

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

GOVERNMENT OF SOUTHERN SUDAN

**JUBA URBAN TRANSPORT INFRASTRUCTURE AND
CAPACITY DEVELOPMENT STUDY**

IN

THE SOUTHERN SUDAN

FINAL REPORT (4)

DRAWINGS

JULY 2010

**CTI ENGINEERING INTERNATIONAL CO., LTD.
YACHIYO ENGINEERING CO., LTD.**

DRAWINGS

MINISTRY OF TRANSPORT AND ROADS
GOVERNMENT OF SOUTHERN SUDAN
MINISTRY OF PHYSICAL INFRASTRUCTURE
CENTRAL EQUATORIA STATE

JUBA URBAN TRANSPORT INFRASTRUCTURE
AND CAPACITY DEVELOPMENT STUDY
IN THE SOUTHERN SUDAN

DESIGN DRAWINGS

July, 2010

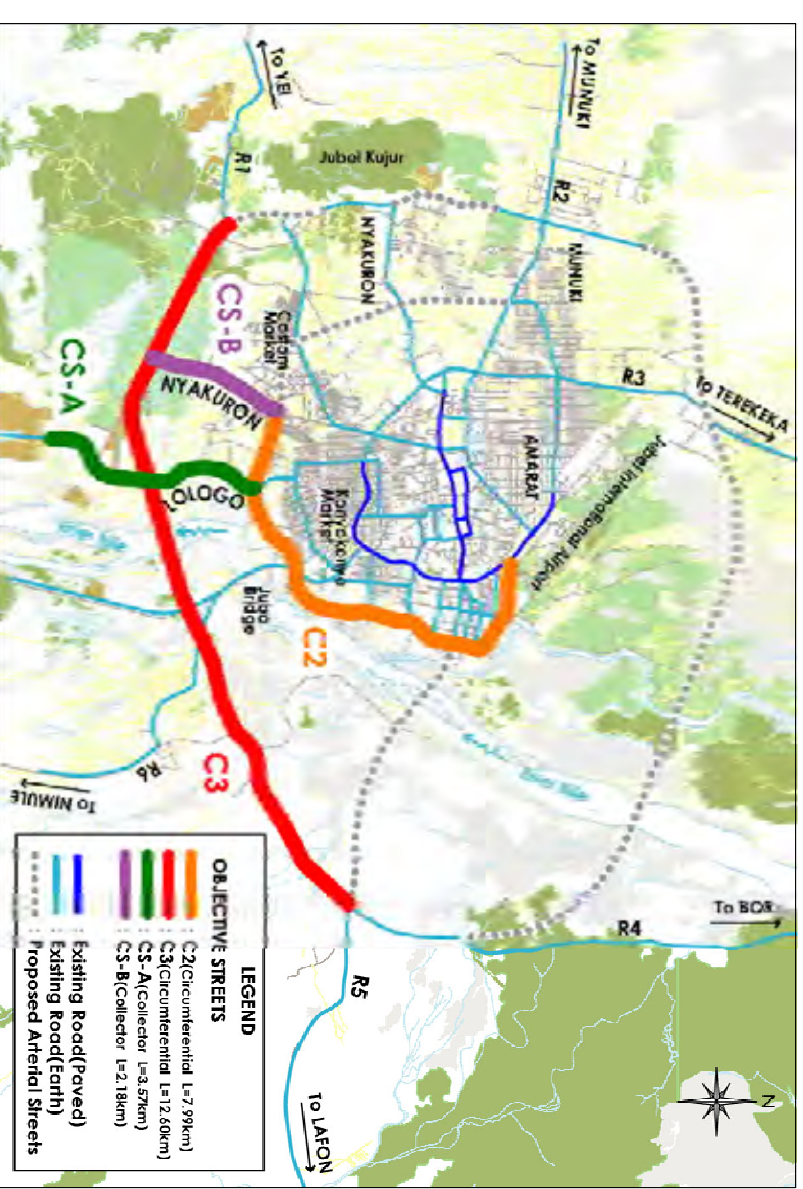
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LIST OF DRAWINGS & PROJECT LOCATION MAP

1. TYPICAL CROSS SECTION	CS-1 to 3	5. STANDARD DETAILS	
		Typical Plan of Intersections	PI-1-2
2. PLAN & PROFILE		Details of Green Belt & Sidewalk and Verge Block	G-1
Circumferential Street C2	PL2-1 to 10	Details of Catch Basin and L Shape Gutter & Grating Cover	G-2
Circumferential Street C3	PL3-1 to 14	Details of Median Drainage	G-3
Collector Street CS-A (Lologo)	PLA-1 to 5	Bus Bay	G-4
Collector Street CS-B (Nyakuron)	PLB-1 to 3	Cross Roads and House Access	G-5
3. TYPICAL PLAN OF DRAINAGE		Standard Pavement Marking Traffic Signal	G-6
Circumferential Street C2	PD2-1	General Drawing of Traffic Signal	G-7
Circumferential Street C3	PD3-1		
Circumferential Street CS-A (LOLOGO)	PDA-1		
Circumferential Street CS-B (NYAKURON)	PDB-1		

