

GOVT. OF THE PUNJAB  
COMMUNICATION AND WORKS  
DEPARTMENT (C&W) PUNJAB



TRANSACTION ADVISORY SERVICES FOR  
DUALIZATION AND REHABILITATION OF EXISTING  
FAISALABAD - CHINIOT - SARGODHA ROAD  
(PUBLIC PRIVATE PARTNERSHIP MODALITY)  
(LENGTH = 66.6 Km)

PRELIMINARY DRAWINGS

DECEMBER, 2020



**NATIONAL ENGINEERING SERVICES PAKISTAN (PVT) LIMITED**

NESPAK House, 1-C, Block-N, Model Town Extension, Lahore-54700, Pakistan

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**GENERAL**

## LIST OF DRAWINGS

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CONSULTANT



NATIONAL ENGINEERING SERVICES  
PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

DRAWN

Faisal

SUBMITTED

RECOMMENDED

CHD./VER.

APPROVED

PROJECT

TRANSACTION ADVISORY SERVICES FOR  
DUALIZATION AND REHABILITATION OF EXISTING  
FAISALABAD - CHINIOT - SARGODHA ROAD  
(LENGTH = 66.6 Km)

LIST OF DRAWINGS

DATE

DECEMBER, 2020

DRAWING No.

SA-413/102/PD/1A000

REV.



SCALE

**GENERAL NOTES**

1. GRID COORDINATES & ELEVATIONS FOR THE PROJECT ARE BASED ON UNIVERSAL TRANSVERSE MERCATOR (UTM WGS84).
2. EACH DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS.
3. NOTES GIVEN ON DRAWINGS ADJACENT TO A SECTION OR DETAIL PERTAIN TO THAT PARTICULAR DETAIL ONLY.
4. SUBGRADE SHALL HAVE A MINIMUM SOAKED CBR OF 10% AT 95% M.D.D.
5. LOCATION OF UNDERGROUND CABLES/UTILITIES SHOWN ON PLAN ARE APPROXIMATE. EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR AT NO EXTRA COST TO THE EMPLOYER.
6. THE CONTRACTOR SHALL ENDEAVOR MAXIMUM TO MAINTAIN UNINTERRUPTED FLOW OF TRAFFIC ON EXISTING ROAD AND ITS ADJOINING CROSS ROADS AND SUBMIT A COMPREHENSIVE DIVERSION PLAN TO ENGINEER FOR APPROVAL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO CATER FOR ALL TEMPORARY TRAFFIC DIVERSION DURING CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER INCLUDING DETOUR ROAD AND ITS MAINTENANCE, SPRINKLING OF WATER, GRADING AND COMPACTION WHEN AND WHERE REQUIRED WITHOUT ANY EXTRA COST TO EMPLOYER.
8. ANY DAMAGE CAUSED TO THE UTILITIES DURING EXCAVATION/EXECUTION OF WORK SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST TO THE EMPLOYER IN CONSULTATION WITH THE CONCERNED UTILITY PROVIDER.
9. CONTRACTOR SHALL PREPARE AND SUBMIT, FOR ENGINEER'S REPRESENTATIVE APPROVAL, CROSS-SECTION @25m INTERVAL DULY DESIGN TEMPLATES, SHOP DRAWINGS FOR STRUCTURES, PAVEMENT MARKINGS (LOCATION, TYPE AND SIZE),PREPARE A COMPREHENSIVE PLAN OF ROAD SIGNS ETC.ON THE PLAN SHEETS FOR THE APPROVAL OF ENGINEER/ENGINEER'S REPRESENTATIVE BEFORE EXECUTION OF RELATED WORKS WITHOUT ANY EXTRA COST TO THE EMPLOYER.
10. SERVICE DUCTS SHALL BE PROVIDED AT JUNCTION LOCATIONS OR AT AN INTERVAL AS DIRECTED BY THE ENGINEER.
11. STRUCTURES SHOWN ON PLAN ARE SYMBOLIC. THE LENGTHS, SIZES, SLOPE, INVERT LEVELS, SKEW ANGLE AND OTHERS DETAILS OF THE PROPOSED STRUCTURES AS SHOWN ON DRAWINGS ARE TENTATIVE. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF EACH STRUCTURE LOCATIONS WITH THE REQUIRED SKEW ANGLE AND OTHER DETAILS AS PER SITE REQUIREMENTS AND SHALL SUBMIT THEM TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION EXECUTION.
12. ROADWAY EXCAVATION MATERIAL SHALL BE UTILIZED IN THE MOST EFFECTIVE MANNER IN THE EMBANKMENT EVEN WITH BLENDING/ MIXING THE SUPERIOR MATERIALS (WHERE REQUIRED WITHOUT AT ANY EXTRA COST).ROADWAY SUITABLE EXCAVATION SHALL NOT BE DISPOSED OFF OUTSIDE RIGHT OF WAY WITHOUT WRITTEN APPROVAL OF THE ENGINEER BY EMPLOYER.
13. ROADWAY EXCAVATION SHALL BE PAID UPTO SUBGRADE LEVEL AND BELOW SUBGRADE FOR THE CONSTRUCTION OF ANY STRUCTURE (BREAST WALL, TOE WALL, DRAIN) SHALL BE PAID IN STRUCTURAL EXCAVATION.
14. THE ROADWAY EXCAVATION MATERIAL FROM ANY LOCATION OF THE PROJECT SHALL BE UTILIZED IN OTHER WORKS INCLUDED IN THE CONTRACT FOR THE ENTIRE LENGTH OF THE PROJECT.

	<b>CLIENT</b> GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB	<b>CONSULTANT</b>  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.  HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04		DRAWN	Faisal	<b>PROJECT</b> TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	<b>GENERAL NOTES</b>		SCALE
	03		SUBMITTED					DATE	DRAWING No.	REV.
	02		RECOMMENDED					DECEMBER, 2020	SA-413/102/PD/1A001	1
	01		CHD./VER.							
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

**SYMBOLS**

**ABBREVIATIONS**

DESIGN CENTER LINE		MULLAH (STREAM)	
RIGHT OF WAY		BRICK KILN	
LAND ACQUISITION		PIPE CULVERT (PLAN)	
TREES		PTCL BOX	
BUSHES		HAND PUMP	
MOSQUE		CANAL / DRAIN	
PERMANENT HOUSE / TEMPORARY		RAILWAY TRACK	
GRAVES / GRAVE YARD		WATER COURSE	
TELEPHONE POLE		GRID LINE	
ELECTRIC LINE		SHRINE	
EARTHEN TRACK		SPOT LEVEL (TYP.)	
METALLED ROAD		ROAD SIGN (IN PLAN)	
ELECTRIC POLE		EXISTING GROUND LEVEL (PROFILE)	
GRID NORTH		FINISHED GRADE LINE	
TRAVERSE /BM POINTS		BRIDGE	
POINT OF INTERSECTION		FLYOVER	
FENCE		BOX CULVERT	
SUI GAS PIPE LINE		PIPE CULVERT	
WATER PIPE LINE		OPTIC FIBER CABLE	
TUBE WELL		GUARD RAIL	
BOUNDARY LINE		DYKES AND CHUTES	
MANHOLE		UTILITY DUCT FOR PTCL	
		UTILITY DUCT FOR WAPDA	

A	AREA	LWC	LINED WATER COURSE
ALIG.	ALIGNMENT	N.S.L	NATURAL SURFACE LEVEL (E.G.L)
B	BRIDGE	N	NORTHING, NORTH
BD	SUFFIX USED FOR CONTROL POINTS	n	EMBANKMENT SLOPE
BC	BOX CULVERT	NO.	NUMBER
B.M	BENCH MARK	N.T.S	NOT TO SCALE
B.N	BOLT & NUT	P	OFFSET OF TANGENT LINE TO PC OF SHIFTED CIRCLE CURVE
BOP	BEGINNING OF PROJECT	PC	POINT OF HORIZONTAL CURVATURE (START OF HORIZONTAL CURVE)
C	CHORD LENGTH	P.C.	REINFORCED CONCRETE PIPE CULVERT
C.B.R	CALIFORNIA BEARING RATIO	PGL	PROFILE GRADE LINE
C/C	CENTER TO CENTER	P.I.	PLASTICITY INDEX
CD	CULVERT OVER DRAIN	PI	POINT OF HORIZONTAL INTERSECTION
CHD.	CHECKED	PL	PLATE
CL, L <sup>C</sup>	CENTER LINE	PR	POINT OF ROTATION
CM/cm	CENTIMETER	PT	POINT OF HORIZONTAL TANGENCY (END OF HORIZONTAL CURVE)
CONC.	CONCRETE	R	RADIUS OF HORIZONTAL CURVE
CONST/IT	CONSTRUCTION JOINT	R.C	REINFORCED CONCRETE
CS	CURVE TO SPIRAL	REINF.	REINFORCEMENT
CUL	CULVERT	REV.	REVISION
Cu.m	CUBIC METER	RHS.	RIGHT HAND SIDE
CURVE LEN	VERTICAL CURVE LENGTH	R.O.W.	RIGHT OF WAY
D	DEPTH	PUP	PEDESTRIAN UNDERPASS
Da	DEGREE OF CURVE (BY ARC)	UP-1	UNDERPASS WITH CLEARANCE 5.1m
Dc	DEGREE OF CURVE (BY CHORD)	UP-2	UNDERPASS WITH CLEARANCE 3.5m
DEG	DEGREE	RT.	RIGHT
DA.	DIAMETER	R/W	RETAINING WALL
DIM.	DIMENSION	RWC	RELOCATED WATER COURSE
D/S	DOWNSTREAM	S	SLOPE GRADIENT (PERCENT)
D.S.T	DOUBLE SURFACE TREATMENT	S.B.P	SHOULDER BREAK POINT
DRG.	DRAWING	S.C.	SLAB CULVERT
E	EASTING, EAST, EXTERNAL DISTANCE (SHIFT)	SC	SPIRAL TO CURVE
ELEV./EL	ELEVATION	SHLD	SHOULDER
EOP	END OF PROJECT	Sq.m	SQUARE METER
EXP/IT	EXPANSION JOINT	S.T.	SHORT TANGENT
G.J	GALVANIZED IRON	ST	SPIRAL TO TANGENT
H/HOR.	HORIZONTAL	STA/STA	STATION (CHAINAGE)
H.T/L.T	HIGH TENSION/LOW TENSION	STRUCT	STRUCTURE
HF	HEIGHT OF FILL	SUPEREL	SUPERELEVATION
HFL	HIGH FLOOD LEVEL	S/WALK	SIDE WALK
HR	SUFFIX USED FOR CONTROL POINTS OF REALIGNED MOTORWAY.	SW	SUBWAY
I	DEFLECTION ANGLE (HORIZONTAL CURVE)	T	TANGENT LENGTH OF HORIZONTAL CURVE
ic	CIRCULAR DEFLECTION ANGLE	TS	TANGENT TO SPIRAL
IL	INVERT LEVEL	T.S.T	TRIPLE SURFACE TREATMENT
IS	SPIRAL DEFLECTION ANGLE	TAN.	TANGENT
K	REFERRED TO STRAIGHT END OF SPIRAL	TH	THICKNESS
Kg.	KILOGRAM	TR	TRANSITION
KM/Km	ABSCISSA OF PC OF SHIFTED CIRCULAR CURVE	TYP.	TYPICAL
L	KILOMETER	US	UPSTREAM
L	LENGTH OF HORIZONTAL CURVE/SPIRAL	V	VERTICAL
LIN.M	LINEAR METER	VAR.	VARIABLE
LHS.	LEFT HAND SIDE	VER.	VERIFIED
LS	SUFFIX USED FOR CONTROL POINTS OF MAIN MOTORWAY	VPC	VERTICAL POINT OF CURVATURE (START OF VERTICAL CURVE)
LT.	LEFT	VPI	VERTICAL POINT OF INTERSECTION OF PROFILE GRADE.
LY	LONG TANGENT	VPT	VERTICAL POINT OF TANGENCY (END OF VERTICAL CURVE)
M/m	METER	W.	WEST, WIDTH OF ROADWAY, WIDTH OF FILL SLOPE
M	MIDDLE ORINATE	WFS	WIDTH OF FILL SLOPE
MAX.	MAXIMUM	W.B.M	WATER BOUND MACADAM
M.H	MAN HOLE	WC	WATER COURSE
MIN.	MINIMUM	WCC	WATER COURSE CULVERT
MM/mm	MILLIMETER	WS	SUFFIX USED FOR CONTROL POINTS OF WADALA SANDHUJAN SKEW ANGLE
0°09'49"	ANGULAR DIMENSION (0 deg, 9 min 49 sec)	0-	

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04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

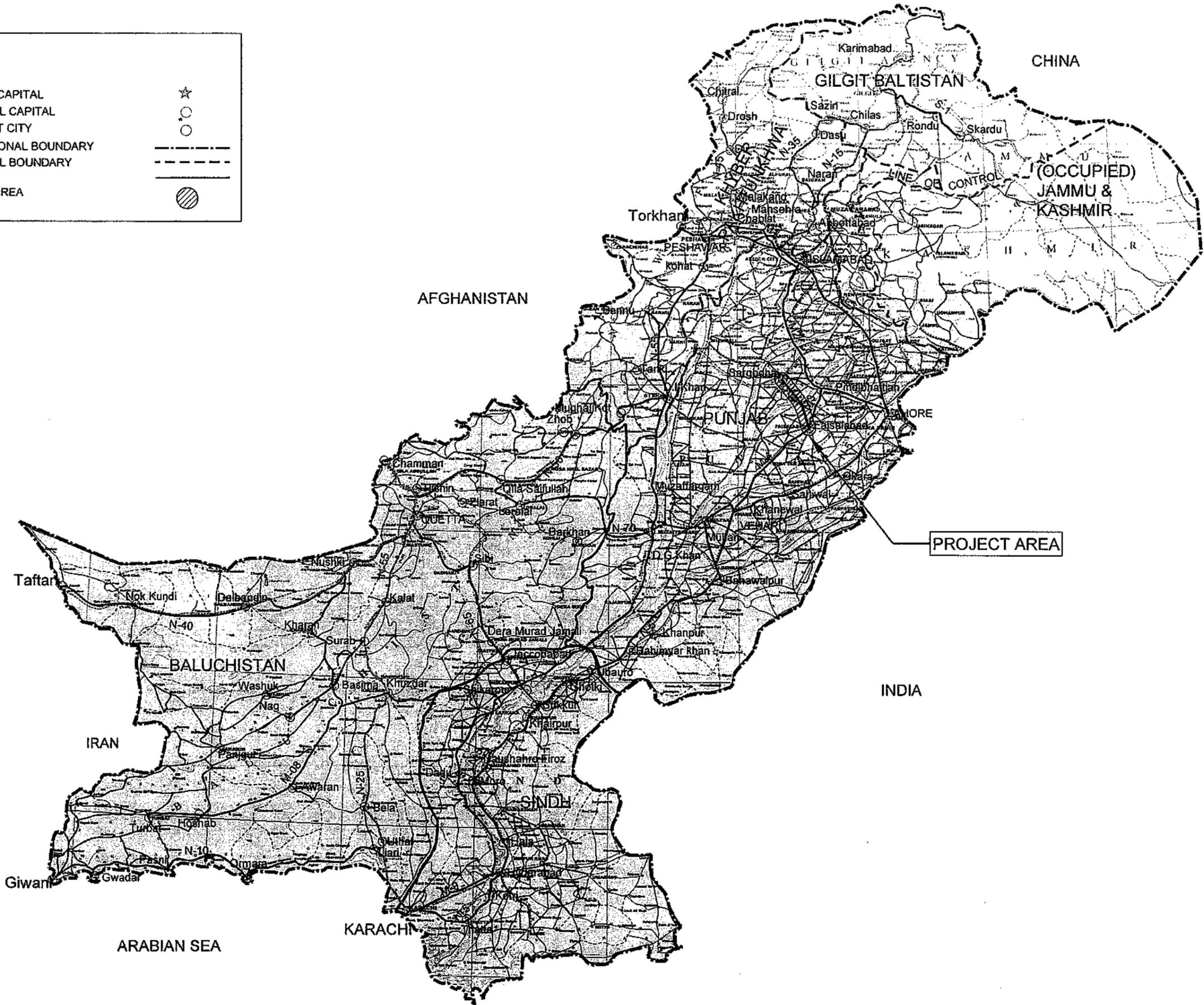
PROJECT

**TRANSACTION ADVISORY SERVICES FOR  
DUALIZATION AND REHABILITATION OF EXISTING  
FAISALABAD - CHINIOT - SARGODHA ROAD  
(LENGTH = 66.6 Km)**

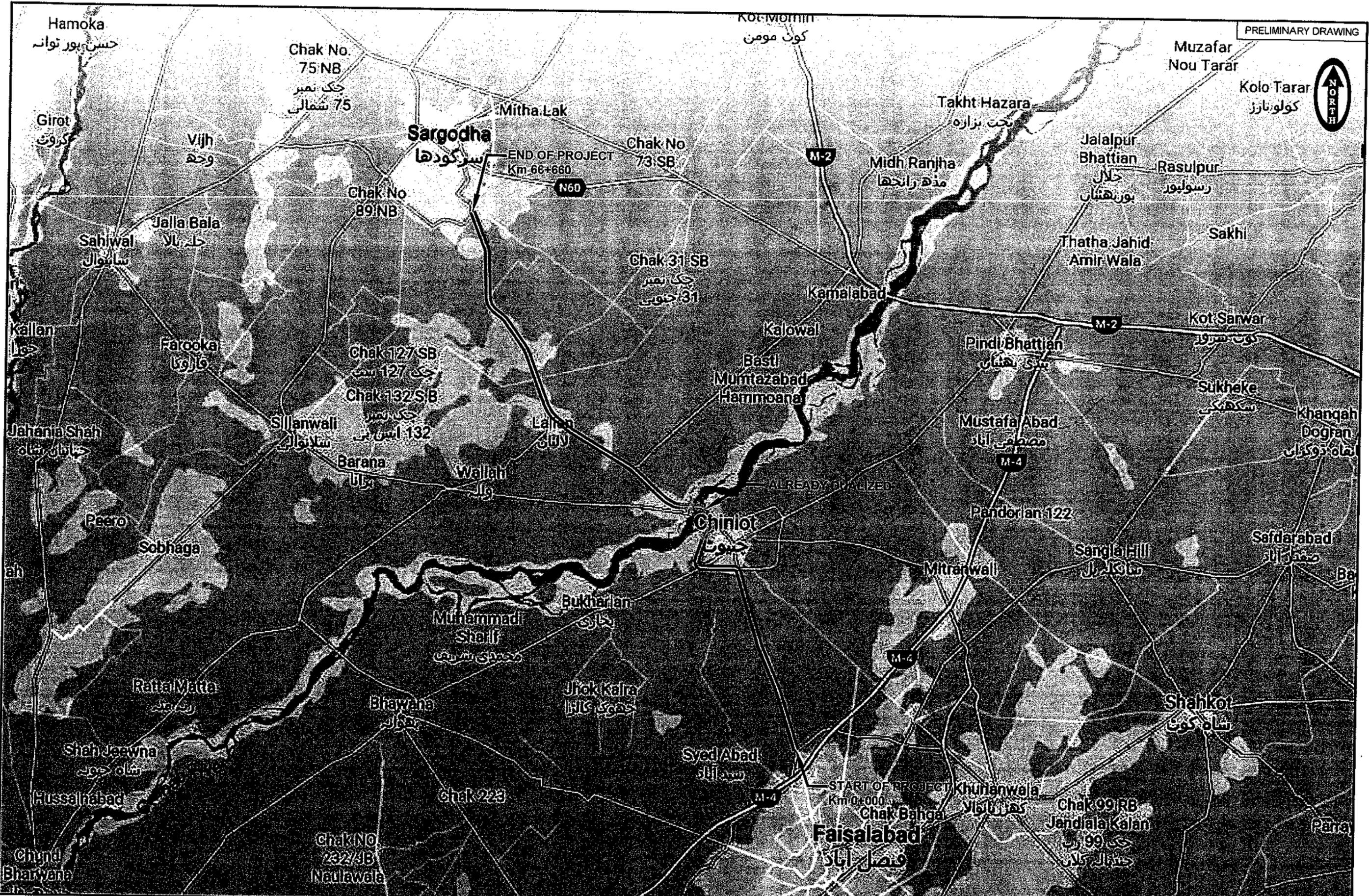
SYMBOLS & ABBREVIATIONS		SCALE
DATE	DRAWING No.	REV.
DECEMBER, 2020	SA-413/102/PD/1A002	0

**LEGEND**

- NATIONAL CAPITAL ☆
- PROVINCIAL CAPITAL ○
- IMPORTANT CITY ○
- INTERNATIONAL BOUNDARY ---
- PROVINCIAL BOUNDARY ---
- ROADS —
- PROJECT AREA ▨



	<p><b>CLIENT</b></p> <p>GOVT. OF THE PUNJAB COMMUNICATION &amp; WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p><b>CONSULTANT</b></p> <p><b>NESPAC</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.</p> <p>HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04				DRAWN	Faisal	<p><b>PROJECT</b></p> <p>TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	<b>KEY MAP</b>		SCALE	
			03				SUBMITTED				DATE	DECEMBER, 2020	DRAWING No.
			02					RECOMMENDED					
			01					CHD/VER.					
			REV.	DATE	DESCRIPTION	APPROVED	APPROVED						



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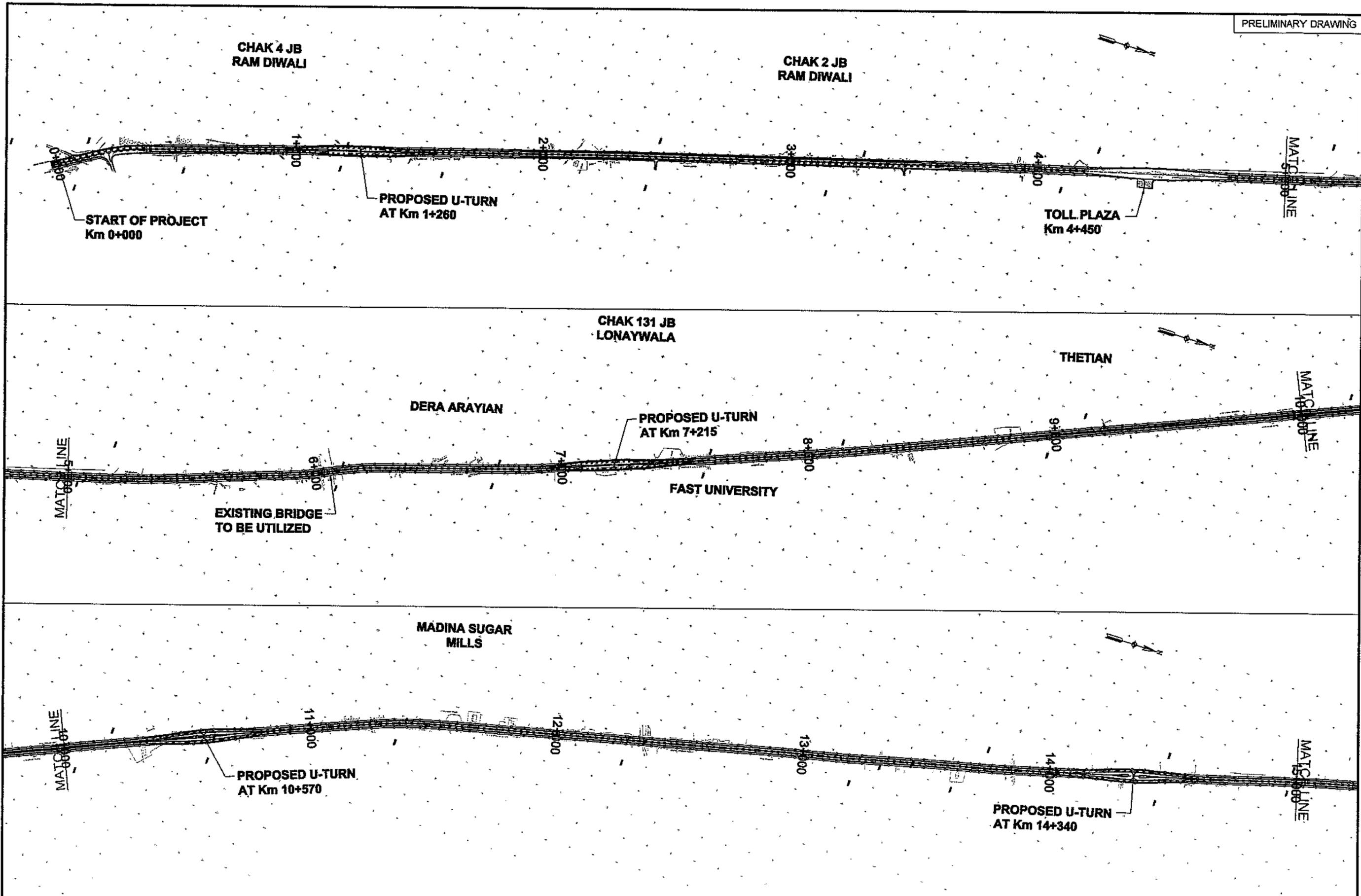
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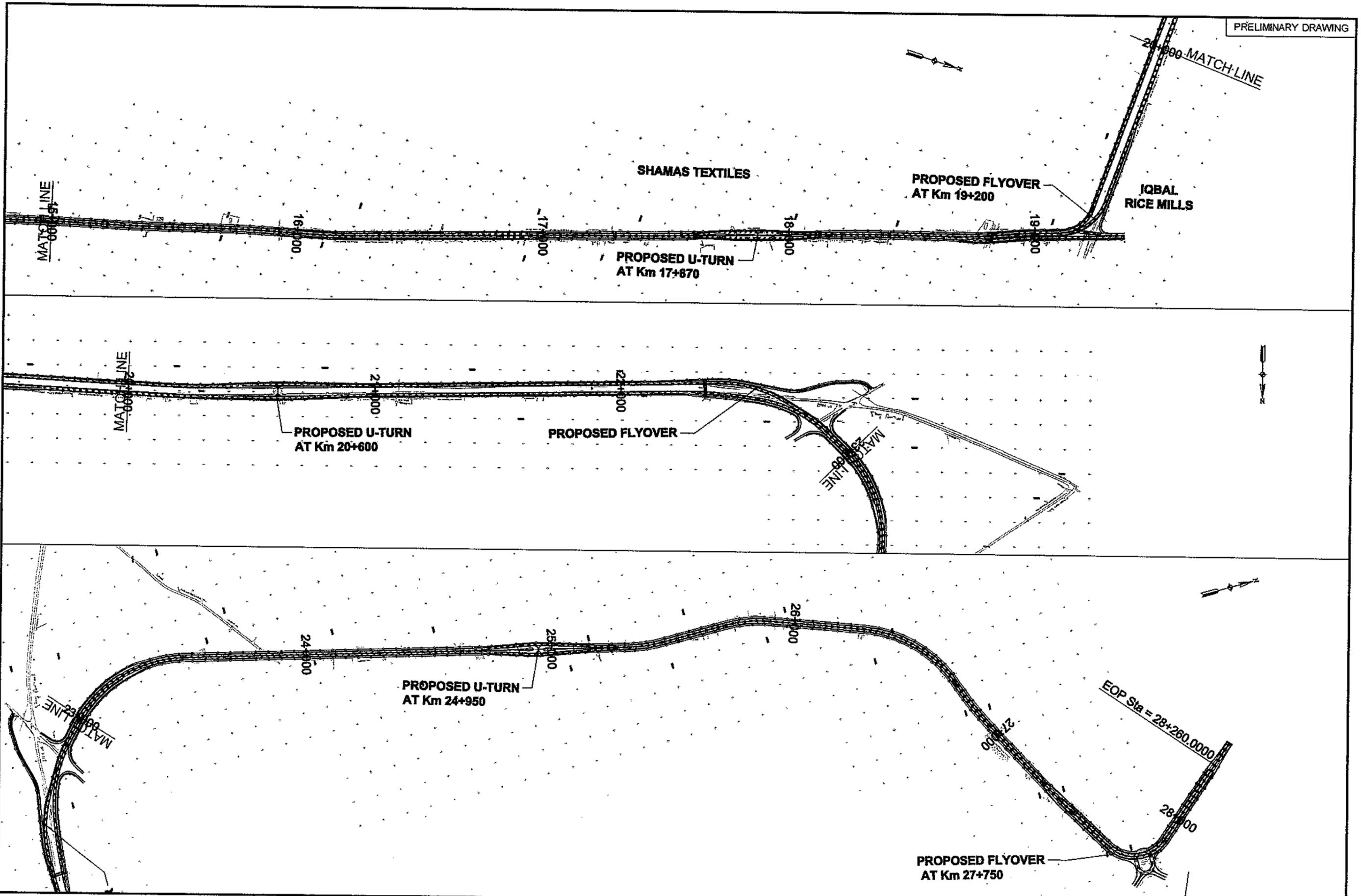
04				DRAWN	Faisal
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REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

LOCATION PLAN		SCALE
DATE	DRAWING No.	REV.
DECEMBER, 2020	SA-413/102/PD/1A004	0



	CLIENT GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT <b>NESP</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 03 02 01	DRAWN SUBMITTED RECOMMENDED CHD./VER.	Faisal [ ] [ ] [ ]	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	ALIGNMENT PLAN		SCALE	
			REV. DATE DESCRIPTION APPROVED APPROVED			DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/1A005	REV.	[ ]	



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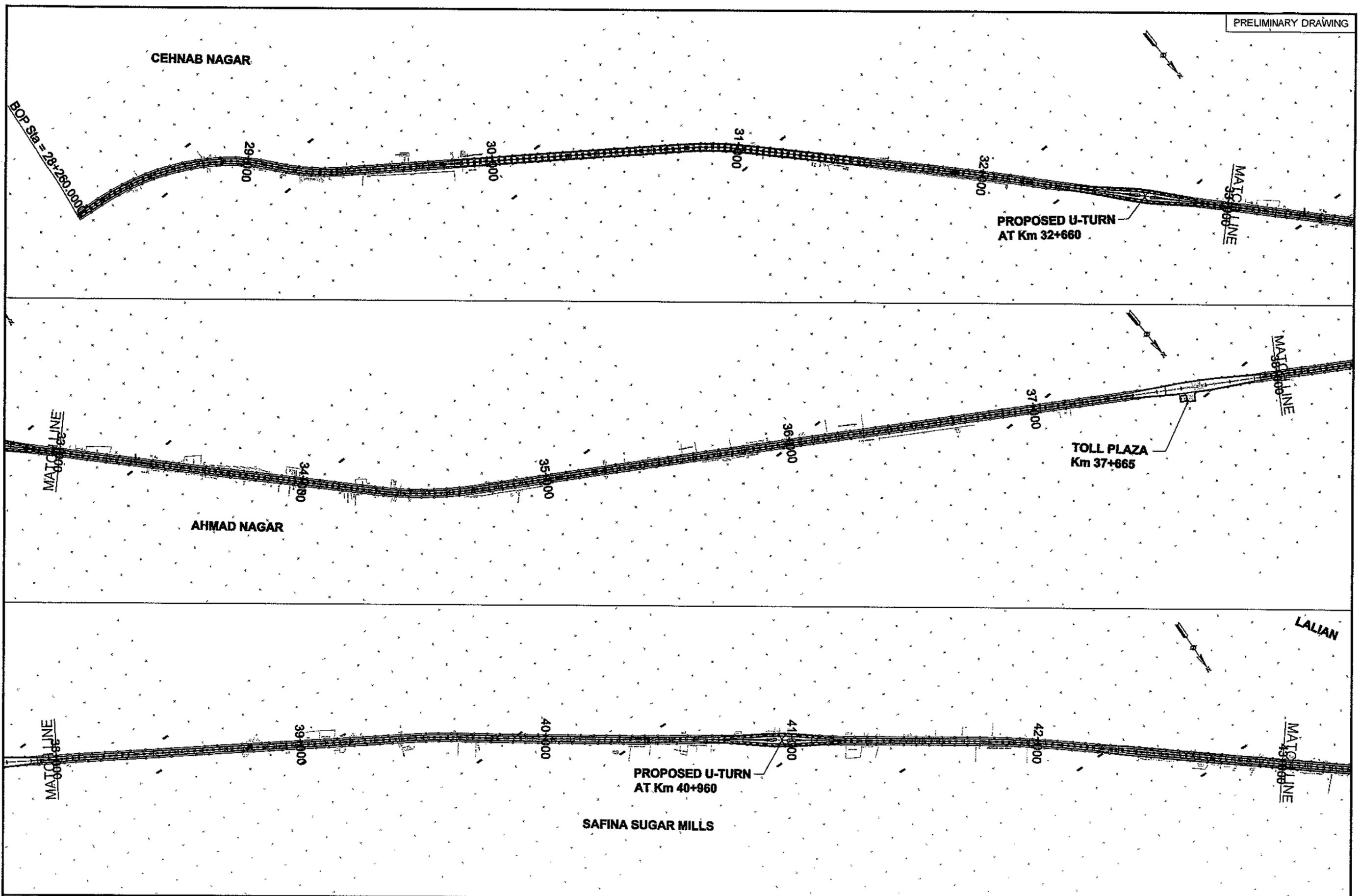
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04				DRAWN	Faisal
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01				CHD/VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

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ALIGNMENT PLAN		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/1A006	REV. 0



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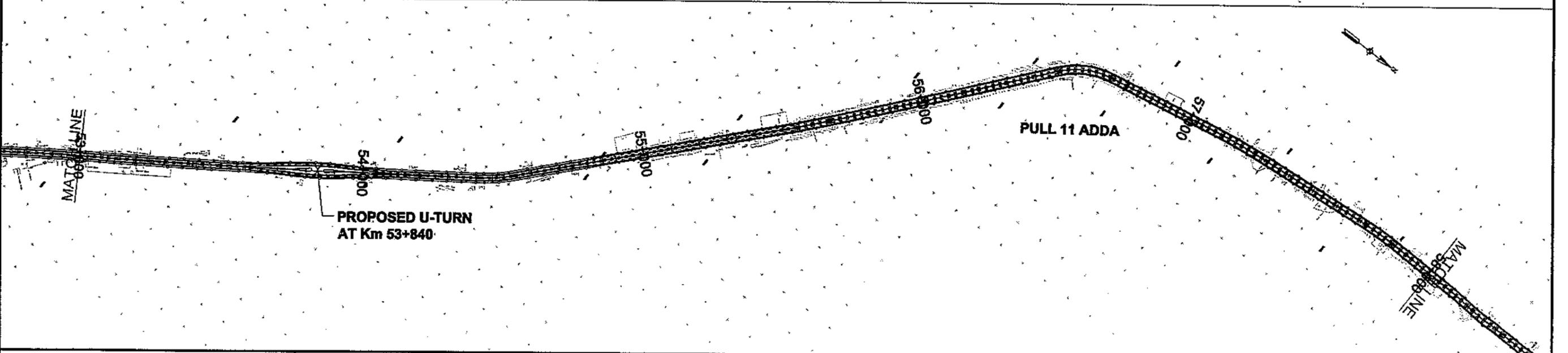
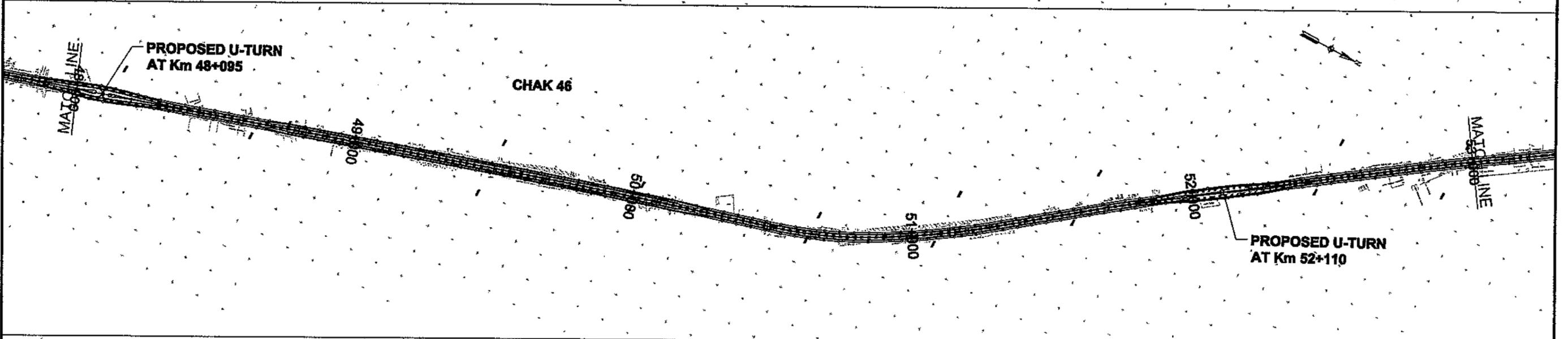
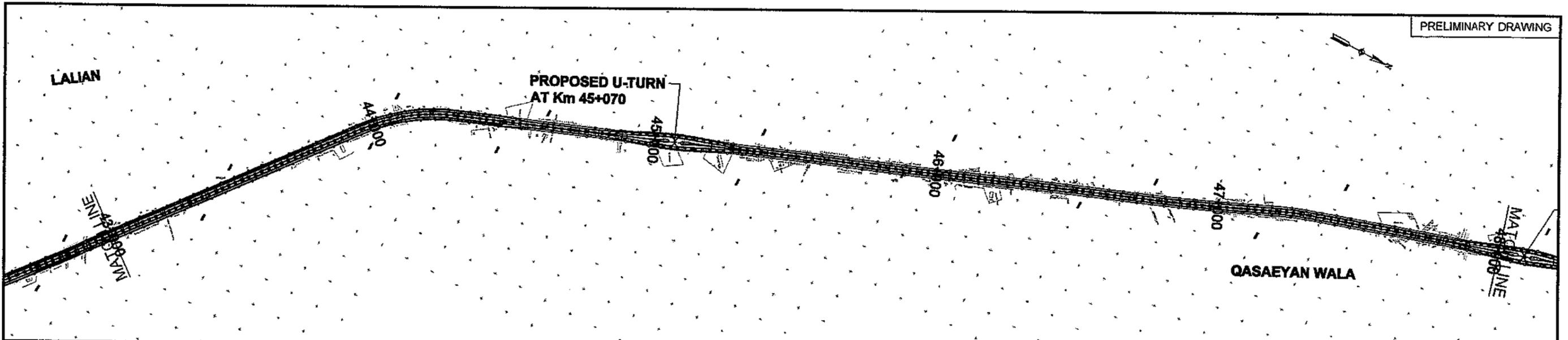
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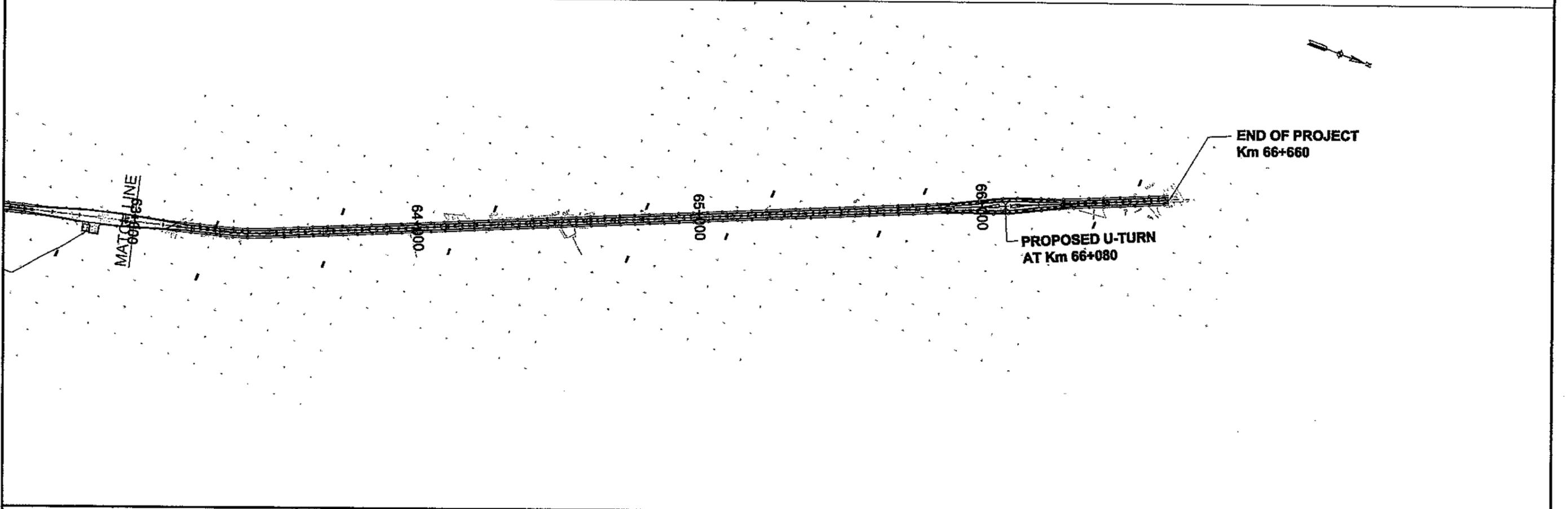
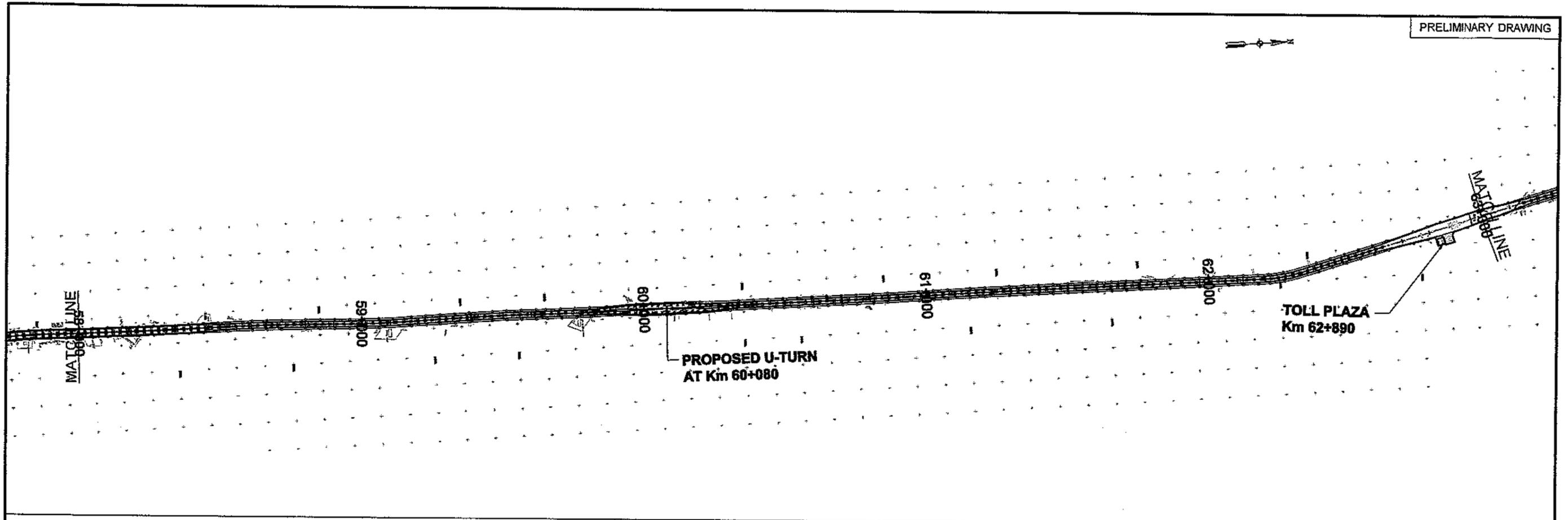
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ALIGNMENT PLAN		SCALE
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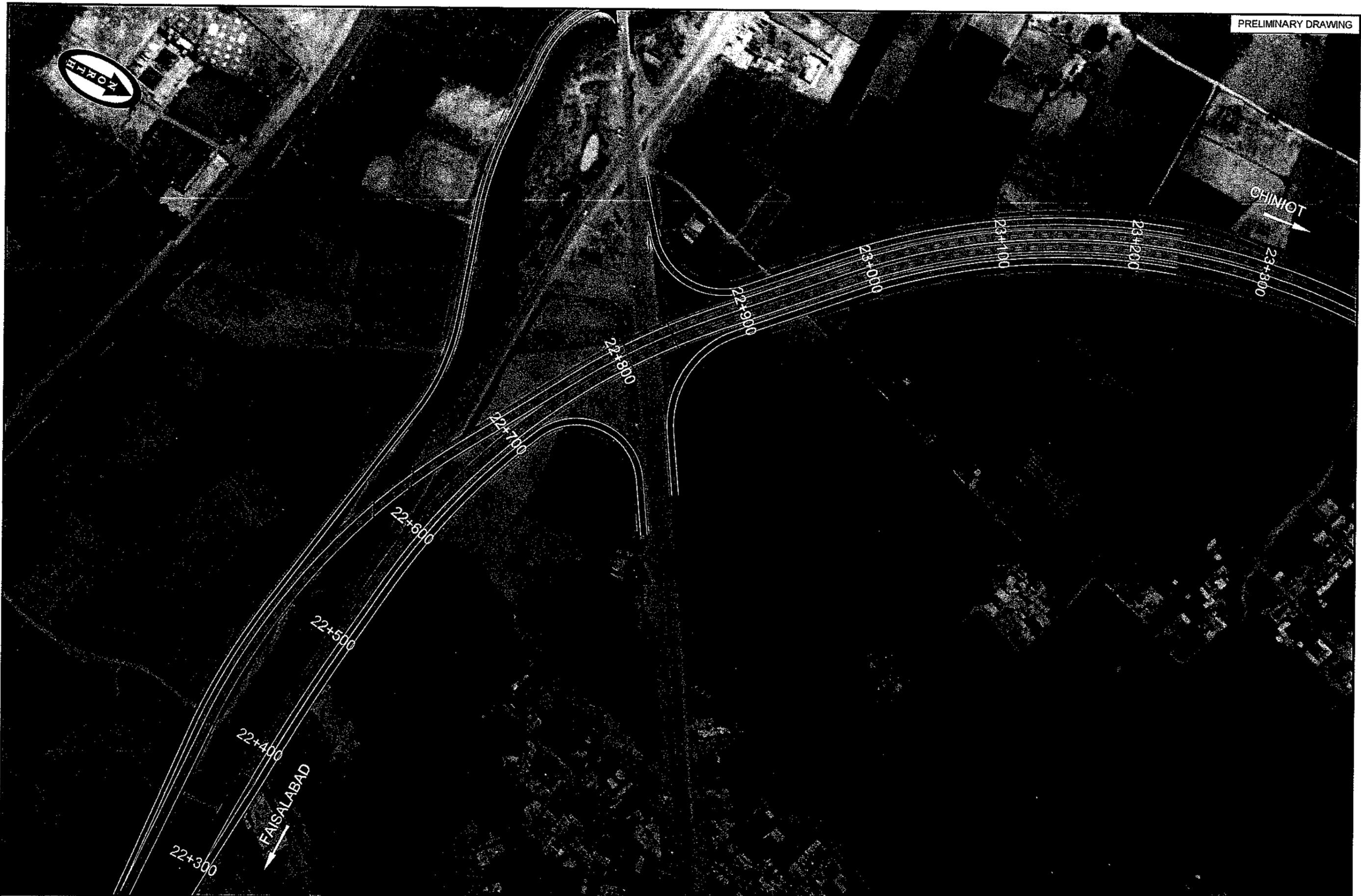
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ALIGNMENT PLAN		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/1A009	REV. 0



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		03				SUBMITTED			DATE	DRAWING No.	REV.
		02				RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1A010	6	
		01				CHD./VER.					
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 (LENGTH = 66.6 Km)

LAYOUT PLAN FLYOVER AT RD. 22+800		SCALE
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CONSULTANT  

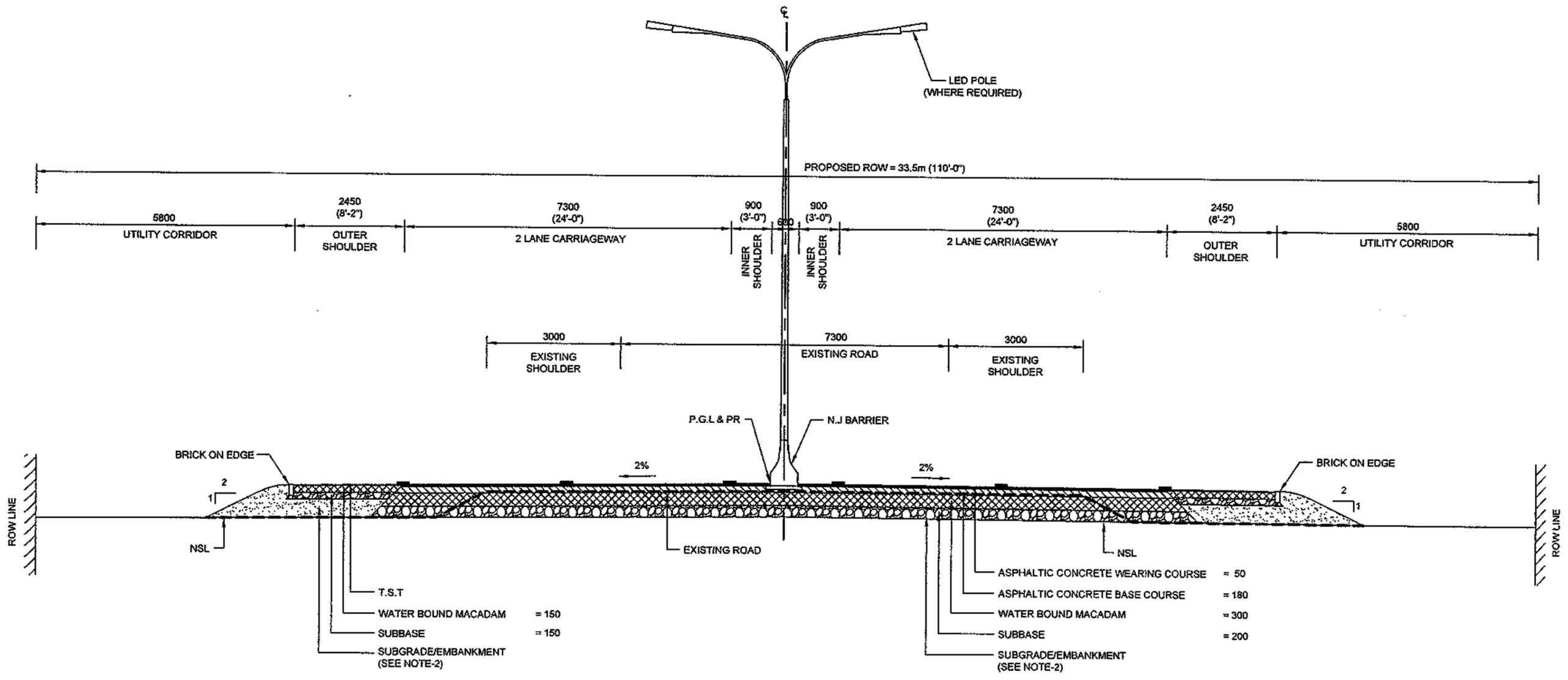
**NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD.VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

LAYOUT PLAN FLYOVER AT RD. 27+800		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/1A012	REV. 

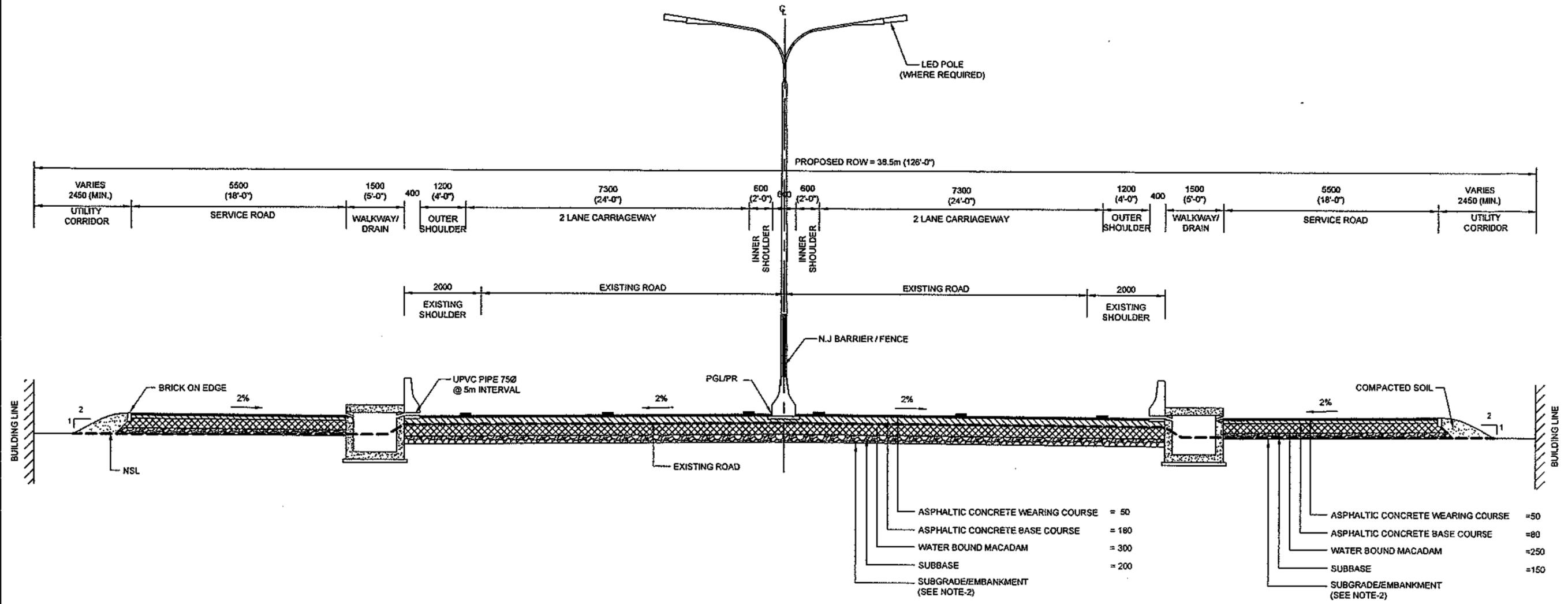
# TYPICAL CROSS SECTIONS



TYPICAL CROSS SECTION IN RURAL AREA

- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
  2. SUBGRADE SHALL HAVE MINIMUM SOAKED CBR 10% @ 95% MDD.
  3. THE EXISTING PAVEMENT SHALL BE COMPLETELY REMOVED UPTO SUBGRADE LEVEL. EXPOSED SURFACE SHALL BE REWORKED AND COMPACTED TO THE REQUIRED DENSITY. THE PROPOSED PAVEMENT STRUCTURE AS MENTIONED SHALL BE PROVIDED OVER IT.

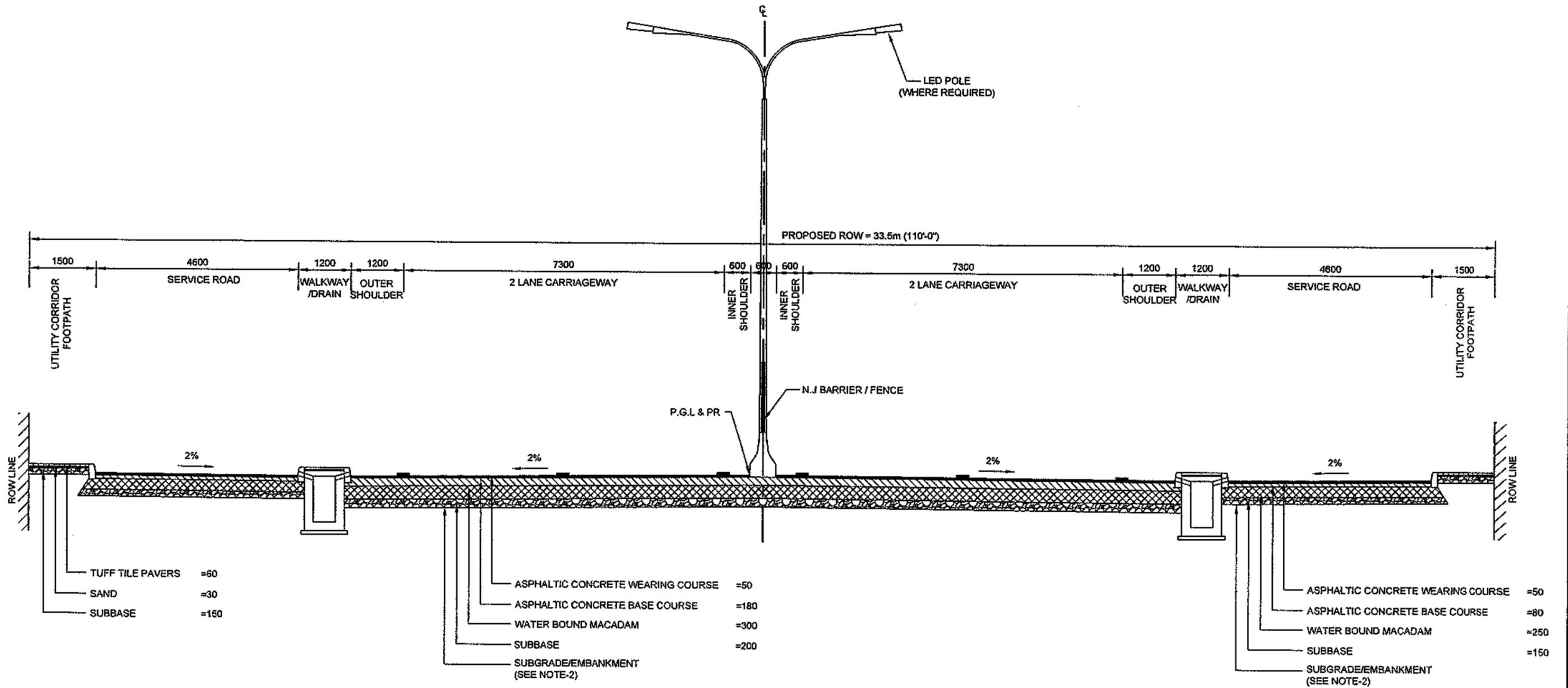
<b>CLIENT</b> GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB	<b>CONSULTANT</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	Faisal	<b>PROJECT</b> TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	<b>TYPICAL CROSS SECTION</b>	SCALE	
		03			SUBMITTED					
		02			RECOMMENDED					
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				
					DATE	DECEMBER, 2020	DRAWING No.	SA-413/102/PD/XS001	REV.	0



**TYPICAL CROSS SECTION IN URBAN AREA  
(WHERE ONE SIDE POPULATION AND OTHER SIDE INDUSTRY)  
FROM Km. 42+350 TO Km. 44+450  
FROM Km. 48+750 TO Km. 50+150**

- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
  2. SUBGRADE SHALL HAVE MINIMUM SOAKED CBR 10% @ 95% MDD.
  3. THE EXISTING PAVEMENT SHALL BE COMPLETELY REMOVED UPTO SUBGRADE LEVEL. EXPOSED SURFACE SHALL BE REWORKED AND COMPACTED TO THE REQUIRED DENSITY. THE PROPOSED PAVEMENT STRUCTURE AS MENTIONED SHALL BE PROVIDED OVER IT.

<p>CLIENT</p> <p>GOVT. OF THE PUNJAB COMMUNICATION &amp; WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT</p> <p>NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.</p> <p>HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	Faisal	<p>PROJECT</p> <p>TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	<p>TYPICAL CROSS SECTION</p>		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/XS002		
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

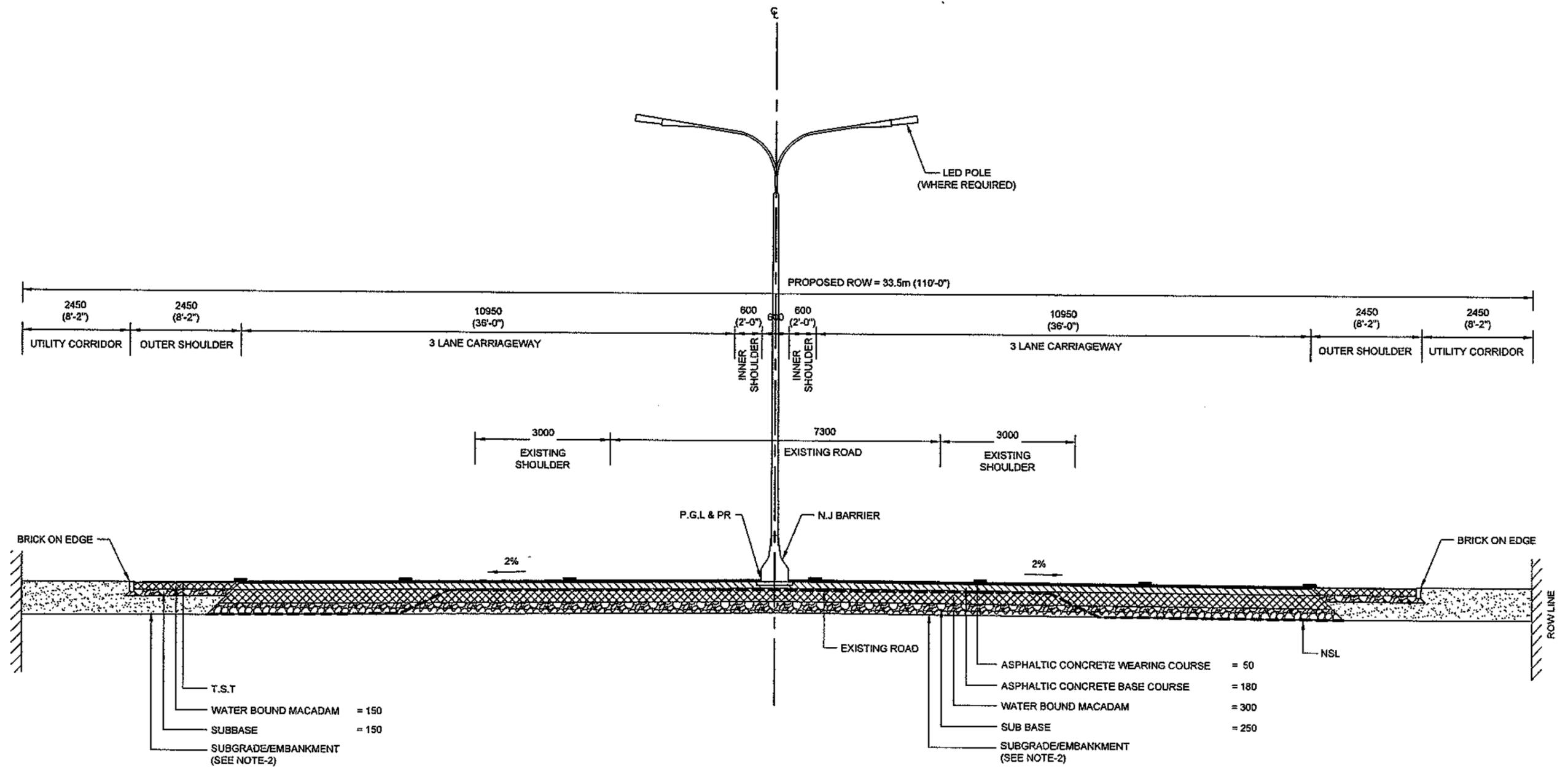


**TYPICAL CROSS SECTION IN SMALL URBAN  
AREA/SUB URBAN AREA**  
FROM Km. 1+900 TO Km. 2+800  
FROM Km. 16+000 TO Km. 16+600

**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. SUBGRADE SHALL HAVE MINIMUM SOAKED CBR 10% @ 95% MDD.
3. THE EXISTING PAVEMENT SHALL BE COMPLETELY REMOVED UP TO SUBGRADE LEVEL. EXPOSED SURFACE SHALL BE REWORKED AND COMPACTED TO THE REQUIRED DENSITY. THE PROPOSED PAVEMENT STRUCTURE AS MENTIONED SHALL BE PROVIDED OVER IT.

