

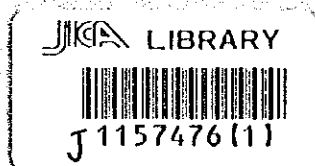
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
NATIONAL CAPITAL REGION PLANNING BOARD (NCRPB)  
GOVERNMENT OF INDIA

THE FEASIBILITY STUDY  
ON THE CONSTRUCTION OF EXPRESSWAYS  
IN THE NATIONAL CAPITAL REGION IN INDIA

FINAL REPORT

**DRAWINGS**

MARCH 2000



PACIFIC CONSULTANTS INTERNATIONAL

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JICA  
THE FEASIBILITY STUDY ON THE CONSTRUCTION OF  
EXPRESSWAYS IN THE NATIONAL CAPITAL REGION IN INDIA  
FINAL REPORT DRAWINGS  
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**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
NATIONAL CAPITAL REGION PLANNING BOARD (NCRPB)  
GOVERNMENT OF INDIA**

**THE FEASIBILITY STUDY  
ON THE CONSTRUCTION OF EXPRESSWAYS  
IN THE NATIONAL CAPITAL REGION IN INDIA**

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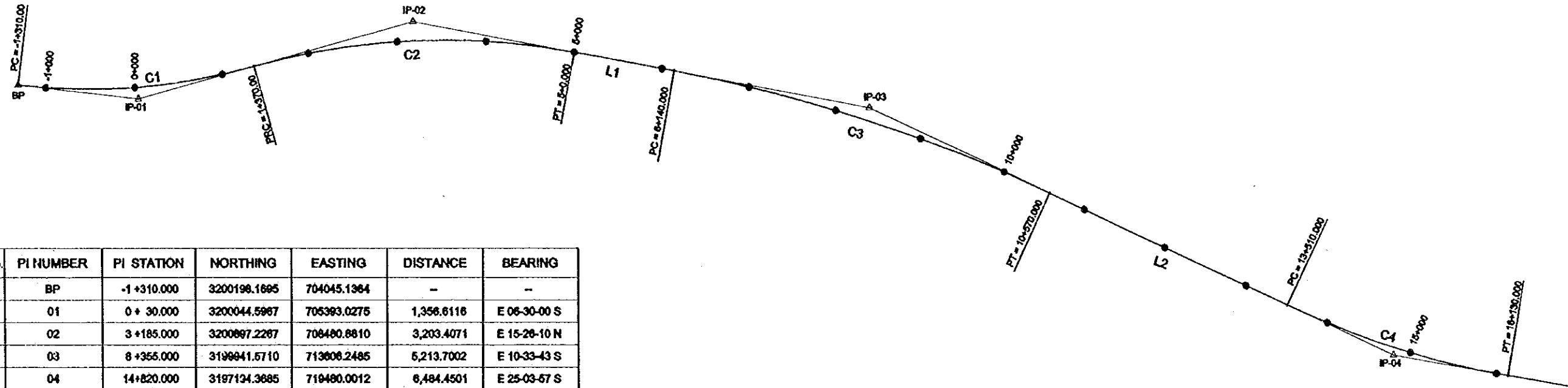
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PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	1/3	000
DESIGN ELEMENTS OF HORIZONTAL ALIGNMENT		SCALE:H=1:50000	



SHEET No.	PI NUMBER	PI STATION	NORTHING	EASTING	DISTANCE	BEARING
1	BP	-1+310.000	3200198.1695	704045.1364	-	-
1	01	0+30.000	3200044.5967	705393.0275	1,356.6116	E 06-30-00 S
1	02	3+185.000	3200897.2287	706480.8810	3,203.4071	E 15-26-10 N
1	03	8+355.000	3199941.5710	713608.2485	5,213.7002	E 10-33-43 S
1,2	04	14+820.000	3197134.3685	719480.0012	6,484.4501	E 25-03-57 S
2	05	21+650.000	3195980.3493	726327.0351	6,953.8274	E 10-03-16 S
2,3	06	28+360.000	3192353.5794	729563.8724	4,861.1290	E 48-15-08 S
2,3	07	29+446.552	3191253.0236	732545.6966	3,178.4448	E 20-15-31 S
3	08	34+401.830	3189901.8517	735068.8924	5,039.8077	E 59-41-38 S
3	09	36+638.292	3185731.7313	737341.0093	2,538.0004	E 27-27-25 S
3	10	40+367.189	3182185.9407	738150.1858	3,636.9490	E 77-08-41 S
3	EP	41+519.196	3181098.5615	737877.1310	1,185.8039	E 113-30-41 S

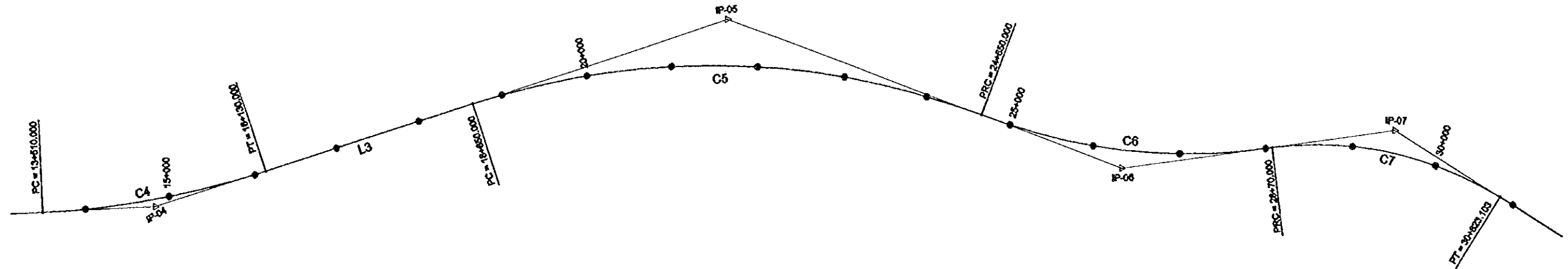
SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	C1	2,680.000	7,000.000
1	C2	3,630.000	8,000.000
1	C3	4,430.000	17,500.000
1,2	C4	2,620.000	10,000.000
2	C5	6,000.000	9,000.000
2,3	C6	3,420.000	7,000.000
2,3	C7	2,753.103	4,000.000
3	C8	1,557.817	3,500.000
3	C9	1,844.048	2,500.000
3	C10	1,570.818	3,000.000

SHEET No.	LINE	LENGTH(m)	START N	START E	BEARING
1	L1	1,140.000	3200558.7146	710296.3874	985.8465
1	L2	2,940.000	3198898.1204	715623.4261	1426.7647
2	L3	2,520.000	3198964.3478	720777.3124	985.8465
3	L4	2,388.490	3190015.3402	733269.1224	985.8465
3	L5	1,164.131	3184444.5432	737834.7555	985.8465
3	L6	33.286	3181098.5615	737877.1310	985.8465

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
3	SP1	411.429	-3,500.000
3	SP2	411.429	3,500.000
3	SP3	324.000	2,500.000
3	SP4	324.000	-2,500.000
3	SP5	333.000	3,000.000
3	SP6	333.000	-3,000.000



PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	2/3	001
DESIGN ELEMENTS OF HORIZONTAL ALIGNMENT		SCALE:H=1:50000	



SHEET No.	PI NUMBER	PI STATION	NORTHING	EASTING	DISTANCE	BEARING
1	BP	-1 +310.000	3200198.1695	704045.1364	--	--
1	01	0 + 30.000	3200044.6967	705393.0275	1,356.6116	E 08-30-00 S
1	02	3 +185.000	3200667.2267	706480.8810	3,203.4071	E 15-26-10 N
1	03	8 +355.000	3199941.5710	713606.2485	5,213.7002	E 10-33-43 S
1,2	04	14+820.000	3197194.3665	719480.0012	6,484.4501	E 25-03-57 S
2	05	21+650.000	3195690.3493	726327.0351	6,953.8274	E 10-03-16 S
2,3	06	28+380.000	3192353.5794	728563.8724	4,861.1280	E 48-15-08 S
2,3	07	29+446.552	3191253.0236	732545.6966	3,178.4448	E 20-15-31 S
3	08	34+401.930	3189901.9517	735068.8824	5,039.8077	E 59-41-38 S
3	09	36+838.292	3185731.7313	737341.0093	2,538.0004	E 27-27-25 S
3	10	40+367.189	3182195.9407	738150.1859	3,636.8490	E 77-08-41 S
3	EP	41+519.198	3181098.5815	737677.1310	1,185.8039	E 113-30-41 S

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	C1	2,880.000	7,000.000
1	C2	3,830.000	8,000.000
1	C3	4,430.000	17,500.000
1,2	C4	2,820.000	10,000.000
2	C5	6,000.000	9,000.000
2,3	C6	3,420.000	7,000.000
2,3	C7	2,753.103	4,000.000
3	C8	1,657.817	3,500.000
3	C9	1,844.048	2,500.000
3	C10	1,570.818	3,000.000

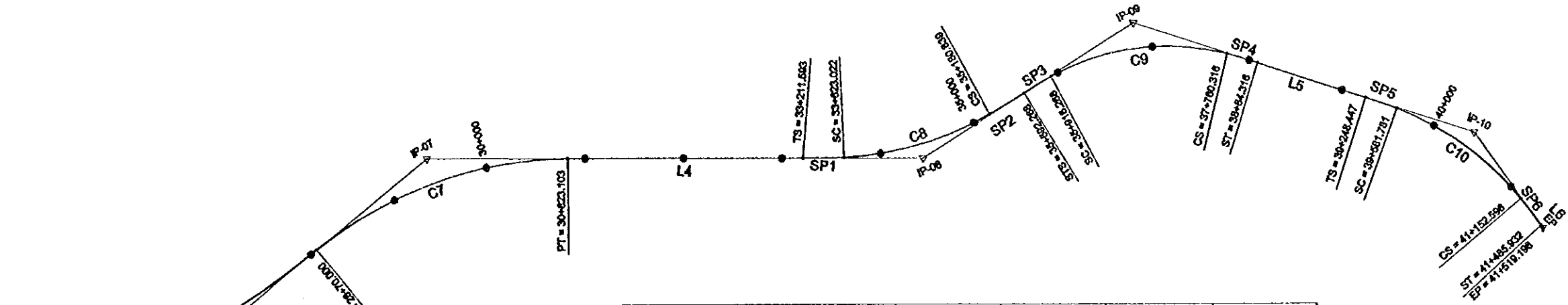
SHEET No.	LINE	LENGTH(m)	START N	START E	BEARING
1	L1	1,140.000	3200558.7146	710296.3874	965.8465
1	L2	2,940.000	3198998.1204	715623.4261	1426.7647
2	L3	2,620.000	3196664.3476	720777.3124	965.8465
3	L4	2,368.490	3190015.3402	733269.1224	965.8465
3	L5	1,164.131	3184444.5432	737834.7555	965.8465
3	L6	33.266	3181098.5815	737677.1310	965.8465

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
3	SP1	411.429	-3,500.000
3	SP2	411.429	3,500.000
3	SP3	324.000	2,500.000
3	SP4	324.000	-2,500.000
3	SP5	333.000	3,000.000
3	SP6	333.000	-3,000.000





PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	3/3	002
DESIGN ELEMENTS OF HORIZONTAL ALIGNMENT		SCALE:H=1:50000	



SHEET No.	PI NUMBER	PI STATION	NORTHING	EASTING	DISTANCE	BEARING
1	BP	-1 +310.000	3200198.1695	704045.1364	--	--
1	01	0 + 30.000	3200044.6967	705393.0275	1,356.6118	E 06-30-00 S
1	02	3 +185.000	3200897.2287	706480.8810	3,203.4071	E 15-28-10 N
1	03	8 +355.000	3199941.5710	713608.2485	5,213.7002	E 10-33-43 S
1,2	04	14+820.000	3197194.3685	719480.0012	6,484.4501	E 25-03-57 S
2	05	21+850.000	3195980.3493	726327.0351	6,953.8274	E 10-03-16 S
2,3	06	28+360.000	3192353.5794	729563.8724	4,861.1290	E 48-15-06 S
2,3	07	29+448.652	3191253.0236	732545.6996	3,178.4448	E 20-15-31 S
3	08	34+401.830	3186901.9517	735068.8924	5,039.8077	E 59-41-38 S
3	09	36+638.292	3185731.7313	737341.0093	2,538.0004	E 27-27-25 S
3	10	40+367.189	3182185.9407	738150.1859	3,636.9490	E 77-08-41 S
3	EP	41+519.198	3181098.5815	737677.1310	1,185.8039	E 113-30-41 S

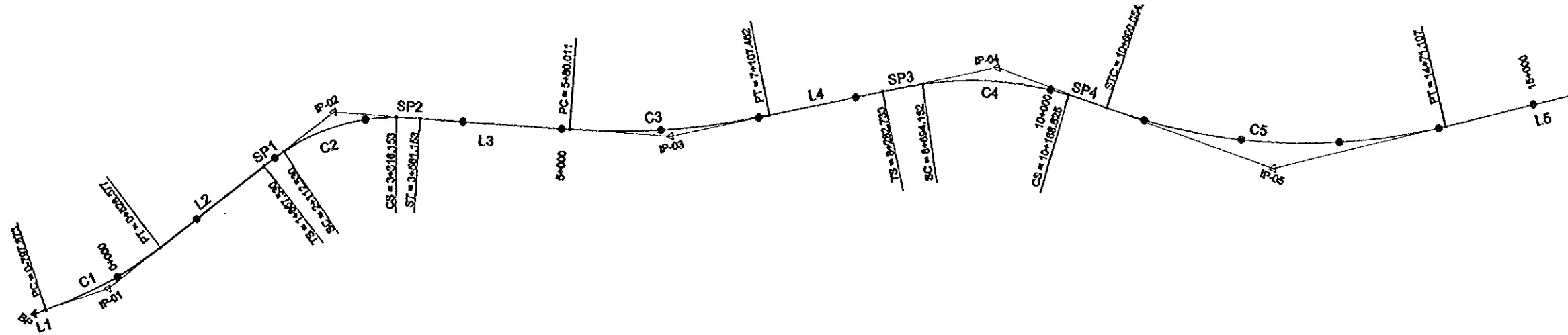
SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	C1	2,680.000	7,000.000
1	C2	3,630.000	8,000.000
1	C3	4,430.000	17,500.000
1,2	C4	2,620.000	10,000.000
2	C5	6,000.000	9,000.000
2,3	C6	3,420.000	7,000.000
2,3	C7	2,753.103	4,000.000
3	C8	1,567.817	3,500.000
3	C9	1,844.048	2,500.000
3	C10	1,570.818	3,000.000

SHEET No.	LINE	LENGTH(m)	START N	START E	BEARING
1	L1	1,140.000	3200558.7146	710296.3874	985.8465
1	L2	2,940.000	3198996.1204	715623.4261	1426.7647
2	L3	2,520.000	3196964.3476	720777.3124	985.8465
3	L4	2,388.490	3190015.3402	733269.1224	985.8465
3	L5	1,164.131	3184444.5432	737634.7555	985.8465
3	L6	33.268	3181098.5815	737677.1310	985.8465

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
3	SP1	411.429	-3,500.000
3	SP2	411.429	3,500.000
3	SP3	324.000	2,500.000
3	SP4	324.000	-2,500.000
3	SP5	333.000	3,000.000
3	SP6	333.000	-3,000.000



PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
GHAZIABAD-MEERUT EXPRESSWAY	NCR	1/3	003
DESIGN ELEMENTS OF HORIZONTAL ALIGNMENT		SCALE:H=1:50000	



SHEET No.	PI NUMBER	PI STATION	NORTHING	EASTING	DISTANCE	BEARING
1	BP	0+928.604	3172774.8482	734548.2380		
1	01	0+134.648	3173541.9020	734775.4503	800.000	N 16-30-00 E
1	02	2+714.342	3178428.1863	734649.4333	2,889.014	N 02-30-00W
1	03	6+093.737	3179065.6111	736801.3896	3,419.492	N 39-00-00 E
1	04	9+441.394	3182183.7875	738149.2536	3,378.683	N 23-30-41 E
1,2	05	12+355.581	3183699.0210	740572.7633	2,969.072	N 54-42-41 E
2	06	18+231.179	3189542.3157	742803.1354	6,068.058	N 21-33-55 E
2,3	07	23+307.015	3191186.5326	747830.4795	5,289.389	N 71-53-22 E
3	08	30+037.015	3197338.2397	750837.8868	6,847.481	N 26-03-10 E
3	09	35+545.911	3201376.2586	754751.1303	5,623.064	N 44-06-03 E
3	10	40+023.820	3205916.9522	753781.9246	4,642.979	N 12-02-56 E
3	EP	42+021.062	3207779.9206	754694.4066	2,074.434	N 26-05-44W

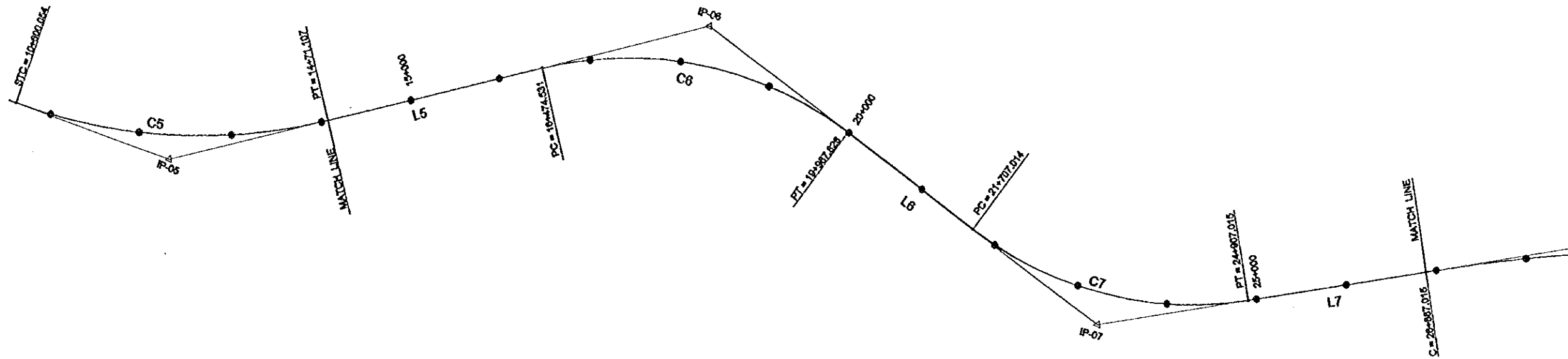
SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	C1	1,326.450	4,000.000
1	C2	1,203.623	2,000.000
1	C3	2,027.451	7,500.000
1	C4	1,494.463	3,500.000
1,2	C5	3,471.053	6,000.000
2	C6	3,513.295	4,000.000
2,3	C7	3,200.001	4,000.000
3	C8	6,299.999	20,000.000
3	C9	1,640.000	2,000.000
3	C10	3,994.485	6,000.000

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	SP1	245.000	2,000.000
1	SP2	245.000	-2,000.000
1	SP3	411.429	3,500.000
1	SP4	411.429	-3,500.000
3	SP5	320.000	2,000.000
3	SP6	320.000	-2,000.000