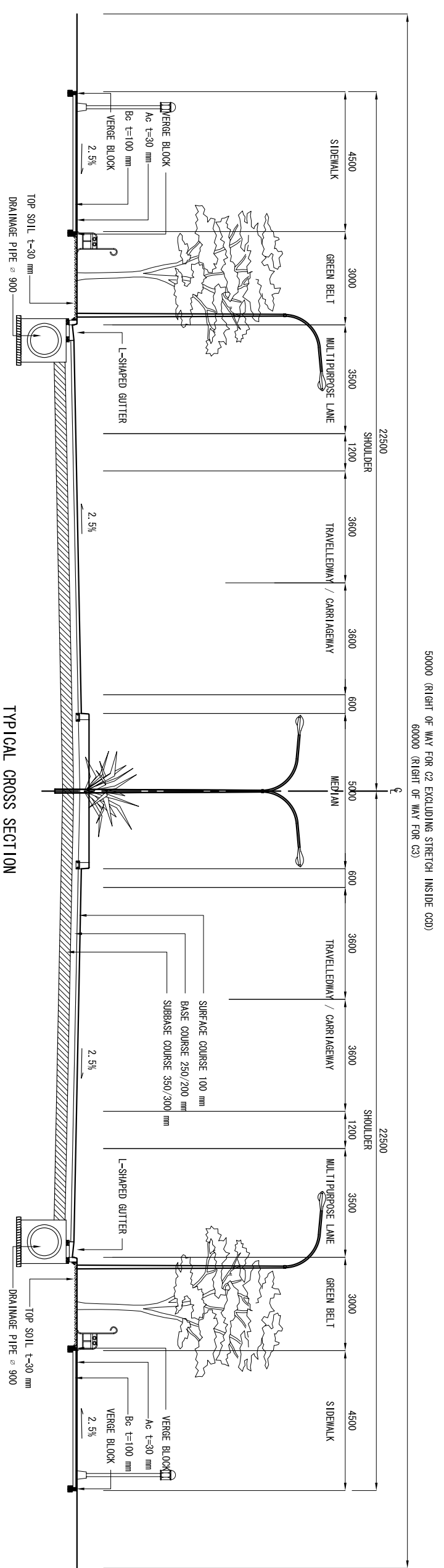
4. BRIDGE & CULVERTS

C3 Nile River Bridge CROSSING	BR-1
FULL BRIDGE FOR C2-B1	BR-2
FULL BRIDGE FOR C3-B3	BR-3
Typical Bridge For Length 50m	BR-4
Typical Bridge For Length 35m	BR-5
Typical Bridge For Length 30m	BR-6
Typical Bridge For Length 20m	BR-7
Typical Box Culvert for Arterial Roads C2 & C3	CL-1
Typical Box Culvert for Collector Roads CSA & CSB	CL-2



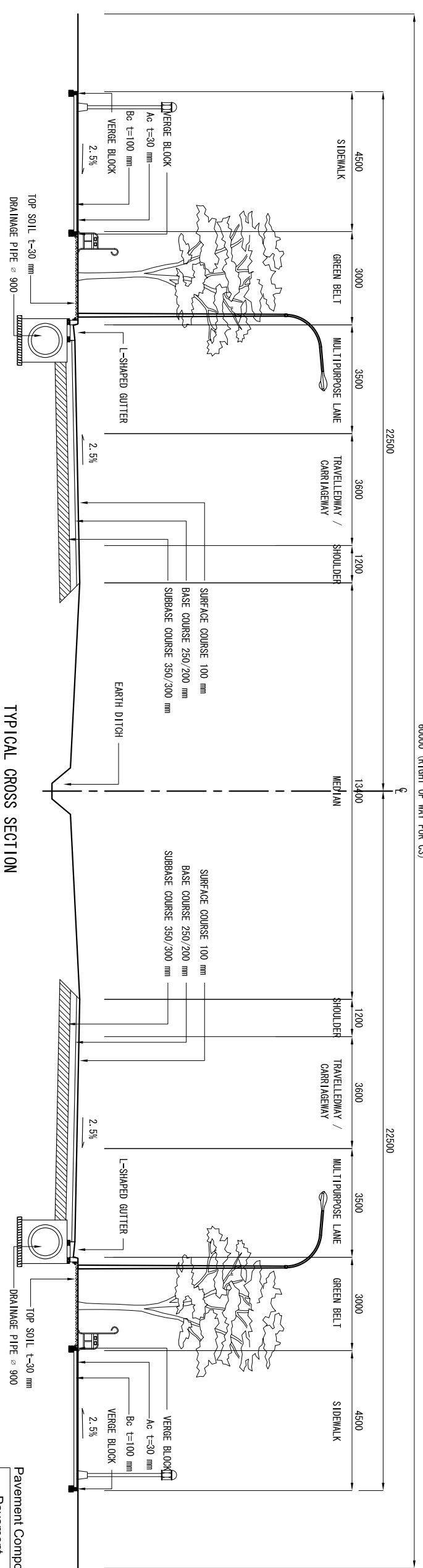
MINISTRY OF TRANSPORT AND ROADS GOVERNMENT OF SOUTHERN SUDAN MINISTRY OF PHYSICAL INFRASTRUCTURE CENTRAL EQUATORIA STATE	JUBA URBAN TRANSPORT INFRASTRUCTURE AND CAPACITY DEVELOPMENT STUDY IN THE SOUTHERN SUDAN	CTI ENGINEERING INTERNATIONAL CO.,LTD YACHIYO ENGINEERING CO.,LTD.	TITLE : LIST OF DRAWINGS & PROJECT LOCATION MAP	SCALE	Drawing No.	LO-1
				NOT TO SCALE	Sheet No.	1