 CLIENT <b>GOVT. OF THE PUNJAB COMMUNICATION &amp; WORKS DEPARTMENT (C&amp;W) PUNJAB</b>	CONSULTANT  <b>NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.</b> HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	Faisal	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	<b>TYPICAL CROSS SECTION</b>		SCALE
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		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

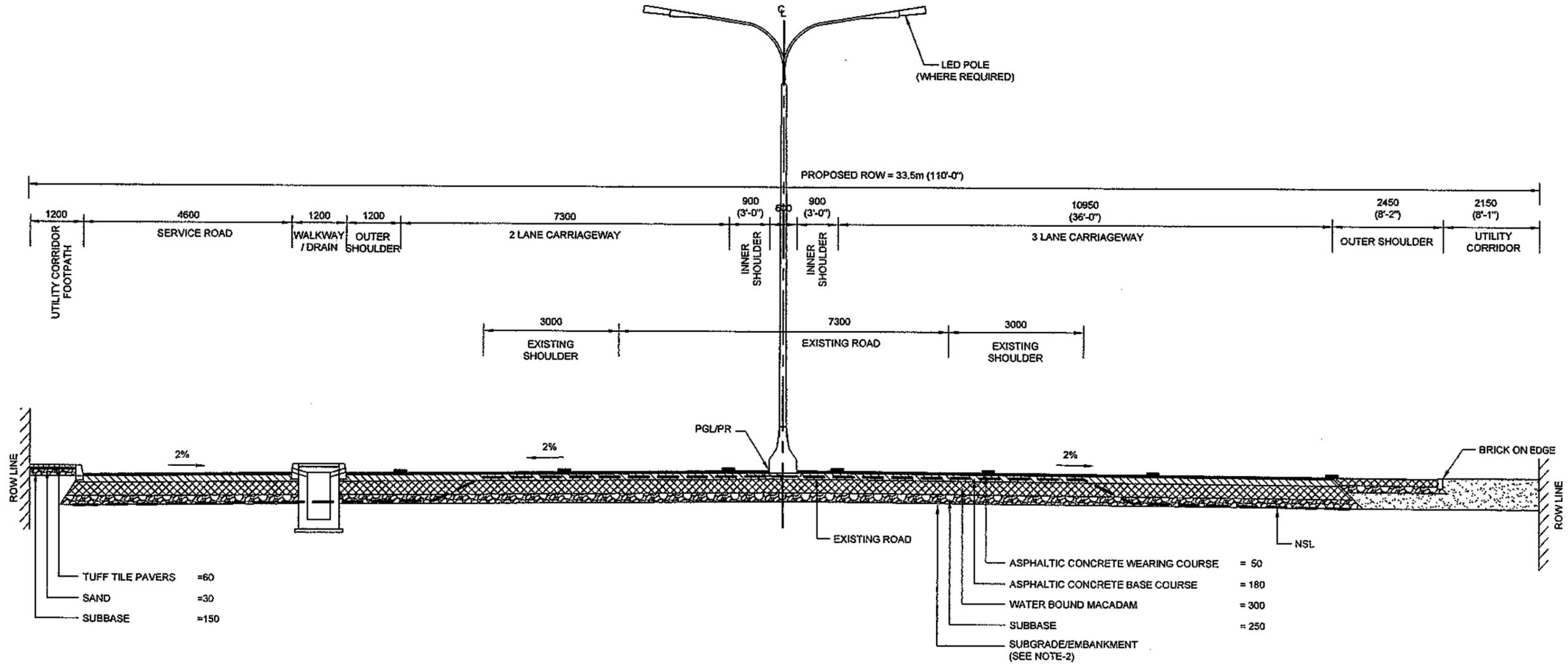


**TYPICAL CROSS SECTION IN RURAL AREA  
(WITH 3 LANES EACH ON BOTH SIDES)**  
 FROM Km. 16+825 TO Km. 16+950  
 FROM Km. 29+850 TO Km. 31+450  
 FROM Km. 54+850 TO Km. 58+450

**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. SUBGRADE SHALL HAVE MINIMUM SOAKED CBR 10% @ 95% MOD.
3. THE EXISTING PAVEMENT SHALL BE COMPLETELY REMOVED UPTO SUBGRADE LEVEL. EXPOSED SURFACE SHALL BE REWORKED AND COMPACTED TO THE REQUIRED DENSITY. THE PROPOSED PAVEMENT STRUCTURE AS MENTIONED SHALL BE PROVIDED OVER IT.

	<b>CLIENT</b> GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB		<b>CONSULTANT</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.  HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 03 02 01		DRAWN SUBMITTED RECOMMENDED CHD./VER.	Faisal	<b>PROJECT</b> TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	<b>TYPICAL CROSS SECTION</b>		SCALE
	DATE DECEMBER, 2020		DRAWING No. SA-413/102/PDXS004	REV. 0							

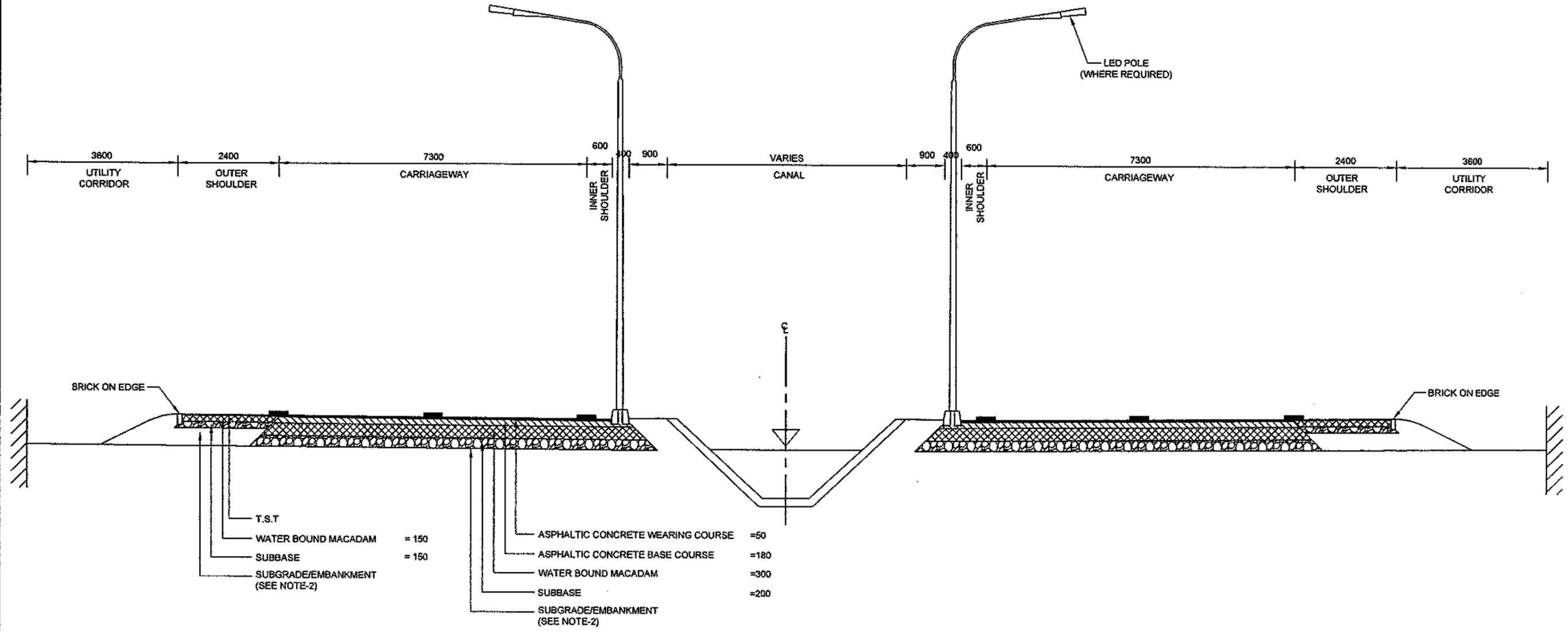


**TYPICAL CROSS SECTION IN RURAL AREA  
(WITH ONE SIDE SERVICE ROAD)  
FROM Km. 2+800 TO Km. 3+500  
FROM Km. 16+600 TO Km. 16+800**

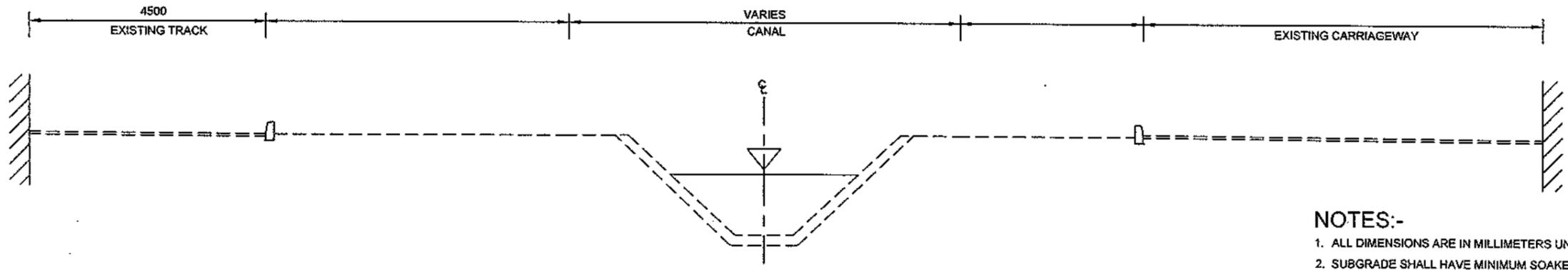
**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. SUBGRADE SHALL HAVE MINIMUM SOAKED CBR 10% @ 95% MDD.
3. THE EXISTING PAVEMENT SHALL BE COMPLETELY REMOVED UPTO SUBGRADE LEVEL. EXPOSED SURFACE SHALL BE REWORKED AND COMPACTED TO THE REQUIRED DENSITY. THE PROPOSED PAVEMENT STRUCTURE AS MENTIONED SHALL BE PROVIDED OVER IT.

CLIENT GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04				DRAWN	Faisal	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	TYPICAL CROSS SECTION		SCALE
		03				SUBMITTED					DATE
		02				RECOMMENDED			DECEMBER, 2020	SA-413/102/PD/XS005	0
		01				CHO. / VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED					



TYPICAL CROSS SECTION  
FROM Km. 19+200 TO Km. 22+200



EXISTING CROSS SECTION

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. SUBGRADE SHALL HAVE MINIMUM SOAKED CBR 10% @ 95% MDD.
3. THE EXISTING PAVEMENT SHALL BE COMPLETELY REMOVED UP TO SUBGRADE LEVEL. EXPOSED SURFACE SHALL BE REWORKED AND COMPACTED TO THE REQUIRED DENSITY. THE PROPOSED PAVEMENT STRUCTURE AS MENTIONED SHALL BE PROVIDED OVER IT.

CLIENT  

**GOVT. OF THE PUNJAB**  
 COMMUNICATION & WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  

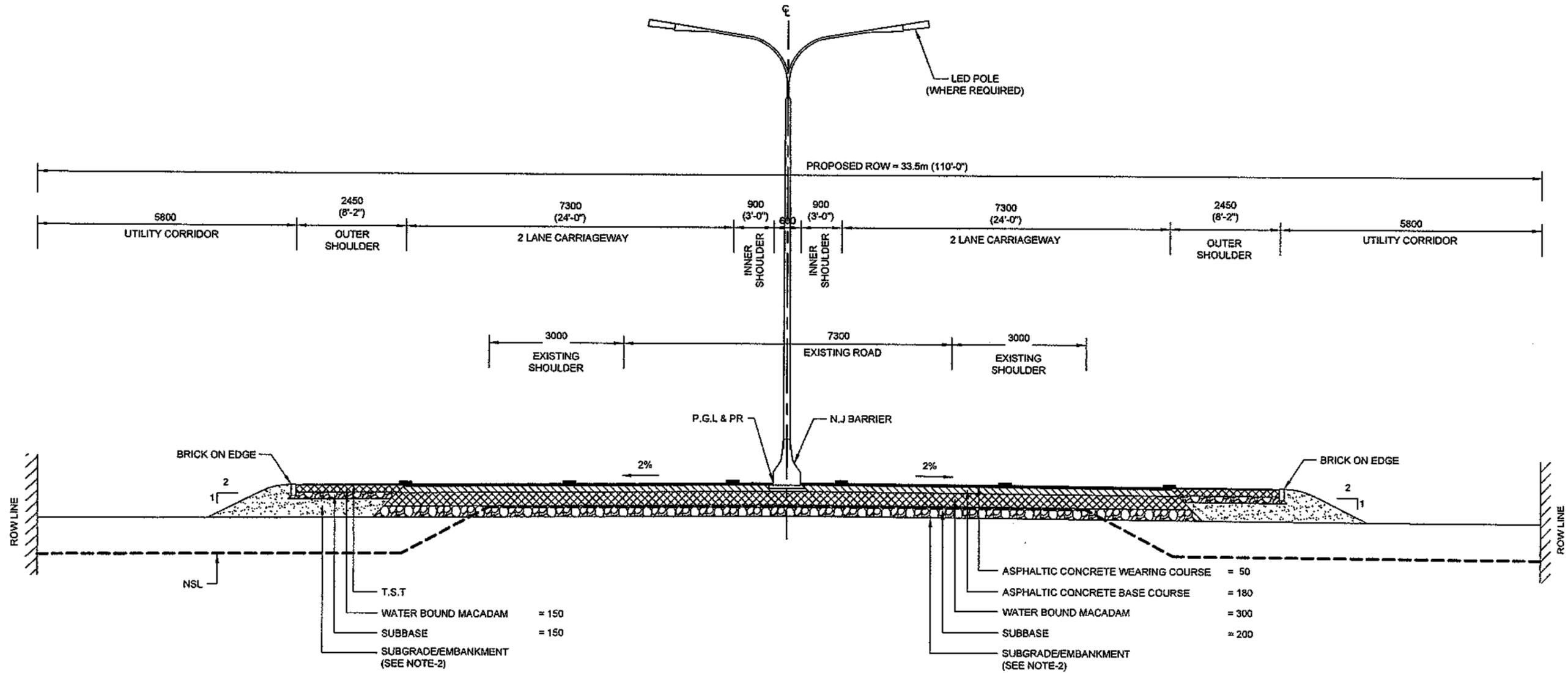
**NATIONAL ENGINEERING SERVICES**  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04					DRAWN	Faisal
03					SUBMITTED	
02					RECOMMENDED	
01					CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED		

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

TYPICAL CROSS SECTION		SCALE
		REV.
DATE	DRAWING No.	
DECEMBER, 2020	SA-413/102/PD/XS006	





**TYPICAL CROSS SECTION IN RURAL AREA  
(IN RAISED EMBANKMENT SECTION)**

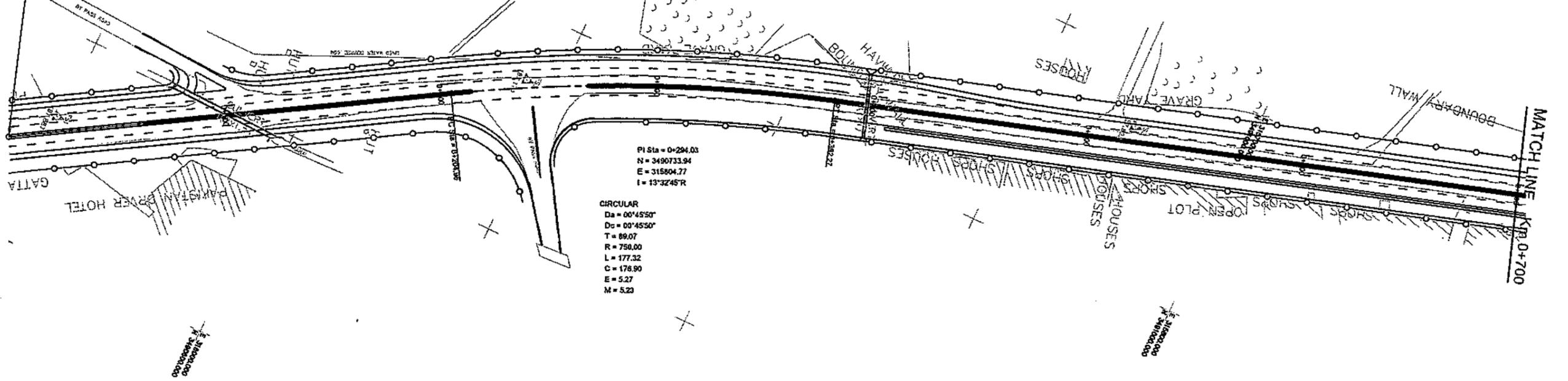
**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. SUBGRADE SHALL HAVE MINIMUM SOAKED CBR 10% @ 95% MDD.
3. THE EXISTING PAVEMENT SHALL BE COMPLETELY REMOVED UP TO SUBGRADE LEVEL. EXPOSED SURFACE SHALL BE REWORKED AND COMPACTED TO THE REQUIRED DENSITY.
4. RAISING OF EMBANKMENT SHALL THEN BE CARRIED OUT BY PROVIDING OVER THE PREPARED LAYER, 0.5M THICK LAYER OF BORROW MATERIAL. THE PROPOSED PAVEMENT STRUCTURE AS MENTIONED SHALL BE PROVIDED OVER IT.

	CLIENT <b>GOVT. OF THE PUNJAB COMMUNICATION &amp; WORKS DEPARTMENT (C&amp;W) PUNJAB</b>	CONSULTANT <b>NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.</b>	04 03 02 01	DRAWN SUBMITTED RECOMMENDED CHD.JVER.	Faisal	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	TYPICAL CROSS SECTION	SCALE
	HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	REV. DATE DESCRIPTION APPROVED APPROVED	DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/XS008	REV.			

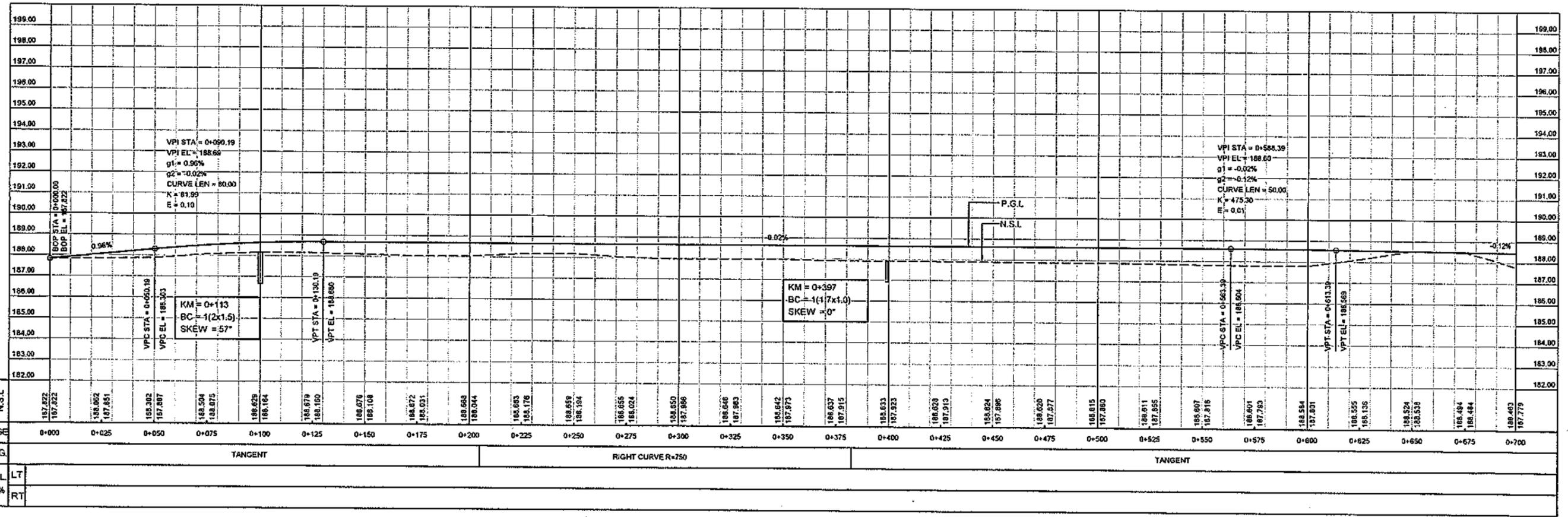
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ELEV.	P.G.L.	N.S.L.	CHAINAGE
187.822	187.822		0+000
188.852	187.851		0+025
189.302	187.807		0+050
188.504	188.075		0+075
188.628	188.164		0+100
188.879	188.150		0+125
188.876	188.108		0+150
188.872	188.031		0+175
188.688	188.044		0+200
188.653	188.178		0+225
188.659	188.194		0+250
188.655	188.024		0+275
188.650	187.968		0+300
188.646	187.963		0+325
188.642	187.973		0+350
188.637	187.915		0+375
188.633	187.923		0+400
188.628	187.910		0+425
188.624	187.896		0+450
188.620	187.877		0+475
188.615	187.860		0+500
188.611	187.855		0+525
188.607	187.816		0+550
188.601	187.793		0+575
188.584	187.801		0+600
188.555	188.135		0+625
188.524	188.539		0+650
188.484	188.484		0+675
188.463	187.779		0+700

CLIENT  
**GOVT. OF THE PUNJAB**  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

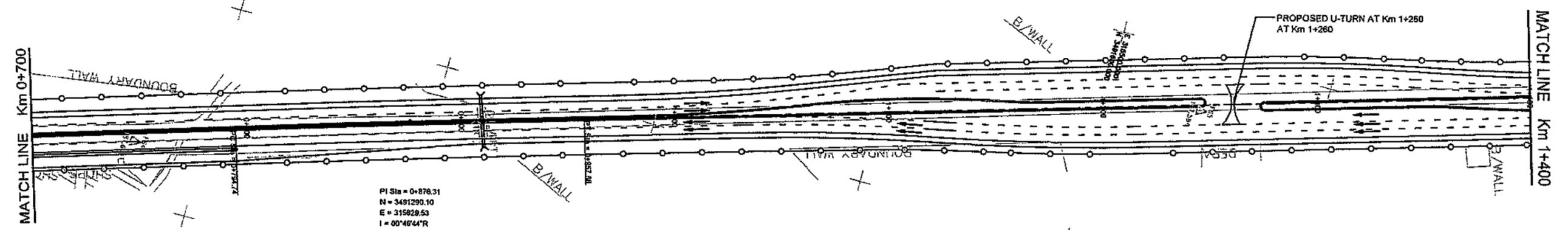
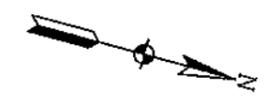
CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04					
03					
02					
01					
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

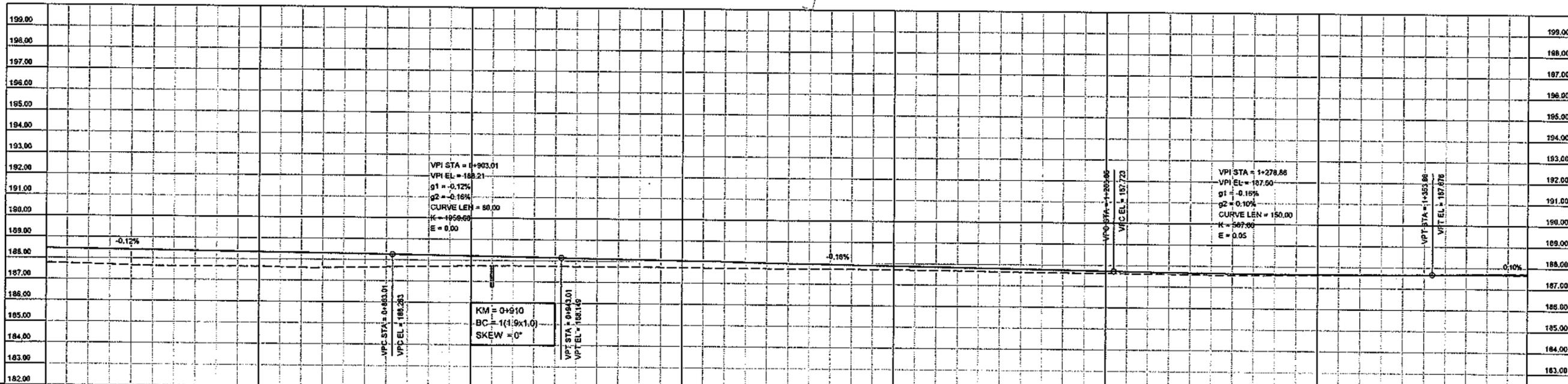
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 FROM KM. 0+000 TO KM. 0+700  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C001

SCALE  
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 REV.



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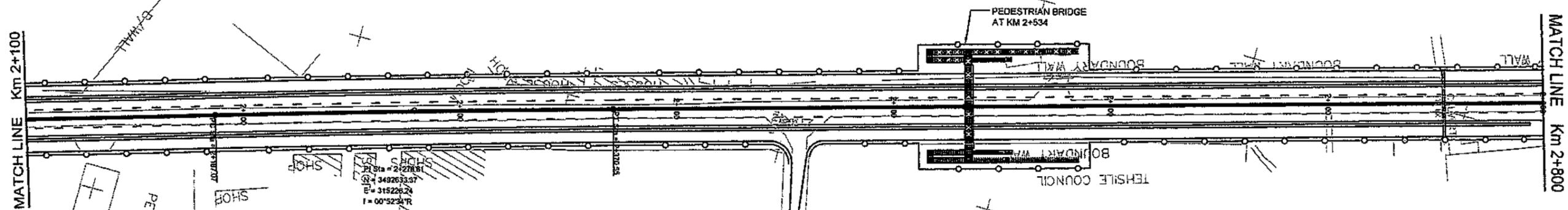
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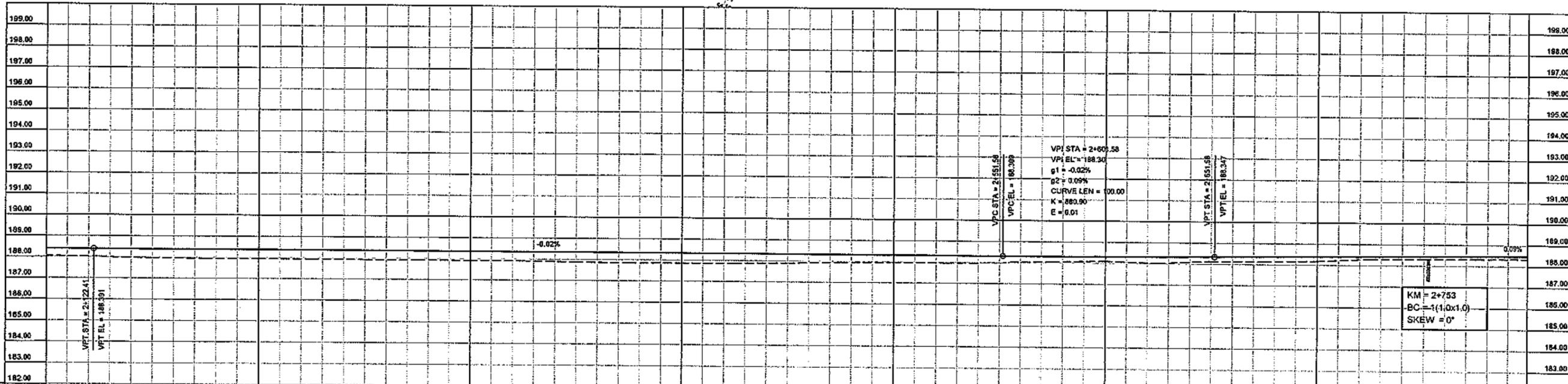
ELEV.	P.G.L	N.S.L	CHAINAGE	HOR.ALIG.	SUPEREL	GRADE %
185.405	187.779		0+700	TANGENT	LT	
188.433	187.710		0+725		RT	
186.402	187.850		0+750			
188.371	187.645		0+775			
188.341	187.659		0+800			
188.310	187.660		0+825			
188.279	187.645		0+850			
188.248	187.699		0+875			
188.214	187.744		0+900			
188.177	187.759		0+925			
188.137	187.743		0+950			
188.097	187.743		0+975			
188.056	187.729		1+000			
188.015	187.724		1+025			
187.974	187.716		1+050			
187.933	187.725		1+075			
187.892	187.706		1+100			
187.851	187.695		1+125			
187.811	187.683		1+150			
187.770	187.625		1+175			
187.729	187.623		1+200			
187.682	187.607		1+225			
187.666	187.560		1+250			
187.651	187.576		1+275			
187.647	187.569		1+300			
187.654	187.532		1+325			
187.622	187.645		1+350			
187.597	187.671		1+375			
187.572	187.672		1+400			

CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 68.6 Km)	PLAN AND PROFILE FROM KM. 0+700 TO KM. 1+400		SCALE HOR=1:2000 VER=1:200
		03			SUBMITTED			DATE	DRAWING No.	
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1C002		
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				





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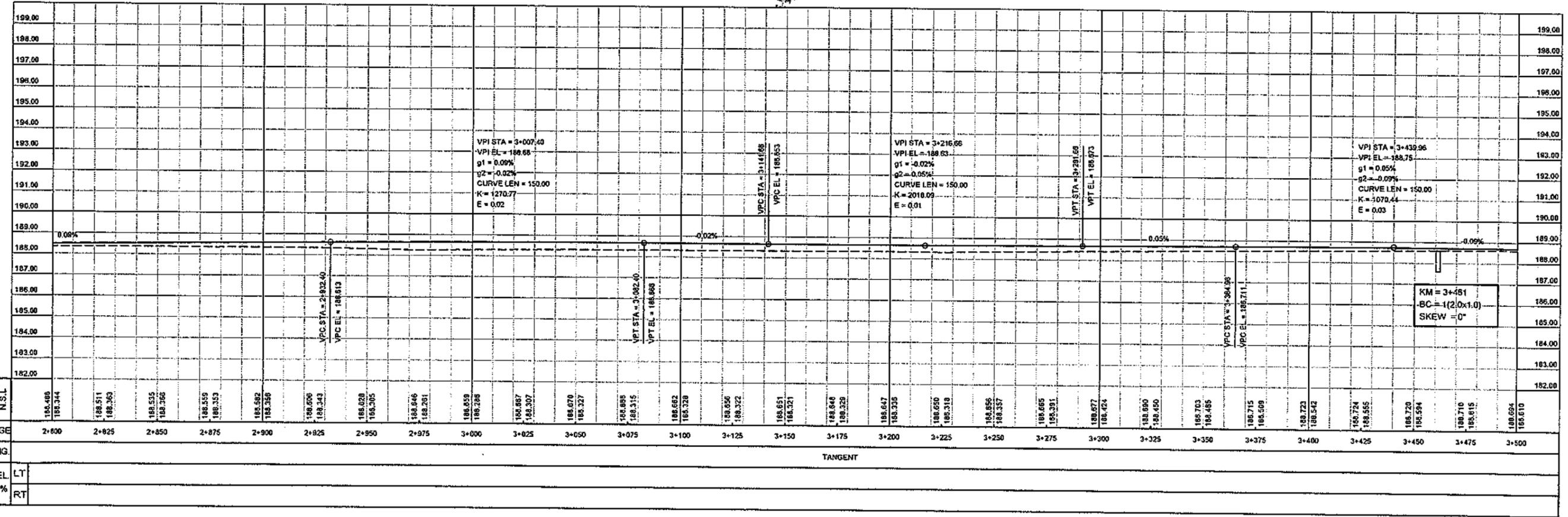
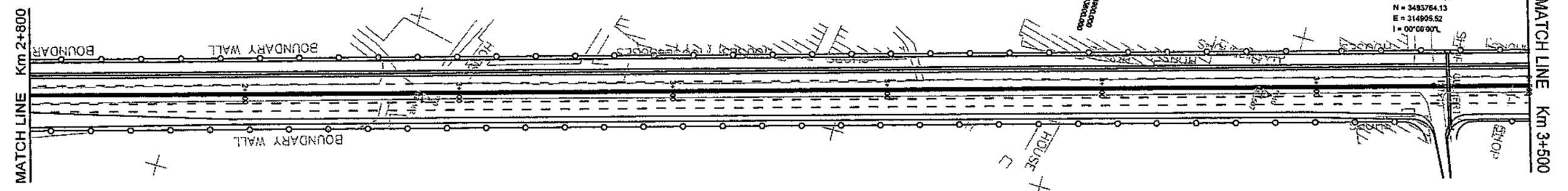
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188.300	188.011		2+125	RIGHT CURVE R=12000	RT	
185.385	187.573		2+150			
183.381	187.545		2+175			
188.376	187.844		2+200			
188.371	187.944		2+225			
188.366	187.930		2+250			
188.362	187.925		2+275			
188.357	187.920		2+300			
188.352	187.915		2+325			
188.346	187.877		2+350			
188.343	187.852		2+375			
188.338	187.856		2+400			
188.333	187.867		2+425			
188.329	187.868		2+450			
188.324	187.950		2+475			
188.319	187.978		2+500			
188.314	187.953		2+525			
188.310	187.988		2+550	TANGENT		
188.308	188.052		2+575			
188.314	188.093		2+600			
188.326	188.023		2+625			
188.348	188.113		2+650			
188.369	188.134		2+675			
188.393	188.181		2+700			
188.417	188.284		2+725			
188.440	188.309		2+750			
188.464	188.324		2+775			
188.488	188.344		2+800			

KM = 2+753  
 BC = 1(1.0x1.0)  
 SKEW = 0°

<p>GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT</p> <p>NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.</p> <p>HEAD OFFICE:- NESPAK HOUSE, 1-C, BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04		DRAWN	SOHAIB	<p>PROJECT</p> <p>TRANSACTION ADVISORY SERVICES FOR                  DUALIZATION AND REHABILITATION OF EXISTING                  FAISALABAD - CHINIOT - SARGODHA ROAD                  (LENGTH = 66.6 Km)</p>	<p>PLAN AND PROFILE</p> <p>FROM KM. 2+100 TO KM. 2+800</p>		SCALE
		03		SUBMITTED			HOR=1:2000 VER=1:200		
		02		RECOMMENDED			DATE	DRAWING No.	REV.
		01		CHD./VER.			DECEMBER, 2020	SA-413/102/PD/1C004	
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED			



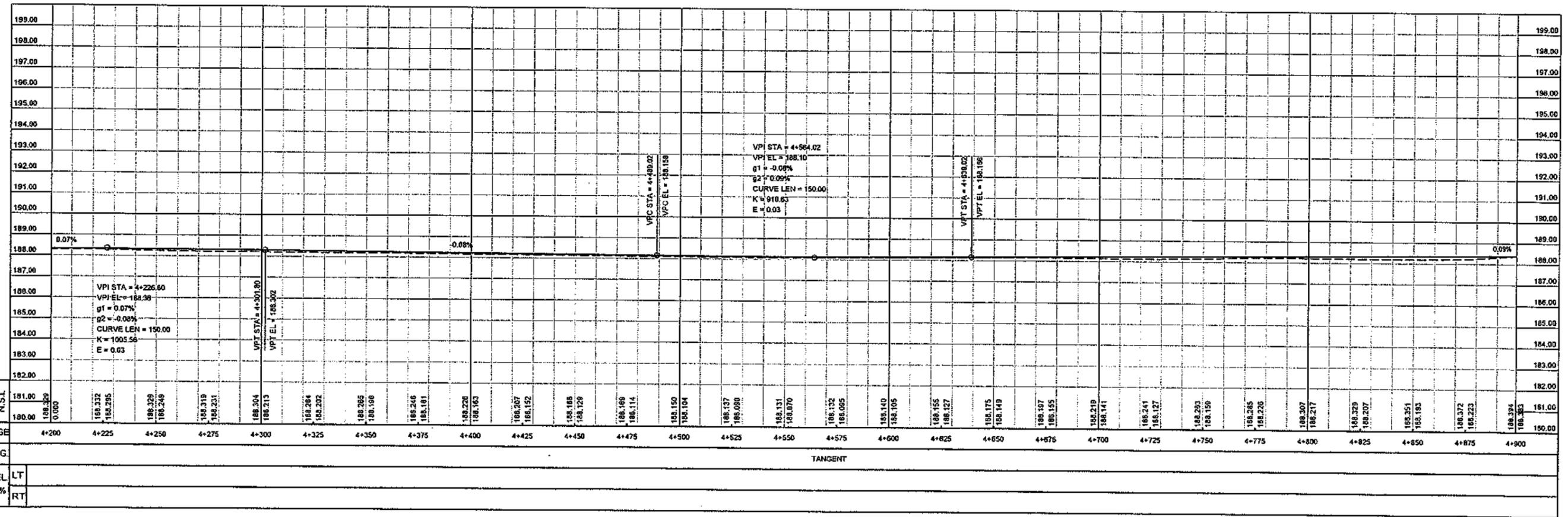
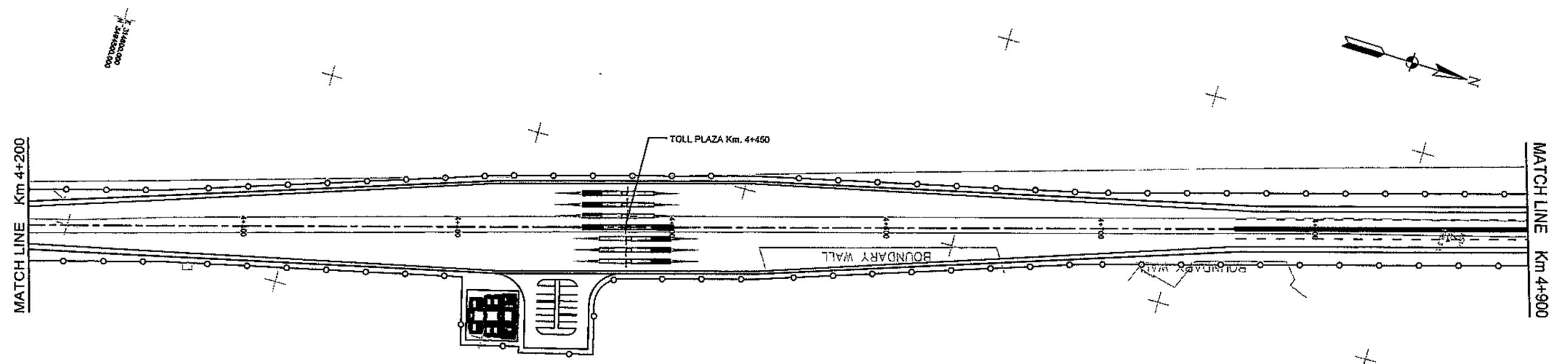
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ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG.	SUPERELEV.	GRADE %
188.405			2+800		LT	
188.511			2+825		RT	
188.535			2+850			
188.559			2+875			
188.582			2+900			
188.606			2+925			
188.628			2+950			
188.646			2+975			
188.659			3+000			
188.667			3+025			
188.670			3+050			
188.688			3+075			
188.662			3+100			
188.640			3+125			
188.651			3+150			
188.648			3+175			
188.647			3+200			
188.650			3+225			
188.656			3+250			
188.665			3+275			
188.677			3+300			
188.690			3+325			
188.703			3+350			
188.715			3+375			
188.723			3+400			
188.724			3+425			
188.720			3+450			
188.710			3+475			
188.694			3+500			

<p>CLIENT                  GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT                   NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.                  HEAD OFFICE: NESPAK HOUSE, I-C, BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAIB	<p>PROJECT                  TRANSACTION ADVISORY SERVICES FOR                  DUALIZATION AND REHABILITATION OF EXISTING                  FAISALABAD - CHINIOT - SARGODHA ROAD                  (LENGTH = 66.6 Km)</p>	<p>PLAN AND PROFILE                  FROM KM. 2+800 TO KM. 3+500</p>		SCALE
		03			SUBMITTED			HOR=1:2000 VER=1:200		
		02			RECOMMENDED		<p>DATE                  DECEMBER, 2020</p>	<p>DRAWING No.                  SA-413/102/PD/1C005</p>	<p>REV.                  0</p>	
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

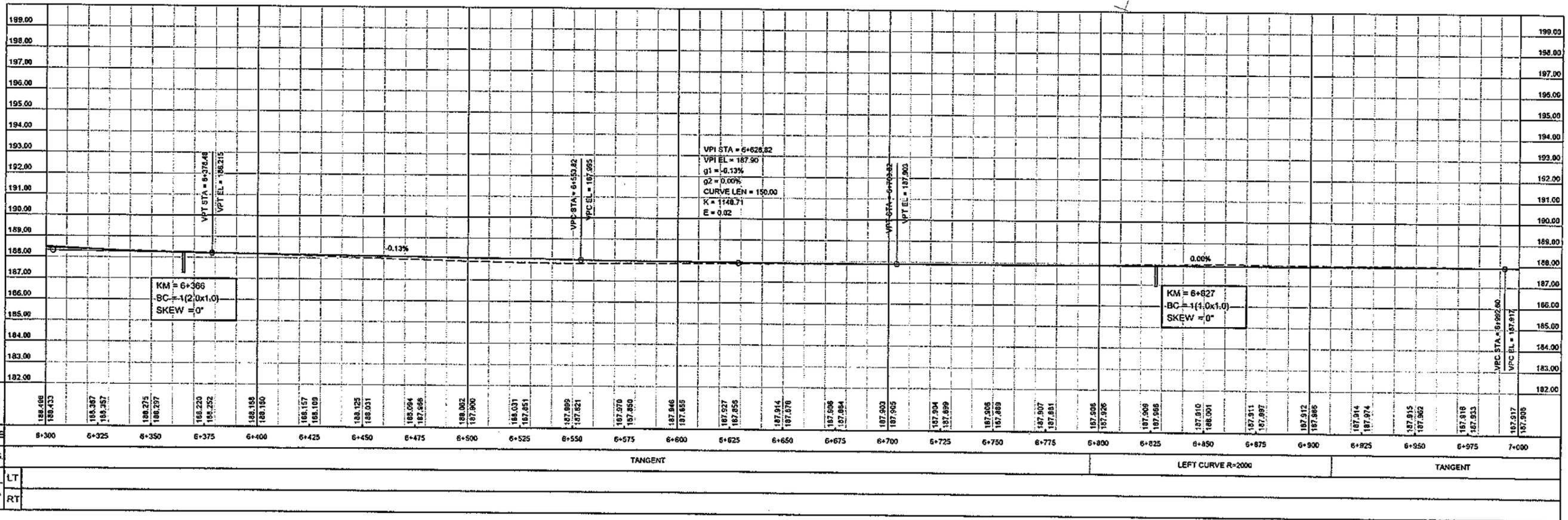
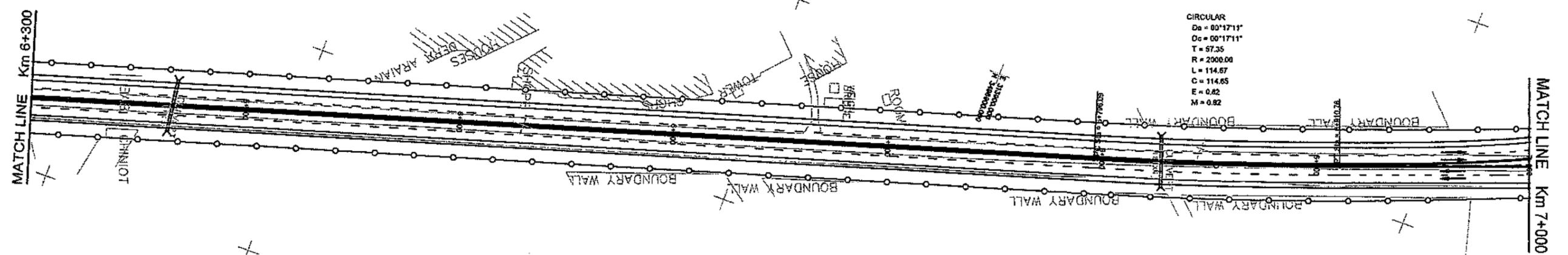




<p>GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT <b>NESPAK</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.</p> <p>HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAIB	<p>PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	PLAN AND PROFILE		<p>SCALE HOR=1:2000 VER=1:200</p>
		03			SUBMITTED			FROM KM. 4+200 TO KM. 4+900	DATE	
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/FPD/1C007		
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				







CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, J-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 6+300 TO KM. 7+000		SCALE HOR=1:2000 VER =1:200
		03			SUBMITTED			DATE	DECEMBER, 2020	
		02			RECOMMENDED		CHD./VER. APPROVED			REV.
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



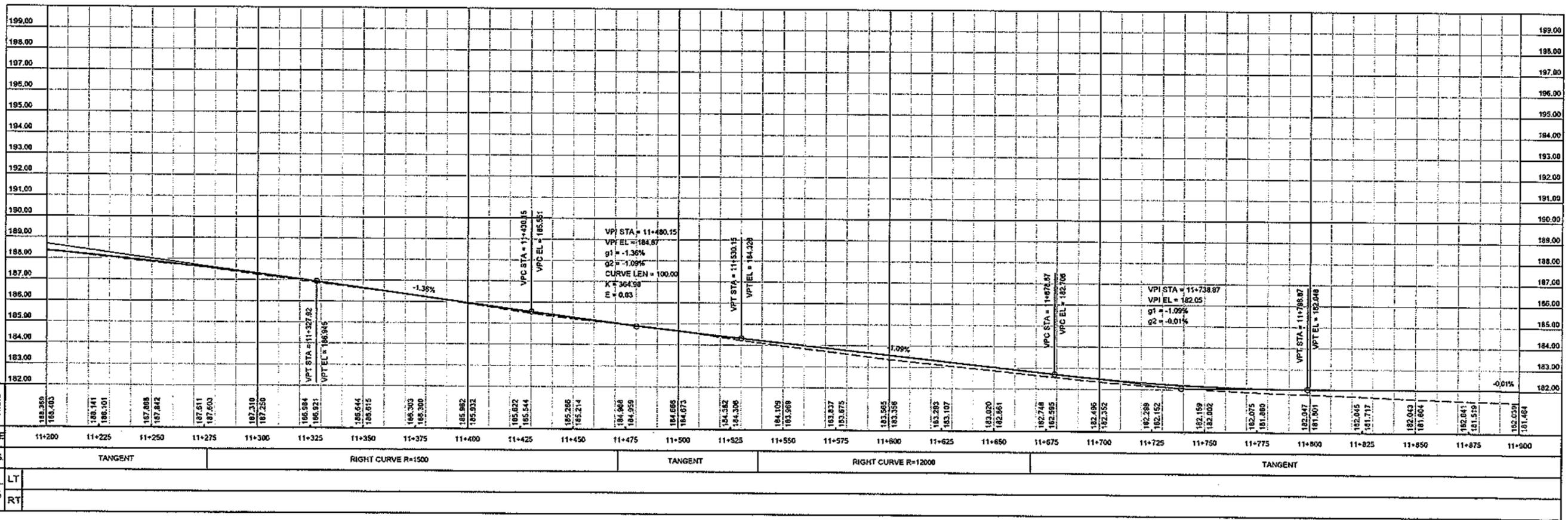
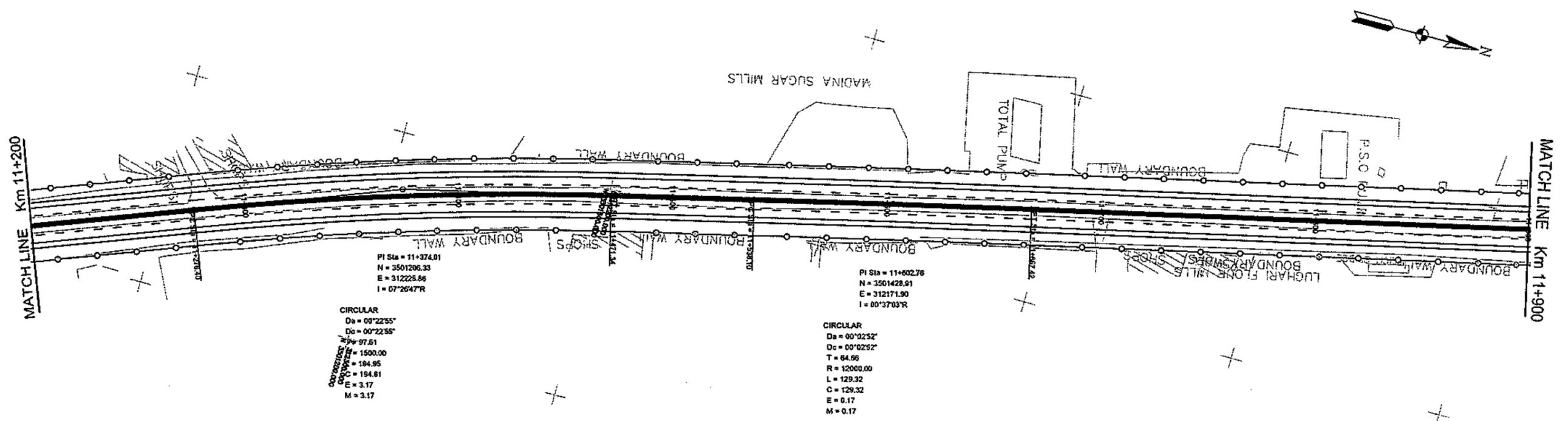








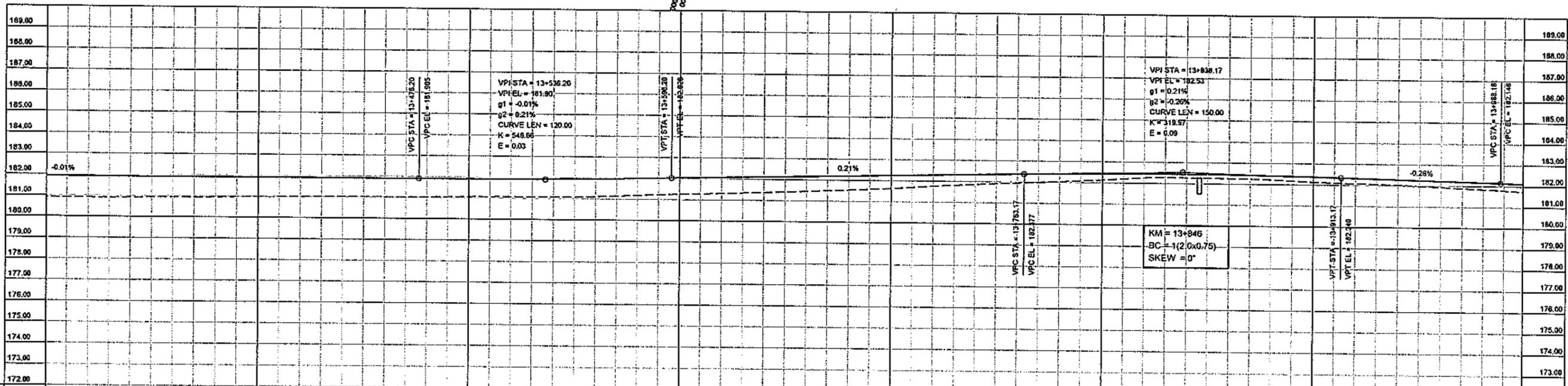
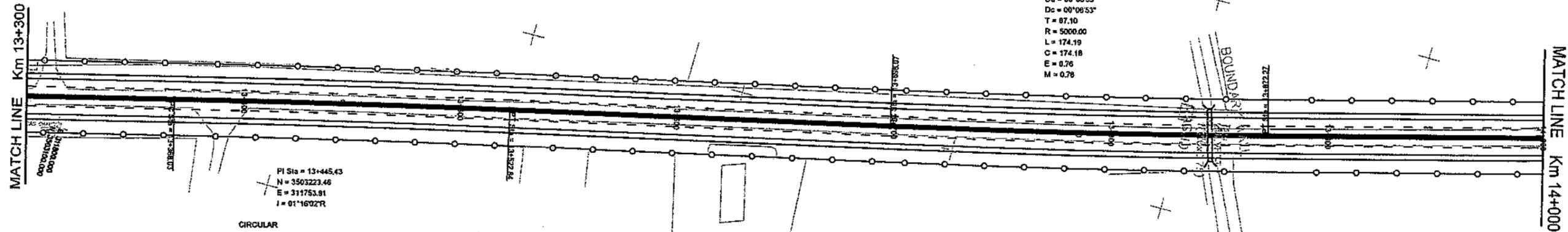




<p>CLIENT                  GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT                   NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.                  HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04				DRAWN	SOHAIB	<p>PROJECT                  TRANSACTION ADVISORY SERVICES FOR                  DUALIZATION AND REHABILITATION OF EXISTING                  FAISALABAD - CHINIOT - SARGODHA ROAD                  (LENGTH = 66.6 Km)</p>	<p>PLAN AND PROFILE                  FROM KM. 11+200 TO KM. 11+900</p>		SCALE
		03				SUBMITTED				DATE	DRAWING No.
		02				RECOMMENDED			DECEMBER, 2020	SA-413/102/PD/10017	
		01				CHD.VER.					REV.
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED					

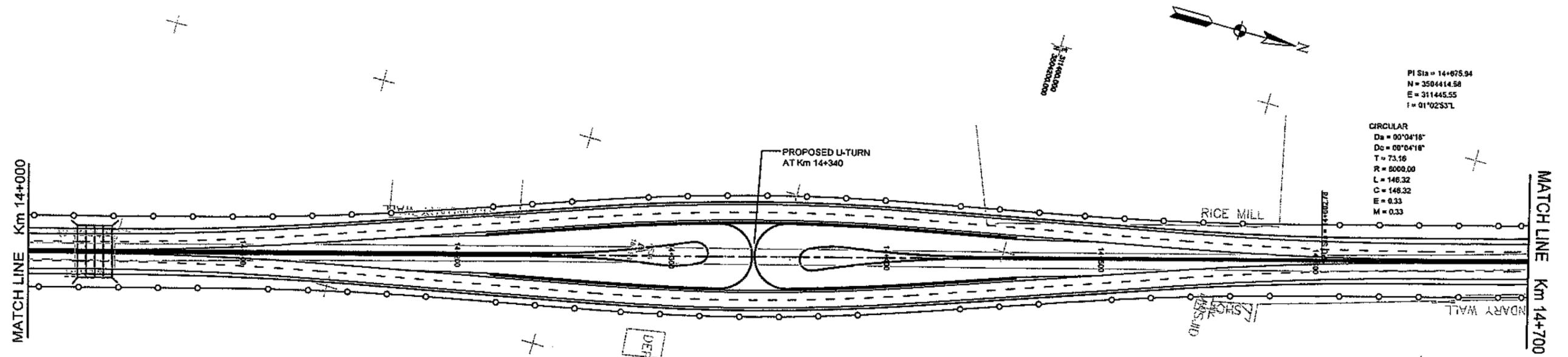






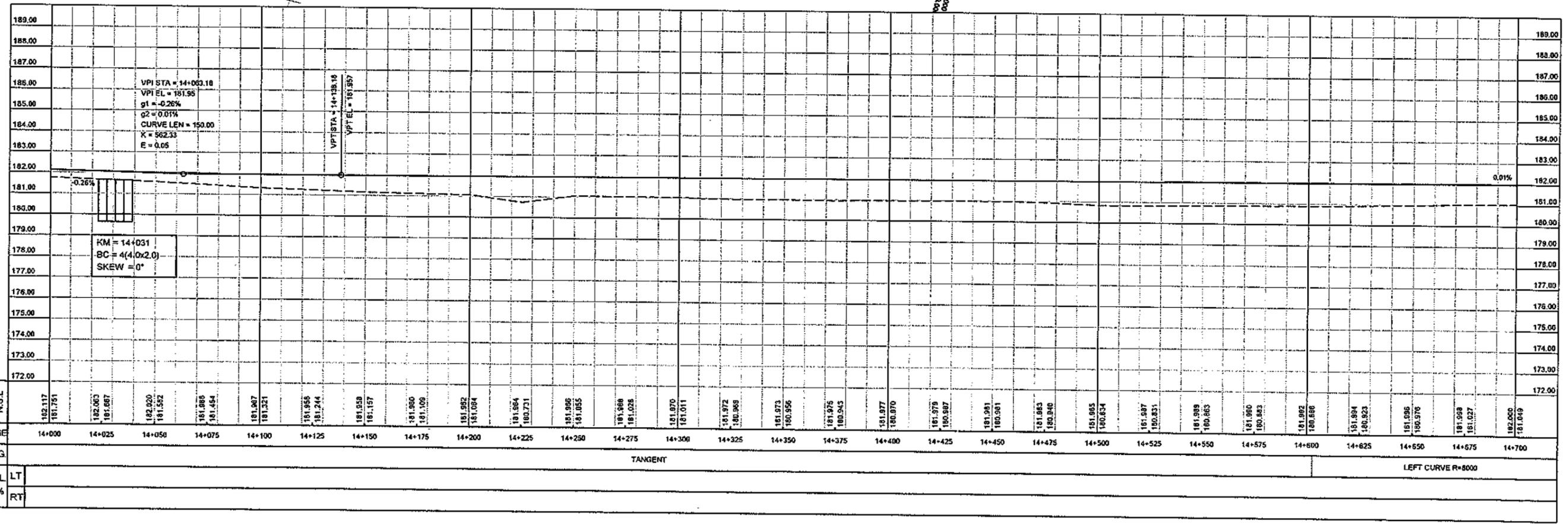
ELEV.	P.G.L	N.S.L	CHAINAGE	HORALIG	SUPEREL	GRADE %
181.920	180.920		13+300	TANGENT	LT	
181.216	180.909		13+325		RT	
181.916	180.940		13+350			
181.914	180.948		13+375			
181.912	180.930		13+400			
181.908	181.005		13+425			
181.907	181.005		13+450			
181.905	181.028		13+475			
181.900	181.061		13+500			
181.922	181.076		13+525			
181.948	181.075		13+550			
181.888	181.172		13+575			
182.034	181.257		13+600			
182.087	181.325		13+625			
182.139	181.410		13+650			
182.192	181.515		13+675			
182.244	181.629		13+700			
182.297	181.762		13+725			
182.349	181.810		13+750			
182.400	182.006		13+775			
182.433	182.134		13+800			
182.447	182.283		13+825			
182.442	182.275		13+850			
182.417	182.237		13+875			
182.372	182.125		13+900			
182.310	182.062		13+925			
182.245	181.984		13+950			
182.180	181.893		13+975			
182.117	181.751		14+000			

<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 13+300 TO KM. 14+000		SCALE HOR=1:2000 VER=1:200
		03			SUBMITTED			DATE	DECEMBER, 2020	
		02			RECOMMENDED					
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED					



PI Sta = 14+675.94  
 N = 3504414.58  
 E = 311445.55  
 I = 01°02'53.7"

CIRCULAR  
 Da = 00°04'18"  
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 R = 8000.00  
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 E = 0.33  
 M = 0.33