SHEET No.	LINE	LENGTH(m)	START N	START E	BEARING
1	L1	130.630	3174210.6354	734746.2528	N 16-30-00 E
1	L2	1,338.953	3180020.8800	737208.2777	N 02-30-00W
1	L3	1,175.272	3185559.6345	741229.0795	N 39-00-00 E
1	L4	2,403.425	3190126.4152	744589.0733	N 23-30-41 E
1,2	L5	1,719.188	3192705.8653	748573.2412	N 21-33-55 E
2	L6	1,980.001	3199619.1926	753048.3578	N 71-53-22 E
2,3	L7	1,218.897	3202577.0887	754494.8147	N 26-03-10 E



PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
GHAZIABAD-MEERUT EXPRESSWAY	NCR	2/3	004
DESIGN ELEMENTS OF HORIZONTAL ALIGNMENT		SCALE:H=1:50000	



SHEET No.	PI NUMBER	PI STATION	NORTHING	EASTING	DISTANCE	BEARING
1	BP	0+928.504	3172774.8462	734548.2380		
1	01	0+134.648	3173541.9020	734775.4503	800.000	N 16-30-00 E
1	02	2+714.342	3178428.1663	734849.4333	2,889.014	N 02-30-00W
1	03	6+093.737	3179085.6111	736801.3898	3,419.492	N 39-00-00 E
1	04	9+441.394	3182183.7976	738149.2536	3,378.683	N 23-30-41 E
1,2	05	12+365.581	3183899.0210	740572.7833	2,989.072	N 54-42-41 E
2	06	18+231.179	3189542.3157	742803.1354	6,068.059	N 21-33-55 E
2,3	07	23+307.015	3191186.5326	747830.4795	5,289.389	N 71-53-22 E
3	08	30+037.015	3197336.2397	750837.8868	6,847.481	N 26-03-10 E
3	09	35+545.911	3201376.2588	754761.1303	5,623.084	N 44-08-03 E
3	10	40+023.820	3205916.9522	753781.8248	4,642.979	N 12-02-58 E
3	EP	42+021.062	3207779.9208	754694.4068	2,074.434	N 26-05-44W

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	C1	1,326.450	4,000.000
1	C2	1,203.623	2,000.000
1	C3	2,027.451	7,500.000
1	C4	1,494.463	3,500.000
1,2	C5	3,471.053	6,000.000
2	C6	3,513.295	4,000.000
2,3	C7	3,200.001	4,000.000
3	C8	6,299.999	20,000.000
3	C9	1,640.000	2,000.000
3	C10	3,994.485	6,000.000

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	SP1	245.000	2,000.000
1	SP2	245.000	-2,000.000
1	SP3	411.429	3,500.000
1	SP4	411.429	-3,500.000
3	SP5	320.000	2,000.000
3	SP6	320.000	-2,000.000

SHEET No.	LINE	LENGTH(m)	START N	START E	BEARING
1	L1	130.630	3174210.6354	734746.2528	N 16-30-00 E
1	L2	1,338.953	3180020.8800	737208.2777	N 02-30-00W
1	L3	1,175.272	3185559.6345	741229.0795	N 39-00-00 E
1	L4	2,403.425	3190126.4152	744589.0733	N 23-30-41 E
1,2	L5	1,718.188	3192705.8653	748573.2412	N 21-33-55 E
2	L6	1,980.001	3199619.1826	753048.3578	N 71-53-22 E
2,3	L7	1,218.897	3202577.0887	754494.8147	N 26-03-10 E



PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
GHAZIABAD-MEERUT EXPRESSWAY	NCR	3/3	005
DESIGN ELEMENTS OF HORIZONTAL ALIGNMENT		SCALE:H=1:50000	

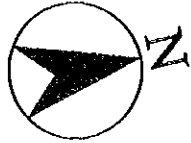


SHEET No.	PI NUMBER	PI STATION	NORTHING	EASTING	DISTANCE	BEARING
1	BP	0+928.504	3172774.8482	734548.2380		
1	01	0+134.848	3173541.9020	734775.4503	800.000	N 16-30-00 E
1	02	2+714.342	3178428.1863	734649.4333	2,889.014	N 02-30-00W
1	03	6+093.737	3179085.6111	736801.3896	3,418.492	N 39-00-00 E
1	04	9+441.394	3182183.7875	738149.2538	3,378.683	N 23-30-41 E
1,2	05	12+355.581	3183899.0210	740572.7833	2,988.072	N 54-42-41 E
2	06	18+231.179	3189542.3157	742803.1354	6,068.069	N 21-33-55 E
2,3	07	23+307.015	3191186.5328	747830.4795	5,289.389	N 71-53-22 E
3	08	30+037.015	3197338.2397	750837.8868	6,847.481	N 26-03-10 E
3	09	35+545.911	3201378.2588	754751.1303	5,623.084	N 44-06-03 E
3	10	40+023.820	3205916.9522	753781.9248	4,842.979	N 12-02-58 E
3	EP	42+021.062	3207779.9206	754694.4066	2,074.434	N 26-05-44W

SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	C1	1,328.450	4,000.000
1	C2	1,203.623	2,000.000
1	C3	2,027.451	7,500.000
1	C4	1,494.463	3,500.000
1,2	C5	3,471.053	6,000.000
2	C6	3,513.295	4,000.000
2,3	C7	3,200.001	4,000.000
3	C8	6,298.999	20,000.000
3	C9	1,640.000	2,000.000
3	C10	3,984.485	6,000.000

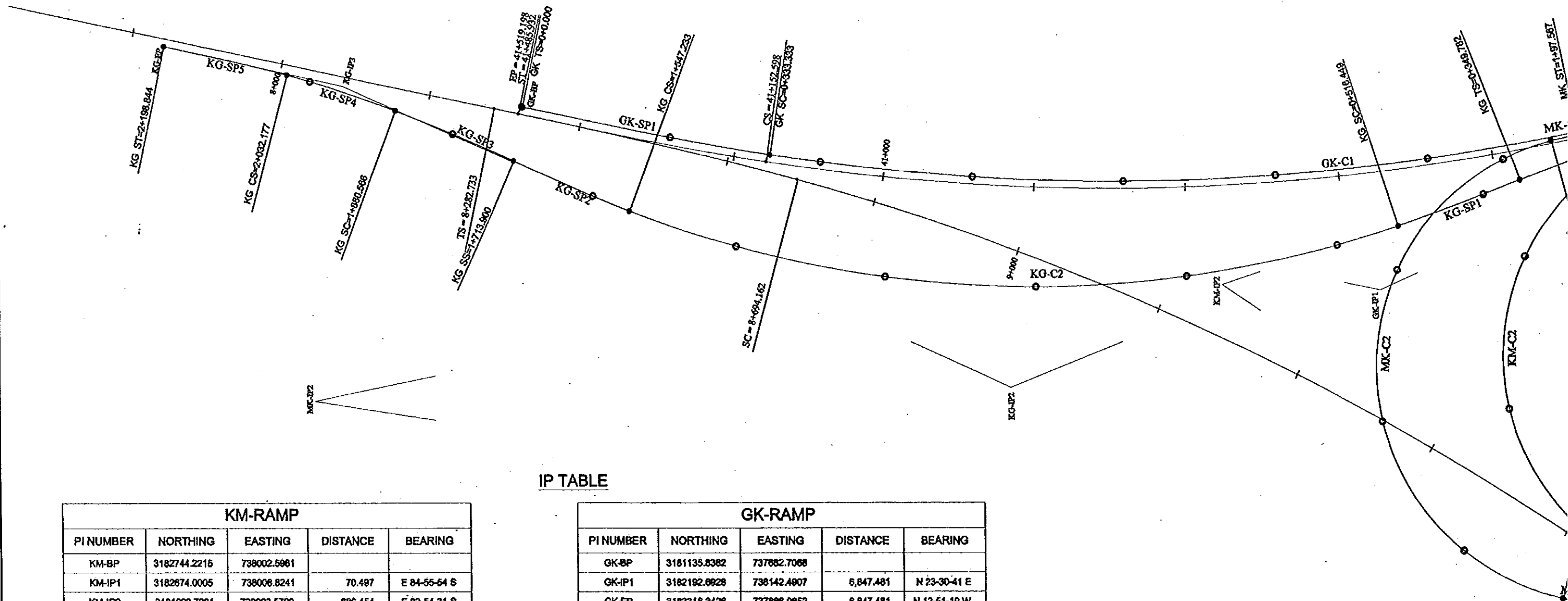
SHEET No.	CURVE	LENGTH(m)	RADIUS(m)
1	SP1	245.000	2,000.000
1	SP2	245.000	-2,000.000
1	SP3	411.429	3,500.000
1	SP4	411.429	-3,500.000
3	SP5	320.000	2,000.000
3	SP6	320.000	-2,000.000

SHEET No.	LINE	LENGTH(m)	START N	START E	BEARING
1	L1	130.630	3174210.6354	734746.2528	N 16-30-00 E
1	L2	1,338.953	3180020.8800	737208.2777	N 02-30-00W
1	L3	1,175.272	3185559.6345	741229.0795	N 39-00-00 E
1	L4	2,403.425	3190128.4152	744589.0733	N 23-30-41 E
1,2	L5	1,719.188	3182705.8653	748573.2412	N 21-33-55 E
2	L6	1,960.001	3189619.1926	753048.3578	N 71-53-22 E
2,3	L7	1,218.897	3202577.0887	754494.8147	N 26-03-10 E



CURVE TABLE

KM-RAMP			KG-RAMP		
CURVE	LENGTH(m)	RADIUS(m)	CURVE	LENGTH(m)	RADIUS(m)
KM-C1	140.978	3,992.5	KG-C1	349.782	4,000.000
KM-C2	630.649	300.000	KG-C2	1,030.784	300.000
MK-RAMP			GK-RAMP		
MK-C1	78.342	300.000	GK-C1	1,570.718	3,000.000
MK-C2	802.558	300.000			



IP TABLE

KM-RAMP				
PI NUMBER	NORTHING	EASTING	DISTANCE	BEARING
KM-BP	3182744.2215	738002.5961		
KM-IP1	3182674.0005	738006.8241	70.497	E 84-55-54 S
KM-IP2	3181992.7961	738093.5700	696.454	E 82-54-31 S
KM-EP	3182419.7774	738537.5200	160.1533	N 46-06-59 E
MK-RAMP				
MK-BP	3182555.3704	738716.9495		
MK-IP1	3182480.4288	738628.3180	116.070	E 139-47-05 S
MK-IP2	3180790.1295	737996.3885	1904.563	E 110-29-55 S
MK-EP	3182478.6175	738000.5738	1688.493	N 00-06-32 E

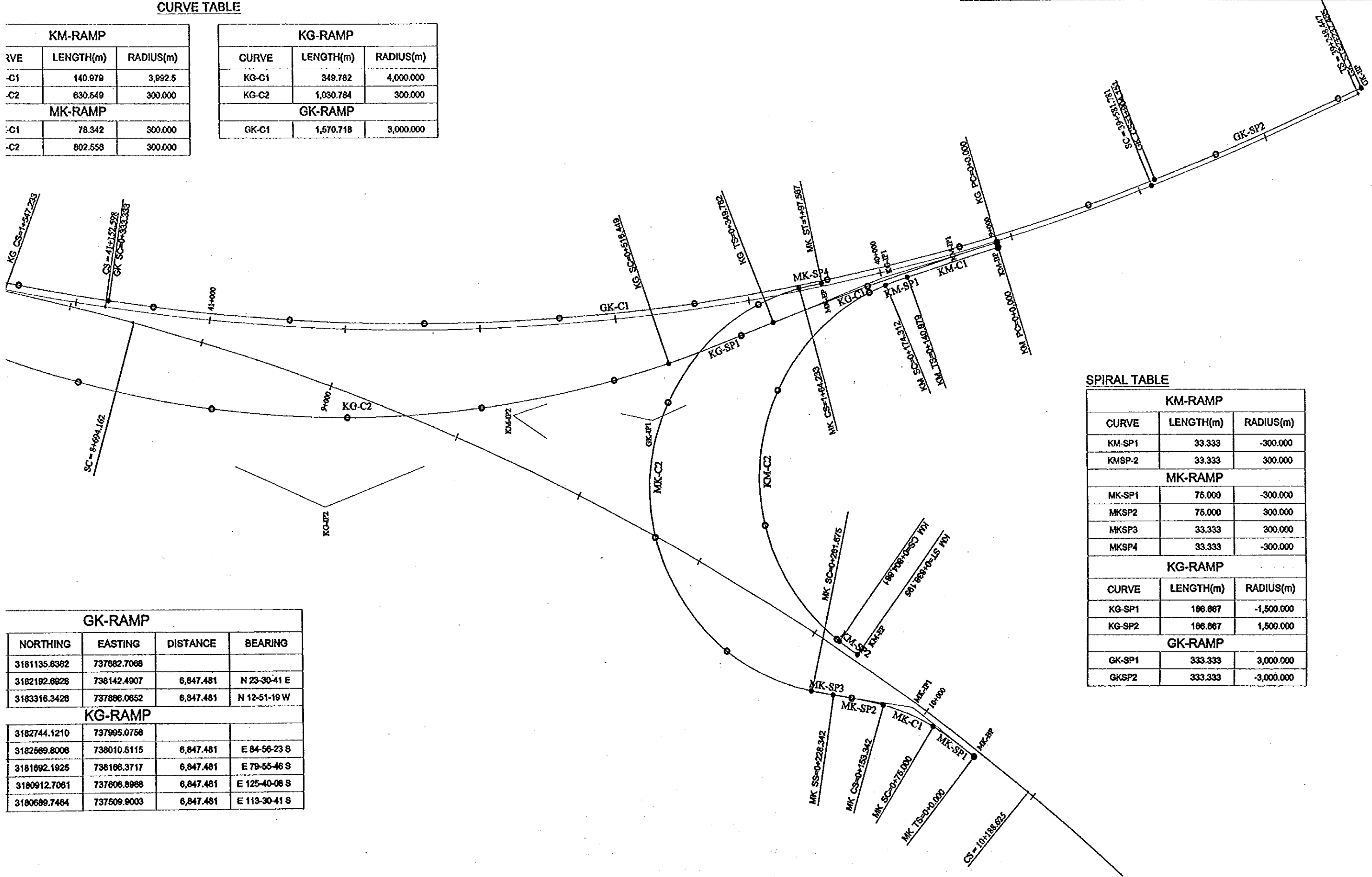
GK-RAMP				
PI NUMBER	NORTHING	EASTING	DISTANCE	BEARING
GK-BP	3181135.8382	737682.7068		
GK-IP1	3182192.6928	738142.4907	6,847.481	N 23-30-41 E
GK-EP	3183316.3426	737866.0652	6,847.481	N 12-51-19 W
KG-RAMP				
KG-BP	3182744.1210	737995.0758		
KG-IP1	3182589.8008	738010.5115	6,847.481	E 84-56-23 S
KG-IP2	3181692.1925	738198.3717	6,847.481	E 79-55-46 S
KG-IP3	3180012.7061	737606.8968	6,847.481	E 125-40-06 S
KG-EP	3180689.7464	737509.9003	6,847.481	E 113-30-41 S

MK sec.

PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD-MEERUT EXPRESSWAY	NCR	1	006
DESIGN ELEMENTS OF HORIZONTAL ALIGNMENT		SCALE H=1:50000	

CURVE TABLE

KM-RAMP			KG-RAMP		
RVE	LENGTH(m)	RADIUS(m)	CURVE	LENGTH(m)	RADIUS(m)
-C1	140.979	3,892.5	KG-C1	349.782	4,000.000
-C2	630.549	300.000	KG-C2	1,030.784	300.000
MK-RAMP			GK-RAMP		
-C1	78.342	300.000	GK-C1	1,570.718	3,000.000
-C2	602.558	300.000			

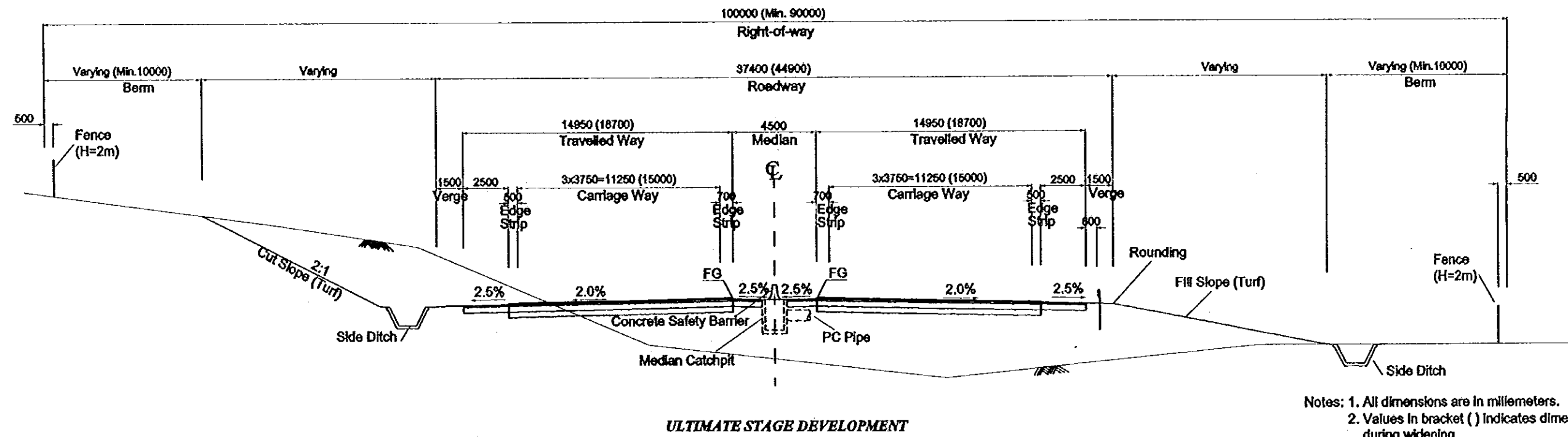
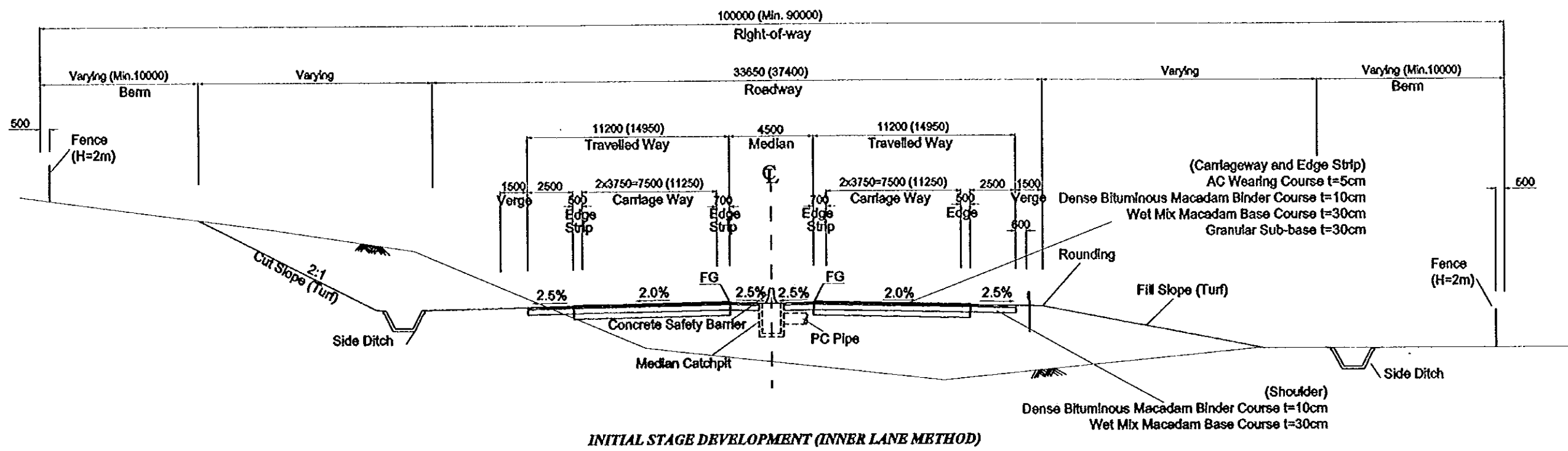