NOTES:
1. THIS DRAWING IS FOR REFERENCE ONLY AND IS NOT FOR CONSTRUCTION USE



TYPICAL CROSS SECTION
(ULTIMATE STAGE)

50000 (RIGHT OF WAY FOR C2)
60000 (RIGHT OF WAY FOR C3)



TYPICAL CROSS SECTION
(INITIAL STAGE)

Pavement Composition

Pavement	C2 (mm)	C3 (mm)
Surface Course	10	10
Base Course	20	15
Subbase Course	35	30

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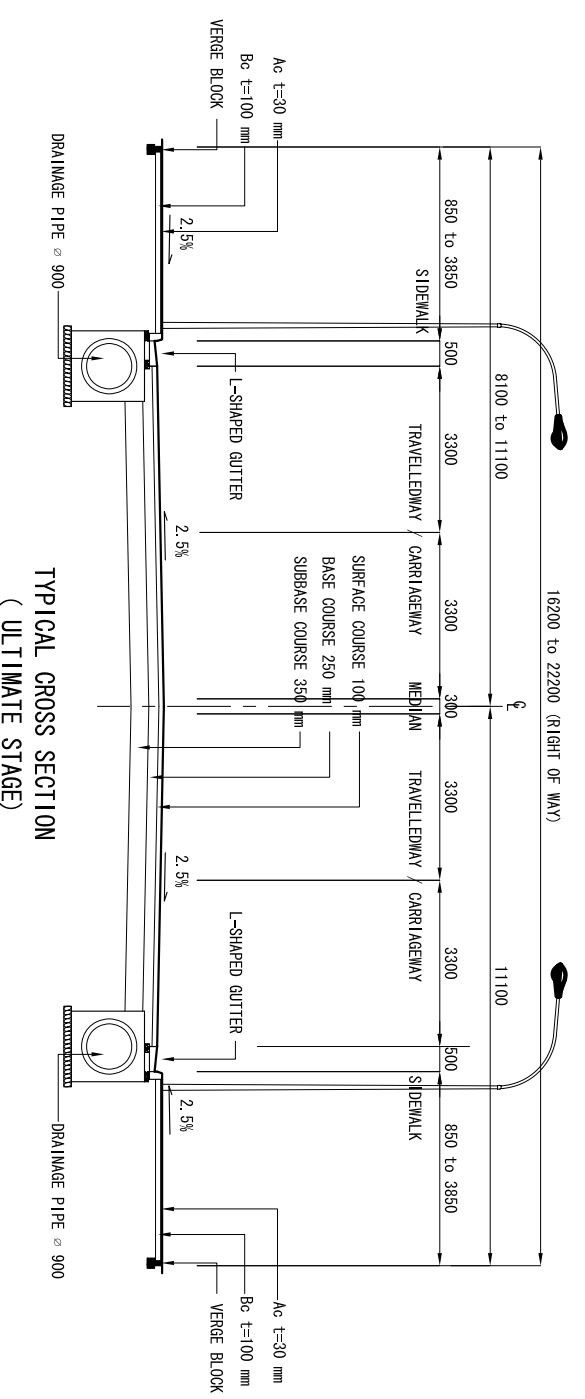
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YACHIYO ENGINEERING CO.,LTD.