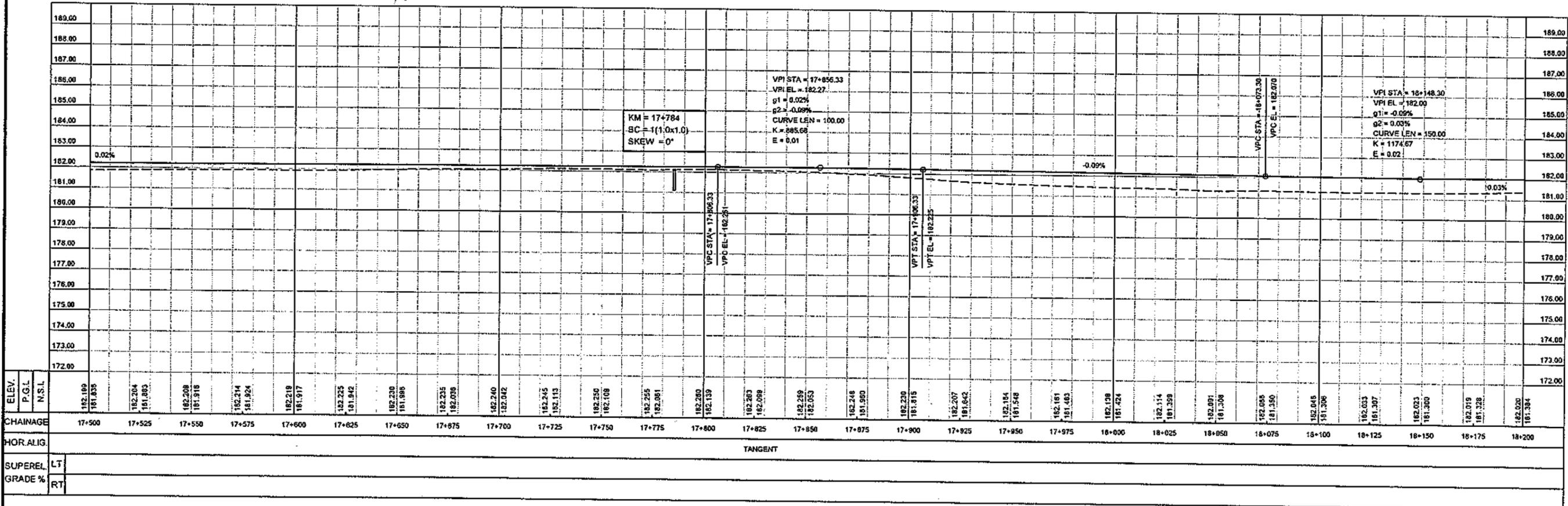
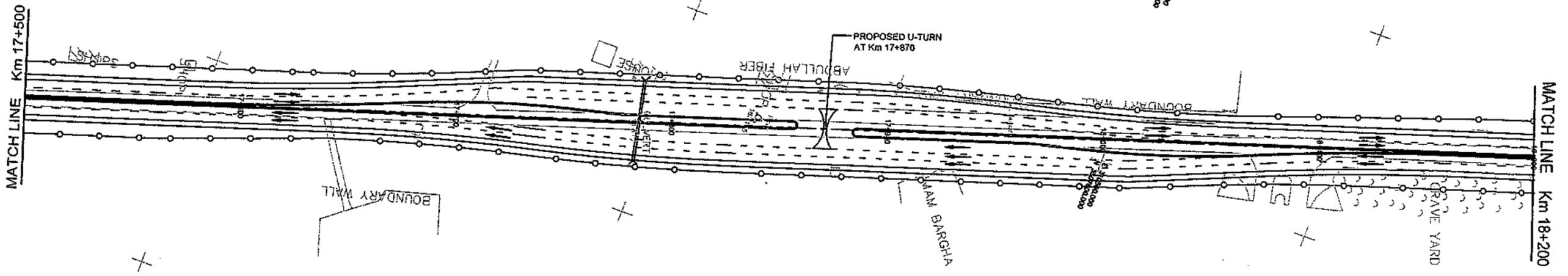
CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 14+000 TO KM. 14+700		SCALE
		03			SUBMITTED			HOR=1:2000 VER=1:200		
		02			RECOMMENDED		DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/1C021	REV.	
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				











CLIENT  
**GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04					
03					
02					
01					
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)**

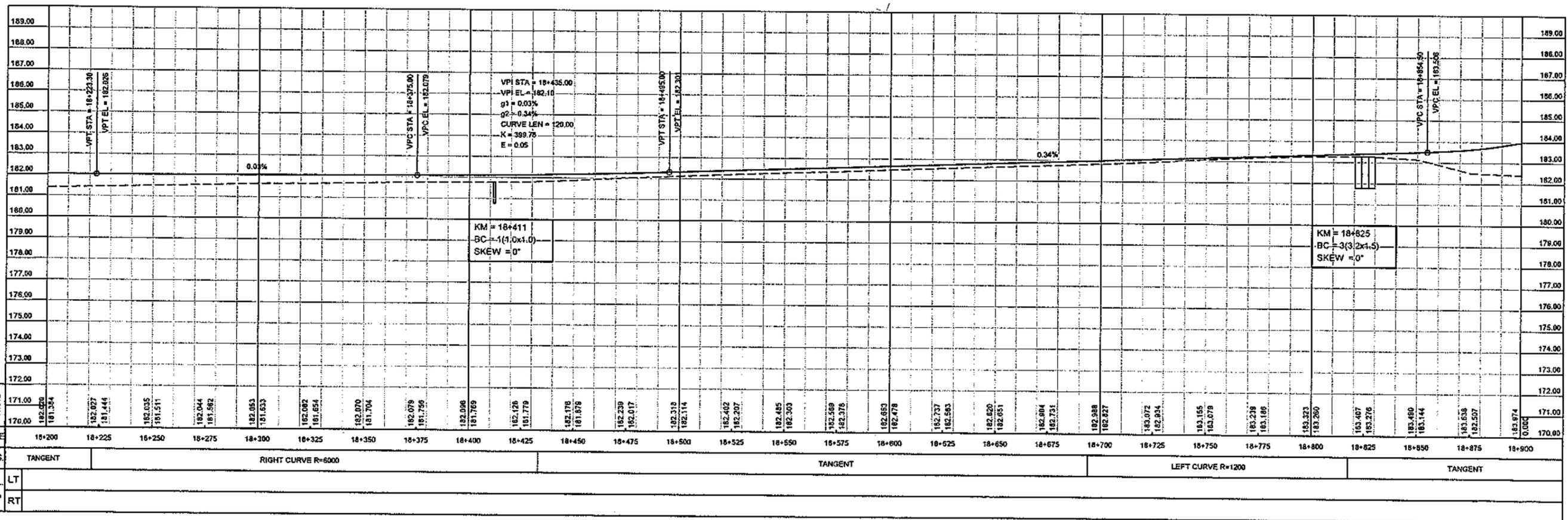
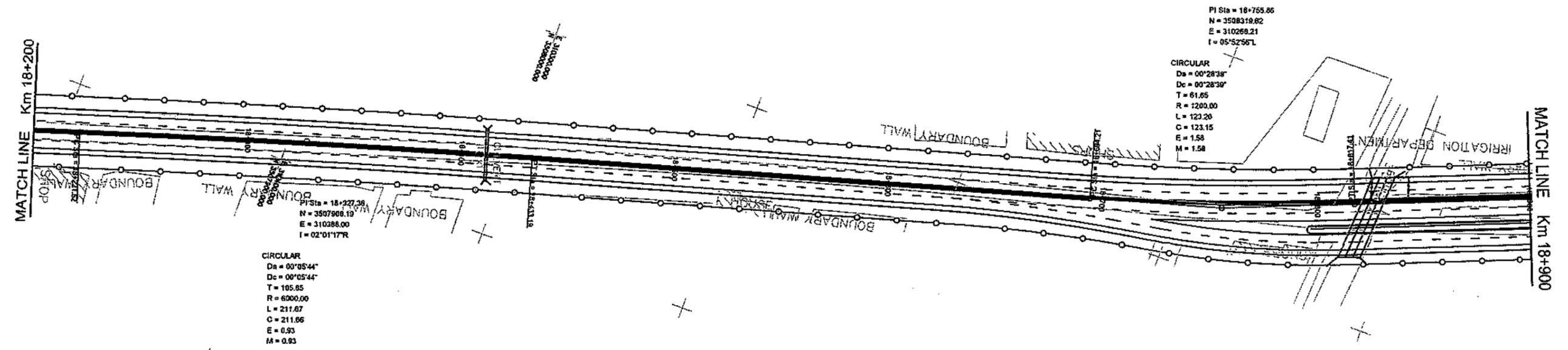
PLAN AND PROFILE  
 FROM KM. 17+500 TO KM. 18+200

SCALE  
 HOR=1:2000  
 VER=1:200

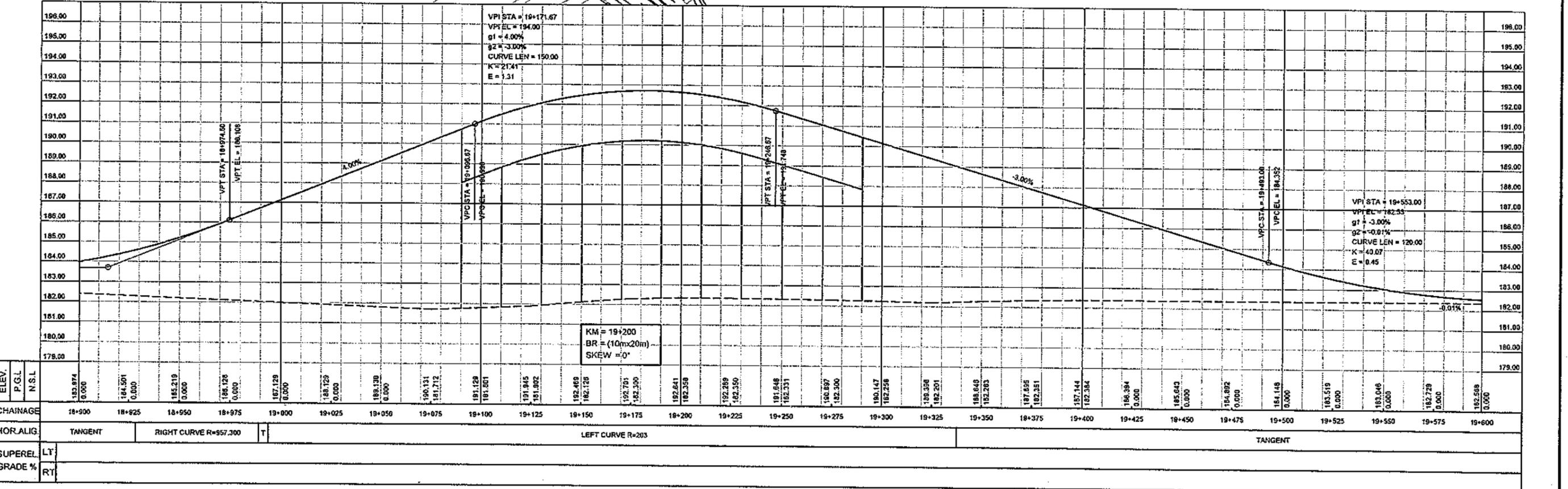
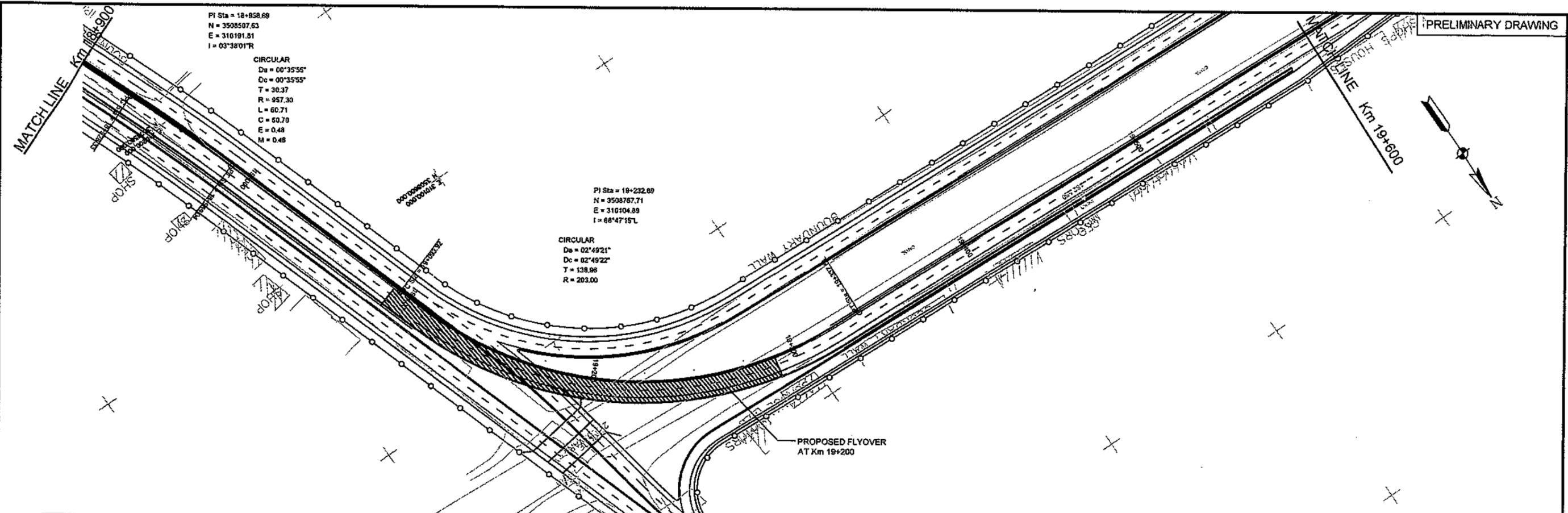
DATE  
 DECEMBER, 2020

DRAWING No.  
**SA-413/102/PD/10026**

REV.



<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAC HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04				DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 18+200 TO KM. 18+900		SCALE HOR=1:2000 VER=1:200 REV.
		03				SUBMITTED			DATE	DRAWING No.	
		02				RECOMMENDED		DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/10027	REV.	
		01				CHD.AVR.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED					



ELEV.	P.G.L	N.S.L	CHAINAGE	HORALIG	SUPEREL	GRADE %
183.874	0.000	184.501	18+900	TANGENT	LT	
185.219	0.000	186.128	18+925	RIGHT CURVE R=957.300	RT	
187.129	0.000	188.129	18+950			
189.130	0.000	190.131	18+975			
191.131	0.000	192.129	18+100			
193.130	0.000	194.129	18+125			
195.129	0.000	196.128	18+150			
197.127	0.000	198.126	18+175	LEFT CURVE R=203		
199.125	0.000	200.124	18+200			
201.123	0.000	202.122	18+225			
203.121	0.000	204.120	18+250			
205.119	0.000	206.118	18+275			
207.117	0.000	208.116	18+300			
209.115	0.000	210.114	18+325			
211.113	0.000	212.112	18+350			
213.111	0.000	214.110	18+375			
215.109	0.000	216.108	18+400			
217.107	0.000	218.106	18+425			
219.105	0.000	220.104	18+450			
221.103	0.000	222.102	18+475			
223.101	0.000	224.100	18+500	TANGENT		
225.099	0.000	226.098	18+525			
227.097	0.000	228.096	18+550			
229.095	0.000	230.094	18+575			
231.093	0.000	232.092	19+000			

CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

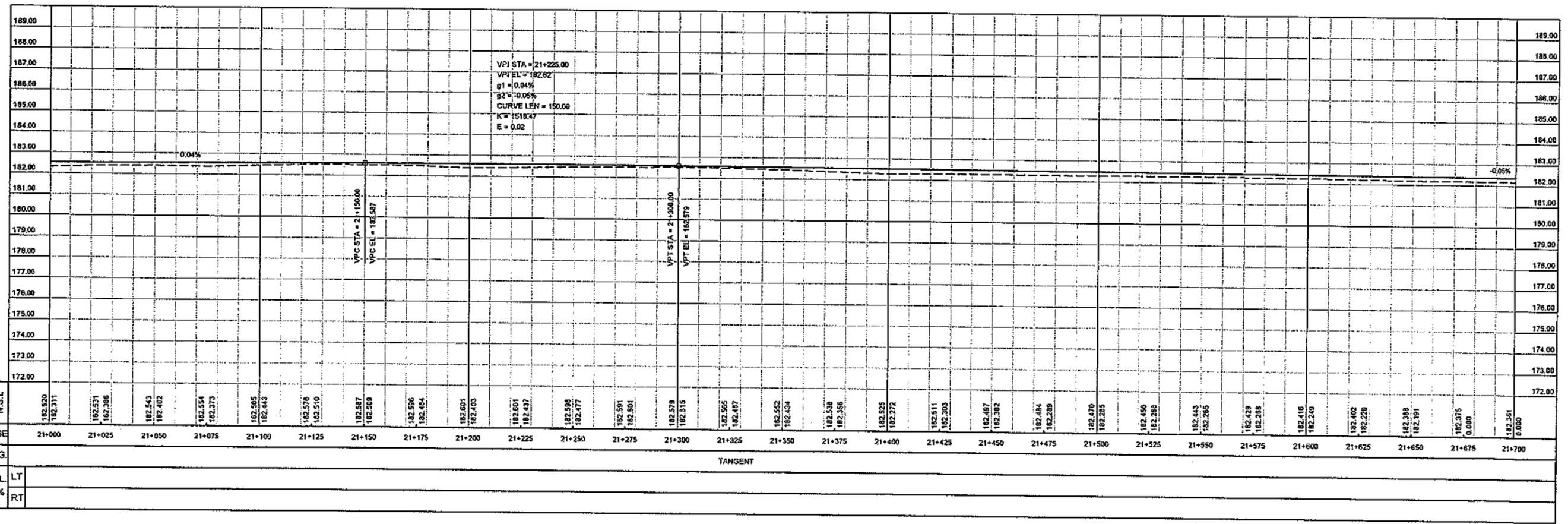
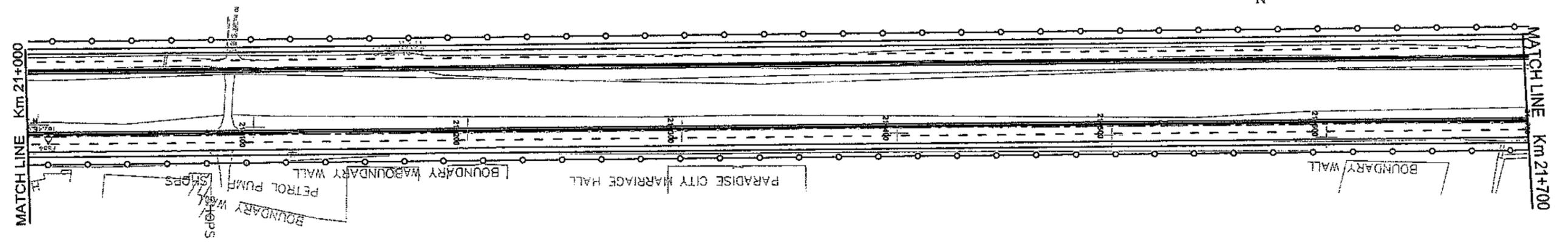
04				DRAWN	SOHAIB
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 18+900 TO KM. 19+600  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C02B  
 SCALE: HOR=1:2000, VER=1:200  
 REV. 0



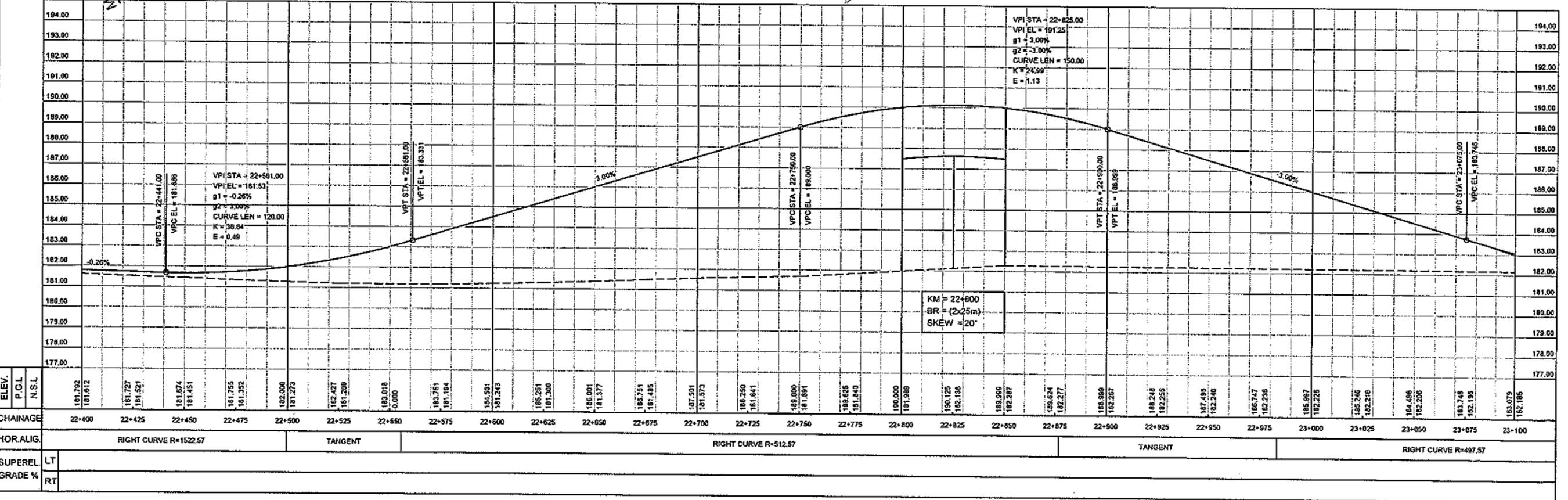
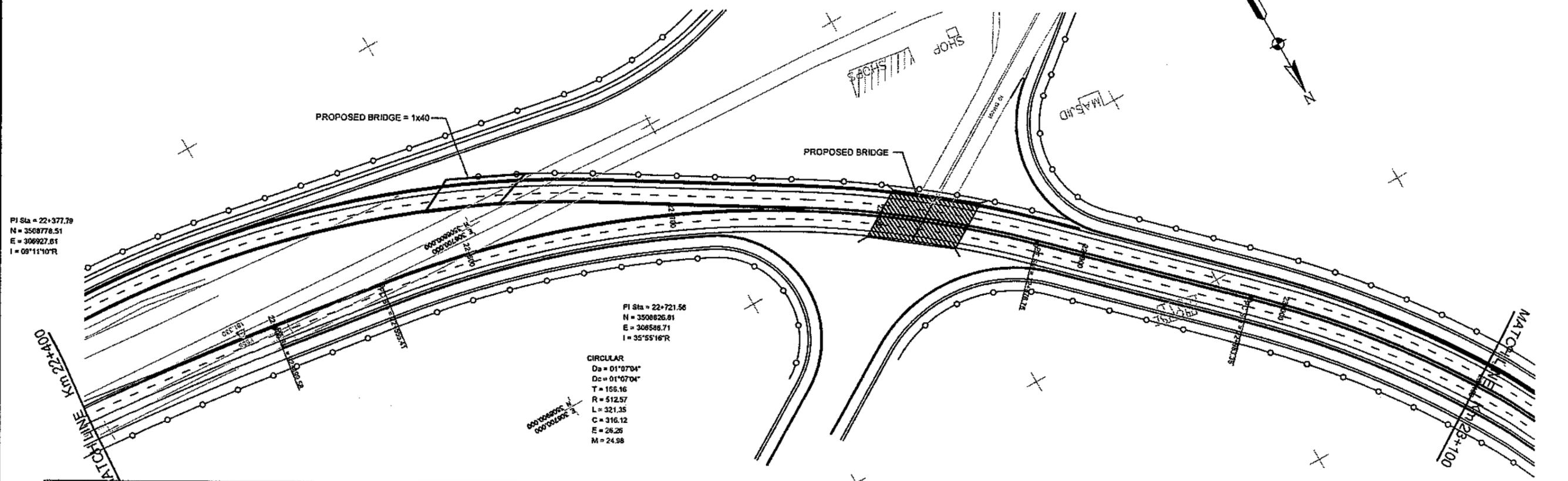




ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG.	SUPEREL.	GRADE %
182.520			21+000		LT	
182.311			21+025		RT	
182.531			21+050			
182.386			21+075			
182.543			21+100			
182.402			21+125			
182.554			21+150			
182.373			21+175			
182.585			21+200			
182.443			21+225			
182.576			21+250			
182.510			21+275			
182.587			21+300			
182.508			21+325			
182.586			21+350			
182.454			21+375			
182.601			21+400			
182.403			21+425			
182.601			21+450			
182.437			21+475			
182.598			21+500			
182.477			21+525			
182.591			21+550			
182.501			21+575			
182.579			21+600			
182.515			21+625			
182.565			21+650			
182.487			21+675			
182.552			21+700			
182.434						
182.538						
182.356						
182.525						
182.272						
182.511						
182.303						
182.487						
182.302						
182.484						
182.288						
182.470						
182.285						
182.456						
182.286						
182.443						
182.285						
182.428						
182.286						
182.416						
182.248						
182.402						
182.220						
182.388						
182.191						
182.375						
0.000						
182.351						
0.000						

<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT <b>NESPAK</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAIB	<p>PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	<p>PLAN AND PROFILE FROM KM. 21+000 TO KM. 21+700</p>		SCALE
		03			SUBMITTED			HOR=1:2000 VER=1:200		
		02			RECOMMENDED		<p>DATE DECEMBER, 2020</p>	<p>DRAWING No. SA-413/102/PD/1C031</p>	<p>REV.</p>	
		01			CHD. VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				





CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

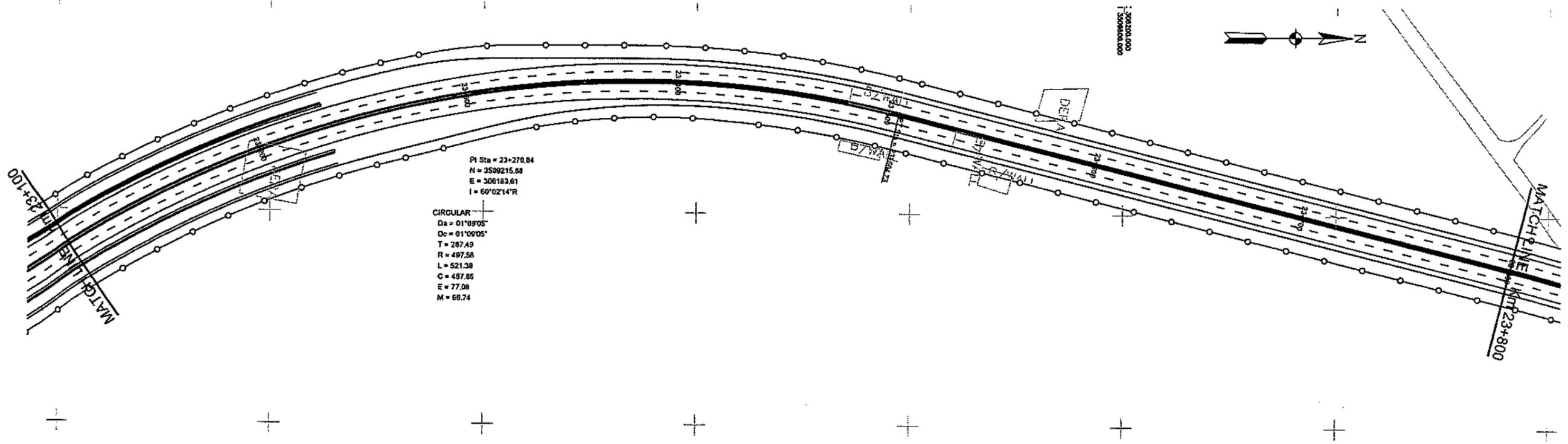
CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	SOHAIB
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
**(LENGTH = 66.6 Km)**

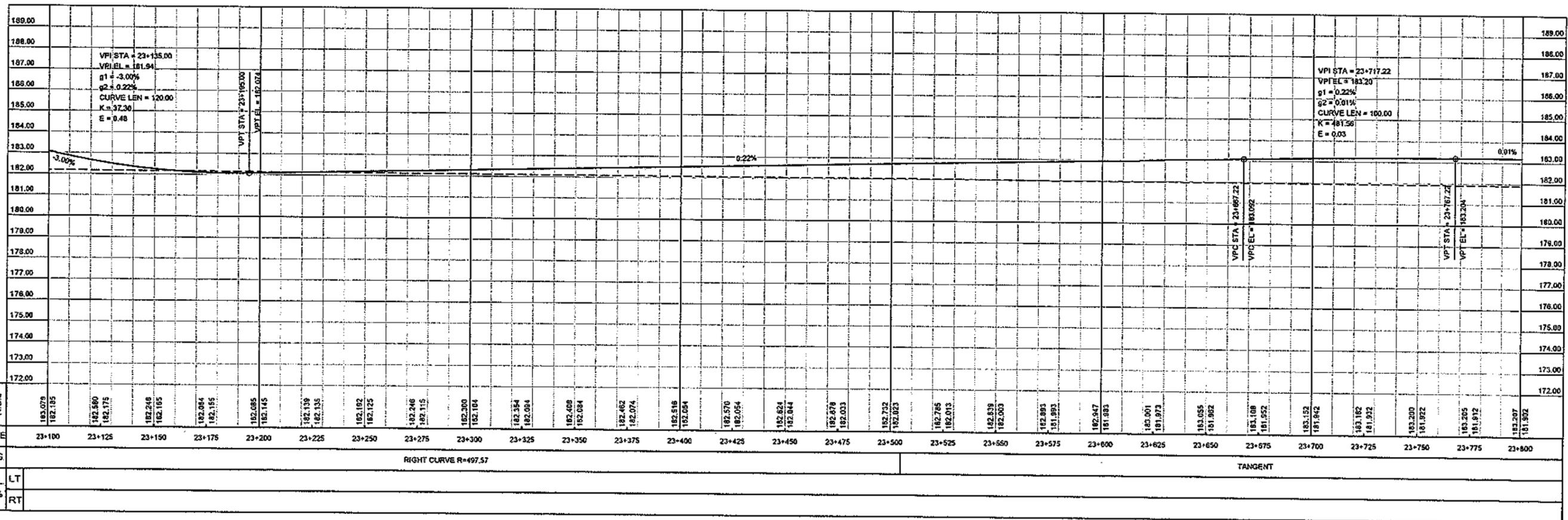
PLAN AND PROFILE  
 FROM KM. 22+400 TO KM. 23+100  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/H033

SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.



PI Sta = 23+270.84  
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 E = 306183.61  
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CIRCULAR  
 Da = 01°09'05\"/>

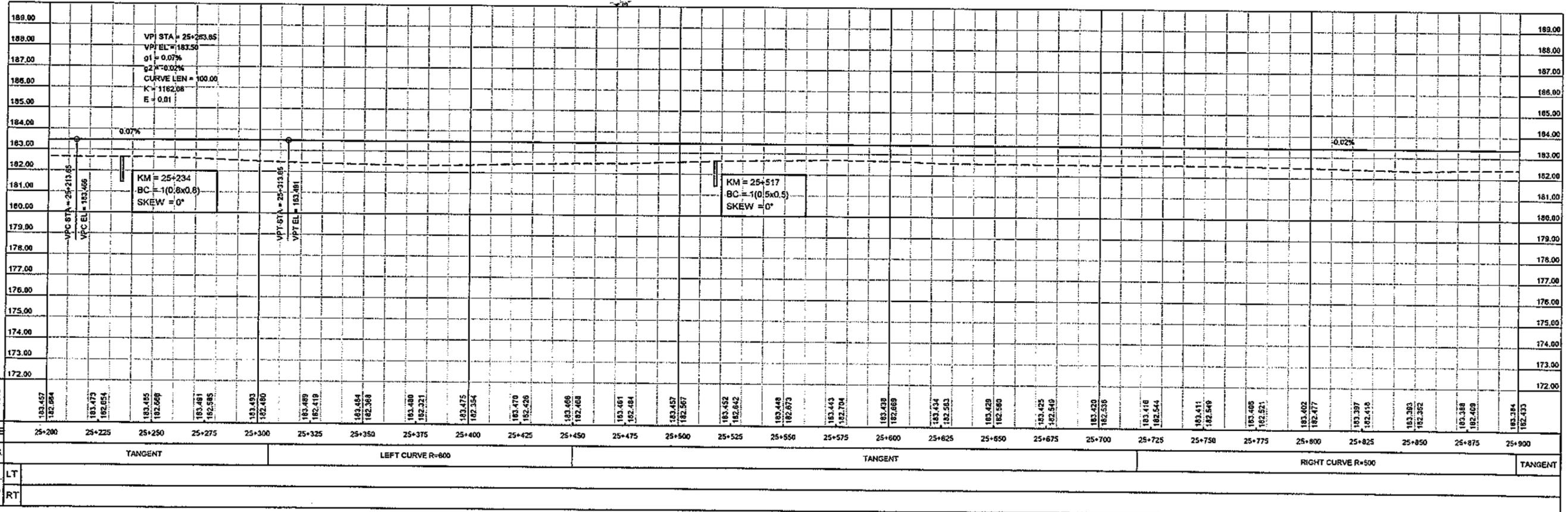
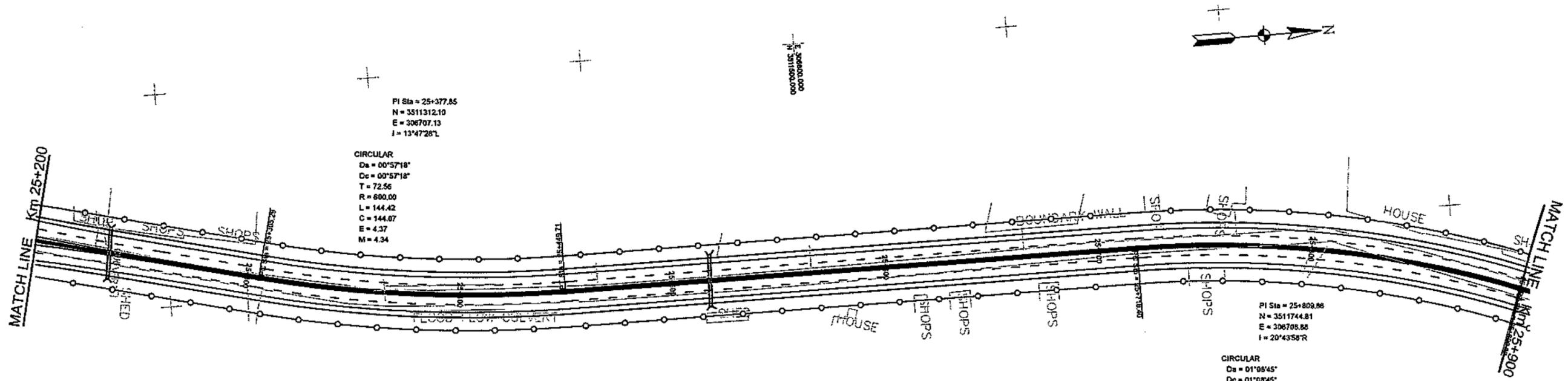


ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG	SUPEREL	GRADE %
189.079		182.185	23+100	RIGHT CURVE R=497.57	LT	
182.569		182.175	23+125		RT	
182.248		182.165	23+150	TANGENT		
182.084		182.155	23+175			
182.085		182.145	23+200			
182.139		182.135	23+225			
182.192		182.125	23+250			
182.246		182.115	23+275			
182.300		182.104	23+300			
182.354		182.094	23+325			
182.408		182.084	23+350			
182.462		182.074	23+375			
182.516		182.064	23+400			
182.570		182.054	23+425			
182.624		182.044	23+450			
182.678		182.033	23+475			
182.732		182.023	23+500			
182.786		182.013	23+525			
182.840		182.003	23+550			
182.894		181.993	23+575			
182.948		181.983	23+600			
183.002		181.973	23+625			
183.056		181.962	23+650			
183.110		181.952	23+675			
183.164		181.942	23+700			
183.218		181.932	23+725			
183.272		181.922	23+750			
183.326		181.912	23+775			
183.380		181.902	23+800			

<p>GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT                   NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.                  HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAIB	<p>PROJECT                  TRANSACTION ADVISORY SERVICES FOR                  DUALIZATION AND REHABILITATION OF EXISTING                  FAISALABAD - CHINIOT - SARGODHA ROAD                  (LENGTH = 66.6 Km)</p>	<p>PLAN AND PROFILE                  FROM KM. 23+100 TO KM. 23+800</p>		<p>SCALE                  HOR=1:2000                  VER =1:200</p>
		03			SUBMITTED			DATE	DECEMBER, 2020	
02				RECOMMENDED						
01				CHD.VER.						
REV.	DATE	DESCRIPTION	APPROVED	APPROVED						







ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG.	SUPEREL.	GRADE %
183.457	182.864		25+200	TANGENT	LT	
183.473	182.654		25+225	LEFT CURVE R=600	RT	
183.485	182.669		25+250			
183.481	182.685		25+275			
183.483	182.480		25+300	TANGENT	LT	
183.489	182.419		25+325		RT	
183.484	182.389		25+350			
183.480	182.321		25+375	TANGENT	LT	
183.475	182.354		25+400		RT	
183.470	182.426		25+425			
183.466	182.468		25+450	TANGENT	LT	
183.461	182.484		25+475		RT	
183.457	182.567		25+500			
183.452	182.642		25+525	TANGENT	LT	
183.448	182.673		25+550		RT	
183.443	182.704		25+575			
183.438	182.669		25+600	TANGENT	LT	
183.434	182.583		25+625		RT	
183.429	182.560		25+650			
183.425	182.549		25+675	TANGENT	LT	
183.420	182.536		25+700		RT	
183.416	182.544		25+725			
183.411	182.549		25+750	RIGHT CURVE R=500	LT	
183.406	182.521		25+775		RT	
183.402	182.477		25+800			
183.397	182.410		25+825	TANGENT	LT	
183.393	182.352		25+850		RT	
183.388	182.409		25+875			
183.384	182.433		25+900			

**CLIENT**  
 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

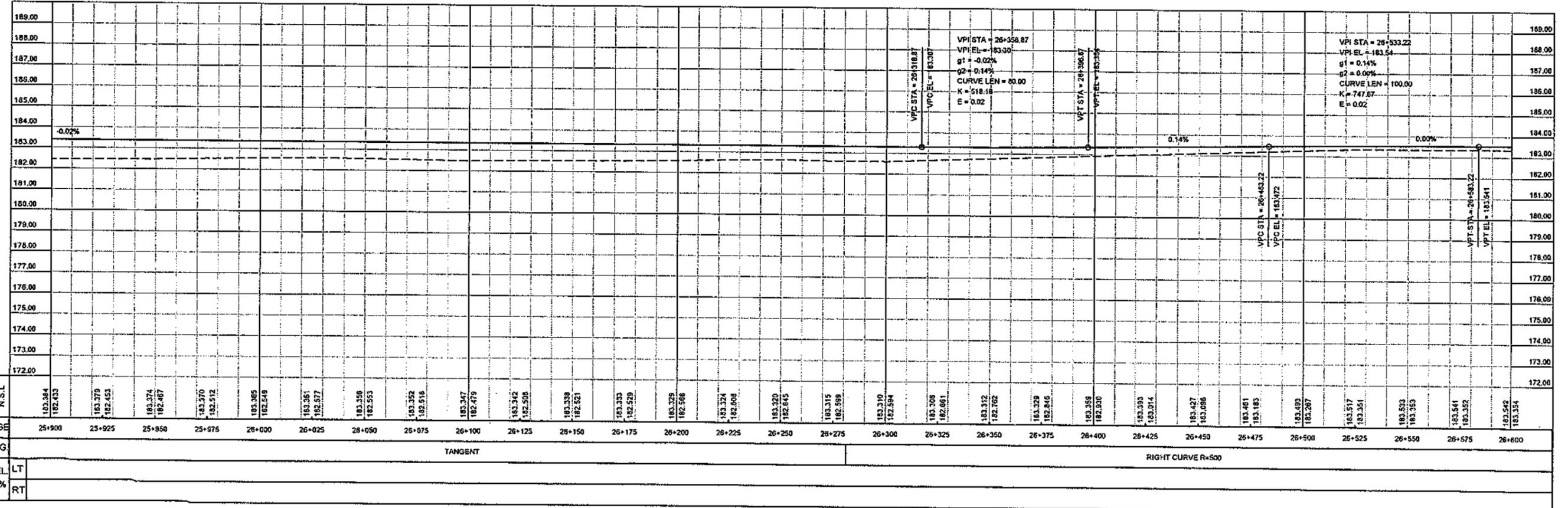
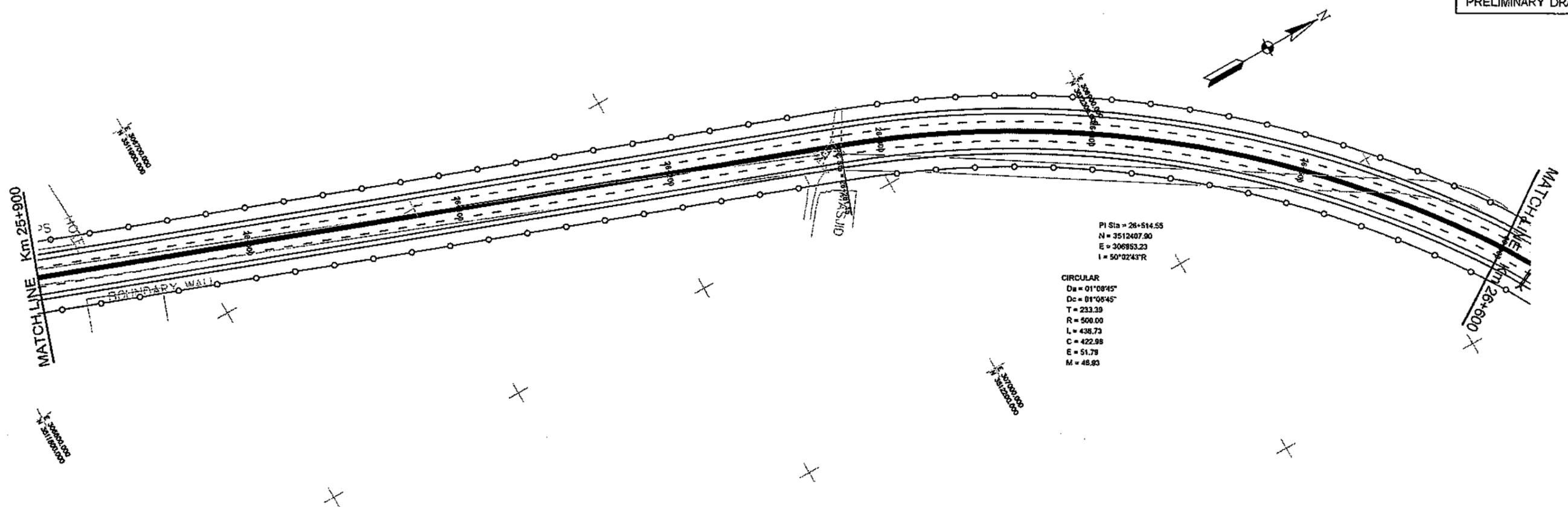
**CONSULTANT**  
 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I.C. BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

**PROJECT**  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

**PLAN AND PROFILE**  
 FROM KM. 25+200 TO KM. 25+900  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C037

**SCALE**  
 HOR=1:2000  
 VER=1:200  
 REV.



ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. AUG.	SUPEREL.	GRADE %
189.00			25+900		LT	
188.00			25+925		RT	
187.00			25+950			
186.00			25+975			
185.00			26+000			
184.00			26+025			
183.00			26+050			
182.00			26+075			
181.00			26+100			
180.00			26+125			
179.00			26+150			
178.00			26+175			
177.00			26+200			
176.00			26+225			
175.00			26+250			
174.00			26+275			
173.00			26+300			
172.00			26+325			
			26+350			
			26+375			
			26+400			
			26+425			
			26+450			
			26+475			
			26+500			
			26+525			
			26+550			
			26+575			
			26+600			

**CLIENT**  
 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

**CONSULTANT**  
 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

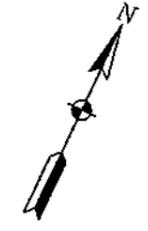
**DRAWN** SOHAIB  
**SUBMITTED**  
**RECOMMENDED**  
**CHD./VER.**  
**APPROVED**

**PROJECT**  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

**PLAN AND PROFILE**  
 FROM KM. 25+900 TO KM. 26+600

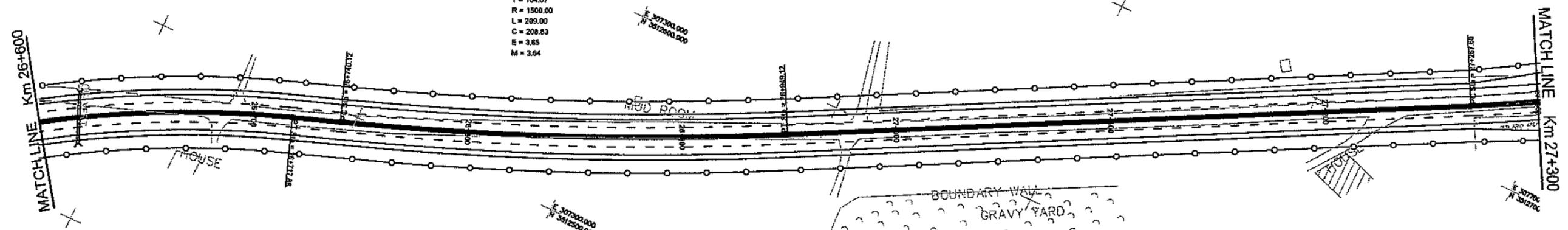
DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/10038

**SCALE**  
 HOR: 1:2000  
 VER: 1:200  
**REV.**



PI Sta = 26+844.79  
 N = 3512530.16  
 E = 307292.15  
 I = 07°59'00"L

CIRCULAR  
 Da = 00°22'55"  
 Dc = 00°22'55"  
 T = 104.67  
 R = 1500.00  
 L = 209.00  
 C = 208.83  
 E = 3.85  
 M = 3.64



ELEV.	189.00	188.00	187.00	186.00	185.00	184.00	183.00	182.00	181.00	180.00	179.00	178.00	177.00	176.00	175.00	174.00	173.00	172.00	189.00													
P.G.L.																																
N.S.L.																																
CHAINAGE	26+600	26+625	26+650	26+675	26+700	26+725	26+750	26+775	26+800	26+825	26+850	26+875	26+900	26+925	26+950	26+975	27+000	27+025	27+050	27+075	27+100	27+125	27+150	27+175	27+200	27+225	27+250	27+275	27+300			
HOR. ALIG.	RIGHT CURVE R=500					TANGENT		LEFT CURVE R=1500					TANGENT					LEFT CURVE R=2500														
SUPEREL	LT																															
GRADE %	RT																															

CLIENT  

 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  

 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

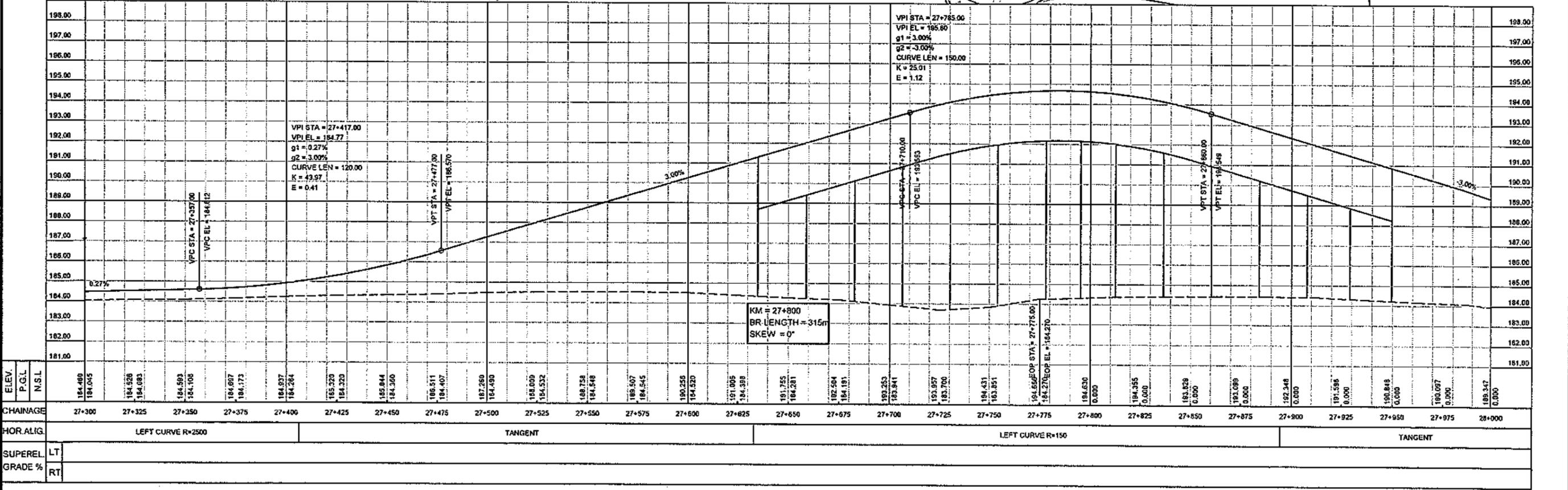
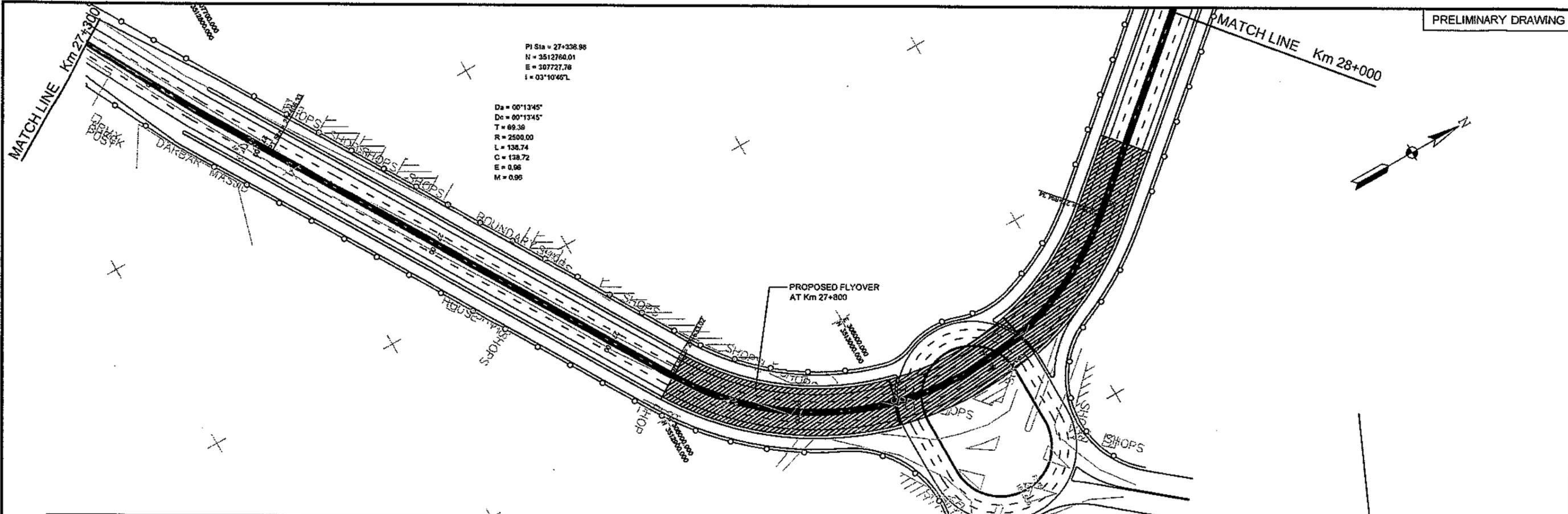
04			
03			
02			
01			
REV.	DATE	DESCRIPTION	APPROVED

DRAWN	SOHAIB
SUBMITTED	
RECOMMENDED	
CHD.VER.	
APPROVED	

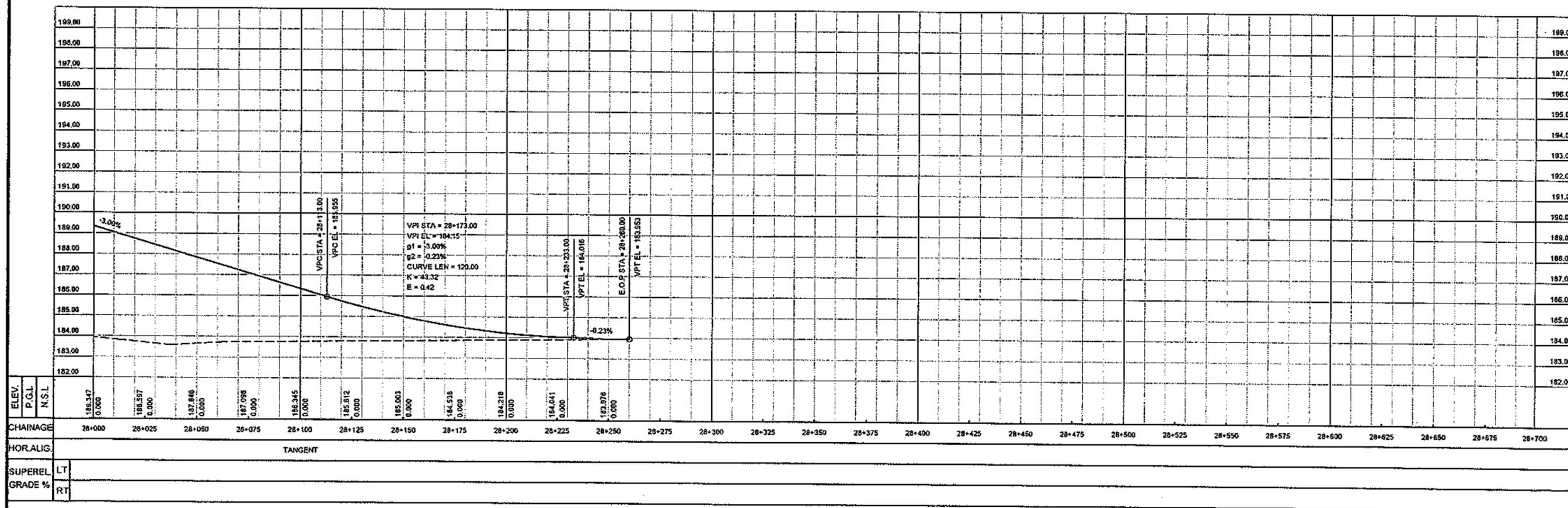
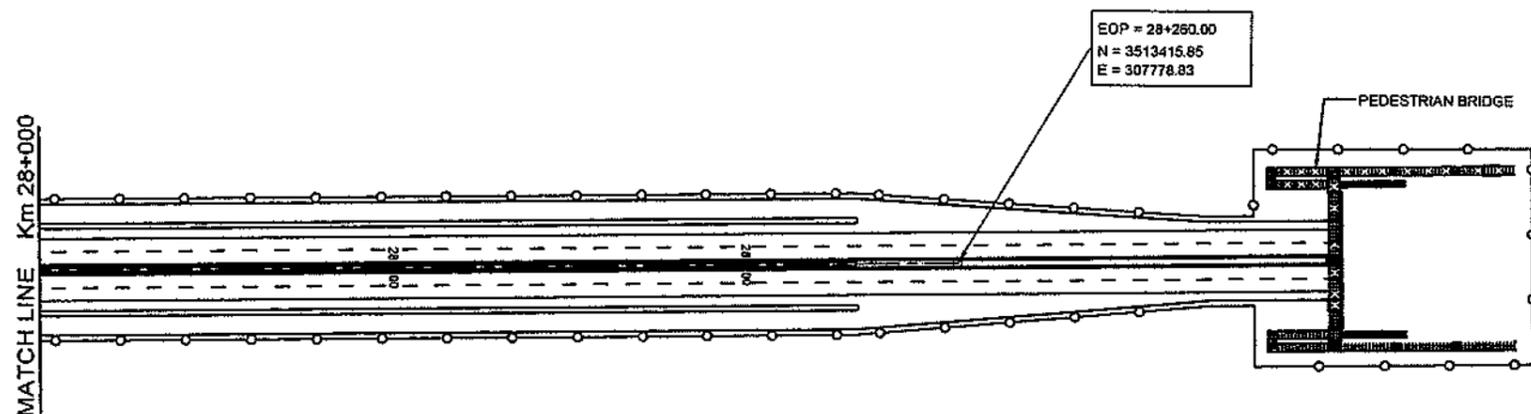
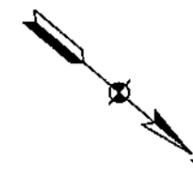
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 26+600 TO KM. 27+300  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C039

SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.



CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 27+300 TO KM. 28+000		SCALE
		03			SUBMITTED			HOR=1:2000 VER=1:200		
		02			RECOMMENDED		DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/1C040	REV.	
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

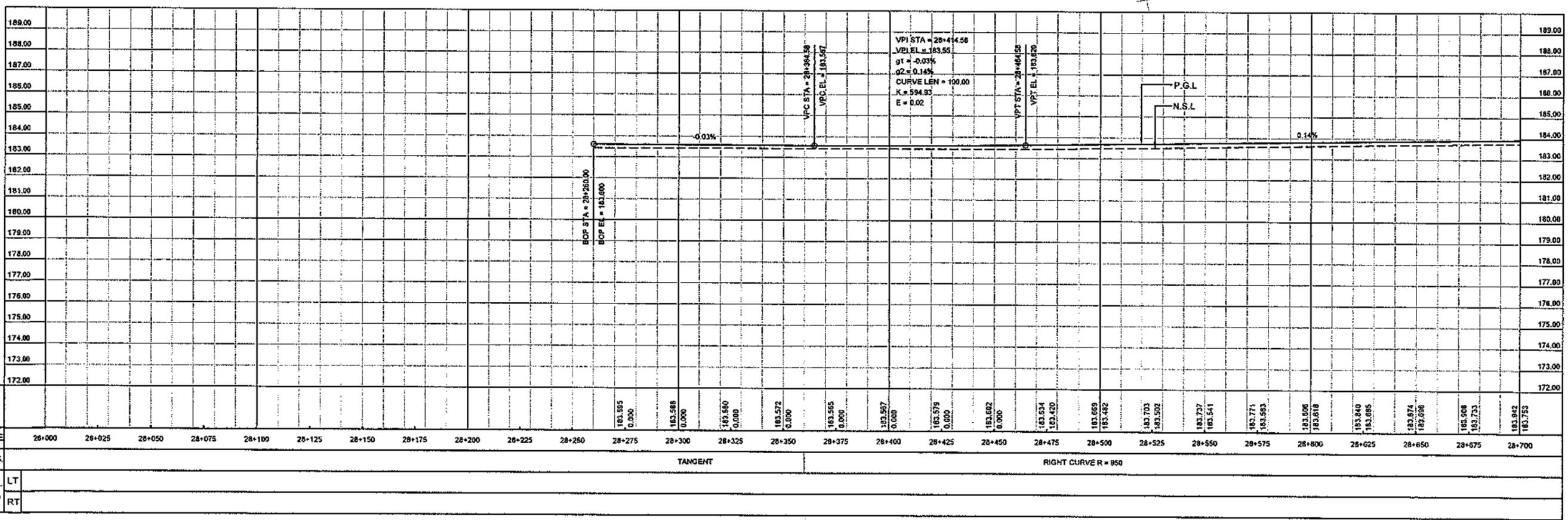
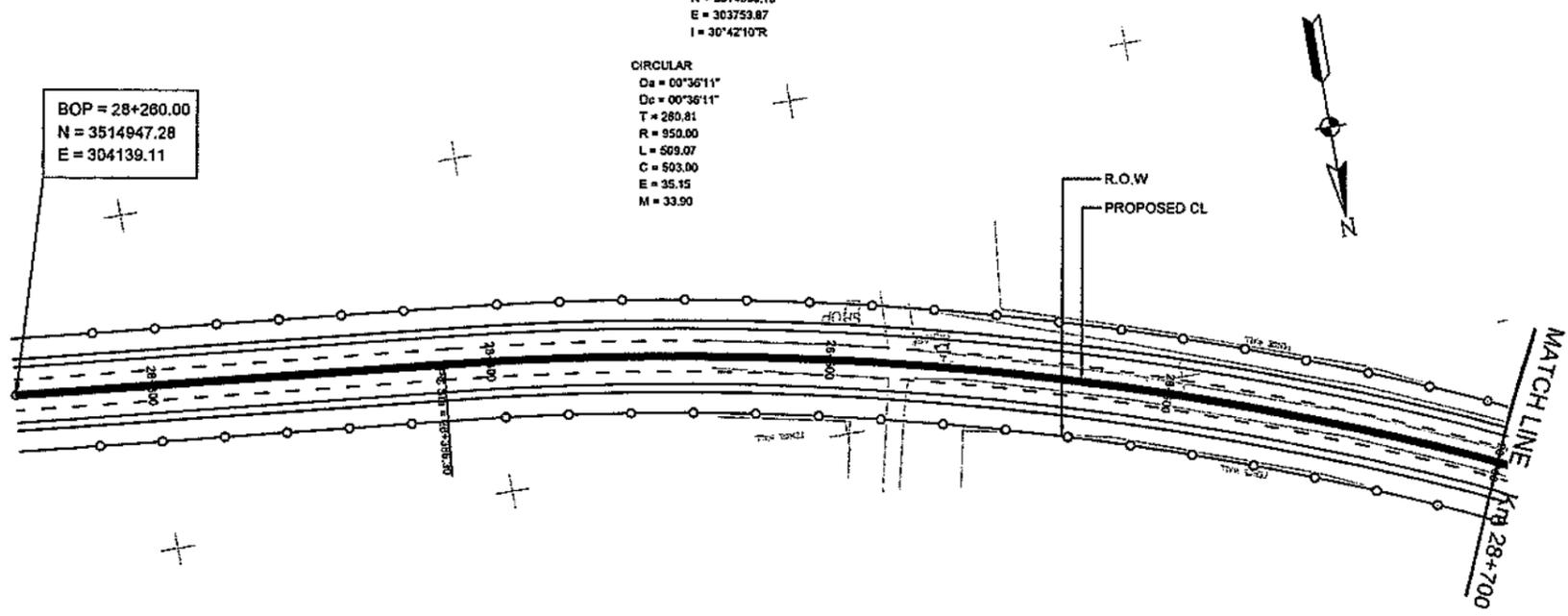


CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 28+000 TO KM. 28+260		SCALE
		03			SUBMITTED			HOR=1:2000 VER=1:200		
		02			RECOMMENDED		DATE	DRAWING No.	REV.	
		01			CHD./VER.		DECEMBER, 2020	SA-413/102/PD/10041		
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

PI Sta = 28+647.10  
 N = 3514985.18  
 E = 303753.87  
 I = 30°42'10"R

CIRCULAR  
 Ca = 00°36'11"  
 Dc = 00°36'11"  
 T = 280.81  
 R = 950.00  
 L = 509.07  
 C = 503.00  
 E = 35.15  
 M = 33.90

BOP = 28+260.00  
 N = 3514947.28  
 E = 304139.11



CHAINAGE	28+000	28+025	28+050	28+075	28+100	28+125	28+150	28+175	28+200	28+225	28+250	28+275	28+300	28+325	28+350	28+375	28+400	28+425	28+450	28+475	28+500	28+525	28+550	28+575	28+600	28+625	28+650	28+675	28+700
HOR. ALIG.	TANGENT															RIGHT CURVE R = 850													
SUPERELEV. GRADE %	LT															RT													

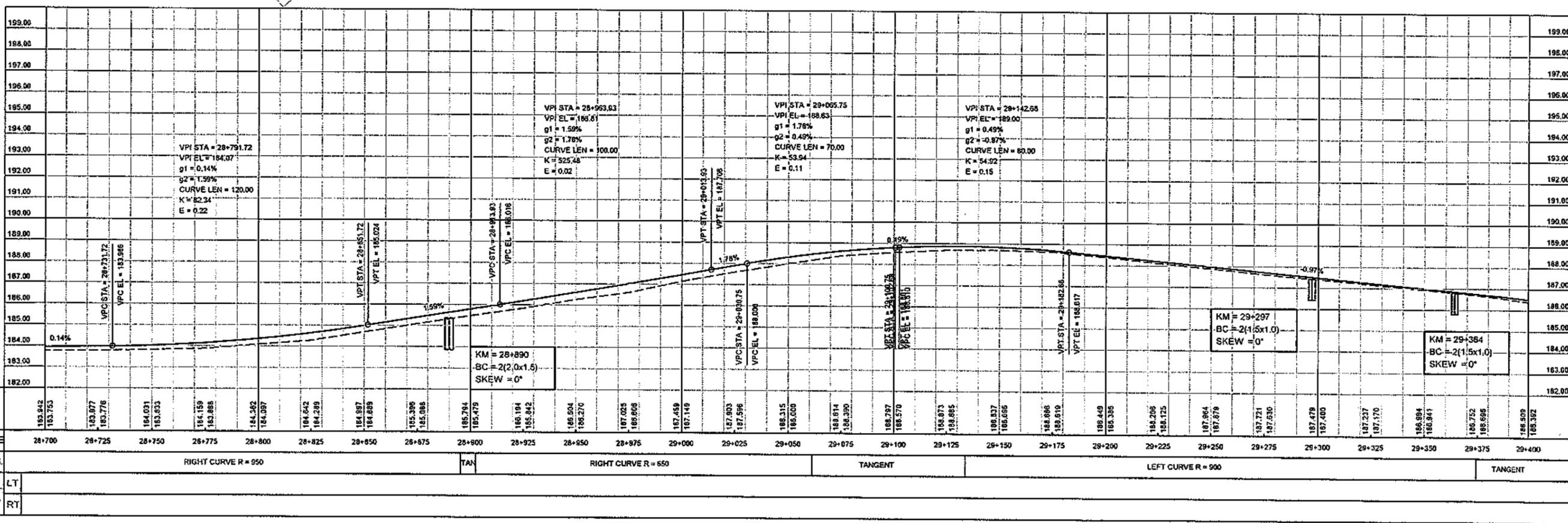
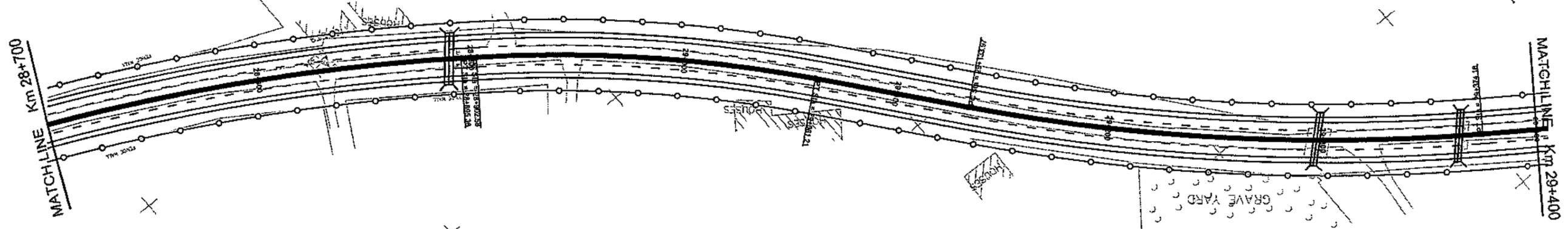
CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04				DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 28+260 TO KM. 28+700		SCALE
		03				SUBMITTED			HOR=1:2000 VER=1:200		
		02				RECOMMENDED			DATE	DRAWING No.	REV.
		01				CHD.AVER.			DECEMBER, 2020	SA-413/102/PD/C042	⬆ ⬆ ⬆
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED					

PI Sta = 28+552.29  
 N = 3515191.17  
 E = 303473.71  
 I = 13°58'59"R

PI Sta = 29+254.79  
 N = 3515401.46  
 E = 303289.16  
 I = 15°17'31"R

CIRCULAR  
 Da = 00°52'53"  
 Dc = 00°52'53"  
 T = 79.71  
 R = 650.00  
 L = 158.03  
 C = 168.24  
 E = 4.87  
 M = 4.83

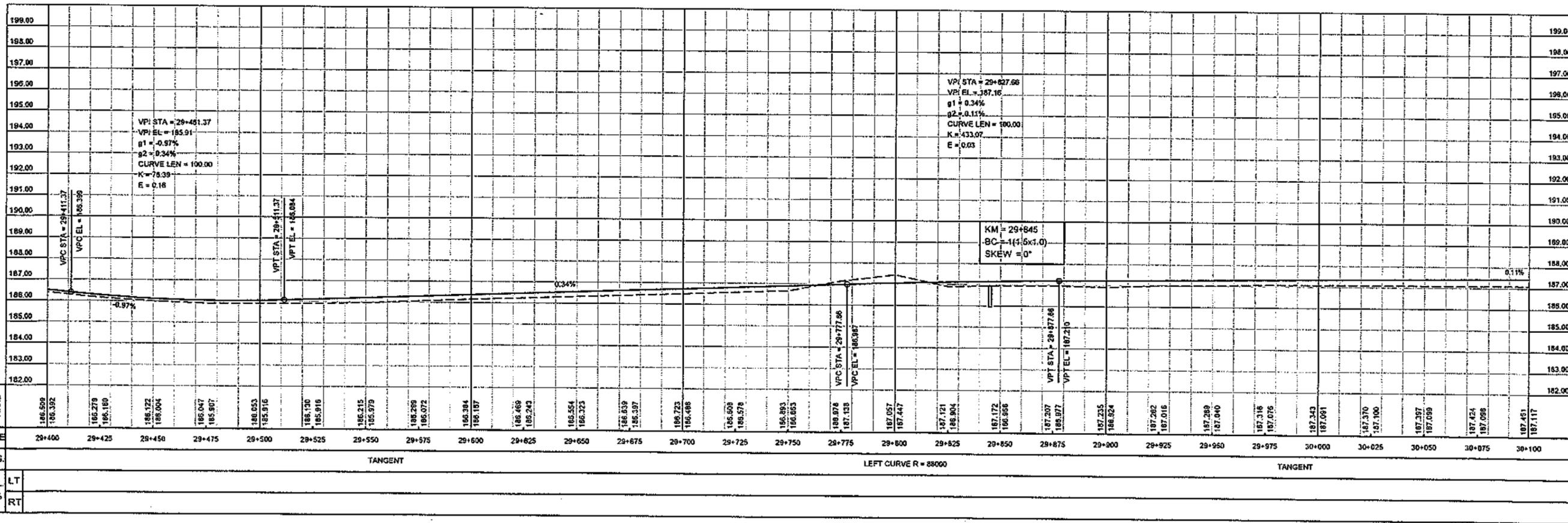
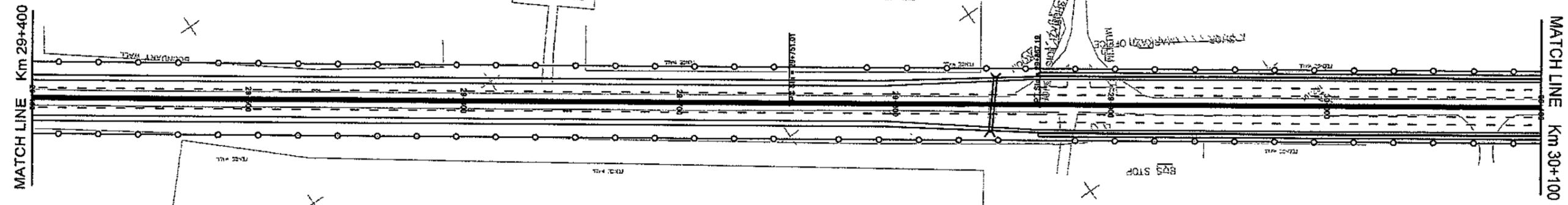
CIRCULAR  
 Da = 00°38'12"  
 Dc = 00°38'12"  
 T = 120.82  
 R = 900.00  
 L = 240.21  
 C = 239.49  
 E = 8.07  
 M = 8.00



CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 28+700 TO KM. 29+400		SCALE HOR=1:2000 VER=1:200
		03			SUBMITTED		DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/H043	REV.
		02			RECOMMENDED				
		01			CHD./VER.				
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED			

PI Sta = 29+809.10  
 N = 3515720.34  
 E = 302844.00  
 I = 00°04'32"L

CIRCULAR  
 Da = 00°00'23"  
 Dc = 00°00'23"  
 T = 58.09  
 R = 85000.00  
 L = 116.18  
 C = 116.18  
 E = 0.02  
 M = 0.02

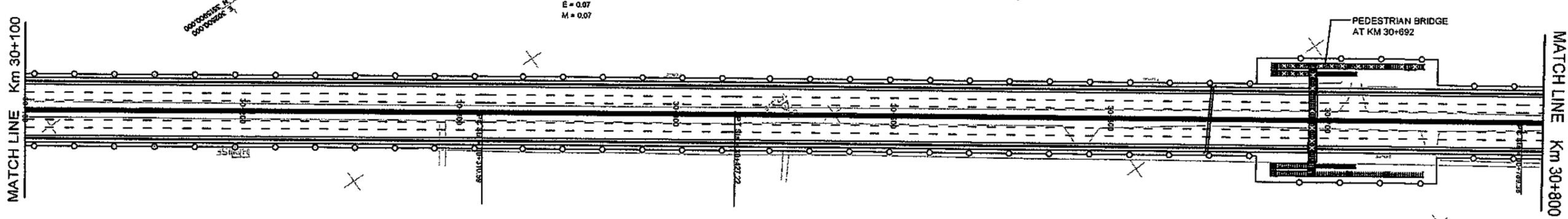


ELEV.	P.G.L	N.S.L	CHAINAGE	HOR.ALIG.	SUPEREL	GRADE %
186.599	186.392		29+400	TANGENT	LT	
186.270	186.160		29+425		RT	
186.122	186.004		29+450			
186.047	185.907		29+475			
186.053	185.916		29+500			
186.120	185.916		29+525			
186.215	185.979		29+550			
186.289	186.072		29+575			
186.384	186.167		29+600			
186.469	186.243		29+625			
186.554	186.323		29+650			
186.639	186.397		29+675			
186.723	186.488		29+700			
186.808	186.578		29+725			
186.893	186.653		29+750			
186.978	186.738		29+775			
187.067	186.817		29+800			
187.121	186.904		29+825			
187.172	186.986		29+850			
187.207	187.077		29+875			
187.235	187.164		29+900			
187.262	187.251		29+925			
187.289	187.340		29+950			
187.316	187.424		29+975			
187.343	187.509		30+000			
187.370	187.598		30+025			
187.397	187.687		30+050			
187.424	187.777		30+075			
187.451	187.867		30+100			

<p>CLIENT                  GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT                  NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.                  HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 29+400 TO KM. 30+100		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED			DECEMBER, 2020	SA-413/102/PD/H0044	REV.
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

PI Sta = 30+368.91  
 N = 3518040.94  
 E = 302385.09  
 I = 00°16'02"R

CIRCULAR  
 Da = 00°01'23"  
 Dc = 00°01'23"  
 T = 58.31  
 R = 25000.00  
 L = 116.62  
 C = 116.62  
 E = 0.07  
 M = 0.07



ELEV	189.00	188.00	187.00	196.00	195.00	194.00	193.00	192.00	191.00	190.00	189.00	188.00	187.00	186.00	185.00	184.00	183.00	182.00	189.00	188.00	187.00	186.00	185.00	184.00	183.00	182.00				
P.G.L																														
N.S.L																														
CHAINAGE	30+100	30+125	30+150	30+175	30+200	30+225	30+250	30+275	30+300	30+325	30+350	30+375	30+400	30+425	30+450	30+475	30+500	30+525	30+550	30+575	30+600	30+625	30+650	30+675	30+700	30+725	30+750	30+775	30+800	
HOR.ALIG	TANGENT										RIGHT CURVE R = 25000					TANGENT					RTCR = 1350									
SUPEREL	LT																													
GRADE %	RT																													

VPI STA = 30+606.97  
 VPI EL = 188.00  
 g1 = 0.11%  
 g2 = -0.25%  
 CURVE LEN = 100.00  
 K = 277.33  
 E = 0.05

KM = 30+645  
 BC = 1(0.8x0.8)  
 SKEW = 0°

VPC STA = 30+556.97  
 VPC EL = 187.94

VPT STA = 30+656.97  
 VPT EL = 187.87

CLIENT  

 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  

 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

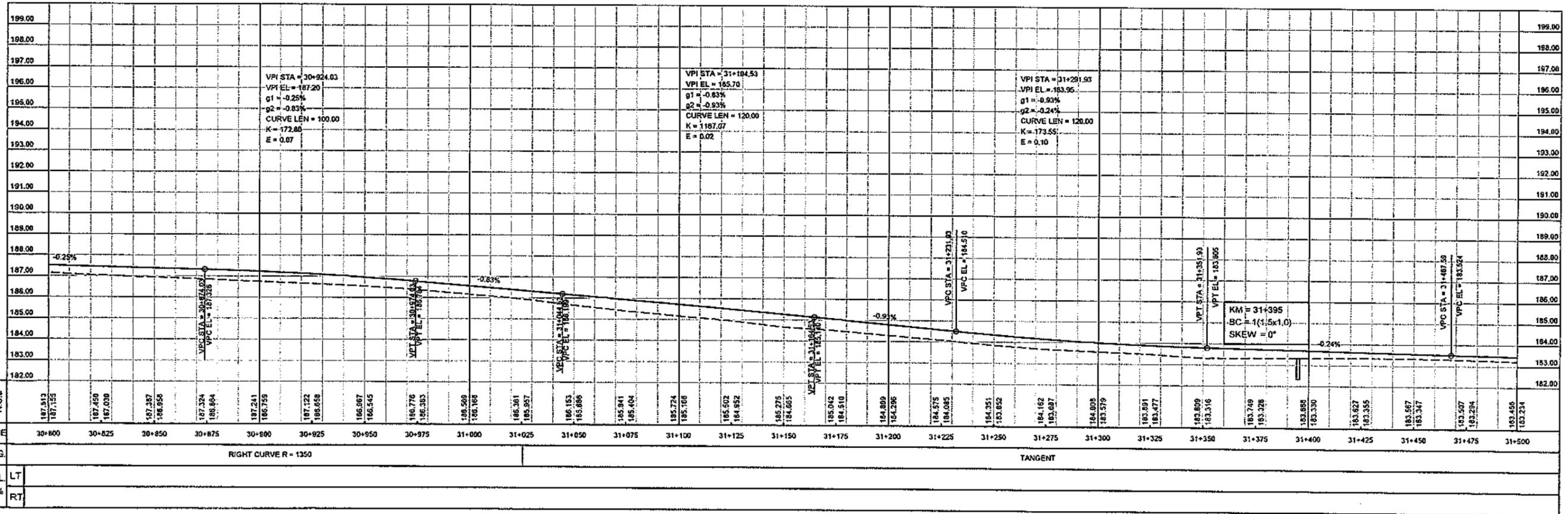
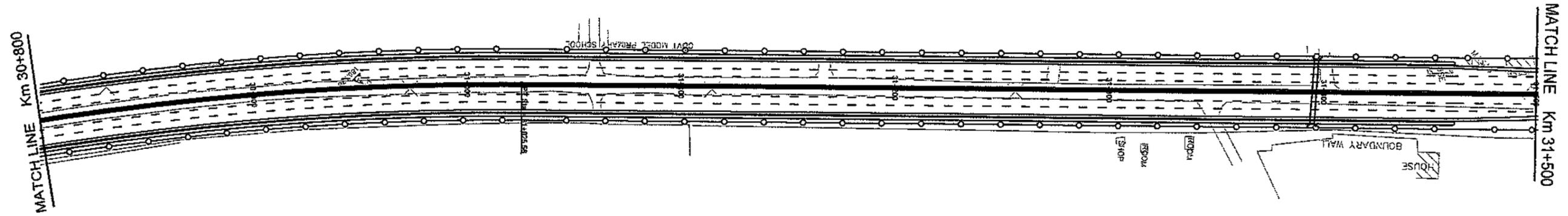
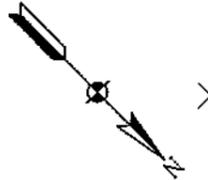
04					
03					
02					
01					
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 30+100 TO KM. 30+800  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/10045  
 SCALE: HOR=1:2000, VER=1:200  
 REV.

PI STA = 30+907.77  
 N = 3516351.60  
 E = 301944.79  
 Z = 10°01'25"R

CIRCULAR  
 Da = 00°25'28"  
 Dc = 00°25'28"  
 T = 118.29  
 R = 1350.00  
 L = 236.18  
 C = 235.87  
 E = 5.18  
 M = 5.16



CLIENT  
**GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

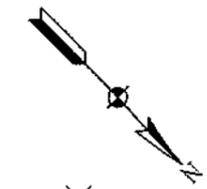
REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	SOHAIB
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)**

PLAN AND PROFILE  
 FROM KM. 30+800 TO KM. 31+500  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C046

SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.



PI Sta = 31+730.73  
N = 3516936.28  
E = 301364.78  
I = 00°32'50"R

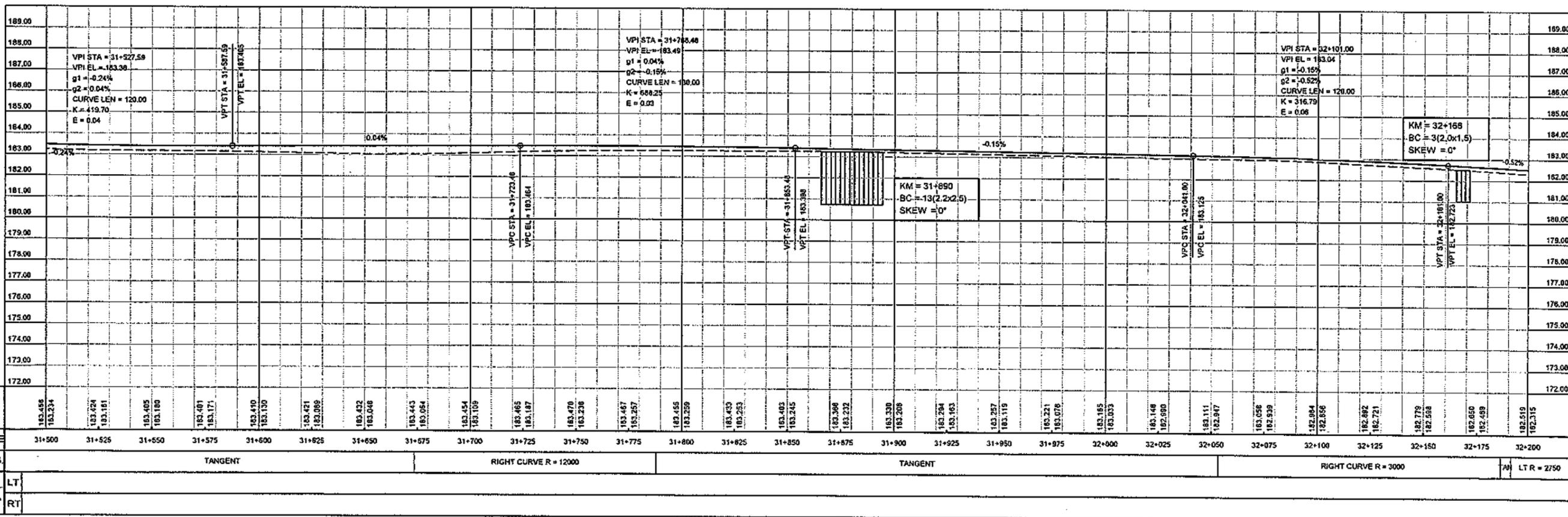
CIRCULAR  
Da = 00°02'52"  
Dc = 00°02'52"  
T = 57.31  
R = 12000.00  
L = 114.62  
C = 114.62  
E = 0.14  
M = 0.14

PI Sta = 32+119.56  
N = 3517214.94  
E = 301093.57  
I = 02°32'07"R

CIRCULAR  
Da = 00°11'28"  
Dc = 00°11'28"  
T = 66.38  
R = 3000.00  
L = 132.74  
C = 132.73  
E = 0.73  
M = 0.73

MATCH LINE Km 31+500

MATCH LINE Km 32+200



ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG.	SUPEREL	GRADE %
183.455	183.234		31+500	TANGENT	LT	
183.429	183.161		31+525		RT	
183.405	183.180		31+550			
183.401	183.171		31+575			
183.410	183.130		31+600			
183.421	183.098		31+625			
183.432	183.046		31+650			
183.443	183.054		31+675			
183.454	183.109		31+700			
183.465	183.187		31+725	RIGHT CURVE R = 12000		
183.470	183.238		31+750			
183.467	183.257		31+775			
183.465	183.269		31+800			
183.439	183.253		31+825			
183.403	183.245		31+850			
183.366	183.232		31+875			
183.330	183.208		31+900	TANGENT		
183.294	183.163		31+925			
183.257	183.119		31+950			
183.221	183.076		31+975			
183.185	183.033		32+000			
183.148	182.990		32+025			
183.111	182.947		32+050			
183.056	182.939		32+075			
182.984	182.856		32+100			
182.892	182.721		32+125			
182.775	182.598		32+150			
182.650	182.459		32+175			
182.519	182.315		32+200	LT R = 2750		

CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	SOHAIB
SUBMITTED	
RECOMMENDED	
CHD/VER.	
APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
**(LENGTH = 66.6 Km)**

PLAN AND PROFILE  
 FROM KM. 31+500 TO KM. 32+200  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/10047

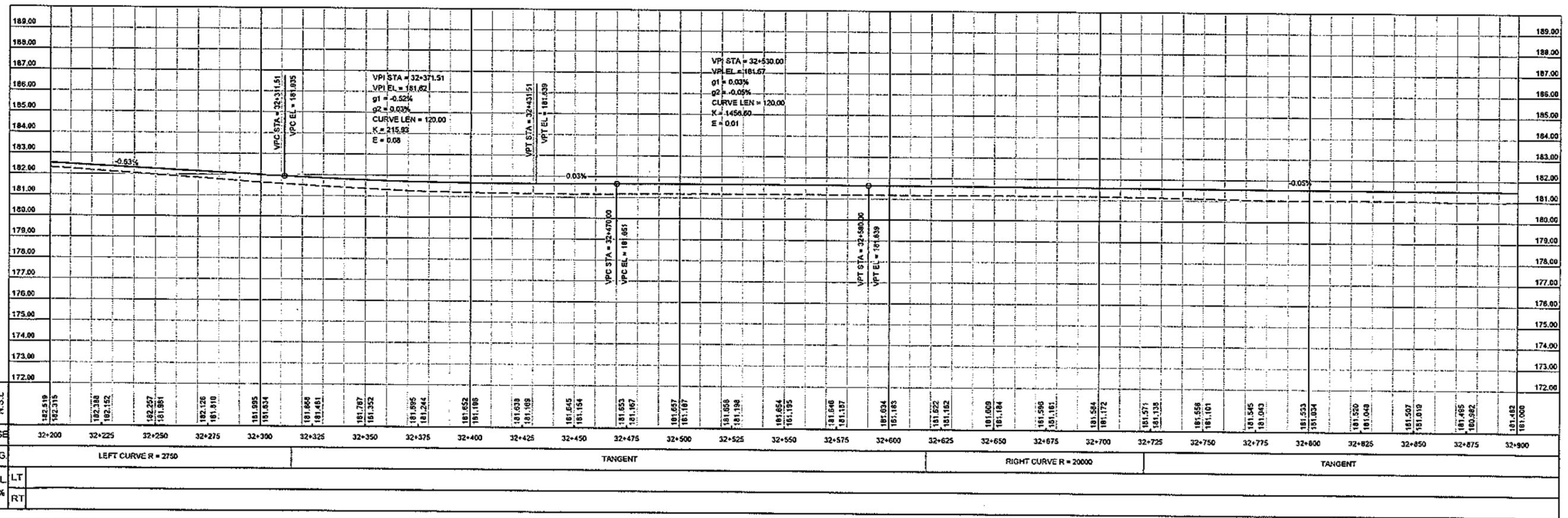
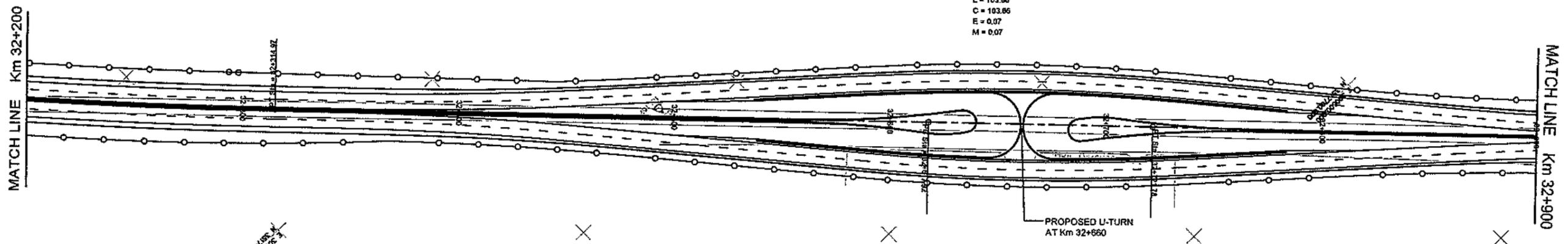
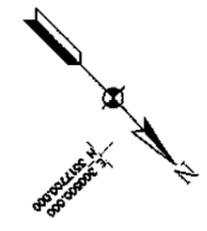
SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.

PI Sta = 32+253.18  
 N = 3517314.72  
 E = 301004.71  
 I = 02°34'31" L

CIRCULAR  
 Da = 00°12'30"  
 Dc = 00°12'30"  
 T = 81.81  
 R = 2750.00  
 L = 123.60  
 C = 123.59  
 E = 0.69  
 M = 0.69

PI Sta = 32+689.65  
 N = 3517613.13  
 E = 300713.88  
 I = 00°17'51" R

CIRCULAR  
 Da = 00°01'43"  
 Dc = 00°01'43"  
 T = 51.93  
 R = 20000.00  
 L = 103.86  
 C = 103.86  
 E = 0.07  
 M = 0.07

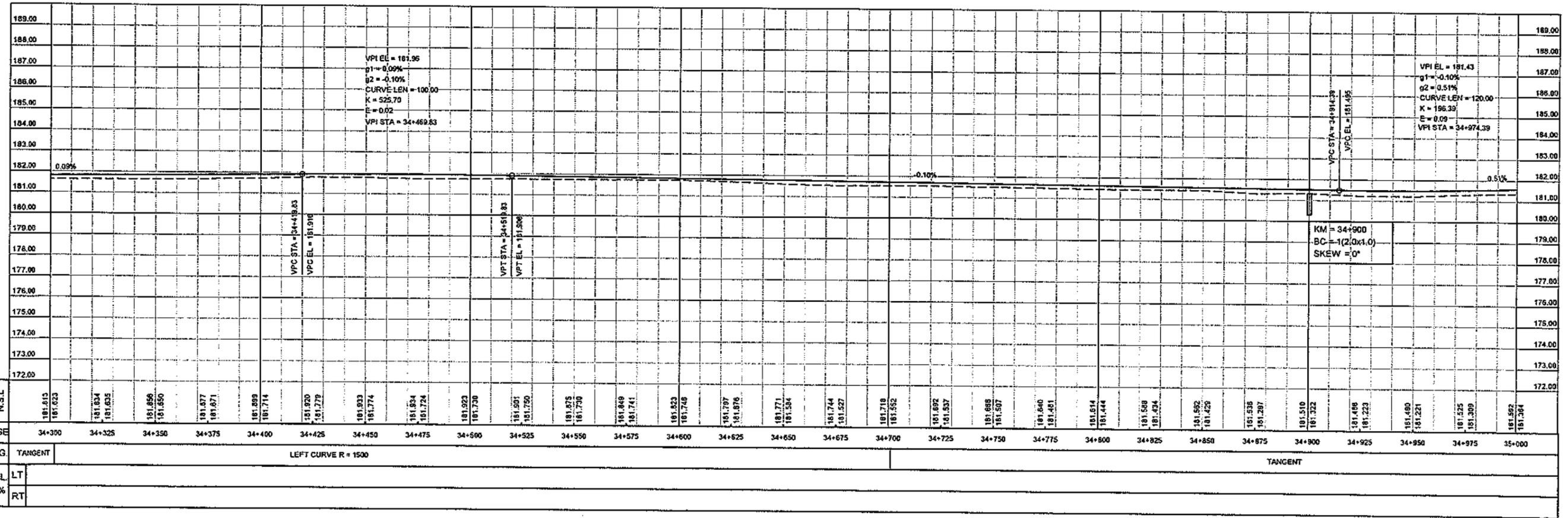
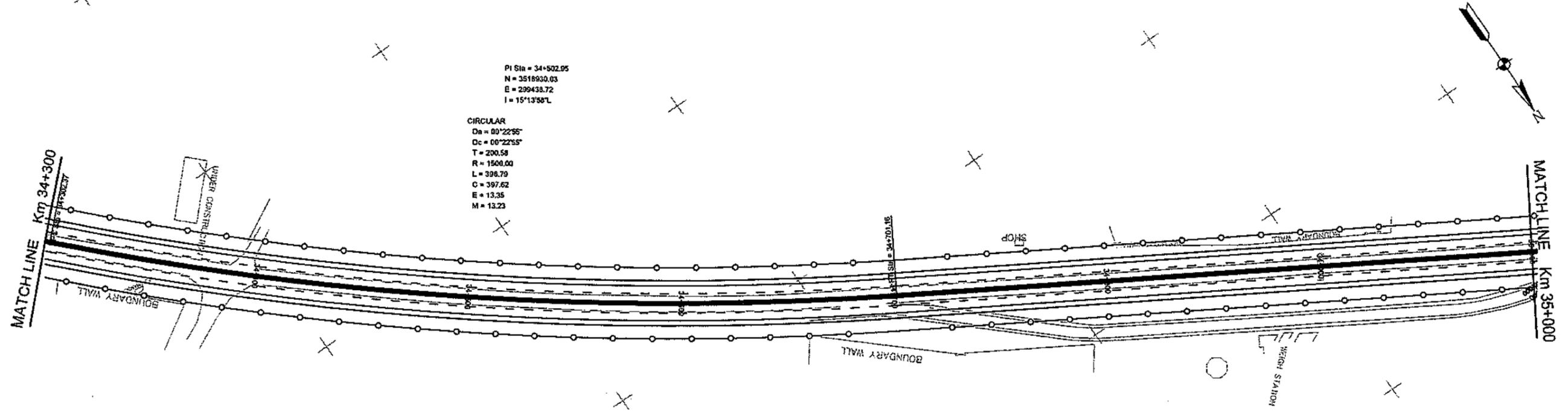


ELEV.	F.G.L	N.S.L	CHAINAGE	HOR. ALIG.	SUPERELEV.	GRADE %
182.818	182.315		32+200	LEFT CURVE R = 2750	LT	
182.386	182.152		32+225		RT	
182.267	181.981		32+250	TANGENT		
181.910	181.910		32+275			
181.925	181.834		32+300	RIGHT CURVE R = 20000		
181.662	181.481		32+325			
181.352	181.244		32+350	TANGENT		
181.186	181.186		32+400			
181.187	181.187		32+425	RIGHT CURVE R = 20000		
181.183	181.183		32+450			
181.182	181.182		32+475	TANGENT		
181.184	181.184		32+500			
181.185	181.185		32+525	RIGHT CURVE R = 20000		
181.186	181.186		32+550			
181.187	181.187		32+575	TANGENT		
181.188	181.188		32+600			
181.189	181.189		32+625	RIGHT CURVE R = 20000		
181.190	181.190		32+650			
181.191	181.191		32+675	TANGENT		
181.192	181.192		32+700			
181.193	181.193		32+725	RIGHT CURVE R = 20000		
181.194	181.194		32+750			
181.195	181.195		32+775	TANGENT		
181.196	181.196		32+800			
181.197	181.197		32+825	RIGHT CURVE R = 20000		
181.198	181.198		32+850			
181.199	181.199		32+875	TANGENT		
181.200	181.200		32+900			

CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 32+200 TO KM. 32+900		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1C048		
		01			CHD. VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				REV.







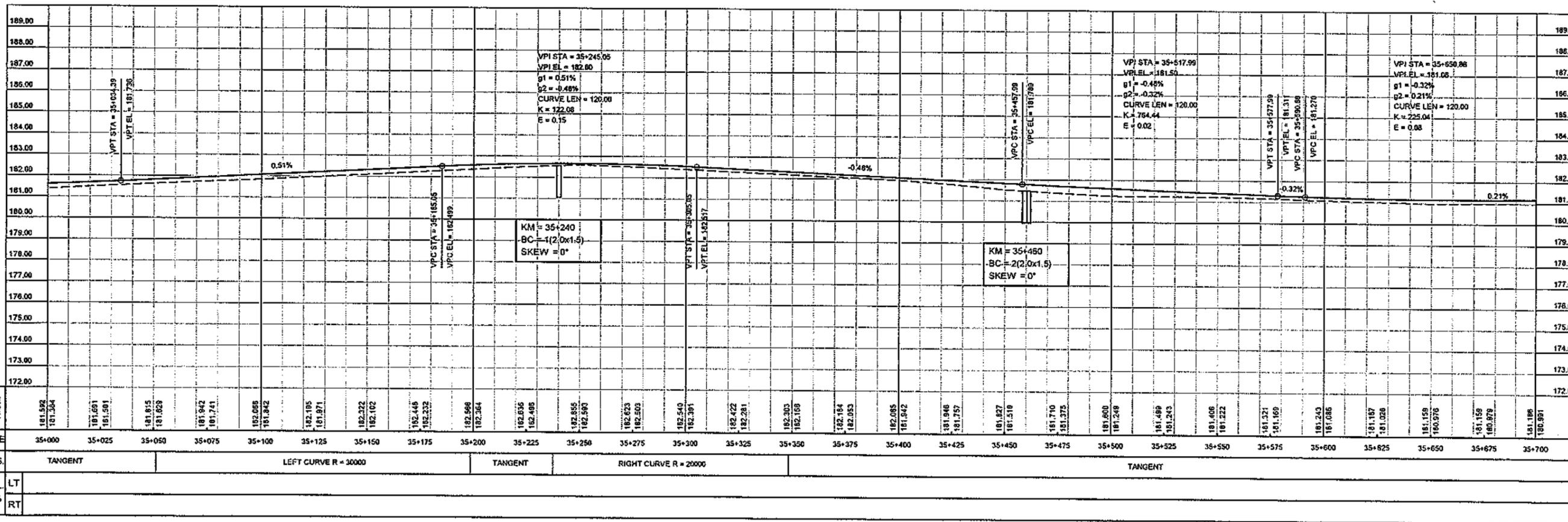
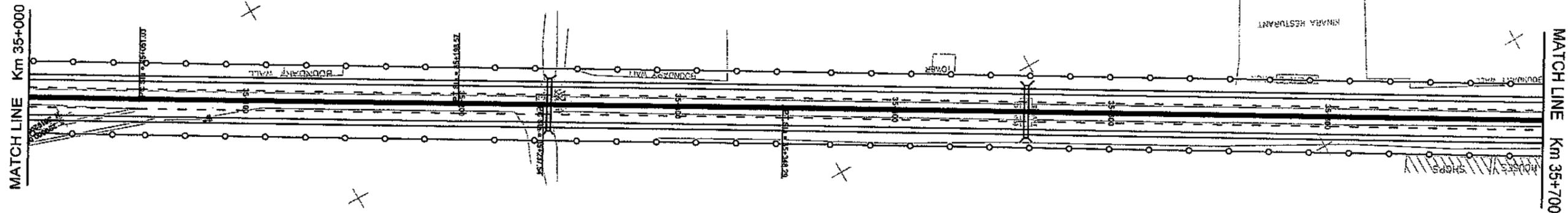
	<b>GOVT. OF THE PUNJAB</b> COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT <b>NATIONAL ENGINEERING SERVICES</b> PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 03 02 01 REV. DATE DESCRIPTION APPROVED	DRAWN SOHAB SUBMITTED RECOMMENDED CHD./VER. APPROVED	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 34+300 TO KM. 35+000 DATE DECEMBER, 2020 DRAWING No. SA-413/102/PD/1C051	SCALE HOR=1:2000 VER=1:200 REV.
	SOHAB E:\FAISALABAD CHINIOT SARGODHA ROAD\PRELIMINARY DRAWINGS\PLAN AND PROFILE\2\RCp51002.dwg						

PI Sta = 35+124.80  
N = 3519247.68  
E = 288901.37  
I = 00°16'54"L

CIRCULAR  
Da = 00°01'09"  
Dc = 00°01'09"  
T = 73.77  
R = 30000.00  
L = 147.53  
C = 147.53  
E = 0.09  
M = 0.09

PI Sta = 35+292.81  
N = 3519332.52  
E = 298756.23  
I = 00°19'02"R

CIRCULAR  
Da = 00°01'43"  
Dc = 00°01'43"  
T = 55.38  
R = 20000.00  
L = 110.76  
C = 110.76  
E = 0.08  
M = 0.08



CLIENT  
GOVT. OF THE PUNJAB  
COMMUNICATION AND WORKS  
DEPARTMENT (C&W) PUNJAB

CONSULTANT  
NATIONAL ENGINEERING SERVICES  
PAKISTAN (PVT.) LTD.  
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

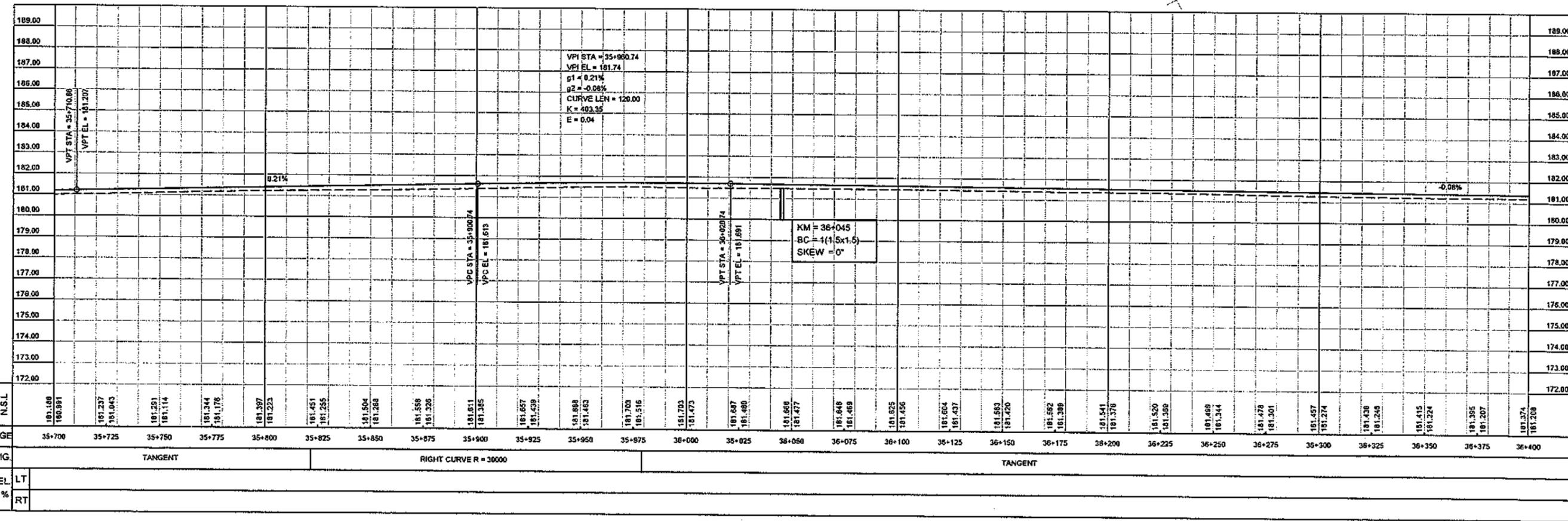
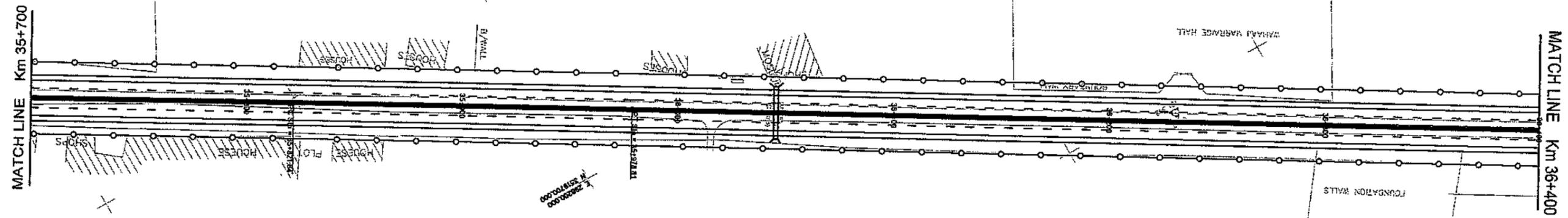
REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

DRAWN SOHAIB  
SUBMITTED  
RECOMMENDED  
CHD.AVER.  
PROJECT  
TRANSACTION ADVISORY SERVICES FOR  
DUALIZATION AND REHABILITATION OF EXISTING  
FAISALABAD - CHINIOT - SARGODHA ROAD  
(LENGTH = 66.6 Km)

PLAN AND PROFILE  
FROM KM. 35+000 TO KM. 35+700  
DATE DECEMBER, 2020  
DRAWING No. SA-413/102/PD/1C/052  
SCALE  
HOR=1:2000  
VER=1:200  
REV.

PI Sta = 35+900.22  
 N = 3519641.89  
 E = 298233.63  
 I = 00°18'01"R

CIRCULAR  
 Da = 00°01'06"  
 Dc = 00°01'09"  
 T = 78.58  
 R = 30000.00  
 L = 157.17  
 C = 157.17  
 E = 0.10  
 M = 0.10

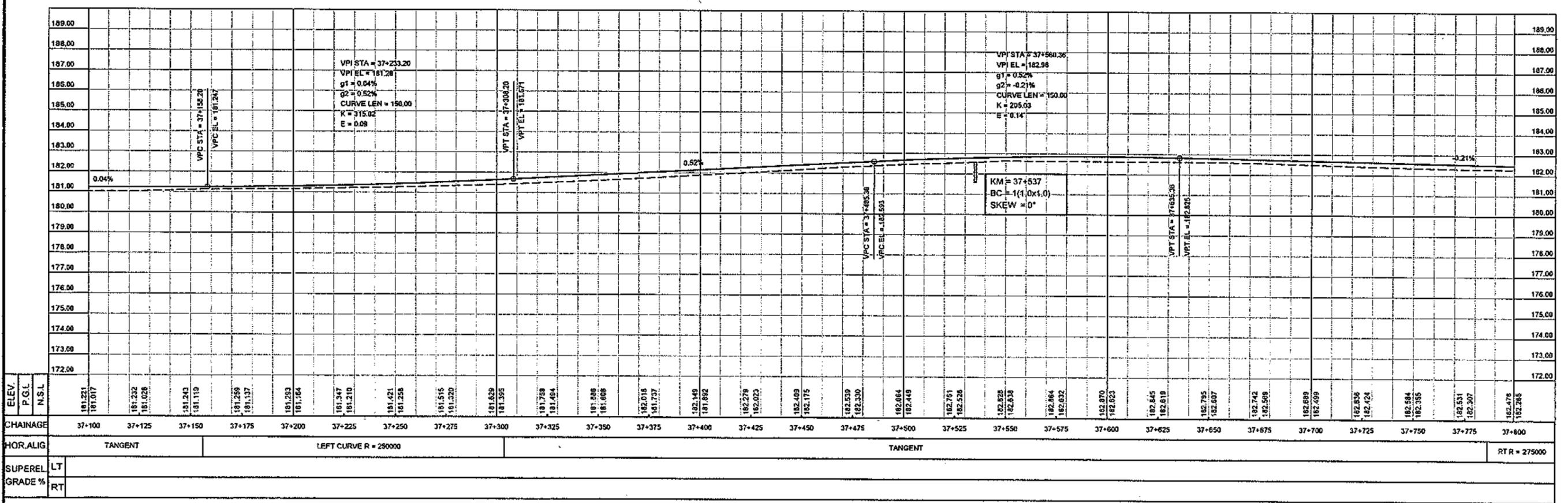
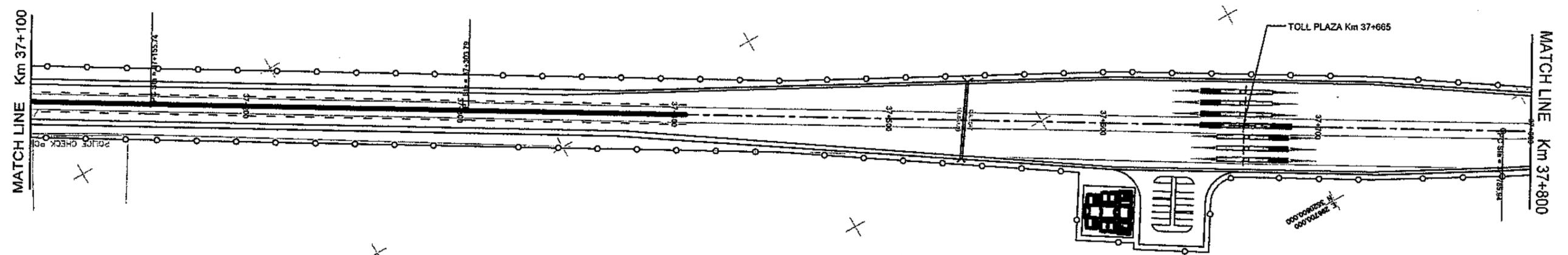


CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 35+700 TO KM. 36+400		SCALE
		03			SUBMITTED			HOR=1:2000 VER=1:200		
		02			RECOMMENDED		DATE	DECEMBER, 2020	DRAWING No.	REV.
		01			CHD.AVR.				SA-413/102/PD/10053	⬇️ ⬆️
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



PI Sta = 37+229.77  
 N = 3520325.17  
 E = 287083.09  
 I = 00°02'02" L

CIRCULAR  
 Da = 80°00'00"  
 Dc = 00°00'00"  
 T = 74.03  
 R = 250000.00  
 L = 148.05  
 C = 148.05  
 E = 0.01  
 M = 0.01



CLIENT  
**GOVT. OF THE PUNJAB**  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

DRAWN: SOHAIB  
 SUBMITTED  
 RECOMMENDED  
 CHD./VER.  
 APPROVED

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 37+100 TO KM. 37+800

DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C055

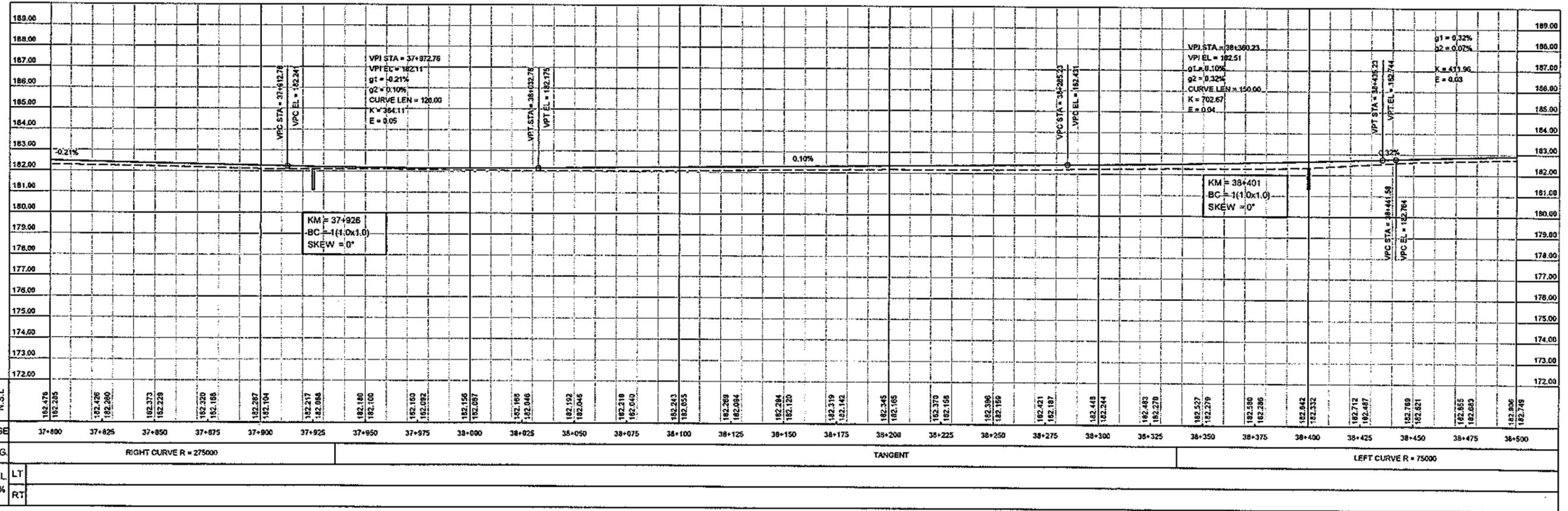
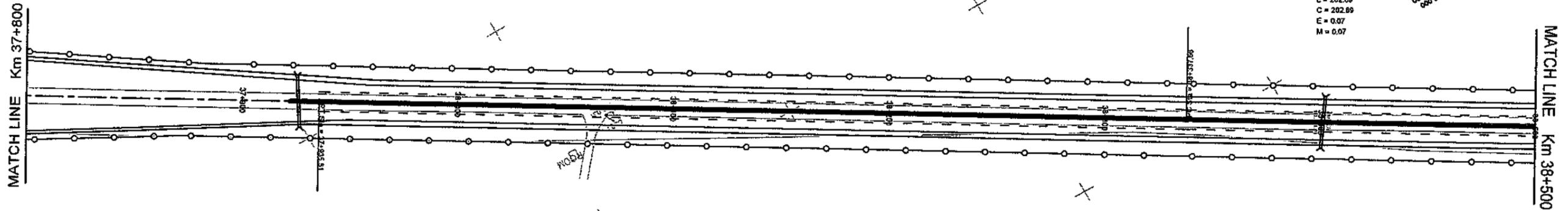
SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.

PI Sta = 37+660.73  
 N = 3520649.11  
 E = 296551.84  
 I = 00°01'52.7R

CIRCULAR  
 Da = 00°00'00"  
 Dc = 00°00'00"  
 T = 74.79  
 R = 27500.00  
 L = 149.58  
 C = 149.58  
 E = 0.01  
 M = 0.01

PI Sta = 38+439.10  
 N = 3520946.32  
 E = 290055.47  
 I = 00°08'18.1L

CIRCULAR  
 Da = 00°00'26"  
 Dc = 00°00'28"  
 T = 101.44  
 R = 75000.00  
 L = 202.89  
 C = 202.89  
 E = 0.07  
 M = 0.07



ELEV.	182.476	182.285	182.426	182.280	182.373	182.229	182.320	182.186	182.287	182.104	182.217	182.068	182.180	182.100	182.160	182.092	182.156	182.097	182.165	182.046	182.152	182.046	182.210	182.040	182.243	182.055	182.269	182.094	182.284	182.120	182.319	182.142	182.345	182.165	182.370	182.166	182.396	182.156	182.421	182.167	182.448	182.244	182.463	182.270	182.527	182.279	182.580	182.286	182.642	182.332	182.712	182.487	182.769	182.621	182.865	182.683	182.906	182.749
CHAINAGE	37+800	37+825	37+850	37+875	37+900	37+925	37+950	37+975	38+000	38+025	38+050	38+075	38+100	38+125	38+150	38+175	38+200	38+225	38+250	38+275	38+300	38+325	38+350	38+375	38+400	38+425	38+450	38+475	38+500																													
HOR. ALIG.	RIGHT CURVE R = 275000										TANGENT										LEFT CURVE R = 75000																																					
SUPEREL.	LT																																																									
GRADE %	RT																																																									

CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04			
03			
02			
01			
REV.	DATE	DESCRIPTION	APPROVED

DRAWN	SOHAB
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

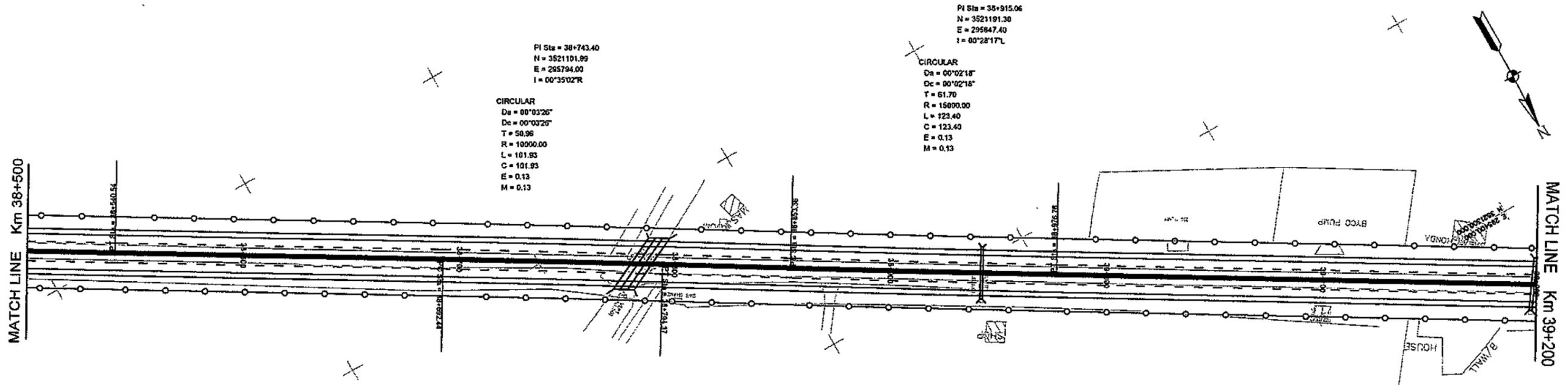
PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
**(LENGTH = 66.6 Km)**

PLAN AND PROFILE  
 FROM KM. 37+800 TO KM. 38+500

DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C056

SCALE  
 HOR=1:2000  
 VER=1:200

REV.



PI Sta = 38+743.40  
N = 3521101.99  
E = 295794.00  
I = 00°35'02"R

CIRCULAR  
Da = 00°03'26"  
Dc = 00°03'26"  
T = 50.98  
R = 10000.00  
L = 101.93  
C = 101.93  
E = 0.13  
M = 0.13

PI Sta = 38+915.06  
N = 3521191.30  
E = 295847.40  
I = 00°28'17"R

CIRCULAR  
Da = 00°02'18"  
Dc = 00°02'18"  
T = 61.70  
R = 15000.00  
L = 123.40  
C = 123.40  
E = 0.13  
M = 0.13

ELEV.	189.00	188.00	187.00	186.00	185.00	184.00	183.00	182.00	181.00	180.00	179.00	178.00	177.00	176.00	175.00	174.00	173.00	172.00	189.00													
P.G.L.																																
N.S.L.																																
CHAINAGE	38+500	38+525	38+550	38+575	38+600	38+625	38+650	38+675	38+700	38+725	38+750	38+775	38+800	38+825	38+850	38+875	38+900	38+925	38+950	38+975	39+000	39+025	39+050	39+075	39+100	39+125	39+150	39+175	39+200			
HOR. AUG.	LEFT CURVE R = 75000			TANGENT						RIGHT CURVE R = 10000			TANGENT			LEFT CURVE R = 15000			TANGENT													
SUPEREL.	LT																															
GRADE %	RT																															

VPI STA = 38+782.46  
VPI EL = 183.11  
g1 = 0.07%  
g2 = -0.56%  
CURVE LEN = 100.00  
K = -157.23  
E = 0.08

KM = 38+785  
BC = 3(2.7x1.5)  
SKEW = 0°

VPC STA = 38+668.85  
VPC EL = 182.08

VPI STA = 39+018.88  
VPI EL = 181.80  
g1 = -0.56%  
g2 = 0.06%  
CURVE LEN = 100.00  
K = 150.21  
E = 0.08

KM = 39+198  
BC = 1(1.0x1.0)  
SKEW = 0°

CLIENT  
**GOVT. OF THE PUNJAB  
COMMUNICATION AND WORKS  
DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NESPAC NATIONAL ENGINEERING SERVICES  
PAKISTAN (PVT.) LTD.**  
HEAD OFFICE:- NESPAC HOUSE, I-C, BLOCK-N,  
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				
03				
02				
01				
REV.	DATE	DESCRIPTION	APPROVED	APPROVED

DRAWN	SOHAIB
SUBMITTED	
RECOMMENDED	
CHD. VER.	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR  
DUALIZATION AND REHABILITATION OF EXISTING  
FAISALABAD - CHINIOT - SARGODHA ROAD  
(LENGTH = 66.6 Km)**

PLAN AND PROFILE  
FROM KM. 38+500 TO KM. 39+200

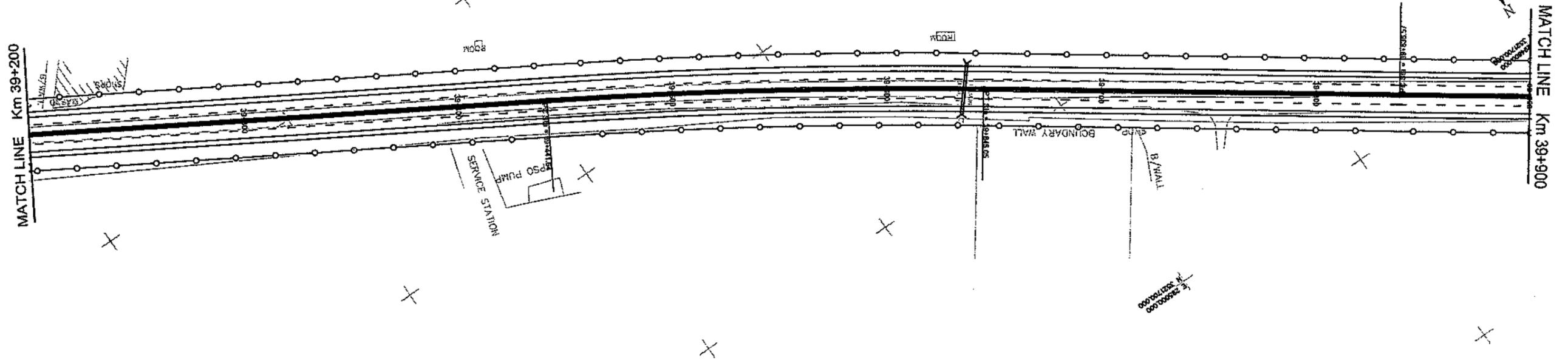
DATE: DECEMBER, 2020  
DRAWING No.: SA-413/102/PD/1C057

SCALE  
HOR=1:2000  
VER=1:200

REV.