SPIRAL TABLE

KM-RAMP		
CURVE	LENGTH(m)	RADIUS(m)
KM-SP1	33.333	-300.000
KMSP-2	33.333	300.000
MK-RAMP		
MK-SP1	75.000	-300.000
MKSP2	75.000	300.000
MKSP3	33.333	300.000
MKSP4	33.333	-300.000
KG-RAMP		
CURVE	LENGTH(m)	RADIUS(m)
KG-SP1	186.667	-1,500.000
KG-SP2	186.667	1,500.000
GK-RAMP		
GK-SP1	333.333	3,000.000
GKSP2	333.333	-3,000.000

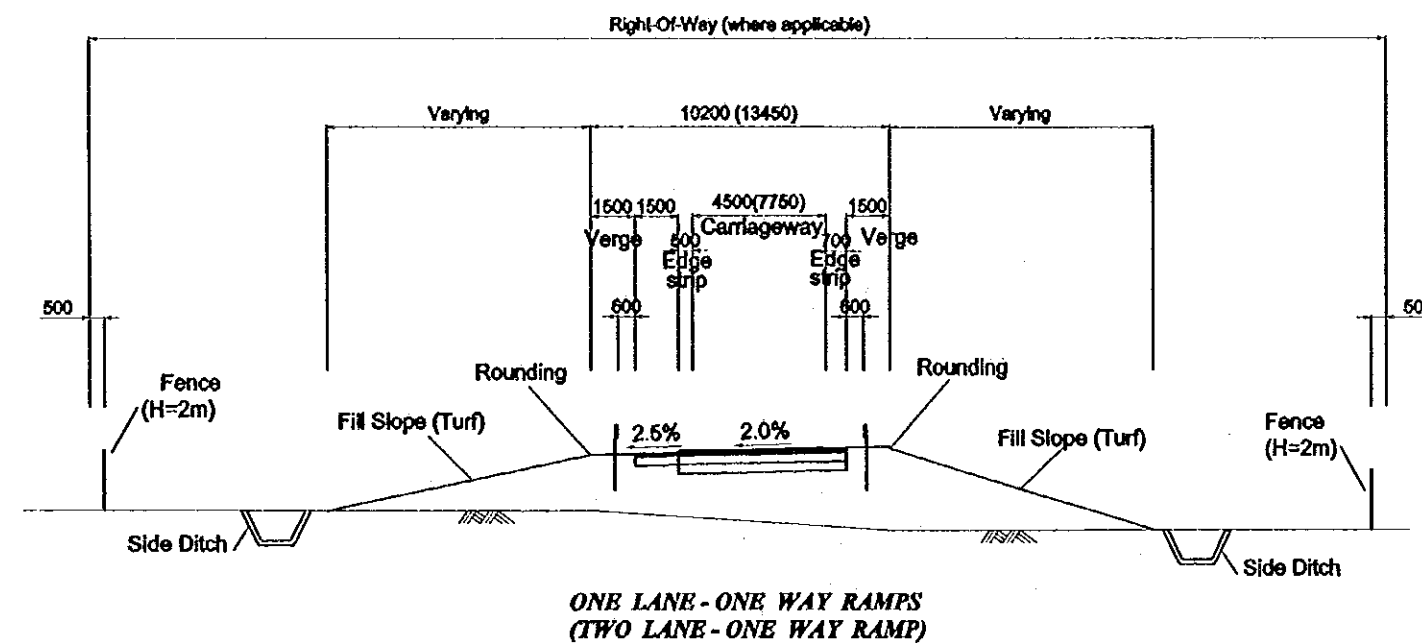
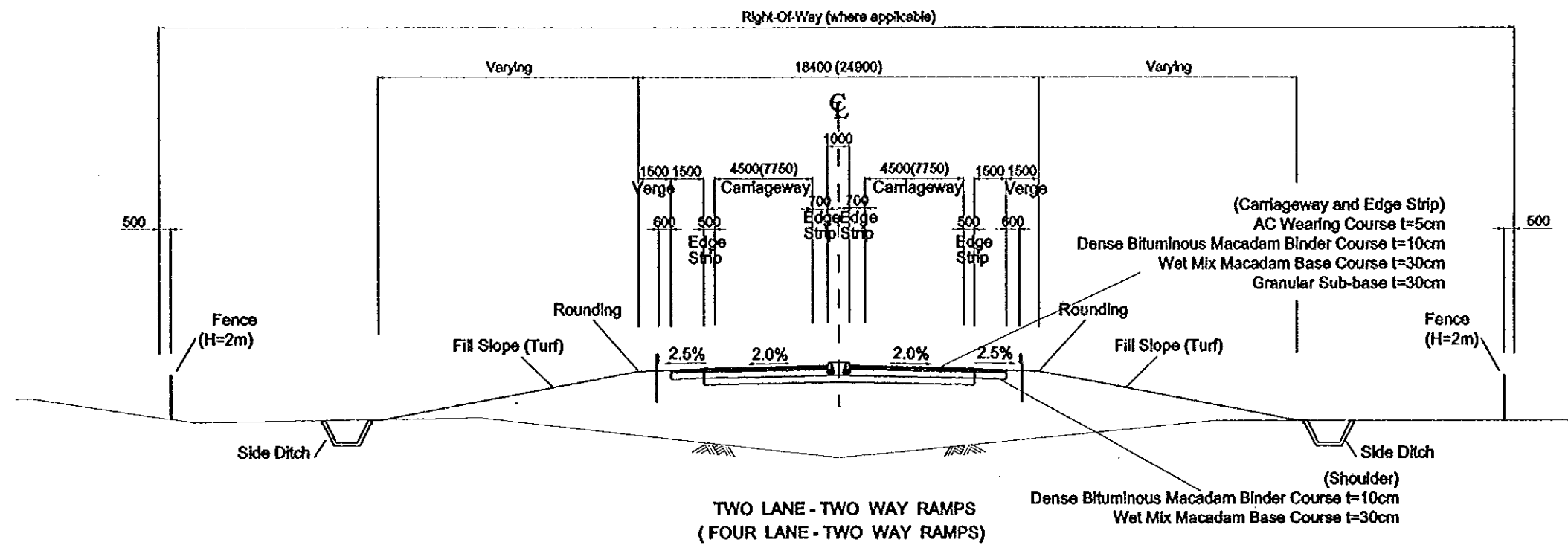
GK-RAMP			
NORTHING	EASTING	DISTANCE	BEARING
3181135.6362	737682.7068		
3182192.6626	738142.4907	6,847.481	N 23-30-41 E
3183316.3428	737896.0652	6,847.481	N 12-51-19 W
KG-RAMP			
3182744.1210	737995.0756		
3182569.8008	738010.5115	6,847.481	E 84-56-23 S
3181692.1925	738166.3717	6,847.481	E 79-55-46 S
3180912.7081	737606.8968	6,847.481	E 125-40-08 S
3180699.7464	737509.9003	6,847.481	E 113-30-41 S

PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	1/2	007
TYPICAL CROSS SECTION		SCALE H=1:250	



- Notes:
1. All dimensions are in millimeters.
  2. Values in bracket ( ) indicates dimension during widening.
  3. Fill slopes shall be :  
 upto 2m high 6:1  
 2m to 4m high 3:1  
 over 4m high 2:1
  4. Median drainage shall be provided at low points and at maximum intervals of 250m.
  5. Safety barriers shall be provided where necessary.

PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	2/2	008
TYPICAL CROSS SECTION (RAMP-WAY)		SCALE H=1:250	

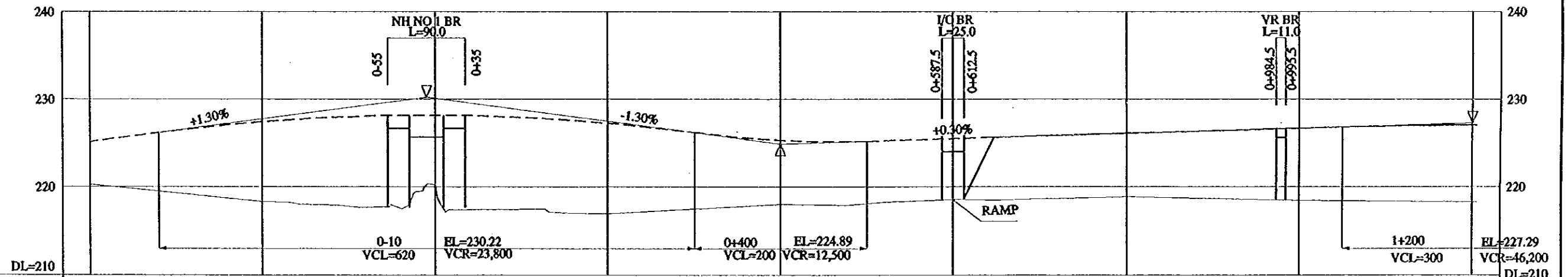
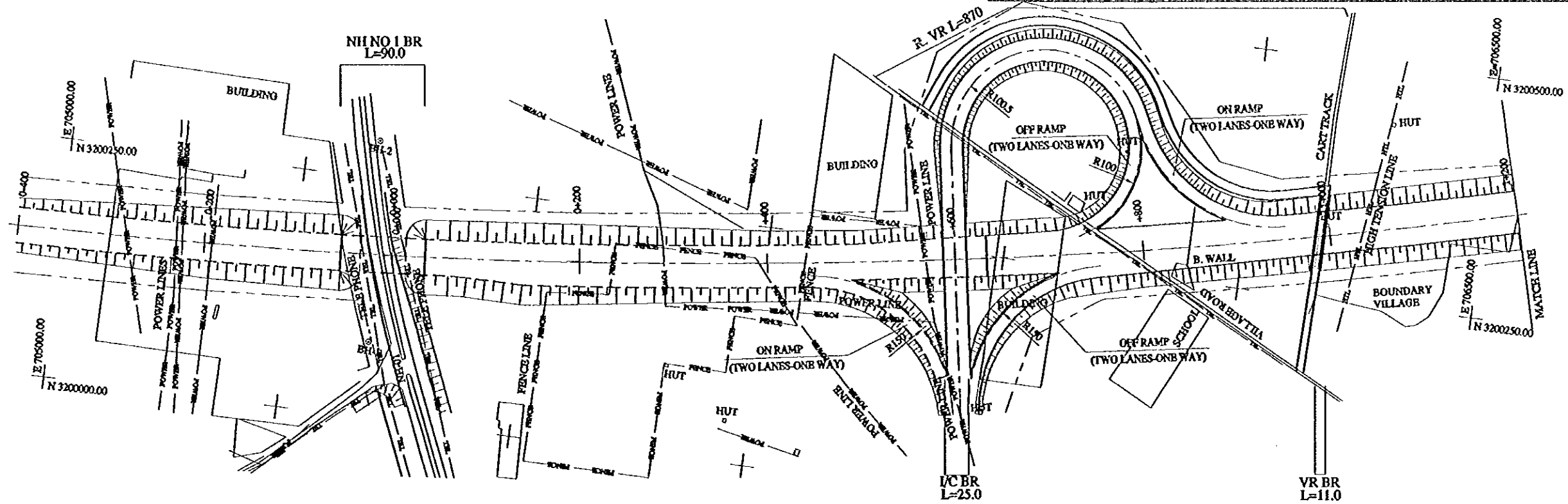


- Notes:
- All dimensions are in millimeters.
  - The carriageway width for KG and GM ramp are taken as 7500mm.
  - Fill slopes shall be :  
 upto 2m high 6:1  
 2m to 4m high 3:1  
 over 4m high 2:1
  - Safety barriers shall be provided wherever necessary.





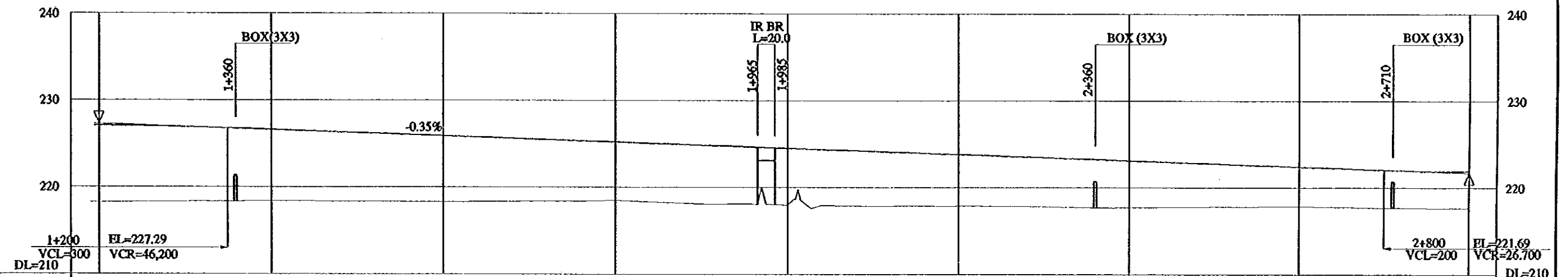
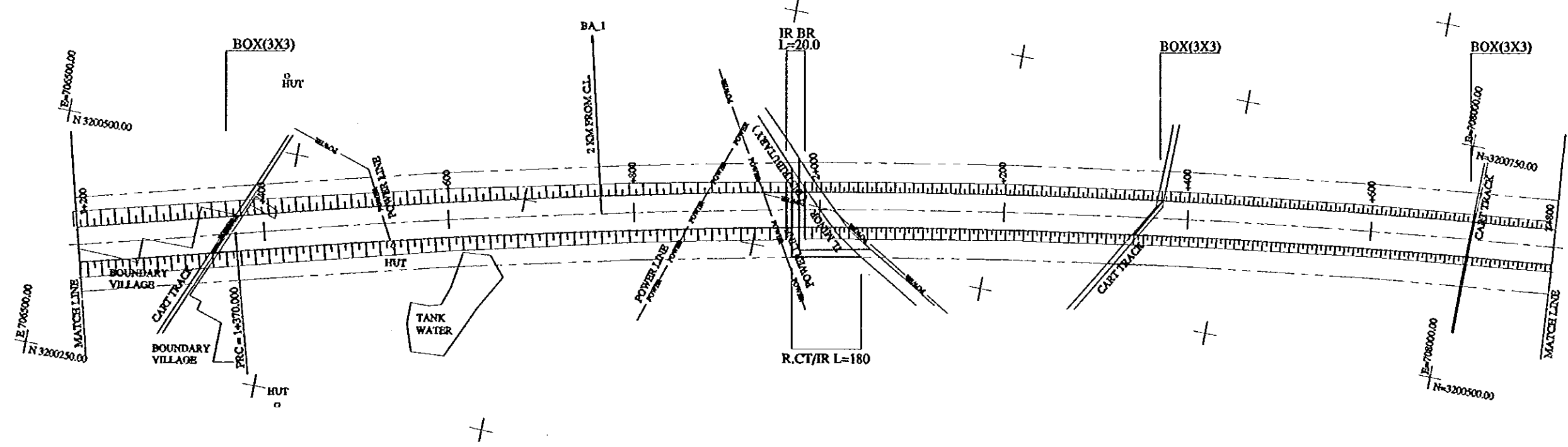
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	1/26	009
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



	0+400	0+200	0+000	0+200	+400	+600	+800	1+000	+200
FINISHED GRADE	225.15	227.45	228.20	227.28	225.29	225.49	226.09	226.69	227.05
GROUND LEVEL	220.28	218.33	220.28	216.96	218.01	218.56	218.88	218.46	218.27
STATION No.(KM)	0+400	0+200	0+000	0+200	+400	+600	+800	1+000	+200
HORIZONTAL ALIGNMENT	----- LT CURVE R=7000 ----- L=2680 -----								
SUPER ELEVATION	----- I=2.0% -----								



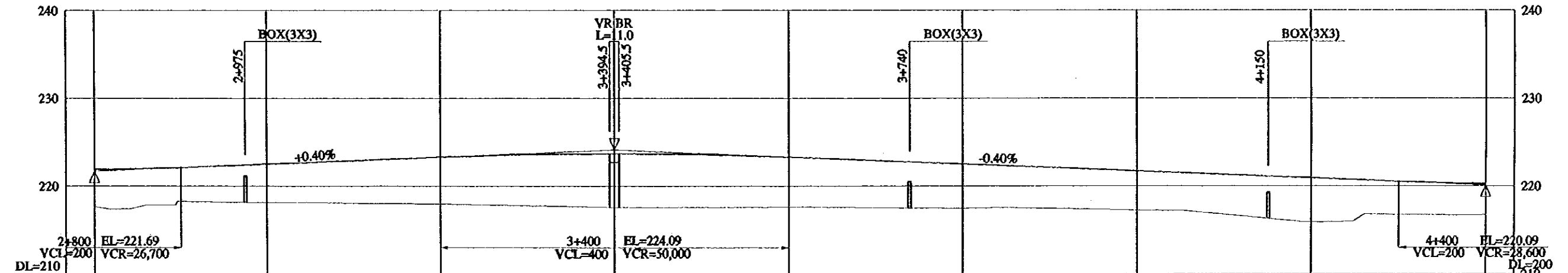
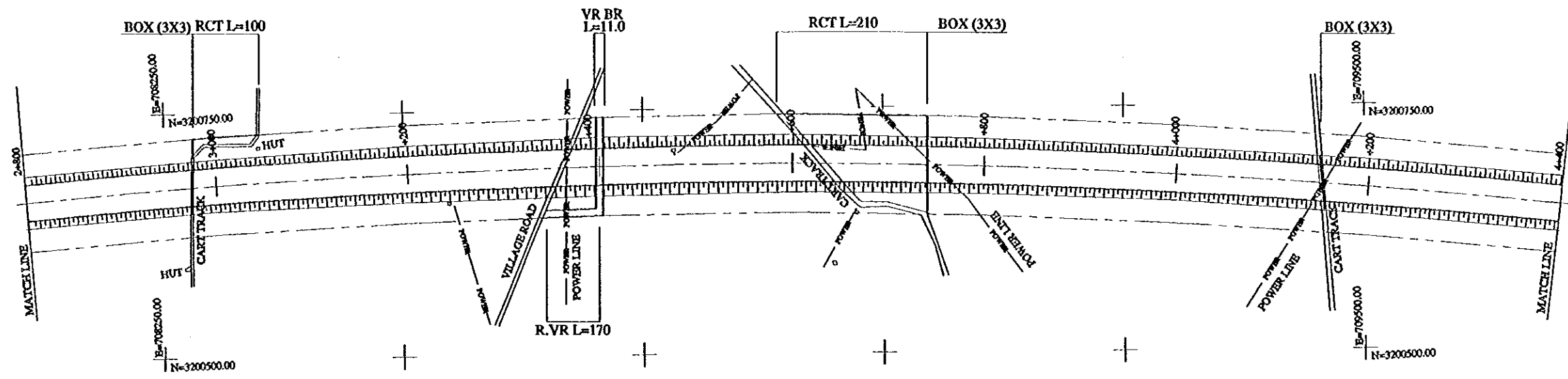
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	2/26	010
PLAN AND PROFILE	SCALE : H = 1:5000, V = 1:500		