TITLE : TYPICAL CROSS SECTIONS
(C2 & C3 STREETS)

SCALE 1:150

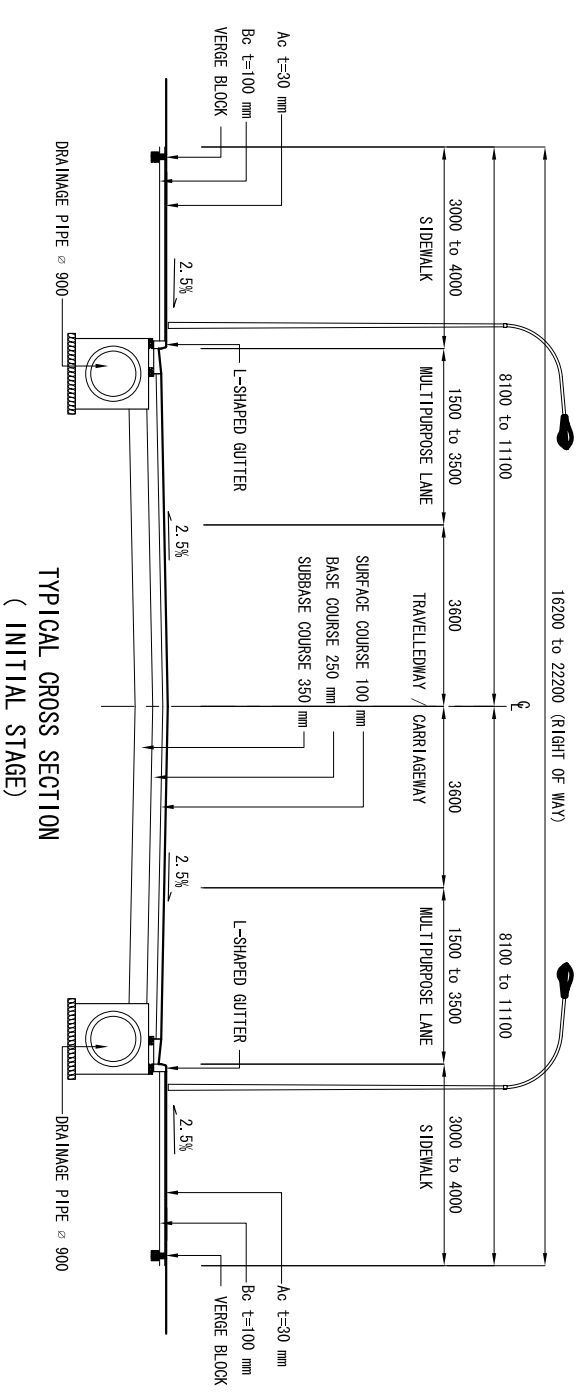
Drawing No. CS-1
Sheet No. 2

NOTES:
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Pavement Composition

Pavement	C2 (mm)	C3 (mm)
Surface Course	10	10
Base Course	20	15
Subbase Course	35	30



MINISTRY OF TRANSPORT AND ROADS
GOVERNMENT OF SOUTHERN SUDAN
MINISTRY OF PHYSICAL INFRASTRUCTURE
CENTRAL EQUATORIA STATE

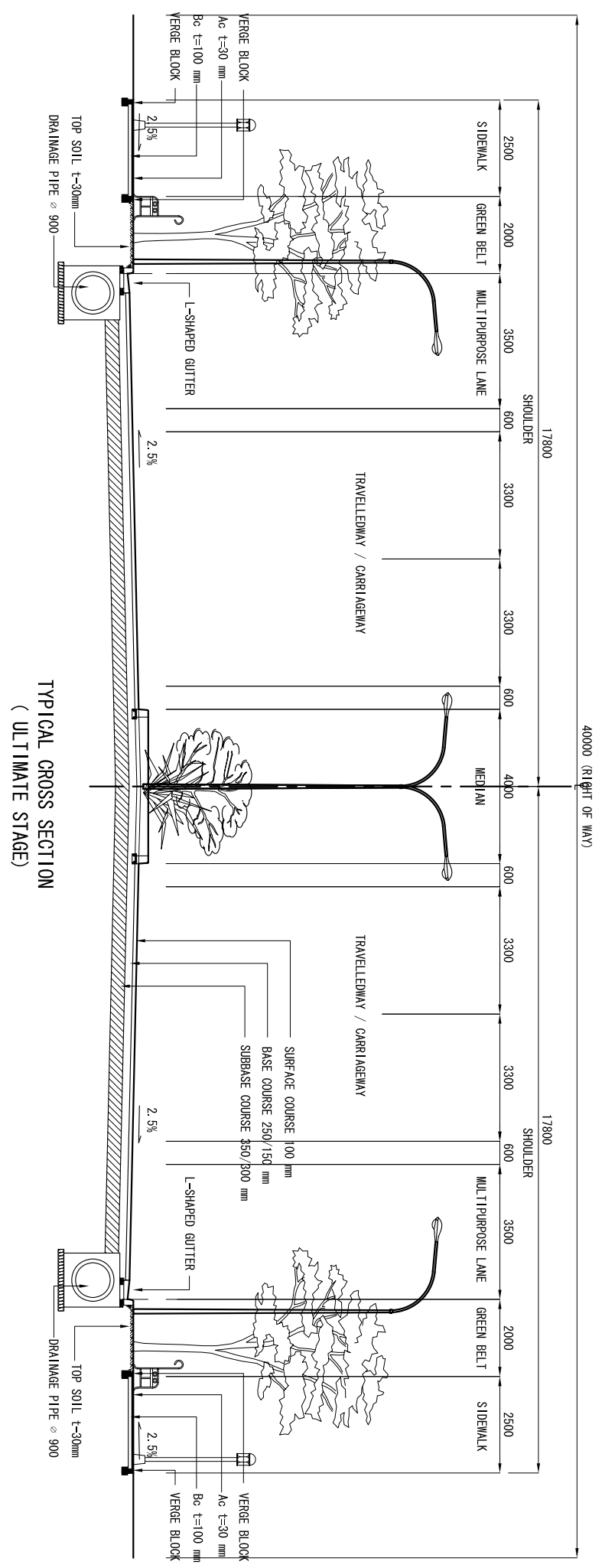
JUBA URBAN TRANSPORT INFRASTRUCTURE
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CTI ENGINEERING INTERNATIONAL CO.,LTD
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TITLE :
TYPICAL CROSS SECTIONS
(C2 STREET INSIDE CCD AREA)