PI Sta = 39+543.40  
 N = 3521513.79  
 E = 285108.13  
 I = 04°35'42"R

CIRCULAR  
 Da = 00°13'45"  
 Dc = 00°13'45"  
 T = 101.76  
 R = 2500.00  
 L = 203.41  
 C = 203.35  
 E = 2.07  
 M = 2.07



ELEV.	189.00	188.00	187.00	186.00	185.00	184.00	183.00	182.00	181.00	180.00	179.00	178.00	177.00	176.00	175.00	174.00	173.00	172.00	172.00	173.00	174.00	175.00	176.00	177.00	178.00	179.00	180.00	181.00	182.00	183.00	184.00	185.00	186.00	187.00	188.00	189.00				
CHAINAGE	39+200	39+225	39+250	39+275	39+300	39+325	39+350	39+375	39+400	39+425	39+450	39+475	39+500	39+525	39+550	39+575	39+600	39+625	39+650	39+675	39+700	39+725	39+750	39+775	39+800	39+825	39+850	39+875	39+900											
HOR. ALIG.	TANGENT										RIGHT CURVE R = 2500										TANGENT										LEFT CURVE R = 15000									
SUPEREL	LT																																							
GRADE %	RT																																							

CLIENT  
 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
**NESPAC** NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAC HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04					
03					
02					
01					
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 39+200 TO KM. 39+900  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C058

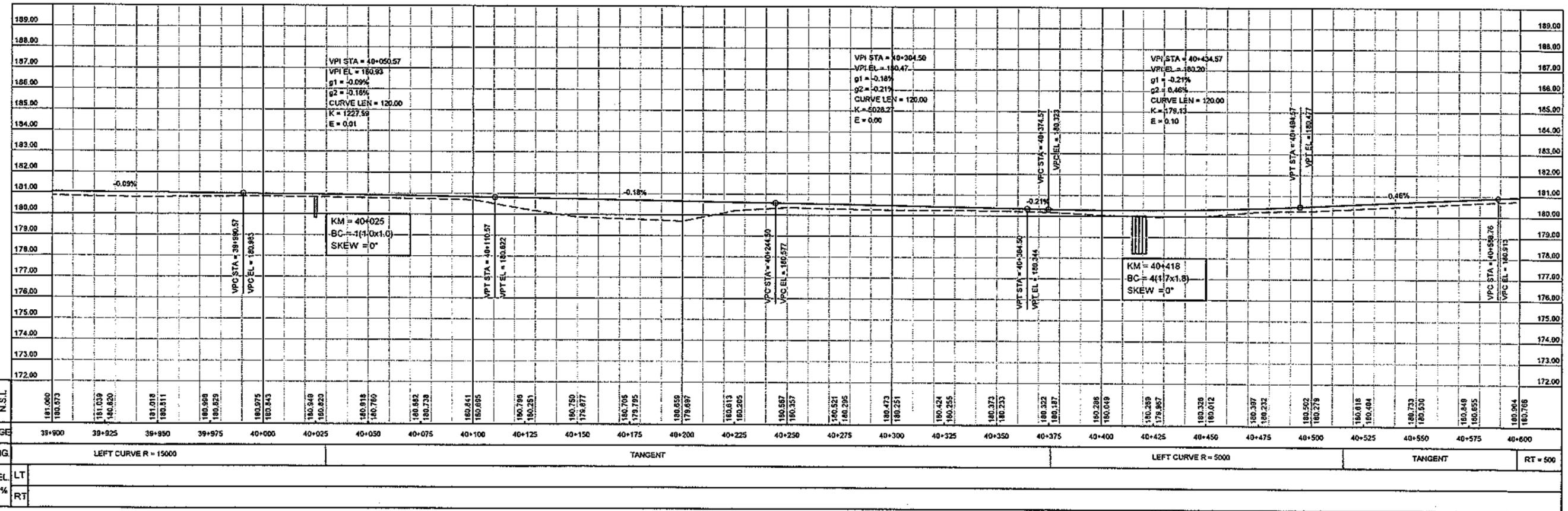
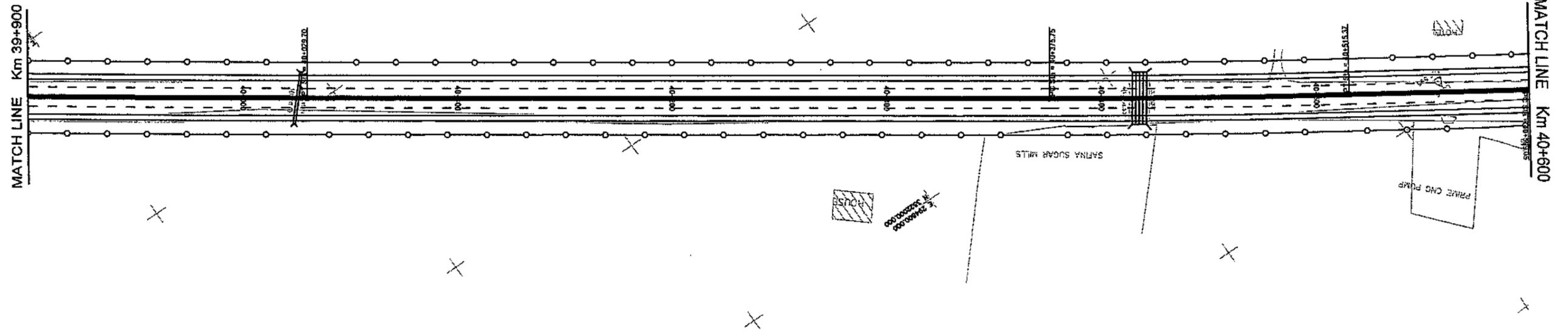
SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.

PI Sta = 39+934.14  
 N = 3521740.66  
 E = 294790.10  
 I = 00°43'48"

CIRCULAR  
 Da = 00°02'18"  
 Dc = 00°02'18"  
 T = 95.57  
 R = 15000.00  
 L = 191.13  
 C = 191.13  
 E = 0.30  
 M = 0.30

PI Sta = 40+445.57  
 N = 352032.96  
 E = 284370.20  
 I = 01°36'00"

CIRCULAR  
 Da = 00°06'53"  
 Dc = 00°06'53"  
 T = 69.81  
 R = 5800.00  
 L = 139.62  
 C = 139.61  
 E = 0.49  
 M = 0.49

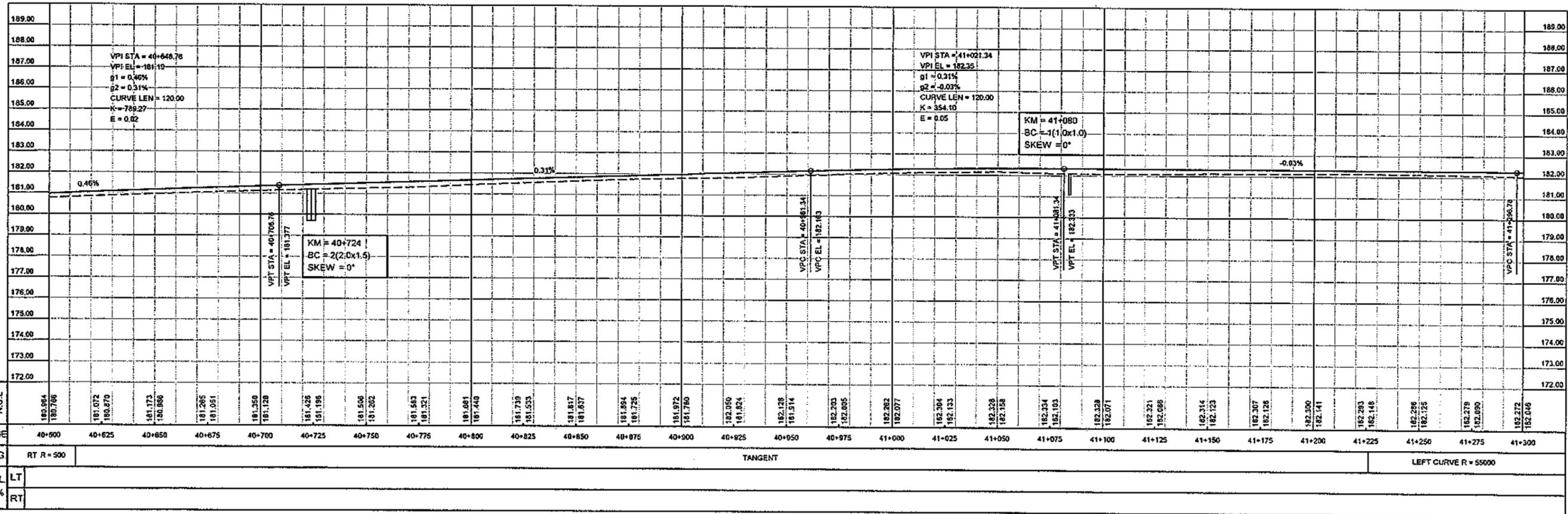
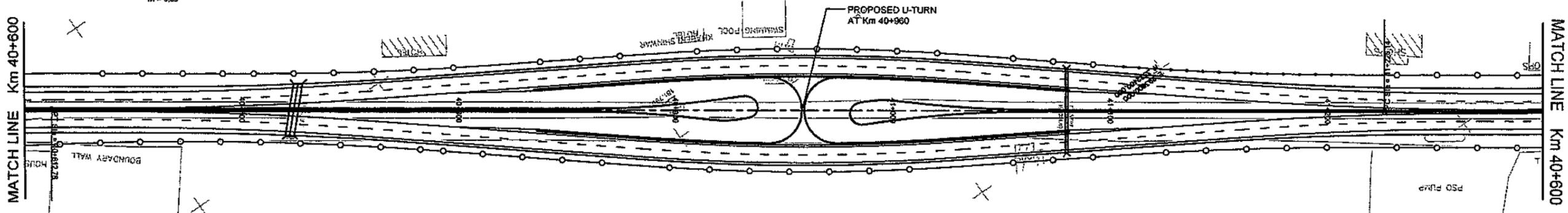


CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 39+900 TO KM. 40+600		SCALE HOR=1:2000 VER=1:200 REV.
		03			SUBMITTED				DATE	
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1059		
		01			CHD. VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

PI Sta = 40+605.91  
 N = 3522120.78  
 E = 294236.04  
 I = 01°34'14"R

CIRCULAR

T = 6.85  
 R = 500.00  
 L = 13.71  
 C = 13.71  
 E = 0.05  
 M = 0.05



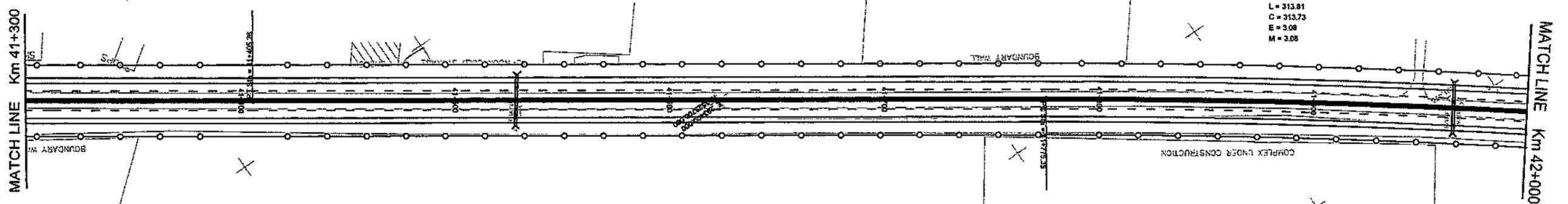
CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04		DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 40+600 TO KM. 41+300		SCALE HOR=1:2000 VER=1:200
		03		SUBMITTED			DATE	DRAWING No.	
		02		RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/IC060		
		01		CHD. VER.					
		REV.	DATE	DESCRIPTION	APPROVED				

PI Sta = 41+315.70  
 N = 3522525.69  
 E = 293653.07  
 I = 00°11'12" L

CIRCULAR  
 E = 0.07  
 M = 0.07

PI Sta = 41+932.33  
 N = 3522875.60  
 E = 293145.47  
 I = 04°28'42" R

CIRCULAR  
 Da = 00°08'36"  
 Dc = 00°08'36"  
 T = 156.96  
 R = 4000.00  
 L = 313.81  
 C = 313.73  
 E = 3.08  
 M = 3.05



ELEV.	189.00	188.00	187.00	186.00	185.00	184.00	183.00	182.00	181.00	180.00	179.00	178.00	177.00	176.00	175.00	174.00	173.00	172.00	189.00														
P.G.L.																																	
N.S.L.																																	
CHAINAGE	41+300	41+325	41+350	41+375	41+400	41+425	41+450	41+475	41+500	41+525	41+550	41+575	41+600	41+625	41+650	41+675	41+700	41+725	41+750	41+775	41+800	41+825	41+850	41+875	41+900	41+925	41+950	41+975	42+000				
HOR. ALIG.	LEFT CURVE R = 55000										TANGENT										RIGHT CURVE R = 4000												
SUPEREL.	LT																																
GRADE %	RT																																

CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04			
03			
02			
01			
REV.	DATE	DESCRIPTION	APPROVED

DRAWN	SOHAIB
SUBMITTED	
RECOMMENDED	
CHD. VER.	
APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
**(LENGTH = 66.6 Km)**

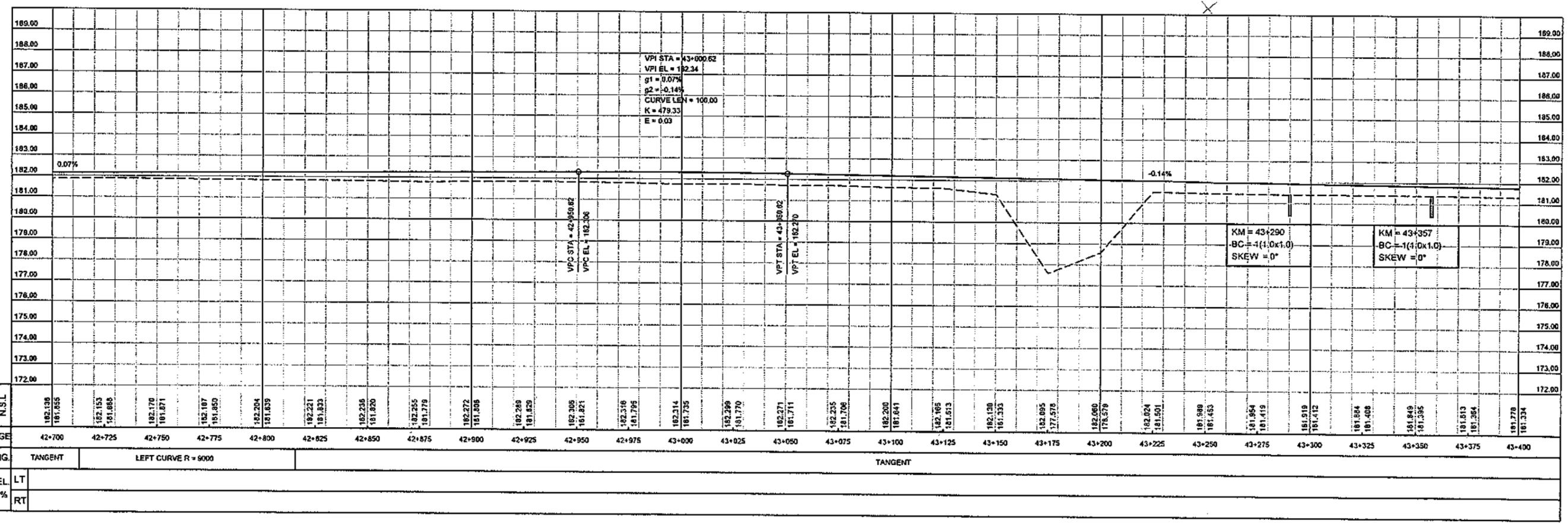
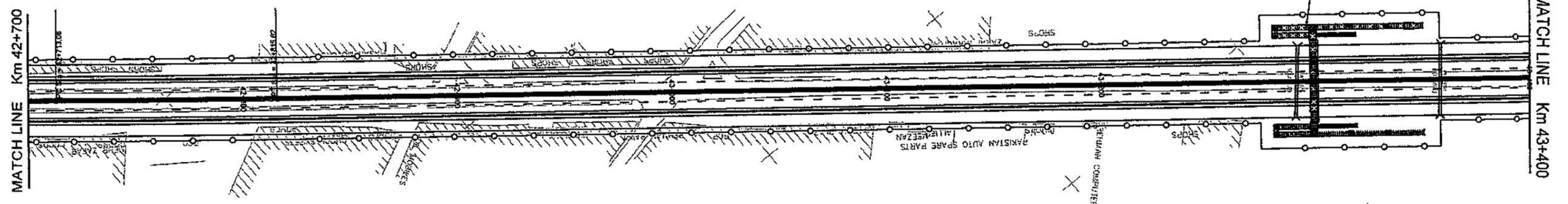
PLAN AND PROFILE  
 FROM KM. 41+300 TO KM. 42+000  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C061

SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.



PI Sta = 42+764.35  
 N = 3523401.12  
 E = 292500.05  
 I = 00°33'10"

CIRCULAR  
 Da = 00°03'49"  
 Dc = 00°03'49"  
 T = 51.27  
 R = 9000.00  
 L = 102.54  
 C = 102.54  
 E = 0.15  
 M = 0.15



ELEV.	P.G.L.	N.S.L.	CHAINAGE	HOR. ALIG.	SUPERELEV.	GRADE %
182.195	181.855		42+700	TANGENT	LT	
182.153	181.813		42+725	LEFT CURVE R = 9000	RT	
182.170	181.871		42+750			
182.187	181.888		42+775			
182.204	181.905		42+800			
182.221	181.922		42+825			
182.238	181.939		42+850			
182.255	181.956		42+875			
182.272	181.973		42+900			
182.289	181.990		42+925			
182.306	182.007		42+950			
182.323	182.024		42+975			
182.340	182.041		43+000	TANGENT		
182.357	182.058		43+025			
182.374	182.075		43+050			
182.391	182.092		43+075			
182.408	182.109		43+100			
182.425	182.126		43+125			
182.442	182.143		43+150			
182.459	182.160		43+175			
182.476	182.177		43+200			
182.493	182.194		43+225			
182.510	182.211		43+250			
182.527	182.228		43+275			
182.544	182.245		43+300			
182.561	182.262		43+325			
182.578	182.279		43+350			
182.595	182.296		43+375			
182.612	182.313		43+400			

CLIENT  
**GOVT. OF THE PUNJAB**  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

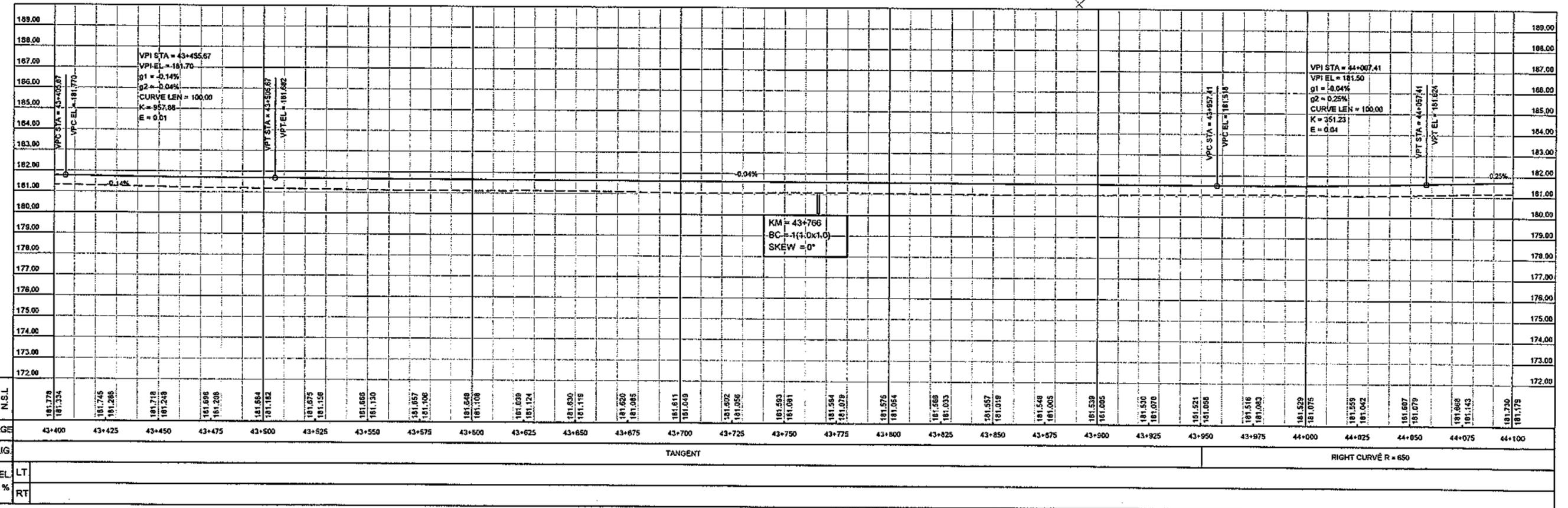
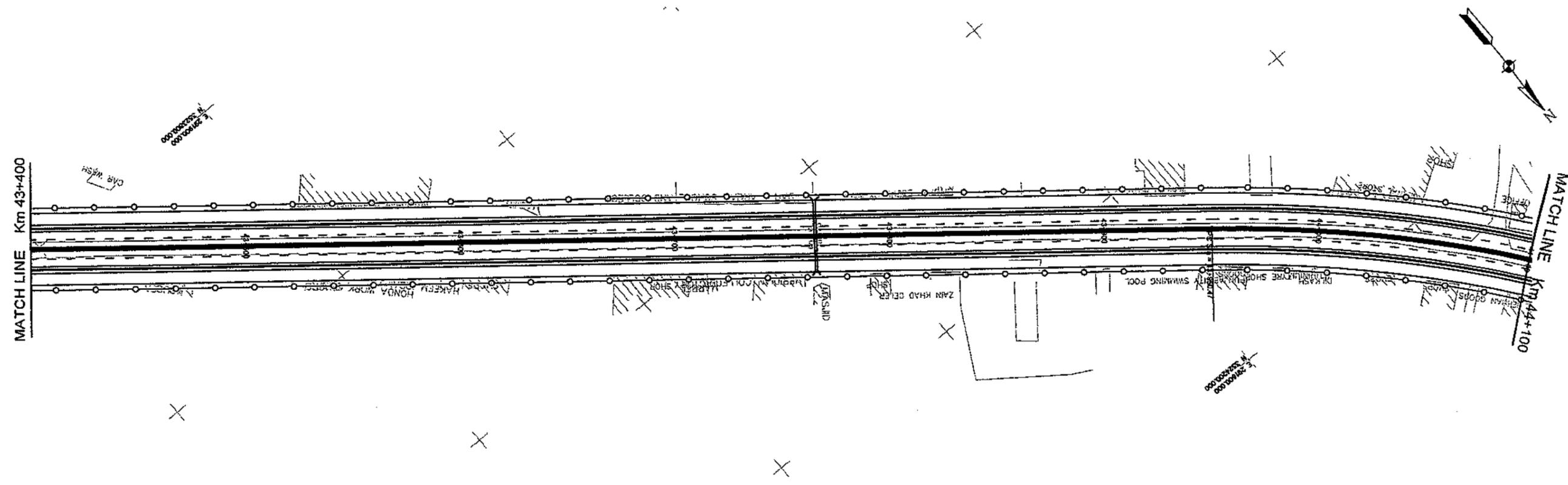
CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

DRAWN: SOHAIB  
 SUBMITTED: [ ]  
 RECOMMENDED: [ ]  
 CHD./VER: [ ]  
 PROJECT: TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 42+700 TO KM. 43+400  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C063

SCALE  
 HOR=1:2000  
 VER=1:200  
 REV. [ ]

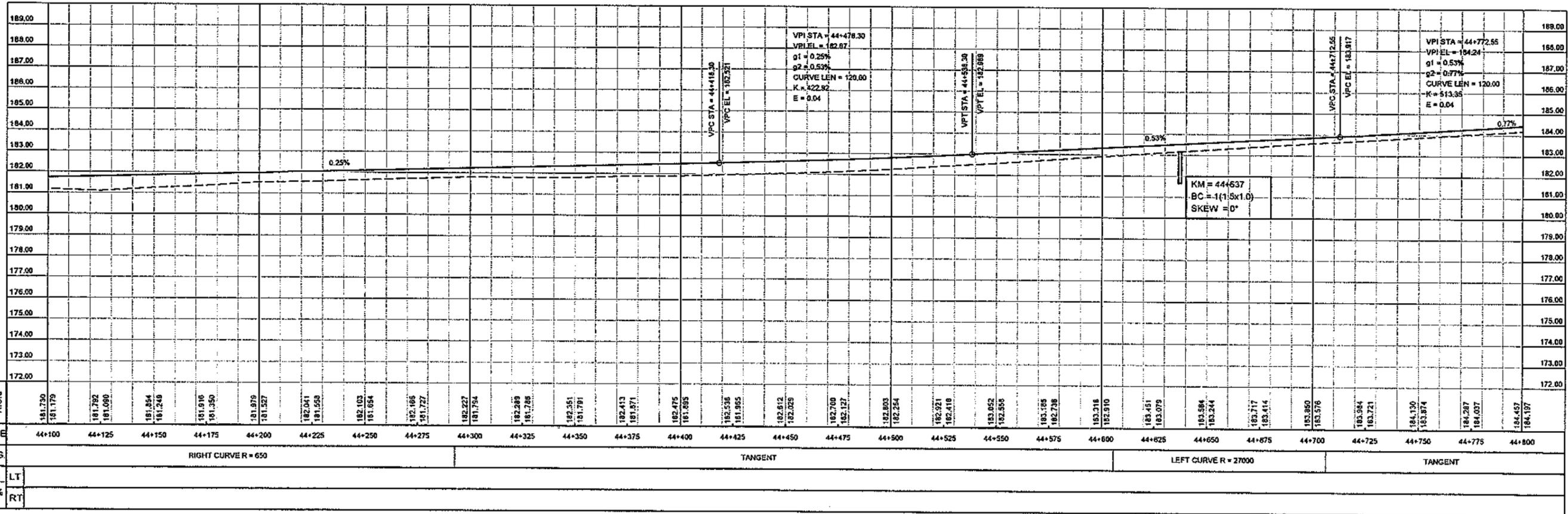
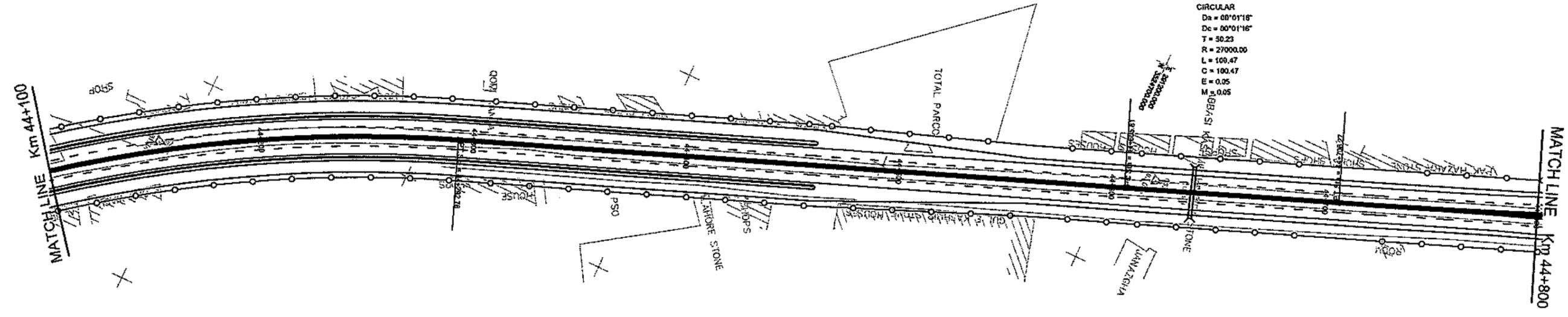


<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT <b>NESPAC</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAC HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAIB	<p>PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	<p>PLAN AND PROFILE FROM KM. 43+400 TO KM. 44+100</p>		<p>SCALE HOR=1:2000 VER=1:200</p>
		03			SUBMITTED			DATE	DRAWING No.	
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1C064		
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

PI Sta = 44+125.88  
 N = 3524251.68  
 E = 291437.13  
 I = 30°10'19"R

PI Sta = 44+656.04  
 N = 3524753.84  
 E = 291242.74  
 I = 00°12'48"L

CIRCULAR  
 Da = 00°01'18"  
 Dc = 00°01'16"  
 T = 30.23  
 R = 27000.00  
 L = 100.47  
 C = 100.47  
 E = 0.05  
 M = 0.05



ELEV.	P.G.L.	N.S.L.	CHAINAGE	HOR. ALIG.	SUPEREL.	GRADE %
181.730	181.179		44+100	RIGHT CURVE R = 650	LT	
181.792	181.090		44+125		RT	
181.854	181.249		44+150	TANGENT		
181.916	181.350		44+175			
181.979	181.527		44+200	LEFT CURVE R = 27000		
182.041	181.558		44+225			
182.103	181.684		44+250	TANGENT		
182.165	181.727		44+275			
182.227	181.754		44+300			
182.289	181.785		44+325			
182.351	181.791		44+350			
182.413	181.871		44+375			
182.475	181.885		44+400			
182.538	181.955		44+425			
182.600	182.025		44+450			
182.662	182.095		44+475			
182.724	182.164		44+500			
182.786	182.234		44+525			
182.848	182.303		44+550			
182.910	182.373		44+575			
182.972	182.442		44+600			
183.034	182.511		44+625			
183.096	182.580		44+650			
183.158	182.649		44+675			
183.220	182.718		44+700			
183.282	182.787		44+725			
183.344	182.856		44+750			
183.406	182.925		44+775			
183.468	182.994		44+800			

CLIENT  
**GOVT. OF THE PUNJAB**  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

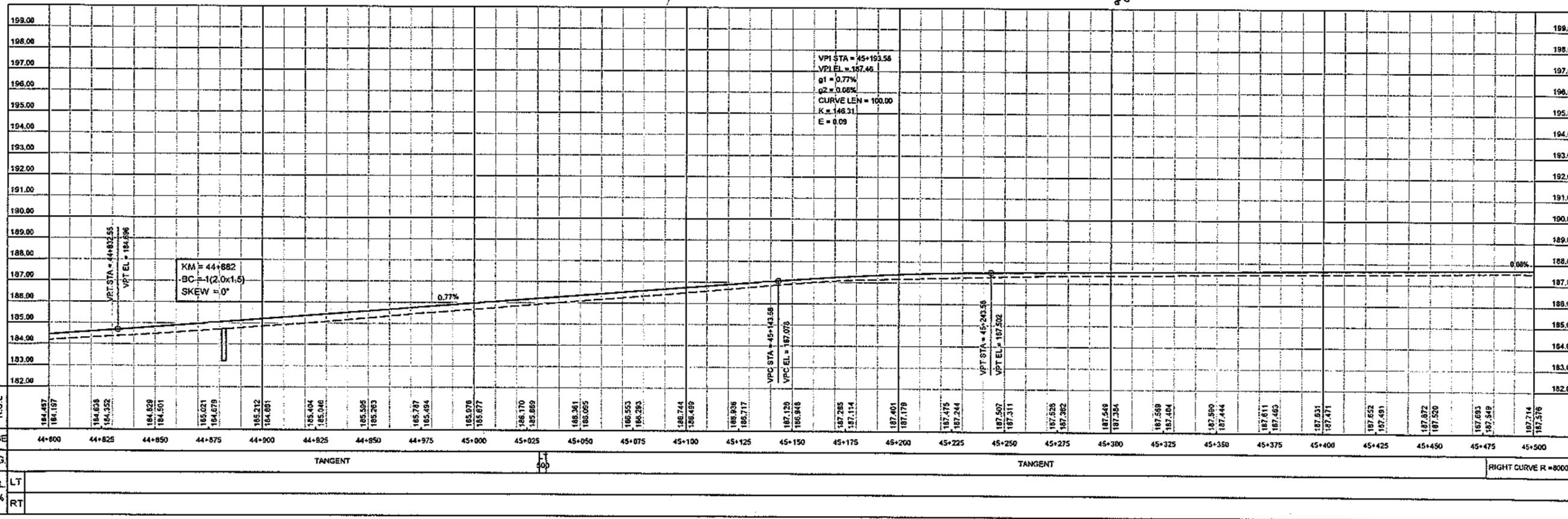
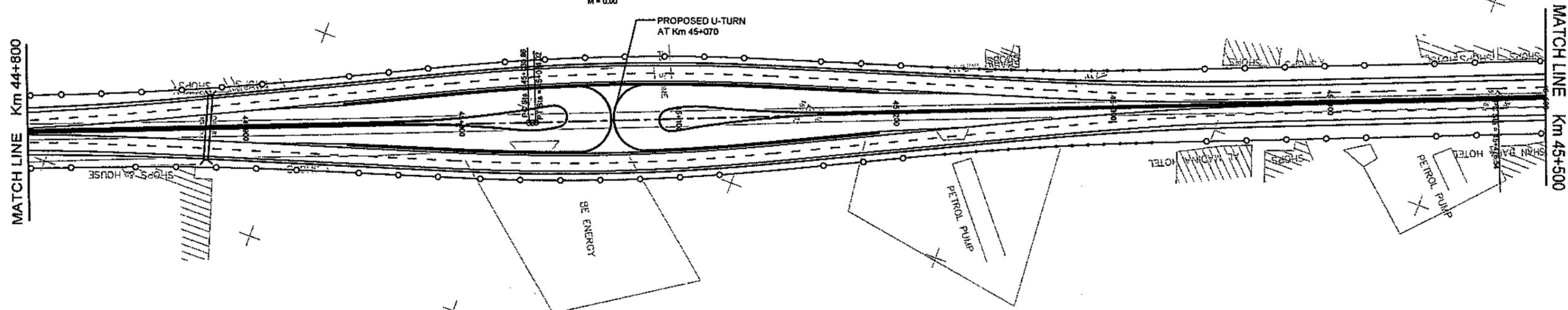
REV.	DATE	DESCRIPTION	APPROVED	DRAWN	SOHAB
04					
03					
02					
01					

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 44+100 TO KM. 44+800  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C065  
 SCALE: HOR=1:2000, VER=1:200  
 REV.

PI Sta = 45+032.44  
 N = 3525104.35  
 E = 291105.55  
 I = 00°21'42.1"

CIRCULAR  
 Da = 01°08'45"  
 Dc = 01°08'45"  
 T = 1.58  
 R = 500.00  
 L = 3.10  
 C = 3.16  
 E = 0.00  
 M = 0.00



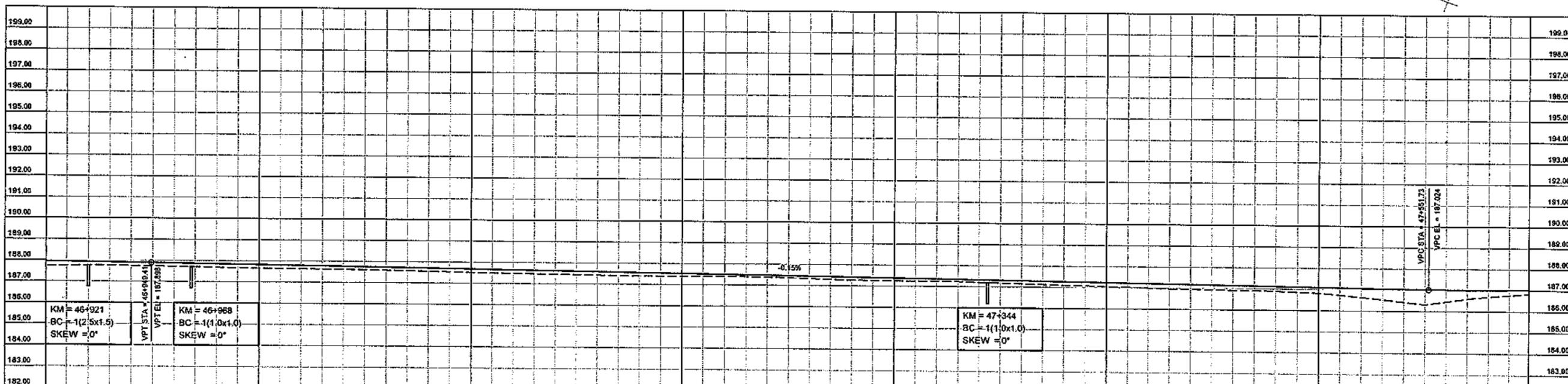
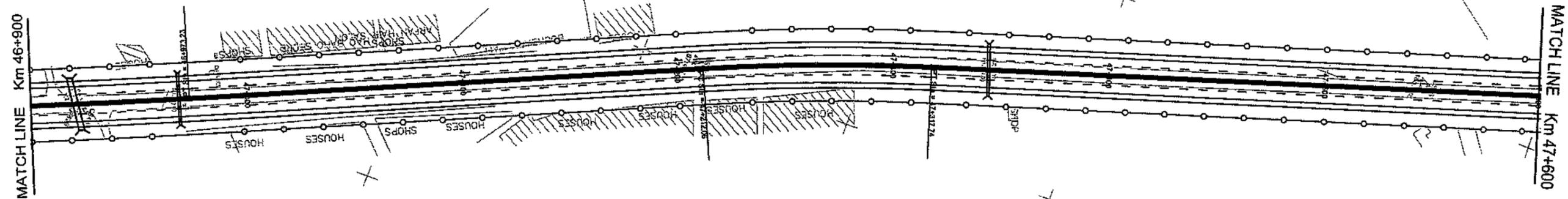
<p>CLIENT                  GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT                  NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.                  HEAD OFFICE:- NESPAK HOUSE, I.C. BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04				DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE		SCALE HOR=1:2000 VER=1:200 REV.
		03				SUBMITTED			DATE	DRAWING No.	
		02				RECOMMENDED			DECEMBER, 2020	SA-413/102/PD/1C066	
		01				CHD.NER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED					





PI Sta = 47+264.95  
 N = 3527177.32  
 E = 280277.52  
 I = 06°03'17R

CIRCULAR  
 Da = 00°34'23"  
 Dc = 00°34'23"  
 T = 52.89  
 R = 1000.00  
 L = 105.68  
 C = 105.63  
 E = 1.40  
 M = 1.40



ELEV.	187.947	187.727	187.528	187.272	187.097	187.739	187.461	187.689	187.825	187.658	187.788	187.635	187.752	187.612	187.718	187.566	187.678	187.514	187.640	187.477	187.607	187.446	187.571	187.400	187.534	187.395	187.488	187.413	187.462	187.350	187.425	187.292	187.389	187.252	187.359	187.247	187.316	187.184	187.280	187.118	187.244	187.053	187.208	186.989	187.171	186.942	187.135	186.907	187.089	186.829	187.062	186.591	187.026	186.314	187.008	186.658	187.002	186.843
CHAINAGE	46+900	46+925	46+950	46+975	47+000	47+025	47+050	47+075	47+100	47+125	47+150	47+175	47+200	47+225	47+250	47+275	47+300	47+325	47+350	47+375	47+400	47+425	47+450	47+475	47+500	47+525	47+550	47+575	47+600																													
HOR. ALIG.	LEFT CURVE R = 4000				TANGENT										RIGHT CURVE R = 1000					TANGENT																																						
SUPEREL.	LT																																																									
GRADE %	RT																																																									

CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I.C. BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				
03				
02				
01				
REV.	DATE	DESCRIPTION	APPROVED	APPROVED

DRAWN: SOHAIB  
 SUBMITTED  
 RECOMMENDED  
 CHD. VER.  
 APPROVED

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
**(LENGTH = 66.6 Km)**

PLAN AND PROFILE  
 FROM KM. 46+900 TO KM. 47+600  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C069

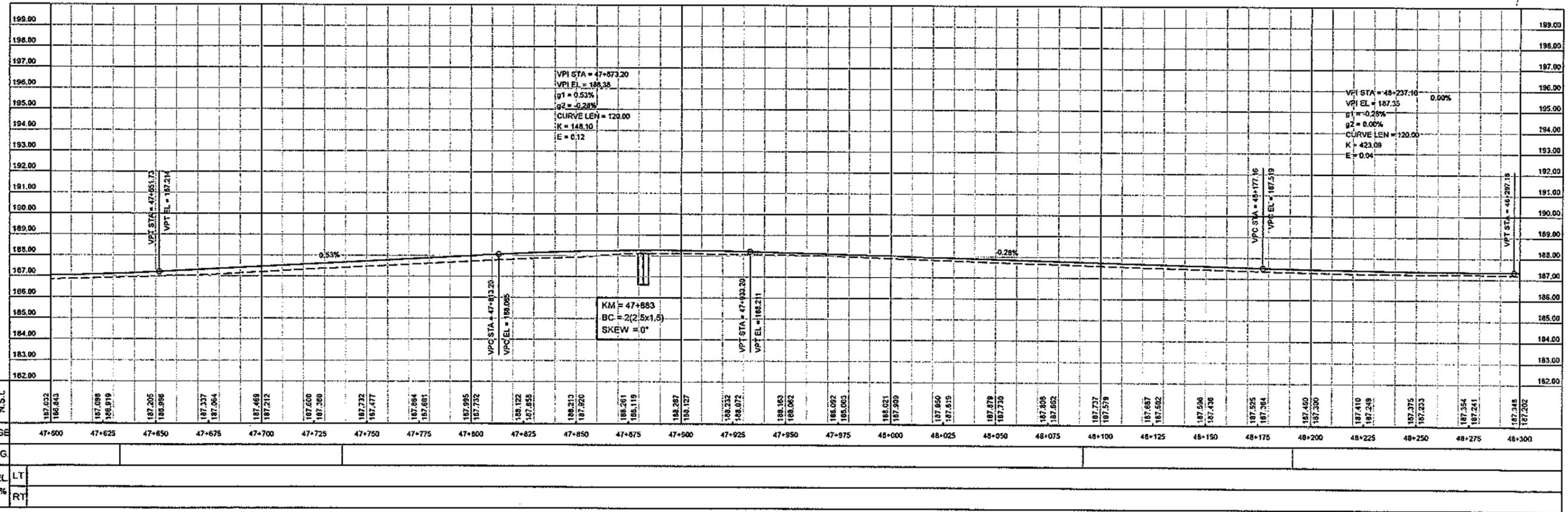
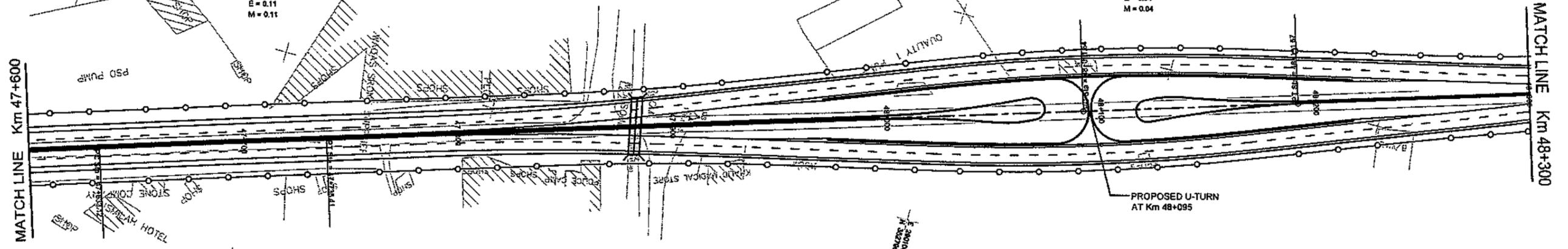
SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.

PI Sta = 47+685.79  
 N = 3527578.31  
 E = 280149.54  
 I = 00°27'51"R

CIRCULAR  
 Da = 00°02'39"  
 Dc = 00°02'39"  
 T = 52.64  
 R = 13000.00  
 L = 105.29  
 C = 105.29  
 E = 0.11  
 M = 0.11

PI Sta = 48+141.65  
 N = 3528013.73  
 E = 280014.46  
 I = 00°11'28"L

CIRCULAR  
 Da = 00°01'09"  
 Dc = 00°01'09"  
 T = 50.02  
 R = 30000.00  
 L = 100.03  
 C = 100.03  
 E = 0.04  
 M = 0.04



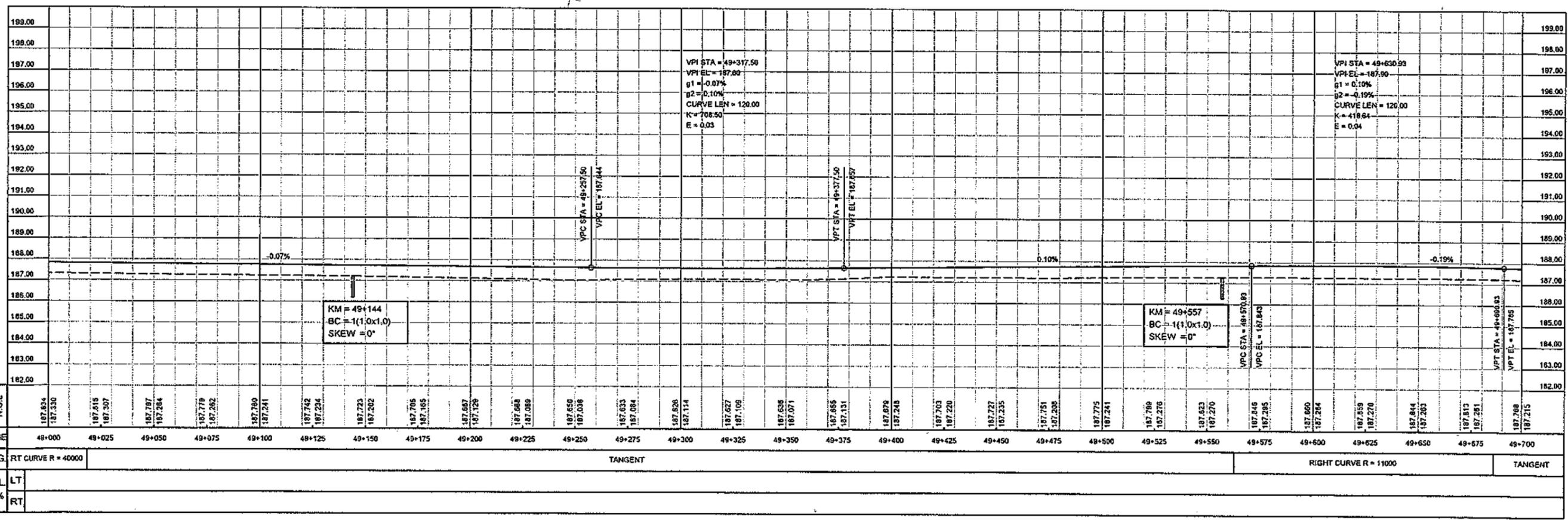
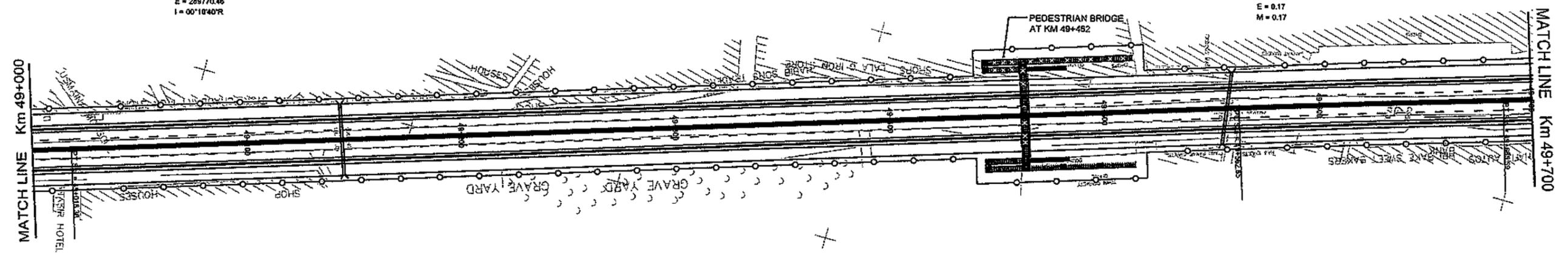
CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAC HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 47+600 TO KM. 48+300		SCALE HOR=1:2000 VER=1:200
		03			SUBMITTED				DATE	
		02			RECOMMENDED			DECEMBER, 2020	SA-413/102/PD/1C070	
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



PI Sta = 49+624.22  
 N = 3529428.85  
 E = 289572.41  
 I = 00°38'21"R

CIRCULAR  
 Da = 00°03'08"  
 Dc = 00°03'08"  
 T = 61.37  
 R = 11000.00  
 L = 122.73  
 C = 122.73  
 E = 0.17  
 M = 0.17

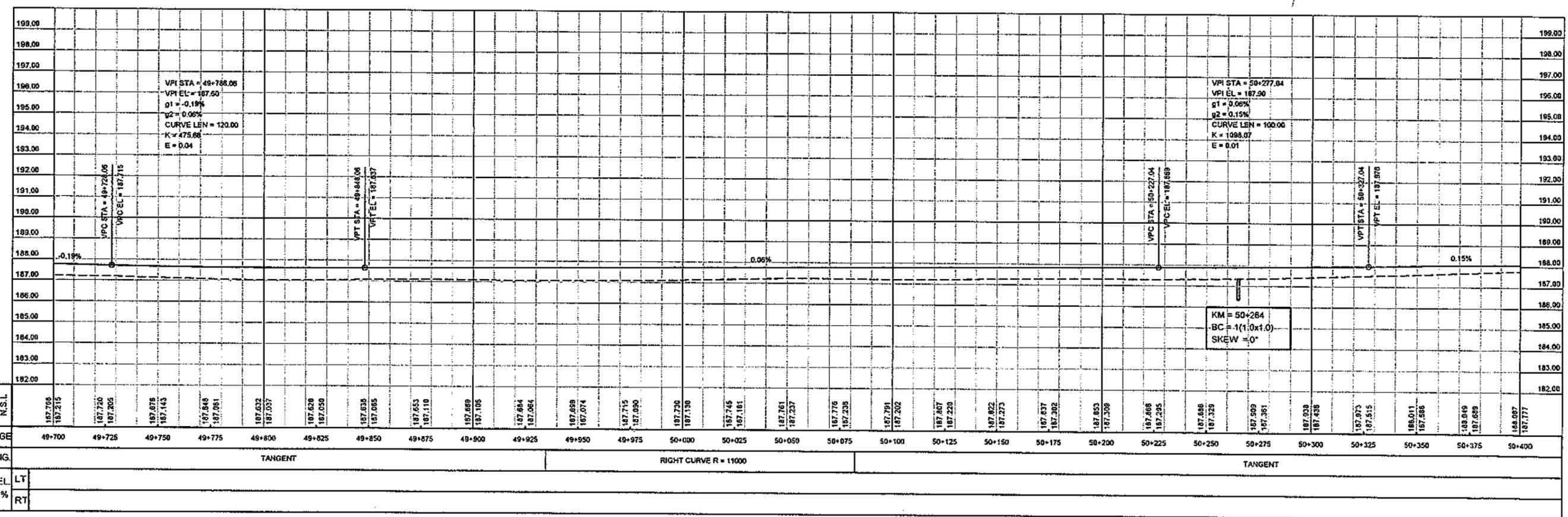
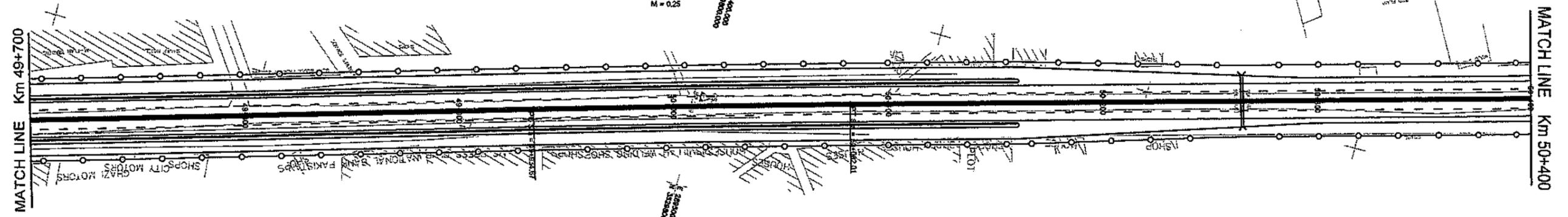
PI Sta = 48+956.32  
 N = 3526790.99  
 E = 289770.46  
 I = 00°10'40"R



CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 49+000 TO KM. 49+700		SCALE HOR=1:2000 VER=1:200 REV.
		03			SUBMITTED				DATE	
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1072		
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

PI Sta = 50+008.34  
 N = 3529796.95  
 E = 269462.60  
 I = 00°48'03"R

CIRCULAR  
 Da = 00°03'08"  
 Dc = 00°03'08"  
 T = 73.67  
 R = 11000.00  
 L = 147.34  
 C = 147.34  
 E = 0.25  
 M = 0.25



<p>CLIENT                  GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT                   NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.                  HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04				DRAWN	SOHAB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 49+700 TO KM. 50+400		SCALE HOR=1:2000 VER=1:200	
		03				SUBMITTED			DATE	DECEMBER, 2020		DRAWING No.
		02				RECOMMENDED						
		01				CHD. VER.						
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED						

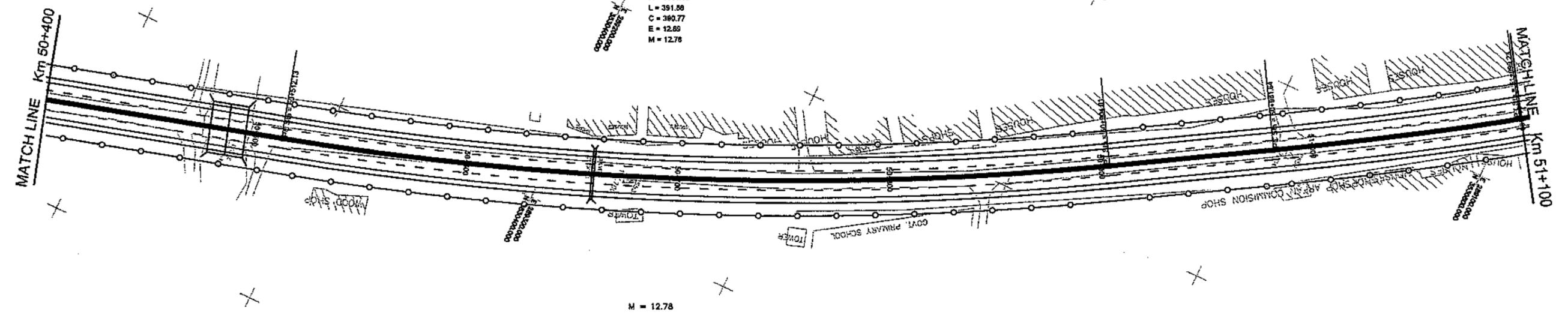
PI Sta = 51+040.45  
 N = 3530757.61  
 E = 289100.44  
 I = 03°22'07" L



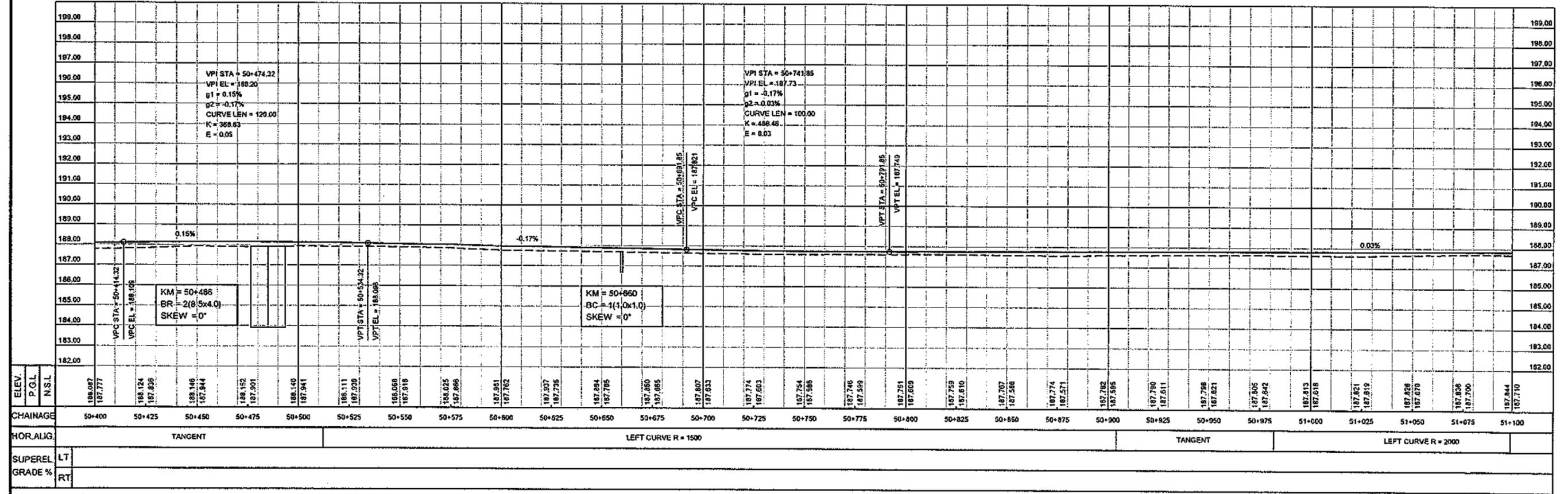
PI Sta = 50+709.19  
 N = 3530471.18  
 E = 289271.28  
 I = 14°58'08" L

CIRCULAR  
 Da = 00°22'55"  
 Dc = 00°22'55"  
 T = 197.08  
 R = 1500.00  
 L = 391.88  
 C = 360.77  
 E = 12.89  
 M = 12.78

CIRCULAR  
 Da = 00°17'11"  
 Dc = 00°17'11"  
 T = 58.81  
 R = 2000.00  
 L = 117.59  
 C = 117.57  
 E = 0.86  
 M = 0.86



M = 12.78



CLIENT  

 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  

 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

DRAWN SOHAIB  
 SUBMITTED  
 RECOMMENDED  
 CHD.VER.  
 APPROVED

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

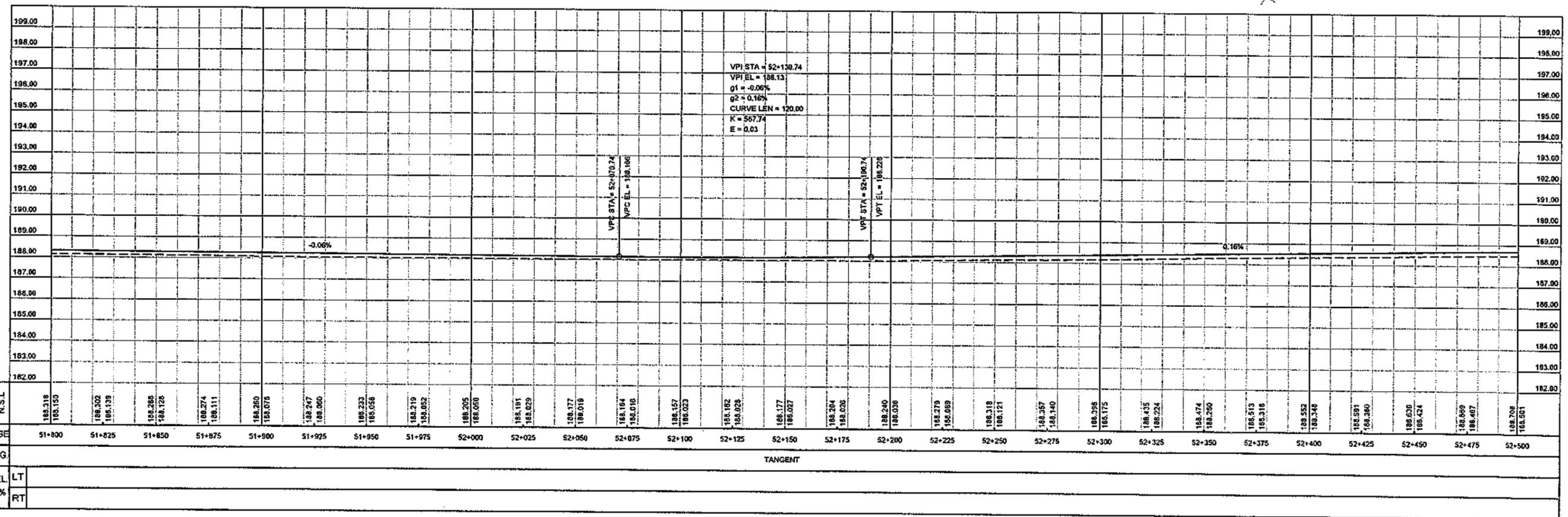
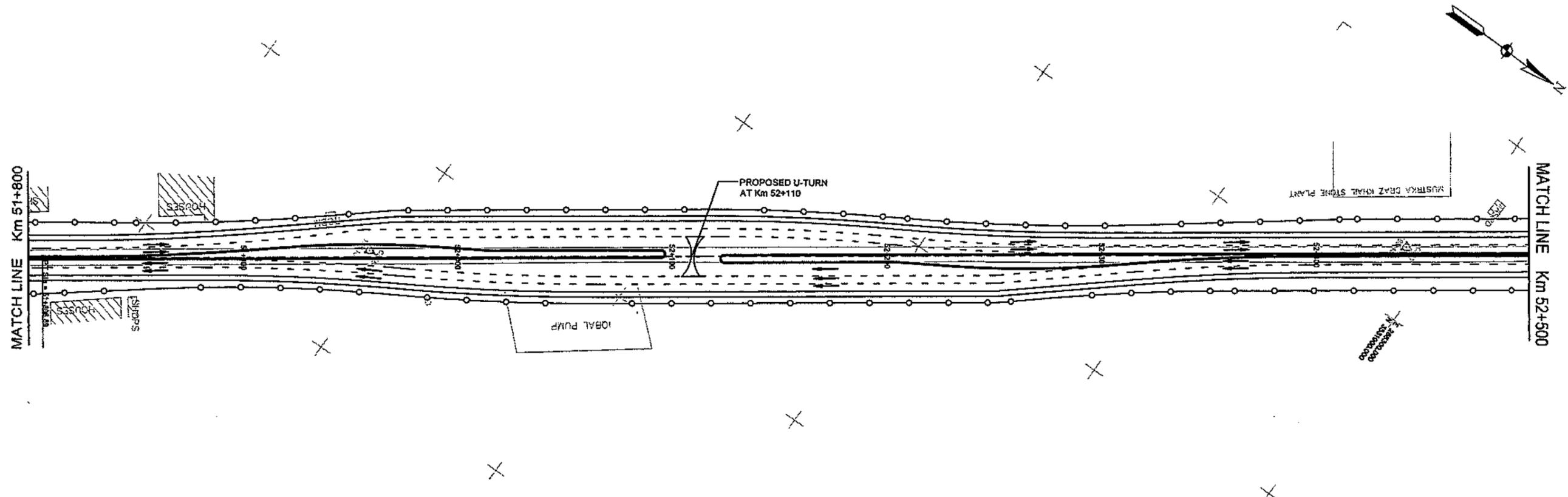
PLAN AND PROFILE  
 FROM KM. 50+400 TO KM. 51+100

DATE DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C074

SCALE  
 HOR=1:2000  
 VER =1:200

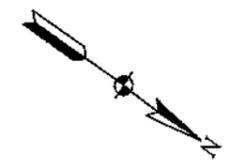
REV.





