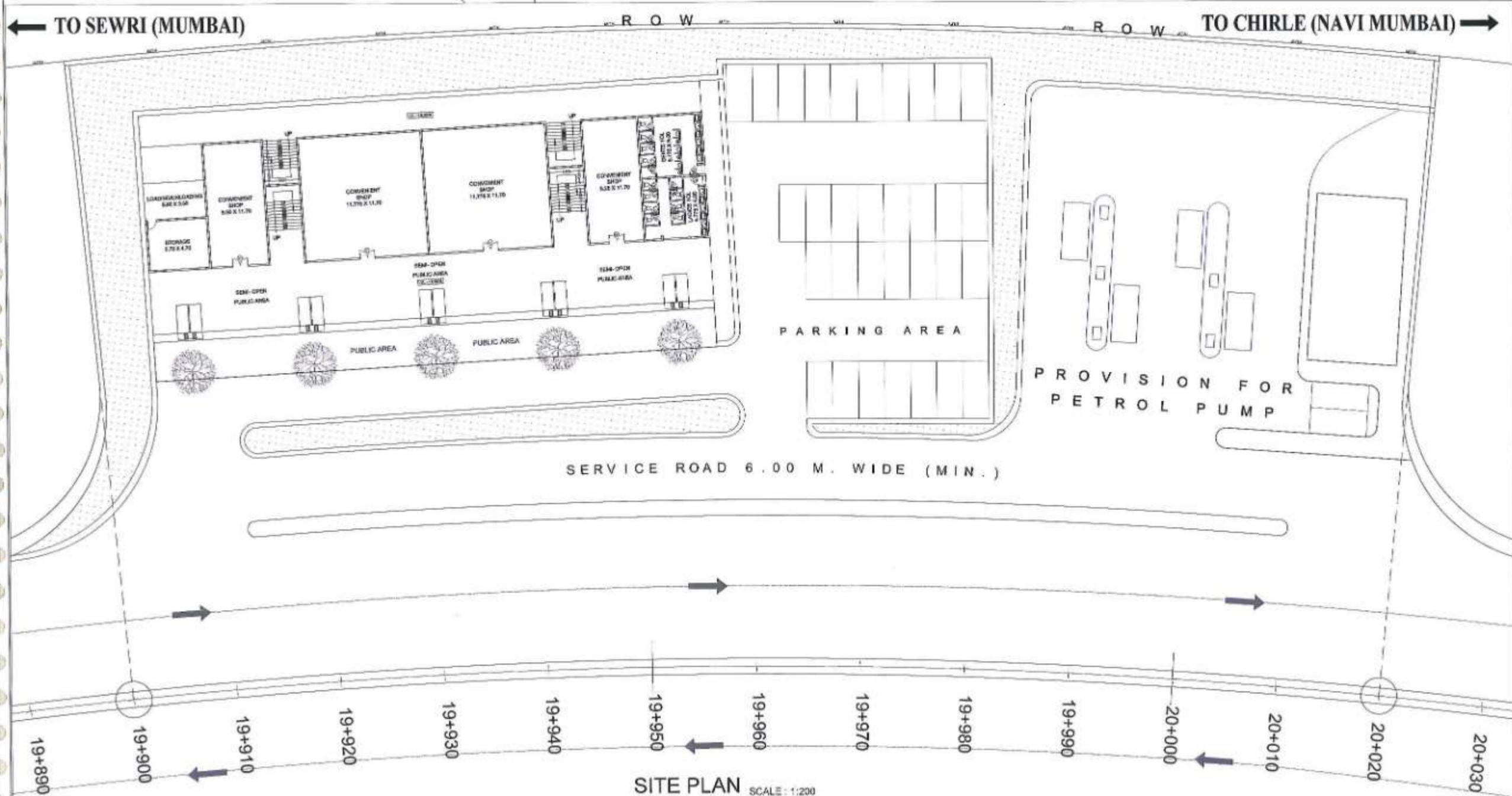
BUILD UP AREA STATEMENT

SER. NO.	FLOOR	AREA (SQMT)
1.	GROUND FLOOR	606.70
2.	FIRST FLOOR	1134.00
TOTAL BUILD UP AREA		1740.70

F.S.I. CALCULATION

TOTAL PLOT AREA = 6004.56 SQMT.
 FLOOR SPACE INDEX = 1.50
 PERMISSIBLE BUILD UP AREA = 9006.84 SQMT.
 PROPOSED BUILD UP AREA = 1740.70 SQMT.

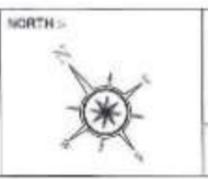
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 - Information on actual size of colour and openings shall be as per MEP design.
 - Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drainage to be as per MEP drawings.
 - The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 - The dimensions on full heights / Tall Plazas are indicative only. The contractor is required to design the toll booths / Toll Plazas as per relevant IRC codes [IRC: SP-87-2019, IRC SP-99-2013].
 - Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
 - This drawing should be superseded immediately when a revised version will be issued.
 - Employer has the copyrights of this drawing.



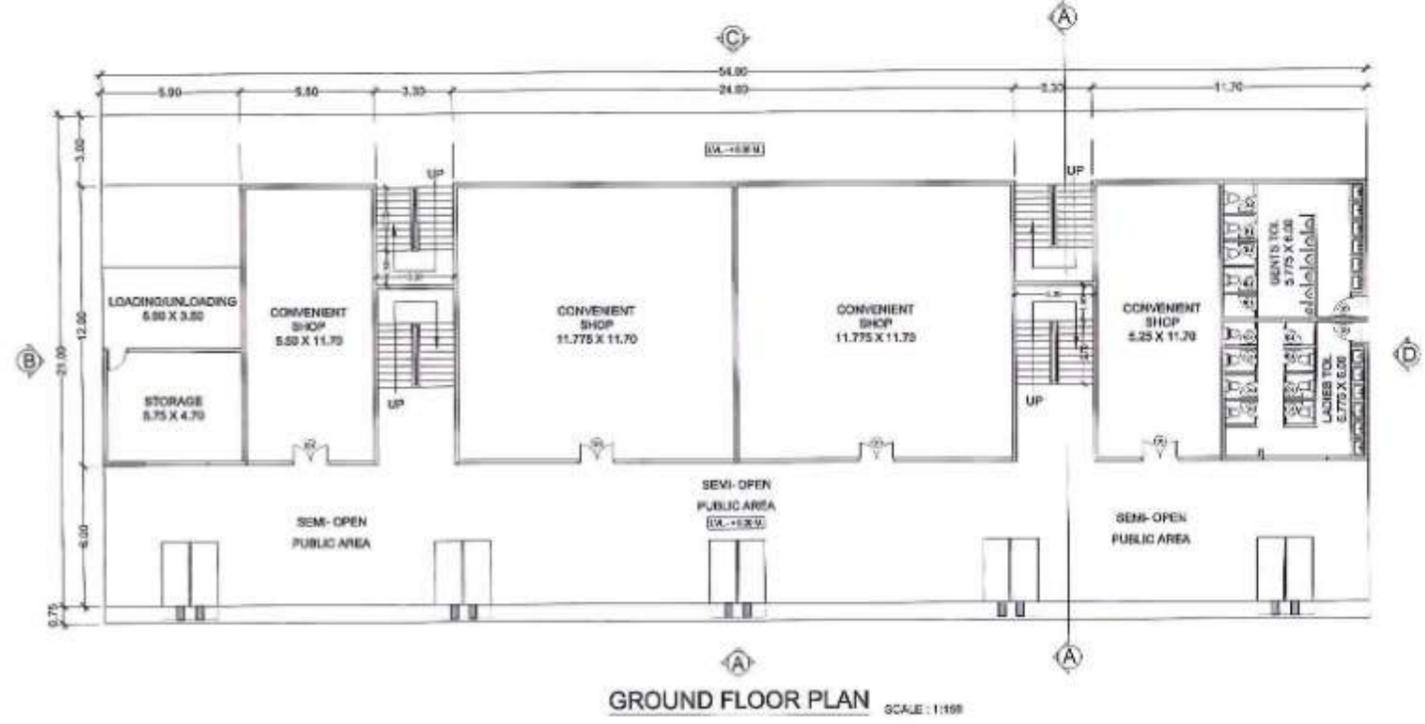
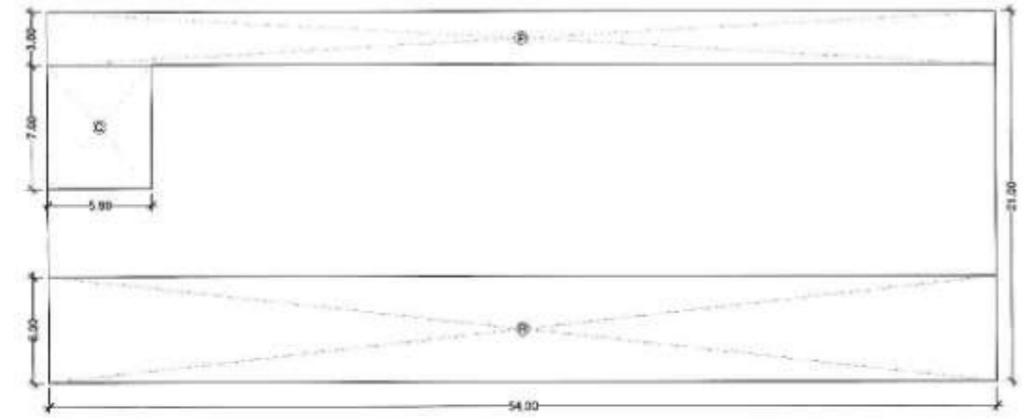
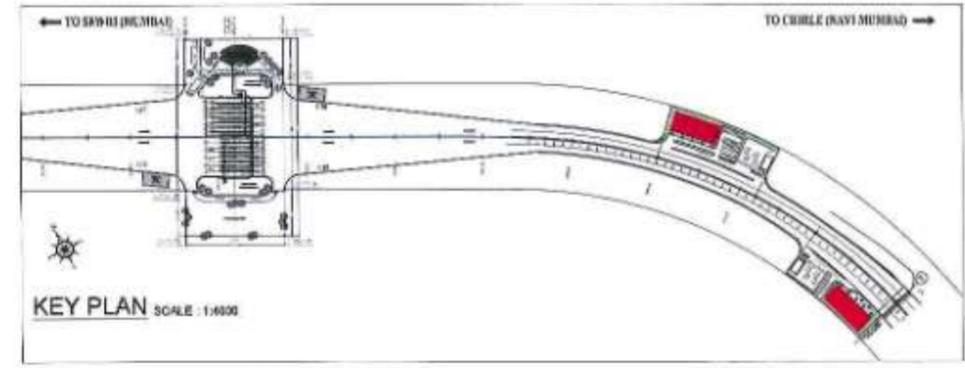
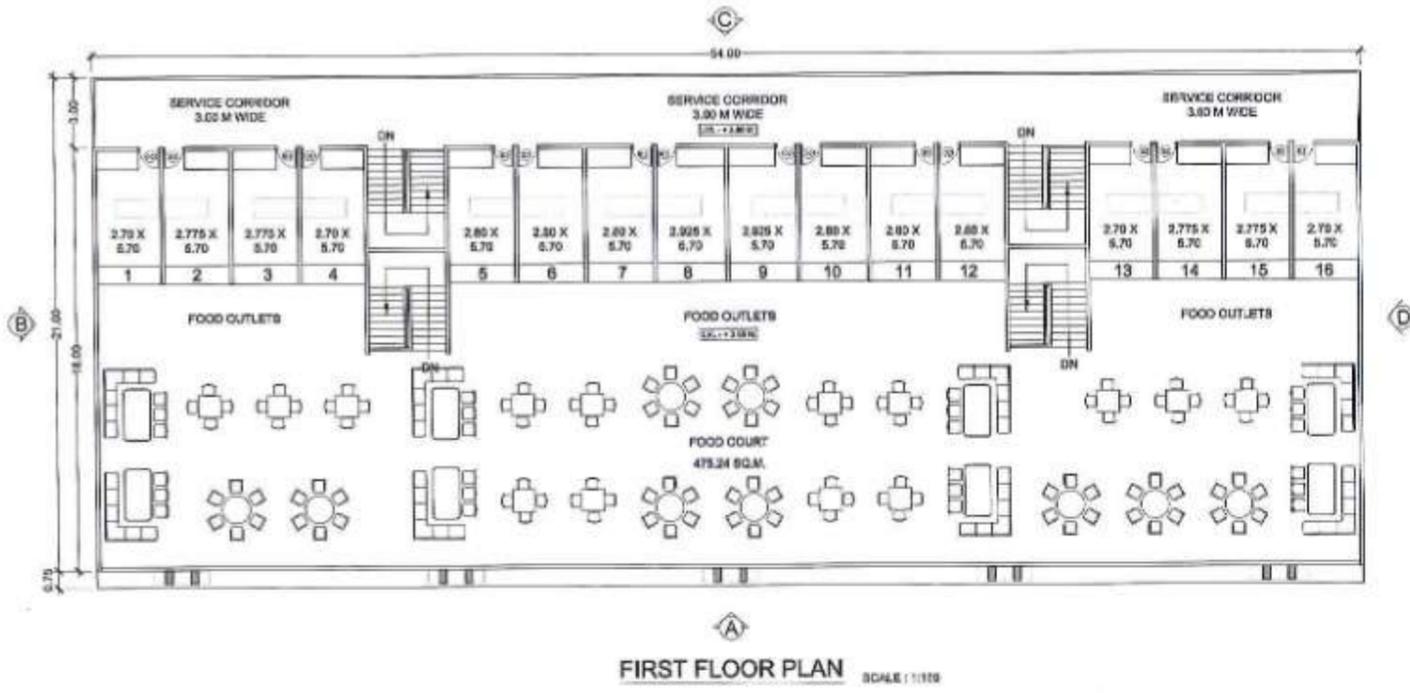
NAME	SIGN
DRAWN BY: PJ	
CHECKED BY: SB	
APPROVED BY: TK	



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	GV-AR-18	A1	A



GROUND FLOOR AREA CALCULATION

GROUND FLOOR AREA 54.00 X 21.00 (G)	1134.00 SQM		
DEDUCTION			
SR. NO.	BLOCK	SIZE	AREA (SQMT)
1.	P	54.00 X 3.00	162.00
2.	Q	5.90 X 7.00	41.30
3.	R	54.00 X 6.00	324.00
TOTAL (G)			527.30
TOTAL GROUND FLOOR B.L.M. AREA (G)			606.70
FIRST FLOOR AREA CALCULATION			
TOTAL FIRST F.L.R. B.U.A.		54.00 X 21.00	1134.00 SQM

DOOR SCHEDULE

DOOR NO.	TYPE	SIZE
D1	GLASS DOOR (Double Slutter)	1.50 X 2.40
D2	WOODEN FLUSH DOOR	0.90 X 2.10
D3	WOODEN FLUSH DOOR WITH LOUVERS	0.90 X 2.10
D4	FLUSH DOOR	0.75 X 2.10

- NOTES:**
- All drawings and details here represented are for indicative purposes only and to show design intent. They may be subject to variations following design developments, technical checks and site conditions.
 - This drawing must be read in conjunction with all relevant drawings from other disciplines.
 - All dimensions are in millimeter unless otherwise specified. No dimensions to be scaled from this drawing.
 - Ground level, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
 - Info mention on actual size of column and openings shall be as per MEP design.
 - Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drainage to be as per MEP drawings.
 - The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 - The dimensions on toll booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC: SP:87-2019, IRC: SP:99-2019).
 - Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
 - This drawing should be superseded immediately when a revised version will issued.
 - Employer has the copyrights of this drawing.



NAME	SIGN
DRAWN BY: JG	
CHECKED BY: SS	
APPROVED BY: TH	

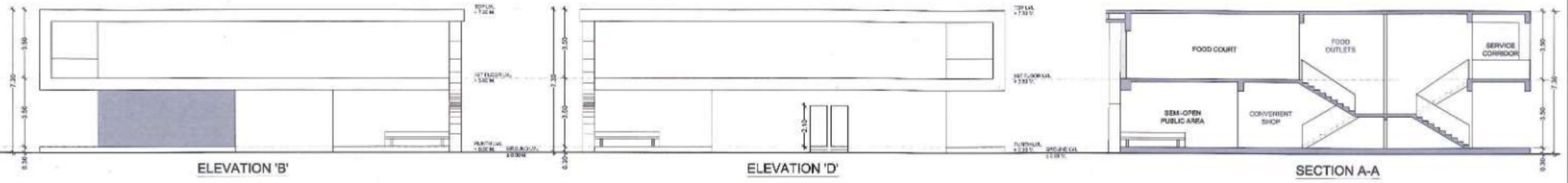


PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**

NORTH ->

TITLE - **MAIN TOLL PLAZA FOOD PLAZA (TYPICAL) GROUND & FIRST FLOOR PLANS**

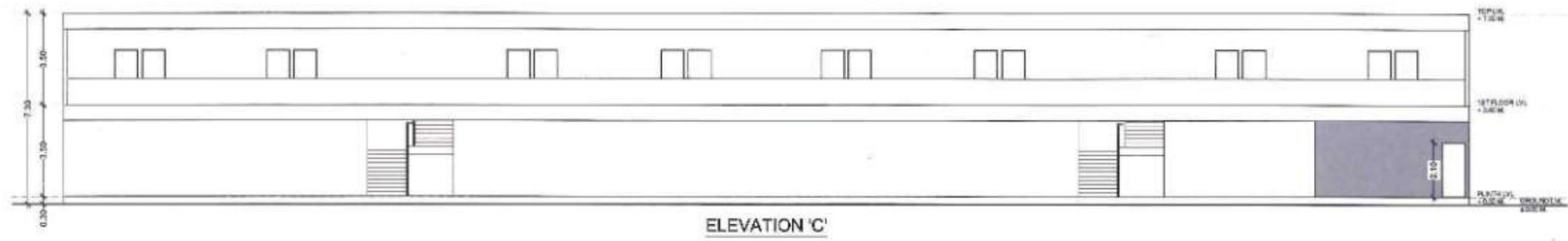
DATE: 08.03.2021	DRAWING NO: GV-AR-17	PAPER SIZE: A1	REV: A
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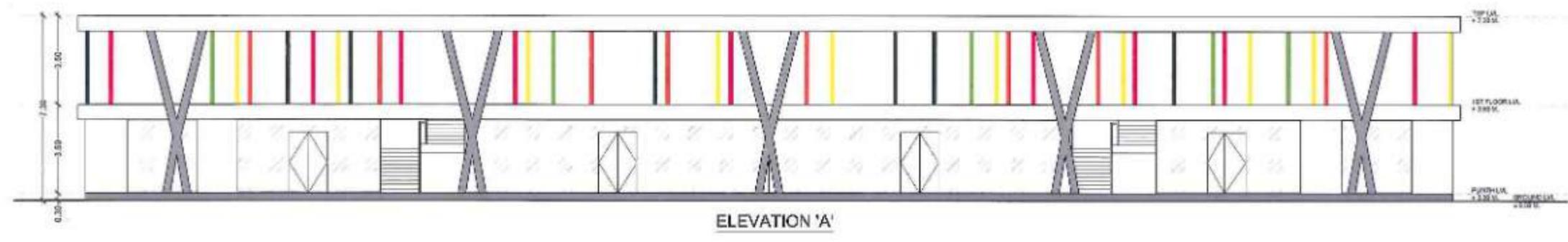
ELEVATION 'B'

ELEVATION 'D'

SECTION A-A



ELEVATION 'C'



ELEVATION 'A'



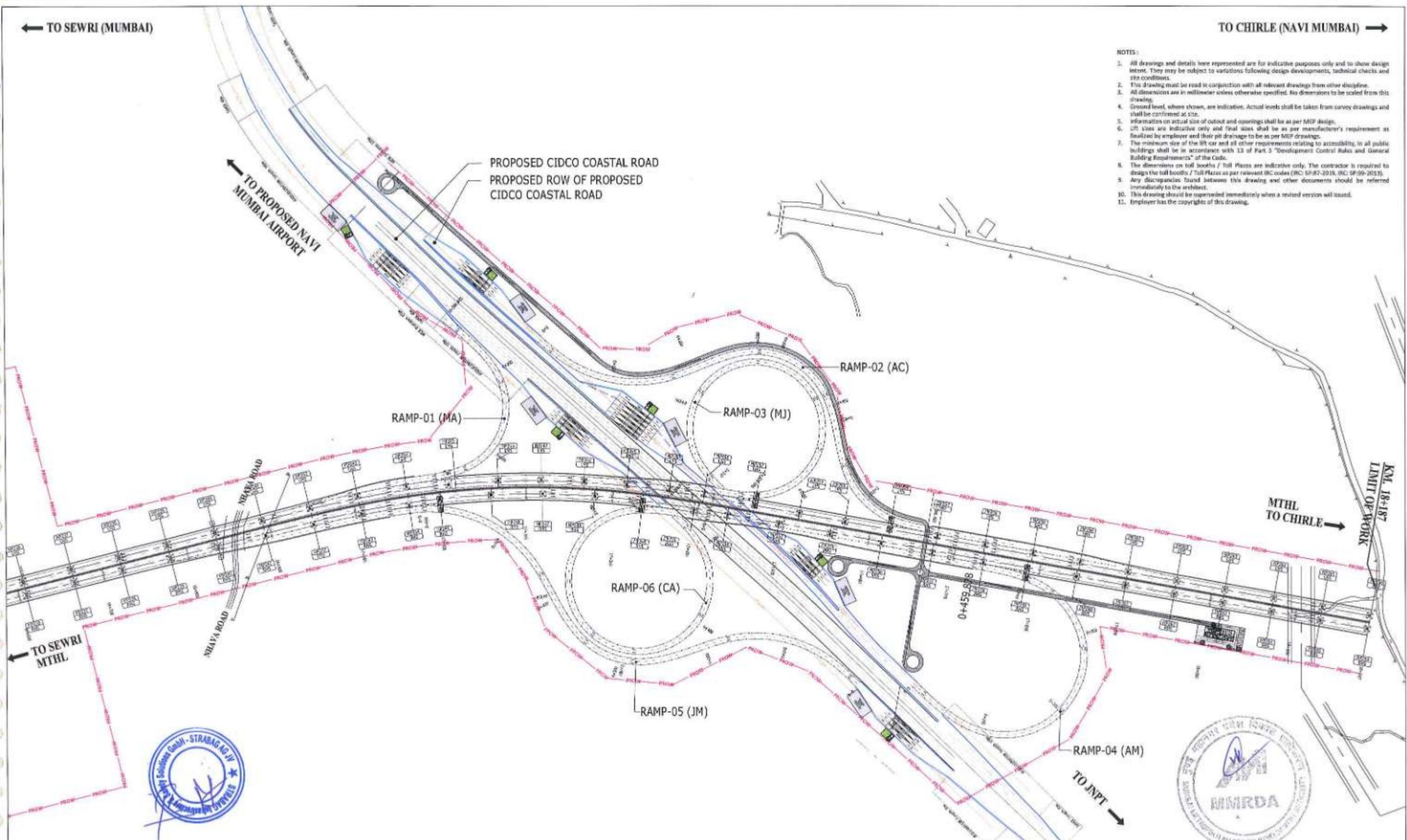
- NOTES:
1. All drawings and details here represented are for indicative purposes only and to show design intent. They may be subject to variations following design developments, technical checks and site conditions.
 2. This drawing must be read in conjunction with all relevant drawings from other discipline.
 3. All dimensions are in millimeter unless otherwise specified. No dimensions to be scaled from this drawing.
 4. Ground level, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
 5. Information on actual size of outlet and openings shall be as per MEP design.
 6. LIFT sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drawings to be as per MEP drawings.
 7. The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 8. The dimensions on sell booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes [IRC: SP-87-2019, IRC: SP-89-2013].
 9. Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
 10. This drawing should be superseded immediately when a revised version will issued.
 11. Employer has the copyright of this drawing.

SCALE : 1:100

DRAWN BY CHECKED BY APPROVED BY	NAME	SR	PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH - 	TITLE - MAIN TOLL PLAZA FOOD PLAZA (TYPICAL) SECTION & ELEVATIONS
	PG.				
	SR				
	TKS				
MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY					
			DATE: 08.03.2021		DRAWING NO. GV-AR-18
			PAPER SIZE A1		REV. A

← TO SEWRI (MUMBAI)

TO CHIRLE (NAVI MUMBAI) →



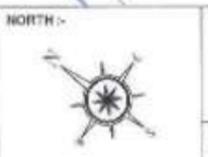
- NOTES:
1. All drawings and details here represented are for indicative purposes only and to show design intent. They may be subject to variations following design developments, technical checks and site conditions.
 2. This drawing must be read in conjunction with all relevant drawings from other disciplines.
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 4. Ground level, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
 5. Information on actual size of outlet and openings shall be as per MEP design.
 6. Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drainage to be as per MEP drawings.
 7. The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 8. The dimensions on toll booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC: SP-87-2015, IRC: SP-99-2015).
 9. Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
 10. This drawing should be superseded immediately when a revised version will issued.
 11. Employer has the copyrights of this drawing.



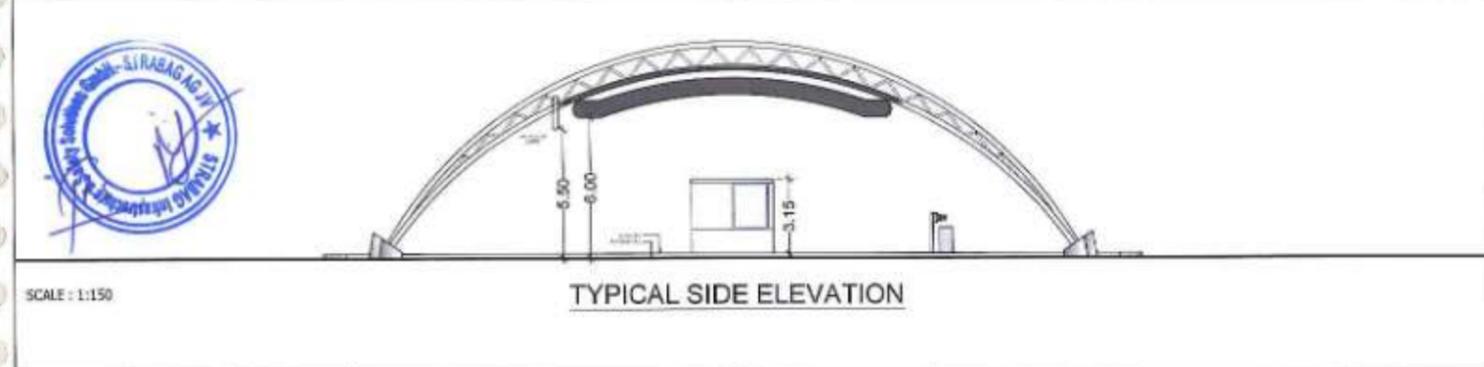
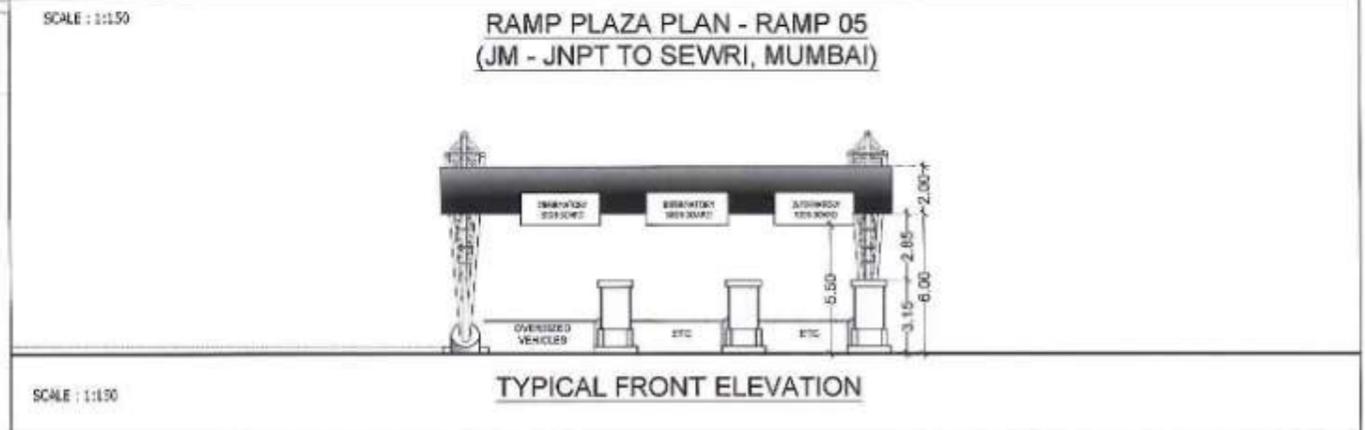
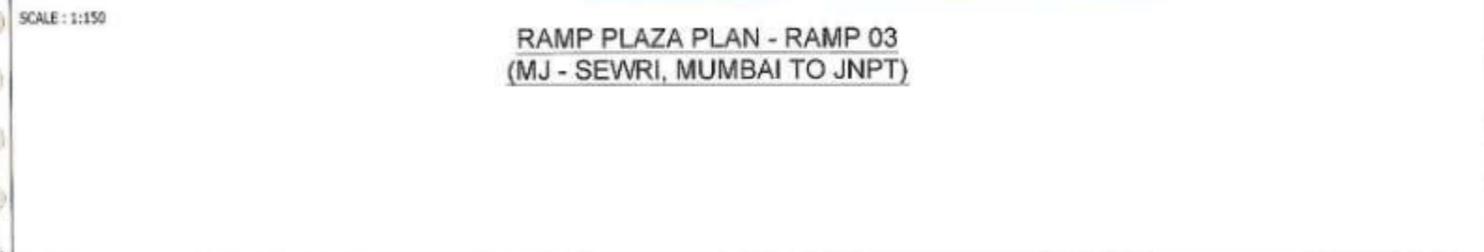
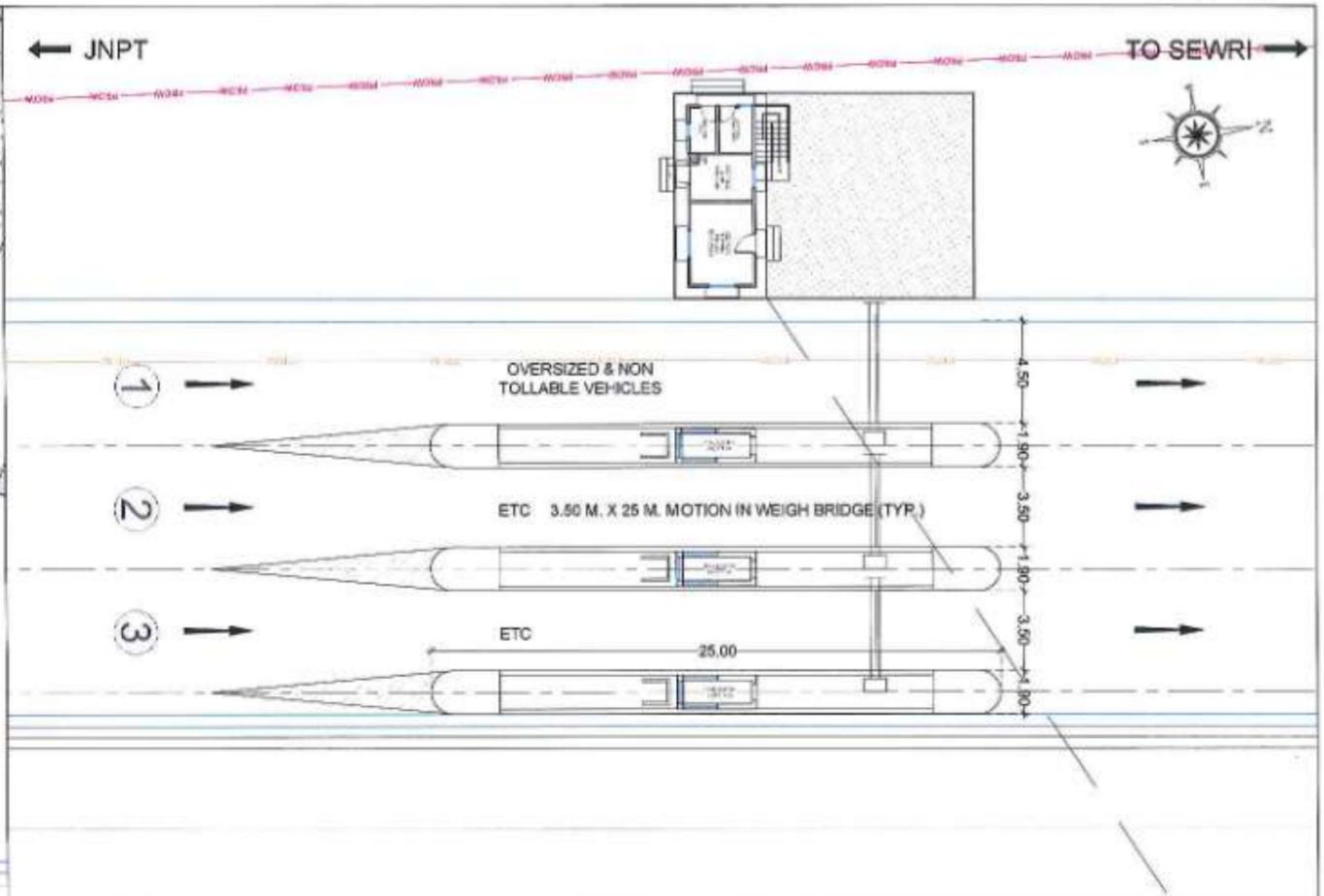
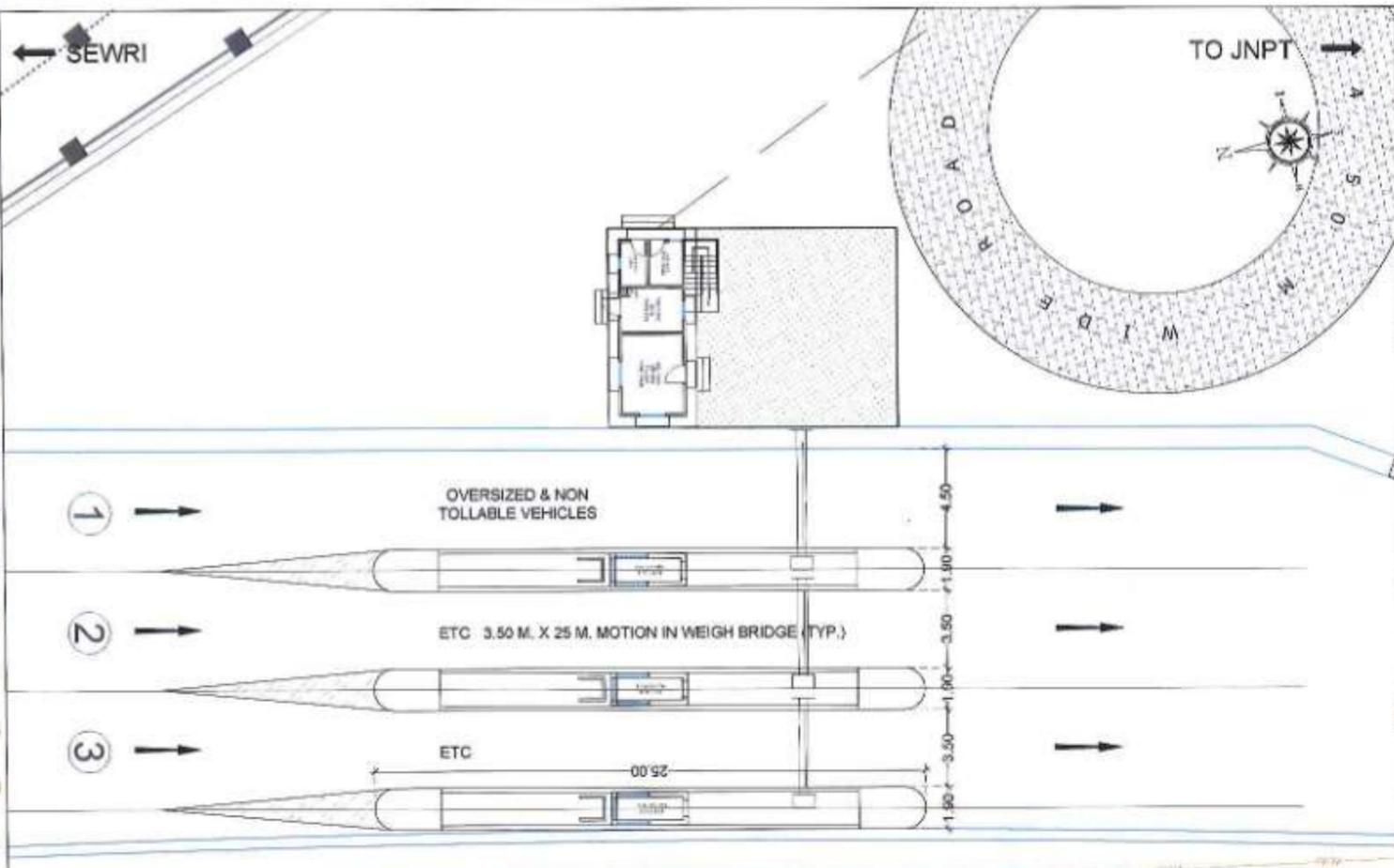
NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



TITLE - SHIVAJINAGAR INTERCHANGE RAMP PLAZA LOCATION PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SN-AR-01	A1	A



- NOTES:
- All drawings and details here represented are for indicative purposes only and to show design intent. They may be subject to variations following design developments, technical checks and site conditions.
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 - All dimensions are in millimeter unless otherwise specified. No dimensions to be scaled from this drawing.
 - Ground level, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
 - Information on actual size of cutout and openings shall be as per MEP design.
 - Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drainage to be as per MEP drawings.
 - The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 23 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 - The dimensions on toll booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC: SP-87-2019, IRC: SP-99-2013).
 - Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
 - This drawing should be superseded immediately when a revised version will issued.
 - Employer has the copyrights of this drawing.

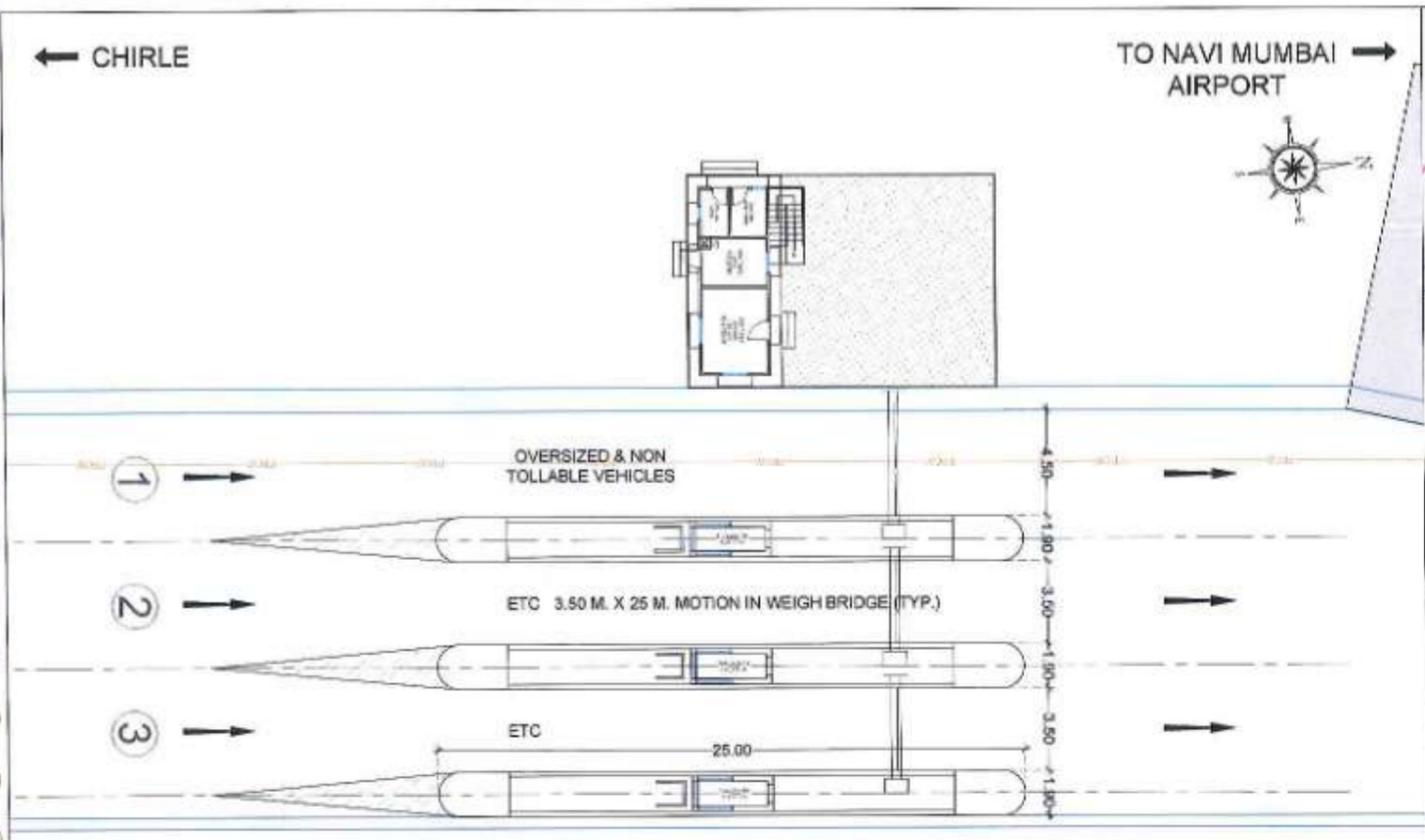
NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT:-
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

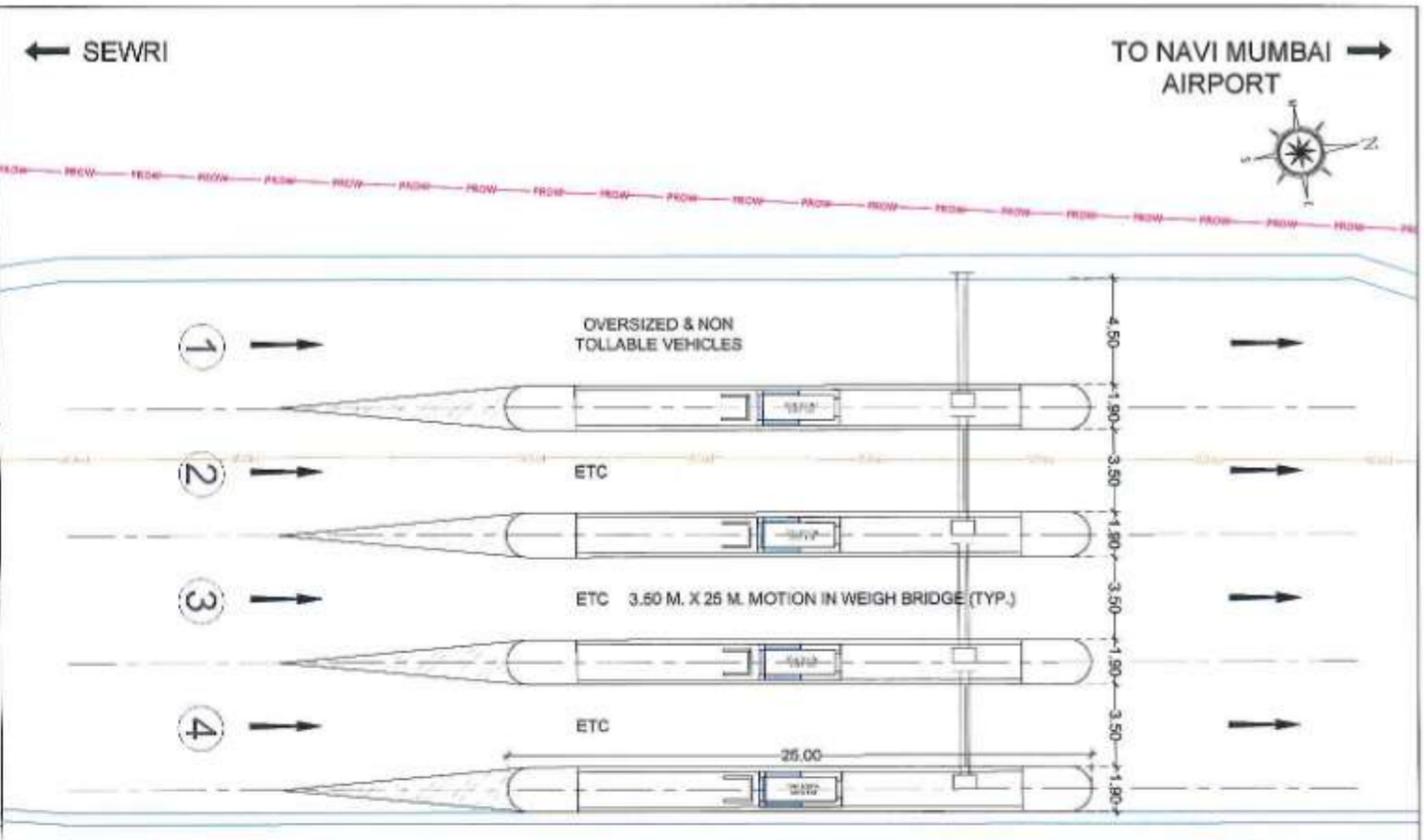


TITLE:- SHIVAJINAGAR INTERCHANGE TOLL PLAZA FOR RAMP MJ & RAMP JM PLAN, SECTION & ELEVATION			
DATE 08.03.2021	DRAWING NO. SN-AR-02 (2/3)	PAPER SIZE A1	REV. A



RAMP PLAZA PLAN - RAMP 06
(CA - CHIRLE TO NAVI MUMBAI AIRPORT)

SCALE : 1:150



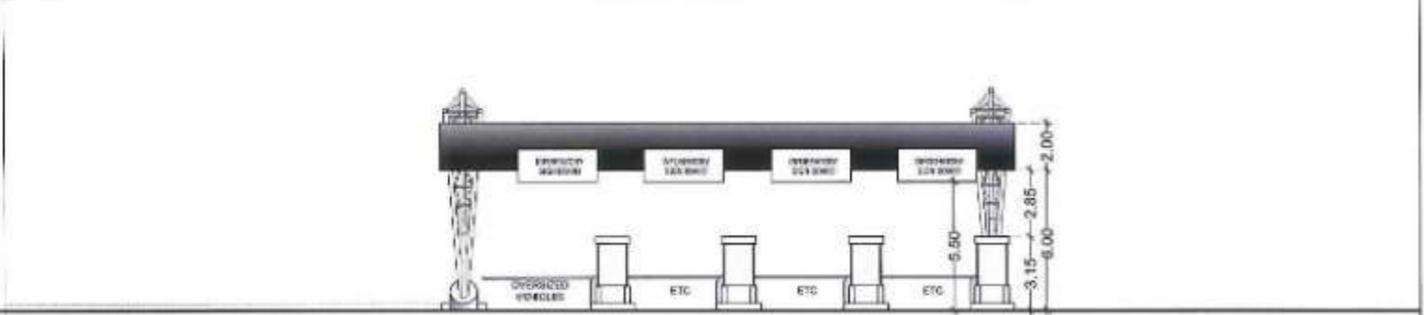
RAMP PLAZA PLAN - RAMP 01
(MA - SEWRI, MUMBAI TO NAVI MUMBAI AIRPORT)

SCALE : 1:150



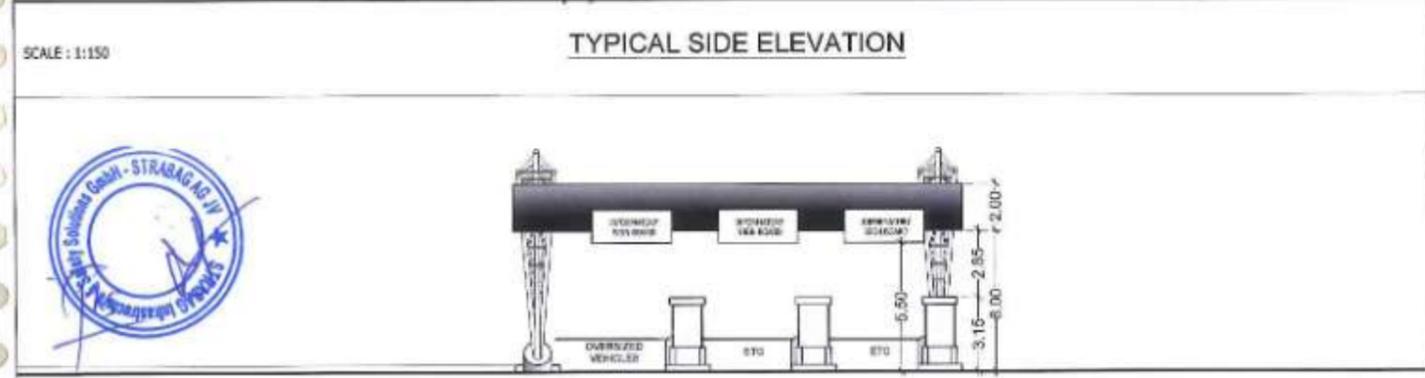
TYPICAL SIDE ELEVATION

SCALE : 1:150



FRONT ELEVATION

SCALE : 1:150



FRONT ELEVATION

SCALE : 1:150

- NOTES:
- All drawings and details here represented are for indicative purposes only and to show design intent. They may be subject to variations following design developments, technical checks and site conditions.
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 - Ground level, where shown, are indicative. Actual levels shall be taken from survey drawings and shall be confirmed at site.
 - Information on actual size of outlet and openings shall be as per MEP design.
 - UFT sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their pit drainage to be as per MEP drawings.
 - The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 5 "Development Control Rules and General Building Requirements" of the Code.
 - The dimensions on toll booths / Toll Plazas are indicative only. The contractor is required to design the toll booths / Toll Plazas as per relevant IRC codes (IRC SP:87-2015, IRC SP:99-2013).
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 - Employer has the copyrights of this drawing.



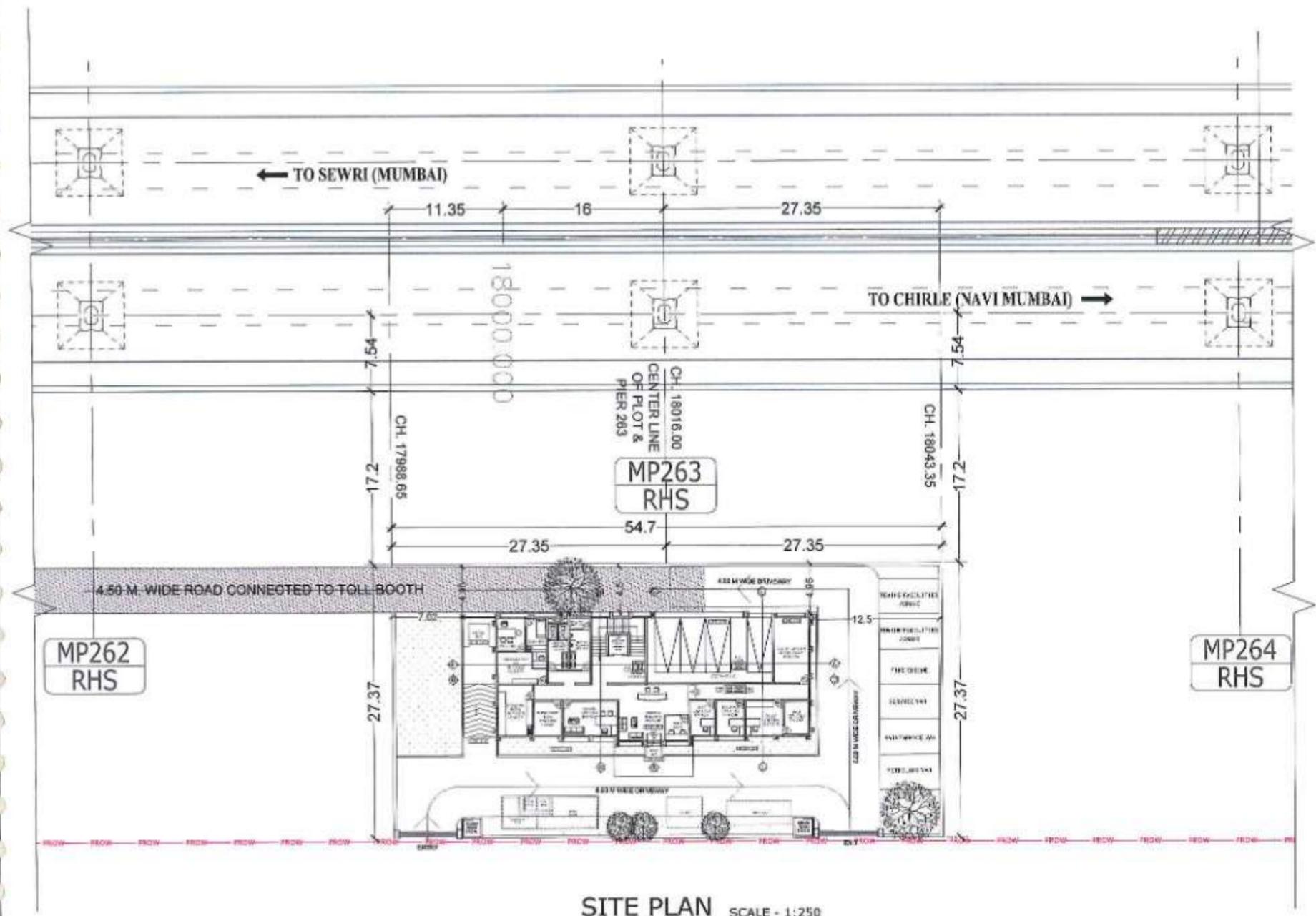
NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



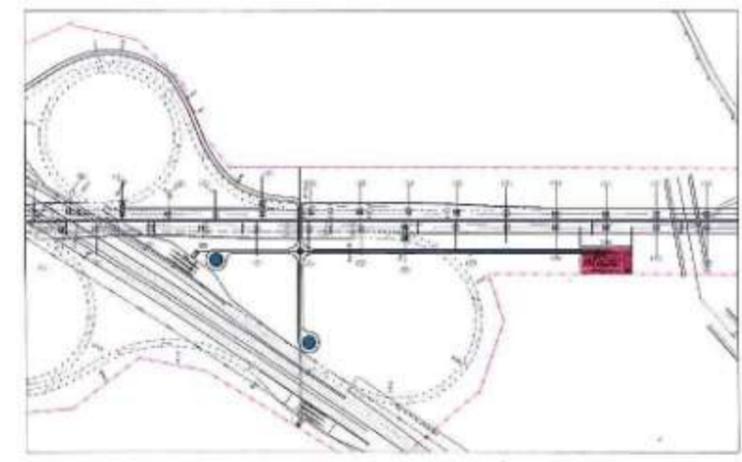
PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



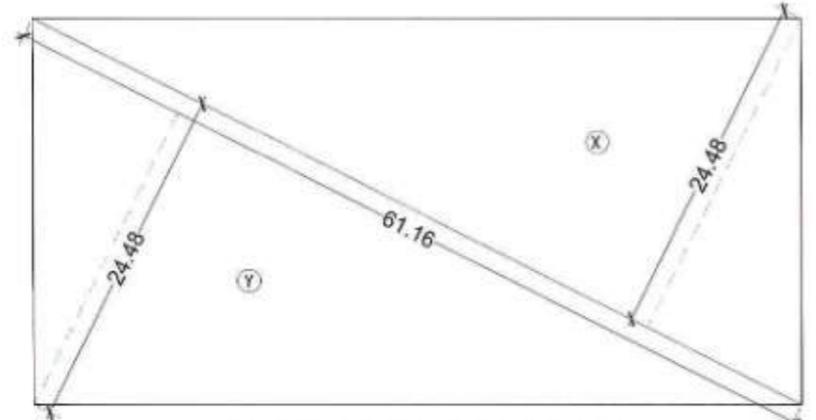
TITLE - SHIVAJINAGAR INTERCHANGE TOLL PLAZA FOR RAMP CA & RAMP MA PLAN, SECTION & ELEVATION			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SN-AR-02 (3/3)	A1	A



SITE PLAN SCALE - 1:250



KEY PLAN SCALE - 1:4000



PLOT AREA DIAGRAM SCALE - 1:250

PLOT AREA CALCULATION			
SR.NO.	TRIANGLE	SIZE	AREA (SQMT)
1.	X	1/2 X 61.16 X 24.48	748.60
2.	Y	1/2 X 61.16 X 24.48	748.60
TOTAL			1497.20
TOTAL PLOT AREA			1497.20

BUILD UP AREA STATEMENT		
SR.NO.	FLOOR	AREA (SQMT)
1.	GROUND FLOOR	320.34
2.	FIRST FLOOR	232.29
2.	TERRACE FLOOR	27.40
TOTAL		580.03
TOTAL BUILD UP AREA		580.03

F.S.I. CALCULATION

TOTAL PLOT AREA = 1497.20 SQMT.
 FLOOR SPACE INDEX = 1.50
 PERMISSIBLE BUILD UP AREA = 2245.80 SQMT.
 PROPOSED BUILD UP AREA = 580.03 SQMT.

NOTES:

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- Information on actual size of cutout and openings shall be as per MEP design.
- Lift sizes are indicative only and final sizes shall be as per manufacturer's requirement as finalized by employer and their fit drainage to be as per MEP drawings.
- The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
- The dimensions on tall booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC: SP-87-2010, IRC: SP-99-2013).
- Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
- This drawing should be superseded immediately when a revised version will found.
- Employer has the copyrights of this drawing.



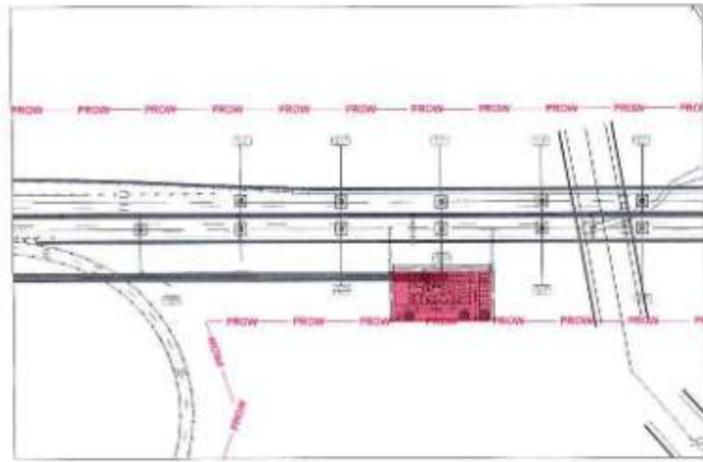
NAME	NO.
DRAWN BY	PS
CHECKED BY	SB
APPROVED BY	TG



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

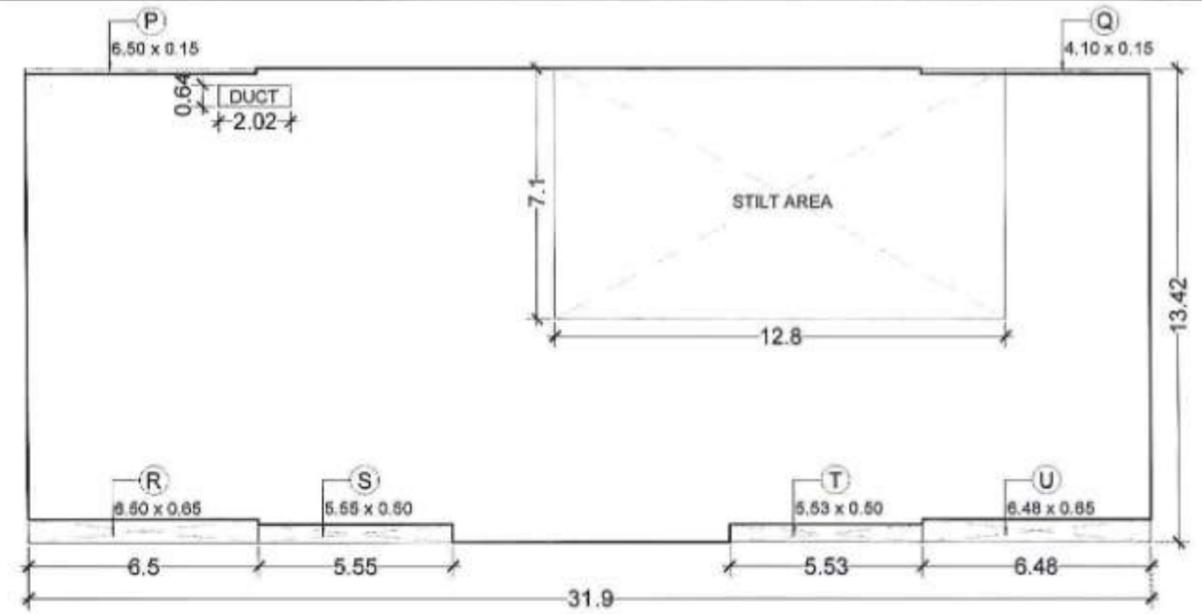


TITLE -			
SHIVAJI NAGAR INTERCHANGE ADMINISTRATION AND COMMAND CONTROL CENTER SITE PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SN-AR-03	A1	A

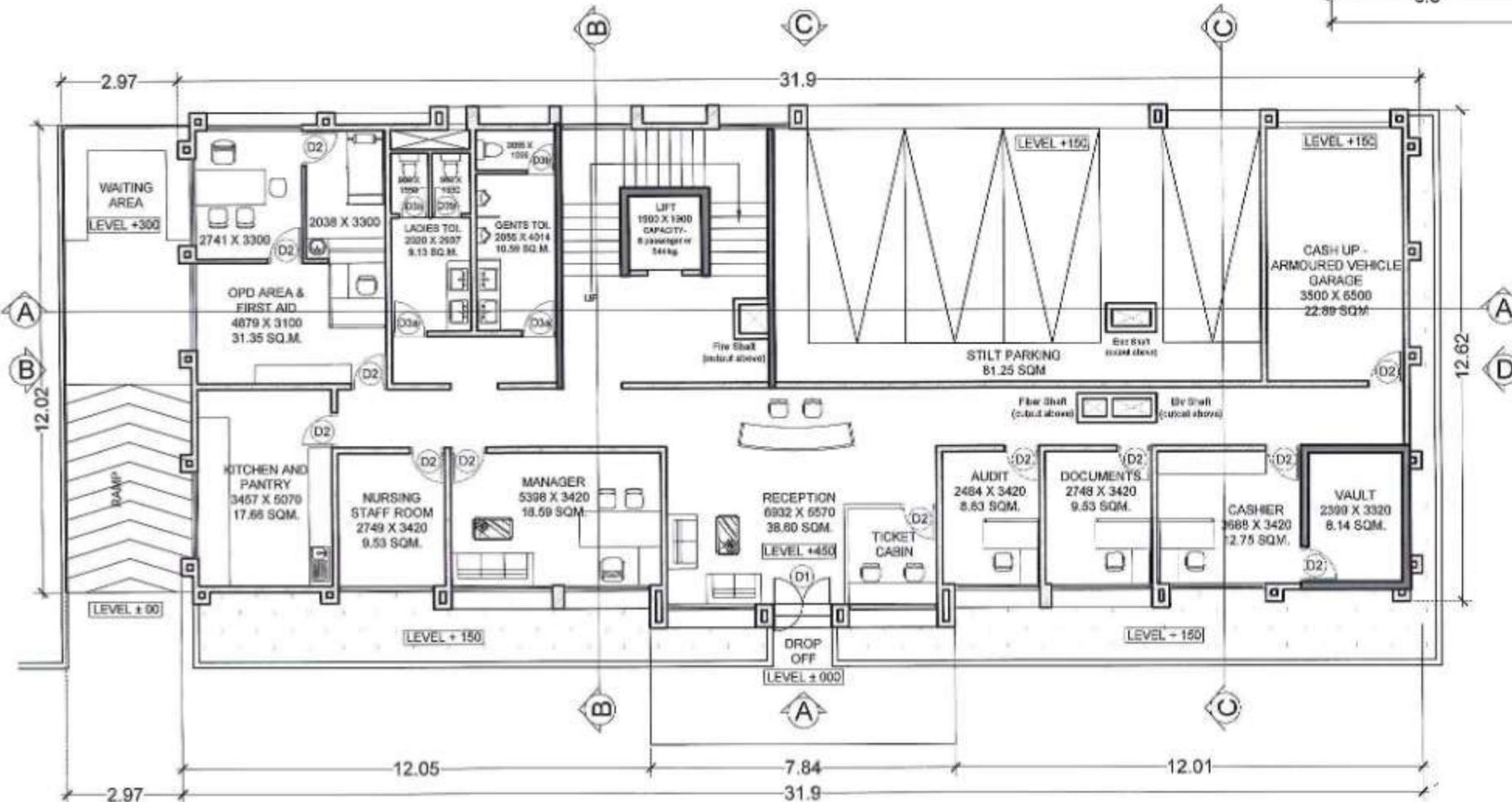


KEY PLAN SCALE - 1:4000

GROUND FLOOR AREA CALCULATION			
TOTAL GR. FLR AREA (31.90 X 13.42) (a)			428.10 SQM.
DEDUCTION			
SR.NO.	BLOCK	SIZE	AREA (SQMT)
1.	DUCT	2.02 X 0.64	1.29
2.	STILT AREA	12.80 X 0.49	90.88
3.	P	6.50 X 0.15	0.98
4.	Q	4.10 X 0.15	0.62
5.	R	6.50 X 0.65	4.23
6.	S	5.55 X 0.50	2.78
7.	T	5.53 X 0.50	2.77
8.	U	6.48 X 0.65	4.21
TOTAL (b)			107.76
TOTAL GROUND FLOOR AREA (a-b)			320.34



AREA DIAGRAM (GROUND FLOOR) SCALE - 1:200



GROUND FLOOR PLAN SCALE - 1:150

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL	0.90 X 2.10
D3a	WOODEN FLUSH DOOR WITH LOUVERS	0.75 X 2.10
D3b	FLUSH DOOR	0.75 X 2.10
D4	WOODEN FLUSH DOOR	1.20 X 2.10
D5	AS SPECIFIED	1.50 X 2.10

NOTES:

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- The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with 13 of Part 3 "Development Control Rules and General Building Requirements" of the Code.
- The dimensions on toll booths / Toll Plazas are indicative only. The contractor is required to design the toll booths / Toll Plazas as per relevant IRC codes (IRC: SP:67-2019, IRC: SP-99-2013).
- Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
- This drawing should be superseded immediately when a revised version will issued.
- Requirement, size and location of Fire Shaft shall be verified as per fire norms and statutory requirement.
- Employer has the copyrights of this drawing.

NAME	DESIGN
DRAWN BY	PG
CHECKED BY	SR
APPROVED BY	THB



PROJECT:-

MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



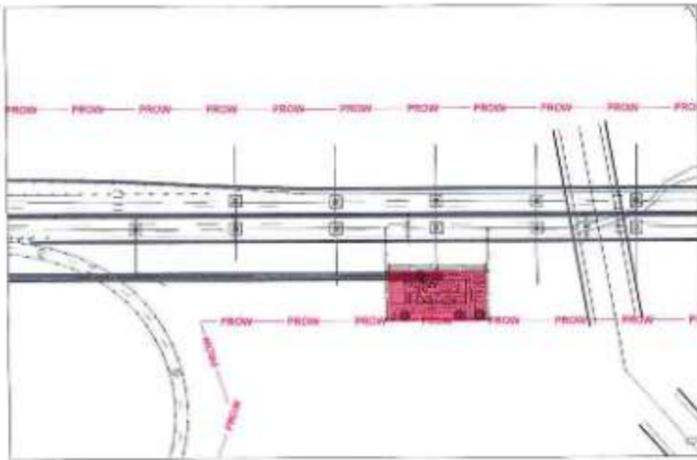
NORTH >



TITLE:-

SHIVAJI NAGAR INTERCHANGE
ADMINISTRATION AND COMMAND CONTROL CENTER
GROUND FLOOR PLAN

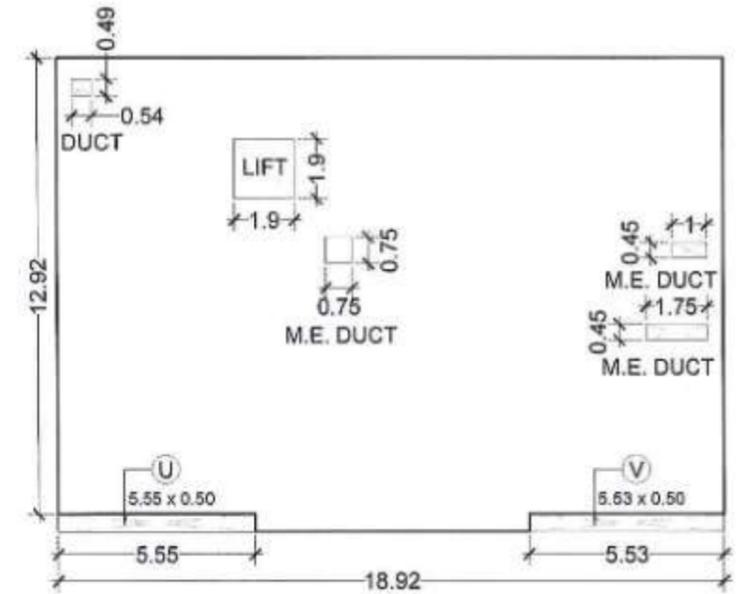
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SN-AR-04	A3	A



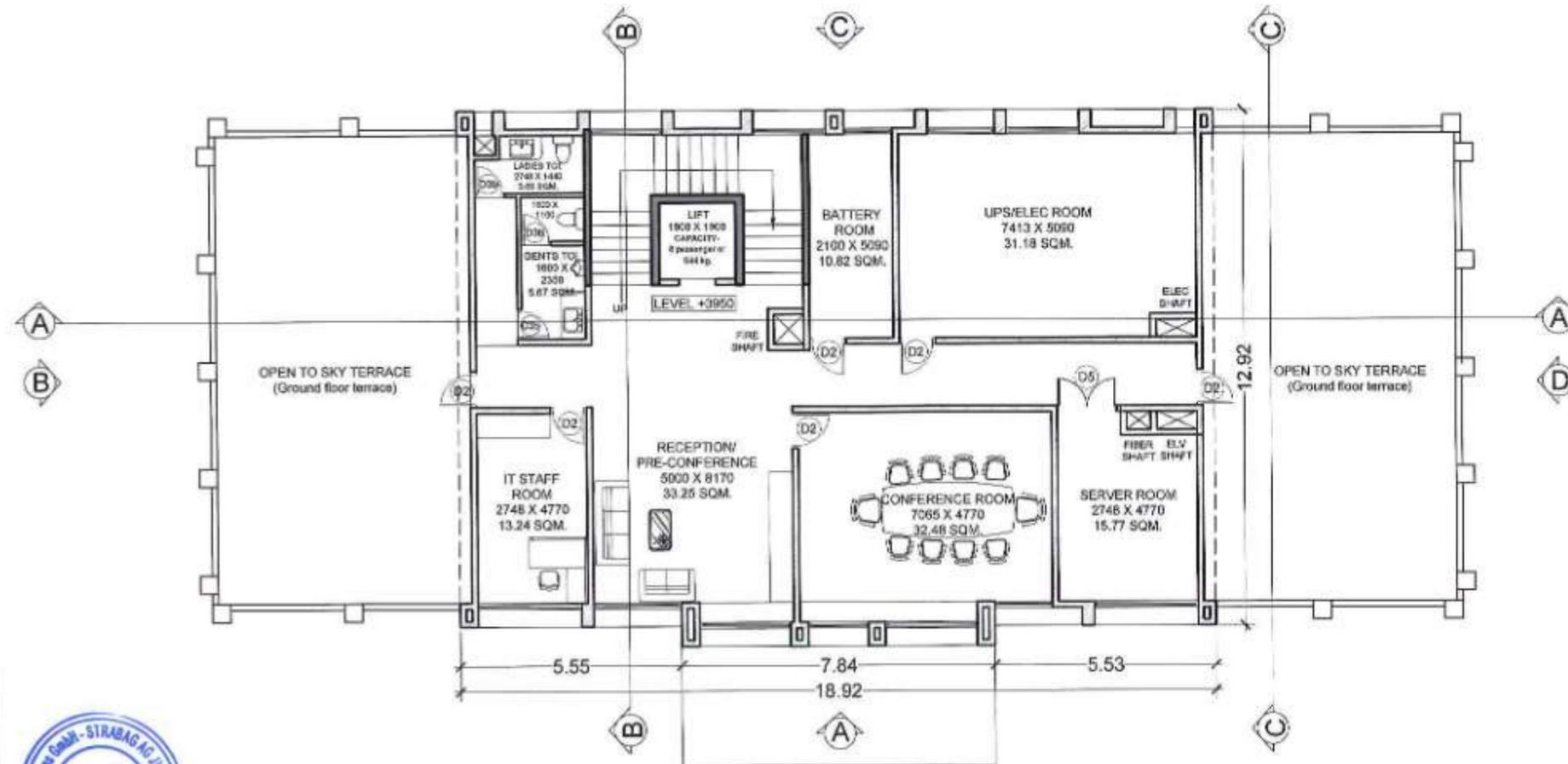
KEY PLAN SCALE - 1:4000

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL	0.90 X 2.10
D3a	WOODEN FLUSH DOOR WITH LOUVERS	0.75 X 2.10
D3b	FLUSH DOOR	0.75 X 2.10
D4	WOODEN FLUSH DOOR	1.20 X 2.10
D5	AS SPECIFIED	1.50 X 2.10

FIRST FLOOR AREA CALCULATION			
TOTAL 1ST FLR AREA (18.92 X 12.92) (a)			244.45 SQM.
DEDUCTION			
SR. NO.	BLOCK	SIZE	AREA (SQMT)
1.	LIFT	1.00 X 1.90	3.51
2.	DUCT	0.54 X 0.49	0.26
3.	M.E. DUCT	0.75 X 0.75	1.50
4.	M.E. DUCT	1.00 X 0.45	0.45
5.	M.E. DUCT	1.75 X 0.45	0.79
6.	U	5.55 X 0.50	2.78
7.	V	5.53 X 0.50	2.77
TOTAL (b)			12.16
TOTAL 1ST FLOOR AREA (a-b)			232.29



AREA DIAGRAM (FIRST FLOOR) SCALE - 1:200



FIRST FLOOR PLAN SCALE - 1:150

NOTES :

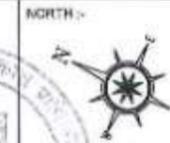
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- The dimensions on toll booths / Toll Plazas are indicative only. The contractor is required to design the toll booths / Toll Plazas as per relevant IRC codes (IRC: SP:87-2019, IRC: SP:99-2013).
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- This drawing should be superseded immediately when a revised version will issued.
- Requirement, size and location of Fire Shaft shall be verified as per fire norms and statutory requirement.
- Employer has the copyrights of this drawing.



NAME	SIGN
DRAWN BY	PO
CHECKED BY	DE
APPROVED BY	TKS

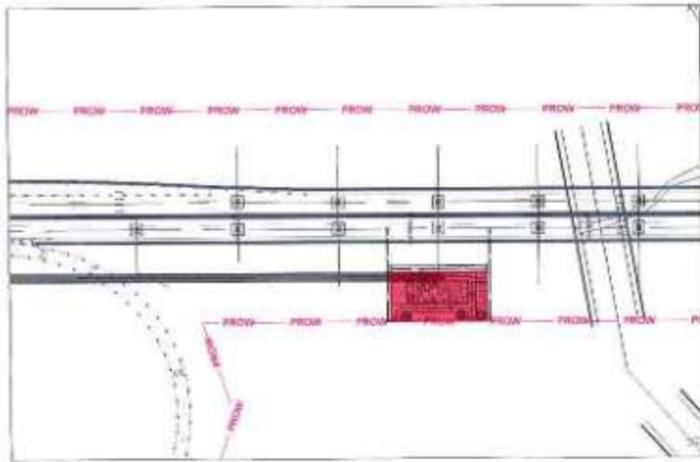


PROJECT -> MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING



TITLE -> SHIVAJI NAGAR INTERCHANGE ADMINISTRATION AND COMMAND CONTROL CENTER FIRST FLOOR PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SN-AR-05	A3	A

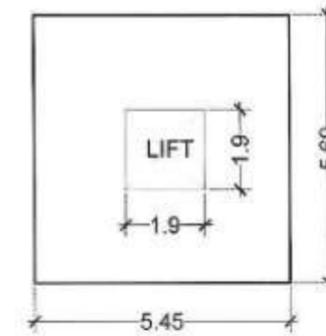




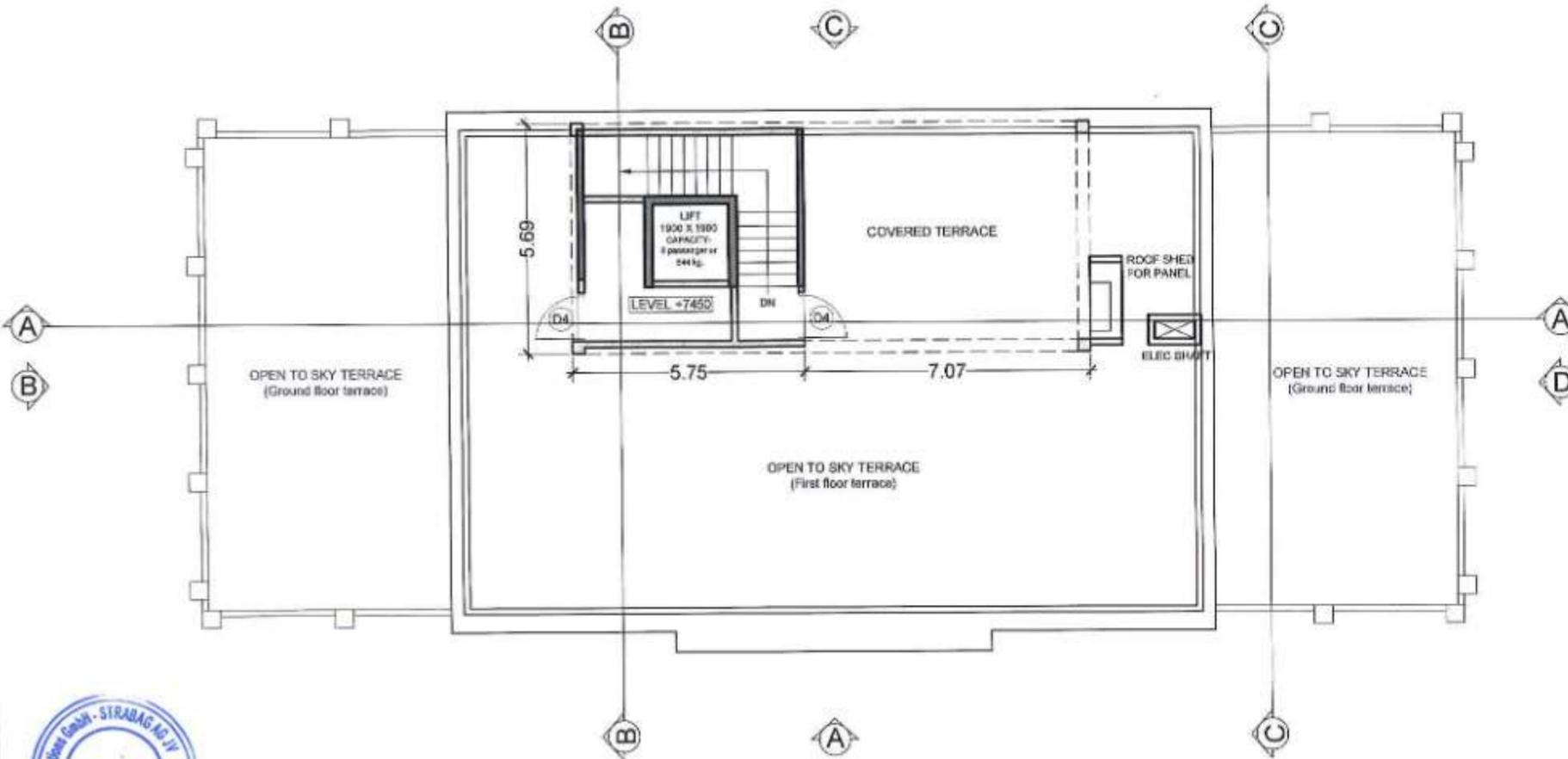
KEY PLAN SCALE - 1:4000

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL	0.90 X 2.10
D3a	WOODEN FLUSH DOOR WITH LOUVERS	0.75 X 2.10
D3b	FLUSH DOOR	0.75 X 2.10
D4	WOODEN FLUSH DOOR	1.20 X 2.10
D5	AS SPECIFIED	1.50 X 2.10

TERRACE FLOOR AREA CALCULATION			
TERRACE FLR AREA (5.45 X 5.69) (a)			31.01 SQM.
DEDUCTION			
SR.NO.	BLOCK	SIZE	AREA (SQMT)
1.	LIFT	1.90 X 1.90	3.61
TOTAL (b)			3.61
TOTAL TERRACE FLOOR AREA (a-b)			27.40



AREA DIAGRAM (TERRACE FLOOR) SCALE - 1:150



TERRACE FLOOR PLAN SCALE - 1:150

NOTES:

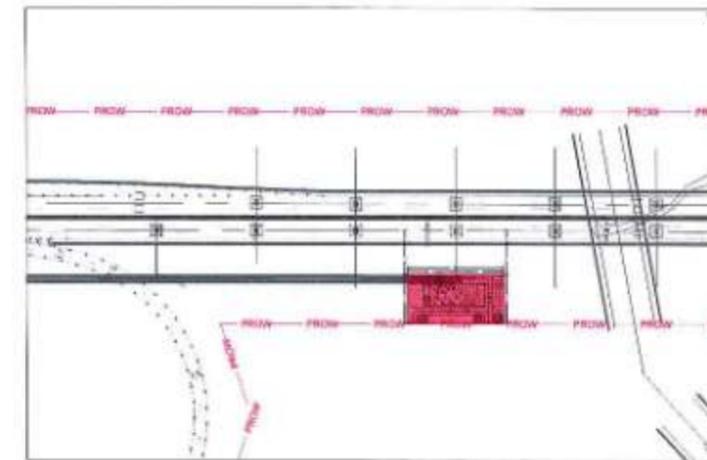
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- Requirement, size and location of Fire Shaft shall be verified as per fire norms and statutory requirement.
- Employer has the copyrights of this drawing.



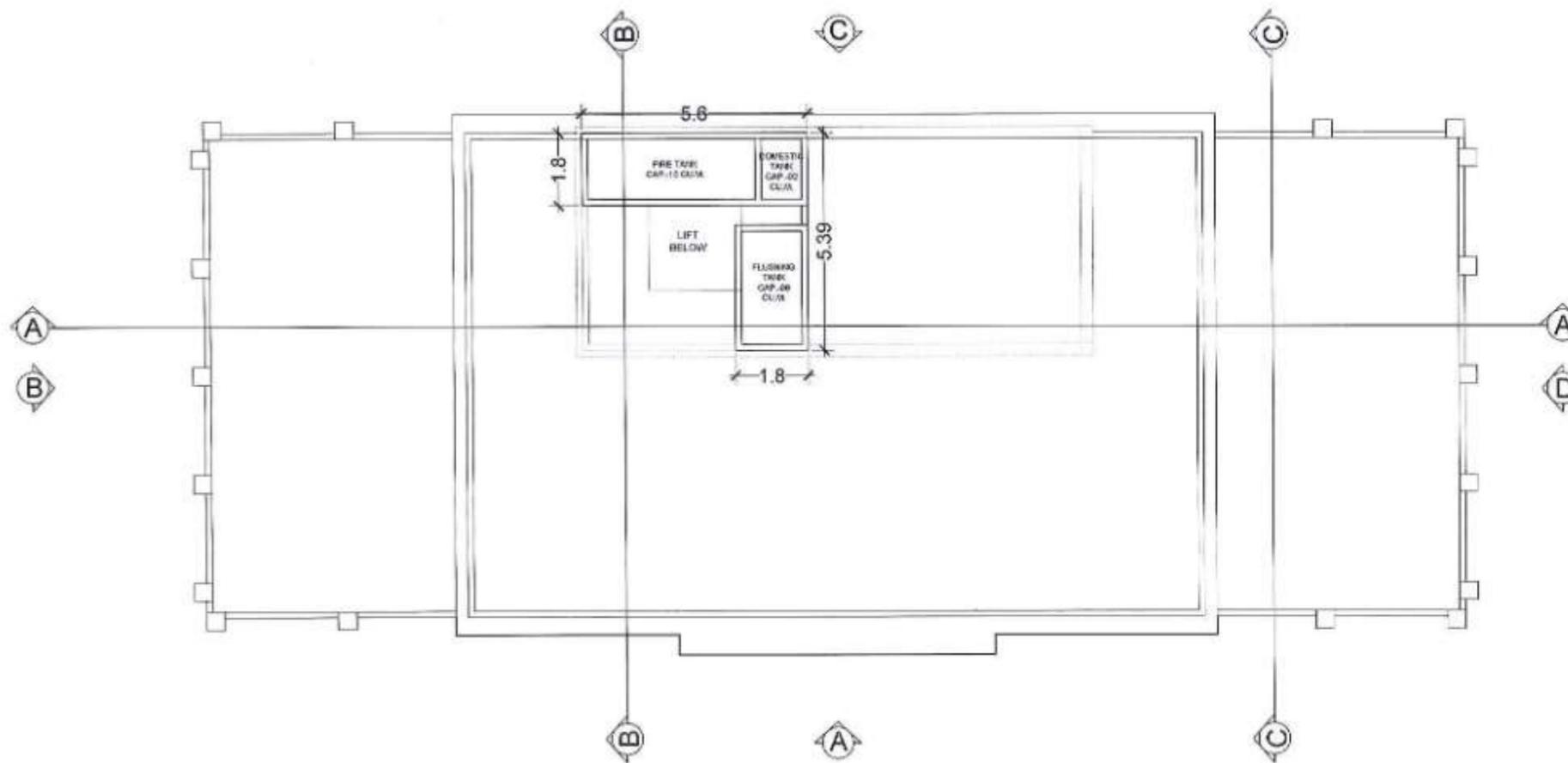
PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE - SHIVAJI NAGAR INTERCHANGE ADMINISTRATION AND COMMAND CONTROL CENTER TERRACE FLOOR PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SN-AR-06	A3	A



KEY PLAN SCALE - 1:4000



OVERHEAD WATER TANK LEVEL PLAN SCALE - 1:150

NOTES:

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MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH ->



TITLE - SHIVAJI NAGAR INTERCHANGE
ADMINISTRATION AND COMMAND CONTROL CENTER
OVERHEAD WATER TANK LEVEL PLAN

DATE	DRAWING NO.	PAPER SIZE	REV.
06.03.2021	SN-AR-07	A3	A



NAME	ROLE
DRAWN BY: PD	
CHECKED BY: SB	
APPROVED BY: DGA	



ELEVATION C

ELEVATION D



ELEVATION A

ELEVATION B

SCALE - 1:150



NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	

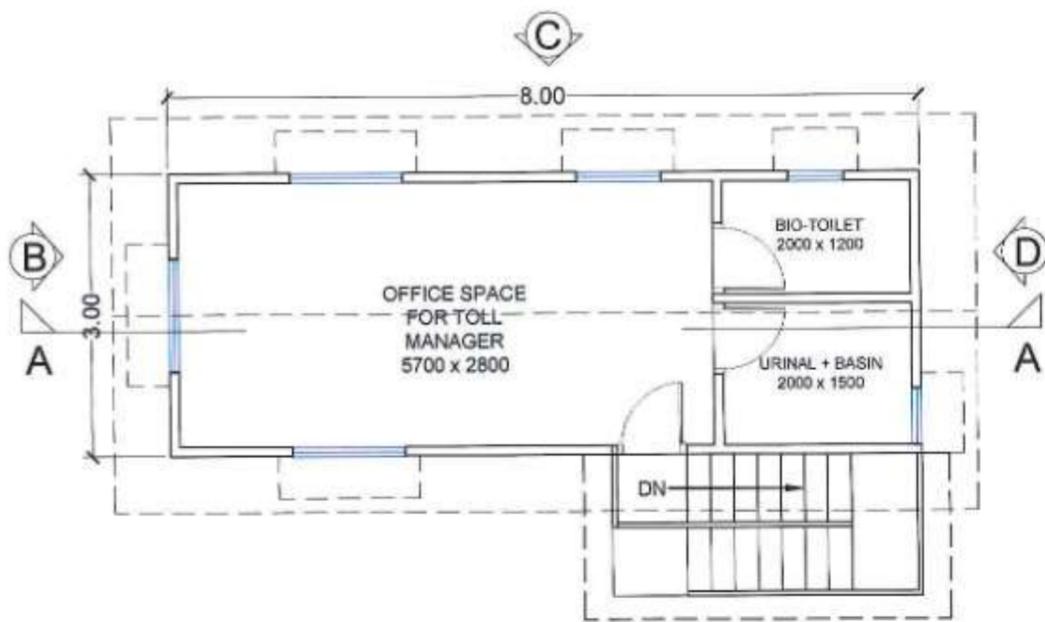


PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

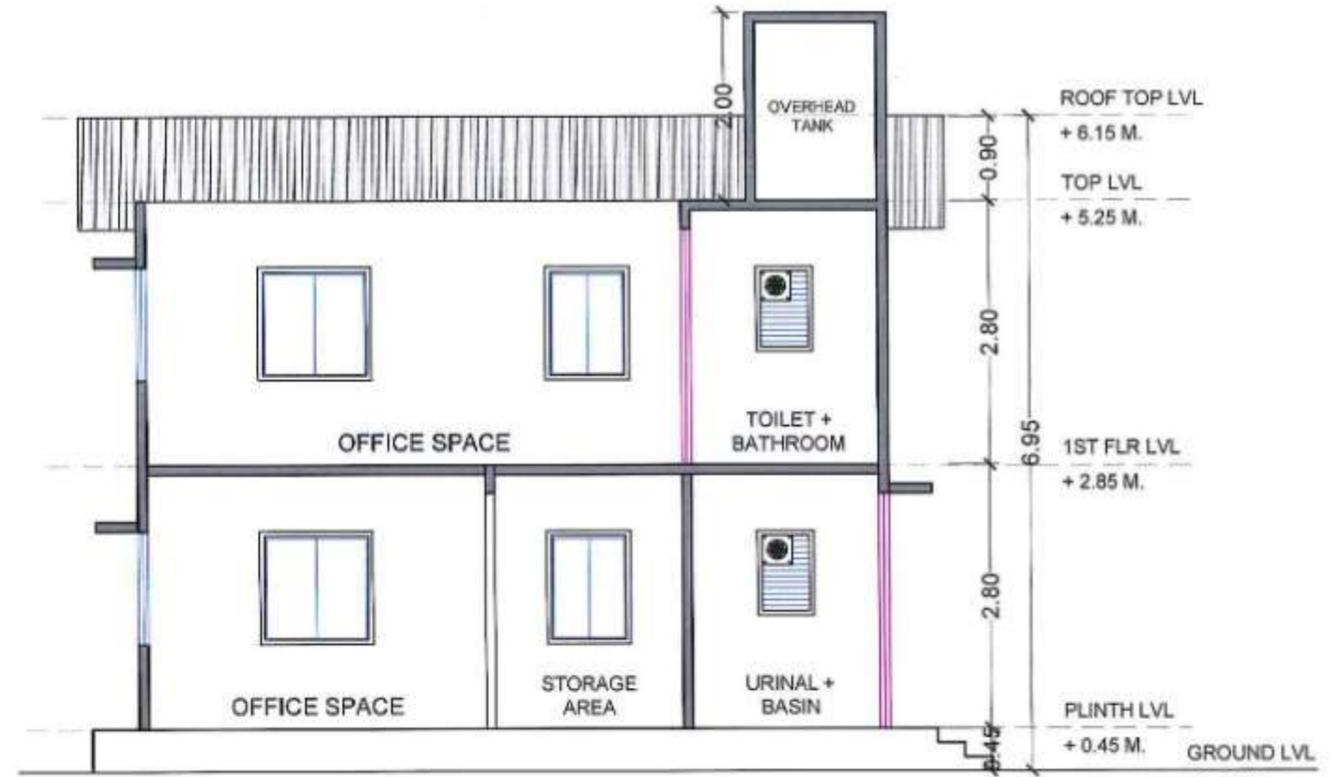


IMPORTANT NOTE: ALL DRAWINGS ARE INDICATIVE

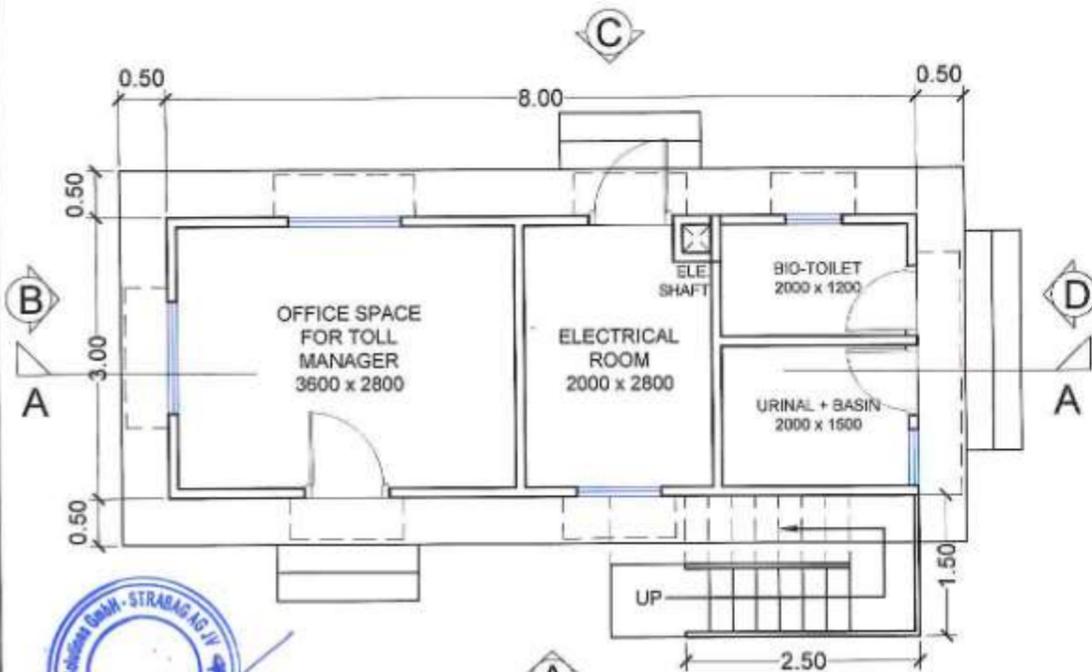
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DATE: 08.03.2021	DRAWING NO. SN-AR-08	PAPER SIZE A3	REV. A



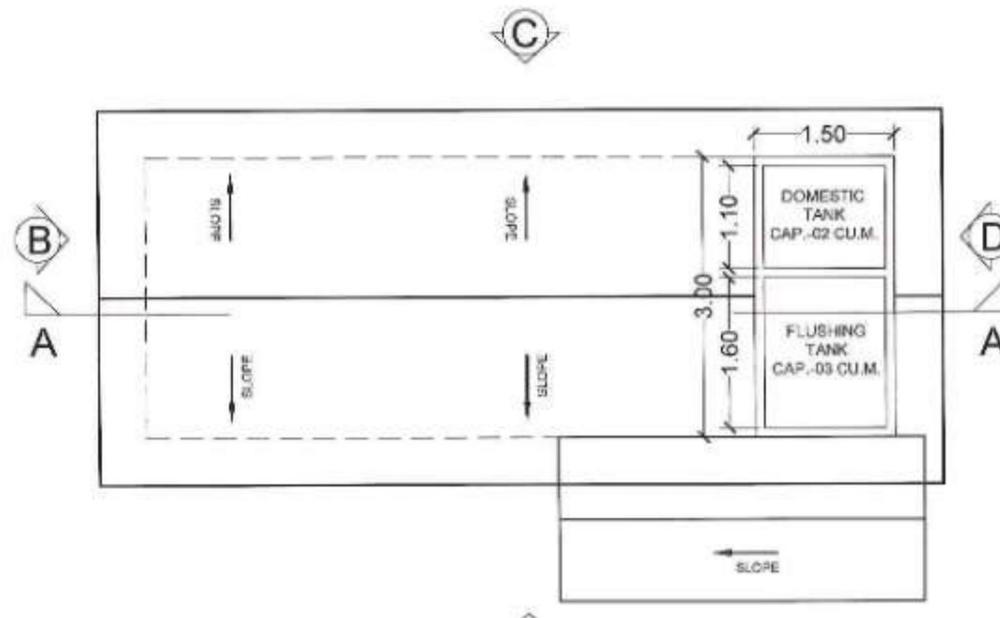
FIRST FLOOR PLAN SCALE: 1:75



SECTION A-A SCALE: 1:75



GROUND FLOOR PLAN SCALE: 1:75



ROOF PLAN SCALE: 1:75

NOTES:

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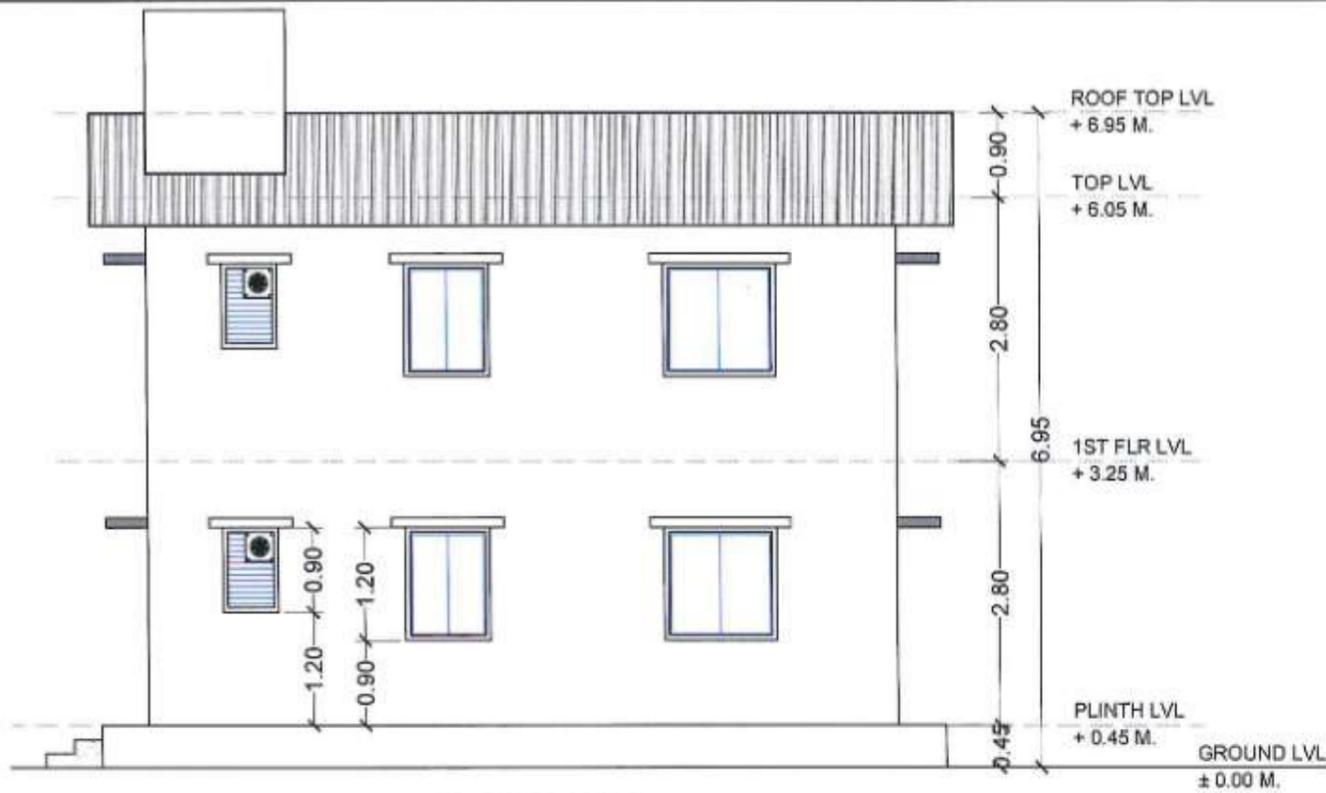


MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

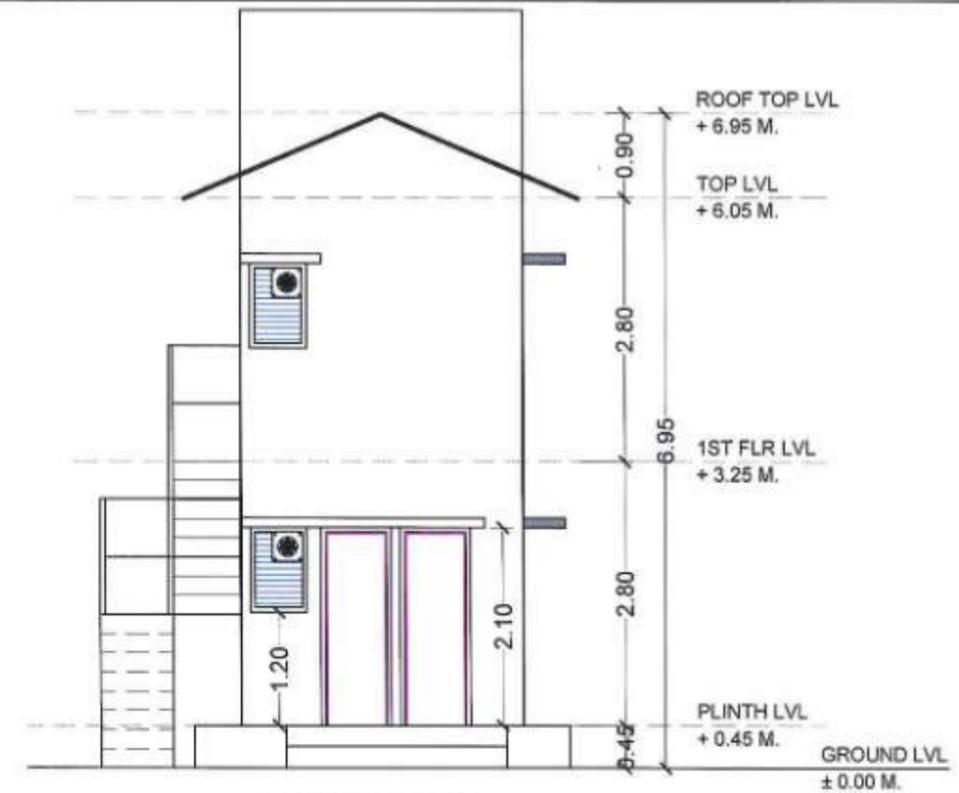
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



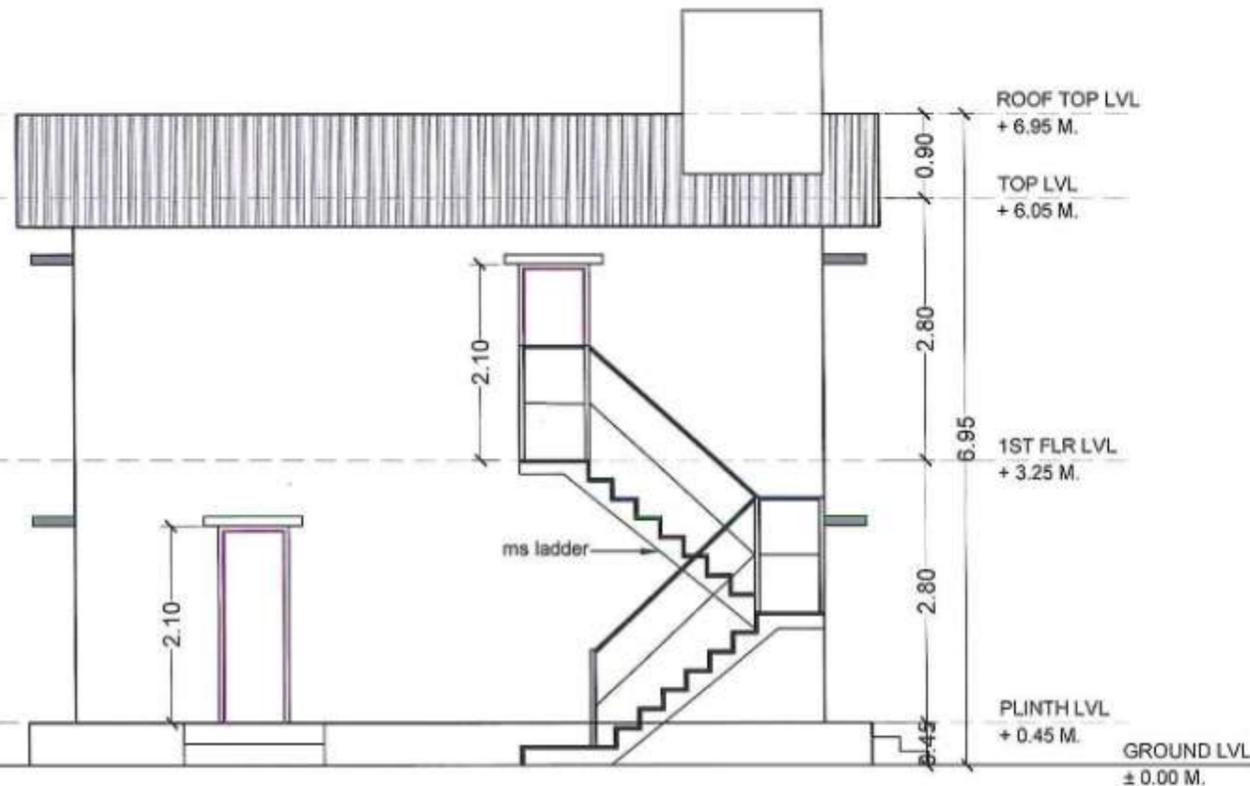
TITLE :- SHIVAJI NAGAR INTERCHANGE PORTA CABIN (TYPICAL) FLOOR PLAN & SECTION			
DATE	DRAWING NO.	PAPER SIZE	REV.
06.03.2021	SN-AR-10	A3	A



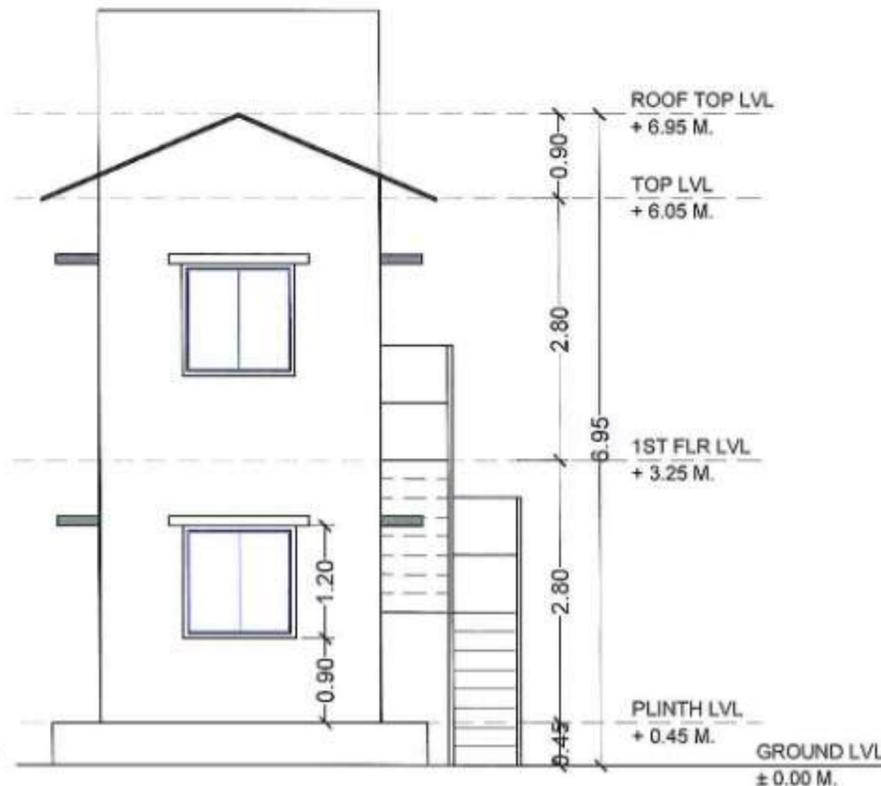
ELEVATION C



ELEVATION D



ELEVATION A



ELEVATION B

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- Employer has the copyrights of this drawing.