FINISHED GRADE	227.05	226.59	225.89	225.19	224.49	223.79	223.09	223.39	221.88
GROUND LEVEL	218.27	218.36	218.29	218.48	217.95	217.86	217.70	217.82	217.60
STATION No.(KM)	+200	+400	+600	+800	2+000	+200	+400	+600	+800
HORIZONTAL ALIGNMENT	LT CURVE R=7000 L=2680			RT CURVE R=8000 L=3630					
SUPER BLEVATION	I=2.0%								



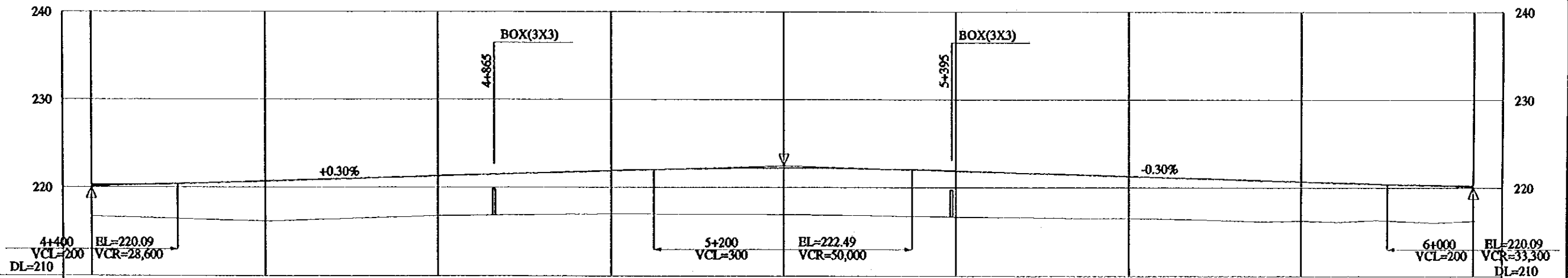
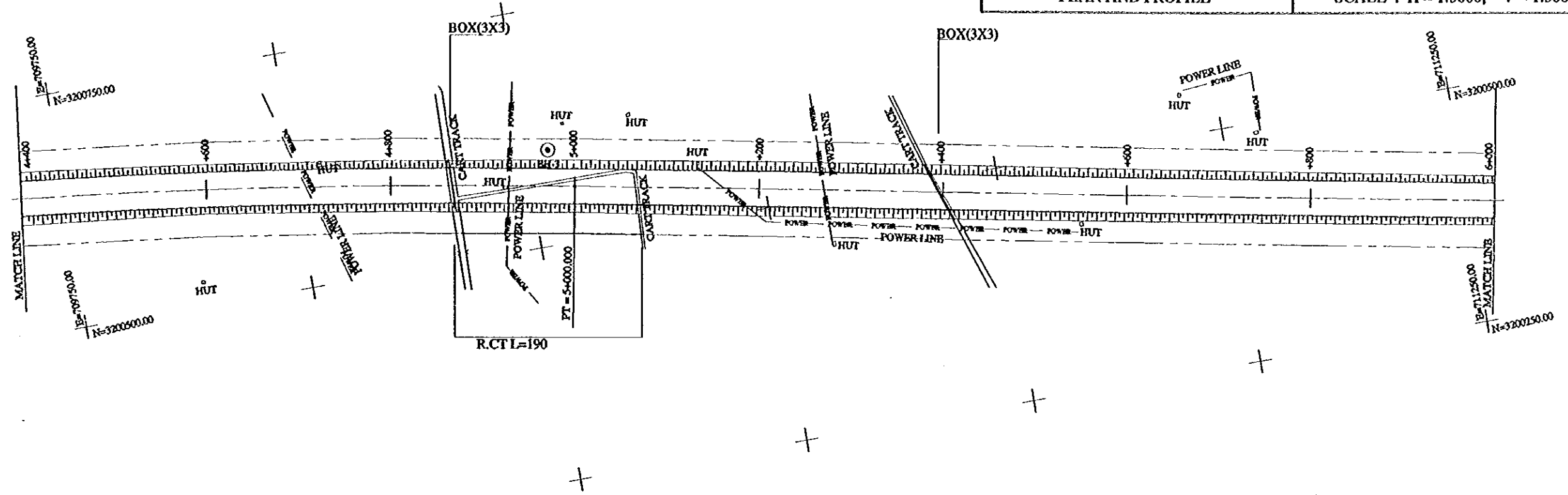
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	3/26	011
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	221.88	222.49	223.29	223.66	223.29	222.49	221.69	220.89	220.27
GROUND LEVEL	-217.60	-218.11	-217.95	-217.58	-217.61	-217.44	-217.26	-215.89	-216.71
STATION No.(KM)	+800	+3000	+200	+400	+600	+800	+4000	+200	+400
HORIZONTAL ALIGNMENT	RT CURVE R=8000 L=3630								
SUPER ELEVATION	i=2.0%								



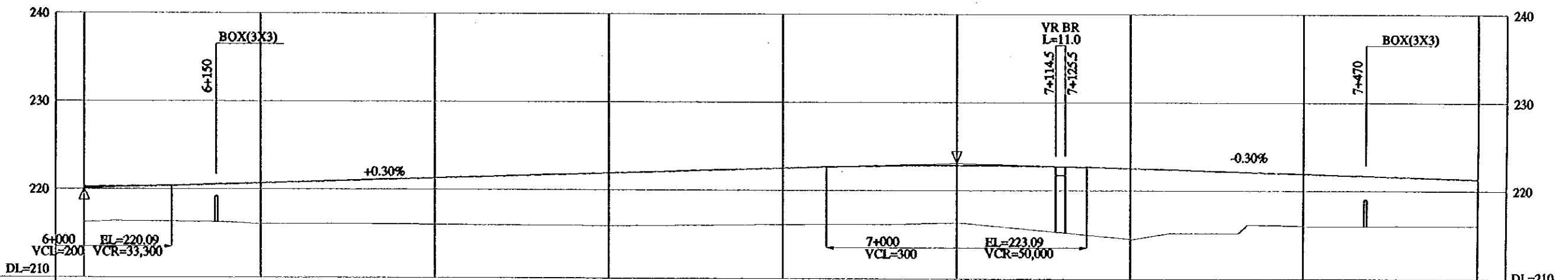
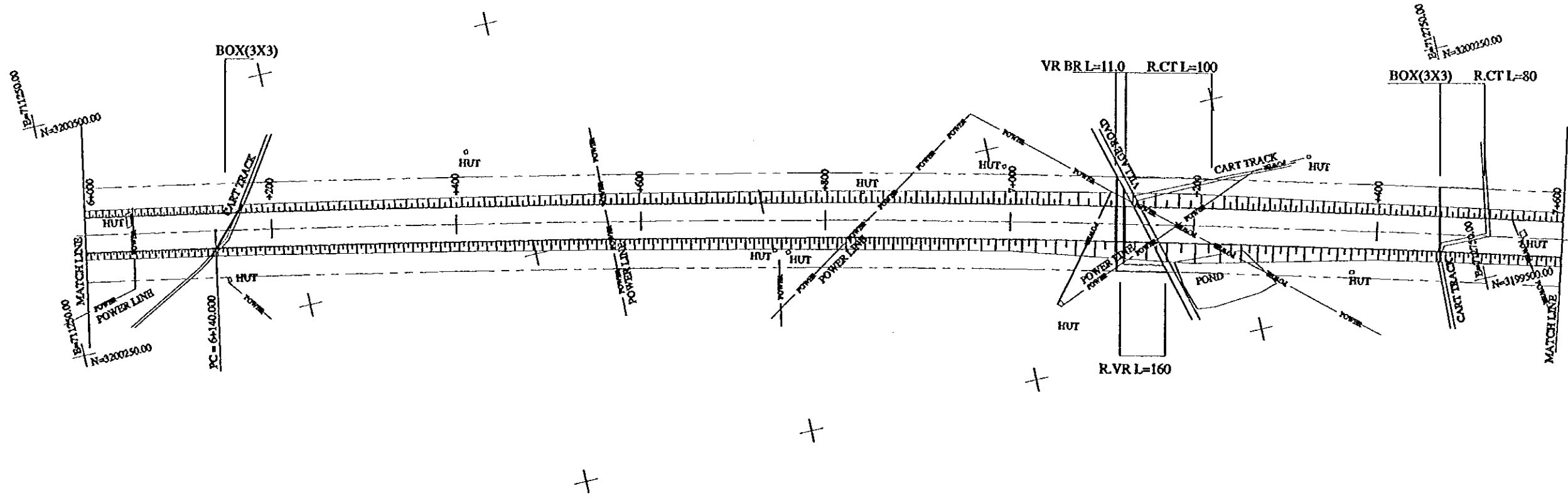
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	4/26	012
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	220.27	220.69	221.29	221.89	222.26	221.89	221.29	220.69	220.24
GROUND LEVEL	216.71	216.18	216.77	217.02	216.94	216.69	216.53	216.23	216.24
STATION No.(KM)	4+00	4+600	4+800	5+000	5+200	5+400	5+600	5+800	6+000
HORIZONTAL ALIGNMENT	RT CURVE R=8000 L=3630				TANGENT L=1140				
SUPER ELEVATION	i=2.0%								



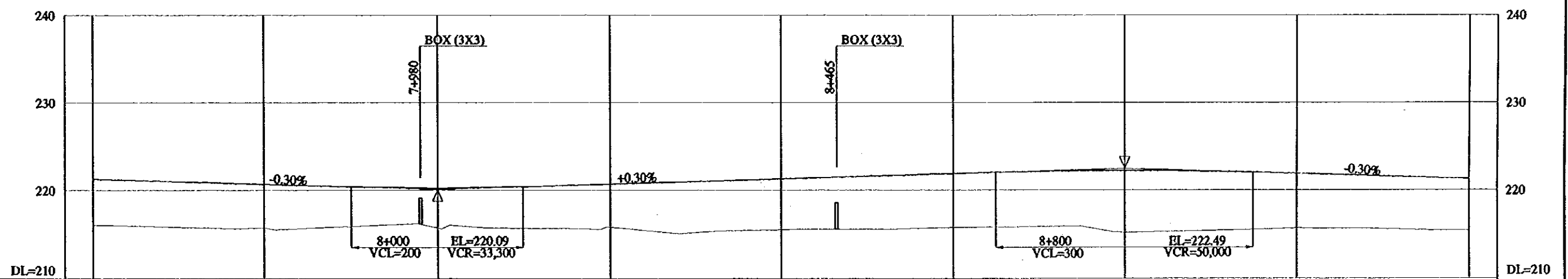
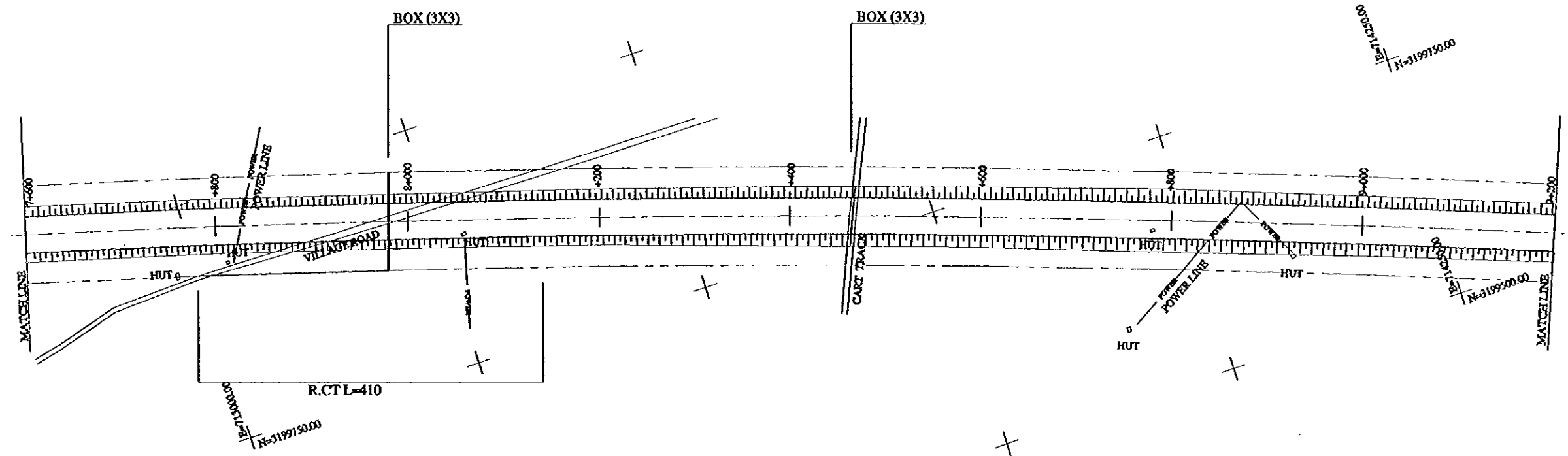
PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	5/26	013
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	220.24	220.69	221.29	221.89	222.49	222.86	222.49	221.89	221.29	
GROUND LEVEL	216.24	216.08	215.99	215.90	216.08	216.33	214.49	216.00	216.02	
STATION No.(KM)	6+000	6+200	6+400	6+600	6+800	7+000	7+200	7+400	7+600	
HORIZONTAL ALIGNMENT	TANGENT L=1140		RT CURVE R=17500 L=4430							
SUPER ELEVATION	i=2.0%									



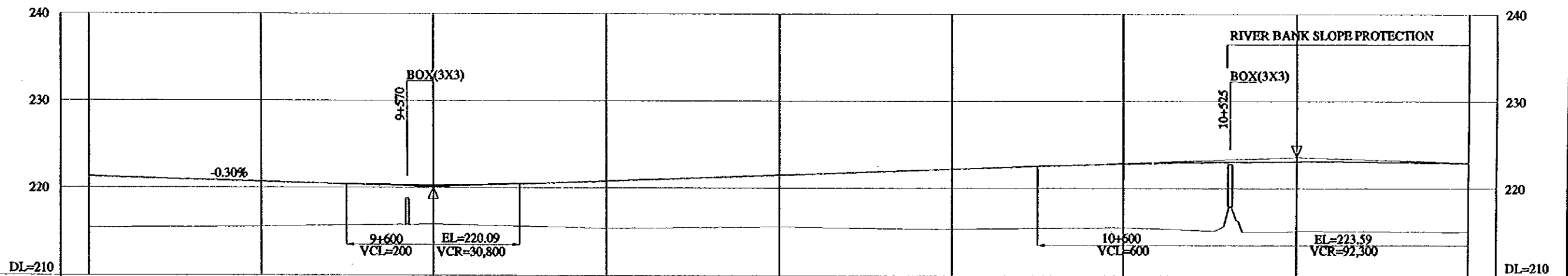
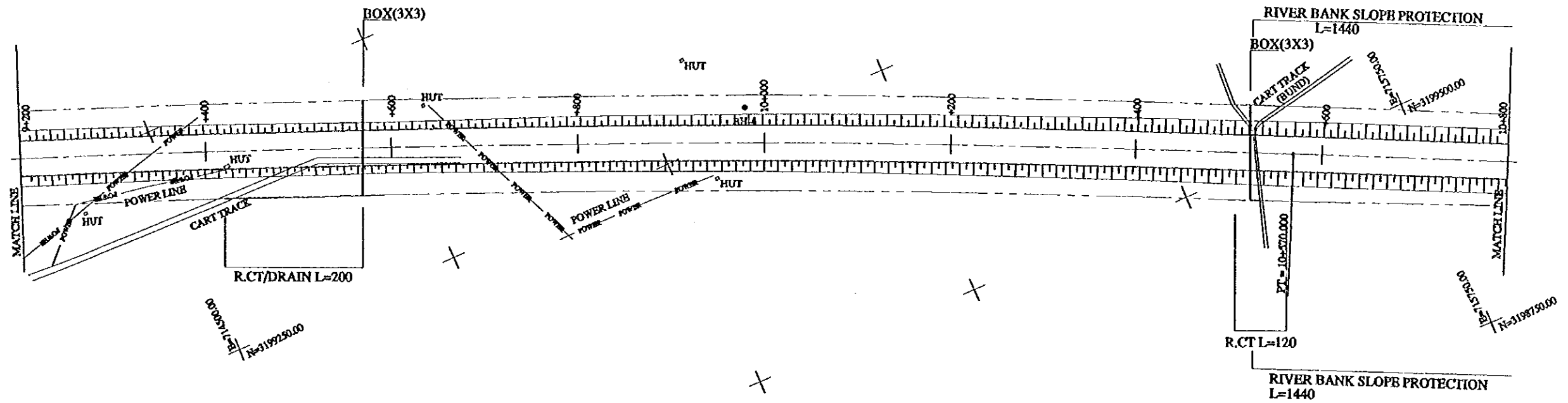
PROJECT	STATB/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	6/26	014
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	221.29	220.69	220.24	220.84	221.29	221.89	222.26	221.89	221.29
GROUND LEVEL	216.02	215.70	215.71	215.80	215.51	215.78	215.20	215.67	215.43
STATION No.(KM)	+600	+800	+8+000	+200	+400	+600	+800	+9+000	+200
HORIZONTAL ALIGNMENT	RT CURVE R=17500 L=4430								
SUPER ELEVATION	I=2.0%								



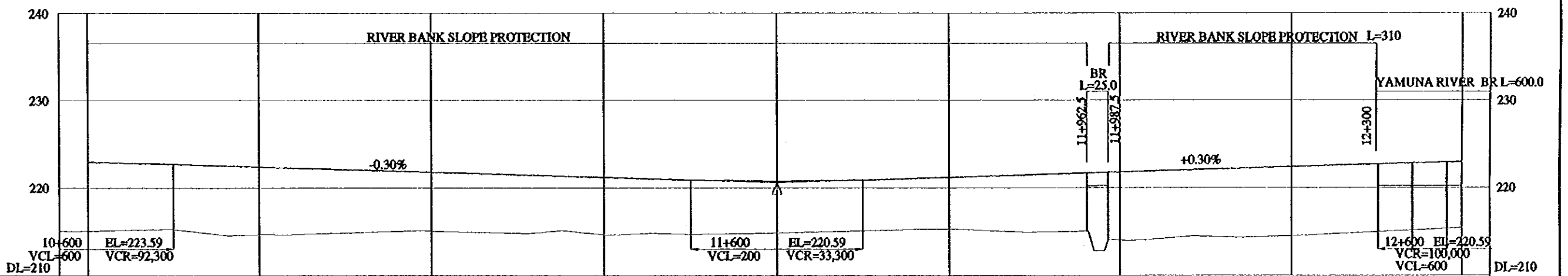
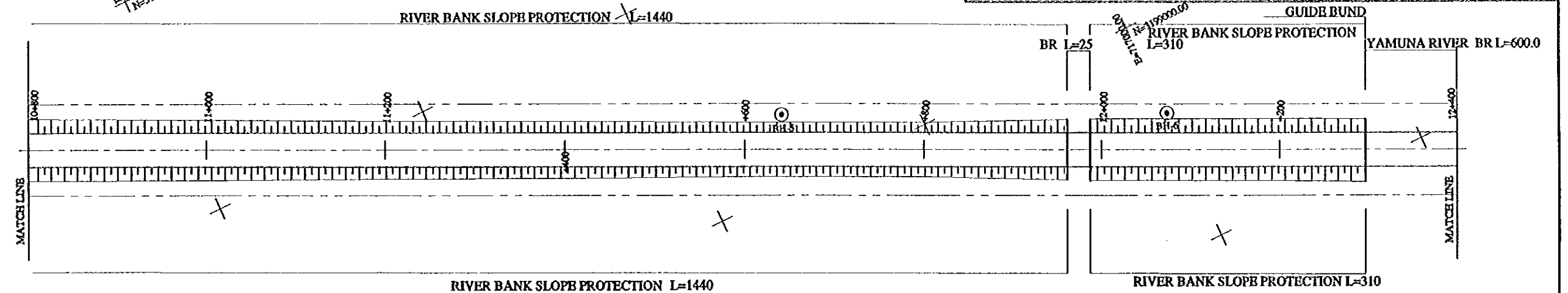
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	7/26	015
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	221.29	220.69	220.25	220.79	221.49	222.19	222.84	223.10	222.94	
GROUND LEVEL	215.43	215.53	215.80	215.38	215.57	215.55	215.54	215.11	215.04	
STATION No.(KM)	+200	+400	+600	+800	+10+000	+200	+400	+600	+800	
HORIZONTAL ALIGNMENT	RT CURVE R=17500 L=4430					TANGENT L=2940				
SUPER ELEVATION	I=2.0%									