SCALE 1:150
Drawing No. GS-2
Sheet No. 3

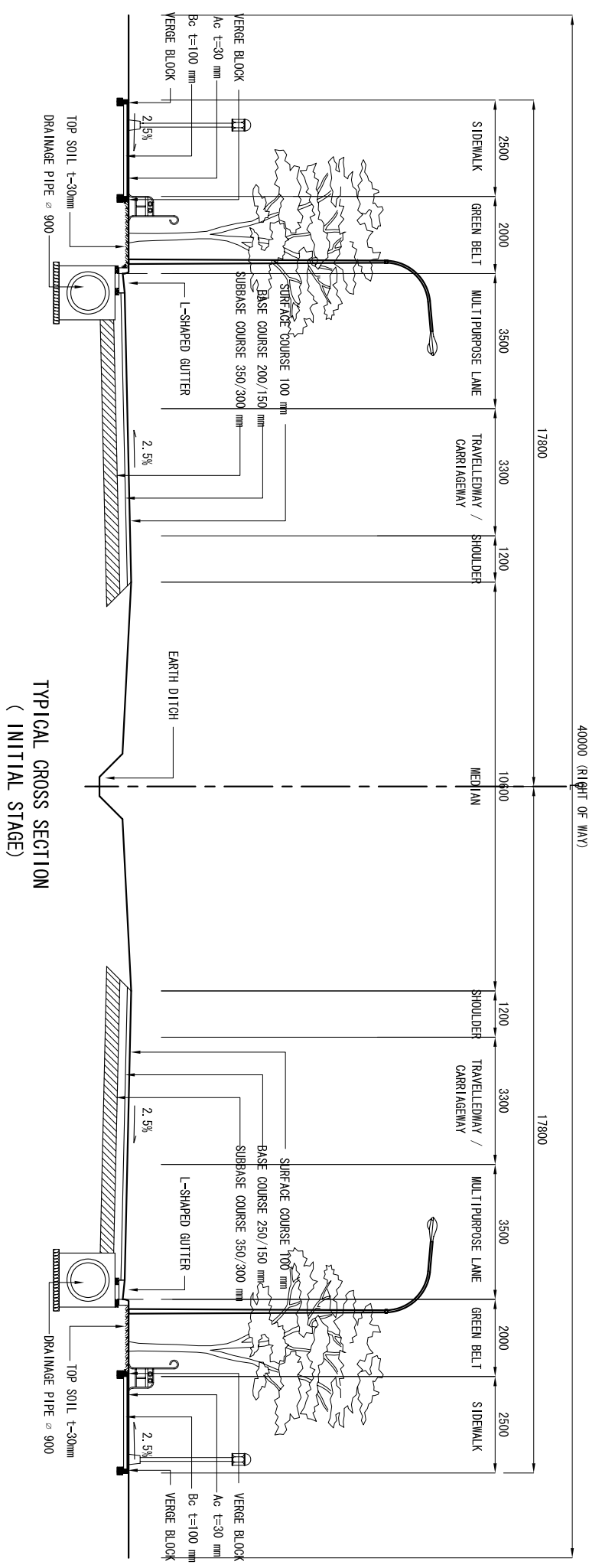
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Pavement Composition

Pavement	CS-A (mm)	CS-B (mm)
Surface Course	10	10
Base Course	15	20
Subbase Course	30	35