NAME	DESIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT :-

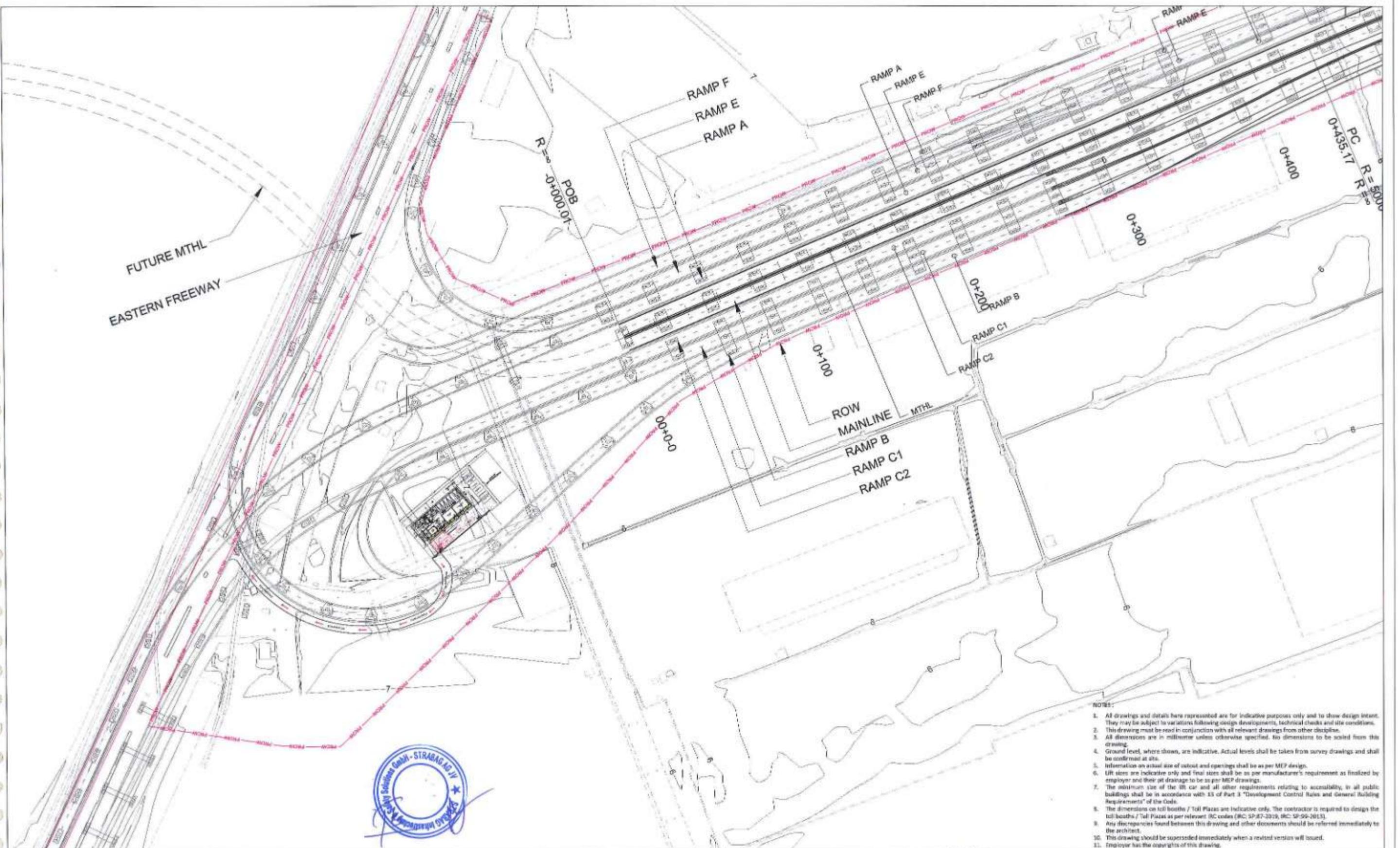
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE :-

**SHIVAJI NAGAR INTERCHANGE
PORTA CABIN (6NOS.)
ELEVATIONS**

DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SN-AR-11	A3	A



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 7. The minimum size of the lift car and all other requirements relating to accessibility, in all public buildings shall be in accordance with IS of Part 3 "Development Control Rules and General Building Requirements" of the Code.
 8. The dimensions on toll booths / Toll Plaza are indicative only. The contractor is required to design the toll booths / Toll Plaza as per relevant IRC codes (IRC:SP-47-2019, IRC:SP-99-2015).
 9. Any discrepancies found between this drawing and other documents should be referred immediately to the architect.
 10. This drawing should be superseded immediately when a revised version will issued.
 11. Employer has the copyrights of this drawing.

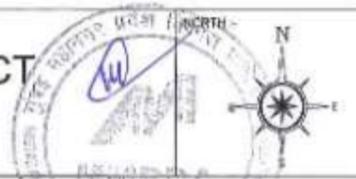
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DRAWN BY	FD
CHECKED BY	SM
APPROVED BY	THS



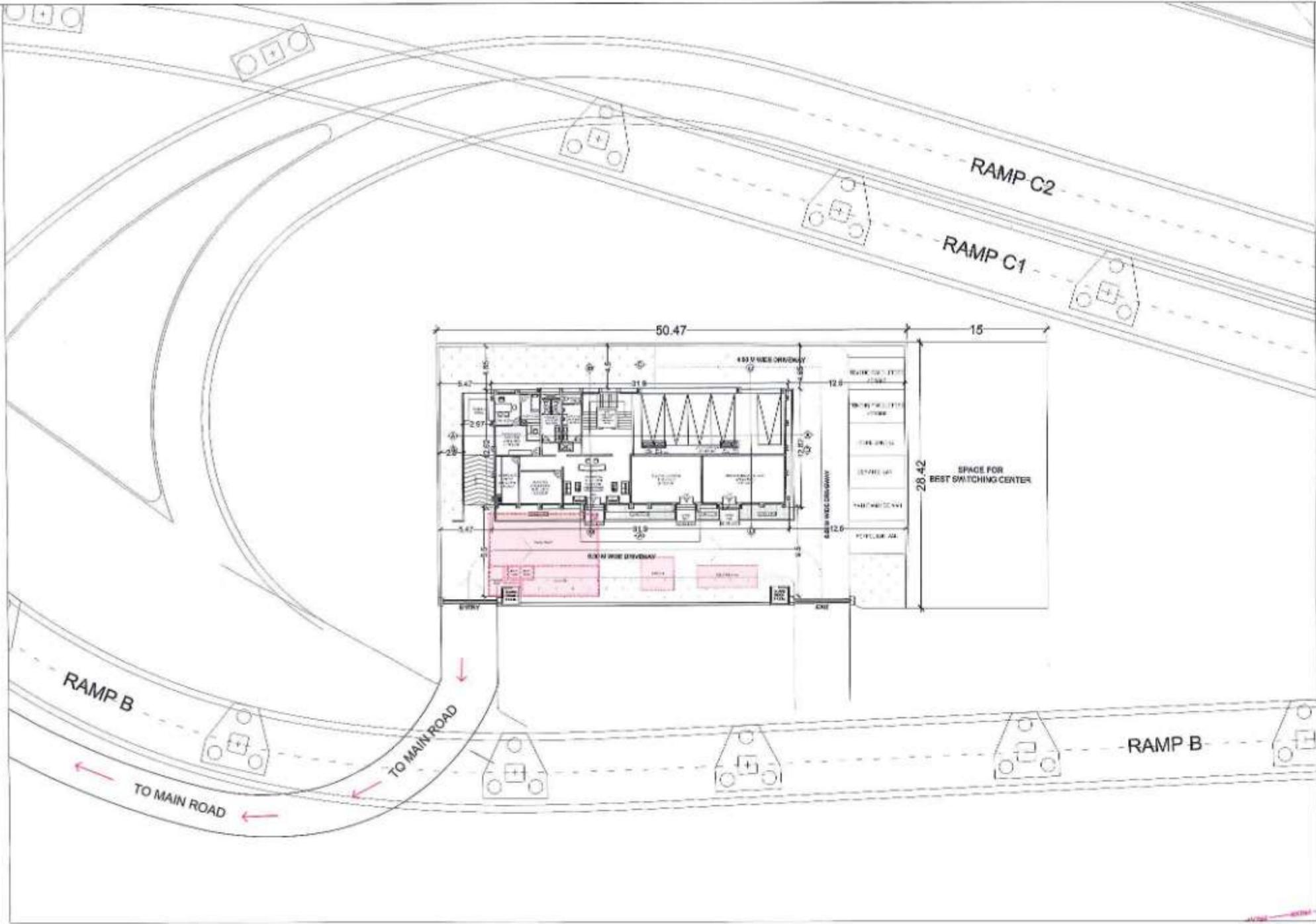
PROJECT:-

MUMBAI TRANS HARBOUR LINK PROJECT

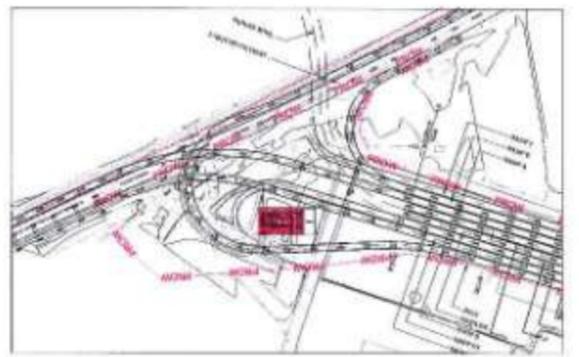
PACKAGE 4 - TENDER DRAWING



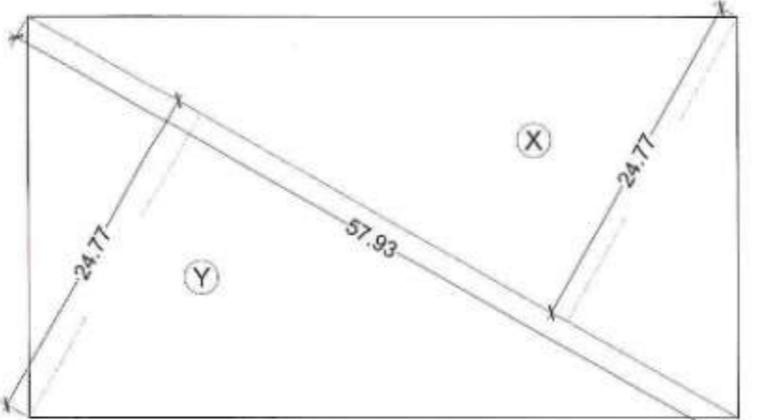
TITLE -			
SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER LOCATION PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SW-AR-01	A1	A



SITE PLAN SCALE - 1:250



KEY PLAN SCALE - 1:4000



PLOT AREA DIAGRAM SCALE - 1:250

PLOT AREA CALCULATION			
SR.NO.	TRIANGLE	SIZE	AREA (SQMT)
1.	X	1/2 X 57.93 X 24.77	717.47
2.	Y	1/2 X 57.93 X 23.78	688.79
TOTAL			1406.26
TOTAL PLOT AREA			1406.26

BUILD UP AREA STATEMENT		
SR.NO.	FLOOR	AREA (SQMT)
1.	GROUND FLOOR	294.05
2.	FIRST FLOOR	404.53
3.	SECOND FLOOR	278.01
4.	TERRACE FLOOR	27.40
TOTAL		1003.99
TOTAL BUILD UP AREA		1003.99

F.S.I. CALCULATION

TOTAL PLOT AREA = 1406.26 SQMT.
 FLOOR SPACE INDEX = 1.50
 PERMISSIBLE BUILD UP AREA = 2109.39 SQMT.
 PROPOSED BUILD UP AREA = 1003.99 SQMT.

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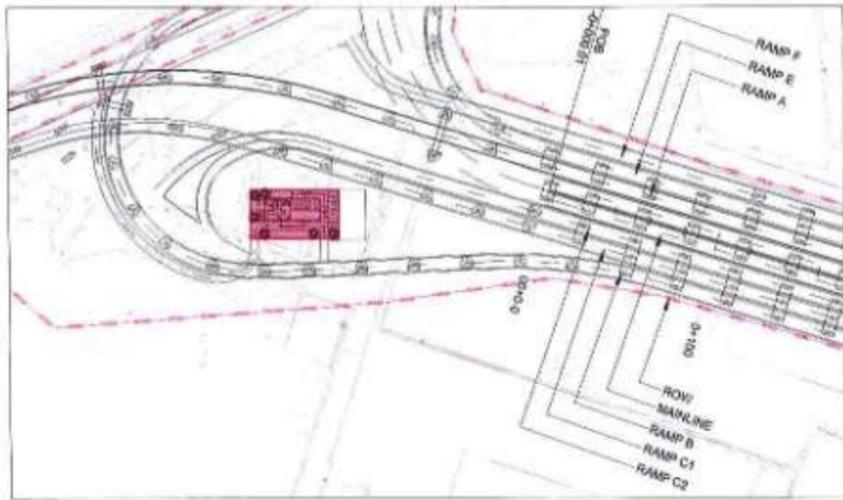
NAME	SON
DESIGNED BY	PO
CHECKED BY	SB
APPROVED BY	TKS



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

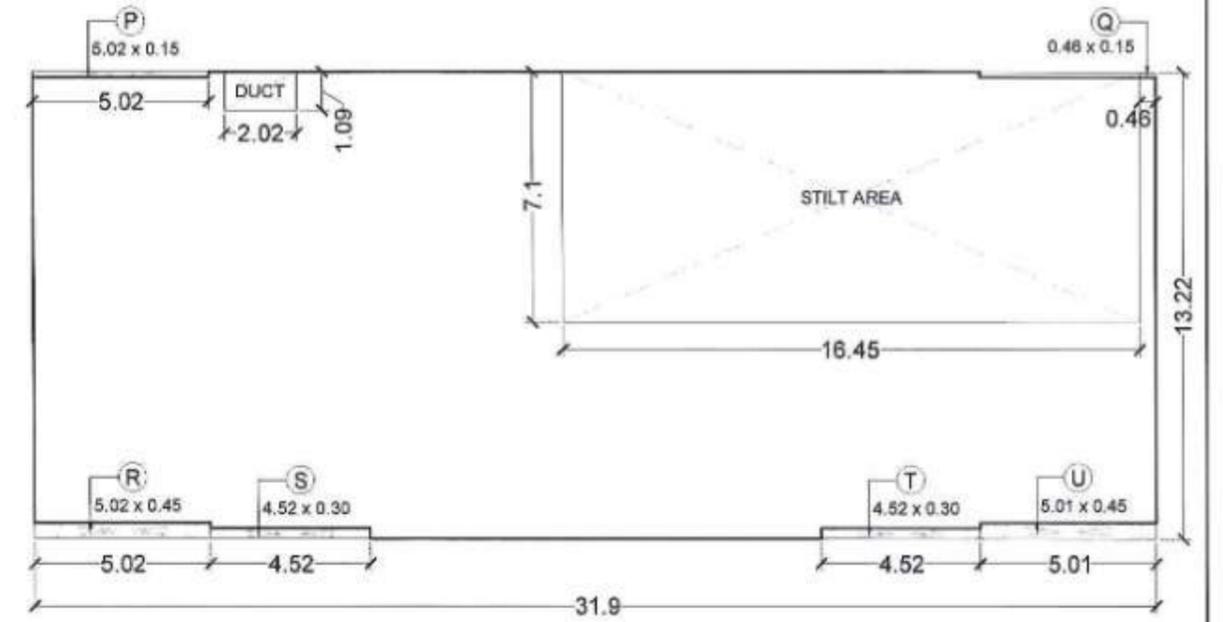


TITLE -			
SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER SITE PLAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SW-AR-02	A1	A

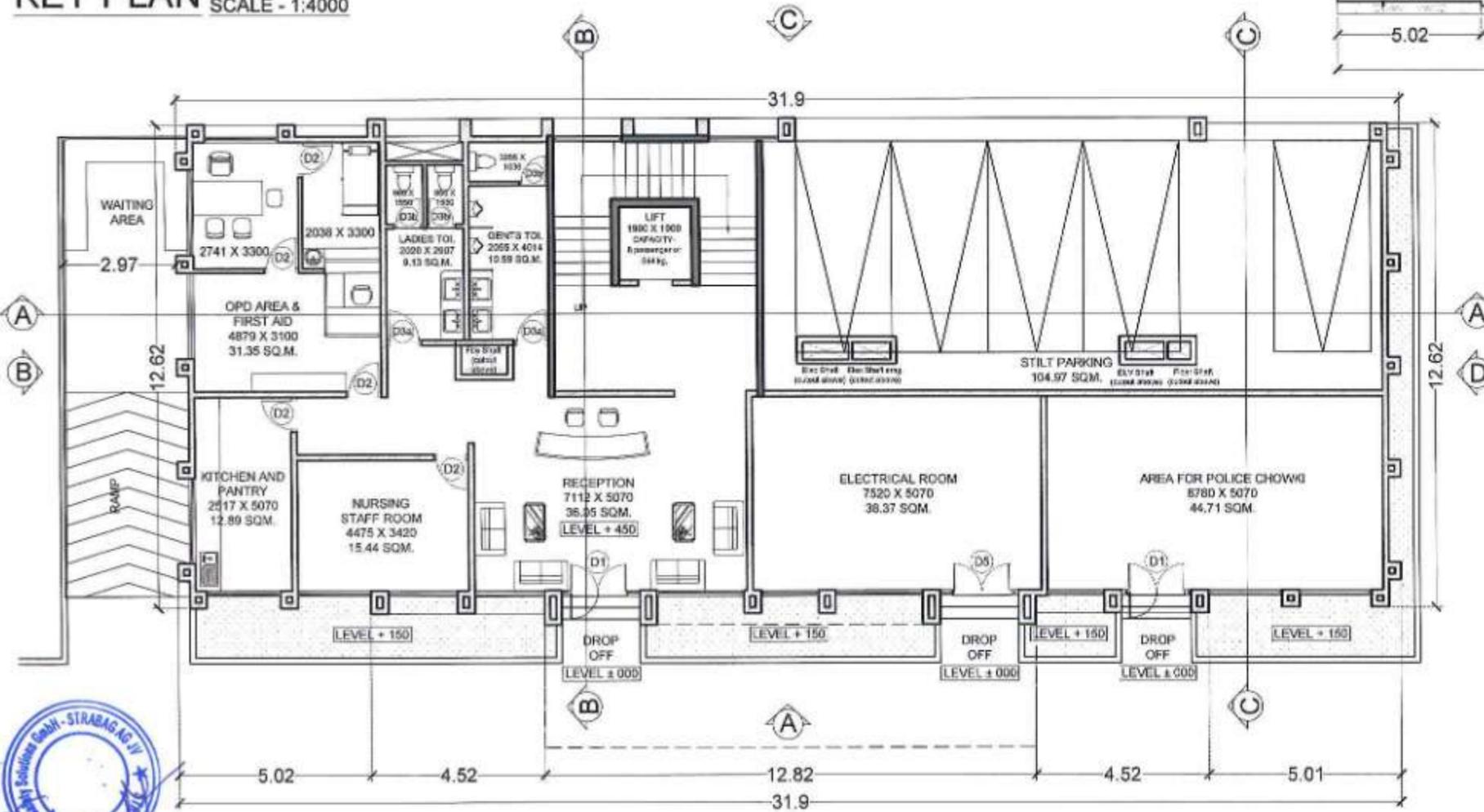


KEY PLAN SCALE - 1:4000

GROUND FLOOR AREA CALCULATION			
GR. FLR AREA (31.90 X 13.22) (a)			421.72 SQM.
DEDUCTION			
SR. NO.	BLOCK	SIZE	AREA (SQMT)
1.	DUCT	2.02 X 1.09	2.20
2.	STILT AREA	16.45 X 7.10	116.80
3.	P	5.02 X 0.15	0.75
4.	Q	0.46 X 0.15	0.69
5.	R	5.02 X 0.45	2.26
6.	S	4.52 X 0.30	1.35
7.	T	4.52 X 0.30	1.35
8.	U	5.01 X 0.45	2.25
TOTAL (b)			127.67
TOTAL GROUND FLOOR AREA (a-b)			294.05



AREA DIAGRAM (GROUND FLOOR) SCALE - 1:200



GROUND FLOOR PLAN SCALE - 1:150

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL	0.90 X 2.10
D3a	WOODEN FLUSH DOOR WITH LOUVERS	0.75 X 2.10
D3b	FLUSH DOOR	0.75 X 2.10
D4	WOODEN FLUSH DOOR	1.20 X 2.10
D5	AS SPECIFIED	1.50 X 2.10

NOTES:

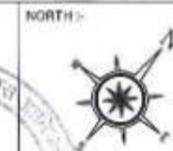
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NAME	SIGN
DRAWN BY: PD	
CHECKED BY: SB	
APPROVED BY: THG	

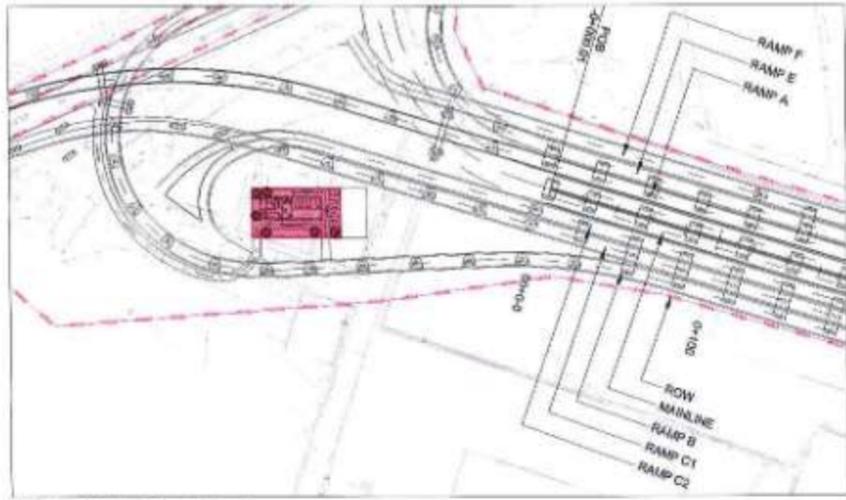


PROJECT: MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING



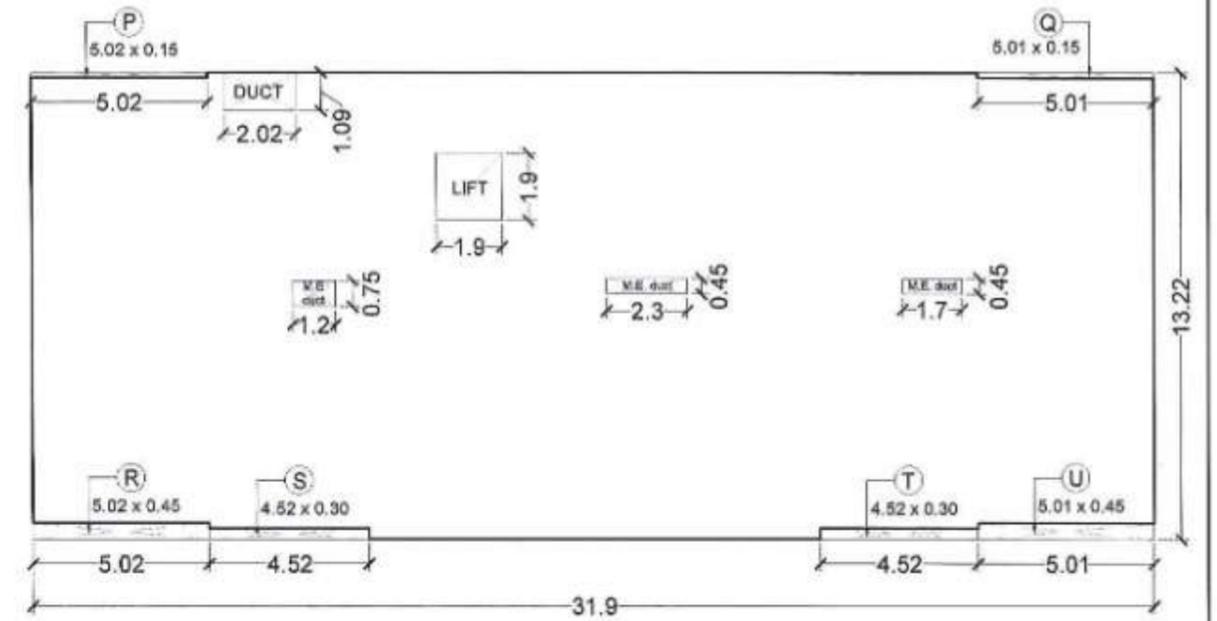
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DATE: 08.03.2021	DRAWING NO: SW-AR-03	PAPER SIZE: A3	REV: A





KEY PLAN SCALE - 1:4000

FIRST FLOOR AREA CALCULATION			
1ST FLR AREA (31.90 X 13.22) (a)		421.72 SQM.	
DEDUCTION			
SR.NO.	BLOCK	SIZE	AREA (SQMT)
1.	DUCT	2.02 X 1.09	2.20
2.	LIFT	1.90 X 1.90	3.61
3.	M.E. DUCT	1.20 X 0.75	0.90
4.	M.E. DUCT	2.30 X 0.45	1.04
5.	M.E. DUCT	1.70 X 0.45	0.77
6.	P	5.02 X 0.15	0.75
7.	Q	0.46 X 0.15	0.09
8.	R	5.02 X 0.45	2.26
9.	S	4.52 X 0.30	1.36
10.	T	4.52 X 0.30	1.36
11.	U	5.01 X 0.45	2.25
TOTAL (b)			17.19
TOTAL FIRST FLOOR AREA (a-b)		404.53	

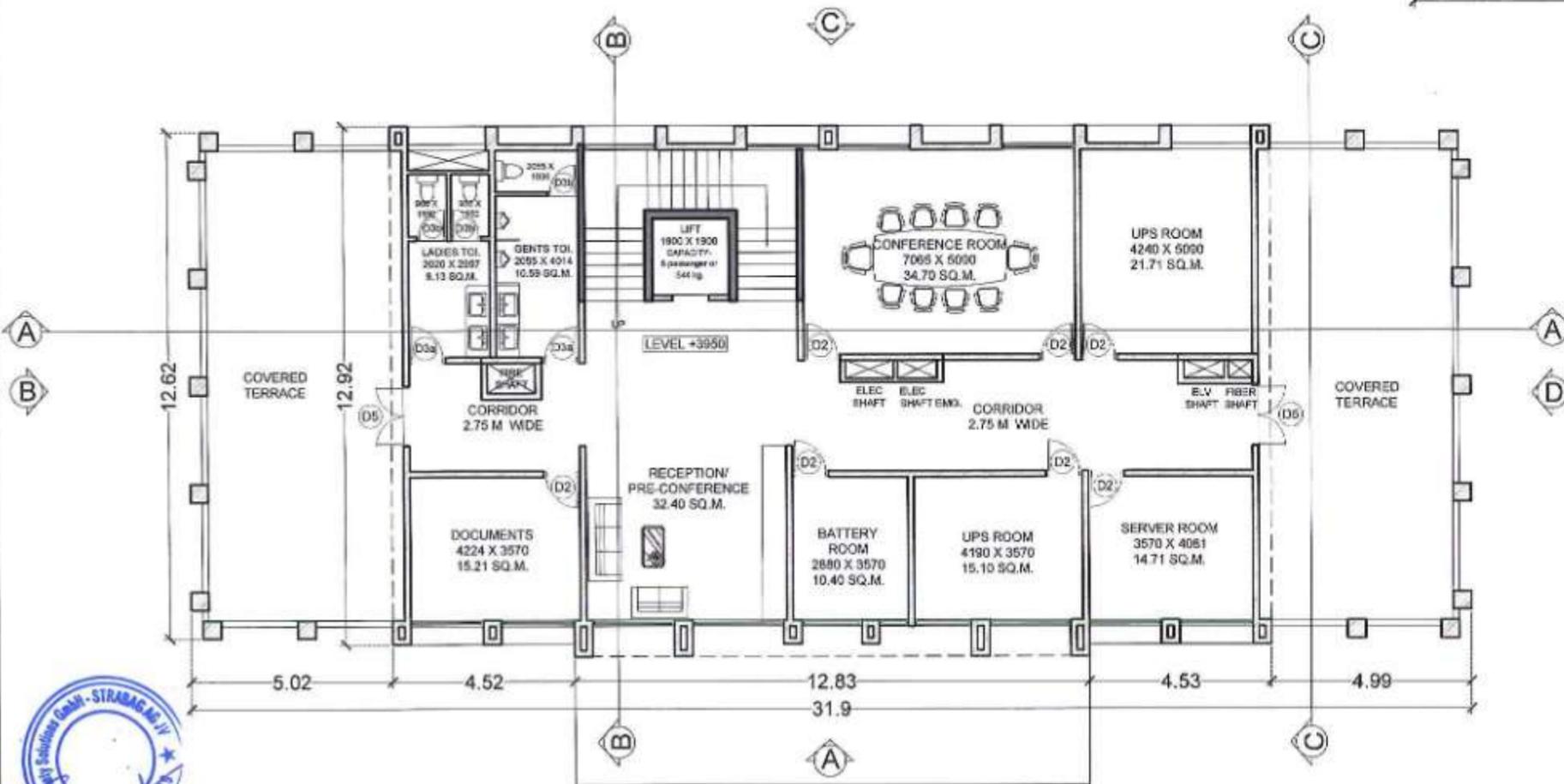


AREA DIAGRAM (FIRST FLOOR) SCALE - 1:200

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL	0.90 X 2.10
D3a	WOODEN FLUSH DOOR WITH LOUVERS	0.75 X 2.10
D3b	FLUSH DOOR	0.75 X 2.10
D4	WOODEN FLUSH DOOR	1.20 X 2.10
D5	AS SPECIFIED	1.50 X 2.10

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- Employer has the copyrights of this drawing.



FIRST FLOOR PLAN SCALE - 1:150



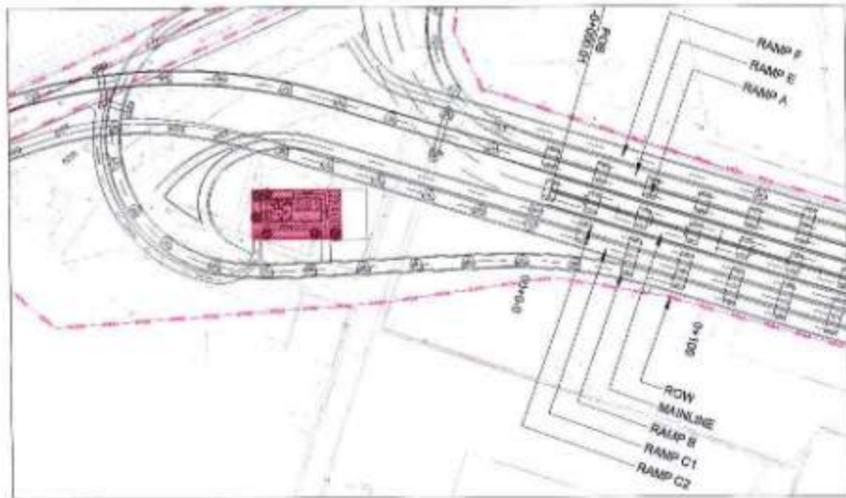
NAME	SIGN
DRAWN BY: RD	
CHECKED BY: SB	
APPROVED BY: TKG	



PROJECT: MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING

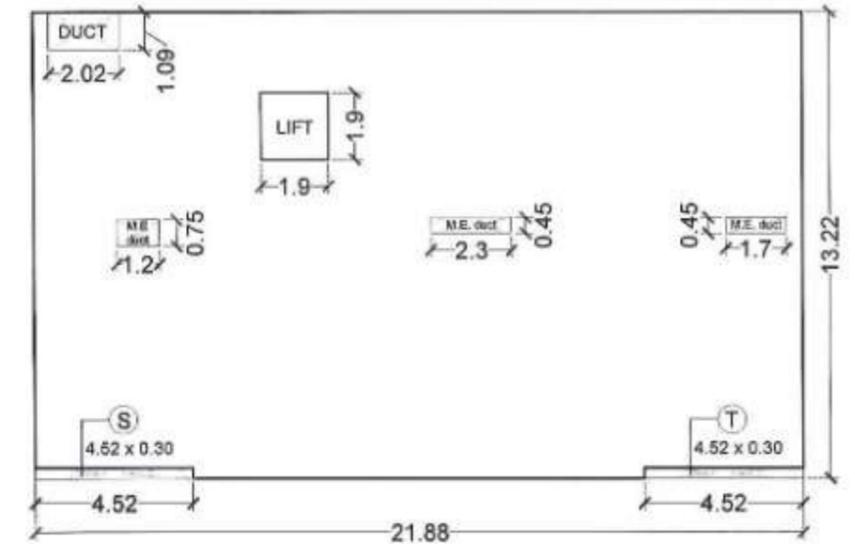
TITLE:		DATE:	
SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER FIRST FLOOR PLAN		08.03.2021	
DRAWING NO. SW-AR-04	PAPER SIZE A3	REV. A	





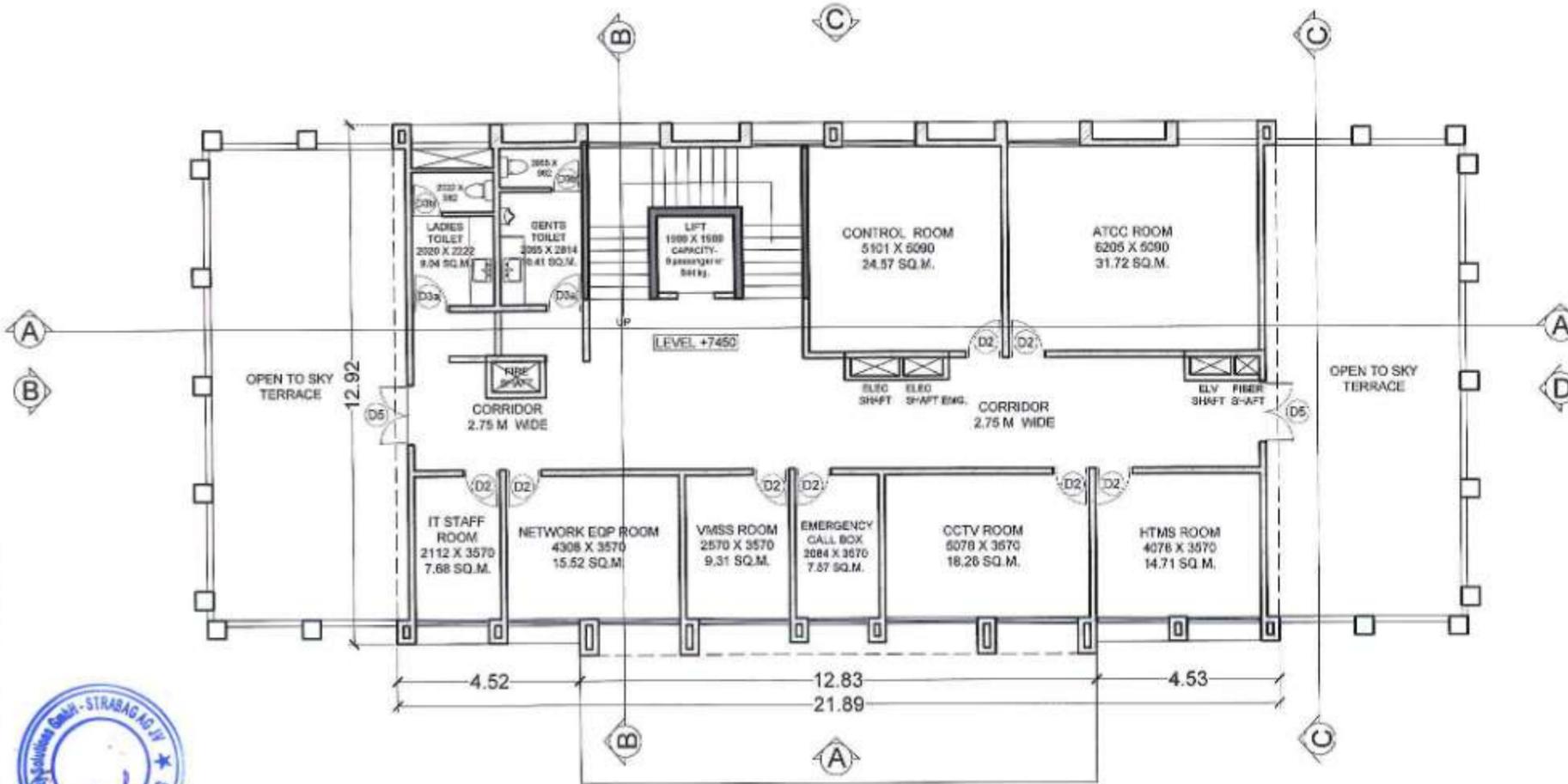
KEY PLAN SCALE - 1:4000

SECOND FLOOR AREA CALCULATION			
2ND FLR AREA (21.88 X 13.22) (a)			288.25 SQM.
DEDUCTION			
SR.NO.	BLOCK	SIZE	AREA (SQMT)
1.	LIFT	1.90 X 1.90	3.61
2.	DUCT	2.02 X 1.09	2.20
3.	M.E. DUCT	1.20 X 0.75	0.90
4.	M.E. DUCT	2.30 X 0.45	1.04
5.	M.E. DUCT	1.70 X 0.45	0.77
6.	S	4.52 X 0.30	1.36
7.	T	4.52 X 0.30	1.36
TOTAL (b)			11.24
TOTAL 2ND FLOOR AREA (a-b)			278.01



AREA DIAGRAM (SECOND FLOOR) SCALE - 1:200

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL	0.90 X 2.10
D3a	WOODEN FLUSH DOOR WITH LOUVERS	0.75 X 2.10
D3b	FLUSH DOOR	0.75 X 2.10
D4	WOODEN FLUSH DOOR	1.20 X 2.10
D5	AS SPECIFIED	1.50 X 2.10



SECOND FLOOR PLAN SCALE - 1:150

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- This drawing should be superseded immediately when a revised version will issued.
- Requirement, size and location of Fire Shaft shall be verified as per fire norms and statutory requirement.
- Employer has the copyrights of this drawing.



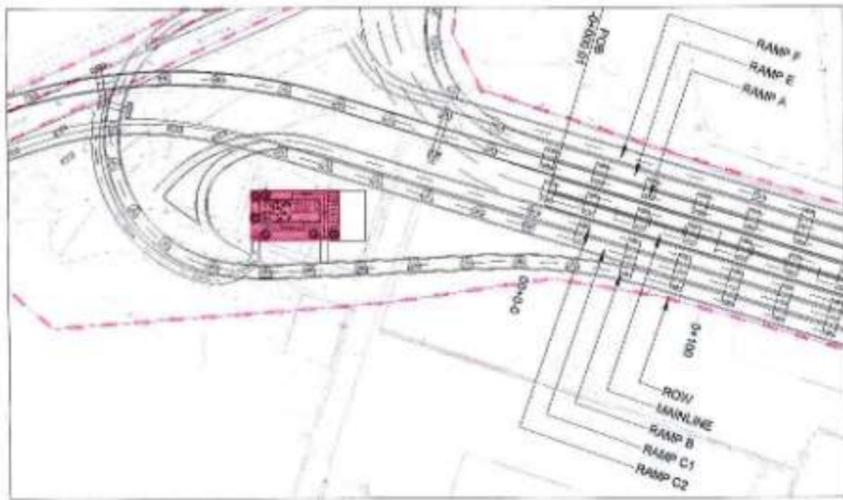
	NAME	SIGN
DRAWN BY	PO	
CHECKED BY	SB	
APPROVED BY	TKS	



PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



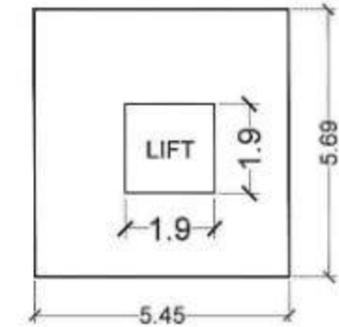
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DATE: 08.03.2021	DRAWING NO. SW-AR-05	PAPER SIZE: A3	REV. A



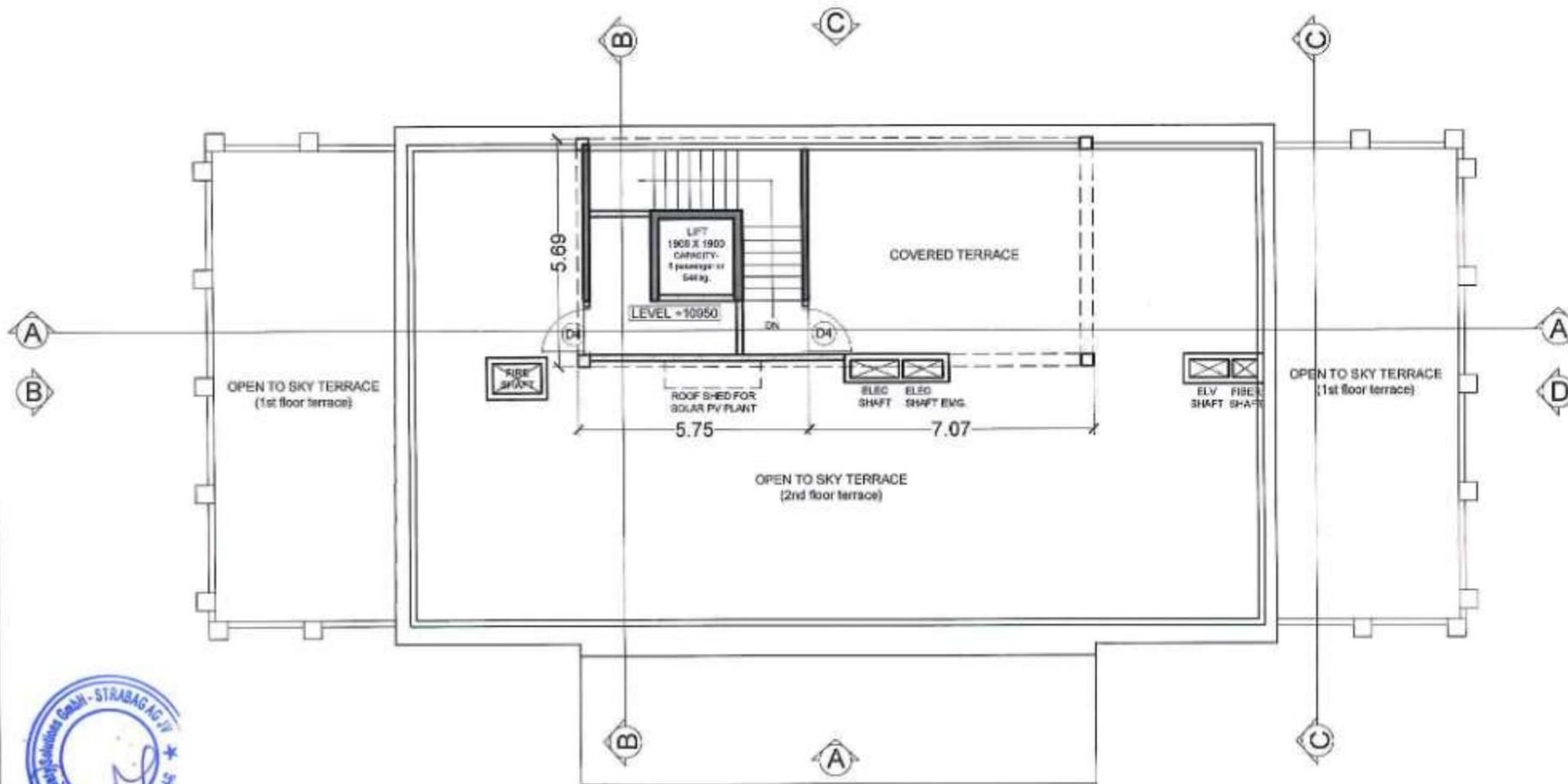
KEY PLAN SCALE - 1:4000

DOOR SCHEDULE		
DOOR NO.	TYPE	SIZE
D1	GLASS DOOR	1.50 X 2.40
D2	WOODEN FLUSH DOOR WITH VISION PANEL	0.90 X 2.10
D3a	WOODEN FLUSH DOOR WITH LOUVERS	0.75 X 2.10
D3b	FLUSH DOOR	0.75 X 2.10
D4	WOODEN FLUSH DOOR	1.20 X 2.10
D5	AS SPECIFIED	1.50 X 2.10

TERRACE FLOOR AREA CALCULATION			
TERRACE FLR AREA (5.45 X 5.69) (a)			31.01 SQM.
DEDUCTION			
SR.NO.	BLOCK	SIZE	AREA (SQMT)
1.	LIFT	1.90 X 1.90	3.61
TOTAL (b)			3.61
TOTAL TERRACE FLOOR AREA (a-b)			27.40



AREA DIAGRAM (TERRACE FLOOR) SCALE - 1:200



TERRACE FLOOR PLAN SCALE - 1:150

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- Employer has the copyrights of this drawing.



NAME	SIGN
DRAGBY	PG
CHECKED BY	SG
APPROVED BY	TKS



PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

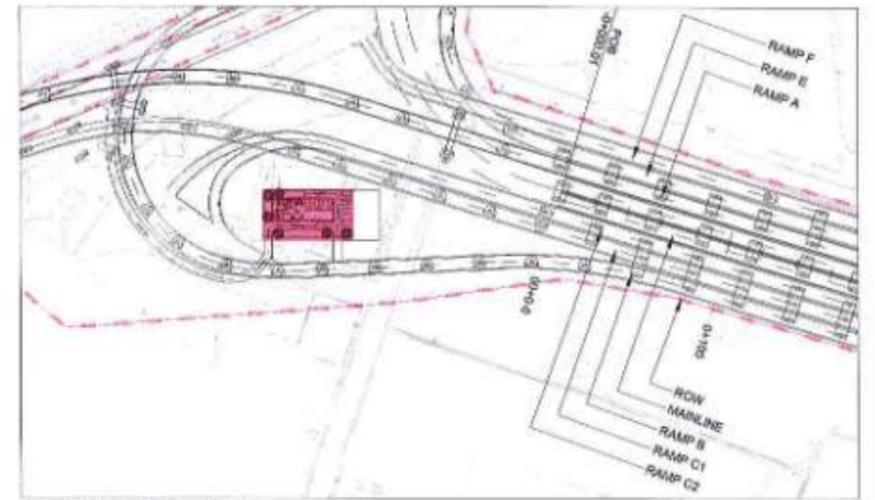
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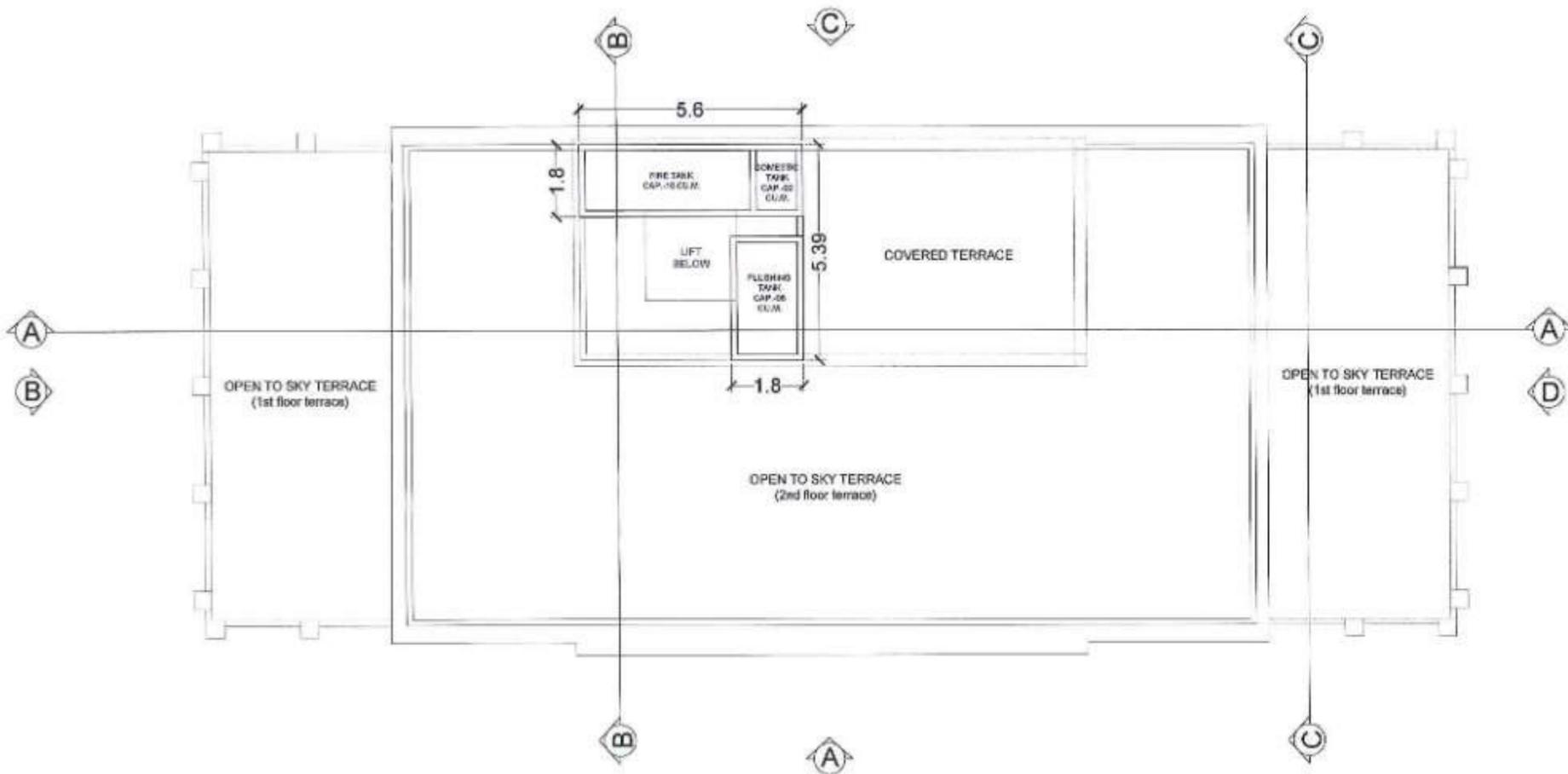
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SUB ADMINISTRATION AND COMMAND CONTROL CENTER
TERRACE FLOOR PLAN

DATE	DRAWING NO.	PAPER SIZE	REV.
08.03.2021	SW-AR-06	A3	A





KEY PLAN SCALE - 1:4000



OVERHEAD WATER TANK LEVEL PLAN SCALE - 1:150

NOTES:

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- Employer has the copyrights of this drawing.



NAME	SIGN
DRAWN BY FD	
CHECKED BY SR	
APPROVED BY YD	



PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
 PACKAGE 4 - TENDER DRAWING



TITLE -> SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER OVERHEAD WATER TANK LEVEL PLAN			
DATE 08.03.2021	DRAWING NO. SW-AR-07	PAPER SIZE A3	REV. A

IMPORTANT NOTE: ALL DRAWINGS ARE INDICATIVE



ELEVATION C

ELEVATION D



ELEVATION A

ELEVATION B

SCALE : 1: 150

NAME	SDH
DRAWN BY	
CHECKED BY	
APPROVED BY	

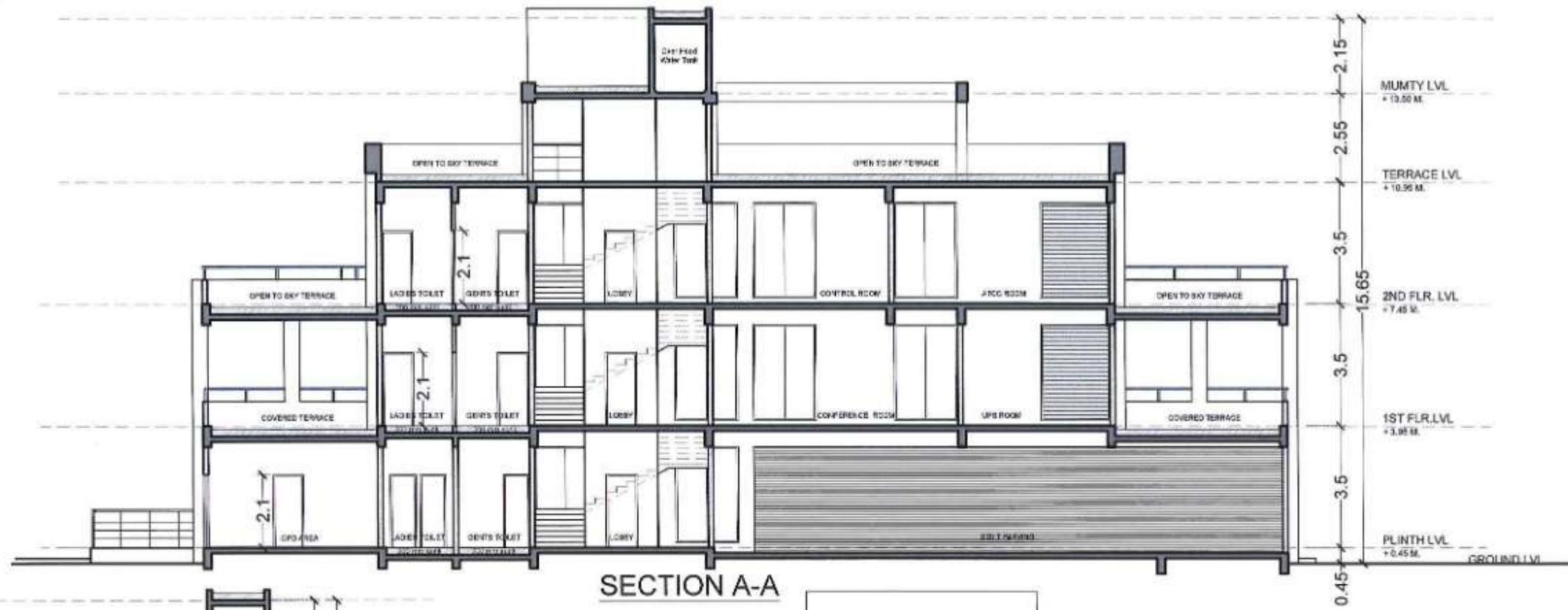


PROJECT >> MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

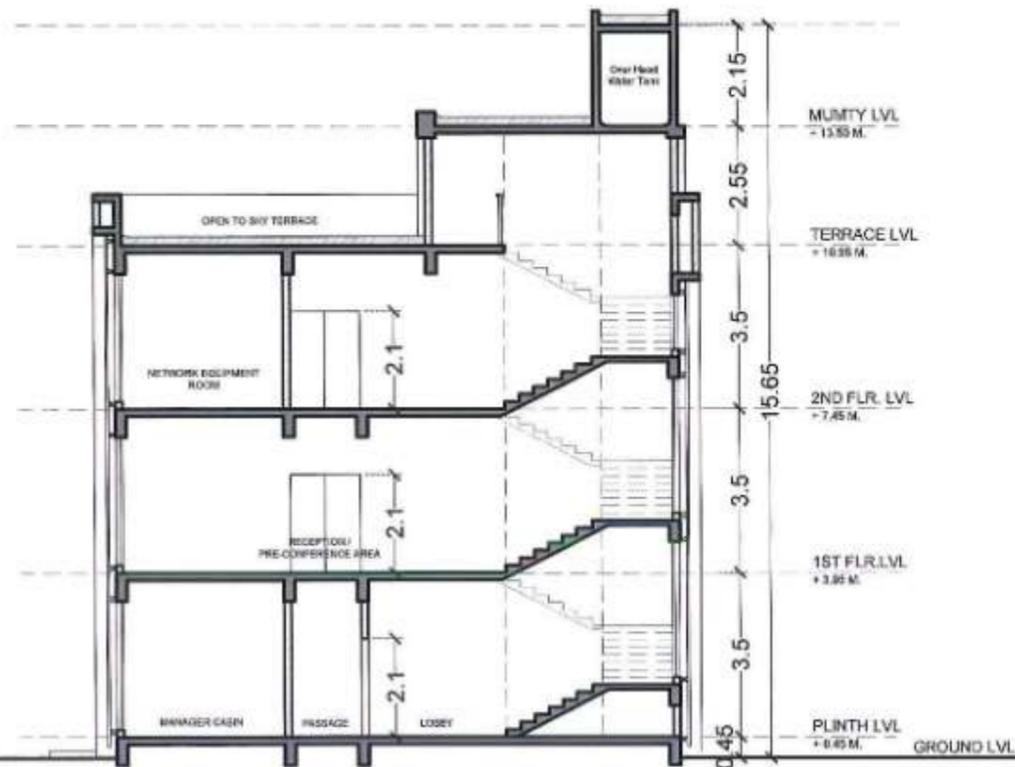


TITLE >> SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER ELEVATION A, B, C & D			
DATE 08.03.2021	DRAWING NO. SW-AR-08	PAPER SIZE A3	REV. A

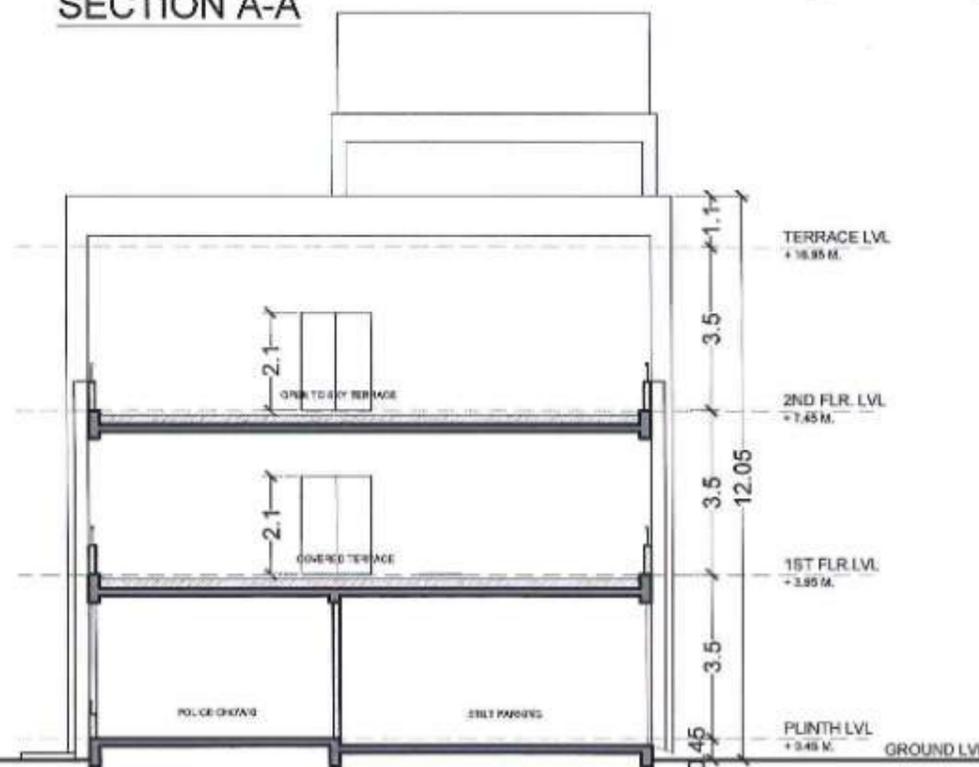
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SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

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SCALE : 1: 150

NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

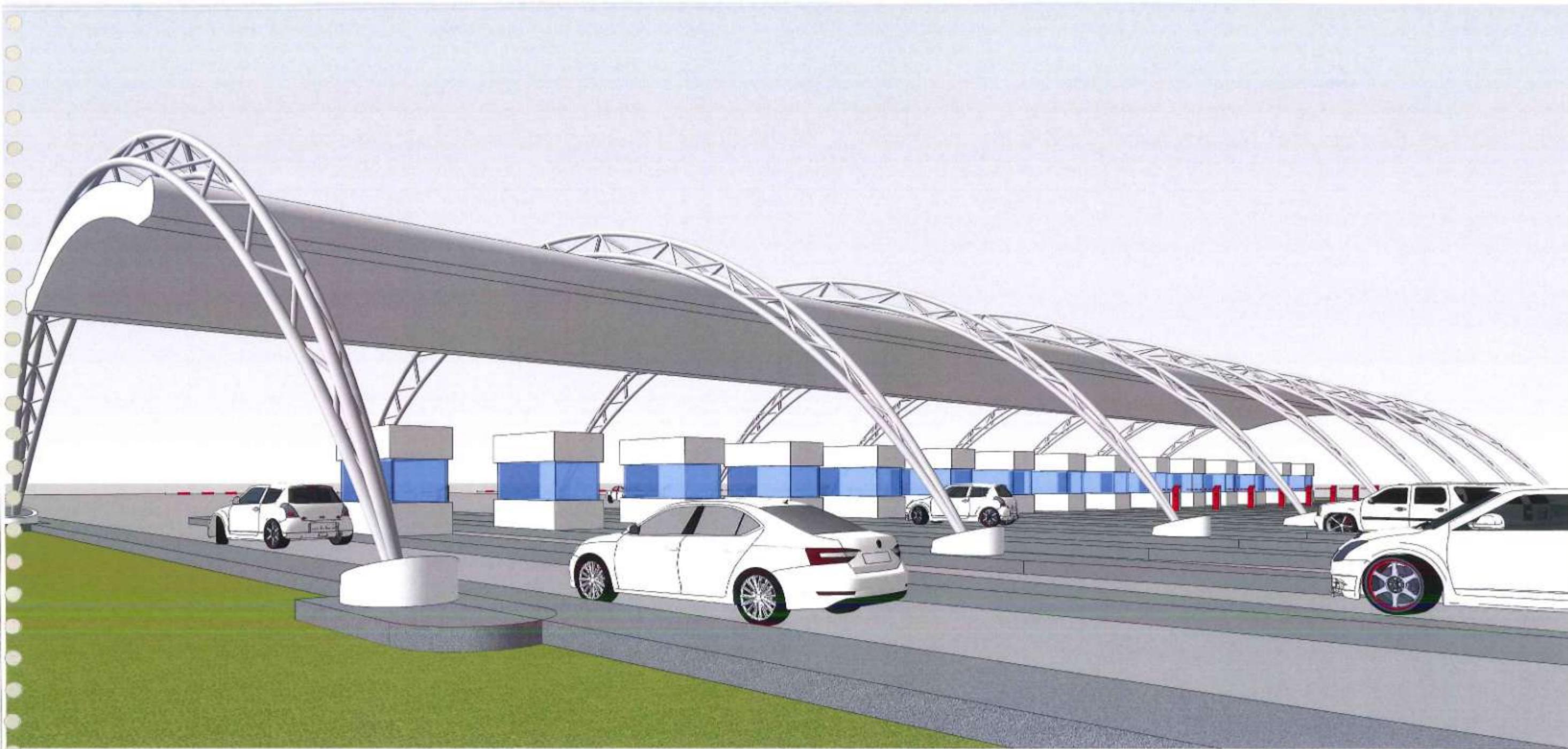
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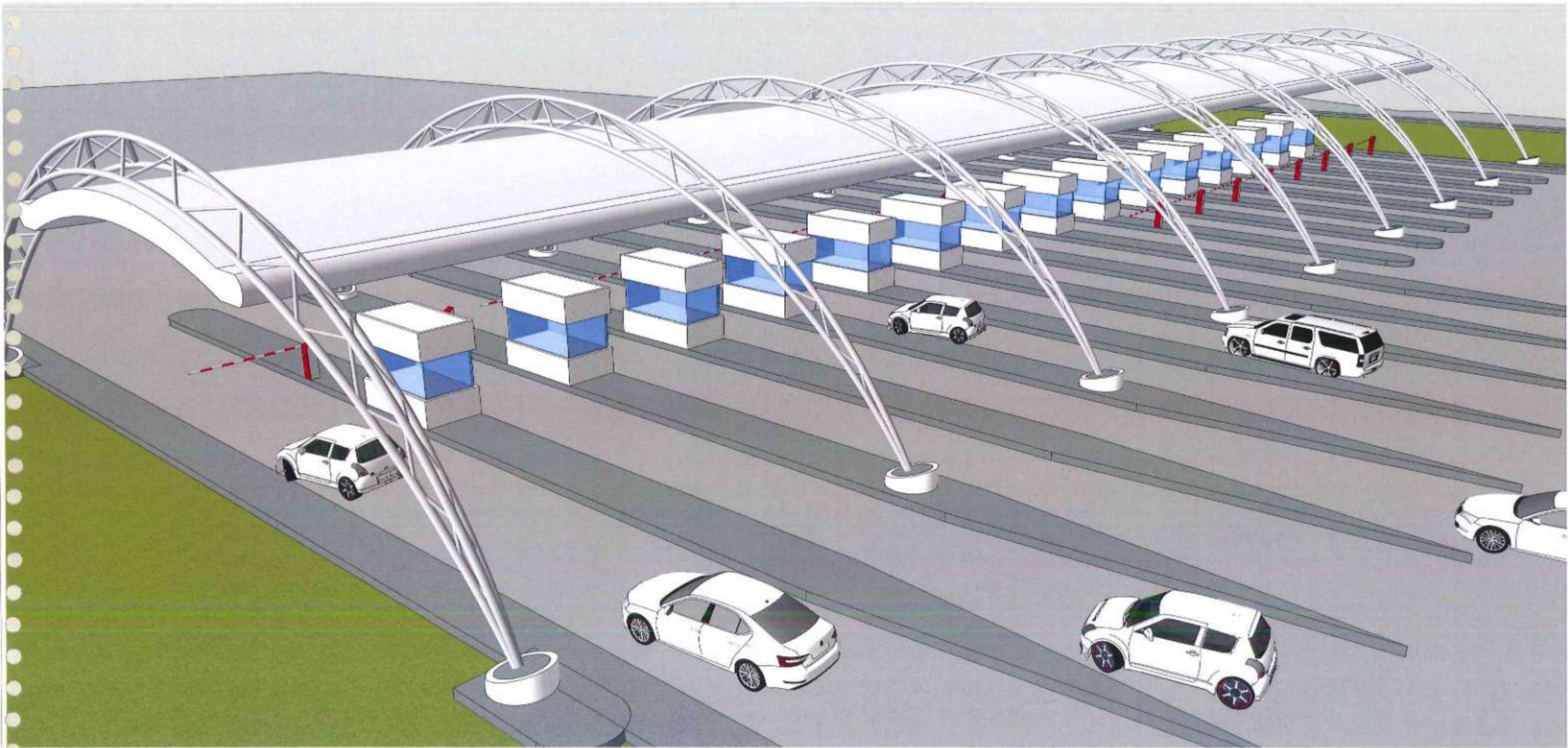


TITLE >

**SEWRI INTERCHANGE
SUB ADMINISTRATION AND COMMAND CONTROL CENTER
SECTION A-A, B-B & C-C**

DATE	DRAWING NO.	PAPER SIZE	REV
08.03.2021	SW-AR-09	A3	A









MAIN ADMIN BUILDING, GAVHAN		
GROUND FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	CAR PARKING	468.82
2	LOCKER ROOM	49.03
3	CASHIER ROOM	26.96
4	SECURED ENTRY ROOM	7.93
5	TOLL PASS/TICKETING ROOM	6.44
6	RECEPTION AREA	63.78
7	ENTRANCE AREA	21.28
8	VISITORS TICKETING ROOM	2.42
9	VISITORS ACCESS TO GALLERY AREA	4.15
10	CONSULTING ROOM	24.71
11	ELECTRICAL ROOM	51.55
12	TOILETS	10.35

PREVIOUS AREA	
468.82	
49.33	
26.71	
7.75	
6.31	
68.95	
21.27	
2.42	
3.78	
24.71	
33.65	
10.88	

FIRST FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	STAFF WORKSTATION AREA	125.95
2	ELECTRICAL ROOM	17.98
3	MICHAICAL ROOM	30.38
4	EXTEND OF MECHANICAL ROOM	21.9
5	UPS ROOM	23.38
6	BATTERY ROOM	23.93
7	TOILETS / SHOWER AREA	26.88
8	DORMETORY	39.34
9	KITCHEN - PANTRY ROOM	21.55
10	LADIES TOILET	17.82
11	GENTS TOILET	19.55
12	NURSING STAFF ROOM	21.48
13	SALE ROOM	21.33
14	MANAGER ROOM	47.79
15	DOCUMENTS ROOM	27.28

128.64
17.98
30.38
21.9
23.38
23.93
28.78
39.83
21.7
17.82
19.55
21.48
21.33
48.62
27.28

SECOND FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	TOLL CONTROL ROOM	114.25
2	PRE-CONFERENCE ROOM	9.75
3	RECEPTION AREA	27.78
4	CONFERENCE ROOM	49.15
5	STORE ROOM	11.92
6	ELECTRICAL ROOM	17.98
7	MECHANICAL ROOM	30.38
8	EXTEND OF MECHANICAL ROOM	21.9
9	CITY ITS, UPS ROOM	68.14
10	ITS CONTROL ROOM	50.2
11	STAFF ROOM	21.87
12	LADIES TOILET	17.82
13	GENTS TOILET	19.55
14	ITS STAFF ROOM	21.48

114.75
11.79
31.26
49.15
8.37
17.98
30.38
21.9
80.32
40.42
21.48
17.82
19.55
21.48

SR. NO.	ROOM	AREA (SQM)
15	NETWORK EQUIPMENT ROOM	21.33
16	SERVER ROOM	48.88
17	HTMS CONTROL ROOM	27.28

PREVIOUS AREA
21.33
48.88
27.28



THIRD FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	HTMS CONTROL ROOM	114.25
2	STORE ROOM	9.75
3	WAITING AREA	31.47
4	METEOROLOGICAL OBS. ROOM	49.15
5	STORE ROOM	8.36
6	ELECTRICAL ROOM	17.98
7	MECHANICAL ROOM	30.38
8	EXTEND OF MECHANICAL ROOM	21.9
9	ATCC ROOM	68.14
10	CCTV ROOM	50.2
11	STAFF ROOM	21.87
12	LADIES TOILET	17.82
13	GENTS TOILET	19.55
14	VMS ROOM	21.48
15	EMERGENCY CALL BOX ROOM	21.33
16	SERVER ROOM	48.88
17	DOCUMENTS ROOM	27.28

114.75
8.37
31.26
49.15
8.18
17.98
30.38
21.9
80.32
40.42
21.48
17.82
19.55
21.48
21.33
48.88
27.28

FOURTH FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	MMRDA MEETING ROOM	60.05
2	PRE-CONFERENCE ROOM	6.49
3	INFORMATIVE KIOSK	4.9
4	RECEPTION AREA	34.59
5	PRE-CONFERENCE ROOM	8.36
6	CONFERENCE ROOM	57.97
7	GALLERY	143.76

60.32
8.37
4.9
34.59
8.37
60.32
143



Handwritten signatures and initials in blue ink.



SUB ADMINISTRATION & CCC, SEWRI

GROUND FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	RECEPTION AREA	36.05
2	ELECTRICAL ROOM	38.37
3	POLICE CHOWKI AREA	44.71
4	PARKING AREA	104.97
5	GENTS TOILET	10.59
6	LADIES TOILET	9.13
7	OPD & FIRST AID ROOM	31.35
8	KITCHEN & PANTRY ROOM	12.89
9	NURSING STAFF ROOM	15.44

PREVIOUS AREA	
35.6	
38.13	
44.51	
107.47	
10.4	
9.2	
31.71	
12.75	
15.3	

FIRST FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	RECEPTION / PRE-CONFERENCE AREA	32.4
2	BATTERY ROOM	10.4
3	UPS ROOM	15.1
4	SERVER ROOM	14.71
5	UPS ROOM	21.71
6	CONFERENCE ROOM	34.7
7	GENTS TOILET	10.59
8	LADIES TOILET	9.13
9	DOCUMENT AREA	15.21

25.77	
10.28	
14.96	
9.4	
17.52	
35.99	
10.4	
9.2	
14.58	

SECOND FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	IT STAFF ROOM	7.68
2	NETWORK EQUIPMENT ROOM	15.52
3	VMSS ROOM	9.31
4	EMERGENCY CALL BOX	7.57
5	CCTV ROOM	18.26
6	HTMS ROOM	14.71
7	ATCC ROOM	31.72
8	CONTROL ROOM	24.57
9	GENTS TOILET	10.41
10	LADIES TOILET	9.04

9.39	
17.37	
8.87	
9.02	
27.68	
14.69	
22.82	
41.19	
8.11	
6.78	








SUB ADMINISTRATION & CCC, SHIVAJINAGAR

GROUND FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	RECEPTION AREA	38.6
2	AUDIT ROOM	8.63
3	DOCUMENTS AREA	9.53
4	CASHIER ROOM	12.75
5	VAULT AREA	8.14
6	ARMOURED VEHICLE GARAGE	22.89
7	PARKING	81.25
8	GENTS TOILET	10.59
9	LADIES TOILET	9.13
10	OPD & FIRST AID ROOM	31.35
11	KITCHEN & PANTRY ROOM	17.66
12	NURSING STAFF ROOM	9.53
13	MANAGER ROOM	18.59

PREVIOUS AREA
35.6
8.55
9.39
12.67
7.96
22.88
81.25
10.4
9.2
31.71
17.52
9.4
18.45

FIRST FLOOR		
SR. NO.	ROOM	AREA (SQM)
1	RECEPTION / PRE-CONFERENCE AREA	33.25
2	CONFERENCE ROOM	32.48
3	SERVER ROOM	15.77
4	UPS/ ELECTRICAL ROOM	31.18
5	BATTERY ROOM	10.82
6	GENTS TOILET	5.67
7	LADIES TOILET	3.65
8	IT STAFF ROOM	13.24

25.77
35.99
12.93
39.26
10.69
5.57
3.57
13.1

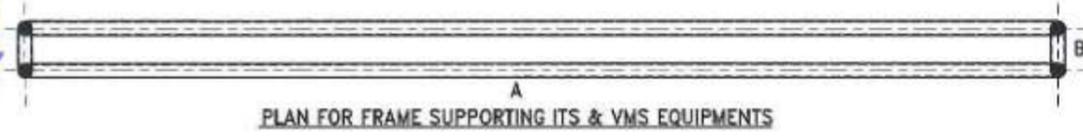
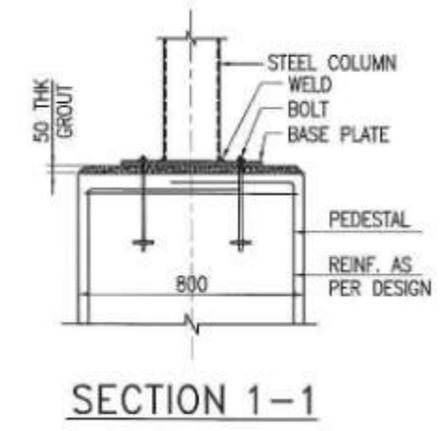
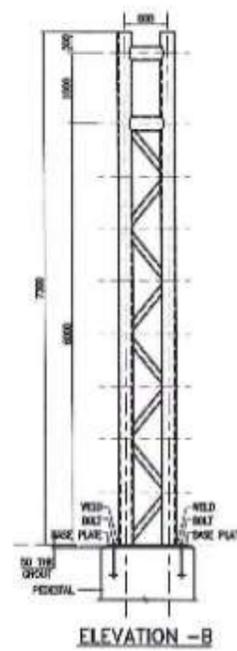
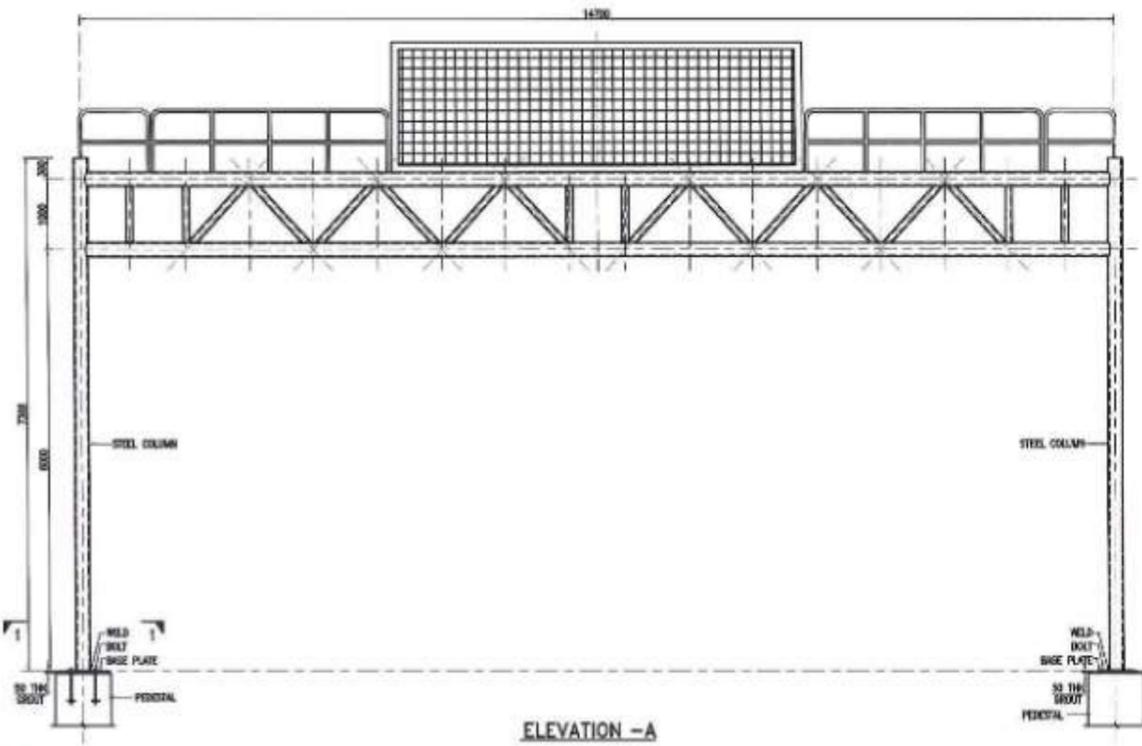
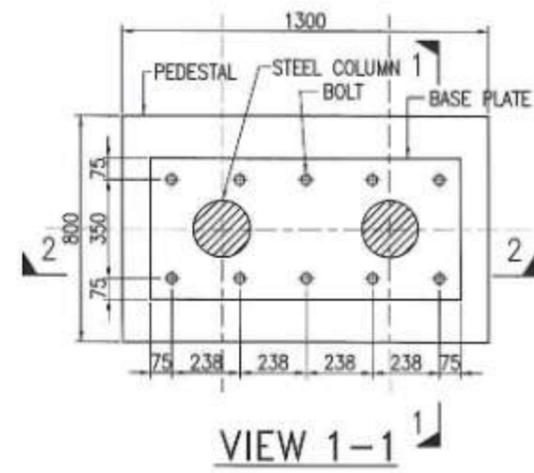
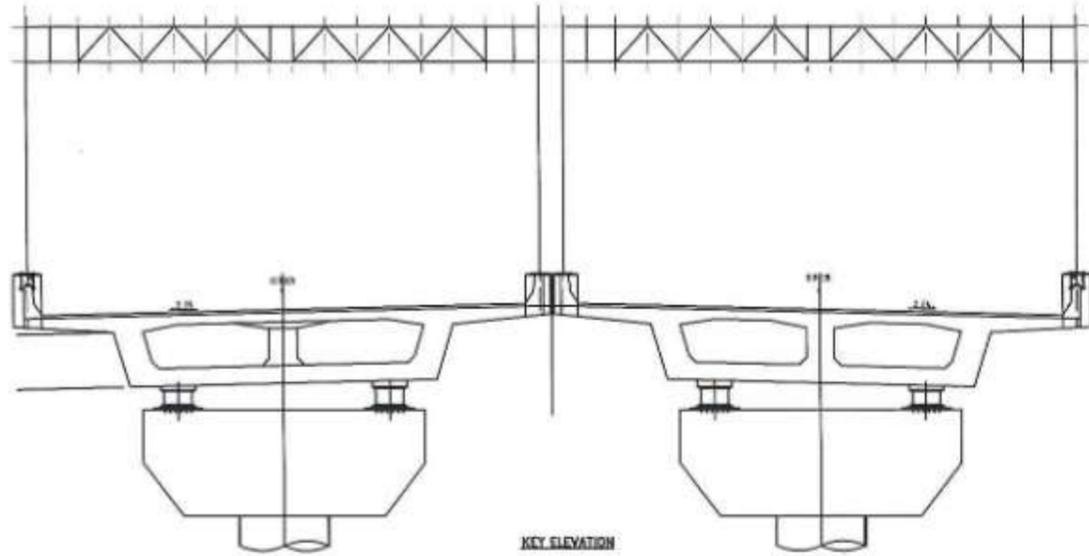


INDEX OF DRAWINGS

TITLE	DRAWING NOS.
INDEX OF ITS DRAWING	P4 - ITS - 001
ITS DRAWING	
ITS EQUIPMENT - VMS FRAMEWORK & INSTALLATION DETAILS	P4 - ITS - 002
ITS EQUIPMENT - MET, ECB, CCTV & ATCC INSTALLATION DETAILS	1 TO 2 P4 - ITS - 003
STANDARD SINGLE LANE LAYOUT	P4 - ITS - 004



NAME	DESIGN	PROJECT >	NORTH >	TITLE >	
DRAWN BY		MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING		INDEX OF ITS DRAWING	
CHECKED BY					
APPROVED BY					
 MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY		DATE: 10.04.2021	DRAWING NO. P4 - ITS - 001	PAPER SIZE: A3	REV. 0



- NOTE:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS
 2. DO NOT SCALE THIS DRAWING. FOR DIMENSIONS & ORIENTATION REFER ARCHITECT'S DRAWING.
 3. ALL STRUCTURAL STEEL SHALL CONFORM TO IS-2062
 4. CRASH BARRIER DESIGN TO BE DESIGNED AS PER RELEVANT IS CODES
 5. DESIGN TO BE CHECKED FOR BRIDGE VIBRATIONS AND MOVEMENTS AS PER RELEVANT IS CODES
 6. ALL DIMENSIONS ARE IN MM U.N.O.

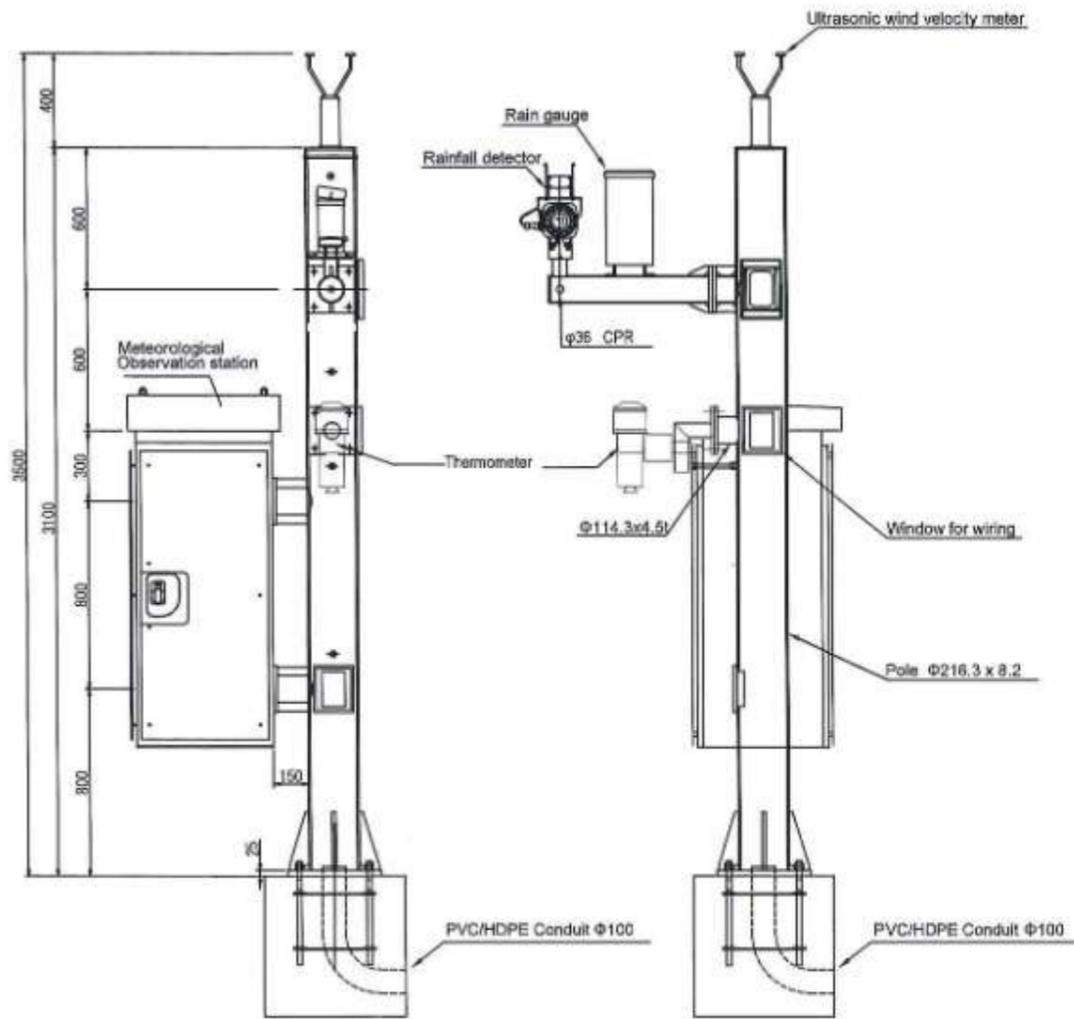
NAME	SOB
DRAWN BY	PO
CHECKED BY	SP
APPROVED BY	TKS



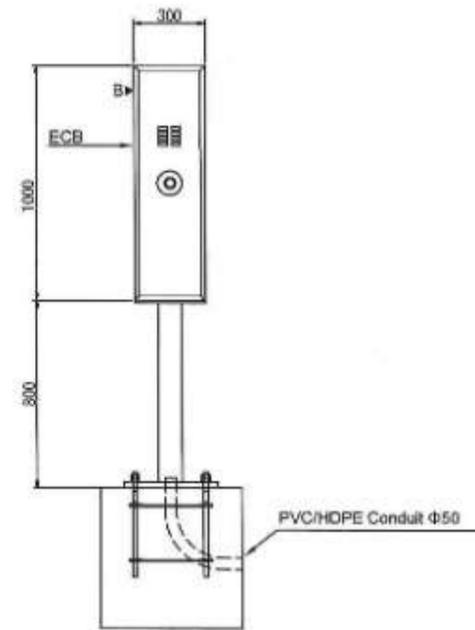
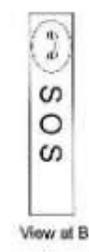
PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING

NORTH -

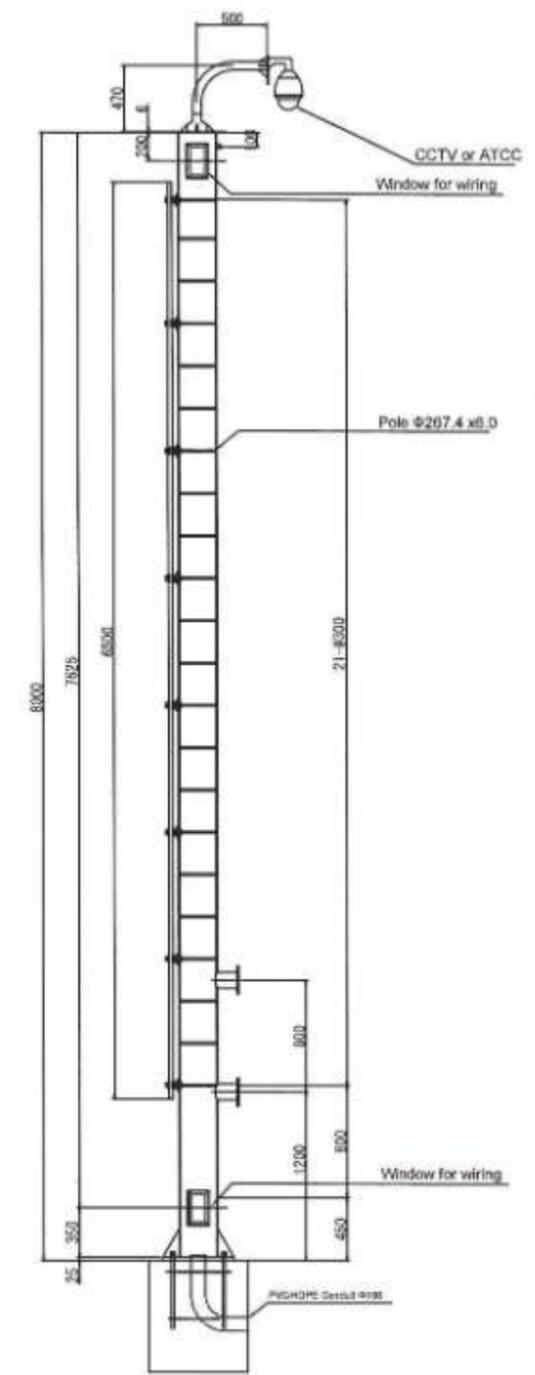
TITLE - ITS EQUIPMENT - VMS FRAMEWORK & INSTALLATION DETAILS			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ITC-002	A1	0



METEOROLOGICAL DATA SYSTEM



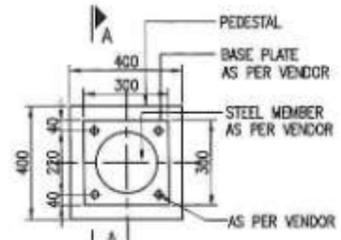
EMERGENCY CALL BOX



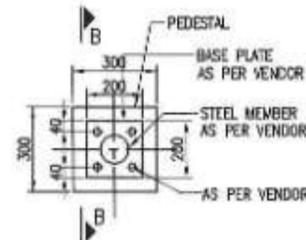
CCTV & AUTOMATIC COUNTER CLASSIFIER



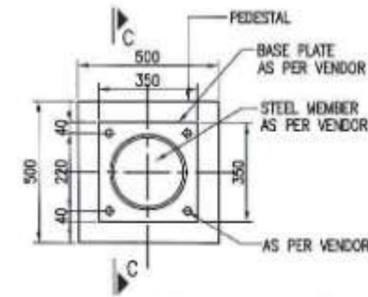
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CHECKED BY	SN													
APPROVED BY	TKS													
DATE	10.04.2021	DRAWING NO.	P4-ITC-003 (1 OF 2)	PAPER SIZE	A3	REV.	0							



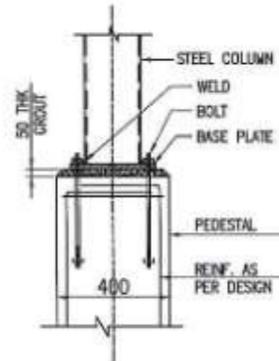
TYPICAL BASE PLATE DETAIL
FOR MET RAIN GAUGE
& WIND VELOCITY METER
SCALE 1:25



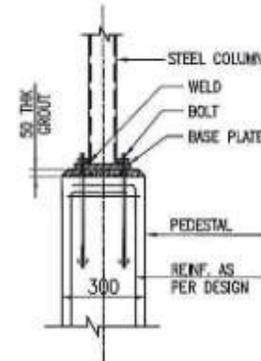
BASE PLATE DETAIL
FOR ECB SUPPORT STRUCTURE
SCALE 1:25



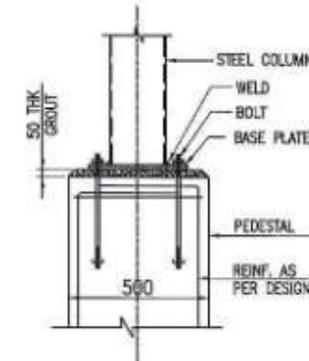
BASE PLATE DETAIL
FOR CCTV UNIT & LIGHTING POLE SUPPORT STRUCTURE
SCALE 1:25



SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25



SECTION C-C
SCALE 1:25

NOTE:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS
2. DO NOT SCALE THIS DRAWING. FOR DIMENSIONS & ORIENTATION REFER ARCHITECT'S DRAWING.
3. ALL STRUCTURAL STEEL SHALL CONFORM TO IS-2002
4. CRASH BARRIER DESIGN TO BE DESIGNED AS PER RELEVANT IS CODES
5. DESIGN TO BE CHECKED FOR BRIDGE VIBRATIONS AND MOVEMENTS AS PER RELEVANT IS CODES
6. ALL DIMENSIONS ARE IN MM U.N.O.
7. SLEEVES TO BE PROVIDED AT CONNECTION PLATE LOCATIONS TO ACCOUNT FOR BRIDGE MOVEMENTS AND VIBRATIONS



NAME	SIGN
DRAWN BY: PD	
CHECKED BY: SH	
APPROVED BY: TR	



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT -

MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH -



TITLE -

ITS EQUIPMENT - MET, ECB, CCTV & ATCC INSTALLATION DETAILS

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ITC-003 (2 OF 2)	A3	0

GENERAL TOLERANCES

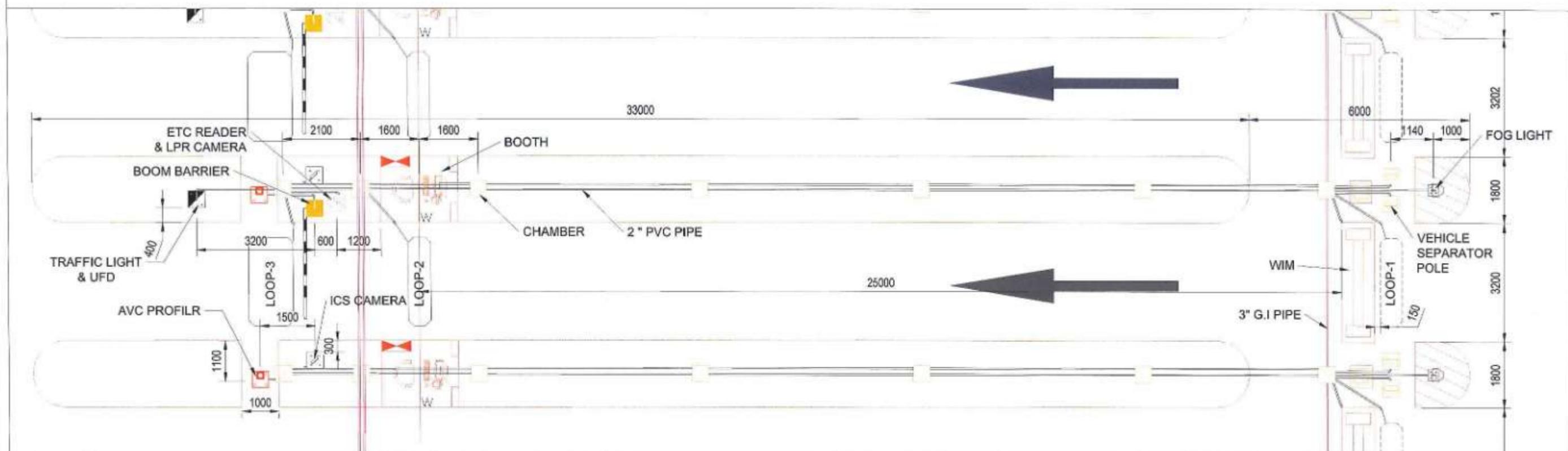
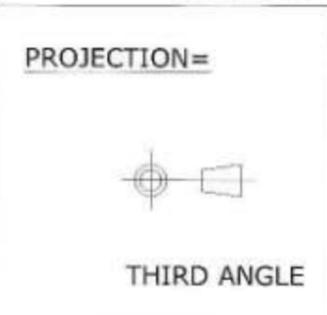
DIMENSIONS	TOLERANCE
0-10	+/- 0.1
11-50	+/- 0.2
51-100	+/- 0.3
101-500	+/- 0.5
501-1000	+/- 0.8
1001-3000	+/- 1.2
Above 3000	+/- 2.0

THE COPY RIGHT OF THESE DRAWINGS AND OF ALL ENCLOSE ENTRUSTED TO THE RECIPIENT PERSONALLY REMAINS THE EXCLUSIVE PROPERTY OF KENT ITS (I) PVT. LTD, WITHOUT OUR WRITTEN CONSENT THEY MAY NOT BE COPIED OR REPRODUCED OR DELIVERED OR MADE KNOWN TO THIRD PARTIES.

- 1) ALL DIMENSIONS ARE IN MM.
- 2) PLEASE FEEL FREE TO REVERT IN CASE OF ANY QUERY.
- 3) DIMENSIONS IN THE DRAWING ARE PROPOSED.
- 4) ALL CORNERS AND EDGES ARE REMOVED.

NOTE-

- 1) ISLAND HEIGHT REQUIRED MINIMUM 150 mm TO MAXIMUM 610 mm.
- 2) REQUIRED CONCRETE IN LANE.



OTHER SIZES

SR.NO.	DESCRIPTION	SIZE LxW (mm)	SYMBOL
A	BOOTH	3200 x 1600	
B	LOOP - 1 & 2.	2400x900	
C	LOOP - 3	2400x1200	
D	2" PUC. PIPE	O.D = 50	
E	3" G.I PIPE	O.D = 76	
F	MS WIM		
G	CHAMBER	600x600x600	
H	FOG LIGHT		

FOUNDATION SIZES

SR.NO.	DESCRIPTION	SIZE HxWxD (mm)	SYMBOL	FOUNDATION BOLT PITCH (mm)
1	ETC ANTENNA TOWER	460x460x600		240x240
2	BOOM BARRIER	460x460x600		180x180
3	AVC PROFILER	460x460x600		240x240
4	CAMERA TOWER	460x460x600		240x240
5	TRAFFIC LIGHT, UFD	460x460x600		240x240
6	VEHICLE SEPARATOR POLE	460x460x600		240x240



NAME	BOX
DRAWN BY	
CHECKED BY	
APPROVED BY	

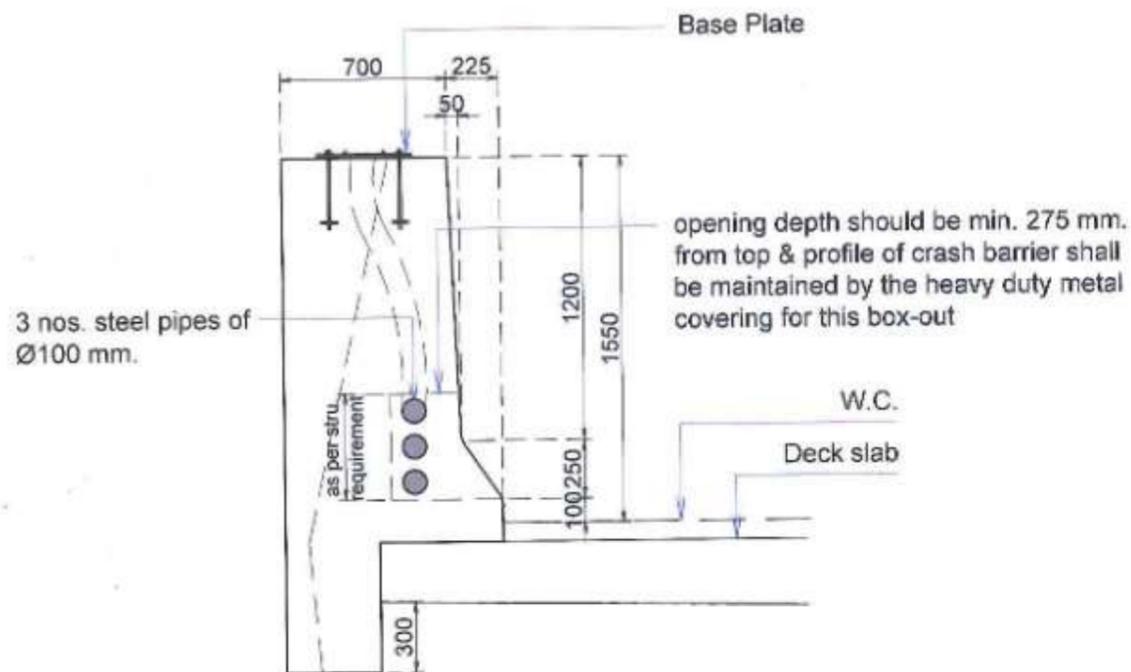


PROJECT:- **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**

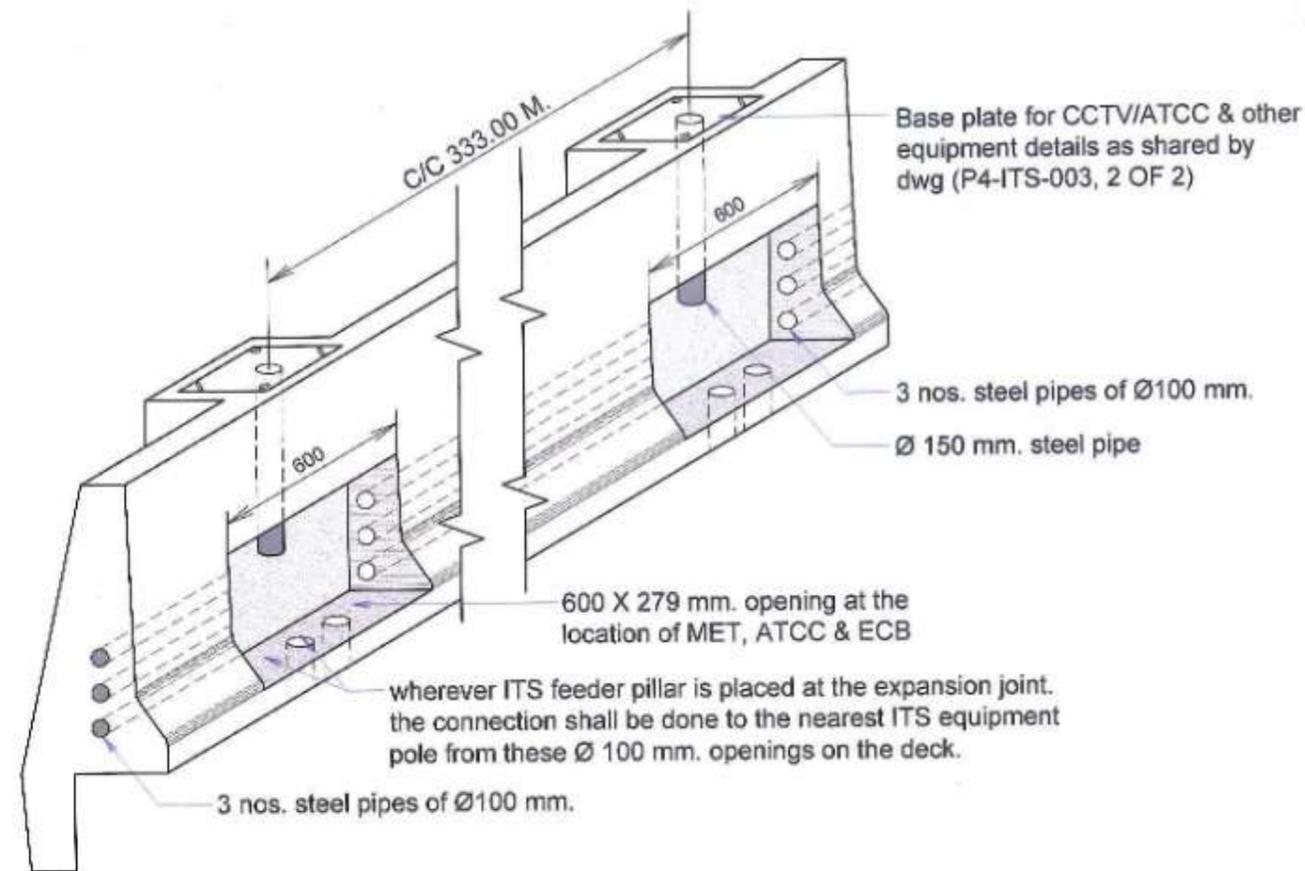


TITLE:- **STANDARD SINGLE LANE LAYOUT**

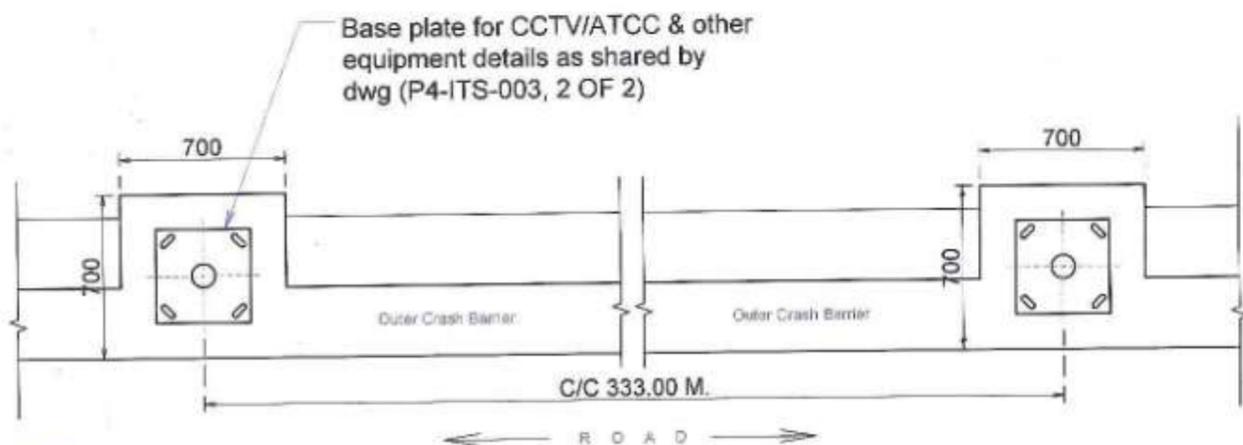
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ITC-004	A1	0



DETAIL OF OUTER BARRIER AT ITS EQUIPMENT



ITS EQUIPMENT INSTALLATION DETAIL ALONG WITH CONDUITS AND CABLE ACCESS OPENING.