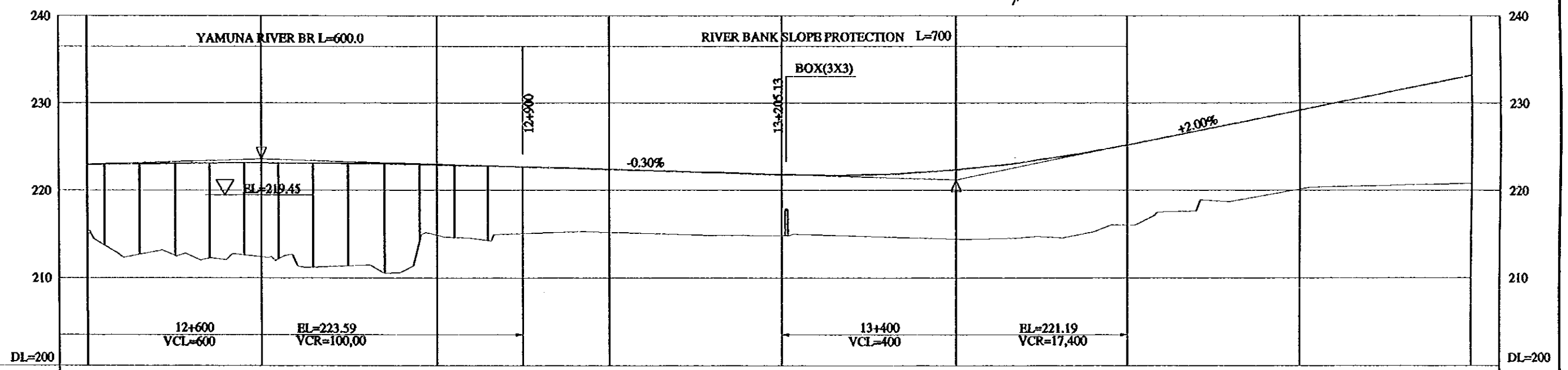
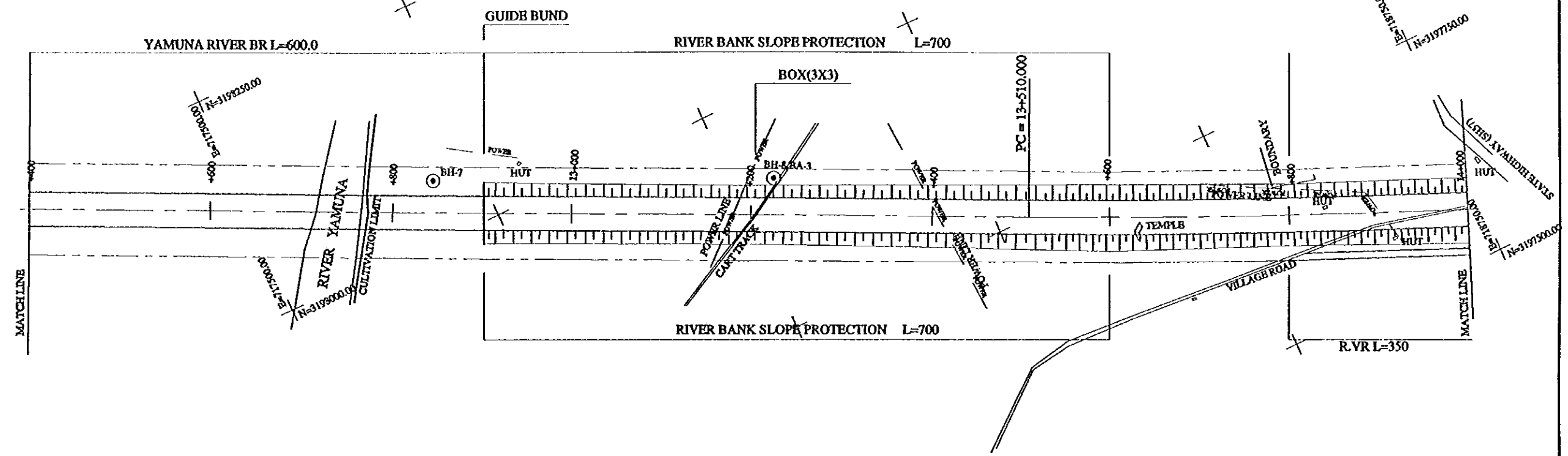
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	8/26	016
PLAN AND PROFILE	SCALE : H = 1:5000, V = 1:500		



FINISHED GRADE	222.94	222.39	221.79	221.19	220.74	221.19	221.79	222.39	222.94
GROUND LEVEL	215.04	214.68	215.03	214.66	214.84	215.27	214.00	214.51	215.39
STATION No.(KM)	+800	+11+000	+200	+400	+600	+800	+12+000	+200	+400
HORIZONTAL ALIGNMENT	TANGENT L=2940								
SUPER ELEVATION	i=2.0%								



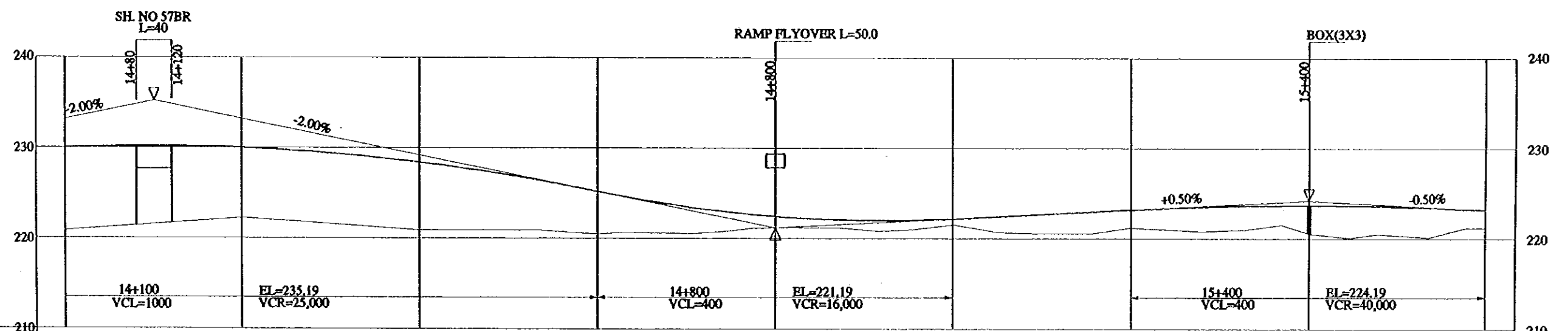
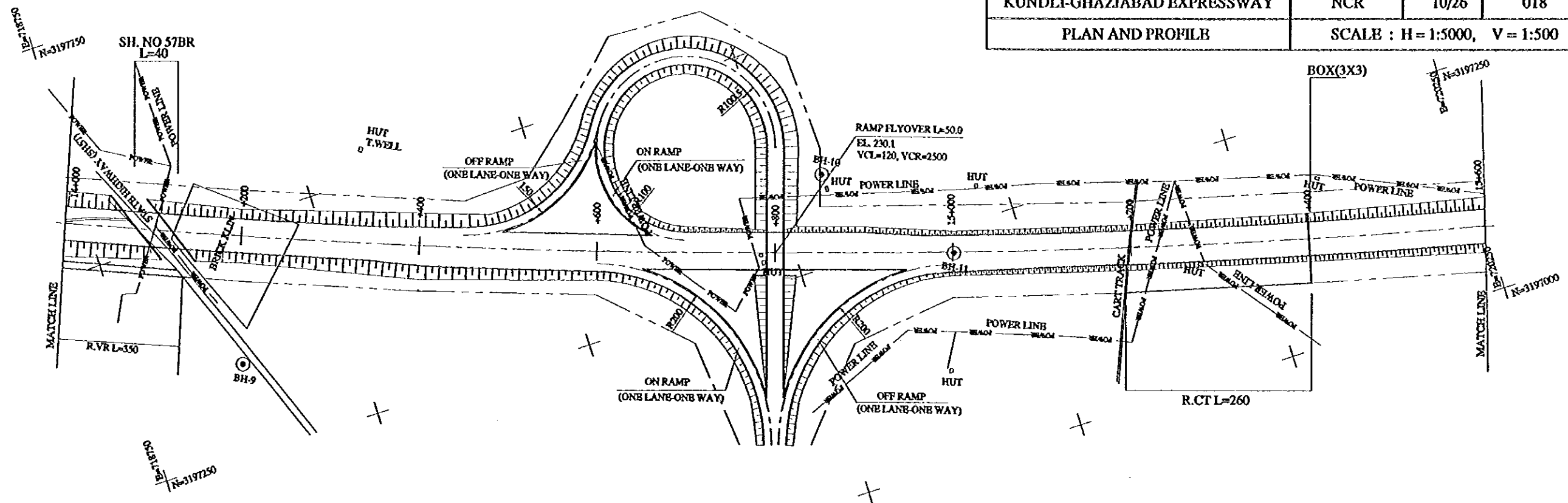
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	9/26	017
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	222.94	223.14	222.94	222.39	221.79	222.34	225.19	228.39	229.99
GROUND LEVEL	215.39	212.38	214.86	215.18	214.81	214.40	216.03	220.17	220.83
STATION No.(KM)	11+400	11+600	11+800	12+000	12+200	12+400	12+600	12+800	13+000
HORIZONTAL ALIGNMENT	TANGENT L=2940				LT CURVE R=10,000 L=2620				
SUPER ELEVATION	i=2.0%								



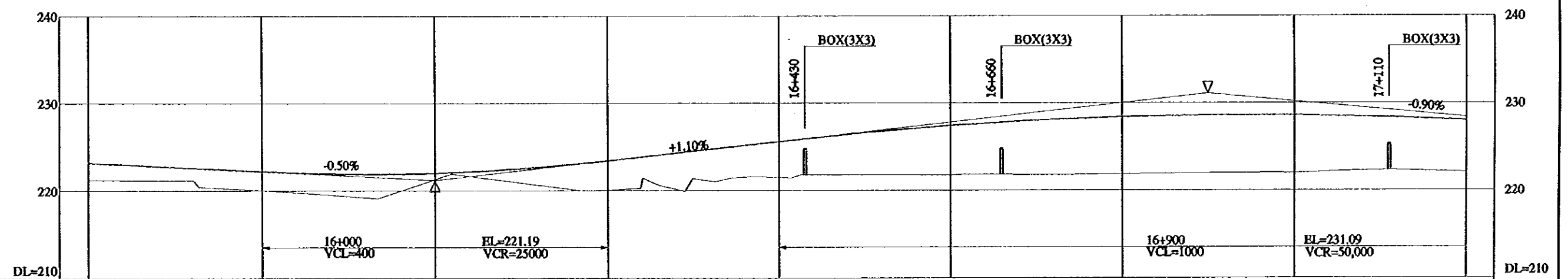
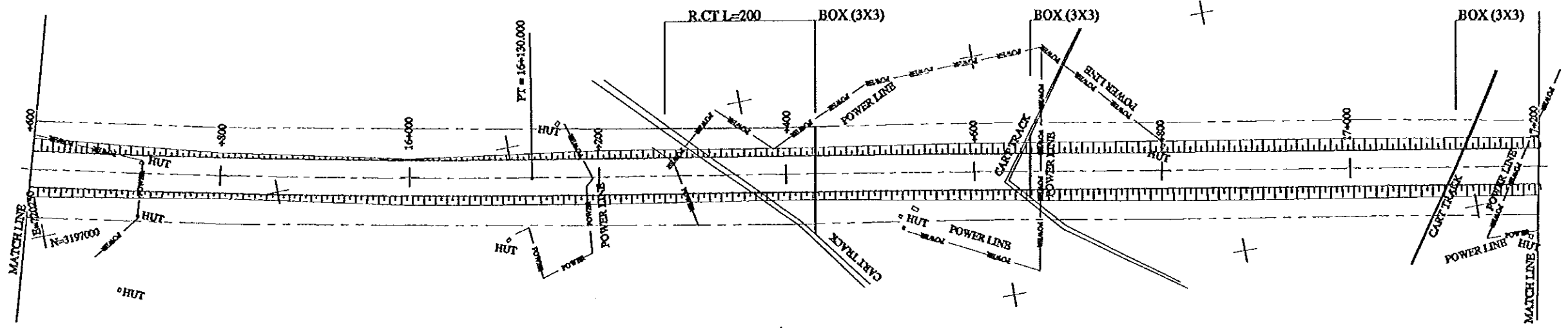
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	10/26	018
PLAN AND PROFILE	SCALE : H = 1:5000, V = 1:500		



FINISHED GRADE	229.99	229.99	228.39	225.19	222.44	222.19	223.19	223.69	223.19
GROUND LEVEL	220.86	222.24	220.92	220.48	221.19	221.53	221.18	220.54	221.21
STATION No.(KM)	14+000	+200	+400	+600	+800	15+000	+200	+400	+600
HORIZONTAL ALIGNMENT	----- LT CURVE R=10000 ----- L=2620 -----								
SUPER ELEVATION	----- f=2.0% -----								



PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	11/26	019
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	

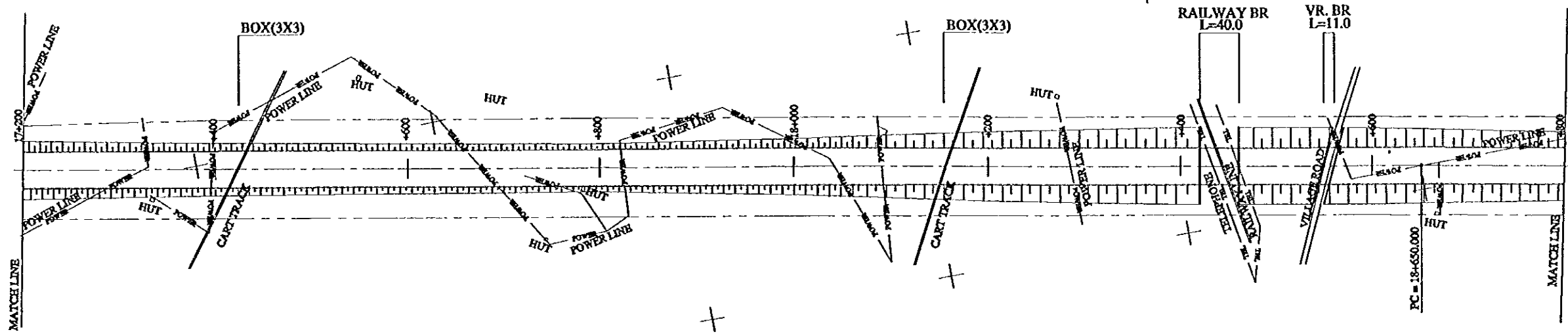


FINISHED GRADE	223.19	222.19	221.99	223.39	225.59	227.39	228.39	228.59	227.99	
GROUND LEVEL	221.21	220.05	221.43	220.05	221.39	221.72	221.86	221.99	222.06	
STATION No.(KM)	+600	+800	16+000	+200	+400	+600	+800	17+000	+2000	
HORIZONTAL ALIGNMENT	LT CURVE R=10,000 L=2620				TANGENT L=2,520					
SUPER ELEVATION	i=2.0%									



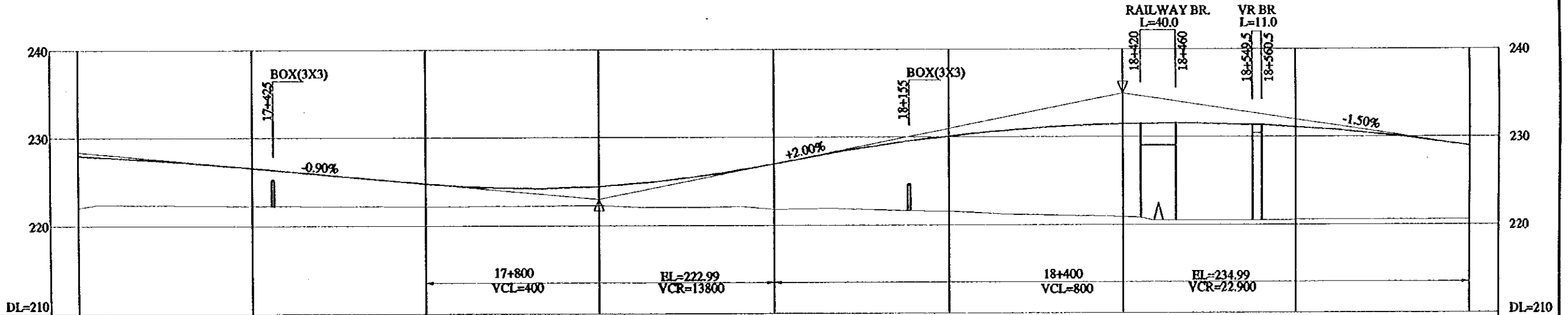
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N=3197000

PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	12/26	020
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