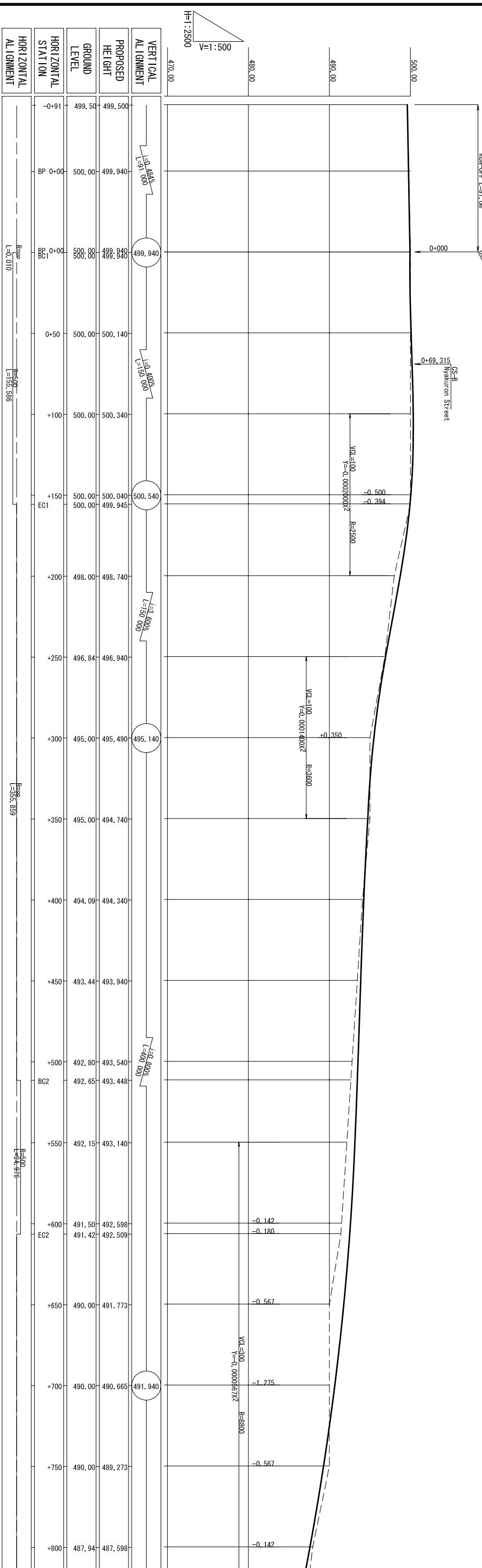
CS-A: Lologo Street
CS-B: Nyakuron Street



MINISTRY OF TRANSPORT AND ROADS GOVERNMENT OF SOUTHERN SUDAN MINISTRY OF PHYSICAL INFRASTRUCTURE CENTRAL EQUATORIA STATE	JUBA URBAN TRANSPORT INFRASTRUCTURE AND CAPACITY DEVELOPMENT STUDY IN THE SOUTHERN SUDAN	CTI ENGINEERING INTERNATIONAL CO.,LTD YACHIYO ENGINEERING CO.,LTD.	TITLE : TYPICAL CROSS SECTIONS (LOGOGO & NYAKURON STREET)	SCALE 1:150	Drawing No. CS-3	Sheet No. 4
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NOTES:
 1. THIS DRAWING IS FOR REFERENCE ONLY AND NOT FOR CONSTRUCTION USE
 2. THE COORDINATES AND ELEVATION ARE BASED ON THE TOPOGRAPHIC MAP PREPARED BY USING SATELLITE IMAGE OF JUBA IN MARCH OF 2009 AND IS NOT BASED ON THE FIELD SURVEY.