PLAN OUTER CRASH BARRIER

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NAME	SIG
DRAWN BY	
CHECKED BY	
APPROVED BY	



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MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT:-
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE:- CRASH BARRIER DETAILS FOR ITS EQUIPMENT INSTALLATION	
DATE 22.03.2021	DRAWING NO. P4-ELE-007
PAPER SIZE A3	REV. 1

INDEX OF DRAWINGS

TITLE	DRAWING NOS.
INDEX OF ELECTRICAL DRAWING	P4 - ELE - 001
ELECTRICAL BACKBONE SYSTEM (1 TO 3)	P4 - ELE - 002
CRASH BARRIER DETAILS FOR ELECTRICAL LIGHTING POLE	P4 - ELE - 003
DETAILS OF LIGHT POLE MOUNTING	P4 - ELE - 003 (a)
GENERAL ARRANGEMENT OF ELECTRICAL TRANSFORMER PLATFORM	P4 - ELE - 004
GENERAL ARRANGEMENT OF WALKWAY AT EXPANSION JOINT FOR ELECTRICAL TRANSFORMER PLATFORM	P4 - ELE - 005
CABLE TRAY DETAIL AND CABLE TRAY OPENINGS DETAILS IN DIAPHRAGM WALL	P4 - ELE - 006
SLD	
11KV RING NETWORK BLOCK DIAGRAM	P4 - ELE - 007
11KV RING NETWORK WITH SUBSTATION DISTRIBUTION	P4 - ELE - 008
MAIN ADMINISTRATION AND COMMAND CONTROL CENTER ELECTRICAL DISTRIBUTION (SS -17)	P4 - ELE - 009
SUB ADMINISTRATION AND COMMAND CONTROL CENTER ELECTRICAL DISTRIBUTION (SS -1)	P4 - ELE - 010
ADMINISTRATION CENTER AT INTERCHANGE ELECTRICAL DISTRIBUTION (SS -14)	P4 - ELE - 011
GAVHAN MAIN TOLL PLAZA G+4, 2 TOILET BLOCKS, 2 WEIGH MACHINE ZONE, 16 TOLL BOOTHS	
GROUND FLOOR PLAN OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 012
FIRST FLOOR PLAN OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 013
SECOND FLOOR PLAN OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 014
THIRD FLOOR PLAN OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 015
FOURTH FLOOR PLAN OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 016
LMR LEVEL PLAN OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 017

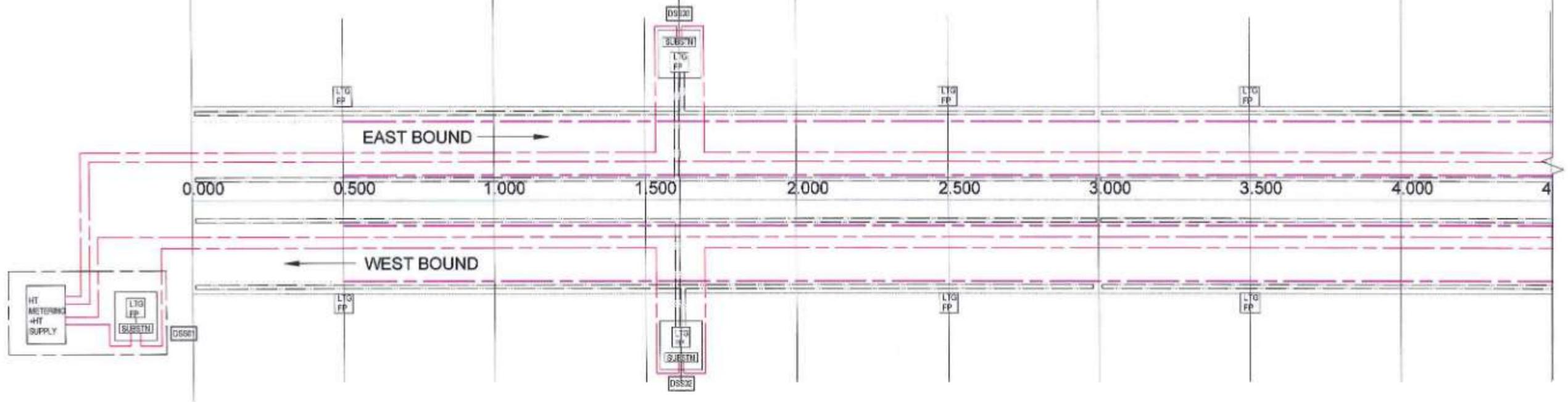
TITLE	DRAWING NOS.
SEWRI INTERCHANGE G+2 SUB ADMIN & CCC, BEST SWITCH	
GROUND FLOOR PLAN OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 018
FIRST FLOOR PLAN OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 019
SECOND FLOOR PLAN OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 020
TERRACE FLOOR PLAN OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 021
SHIVAJINAGAR INTERCHANGE G+1 CCC, 8 PORTA CABINS, 12 TOILET BLOCKS, 12 WEIGH MACHINE ZONE, 3+3+3+3+4+6 TOLL BOOTHS	
GROUND FLOOR PLAN OF ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 022
FIRST FLOOR PLAN OF ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 023
TERRACE FLOOR PLAN OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT	P4 - ELE - 024
TYPICAL PLAN OF PORTA CABINS (6NOS.) EQUIPMENT LAYOUT	P4 - ELE - 025
MAIN TOLL PLAZA EQUIPMENT LAYOUT (1 & 2)	P4 - ELE - 026
LIGHTENING PROTECTION & EARTHING SYSTEM (1 & 2)	P4 - ELE - 027
TYPICAL INSTALLATION DETAILS OF ELECTRICAL SYSTEM (1 TO 7)	P4 - ELE - 028



	MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY	PROJECT :- MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH :- 	TITLE :- INDEX OF ELECTRICAL DRAWING
DRAWN BY CHECKED BY APPROVED BY				DATE: 22.03.2021 DRAWING NO. P4 - ELE - 001 PAPER SIZE: A3 REV. 0

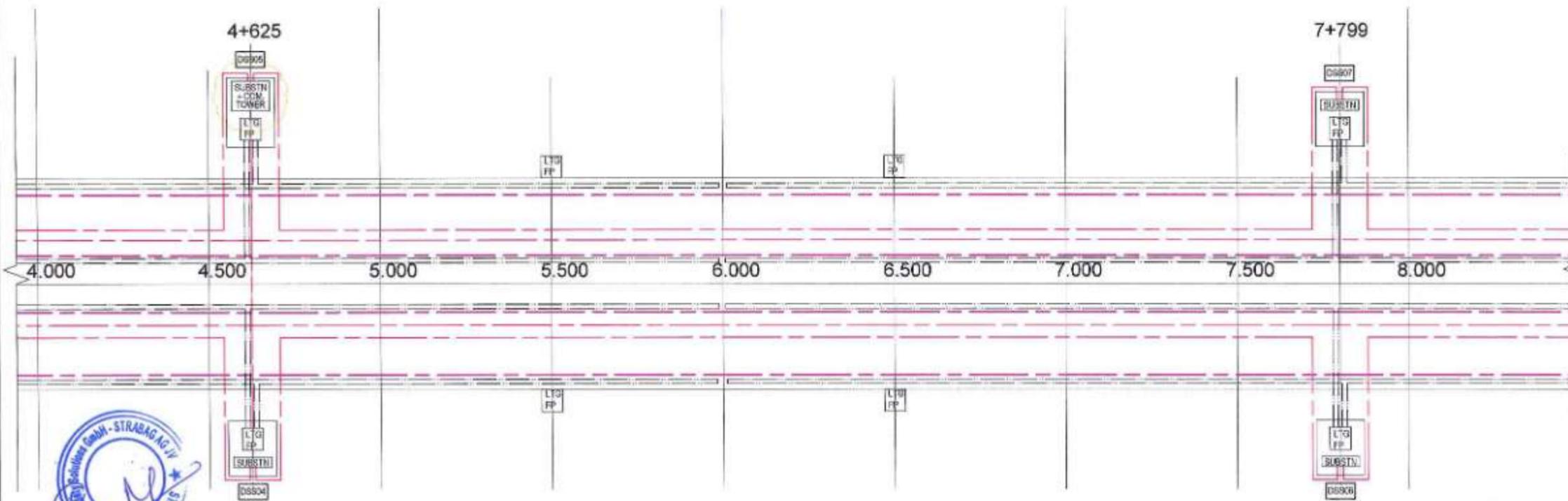
Sewri IC
0+000

1+615



4+625

7+799



Legend

- 11KV HT POWER CABLE
- 415V LV POWER CABLE
- - - - - POLE MOUNTED LIGHTING
- - - - - CRASH BARRIER EMBEDDED LIGHTING
- [LTO FP] LIGHTING FEEDER PILLAR

- NOTES:**
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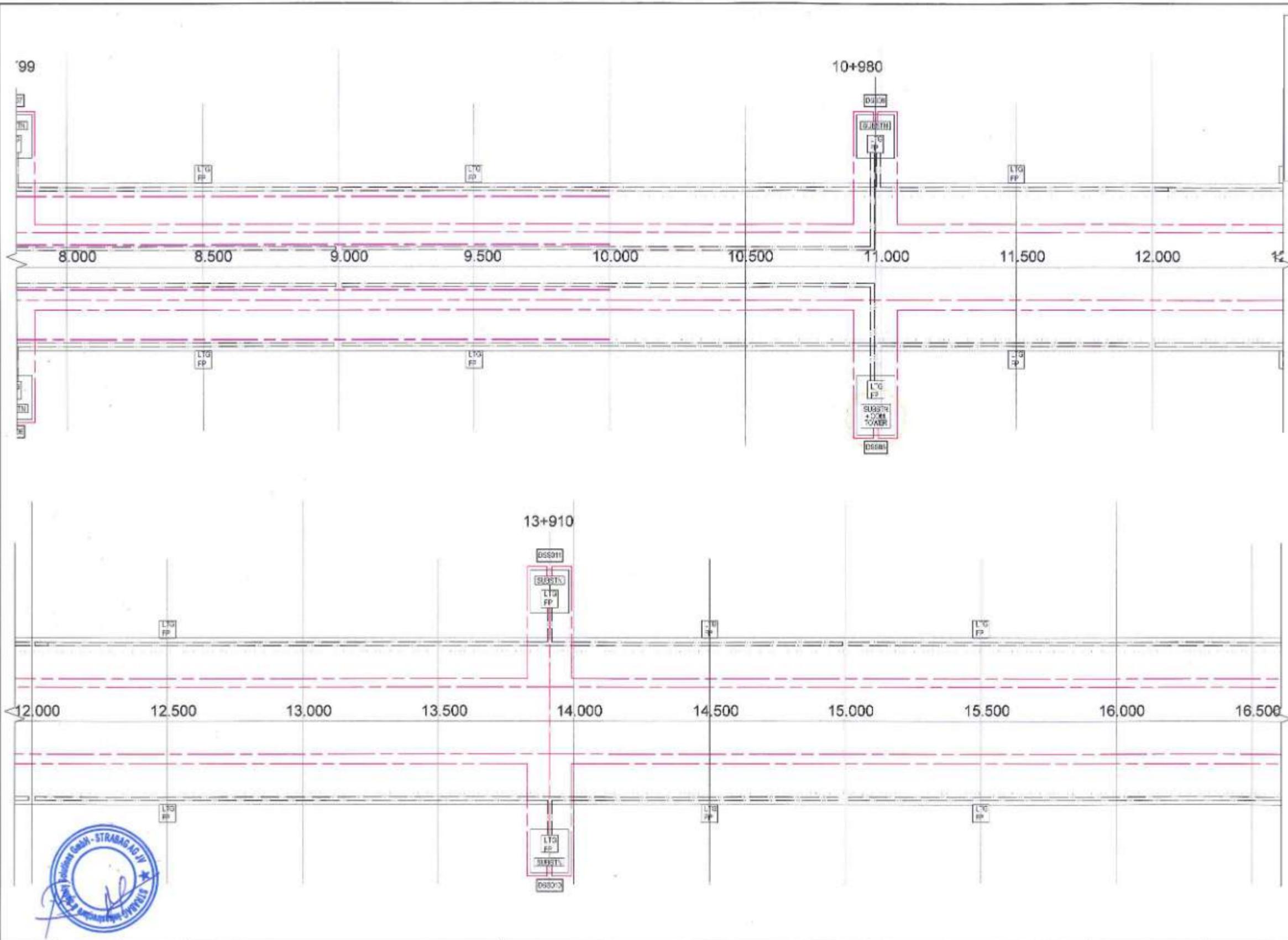
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DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT -
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE - ELECTRICAL BACKBONE SYSTEM			
DATE 10.04.2021	DRAWING NO. P4 - ELE - 002 (1 of 3)	PAPER SIZE A3	REV. 0



Legend

- 11KV HT POWER CABLE
- - - - - 415V LV POWER CABLE
- POLE MOUNTED LIGHTING
- - - - - CRASH BARRIER EMBEDDED LIGHTING
- LFP LIGHTING FEEDER PILLAR

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DESIGN BY	
CHECKED BY	
APPROVED BY	



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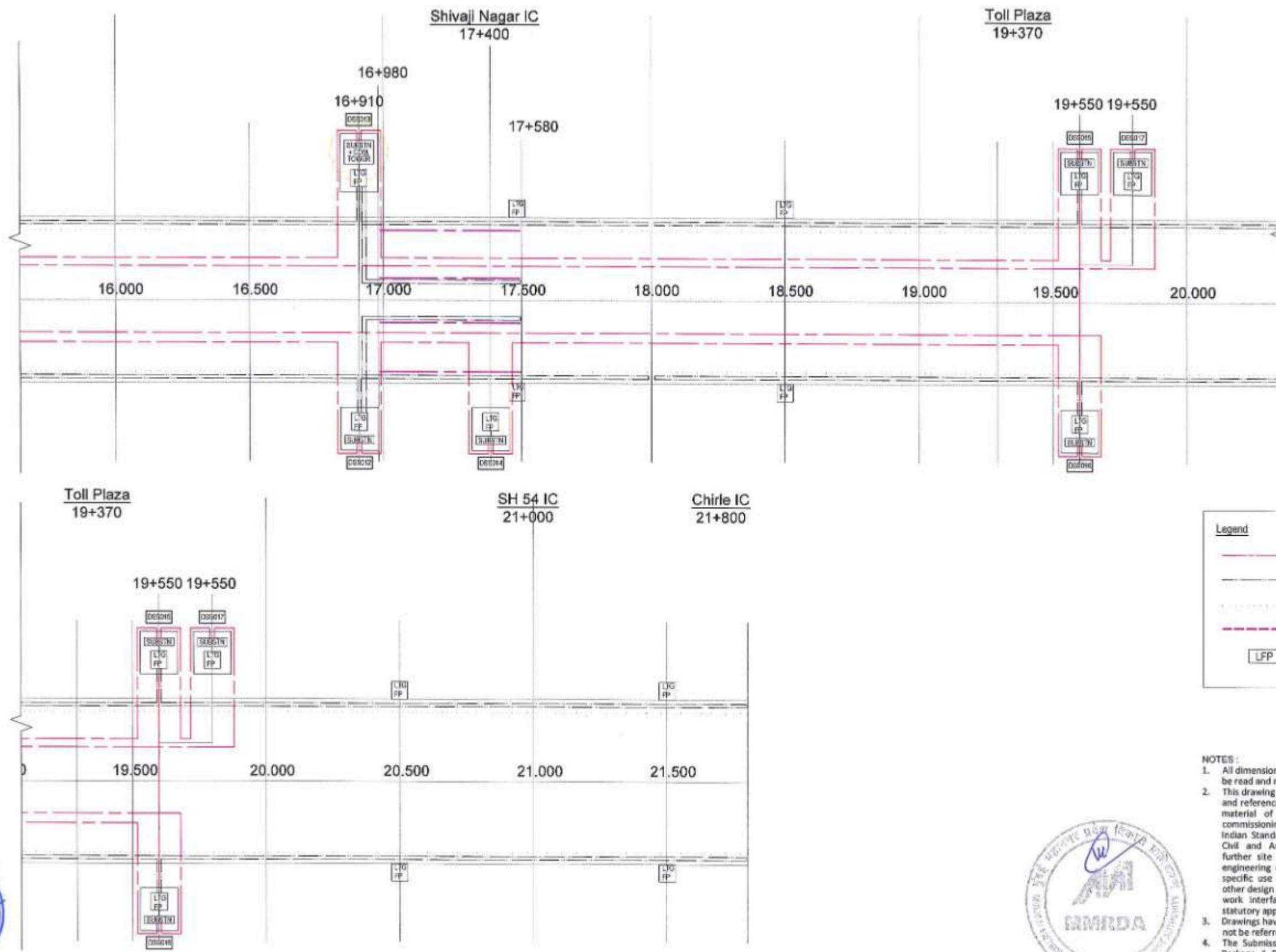
PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH >

TITLE >			
ELECTRICAL BACKBONE SYSTEM			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - ELE - 002 (2 of 3)	A3	0





Legend

- 11KV HT POWER CABLE
- - - 415V LV POWER CABLE
- · · · · POLE MOUNTED LIGHTING
- - - CRASH BARRIER EMBEDDED LIGHTING
- LFP LIGHTING FEEDER PILLAR

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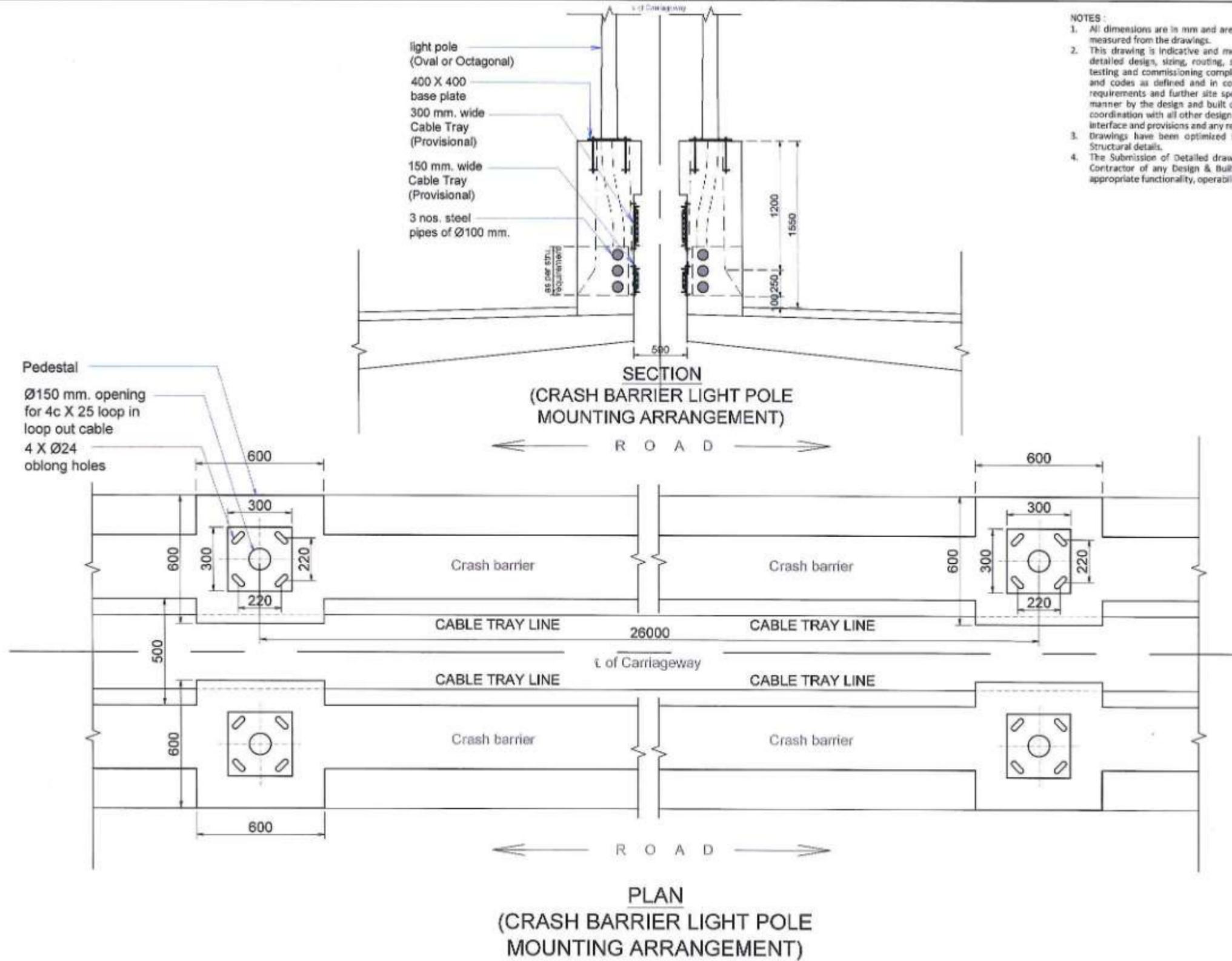


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PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

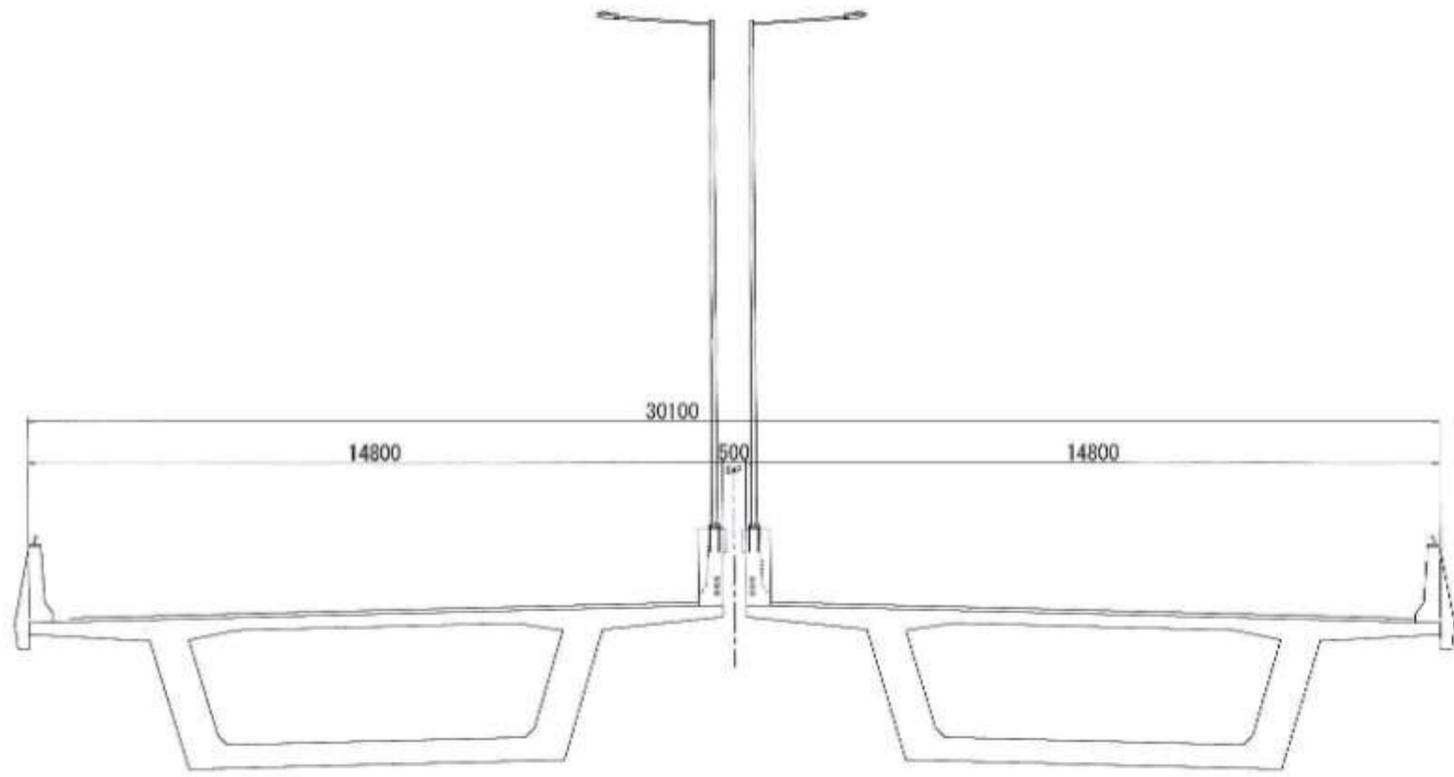
NORTH	TITLE :- ELECTRICAL BACKBONE SYSTEM
DATE: 10.04.2021	DRAWING NO. P4 - ELE - 002 (3 of 3)
PAPER SIZE: A3	REV: 0



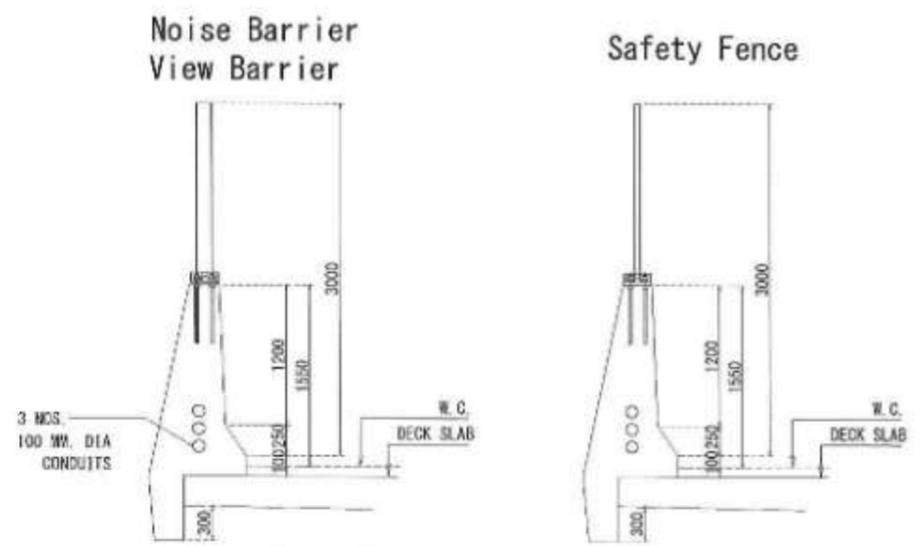
- NOTES:**
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NAME DESIGN BY CHECKED BY APPROVED BY	BOX#	 MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY	PROJECT -> MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH ->	TITLE -> CRASH BARRIER DETAILS FOR ELECTRICAL LIGHTING POLE SYSTEM			
					DATE 10.04.2021	DRAWING NO. P4 - ELE - 003	PAPER SIZE A3	REV. 0



**CROSS SECTION OF SUPERSTRUCTURE
LIGHTING POLE INSTALLATION ALONG THE INNER
CRASH BARRIER S = 1:75**



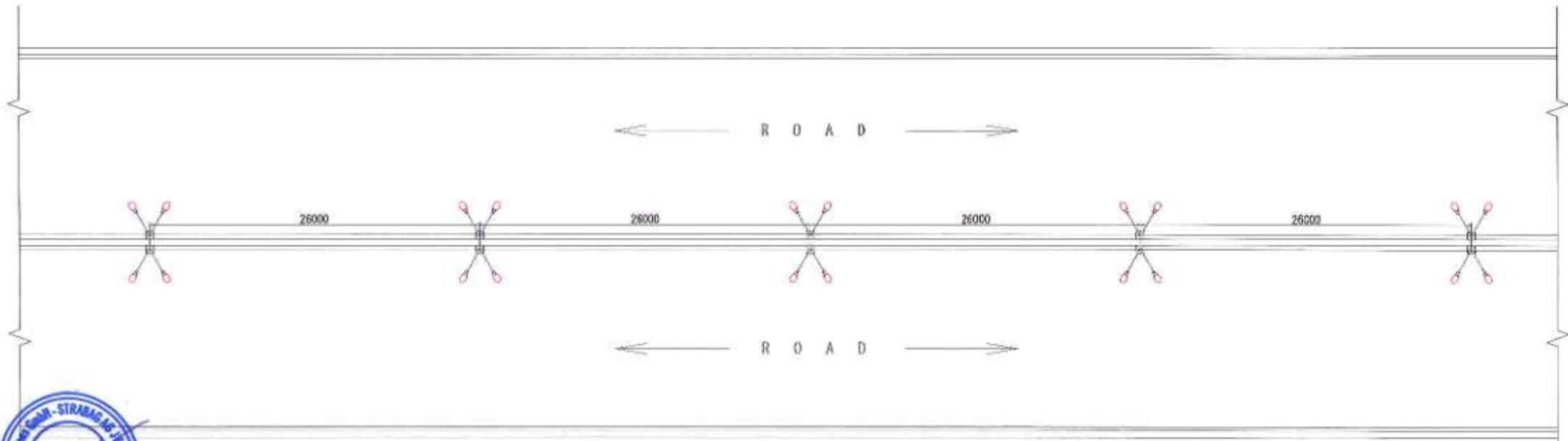
Noise Barrier, View Barrier, Safety Fence S=1:30

Noise Barrier		
Chainage	Length	
CH. 0+500 to CH. 4+000 (North)	3,500m	
CH. 0+500 to CH. 5+600 (South)	5,000m	
CH. 16+980 to CH. 17+580 (Both)	1,200m	

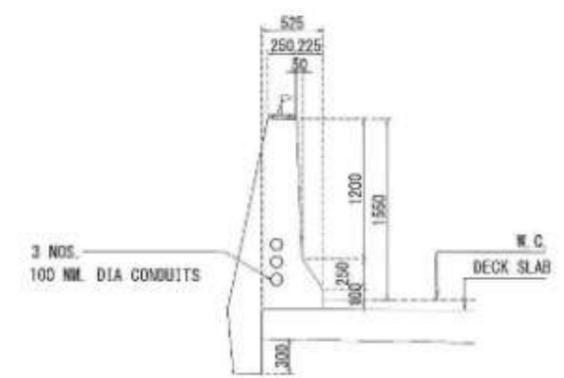
View Barrier		
Chainage	Length	
CH. 4+000 to CH. 10+000 (North)	6,000m	

Safety Fence		
Chainage	Length	
CH. 5+500 to CH. 6+078 (South)	578m	
CH. 8+720 to CH. 9+080 (South)	360m	
CH. 13+138 to CH. 13+510 (Both)	744m	
CH. 16+840 to CH. 16+880 (Both)	96m	
CH. 18+087 to CH. 18+127 (Both)	80m	
CH. 18+167 to CH. 18+217 (Both)	60m	
CH. 18+317 to CH. 18+357 (Both)	80m	
CH. 18+421.5 to CH. 18+491.5 (Both)	140m	
CH. 18+574 to CH. 18+644 (Both)	140m	
CH. 18+884 to CH. 18+929 (Both)	90m	
CH. 20+225 to CH. 20+260 (Both)	70m	
CH. 21+012 to CH. 21+079 (Both)	134m	
CH. 21+232 to CH. 21+427 (Both)	390m	
CH. 21+660 to CH. 21+730 (Both)	140m	

The panel of Noise Barrier and View Barrier and the Safety Fence are referred in the outline specification



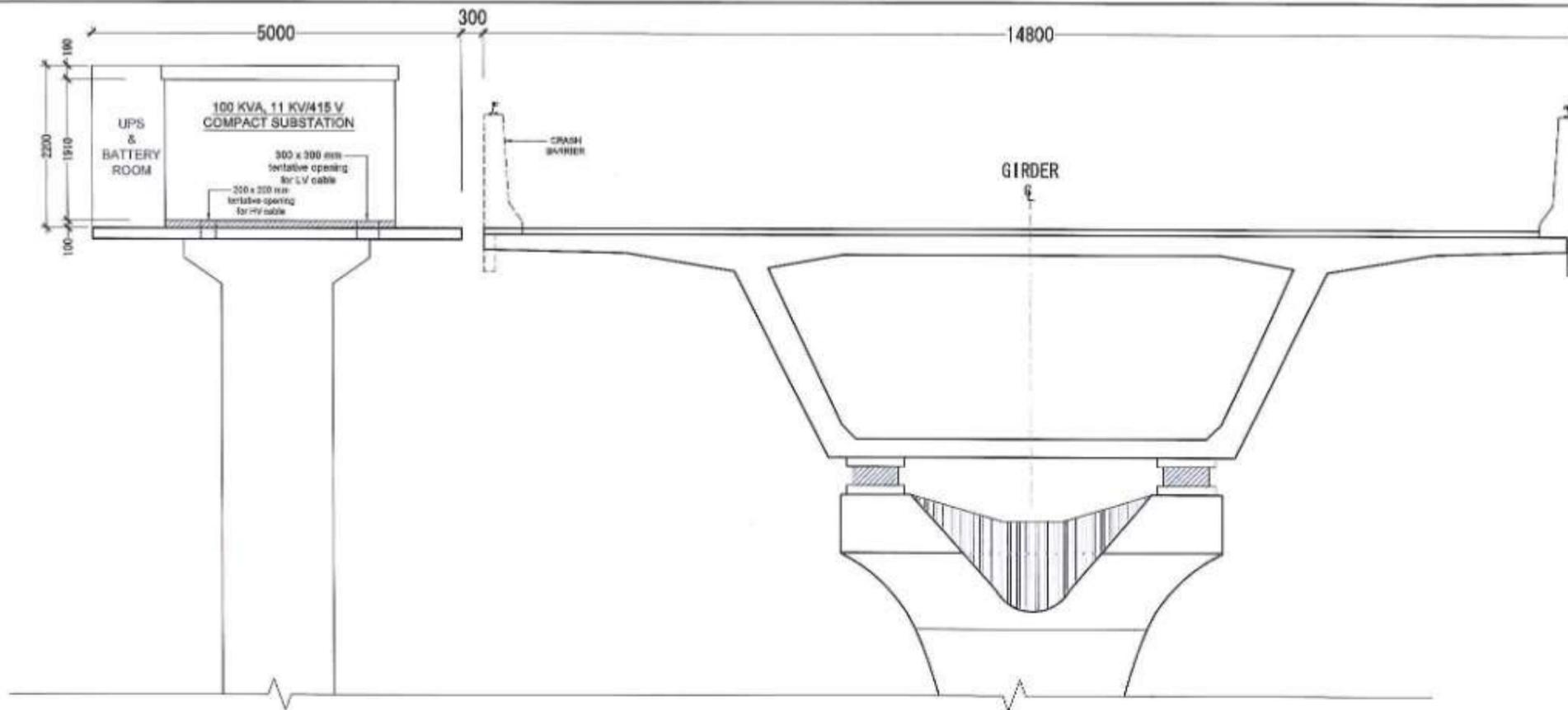
**MAIN CARRIAGEWAY PLAN
LIGHTING POLE INSTALLATION S = 1:200**



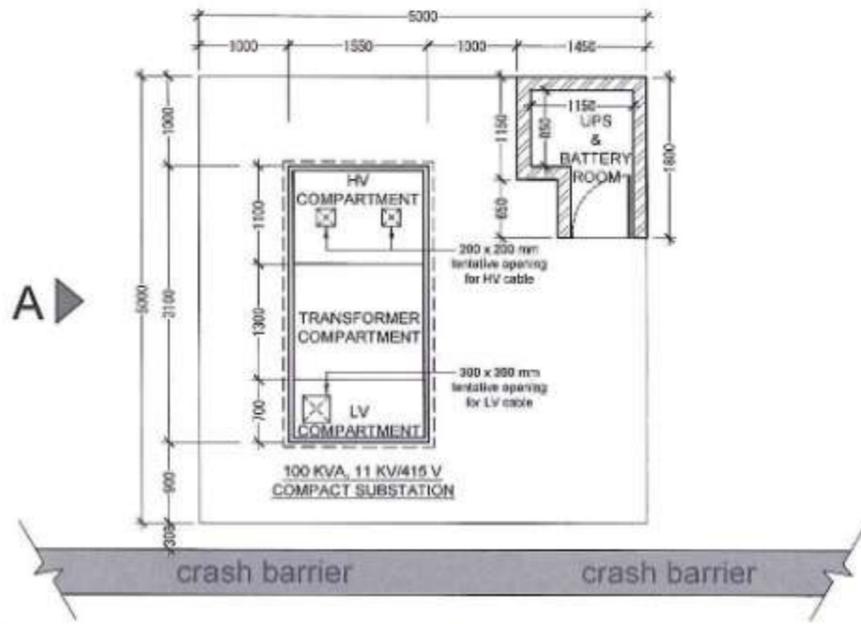
Detail of Barrier S=1:30



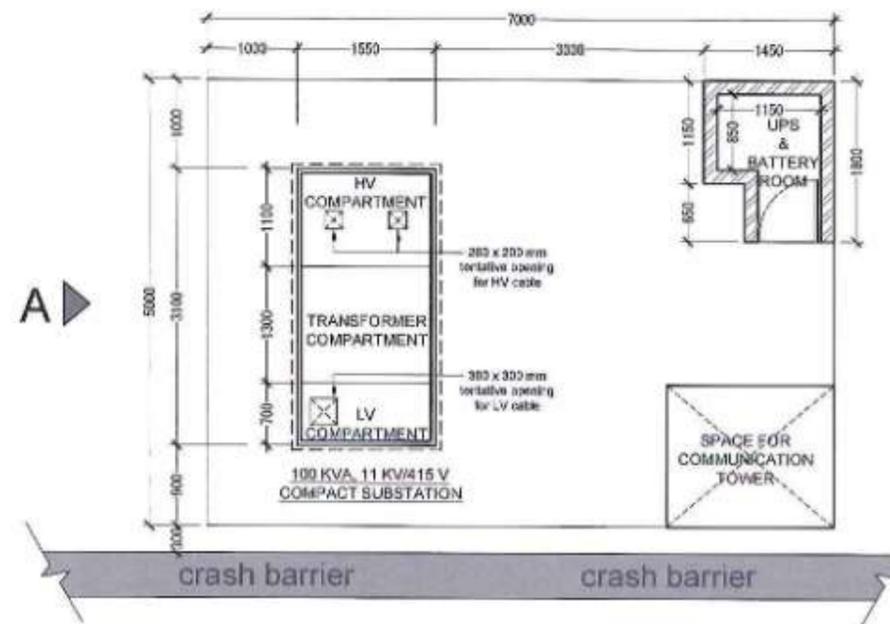
<table border="1"> <tr> <td>DRAWN BY</td> <td>PG</td> </tr> <tr> <td>CHECKED BY</td> <td>BN & SP</td> </tr> <tr> <td>APPROVED BY</td> <td>TKS</td> </tr> </table>	DRAWN BY	PG	CHECKED BY	BN & SP	APPROVED BY	TKS	<p>MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY</p>	<p>PROJECT -</p> <p>MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING</p>	<p>NORTH -</p>	<p>TITLE -</p> <p>DETAILS OF LIGHTING POLE</p>	<table border="1"> <tr> <td>DATE</td> <td>DRAWING NO</td> <td>SHEET</td> <td>REV</td> </tr> <tr> <td>10.03.2021</td> <td>P4 - ELE - 003 (a)</td> <td>A1</td> <td></td> </tr> </table>	DATE	DRAWING NO	SHEET	REV	10.03.2021	P4 - ELE - 003 (a)	A1	
DRAWN BY	PG																		
CHECKED BY	BN & SP																		
APPROVED BY	TKS																		
DATE	DRAWING NO	SHEET	REV																
10.03.2021	P4 - ELE - 003 (a)	A1																	



SECTIONAL ELEVATION 'A'



← MTHL BRIDGE →
TENTATIVE TRANSFORMER PLATFORM
5000 X 5000MM



← MTHL BRIDGE →
TENTATIVE TRANSFORMER PLATFORM
5000 X 7000MM
(@ CH. 4+500, 10+500, 16+500 M.)

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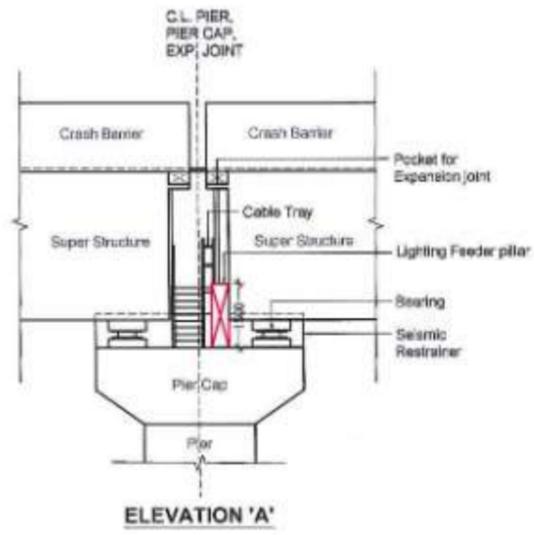
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CHECKED BY	
APPROVED BY	



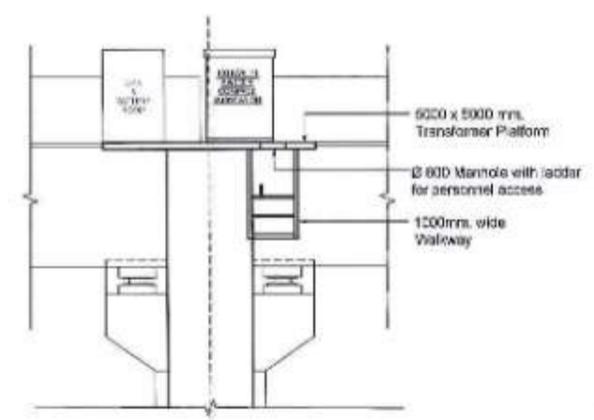
PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH :-

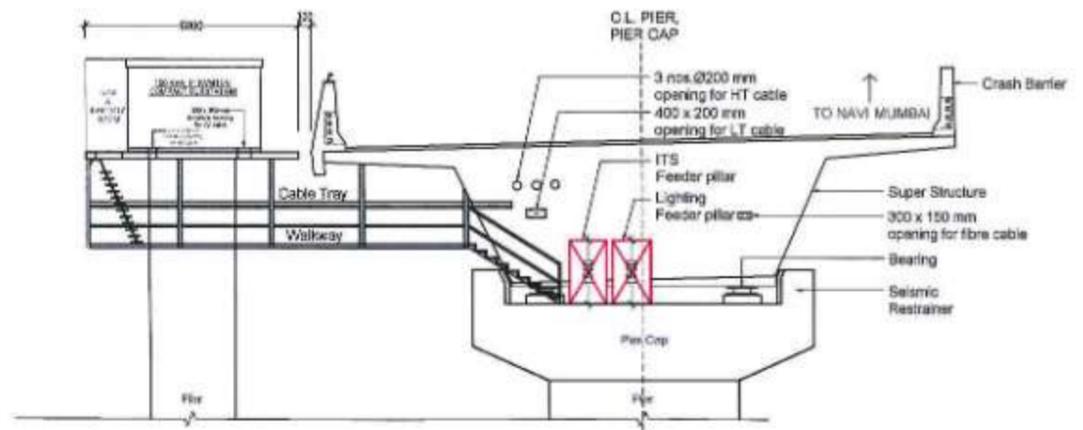
TITLE :- GENERAL ARRANGEMENT OF ELECTRICAL TRANSFORMER PLATFORM			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - ELE - 004	A3	0



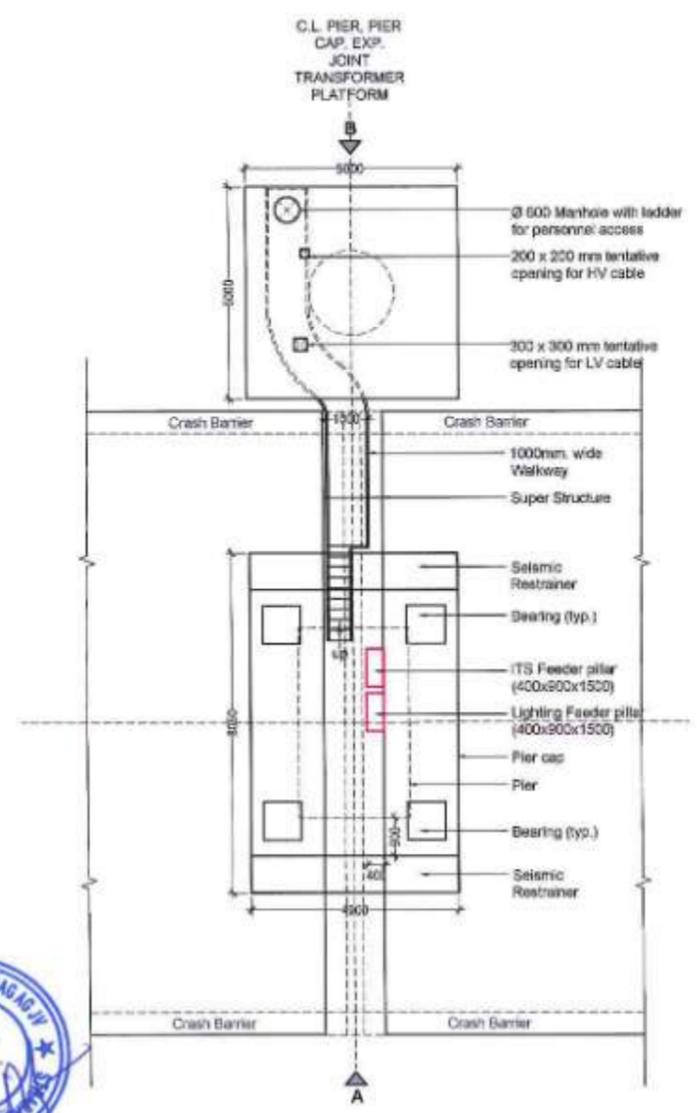
ELEVATION 'A'



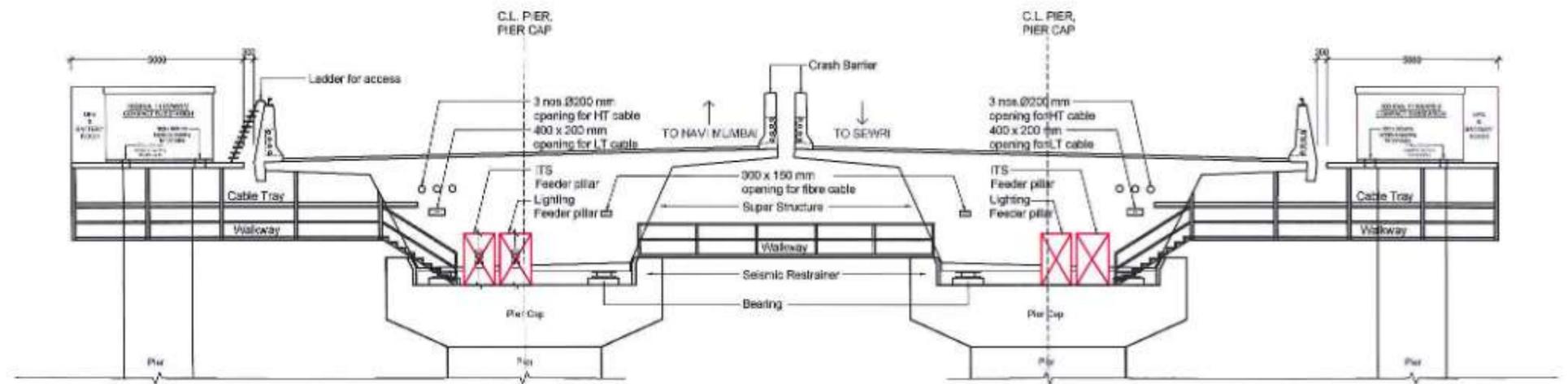
ELEVATION 'B'



CROSS SECTION (@ EXPANSION JOINT)



PLAN (@ EXPANSION JOINT)



CROSS SECTION (@ EXPANSION JOINT)

Note : At the location of vision/noise barrier there has to be 1 m. wide operable door with lock and key for the access to the electrical platform.

- NOTES :
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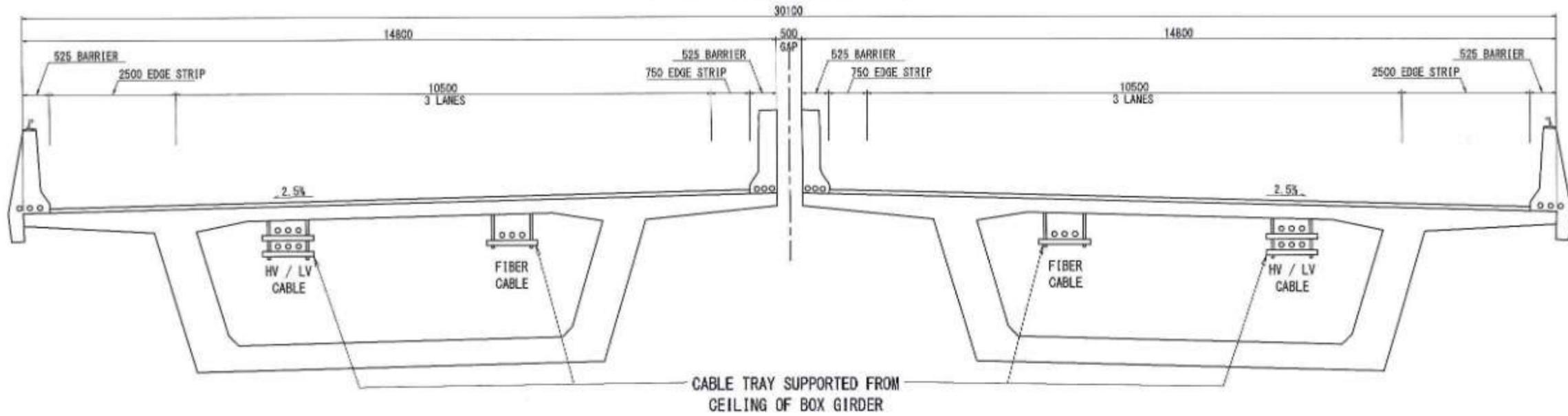


PROJECT > **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**

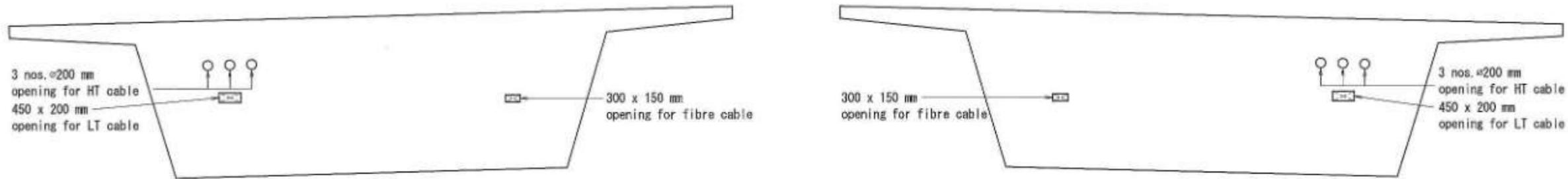
NORTH >

TITLE >	GENERAL ARRANGEMENT OF WALKWAY AT EXPANSION JOINT FOR ELECTRICAL TRANSFORMER PLATFORM		
DATE:	DRAWING NO.:	PAPER SIZE:	REV.:
10.04.2021	P4 - ELE - 005	A3	0

CABLE TRAY SUPPORT DETAIL

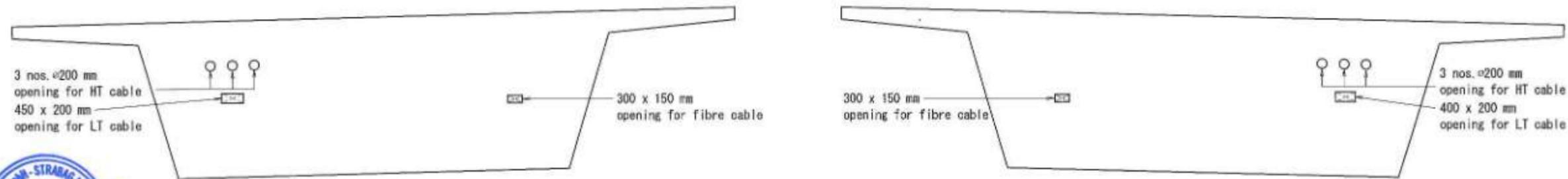


INTERMEDIATE AT DIAPHRAGM



REFERENCE DWG.
ELECTRICAL REQUIREMENT
STRUCTURAL OPENING FOR
HT CABLE, LT CABLE, FIBRE CABLE

EXPANSION JOINT AT DIAPHRAGM



REFERENCE DWG.
ELECTRICAL REQUIREMENT
STRUCTURAL OPENING FOR
HT CABLE, LT CABLE, FIBRE CABLE

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PROJECT ->

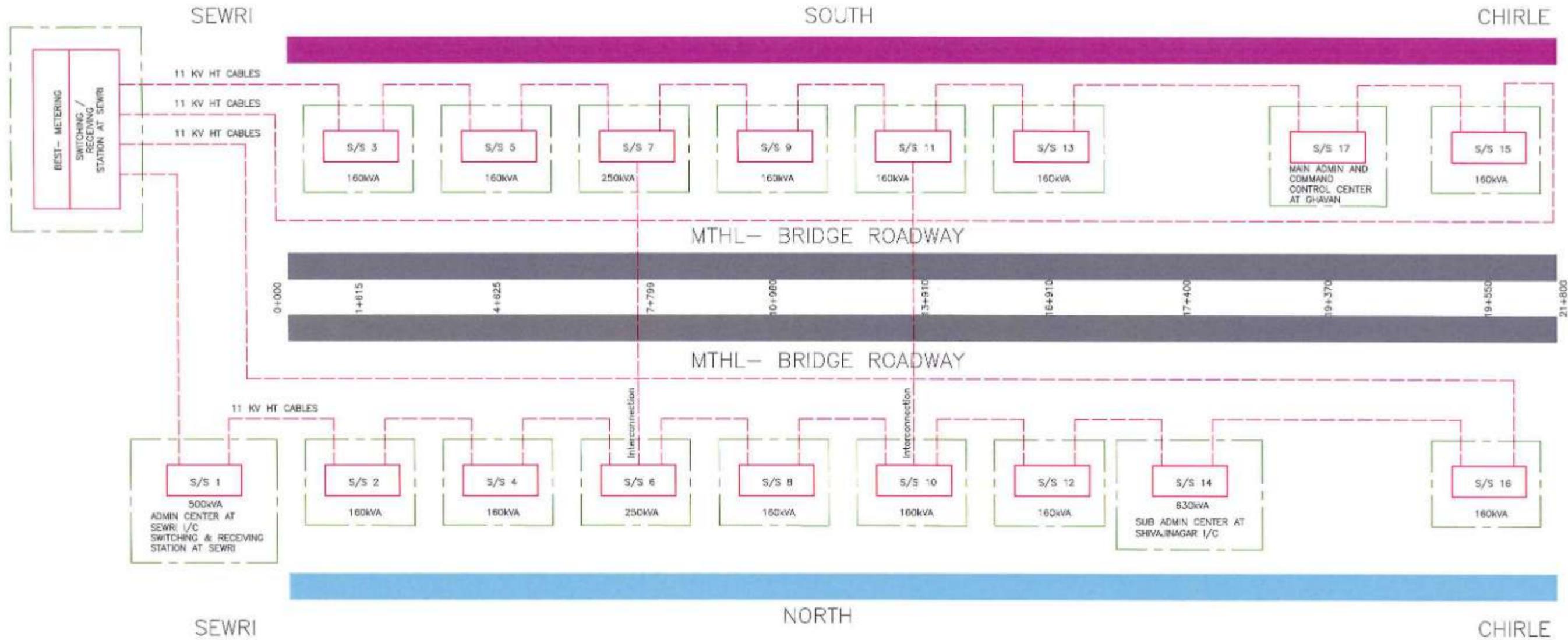
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE ->

**CABLE TRAY DETAILS AND CABLE OPENINGS
DETAILS IN DIAPHRAGM WALL**

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - ELE - 006	A3	0



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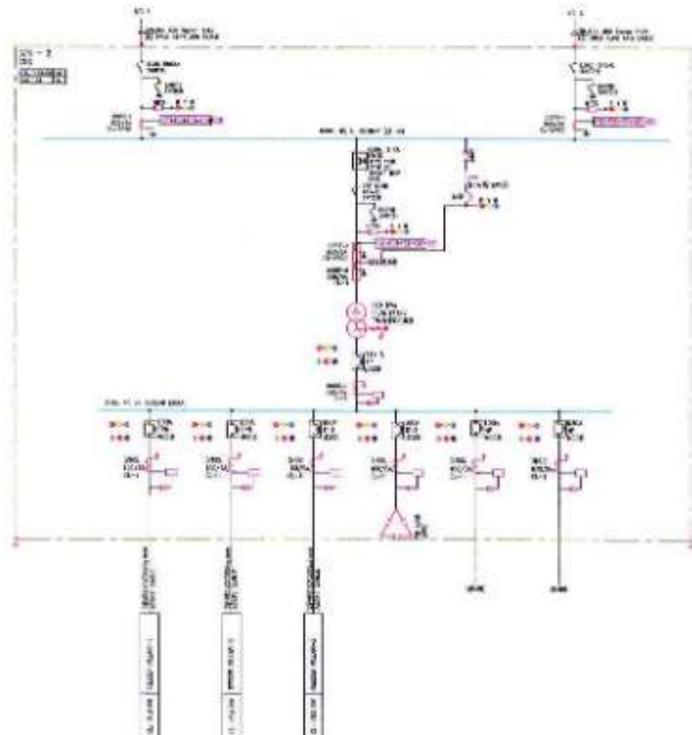
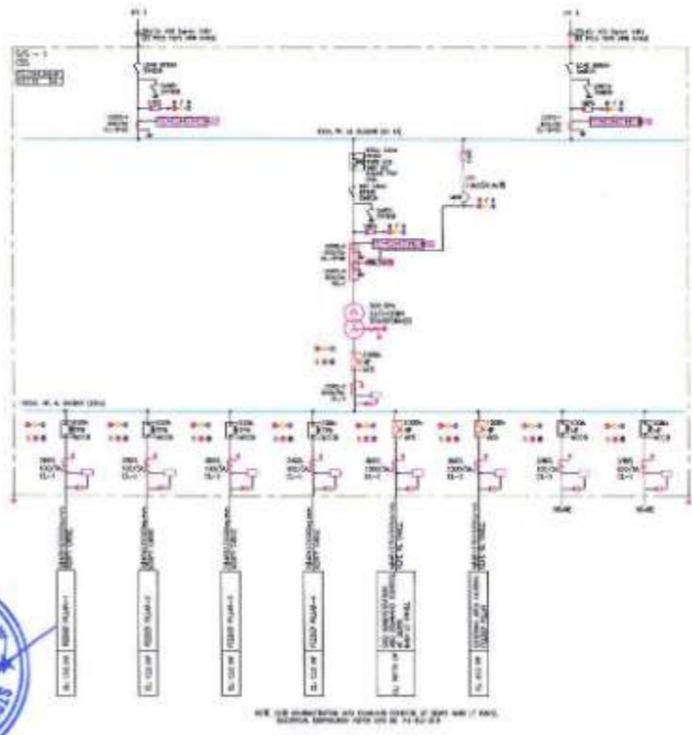
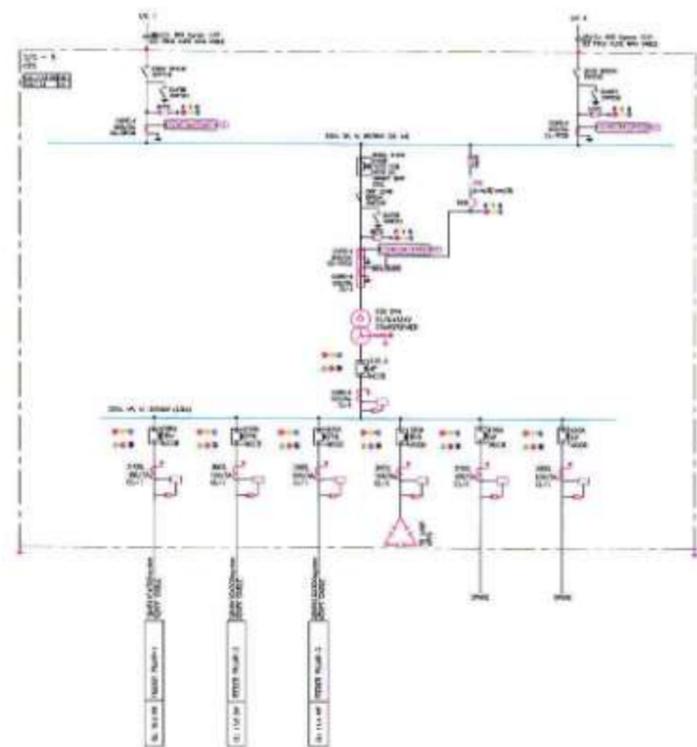
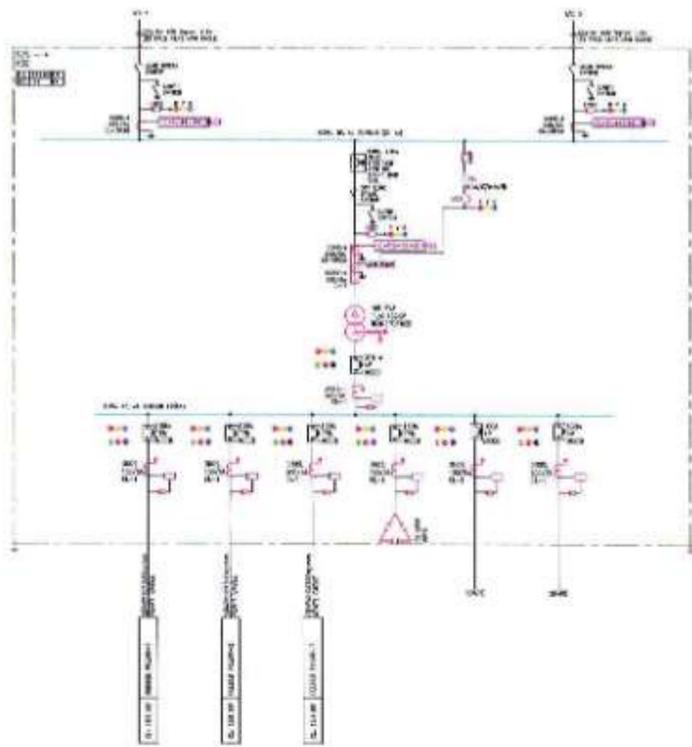
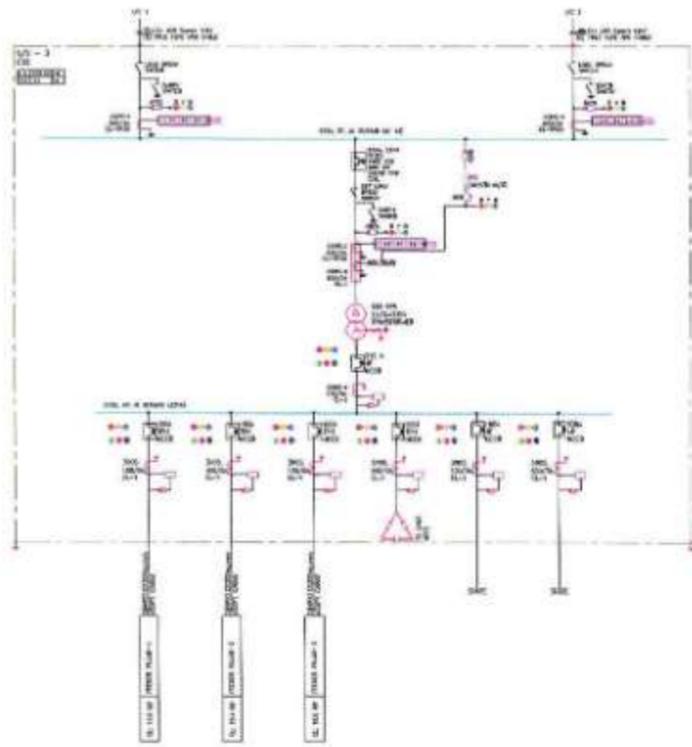
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MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE >			
11kV RING NETWORK BLOCK DIAGRAM			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - ELE - 007	A3	0



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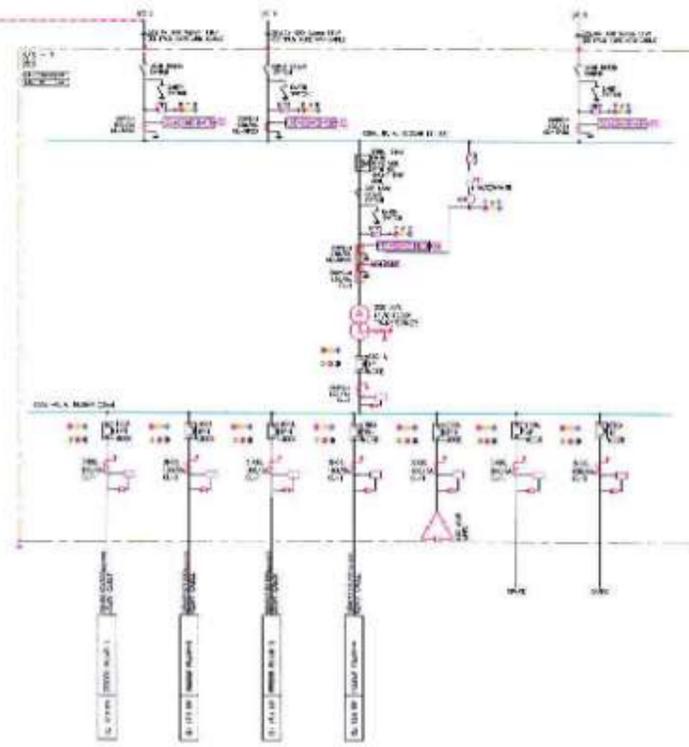
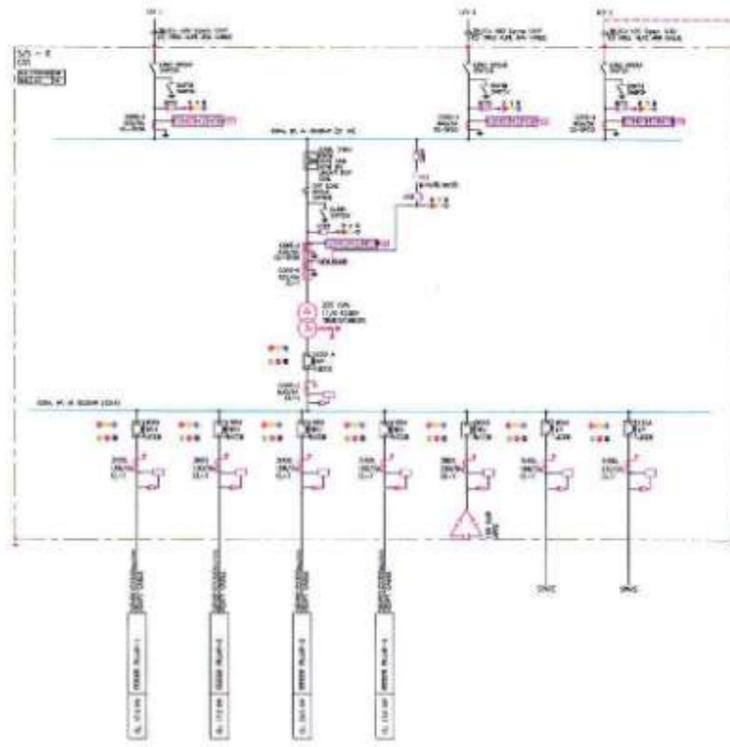
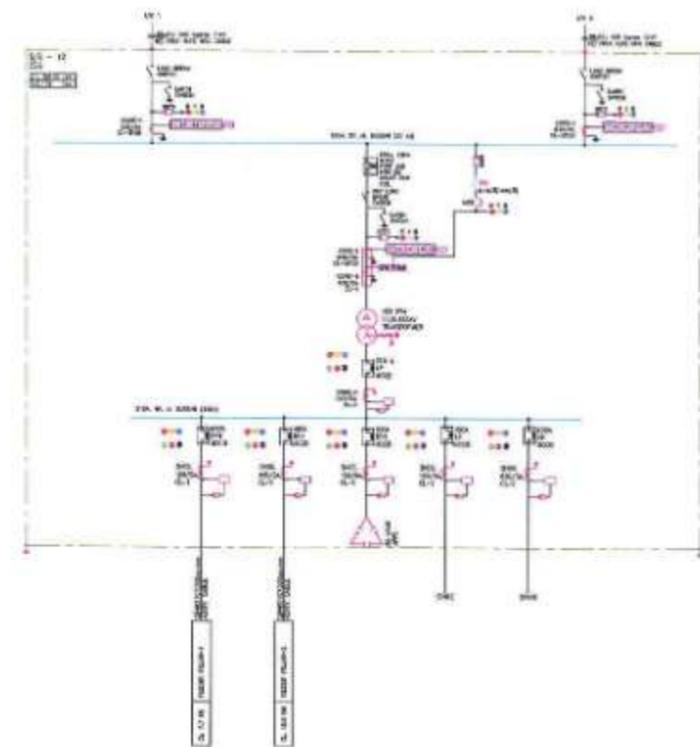
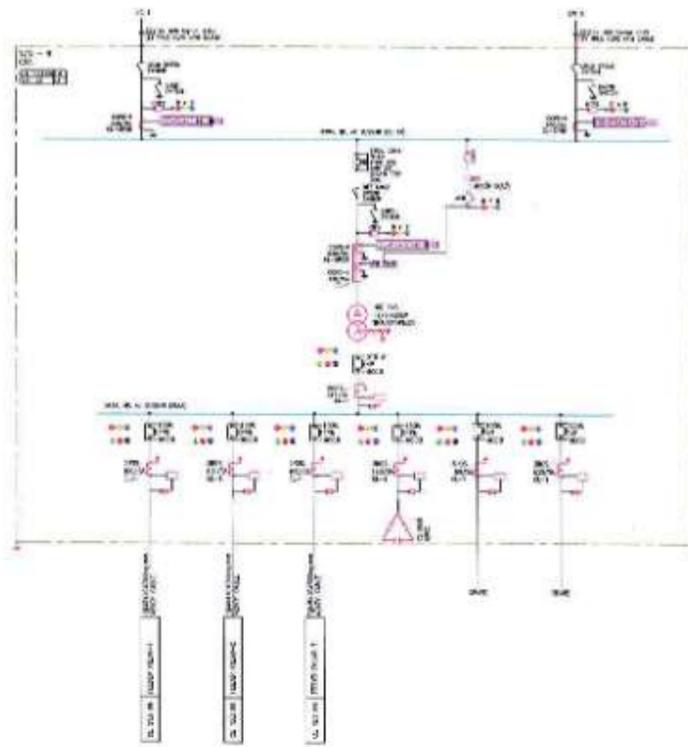
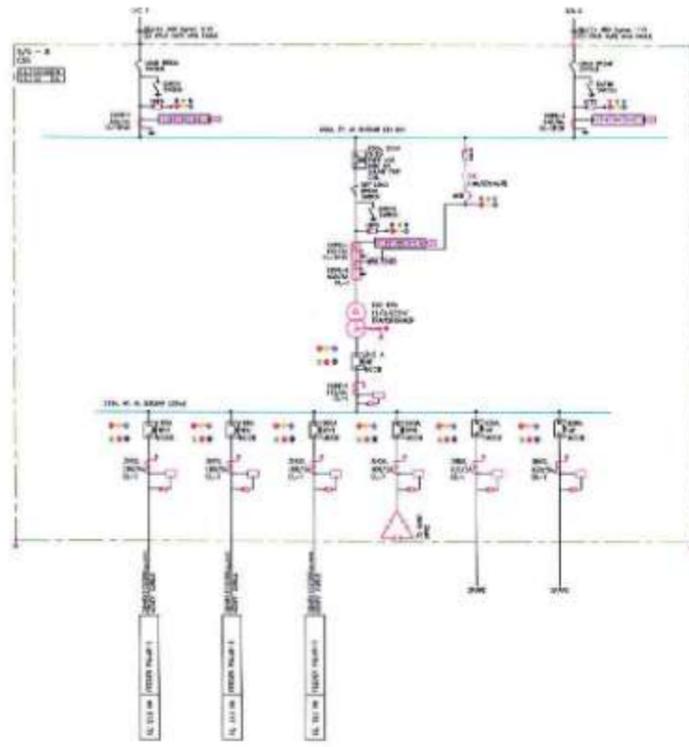
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CHECKED BY	
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PROJECT:-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH:-

TITLE:- ELECTRICAL DISTRIBUTION OF SUB STATION NOS. 1 TO 5			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - ELE - 008 (1 OF 4)	A1	0



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PROJECT:-

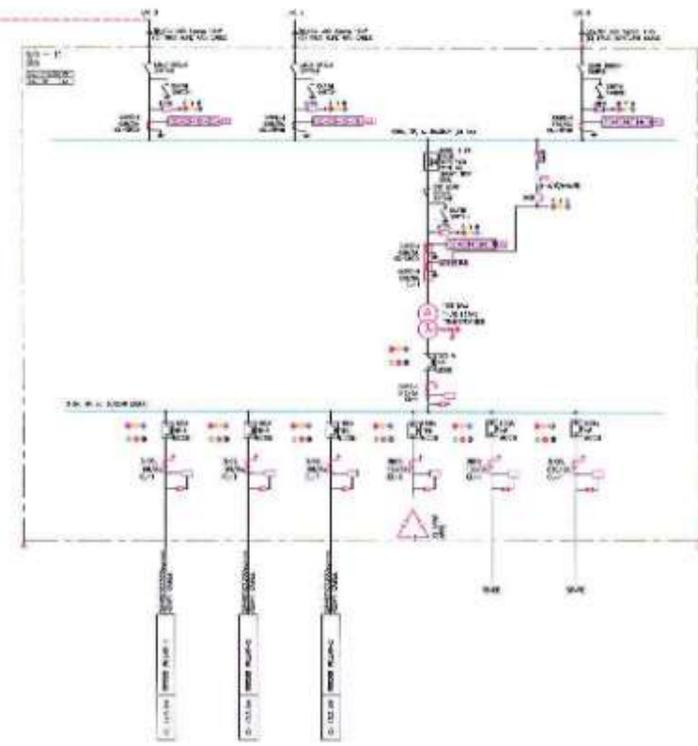
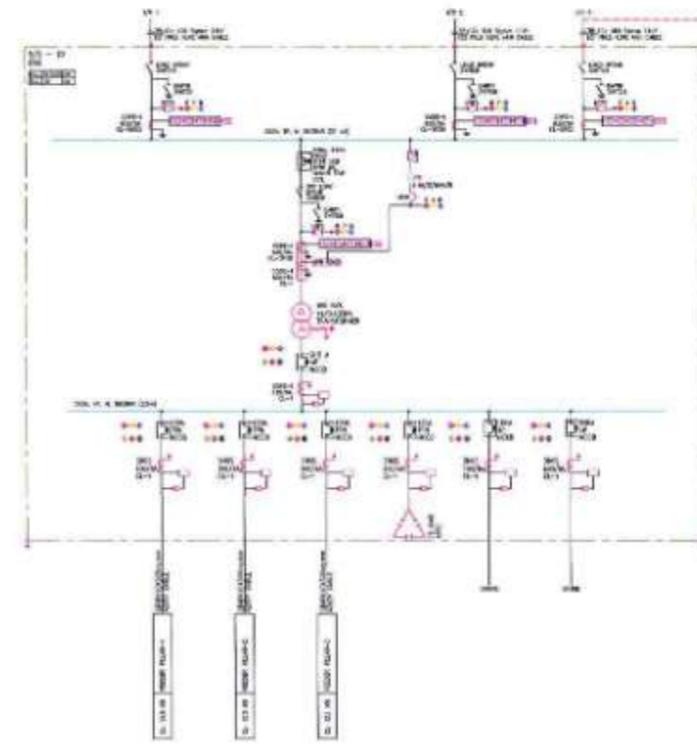
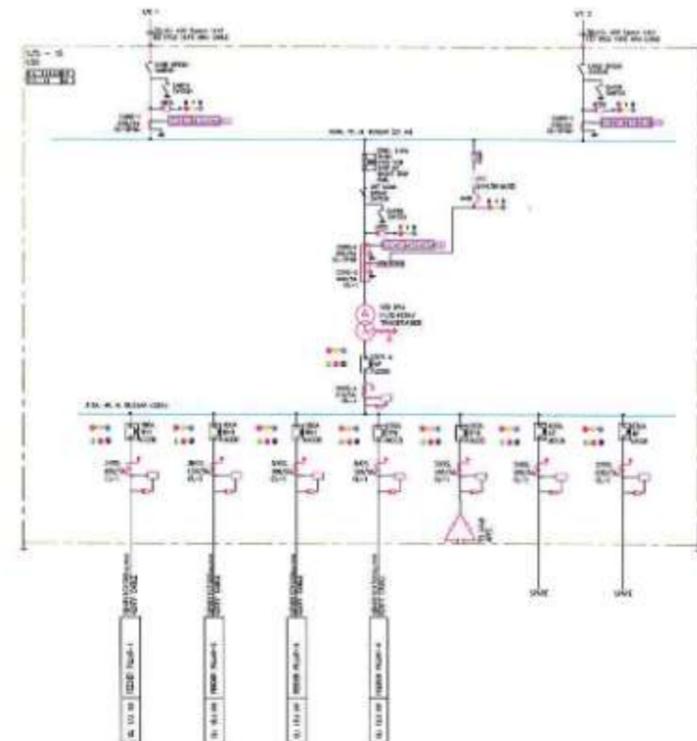
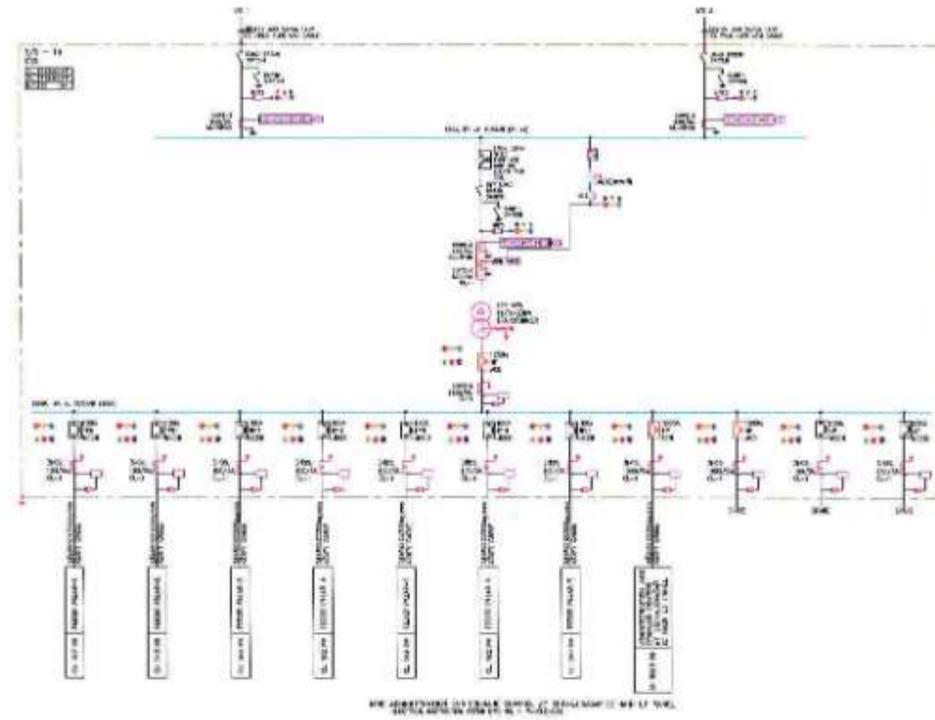
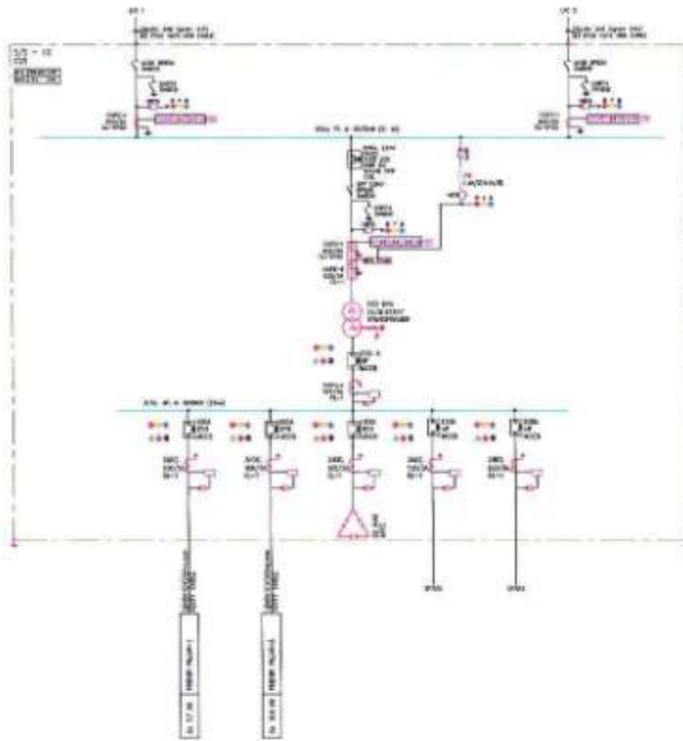
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH:-

TITLE:-

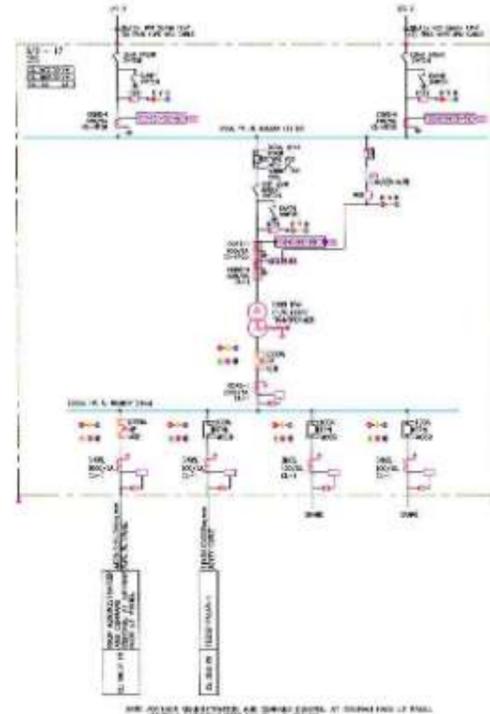
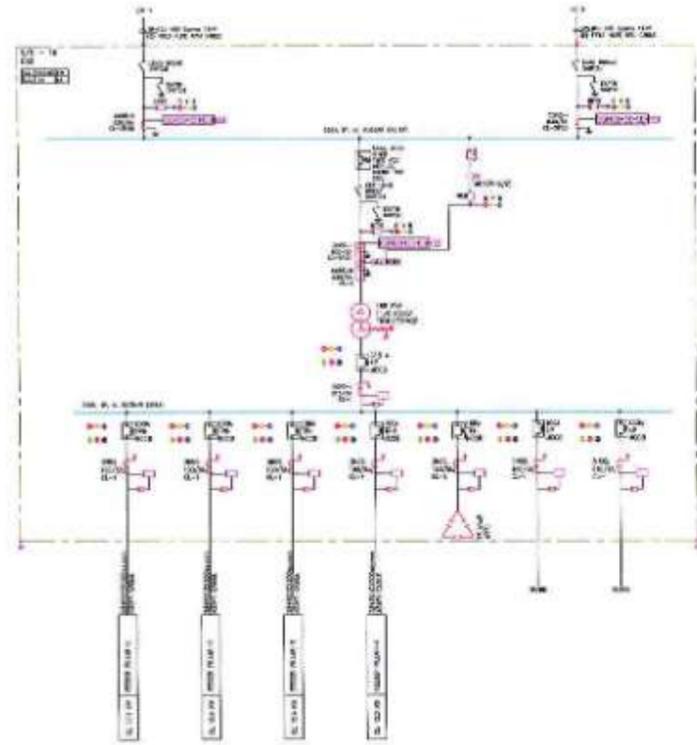
**ELECTRICAL DISTRIBUTION OF SUB
STATION NOS. 6 TO 9 & 12**

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - ELE - 008 (2 OF 4)	A1	0



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	 MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY				DATE	DRAWING NO.	PAPER SIZE	REV.
					10.04.2021	P4 - ELE - 008 (3 OF 4)	A1	0



THE ABOVE DIMENSIONS ARE SHOWN EQUAL TO DIMENSIONS OF PANEL UNLESS SPECIFIED OTHERWISE

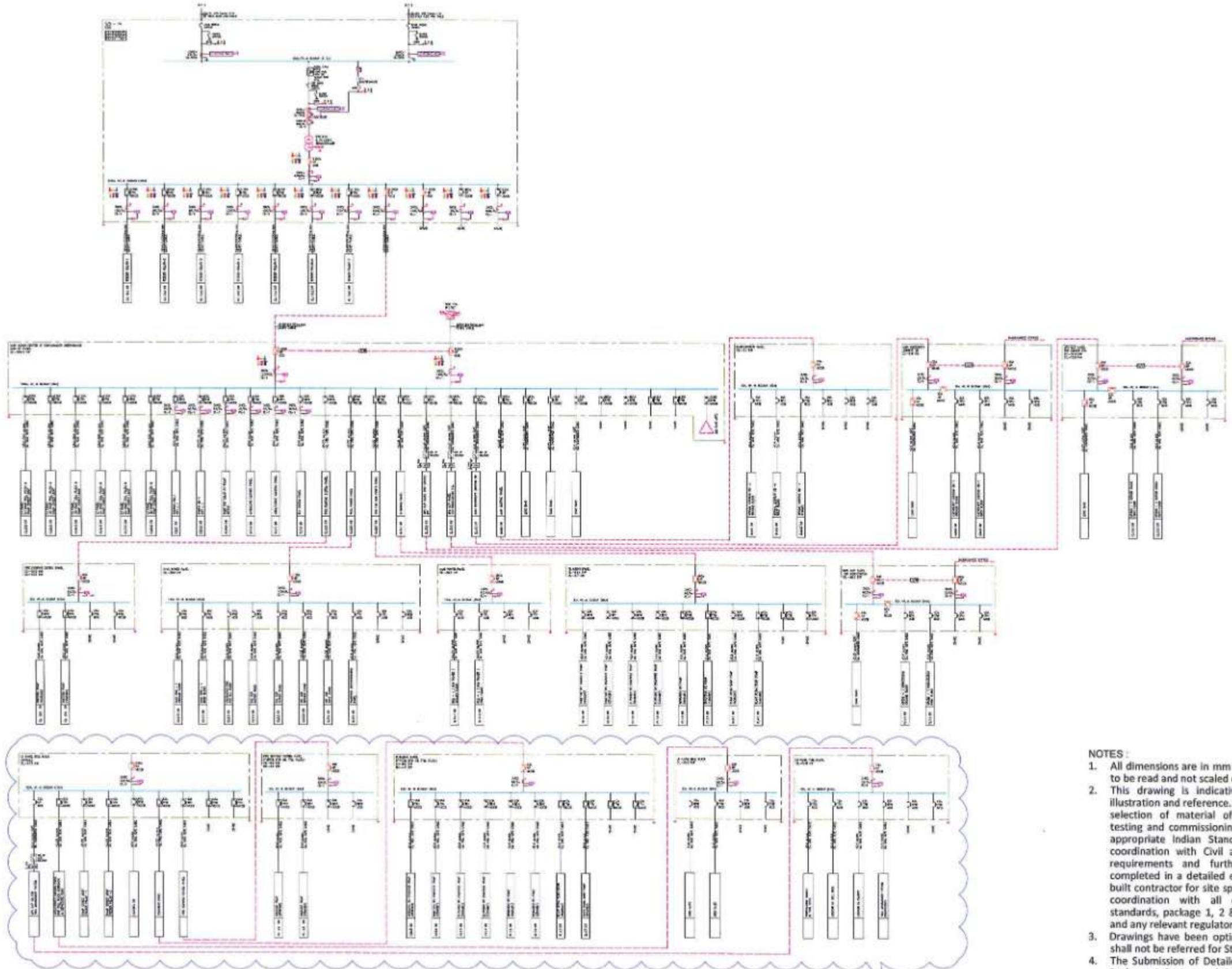
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	CHECKED BY							DATE	DRAWING NO.	PAPER SIZE
APPROVED BY							10.04.2021	P4 - ELE - 008 (4 OF 4)	A1	0



SYMBOL	DESCRIPTION
1	4 PILE AIR SWITCH BOARD
2	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
3	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
4	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
5	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
6	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
7	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
8	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
9	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
10	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
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99	100 AMP 400V 3P+N+PE CIRCUIT BREAKER
100	100 AMP 400V 3P+N+PE CIRCUIT BREAKER



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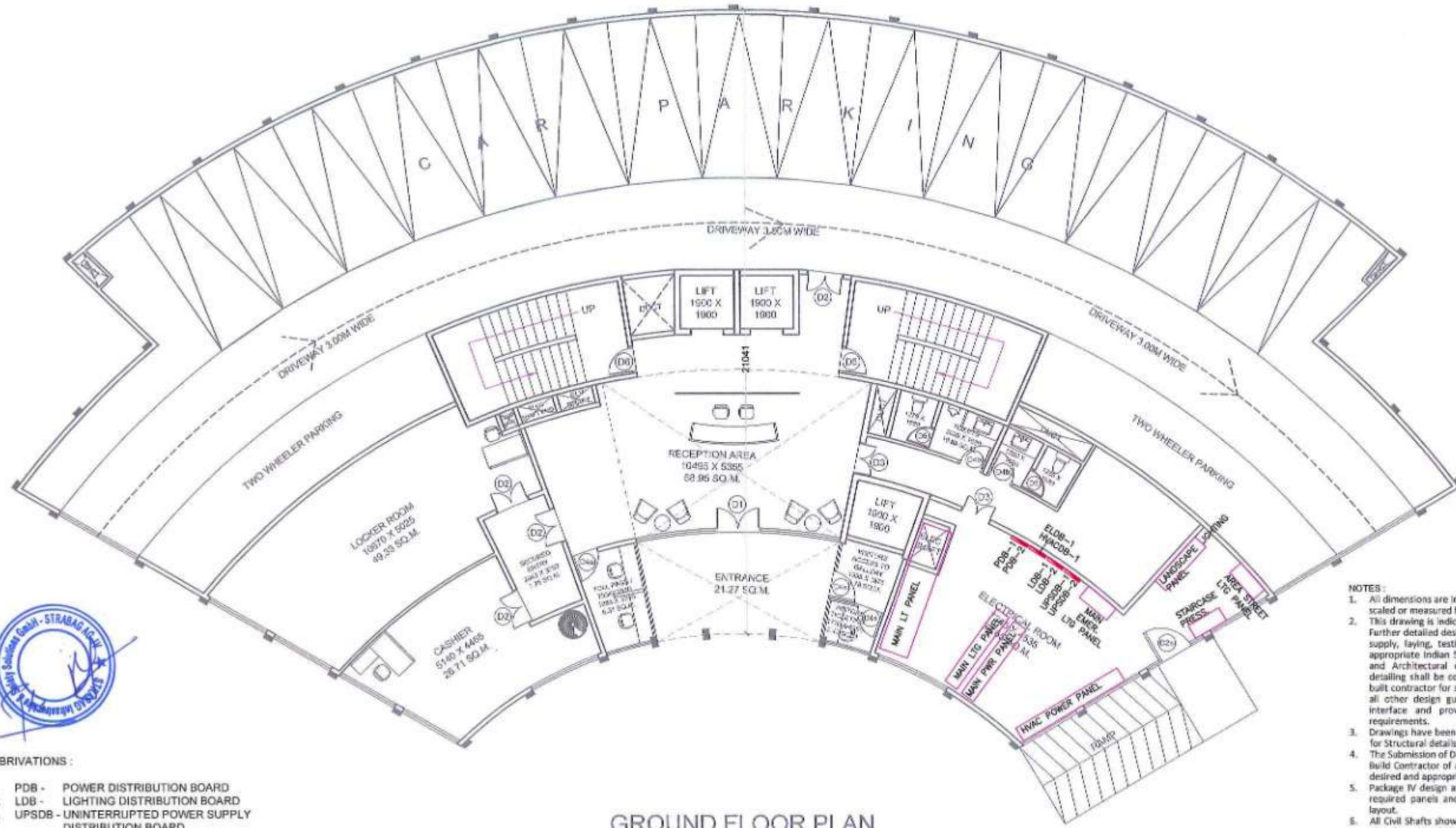


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MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT >
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE >	ADMINISTRATION CENTER AT SHIVAJI NAGAR IC ELECTRICAL DISTRIBUTION (SUB - STATION - 14)		
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-011	A1	0



**GROUND FLOOR PLAN
ADMINISTRATION CENTER**

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 5. Package IV design and build contractor shall submit GA drawings and SLD of each required panels and DB as indicated in the drawing along with electrical room layout.
 6. All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace level in coordination with Architectural and Civil Works.
 7. Package IV contractor shall submit lighting and power load calculations and submit the relevant drawings (Plan & Sections) for every floor along with electrical circuit details, lighting fixture details, LDB, PDB, UPSDB, SLD and GA drawings in accordance to Architectural layout, Specifications, Relevant Standards and Codes (NBC 2016).



- ABRIVATIONS :**
1. PDB - POWER DISTRIBUTION BOARD
 2. LDB - LIGHTING DISTRIBUTION BOARD
 3. UPSDB - UNINTERRUPTED POWER SUPPLY DISTRIBUTION BOARD
 4. ELDB - EMERGENCY LIGHTING DISTRIBUTION BOARD
 5. HVAC - HEATING VENTILATION AIR CONDITIONING DISTRIBUTION BOARD

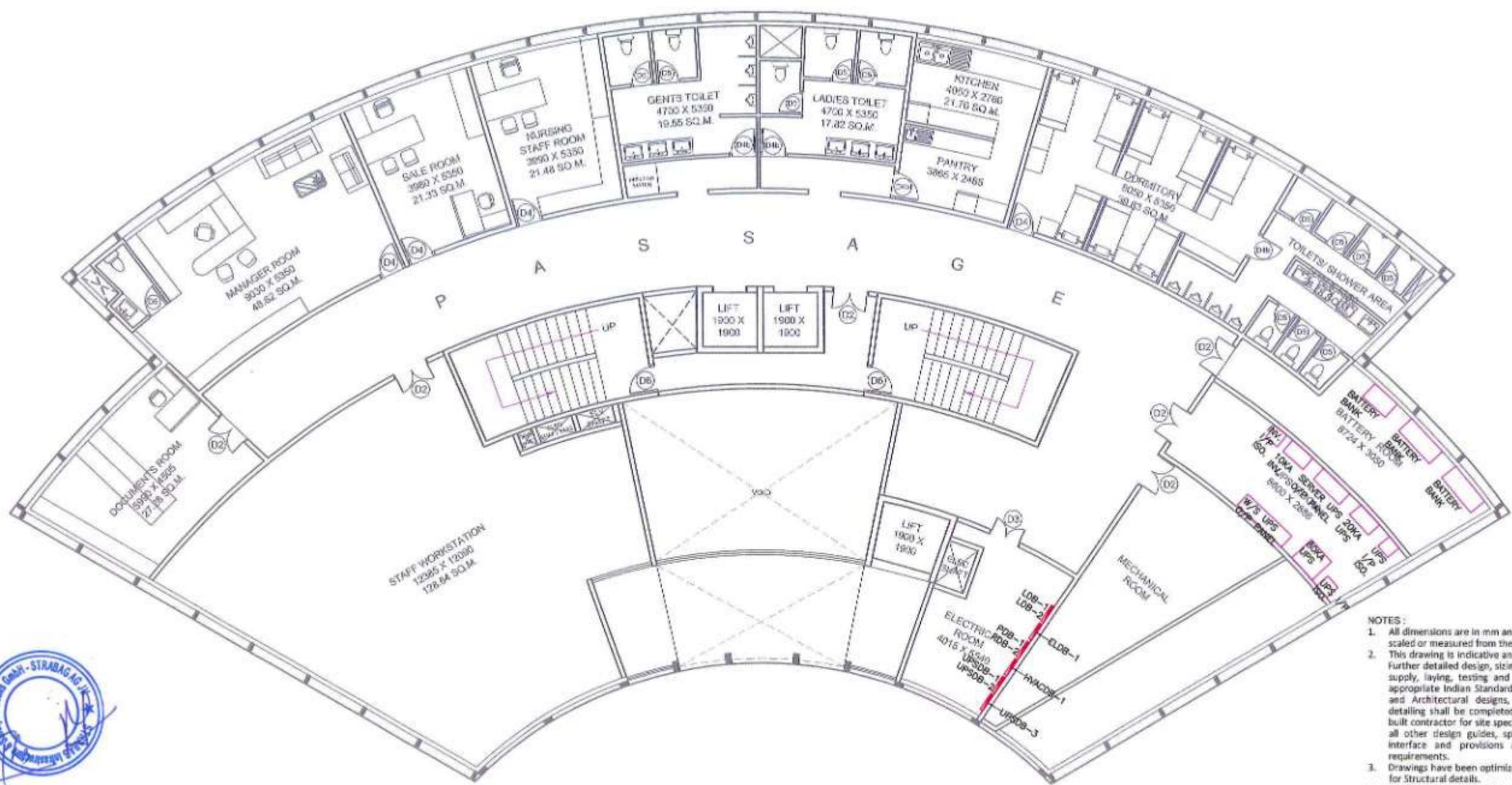
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**PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE -			
GROUND FLOOR PLAN MAIN ADMIN. AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-012	A3	0



**FIRST FLOOR PLAN
ADMINISTRATION CENTER**

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 6. All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace Level in coordination with Architectural and Civil Works.
 7. Package IV contractor shall submit lighting and power load calculations and submit the relevant drawings (Plan & Sections) for every floor along with electrical circuit details, lighting fixture details, LDB, PDB, UPSDB, SLD and GA drawings in accordance to Architectural layout, Specifications, Relevant Standards and Codes (NBC 2016).