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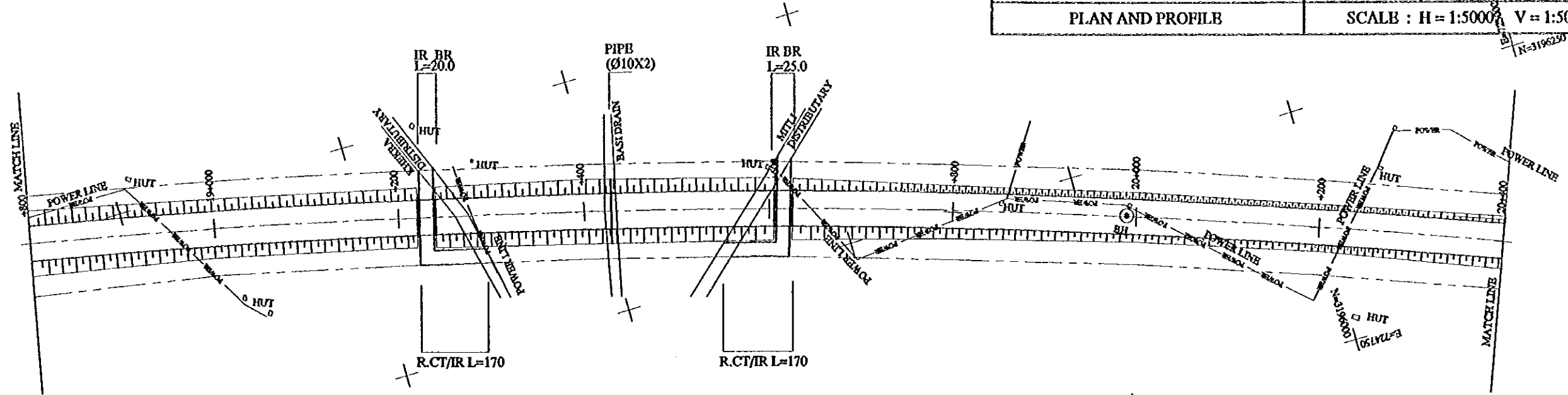
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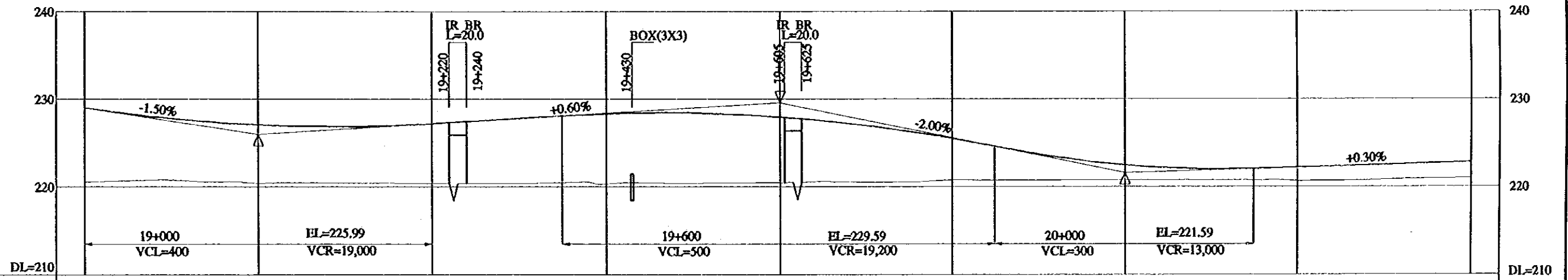
FINISHED GRADE	227.99	226.59	224.79	224.44	226.99	230.12	231.49	231.12	228.99	
GROUND LEVEL	222.06	222.25	222.18	222.27	221.79	221.53	220.91	220.89	220.56	
STATION No.(KM)	+200	+400	+600	+800	18+000	+200	+400	+600	+800	
HORIZONTAL ALIGNMENT	TANGENT L=2520						RT CURVE R=9000 L=6000			
SUPER ELEVATION	I=2.0%									



PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	13/26	021
PLAN AND PROFILE	SCALE : H = 1:5000 V = 1:500		

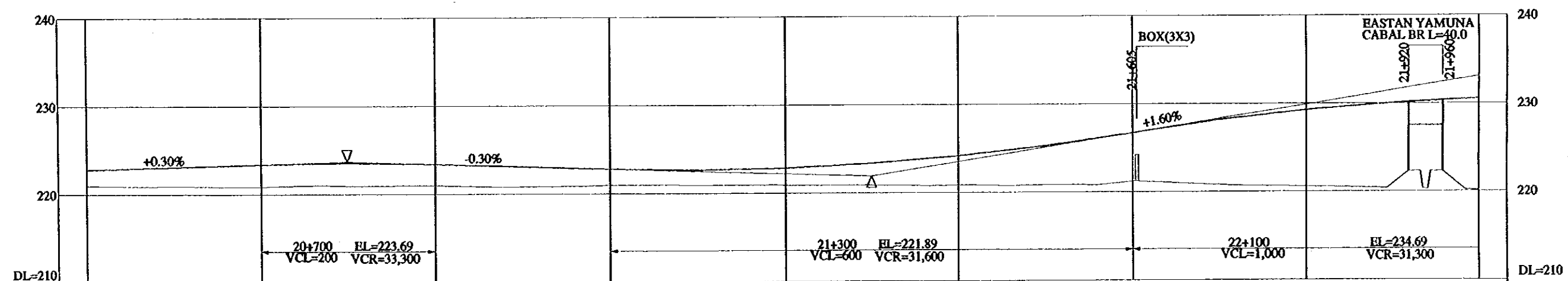
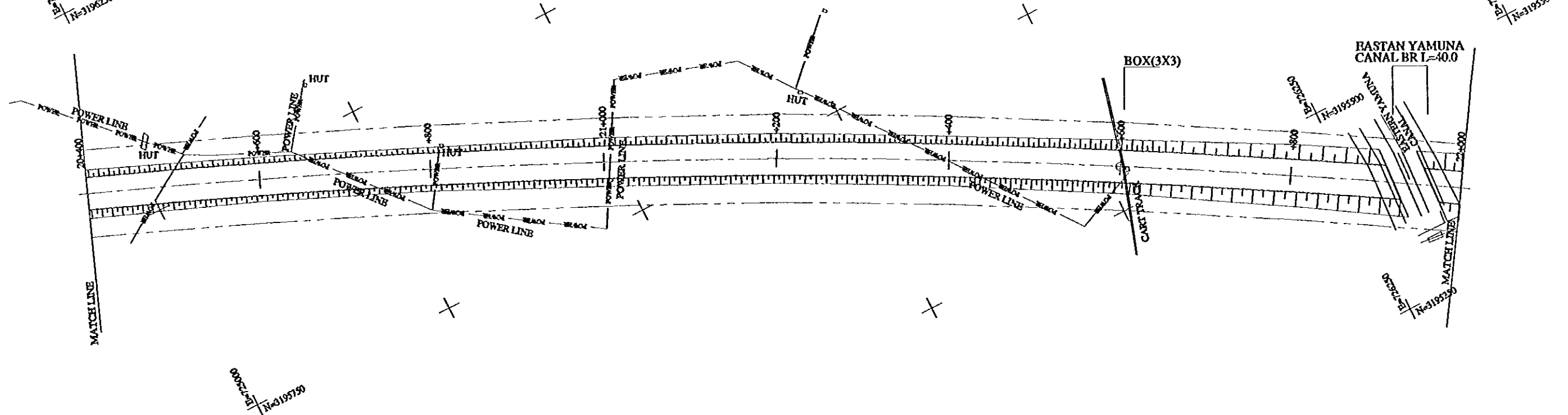


SCALE  
H=1:5000  
V=1:500



FINISHED GRADE	228.99	227.04	227.19	228.33	227.96	225.53	222.45	222.19	222.79
GROUND LEVEL	220.56	220.41	220.40	220.34	220.47	220.76	220.78	220.63	220.96
STATION No.(KM)	18+800	19+000	19+200	19+400	19+600	19+800	20+000	20+200	20+400
HORIZONTAL ALIGNMENT	RT CURVE R=9000 L=6000								
SUPER ELEVATION	I=2.0%								

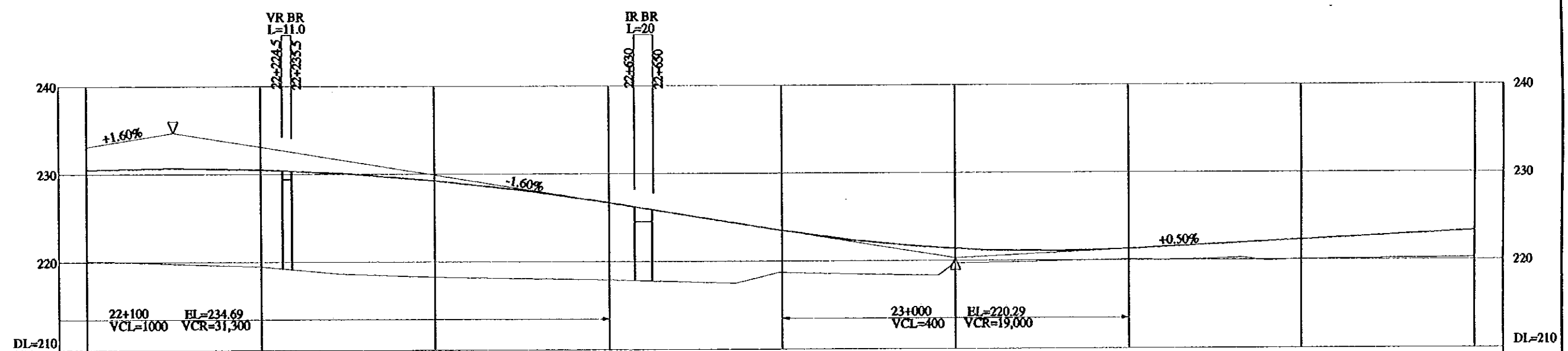
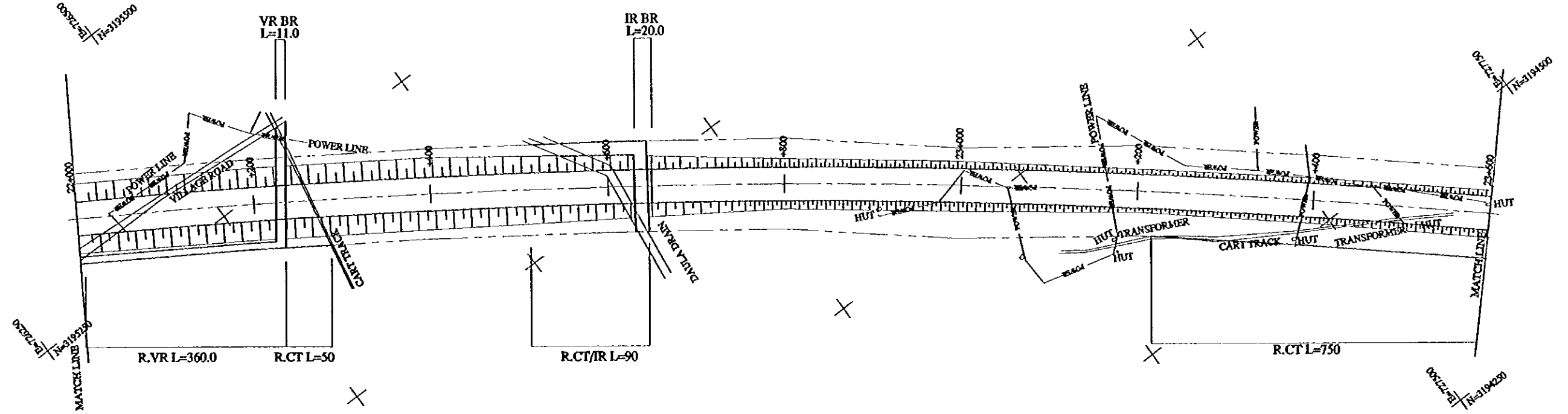
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	14/26	022
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	222.79	223.39	223.39	222.79	222.82	224.12	226.69	229.25	230.53
GROUND LEVEL	220.96	220.84	220.97	220.94	220.88	220.83	221.14	220.59	220.13
STATION No.(KM)	+400	+600	+800	21+000	+200	+400	+600	+800	22+000
HORIZONTAL ALIGNMENT	RT CURVE R=9000 L=6000								
SUPER ELEVATION	i=2.0%								



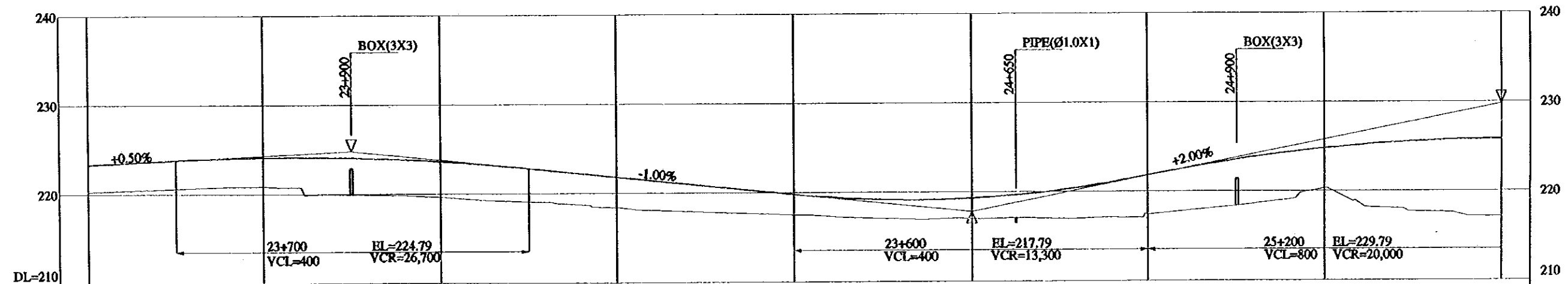
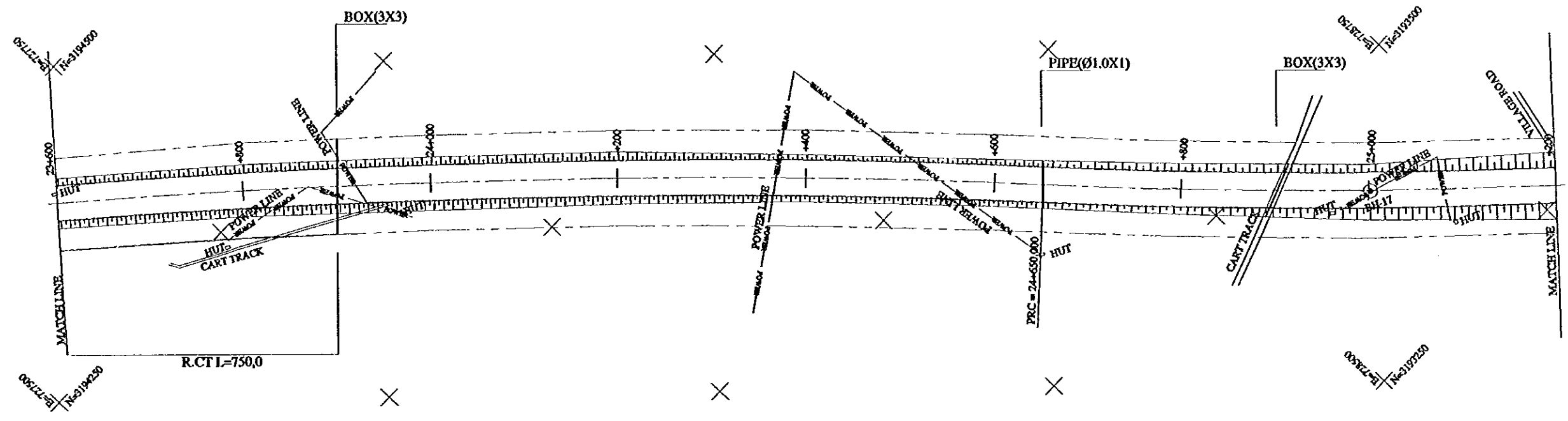
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	15/26	023
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	22+000	22+200	22+400	22+600	22+800	23+000	23+200	23+400	23+600
GROUND LEVEL	220.13	219.49	218.29	217.92	218.71	219.71	220.07	220.82	220.22
STATION No.(KM)	22+000	22+200	22+400	22+600	22+800	23+000	23+200	23+400	23+600
HORIZONTAL ALIGNMENT	RT CURVE R=9000 L=6000								
SUPER ELEVATION	i=2.0%								



PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	16/26	024
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	

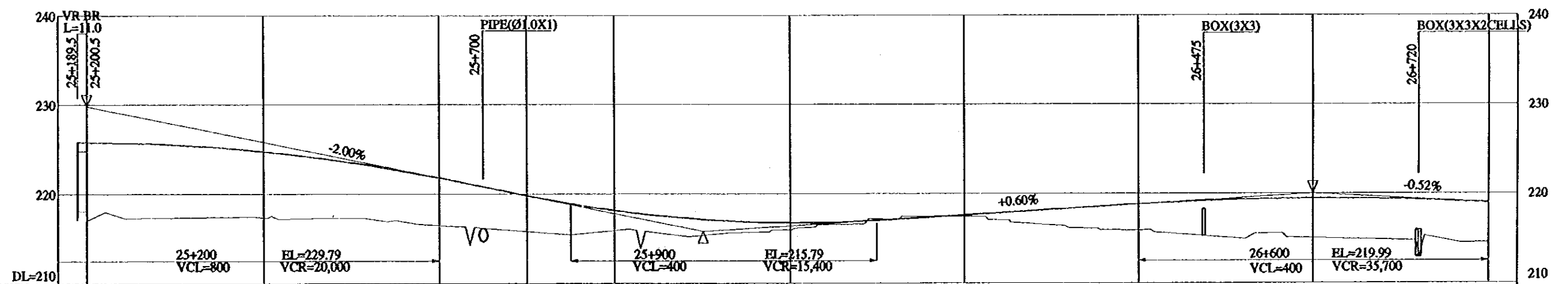
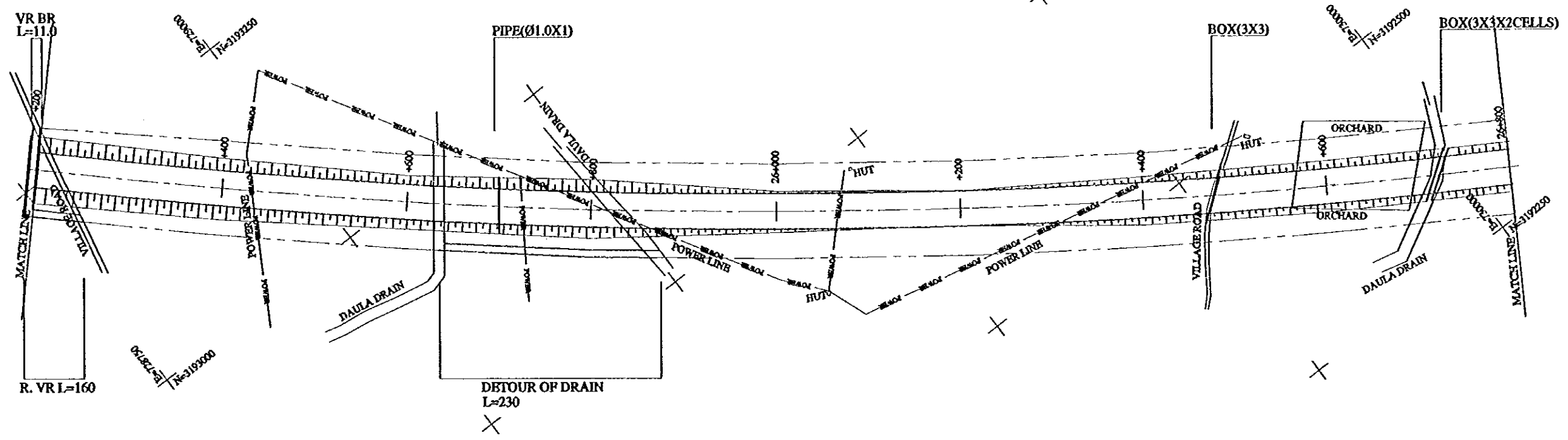


FINISHED GRADE	223.29	224.10	224.50	221.79	219.79	219.29	221.79	224.79	225.79
GROUND LEVEL	220.22	220.82	219.62	218.38	217.47	216.99	217.40	220.31	217.09
STATION No.(KM)	+600	+800	24+000	+200	+400	+600	+800	25+000	+200
HORIZONTAL ALIGNMENT	RT CURVE R=9000 L=6000			LT CURVE R=7000 L=3420					
SUPER ELEVATION	I=2.0%								





PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	17/26	025
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	

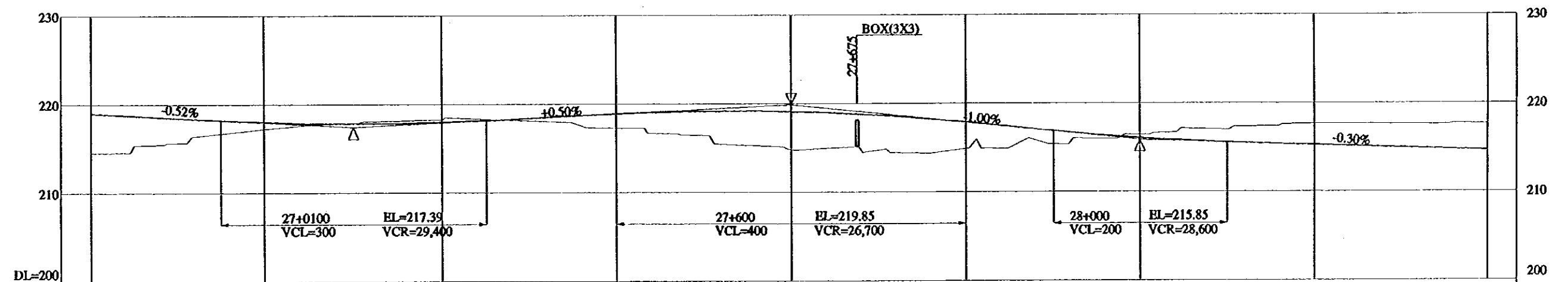
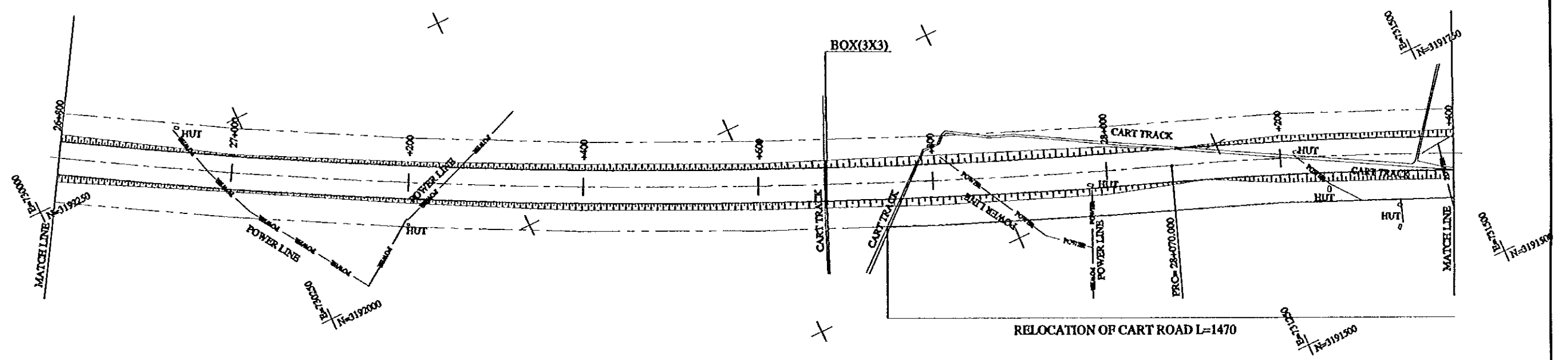


FINISHED GRADE	225.79	224.79	221.79	217.92	216.92	217.59	218.79	219.43	218.95
GROUND LEVEL	217.09	217.52	216.42	216.06	215.97	217.43	215.87	214.62	214.51
STATION No.(KM)	+200	+400	+600	+800	26+000	+200	+400	+600	+800
HORIZONTAL ALIGNMENT	LT CURVE R=7000 L=3420								
SUPER ELEVATION	i=2.0%								



05102-21  
R=3192500

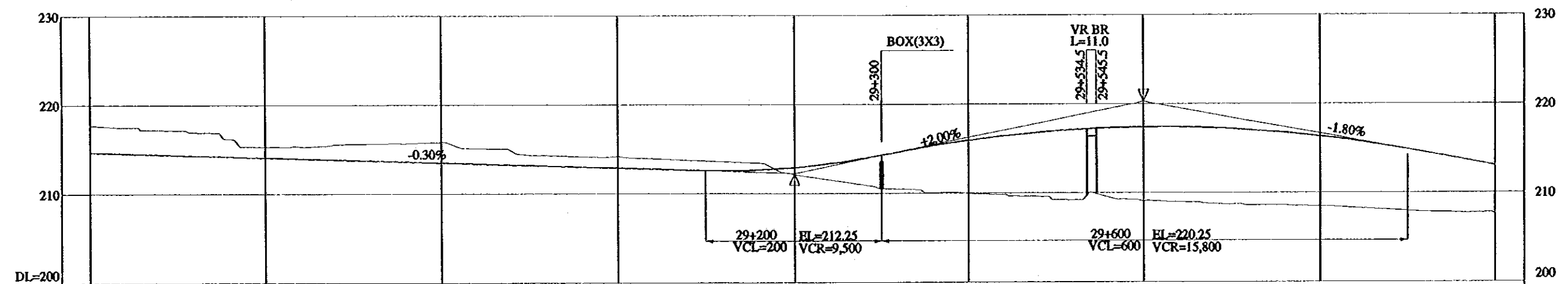
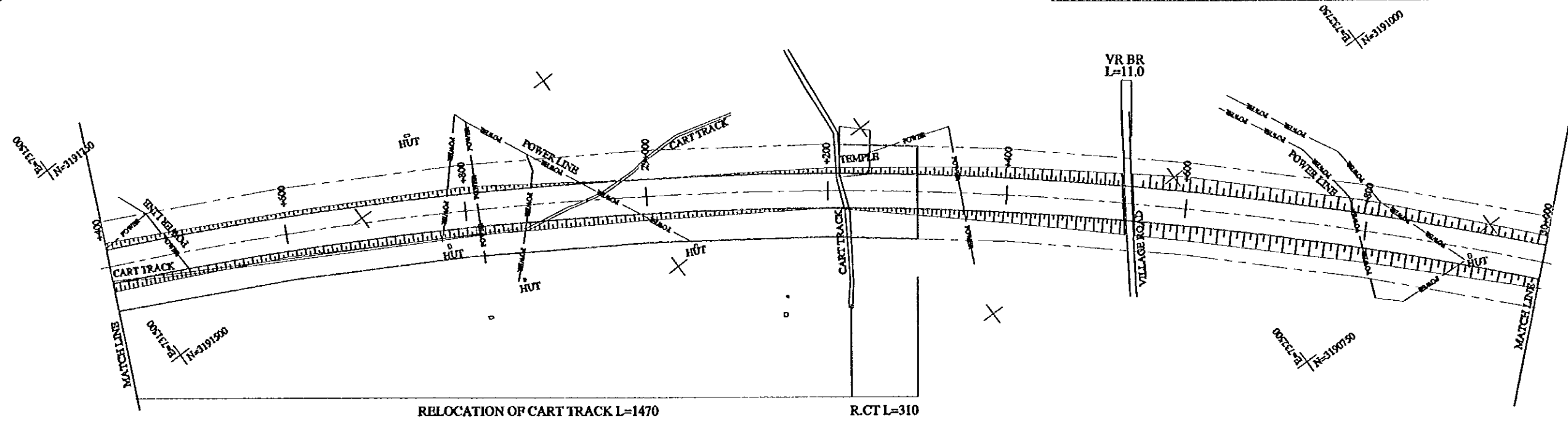
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	18/26	026
PLAN AND PROFILE	SCALE : H = 1:5000, V = 1:500		



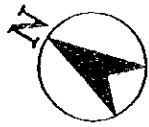
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FINISHED GRADE	218.95	217.95	217.99	218.89	219.10	217.85	216.03	215.43	214.83
GROUND LEVEL	214.51	217.24	218.47	217.23	214.71	214.89	214.54	217.66	217.66
STATION No.(KM)	+800	+27+000	+200	+400	+600	+800	+28+000	+200	+400
HORIZONTAL ALIGNMENT	LT CURVE R=7000 L=3420								
SUPER ELEVATION	i=2.0%								



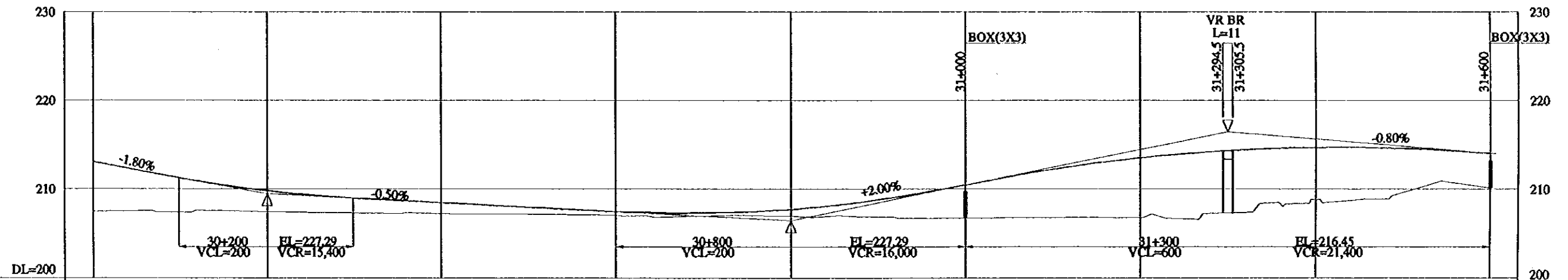
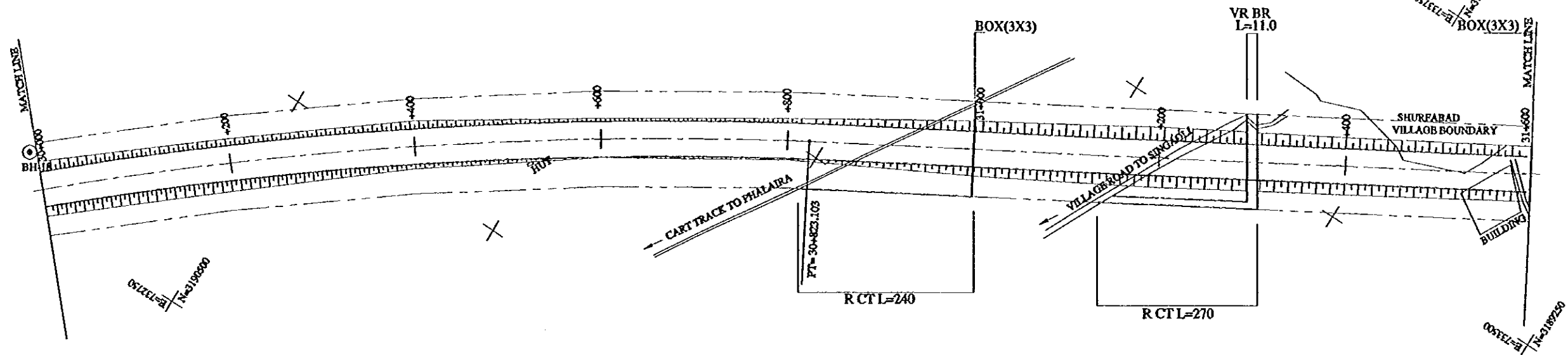
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	19/26	027
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



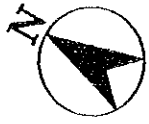
FINISHED GRADE	214.83	214.23	213.63	213.03	212.78	215.93	217.40	216.33	213.05
GROUND LEVEL	217.66	215.28	215.79	214.10	212.00	209.89	209.10	208.45	207.58
STATION No.(KM)	+400	+600	+800	29+000	+200	+400	+600	+800	30+000
HORIZONTAL ALIGNMENT	RT CURVE R=4000 L=2753.103								
SUPER ELEVATION	i=2.0% i=2.0%								



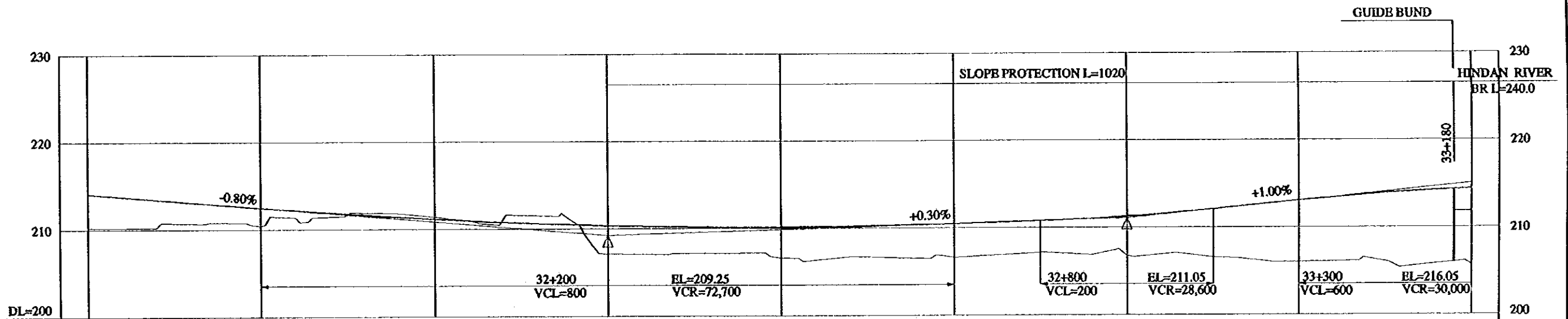
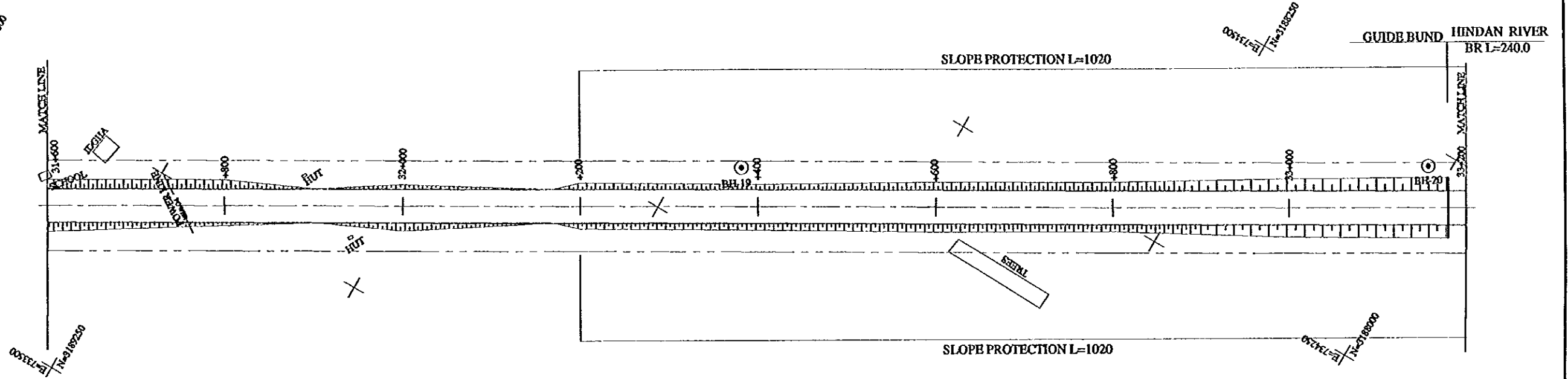
PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	20/26	028
PLAN AND PROFILE		SCALB : H = 1:5000, V = 1:500	



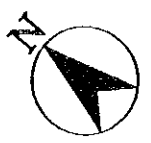
FINISHED GRADE	213.05	209.78	208.45	207.45	207.70	210.45	213.52	214.72	214.05	
GROUND LEVEL	207.50	207.45	207.23	207.04	206.95	206.73	206.75	208.80	210.15	
STATION No.(KM)	30+000	30+200	30+400	30+600	30+800	31+000	31+200	31+400	31+600	
HORIZONTAL ALIGNMENT	RT CURVE R=4000 L=2753.103					TANGENT L=2388.490				
SUPER ELEVATION						i=2.0%				



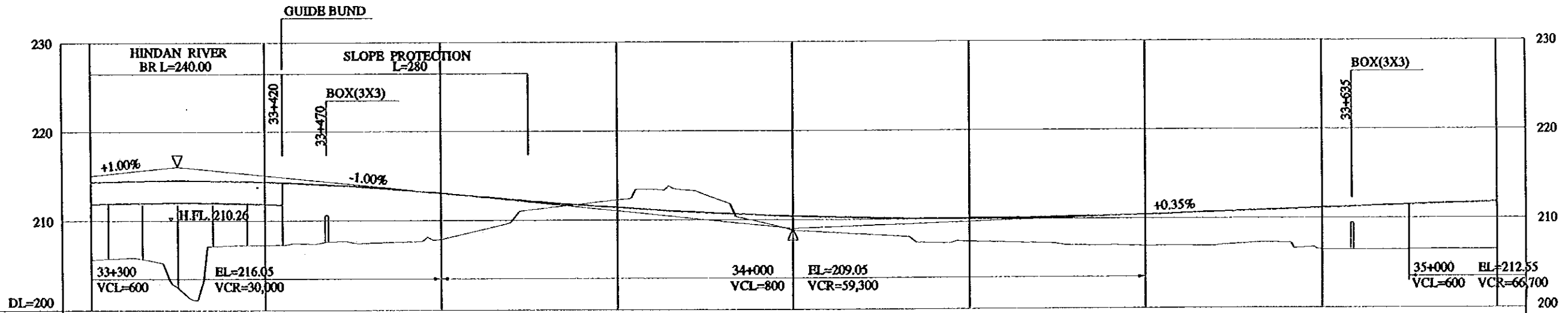
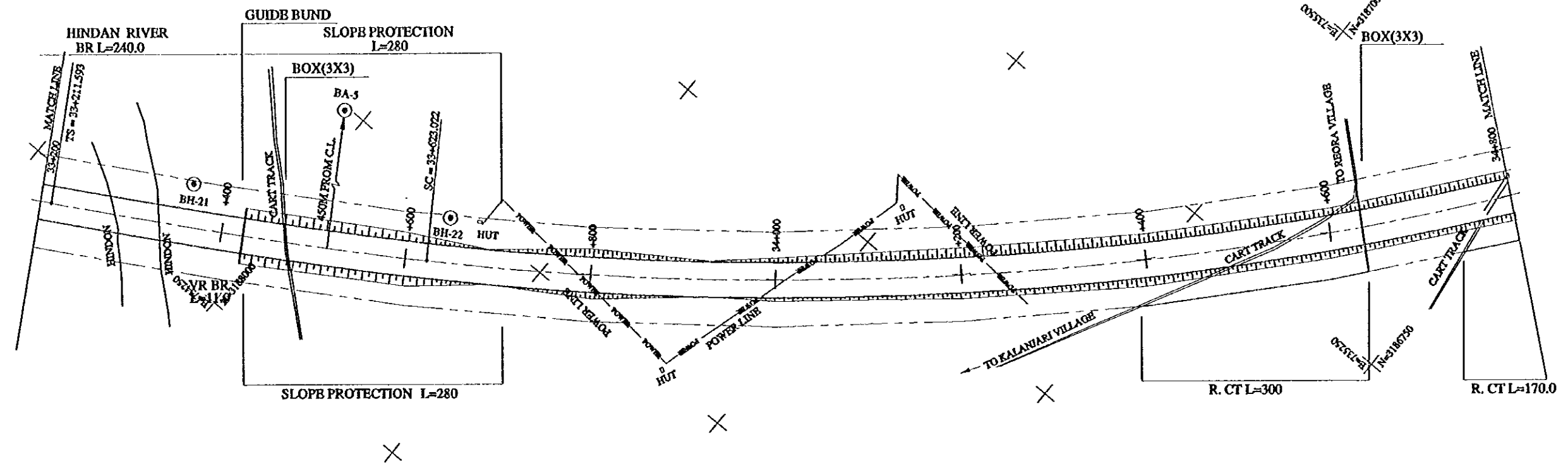
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	21/26	029
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	214.05	212.45	211.13	210.35	210.13	210.45	211.28	213.05	214.38
GROUND LEVEL	210.12	210.43	211.40	207.12	206.62	206.62	206.72	206.01	205.66
STATION No.(KM)	31+600	31+800	32+000	32+200	32+400	32+600	32+800	33+000	33+200
HORIZONTAL ALIGNMENT	TANGENT L=2388.490								
SUPER ELEVATION	i=2.0%								