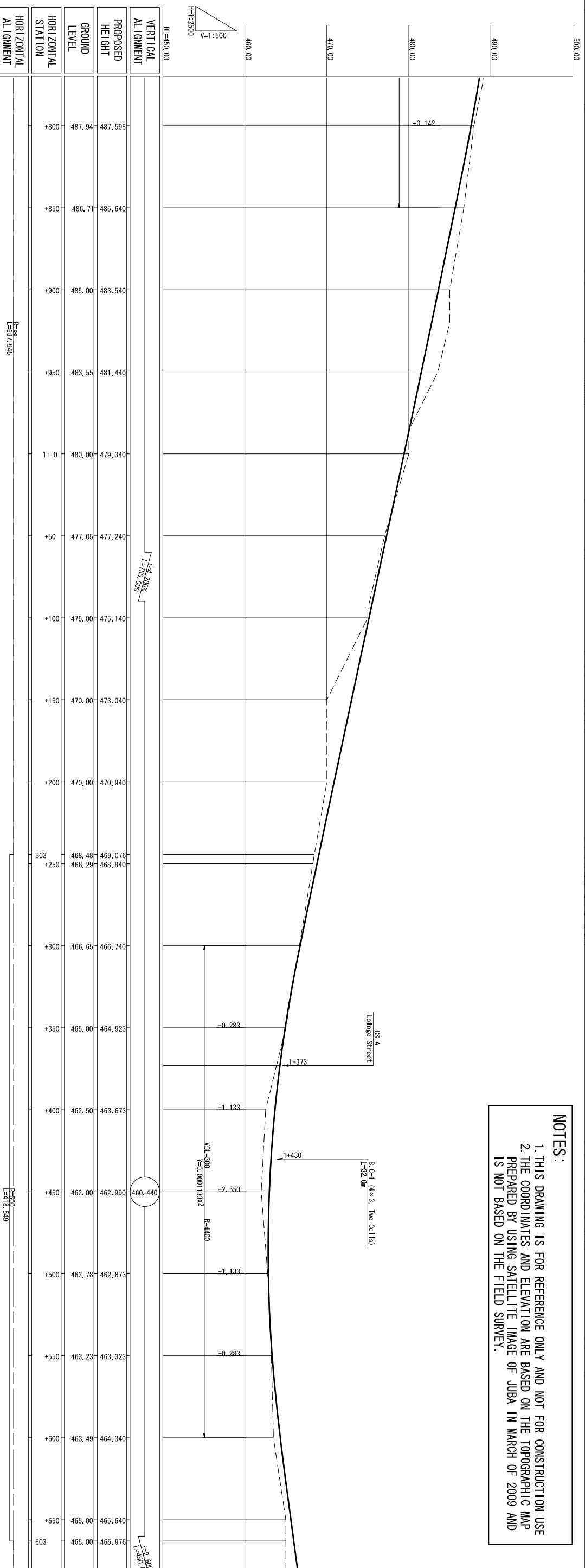


MINISTRY OF TRANSPORT AND ROADS GOVERNMENT OF SOUTHERN SUDAN MINISTRY OF PHYSICAL INFRASTRUCTURE CENTRAL EQUATORIA STATE		JUBA URBAN TRANSPORT INFRASTRUCTURE AND CAPACITY DEVELOPMENT STUDY IN THE SOUTHERN SUDAN		CTI ENGINEERING INTERNATIONAL CO.,LTD YACHYO ENGINEERING CO.,LTD.		TITLE : PLAN AND PROFILE (ROUTE-C2) (1/10)		SCALE H=1:2500, V=1:500		Drawing No. Sheet No.	
HORIZONTAL ALIGNMENT		L=0.010		L=150.000		L=150.000		L=350.889		L=300.000	
HORIZONTAL STATION		-0+91		0+50		+100		+200		+300	
GROUND LEVEL		499.500		500.140		500.340		498.740		494.340	
PROPOSED HEIGHT		499.940		500.540		495.140		493.940		493.140	
VERTICAL ALIGNMENT		L=150.000		L=150.000		L=150.000		L=150.000		L=150.000	
HORIZONTAL STATION		BP 0+00		BC1 0+00		EC1		BC2		EC2	
GROUND LEVEL		499.940		499.940		495.140		493.940		492.509	
PROPOSED HEIGHT		499.940		499.940		495.140		493.940		492.509	
VERTICAL ALIGNMENT		L=150.000		L=150.000		L=150.000		L=150.000		L=150.000	
HORIZONTAL STATION		0+50		+100		+200		+300		+400	
GROUND LEVEL		500.000		500.340		498.740		494.340		493.140	
PROPOSED HEIGHT		500.540		495.140		493.940		492.509		491.140	
VERTICAL ALIGNMENT		L=150.000		L=150.000		L=150.000		L=150.000		L=150.000	
HORIZONTAL STATION		+450		+500		+550		+600		+650	
GROUND LEVEL		496.940		494.340		493.140		492.509		491.140	
PROPOSED HEIGHT		496.940		495.140		493.940		492.509		491.140	
VERTICAL ALIGNMENT		L=150.000		L=150.000		L=150.000		L=150.000		L=150.000	
HORIZONTAL STATION		+700		+750		+800					
GROUND LEVEL		490.665		489.273		487.598					
PROPOSED HEIGHT		491.940		488.540		487.140					