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 3. UPSDB - UNINTERRUPTED POWER SUPPLY DISTRIBUTION BOARD
 4. ELDB - EMERGENCY LIGHTING DISTRIBUTION BOARD
 5. HVAC - HEATING VENTILATION AIR CONDITIONING DISTRIBUTION BOARD

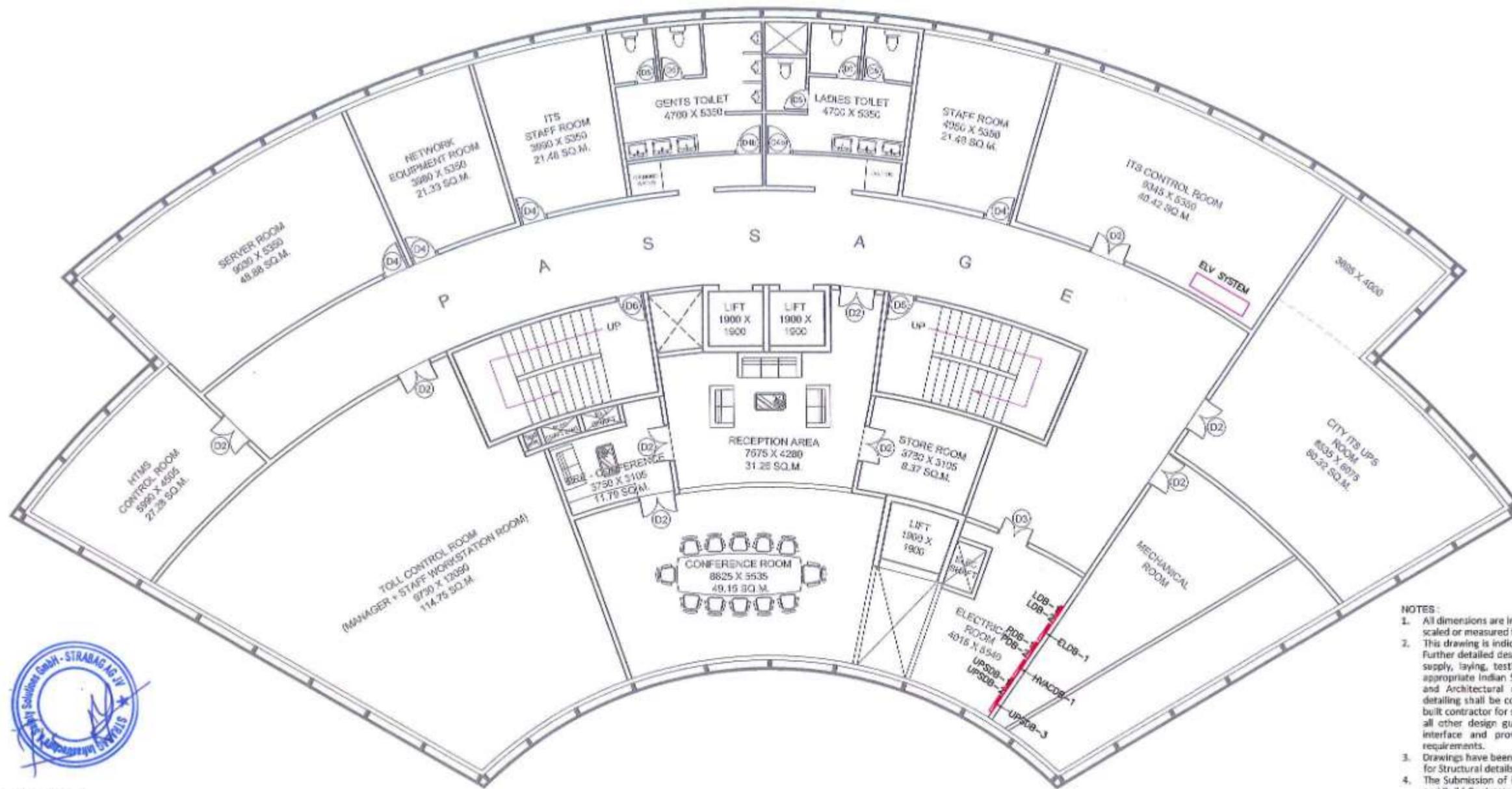
NAME	SIGN
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PROJECT >
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE > FIRST FLOOR PLAN MAIN ADMIN. AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT			
DATE 10.04.2021	DRAWING NO. P4-ELE-013	PAPER SIZE A3	REV. 0



ABRIVATIONS :

- 1. PDB - POWER DISTRIBUTION BOARD
- 2. LDB - LIGHTING DISTRIBUTION BOARD
- 3. UPSDB - UNINTERRUPTED POWER SUPPLY DISTRIBUTION BOARD
- 4. ELDB - EMERGENCY LIGHTING DISTRIBUTION BOARD
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**SECOND FLOOR PLAN
COMMAND CONTROL CENTER**

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APPROVED BY	

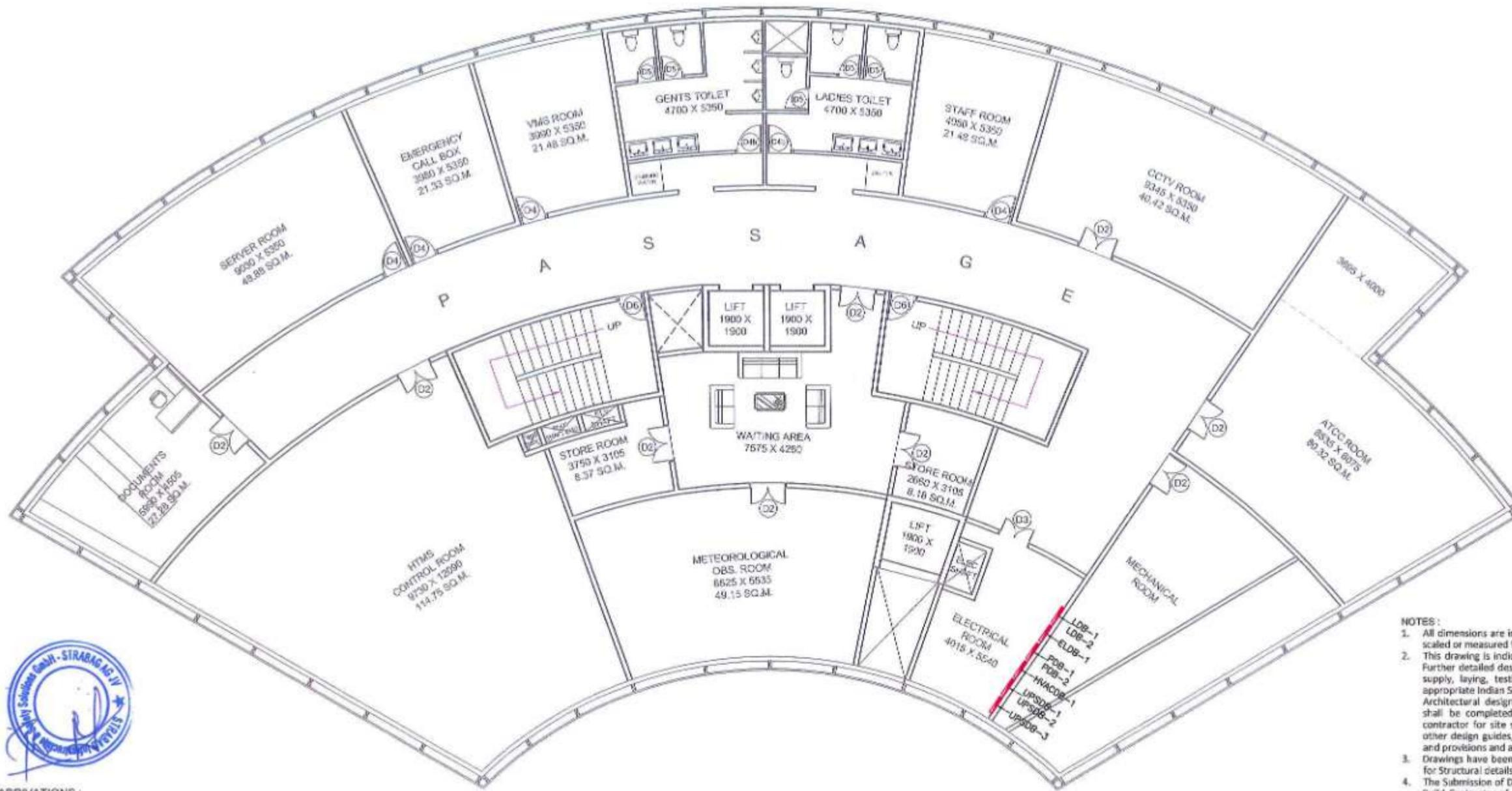


PROJECT :-
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH ->

TITLE -			
SECOND FLOOR PLAN MAIN ADMIN. AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-014	A3	0





ABBREVIATIONS :

- 1. PDB - POWER DISTRIBUTION BOARD
- 2. LDB - LIGHTING DISTRIBUTION BOARD
- 3. UPSDB - UNINTERRUPTED POWER SUPPLY DISTRIBUTION BOARD
- 4. ELDB - EMERGENCY LIGHTING DISTRIBUTION BOARD
- 5. HVAC - HEATING VENTILATION AIR CONDITIONING DISTRIBUTION BOARD

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THIRD FLOOR PLAN
COMMAND CONTROL CENTER

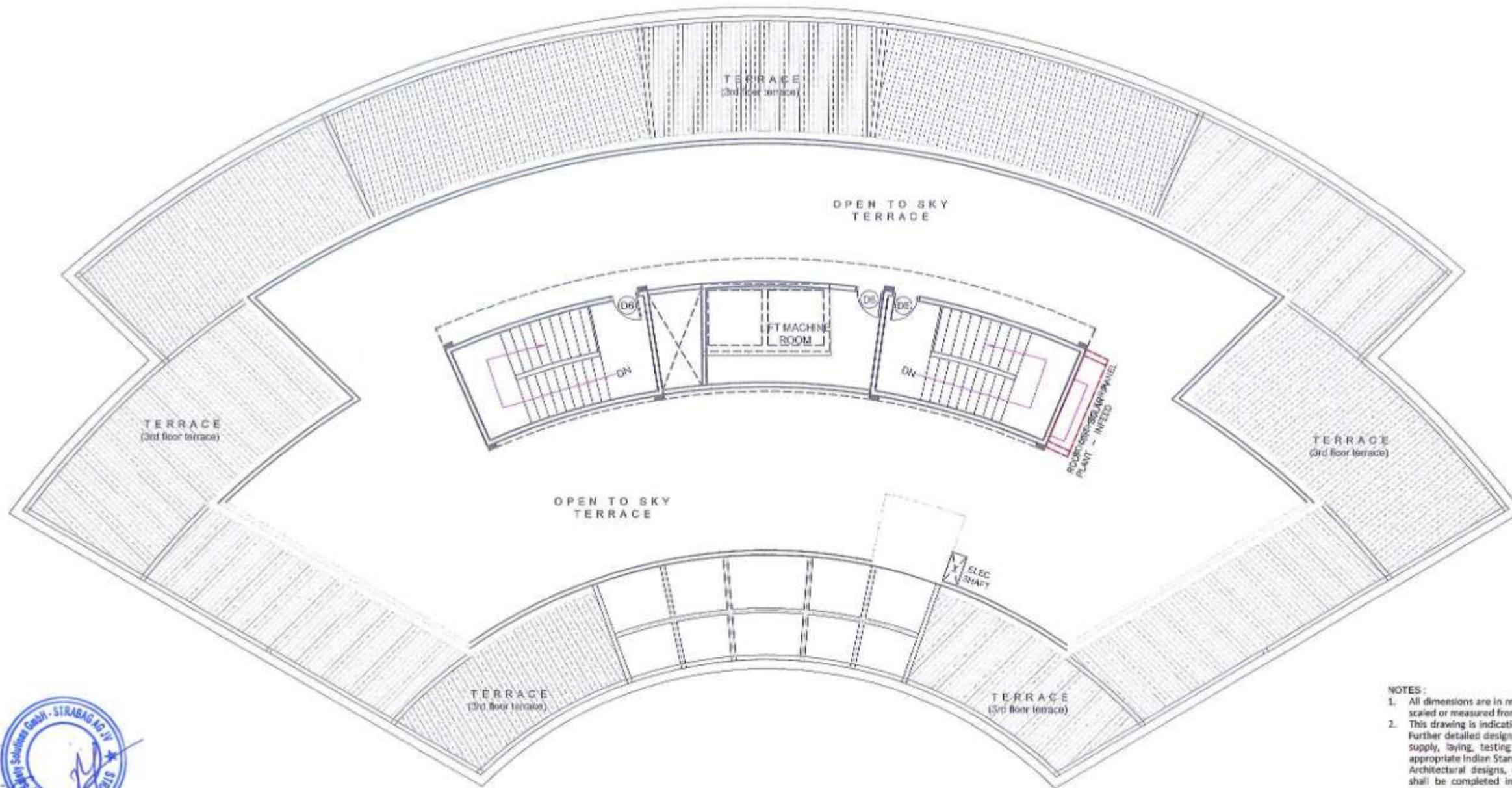
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APPROVED BY	



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :-			
THIRD FLOOR PLAN MAIN ADMIN. AND COMMAND CONTROL CENTER EQUIPMENT LAYOUT			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-015	A3	0



TERRACE FLOOR PLAN



ABRIVATIONS :

- 1. PDB - POWER DISTRIBUTION BOARD
- 2. LDB - LIGHTING DISTRIBUTION BOARD
- 3. UPSDB - UNINTERRUPTED POWER SUPPLY DISTRIBUTION BOARD
- 4. ELDB - EMERGENCY LIGHTING DISTRIBUTION BOARD
- 5. HVAC - HEATING VENTILATION AIR CONDITIONING DISTRIBUTION BOARD

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	NAME	SIGN
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CHECKED BY		
APPROVED BY		



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT :-

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

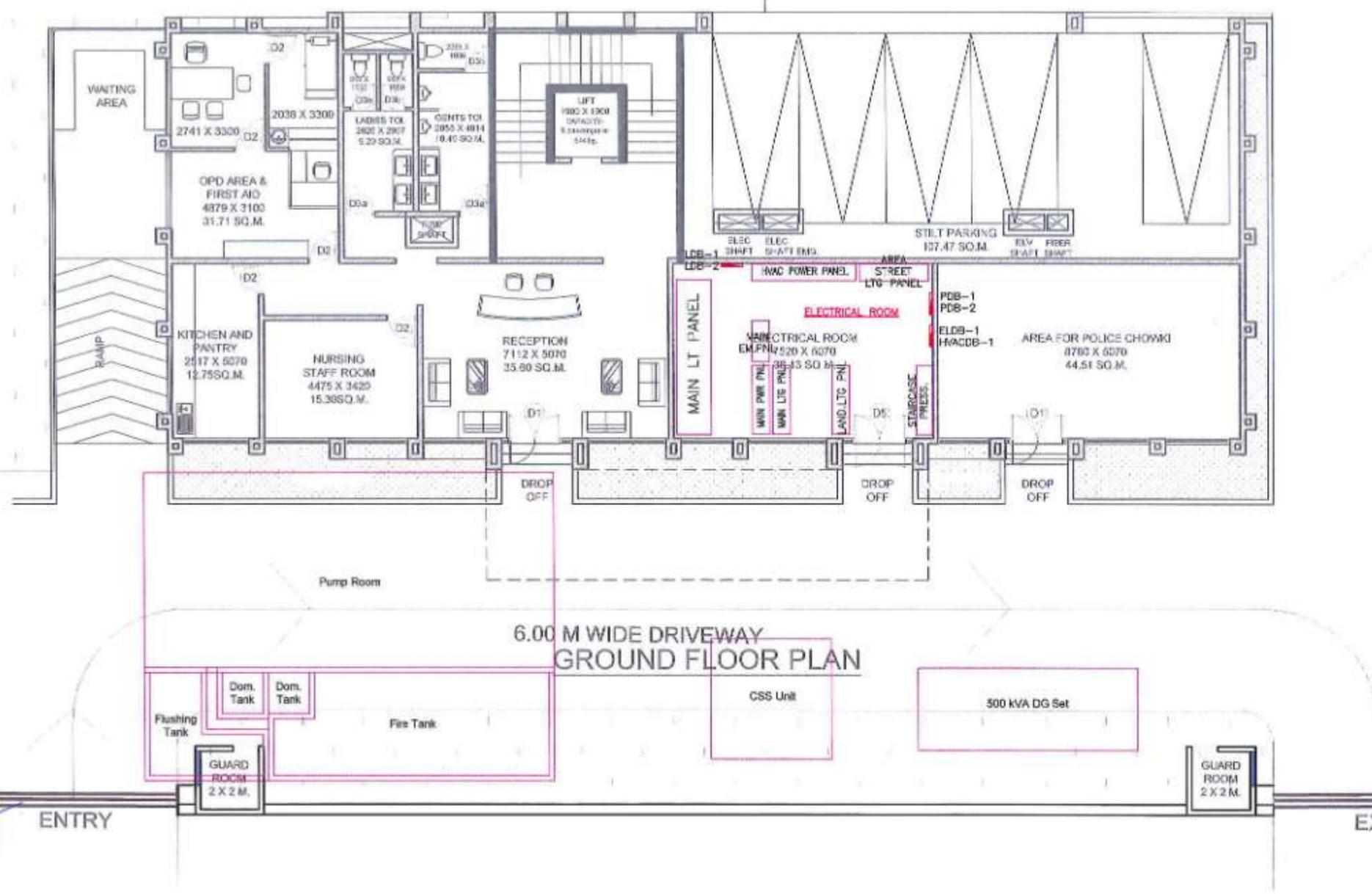
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TITLE :-

**LMR LEVEL PLAN
MAIN ADMIN. AND COMMAND CONTROL CENTER
EQUIPMENT LAYOUT**

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-017	A3	0



- NOTES:**
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 5. HVAC - HEATING VENTILATION AIR CONDITIONING DISTRIBUTION BOARD

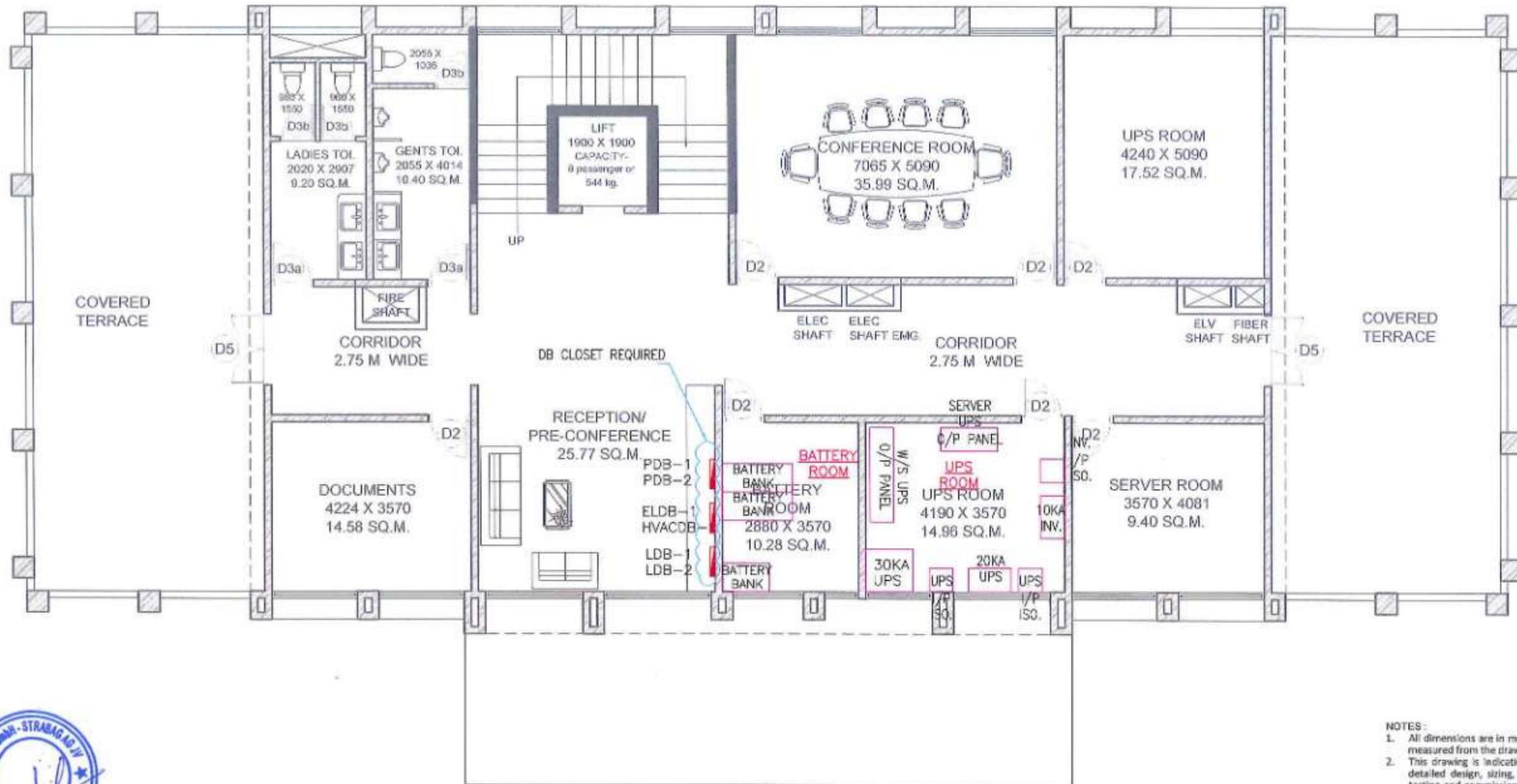
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PROJECT >
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE >			
SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER GROUND FLOOR PLAN EQUIPMENT LAYOUT			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-018	A3	0



FIRST FLOOR PLAN



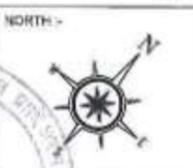
- ABBREVIATIONS :**
- 1. PDB - POWER DISTRIBUTION BOARD
 - 2. LDB - LIGHTING DISTRIBUTION BOARD
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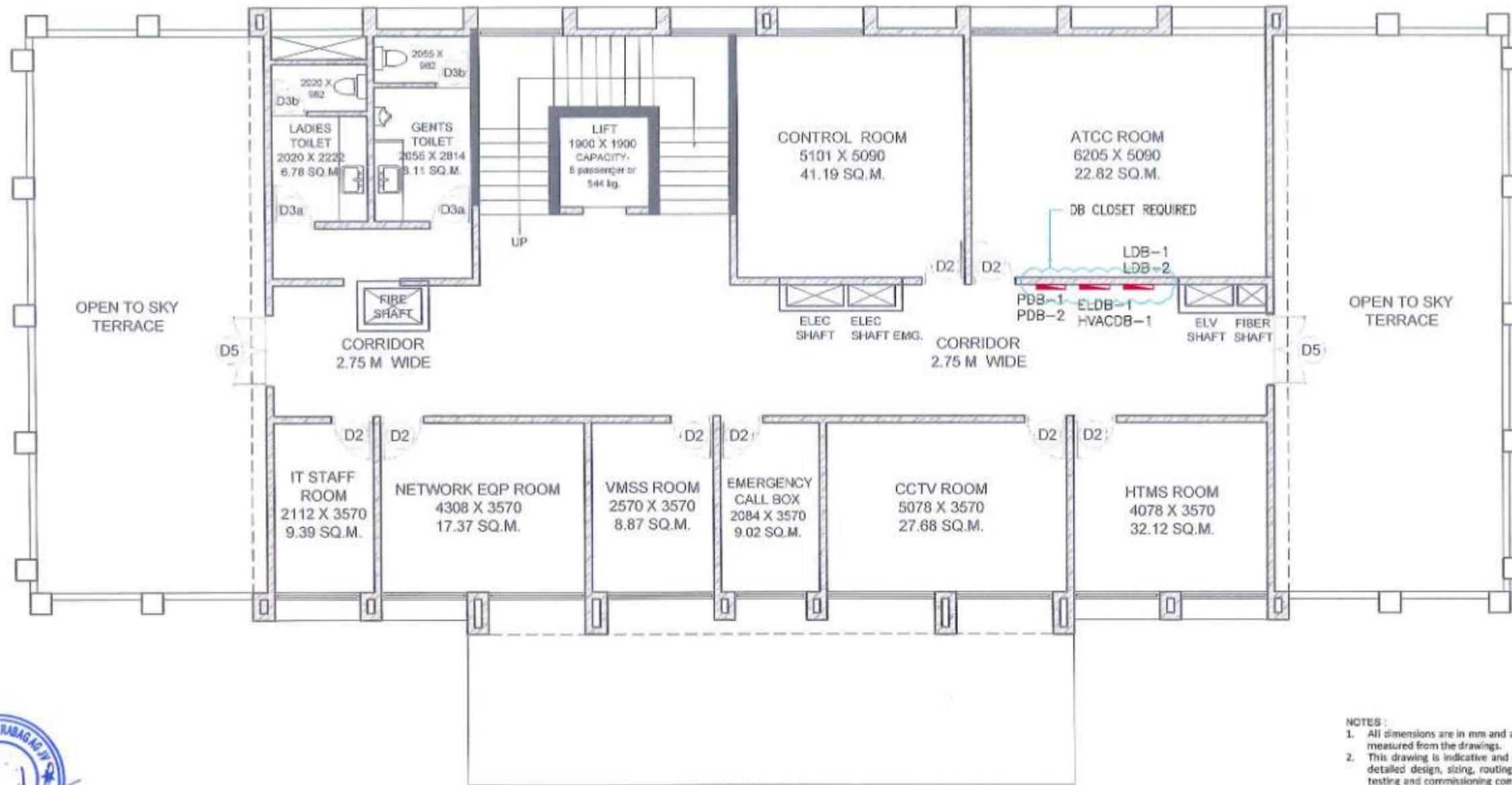


PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE -> SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER FIRST FLOOR PLAN EQUIPMENT LAYOUT			
DATE 10.04.2021	DRAWING NO. P4-ELE-019	PAPER SIZE A3	REV. 0





SECOND FLOOR PLAN



ABRIVATIONS :

- 1. PDB - POWER DISTRIBUTION BOARD
- 2. LDB - LIGHTING DISTRIBUTION BOARD
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NAME	SIGN
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APPROVED BY	



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT ->

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH ->

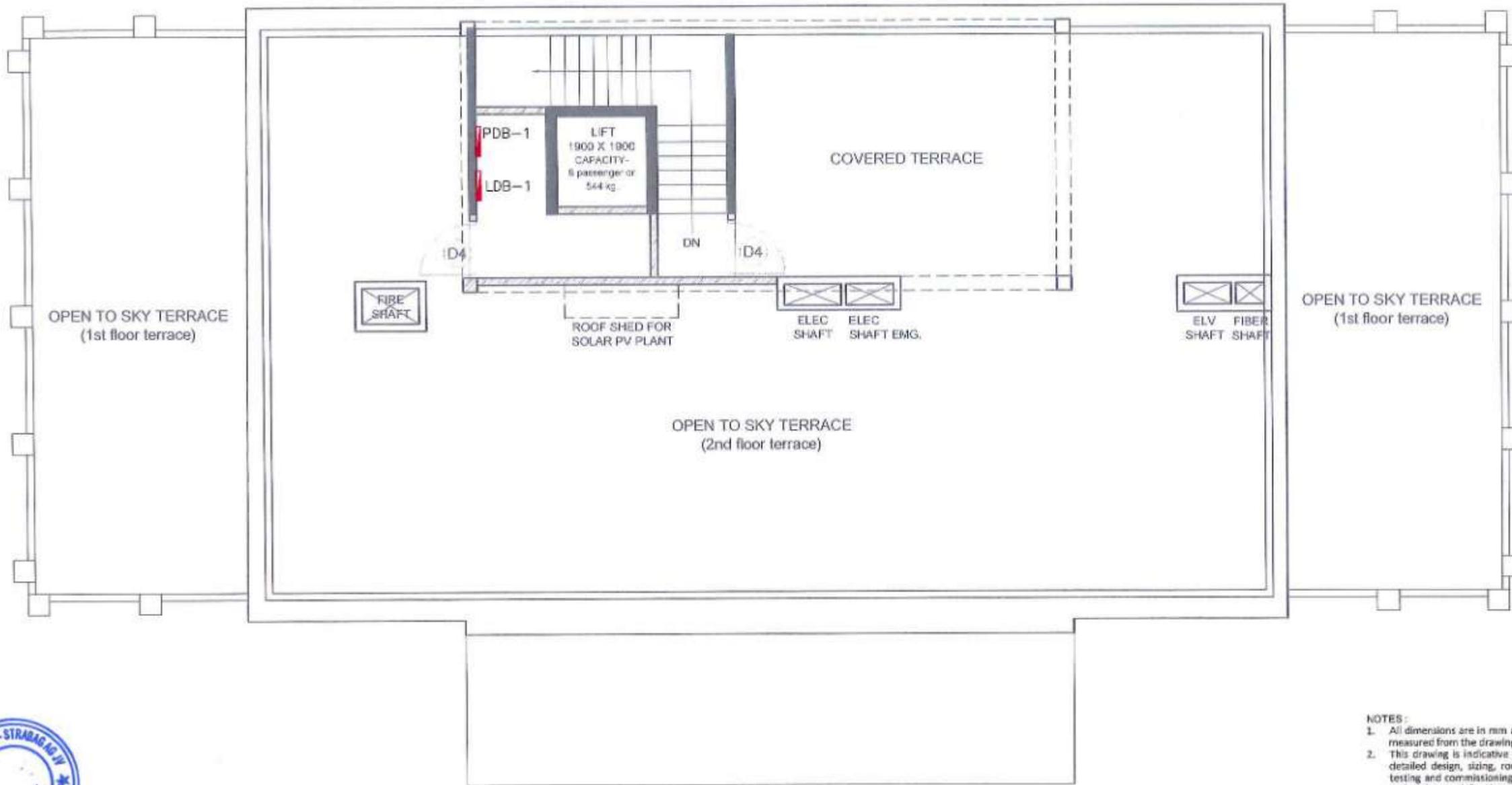


TITLE ->

**SEWRI INTERCHANGE
SUB ADMINISTRATION AND COMMAND CONTROL CENTER
SECOND FLOOR PLAN
EQUIPMENT LAYOUT**

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-020	A3	0





TERRACE FLOOR PLAN



- ABRIVATIONS :**
1. PDB - POWER DISTRIBUTION BOARD
 2. LDB - LIGHTING DISTRIBUTION BOARD
 3. UPSDB - UNINTERRUPTED POWER SUPPLY DISTRIBUTION BOARD
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APPROVED BY		

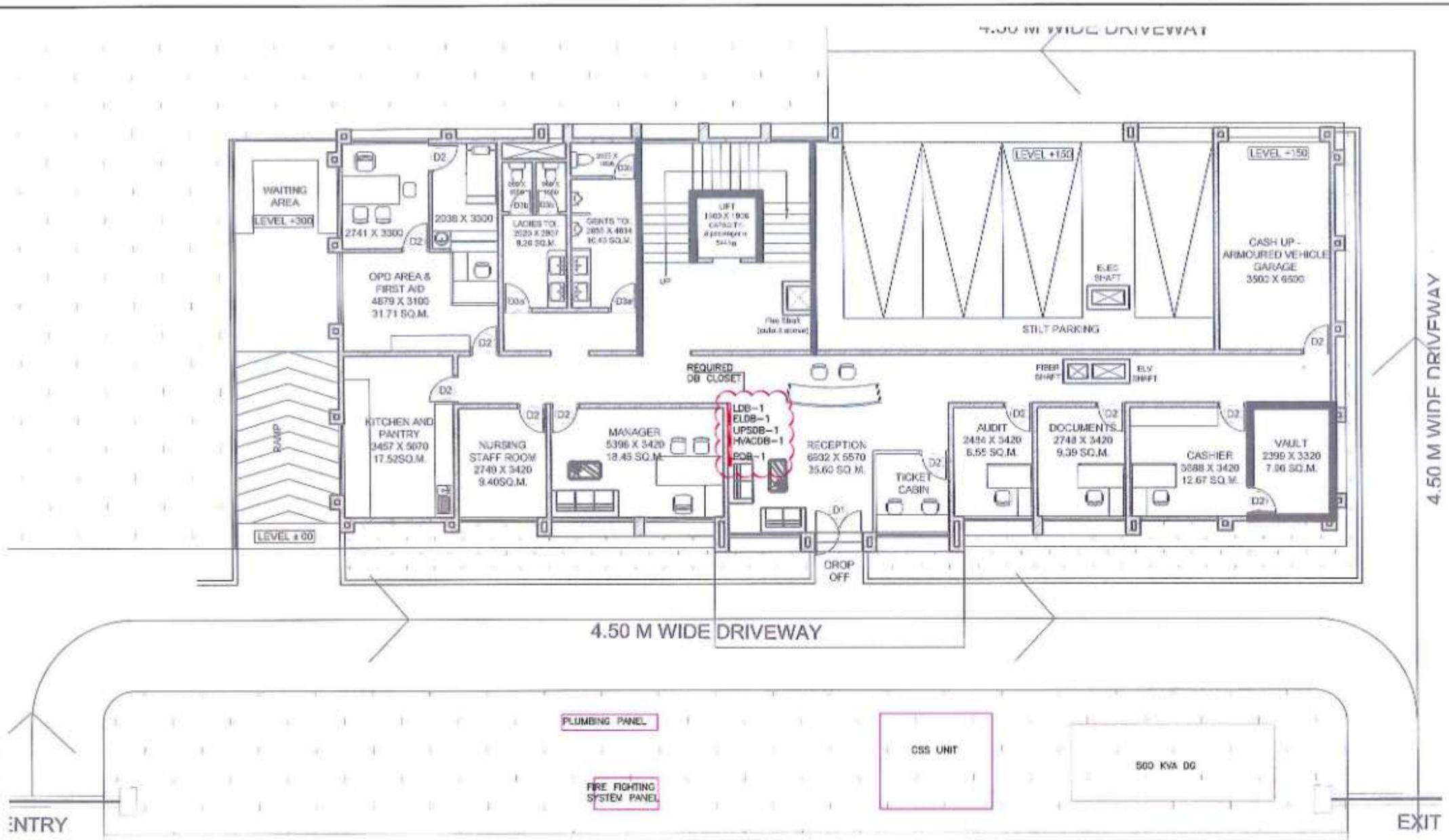


PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE - SEWRI INTERCHANGE SUB ADMINISTRATION AND COMMAND CONTROL CENTER TERRACE FLOOR PLAN EQUIPMENT LAYOUT			
DATE: 10.04.2021	DRAWING NO: P4-ELE-021	PAPER SIZE: A3	REV: 0





GROUND FLOOR PLAN

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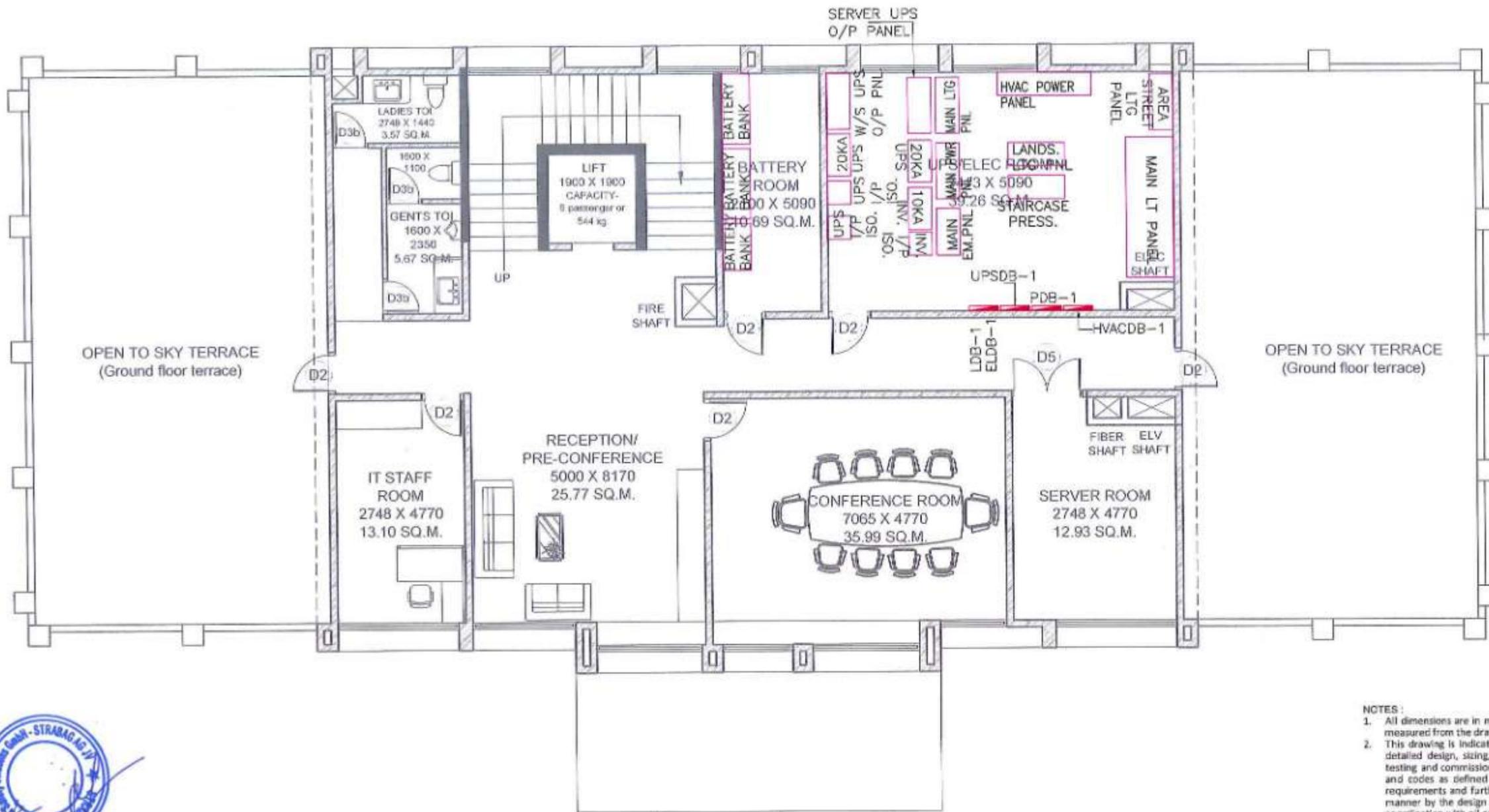


MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- SHIVAJI NAGAR INTERCHANGE ADMINISTRATION AND COMMAND CONTROL CENTER GROUND FLOOR PLAN EQUIPMENT LAYOUT			
DATE: 10.04.2021	DRAWING NO. P4-ELE-22	PAPER SIZE A3	REV. 0

NAME	SIGN
DRAWN BY	
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FIRST FLOOR PLAN

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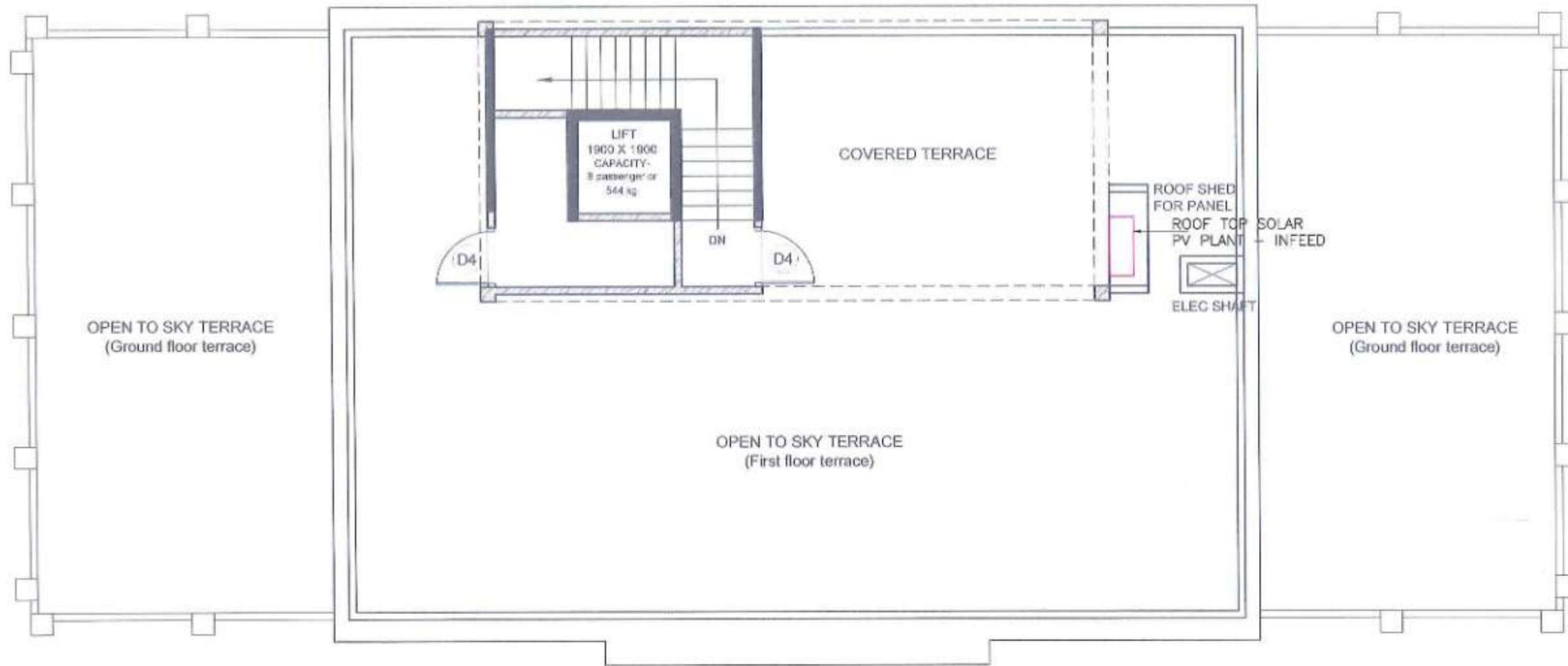


PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING

NORTH -

TITLE - SHIVAJI NAGAR INTERCHANGE ADMINISTRATION AND COMMAND CONTROL CENTER FIRST FLOOR PLAN EQUIPMENT LAYOUT			
DATE: 10.04.2021	DRAWING NO: P4-ELE-23	PAPER SIZE: A3	REV: 0





TERRACE FLOOR PLAN



ABBREVIATIONS:

- 1. PDB - POWER DISTRIBUTION BOARD
- 2. LDB - LIGHTING DISTRIBUTION BOARD
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CHECKED BY		
APPROVED BY		



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT :-

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

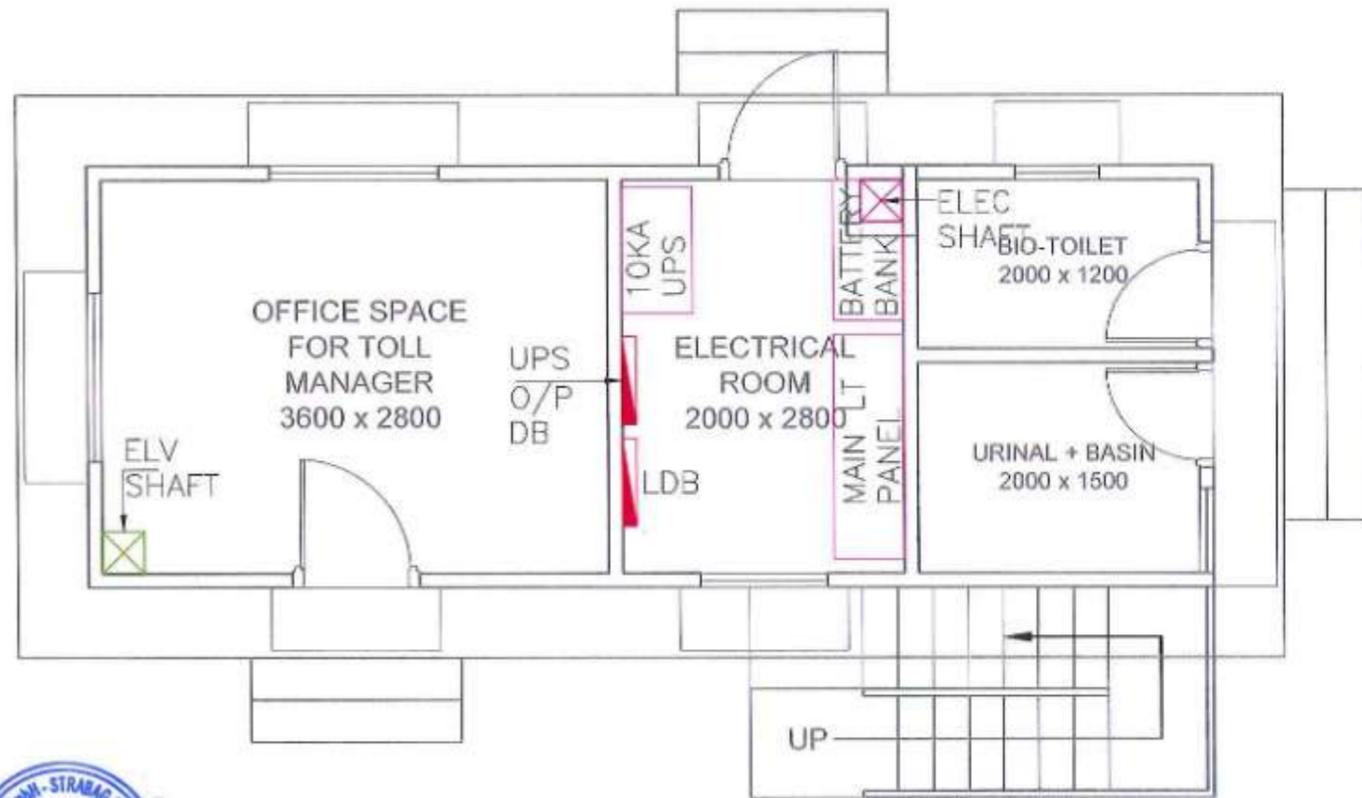
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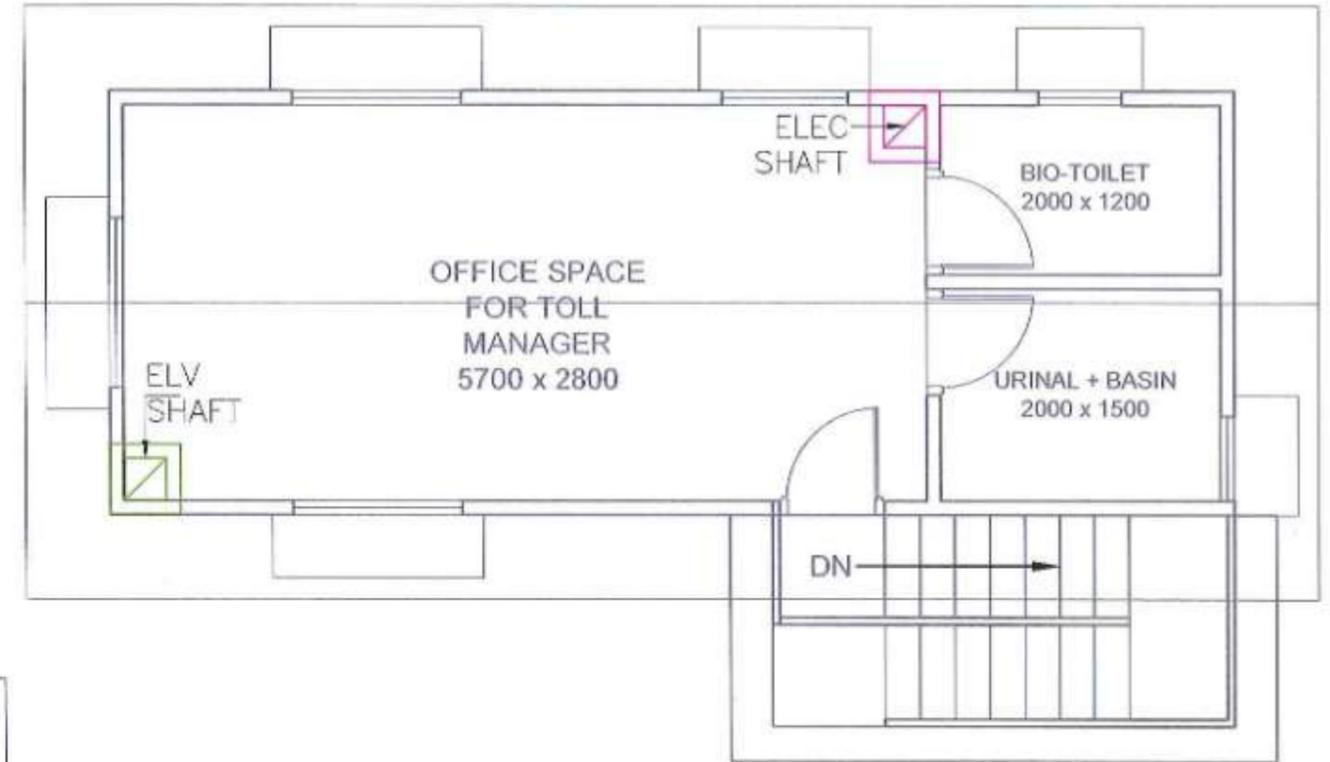
TITLE :-

**SHIVAJI NAGAR INTERCHANGE
ADMINISTRATION AND COMMAND CONTROL CENTER
TERRACE FLOOR PLAN
EQUIPMENT LAYOUT**

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-24	A3	0



GROUND FLOOR PLAN



FIRST FLOOR PLAN

ABRIVATIONS :

- 1. PDB - POWER DISTRIBUTION BOARD
- 2. LDB - LIGHTING DISTRIBUTION BOARD
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NAME	SIGN
DRAWN BY	
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APPROVED BY	

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PROJECT ->

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH ->



TITLE ->

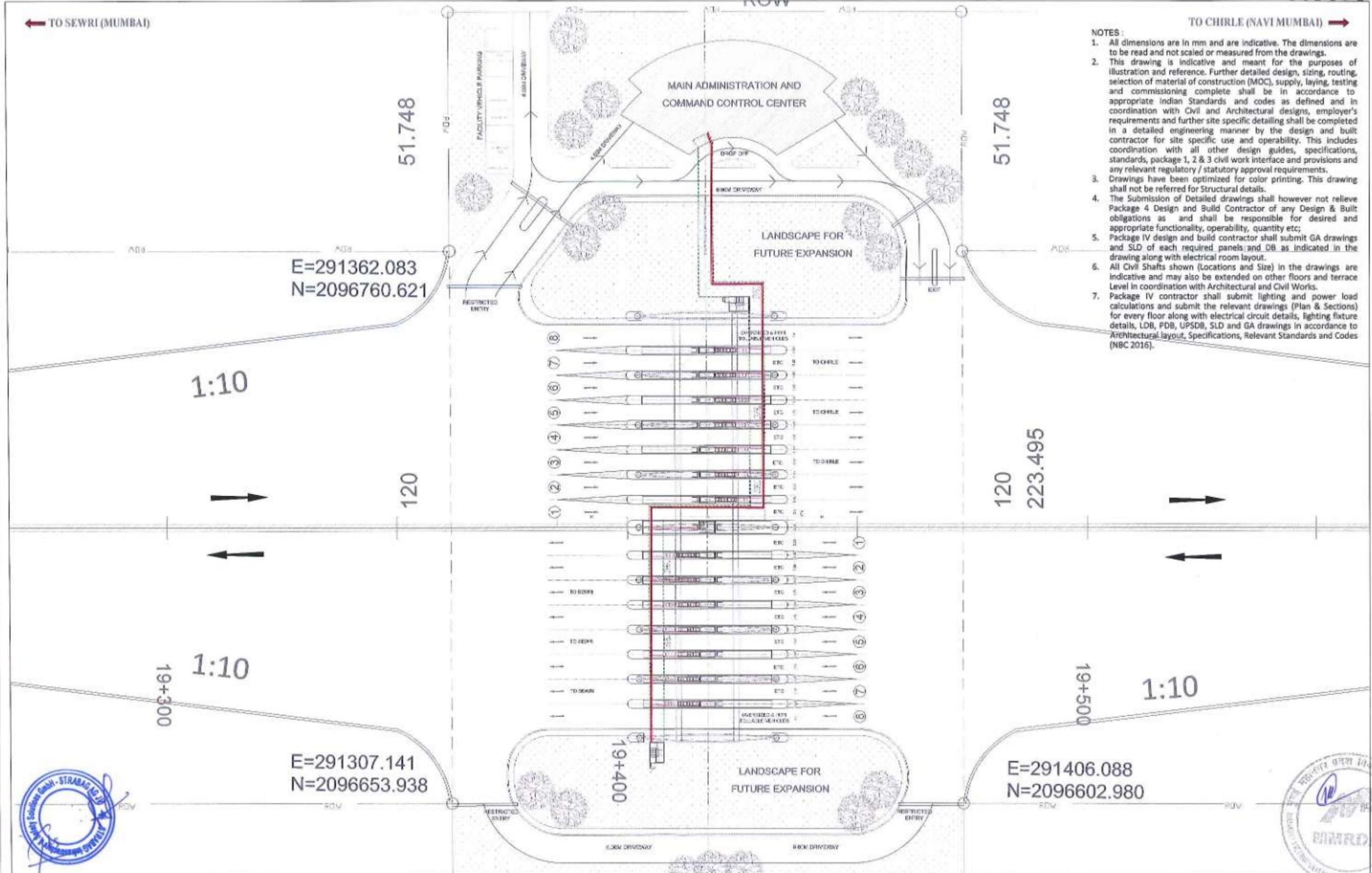
**SHIVAJI NAGAR INTERCHANGE
PORTA CABIN GROUND & FIRST FLOOR PLAN
EQUIPMENT LAYOUT**

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-ELE-25	A3	0

← TO SEWRI (MUMBAI)

TO CHIRLE (NAVI MUMBAI) →

- NOTES:
1. All dimensions are in mm and are indicative. The dimensions are to be read and not scaled or measured from the drawings.
 2. This drawing is indicative and meant for the purposes of illustration and reference. Further detailed design, sizing, routing, selection of material of construction (MOC), supply, laying, testing and commissioning complete shall be in accordance to appropriate Indian Standards and codes as defined and in coordination with Civil and Architectural designs, employer's requirements and further site specific detailing shall be completed in a detailed engineering manner by the design and built contractor for site specific use and operability. This includes coordination with all other design guides, specifications, standards, package 1, 2 & 3 civil work interface and provisions and any relevant regulatory / statutory approval requirements.
 3. Drawings have been optimized for color printing. This drawing shall not be referred for Structural details.
 4. The Submission of Detailed drawings shall however not relieve Package 4 Design and Build Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc;
 5. Package IV design and build contractor shall submit GA drawings and SLD of each required panels and DB as indicated in the drawing along with electrical room layout.
 6. All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace Level in coordination with Architectural and Civil Works.
 7. Package IV contractor shall submit lighting and power load calculations and submit the relevant drawings (Plan & Sections) for every floor along with electrical circuit details, lighting fixture details, LDB, PDB, UPSDB, SLD and GA drawings in accordance to Architectural layout, Specifications, Relevant Standards and Codes (NBC 2016).



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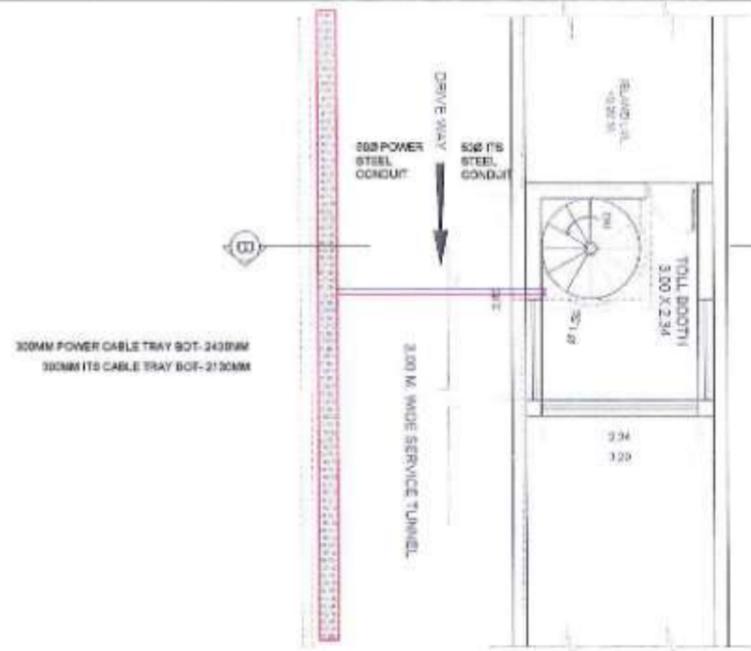
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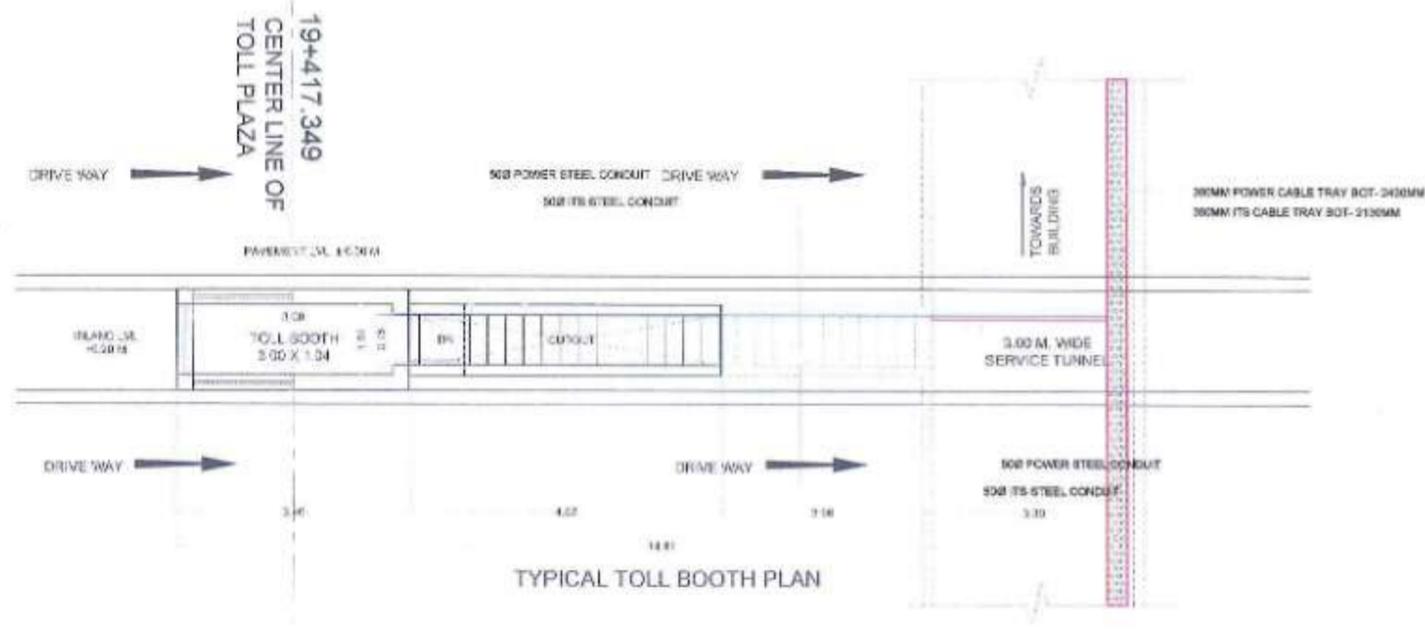
PROJECT:-
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



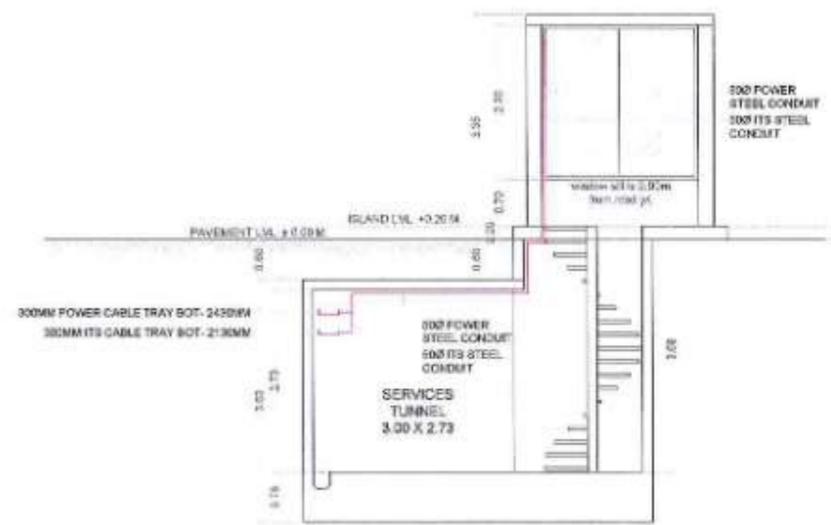
TITLE:- GAWAN TOLL PLAZA- TUNNEL CABLE TRAY ROUTING			
DATE: 10.04.2021	DRAWING NO: P4 - ELE - 026 (1 OF 2)	PAPER SIZE: A1	REV. 0



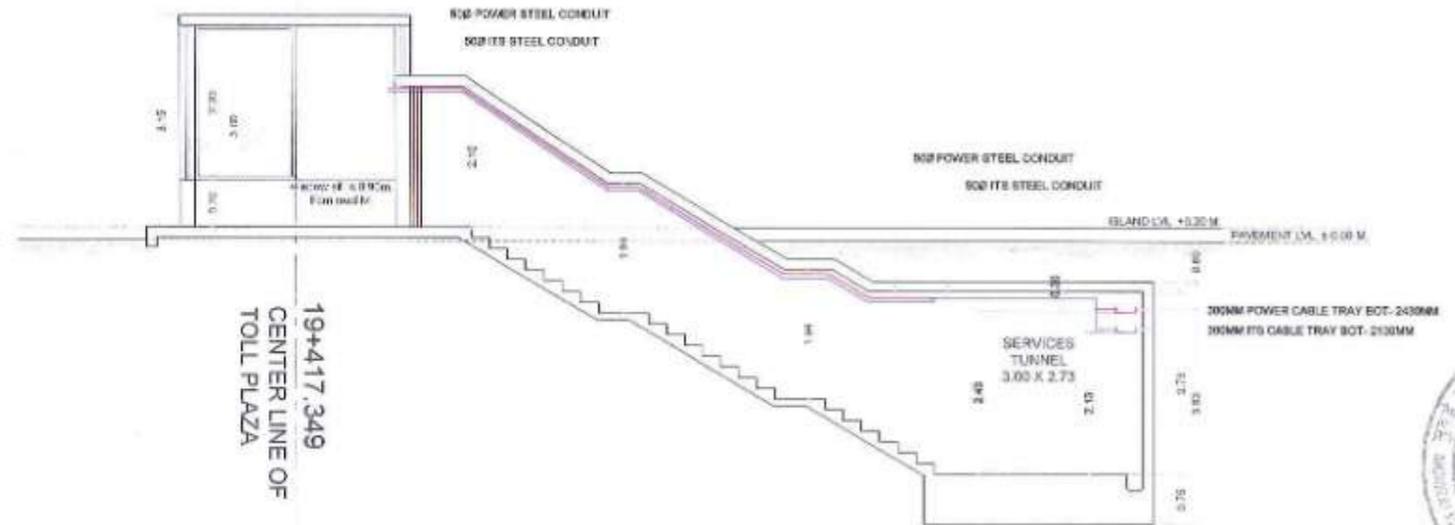
CENTER ISLAND TOLL BOOTH PLAN



TYPICAL TOLL BOOTH PLAN



SECTION B - B



TYPICAL TOLL BOOTH SECTION

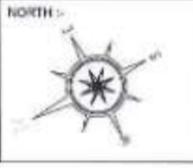
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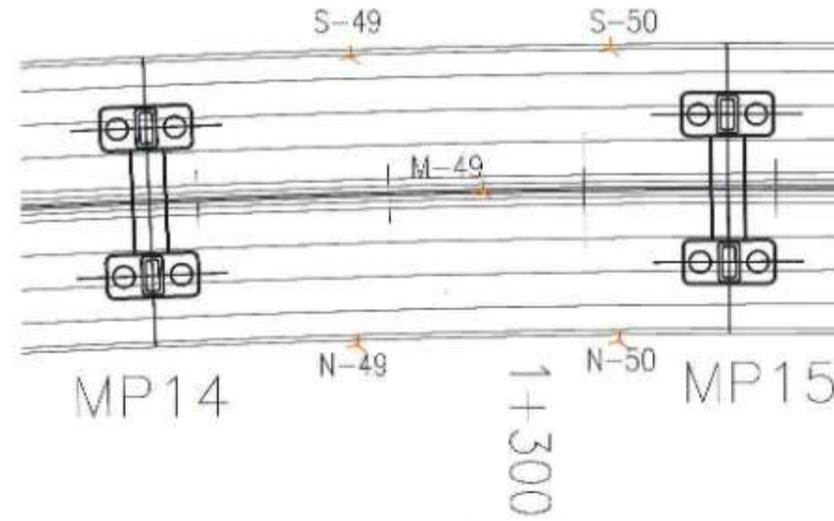
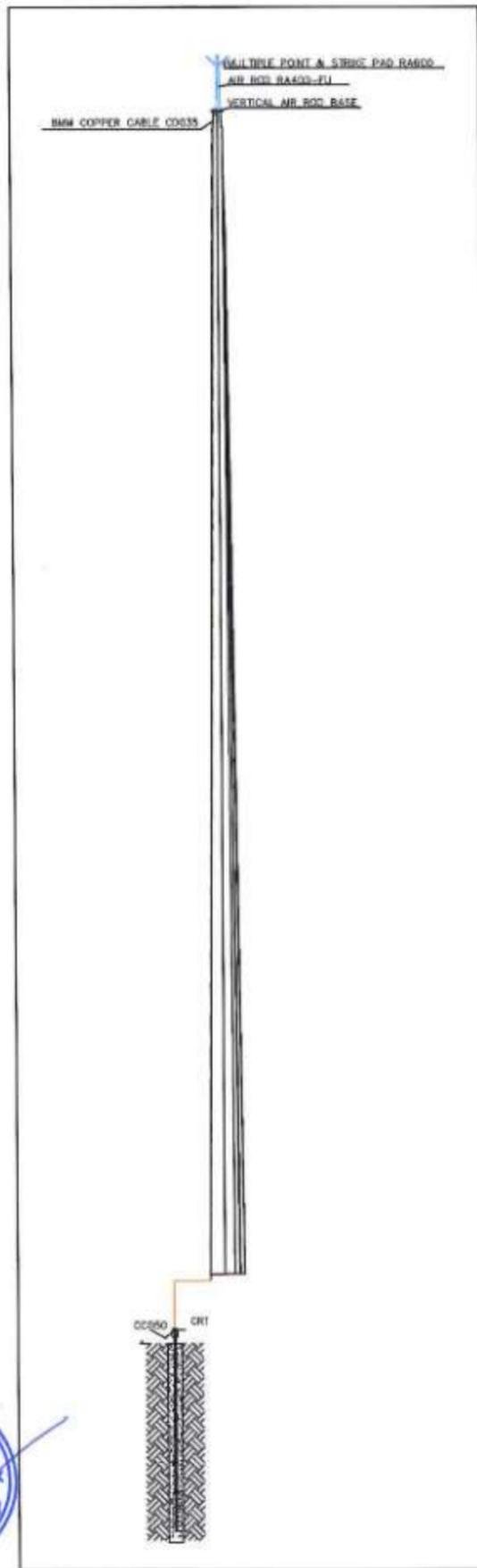
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PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

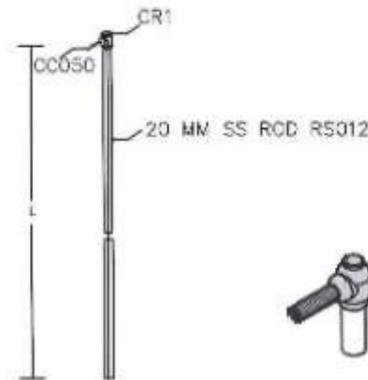


TITLE :- GAWAN TOLL PLAZA- TUNNEL CABLE TRAY ROUTING DETAILS OF TOLL BOOTH			
DATE 10.04.2021	DRAWING NO. P4 - ELE - 026 (2 OF 2)	PAPER SIZE A1	REV. 0



MATERIALS DESCRIPTION :-
 SS - EARTHING ROD OF 'd' DIA AND 'L' LENGTH CONNECTION MADE FROM FURSEWELD TO ROD AS PER DRAWING.

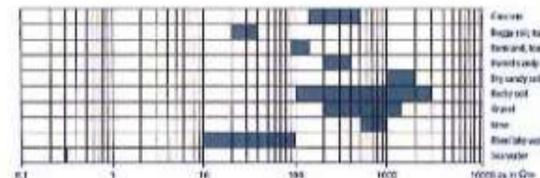
SR	L - LENGTH	d - DIAMETER
1	3000 MM	20 MM



100MM DIA CASTING MADE FROM FURSECEM MIXED WITH CEMENT @ RATIO OF 3:1



CONDUCTIVE CONCRETE EARTHING TYPICAL DETAIL



- NOTES:-**
- (1) PLEASE ALLOW 21 DAY TO SETTLE THE EARTHING PIT.
 - (2) KEEP DISTANCE OF 3M FROM NEAR BY STRUCTURE & EARTH PIT FOR COVERAGE AREA.
 - (3) DO NOT USE DEBRIS, WOOD, CEMENT, STONE AS BASIC FILL MATERIAL.

SYMBOL	DESCRIPTION
	LIGHTNING ARRESTOR
	EARTH PIT

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NAME	SIGN
DESIGNED BY	
CHECKED BY	
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 MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY

PROJECT :-

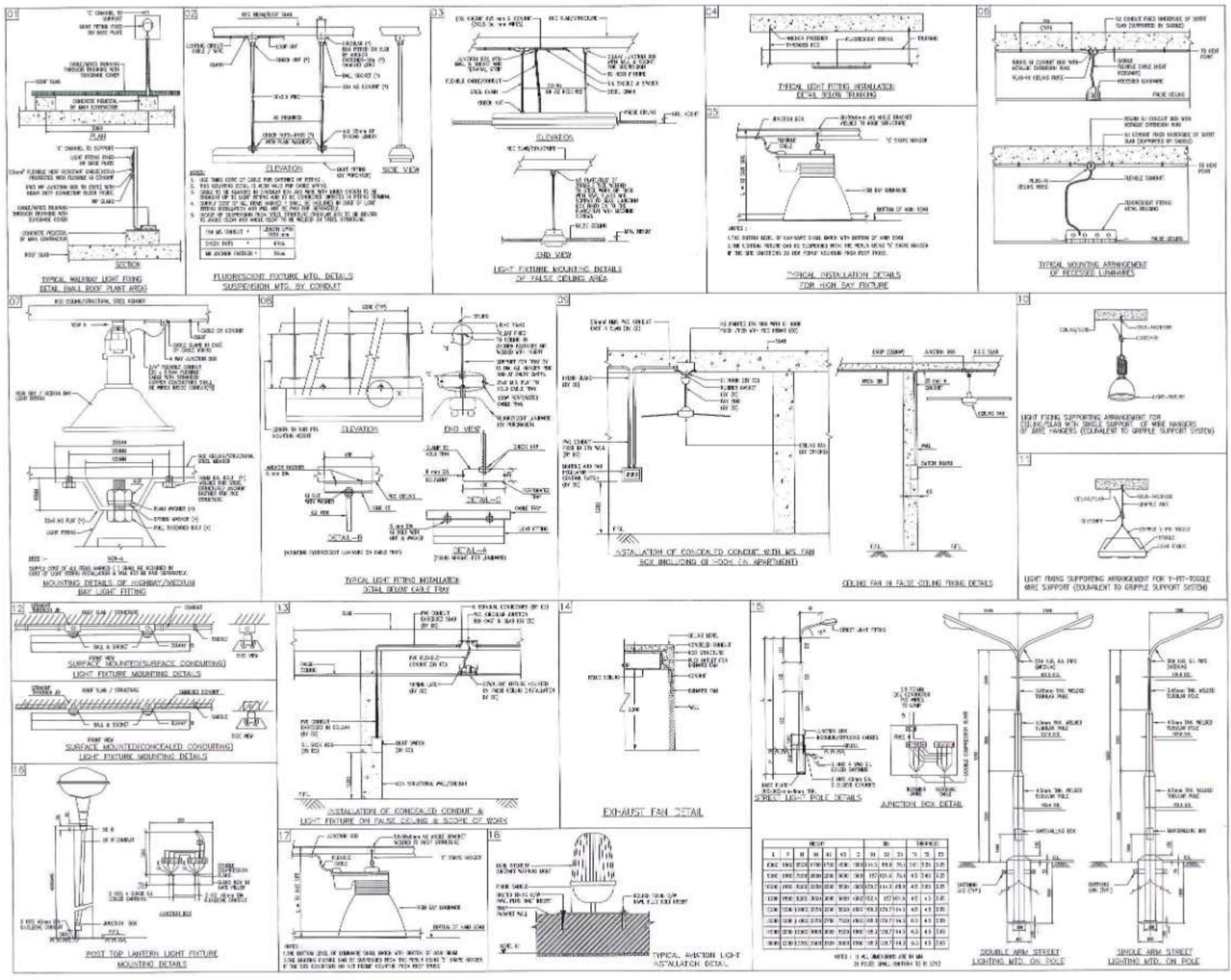
**MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING**



TITLE :-

**LIGHTNING PROTECTION & EARTHING SYSTEM
 FOR MTHL- PLAN**

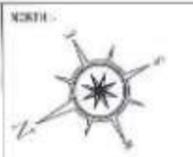
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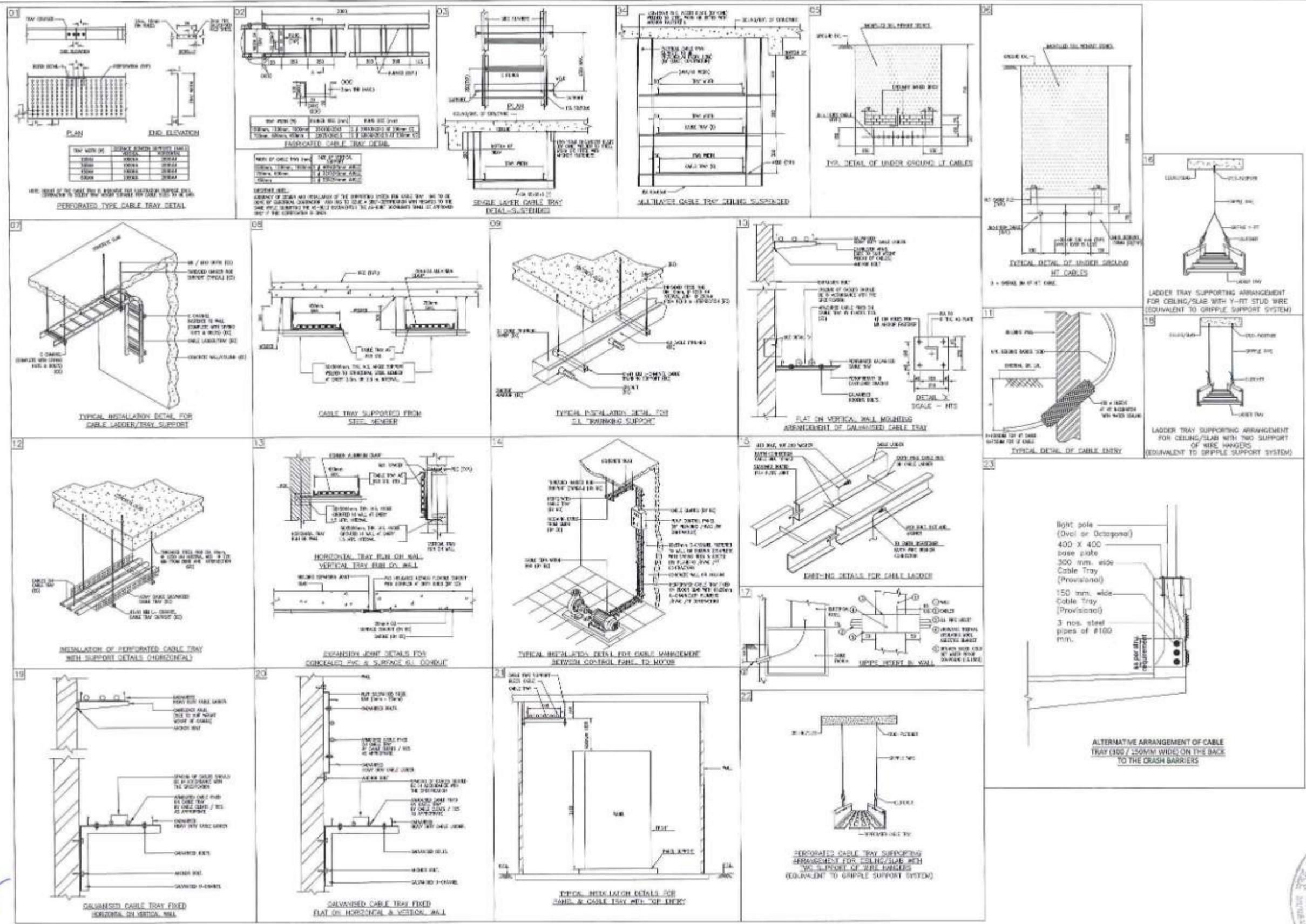
DESIGNED	
CHECKED	
APPROVED	

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DEVELOPMENT AUTHORITY

PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



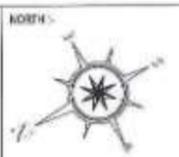
TITLE -	TYPICAL INSTALLATION DETAILS FOR ELECTRICAL SYSTEM		
DATE	10.04.2021	DRAWING NO.	P4 - ELE - 028 (1 OF 7)
PAPER SIZE	A1	REV.	0



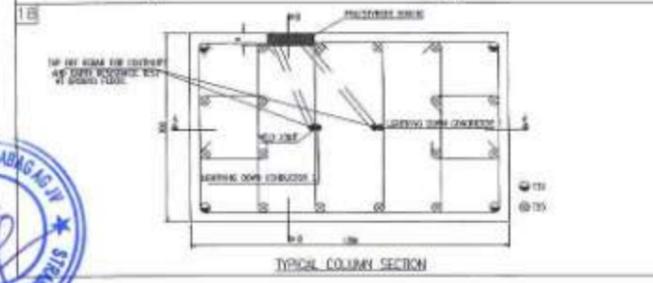
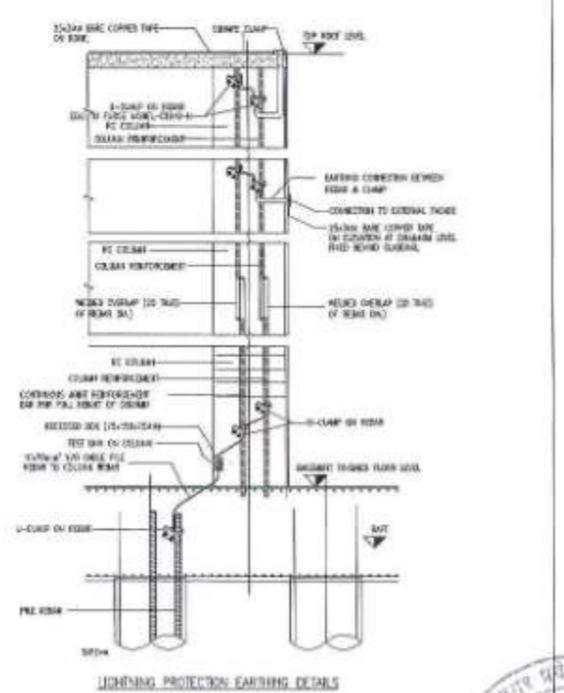
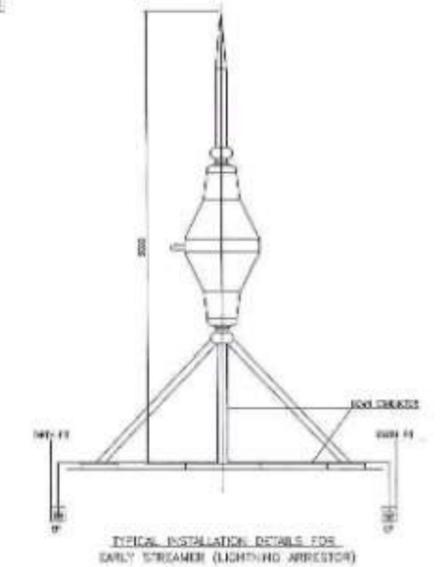
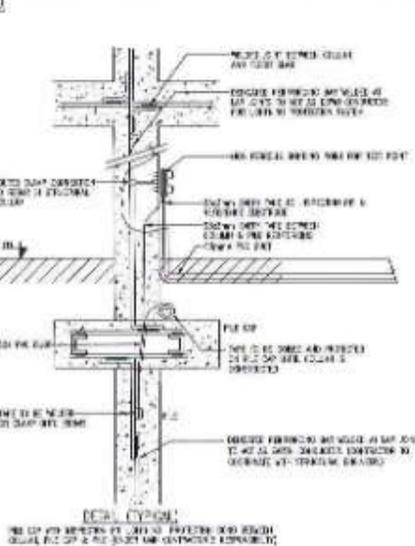
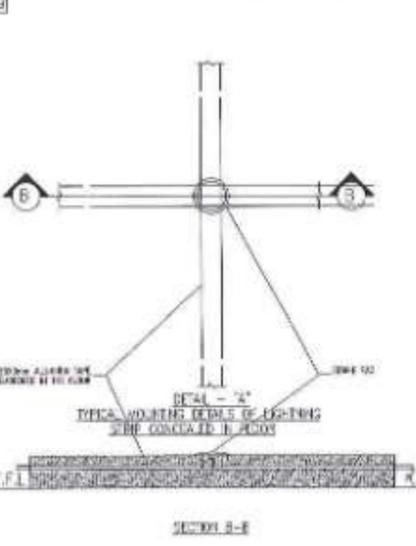
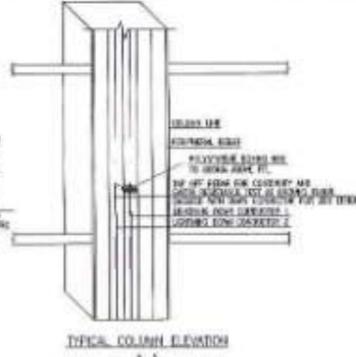
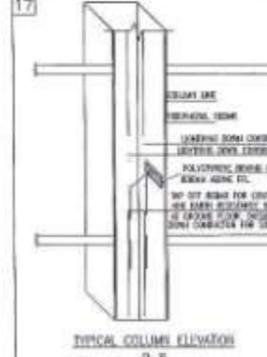
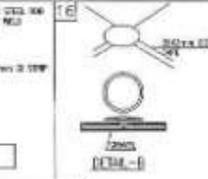
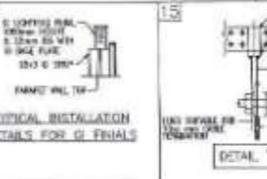
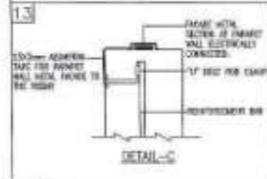
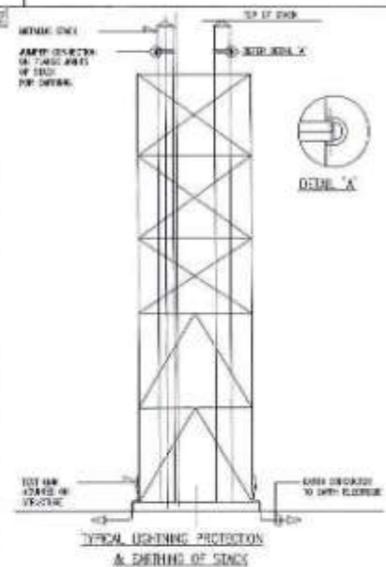
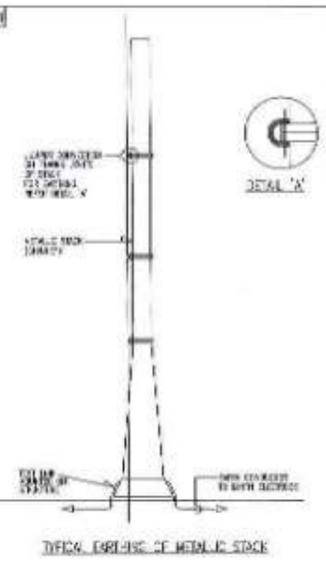
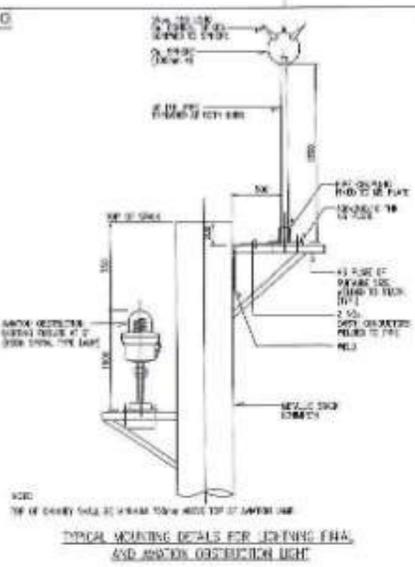
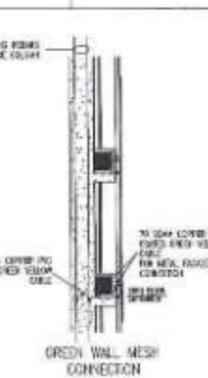
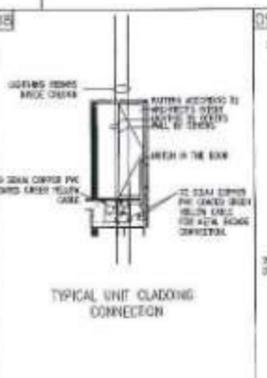
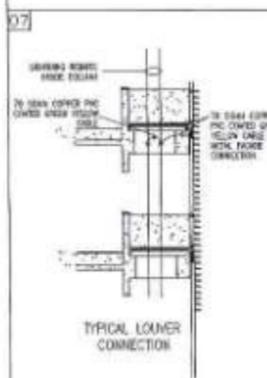
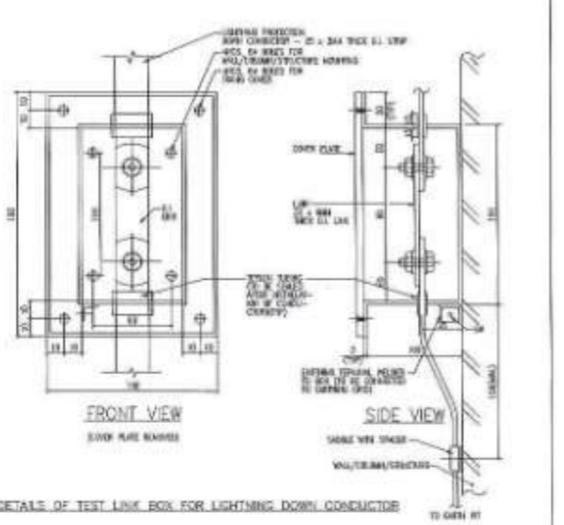
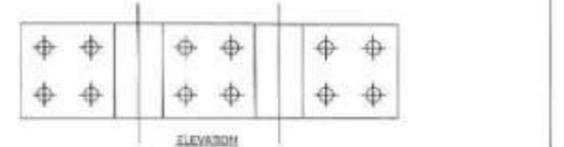
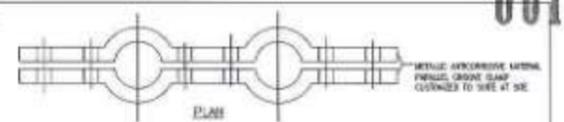
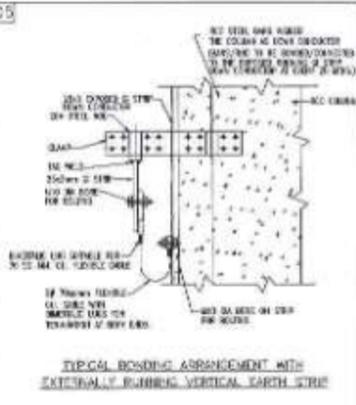
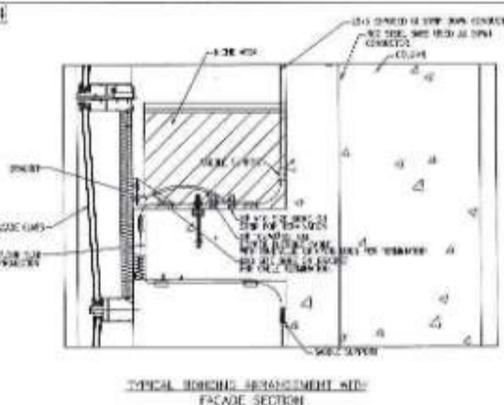
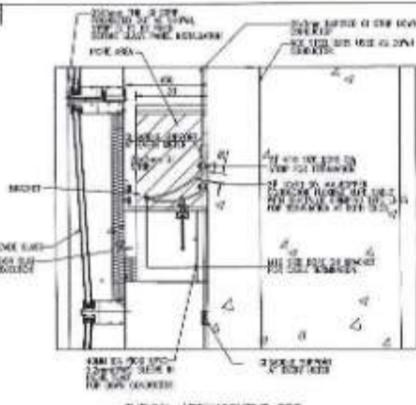
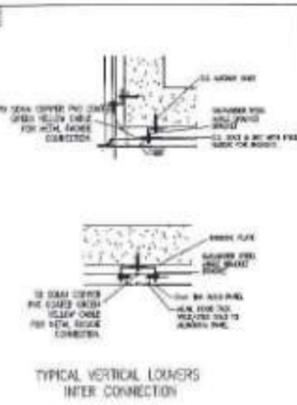
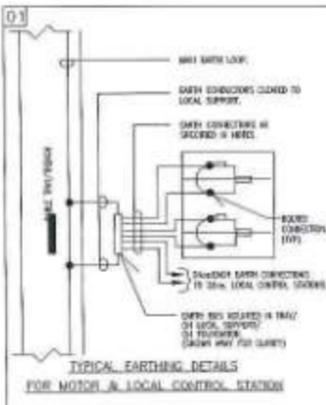
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PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



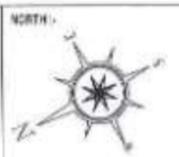
TITLE -	TYPICAL INSTALLATION DETAILS FOR ELECTRICAL SYSTEM		
DATE	10.04.2021	DRAWING NO.	P4 - ELE - 02B (3 OF 7)
PAPER SIZE	A1	REV.	0



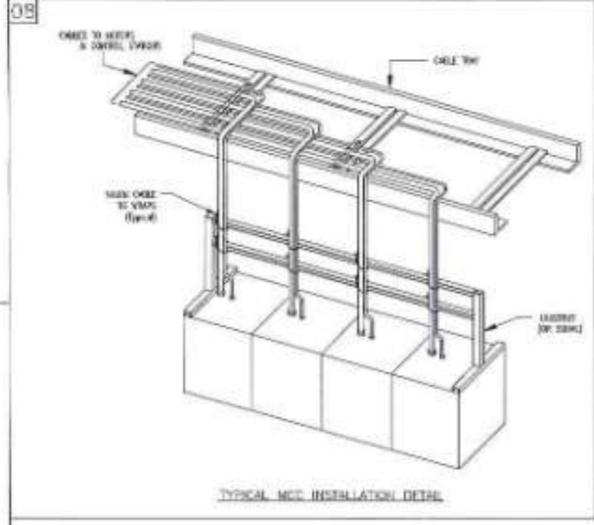
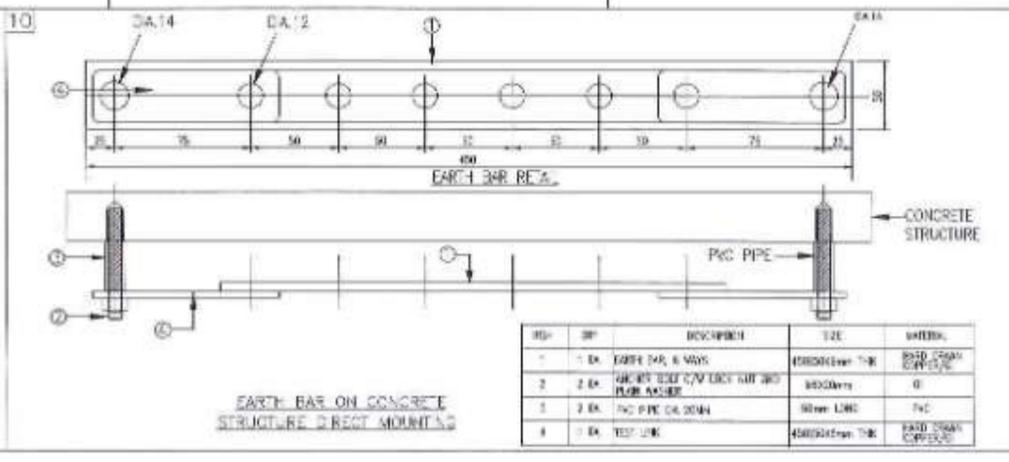
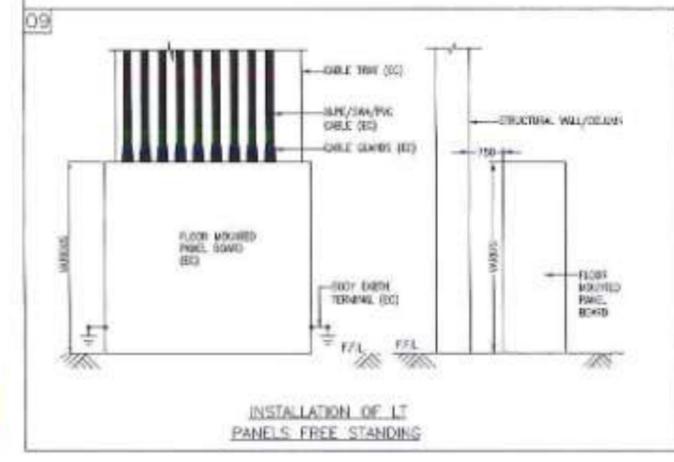
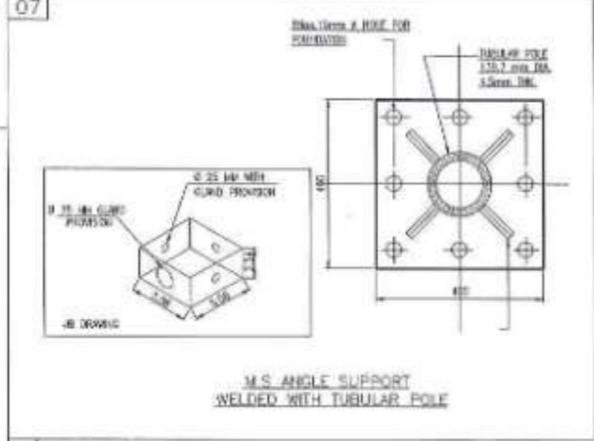
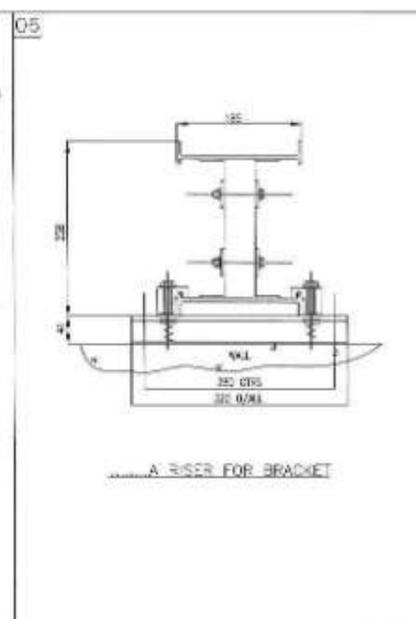
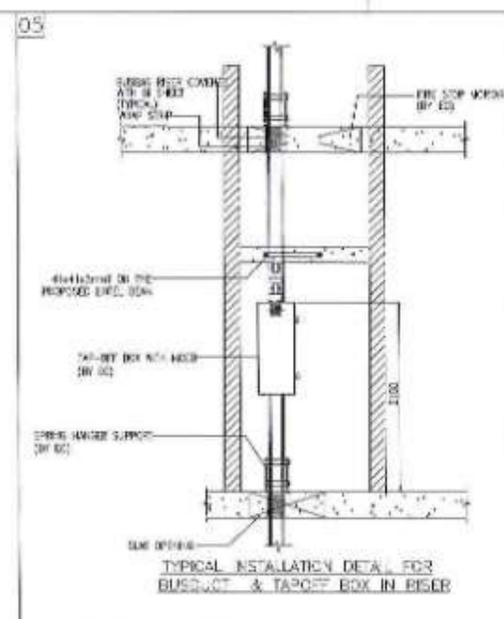
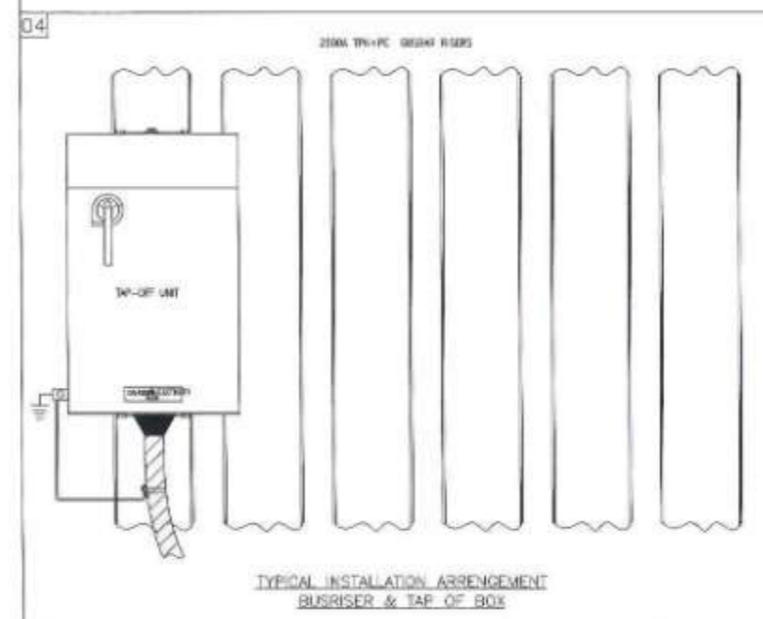
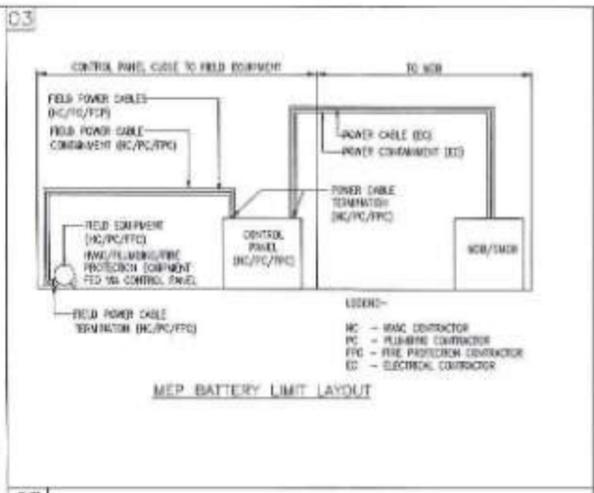
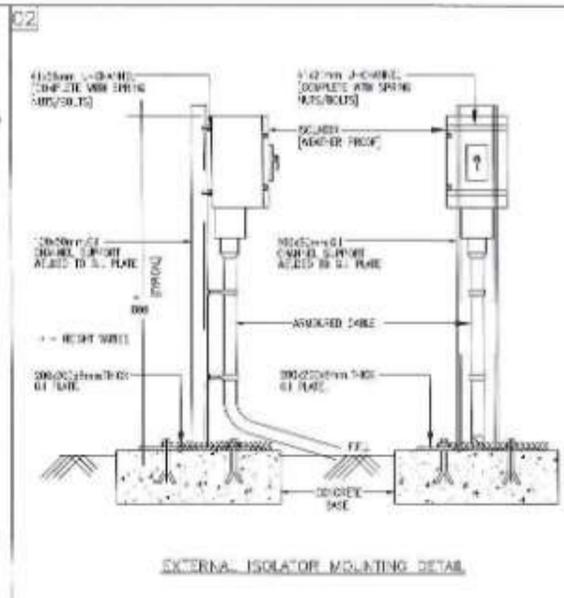
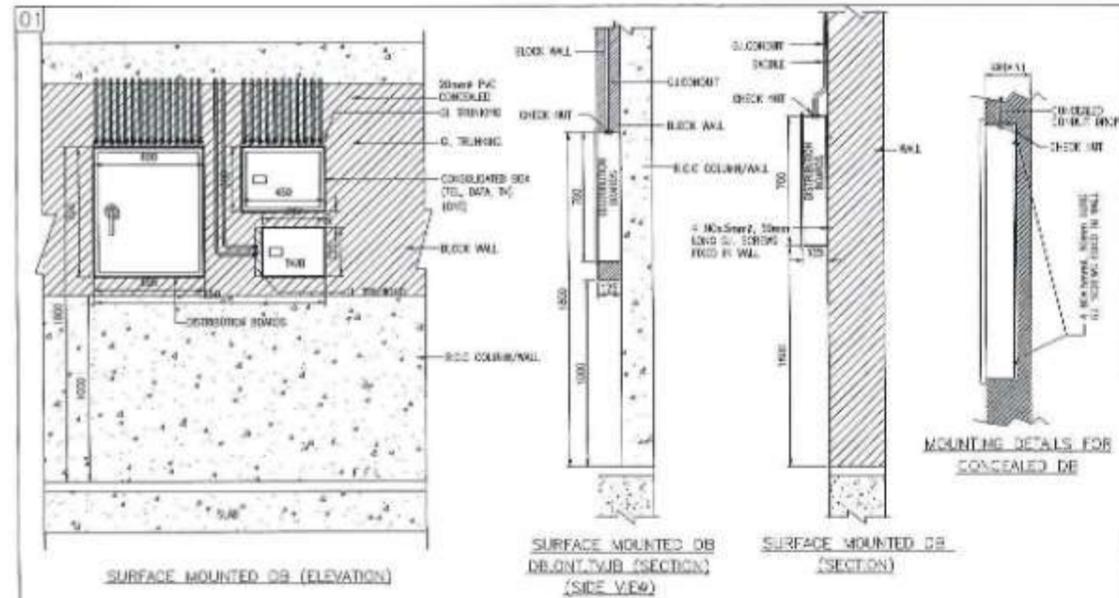
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PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



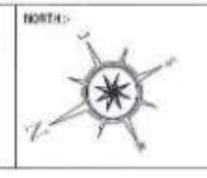
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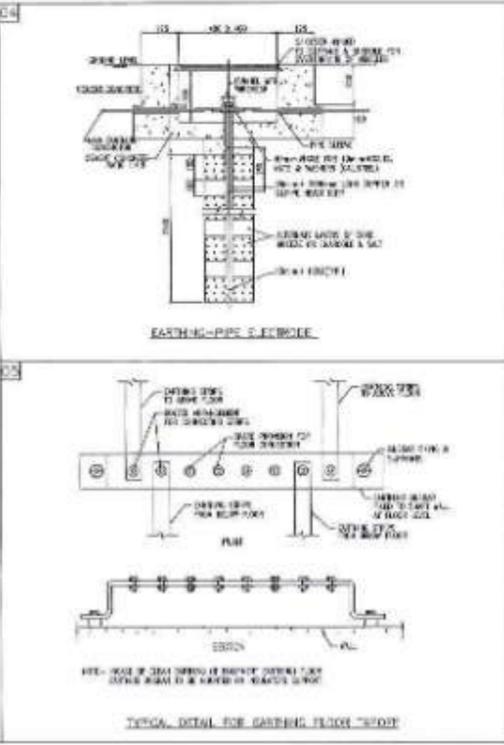
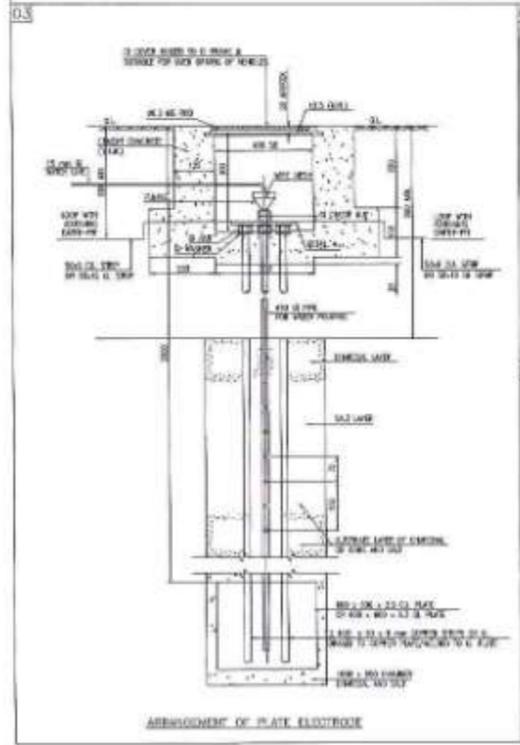
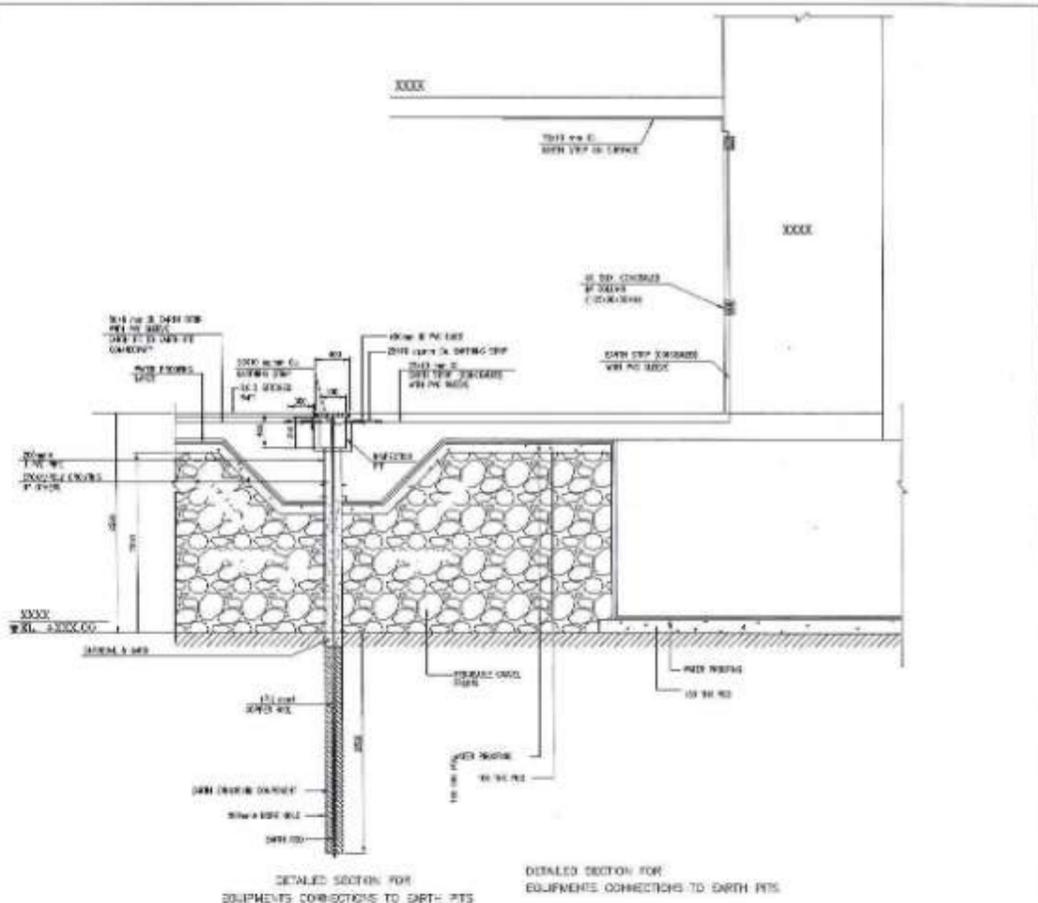
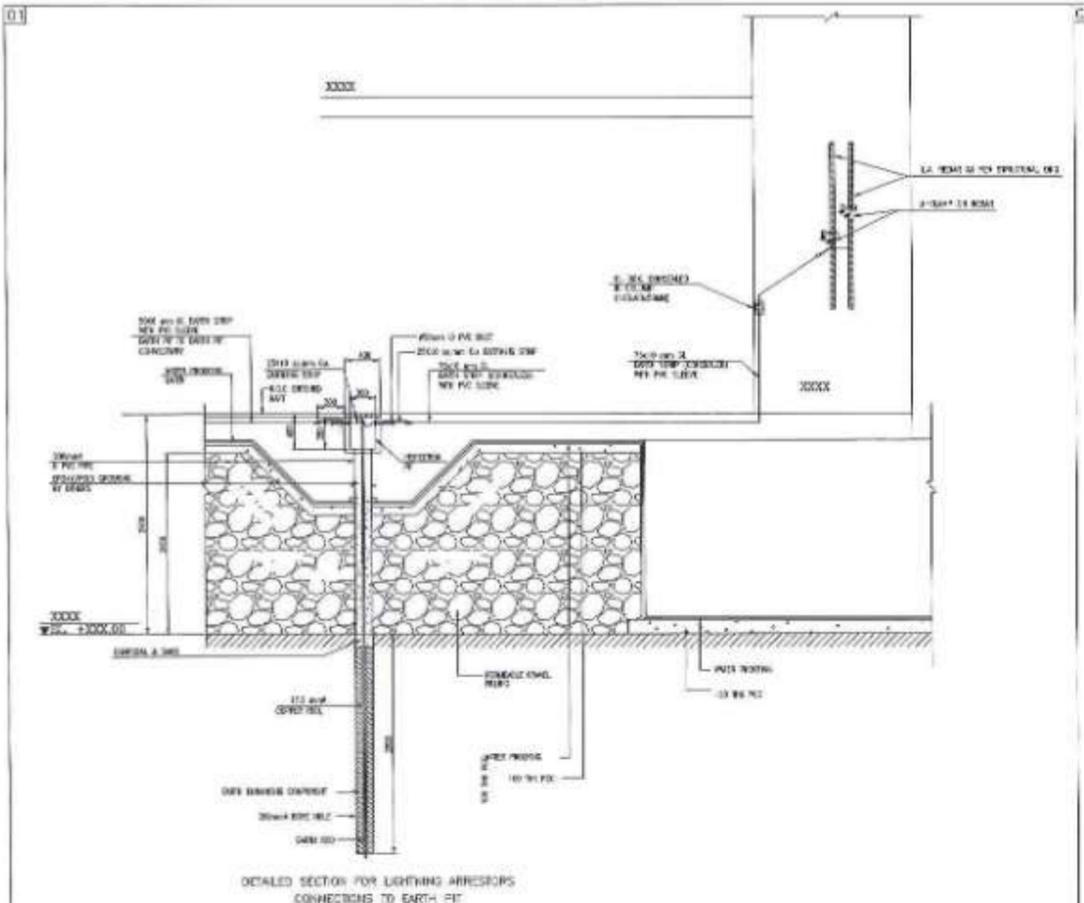
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PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING



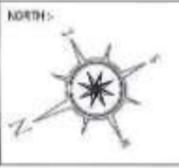
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DATE: 10.04.2021	DRAWING NO: P4 - ELE - 028 (6 OF 7)	PAPER SIZE: A1	REV: 0



NAME	DESIGN
DESIGNED	
CHECKED	
APPROVED	



PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING



TITLE - TYPICAL INSTALLATION DETAILS FOR ELECTRICAL SYSTEM			
DATE	DRAWING NO	PAPER SIZE	REV
10.04.2021	P4 - ELE - 028 (7 OF 7)	A1	0

INDEX OF DRAWINGS

001865

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UNDER GROUND TANK LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - PLU - 003
GROUND FLOOR PLUMBING LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - PLU - 004
FIRST FLOOR PLUMBING LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - PLU - 005
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TITLE	DRAWING NOS.
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WATER SUPPLY SCHEMATIC FOR SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI	P4 - WS - 020
WATER SUPPLY SCHEMATIC FOR ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR	P4 - WS - 021
RAIN WATER GAVHAN, SEWRI & SHIVAJINAGAR IC	
RAIN WATER SCHEMATIC FOR MAIN ADMIN. AND COMMAND CONTROL CENTER AND MAIN TOLL PLAZA AT GAVHAN	P4 - RW - 022
RAIN WATER SCHEMATIC FOR SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI	P4 - RW - 023
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DRAINAGE GAVHAN, SEWRI & SHIVAJINAGAR IC	
DRAINAGE SCHEMATIC FOR MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN	P4 - DR - 025
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TYPICAL INSTALLATION DETAILS FOR PLUMBING SYSTEM (1 & 2)	P4 - PLU - 028



DRAWN BY	NAME	SIGN
CHECKED BY		
APPROVED BY		



PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

NORTH :-	TITLE :-	INDEX OF PLUMBING DRAWING		
DATE	DRAWING NO.	PAPER SIZE	REV.	
11.04.2021	P4-PLU-001	A3	0	

PLUMBING LEGEND

SYMBOLS	DESCRIPTION
	DOMESTIC PIPE
	FLUSHING PIPE
	HOT WATER PIPE
	SOIL PIPE
	WASTE PIPE
	NAHANI TRAP
	FLOOR CLEANOUT
	WASTE VERTICAL STACK
	SOIL VERTICAL STACK
	RAIN WATER VERTICAL STACK
	FLUSHING WATER SUPPLY VERTICAL RISER
	DOMESTIC WATER SUPPLY VERTICAL RISER
	CATCH BASIN
	GULLY TRAP
	RECTANGULAR MANHOLE
	600Ø CIRCULAR MANHOLE

GENERAL NOTES :-

- Building layout, dimensions & levels are based on architectural drawings furnished at the time of preparation of the respective drawings, refer latest architectural layout before carrying out the work. discrepancy, if any, to be got clarified from the site incharge & necessary modifications to be carried out at site.
- All materials shall be of the best quality conforming to the specifications and subject to the approval of the Consultants.
- Pipes shall be fixed in a manner as to provide easy accessibility for repair and maintenance and shall not cause obstruction in shafts, passages etc.
- Pipes shall be securely fixed to walls and ceilings by suitable clamps and supports (galvanised after fabrication) at intervals specified. Only approved type of anchor fasteners shall be used for RCC slabs and walls / floors etc.
- Valves and other appurtenances shall be so located that they are easily accessible for operations, repairs and maintenance.
- Pipes and fittings shall be fixed truly vertical, horizontal or in slopes as required in a neat workman like manner.
- Pipe accessories such as gauges, meters, control devices, etc. shall have the same working pressure rating as the associated pipe work. All pipe work shall be cleaned before installation.
- Pumps shall be installed true to levels on suitable concrete foundations. Base plate shall be firmly fixed by properly grouted foundation bolts. Pumps and motors shall be truly aligned by suitably instruments.
- Locations & levels of sanitary appliances & fittings are based on standard practice, necessary modifications, if required, to suite the interior design / tile modules shall be carried out at site after obtaining the confirmation from site incharge.
- The mounting height & minimum wall clearance of sanitary appliances & fittings shall generally be as shown below, unless indicated on the interior drawings.