ELEV.	188.318	188.150	188.302	188.139	188.285	188.128	188.274	188.111	188.260	188.075	188.247	188.060	188.233	188.056	188.219	188.052	188.205	188.050	188.185	188.029	188.177	188.018	188.164	188.016	188.157	188.023	188.142	188.025	188.177	188.027	188.204	188.026	188.240	188.038	188.275	188.059	188.318	188.121	188.357	188.140	188.398	188.175	188.435	188.224	188.474	188.260	188.513	188.316	188.552	188.348	188.591	188.380	188.630	188.424	188.669	188.467	188.708	188.501
CHAINAGE	51+800	51+825	51+850	51+875	51+900	51+925	51+950	51+975	52+000	52+025	52+050	52+075	52+100	52+125	52+150	52+175	52+200	52+225	52+250	52+275	52+300	52+325	52+350	52+375	52+400	52+425	52+450	52+475	52+500																													
HOR.AUG.																																																										
SUPEREL	LT																																																									
GRADE %	RT																																																									

<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT <b>NESPAK</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	SOHAB	<p>PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	PLAN AND PROFILE		<p>SCALE HOR=1:2000 VER=1:200</p>
		03			SUBMITTED			FROM KM. 51+800 TO KM. 52+500	DATE	
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1C076		
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED					

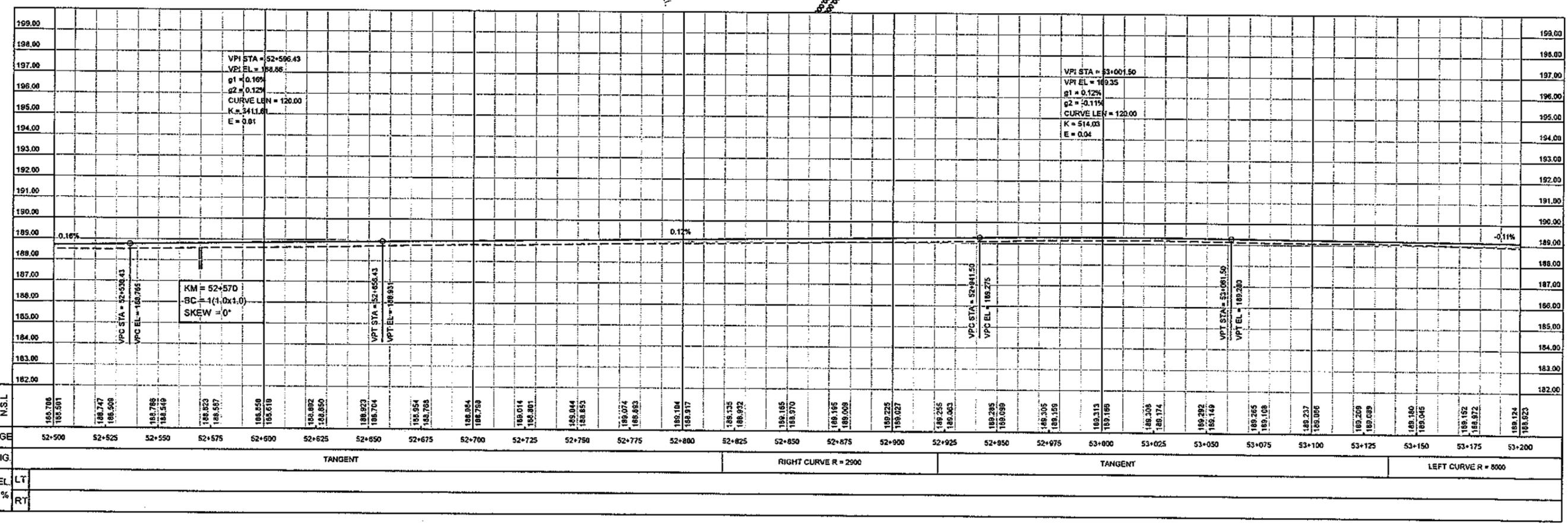
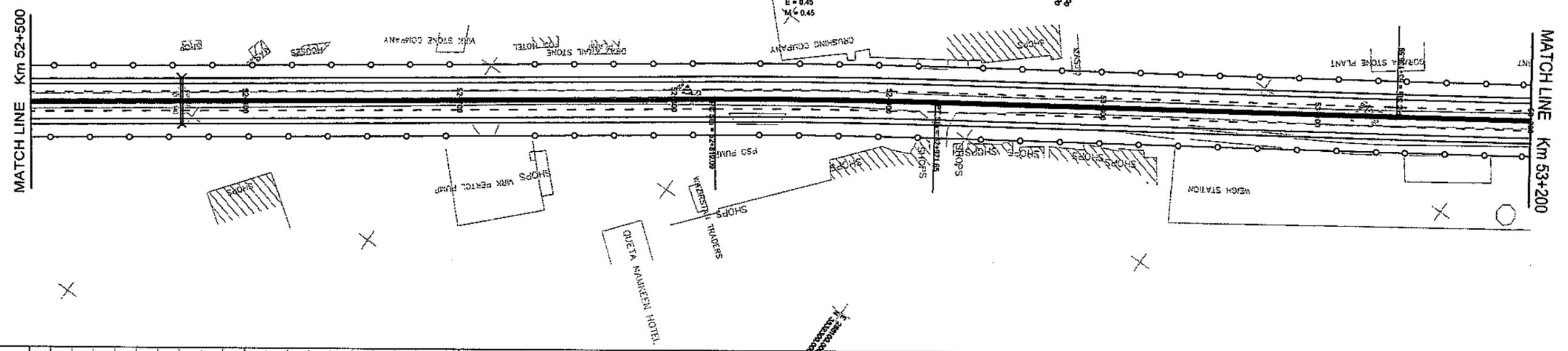


PI Sta = 52+870.30  
 N = 3532235.96  
 E = 288022.51  
 I = 02°01'35"R

CIRCULAR  
 Da = 00°11'51"  
 Dc = 00°11'51"  
 T = 51.29  
 R = 2900.00  
 L = 102.56  
 C = 102.56  
 E = 0.45  
 M = 0.45

MATCH LINE Km 52+500

MATCH LINE Km 53+200



ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG	SUPERELEV	GRADE %
182.00			52+500	TANGENT	LT	RT
183.00			52+525	TANGENT		
184.00			52+550	TANGENT		
185.00			52+575	TANGENT		
186.00			52+600	TANGENT		
187.00			52+625	TANGENT		
188.00			52+650	TANGENT		
189.00			52+675	TANGENT		
190.00			52+700	TANGENT		
191.00			52+725	TANGENT		
192.00			52+750	TANGENT		
193.00			52+775	TANGENT		
194.00			52+800	TANGENT		
195.00			52+825	RIGHT CURVE R = 2900		
196.00			52+850	RIGHT CURVE R = 2900		
197.00			52+875	RIGHT CURVE R = 2900		
198.00			52+900	RIGHT CURVE R = 2900		
199.00			52+925	RIGHT CURVE R = 2900		
198.00			52+950	TANGENT		
197.00			52+975	TANGENT		
196.00			53+000	TANGENT		
195.00			53+025	TANGENT		
194.00			53+050	TANGENT		
193.00			53+075	TANGENT		
192.00			53+100	TANGENT		
191.00			53+125	TANGENT		
190.00			53+150	TANGENT		
189.00			53+175	TANGENT		
188.00			53+200	LEFT CURVE R = 8000		

CLIENT  
**GOVT. OF THE PUNJAB**  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04			
03			
02			
01			
REV.	DATE	DESCRIPTION	APPROVED

DRAWN	SOHAIB
SUBMITTED	
RECOMMENDED	
CHD. VER.	
APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

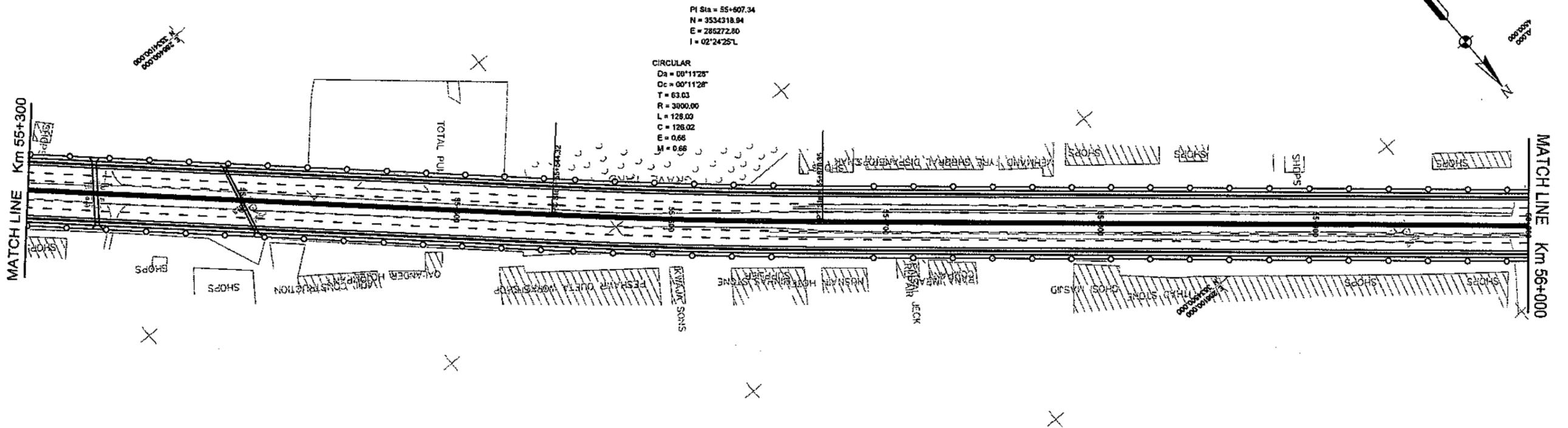
PLAN AND PROFILE  
 FROM KM. 52+500 TO KM. 53+200  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/C077

SCALE  
 HOR=1:2000  
 VER=1:200  
 REV. 0









ELEV.	199.00	198.00	197.00	196.00	195.00	194.00	193.00	192.00	191.00	190.00	189.00	188.00	187.00	186.00	185.00	184.00	183.00	182.00	182.00	183.00	184.00	185.00	186.00	187.00	188.00	189.00	190.00	191.00	192.00	193.00	194.00	195.00	196.00	197.00	198.00	199.00			
P.G.L.																																							
N.S.L.																																							
CHAINAGE	55+300	55+325	55+350	55+375	55+400	55+425	55+450	55+475	55+500	55+525	55+550	55+575	55+600	55+625	55+650	55+675	55+700	55+725	55+750	55+775	55+800	55+825	55+850	55+875	55+900	55+925	55+950	55+975	56+000										
HOR. ALIG.	TANGENT										LEFT CURVE R = 3000										TANGENT																		
SUPEREL.	LT																																						
GRADE %	RT																																						

VPI STA = 55+871.01  
 VPI EL = 189.47  
 g1 = -0.10%  
 g2 = 0.45%  
 CURVE LEN = 120.00  
 K = 220.19  
 E = 0.08

VPC STA = 55+811.01  
 VPC EL = 188.528

KM = 55+331  
 BC = -1(2.0x1.5)  
 SKEW = 0°

KM = 56+400  
 BC = 1(1.0x1.0)  
 SKEW = 0°

CLIENT  

 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  

 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04					
03					
02					
01					
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 55+300 TO KM. 56+000  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C081

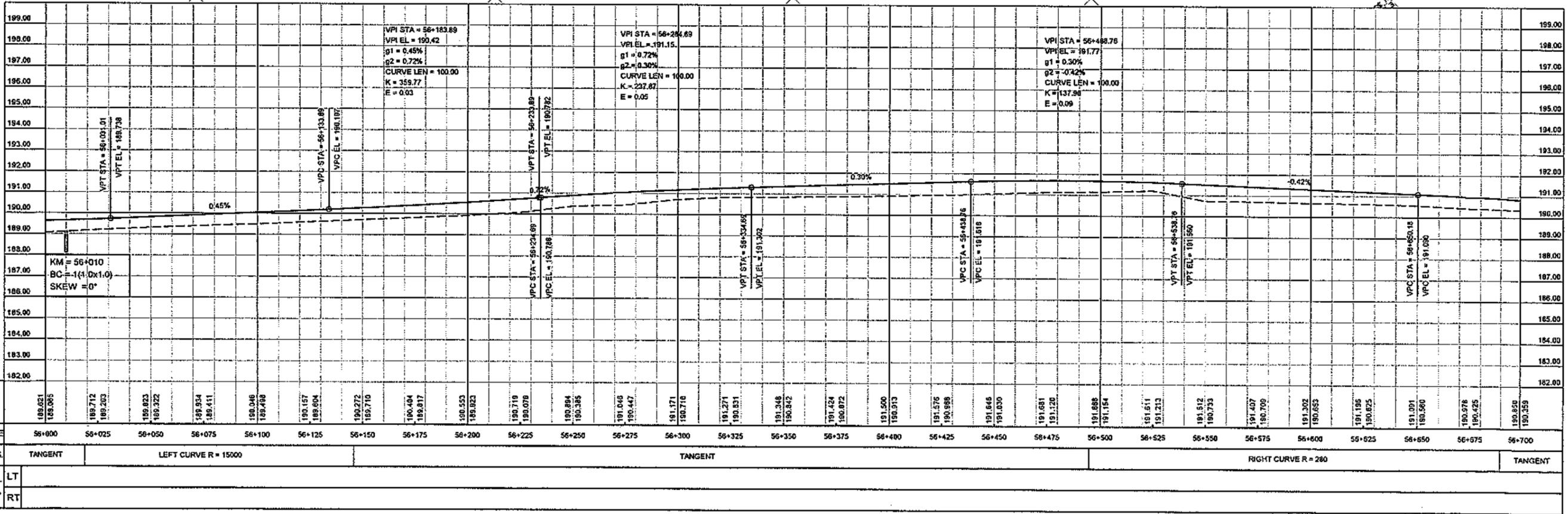
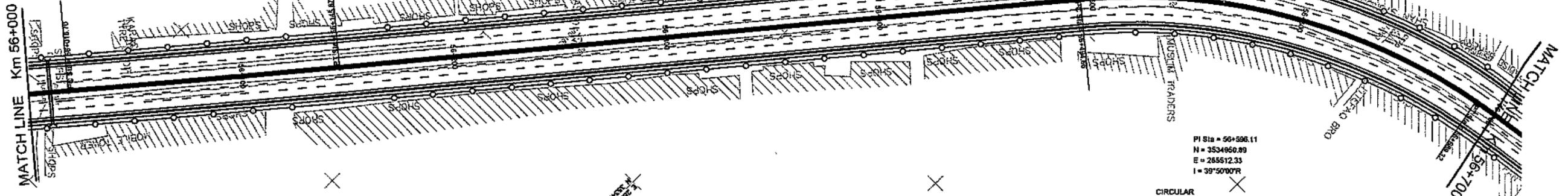
SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.

PI Sta = 56+82.29  
 N = 3534624.10  
 E = 285908.24  
 I = 00°29'08"L

CIRCULAR  
 Da = 00°02'18"  
 Dc = 00°02'18"  
 T = 63.59  
 R = 15000.00  
 L = 127.17  
 C = 127.17  
 E = 0.13  
 M = 0.13

PI Sta = 56+98.11  
 N = 3534950.89  
 E = 285512.33  
 I = 39°50'07"R

CIRCULAR  
 Da = 02°02'47"  
 Dc = 02°02'47"  
 T = 101.45  
 R = 2800.00  
 L = 194.86  
 C = 190.77  
 E = 17.81  
 M = 16.75



ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG.	SUPERELEV.	GRADE %	
189.021	189.065		56+000	TANGENT	LT		
189.712	189.203		56+025	LEFT CURVE R = 15000	RT		
189.893	189.322		56+050				
189.934	189.411		56+075				
190.046	189.488		56+100				
190.157	189.504		56+125				
190.272	189.710		56+150				
190.404	189.817		56+175				
190.553	189.823		56+200				
190.719	190.078		56+225		TANGENT		
190.884	190.385		56+250				
191.046	190.447		56+275				
191.171	190.710		56+300				
191.271	190.931		56+325				
191.348	190.842		56+350				
191.424	190.872		56+375				
191.500	190.913		56+400				
191.575	190.898		56+425	RIGHT CURVE R = 280			
191.646	191.030		56+450				
191.691	191.120		56+475				
191.688	191.154		56+500				
191.611	191.213		56+525				
191.512	190.733		56+550				
191.407	190.709		56+575				
191.302	190.653		56+600				
191.195	190.625		56+625				
191.091	190.580		56+650				
190.978	190.425		56+675				
190.826	190.359		56+700	TANGENT			

CLIENT  
 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
**NESPAC**  
 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAC HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN: SCHAIK  
 SUBMITTED  
 RECOMMENDED  
 CHD. VER.  
 APPROVED

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

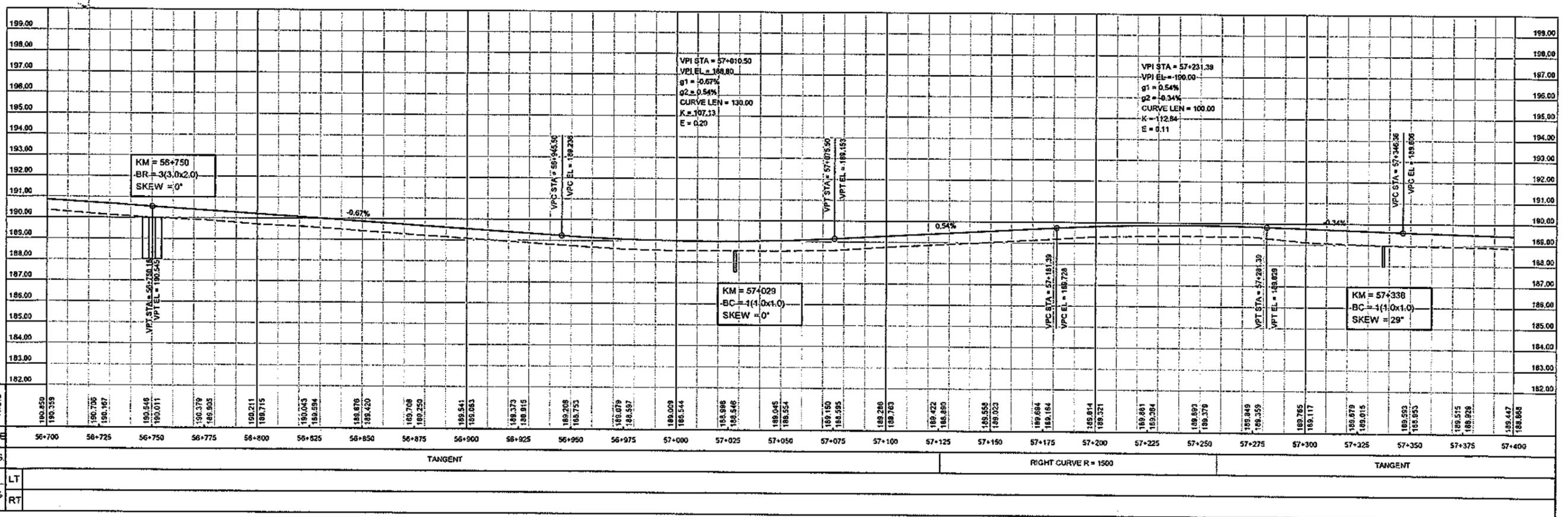
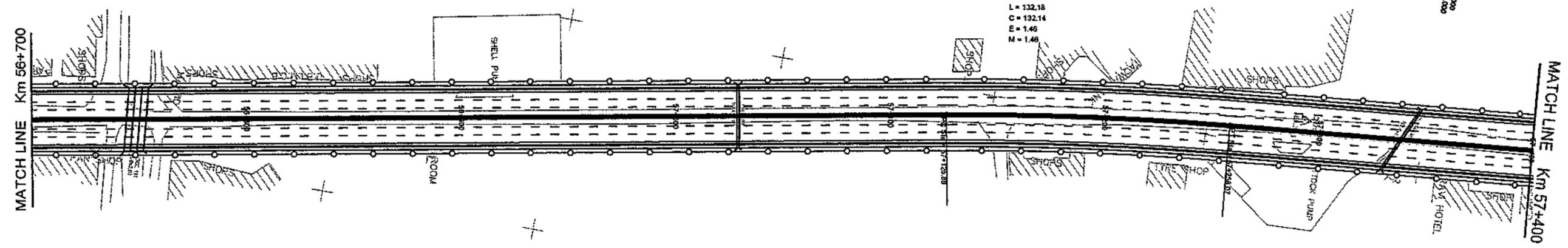
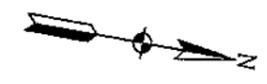
PLAN AND PROFILE  
 FROM KM. 56+000 TO KM. 56+700

DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C082

SCALE  
 HOR=1:2000  
 VER=1:200

PI Sta = 57+182.02  
 N = 3535544.89  
 E = 285400.43  
 I = 05°02'57"R

CIRCULAR  
 Da = 00°22'55"  
 Dc = 00°22'55"  
 T = 66.13  
 R = 1500.00  
 L = 132.18  
 C = 132.14  
 E = 1.46  
 M = 1.46



CLIENT  

 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  

 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04					DRAWN	SOHAB
03					SUBMITTED	
02					RECOMMENDED	
01					CHD.VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED		

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 56+700 TO KM. 57+400  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/10C083  
 SCALE: HOR=1:2000, VER=1:200  
 REV. 0

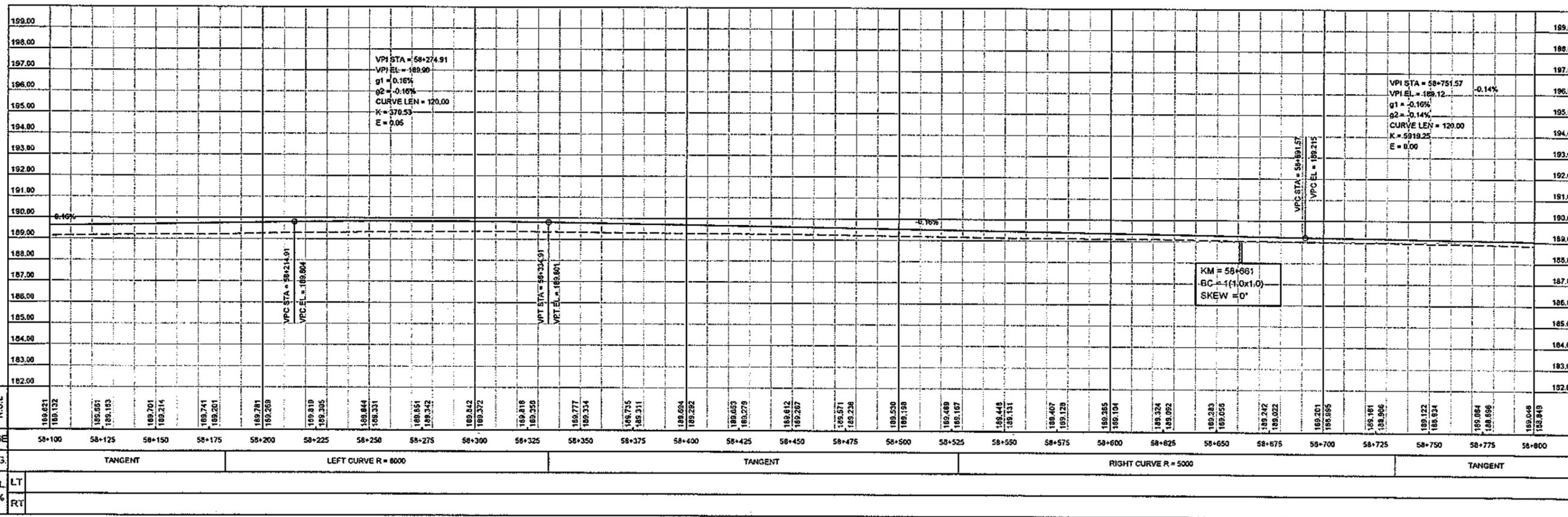
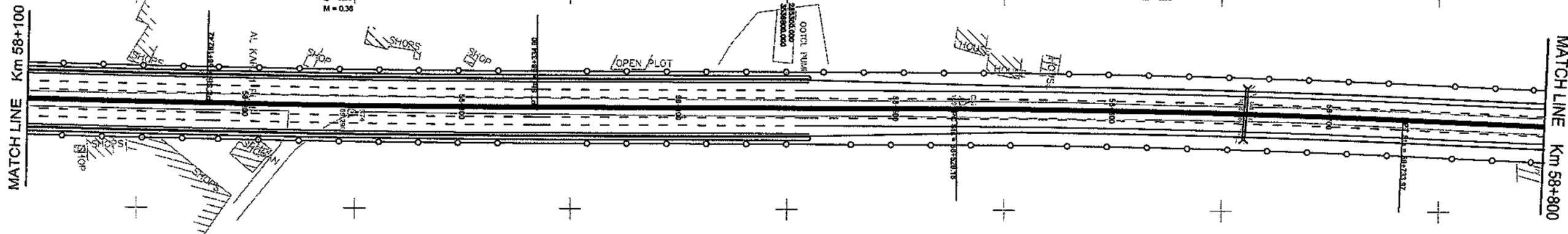


PI Sta = 58+258.66  
 N = 3536808.54  
 E = 285352.80  
 I = 01°05'31.7L

CIRCULAR  
 Da = 00°04'18"  
 Dc = 00°04'18"  
 T = 75.24  
 R = 8000.00  
 L = 152.48  
 C = 152.48  
 E = 0.38  
 M = 0.38

PI Sta = 58+631.09  
 N = 3536809.97  
 E = 285353.10  
 I = 02°21'29.7R

CIRCULAR  
 Da = 00°06'53"  
 Dc = 00°06'53"  
 T = 102.91  
 R = 5000.00  
 L = 205.79  
 C = 205.77  
 E = 1.06  
 M = 1.06



CLIENT  
 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	SOHAIB
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

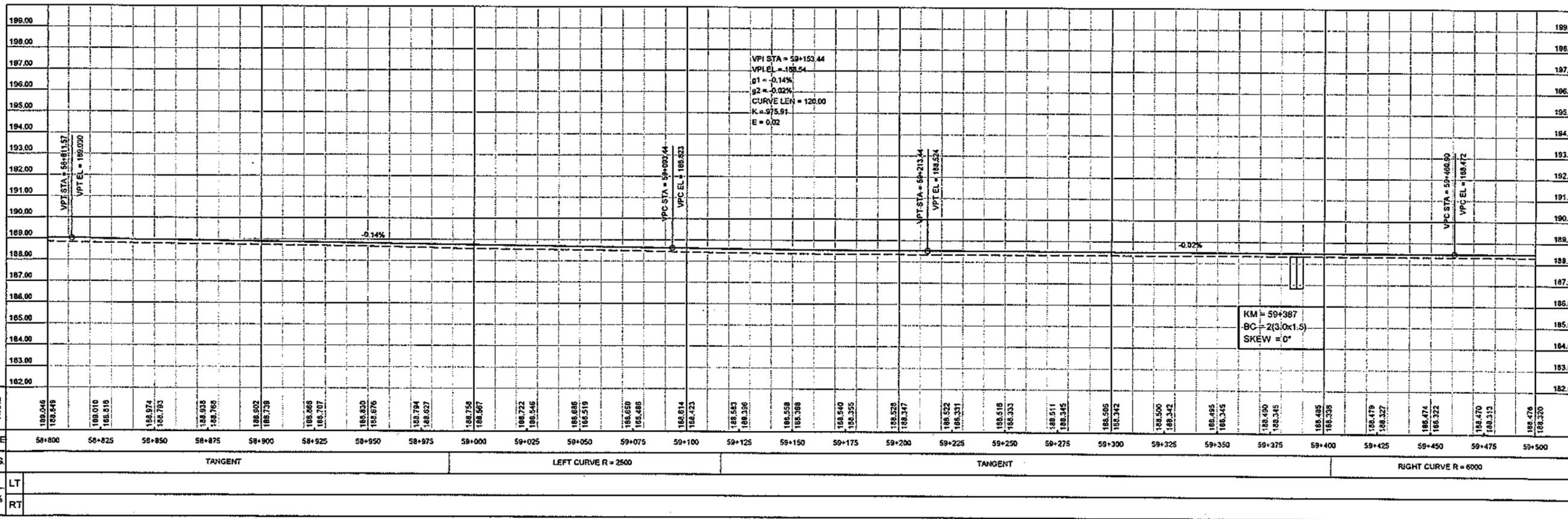
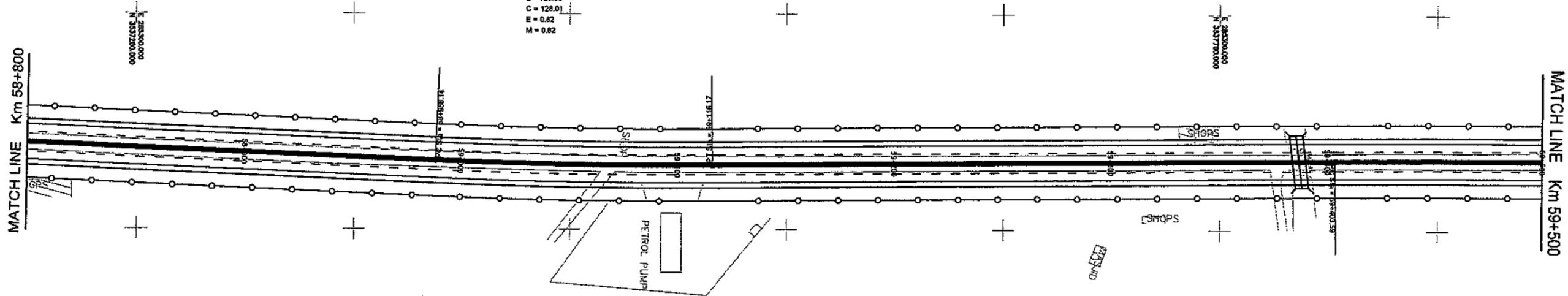
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 58+100 TO KM. 58+800  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PR/1C085

SCALE  
 HOR=1:2000  
 VER=1:200  
 REV.

PI Sta = 59+052.17  
 N = 3537401.71  
 E = 285370.75  
 I = 02°56'03"L

CIRCULAR  
 Da = 00°13'45"  
 Dc = 00°13'45"  
 T = 64.03  
 R = 2500.00  
 L = 128.03  
 C = 128.01  
 E = 0.82  
 M = 0.82



ELEV.	P.G.L	NSL	CHAINAGE	HOR. ALIG.	SUPEREL.	GRADE %
188.046	188.648		58+800	TANGENT	LT	
188.010	188.618		58+825		RT	
188.974	188.793		58+850	LEFT CURVE R = 2500	LT	
188.935	188.768		58+875		RT	
188.902	188.738		58+900	TANGENT	LT	
188.866	188.707		58+925		RT	
188.830	188.676		58+950	RIGHT CURVE R = 6000	LT	
188.794	188.627		58+975		RT	
188.750	188.567		59+000		LT	
188.722	188.546		59+025		RT	
188.686	188.519		59+050		LT	
188.650	188.488		59+075		RT	
188.614	188.423		59+100		LT	
188.583	188.386		59+125		RT	
188.558	188.368		59+150		LT	
188.540	188.355		59+175		RT	
188.528	188.347		59+200		LT	
188.522	188.331		59+225		RT	
188.516	188.333		59+250		LT	
188.511	188.345		59+275		RT	
188.506	188.342		59+300		LT	
188.500	188.342		59+325		RT	
188.495	188.345		59+350		LT	
188.490	188.345		59+375		RT	
188.485	188.335		59+400		LT	
188.479	188.327		59+425		RT	
188.474	188.322		59+450		LT	
188.470	188.313		59+475		RT	
188.476	188.320		59+500		LT	

CLIENT  
 GOVT. OF THE PUNJAB  
 COMMUNICATION AND WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
**NESPAK** NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	SOHAIB
03				SUBMITTED	
02				RECOMMENDED	
01				CHD. VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 58+800 TO KM. 59+500  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C086

SCALE  
 HOR: 1:2000  
 VER: 1:200  
 REV.

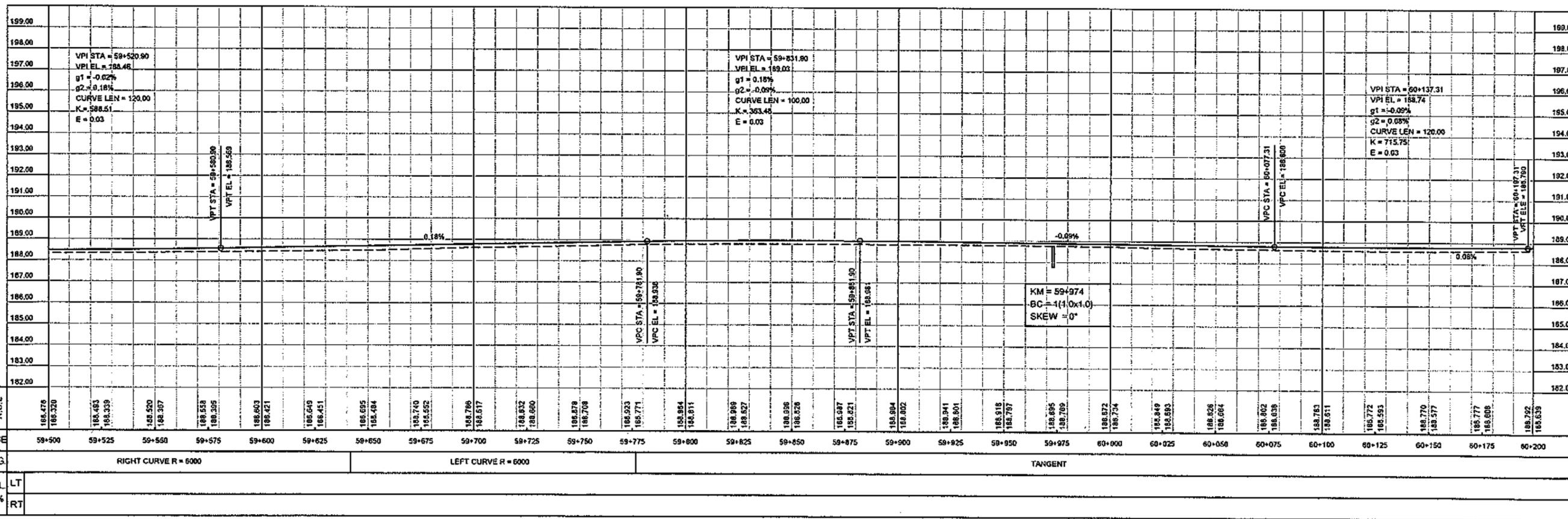
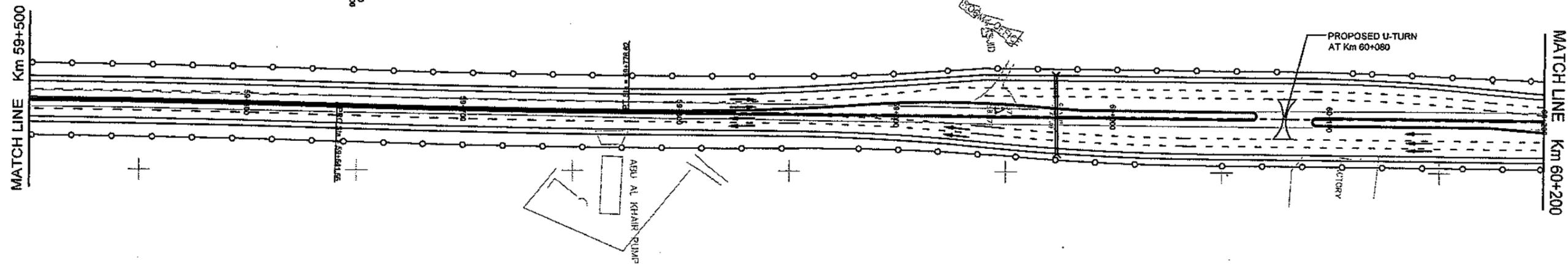
PI Sta = 59+522.64  
N = 3537872.19  
E = 285366.41  
I = 02°16'24"R

PI Sta = 59+708.14  
N = 3534058.84  
E = 285372.08  
I = 01°17'20"R

CIRCULAR  
Da = 00°05'44"  
Dc = 00°05'44"  
T = 87.49  
R = 6000.00  
L = 134.97  
C = 134.96  
E = 0.38  
M = 0.38

CIRCULAR

E = 1.18  
M = 1.18



CLIENT  
GOVT. OF THE PUNJAB  
COMMUNICATION AND WORKS  
DEPARTMENT (C&W) PUNJAB

CONSULTANT  
NATIONAL ENGINEERING SERVICES  
PAKISTAN (PVT.) LTD.  
HEAD OFFICE: NESPAK HOUSE, I-C, BLOCK-N,  
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	SCH/AB
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

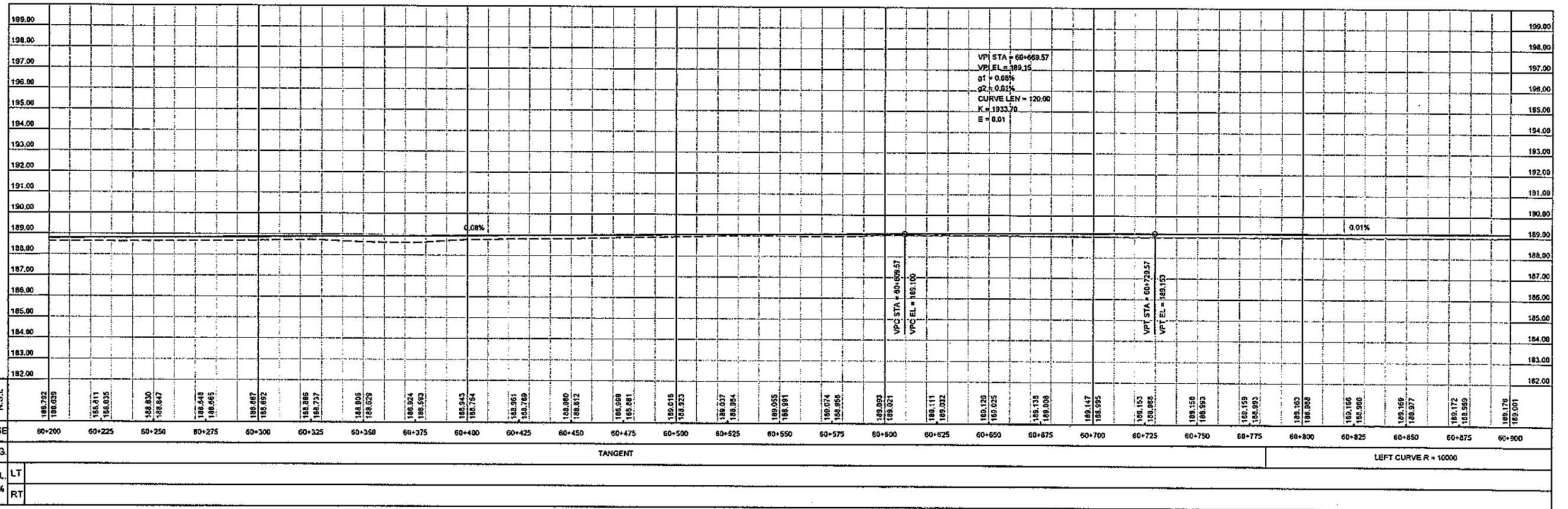
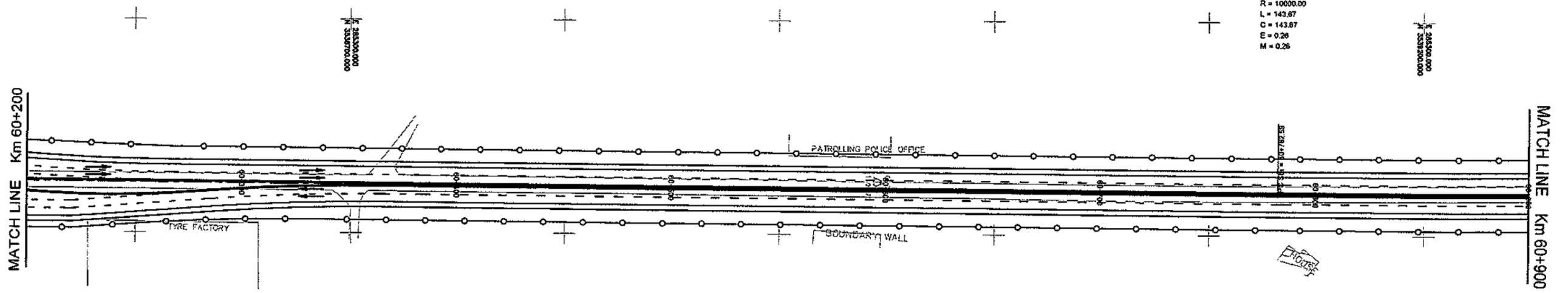
PROJECT  
TRANSACTION ADVISORY SERVICES FOR  
DUALIZATION AND REHABILITATION OF EXISTING  
FAISALABAD - CHINIOT - SARGODHA ROAD  
(LENGTH = 66.6 Km)

PLAN AND PROFILE  
FROM KM. 59+500 TO KM. 60+200  
DATE: DECEMBER, 2020  
DRAWING No. SA-413/102/PD/10887

SCALE  
HOR=1:2000  
VER=1:200  
REV.

PI Sta = 60+854.43  
 N = 3539203.89  
 E = 285381.17  
 1 = 00°49'23" L

CIRCULAR  
 Da = 00°03'26"  
 Dc = 00°03'26"  
 T = 71.54  
 R = 10000.00  
 L = 143.67  
 C = 143.67  
 E = 0.26  
 M = 0.26



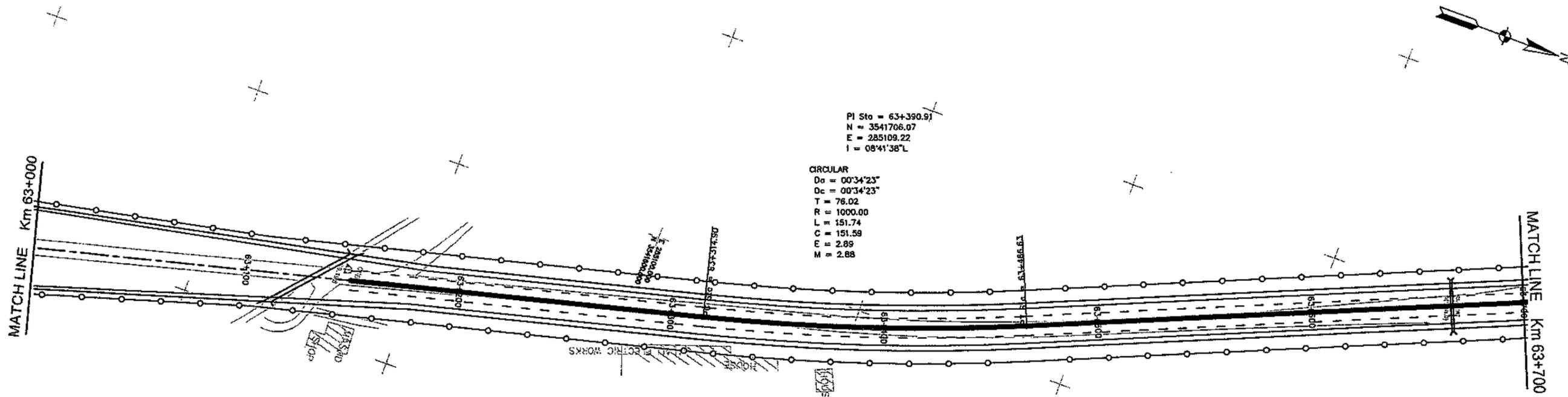
ELEV.	P.G.L.	N.S.L.	CHAINAGE	HOR. ALIG.	SUPERELEV.	GRADE %
188.292	188.639		60+200		LT	
188.811	188.635		60+225		RT	
188.830	188.847		60+250			
188.449	188.465		60+275			
188.667	188.692		60+300			
188.385	188.737		60+325			
188.905	188.629		60+350			
188.924	188.553		60+375			
188.943	188.754		60+400			
188.961	188.769		60+425			
188.980	188.812		60+450			
188.998	188.861		60+475			
189.015	188.923		60+500			
189.037	188.984		60+525			
189.055	188.981		60+550			
189.074	189.005		60+575			
189.093	189.021		60+600			
189.111	189.032		60+625			
189.128	189.025		60+650			
189.138	189.008		60+675			
189.147	188.995		60+700			
189.153	188.989		60+725			
189.159	188.983		60+750			
189.163	188.968		60+775			
189.166	188.965		60+800			
189.168	188.959		60+825			
189.169	188.957		60+850			
189.172	188.959		60+875			
189.176	188.961		60+900			

CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I.C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 60+200 TO KM. 60+900		SCALE HOR=1:2000 VER=1:200
		03			SUBMITTED			DATE	DRAWING No.	
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/1C088	0	
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



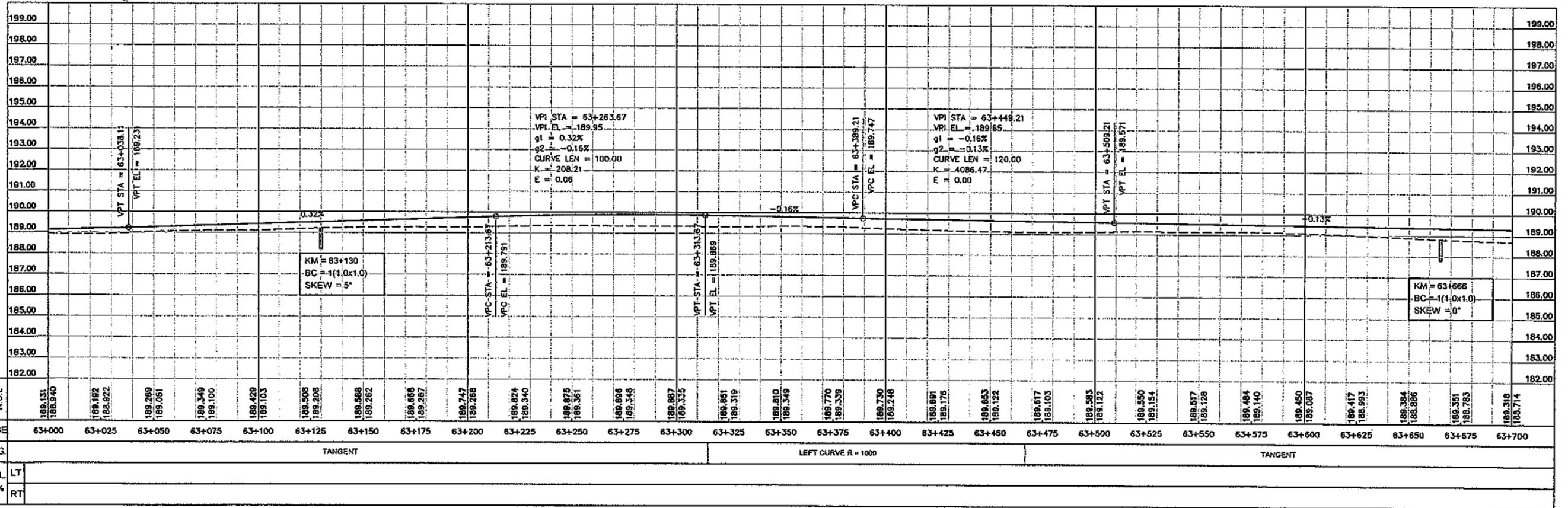






PI Sta = 63+390.9  
 N = 3541706.07  
 E = 285109.22  
 I = 08°41'38"L

CIRCULAR  
 Da = 00°34'23"  
 Dc = 00°34'23"  
 T = 76.02  
 R = 1000.00  
 L = 151.74  
 C = 151.59  
 E = 2.89  
 M = 2.88



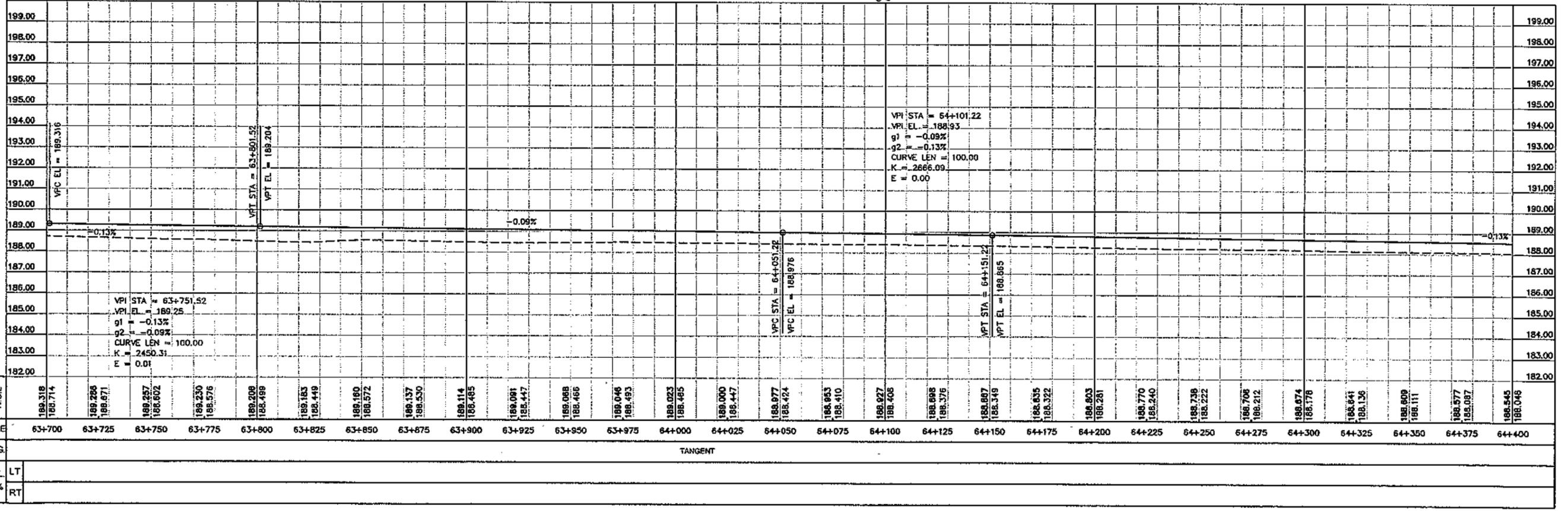
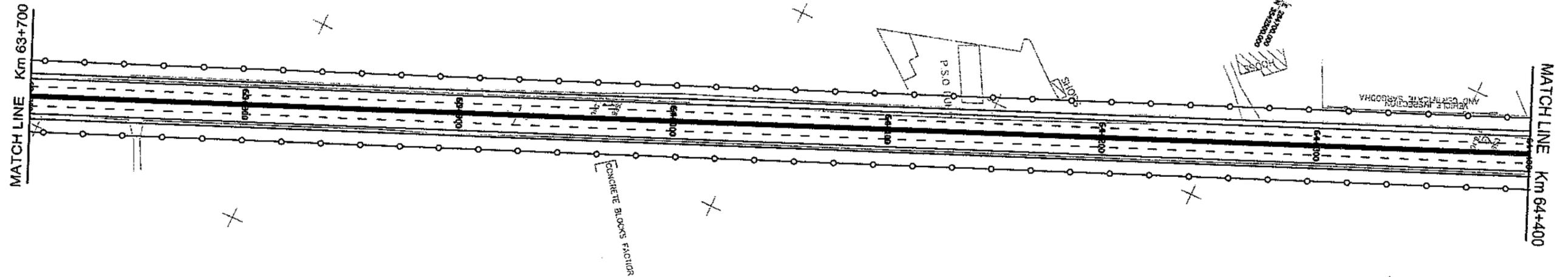
VPI STA = 63+263.67  
 VPI EL = 189.95  
 g1 = 0.32%  
 g2 = -0.16%  
 CURVE LEN = 100.00  
 K = 208.21  
 E = 0.06

VPI STA = 63+448.21  
 VPI EL = 189.65  
 g1 = -0.16%  
 g2 = -0.13%  
 CURVE LEN = 120.00  
 K = 4086.47  
 E = 0.00

KM = 63+130  
 BC = 1(1.0x1.0)  
 SKEW = 5°

KM = 63+666  
 BC = 1(1.0x1.0)  
 SKEW = 0°

<p>CLIENT                  GOVT. OF THE PUNJAB                  COMMUNICATION AND WORKS                  DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT                  NATIONAL ENGINEERING SERVICES                  PAKISTAN (PVT.) LTD.                  HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,                  MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04				DRAWN	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 63+000 TO KM. 63+700		SCALE HOR=1:2000 VER=1:200
		03				SUBMITTED			DATE	DECEMBER, 2020	
		02				RECOMMENDED					REV.
		01				CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED					



ELEV.	P.G.L	N.S.L	CHAINAGE	HOR. ALIG.	SUPEREL	GRADE %
189.318			63+700		LT	
189.714			63+725		RT	
189.280			63+750			
189.671			63+775			
189.257			63+800			
189.602			63+825			
189.230			63+850			
189.576			63+875			
189.208			63+900			
189.488			63+925			
189.183			63+950			
189.449			63+975			
189.180			64+000			
189.572			64+025			
189.137			64+050			
189.530			64+075			
189.114			64+100			
189.485			64+125			
189.091			64+150			
189.447			64+175			
189.088			64+200			
189.466			64+225			
189.046			64+250			
189.493			64+275			
189.023			64+300			
189.465			64+325			
189.000			64+350			
189.447			64+375			
189.077			64+400			
189.424						
189.063						
189.410						
189.027						
189.406						
189.008						
189.376						
189.007						
189.349						
189.635						
189.322						
189.803						
189.281						
189.770						
189.240						
189.736						
189.222						
189.706						
189.212						
189.674						
189.178						
189.841						
189.136						
189.609						
189.111						
189.577						
189.087						
189.545						
189.046						

CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

DRAWN: SOHAB  
 SUBMITTED  
 RECOMMENDED  
 CHD/VER  
 APPROVED

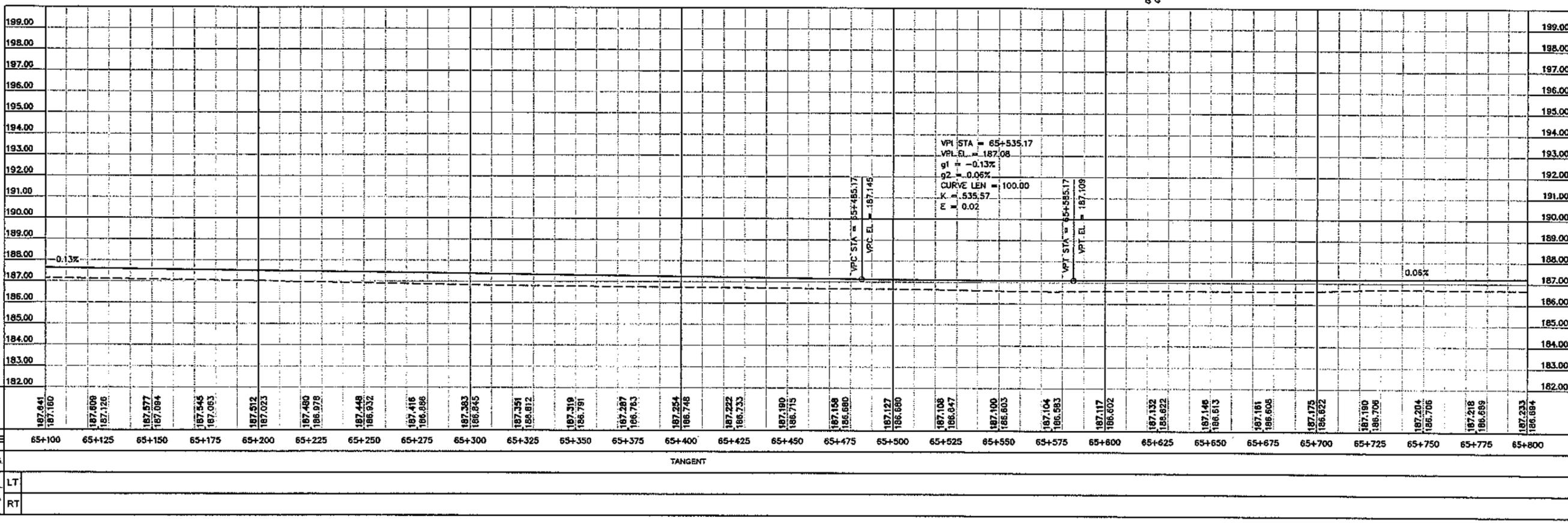
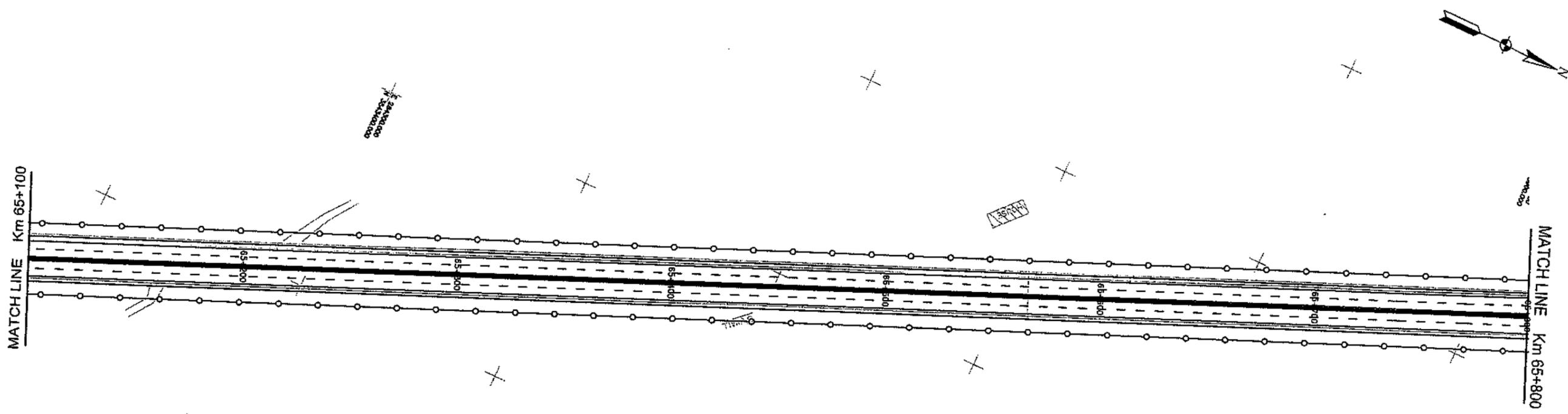
PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 63+700 TO KM. 64+400

DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C093

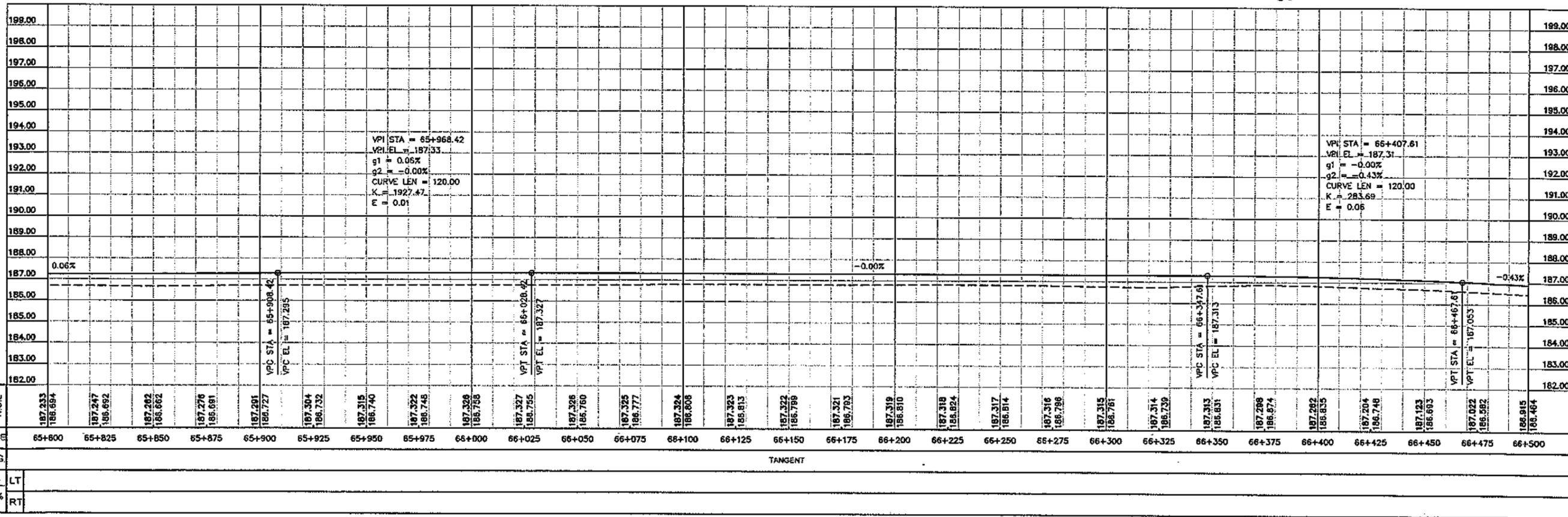
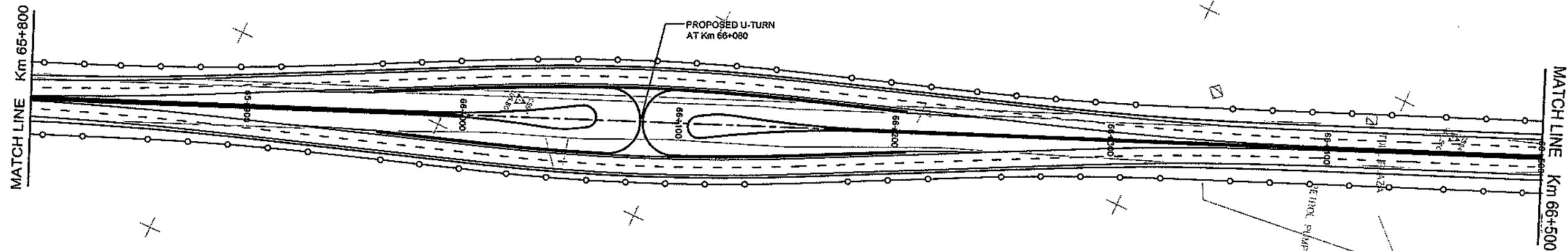
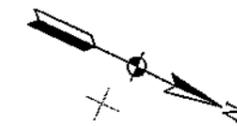
SCALE  
 HOR=1:2000  
 VER=1:200





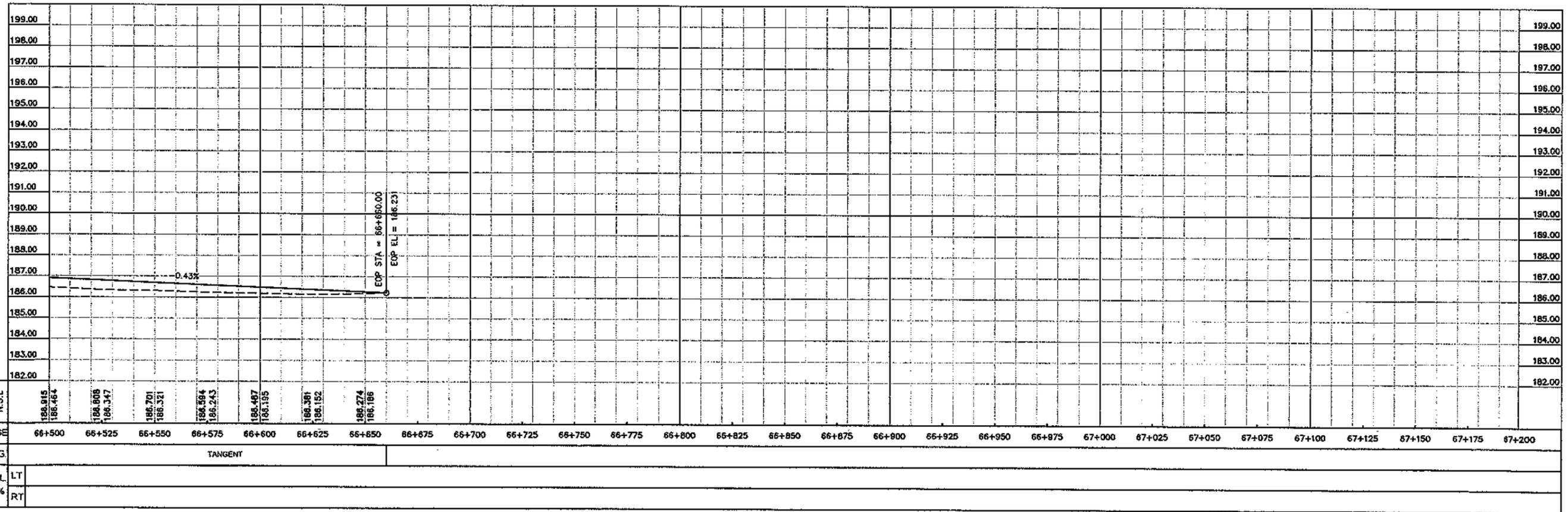
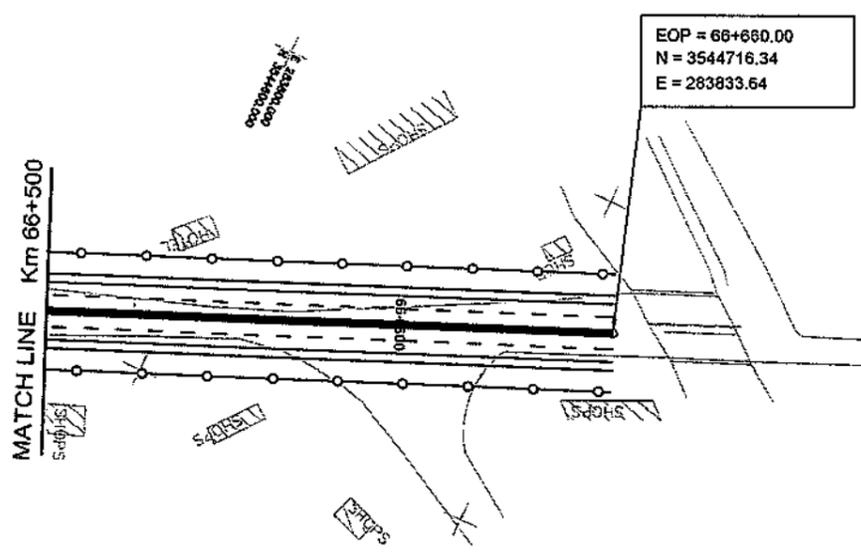
ELEV.	P.S.L	N.S.L	65+100	65+125	65+150	65+175	65+200	65+225	65+250	65+275	65+300	65+325	65+350	65+375	65+400	65+425	65+450	65+475	65+500	65+525	65+550	65+575	65+600	65+625	65+650	65+675	65+700	65+725	65+750	65+775	65+800
187.641	187.180																														
187.609	187.126																														
187.577	187.094																														
187.544	187.063																														
187.512	187.023																														
187.480	186.979																														
187.448	186.932																														
187.416	186.896																														
187.383	186.845																														
187.351	186.812																														
187.319	186.791																														
187.287	186.763																														
187.254	186.748																														
187.222	186.733																														
187.190	186.715																														
187.168	186.690																														
187.127	186.680																														
187.109	186.647																														
187.100	186.603																														
187.104	186.593																														
187.117	186.602																														
187.132	186.622																														
187.146	186.613																														
187.161	186.608																														
187.175	186.622																														
187.190	186.706																														
187.204	186.706																														
187.218	186.699																														
187.233	186.694																														

CLIENT GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 03 02 01	DRAWN SUBMITTED RECOMMENDED CHO.VER. APPROVED	SOHAIB	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	PLAN AND PROFILE FROM KM. 65+100 TO KM. 65+800		SCALE HOR=1:2000 VER =1:200
		REV. DATE DESCRIPTION APPROVED APPROVED	DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/1C095		REV.		