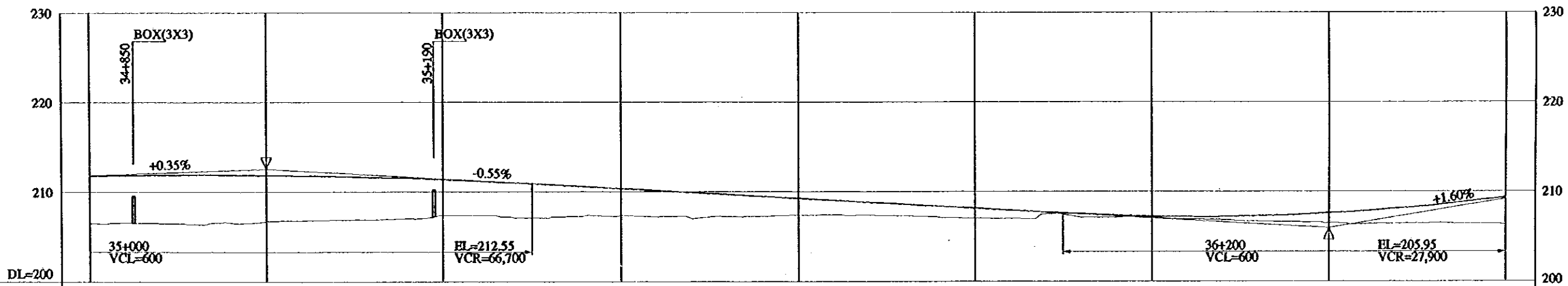
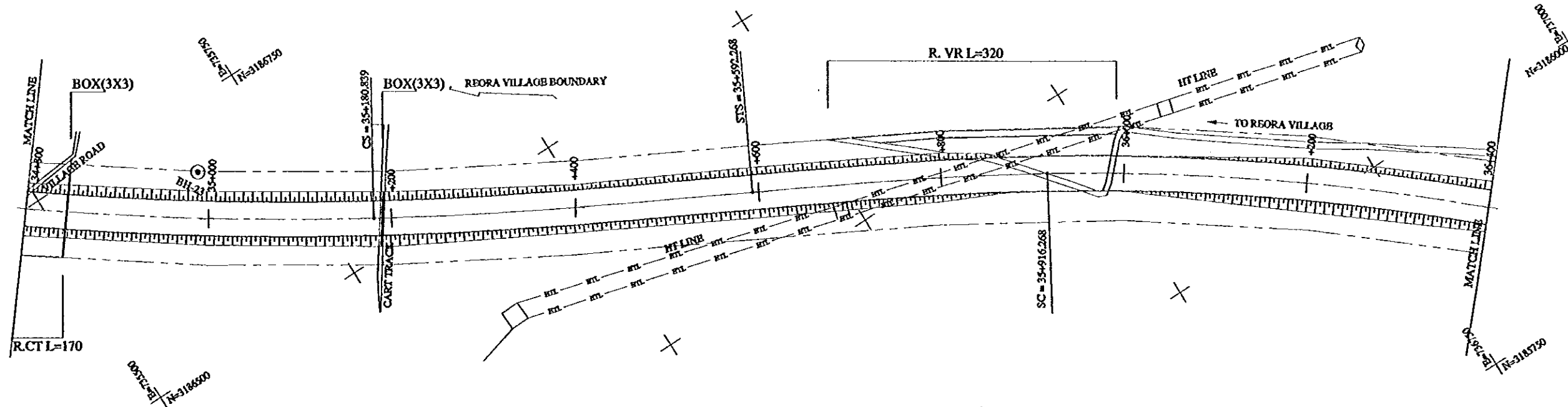
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	22/26	030
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



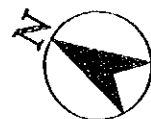
FINISHED GRADE	214.38	214.38	213.05	211.39	210.40	210.09	210.45	211.15	211.85	
GROUND LEVEL	205.66	207.25	207.89	212.31	208.83	207.52	206.92	206.46	206.48	
STATION No.(KM)	33+200	33+400	33+600	33+800	34+000	34+200	34+400	34+600	34+800	
HORIZONTAL ALIGNMENT	SPIRAL A=1200 L=411.429		LT CURVE R=3500			L=1557.817				
SUPER ELEVATION					i=2.0%		i=2.0%			



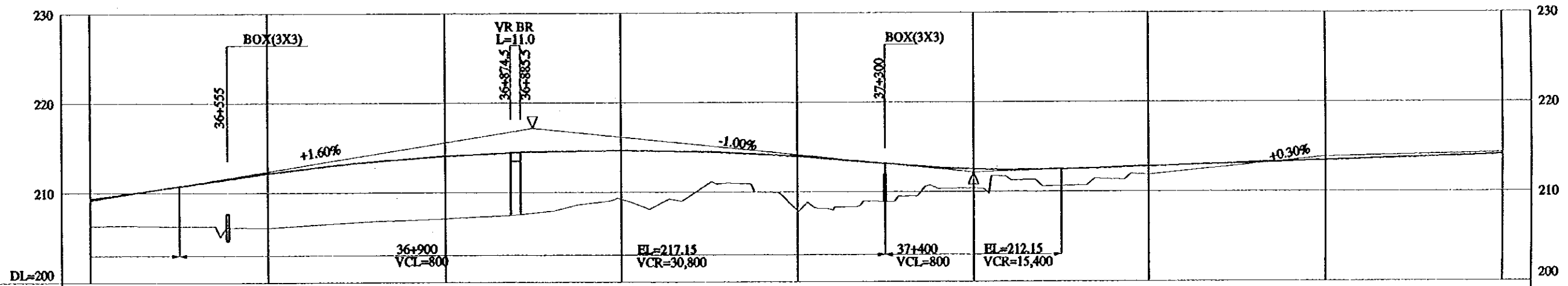
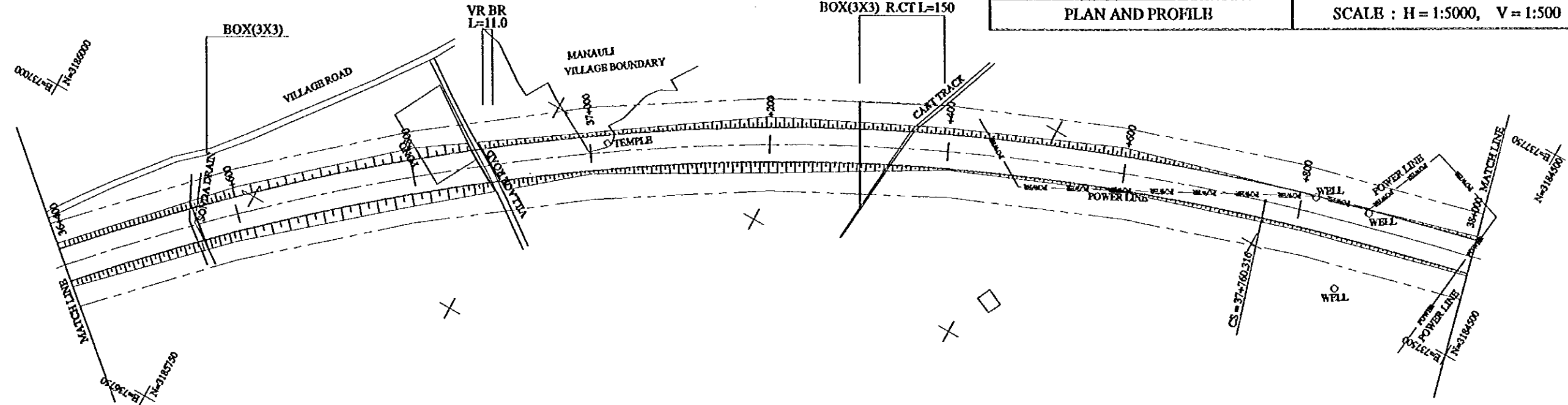
PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	23/26	031
PLAN AND PROFILE		SCALE : H=1:5000, V=1:500	



FINISHED GRADE	211.85	211.87	211.38	210.35	209.25	208.15	207.23	207.56	209.33
GROUND LEVEL	206.48	206.83	207.39	207.39	207.36	207.03	207.07	206.49	206.33
STATION No.(KM)	34+800	35+000	35+200	35+400	35+600	35+800	36+000	36+200	36+400
HORIZONTAL ALIGNMENT	LT CURVE R=3500 L=2680		SPIRAL A=1200 L=411.429		SPIRAL A=900 L=324.00		RT CURVE R=2500 L=1844.048		
SUPER ELEVATION	i=2.0%		i=2.0%		i=3.0%		i=3.0%		



PROJECT	STATB/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	24/26	032
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	

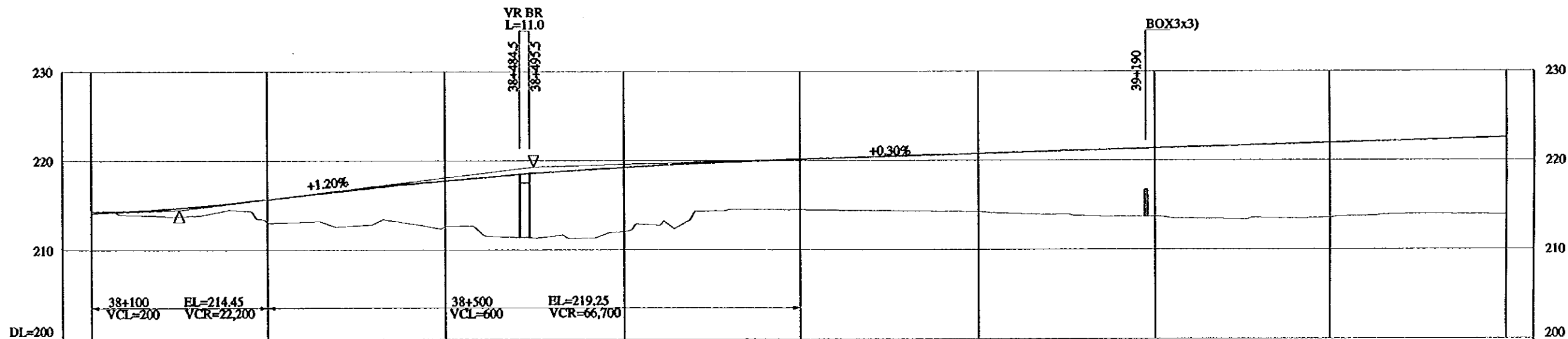
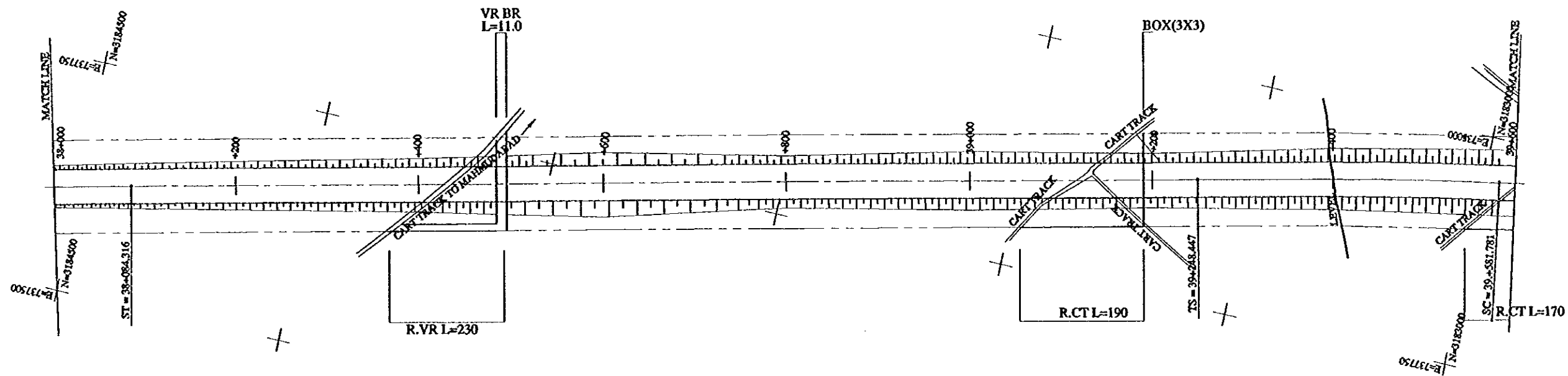


FINISHED GRADE	209.33	212.19	214.09	214.69	213.99	212.48	212.75	213.35	213.95	
GROUND LEVEL	206.33	206.13	207.08	209.02	207.85	210.40	211.85	213.87	214.33	
STATION No.(KM)	36+400	36+600	36+800	37+000	37+200	37+400	37+600	37+800	38+000	
HORIZONTAL ALIGNMENT	LT CURVE R=2500 L=1844.048							SPIRAL - A=900 L=324.00		
SUPER ELEVATION						e=3.0%		e=3.0%		





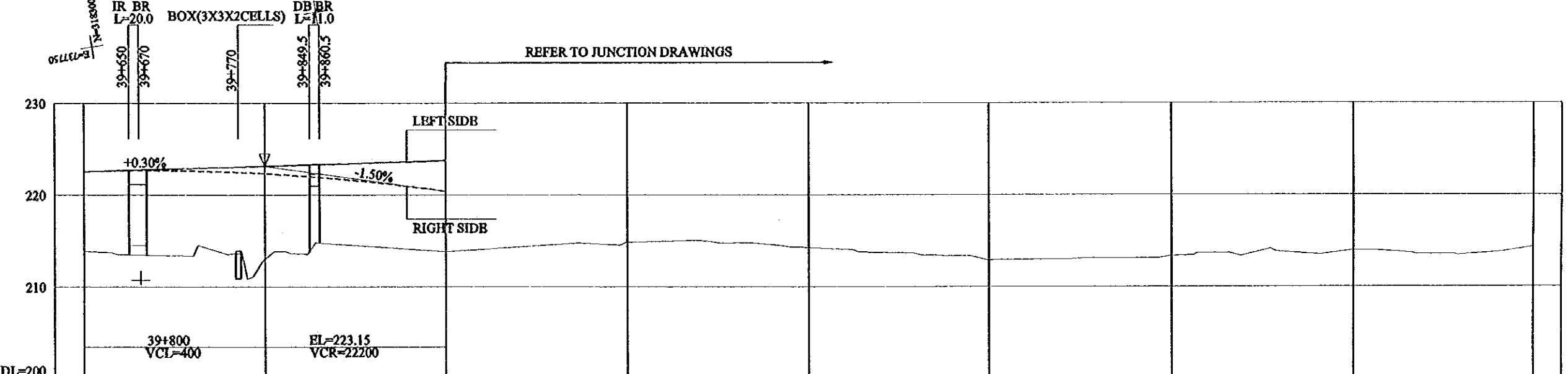
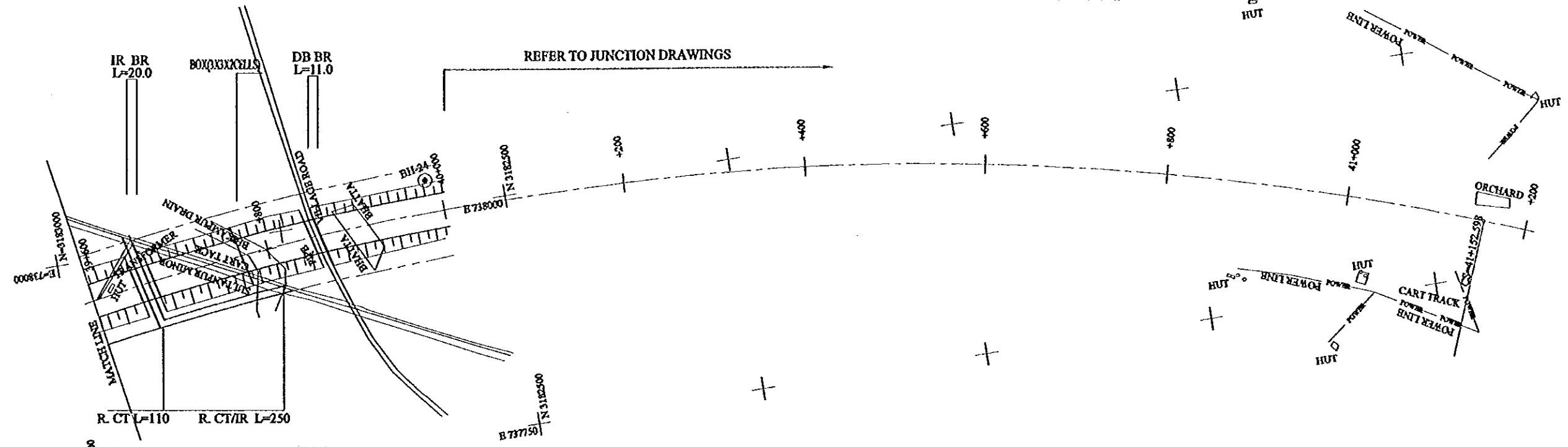
PROJECT	STATE / REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	25/26	033
PLAN AND PROFILE		SCALE : H = 1:5000, V = 1:500	



FINISHED GRADE	213.95	215.65	217.75	219.25	220.15	220.75	221.35	221.95	222.55	
GROUND LEVEL	214.33	213.02	212.58	212.02	214.47	214.24	213.67	213.55	213.87	
STATION No.(KM)	38+000	+200	+400	+600	+800	39+000	+200	+400	39+600	
HORIZONTAL ALIGNMENT	TANGENT L=1164.131					SPIRAL A=1000 L=333.333				
SUPER ELEVATION	i=2.0%					i=2.0%				



PROJECT	STATE/REGION	SHEET NO.	TOTAL SHEET
KUNDLI-GHAZIABAD EXPRESSWAY	NCR	26/26	034
PLAN AND PROFILE	SCALE : 1 : 5000		



FINISHED GRADE	222.55	223.15 (222.25)	223.75 (220.15)							
GROUND LEVEL	213.87	213.03	213.85	215.00	214.30	213.30	213.40	214.10	214.30	
STATION No.(KM)	39+600	+800	40+000	+200	+400	+600	+800	41+000	+200	
HORIZONTAL ALIGNMENT	R.T CURVE R=3000 L=1570.818									
SUPER ELEVATION		-2.0%								