FIXTURES	VERT	HORZ.
a) EWC, UWC & BIDET	400	500
b) WASH BASIN	700	400
c) SINK	750	500
d) URINAL	620	300
e) BIB COCK	300	300
f) BATH SPOUT	600	500
g) SHOWER MIXER / STOP VALVE	1500	500
h) SHOWER HEAD	2100	500
i) URINAL FLUSH VALVE	1500	∅
j) WC FLUSH VALVE	600	∅ 200
k) SINK COCK	850	∅
l) ANGLE STOP COCK WASH BASIN	200	200
m) ANGLE STOP COCK GEYSERS (HORZ.)	2300	----
n) ANGLE STOP COCK GEYSERS (VERT.)	2000	----
o) ANGLE STOP COCK WATER PURIFIER	1500	----
	(FROM APPLIANCES)	

11. Size of connection for sanitary appliances & fittings shall be as shown below.

FIXTURES	WATER mm	DRAIN mm
a) WATER CLOSETS WITH FLUSH VALVE	32	100
b) WATER CLOSETS WITH FLUSHING CISTERN	15	100
c) WASH BASIN	15	32
d) SINK	15	40
e) URINAL	15	32
f) BIDET	15	32
g) SHOWER	15	50
h) BATH TUB	15	50
j) NAHANI TRAP	----	75

12. The minimum size of pipe connections shall be as shown below unless otherwise indicated.

A. SOIL LINE

1. WC TO STACK	100 mm	@ 1:100
2. URINAL TO URINAL TRAP	50 mm	@ 1:100
3. URINAL TRAP TO STACK	50 mm	@ 1:100
4. VENT	75 mm	---

B. WASTE

1. WASH BASIN HOPPER	40 mm	@ 1:100
2. BATH TUB TO HOPPER	50 mm	@ 1:100
4. FLOOR DRAIN HOPPER	50 mm	@ 1:100

C. WATER LINE

1. WC FLUSH VALVE - INLET/OUTLET	32 mm / 40 mm
2. WC CISTERN - INLET/OUTLET	15 mm / 40 mm
3. URINAL CISTERN	15 mm / 20 mm
4. URINAL FLUSH VALVE	15 mm
5. WASH BASIN / SINK INLET	15 mm
6. SHOWER	15 mm
7. BATH TUB.	20 mm
8. GEYSER / WATER PURIFIER	15 mm

13. THE GRADIENT FOR DRAWING LINES SHALL GENERALLY BE AS SHOWN BELOW UNLESS OTHERWISE INDICATED ON THE LAYOUT PLAN.

a) INTERNAL DRAINAGE LINE	1 : 100
b) EXTERNAL SEWER LINE	$\left\{ \begin{array}{l} 1 : 150 \text{ UPTO } 230 \text{ } \varnothing, \\ 1 : 300 \text{ UPTO } 400 \text{ } \varnothing, \\ 1 : 350 \text{ FOR } 450 \text{ } \varnothing, \\ 1 : 500 \text{ FOR } 600 \text{ } \varnothing \end{array} \right.$

14. THE MATERIAL FOR PIPING SHALL BE AS PER THE SCHEDULE OF MATERIALS

- Cold water domestic : cPVC pipes (Chlorinated Poly Vinyl Chloride)
- Hot water : cPVC pipes (Chlorinated Poly Vinyl Chloride)
- Flushing : cPVC pipes (Chlorinated Poly Vinyl Chloride)
- FCU drainage : C.I. pipes (IS:3989) with drip seal joints instead of lead joint
- Soil, Waste & Vent Stack (Internal) : C.I. pipes (IS:3989) with drip seal joints instead of lead joint specified.
- Basement drainage & Base. Suspended pipes : C.I. Class LA pipes with lead joint.
- Antisiphon pipes : uPVC (IS:4985) (Pipe Class III - 6 kg / sq.cm) interconnecting in shafts
- External drainage
 - Sewer System : Stoneware pipes Grade 'A'
 - Storm System : RCC pipes (NP2 Class) (IS:458)



NAME	DOB	PROJECT :-	TITLE :-
		MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	PLUMBING LEGENDS AND NOTES
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-002 (1 OF 2)	A3	0

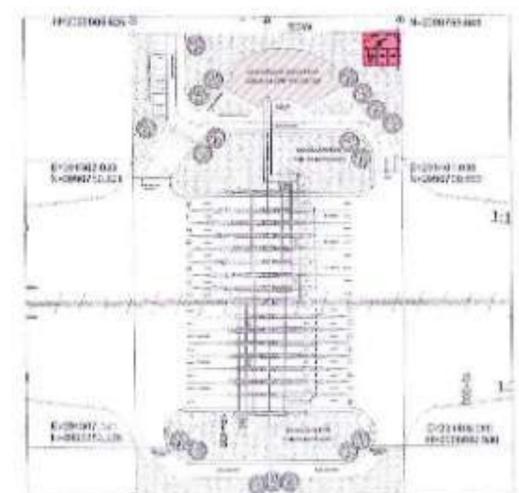
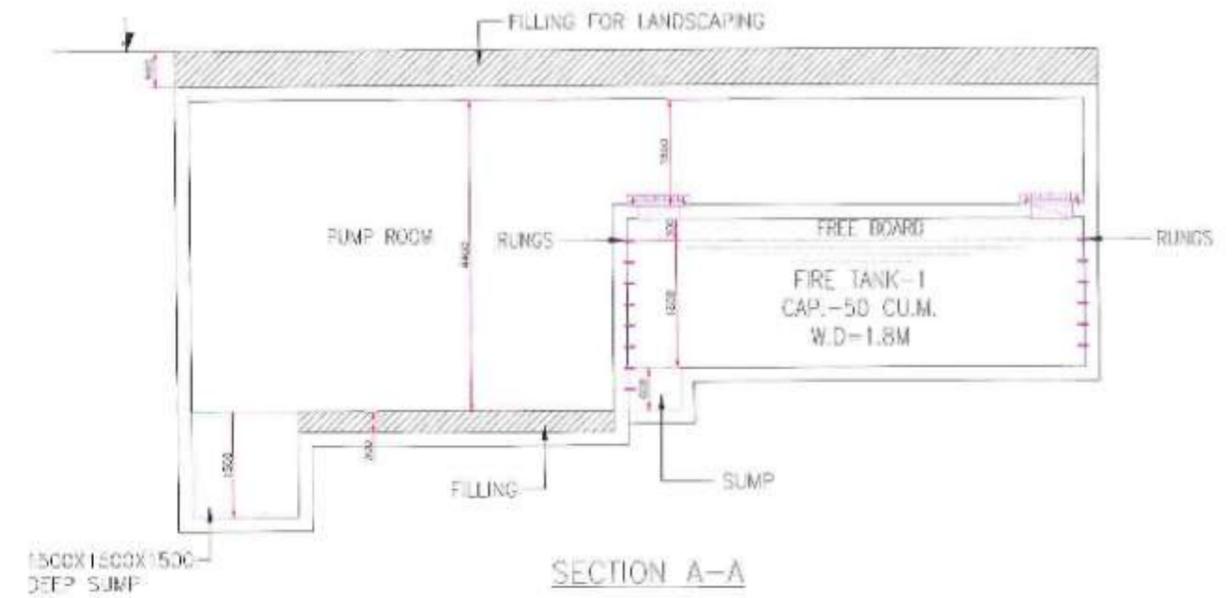
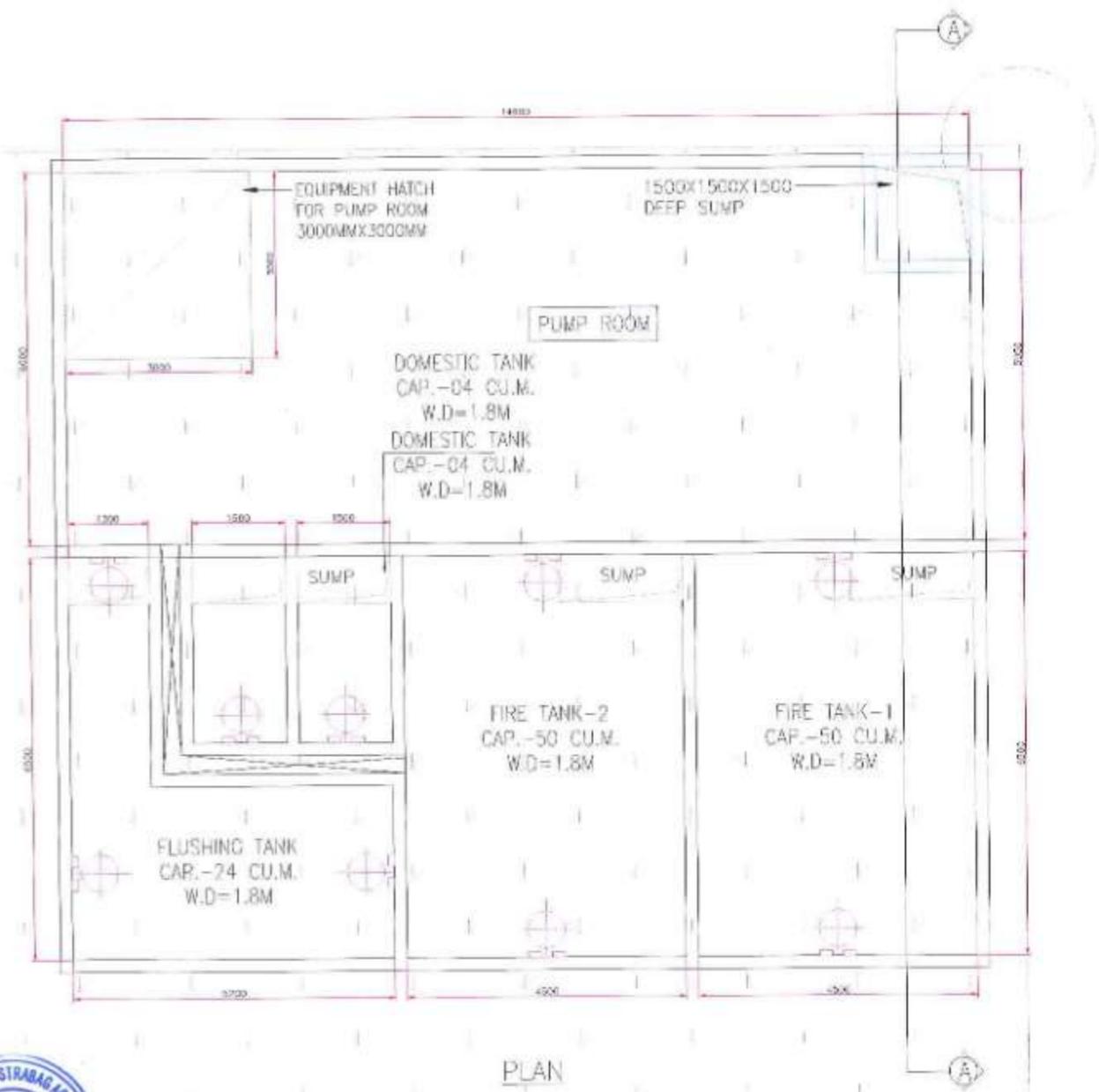
SYMBOLS	DESCRIPTION
	CHECK VALVE
	GATE VALVE / SLUICE VALVE
	NON-RETURN VALVE
	GLOBE VALVE
	PRESSURE RELIEF VALVE
	BUTTERFLY VALVE (NORMALLY CLOSE)
	'Y' TYPE STRAINER
	3 WAY COCK
	PRESSURE GAUGE
	PRESSURE SWITCH
	FLOW METER
	BASKET STRAINER
	EXPANSION BELLOW
	SAFETY RELIEF VALVE
	PRESSURE TRANSMITTER
	MOTORISED VALVE
	SOLENOID VALVE
	LEVEL TRANSMITTER
	DIFFERENTIAL PRESSURE INDICATOR.

SYMBOLS	DESCRIPTION
	LEVEL SWITCH
	LEVEL GAUGE
	RESTRICTION CHECK VALVE
	DRIP-VALVE
	BY PASS VALVE
	ISOLATION VALVE
	CONCENTRIC REDUCER.
	ECCENTRIC REDUCER.
	GAUGE COCK

SYMBOL	REFERENCE
	WC
	BD
	WB
	BT
	SH
	KS
	IWC
	UR
	EWH
	MT



DRAWN BY	NAME	DESIGN	PROJECT ->	NORTH ->	TITLE ->	
	CHECKED BY					MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING
APPROVED BY			MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY			
				DATE: 11.04.2021	DRAWING NO. P4-PLU-002 (2 OF 2)	PAPER SIZE: A3



- NOTES:**
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SCALE : 1:100

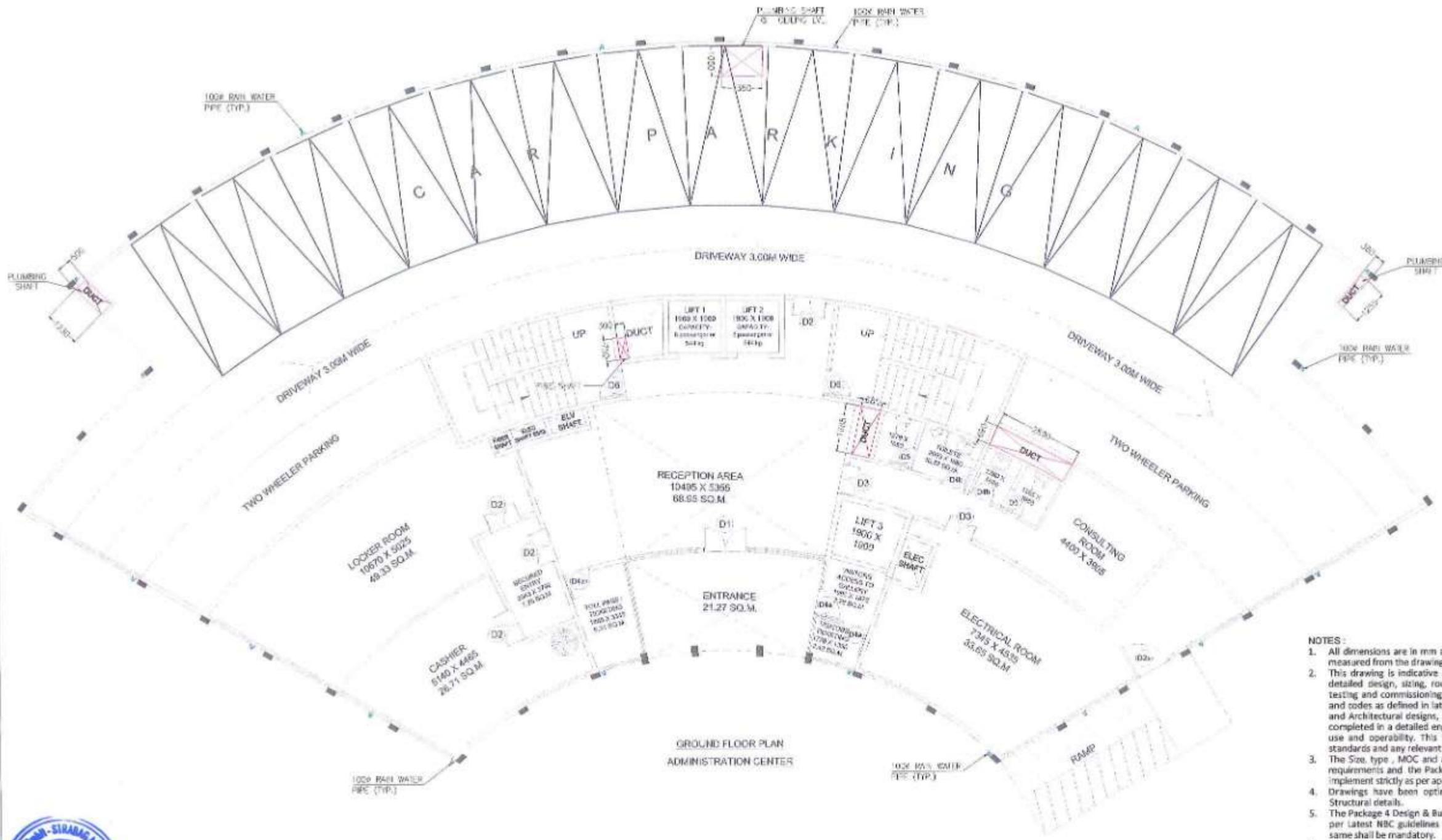
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APPROVED BY	



PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE :-		DATE		DRAWING NO.		PAPER SIZE		REV.	
UNDER GROUND TANK LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN		11.04.2021		P4-PLU-003		A3		0	



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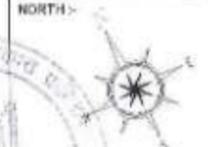


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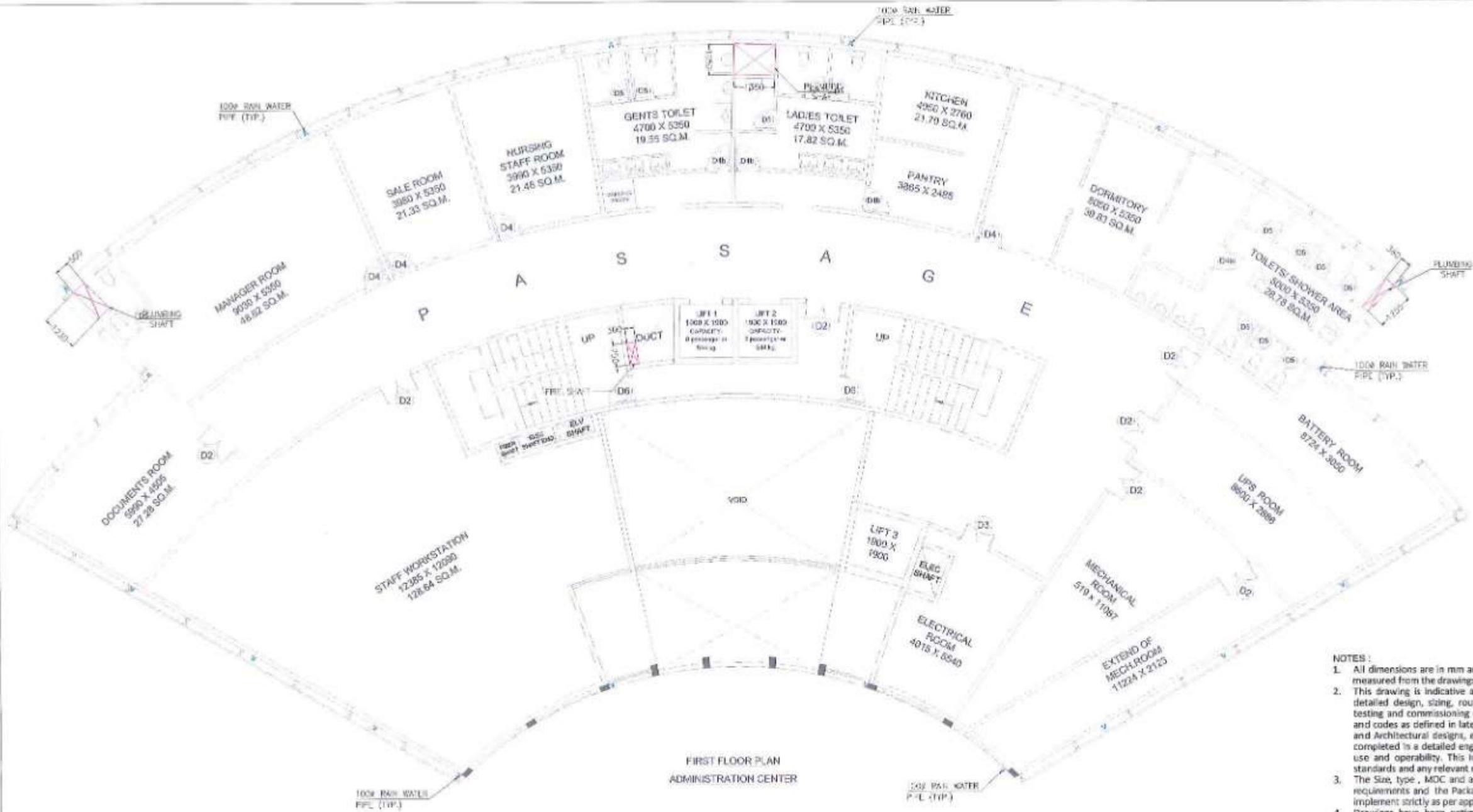


PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE :-			
GROUND FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-004	A3	0





FIRST FLOOR PLAN
ADMINISTRATION CENTER

- NOTES:
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SCALE : 1:150

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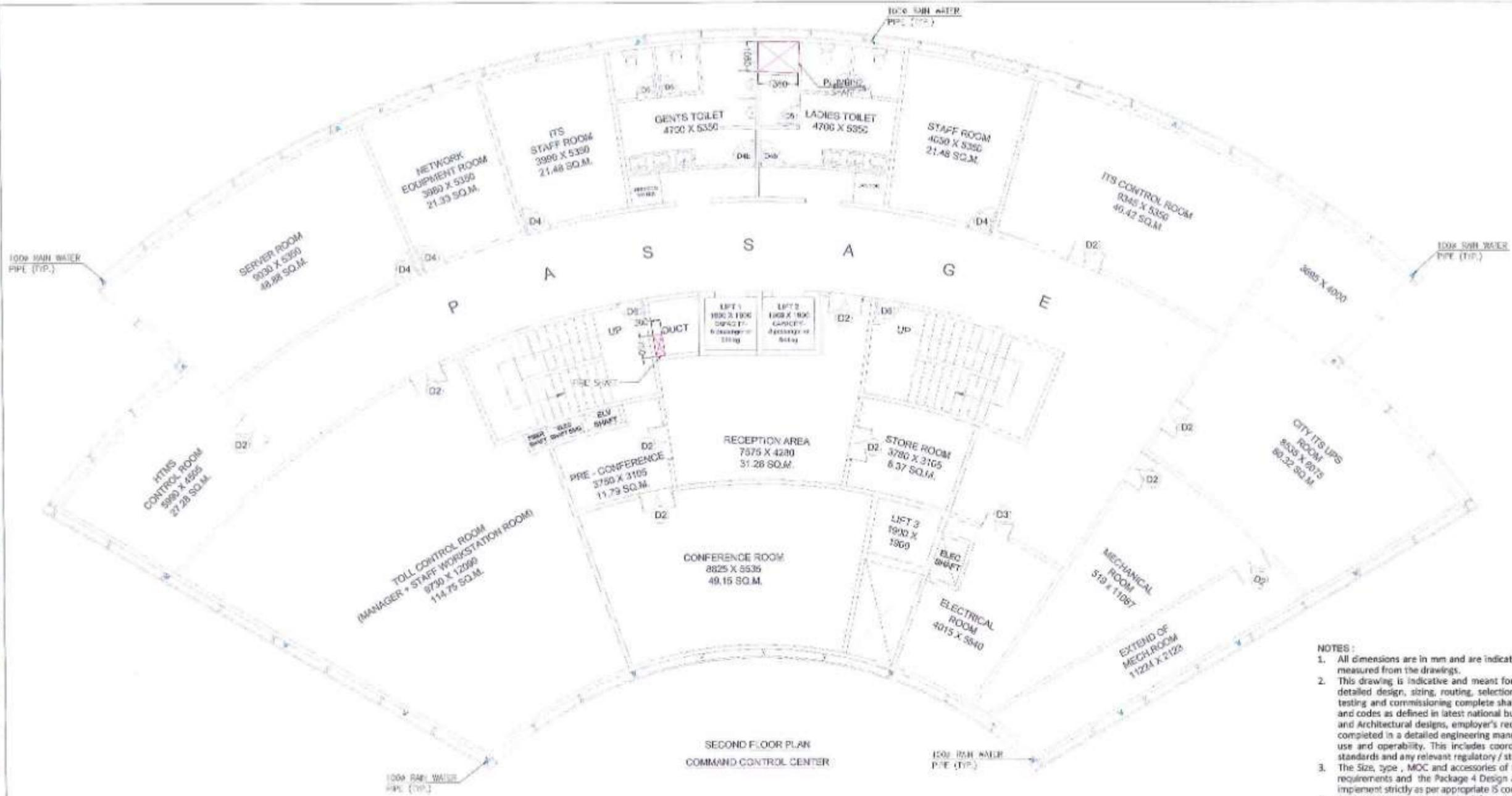
PROJECT :-

MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH ->



TITLE ->	FIRST FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN		
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-005	A3	0



SECOND FLOOR PLAN
COMMAND CONTROL CENTER

- NOTES:
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SCALE : 1:150

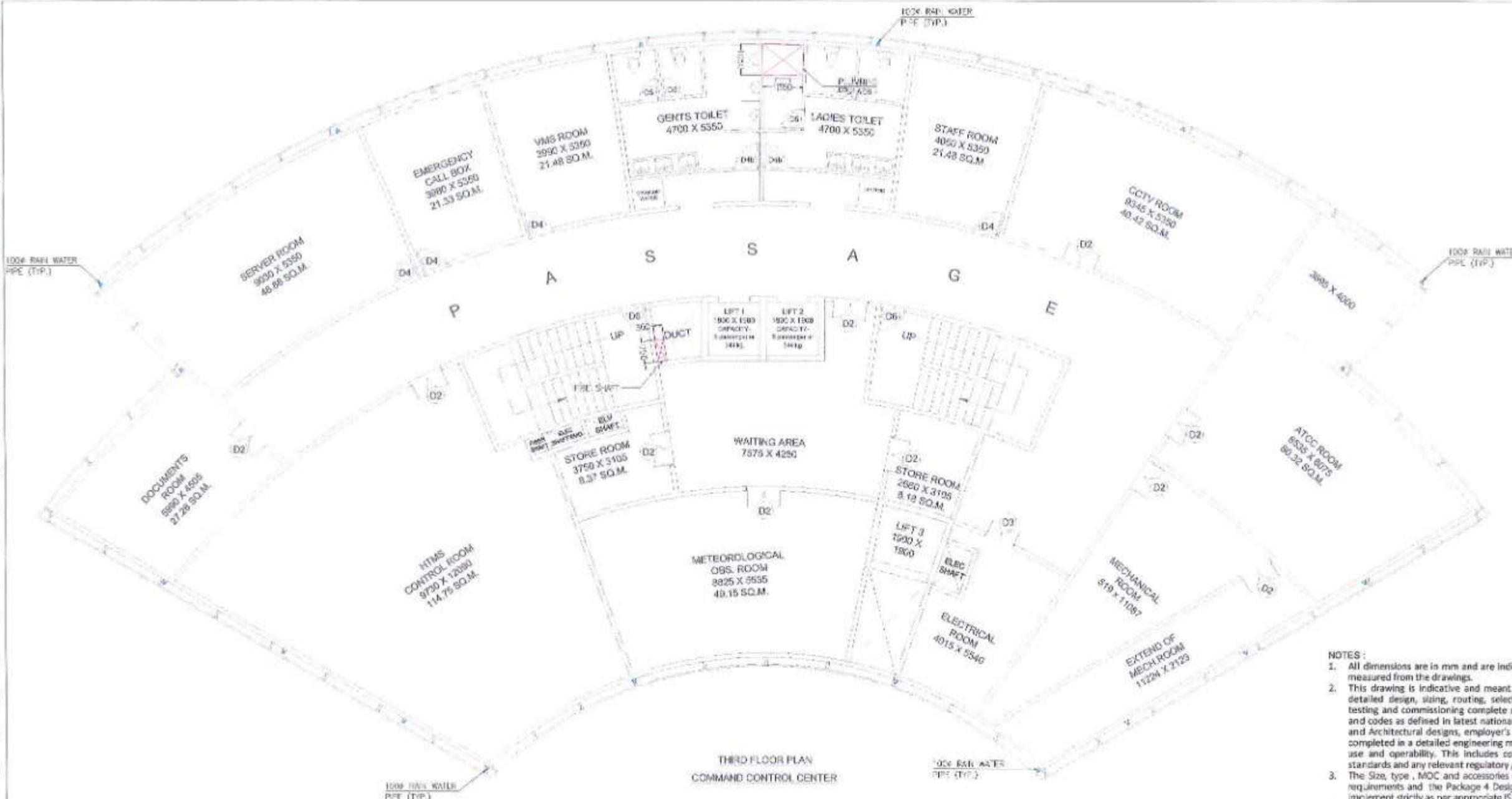
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PROJECT >
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE > SECOND FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE 11.04.2021	DRAWING NO. P4-PLU-006	PAPER SIZE A3	REV. 0



THIRD FLOOR PLAN
COMMAND CONTROL CENTER

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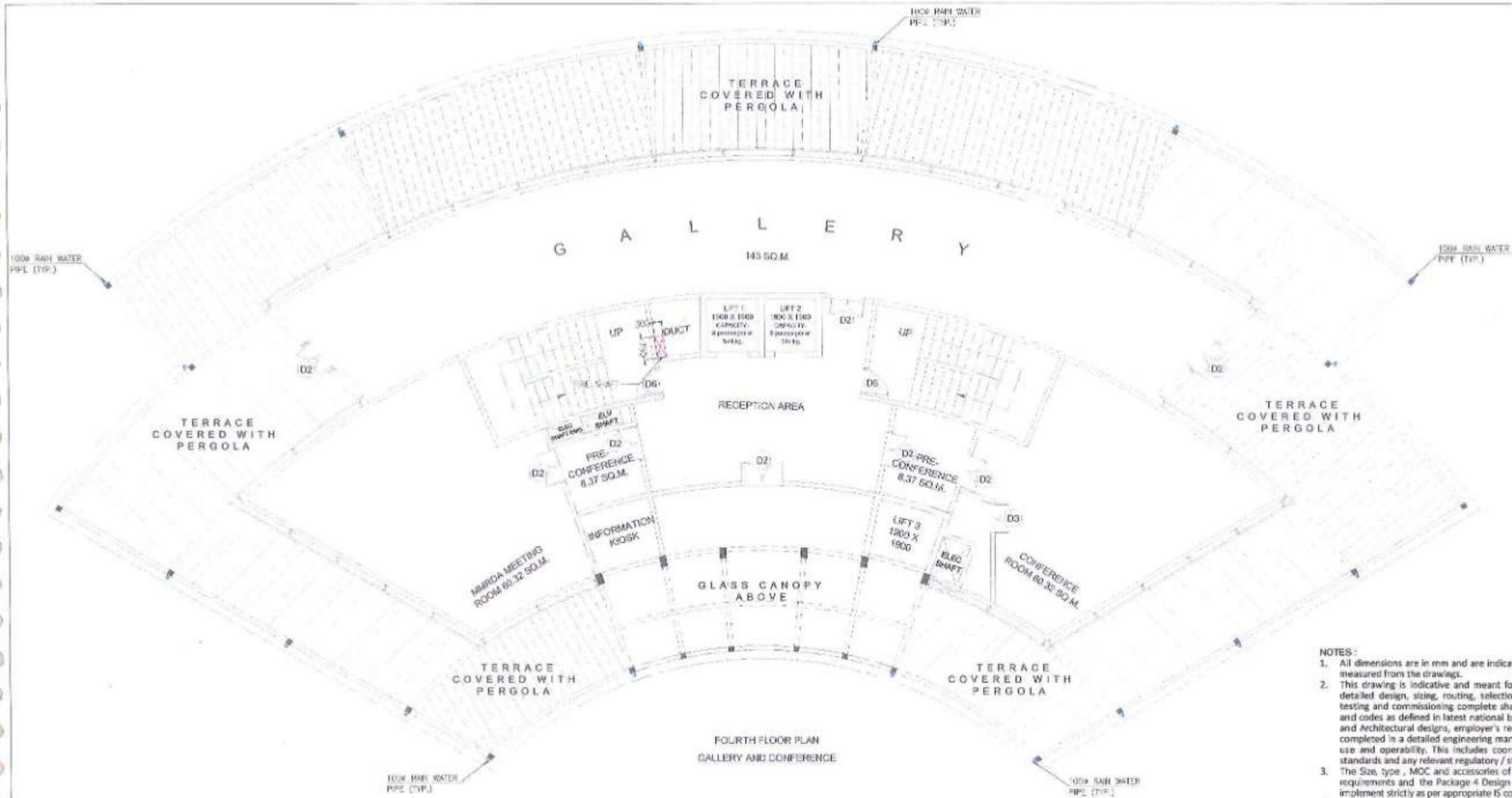
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APPROVED BY	



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :-			
THIRD FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-007	A3	0



- NOTES:**
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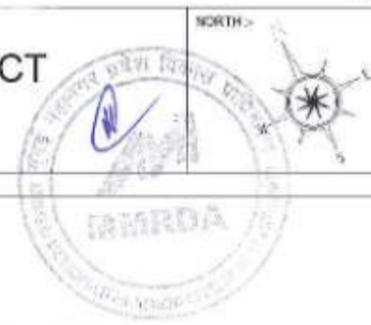


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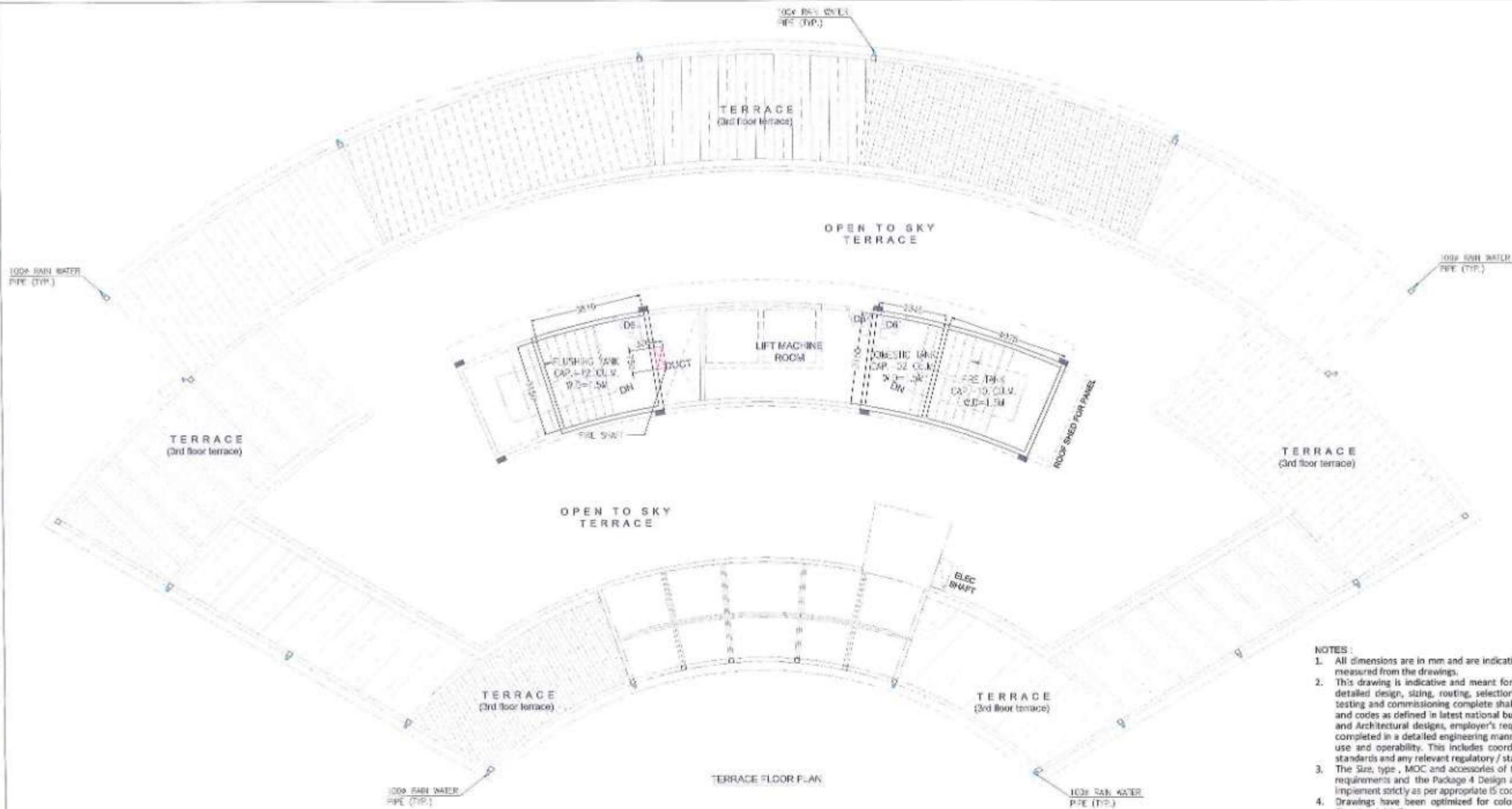
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APPROVED BY	



PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



TITLE -> FOURTH FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-008	A3	0



- NOTES:**
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SCALE : 1:150

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APPROVED BY	



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT ->

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

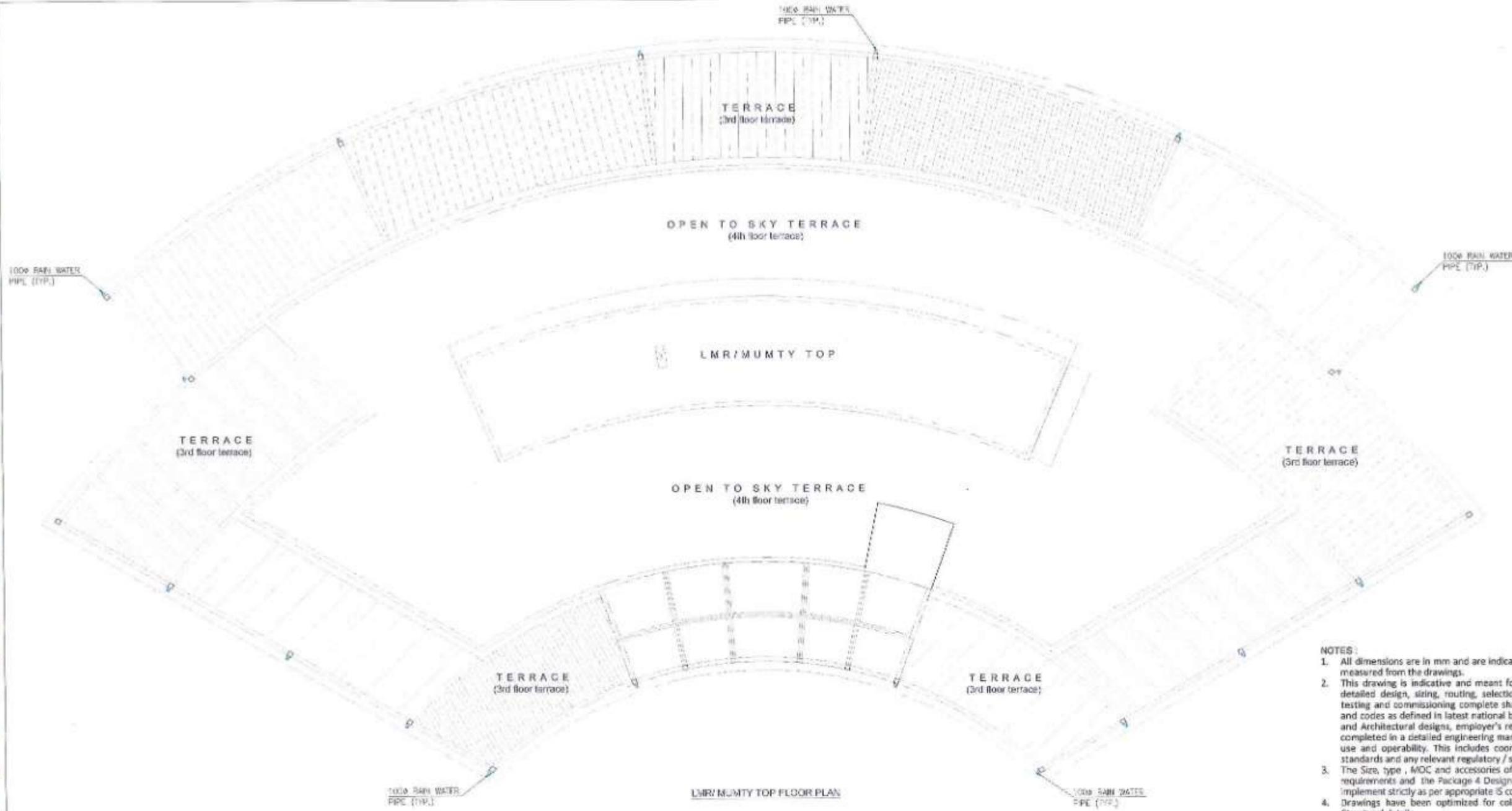
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TITLE ->

**TERRACE FLOOR
PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS
OF MAIN ADMIN. AND COMMAND CONTROL CENTER
AT GAVHAN**

DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-009	A3	0



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SCALE : 1:150

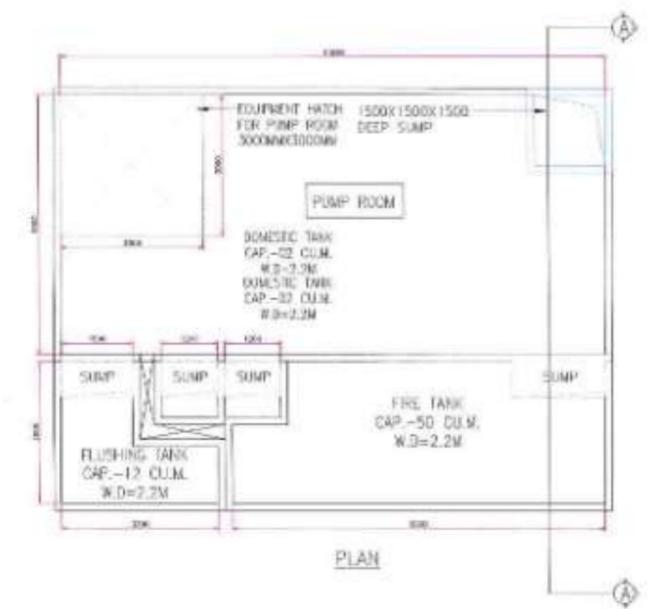
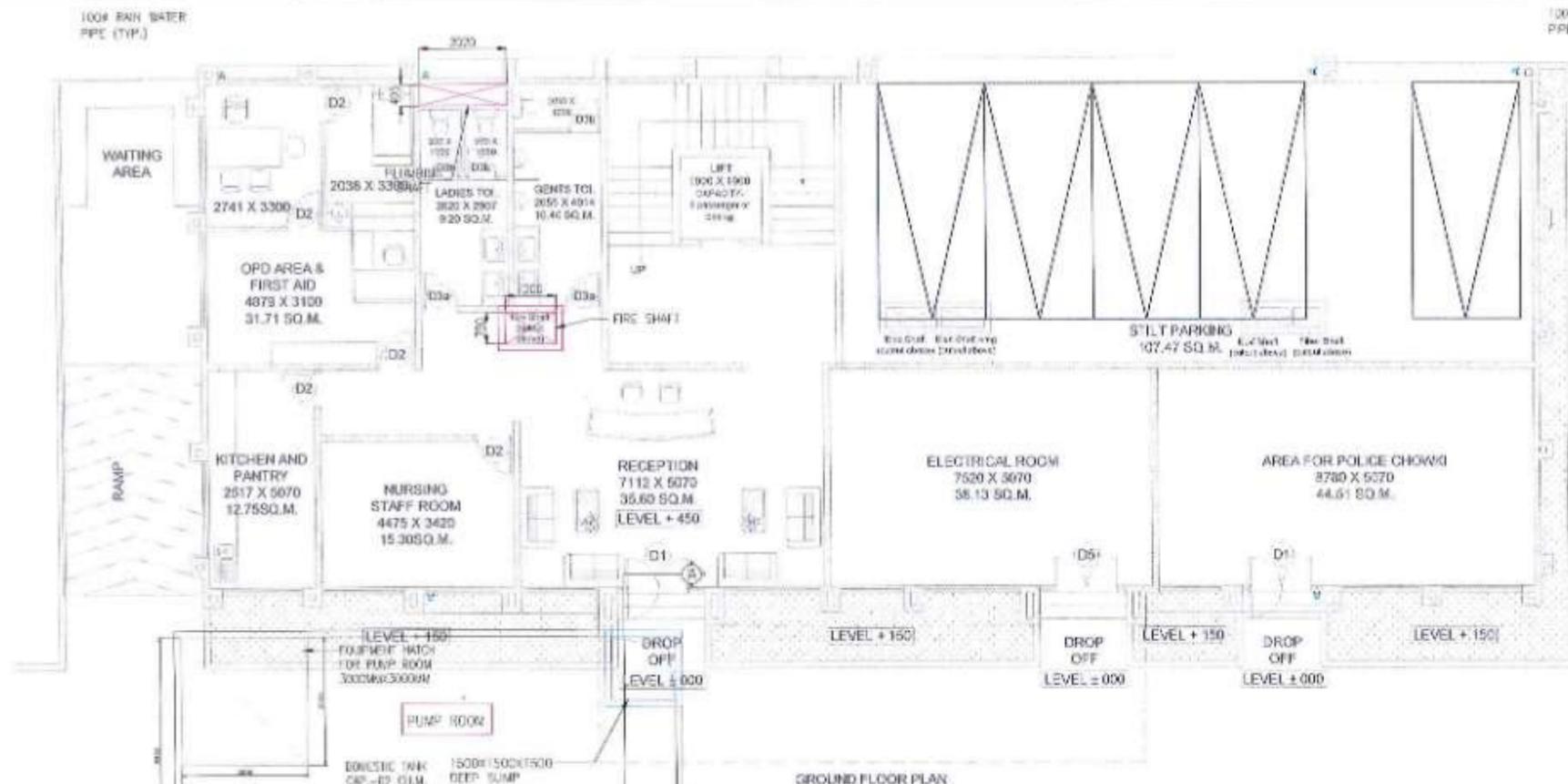
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APPROVED BY	



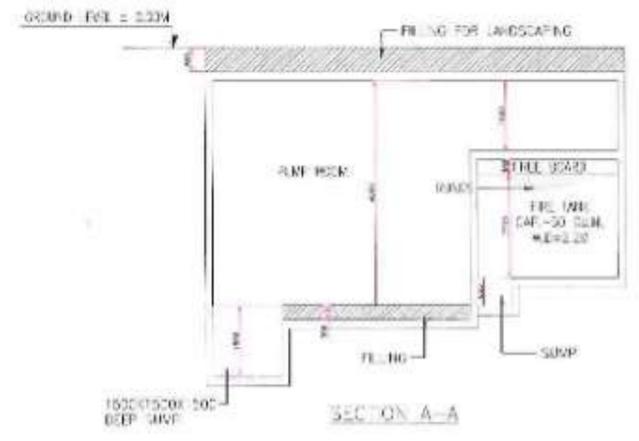
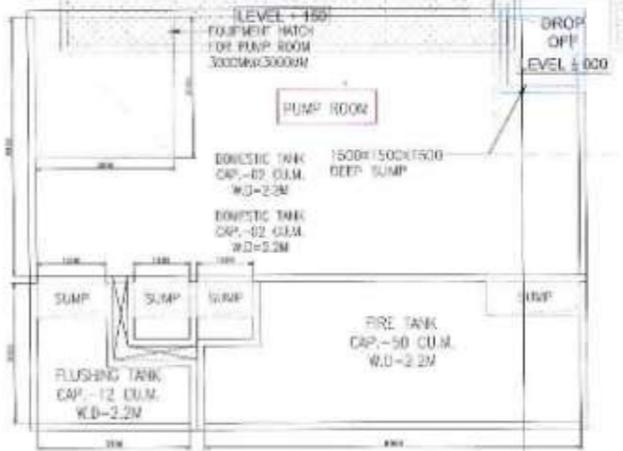
PROJECT > **MUMBAI TRANS HARBOUR LINK PROJECT**
 PACKAGE 4 - TENDER DRAWING



TITLE >	DATE	DRAWING NO.	PAPER SIZE	REV.
LMR/MUMTY LVL PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN	11.04.2021	P4-PLU-010	A3	0



NOTE - PUMP ROOM SPACE PLANNING (INDICATIVE LAYOUT) AND UG WATER STORAGE REQUIREMENTS (LOCATION AND SIZE TO BE DESIGNED BY THE CONTRACTOR).



NOTE : WATER SOURCE - MUNICIPAL WATER CONNECTIONS / MUNICIPAL WATER TANKER / BORE WELL

- NOTES:
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SCALE : 1: 150

NAME	SIGN
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APPROVED BY	



PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

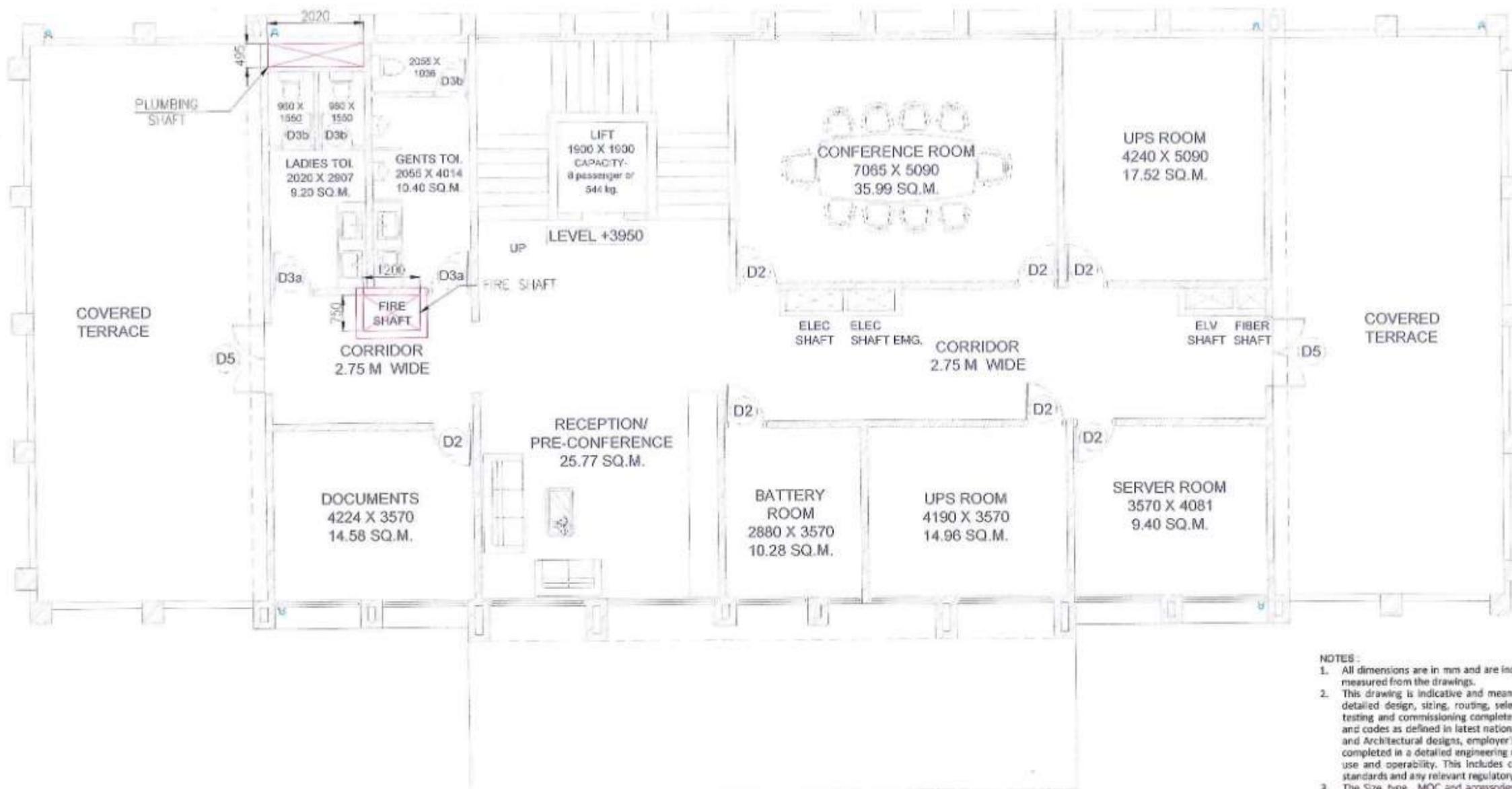


TITLE - GROUND FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-011	A3	0



100# RAIN WATER PIPE (TYP.)

100# RAIN WATER PIPE (TYP.)



FIRST FLOOR PLAN

NOTES :

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SCALE : 1: 100

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CHECKED BY	
APPROVED BY	

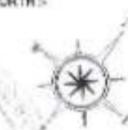


MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH >

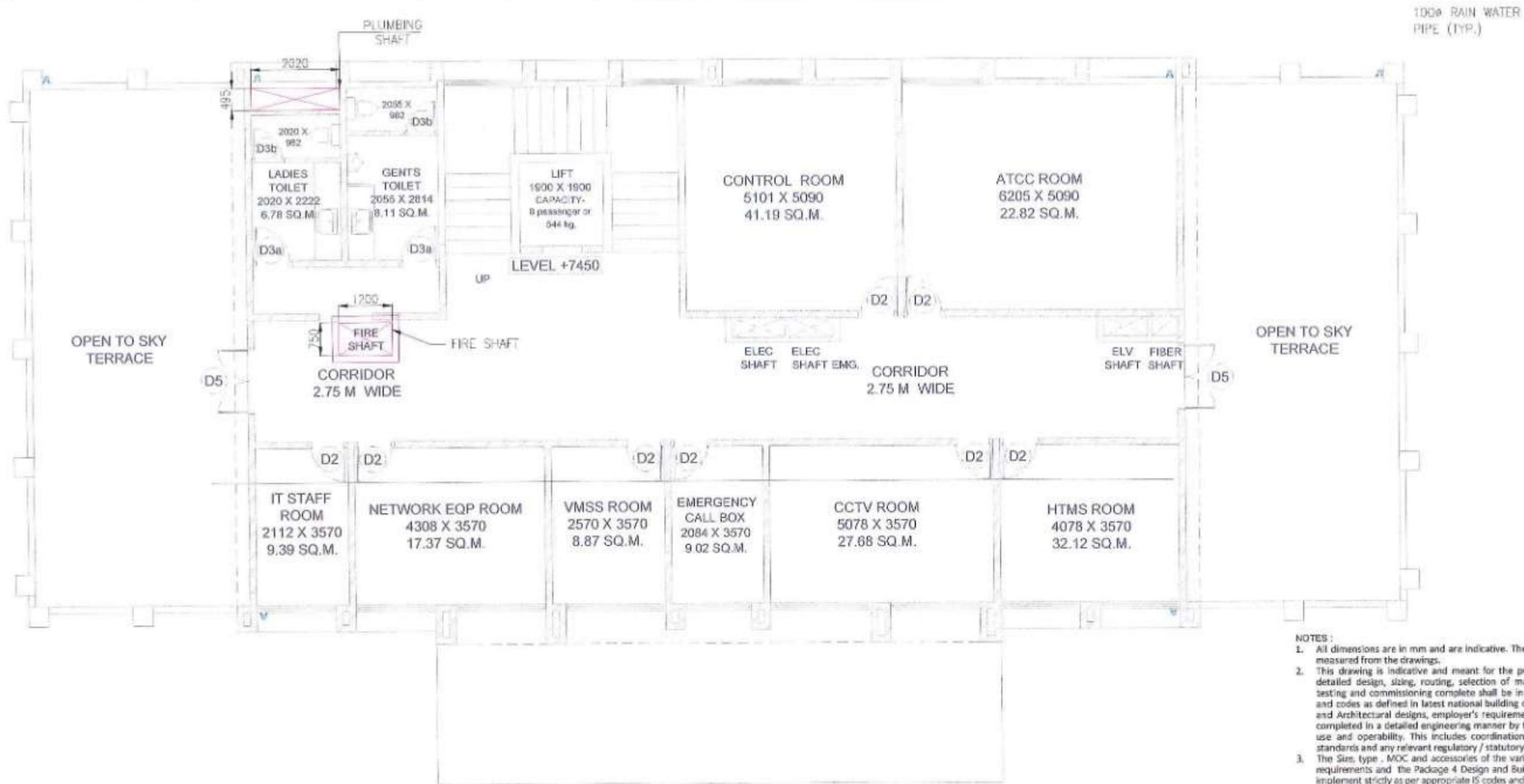


TITLE >

**FIRST FLOOR
PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS
OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER
AT SEWRI**

DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-012	A3	0





100mm RAIN WATER PIPE (TYP.)

SECOND FLOOR PLAN

- NOTES:
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SCALE : 1: 100

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APPROVED BY	



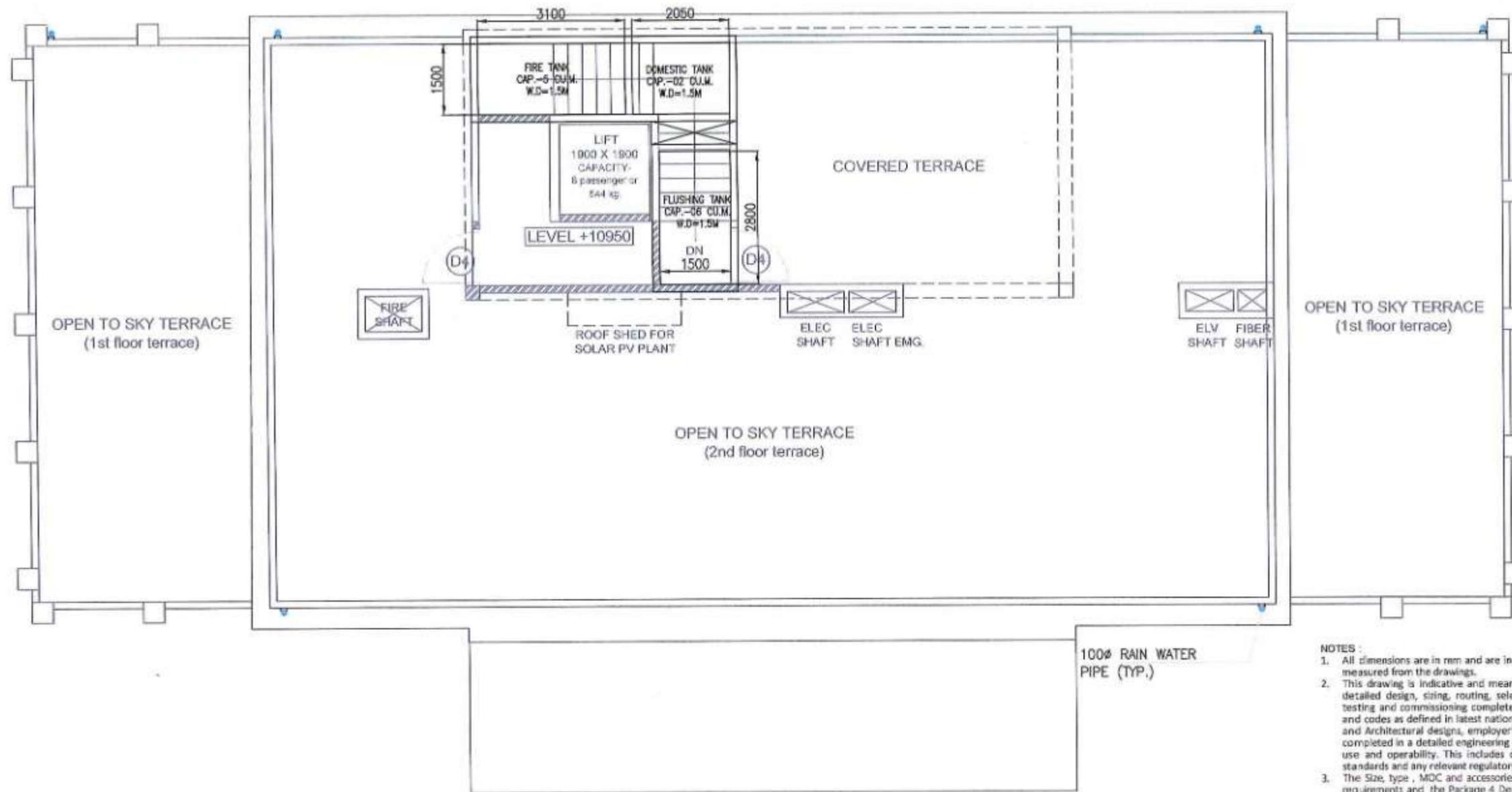
PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE -> SECOND FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-013	A3	0

100Ø RAIN WATER PIPE (TYP.)

100Ø RAIN WATER PIPE (TYP.)



TERRACE FLOOR PLAN

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SCALE : 1: 100

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CHECKED BY	
APPROVED BY	



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT :-

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH ->



TITLE :-

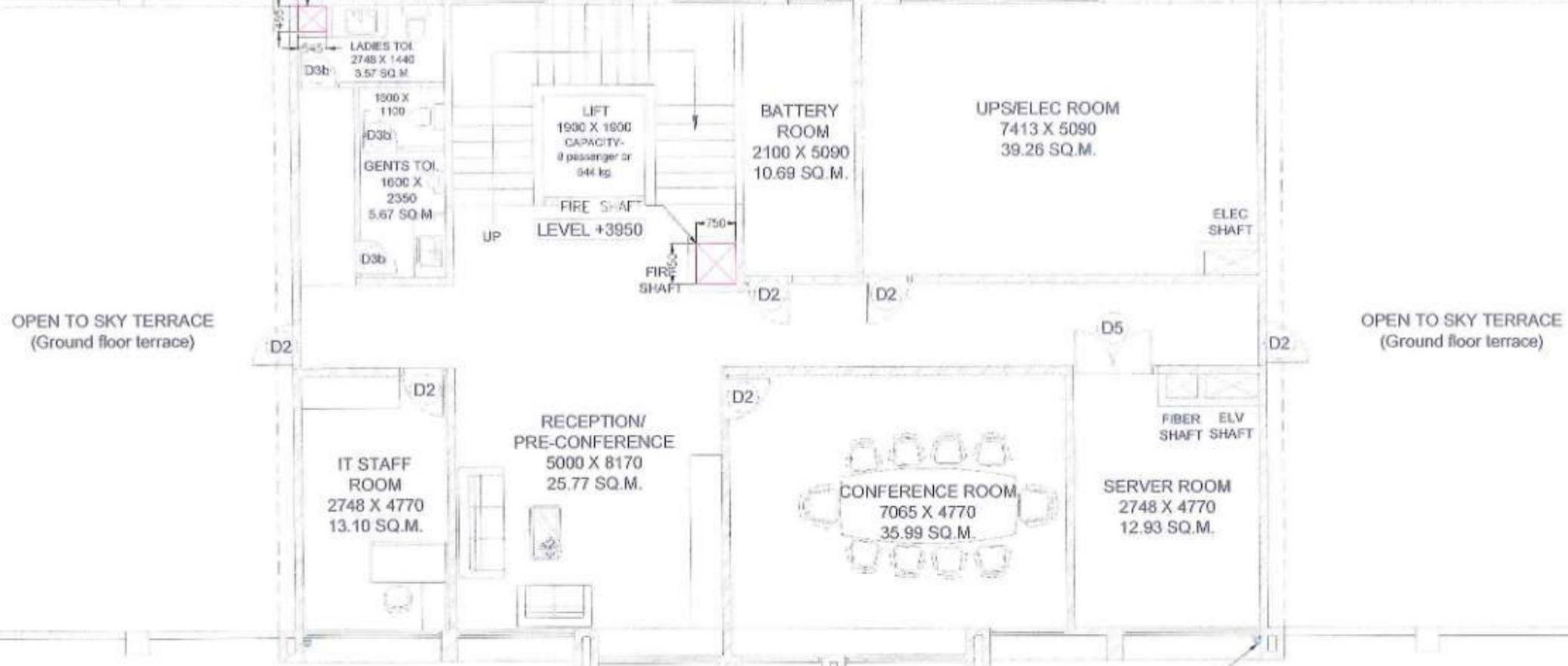
**TERRACE FLOOR
PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS
OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER
AT SEWRI**

DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-014	A3	0



100Ø RAIN WATER PIPE (TYP.)

PLUMBING SHAFT



100Ø RAIN WATER PIPE (TYP.)

FIRST FLOOR PLAN

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SCALE - 1:100

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APPROVED BY	

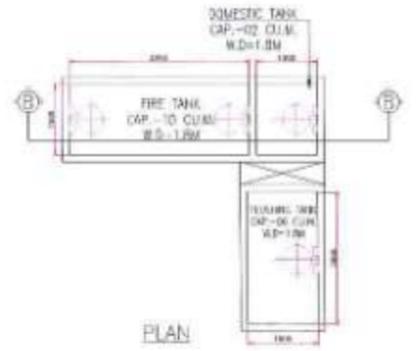
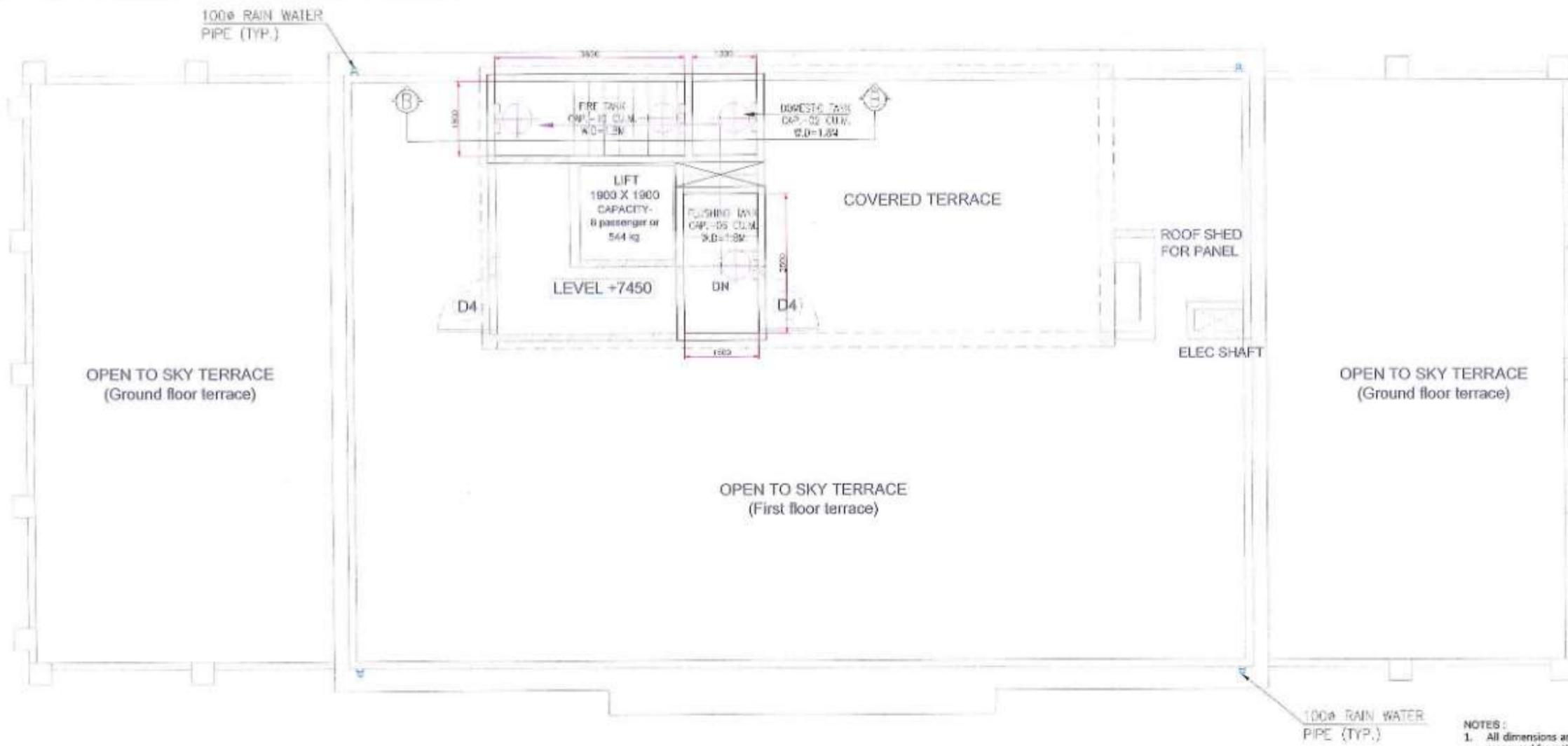


PROJECT > MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING



TITLE > FIRST FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR INTERCHANGE			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4-PLU-016	A3	0





NOTE - PUMP ROOM SPACE PLANNING (INDICATIVE LAYOUT) AND UG WATER STORAGE REQUIREMENTS (LOCATION AND SIZE TO BE DESIGNED BY THE CONTRACTOR).



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SCALE - 1:100

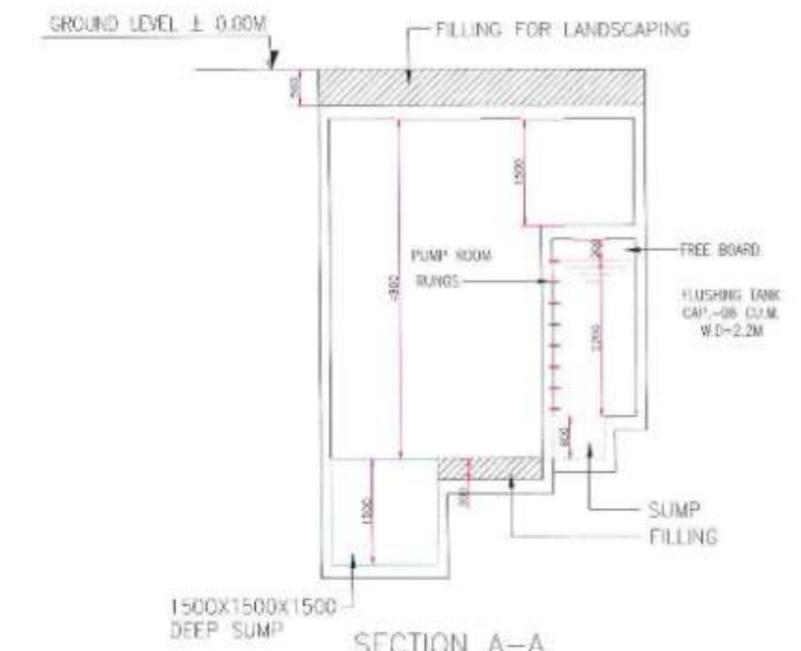
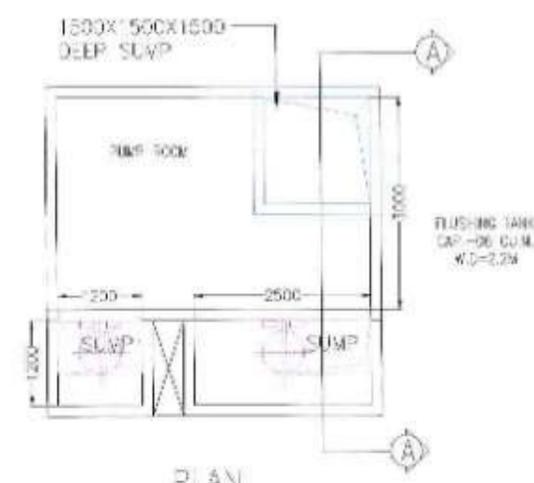
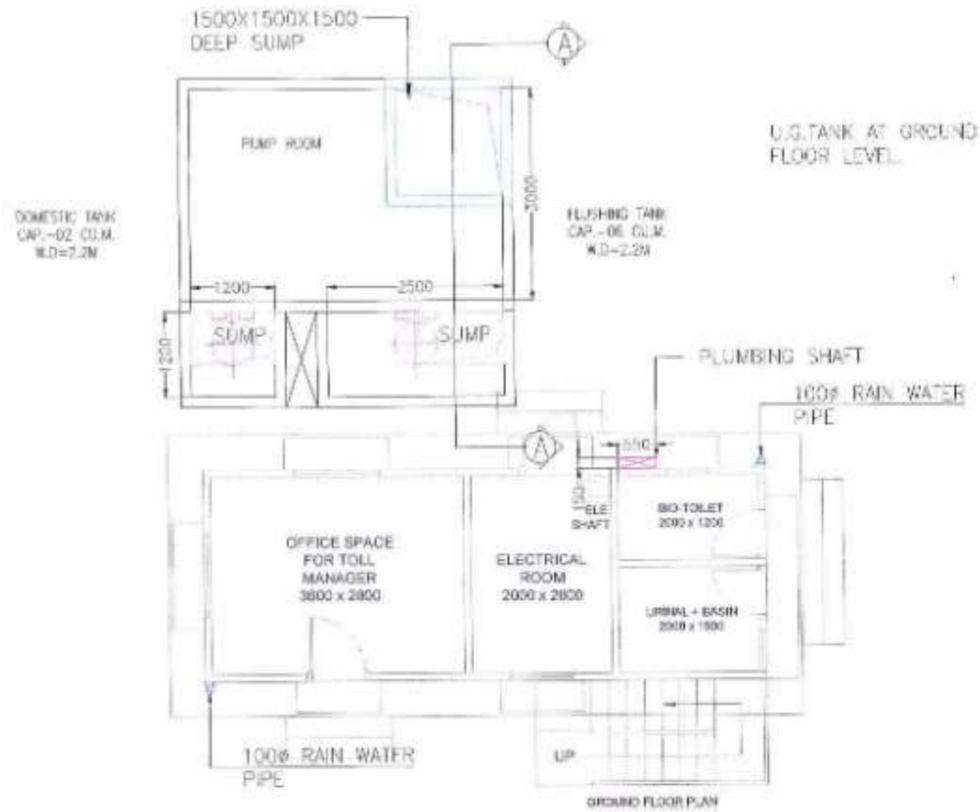
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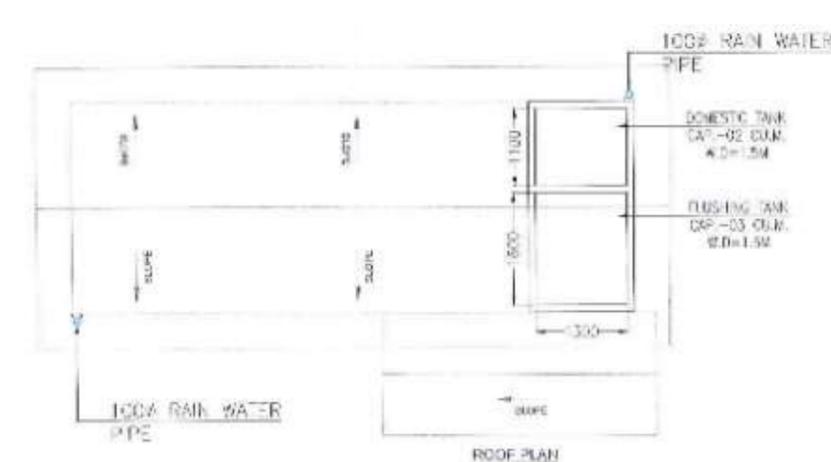
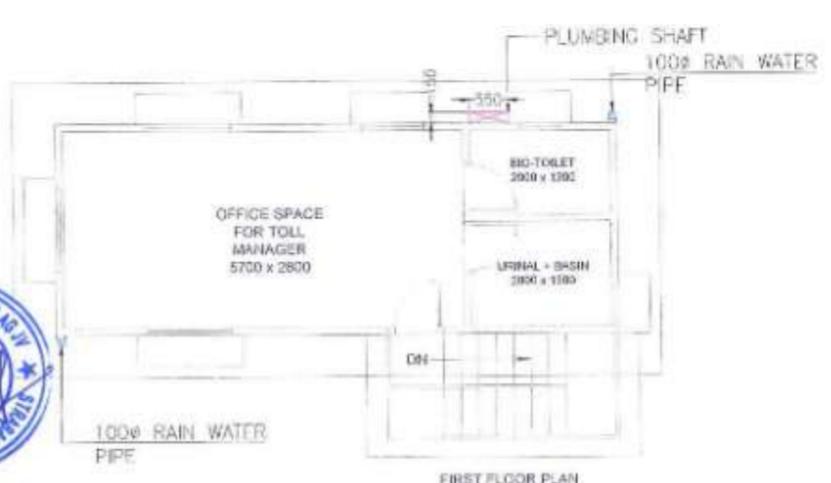
PROJECT > **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE >	DATE	DRAWING NO.	PAPER SIZE	REV.
TERRACE FLOOR PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS OF ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR INTERCHANGE	11.04.2021	P4-PLU-017	A3	0



NOTE - PUMP ROOM SPACE PLANNING IF UG WATER STORAGE IS FEASIBLE



NOTE : WATER SOURCE - MUNICIPAL WATER CONNECTIONS / MUNICIPAL WATER TANKER / BORE WELL

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SCALE - 1:100

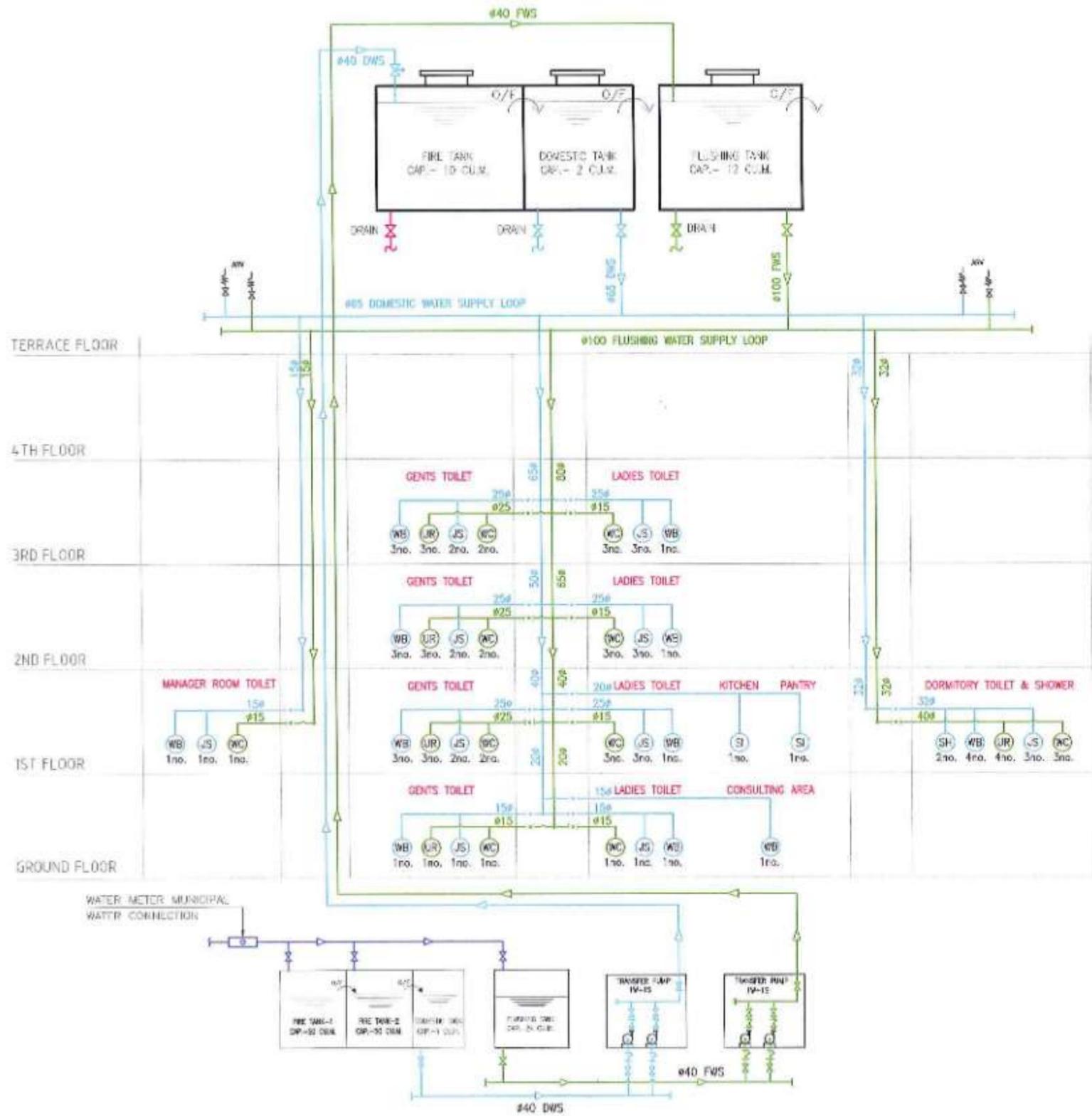
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PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE ->		DATE		DRAWING NO.		PAPER SIZE		REV.	
PLUMBING AND FIRE FIGHTING SERVICES SHAFT LAYOUTS FOR PORTA CABIN		11.04.2021		P4-PLU-018		A3		0	



LEGEND:-

WC	WATER CLOSET
JS	JET SPRAY
WB	WASH BASIN
U	URINAL
SI	SINK
SH	SHOWER
— (Blue)	DOMESTIC WATER SUPPLY (DWS)
— (Green)	FLUSHING WATER SUPPLY (FWS)
— (Purple)	MUNICIPAL WATER INLET
⊗	SOLENOID VALVE
⊗	BALL VALVE
⊗	AIR RELEASE VALVE

NOTES:

- All dimensions are in mm and are indicative. The dimensions are to be read and not scaled or measured from the drawings.
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SCALE - 1:200

NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

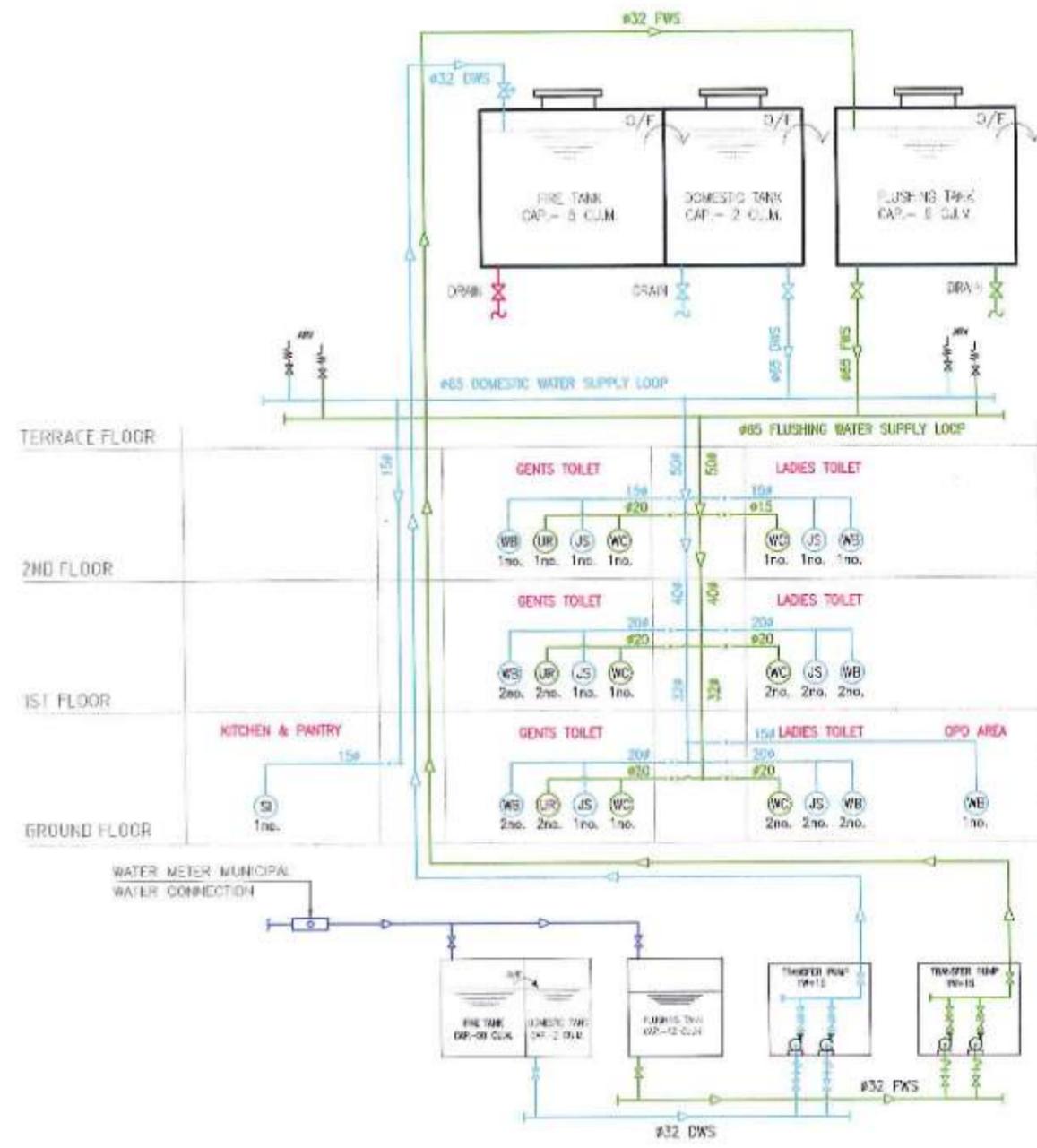
NORTH >

TITLE >

**WATER SUPPLY SCHEMATIC
FOR MAIN ADMIN. AND COMMAND CONTROL CENTER
AT GAVHAN**

DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4 - WS - 019	A3	0





LEGEND:-

(WC)	WATER CLOSET
(JS)	JET SPRAY
(WB)	WASH BASIN
(U)	URINAL
(SI)	SINK
(SH)	SHOWER
— (Blue line)	DOMESTIC WATER SUPPLY (DWS)
— (Green line)	FLUSHING WATER SUPPLY (FWS)
— (Purple line)	MUNICIPAL WATER INLET
(X-e)	SOLENOID VALVE
(X)	BALL VALVE
(X-W)	AIR RELEASE VALVE

NOTES:

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SCALE - 1:200

NAME	SON
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CHECKED BY	
APPROVED BY	



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MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT:-

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

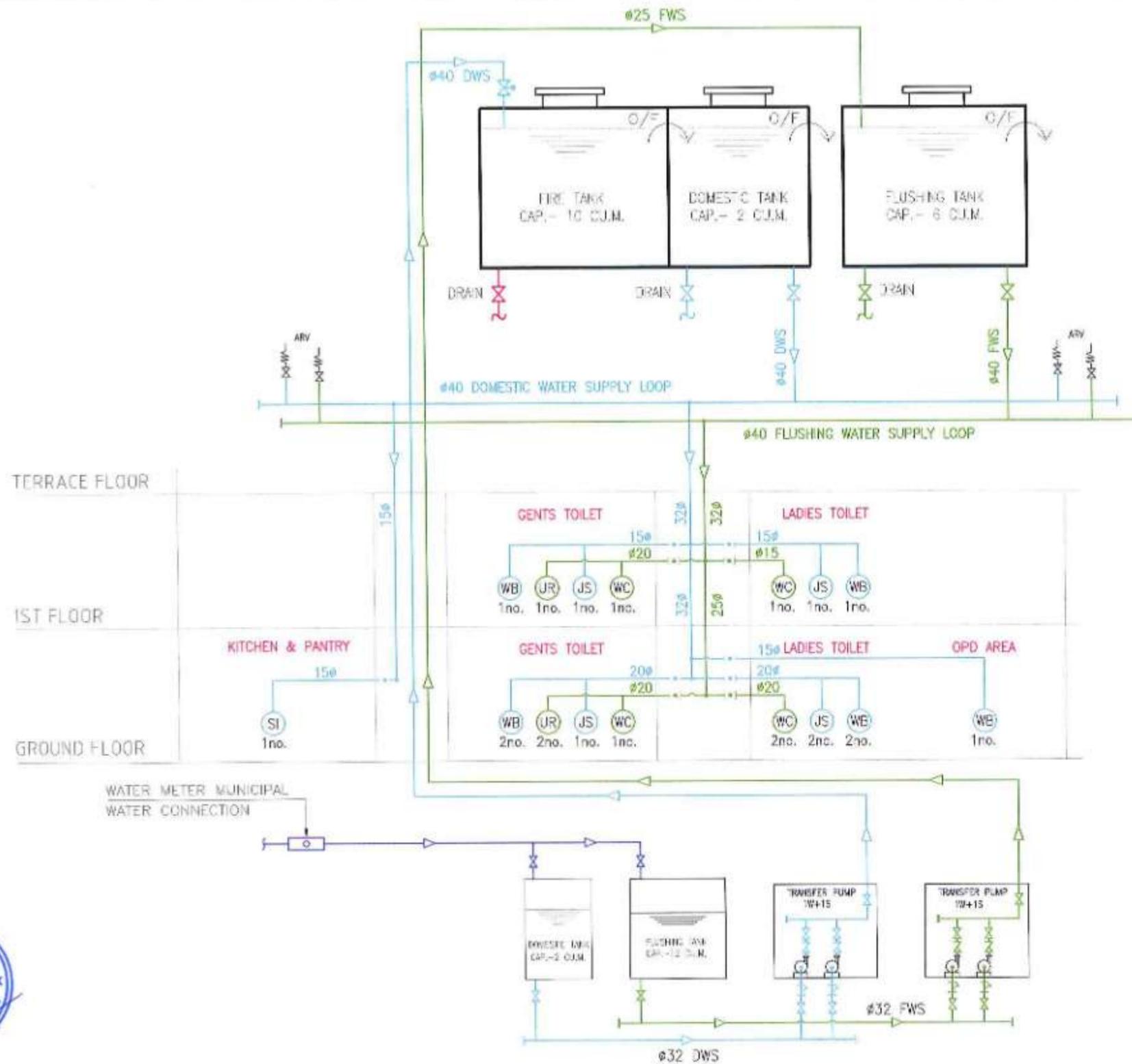
NORTH ->

TITLE ->

**WATER SUPPLY SCHEMATIC
FOR SUB ADMINISTRATION AND COMMAND CONTROL CENTER
AT SEWRJ**

DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4 - WS - 020	A3	0





LEGEND:-

(WC)	WATER CLOSET
(JS)	JET SPRAY
(WB)	WASH BASIN
(U)	URINAL
(SI)	SINK
(SH)	SHOWER
(Blue line)	DOMESTIC WATER SUPPLY (DWS)
(Green line)	FLUSHING WATER SUPPLY (FWS)
(Purple line)	MUNICIPAL WATER INLET
(SV)	SOLENOID VALVE
(BV)	BALL VALVE
(ARV)	AIR RELEASE VALVE

NOTES:

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SCALE - 1:150

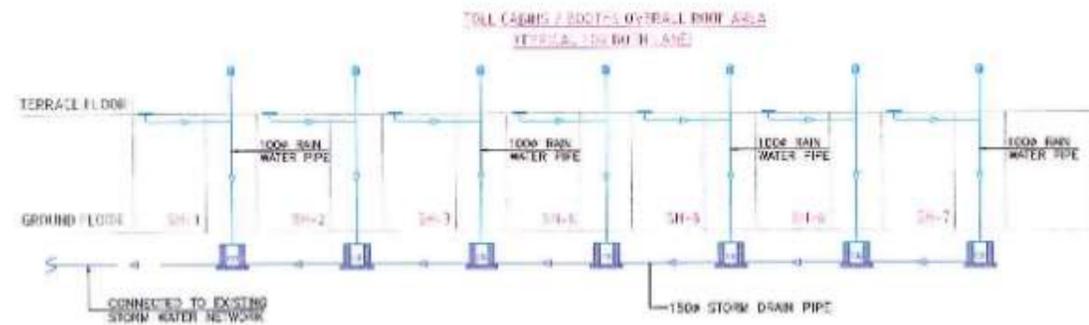
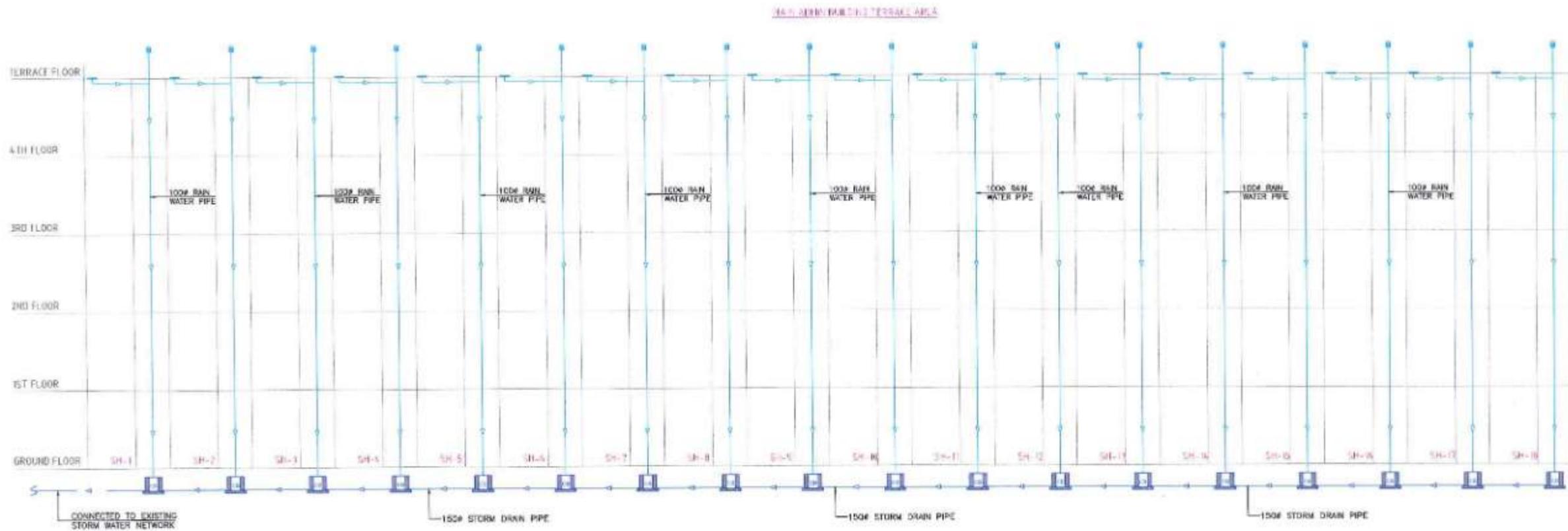
NAME	DESIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE -> WATER SUPPLY SCHEMATIC FOR ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4 - WS - 021	A3	0



LEGEND :-

- 1000 RAIN WATER PIPE
- 1500 STORM DRAIN PIPE
- CB 300x300 CATCH BASIN
- VC VENT COWL
- KHURRA

- NOTES :**
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SCALE - 1:250

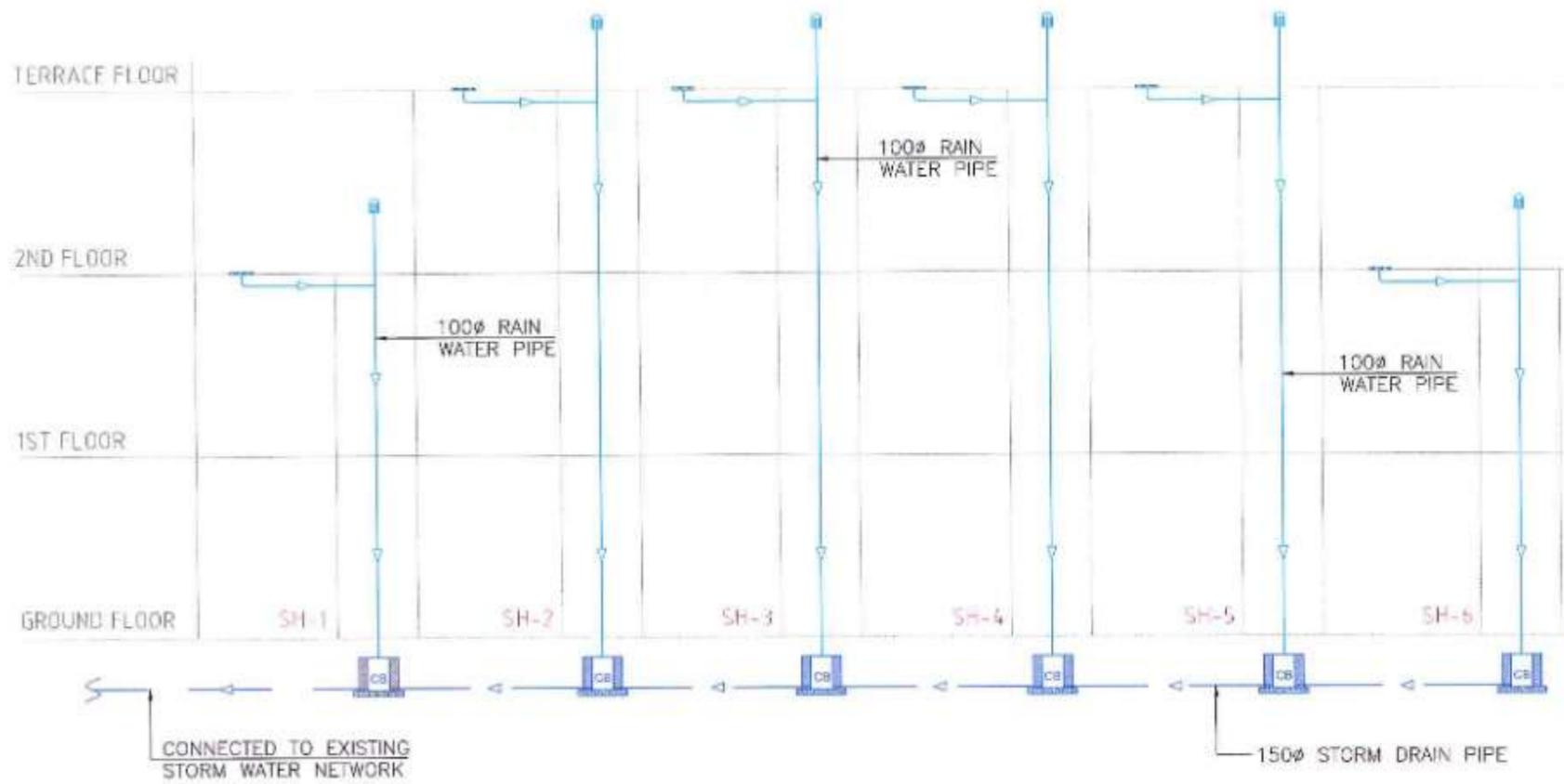
NAME	SIGN
DESIGN BY	
CHECKED BY	
APPROVED BY	



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
 PACKAGE 4 - TENDER DRAWING



TITLE - RAINWATER SCHEMATIC FOR MAIN ADMIN. AND COMMAND CONTROL CENTER AND MAIN TOLL PLAZA AT GAVHAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4 - RW - 022	A3	0



LEGEND :-

	100mm RAIN WATER PIPE
	150mm STORM DRAIN PIPE
	300x300 CATCH BASIN
	VENT COWL
	KHURRA

NOTES :

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SCALE - 1:150

NAME	SIGN
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APPROVED BY	



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PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

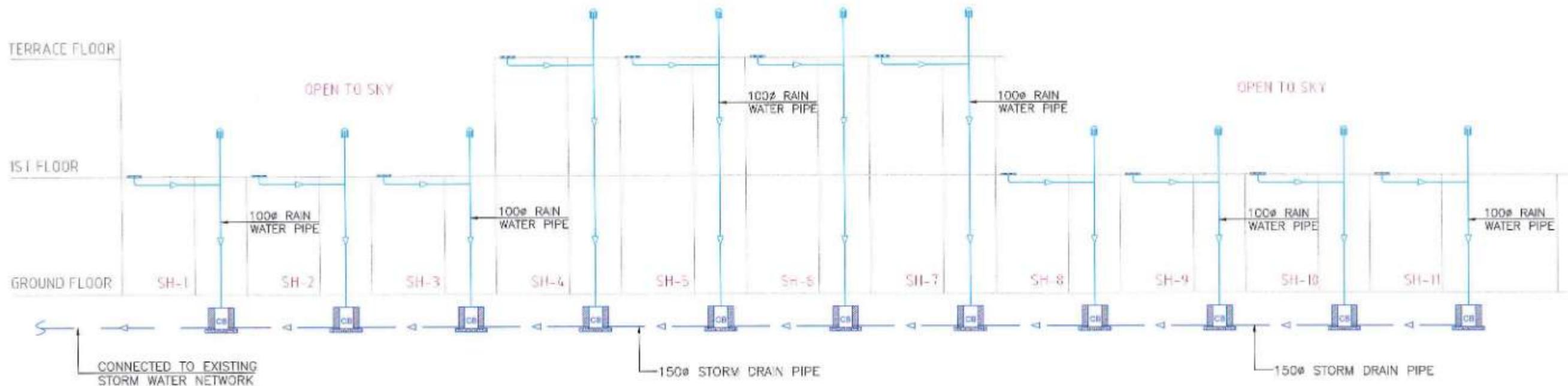
NORTH >

TITLE >

**RAINWATER SCHEMATIC
FOR SUB ADMINISTRATION AND COMMAND CONTROL CENTER
AT SEWRI**

DATE 11.04.2021	DRAWING NO. P4 - RW - 023	PAPER SIZE A3	REV. 0
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LEGEND :-

	100mm RAIN WATER PIPE
	150mm STORM DRAIN PIPE
	300x300 CATCH BASIN
	VENT COWL
	KHURRA



- NOTES:**
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SCALE - 1:150

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APPROVED BY		

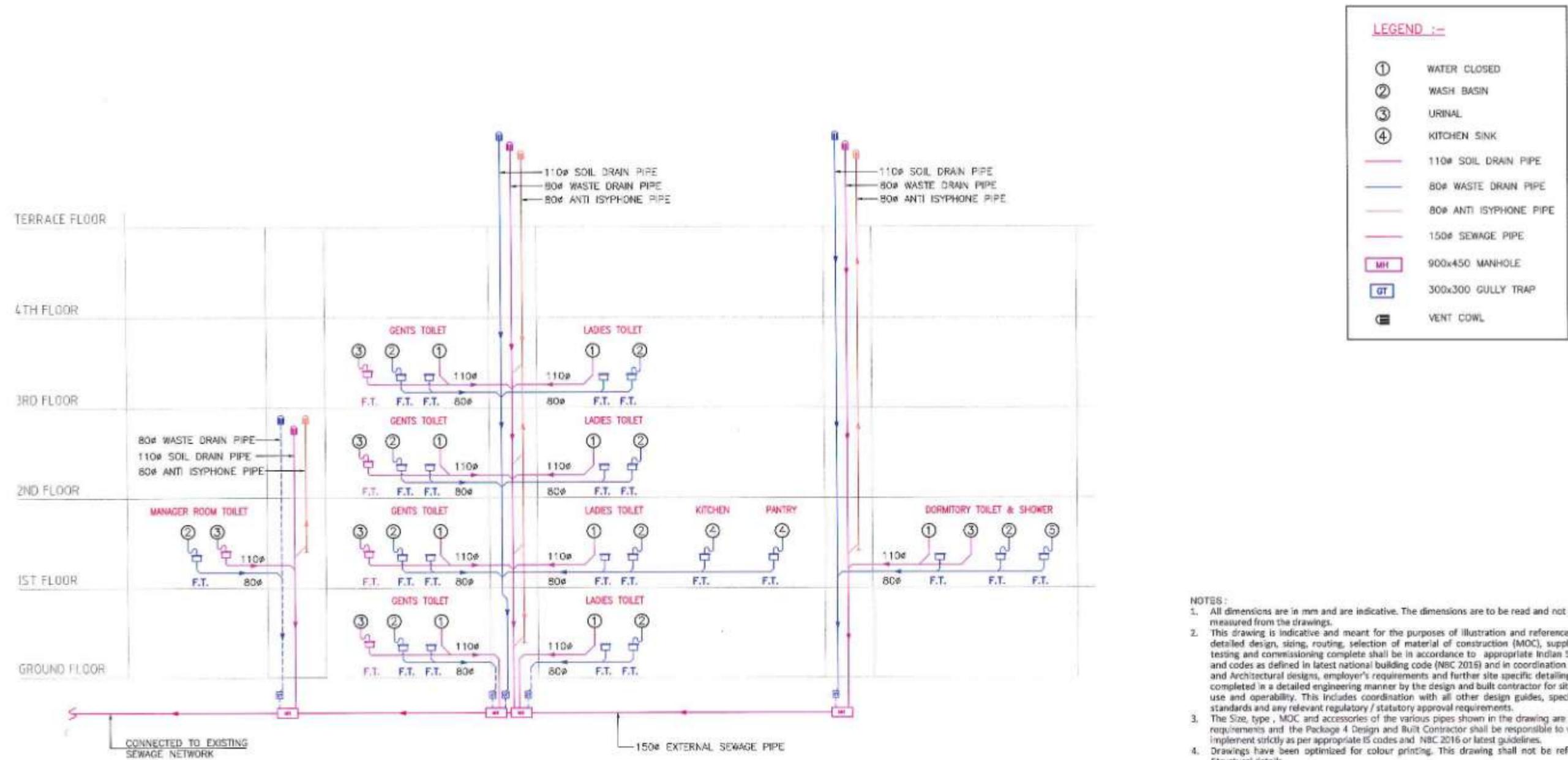


PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

NORTH ->



TITLE ->			
RAINWATER SCHEMATIC FOR ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4 - RW - 024	A3	0



LEGEND :-

①	WATER CLOSED
②	WASH BASIN
③	URINAL
④	KITCHEN SINK
— (Red)	110# SOIL DRAIN PIPE
— (Blue)	80# WASTE DRAIN PIPE
— (Green)	80# ANTI ISYPHONE PIPE
— (Purple)	150# SEWAGE PIPE
MH	900x450 MANHOLE
GT	300x300 GULLY TRAP
☐	VENT COWL

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SCALE - 1:200

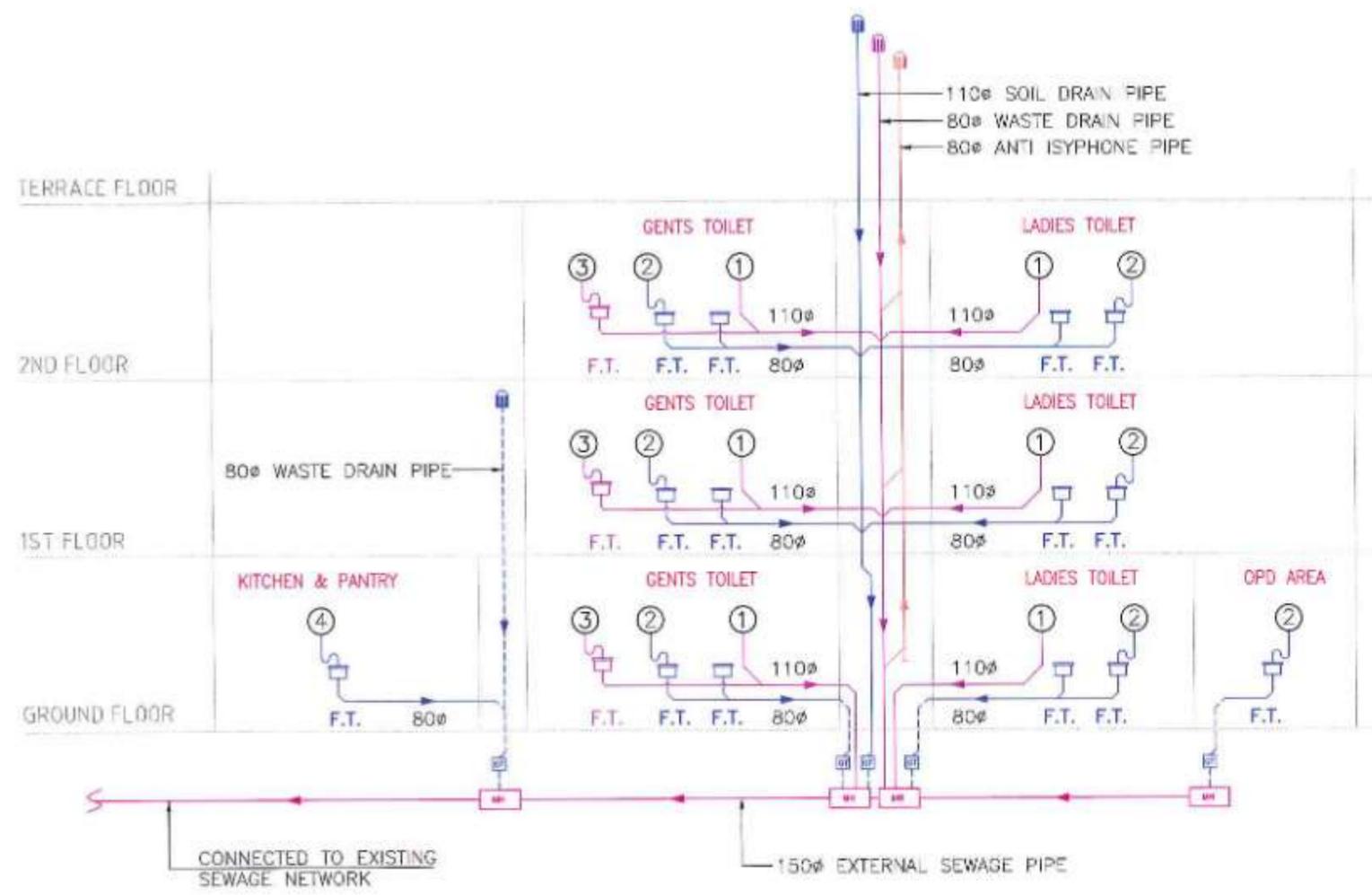
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APPROVED BY	



PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE -> DRAINAGE SCHEMATIC FOR MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4 - DR - 025	A3	0



LEGEND :-

①	WATER CLOSED
②	WASH BASIN
③	URINAL
④	KITCHEN SINK
— (red line)	110mm SOIL DRAIN PIPE
— (blue line)	80mm WASTE DRAIN PIPE
— (green line)	80mm ANTI ISYPHONE PIPE
— (purple line)	150mm SEWAGE PIPE
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GT	300x300 GULLY TRAP
☐	VENT COWL

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SCALE - 1:150

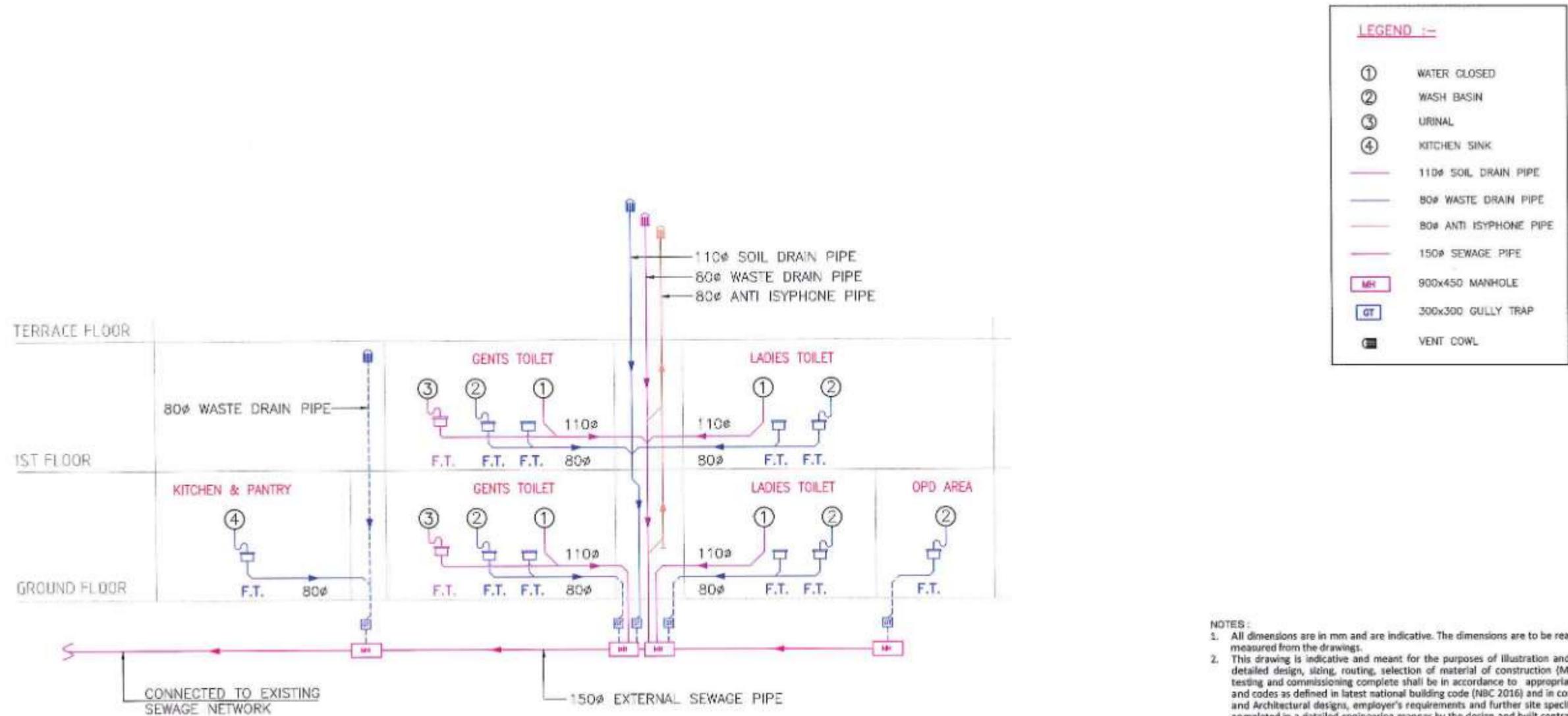
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APPROVED BY	