ELEV.	P.G.L	N.S.L	CHAINAGE	HOR.AUG.	SUPEREL	GRADE %
187.233	186.694		65+800		LT	
187.247	186.692		65+825		RT	
187.202	186.662		65+850			
187.276	186.691		65+875			
187.201	186.727		65+900			
187.304	186.732		65+925			
187.315	186.740		65+950			
187.322	186.748		65+975			
187.328	186.758		66+000			
187.327	186.755		66+025			
187.328	186.760		66+050			
187.325	186.777		66+075			
187.324	186.808		66+100			
187.323	186.813		66+125			
187.322	186.799		66+150			
187.321	186.783		66+175			
187.319	186.810		66+200			
187.318	186.824		66+225			
187.317	186.814		66+250			
187.316	186.796		66+275			
187.315	186.781		66+300			
187.314	186.739		66+325			
187.313	186.681		66+350			
187.288	186.674		66+375			
187.282	186.635		66+400			
187.204	186.748		66+425			
187.123	186.693		66+450			
187.022	186.582		66+475			
186.915	186.464		66+500			

<b>CLIENT</b> GOVT. OF THE PUNJAB COMMUNICATION AND WORKS DEPARTMENT (C&W) PUNJAB	<b>CONSULTANT</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	SOHAIB	<b>PROJECT</b> TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	<b>PLAN AND PROFILE</b> FROM KM. 65+800 TO KM. 66+500		SCALE HOR=1:2000 VER =1:200
		03			SUBMITTED				DATE	
		02			RECOMMENDED			DECEMBER, 2020	SA-413/102/PD/1C096	0
		01			CHD.AVR.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



CLIENT  
**GOVT. OF THE PUNJAB**  
**COMMUNICATION AND WORKS**  
**DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

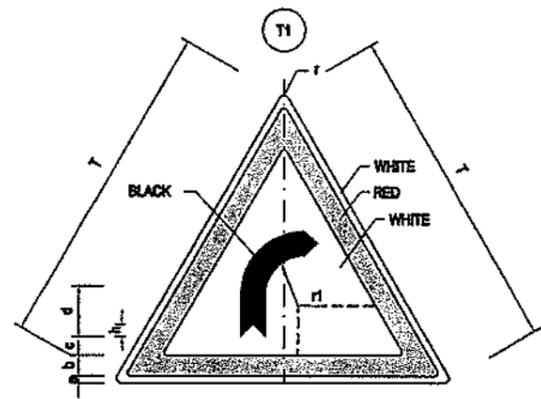
04				DRAWN	SOHAIB
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
**TRANSACTION ADVISORY SERVICES FOR**  
**DUALIZATION AND REHABILITATION OF EXISTING**  
**FAISALABAD - CHINIOT - SARGODHA ROAD**  
 (LENGTH = 66.6 Km)

PLAN AND PROFILE  
 FROM KM. 66+500 TO KM. 66+660  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/1C097

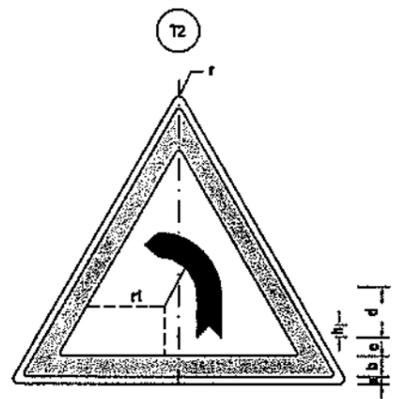
SCALE  
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 VER=1:200  
 REV.

# ROAD SIGNS



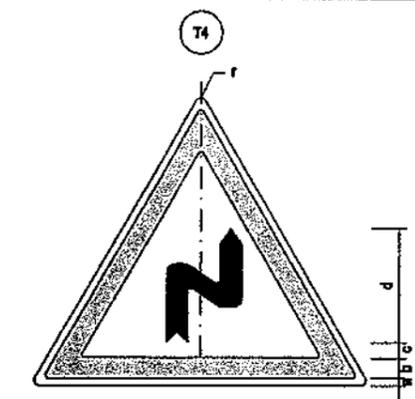
**RIGHT CURVE**  
DIMENSION(cm)

PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	4.0	5.3
d	11.5	15.3
e	6.5	11.3
f	7.0	9.3
g	6.0	8.0
h	3.5	4.7
r1	12.5	16.7



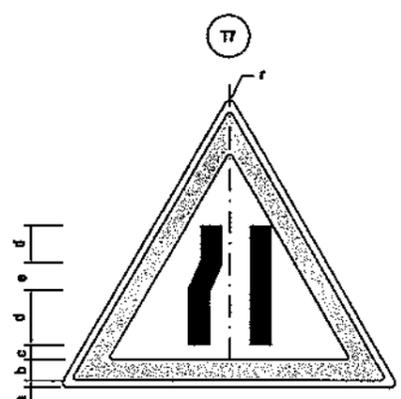
**LEFT CURVE**  
DIMENSION(cm)

PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	4.0	5.3
d	11.5	15.3
e	6.5	11.3
f	7.0	9.3
g	6.0	8.0
h	3.5	4.7
r1	12.5	16.7



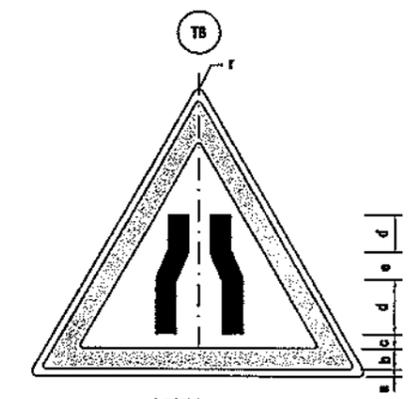
**SERIES OF CURVES (FIRST TO RIGHT)**  
DIMENSION(cm)

PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	3.0	4.0
d	33.0	44.0
e	14.0	18.7
f	6.0	10.7
g	7.0	9.3
h	2.0	2.7
i	3.5	4.7
r1	4.6	6.0



**ROADWAY NARROWS (FROM LEFT)**  
DIMENSION(cm)

PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	3.5	4.7
d	10.0	13.3
e	14.0	18.7
f	2.5	3.3
g	5.0	6.7



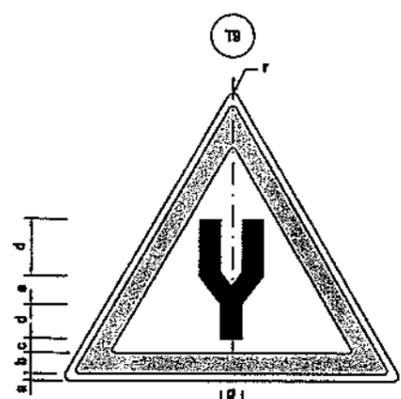
**ROADWAY NARROWS (FROM BOTH SIDES)**  
DIMENSION(cm)

PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	3.5	4.7
d	10.0	13.3
e	14.0	18.7
f	2.5	3.3
g	5.0	6.7

NOTES:-

- 90cm SIGN SIZE SHALL BE USED FOR DRAWING NO. SA-413/102/PDRS001 TO SA-413/102/PDRS007.

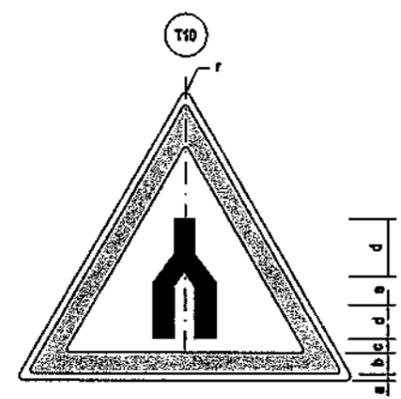
CLIENT GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	Faisal	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	ROAD SIGNS (1) (INFORMATORY SIGN)		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED			DECEMBER, 2020	SA-413/102/PDRS001	0
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



DUAL CARRIAGEWAY STARTS

DIMENSION(cm)

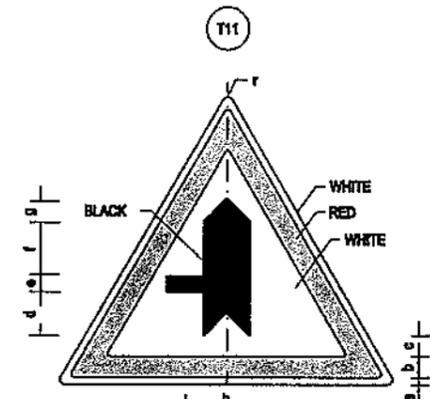
PARTS	SIGN SIZE	
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r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	4.5	6.0
d	15.0	20.0
e	8.0	12.0
f	12.0	18.0
g	8.0	12.0
h	7.0	9.3



DUAL CARRIAGEWAY ENDS

DIMENSION(cm)

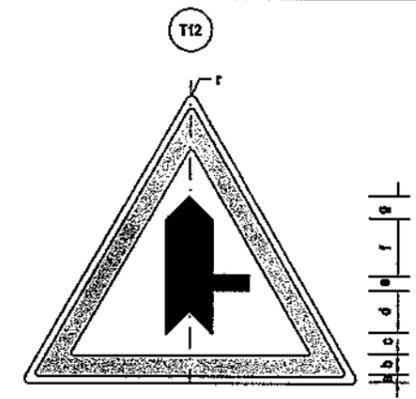
PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	4.0	5.30
d	15.0	20.0
e	8.0	12.0
f	12.0	18.0
g	8.0	12.0
h	7.0	9.3



MINOR ROAD FROM LEFT

DIMENSION(cm)

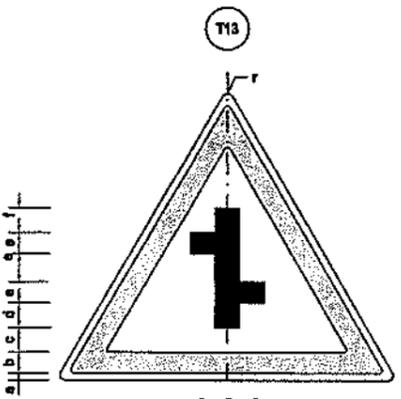
PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	3.0	4.0
d	15.5	18.0
e	6.5	7.3
f	15.0	20.0
g	7.0	8.3
h	14.0	18.7
i	10.5	14.0



MINOR ROAD FROM RIGHT

DIMENSION(cm)

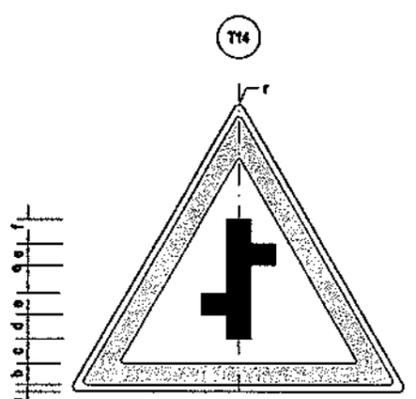
PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	3.0	4.0
d	13.5	18.0
e	6.5	7.3
f	15.0	20.0
g	7.0	8.3
h	14.0	18.7
i	10.5	14.0



MINOR ROAD CROSSING WITH AN OFFSET

DIMENSION(cm)

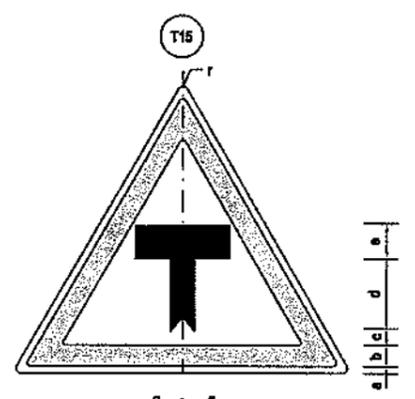
PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	2.5	3.3
d	8.0	10.7
e	7.5	10.0
f	8.0	12.0



MINOR ROAD CROSSING WITH AN OFFSET

DIMENSION(cm)

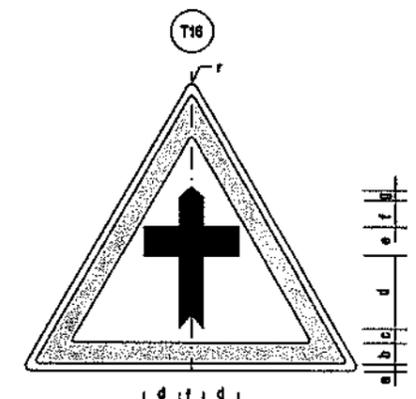
PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	2.5	3.3
d	8.0	10.7
e	7.5	10.0
f	8.0	12.0



T-JUNCTION AHEAD

DIMENSION(cm)

PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	3.0	4.0
d	15.5	20.7
e	7.0	8.3
f	5.0	6.7
g	11.0	14.7
h	2.5	3.3



CROSS ROAD AHEAD

DIMENSION(cm)

PARTS	SIGN SIZE	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	3.0	4.0
d	13.0	17.3
e	7.0	9.3
f	10.0	13.3
g	2.5	3.3
i	5.0	8.7

NOTES:-

- 90cm SIGN SIZE SHALL BE USED FOR DRAWING NO. SA-413/102/PDRS001 TO SA-413/102/PDRS007.

CLIENT  
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 COMMUNICATION & WORKS  
 DEPARTMENT (C&W) PUNJAB

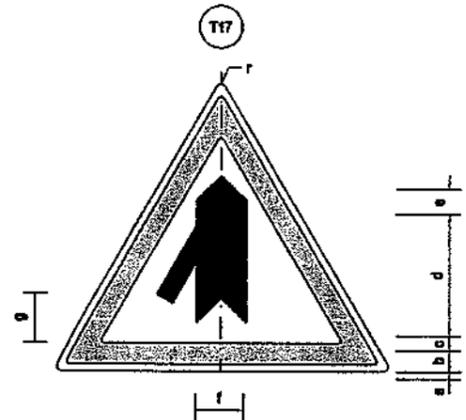
CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, 1-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD.VER.	
APPROVED	

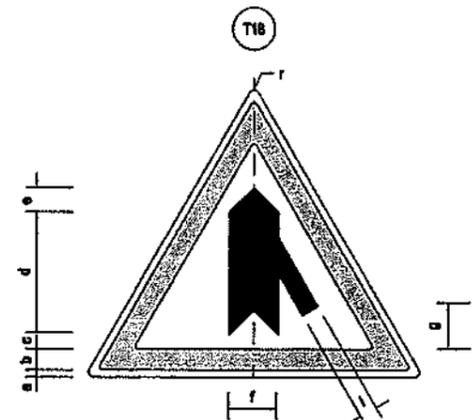
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

ROAD SIGNS (2) (INFORMATORY SIGN)		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/RS002	REV. 0



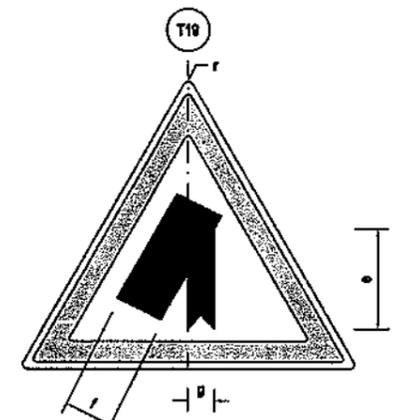
**MINOR ROAD FROM LEFT DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	3.5	4.7
d	33.0	44.0
e	7.0	8.3
f	14.0	18.7
g	15.0	20.0
h	3.0	4.0
i	5.5	7.3



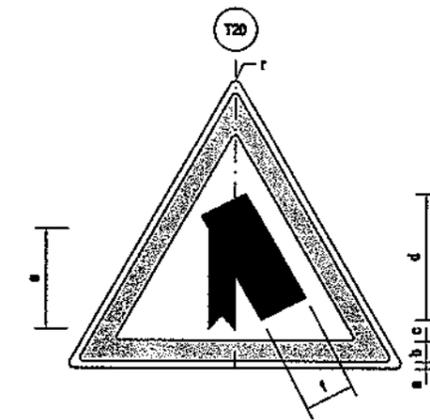
**MINOR ROAD FROM RIGHT DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	3.5	4.7
d	33.0	44.0
e	7.0	8.3
f	14.0	18.7
g	15.0	20.0
h	3.0	4.0
i	5.5	7.3



**MAIN ROAD (ON LEFT) DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	2.5	3.3
d	30.0	39.0
e	27.0	36.0
f	13.0	17.3
g	5.0	6.7



**MAIN ROAD (ON RIGHT) DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	8.5	8.7
c	2.5	3.3
d	30.0	39.0
e	27.0	36.0
f	13.0	17.3
g	5.0	6.7

NOTES:-

- 90cm SIGN SIZE SHALL BE USED FOR DRAWING NO. SA-413/102/PDRS001 TO SA-413/102/PDRS007.

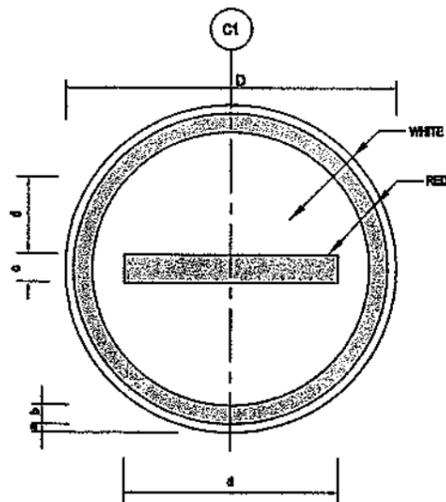
CLIENT  
  
 GOVT. OF THE PUNJAB  
 COMMUNICATION & WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
  
 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD.AVER	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

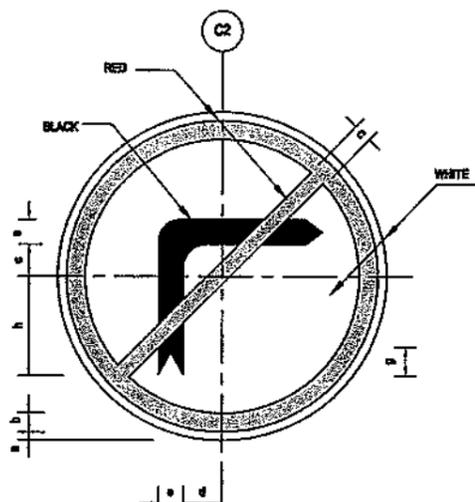
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

ROAD SIGNS (2) (INFORMATORY SIGN)		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PDRS003	REV. ⤴



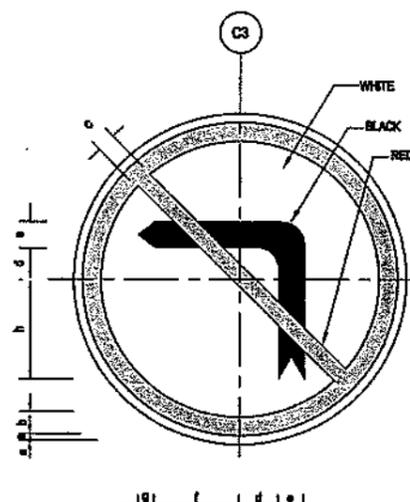
**NO ENTRY  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm	120cm
a	1.0	1.3
b	4.0	5.3
c	8.0	10.7
d	64.0	85.3



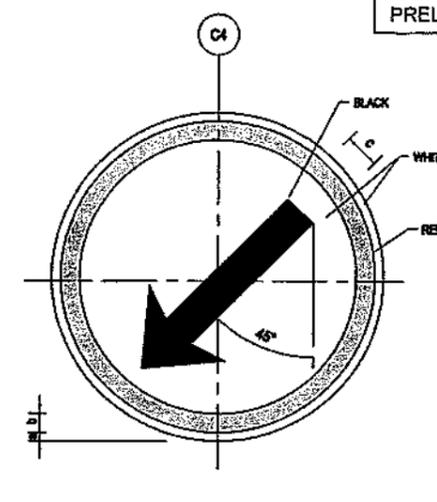
**NO RIGHT TURN  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm	120cm
a	1.0	1.3
b	8.6	8.7
c	8.5	7.3
d	8.0	8.0
e	10.0	13.3
f	25.0	33.3
g	6.0	8.7
h	30.0	40.0



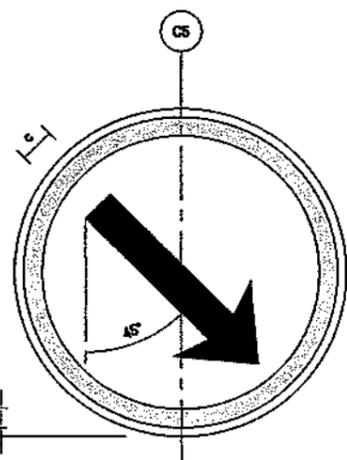
**NO LEFT TURN  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm(C3)	120cm(C7)
a	1.0	1.3
b	8.5	8.7
c	8.5	7.3
d	8.0	8.0
e	10.0	13.3
f	25.0	33.3
g	6.0	8.7
h	30.0	40.0



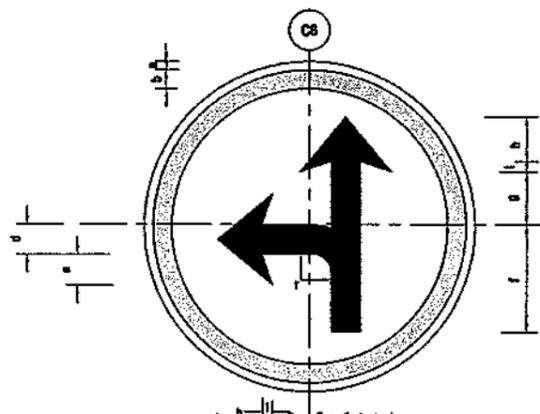
**KEEP LEFT  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm(C4)	120cm(C3)
a	1.0	1.3
b	4.0	5.3
c	8.0	10.7
d	8.0	12.0
e	32.0	42.7
f	23.0	30.7
g	4.5	6.0



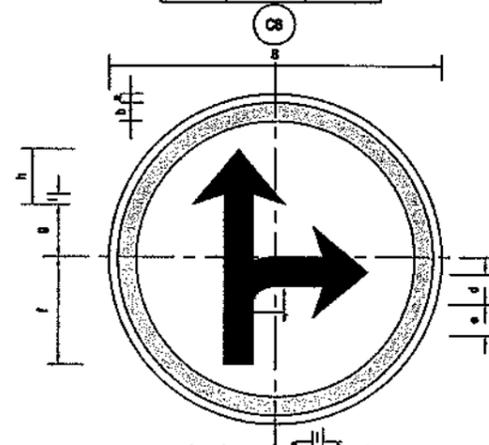
**KEEP RIGHT  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm(C4)	120cm(C3)
a	1.0	1.3
b	4.0	5.3
c	8.0	10.7
d	8.0	12.0
e	32.0	42.7
f	23.0	30.7
g	4.5	6.0



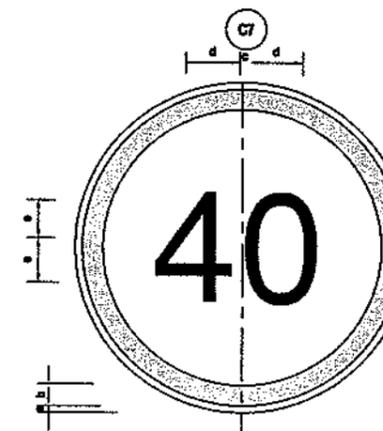
**STRAIGHT OR LEFT ONLY  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm(C4)	120cm(C3)
a	1.0	1.3
b	8.5	8.7
c	10.0	13.3
d	8.0	10.7
e	9.0	12.0
f	34.0	45.3
g	10.5	14.0
h	23.5	31.3
i	4.5	6.0
r	8.0	10.7



**STRAIGHT OR RIGHT ONLY  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm(C4)	120cm(C3)
a	1.0	1.3
b	8.5	8.7
c	10.0	13.3
d	8.0	10.7
e	9.0	12.0
f	34.0	45.3
g	10.5	14.0
h	23.5	31.3
i	4.5	6.0
r	8.0	10.7



**SPEED LIMIT (40)  
DIMENSION(cm)**

PARTS	SIGN SIZE	
	90cm(C4)	120cm(C3)
a	1.0	1.3
b	8.5	8.7
c	3.0	4.0
d	25.0	30.7
e	20.0	25.7

**NOTES:-**

- 90cm SIGN SIZE SHALL BE USED FOR DRAWING NO. SA-413/102/PDR/S001 TO SA-413/102/PDR/S007.

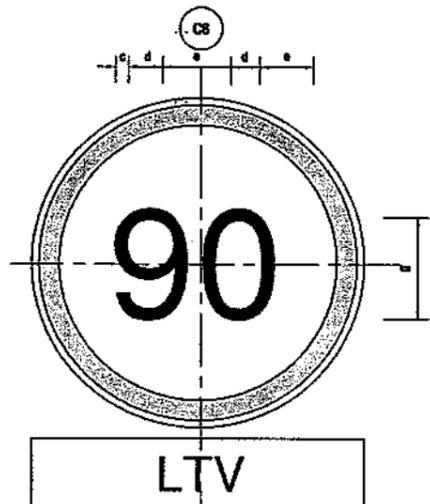
CLIENT  
  
 GOVT. OF THE PUNJAB  
 COMMUNICATION & WORKS  
 DEPARTMENT (C&W) PUNJAB

CONSULTANT  
  
 NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHKD.VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

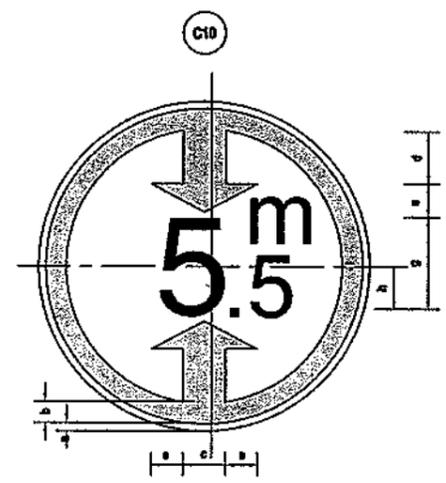
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

ROAD SIGNS (3)  
 (REGULATORY SIGN)  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PDR/S004  
 SCALE: 



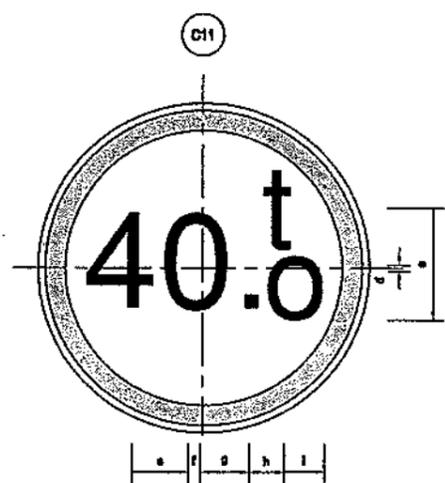
**SPEED LIMIT (60)  
DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
a	1.0	1.5
b	6.5	8.7
c	2.5	3.25
d	5.0	6.5
e	11.25	15.36
f	35.0	47.0
g	40.0	53.5



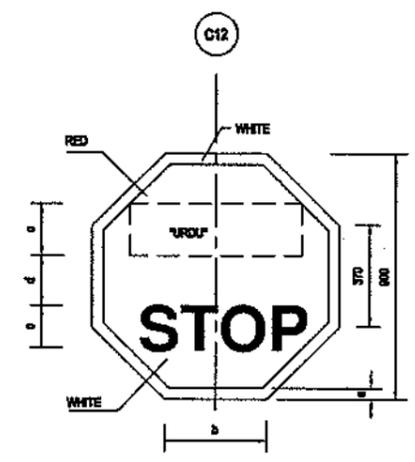
**MIN. VERTICAL CLEARANCE  
DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
a	1.0	1.5
b	6.5	8.7
c	13.5	18.0
d	12.5	17.0
e	8.5	11.5
f	31.0	41.0
g	24.5	32.5
h	12.5	16.5



**MAX. GROSS WEIGHT LIMIT  
DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
a	1.0	1.5
b	6.5	8.7
c	32.0	42.50
d	2.5	3.50
e	17.0	22.50
f	1.5	2.0
g	17.0	22.50
h	3.5	4.50
i	10.0	13.50



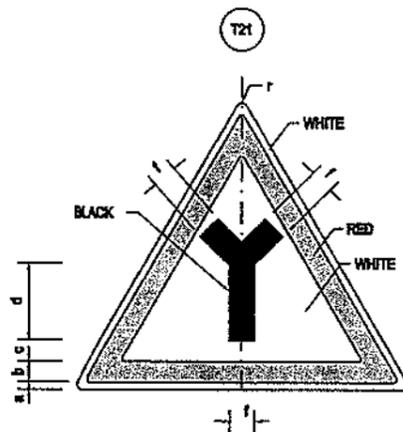
**STOP  
DIMENSION(cm)**

PARTS	Sign Size	
	90cm	120cm
a	1.0	1.50
b	37.0	49.5
c	20.0	25.0
d	15.0	20.0
e	35.0	43.0
f	90.0	120.0

**NOTES:-**

- 90cm SIGN SIZE SHALL BE USED FOR DRAWING NO. SA-413/102/PD/RS001 TO SA-413/102/PD/RS007.

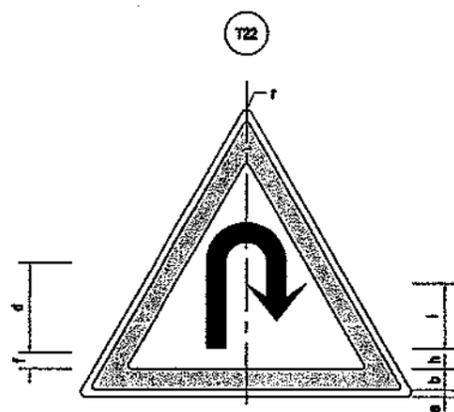
CLIENT GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	Faisal	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 65.6 Km)	ROAD SIGNS (3) (REGULATORY SIGN)		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/RS005	0	
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



Y-JUNCTION

DIMENSION(cm)

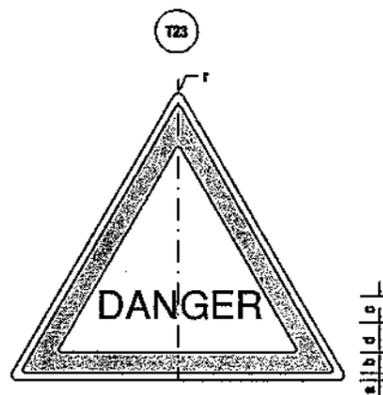
PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	3.0	4.0
d	17.0	22.7
e	13.0	17.3
f	7.0	9.3



U-TURN

DIMENSION(cm)

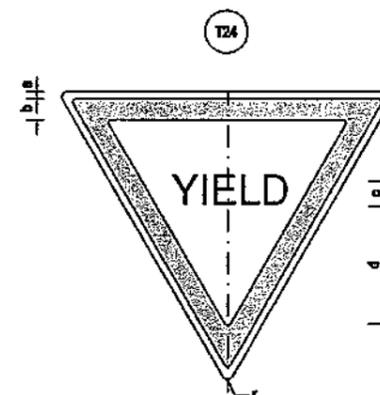
PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	6.5	7.3
d	7.0	9.3
e	6.0	8.7
f	2.5	3.3
g	23.0	30.7
h	7.5	10.0
i	12.0	16.0



DANGER WARNING

DIMENSION(cm)

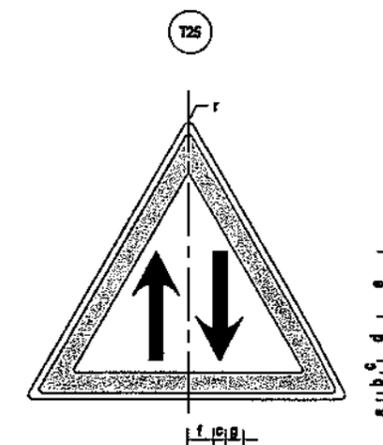
PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	6.5	8.7
d	7.0	9.5



GIVE WAY

DIMENSION(cm)

PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	6.5	8.7
d	16.0	21.3



TWO WAY TRAFFIC

DIMENSION(cm)

PARTS	Sign Size	
	90cm	120cm
r	3.5	4.7
a	1.0	1.3
b	6.5	8.7
c	4.0	8.7
d	9.0	21.3
e	19.0	21.3
f	5.0	21.3
g	3.5	21.3

NOTES:-

- 90cm SIGN SIZE SHALL BE USED FOR DRAWING NO. SA-413/102/PD/RS001 TO SA-413/102/PD/RS007.

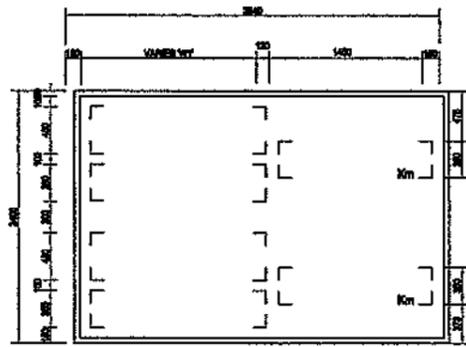
CLIENT  
**GOVT. OF THE PUNJAB  
 COMMUNICATION & WORKS  
 DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES  
 PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

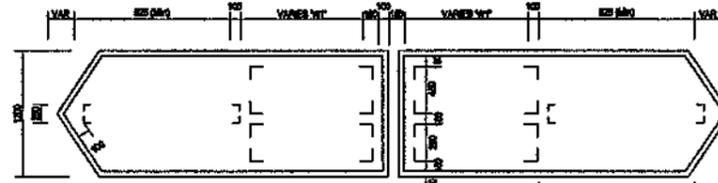
REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				DRAWN Faisal
03				SUBMITTED
02				RECOMMENDED
01				CHD./VER.

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

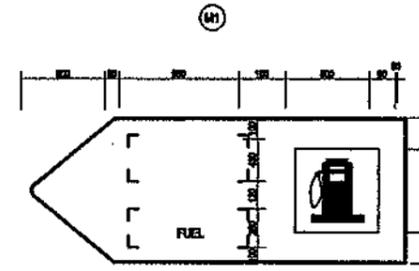
ROAD SIGNS (4) (INFORMATORY SIGN)		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/RS006	REV. 0



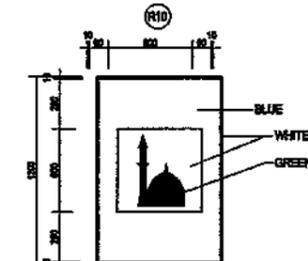
**DISTANCE SIGN**  
(After the Junction)



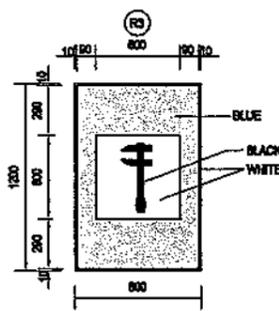
**DISTANCE & DESTINATION SIGN**  
(At T-Junction)



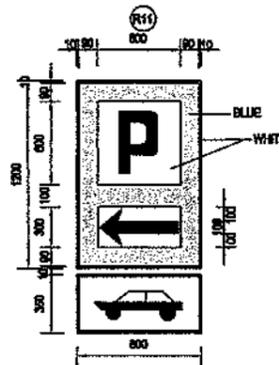
**FILLING STATION ON LEFT**



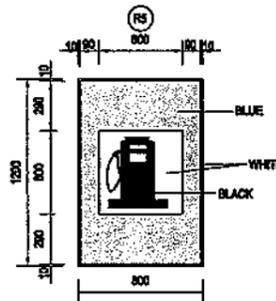
**MOSQUE**



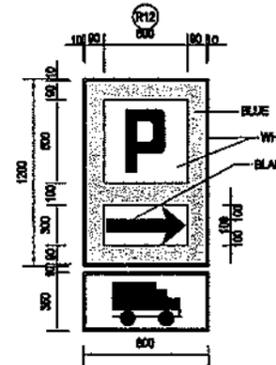
**BREAKDOWN SERVICE**



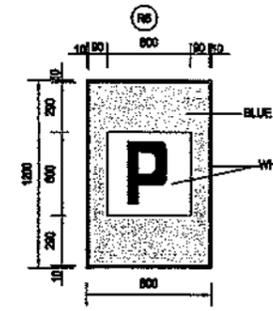
**PARKING ON LEFT**  
(FOR CARS)



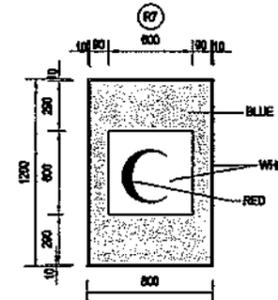
**FILLING STATION**



**PARKING ON RIGHT**  
(FOR BUS/TRUCK)



**PARKING**



**FIRST AID STATION**

**NOTES:-**

- 90cm SIGN SIZE SHALL BE USED FOR DRAWING NO. SA-413/102/PDRS001 TO SA-413/102/PDRS007.

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**GOVT. OF THE PUNJAB**  
**COMMUNICATION & WORKS**  
**DEPARTMENT (C&W) PUNJAB**

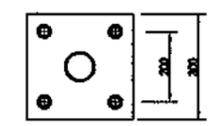
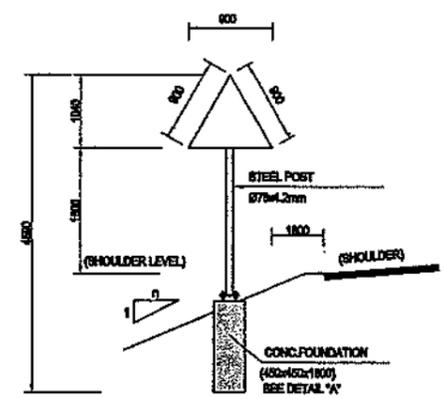
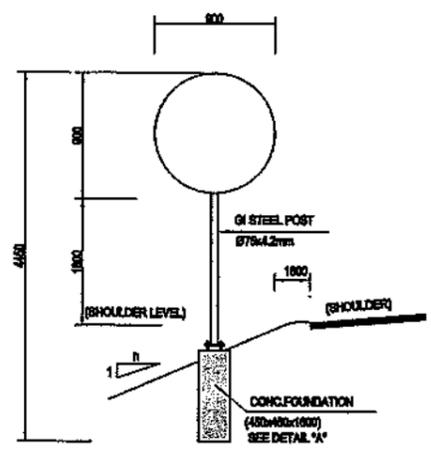
CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

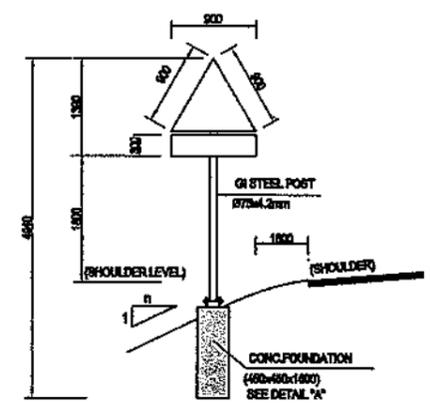
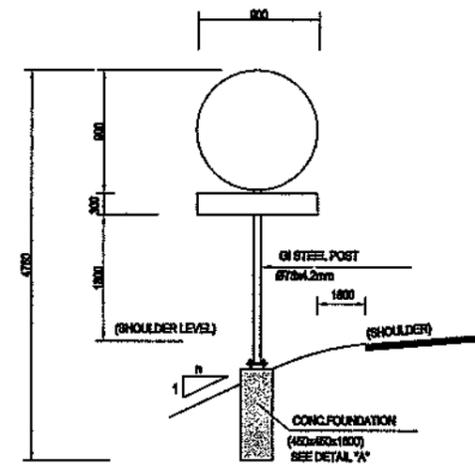
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

**ROAD SIGNS (5)**  
**(INFORMATERY SIGN)**  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PDRS007

SCALE  
 REV.

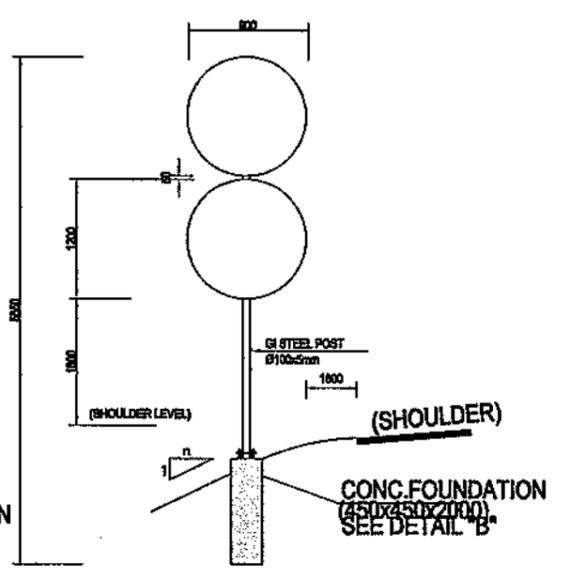
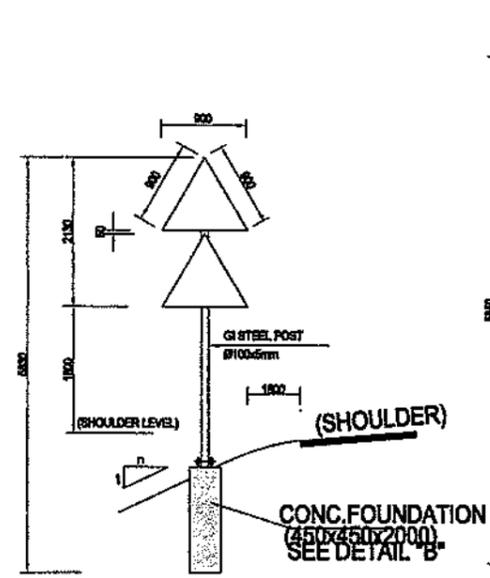


TYPICAL PLAN

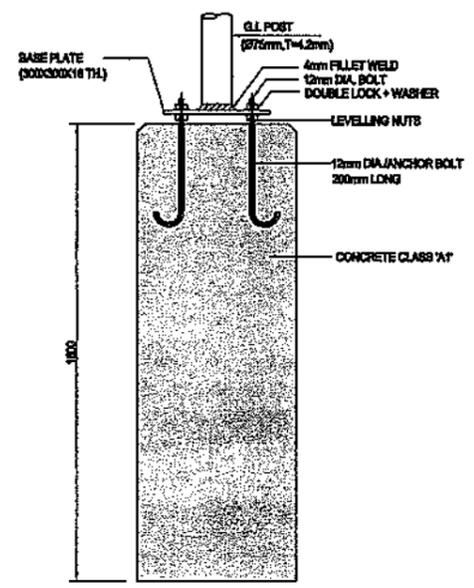


SINGLE SIGNS  
FOUNDATION TYPE-1

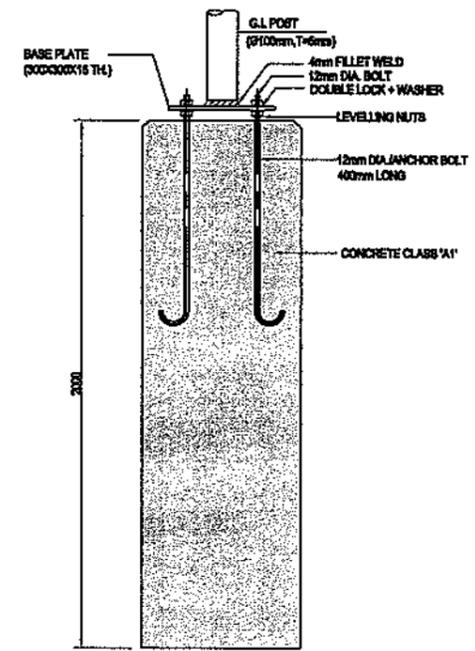
SINGLE SIGNS WITH ADDITIONAL PLATE  
FOUNDATION TYPE-1



DOUBLE SIGNS  
FOUNDATION TYPE-2



DETAIL 'A'  
CONCRETE FOUNDATION  
(TYPE-1)



DETAIL 'B'  
CONCRETE FOUNDATION  
(TYPE-2)

NOTE:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. ALL STRUCTURAL CONCRETE SHALL HAVE MINIMUM CYLINDER STRENGTH EQUAL TO 3000psi AT 28 DAYS.
3. SIGN PANELS SHALL BE MADE OF ALUMINUM ALLOY PLATES OF MIN. 3mm TH.
4. SIGN PANELS SHOULD BE RIVETED TO STEEL MEMBER OF SUPPORTING FRAME.

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 DEPARTMENT (C&W) PUNJAB

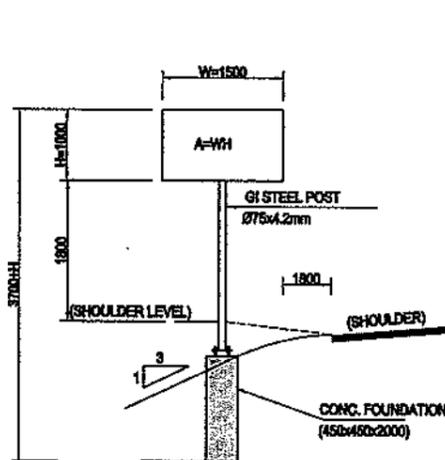
CONSULTANT  
**NATIONAL ENGINEERING SERVICES**  
**PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
 MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD. VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

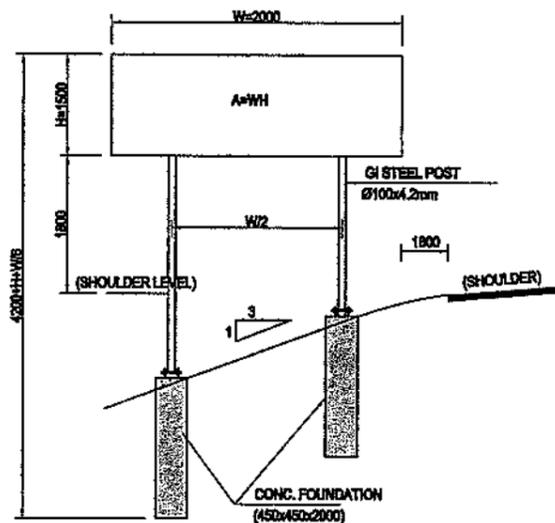
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

ROAD SIGNS (9)  
 (REGULATORY SIGN)  
 DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/RS008

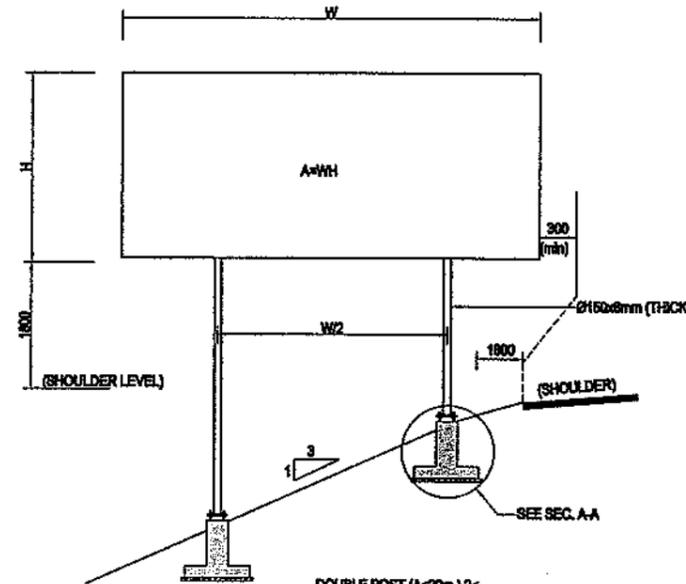
SCALE  
 REV.



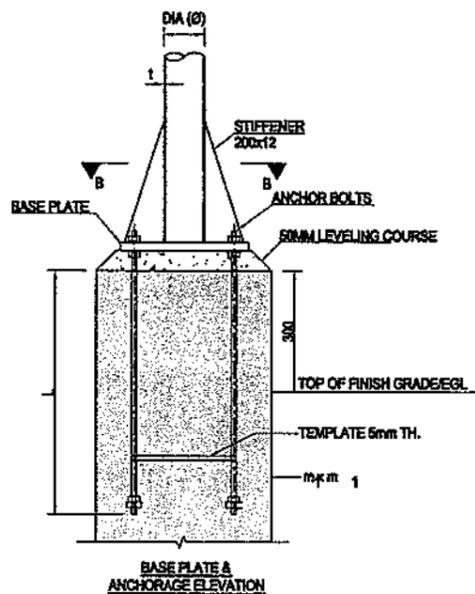
2 SINGLE POST (A<1.5m) 2x FOUNDATION TYPE-1



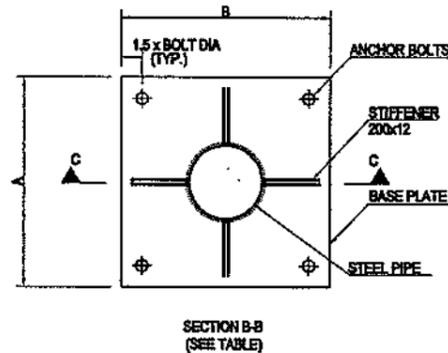
DOUBLE POST (A<3m) 2x FOUNDATION TYPE-2



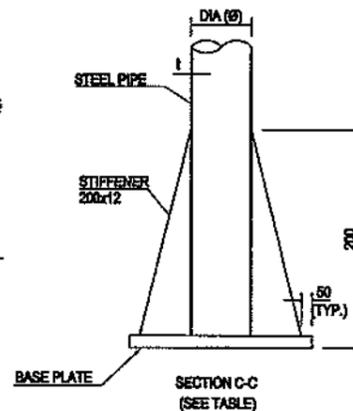
DOUBLE POST (A<20m) 2x FOUNDATION TYPE-3



BASE PLATE & ANCHORAGE ELEVATION



SECTION B-B (SEE TABLE)



SECTION C-C (SEE TABLE)

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. FABRICATION GALVANIZING AND ERECTION TO BE IN ACCORDANCE WITH AISC SPECIFICATIONS.
3. AFTER FABRICATION AND BEFORE GALVANIZING THE TRIAL ASSEMBLY OF COMPLETE STRUCTURE SHALL BE DONE.
4. ALL COMPONENTS TO BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. GALVANIZATION THICKNESS SHALL NOT BE LESS THAN 80 MICRONS.
5. BASE PLATES SHALL BE SET LEVEL TO CORRECT ELEVATION WITH THE HELP OF LEVELING NUTS.
6. STEEL STRUCTURE SHALL BE ASTM A36, OR EQUIVALENT.
7. BOLTS (GALVANIZED) SHALL BE ISO 888-1, GRADE 8.8, OR EQUIVALENT.
8. NUTS (GALVANIZED) SHALL BE ISO 888-2, GRADE 8, OR EQUIVALENT.
9. PLAIN WASHERS (GALVANIZED) SHALL BE ISO 7089, GRADE A CLASS 200, OR EQUIVALENT. ALL BOLTS SHALL BE FIXED WITH ONE PLAIN WASHER.
10. ANCHOR RODS SHALL BE G80 DEFORMED BARS IN ACCORDANCE WITH ASTM A815.
11. WELDING ELECTRODES SHALL BE E 60 XX.
12. SIGN PANELS SHALL BE MADE OF ALUMINUM ALLOY PLATES OF MIN. 3mm TH.
13. SIGN PANELS SHOULD BE RIVETED TO STEEL MEMBER OF SUPPORTING FRAME.
14. ALL STRUCTURAL CONCRETE SHALL HAVE MINIMUM CYLINDER STRENGTH EQUAL TO 3000psi AT 28 DAYS.
15. ALL REINFORCEMENT SHALL BE GRADE 80 DEFORMED IN ACCORDANCE WITH ASTM A-815 SPECIFICATION.

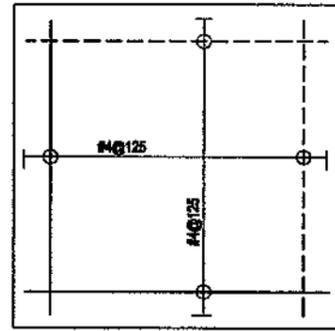
CLIENT  
**GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB**

CONSULTANT  
**NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.**  
 HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

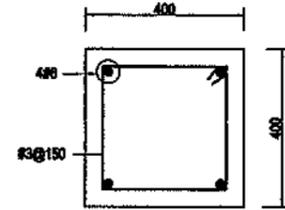
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)

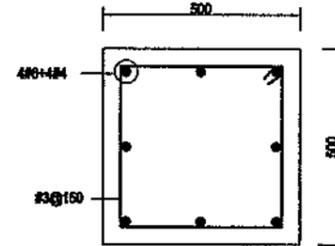
TYPICAL SIGN PLACING AND FOUNDATION DETAILS		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/RS009	REV. 0



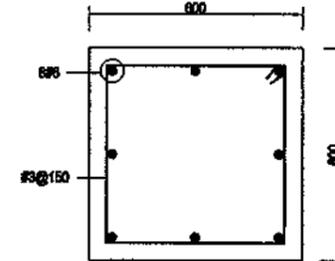
FOUNDATION PLAN  
(SEE TABLE)



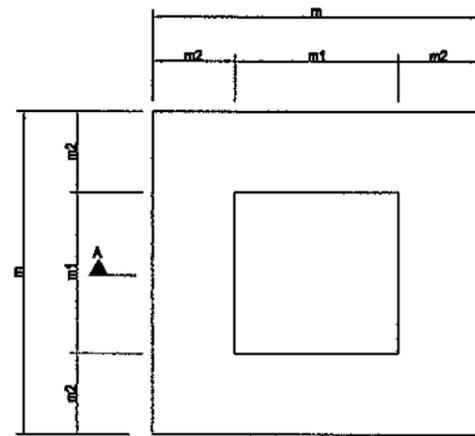
SECTION 1-1



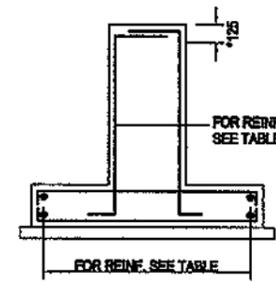
SECTION 2-2



SECTION 3-3

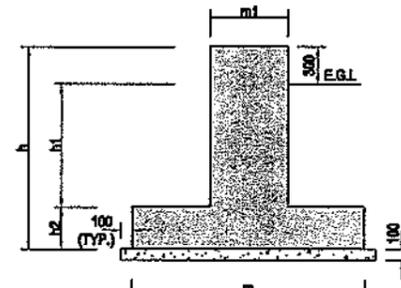


FOUNDATION PLAN  
(SEE TABLE)



SECTION A-A  
(REINFORCEMENT)  
(SEE TABLE)

\*ADD 3 TIES OF #10 IN THE TOP 125MM OF PEDESTAL WITH EXISTING LATERAL/ SHEAR REINFORCEMENT.