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING



TITLE - DRAINAGE SCHEMATIC FOR SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI			
DATE 11.04.2021	DRAWING NO. P4 - DR - 026	PAPER SIZE A3	REV. 0



SCALE - 1:150

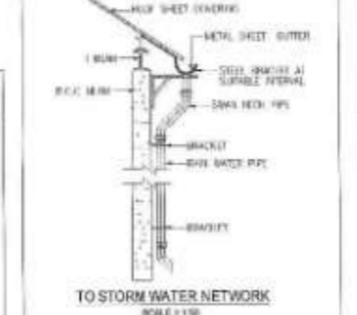
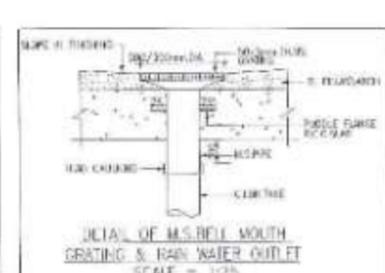
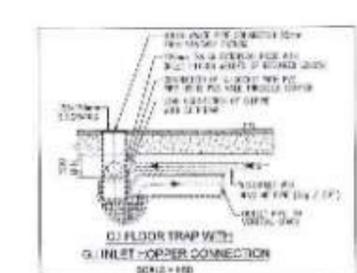
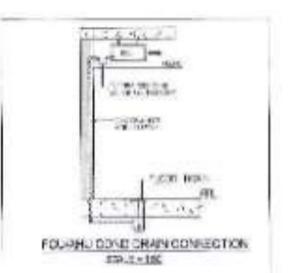
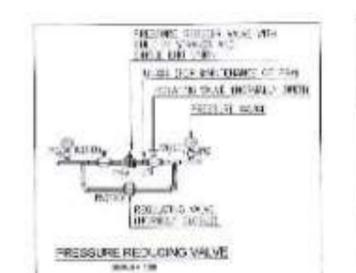
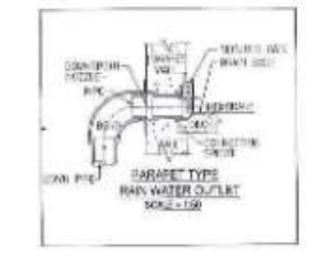
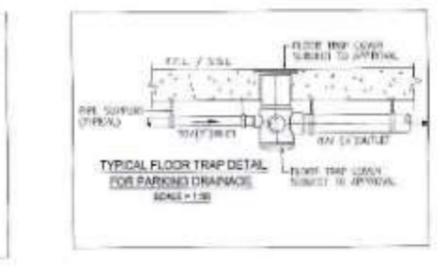
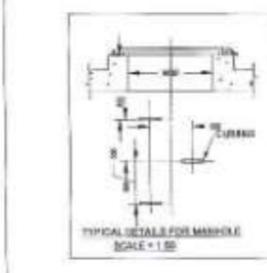
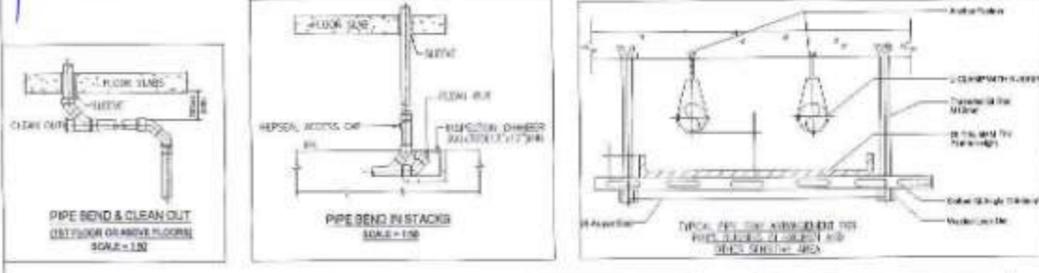
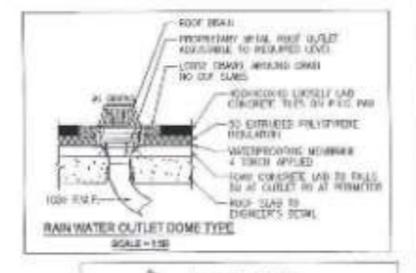
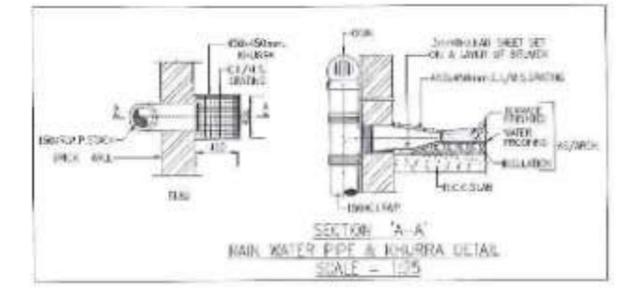
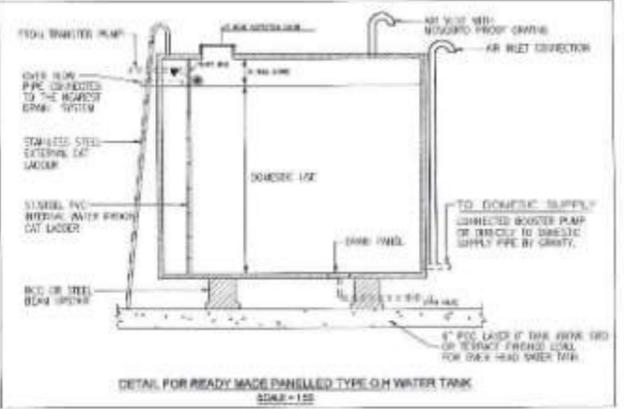
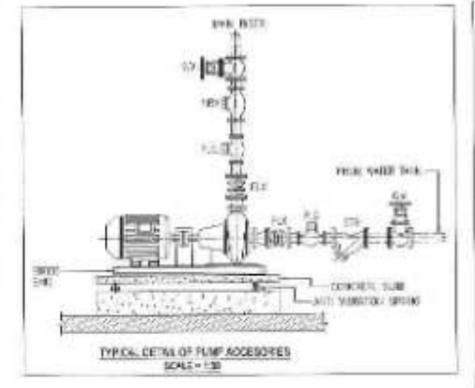
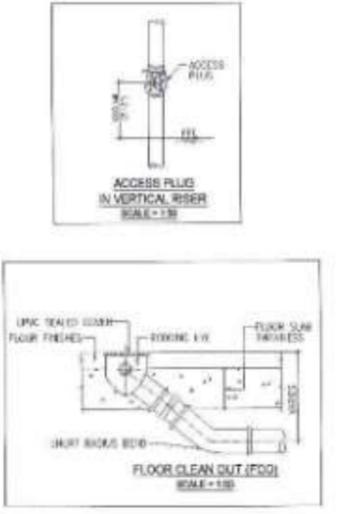
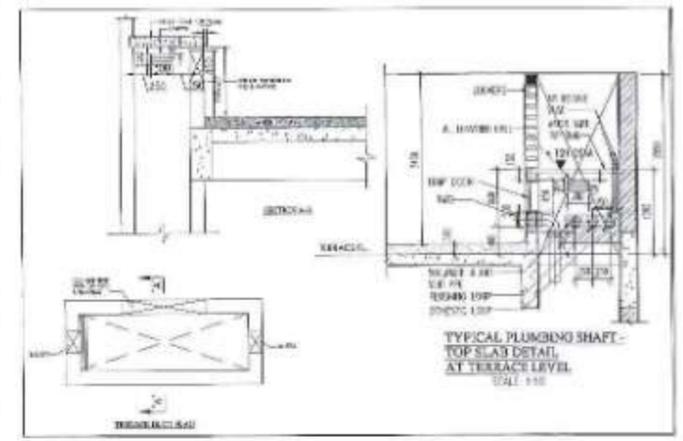
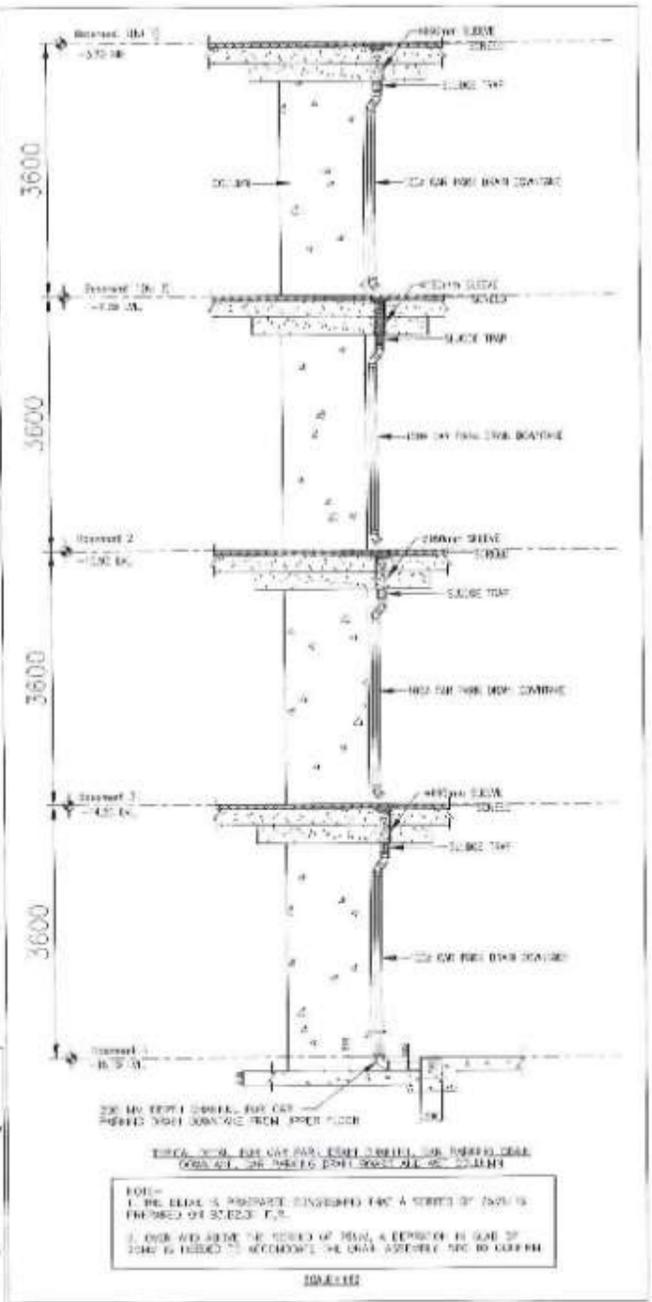
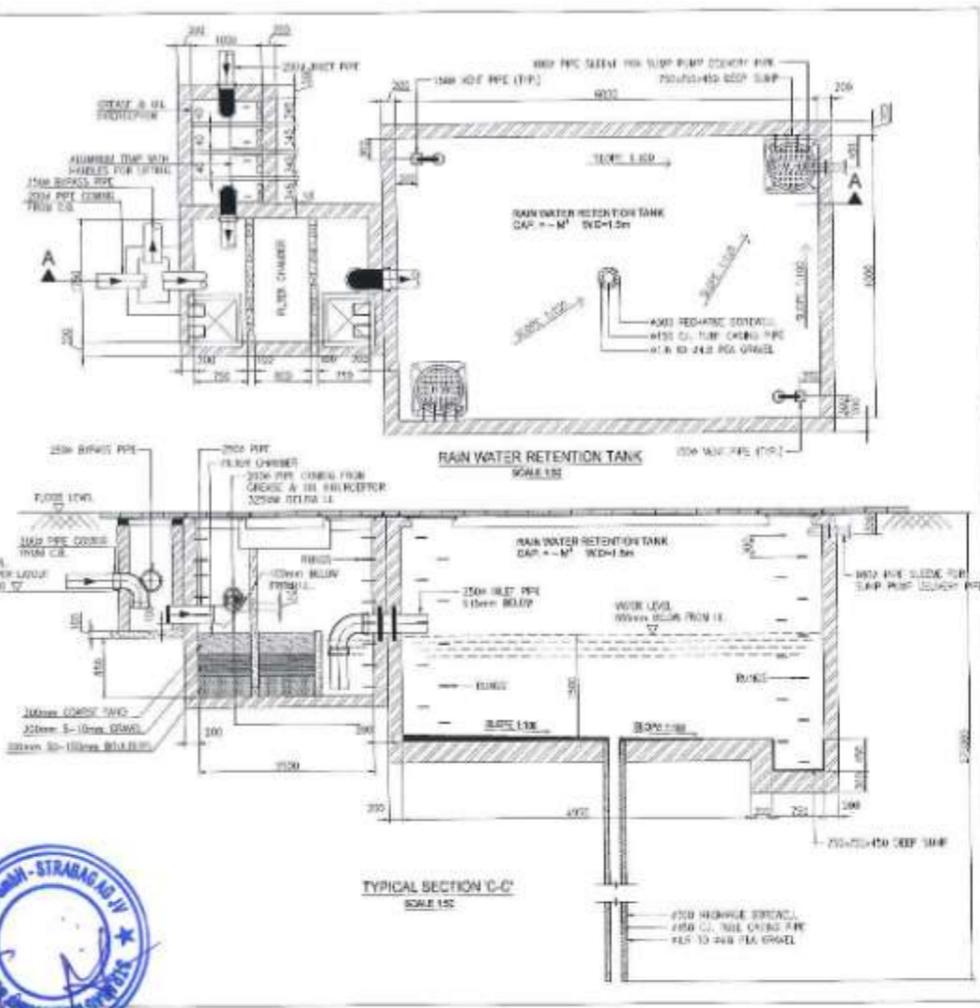
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DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE :- DRAINAGE SCHEMATIC FOR ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR			
DATE	DRAWING NO.	PAPER SIZE	REV.
11.04.2021	P4 - DR - 027	A3	0



NAME	SGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



TITLE -	TYPICAL INSTALLATION DETAILS FOR PLUMBING SYSTEM		
DATE	11.04.2021	DRAWING NO	P4-PLU-026 (2 OF 2)
PAPER SIZE	A1	REV.	0

INDEX OF DRAWINGS

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GENERAL NOTES FOR HVAC SYSTEM	P4 - HVAC - 002
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GROUND FLOOR HVAC LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - HVAC - 003
FIRST FLOOR HVAC LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - HVAC - 004
SECOND FLOOR HVAC LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - HVAC - 005
THIRD FLOOR HVAC LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - HVAC - 006
FOURTH FLOOR HVAC LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - HVAC - 007
TERRACE FLOOR HVAC LAYOUT OF MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - HVAC - 008
SEWRI INTERCHANGE G+2 SUB ADMINISTRATION & COMMAND CONTROL CENTER	
GROUND FLOOR HVAC LAYOUT OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI	P4 - HVAC - 009
FIRST FLOOR HVAC LAYOUT OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI	P4 - HVAC - 010
SECOND FLOOR HVAC LAYOUT OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI	P4 - HVAC - 011

TITLE	DRAWING NOS.
SHIVAJINAGAR INTERCHANGE G+1 ADMINISTRATION & COMMAND CONTROL CENTER	
GROUND FLOOR HVAC LAYOUT OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR INTERCHANGE	P4 - HVAC - 012
FIRST FLOOR HVAC LAYOUT OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR INTERCHANGE	P4 - HVAC - 013
HVAC LAYOUT FOR PORTA CABINS (6NOS.)	P4 - HVAC - 014
LEGENDS AND SYMBOLS FOR HVAC SYSTEM	P4 - HVAC - 015
TYPICAL STANDARD DETAILS FOR HVAC SYSTEM	P4 - HVAC - 016



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CHECKED BY		
APPROVED BY		



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MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE >

INDEX OF HVAC DRAWING

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4-HVAC-001	A3	0

GENERAL NOTES-

- 1) ALL DIMENSIONS ARE IN mm UNLESS SPECIFIED.
- 2) ALL DUCTS SHALL BE FABRICATED AS PER RELEVANT SMACNA STANDARDS. DUCT CONSTRUCTION, PRESSURE RATING OF THE DUCTS AS PER STATIC PRESSURE REQUIREMENT. DUCT DESIGN AND FABRICATION SHALL BE AS PER AWS SPECIFICATION FOR AIR DISTRIBUTION SECTION 233113.
- 3) SERVICES IN SHAFT TO BE COORDINATED WITH OTHER SERVICES.
- 4) ALL DUCT / PIPE LEVELS ARE INDICATED FROM FFL.
- 5) ALL TOILET DOORS TO BE PROVIDED WITH 12 mm UNDER-CUT FOR AIR TRANSFER, INCASE FRESH AIR DIRECTLY NOT SUPPLIED TO TOILET.
- 6) ALL AHU ROOM / FAN ROOM DOOR SHOULD BE OPEN OUTSIDE.
- 7) ALL 90° MITERED ELBOWS SHALL HAVE DOUBLE THICKNESS TURNING VANES UNLESS OTHERWISE NOTED.
- 8) ALL SPECIFICATIONS AND EQUIPMENT SELECTION SHOULD MEET MINIMUM ECBC 2019 REQUIREMENT.
- 9) FIRE DAMPERS TO BE PROVIDED IN SUPPLY AIR AND RETURN AIR DUCTS WHILE CROSSING FIRE RATED PARTITION OR AS SHOWN ON DRAWINGS.
- 10) ACCESS DOORS ON THE DUCTS/PLENUM SHALL BE MINIMUM 450x450 WHEREVER APPLICABLE.
- 11) PROVIDE HIGH POINT VENTS AND LOW POINT DRAINS ON ALL PIPING AS APPLICABLE. SUCH DRAIN POINTS ARE CONSIDERED AS PIPING ACCESSORIES. ALL DRAIN AND VENT POINTS MAY NOT BE SHOWN IN THE DRAWING / SCHEMATICS.
- 12) NO LIQUID-CARRYING PIPES SHALL BE ROUTED ABOVE ELECTRICAL EQUIPMENT. IF THE SAME IS UNAVOIDABLE THEN SUCH PIPES SHALL RUN THROUGH 1.2 mm THICK DRAIN TRAY SLOPED AWAY FROM EQUIPMENT.
- 13) ALL PIPES INSTALLED INSIDE THE MECHANICAL PLANT ROOM, FAN ROOMS SHALL BE SUPPORTED WITH SEISMIC ISOLATOR FOR RELEVANT EARTHQUAKE ZONE.
- 14) ALL VALVES & OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED WITH ACCESS PANEL.
- 15) ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS OR FLOORS SHALL BE FIRE STOPPED USING U.L. LISTED FIRE STOP SYSTEM BY MEP CONTRACTOR.
- 16) MANUAL VOLUME CONTROL DAMPERS SHALL BE PROVIDED IN ALL DUCTS BRANCHES UNLESS OTHERWISE NOTED. MANUAL VOLUME CONTROL DAMPERS INSTALLED IN THE GYPSUM BOARD CEILING AREA SHALL BE PROVIDED WITH CONCEALED REGULATOR.
- 17) ALL MECHANICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT ADOPTED EDITION OF THE NATIONAL BUILDING CODE OF INDIA.
- 18) PLEASE REFER FLOOR PLAN & SCHEMATICS FOR FACE VELOCITY, PRESSURE DROP & FACE AREA IN LOUVER. ALSO REFER ARCHITECTURAL DRAWINGS FOR LOUVERS COMING ON BUILDING FACADE.
- 19) DUCTS WITH ACOUSTIC LINING SHOULD BE THERMALLY INSULATED.
- 20) ALL DUCTS SHALL BE TOTALLY FREE FROM VIBRATIONS UNDER ALL CONDITIONS OF OPERATIONS.
- 21) EQUIPMENT SCHEDULE TO BE READ IN CONJUNCTION WITH FLOOR PLAN LAYOUTS & SCHEMATICS.
- 22) SCHEMATIC DRAWING TO BE READ IN CONJUNCTION WITH FLOOR PLAN LAYOUTS.
- 23) FOR EQUIPMENT CAPACITY REFER TO EQUIPMENT SCHEDULE.
- 24) VRF PIPING TO BE DESIGN BY SPECIALIST VENDOR.
- 25) THE BUILDING STRUCTURES IN THE PROJECT ARE NOT DESIGNED FOR EQUIPMENT VIBRATION. ALL THE EQUIPMENT USED FOR THE PROJECT SHALL INCORPORATE MEASURES TO ATTENUATE TRANSMISSION OF THE VIBRATION FROM OPERATING EQUIPMENT TO THE MAIN STRUCTURE THROUGH PASSIVE MEANS WITH PRIMARY AND SECONDARY MEASURES AS REQUIRED TO ACHIEVE MINIMUM 95% EFFICIENCY IN ISOLATION OF THE VIBRATIONS. THE VENDOR/SUPPLIER SHALL PROVIDE DETAILED INFORMATION REGARDING THE VIBRATION ISOLATION METHODS ADOPTED AND THE RESIDUAL VIBRATIONS IN THE EQUIPMENT BEING TRANSMITTED TO THE BUILDING. VENDOR/SUPPLIER SHALL ALSO PROVIDE THE DETAILS OF ANY SUPPORT NEEDED FROM THE GENERAL CONTRACTOR IN ORDER TO IMPLEMENT THE SOLUTION. THE EFFECTIVENESS OF THE ISOLATION MEASURES PROVIDED FOR THE EQUIPMENT SHALL BE SUCCESSFULLY DEMONSTRATED FOR VARIOUS OPERATIONAL SCENARIOS AS PART OF THE TESTING AND COMMISSIONING STAGE PRIOR TO ACCEPTANCE BY CLIENT.



	NAME	SIGN
DRAWN BY		
CHECKED BY		
APPROVED BY		

MMRDAMUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT :-

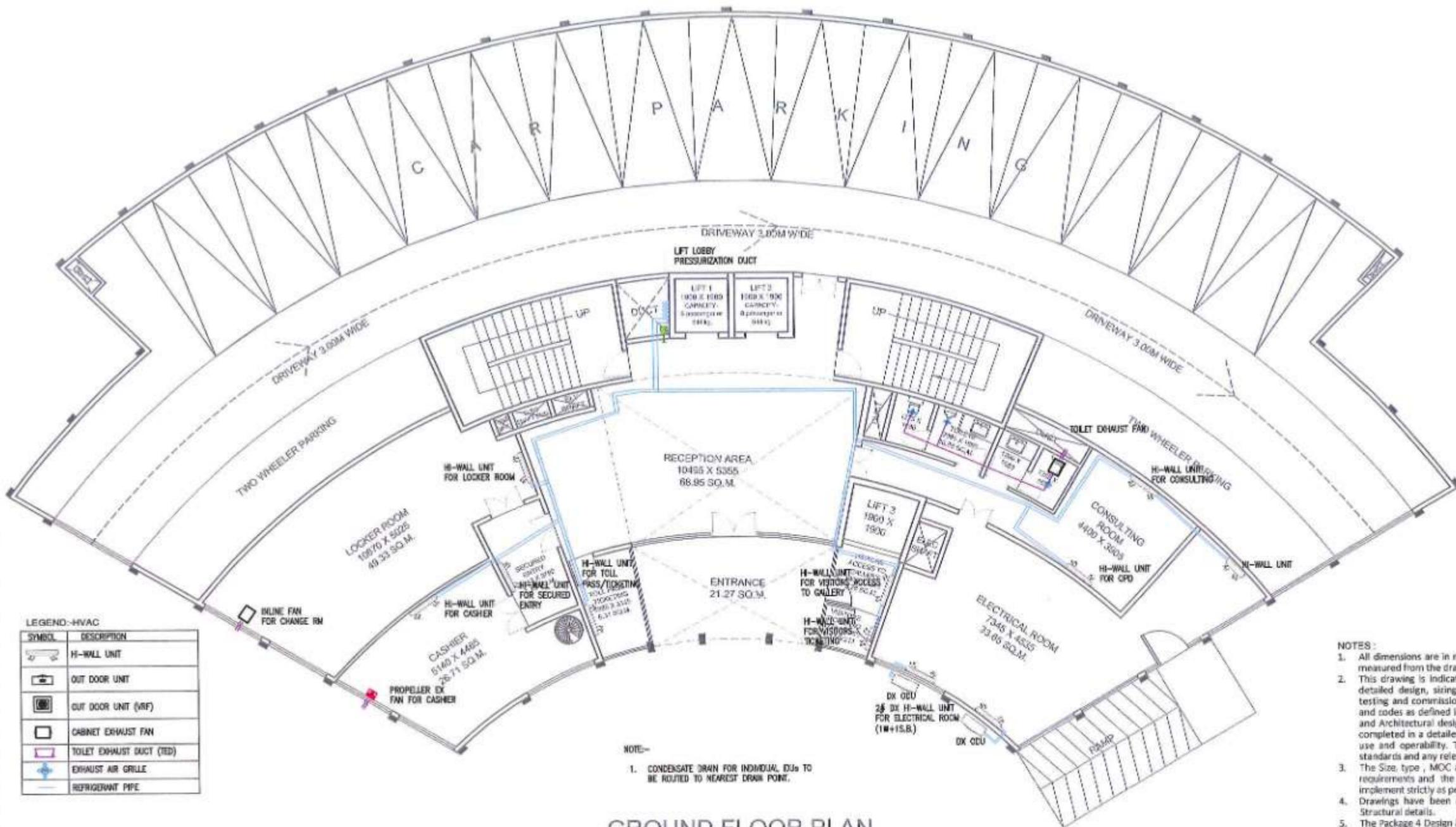
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH ->

TITLE ->

GENERAL NOTES FOR HVAC SYSTEM

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - HVAC - 002	A3	0



LEGEND - HVAC

SYMBOL	DESCRIPTION
	H-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (VRF)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TED)
	EXHAUST AIR GRILLE
	REFRIGERANT PIPE

NOTE-
1. CONDENSATE DRAIN FOR INDIVIDUAL IDUs TO BE ROUTED TO NEAREST DRAIN POINT.

**GROUND FLOOR PLAN
ADMINISTRATION CENTER**

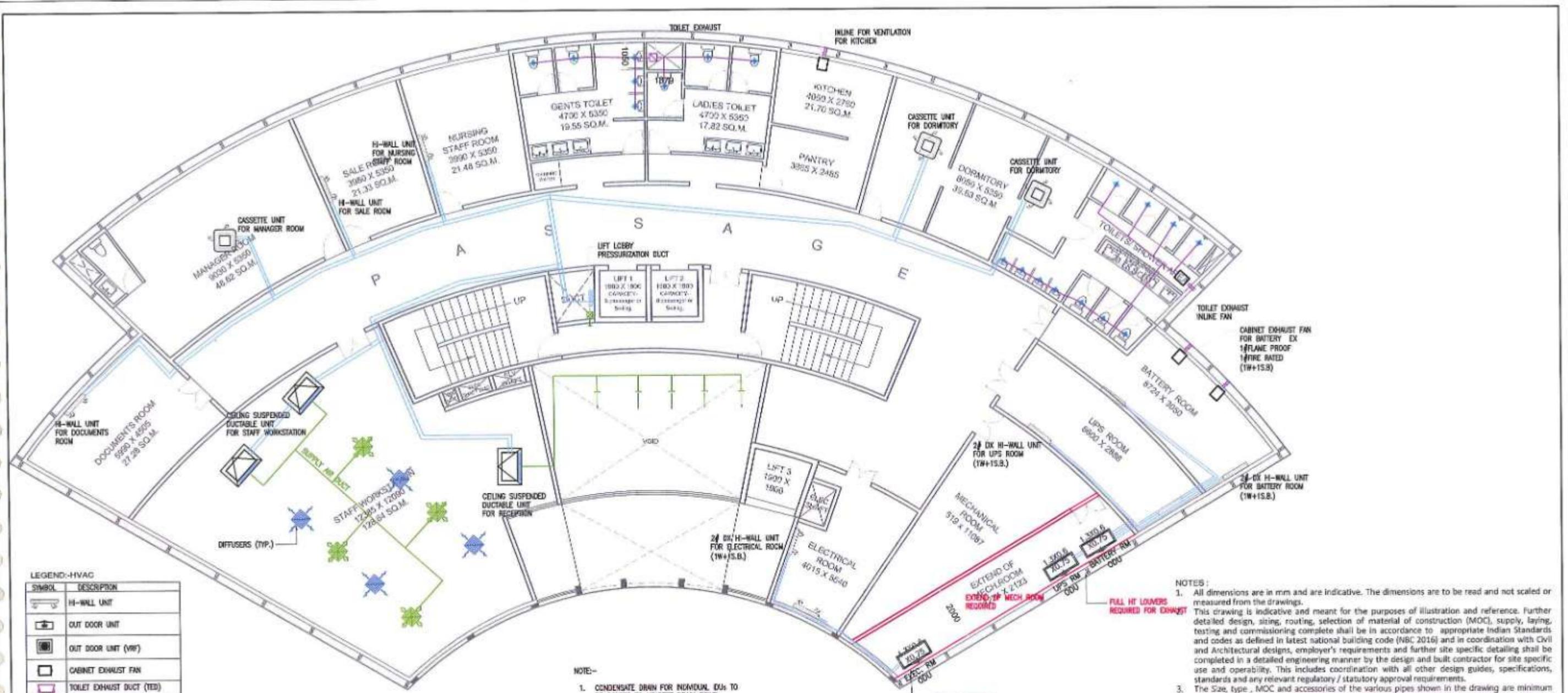
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 - Drawings have been optimized for colour printing. This drawing shall not be referred for Structural details.
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 - The Submission of Detailed drawings shall however not relieve Package 4 Design and Built Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc.
 - All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace level in coordination with Architectural and Civil Works.



SCALE : 1:150

DRAWN BY	NAME	SIGN	PROJECT >	MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH >	TITLE >	GROUND FLOOR PLAN HVAC LAYOUTS OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
	CHECKED BY	APPROVED BY						DATE	DRAWING NO.	PAPER SIZE
							10.04.2021	P4 - HVAC - 003	A3	0





LEGEND-HVAC

SYMBOL	DESCRIPTION
	HI-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (VRF)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TED)
	EXHAUST AIR GRILLE
	REFRIGERANT PIPE

NOTE:-
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- NOTES:**
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**FIRST FLOOR PLAN
 ADMINISTRATION CENTER**



SCALE : 1:150

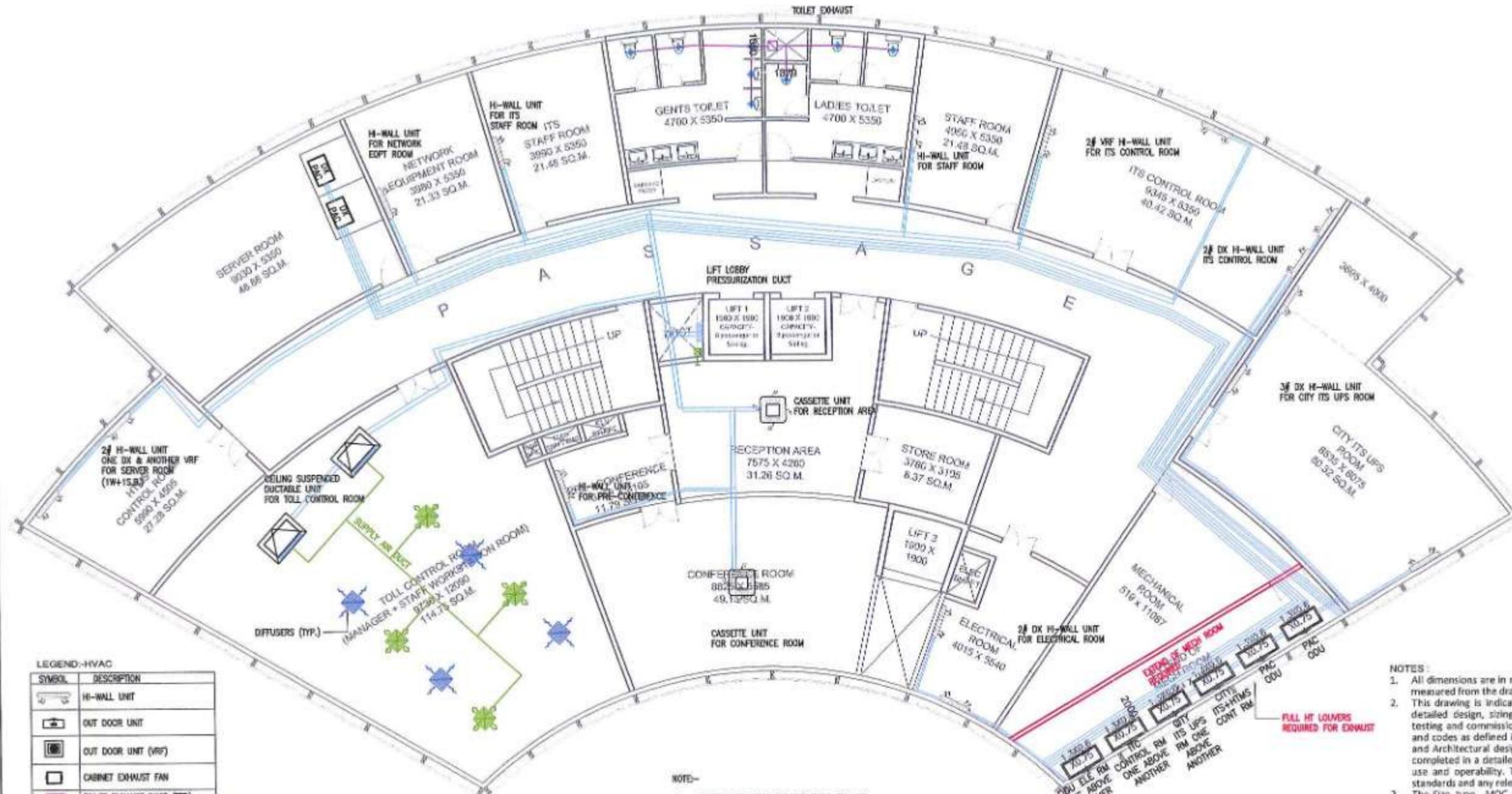
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CHECKED BY	
APPROVED BY	



PROJECT :-
**MUMBAI TRANS HARBOUR LINK PROJECT
 PACKAGE 4 - TENDER DRAWING**



TITLE :- FIRST FLOOR PLAN HVAC LAYOUT OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE 10.04.2021	DRAWING NO. P4 - HVAC - 004	PAPER SIZE A3	REV. 0



LEGEND-HVAC

SYMBOL	DESCRIPTION
	HI-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (VRF)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TED)
	EXHAUST AIR GRILLE
	REFRIGERANT PIPE

NOTE:-
1. CONDENSATE DRAIN FOR INDIVIDUAL IDUs TO BE ROUTED TO NEAREST DRAIN POINT.

**SECOND FLOOR PLAN
COMMAND CONTROL CENTER**

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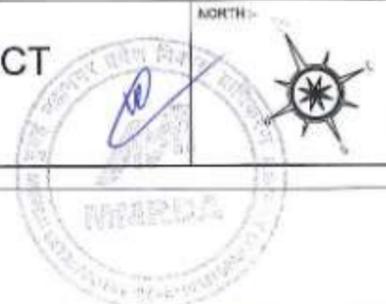


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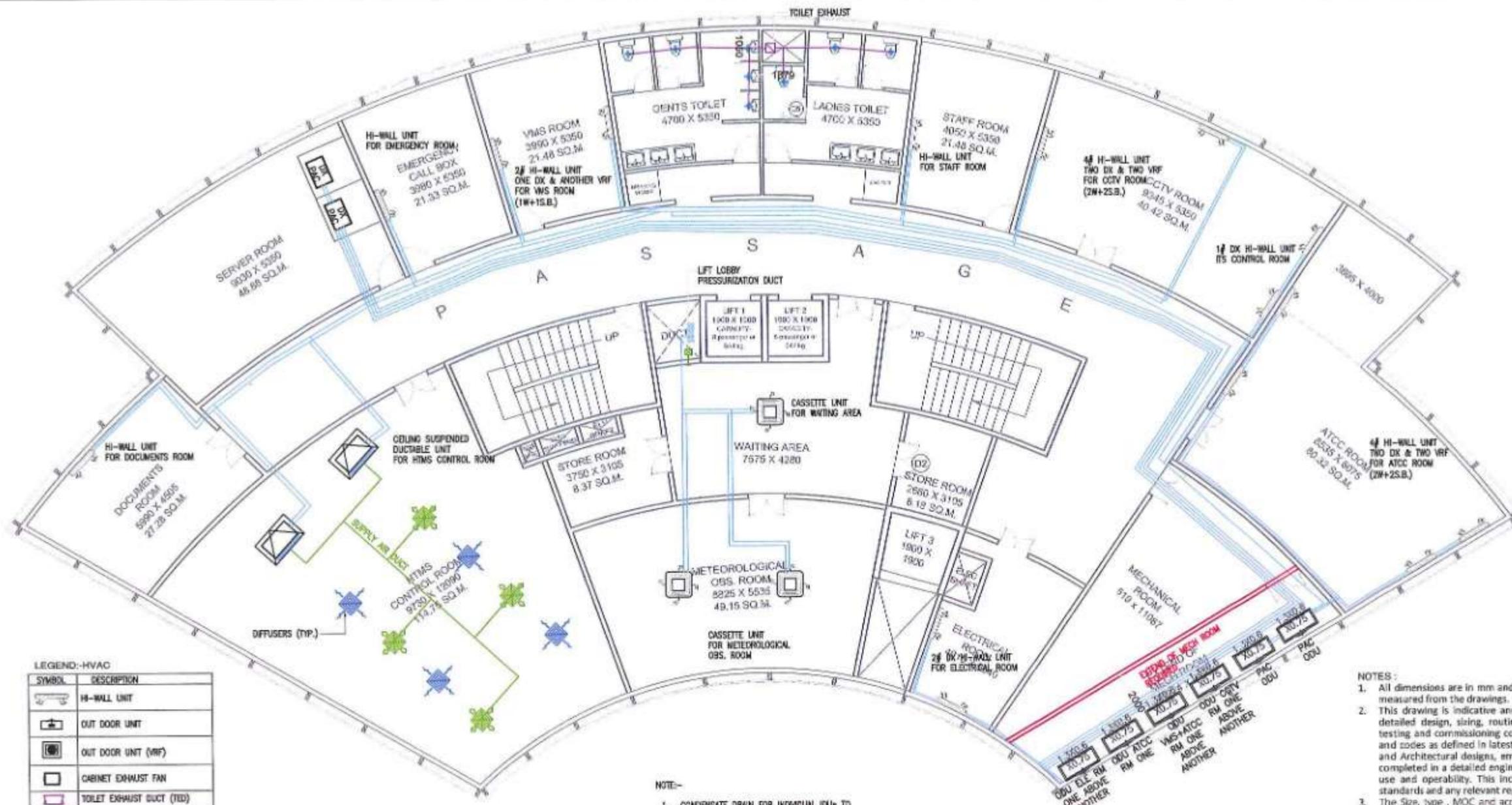
NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT:-
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE:- SECOND FLOOR PLAN HVAC LAYOUT OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE: 10.04.2021	DRAWING NO. P4 - HVAC - 005	PAPER SIZE: A3	REV. 0



LEGEND:-HVAC

SYMBOL	DESCRIPTION
	HI-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (VRF)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TED)
	EXHAUST AIR GRILLE
	REFRIGERANT PIPE

NOTE:-
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THIRD FLOOR PLAN
COMMAND CONTROL CENTER



SCALE : 1:150

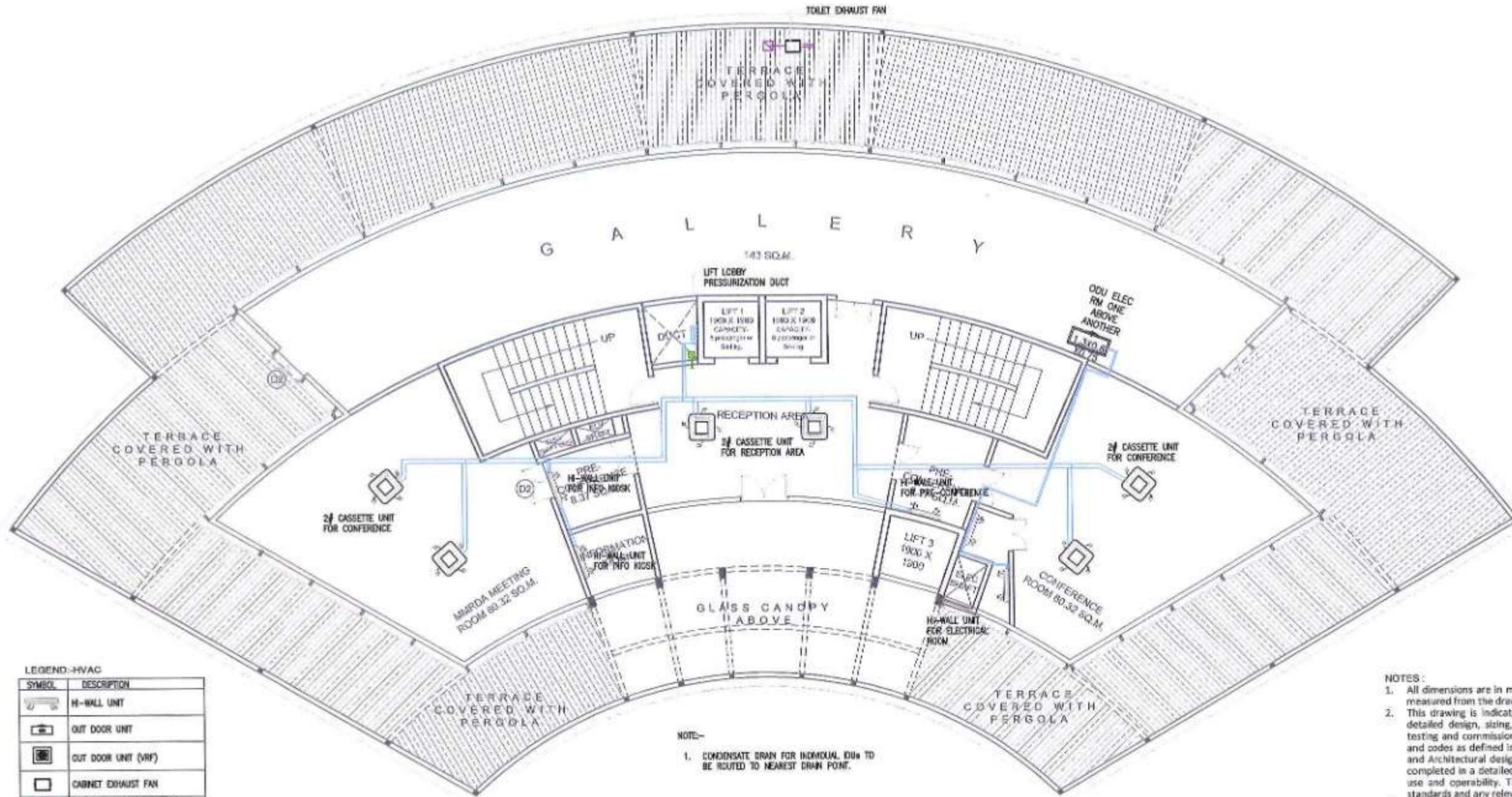
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DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT:-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE:- THIRD FLOOR PLAN HVAC LAYOUT OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE: 10.04.2021	DRAWING NO. P4 - HVAC - 006	PAPER SIZE A3	REV. 0



LEGEND-HVAC

SYMBOL	DESCRIPTION
	H-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (VRF)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TED)
	EXHAUST AIR GRILLE
	REFRIGERANT PIPE

NOTE-
1. CONDENSATE DRAIN FOR INDIVIDUAL DUH TO BE ROUTED TO NEAREST DRAIN POINT.

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**FOURTH FLOOR PLAN
GALLERY AND CONFERENCE**



SCALE : 1:150

NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



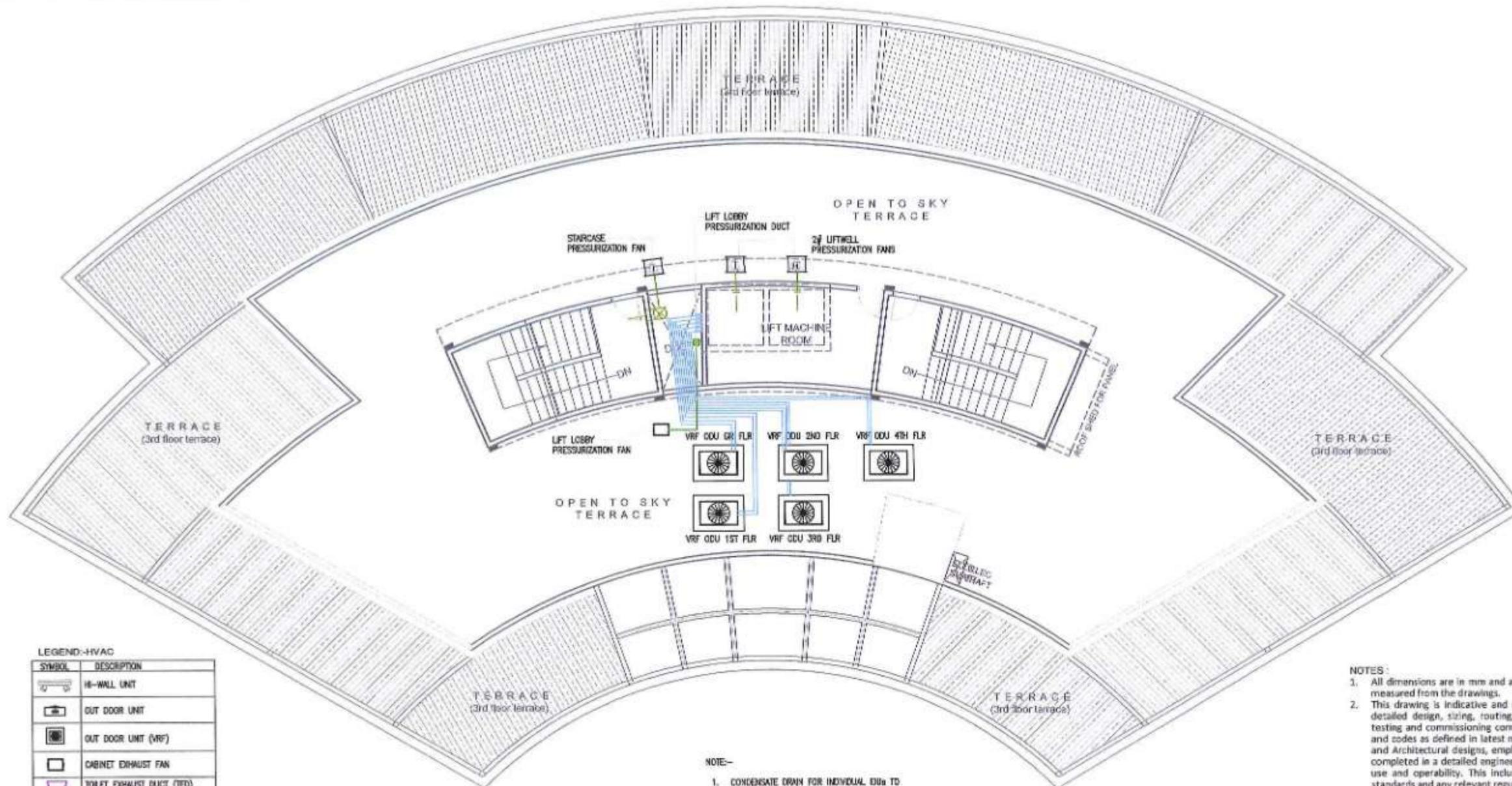
PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH ->

TITLE -> **FOURTH FLOOR PLAN HVAC LAYOUT
OF MAIN ADMIN. AND COMMAND CONTROL CENTER
AT GAVHAN**

DATE: 10.04.2021 | DRAWING NO. P4 - HVAC - 007 | PAPER SIZE: A3 | REV. 0





LEGEND-HVAC

SYMBOL	DESCRIPTION
	H-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (VRF)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TED)
	EXHAUST AIR GRILLE
	REFRIGERANT PIPE

NOTE:-
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TERRACE FLOOR PLAN

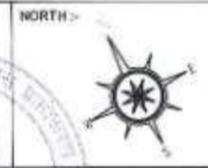


SCALE : 1:150

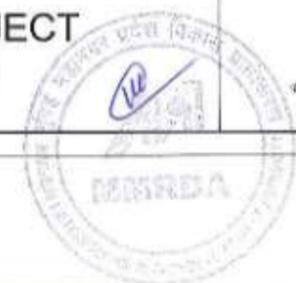
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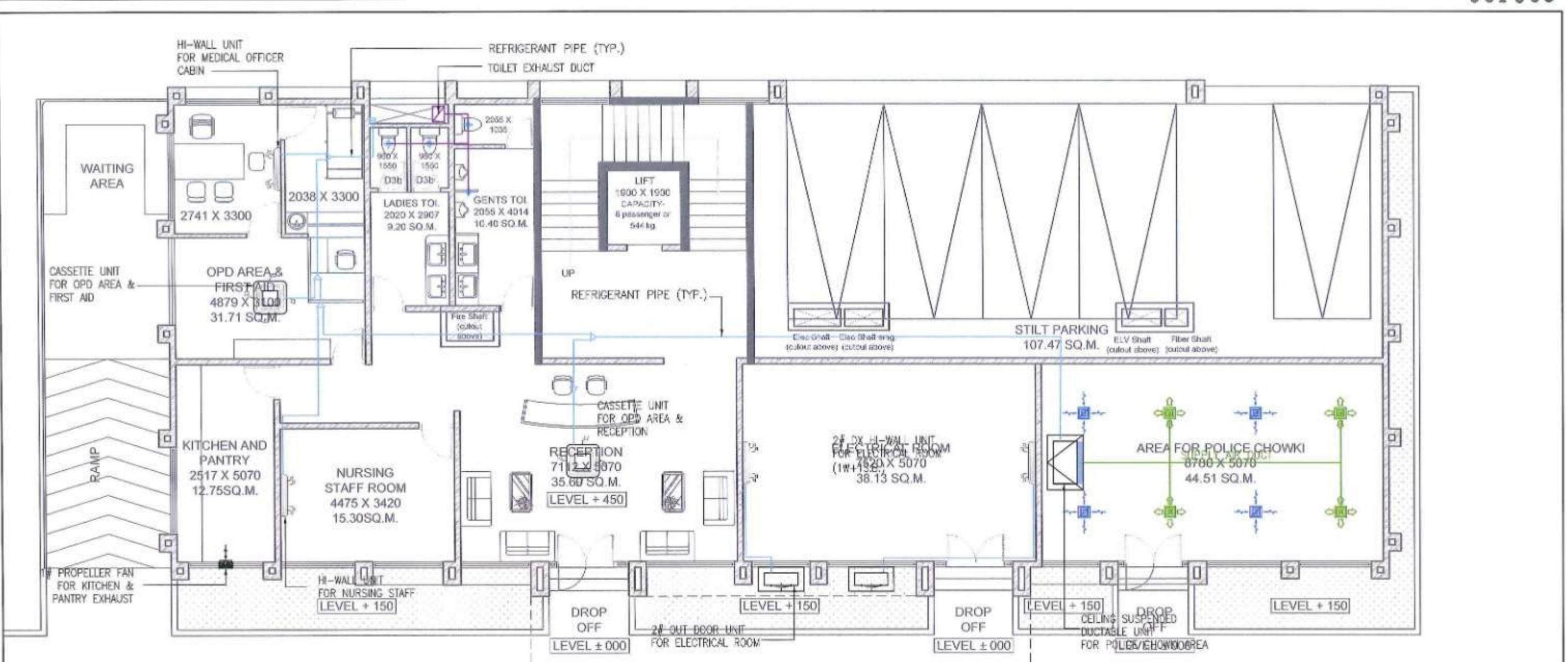


PROJECT > **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE > TERRACE FLOOR PLAN HVAC LAYOUT OF MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - HVAC - 008	A3	0





LEGEND - HVAC

SYMBOL	DESCRIPTION
[Symbol]	HI-WALL UNIT
[Symbol]	OUT DOOR UNIT
[Symbol]	OUT DOOR UNIT (DRY)
[Symbol]	CASSETT EXHAUST FAN
[Symbol]	TOILET EXHAUST DUCT (DIB)
[Symbol]	EXHAUST AIR BRIDGE
[Symbol]	REFRIGERANT PIPE

GROUND FLOOR PLAN

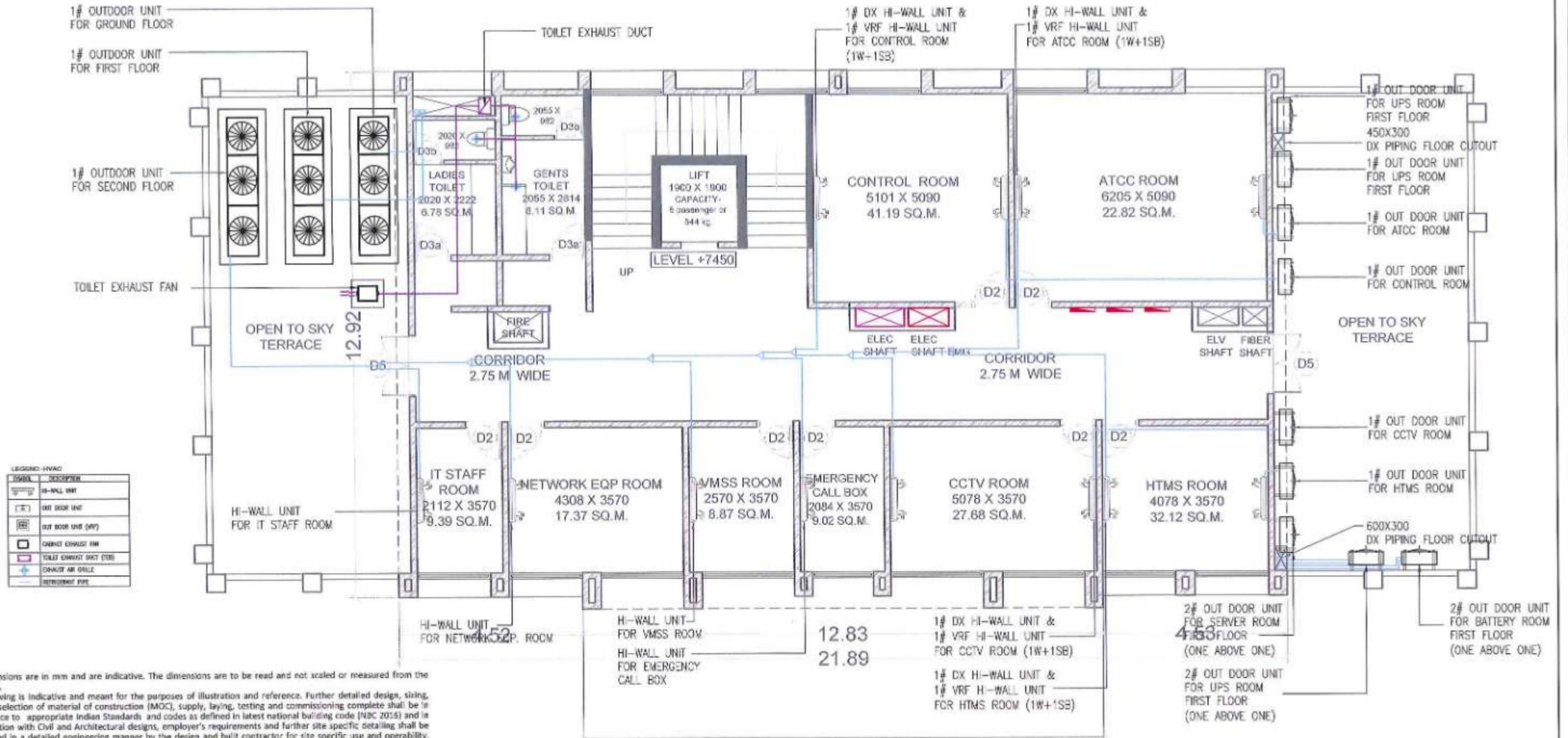
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SCALE - 1:100

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NAME	SIGN											
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APPROVED BY												
				<table border="1"> <tr> <td>DATE</td> <td>DRAWING NO.</td> <td>PAPER SIZE</td> <td>REV.</td> </tr> <tr> <td>10.04.2021</td> <td>P4 - HVAC - 008</td> <td>A3</td> <td>0</td> </tr> </table>	DATE	DRAWING NO.	PAPER SIZE	REV.	10.04.2021	P4 - HVAC - 008	A3	0
DATE	DRAWING NO.	PAPER SIZE	REV.									
10.04.2021	P4 - HVAC - 008	A3	0									





LEGEND-HVAC

SYMBOL	DESCRIPTION
(Symbol)	HI-WALL UNIT
(Symbol)	OUT DOOR UNIT
(Symbol)	OUT DOOR UNIT (VRF)
(Symbol)	TOILET EXHAUST FAN
(Symbol)	TOILET EXHAUST DUCT (TED)
(Symbol)	EXHAUST AIR GRILLE
(Symbol)	RETROFITTED PIPE

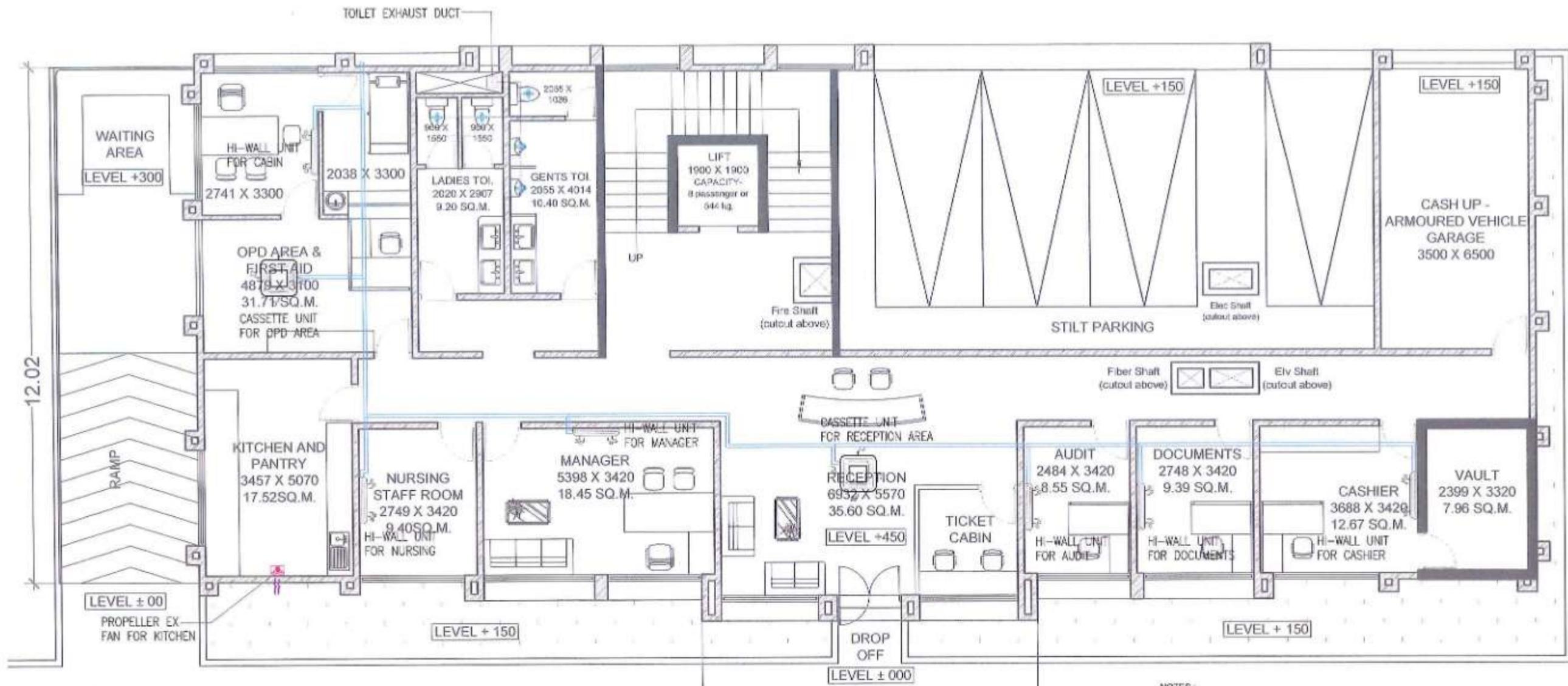
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SECOND FLOOR PLAN



SCALE - 1:100

DRAWN BY CHECKED BY APPROVED BY	MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY	PROJECT -	MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH -		TITLE -	SECOND FLOOR PLAN HVAC LAYOUT OF SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI				
		DATE		10.04.2021		DRAWING NO.	P4 - HVAC - 011	PAPER SIZE	A3	REV.	0



NOTE:-
1. CONDENSATE DRAIN FOR INDIVIDUAL IDUs TO BE ROUTED TO NEAREST DRAIN POINT.

LEGEND: HVAC

SYMBOL	DESCRIPTION
	HI-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (NPT)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TED)
	EXHAUST AIR DUCT
	REFRIGERANT PIPE

GROUND FLOOR PLAN

- NOTES:
- All dimensions are in mm and are indicative. The dimensions are to be read and not scaled or measured from the drawings.
 - This drawing is indicative and meant for the purposes of illustration and reference. Further detailed design, sizing, routing, selection of material of construction (MOC), supply, laying, testing and commissioning complete shall be in accordance to appropriate Indian Standards and codes as defined in latest national building code (NBC 2016) and in coordination with Civil and Architectural designs, employer's requirements and further site specific detailing shall be completed in a detailed engineering manner by the design and built contractor for site specific use and operability. This includes coordination with all other design guides, specifications, standards and any relevant regulatory / statutory approval requirements.
 - The Size, type, MOC and accessories of the various pipes shown in the drawing are minimum requirements and the Package 4 Design and Built Contractor shall be responsible to verify and implement strictly as per appropriate IS codes and NBC 2016 or latest guidelines.
 - Drawings have been optimized for colour printing. This drawing shall not be referred for Structural details.
 - The Package 4 Design & Build Contractor shall propose the plumbing work design philosophy as per latest NBC guidelines as specified in Client's requirements / Technical Specifications and same shall be mandatory.
 - Package 4 Design and Built Contractor shall detailed all necessary calculations, verify the requirements as per the Statutory Norms, latest design Standards in accordance to latest NBC guidelines, Indian Standards, statutory compliances and according to the Employer's requirement all in coordination with Architectural and Civil works and all Mechanical, Electrical and PHE services. Detailed coordinated Construction drawings (Plan and Sectional drawings) shall be submitted to Employer's approval before construction along with necessary and relevant Technical submissions.
 - The Submission of Detailed drawings shall however not relieve Package 4 Design and Built Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc;
 - All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace level in coordination with Architectural and Civil Works.



SCALE - 1:100

NAME	SIGN
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CHECKED BY	
APPROVED BY	



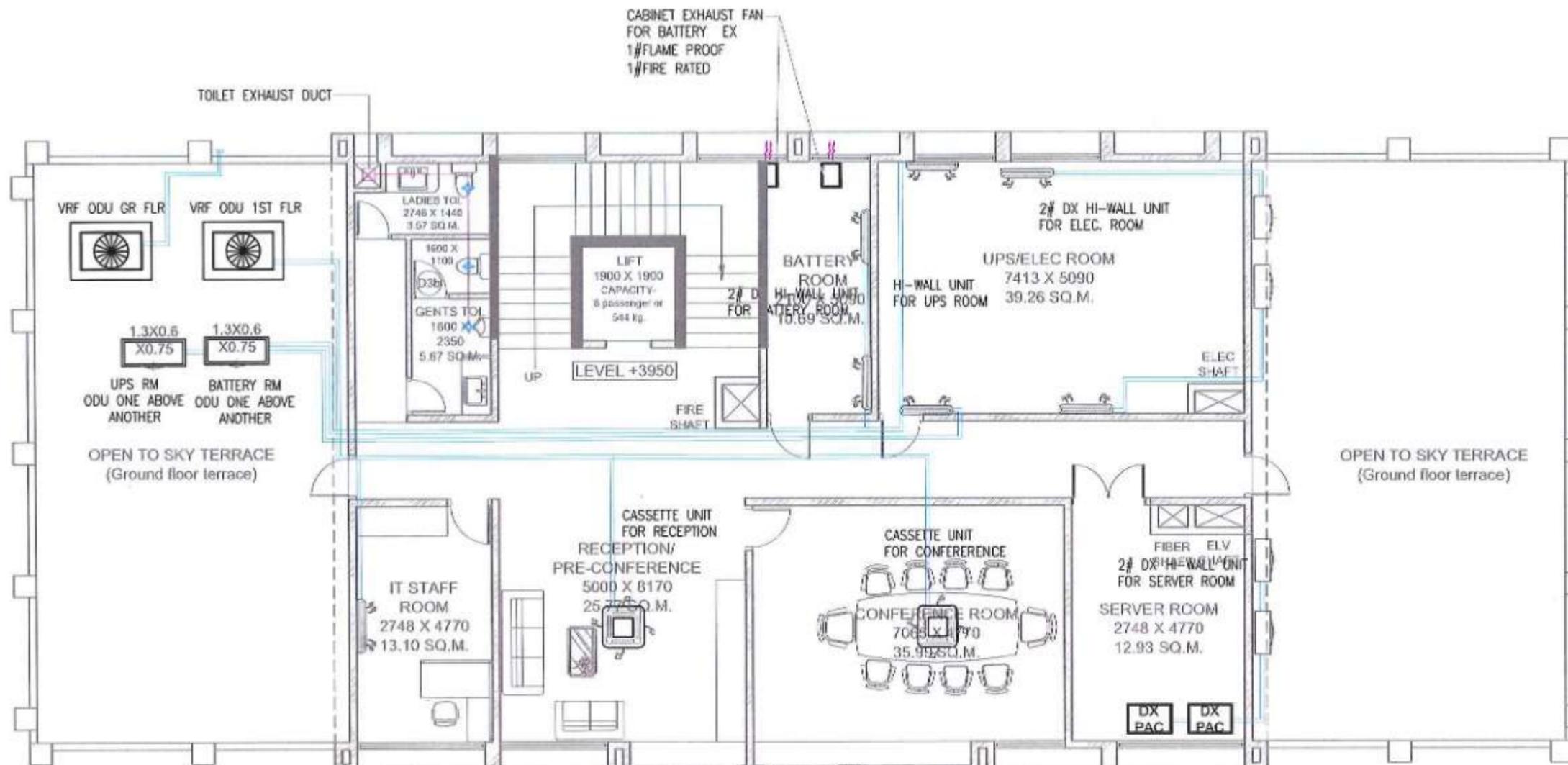
PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH -



TITLE :-			
GROUND FLOOR PLAN HVAC LAYOUT OF ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR INTERCHANGE			
DATE	DRAWING NO.	PAPER SIZE	REV
10.04.2021	P4 - HVAC - 012	A3	0





FIRST FLOOR PLAN

LEGEND - HVAC

	H-WALL UNIT
	OUT DOOR UNIT
	OUT DOOR UNIT (HP)
	CABINET EXHAUST FAN
	TOILET EXHAUST DUCT (TO)
	EXHAUST AIR GRILLE
	RETURNAIR PIPE

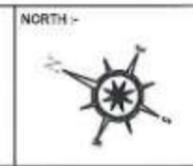
- NOTES:
- All dimensions are in mm and are indicative. The dimensions are to be read and not scaled or measured from the drawings.
 - This drawing is indicative and meant for the purposes of illustration and reference. Further detailed design, sizing, routing, selection of material of construction (MOC), supply, laying, testing and commissioning complete shall be in accordance to appropriate Indian Standards and codes as defined in latest national building code (NBC 2016) and in coordination with Civil and Architectural designs, employer's requirements and further site specific detailing shall be completed in a detailed engineering manner by the design and built contractor for site specific use and operability. This includes coordination with all other design guides, specifications, standards and any relevant regulatory / statutory approval requirements.
 - The Size, type, MOC and accessories of the various pipes shown in the drawing are minimum requirements and the Package 4 Design and Built Contractor shall be responsible to verify and implement strictly as per appropriate IS codes and NBC 2016 or latest guidelines.
 - Drawings have been optimized for colour printing. This drawing shall not be referred for Structural details.
 - The Package 4 Design & Built Contractor shall propose the plumbing work design philosophy as per Latest NBC guidelines as specified in Client's requirements / Technical Specifications and same shall be mandatory.
 - Package 4 Design and Built Contractor shall detailed all necessary calculations, verify the requirements as per the Statutory Norms, latest design Standards in accordance to latest NBC guidelines, Indian Standards, statutory compliances and according to the Employer's requirement all in coordination with Architectural and Civil works and all Mechanical, Electrical and PHE services. Detailed coordinated Construction drawings (Plan and Sectional drawing) shall be submitted to Employer's approval before construction along with necessary and relevant Technical submissions.
 - The Submission of Detailed drawings shall however not relieve Package 4 Design and Built Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc;
 - All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace level in coordination with Architectural and Civil Works.

SCALE - 1:100

NO.	DATE	BY



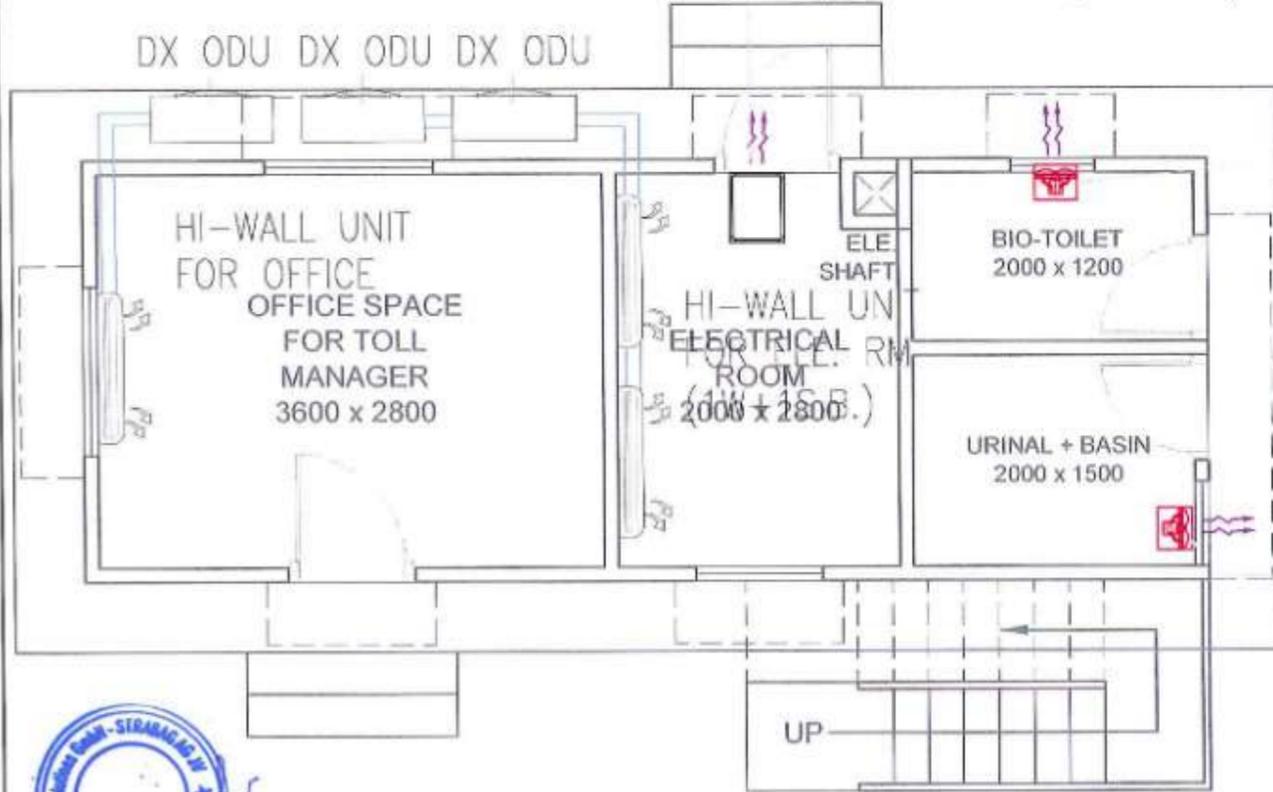
PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



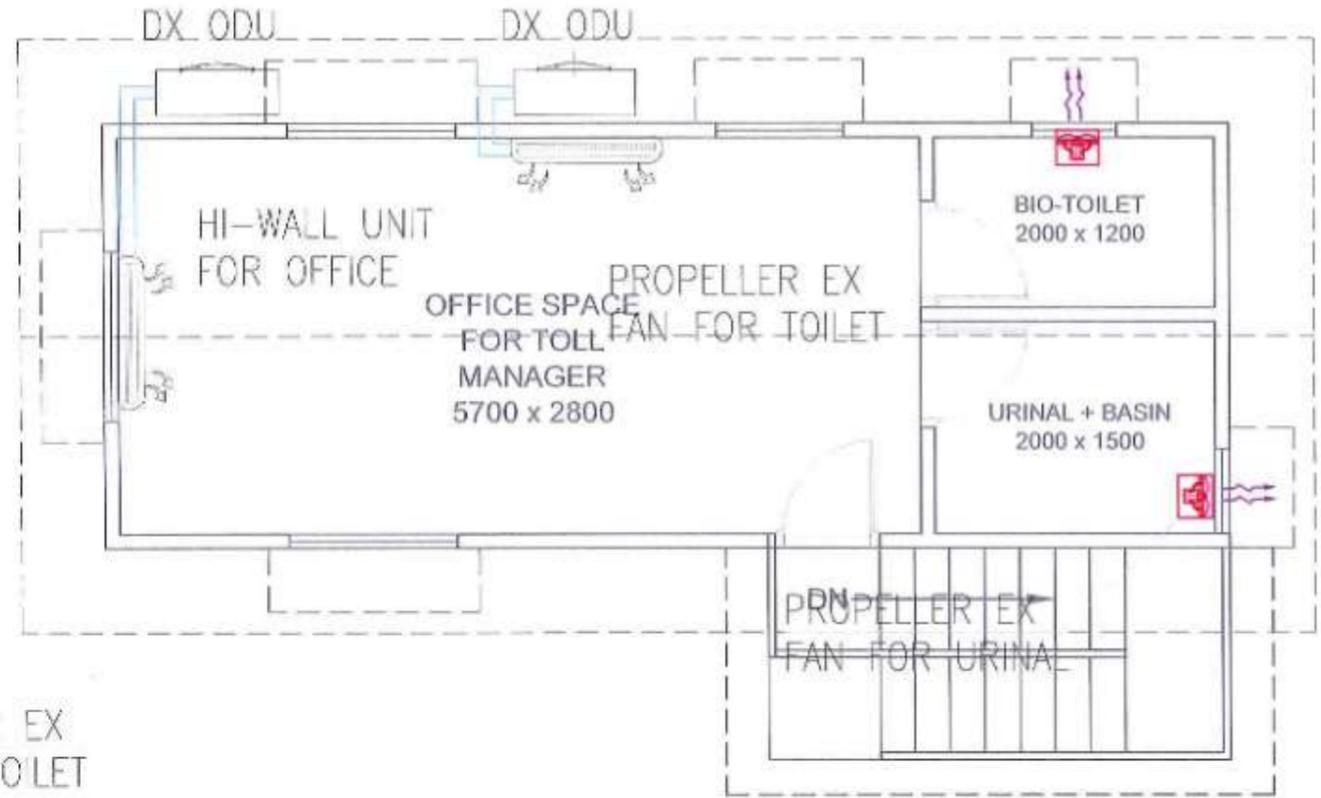
TITLE - FIRST FLOOR PLAN HVAC LAYOUT OF ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR INTERCHANGE		
DATE - 10.04.2021	DRAWING NO. - P4 - HVAC - 013	PAPER SIZE - 0



CABINET EXHAUST FAN FOR BATTERY EX
 1#FLAME PROOF
 1#FIRE RATED (1W+1S.B)



GROUND FLOOR PLAN



FIRST FLOOR PLAN

- NOTES :
1. All dimensions are in mm and are indicative. The dimensions are to be read and not scaled or measured from the drawings.
 2. This drawing is indicative and meant for the purposes of illustration and reference. Further detailed design, sizing, routing, selection of material of construction (MOC), supply, laying, testing and commissioning complete shall be in accordance to appropriate Indian Standards and codes as defined in latest national building code (NBC 2016) and in coordination with Civil and Architectural designs, employer's requirements and further site specific detailing shall be completed in a detailed engineering manner by the design and built contractor for site specific use and operability. This includes coordination with all other design guides, specifications, standards and any relevant regulatory / statutory approval requirements.
 3. The Size, type, MOC and accessories of the various pipes shown in the drawing are minimum requirements and the Package 4 Design and Built Contractor shall be responsible to verify and implement strictly as per appropriate IS codes and NBC 2015 or latest guidelines.
 4. Drawings have been optimized for colour printing. This drawing shall not be referred for Structural details.
 5. The Package 4 Design & Build Contractor shall propose the plumbing work design philosophy as per latest NBC guidelines as specified in Client's requirements / Technical Specifications and same shall be mandatory.
 6. Package 4 Design and Built Contractor shall detailed all necessary calculations, verify the requirements as per the Statutory Norms, latest design Standards in accordance to latest NBC guidelines, Indian Standards, statutory compliances and according to the Employer's requirement all in coordination with Architectural and Civil works and all Mechanical, Electrical and PHE services. Detailed coordinated Construction drawings (Plan and Sectional drawing) shall be submitted to Employer's approval before construction along with necessary and relevant Technical submissions.
 7. The Submission of Detailed drawings shall however not relieve Package 4 Design and Built Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc;
 8. All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace level in coordination with Architectural and Civil Works.



SCALE : 1:75

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PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :-			
TYPICAL HVAC LAYOUT OF PORTA CABINS AT GAVHAN			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - HVAC - 014	A3	0

PIPING & FIXTURES				DUCTWORK & FITTINGS				EQUIPMENT & ABBREVIATIONS				CONTROLS			
-	→	FLOW DIRECTION	TD	TEMPERATURE GAUGE	-	○	CIRCULAR DUCTWORK	FD	FLAP	○	THERMISTE	○	THERMISTE		
-	→	PIPE SLOPE	FRV	PRESSURE SAFETY VALVE	-	□	RECTANGULAR DUCTWORK	SD	SOLEY	---	CONTROL WIRING	○	INDICATOR LIGHT		
TA	→	PIPE TURNED UP TA	-	BACKFLOW PREVENTER ASSEMBLY	-	○	CIRCULAR DUCT RISER	ED	EXHAUST FAN	○	ACROSS/UP/ DOWN/COMMON SYSTEM	○	ACROSS/UP/ DOWN/COMMON SYSTEM		
TB	→	PIPE TURNED DOWN TB	-	ORFEEV CONNECTION	-	○	CIRCULAR DUCT DESPHER	ED	SUPPLY AIR FAN	○	DETAIL REF. NO. REFERENCE DRAWING	○	DETAIL REF. NO. REFERENCE DRAWING		
	→	PIPE CAPED	SH	SHROUDED	-	□	RECTANGULAR DUCT RISER	ED	FAN HEATER	○	DETAIL REF. NO. REFERENCE DRAWING	○	DETAIL REF. NO. REFERENCE DRAWING		
	→	PIPE COOTHED	-	NON-FRAME HEATER	-	□	RECTANGULAR DUCT DOWNER	ED	EXPANSION VESSEL	○	DETAIL REF. NO. REFERENCE DRAWING	○	DETAIL REF. NO. REFERENCE DRAWING		
	→	PIPE AT LOW LEVEL EXPOSED	FDC	FREEDOM TO BE CONNECTION	-	□	FLEXIBLE DUCT CONNECTION	ED	ELECTRIC WATER HEATER	○	CONTROL DEVICE INDEPENDENT OF BMS	○	CONTROL DEVICE INDEPENDENT OF BMS		
	→	PIPE AT HIGH LEVEL	-	PRESSURE SAFETY RELIEF VALVE DOWN TO FLOOR	-	□	FLEXIBLE CONNECTION - CIRCULAR	ED	HOT WATER CYLINDER (CUMULATIVE)	○	SMOKE DETECTION	○	SMOKE DETECTION		
	→	PIPE AT HIGH LEVEL	-	PRESSURE SAFETY RELIEF VALVE DOWN TO FLOOR	-	□	TRANSITION PIECE	ED	SUPPLY AIR DIFFUSER	○	FIRE STAT	○	FIRE STAT		
	→	PIPE AT HIGH LEVEL	-	PRESSURE SAFETY RELIEF VALVE DOWN TO FLOOR	-	□	TRANSITION FROM RECTANGULAR TO CIRCULAR	ED	RETURN AIR GRILLE	○	DIFFERENTIAL PRESSURE SWITCH	○	DIFFERENTIAL PRESSURE SWITCH		
CWS	→	COLD WATER SUPPLY	-	ADJUSTABLE SHUT OFF COMPLETE HIGH PRESSURE REDUCING VALVE, CHECK VALVE, CHECK VALVE STRAINER & PRESSURE GAUGE	-	□	SET UP	ED	EXTRACT GRILLE	○	PRESSURE SENSOR	○	PRESSURE SENSOR		
MWS	→	MIXED WATER SUPPLY	-	VALVE/FAULT	-	□	SET DOWN	ED	AR CONDITIONING UNIT (CEILING CASSETTE TYPE)	○	DIFFERENTIAL PRESSURE SENSOR	○	DIFFERENTIAL PRESSURE SENSOR		
HWS	→	HOT WATER SUPPLY	-	FLOOR/VALVE	-	□	SOUS BOND (100.10)	ED	OUTDOOR CONDENSING UNIT	○	PRESSURE INDICATOR GAUGE	○	PRESSURE INDICATOR GAUGE		
HWTR	→	HOT WATER RETURN	-	FLOOR/VALVE	-	□	ROUND BOND WITH TURNING VALVE	ED	COMPLEX ROOM AIR HANDLING UNIT (DUAL WARE)	○	PRESSURE SAFETY VALVE	○	PRESSURE SAFETY VALVE		
HW	→	HANDLING WATER	HC	ORIFICE	-	□	JUNCTION BOX/ACCESSORILY J.BOX	ED	COMPLEX ROOM AIR CONDITIONING UNIT (DO)	○	PRESSURE RELIEF VALVE	○	PRESSURE RELIEF VALVE		
CHWS	→	CHILLED WATER SUPPLY	HC	RYL/REGULATOR	YD	□	VOLUME CONTROL DAMPER	ED	AR HANDLING UNIT	○	HARDNESS MONITOR	○	HARDNESS MONITOR		
CHWR	→	CHILLED WATER RETURN	YR	VEE DRAINAGE	YD	□	REVERSE DAMPER	ED	FEED & EXPANSION UNIT	○	TEMPERATURE SENSORS	○	TEMPERATURE SENSORS		
COND	→	CONDENSATE WATER	-	FILTER/FEED	ED	□	BACK DRAFT DAMPER	ED		○	LEAKY SENSOR (AVERAGING)	○	LEAKY SENSOR (AVERAGING)		
V	→	VENT PIPE/EXHAUST	-	WATER TAP/FAULT/CL/CO/VALVE	TD	□	FIRE DAMPER	ED	COOLING COIL	○	VARIABLE SPEED DRIVE	○	VARIABLE SPEED DRIVE		
F	→	FRESH AIR	-	THERMOSTATIC DAMPER	NDPC	□	FIRE & SMOKE DAMPER	-	WATER GYRE/VALVE/FLASK OPERATING VALVE	○	LOW & HIGH LEVEL SENSORS	○	LOW & HIGH LEVEL SENSORS		
FD	→	FRESH AIR	-	FRESH AIR/FAULT	AF	□	ACCESS PANEL	-	SEALED PANEL FRESH AIR	○	CONDUCTIVITY SENSOR	○	CONDUCTIVITY SENSOR		
D	→	DRAINAGE	-	AIR/FAULT	FD	□	FLOOR VULNERATED SUPPLY AIR GRILLE	-	FRESH AIR FRESH AIR	○	CONTROL DAMPER	○	CONTROL DAMPER		
OD	→	OUTDOOR AIR	-	CHEMICAL RESISTANT	OD	□	SUPPLY AIR DIFFUSER RECTANGULAR		ABBREVIATIONS						
S	→	SPRING LINE	-	COOLING COIL/FAULT/WHOLE/FAULT/FAULT	SD	□	SUPPLY AIR DIFFUSER CIRCULAR	HL/L	HL/L	○	HIGH LEVEL / LOW LEVEL	○	HIGH LEVEL / LOW LEVEL		
R	→	RETURN AIR/FAULT	-	ALARM/RESISTANCE	RA	□	SUPPLY AIR GRILLE - SIDE WALL	TA	TA	○	FROM ABOVE	○	COMMON ALARM		
	→	FLAME PIPE CONNECTION	-	PRESSURE REGULATOR	RD	□	NEAR DEFUSED - SUPPLY/EXTRACT DURING INCALCIED	TA	TA	○	TO ABOVE	○	MAN/OFF/AUTO		
	→	PIPE/VALVE	TD	FLOOR/VALVE	-	□	SLASH LINE/EXTRACT	TB	TB	○	TO BELOW	○	ENABLE ON/OFF		
FC	→	FRESH AIR	-	GAUGE/VALVE	ED/FC	□	EXTRACT/RETURN AIR GRILLE	FAB	FAB	○	FROM ABOVE TO BELOW	○	OPERATING COMMAND SIGNAL		
AF	→	AIR/FAULT	-	WATER/VALVE	ED/FC	□	EXTRACT/RETURN AIR GRILLE - SIDE WALL	FDBA	FDBA	○	FROM BELOW TO ABOVE	○	SPEED STATUS (FEEDBACK)		
STR	→	STRAINER	-	FLOOR/VALVE/FAULT	TC	□	TRANSFER GRILLE	DBL	DBL	○	DROP TO LOW LEVEL	○	FLOW METER		
IV	→	ISOLATION VALVE BUTTERFLY/FAULT/VALVE	-	RUBBER SPRING LOADED VALVE	ATT	□	200% LEAKAGE OF 20mm	EDP	EDP	○	BOTTOM OF PIPE	○	SM FAN SMOKE		
REV	→	REVERSE VALVE	LSV	LOCK/SHUT/VALVE	ATH	□	ATEL/FAULT	HC/HD	HC/HD	○	NORMALLY CLOSED/NORMALLY OPEN	○	DISPENSER SMOKE		
DEL REV	→	DOUBLE CHECK VALVE	TGV	BORNE/STAT/VALVE/FAULT	IAC	□	AIR FLOW MEASURING STATION	SP	SP	○	SOIL PIPE	REFERENCE			
	→	SLAM SHUT VALVE	BRV	CONNECTION TO EST/VALVE/FAULT/VALVE		□	ELECTRIC AIR CURTAIN	WP	WP	○	WASTE PIPE	○	PROJECT NORTH REFERENCE w/TRUE NORTH REFERENCE		
	→	DRY/VALVE		SOLE/VALVE		□	EXTERNAL DRAIN	GL	GL	○	GROUND LEVEL	○	SECTION REF. REFERENCE DRAWING		
2PW	→	2PORT SOLE/VALVE	H	HOT/VALVE		□	RECTANGULAR JUNCTION BOX	FL	FL	○	FINISHED FLOOR LEVEL	○	DETAIL REF. NO. REFERENCE DRAWING		
3PW	→	3PORT SOLE/VALVE	HW	HOT/VALVE		□	CIRCULAR DUCT BREAK	SA/RA	SA/RA	○	SUPPLY AIR/RETURN AIR	○	DETAIL REF. NO. REFERENCE DRAWING		
	→	DUCK/VALVE	SLV	SLIDE/VALVE/FAULT/VALVE		□		SA	SA	○	EXHAUST AIR	○	DETAIL INDICATION		
	→	AUTOMATIC VALVE	AV	WELL/VALVE		□		TA	TA	○	FRESH AIR INTAKE	○	FOR CONTINUATION REFER TO Dwg No. 000000000		
PI	→	PRESSURE GAUGE	FLEX	FLEXIBLE CONNECTION		□		P	P	○	DIAMETER	○	CONSTRUCTION PHASE BOUNDARY		
								N/S	N/S	○	NOT TO SCALE	○	CONSTRUCTION PHASE BOUNDARY		
								PS	PS	○	PREHEATING AIR	○	CONSTRUCTION PHASE BOUNDARY		



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APPROVED BY	



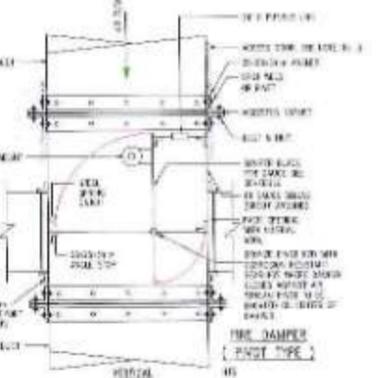
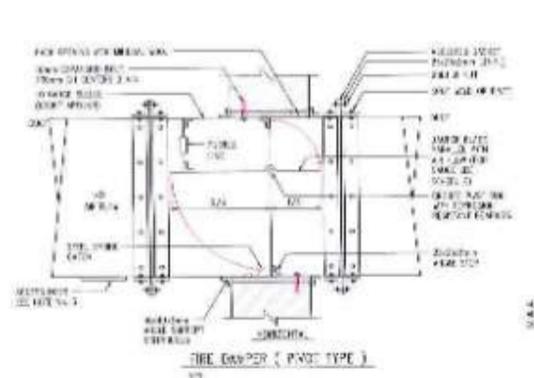
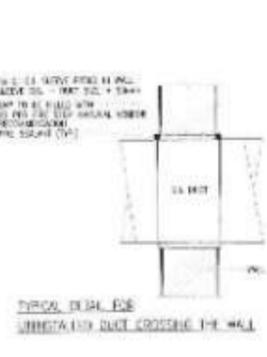
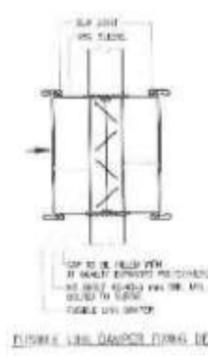
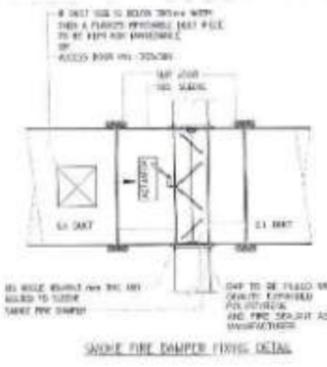
PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



TITLE :- LEGENDS AND SYMBOLS FOR HVAC SYSTEM			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - HVAC - 015	A1	0

NOTES

1. ALL DIMENSIONS SHOWN ARE IN MM, UNLESS NOTED OTHERWISE (U.N.O.).
2. DO NOT SCALE OFF THIS DRAWING. CHECK ALL DIMENSIONS ON SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS.
4. THE LOCATION AND SIZE OF THE MECHANICAL EQUIPMENTS ARE SHOWN FOR INDICATIVE PURPOSES ONLY.
5. APPROVALS / N.O.C.S TO BE OBTAINED FROM ALL CONCERNED AUTHORITIES AND SHALL INCLUDE FOR ALL SUCH WORKS WITH RESPECT TO THE DIVERSION / PROTECTION OF THE SERVICES DURING THE PERIOD OF CONSTRUCTION, TO THE SATISFACTION OF THE CONCERNED AUTHORITIES AND THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR SHOP DRAWINGS AS PER SITE MEASUREMENTS FOR APPROVAL PRIOR TO INSTALLATION, EXECUTION OR MANUFACTURING.

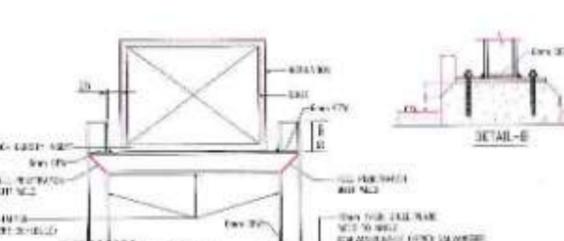
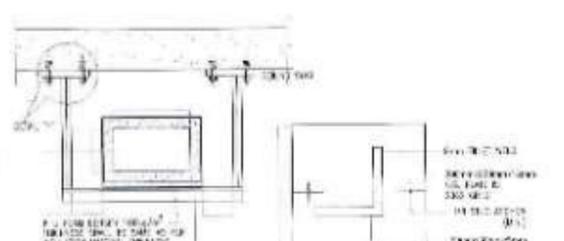
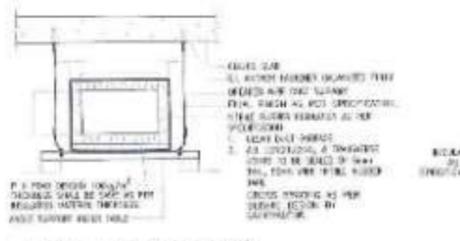
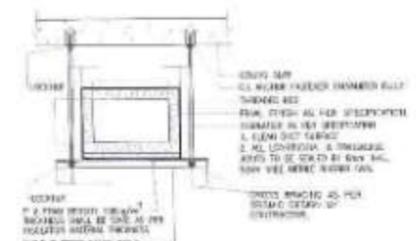
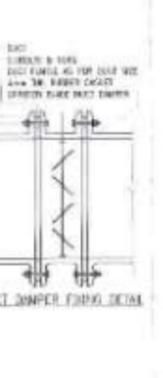


SCHEDULE OF DAMPER BLADES GASKETS

DUCT DIA. (mm)	DUCT WALL THICK. (mm)	DUCT FINISH
150	10	PLASTER
200	10	PLASTER
250	10	PLASTER
300	10	PLASTER
350	10	PLASTER
400	10	PLASTER
450	10	PLASTER
500	10	PLASTER

NOTES:

1. UNLESS SPECIFIED OTHERWISE, ALL DAMPER BLADES SHALL BE OF PAINT TYPE.
2. DAMPER BLADES SHALL BE OF 1.5mm MINIMUM THICKNESS.
3. DAMPER BLADES SHALL BE OF 1.5mm MINIMUM THICKNESS.
4. DAMPER BLADES SHALL BE OF 1.5mm MINIMUM THICKNESS.
5. DAMPER BLADES SHALL BE OF 1.5mm MINIMUM THICKNESS.



DUCT SUPPORTS (UP TO 2100mm) - CONVENTIONAL

DUCT DIA. (mm)	DUCT WALL THICK. (mm)	DUCT FINISH	SUPPORT DIA. (mm)	SUPPORT WALL THICK. (mm)	SUPPORT FINISH
150	10	PLASTER	25	10	PLASTER
200	10	PLASTER	30	10	PLASTER
250	10	PLASTER	35	10	PLASTER
300	10	PLASTER	40	10	PLASTER
350	10	PLASTER	45	10	PLASTER
400	10	PLASTER	50	10	PLASTER
450	10	PLASTER	55	10	PLASTER
500	10	PLASTER	60	10	PLASTER

DUCT SUPPORTS (UP TO 2100mm) - RIGID

DUCT DIA. (mm)	DUCT WALL THICK. (mm)	DUCT FINISH	SUPPORT DIA. (mm)	SUPPORT WALL THICK. (mm)	SUPPORT FINISH
150	10	PLASTER	25	10	PLASTER
200	10	PLASTER	30	10	PLASTER
250	10	PLASTER	35	10	PLASTER
300	10	PLASTER	40	10	PLASTER
350	10	PLASTER	45	10	PLASTER
400	10	PLASTER	50	10	PLASTER
450	10	PLASTER	55	10	PLASTER
500	10	PLASTER	60	10	PLASTER

DUCT SUPPORT FROM CHANGING

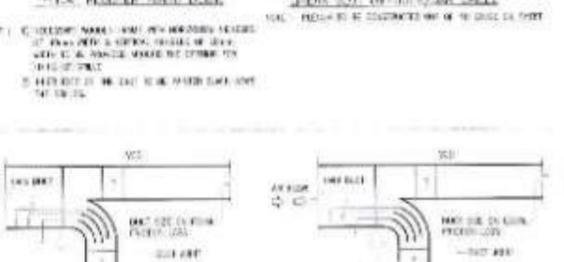
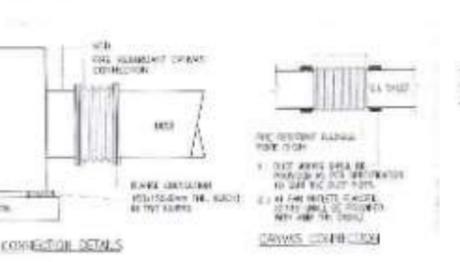
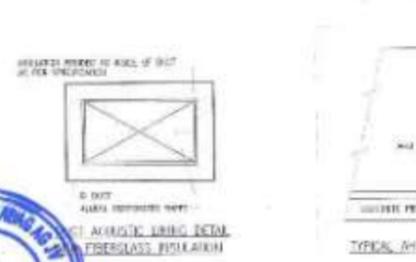
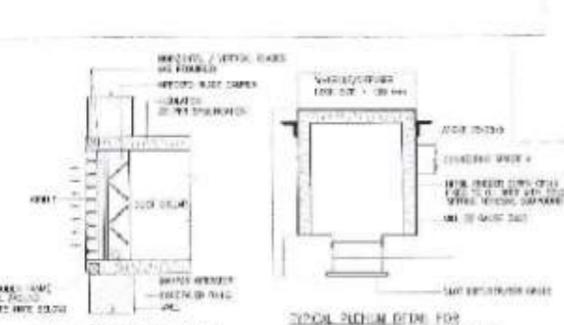
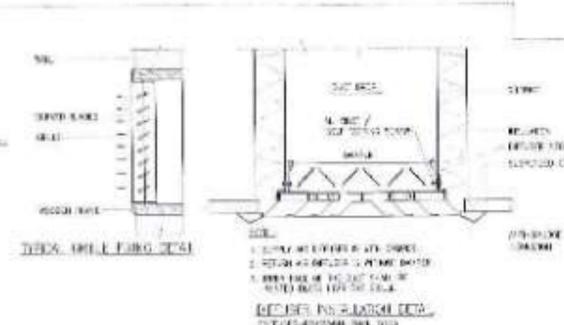
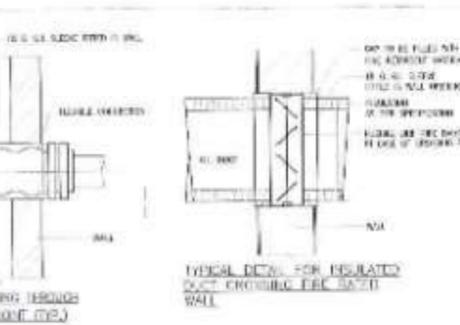
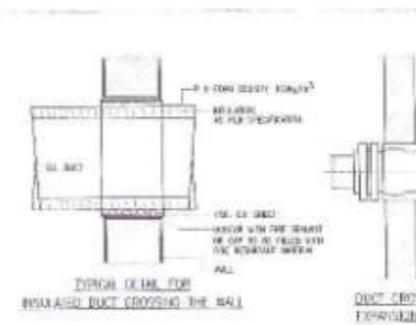
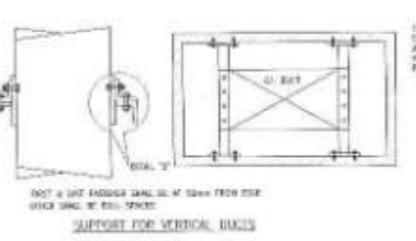
DUCT DIA. (mm)	DUCT WALL THICK. (mm)	DUCT FINISH	SUPPORT DIA. (mm)	SUPPORT WALL THICK. (mm)	SUPPORT FINISH
150	10	PLASTER	25	10	PLASTER
200	10	PLASTER	30	10	PLASTER
250	10	PLASTER	35	10	PLASTER
300	10	PLASTER	40	10	PLASTER
350	10	PLASTER	45	10	PLASTER
400	10	PLASTER	50	10	PLASTER
450	10	PLASTER	55	10	PLASTER
500	10	PLASTER	60	10	PLASTER

FLOOR MOUNTED DUCT SUPPORT DETAIL

DUCT DIA. (mm)	DUCT WALL THICK. (mm)	DUCT FINISH	SUPPORT DIA. (mm)	SUPPORT WALL THICK. (mm)	SUPPORT FINISH
150	10	PLASTER	25	10	PLASTER
200	10	PLASTER	30	10	PLASTER
250	10	PLASTER	35	10	PLASTER
300	10	PLASTER	40	10	PLASTER
350	10	PLASTER	45	10	PLASTER
400	10	PLASTER	50	10	PLASTER
450	10	PLASTER	55	10	PLASTER
500	10	PLASTER	60	10	PLASTER

DUCT SUPPORTS (UP TO 2100mm) - CONVENTIONAL

DUCT DIA. (mm)	DUCT WALL THICK. (mm)	DUCT FINISH	SUPPORT DIA. (mm)	SUPPORT WALL THICK. (mm)	SUPPORT FINISH
150	10	PLASTER	25	10	PLASTER
200	10	PLASTER	30	10	PLASTER
250	10	PLASTER	35	10	PLASTER
300	10	PLASTER	40	10	PLASTER
350	10	PLASTER	45	10	PLASTER
400	10	PLASTER	50	10	PLASTER
450	10	PLASTER	55	10	PLASTER
500	10	PLASTER	60	10	PLASTER



NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	

MMRDA
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - HVAC - 016	A1	0

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TITLE	DRAWING NOS.
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FIRE FIGHTING SCHEMATIC FOR MAIN ADMINISTRATION AND COMMAND CONTROL CENTER AT GAVHAN	P4 - FF - 003
FIRE FIGHTING SCHEMATIC FOR SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI	P4 - FF - 004
FIRE FIGHTING SCHEMATIC FOR ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR IC	P4 - FF - 005
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DRAWN BY CHECKED BY APPROVED BY	NAME	SIGN	 MMRDA MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY	PROJECT > MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH > 	TITLE > INDEX OF FIRE FIGHTING DRAWING			
	DATE	DRAWING NO.				PAPER SIZE	REV.		
	10.04.2021	P4 - FF - 001				A3	0		

LEGEND

SR. NO.	SYMBOL	DESCRIPTION
1		GATE VALVE
2		BALL VALVE
3		BUTTERFLY VALVE
4		NON RETURN VALVE/CHECK VALVE
5		1" STRAINER
6		FIRE HOSE CABINET
7		HYDRANT PUMP SPRINKLER PUMP JOCKEY PUMP BOOSTER PUMP
8		FIRST AID KIT
9		DOUBLE HYDRANT VALVE
10		SINGLE HYDRANT VALVE
11		DRAIN PLATE
12		FIRE HOSE CABINET
13		EXTERNAL FIRE HYDRANT CABINET
14		BUTTERFLY VALVE WITH TAPER SWITCH
15		FLOW SWITCH
16		PENDANT SPRINKLER
17		CONCEALED SPRINKLER
18		UPRIGHT SPRINKLER
19		SIDE WALL SPRINKLER
20		DRENCHER / WATER CURTAIN NOZZLE
21		DELUGE VALVE
22		4.5kg CO ₂ FIRE EXTINGUISHER
23		2kg DCP FIRE EXTINGUISHER
24		10kg DCP FIRE EXTINGUISHER
25		9 LITRE WATER TYPE FIRE EXTINGUISHER
26		FOAM TYPE FIRE EXTINGUISHER
27		SAND BUCKET
28		FIRE ACTION & EXIT STORAGE

LEGEND

SL. NO.	SYMBOL	DESCRIPTION
1.0		PIPING
1.1		FIRE HYDRANT LINE
1.2		SPRINKLER LINE
1.3		SPRINKLER DRAIN LINE
2.0		VALVES
2.1		GENERAL
2.1.1		GATE VALVE
2.1.2		BALL VALVE
2.1.3		CHECK VALVE
2.1.4		BUTTERFLY VALVE
2.1.5		NON RETURN VALVE/ CHECK VALVE
2.1.6		WATER MOTOR VALVE
2.1.7		FOAM WATER STRAINER
2.1.8		FOAM CONCENTRATE PUMP
2.1.9		CONCENTRIC REDUCER
2.1.10		ECCENTRIC REDUCER
2.2		CONTROL VALVES
2.2.1		BATTERY VALVE WITH WATER SWITCH
2.2.2		1 WAY MOTORIZED VALVE
2.2.3		1 WAY SOLENOID VALVE
2.2.4		PRESSURE RELIEF VALVE
2.2.5		SAFETY RELIEF VALVE
2.3		STRAINERS
2.3.1		1" STRAINER
2.3.2		NET STRAINER
2.3.3		REMOVABLE PIPE JOINT EXPANSION BELLOWS
2.4		PRESSURE CONTROLS
2.4.1		PRESSURE GAUGE
2.4.2		PRESSURE TRANSMITTER
2.4.3		LEVEL TRANSMITTER
2.4.4		DIFFERENTIAL PRESSURE SWITCH
2.4.5		PRESSURE SWITCH
2.5		FLOW CONTROLS
2.5.1		FLOW INDICATOR
2.5.2		FLOW TEST METER
2.5.3		FLOW SWITCH
2.5.4		LEVEL SWITCH
2.5.5		LEVEL GAUGE

GENERAL NOTES:

- ALL MATERIALS SHALL BE OF THE BEST QUALITY CONFORMING TO THE SPECIFICATIONS AND SUBJECT TO THE APPROVAL OF THE CONSULTANTS.
- PIPES SHALL BE FIXED IN A MANNER AS TO PROVIDE EASY ACCESSIBILITY FOR REPAIR & MAINTENANCE & SHALL NOT CAUSE OBSTRUCTION IN SHAFTS, PASSAGES ETC.
- PIPES SHALL BE SECURELY TIED TO WALLS & CEILING BY SUITABLE CLAMPS & SUPPORTS (GALVANISED) AFTER FABRICATION AT INTERVALS SPECIFIED. ONLY APPROVED TYPE OF ANCHOR FASTENERS SHALL BE USED FOR RCC SLABS & WALLS / FLOORS ETC.
- VALVES AND OTHER APPURTENANCES SHALL BE SO LOCATED THAT THEY ARE EASILY ACCESSIBLE FOR OPERATIONS, REPAIRS & MAINTENANCE.
- PIPES & FITTINGS SHALL BE FIXED TRULY VERTICAL, HORIZONTAL OR IN SLOPES AS REQUIRED IN A NEAT WORKMANLIKE MANNER.
- PIPE ACCESSORIES SUCH AS GAUGES, METERS, CONTROL DEVICES, ETC. SHALL HAVE THE SAME WORKING PRESSURE RATING AS THE ASSOCIATED PIPE WORK. ALL PIPE WORK SHALL BE FREE FROM BURRS, RUST & SCALE & SHALL BE CLEANED BEFORE INSTALLATION. ALL PERSONNEL ENGAGED ON WELDING OPERATIONS MUST POSSESS A CERTIFICATE OF COMPETENCE ISSUED BY AN ACCEPTABLE / RECOGNISED AUTHORITY.
- FIRE HOSE ROLL SHALL BE RATED FOR MIN. 10.5 BAR WORKING PRESSURE.
- ALL ISOLATING VALVES SHALL BE PROVIDED WITH "WATER PROOF" SWITCH (D & Y) & SHALL BE CONNECTED WITH RESPECTIVE FIRE ALARM PANELS WITH BMS INTERFACE.
- ALL SPRINKLERS SHALL BE QUICK RESPONSE (A) LISTED WITH PW APPROVAL.
- ALL FITTINGS, GAUGES, VALVES, SPRINKLER HEADS, PIPES ETC. SHALL BE SUITABLY RATED FOR WORKING PRESSURE STATED IN SPECIFICATION/REGULATION REQUIREMENTS.
- 1ST & 2ND FLOOR, CAR PARK SHALL BE SPRINKLER PROTECTED TO ORDINARY HAZARD GROUP-B.
- GUARD TO BE PROVIDED FOR SPRINKLERS IN CAR PARKING AREA.
- PIPING SHALL BE INSTALLED TRUE TO LEVEL ON SUITABLE CONCRETE FOUNDATION. BASE PLATE SHALL BE FIRMLY TIED BY PROPERLY GRouted FOUNDATION BOLTS, PUMPS AND MOTORS SHALL BE TRULY ALIGNED BY SUITABLE INSTRUMENTS.
- MINOR APPLIANCES SHALL BE INSTALLED IN EASILY ACCESSIBLE LOCATIONS WITH THE BRACKETING TO THE WALL BY SUITABLE AND/OR FASTENERS. EACH APPLIANCE SHALL BE PROVIDED WITH AN INSPECTION CARD INDICATING THE DATE OF INSPECTION, TESTING, CHANGE OF CHARGE & OTHER RELEVANT DATA. ALL APPLIANCES SHALL BE FIXED IN A TRUE WORKMANLIKE MANNER TRULY VERTICAL AND AT CORRECT LOCATIONS. DIRECTOR / INSTALLATION OF FIRE EXTINGUISHER TO BE IN ACCORDANCE TO IS 2196.

NOTES:

- ALL PIPES AS PER IS 1238 HEAVY GRADE FOR PIPES OF SIZE 150 MM DIA & BELOW SUITABLY LAGGED ON THE OUTSIDE TO PREVENT SOIL CORROSION. IF PIPES BURIED BELOW GROUND SHALL ALSO BE SUITABLY LAGGED WITH 2 LAYERS OF 60 MICRON POLYETHYLENE SHEET OVER 2 COATS OF BITUMEN.
- PIPE LINES UP TO 150 MM DIA SHALL BE AS PER IS 1235 PART-I HEAVY GRADE WHILE PIPE LINES ABOVE 150 MM DIA SHALL BE AS PER IS 1232.
- ALL PIPE CLAMPS AND SUPPORTS SHALL BE FABRICATED FROM MS STEEL SECTIONS & SHALL BE FACTORY GALVANISED BEFORE USE AT SITE. WELDING OF GALVANISED CLAMPS & SUPPORTS SHALL NOT BE PERMITTED.
- FLANGED JOINTS SHALL BE USED FOR CONNECTIONS FOR VESSELS, EQUIPMENT, FLANGED VALVES & ALSO ON TWO STRAIGHT LENGTHS OF PIPE LINES OF STATED LENGTH TO FACILITATE ERECTION & SUBSEQUENT MAINTENANCE WORK.
- FOR PIPES UNDER GROUND INSTALLATION THE PIPES SHALL BE BURIED AT LEAST ONE METER BELOW GROUND LEVEL AND SHALL HAVE 230 MM X 230 MM MASONRY OR CONCRETE SUPPORTS AT LEAST 300 MM HIGH AT 3M INTERVALS. MASONRY WORK TO HAVE PLAIN CEMENT CONCRETE FOUNDATION (1 CEMENT : 4 COARSE SAND : 5 STONE AGGREGATE) OF SIZE 300MM X 300MM THICK RESTING ON FIRM SOIL.
- DUCTILE IRON / CAST IRON / FORGED STEEL SCREWED TYPE FITTINGS SHALL BE USED FOR PIPES OF 60MM DIA & BELOW. FABRICATED FITTINGS SHALL NOT BE PERMITTED FOR PIPES DIAMETERS 60MM & BELOW.

INSTALLATION:

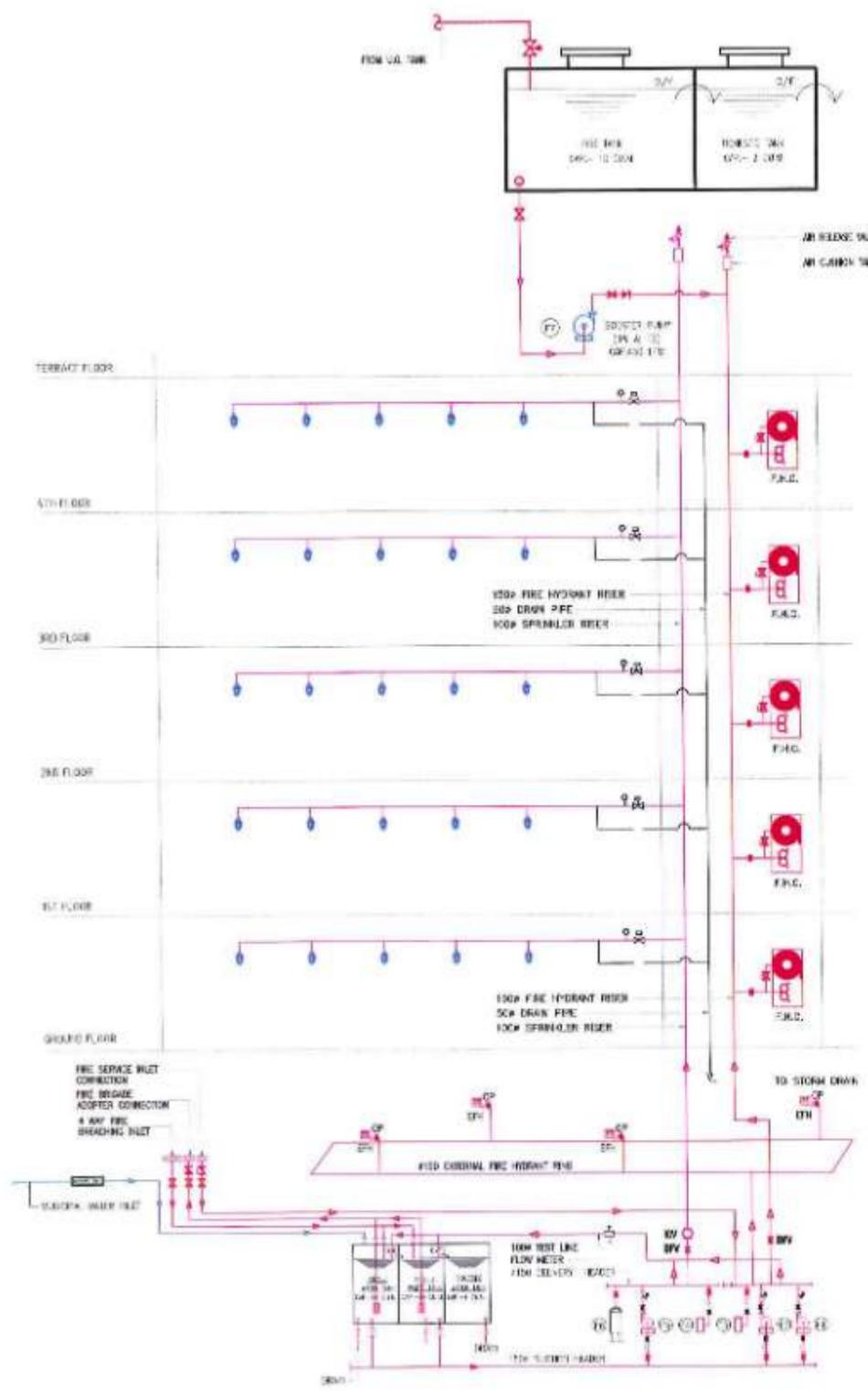
- PIPE WORK & FITTINGS SHALL BE SUPPORTED BY HANGERS OR BRACKETS SO AS TO PERMIT FREE EXPANSION & CONTRACTION. RISERS SHALL BE SUPPORTED AT EACH FLOOR WITH GALVANISED STEEL CLAMPS. TO PERMIT FREE MOVEMENT OF COMMON PIPING SUPPORT SHALL BE FROM A COMMON HANGER BAR FABRICATED FROM GALVANISED STEEL SECTIONS.

SPRINKLER PIPE SCHEDULE						PIPING INSTALLATION SUPPORT (WALL)	
FOR STEEL & Q.T. PIPE	FOR COPPER PIPE	FOR STEEL PIPE	FOR COPPER PIPE	FOR CS / COPPER PIPING ONLY	FOR CS / COPPER PIPING ONLY	FOR CS / COPPER PIPING ONLY	FOR CS / COPPER PIPING ONLY
PIPE DIA (mm)	PIPE DIA (mm)	PIPE DIA (mm)	PIPE DIA (mm)	PIPE DIA (mm)	PIPE DIA (mm)	PIPE DIA (mm)	PIPE DIA (mm)
25	1"	25	1"	25	25	25	25
32	1 1/8"	32	1 1/8"	32	32	32	32
40	1 1/2"	40	1 1/2"	40	40	40	40
50	2"	50	2"	50	50	50	50
75	3"	75	3"	75	75	75	75
100	4"	100	4"	100	100	100	100
125	5"	125	5"	125	125	125	125
150	6"	150	6"	150	150	150	150
- ALL PIPE WORK SHALL BE CARRIED OUT IN A PROPER WORKMANLIKE MANNER CAUSING MINIMAL DISTURBANCE TO THE EXISTING SERVICES, BUILDINGS, ROADS & STRUCTURE. THE ENTIRE PIPING WORK SHALL BE ORGANIZED IN CONSULTATION WITH OTHER AGENCIES WORK, SO THAT AREA CAN BE CARRIED OUT IN ONE STRETCH.
- CUT-OUTS IN THE FLOOR SLAB FOR INSTALLING THE VARIOUS PIPES AREA ARE INDICATED IN THE DRAWINGS. CONTRACTOR SHALL CAREFULLY EXAMINE THE CUT-OUTS PROVIDED & CLEARLY POINT OUT WHEREVER THE CUT-OUTS SHOWN IN THE DRAWINGS, DO NOT MEET WITH THE REQUIREMENTS.
- PIPE SLEEVES, LARGER DIAMETER THAN PIPES, SHALL BE PROVIDED WHEREVER PIPES PASS THROUGH WALLS & SLAB 7 ANULAR SPACE FILLED WITH FIBREGLASS AND FINISHED WITH RETAINER RINGS.
- AUTOMATIC AIR VALVES SHALL BE PROVIDED AT ALL HIGH POINTS IN THE PIPING SYSTEM FOR VENTING. ALL VALVES SHALL BE OF 15MM PIPE SIZE & SHALL BE ASSOCIATED WITH AN EQUAL SIZE GATE VALVES. AUTOMATIC AIR VALVES SHALL BE PROVIDED ON HOT WATER RISERS.
- DISCHARGE FROM THE AIR VALVES SHALL BE PIPED THROUGH A PIPE TO THE NEAREST DRAIN OR SUMP. ALL PIPES SHALL BE PITCHED TOWARDS DRAIN POINTS.
- PRESSURE GAUGES SHALL BE PROVIDED AS SHOWN ON THE APPROVED DRAWINGS. GAGES SHALL BE TAKEN TO PROTECT PRESSURE GAUGES DURING PRESSURE TESTING.
- APPLICATION OF PRIMER - (PHOSPHATE / ZINC RICH PRIMER) IS TO BE APPLIED ON PIPES IMMEDIATELY AFTER CLEANING. THIS IS TO PREVENT ANY FURTHER ACCUMULATION OF RUST ON THE PIPE. THIS IS A GOLD APPLIED PRIMER & IS APPLIED BY BRUSH.
- FLANGED JOINTS WITH FLANGES CONFORMING TO IS 6962 SHALL BE PROVIDED ON STRAIGHT RUNS AT INTERVALS NOT EXCEEDING 25-30M ON PIPE LINES OF 50 MM DIA & ABOVE. FOR JOINING ALL TYPES OF VALVES, APPLIANCE, PUMPS, CONNECTIONS WITH OTHER TYPE OF PIPES, TO WATER TANKS AND OTHER PLACES NECESSARY & AS REQUIRED FOR GOOD ENGINEERING PRACTICE & AS INDICATED ON THE DRAWINGS. FLANGES SHALL BE WITH G BOLTS AND NUTS & 3MM INSERTION GASKET OF NATURAL RUBBER CONFORMING TO IS 11146 IS APPROVED TYPE OF DISMOUNTABLE UNIONS SHALL BE PROVIDED ON PIPE LINES OF 40 MM DIA AND SMALLER DIA. RELOCATIONS SIMILAR TO THOSE SPECIFIED FOR FLANGES.
- FOR INSTALLATION, REF. DRG. NO. _____ (TYPICAL INSTALLATION DETAILS FOR FIRE FIGHTING SYSTEM)



DRAWN BY	NAME	SIGN	PROJECT -	NORTH -	TITLE -		
CHECKED BY			MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING		NOTES AND LEGENDS FOR FIRE FIGHTING SYSTEM		
APPROVED BY				DATE		DRAWING NO.	PAPER SIZE
				10.04.2021	P4 - FF - 002	A3	0





LEGEND:

	FIRE HYDRANT PIPE
	SPRINKLER PIPE
	SPRINKLER DRAIN LINE
	PENDENT SPRINKLER
	BALL VALVE
	ISOLATION VALVE
	EXPANSION BELLOW
	Y STRAINER
	NR RELIEF VALVE
	BUTTERFLY VALVE WITH TEMPER SWITCH
	FLOW SWITCH
	PG- PRESSURE GAUGE
	EXTERNAL FIRE HYDRANT
	ORIFICE PLATE
	INSTALLATION CONTROL VALVE
	EXTERNAL FIRE HYDRANT CABINET
	INTERNAL FIRE HYDRANT CABINET

ABBREVIATION	DESCRIPTION	QTY.
F1	ELECTRICAL MAIN PUMP CAP.2280 LPM	1NO.
F2	FIRE HYDRANT PUMP CAP.2280 LPM	1NO.
F3	HYDRANT JOCKEY PUMP CAP.180 LPM	1NO.
F4	SPRINKLER JOCKEY PUMP CAP.180 LPM	1NO.
F5	FIRE SPRINKLER PUMP CAP.2280 LPM	1NO.
F6	PRESSURE VESSEL	1NO.
F7	BOOSTER PUMP CAP.450 LPM	1NO.

- NOTES:**
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 - The Size, type, MOC and accessories of the various pipes shown in the drawing are minimum requirements and the Package 4 Design and Built Contractor shall be responsible to verify and implement strictly as per appropriate IS codes and NBC 2016 or latest guidelines.
 - Drawings have been optimized for colour printing. This drawing shall not be referred for Structural details.
 - The Package 4 Design & Built Contractor shall propose the plumbing work design philosophy as per latest NBC guidelines as specified in Client's requirements / Technical Specifications and same shall be mandatory.
 - Package 4 Design and Built Contractor shall detailed all necessary calculations, verify the requirements as per the Statutory Norms, latest design Standards in accordance to latest NBC guidelines, Indian Standards, statutory compliances and according to the Employer's requirement all in coordination with Architectural and Civil works and all Mechanical, Electrical and PHE services. Detailed coordinated Construction drawings (Plan and Sectional drawing) shall be submitted to Employer's approval before construction along with necessary and relevant Technical submissions.
 - The Submission of Detailed drawings shall however not relieve Package 4 Design and Built Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc;
 - All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace Level in coordination with Architectural and Civil Works.



SCALE - 1:200

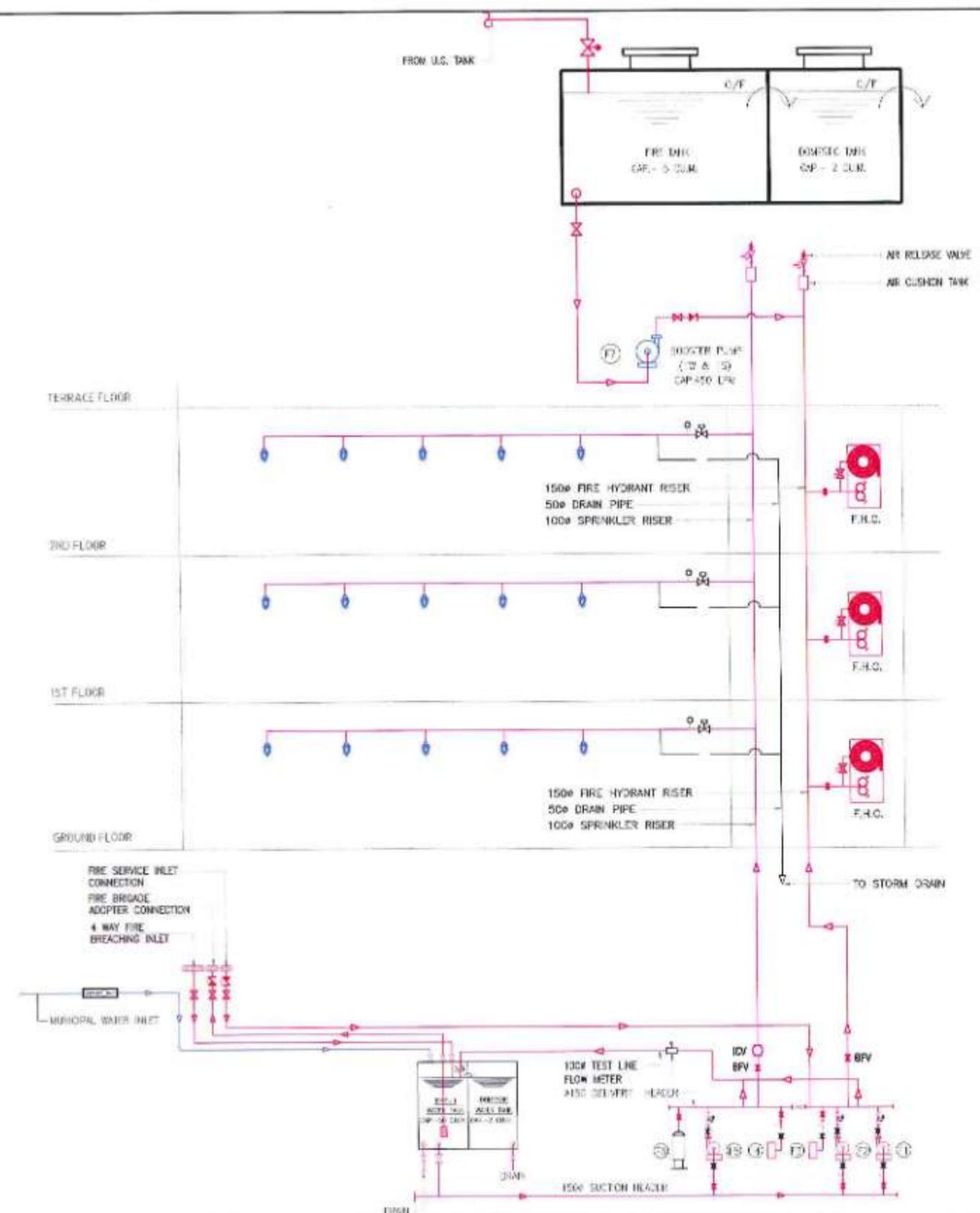
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CHECKED BY	
APPROVED BY	



PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE -> FIRE FIGHTING SCHEMATIC FOR MAIN ADMIN. AND COMMAND CONTROL CENTER AT GAVHAN			
DATE	CRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - FF - 003	A3	0



LEGEND:

	FIRE HYDRANT PIPE
	SPRINKLER PIPE
	SPRINKLER DRAIN LINE
	PENDENT SPRINKLER
	BALL VALVE
	ISOLATION VALVE
	EXPANSION BELLOW
	Y STRAINER
	NON RETURN VALVE
	AIR RELIEF VALVE
	BUTTERFLY VALVE WITH TEMPER SWITCH
	FLOW SWITCH
	PS- PRESSURE GAUGE
	EXTERNAL FIRE HYDRANT
	INTERNAL FIRE HYDRANT
	ORRICE PLATE
	INSTALLATION CONTROL VALVE
	EXTERNAL FIRE HYDRANT CABINET
	INTERNAL FIRE HYDRANT CABINET

ABBREVIATION	DESCRIPTION	QTY.
F1	ELECTRICAL MAIN PUMP CAP.2280 LPM	1NO.
F2	FIRE HYDRANT PUMP CAP.2280 LPM	1NO.
F3	HYDRANT JOCKEY PUMP CAP.180 LPM	1NO.
F4	SPRINKLER JOCKEY PUMP CAP.180 LPM	1NO.
F5	FIRE SPRINKLER PUMP CAP.2280 LPM	1NO.
F6	PRESSURE VESSEL	1NO.
F7	BOOSTER PUMP CAP.450 LPM	1NO.

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 - The Size, type, MOC and accessories of the various pipes shown in the drawing are minimum requirements and the Package 4 Design and Built Contractor shall be responsible to verify and implement strictly as per appropriate IS codes and NBC 2016 or latest guidelines.
 - Drawings have been optimized for colour printing. This drawing shall not be referred for structural details.
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 - The Submission of Detailed drawings shall however not relieve Package 4 Design and Build Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc;
 - All Civil Shafts shown (Locations and Size) in the drawings are indicative and may also be extended on other floors and terrace Level in coordination with Architectural and Civil Works.



SCALE - 1:150

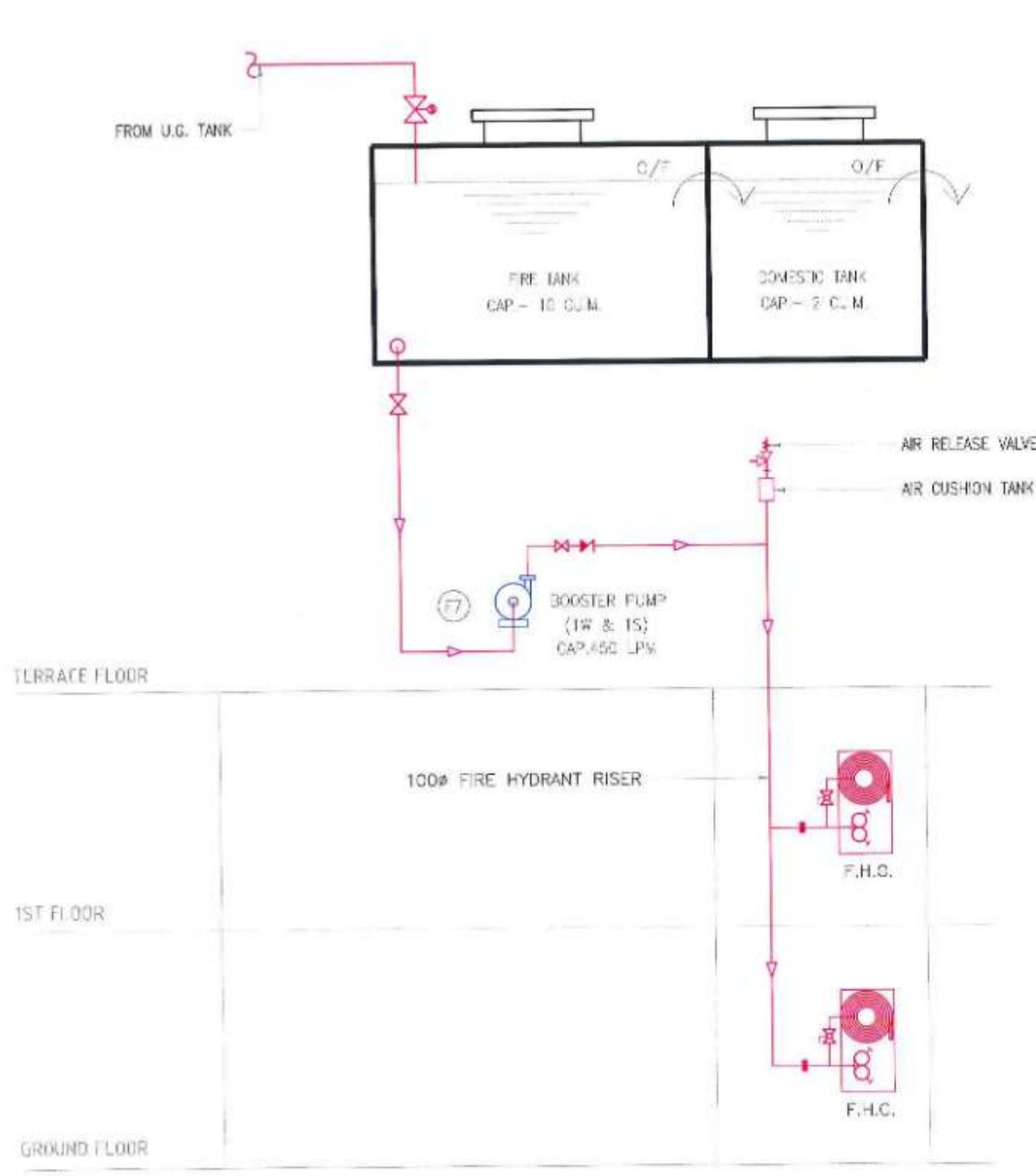
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PROJECT - MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - FIRE FIGHTING SCHEMATIC FOR SUB ADMINISTRATION AND COMMAND CONTROL CENTER AT SEWRI			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - FF - 004	A3	0



LEGEND:

	FIRE HYDRANT PIPE
	SPRINKLER PIPE
	SPRINKLER DRAIN LINE
	PENDENT SPRINKLER
	BALL VALVE
	ISOLATION VALVE
	EXPANSION BELLOW
	Y STRAINER
	NON RETURN VALVE
	AIR RELIEF VALVE
	BUTTERFLY VALVE WITH TEMPER SWITCH
	FLOW SWITCH
	PG- PRESSURE GAUGE
	EXTERNAL FIRE HYDRANT
	ORIFICE PLATE
	INSTALLATION CONTROL VALVE
	EXTERNAL FIRE HYDRANT CABINET
	INTERNAL FIRE HYDRANT CABINET

ABBREVIATION	DESCRIPTION	QTY.
F1	ELECTRICAL MAIN PUMP CAP.2280 LPM	1NO.
F2	FIRE HYDRANT PUMP CAP.2280 LPM	1NO.
F3	HYDRANT JOCKEY PUMP CAP.180 LPM	1NO.
F4	SPRINKLER JOCKEY PUMP CAP.180 LPM	1NO.
F5	FIRE SPRINKLER PUMP CAP.2280 LPM	1NO.
F6	PRESSURE VESSEL	1NO.
F7	BOOSTER PUMP CAP.450 LPM	1NO.

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SCALE - 1:100

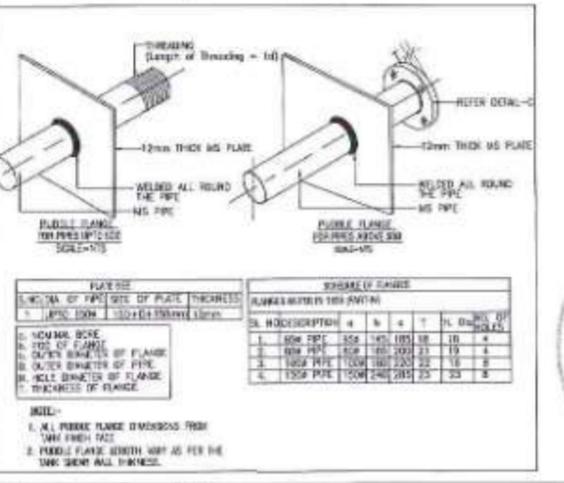
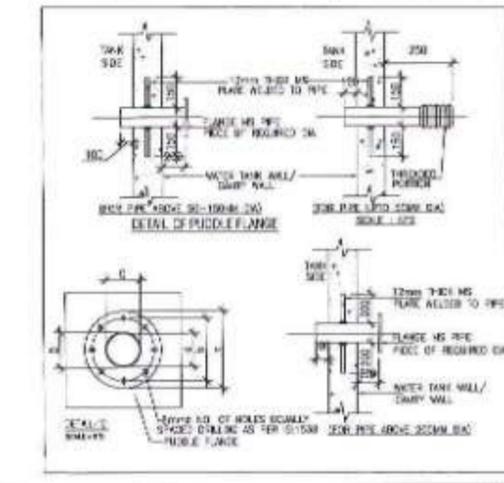
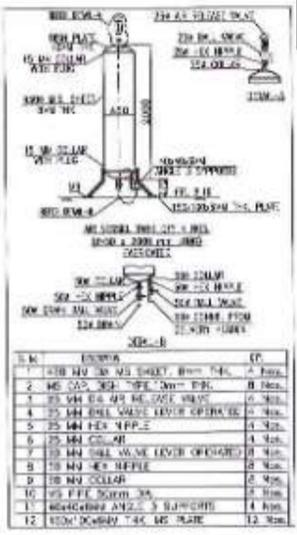
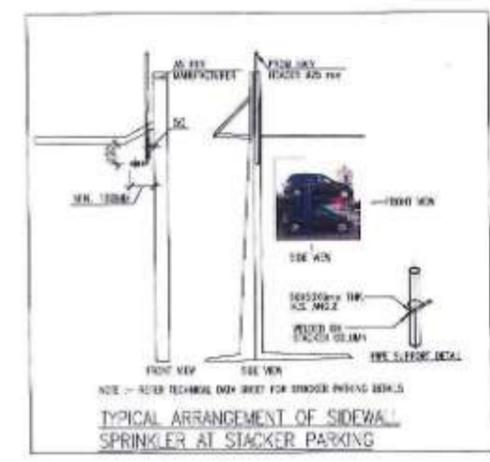
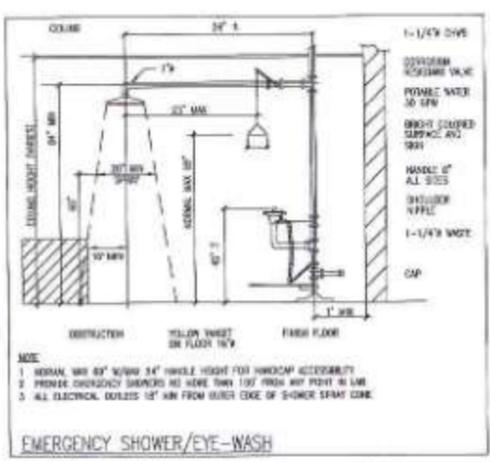
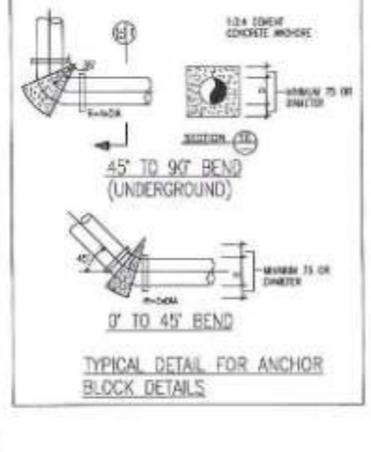
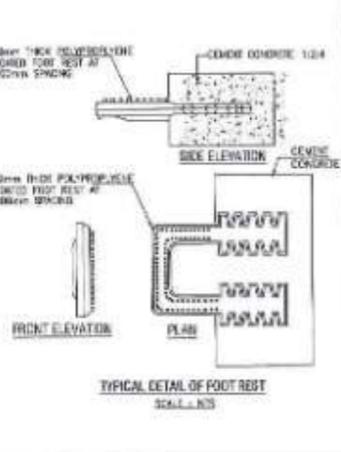
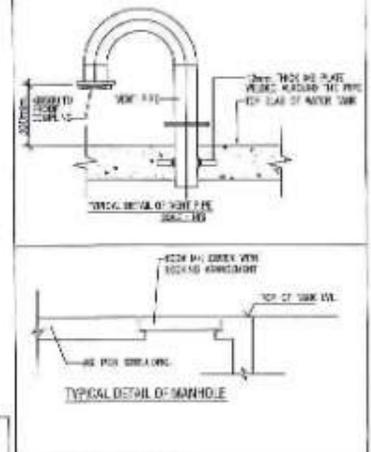
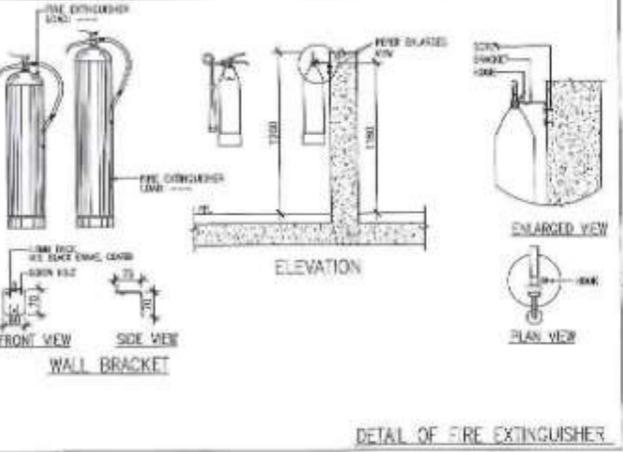
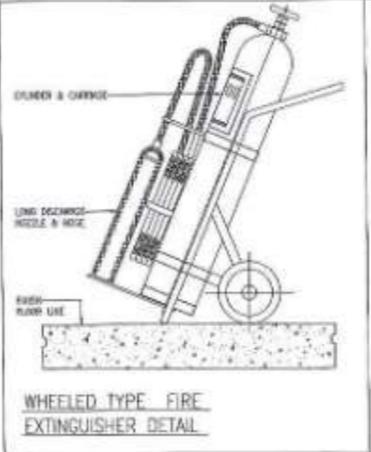
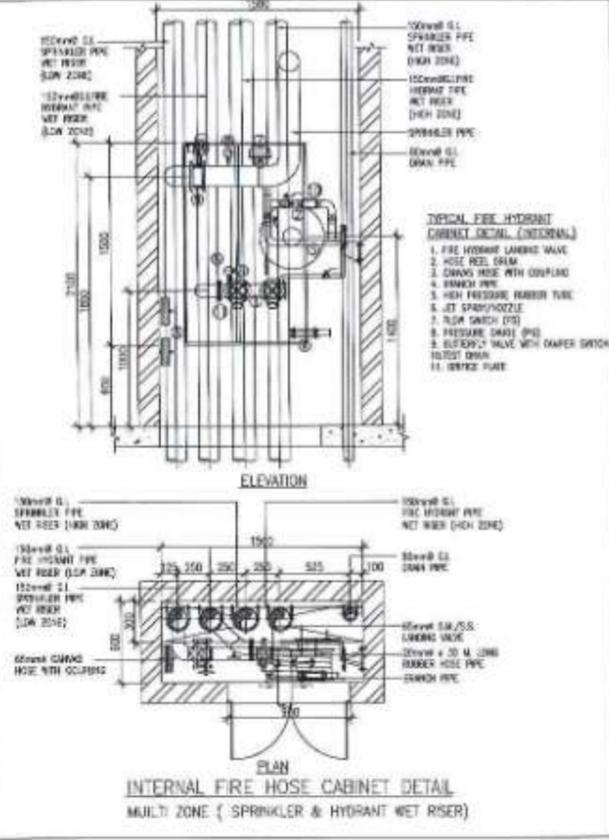
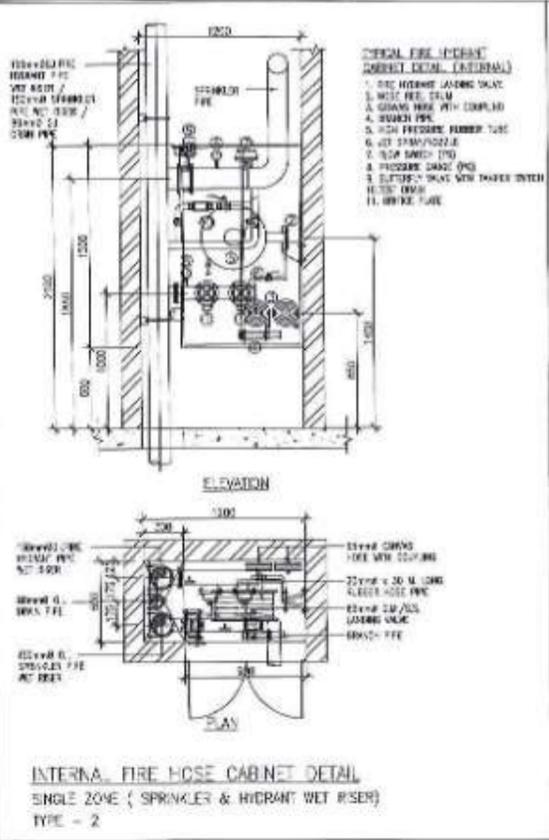
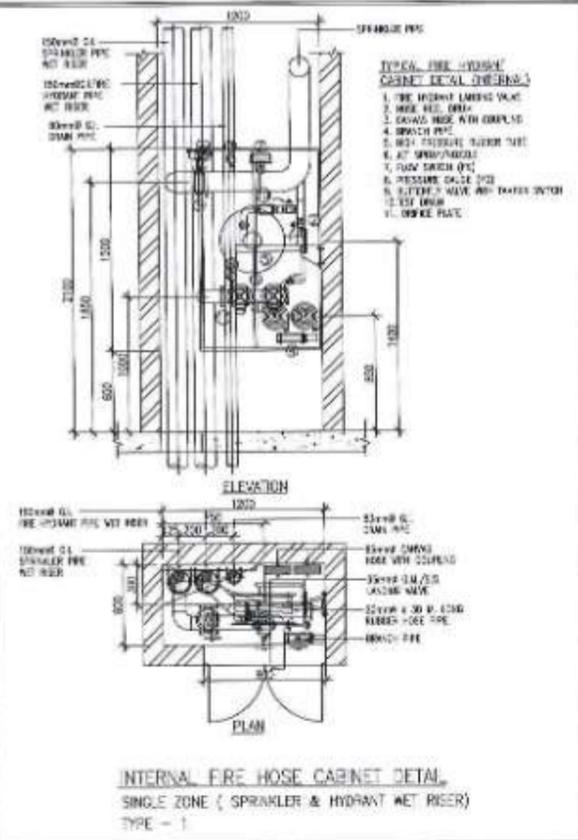
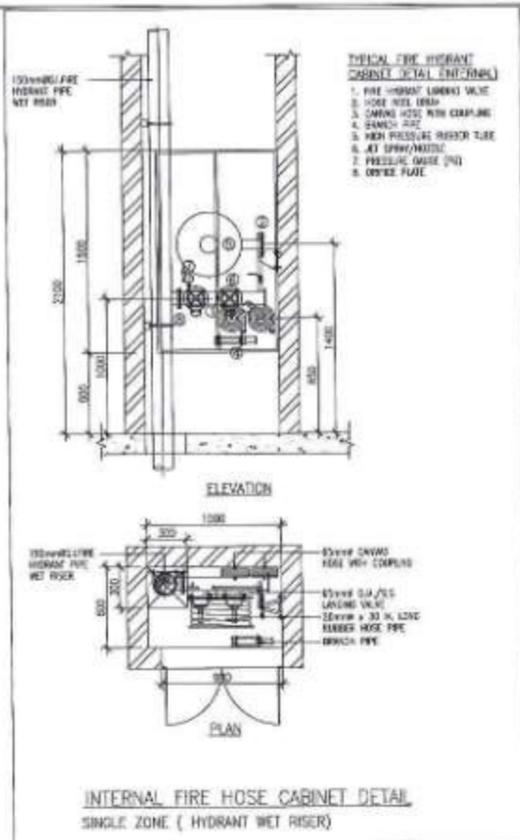
NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE :- FIRE FIGHTING SCHEMATIC FOR ADMINISTRATION AND COMMAND CONTROL CENTER AT SHIVAJINAGAR			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - FF - 005	A3	0



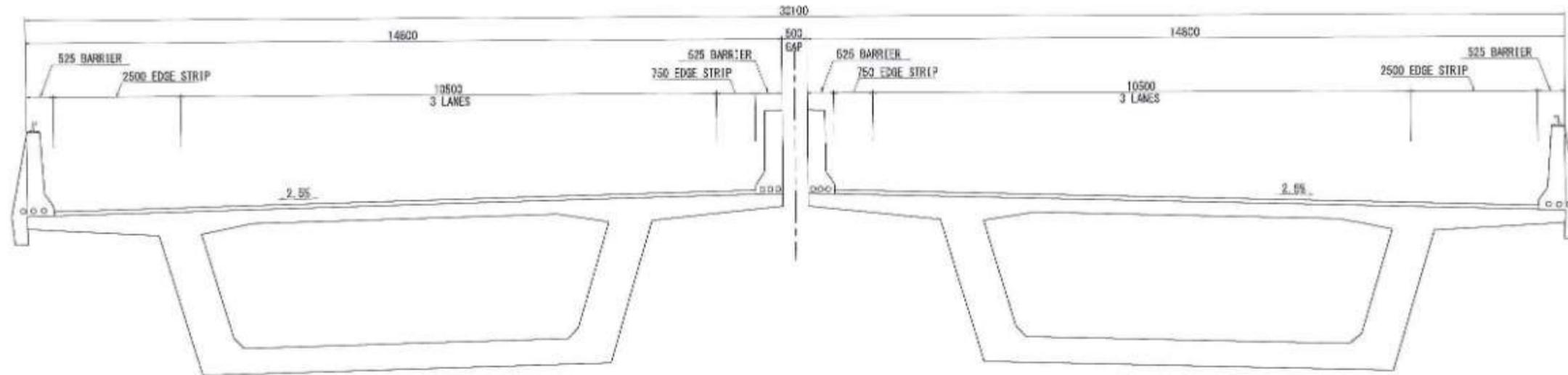
NAME	SIGN
DRAWN BY	
CHECKED BY	
APPROVED BY	



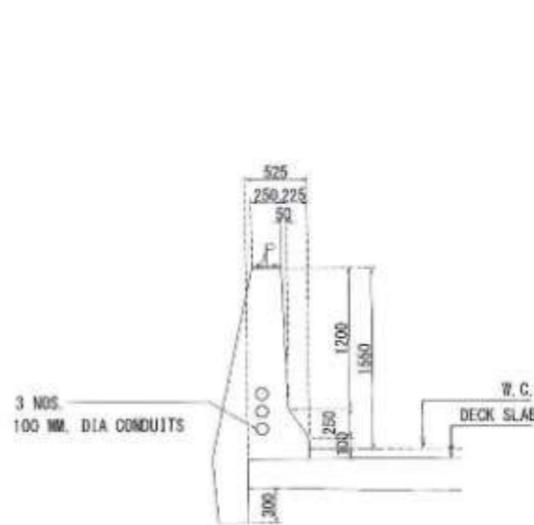
PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING

DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - FF - 008 (2 OF 2)	A1	0

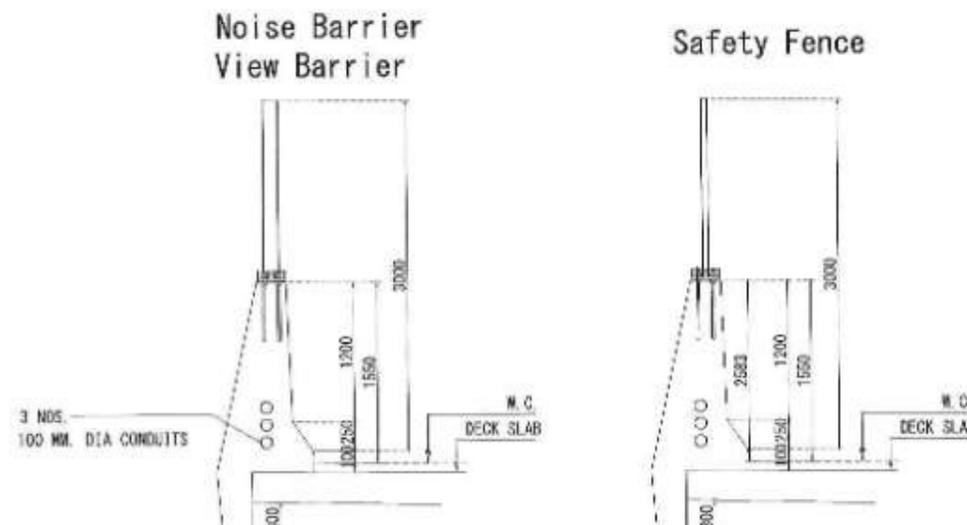
Detail of Noise Barrier, View Barrier, Safety Fence and Lighting Facility



Typical Cross Section of Superstructure of PC Box Girder Bridge s=1:30



Detail of Barrier s=1:30



Noise Barrier, View Barrier, Safety Fence s=1:30

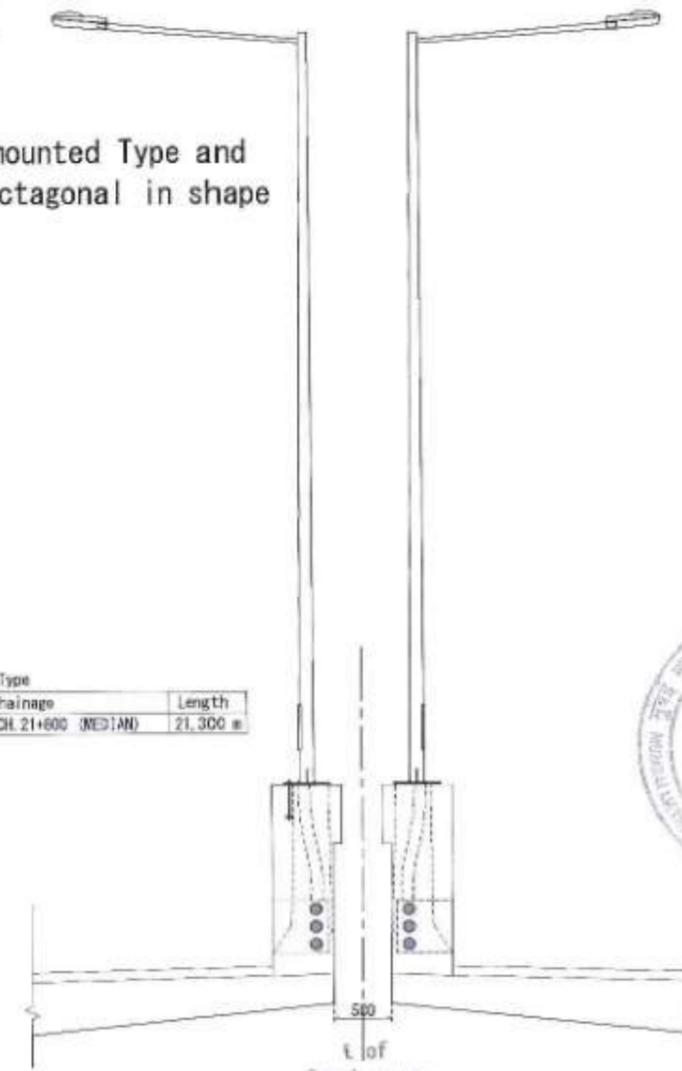
Noise Barrier	
Chainage	Length
CH. 0+500 to CH. 4+000 (North)	3,500m
CH. 0+500 to CH. 5+500 (South)	5,000m
CH. 16+880 to CH. 17+580 (Both)	1,200m

View Barrier	
Chainage	Length
CH. 4+000 to CH. 10+000 (North)	6,000m

Safety Fence	
Chainage	Length
CH. 5+500 to CH. 6+378 (South)	878m
CH. 8+720 to CH. 9+080 (South)	360m
CH. 13+138 to CH. 13+510 (Both)	744m
CH. 16+840 to CH. 16+890 (Both)	998m
CH. 18+087 to CH. 18+127 (Both)	80m
CH. 18+187 to CH. 18+217 (Both)	60m
CH. 18+317 to CH. 18+357 (Both)	80m
CH. 18+421.5 to CH. 18+491.5 (Both)	140m
CH. 18+574 to CH. 18+644 (Both)	140m
CH. 18+864 to CH. 18+929 (Both)	90m
CH. 20+225 to CH. 20+260 (Both)	70m
CH. 21+012 to CH. 21+379 (Both)	134m
CH. 21+532 to CH. 21+427 (Both)	390m
CH. 21+680 to CH. 21+730 (Both)	140m

Pole - mounted Type and Oval or Octagonal in shape

Pole-mounted Type	
Chainage	Length
CH. 0+500 to CH. 21+600 (MEDIAN)	21,300 m



note : drawings area tentative and shall not be used for estimation



The panel of Noise Barrier and View Barrier and the Safety Fence are referred in the outline specification

	NAME	SIGN	PROJECT :-	NORTH :-	TITLE :-	
DRAWN BY	PO		MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING		TYPICAL CROSS SECTION OF SUPERSTRUCTURE OF PC BOX GIRDER BRIDGE	
CHECKED BY	SHANU			DATE	DRAWING NO.	SHEET
APPROVED BY	TR			26.08.2021	B-049	REV.

MMRDA

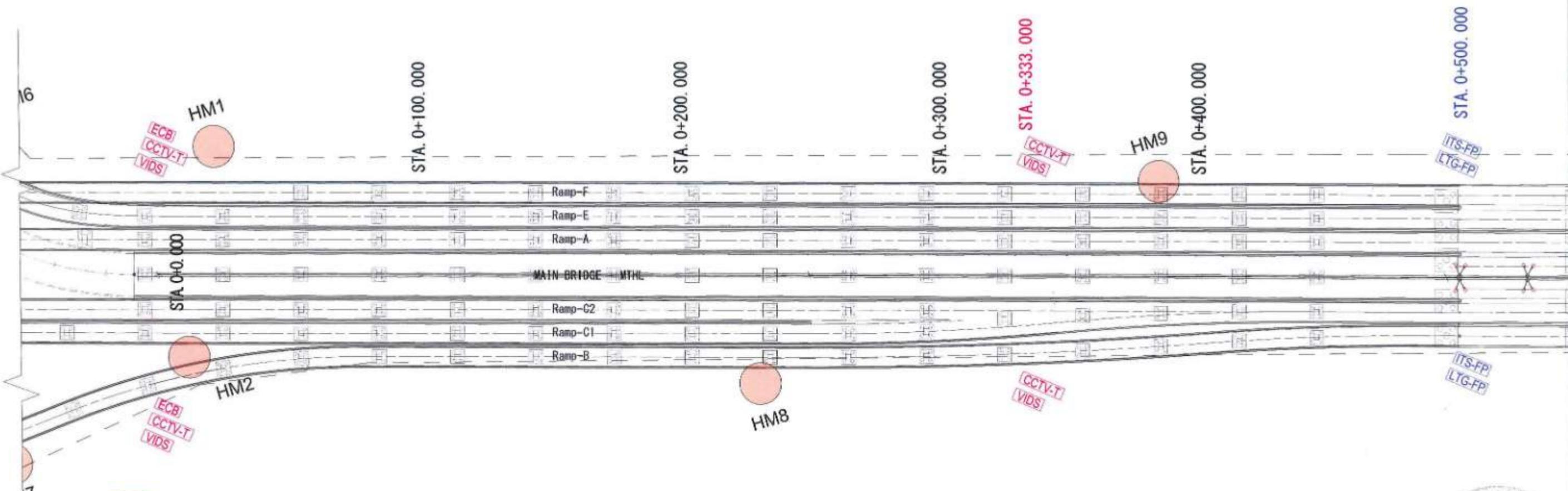
MUMBAI METROPOLITAN REGION
DEVELOPMENT AUTHORITY

INDEX OF DRAWINGS

TITLE	DRAWING NOS.
INDEX OF CO-ORDINATED DRAWINGS	P4 - CO - 001
COORDINATED DRAWING	
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICE ON THE BRIDGE 1 TO 44	P4 - CO - 102
GENERAL VIEW OF RAMP AT SEWRI IC FOR CO-ORDINATED SERVICE	P4 - CO - 103
GENERAL VIEW OF RAMP AT SHIVAJINAGAR IC FOR CO-ORDINATED SERVICE	P4 - CO - 104
GENERAL VIEW OF RAMP AT SH54 IC FOR CO-ORDINATED SERVICE	P4 - CO - 105
GENERAL VIEW OF RAMP AT CHIRLE IC FOR CO-ORDINATED SERVICE	P4 - CO - 106



DRAWN BY CHECKED BY APPROVED BY	NAME	IGN	 MMRDA MUMBAI METROPOLITAN REGIONAL DEVELOPMENT AUTHORITY	PROJECT :- MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING	NORTH :- 	TITLE :- INDEX OF CO-ORDINATED DRAWINGS		
	DATE	DRAWING NO.					PAPER SIZE	REV.
	10.04.2021	P4 - CO - 101					A3	0

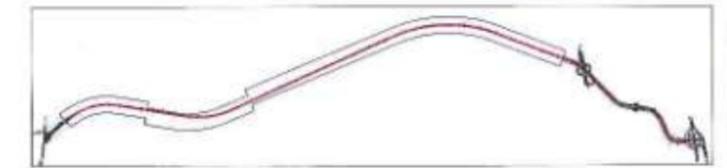


PLAN

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole]
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast]

- NOTES:
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 - The sectional details for Street Pole Lights shall be referred as per Drawing reference no. P4 - ELE - 004



KEY PLAN

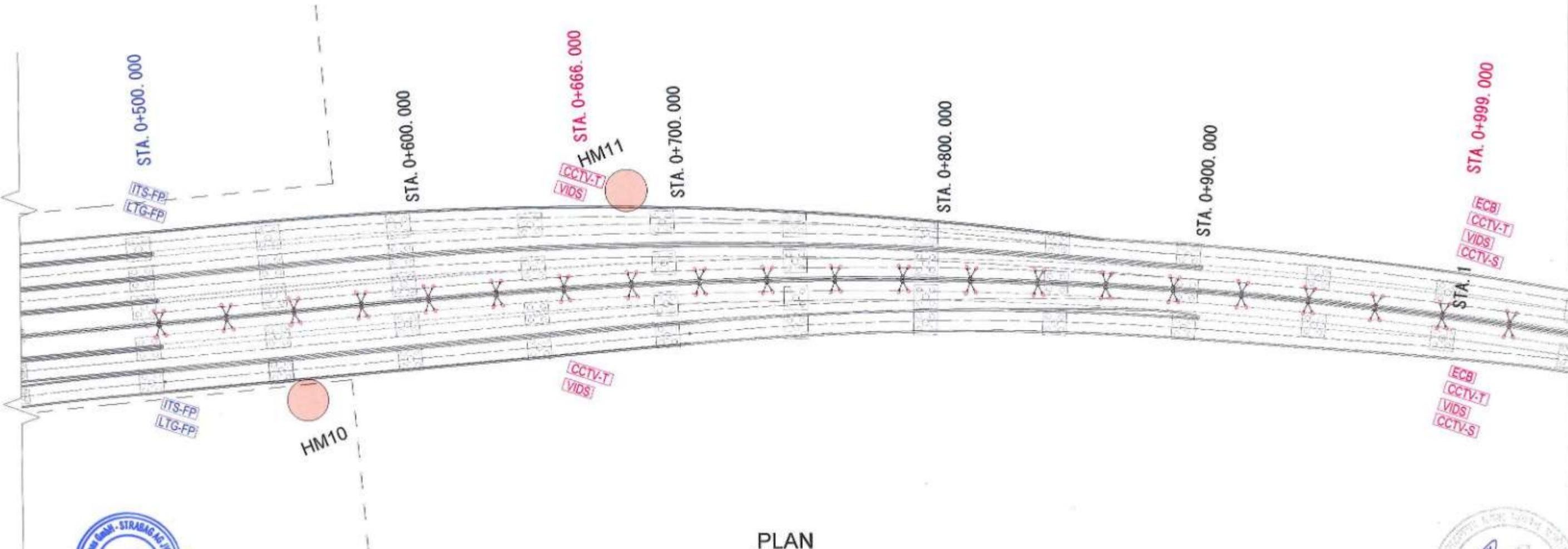
NAME	DRG
DRAWN BY	PG
CHECKED BY	SH & SP
APPROVED BY	TKS



PROJECT ->
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



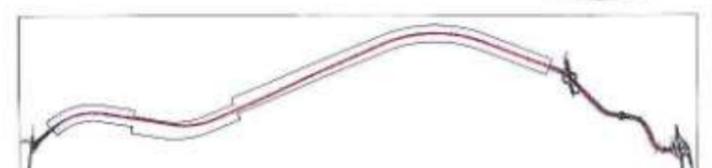
TITLE -> GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 0+000 TO CH 0+500			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (1/44)	PAPER SIZE A1	REV. 0



PLAN

- NOTES :
1. All dimensions are in mm and are indicative. The dimensions are to be read and not scaled or measured from the drawings.
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 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
 - Lighting pole
 - [ITS-FP] ITS feeder pillar
 - [LTG-FP] Lighting feeder pillar
 - [UPS] Uninterrupted Power Supply
 - High Mast



KEY PLAN

NAME	SIGN
DRAWN BY	PG
CHECKED BY	SN & SP
APPROVED BY	TNS

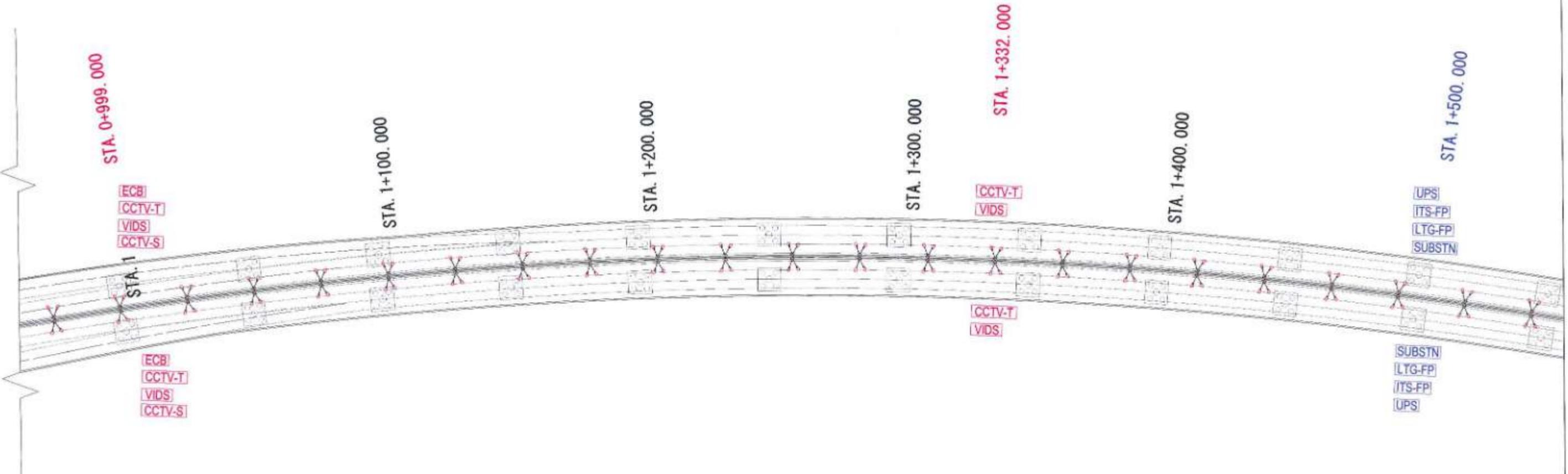


PROJECT >

MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE >			
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 0+500 TO CH 1+000			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (2/44)	A1	0



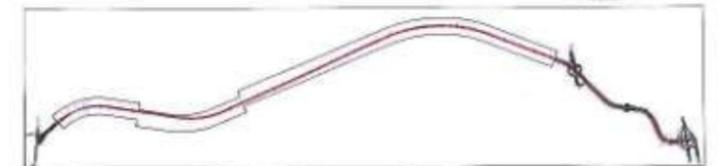
PLAN

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
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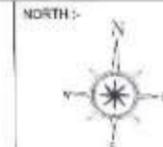
KEY PLAN

NAME	DESIGN
DRAWN BY	PG
CHECKED BY	SN & SP
APPROVED BY	THB



PROJECT :-

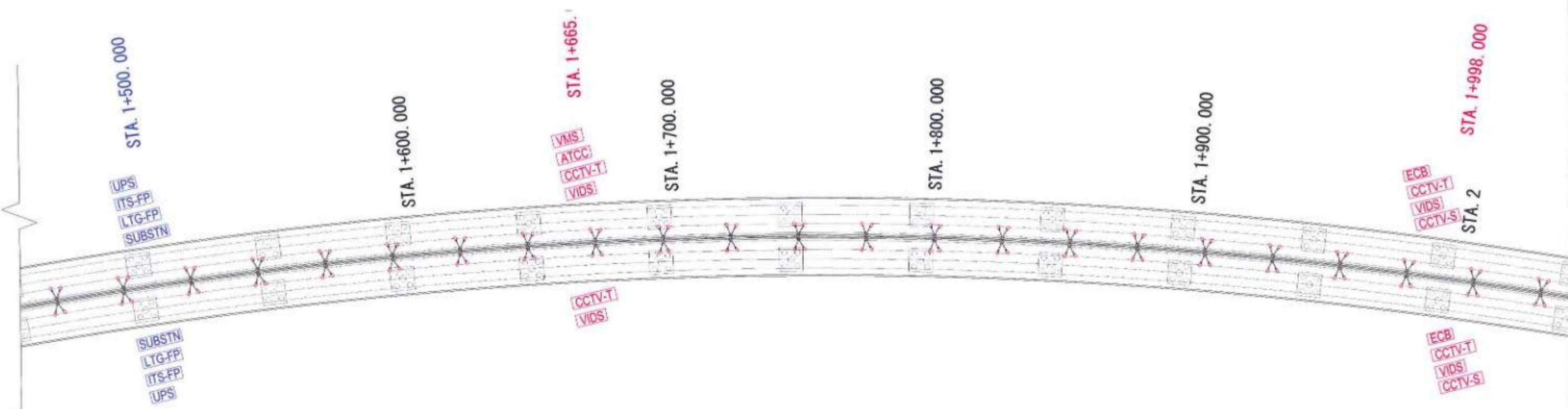
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 1+000 TO CH 1+500			
DATE: 10.04.2021	DRAWING NO. P4 - CO - 102 (3/44)	PAPER SIZE A1	REV. 0

SEWRI(MUMBAI)

CHIRLE (NAVI MUMBAI)

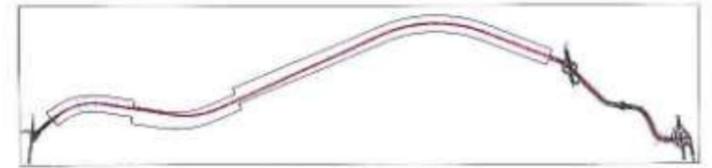


PLAN

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LEGEND :

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- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- Lighting pole
- High Mast

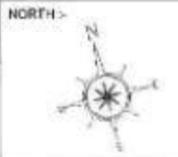


KEY PLAN

NAME	SIGN
DRAWN BY: PG	
CHECKED BY: SP1 & SP	
APPROVED BY: TNS	



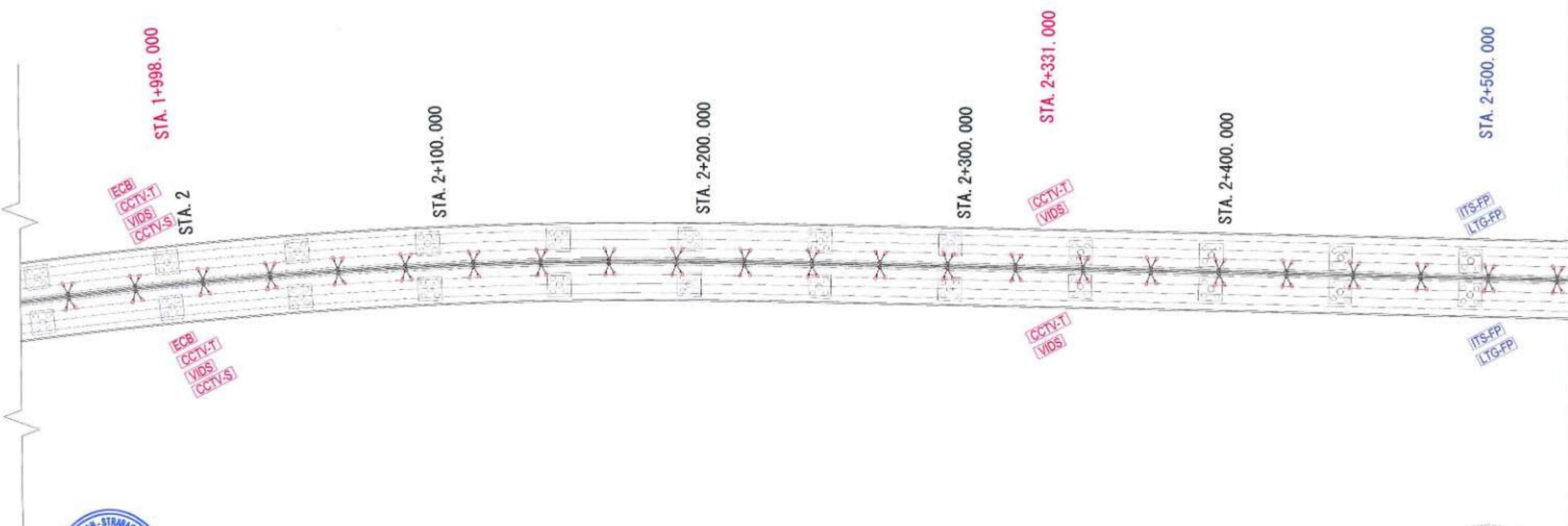
PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 1+500 TO CH 2+000			
DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (4/44)	PAPER SIZE: A1	REV: 0

SEWRI(MUMBAI)

CHIRLE (NAVI MUMBAI)

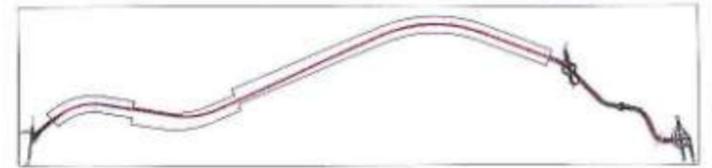


PLAN

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LEGEND :

- | | |
|---|---|
| [VMS] Variable Message Sign | Lighting pole |
| [CCTV-T] CCTV-Traffic | [ITS-FP] ITS feeder pillar |
| [CCTV-S] CCTV-Security | [LTG-FP] Lighting feeder pillar |
| [ATCC] Automatic Counter Classifier | [UPS] Uninterrupted Power Supply |
| [MET] Meteorological Data System | High Mast |
| [ECB] Emergency Call Box | |
| [VIDS] Video incident detection system | |

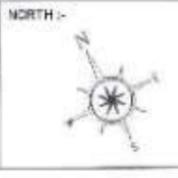


KEY PLAN

NAME	SIGN
DRAWN BY	PG
CHECKED BY	SP & BP
APPROVED BY	THS



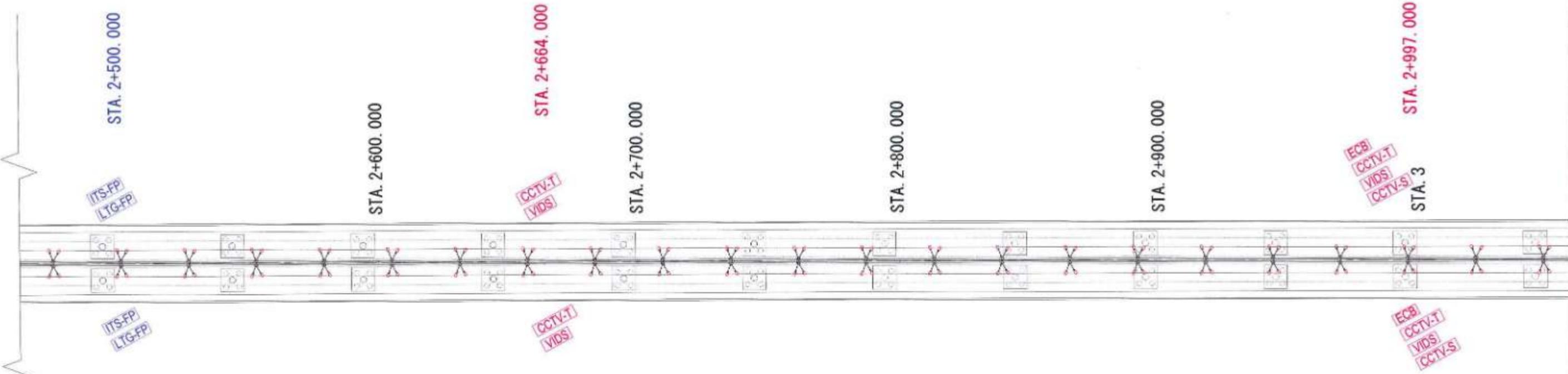
PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 2+000 TO CH 2+500			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (5/44)	PAPER SIZE A1	REV. 0

SEWRI(MUMBAI)

CHIRLE (NAVI MUMBAI)



PLAN

LEGEND :

- VMS Variable Message Sign
- CCTV-T CCTV-Traffic
- CCTV-S CCTV-Security
- ATCC Automatic Counter Classifier
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KEY PLAN

NAME	SIGN
DRAWN BY	FD
CHECKED BY	SK & SP
APPROVED BY	TKD



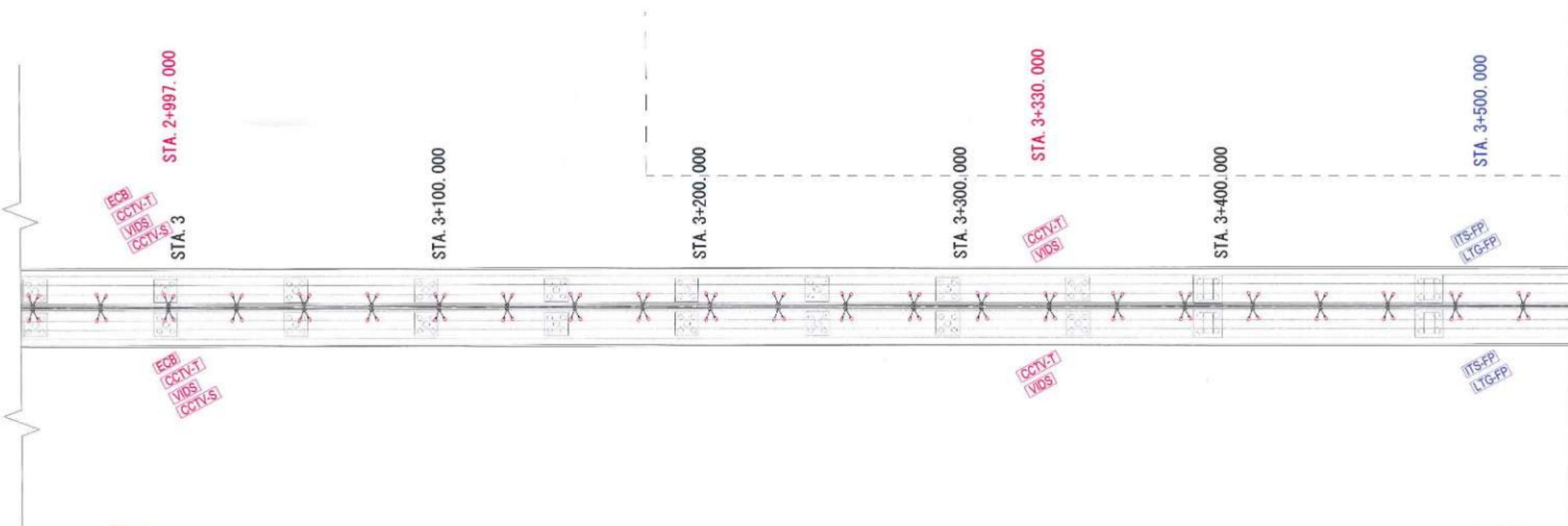
PROJECT -> **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE -> GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 2+500 TO CH 3+000			
DATE -> 10.04.2021	DRAWING NO -> P4 - CO - 102 (6/44)	PAPER SIZE -> A1	REV. -> 0

SEWRI(MUMBAI)

CHIRLE (NAVI MUMBAI)

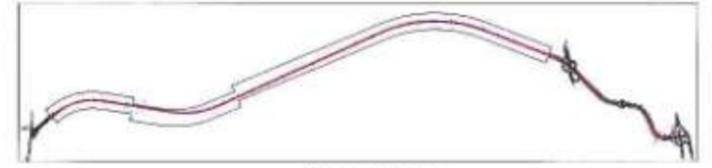


PLAN

LEGEND :

- VMS** Variable Message Sign
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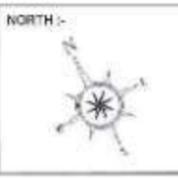


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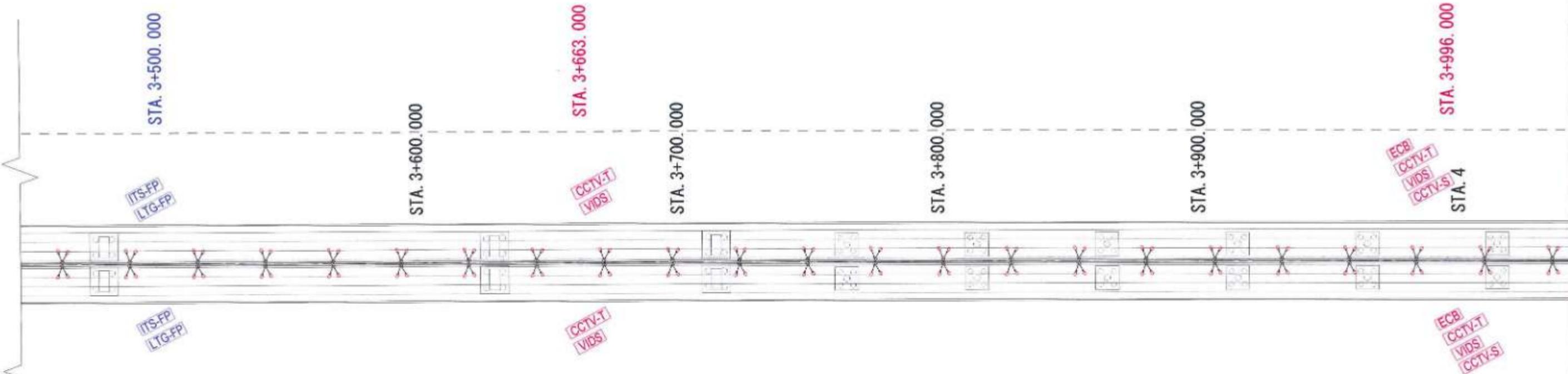
NAME	SIGN
DRAWN BY	PG
CHECKED BY	SH & SP
APPROVED BY	TAS



PROJECT:-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE:- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 3+000 TO CH 3+500			
DATE	DRAWING NO.	PAPER SIZE	REV
10.04.2021	P4 - CO - 102 (7/44)	A1	0

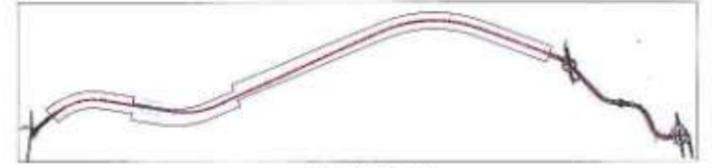


PLAN

LEGEND :

- [VMS] Variable Message Sign
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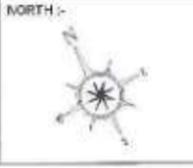


KEY PLAN

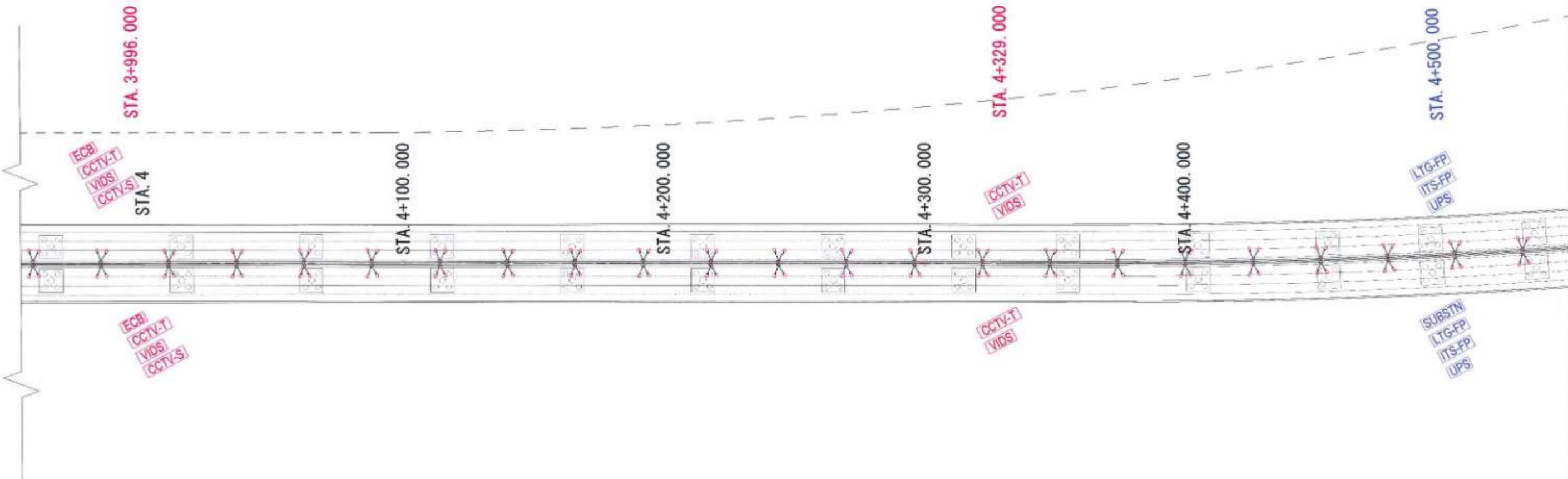
NAME	SIGN
DRAWN BY	PG
CHECKED BY	SV & SP
APPROVED BY	TKS



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



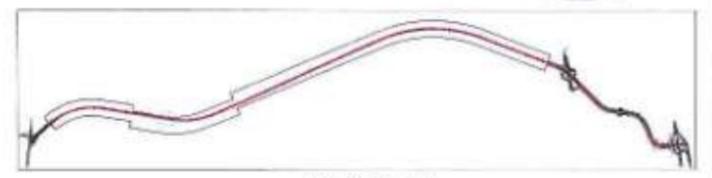
TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 3+500 TO CH 4+000			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (8/44)	A1	0



PLAN

- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
 - [Lighting pole] Lighting pole
 - [ITS-FP] ITS feeder pillar
 - [LTG-FP] Lighting feeder pillar
 - [UPS] Uninterrupted Power Supply
 - [High Mast] High Mast

- NOTES :**
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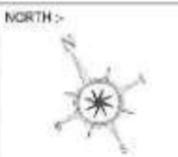


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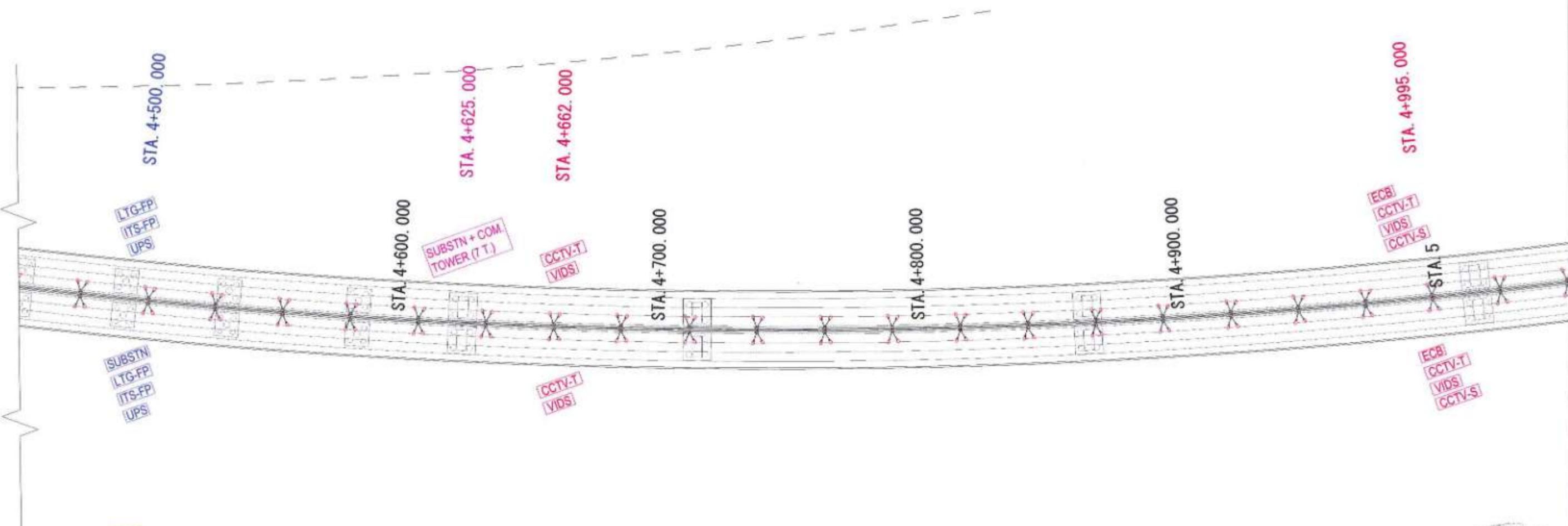
NAME	SKN
DRAWN BY	PG
CHECKED BY	SH & SP
APPROVED BY	TKS



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 4+000 TO CH 4+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (9/44)	A1	0

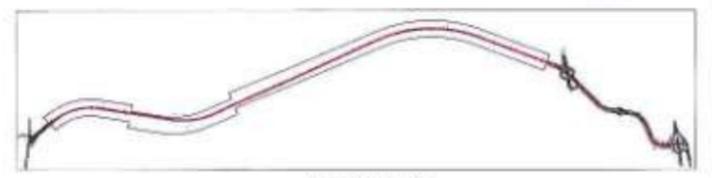


PLAN

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
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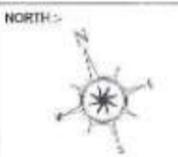


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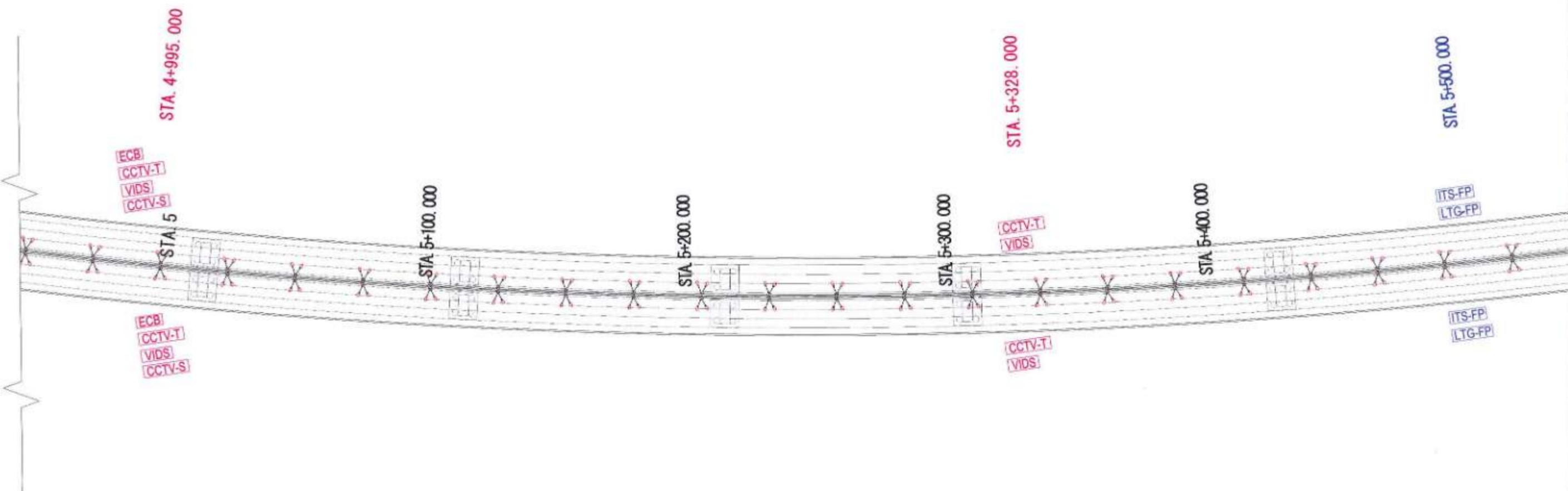
NAME	DESIGN
DRAWN BY	PO
CHECKED BY	SN & SP
APPROVED BY	TH



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



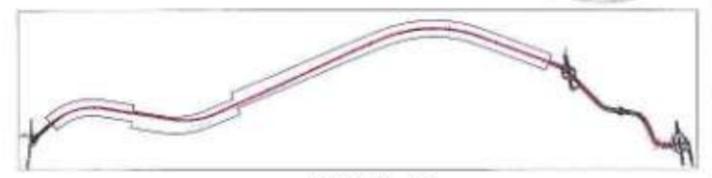
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GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 4+500 TO CH 5+000			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (10/44)	A1	0



PLAN

- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
 - Lighting pole
 - [ITS-FP] ITS feeder pillar
 - [LTG-FP] Lighting feeder pillar
 - [UPS] Uninterrupted Power Supply
 - High Mast

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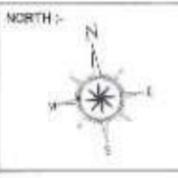


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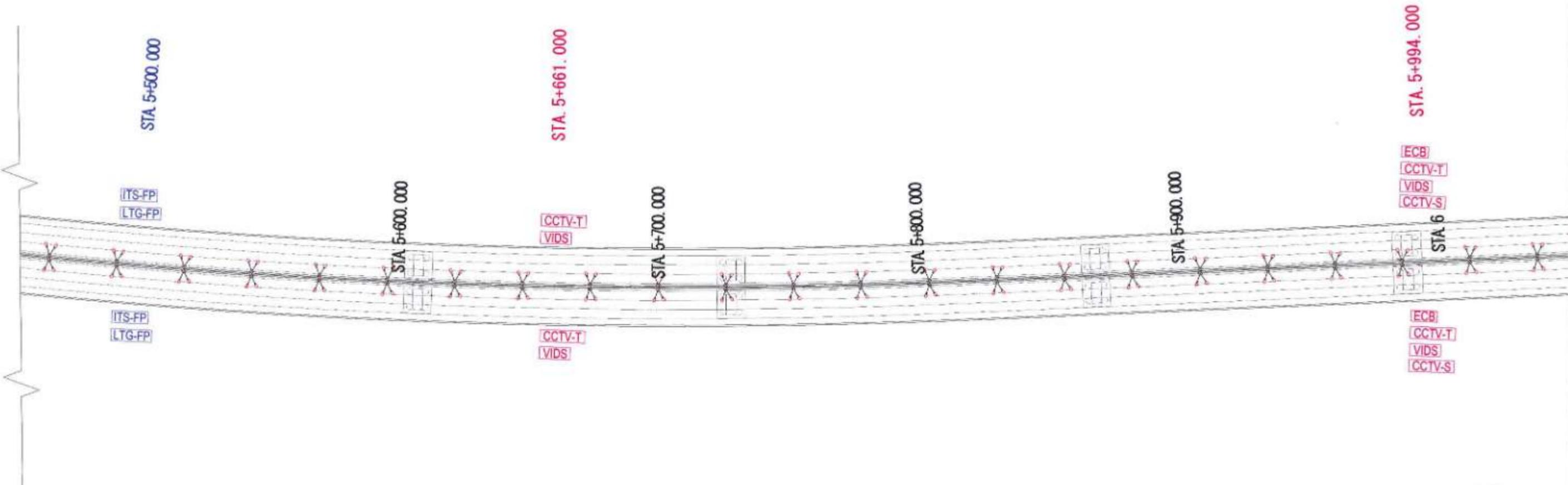
NAME	DOB
DRAWN BY	PC
CHECKED BY	SN & SP
APPROVED BY	TKS



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 5+000 TO CH 5+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (11/44)	A1	0

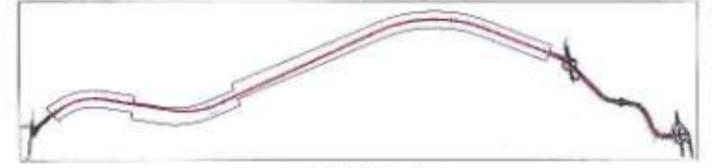


PLAN

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
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KEY PLAN

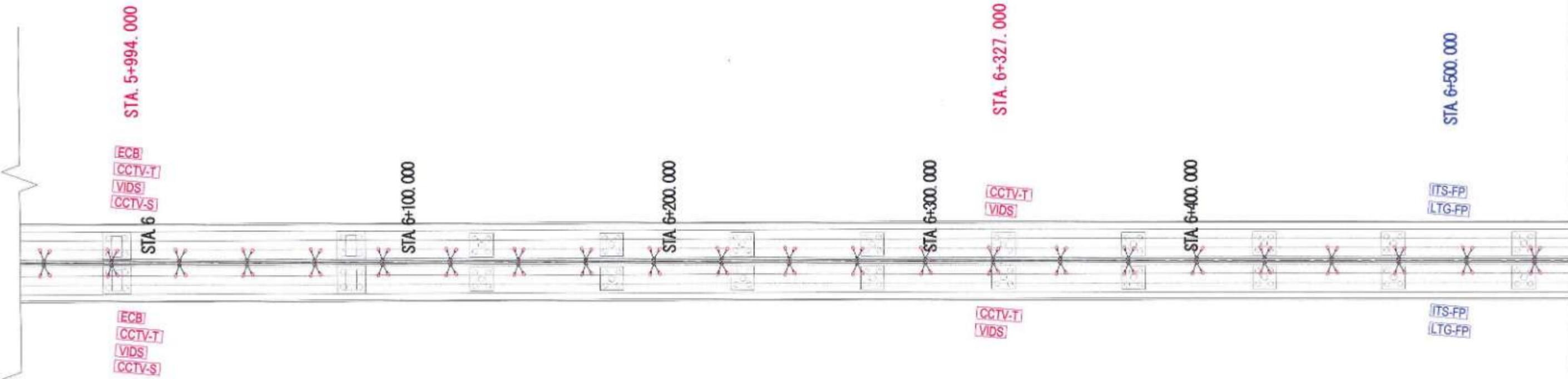
NAME	DESIGN
DRAWN BY	PD
CHECKED BY	SV & BP
APPROVED BY	TKB



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 5+500 TO CH 6+000			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (12/44)	A1	0

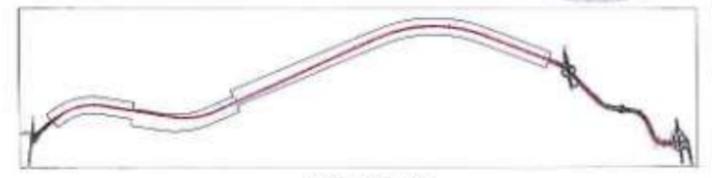


PLAN



- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
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 - [ITS-FP] ITS feeder pillar
 - [LTG-FP] Lighting feeder pillar
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KEY PLAN

NAME	DOB
DRAWN BY: PG	
CHECKED BY: SN & SP	
APPROVED BY: THS	



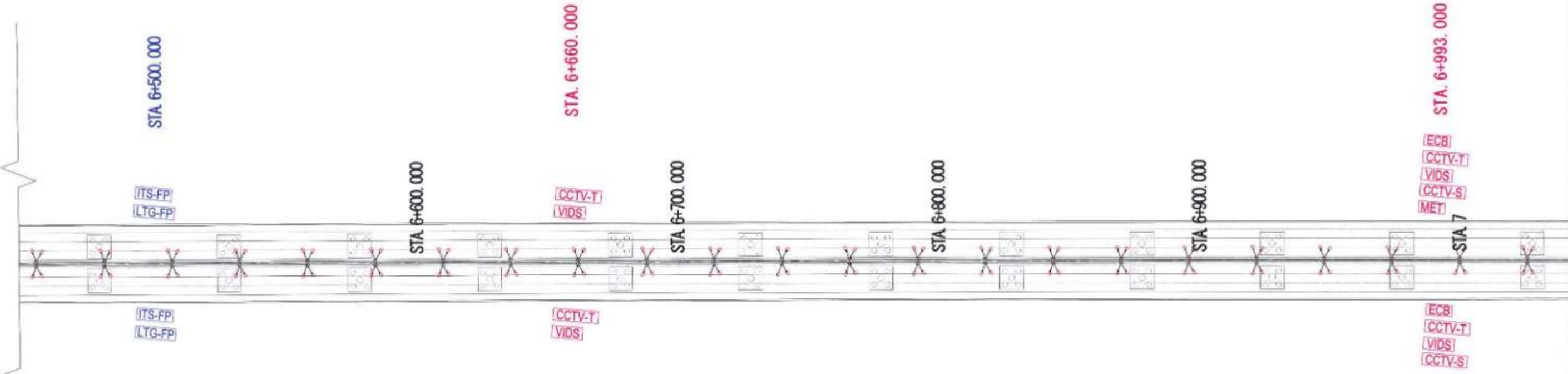
PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE:- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 6+000 TO CH 6+500			
DATE: 10.04.2021	DRAWING NO. P4 - CO - 102 (13/44)	PAPER SIZE A1	REV 0

SEWRI(MUMBAI)

CHIRLE (NAVI MUMBAI)

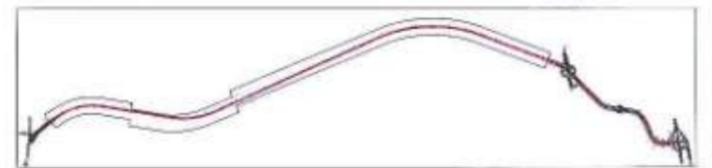


PLAN

LEGEND :

[VMS] Variable Message Sign	Lighting pole
[CCTV-T] CCTV-Traffic	[ITS-FP] ITS feeder pillar
[CCTV-S] CCTV-Security	[LTG-FP] Lighting feeder pillar
[ATCC] Automatic Counter Classifier	[UPS] Uninterrupted Power Supply
[MET] Meteorological Data System	High Mast
[ECB] Emergency Call Box	
[VIDS] Video incident detection system	

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KEY PLAN

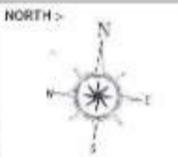
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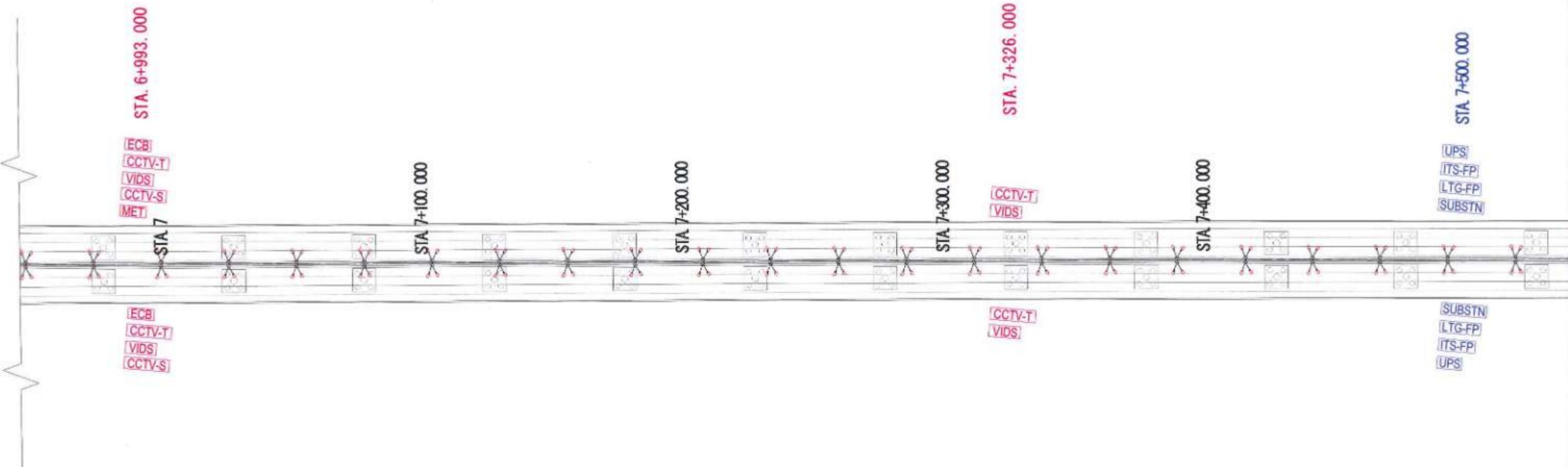
PROJECT -

MUMBAI TRANS HARBOUR LINK PROJECT

PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 6+500 TO CH 7+000			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (14/44)	A1	0

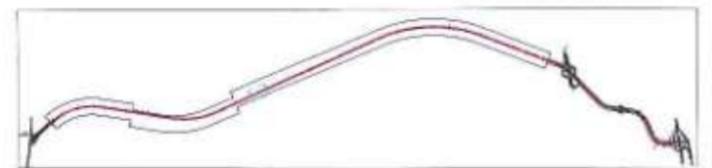


PLAN

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
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- [ITS-FP] ITS feeder pillar
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KEY PLAN

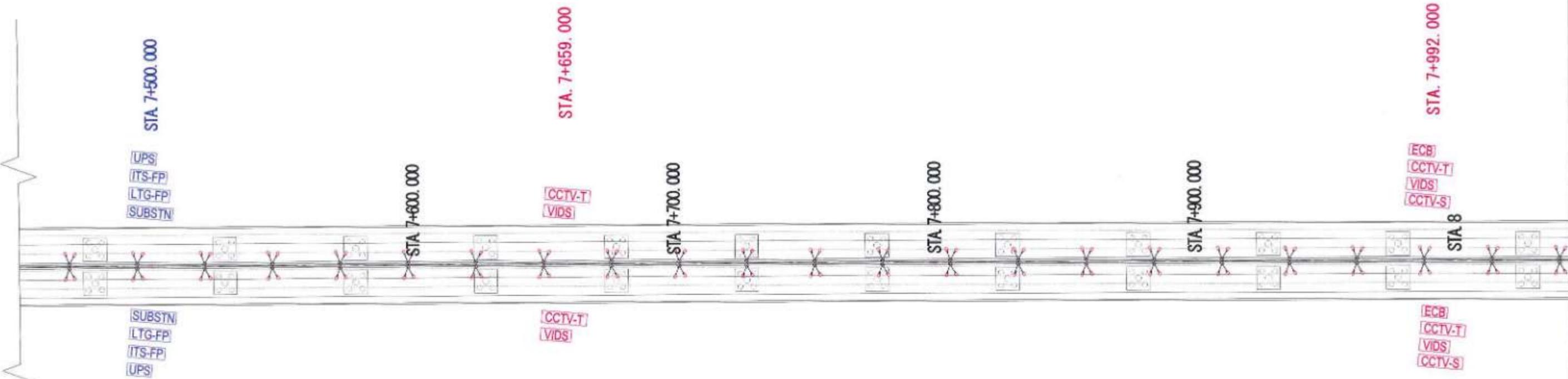
NAME	DESIGN
DRAWN BY	PD
CHECKED BY	SA & SP
APPROVED BY	TKB



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



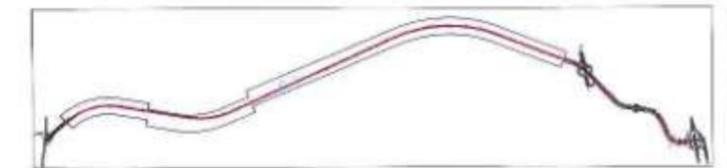
TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 7+000 TO CH 7+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (15/44)	A1	0



PLAN

- LEGEND :**
- [VMS] Variable Message Sign
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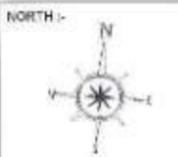


KEY PLAN

NAME	SOB
DRAWN BY: PG	
CHECKED BY: SN & SP	
APPROVED BY: TK	



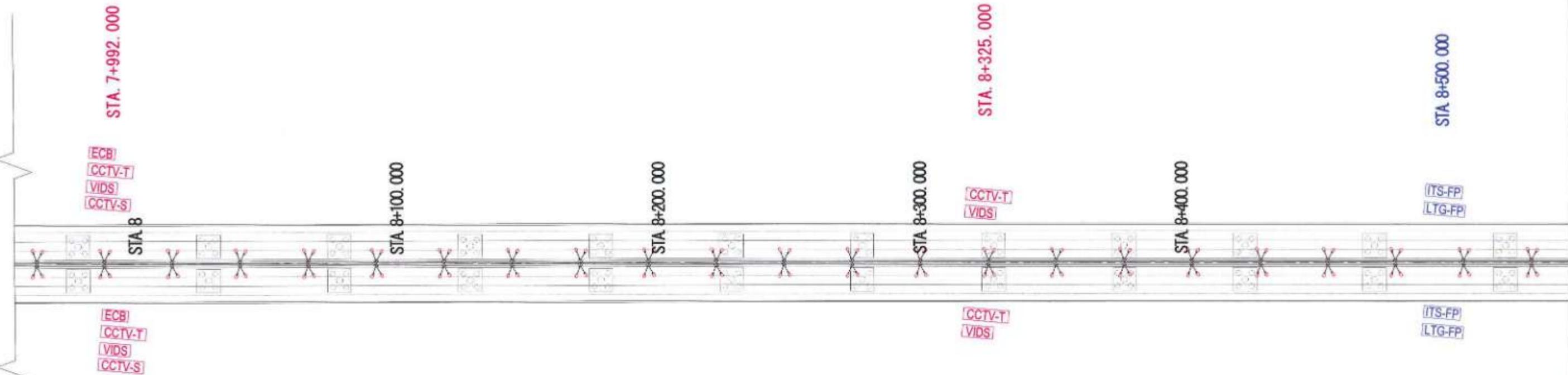
PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 7+500 TO CH 8+000			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (16/44)	PAPER SIZE A1	REV 0

SEWRI(MUMBAI)

CHIRLE (NAVI MUMBAI)



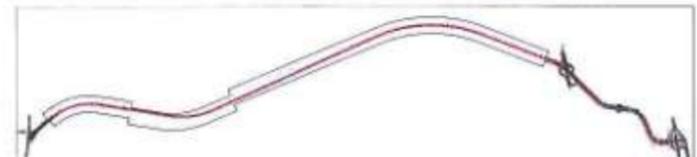
PLAN

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LEGEND :

- VMS** Variable Message Sign
- CCTV-T** CCTV-Traffic
- CCTV-S** CCTV-Security
- ATCC** Automatic Counter Classifier
- MET** Meteorological Data System
- ECB** Emergency Call Box
- VIDS** Video incident detection system
- Lighting pole**
- ITS-FP** ITS feeder pillar
- LTG-FP** Lighting feeder pillar
- UPS** Uninterrupted Power Supply
- High Mast**

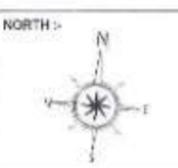


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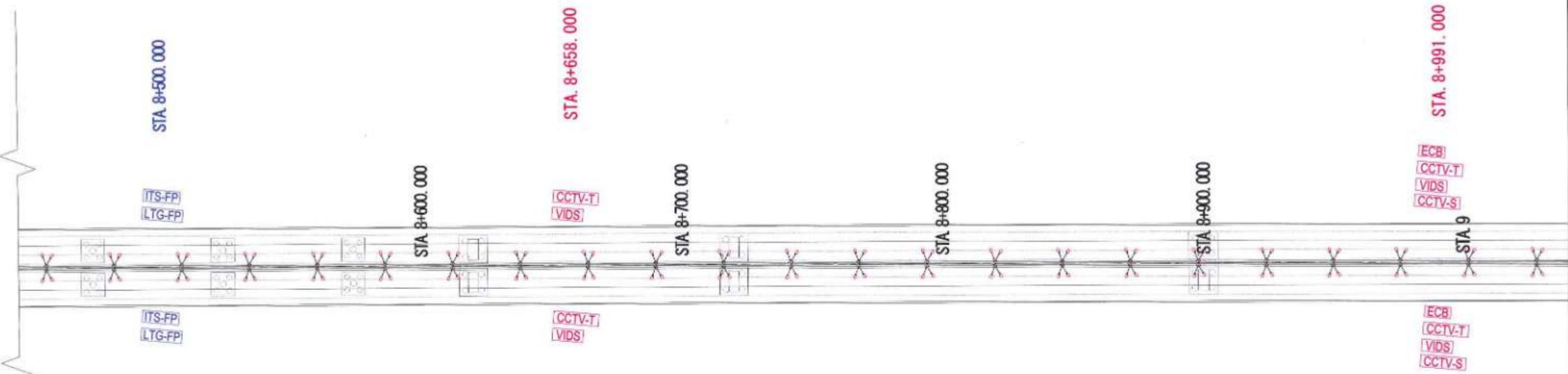
	NAME	IGN
DRAWN BY	PD	
CHECKED BY	SH & SP	
APPROVED BY	TKB	



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE -			
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 8+000 TO CH 8+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (17/44)	A1	0

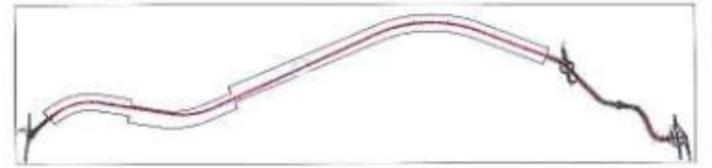


PLAN



- LEGEND :**
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 - [CCTV-T] CCTV-Traffic
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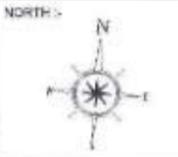


KEY PLAN

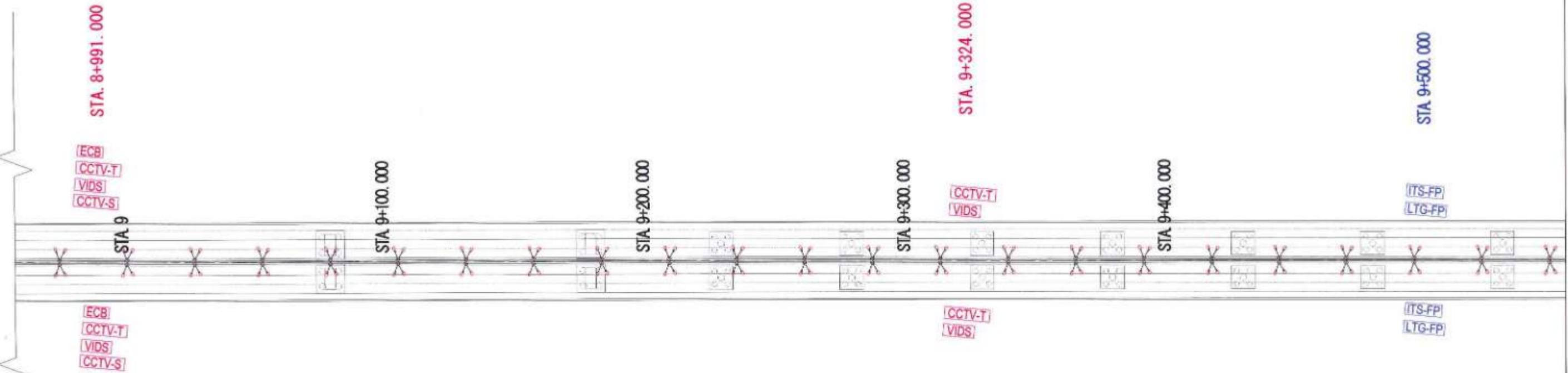
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CHECKED BY	SR & SP
APPROVED BY	TKS