SECTION A-A  
(CONCRETE OUTLINE)  
(SEE TABLE)

\*ADD 3 TIES OF #10 IN THE TOP 125MM OF PEDESTAL WITH EXISTING LATERAL/ SHEAR REINFORCEMENT.

TABLE - 1

AREA OF SIGN BOARD A (M) <sup>2</sup>	STRUCTURAL CONCRETE SIZING (mm)						STRUCTURAL STEEL SIZING (mm)						REINFORCEMENT		
	PEDESTAL m <sub>1</sub> x m <sub>1</sub>	FOUNDATION PAD m x m	m <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	h	PIPE		BASE PLATE		ANCHOR BOLTS (J-TYPE)		PEDESTAL	PAD	
							DIA (Ø)	THICKNESS (t)	PLAN SIZE (AxB)	THICKNESS (T)	DIA.	EMBEDMENT (L)			Number
3 < A < 5	400x400	1000x1000	400	1250	350	1600	125	6	300x300	22	16	400	4	SEE SEC. 1-1	SEE FOUNDATION PLAN
5 < A < 10	500x500	1350x1350	525	1175	425	1600	150	10	400x400	25	20	450	4	SEE SEC. 2-2	
10 < A < 15	500x500	1500x1500	525	1125	475	1600	175	10	400x400	28	22	500	4	SEE SEC. 2-2	
15 < A < 20	600x600	1750x1750	625	1050	550	1600	200	10	500x500	32	25	600	4	SEE SEC. 3-3	

TABLE - 2

INFORMATION	
FOUNDATION TYPE-1	FOR SINGLE SIGNS AND SINGLE SIGNS WITH ADDITIONAL PLATE
FOUNDATION TYPE-2	FOR DOUBLE SIGNS, FOR SINGLE POST SIGNS WITH AREA <1.5m <sup>2</sup> & FOR DOUBLE POST SIGNS WITH AREA <3m <sup>2</sup>
FOUNDATION TYPE-3	FOR DOUBLE SIGNS WITH 3< AREA <20m <sup>2</sup>

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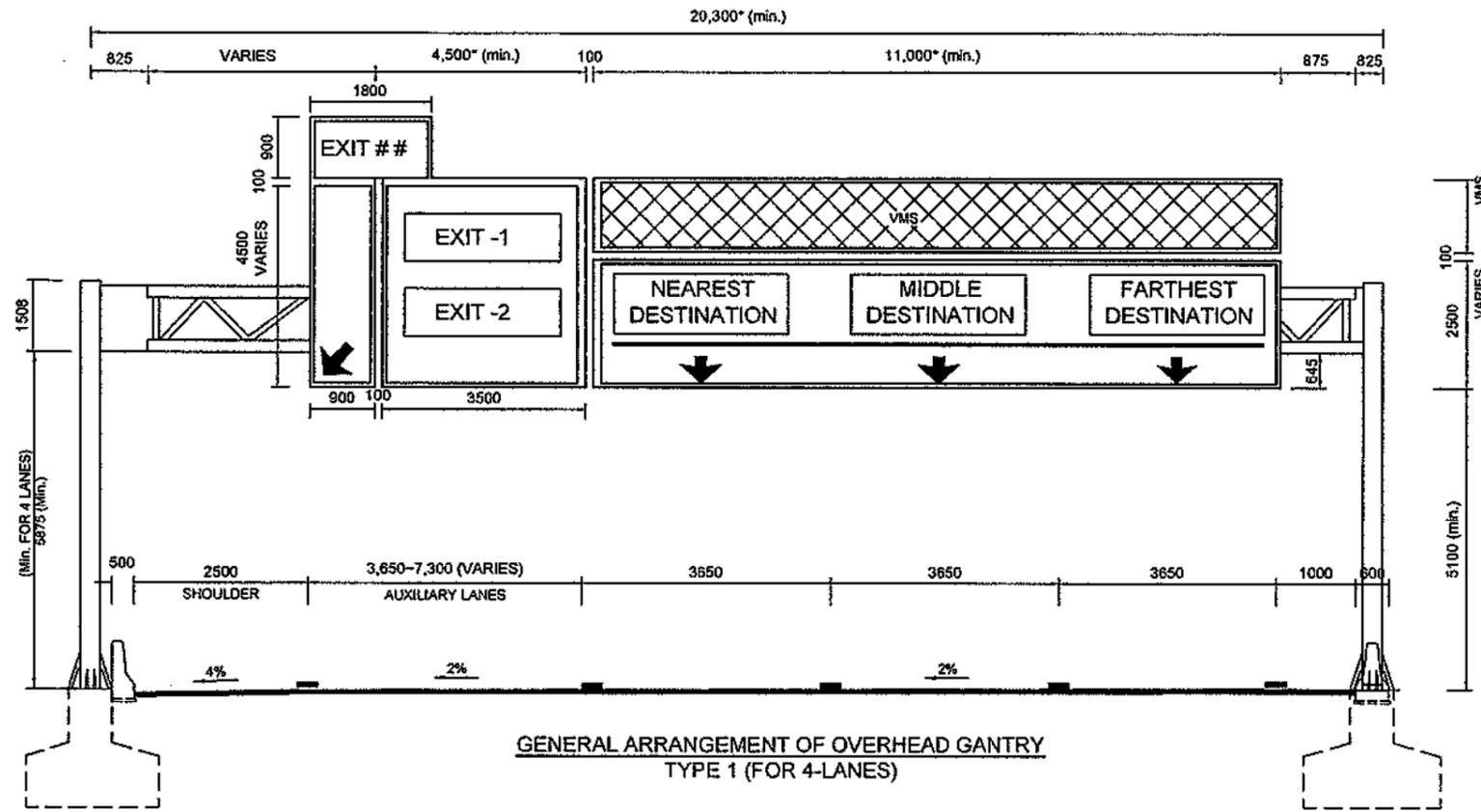
CONSULTANT  
**NESPAK** NATIONAL ENGINEERING SERVICES  
PAKISTAN (PVT.) LTD.  
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,  
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04					
03					
02					
01					
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

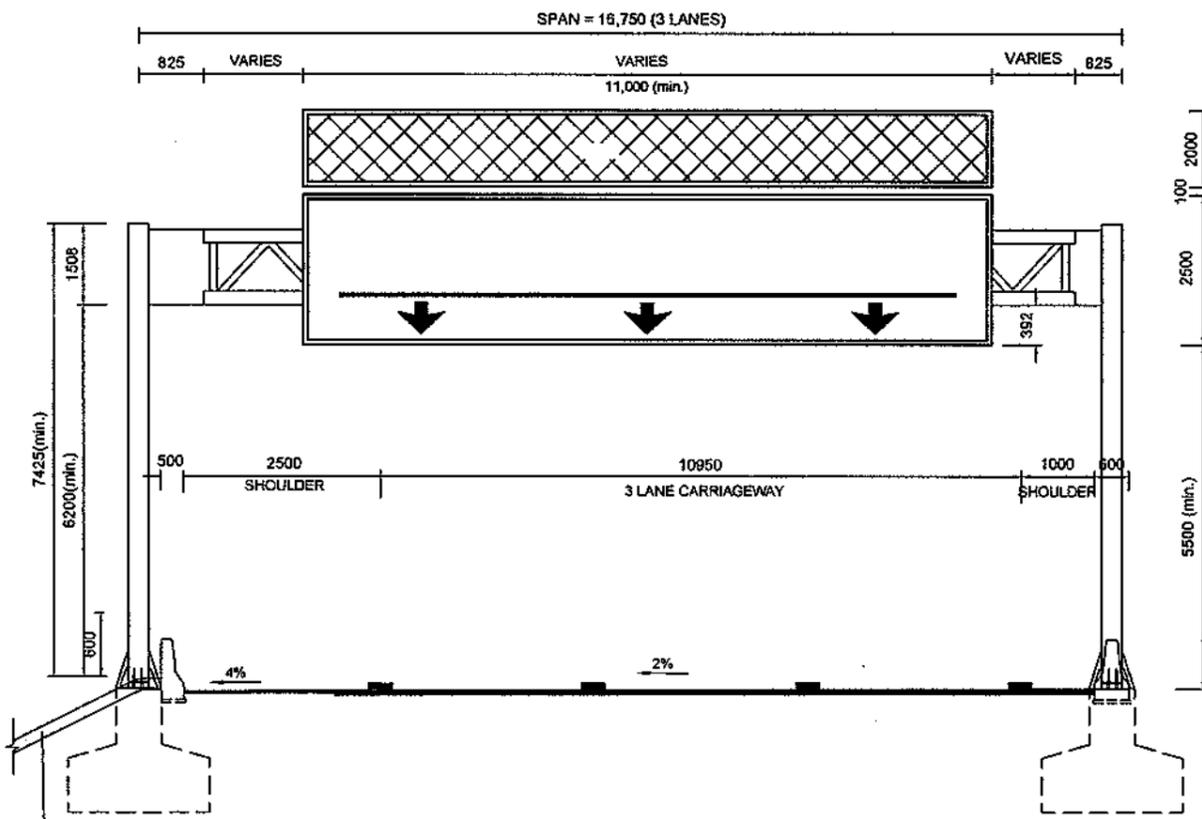
PROJECT  
TRANSACTION ADVISORY SERVICES FOR  
DUALIZATION AND REHABILITATION OF EXISTING  
FAISALABAD - CHINIOT - SARGODHA ROAD  
(LENGTH = 66.6 Km)

TYPICAL SIGN PLACING AND FOUNDATION DETAILS		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/RS010	REV. 0

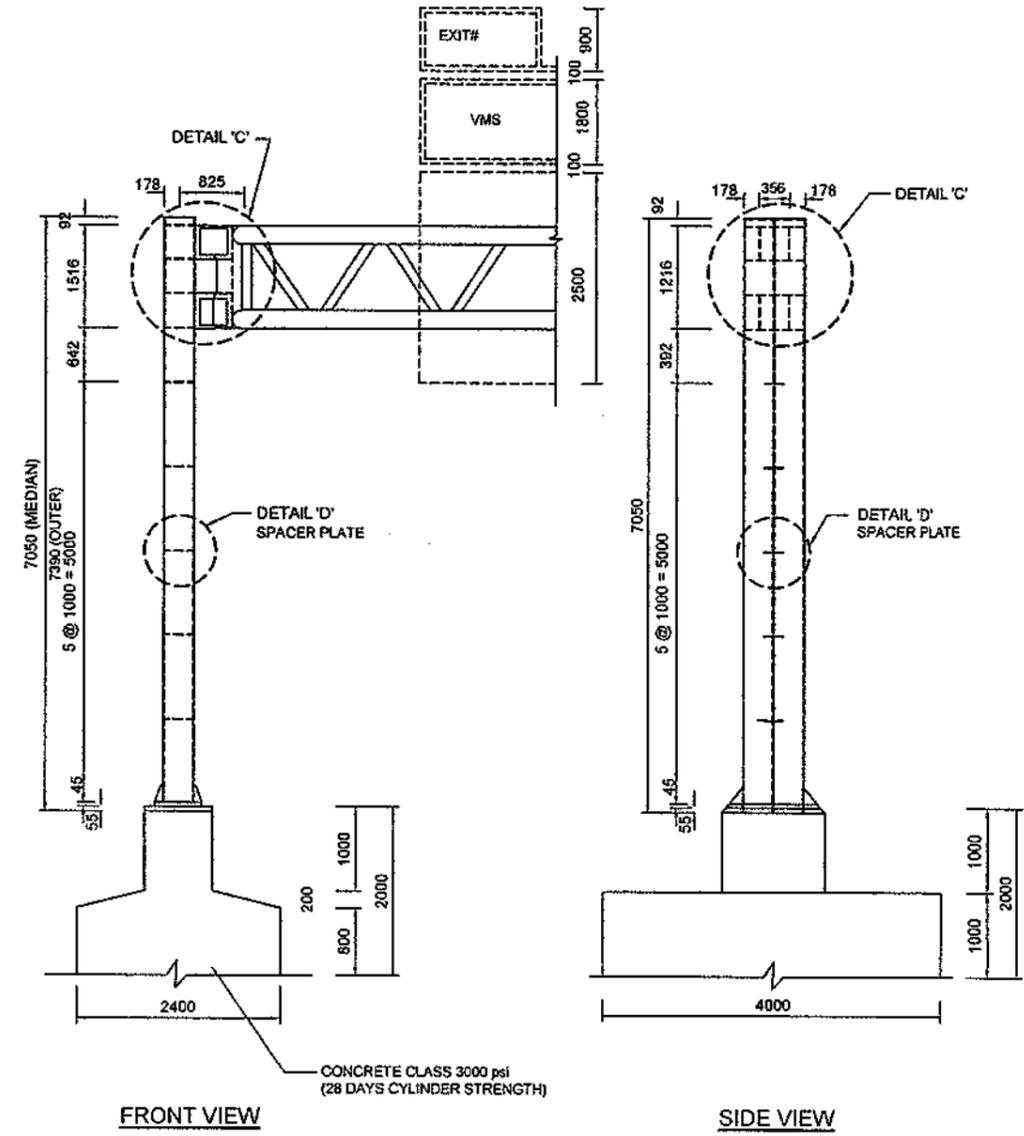
# GANTRY SIGNS



GENERAL ARRANGEMENT OF OVERHEAD GANTRY TYPE 1 (FOR 4-LANES)



GENERAL ARRANGEMENT OF OVERHEAD GANTRY TYPE-2 (FOR 3-LANES)

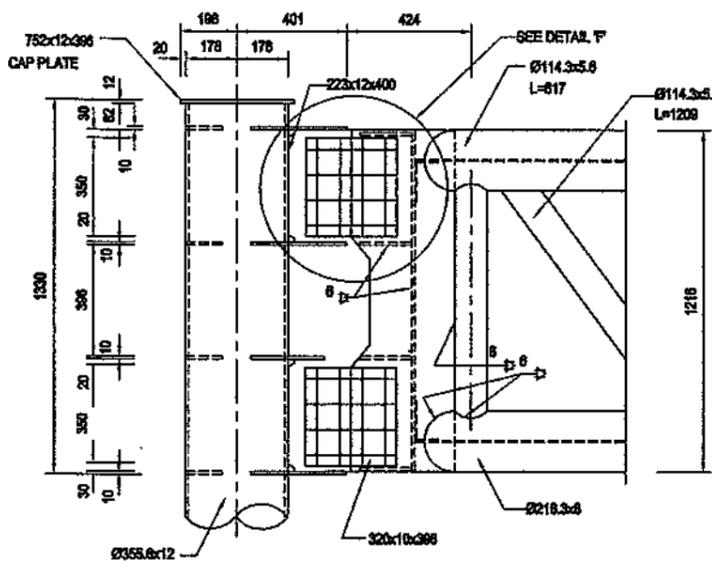


FRONT VIEW

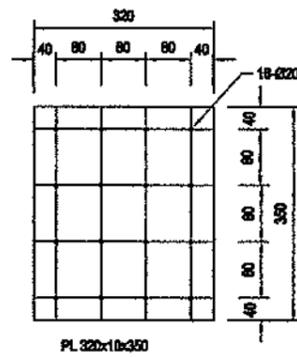
SIDE VIEW

- NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
  2. CLEAR HEIGHT OF GANTRY AT SHOULDER EDGE SHALL VARY DEPENDING UPON CAMBER / SUPERELEVATION RATE AT THE GIVEN LOCATION.

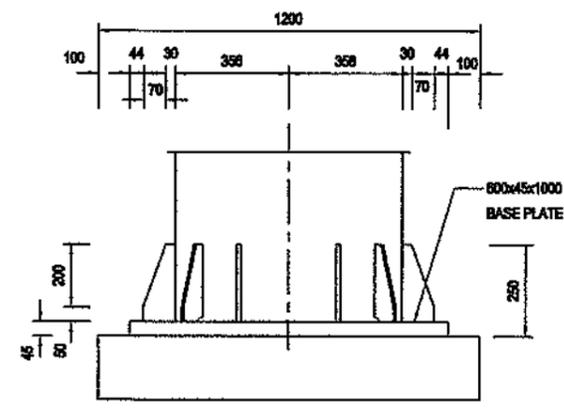
<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION &amp; WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT <b>NESPAK</b> NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04				DRAWN	Faisal	<p>PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	<p>GENERAL ARRANGEMENT OF OVERHEAD SIGNS</p>		SCALE
		03				SUBMITTED			DATE	DECEMBER, 2020	DRAWING No.
		02				RECOMMENDED					
		01				CHD.AVER					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED					



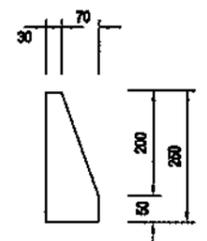
DETAIL 'C'



DETAIL 'F'

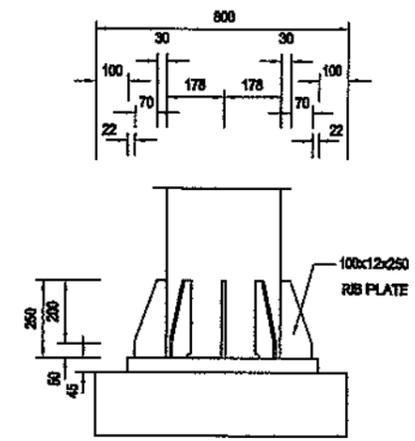


SIDE VIEW

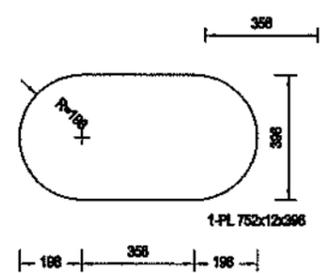
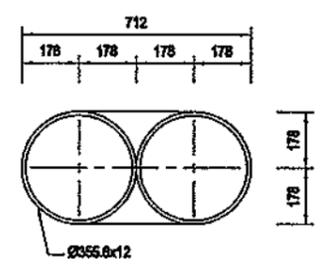


RIB DETAIL  
DETAIL 'E'

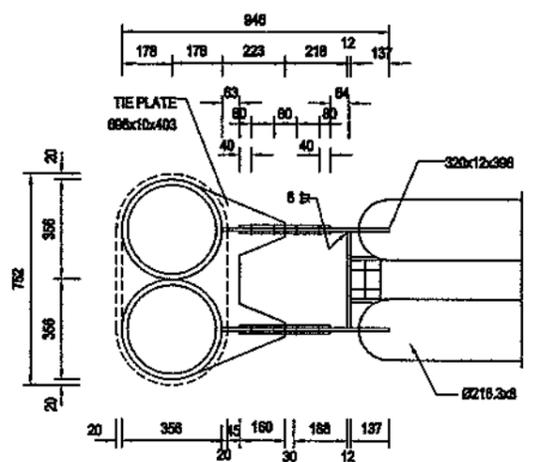
- 1-PL 600x45x1000
- 12-PL 100x12x250
- ANCHOR BOLT Ø240mm,  
1400mm. LONG



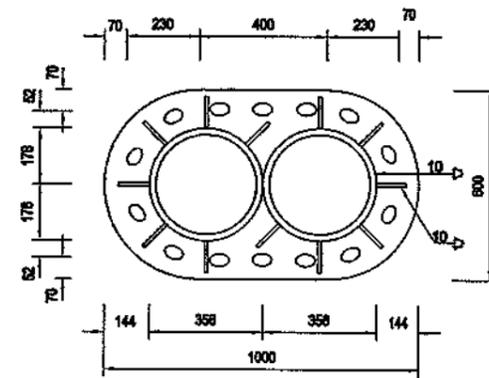
FRONT VIEW



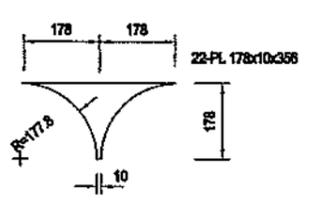
CAP PLATE



DETAIL 'C'(PLAN)

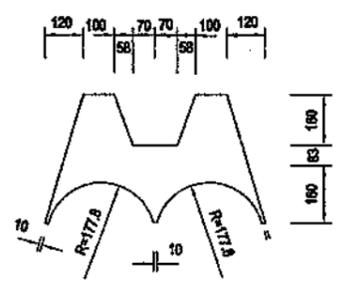


BASE PLATE



DETAIL 'D'

SPACER PLATE



TIE PLATE

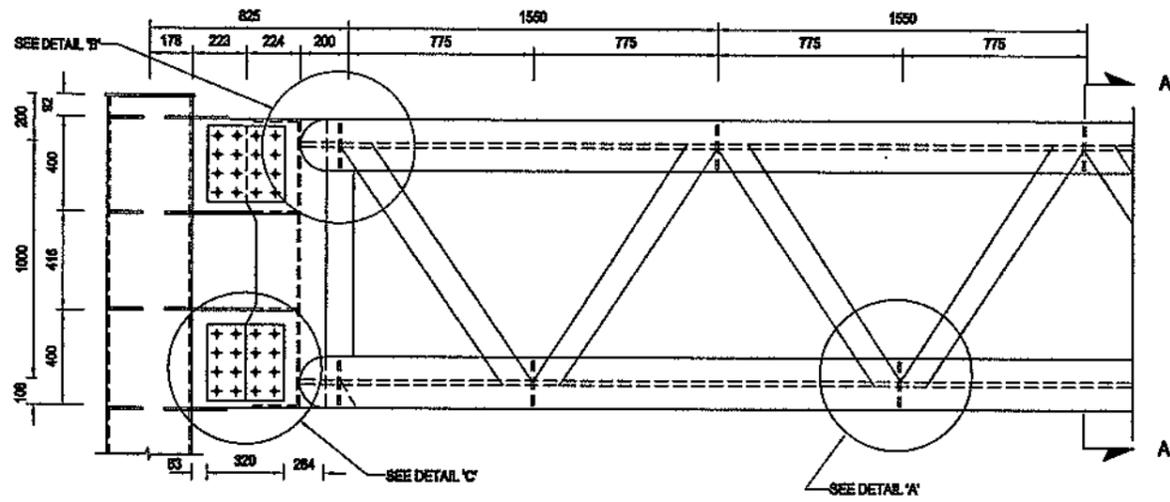
DETAIL 'C' MATERIALS

- TIE PLATE 4-PL 696x10x403
- 4-PL 223x12x400
- 6-PL 320x10x320
- CAP 1-PL 752x12x396
- 4-PL 178x10x358
- H.T.B PROT - Ø220 x70 : 64EA

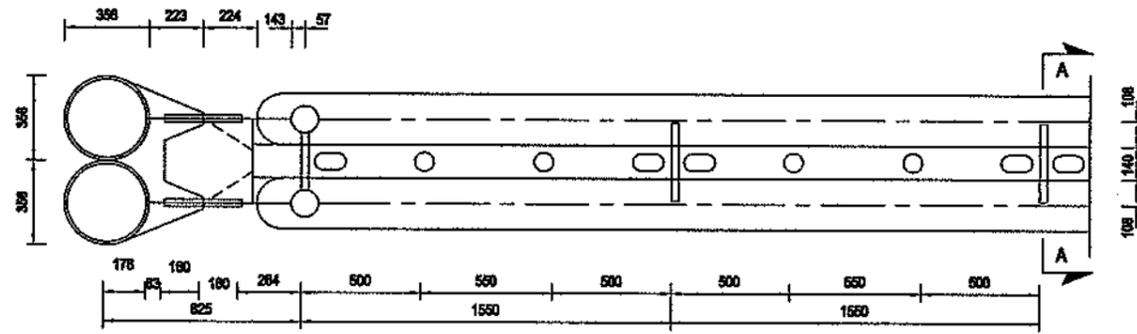
NOTE:-

- 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

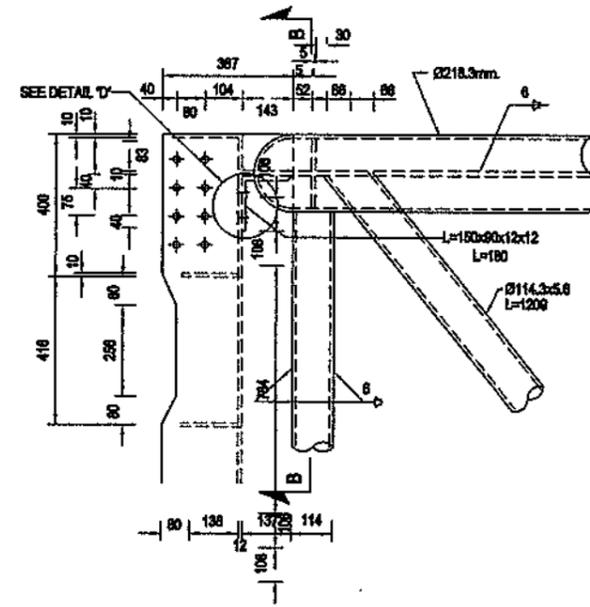
CLIENT GOVT. OF THE PUNJAB COMMUNICATION & WORKS DEPARTMENT (C&W) PUNJAB	CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN	Faisal	PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)	GANTRY SIGN COLUMN DETAILS		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/RS012		
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



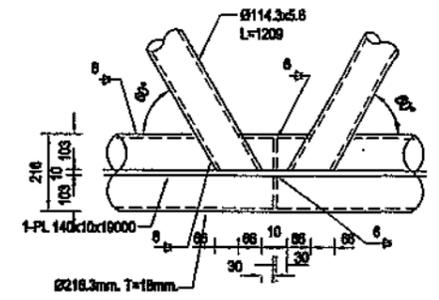
FRONT VIEW



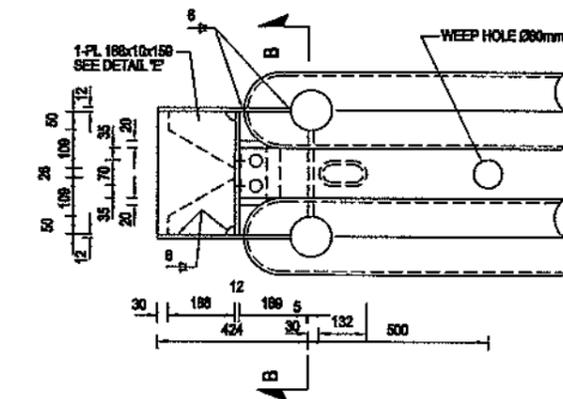
PLAN



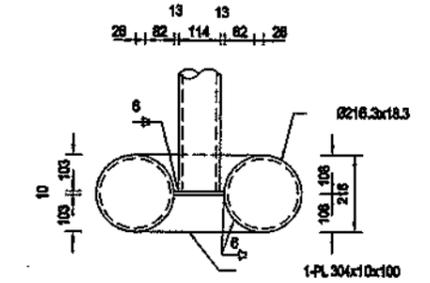
DETAIL 'A'



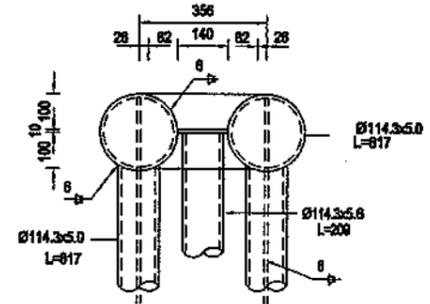
DETAIL 'B'



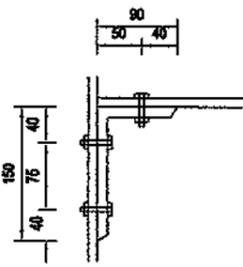
DETAIL 'C'



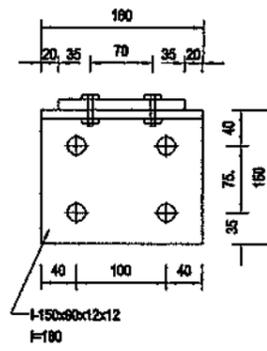
DETAIL 'D'



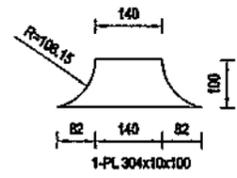
SECTION B-B



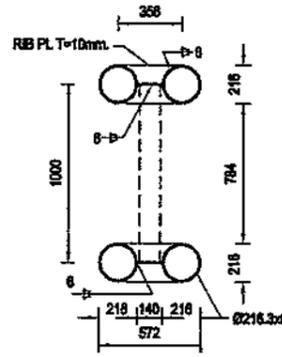
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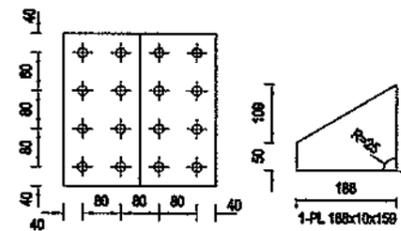
RIB PL DETAIL



SECTION A-A



DETAIL 'C'

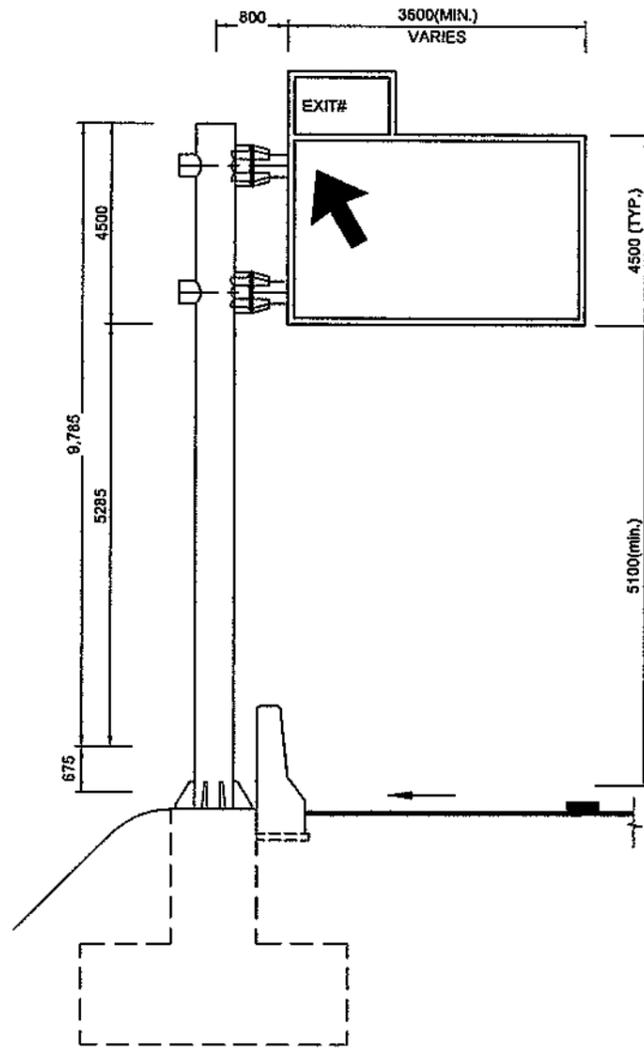


DETAIL 'E'

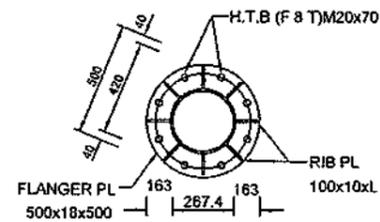
NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL WELDS SHALL BE 6mm THICK.

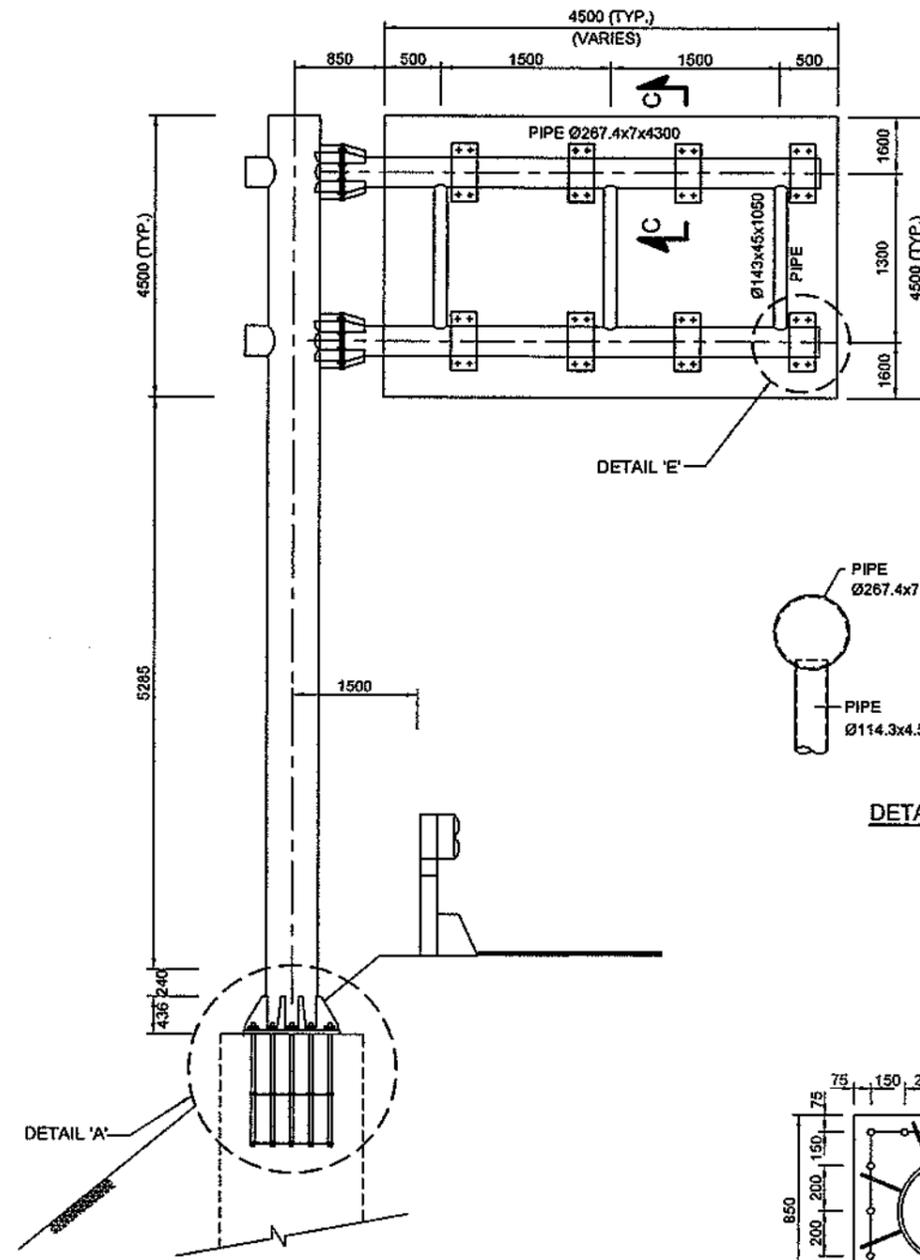
<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION &amp; WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	Faisal	<p>PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	<p>GANTRY SIGN TRUSS DETAILS</p>		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED		DECEMBER, 2020	SA-413/102/PD/RS013		
		01			CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				



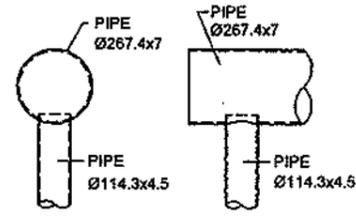
CANTILEVER GANTRY TYPE II



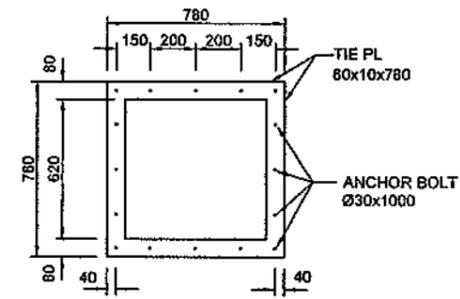
DETAIL "F"  
(FLANGER PLATE)



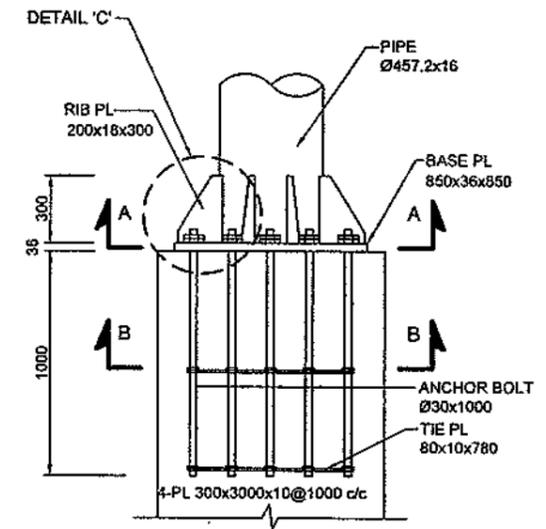
DETAIL "E"



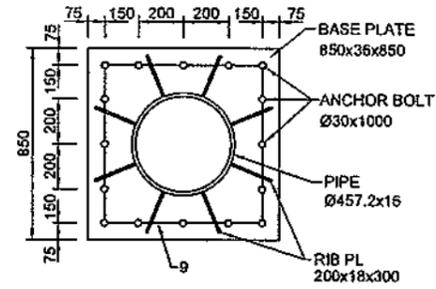
DETAIL "E"



SECTION B-B  
(TIE PLATE)



DETAIL "A"



SECTION A-A  
(BASE PLATE)

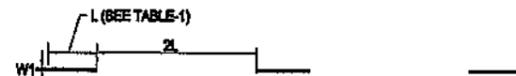
**NOTE:-**  
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.

<p>CLIENT GOVT. OF THE PUNJAB COMMUNICATION &amp; WORKS DEPARTMENT (C&amp;W) PUNJAB</p>	<p>CONSULTANT NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, 1-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.</p>	04			DRAWN	Faisal	<p>PROJECT TRANSACTION ADVISORY SERVICES FOR DUALIZATION AND REHABILITATION OF EXISTING FAISALABAD - CHINIOT - SARGODHA ROAD (LENGTH = 66.6 Km)</p>	OVERHANGER GUIDE SIGN DETAILS (1)		SCALE
		03			SUBMITTED				DATE	DRAWING No.
		02			RECOMMENDED			DECEMBER, 2020	SA-413/102/PD/RS014	0
		01			CHD.VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

# MISCELLANEOUS DRAWINGS

**PAVEMENT MARKING LINES**

FOR DIMENSIONS L & W1 TO W5, SEE TABLE-1



**L1 - BROKEN GUIDE LINE-WHITE**  
AT CENTERLINE OF DIVIDED 2-LANE



**L2 - BROKEN WARNING LINE -WHITE**  
LANE MARKING FOR MIX TRAFFIC



**L3 - CONTINUOUS LINE - WHITE**  
AT NO PASSING ZONES



**L4 - CONTINUOUS EDGE LINE -YELLOW**  
AT EDGE OF PAVEMENT AT ALL LOCATIONS



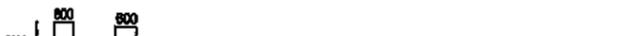
**L5 - DASHED LINE - WHITE**  
AT SEPARATION OF THROUGH LANES FROM ACCELERATION LANE



**L6 - DOTTED LINE - WHITE**  
FOR DEFINING VEHICLE PATHS WITHIN INTERSECTIONS



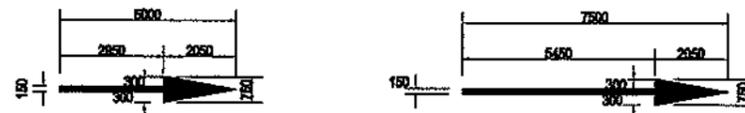
**L7 - STOP LINE - WHITE**  
AT INTERSECTIONS ACROSS PAVEMENT



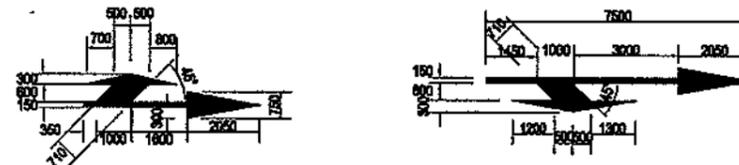
**L8 - TRANSVERSE YIELD LINE - WHITE**  
AT INTERSECTIONS ACROSS PAVEMENT IN THE SAME POSITION AS L7 LINE TO INDICATE GIVE WAY



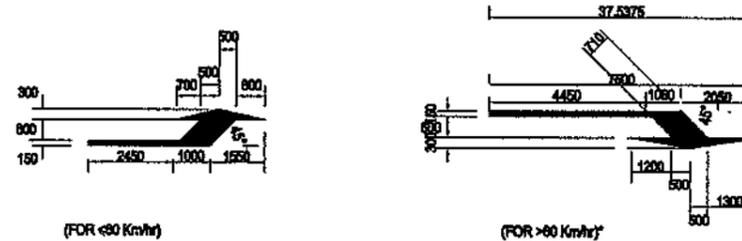
**L9 - DOTTED LINE - YELLOW**  
FOR EDGE LINE WHERE PARKING BAYS ARE PROVIDED OUTSIDE THE LANE



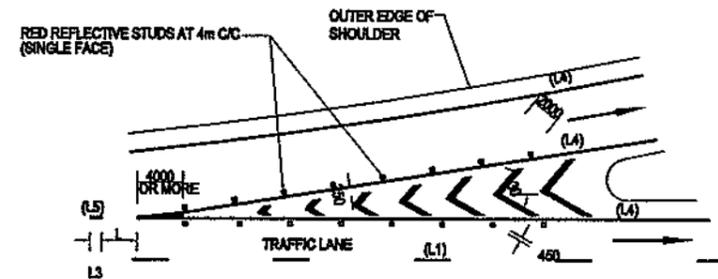
**ARROWS TYPE-I (STRAIGHT)**



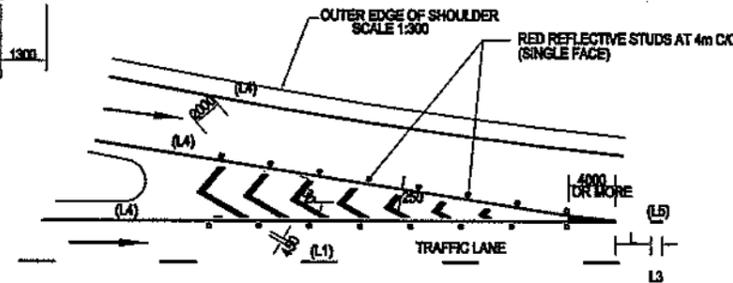
**ARROWS TYPE-II (COMBINED)**



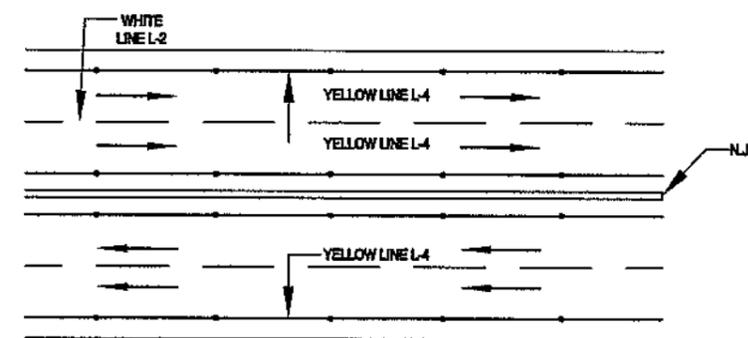
**ARROWS TYPE-III (DEFLECTION)**  
**LANE SELECTION ARROWS - WHITE**



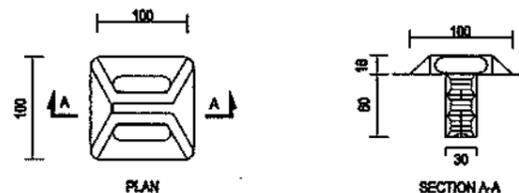
**ENTRANCE NOSE DETAIL**



**EXIT NOSE DETAIL**  
SCALE 1:300



**PROJECT ROAD**



**REFLECTORISED PAVEMENT STUD**  
**(RAISED PROFILE TYPE)**

TABLE - 1

ROADWAY SPEED	L (mm)	W1	W2	W3	W4	W5
<50 Km/hr	2000	100	100	100	300	100
60-80 Km/hr*	3000	120	120	150	300	100
>80 Km/hr	4000	150	150	150	300	120
SERVICE ROAD	2000	100	120	100	300	100

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REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

DRAWN: Faisal  
 SUBMITTED  
 RECOMMENDED  
 CHD./VER.  
 APPROVED

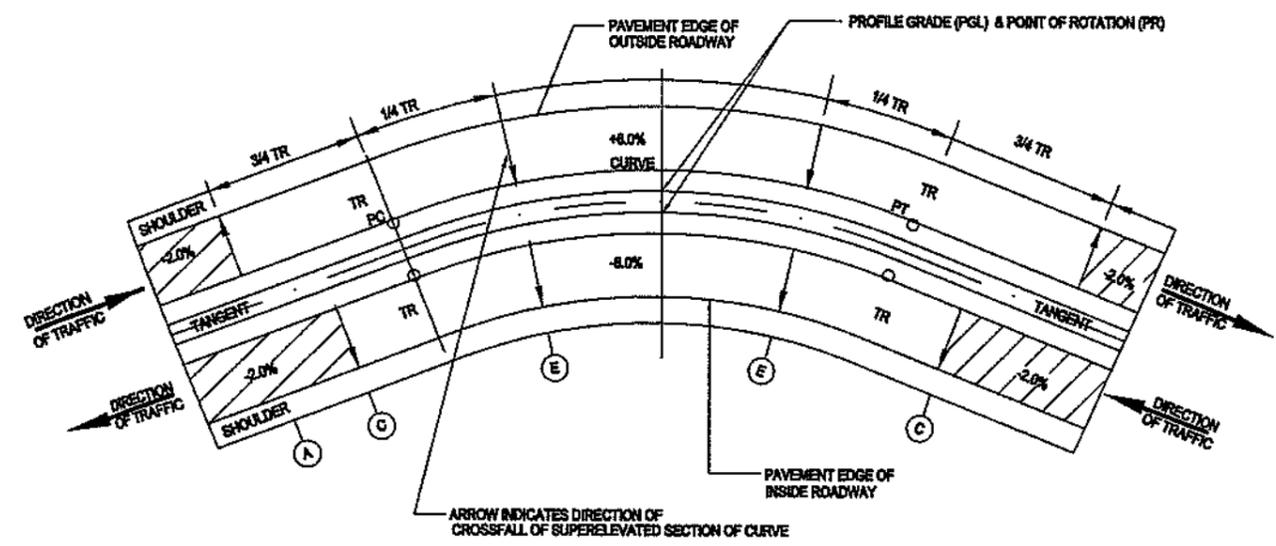
PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

<b>TYPICAL PAVEMENT MARKING DETAILS</b>		SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/MS001	REV. 0

TABLE-I  
RELATIVE SLOPE FOR SUPERELEVATED EDGE (S%)

DESIGN SPEED Km/h	2 LANE ROAD	1 LANE RAMP	2 LANE RAMP
50	0.87	0.80	1.00
80	0.50		
100	0.45		
120	0.40		

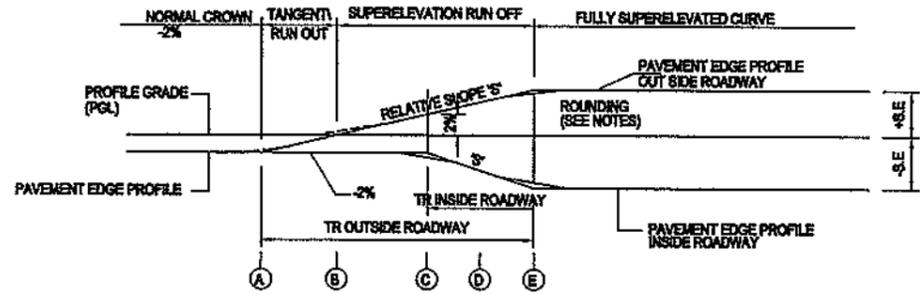
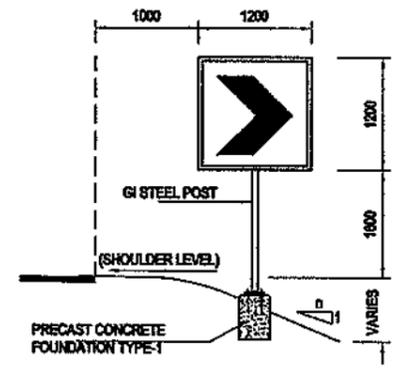
\* VALUE TO BE ADOPTED FOR THIS PROJECT.



PLAN OF TYPICAL SUPERELEVATION TRANSITION

	SHOULDER	PAVEMENT	INNER SHD	INNER MEDIAN SHD	PAVEMENT	SHOULDER
A	-4%	-2%	0%	0%	-2%	-4%
B	-4%	0%	0%	0%	-2%	-4%
C	-3%	+1%	+1%	0%	-2%	-4%
D	-2%	+2%	+2%	0%	-2%	-4%
E	-1%	+3%	+3%	0%	-3%	-4%
F	0%	+4%	+4%	0%	-4%	-4%
G	+1%	+5%	+5%	0%	-5%	-5%
H	+2%	+6%	+6%	0%	-6%	-6%

SECTIONS OF TYPICAL DISTRIBUTION OF SUPERELEVATION



NOTES :-

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
- ALL SUPERELEVATION RATES ARE EXPRESSED IN UNITS PER HUNDRED (%).
- PROFILE GRADE LINE (PGL) AND POINT OF ROTATION (PR) SHALL BE AS SHOWN IN THE TYPICAL CROSS SECTION.
- FOLLOWING SIGN CONVENTION FOR SUPERELEVATION RATE ARE APPLICABLE  
(-) WHEN LEFT EDGE OF PAVEMENT OR SHOULDER, IN DIRECTION OF TRAFFIC IS LOWER THAN RIGHT EDGE.  
(+) WHEN LEFT EDGE OF PAVEMENT OR SHOULDER, IN DIRECTION OF TRAFFIC, IS HIGHER THAN RIGHT EDGE.
- EDGE PROFILES OF SUPERELEVATED PAVEMENT AND SHOULDERS SHALL BE FREE FROM IRREGULARITIES, ROUNDING AT POINTS A, C & E SHALL BE ACHIEVED USING A 20 METER MINIMUM VERTICAL CURVE.
- THE FORMULAE USED FOR CALCULATION OF INNER & OUTER TRs ARE AS UNDER:-  
(i). LENGTH OF TR =  $\frac{\text{REQUIRED S.E.} \times \text{CROSS SLOPE}}{\text{PAVEMENT WIDTH TO BE ROTATED}} \times \text{S FACTOR}$   
(ii). 'S' FACTOR IS TAKEN FROM TABLE-I. THE LENGTH OF TRs ARE INDICATED ON PLAN & PROFILE SHEETS, WHICH MAY BE ADJUSTED AS PER SITE CONDITIONS AND/OR AS APPROVED BY THE ENGINEER'S REPRESENTATIVE.
- THE RATE OF SUPERELEVATION (S.E) IS RESTRICTED TO A MAXIMUM OF 8%.

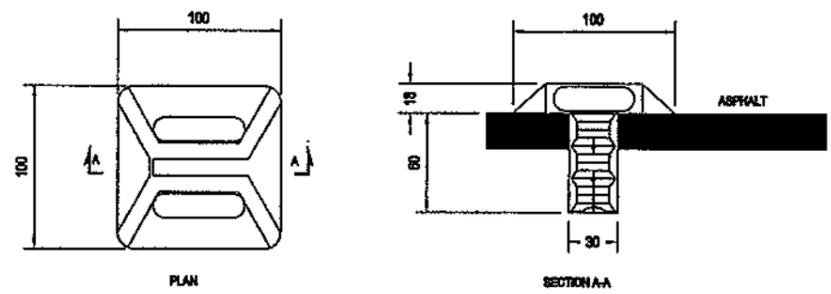
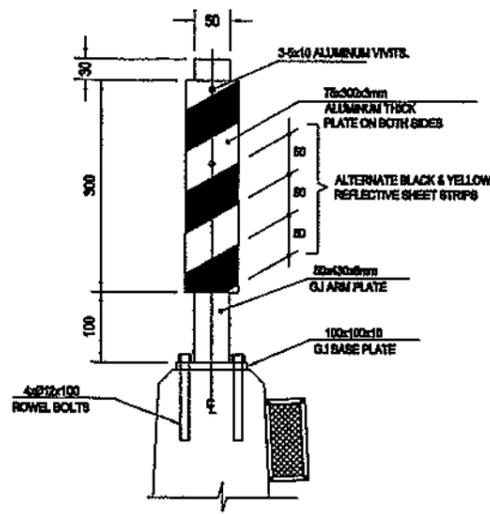
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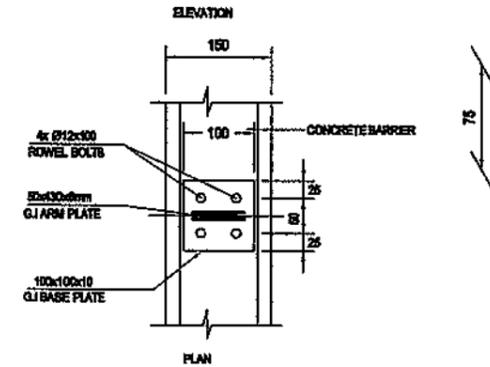
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REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT  
TRANSACTION ADVISORY SERVICES FOR  
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FAISALABAD - CHINIOT - SARGODHA ROAD  
(LENGTH = 66.6 Km)

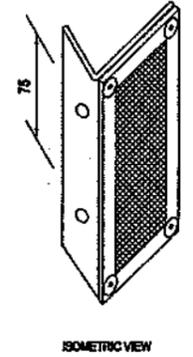
TYPICAL SUPERELEVATION DETAILS			SCALE
DATE DECEMBER, 2020	DRAWING No. SA-413/102/PD/MS002	REV.	



REFLECTORISED PAVEMENT STUD (RAISED PROFILE TYPE)

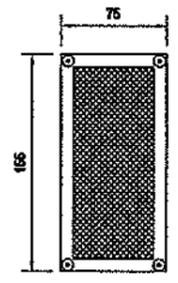
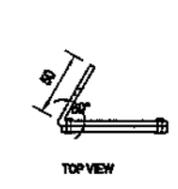


CURVE DELINEATOR TYPE-2 (RIGID TYPE)

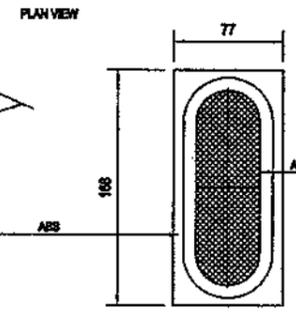
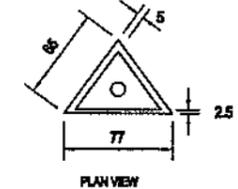


CONCRETE BARRIER REFLECTOR (TYPE-1)

(TO BE FIXED WITH CONCRETE BARRIER USE 2x2(10x75) ROWEL BOLTS)



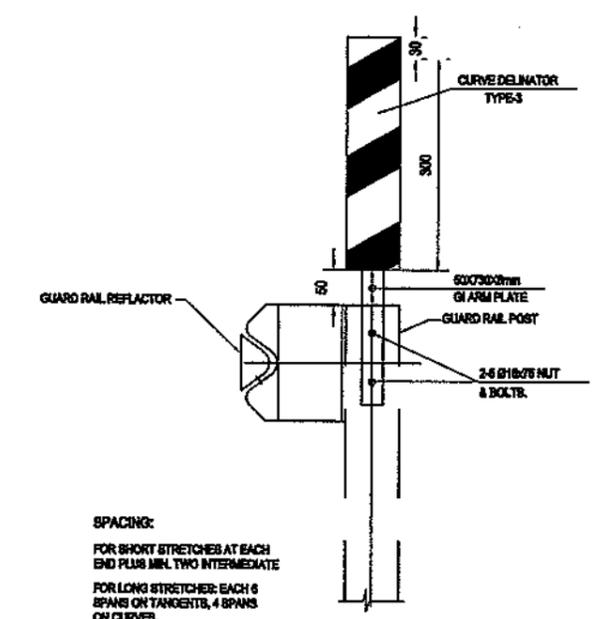
FRONT VIEW



CONCRETE BARRIER REFLECTOR (TYPE-2)

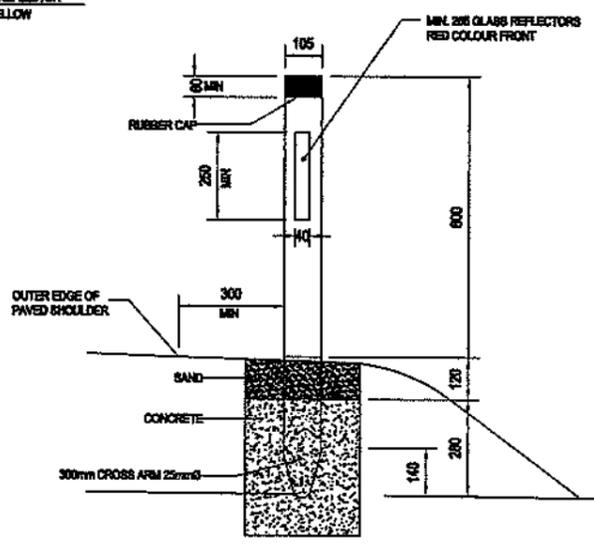
FRONT VIEW

PLAN VIEW



GUARD RAIL REFLECTOR

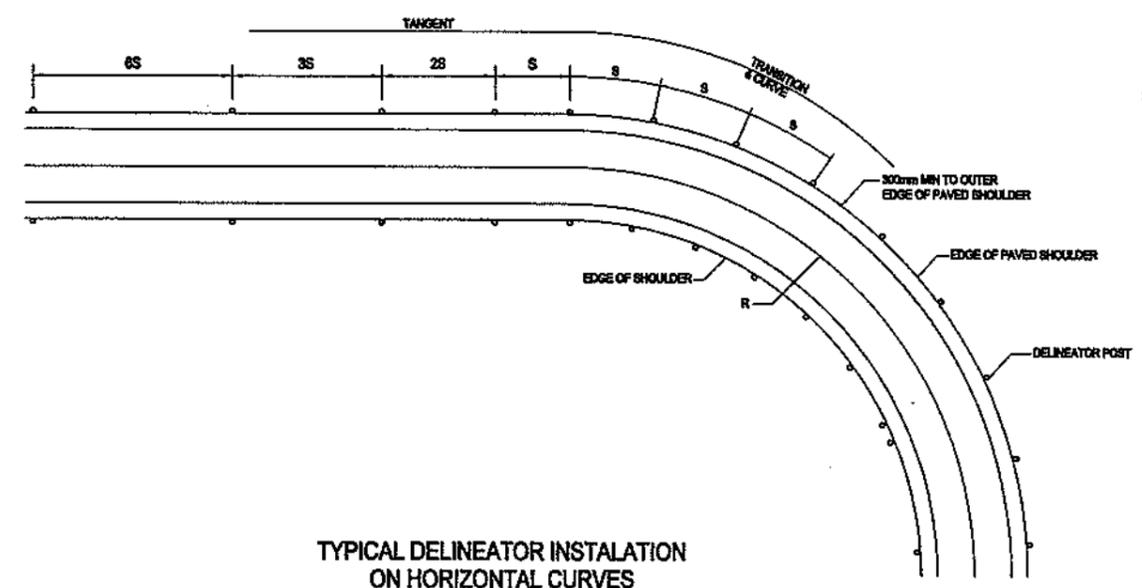
SPACING:  
FOR SHORT STRETCHES AT EACH END PLUS MIN. TWO INTERMEDIATE  
FOR LONG STRETCHES: EACH 6 SPANS ON TANGENTS, 4 SPANS ON CURVES.  
REFLECTING SIDE:  
-ONE REFLECTING SIDE FOR MOTORWAY AND ONE WAY RAMP/TWO REFLECTING SIDE FOR FLYOVERS AND TWO WAY RAMP.



CURVE DELINEATOR (TYPE-1)

(FLEXIBLE TYPE) (ALONG SHOULDER EDGES WHEN NO RAIL OR BARRIER IS FIXED)

CURVE RADIUS R (m)	SPACING ON CURVE (S) (m)
500 & ABOVE	50
300	30
200	20
100	15
50	10
25	5



TYPICAL DELINEATOR INSTALATION ON HORIZONTAL CURVES

NOTES

- 1 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- 2 - DELINEATOR TYPE-1 SHALL BE FIXED AT OUTER EDGE OF C/WAY WHERE NO RAIL OR BARRIER IS FIXED.
- 3 - DELINEATORS TYPE-2 SHALL BE FIXED AT MEDIAN BARRIER ALONG CURVES AT BARRIER ALONG BRIDGES INCLUDING 100m APPROACH AND AT OTHER HAZARDOUS LOCATIONS AS DIRECTED AT EACH END BY THE ENGINEER.
- 4 - SPACING OF DELINEATOR TYPE-2 SHALL BE SAME AS THAT TYPE-1

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REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				
03				
02				
01				

PROJECT  
 TRANSACTION ADVISORY SERVICES FOR  
 DUALIZATION AND REHABILITATION OF EXISTING  
 FAISALABAD - CHINIOT - SARGODHA ROAD  
 (LENGTH = 66.6 Km)

REFLECTORS, STUDS  
 AND DELINEATORS

DATE: DECEMBER, 2020  
 DRAWING No. SA-413/102/PD/MS003  
 SCALE: 1:100