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 8+500 TO CH 9+000			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (18/44)	PAPER SIZE A1	REV 0

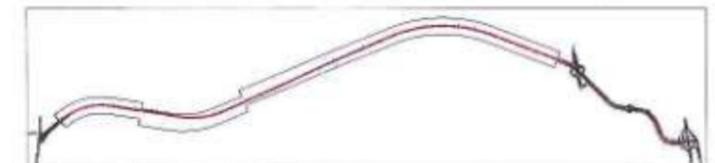


PLAN

- NOTES :
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 5. The sectional details for Street Pole Lights shall be referred as per Drawing reference no. P4 - ELE - 004

LEGEND :

- | | | | |
|----------|---------------------------------|------------------------|----------------------------|
| [VMS] | Variable Message Sign | [Lighting pole symbol] | Lighting pole |
| [CCTV-T] | CCTV-Traffic | [ITS-FP symbol] | ITS feeder pillar |
| [CCTV-S] | CCTV-Security | [LTG-FP symbol] | Lighting feeder pillar |
| [ATCC] | Automatic Counter Classifier | [UPS symbol] | Uninterrupted Power Supply |
| [MET] | Meteorological Data System | [High Mast symbol] | High Mast |
| [ECB] | Emergency Call Box | | |
| [VIDS] | Video incident detection system | | |



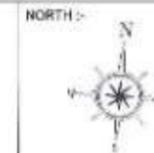
KEY PLAN

	NAME	IGN
DRAWN BY	PO	
CHECKED BY	SH & RP	
APPROVED BY	THS	

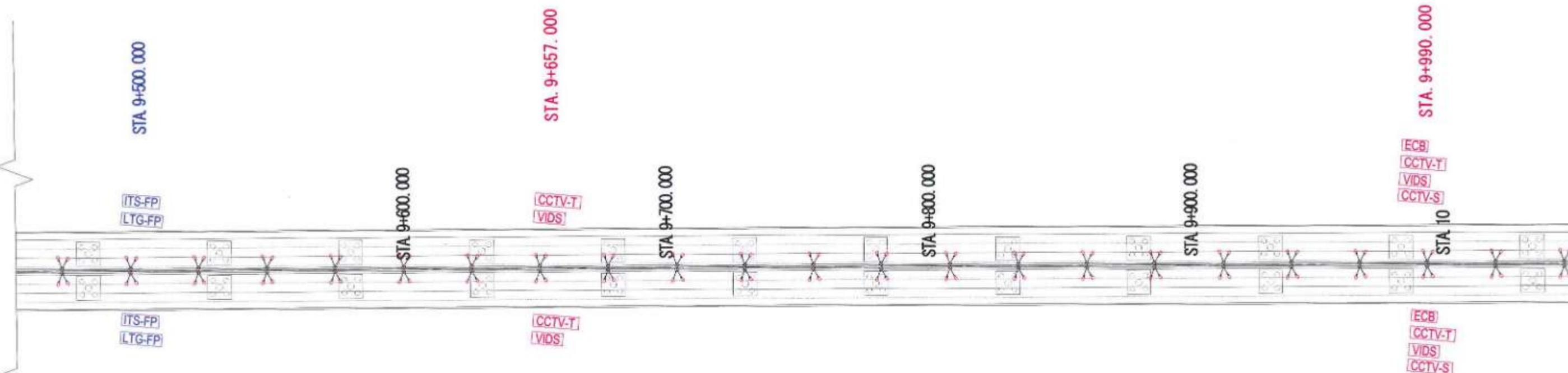


PROJECT :-

MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 9+000 TO CH 9+500			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (19/44)	PAPER SIZE A1	REV 0



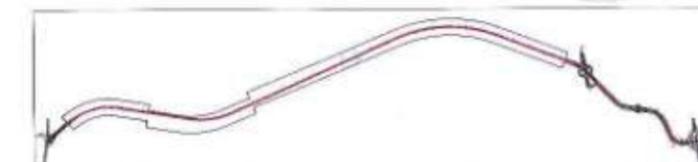
PLAN

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole]
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast]

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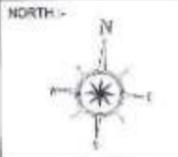


KEY PLAN

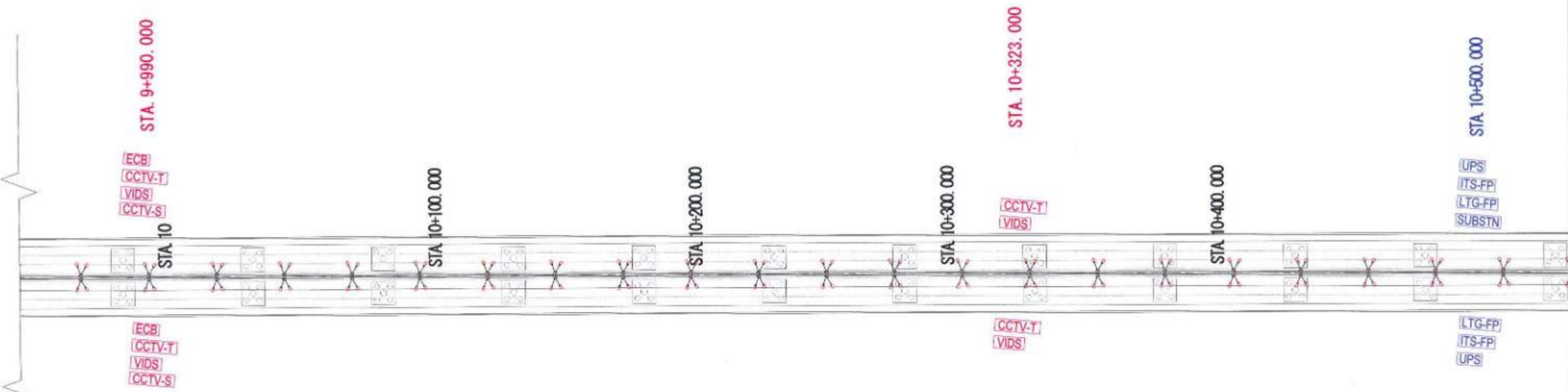
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PO	
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PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 9+500 TO CH 10+000			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (20/44)	PAPER SIZE A1	REV. 0

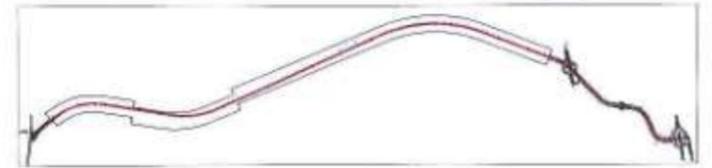


PLAN



- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
 - [Lighting pole]
 - [ITS-FP] ITS feeder pillar
 - [LTG-FP] Lighting feeder pillar
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 - [High Mast]

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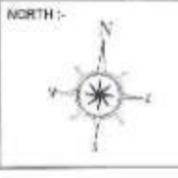


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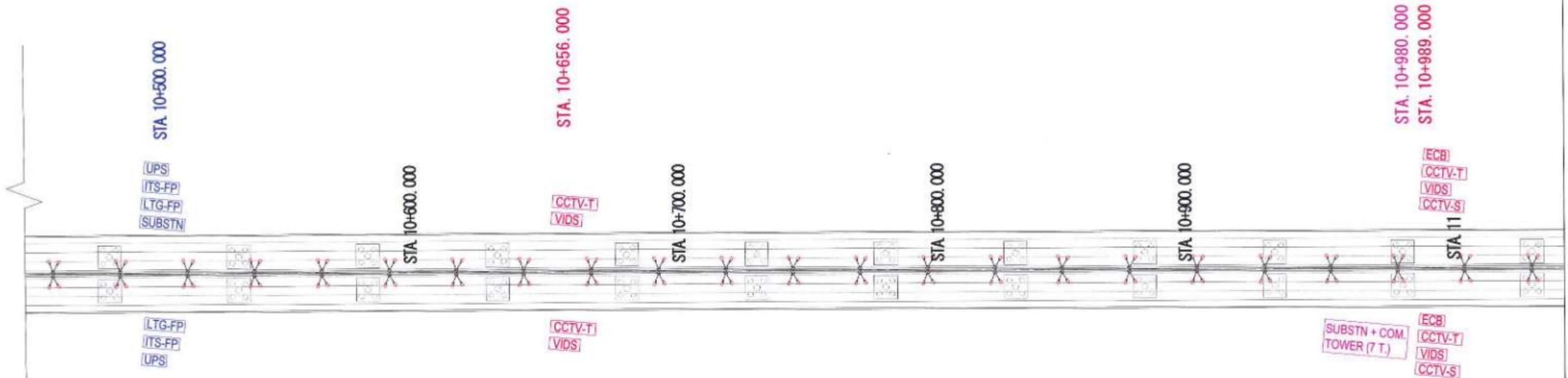
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DRAWN BY	IGN	
CHECKED BY	IGN & SP	
APPROVED BY	TKS	



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 10+000 TO CH 10+500			
DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (21/44)	PAPER SIZE: A1	REV: 0

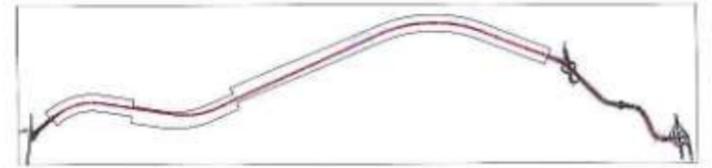


PLAN

LEGEND :

VMS Variable Message Sign	Lighting pole
CCTV-T CCTV-Traffic	ITS-FP ITS feeder pillar
CCTV-S CCTV-Security	LTG-FP Lighting feeder pillar
ATCC Automatic Counter Classifier	UPS Uninterrupted Power Supply
MET Meteorological Data System	High Mast
ECB Emergency Call Box	
VIDS Video incident detection system	

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KEY PLAN

NAME	SOFT
PG	
SN & SP	
THS	



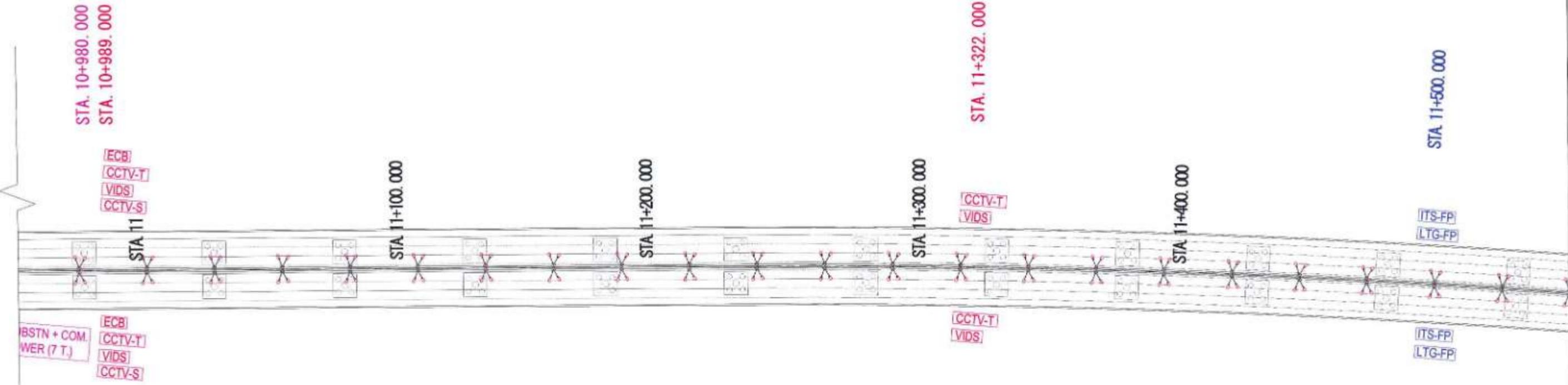
PROJECT ->

MUMBAI TRANS HARBOUR LINK PROJECT

PACKAGE 4 - TENDER DRAWING



TITLE ->			
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 10+500 TO CH 11+000			
DATE ->	DRAWING NO. ->	PAPER SIZE ->	REV. ->
10.04.2021	P4 - CO - 102 (22/44)	A1	0

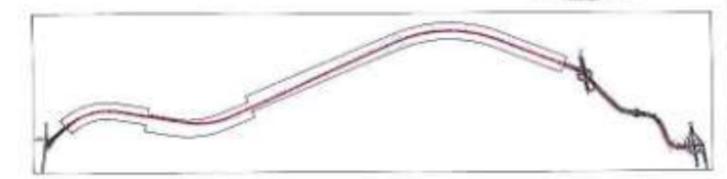


PLAN



- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
 - [Lighting pole]
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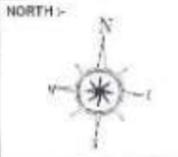


KEY PLAN

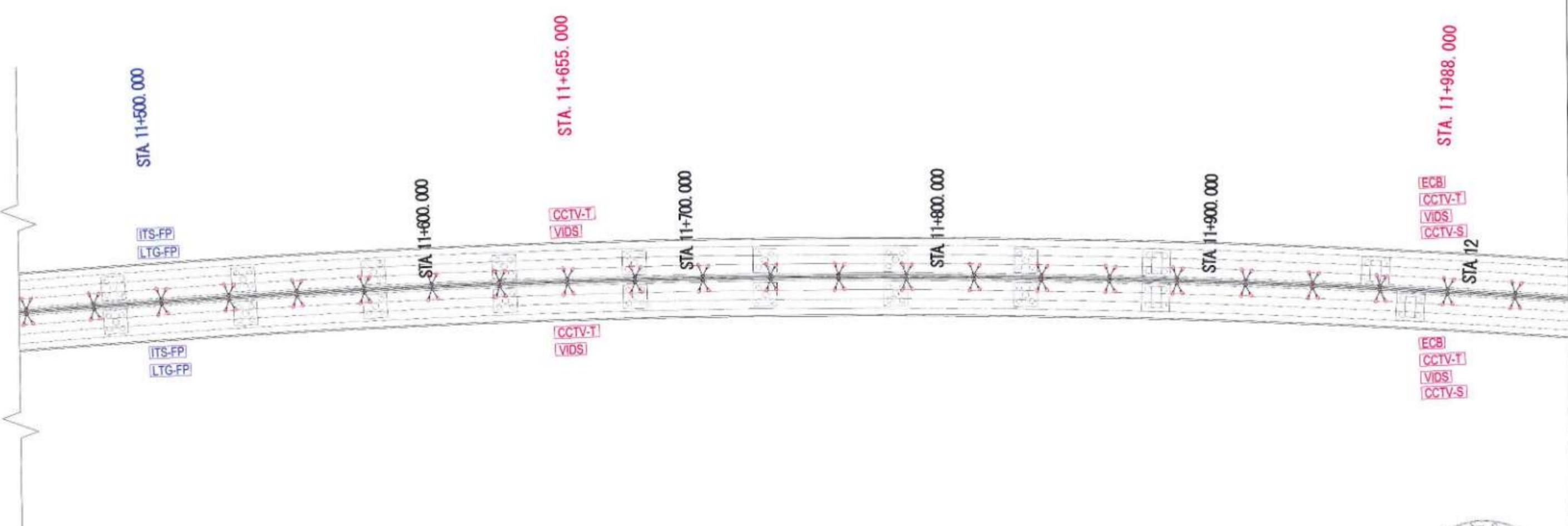
NAME	SIGN
DRAWN BY: PG	
CHECKED BY: SR & SP	
APPROVED BY: THS	



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 11+000 TO CH 11+500			
DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (23/44)	PAPER SIZE: A1	REV: 0



PLAN

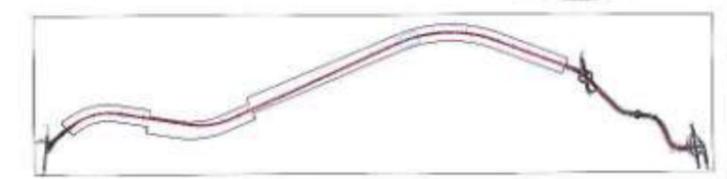


LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
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KEY PLAN

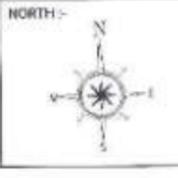
NAME	SIGN
DRAWN BY	PG
CHECKED BY	SN & SP
APPROVED BY	YVS



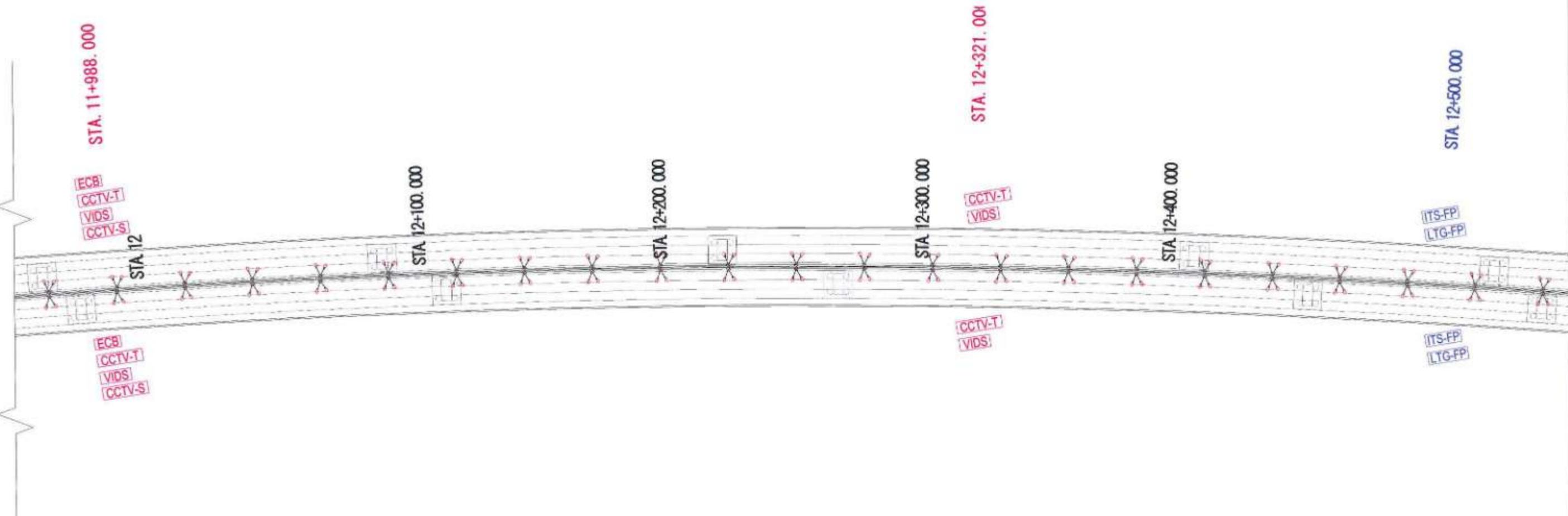
PROJECT -

MUMBAI TRANS HARBOUR LINK PROJECT

PACKAGE 4 - TENDER DRAWING



TITLE -			
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 11+500 TO CH 12+000			
DATE	DRAWING NO.	PAPER SIZE	REV
10.04.2021	P4 - CO - 102 (24/44)	A1	0

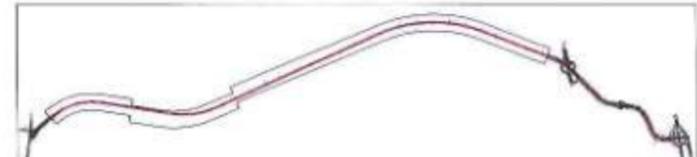


PLAN

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LEGEND:

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- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole]
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast]



KEY PLAN

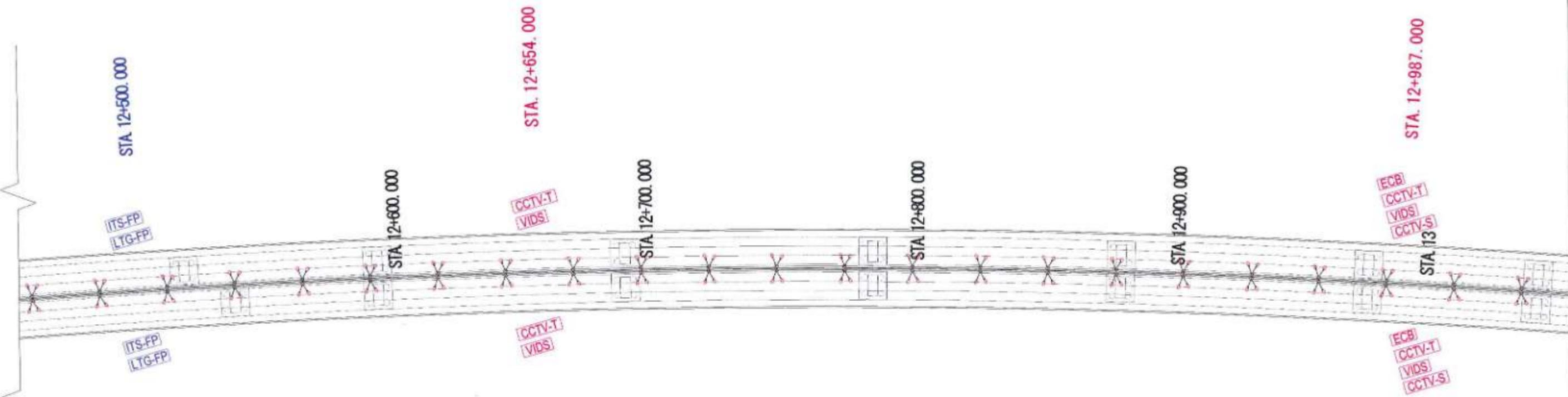
NAME	SIGN
DRAWN BY	FO
CHECKED BY	SH & SP
APPROVED BY	TKS



PROJECT >
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE:- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 12+000 TO CH 12+500			
DATE: 10.04.2021	DRAWING NO. P4 - CO - 102 (25/44)	PAPER SIZE A1	REV. 0

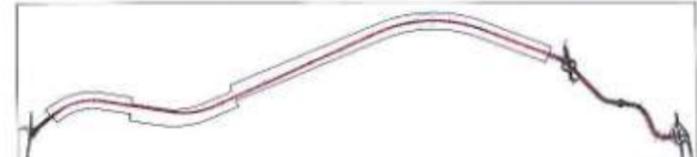


PLAN



- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
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KEY PLAN

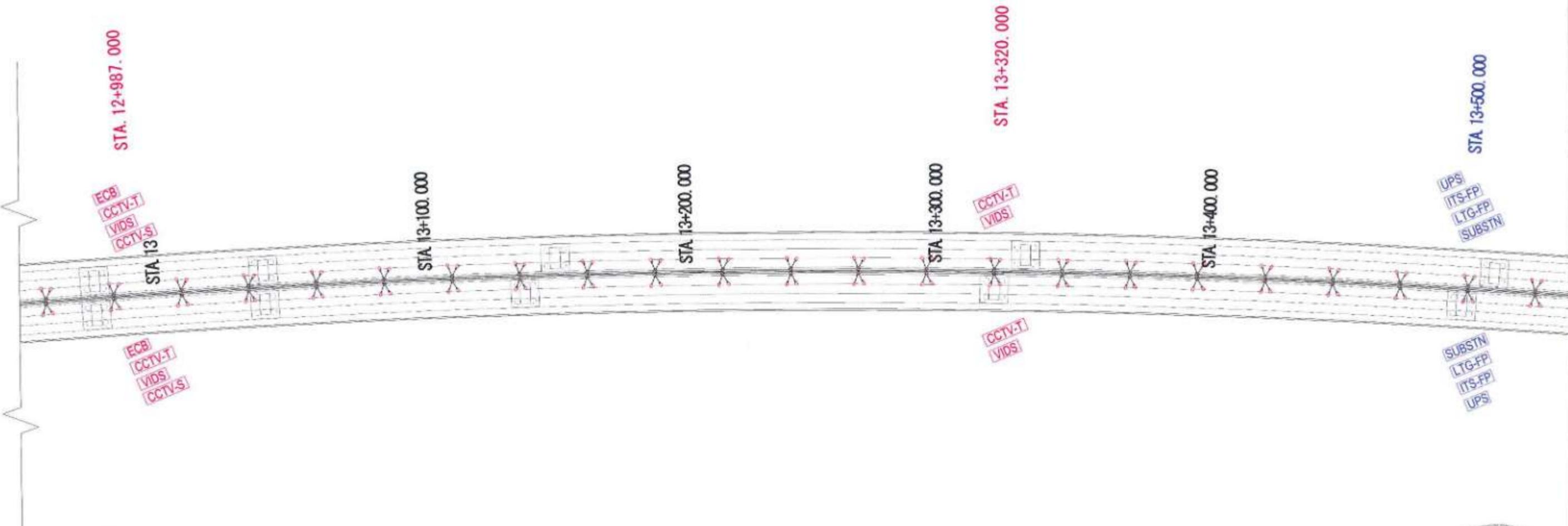
NAME	SIGN
DRAWN BY	FD
CHECKED BY	SH & SP
APPROVED BY	THS



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 12+500 TO CH 13+000			
DATE 10.04.2021	DRAWING NO P4 - CO - 102 (26/44)	PAPER SIZE A1	REV 0

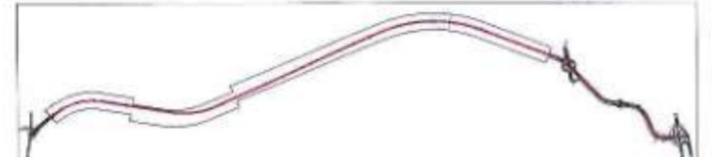


PLAN



- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
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KEY PLAN

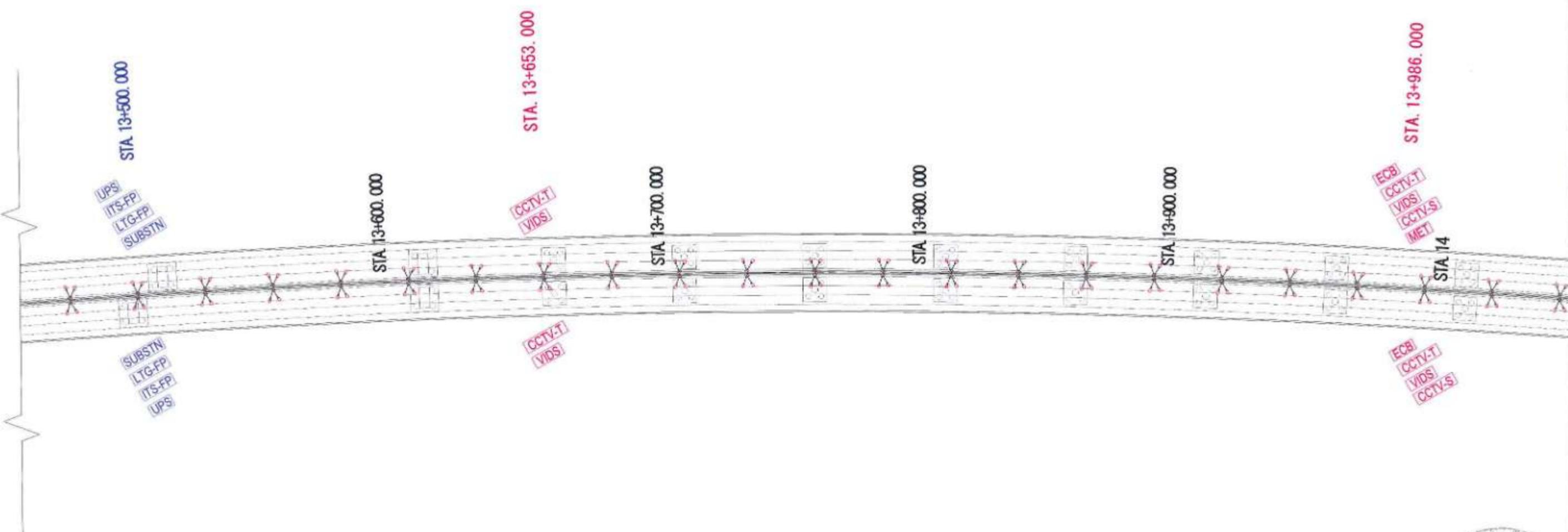
NAME	BOB
DRAWN BY	PG
CHECKED BY	SN & SP
APPROVED BY	TKS



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 13+000 TO CH 13+500			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (27/44)	PAPER SIZE A1	REV. 0



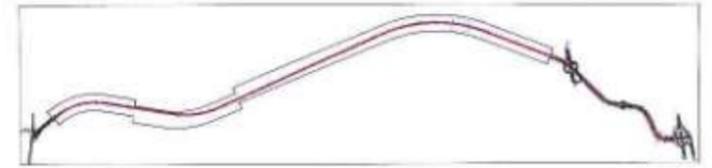
PLAN



LEGEND :

- VMS** Variable Message Sign
- CCTV-T** CCTV-Traffic
- CCTV-S** CCTV-Security
- ATCC** Automatic Counter Classifier
- MET** Meteorological Data System
- ECB** Emergency Call Box
- VIDS** Video incident detection system
- Lighting pole**
- ITS-FP** ITS feeder pillar
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- UPS** Uninterrupted Power Supply
- High Mast**

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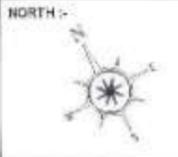


KEY PLAN

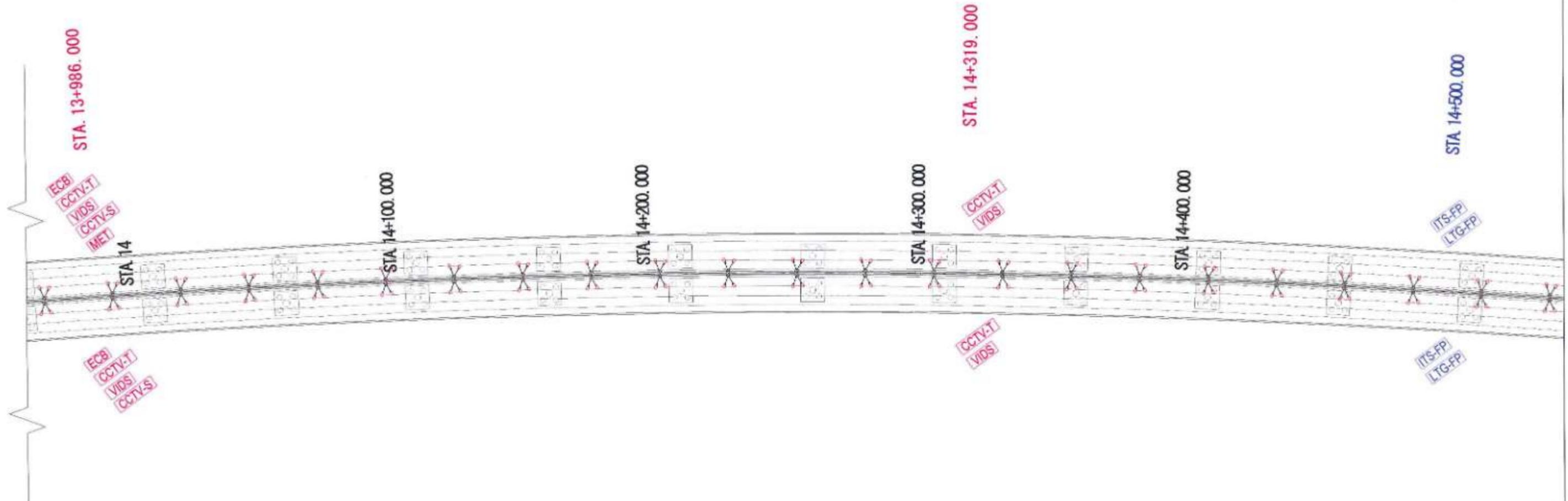
NAME	SIGN
DRAWN BY: PG	
CHECKED BY: SK & SP	
APPROVED BY: THG	



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 13+500 TO CH 14+000			
DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (28/44)	PAPER SIZE: A1	REV: 0



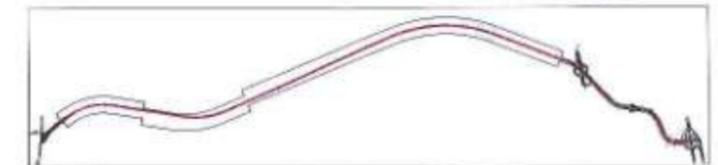
PLAN

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LEGEND :

- | | |
|---|---------------------------------------|
| VMS Variable Message Sign | Lighting pole |
| CCTV-T CCTV-Traffic | ITS-FP ITS feeder pillar |
| CCTV-S CCTV-Security | LTG-FP Lighting feeder pillar |
| ATCC Automatic Counter Classifier | UPS Uninterrupted Power Supply |
| MET Meteorological Data System | High Mast |
| ECB Emergency Call Box | |
| VIDS Video incident detection system | |



KEY PLAN

NAME	IGN
DRAWN BY: PG	
CHECKED BY: WJ & SP	
APPROVED BY: TNS	



PROJECT :-

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

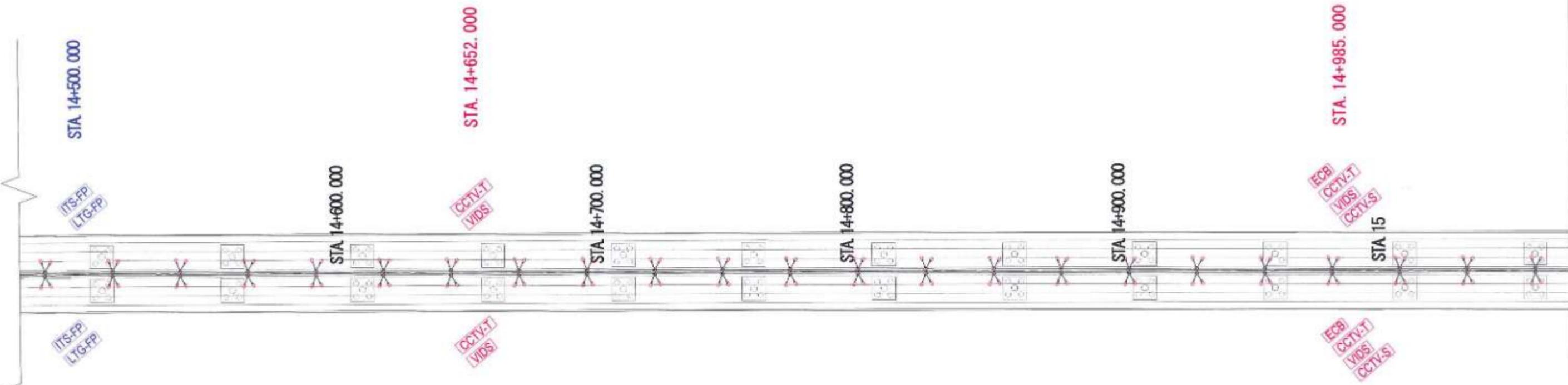
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TITLE :-

**GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES
(ITS & ELECTRICAL) ON THE BRIDGE
FROM CH 14+000 TO CH 14+500**

DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (29/44)	PAPER SIZE: A1	REV: 0
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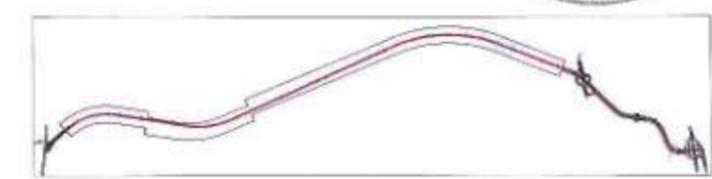
PLAN

NOTES :

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- The Submission of Detailed drawings shall however not relieve Package 4 Design and Build Contractor of any Design & Built obligations as and shall be responsible for desired and appropriate functionality, operability, quantity etc;
- The sectional details for Street Pole Lights shall be referred as per Drawing reference no. P4 - ELE - 004

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole]
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast]

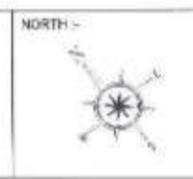


KEY PLAN

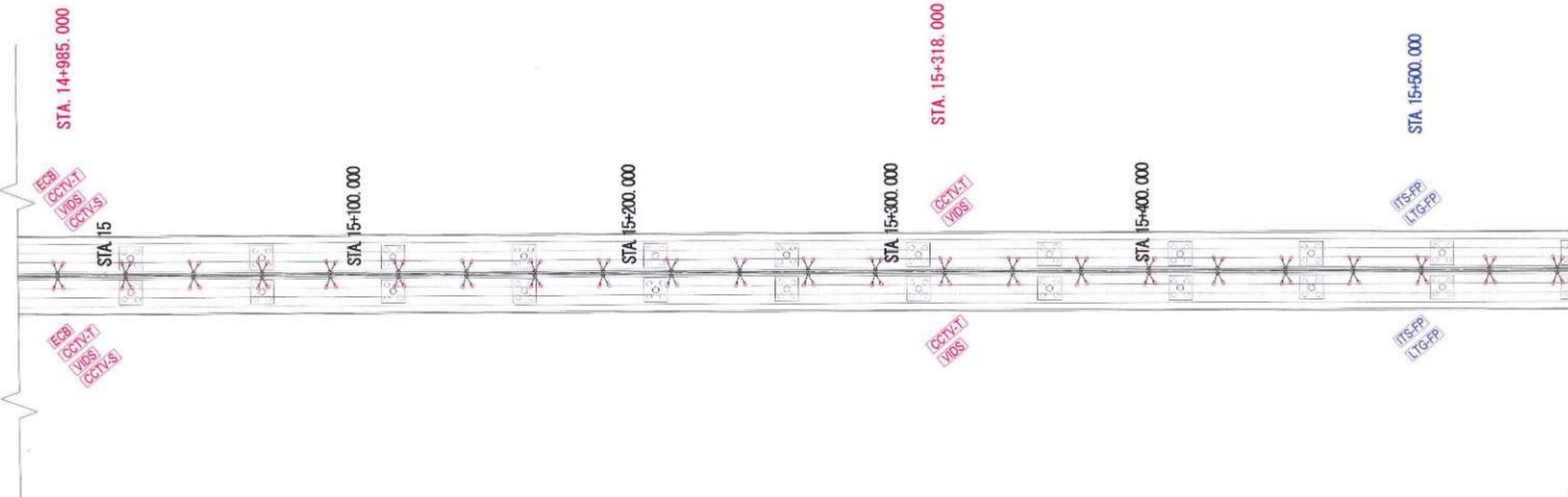
NAME	SIGN
DRAWN BY	PO
CHECKED BY	SR & SP
APPROVED BY	TR



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 14+500 TO CH 15+000			
DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (30/44)	PAPER SIZE: A1	REV: 0



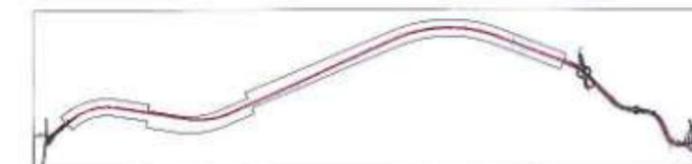
PLAN



LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole] Lighting pole
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast] High Mast

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 - The sectional details for Street Pole Lights shall be referred as per Drawing reference no. P4 - ELE - 004



KEY PLAN



PROJECT >

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

NORTH:-

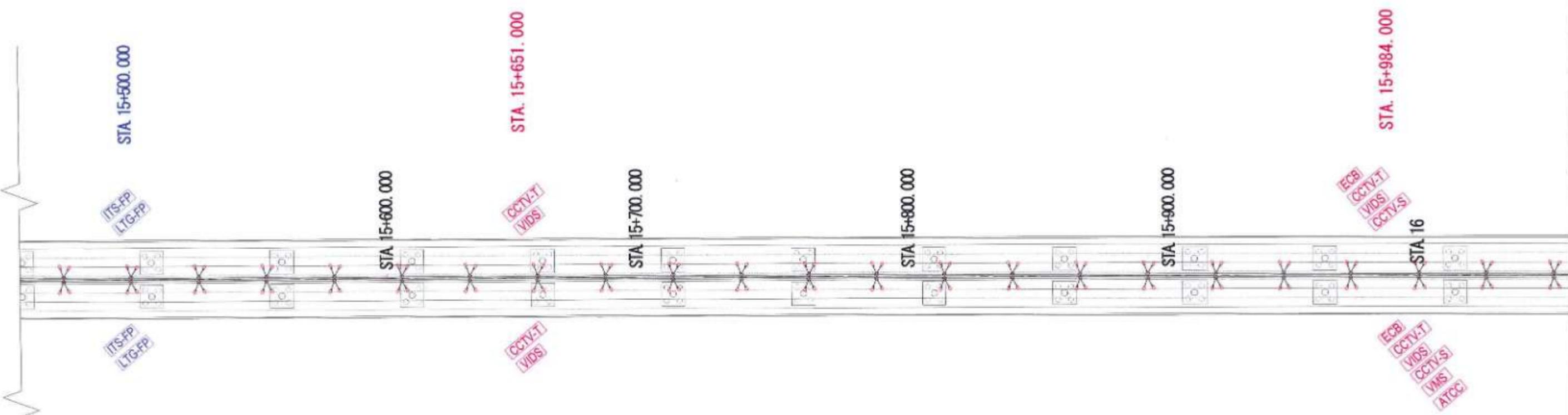


TITLE:-

**GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES
(ITS & ELECTRICAL) ON THE BRIDGE
FROM CH 15+000 TO CH 15+500**

DATE: 10.04.2021	DRAWING NO. P4 - CO - 102 (31/44)	PAPER SIZE A1	REV 0
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NAME	SIGN
DRAWN BY PG	
CHECKED BY SN & AP	
APPROVED BY TKS	

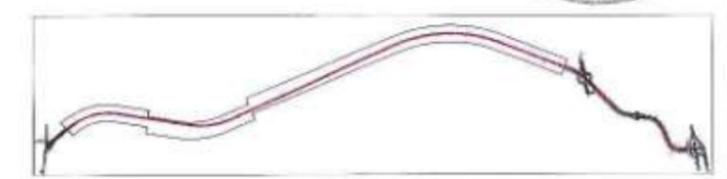


PLAN



- LEGEND :**
- VMS Variable Message Sign
 - CCTV-T CCTV-Traffic
 - CCTV-S CCTV-Security
 - ATCC Automatic Counter Classifier
 - MET Meteorological Data System
 - ECB Emergency Call Box
 - VIDS Video incident detection system
 - Lighting pole
 - ITS-FP ITS feeder pillar
 - LTG-FP Lighting feeder pillar
 - UPS Uninterrupted Power Supply
 - High Mast

- NOTES :**
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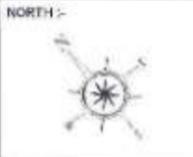


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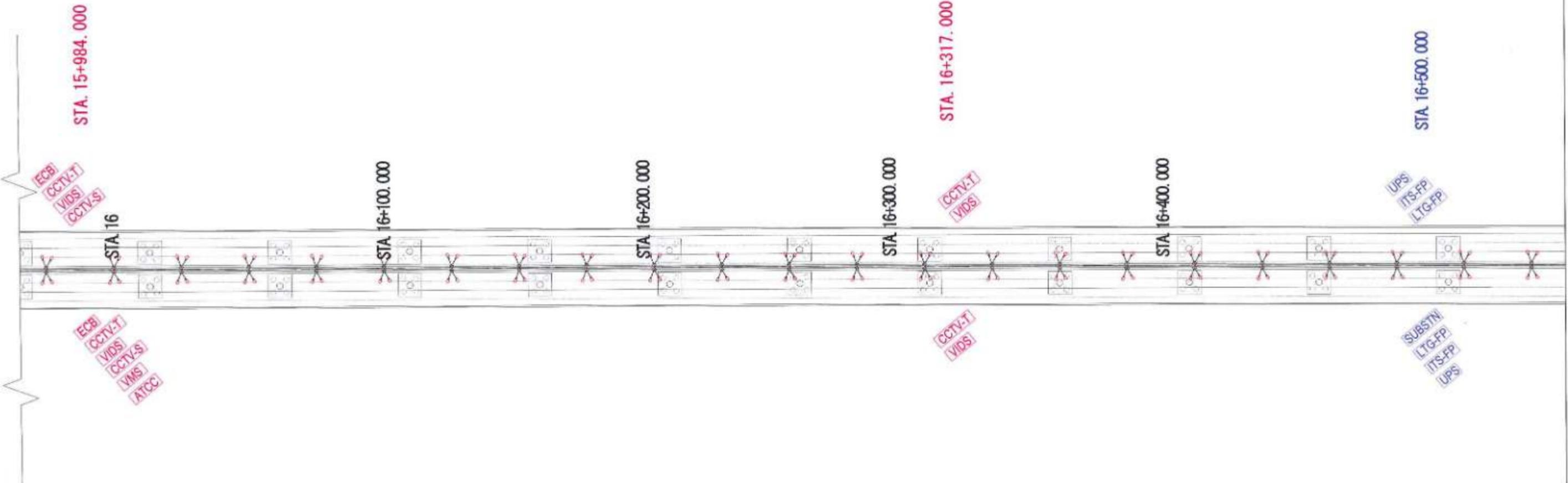
NAME	DOB
DRAWN BY	PG
CHECKED BY	SH & SP
APPROVED BY	TKS



PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 15+500 TO CH 16+000			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (32/44)	A1	0

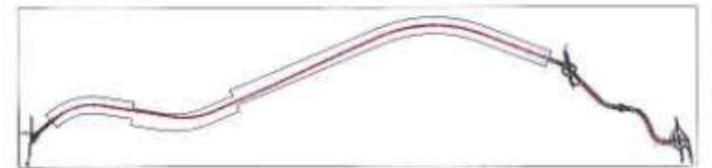


PLAN



- LEGEND :**
- VMS** Variable Message Sign
 - CCTV-T** CCTV-Traffic
 - CCTV-S** CCTV-Security
 - ATCC** Automatic Counter Classifier
 - MET** Meteorological Data System
 - ECB** Emergency Call Box
 - VIDS** Video incident detection system
 - Lighting pole**
 - ITS-FP** ITS feeder pillar
 - LTG-FP** Lighting feeder pillar
 - UPS** Uninterrupted Power Supply
 - High Mast**

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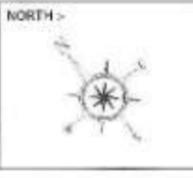


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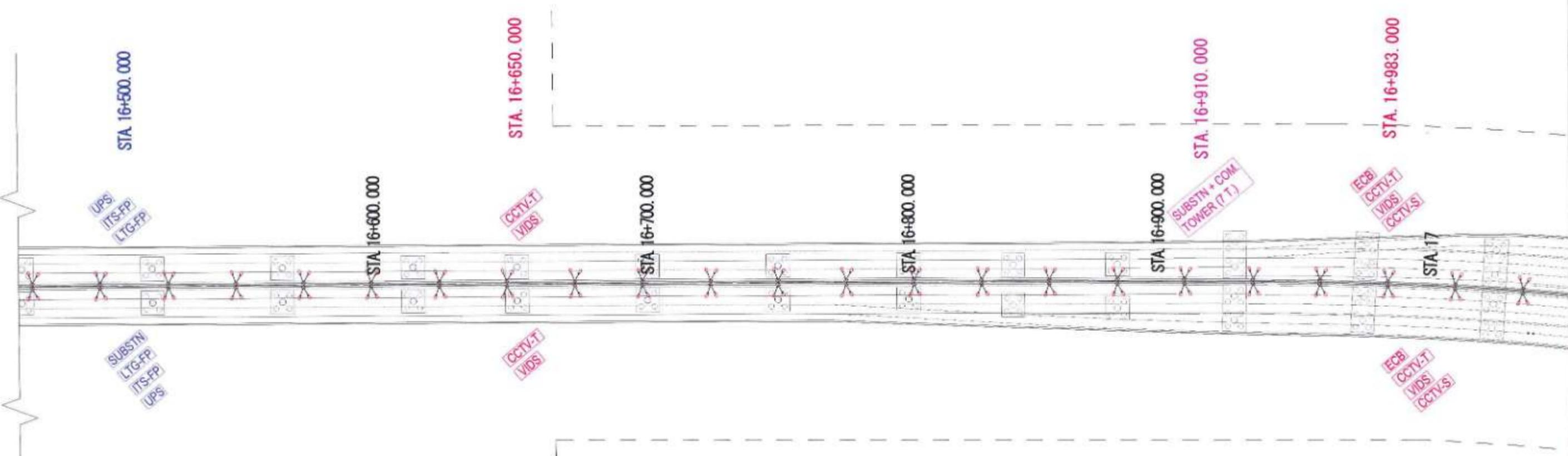
NAME	SIGN
DRAWN BY	PO
CHECKED BY	SH A BP
APPROVED BY	TKB



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 16+000 TO CH 16+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (33/44)	A1	0

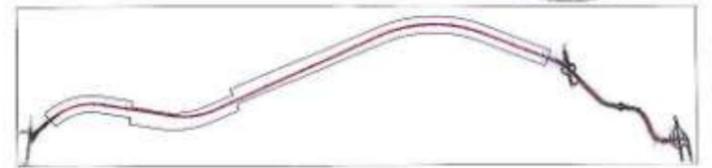


PLAN

LEGEND :

VMS	Variable Message Sign	Lighting pole
CCTV-T	CCTV-Traffic	ITS feeder pillar
CCTV-S	CCTV-Security	Lighting feeder pillar
ATCC	Automatic Counter Classifier	Uninterrupted Power Supply
MET	Meteorological Data System	High Mast
ECB	Emergency Call Box	
VIDS	Video incident detection system	

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KEY PLAN

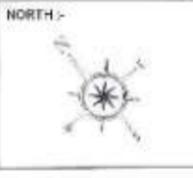
NAME	DATE
DRAWN BY	PD
CHECKED BY	SN & NP
APPROVED BY	THS



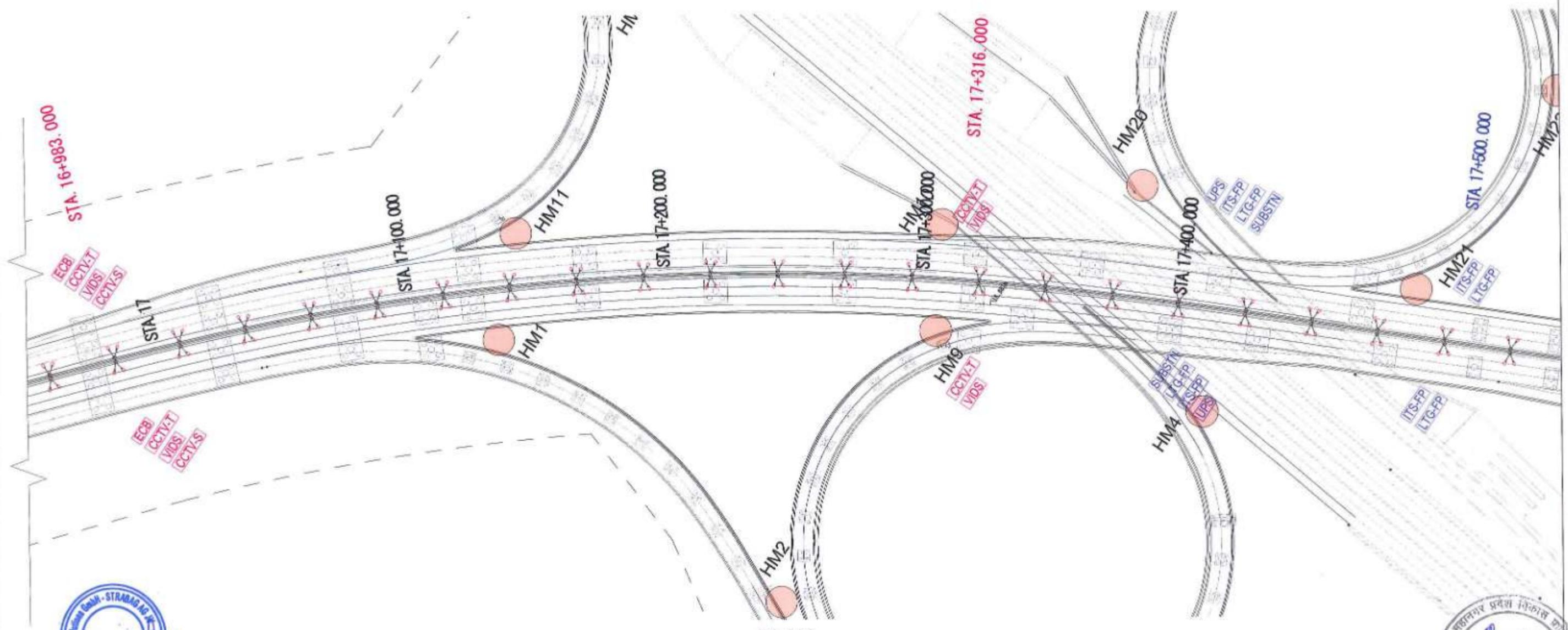
PROJECT -

MUMBAI TRANS HARBOUR LINK PROJECT

PACKAGE 4 - TENDER DRAWING



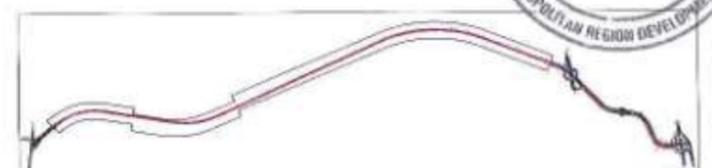
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GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 16+500 TO CH 17+000			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (34/44)	A1	0



PLAN

- NOTES:
1. All dimensions are in mm and are indicative. The dimensions are to be read and not scaled or measured from the drawings.
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- LEGEND:
- VMS Variable Message Sign
 - CCTV-T CCTV-Traffic
 - CCTV-S CCTV-Security
 - ATCC Automatic Counter Classifier
 - MET Meteorological Data System
 - ECB Emergency Call Box
 - VIDS Video incident detection system
 - Lighting pole
 - ITS-FP ITS feeder pillar
 - LTG-FP Lighting feeder pillar
 - UPS Uninterrupted Power Supply
 - High Mast



KEY PLAN

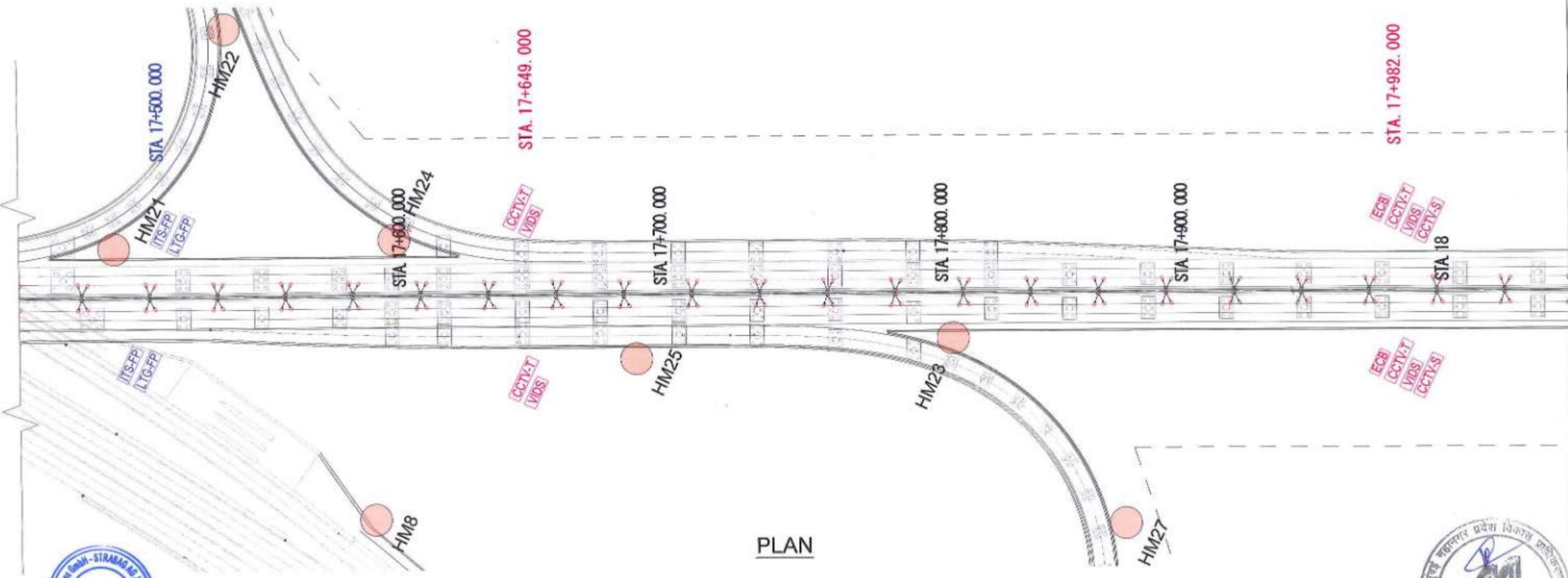
NAME	SIGN
DRAWN BY	PG
CHECKED BY	SH & SP
APPROVED BY	THB



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 17+000 TO CH 17+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (35/44)	A1	0

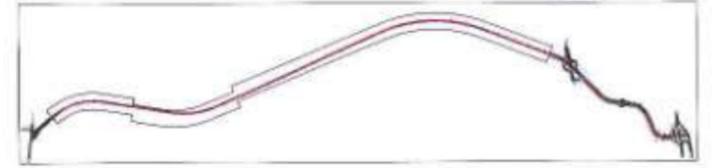


PLAN



- LEGEND:**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
 - [Lighting pole] Lighting pole
 - [ITS-FP] ITS feeder pillar
 - [LTG-FP] Lighting feeder pillar
 - [UPS] Uninterrupted Power Supply
 - [High Mast] High Mast

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KEY PLAN

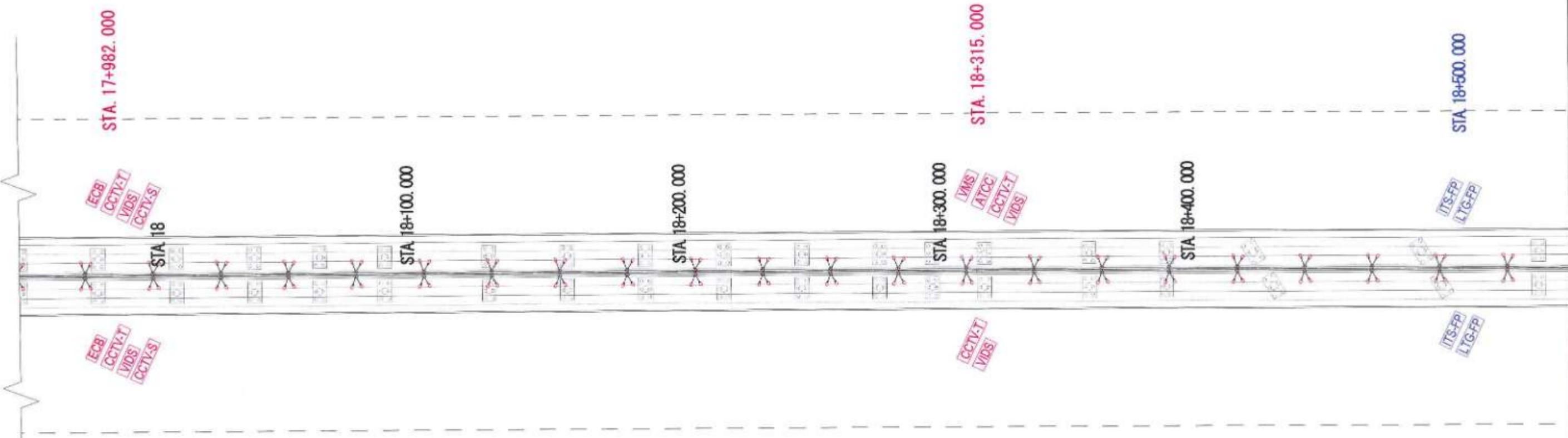
NAME	SIGN
DRAWN BY: PG	
CHECKED BY: SN & SP	
APPROVED BY: TYS	



PROJECT - **MUMBAI TRANS HARBOUR LINK PROJECT PACKAGE 4 - TENDER DRAWING**



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 17+500 TO CH 18+000			
DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (36/44)	PAPER SIZE: A1	REV: 0

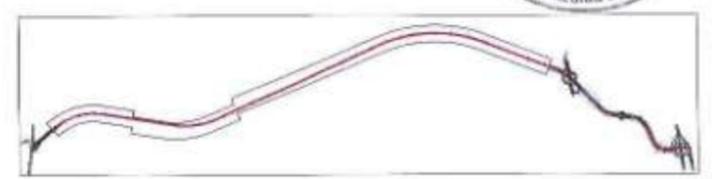


PLAN



- LEGEND :**
- VMS Variable Message Sign
 - CCTV-T CCTV-Traffic
 - CCTV-S CCTV-Security
 - ATCC Automatic Counter Classifier
 - MET Meteorological Data System
 - ECB Emergency Call Box
 - VIDS Video incident detection system
 - Lighting pole
 - ITS-FP ITS feeder pillar
 - LTG-FP Lighting feeder pillar
 - UPS Uninterrupted Power Supply
 - High Mast

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KEY PLAN

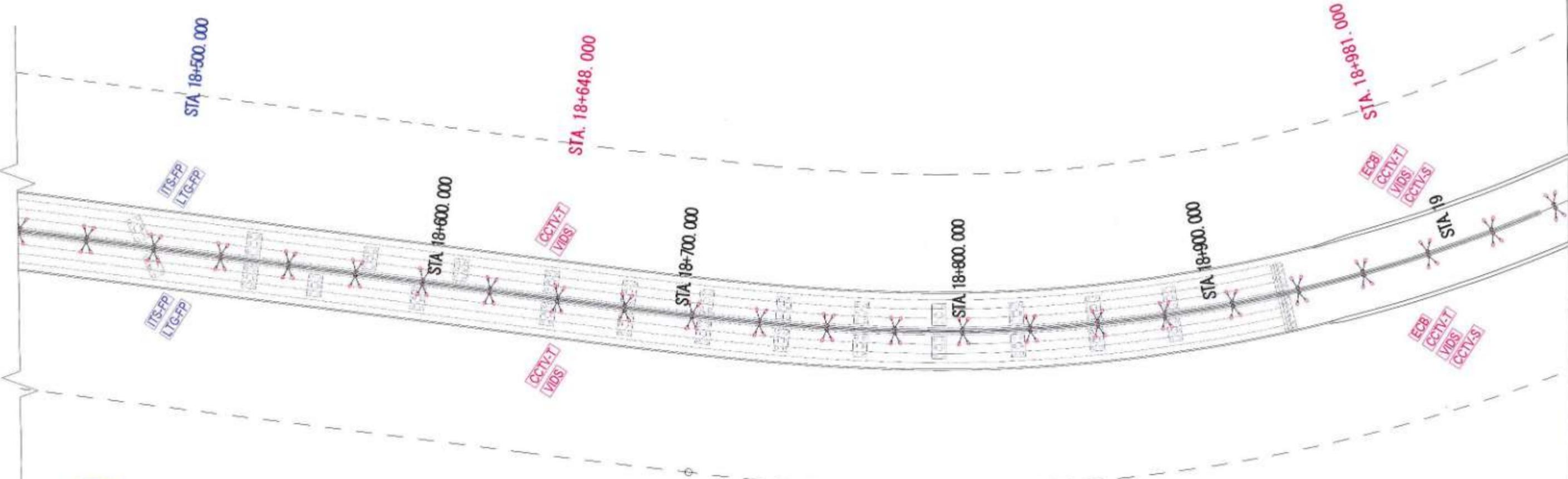
NAME	SIGN
DRAWN BY	JG
CHECKED BY	SN & SP
APPROVED BY	YS



PROJECT -
**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**



TITLE - GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 18+000 TO CH 18+500			
DATE 10.04.2021	DRAWING NO. P4 - CO - 102 (37/44)	PAPER SIZE A1	REV. 0



PLAN

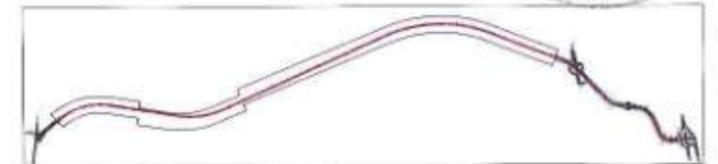


LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole symbol] Lighting pole
- [ITS-FP] ITS feeder pillar
- [LGT-FP] Lighting feeder pillar
- [UPS symbol] Uninterrupted Power Supply
- [High Mast symbol] High Mast

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KEY PLAN

NAME	DESIGN
DRAWN BY	PG
CHECKED BY	SV & SP
APPROVED BY	THB



PROJECT :-

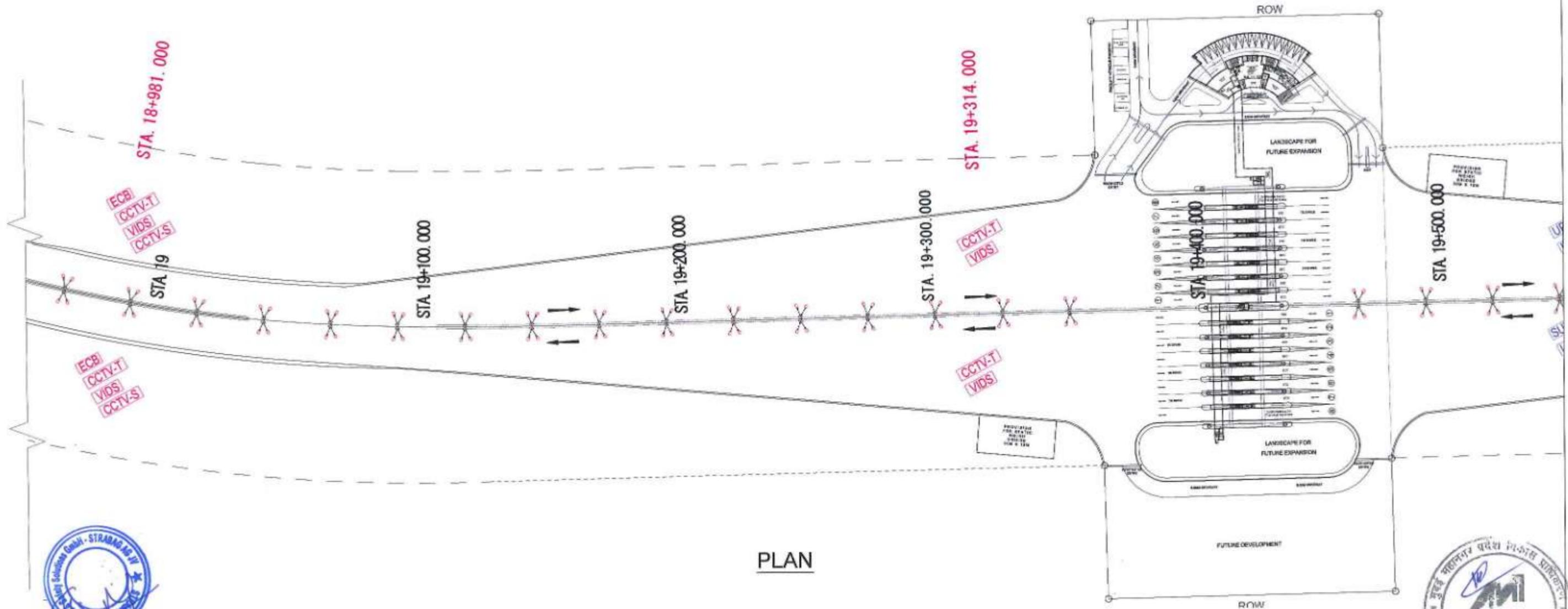
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH :-



TITLE :-
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES
(ITS & ELECTRICAL) ON THE BRIDGE
FROM CH 18+500 TO CH 19+000

DATE	DRAWING NO	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (38/44)	A1	0



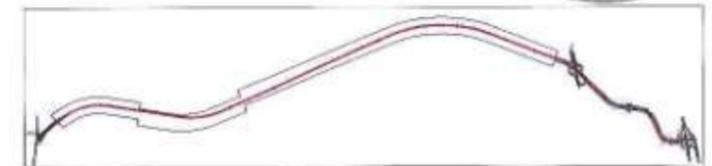
PLAN



LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole]
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast]

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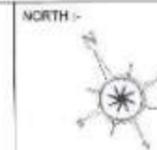


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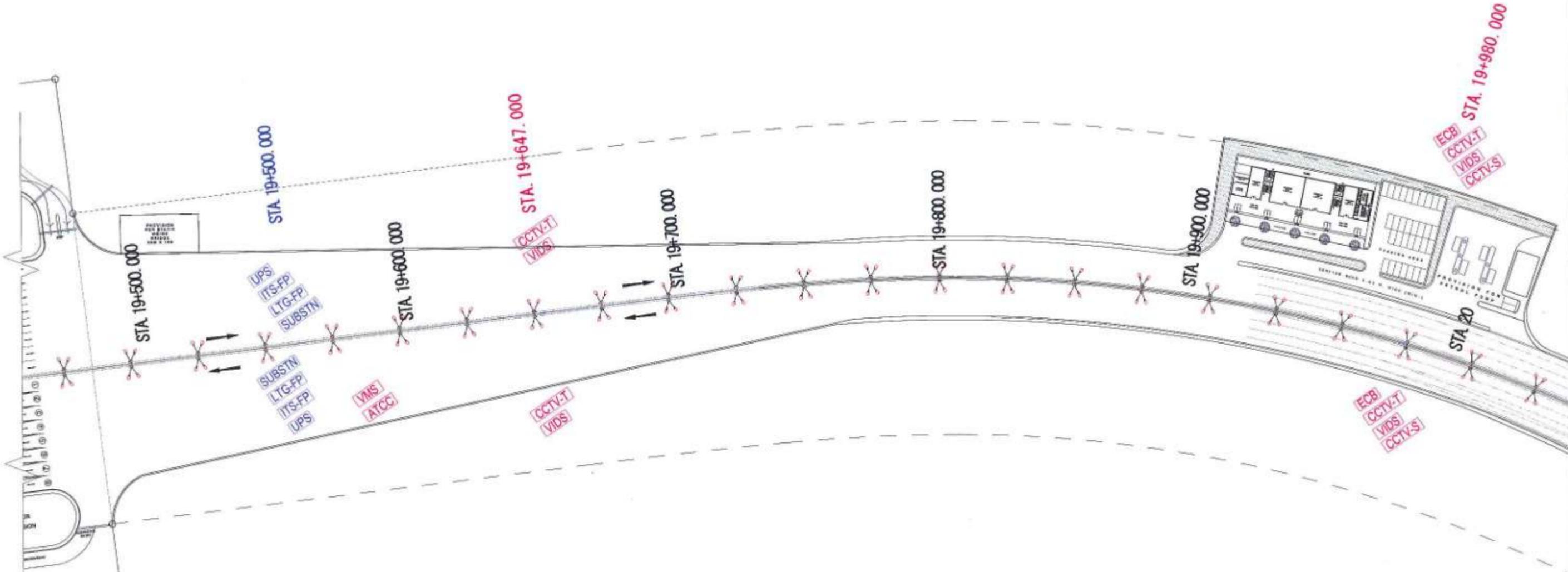
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DRAWN BY	PG
CHECKED BY	SA & SP
APPROVED BY	TS



PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE -			
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 19+000 TO CH 19+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (39/44)	A1	0



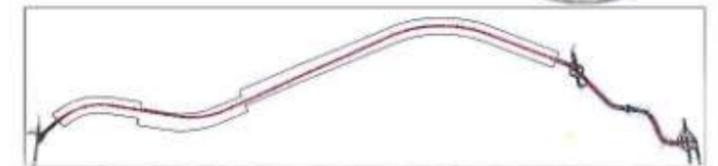
PLAN

LEGEND :

- VMS Variable Message Sign
- CCTV-T CCTV-Traffic
- CCTV-S CCTV-Security
- ATCC Automatic Counter Classifier
- MET Meteorological Data System
- ECB Emergency Call Box
- VIDS Video incident detection system
- Lighting pole
- ITS-FP ITS feeder pillar
- LTG-FP Lighting feeder pillar
- UPS Uninterrupted Power Supply
- High Mast

NOTES :

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5. The sectional details for Street Pole Lights shall be referred as per Drawing reference no. P4 - ELE - 004



KEY PLAN

NAME	SIGN
DRAWN BY	PG
CHECKED BY	SN & SP
APPROVED BY	THS



PROJECT :-

**MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING**

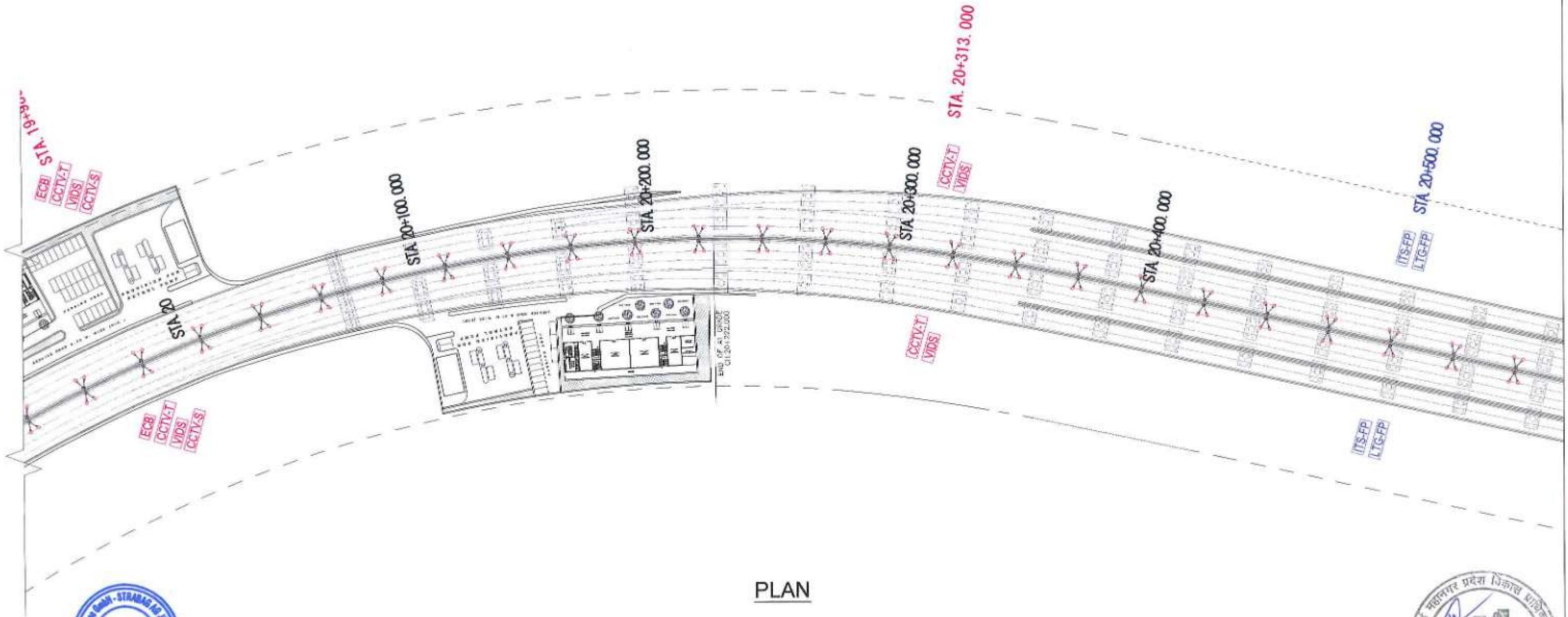
NORTH :-



TITLE :-

**GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES
(ITS & ELECTRICAL) ON THE BRIDGE
FROM CH 19+500 TO CH 20+000**

DATE	DRAWING NO.	PAPER SIZE	REV
10.04.2021	P4 - CO - 102 (40/44)	A1	0

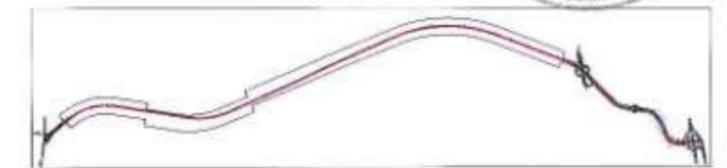


PLAN

LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole]
- [ITS-FP] ITS feeder pillar
- [LTG-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast]

- NOTES :
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KEY PLAN

NAME	DATE
DRAWN BY: PG	
CHECKED BY: SN & SP	
APPROVED BY: THS	



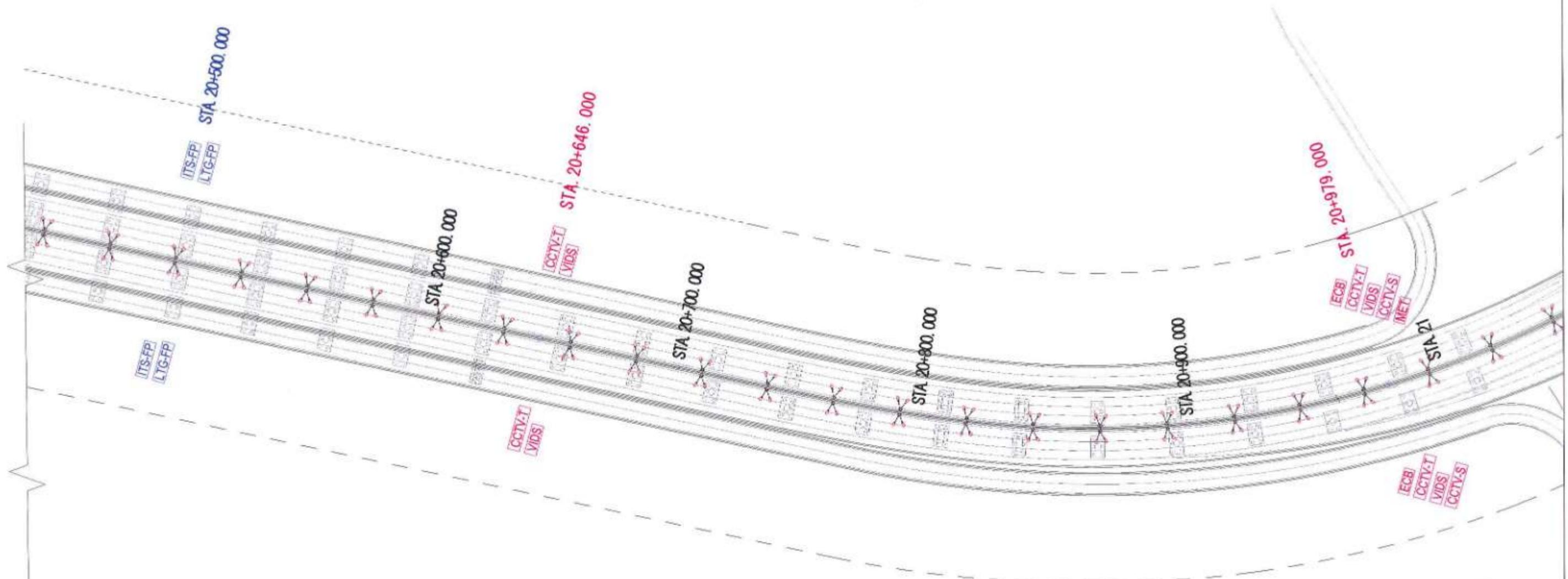
PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE -			
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 20+000 TO CH 20+500			
DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (41/44)	PAPER SIZE: A1	REV: 0

SEWRI(MUMBAI)

001961
CHIRLE (NAVI MUMBAI)



PLAN

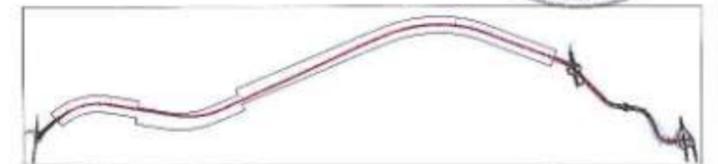


LEGEND :

- [VMS] Variable Message Sign
- [CCTV-T] CCTV-Traffic
- [CCTV-S] CCTV-Security
- [ATCC] Automatic Counter Classifier
- [MET] Meteorological Data System
- [ECB] Emergency Call Box
- [VIDS] Video incident detection system
- [Lighting pole] Lighting pole
- [ITS-FP] ITS feeder pillar
- [LGT-FP] Lighting feeder pillar
- [UPS] Uninterrupted Power Supply
- [High Mast] High Mast

NOTES :

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KEY PLAN

DATE	BY	CHKD
10.04.2021	PG	
	SH & SP	
	THD	



PROJECT >

MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

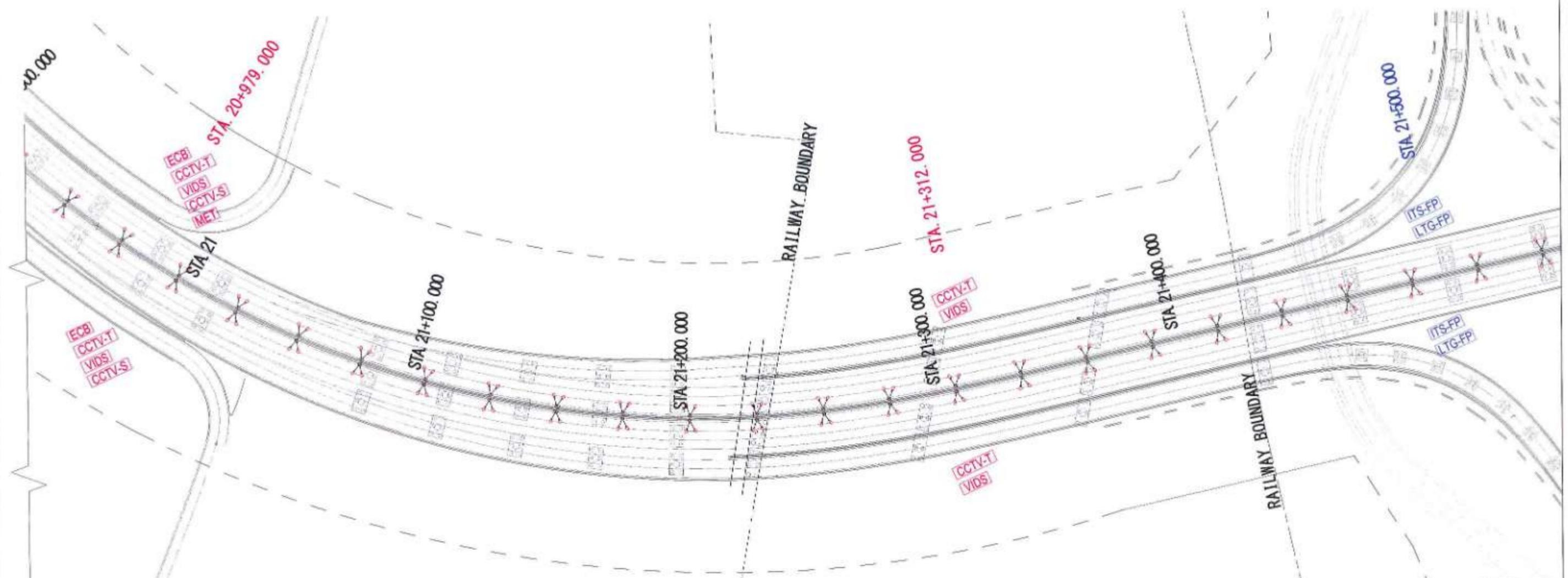
NORTH >



TITLE >

GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES
(ITS & ELECTRICAL) ON THE BRIDGE
FROM CH 20+500 TO CH 21+000

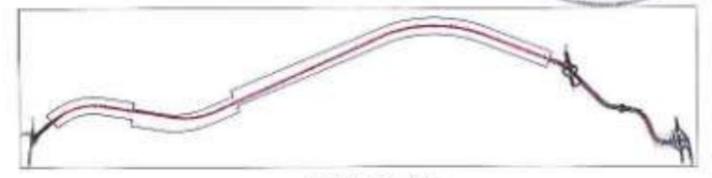
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (42/44)	A1	0



PLAN

- LEGEND :**
- [VMS] Variable Message Sign
 - [CCTV-T] CCTV-Traffic
 - [CCTV-S] CCTV-Security
 - [ATCC] Automatic Counter Classifier
 - [MET] Meteorological Data System
 - [ECB] Emergency Call Box
 - [VIDS] Video incident detection system
 - [Lighting pole]
 - [ITS-FP] ITS feeder pillar
 - [LTG-FP] Lighting feeder pillar
 - [UPS] Uninterrupted Power Supply
 - [High Mast]

- NOTES :**
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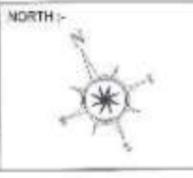


KEY PLAN

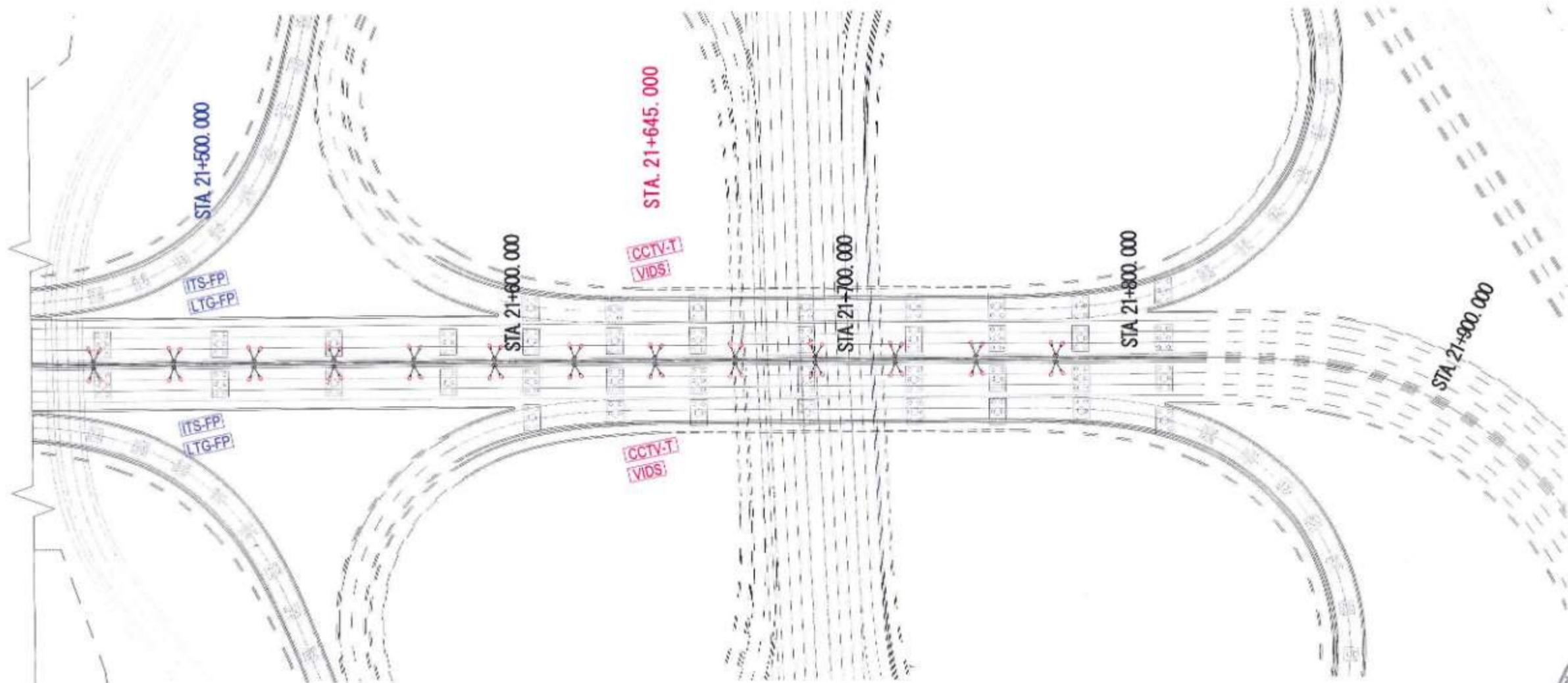
NAME	SIGN
DRAWN BY	PO
CHECKED BY	SN & SP
APPROVED BY	THB



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :- GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL) ON THE BRIDGE FROM CH 21+000 TO CH 21+500			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 102 (43/44)	A1	0



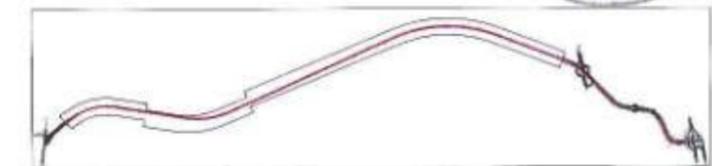
PLAN

NOTES:

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- The sectional details for Street Pole Lights shall be referred as per Drawing reference no. P4 - ELE - 004

LEGEND :

- | | | | |
|----------|---------------------------------|-----------------|----------------------------|
| [VMS] | Variable Message Sign | [Lighting pole] | Lighting pole |
| [CCTV-T] | CCTV-Traffic | [ITS-FP] | ITS feeder pillar |
| [CCTV-S] | CCTV-Security | [LTG-FP] | Lighting feeder pillar |
| [ATCC] | Automatic Counter Classifier | [UPS] | Uninterrupted Power Supply |
| [MET] | Meteorological Data System | [High Mast] | High Mast |
| [ECB] | Emergency Call Box | | |
| [VIDS] | Video incident detection system | | |



KEY PLAN



PROJECT :-

MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING

NORTH ->

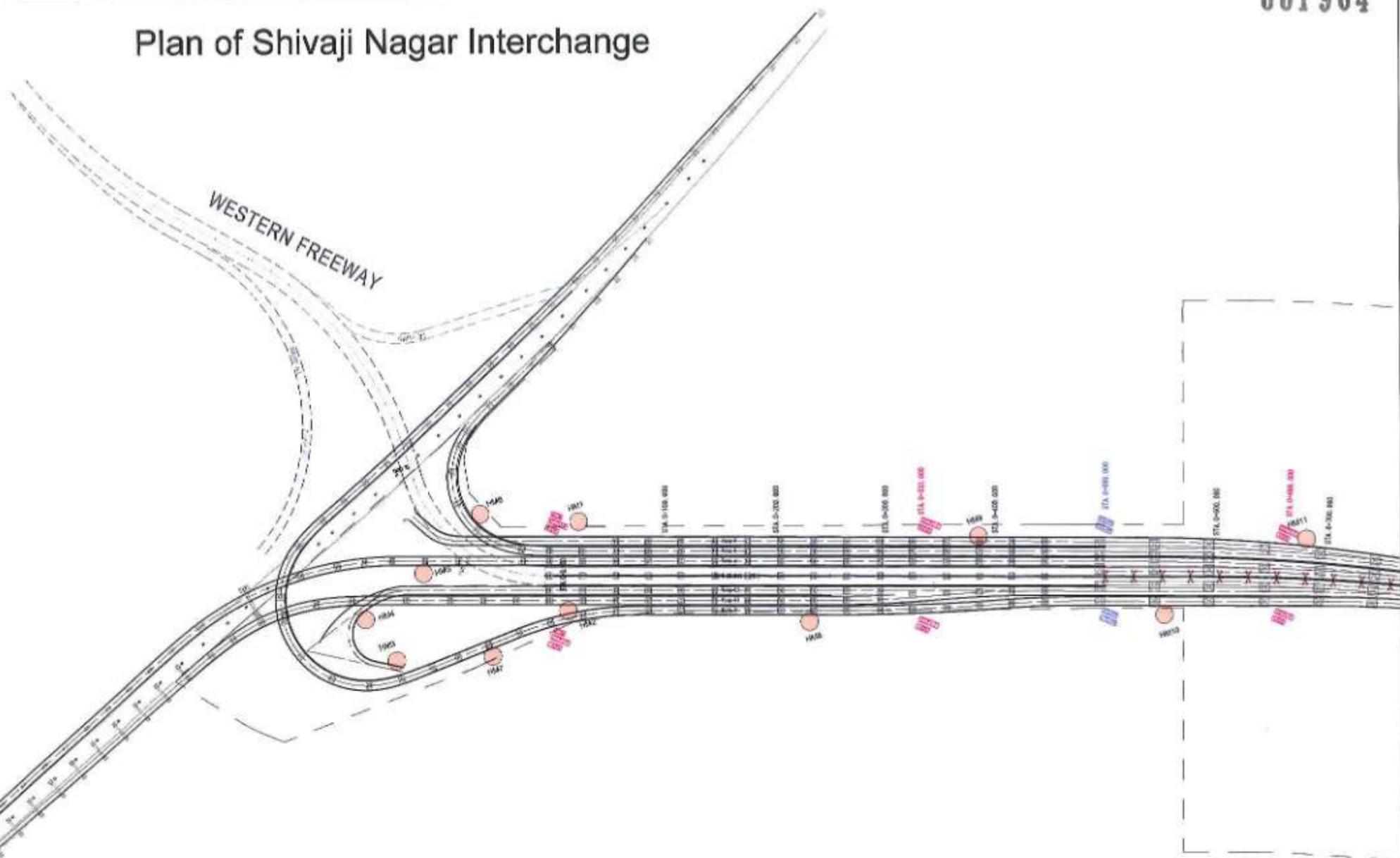


TITLE:-
GENERAL VIEW OF MAIN LINE FOR CO-ORDINATED SERVICES
(ITS & ELECTRICAL) ON THE BRIDGE
FROM CH 21+500 TO CH 21+800

DATE: 10.04.2021	DRAWING NO: P4 - CO - 102 (44/44)	PAPER SIZE: A1	REV: 0
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NAME	SIGN
DRAWN BY: PG	
CHECKED BY: SH & SP	
APPROVED BY: THB	

Plan of Shivaji Nagar Interchange



NOTES :

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LEGEND :

- VMS Variable Message Sign
- CCTV-T CCTV-Traffic
- CCTV-S CCTV-Security
- ATCC Automatic Counter Classifier
- MET Meteorological Data System
- ECB Emergency Call Box
- VIDS Video incident detection system
- Lighting pole
- ITS-FP ITS feeder pillar
- LTG-FP Lighting feeder pillar
- UPS Uninterrupted Power Supply
- High Mast

NAME	SIGN
DRAWN BY	PO
CHECKED BY	SH & SP
APPROVED BY	TKS

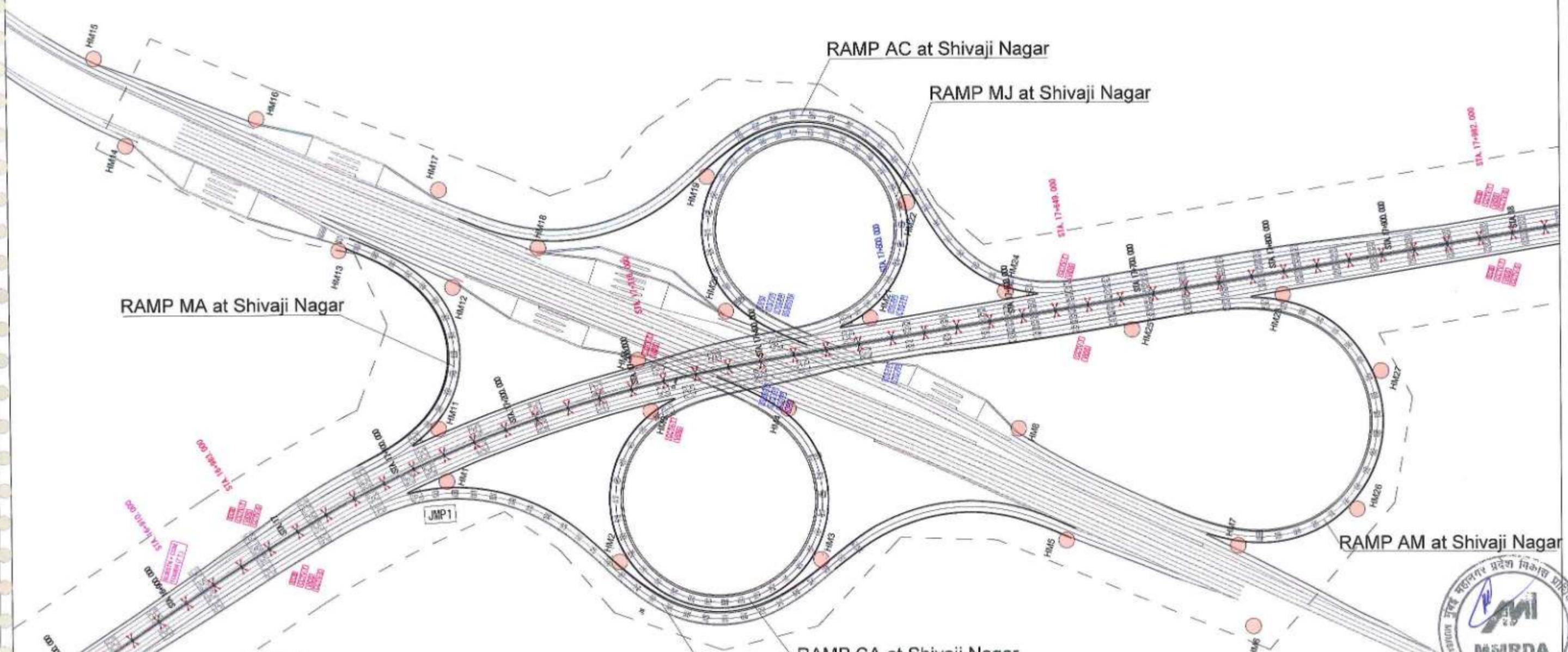


PROJECT :- **MUMBAI TRANS HARBOUR LINK PROJECT**
PACKAGE 4 - TENDER DRAWING



TITLE :-			
GENERAL VIEW OF RAMP AT SEWRI IC FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL)			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 103	A1	0

Plan of Shivaji Nagar Interchange



RAMP MA at Shivaji Nagar

RAMP AC at Shivaji Nagar

RAMP MJ at Shivaji Nagar

RAMP AM at Shivaji Nagar

RAMP CA at Shivaji Nagar

RAMP JM at Shivaji Nagar

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LEGEND :

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- CCTV-T CCTV-Traffic
- CCTV-S CCTV-Security
- ATCC Automatic Counter Classifier
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- ECB Emergency Call Box
- VIDS Video incident detection system
- Lighting pole
- ITS-FP ITS feeder pillar
- LTG-FP Lighting feeder pillar
- UPS Uninterrupted Power Supply
- High Mast



NAME	SIGN
DRAWN BY: PO	
CHECKED BY: SH & SP	
APPROVED BY: TNS	

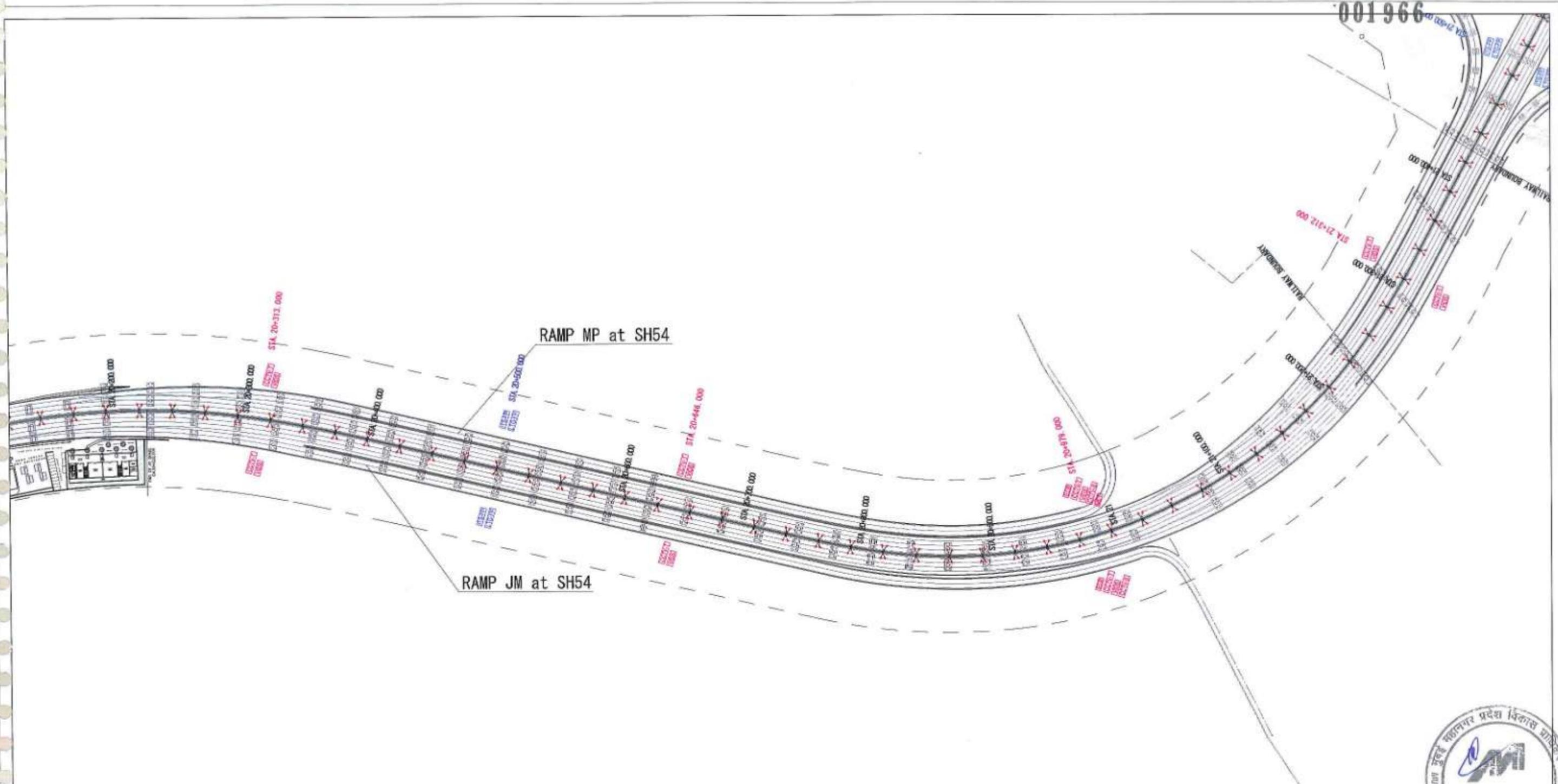


PROJECT -
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE -			
GENERAL VIEW OF RAMP AT SHIVAJINAGAR IC FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL)			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 104	A1	0

001966



NOTES :

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LEGEND :

- | | | | |
|---------------|---------------------------------|---------------|----------------------------|
| VMS | Variable Message Sign | | Lighting pole |
| CCTV-T | CCTV-Traffic | ITS-FP | ITS feeder pillar |
| CCTV-S | CCTV-Security | LTG-FP | Lighting feeder pillar |
| ATCC | Automatic Counter Classifier | UPS | Uninterrupted Power Supply |
| MET | Meteorological Data System | | High Mast |
| ECB | Emergency Call Box | | |
| VIDS | Video incident detection system | | |

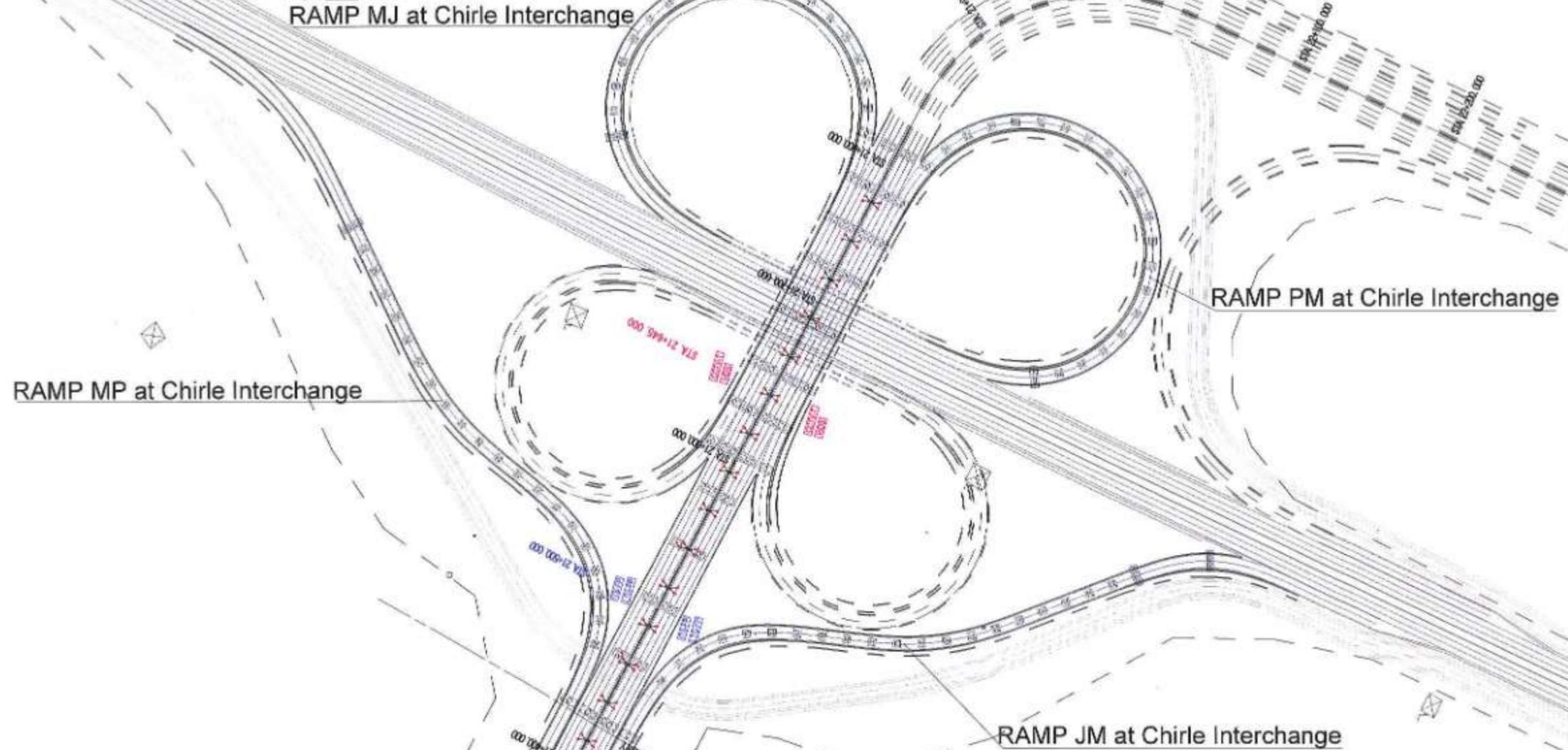
NAME	SIGN
DRAWN BY	PG
CHECKED BY	SP & SP
APPROVED BY	TKS



PROJECT :-
MUMBAI TRANS HARBOUR LINK PROJECT
PACKAGE 4 - TENDER DRAWING



TITLE :-			
GENERAL VIEW OF RAMP AT SH54 IC FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL)			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 105	A1	0



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LEGEND :

VMS	Variable Message Sign		Lighting pole
CCTV-T	CCTV-Traffic	ITS-FP	ITS feeder pillar
CCTV-S	CCTV-Security	LTG-FP	Lighting feeder pillar
ATCC	Automatic Counter Classifier	UPS	Uninterrupted Power Supply
MET	Meteorological Data System		High Mast
ECB	Emergency Call Box		
VIDS	Video incident detection system		

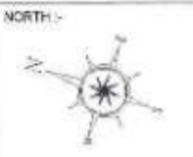
NAME	SIGN
DRAWN BY	PG
CHECKED BY	SN & SP
APPROVED BY	TKS



PROJECT -

MUMBAI TRANS HARBOUR LINK PROJECT

PACKAGE 4 - TENDER DRAWING



TITLE -			
GENERAL VIEW OF RAMP AT CHIRLE IC FOR CO-ORDINATED SERVICES (ITS & ELECTRICAL)			
DATE	DRAWING NO.	PAPER SIZE	REV.
10.04.2021	P4 - CO - 106	A1	0