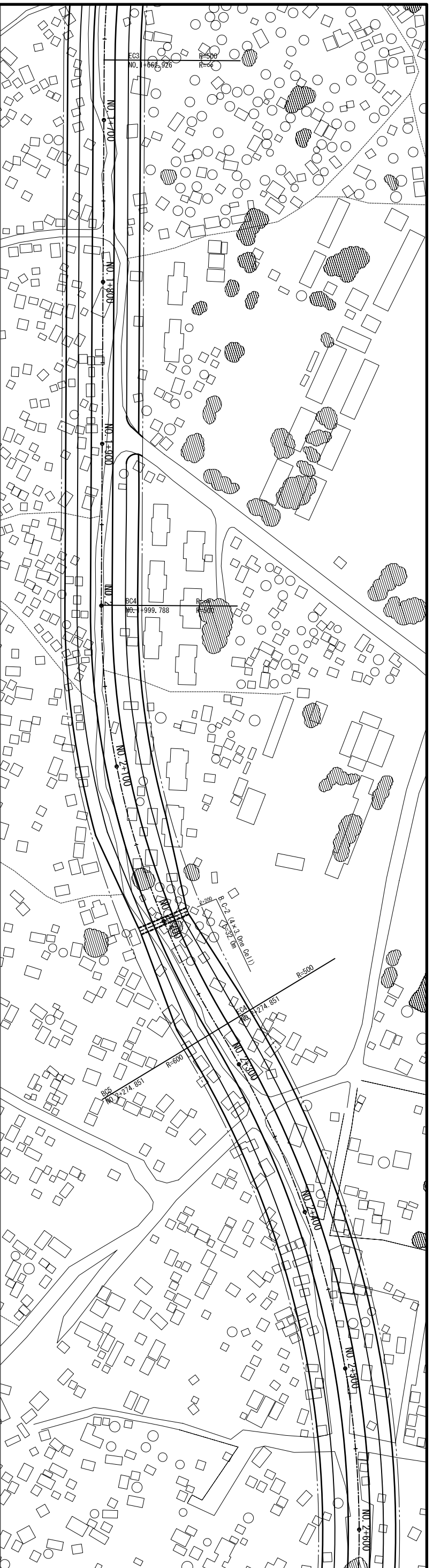
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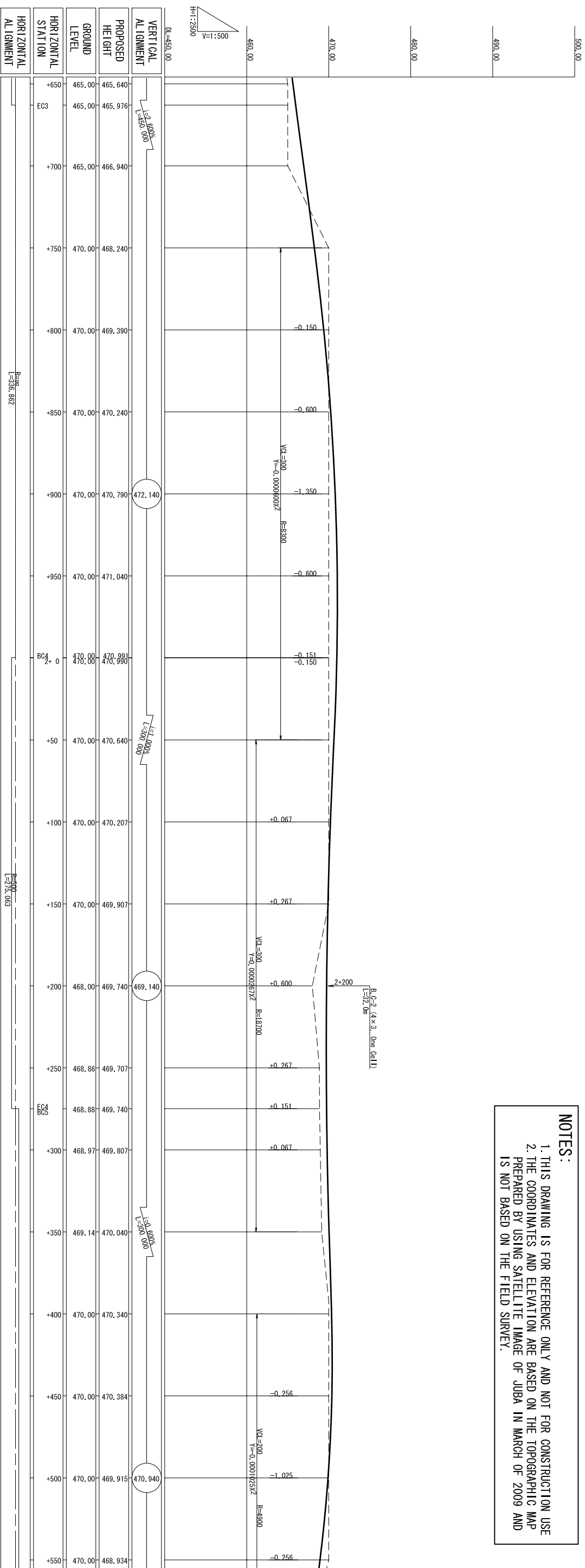
VERTICAL ALIGNMENT	PROPOSED HEIGHT	GROUND LEVEL	HORIZONTAL STATION	HORIZONTAL ALIGNMENT
	487.596	487.94	+800	
	485.640	486.71	+850	
	483.540	485.00	+900	
	481.440	483.55	+950	
	479.340	480.00	+1+0	
	477.240	477.05	+50	
	475.140	475.00	+100	
	473.040	470.00	+150	
	470.940	470.00	+200	
BC3	469.076	468.48	+250	
	468.840	468.29		
	466.740	466.65	+300	
	464.923	465.00	+350	
	463.673	462.50	+400	
	462.990	462.00	+450	
	462.873	462.78	+500	
	463.323	463.23	+550	
	464.340	463.49	+600	
	465.640	465.00	+650	
EC3	465.976	465.00		

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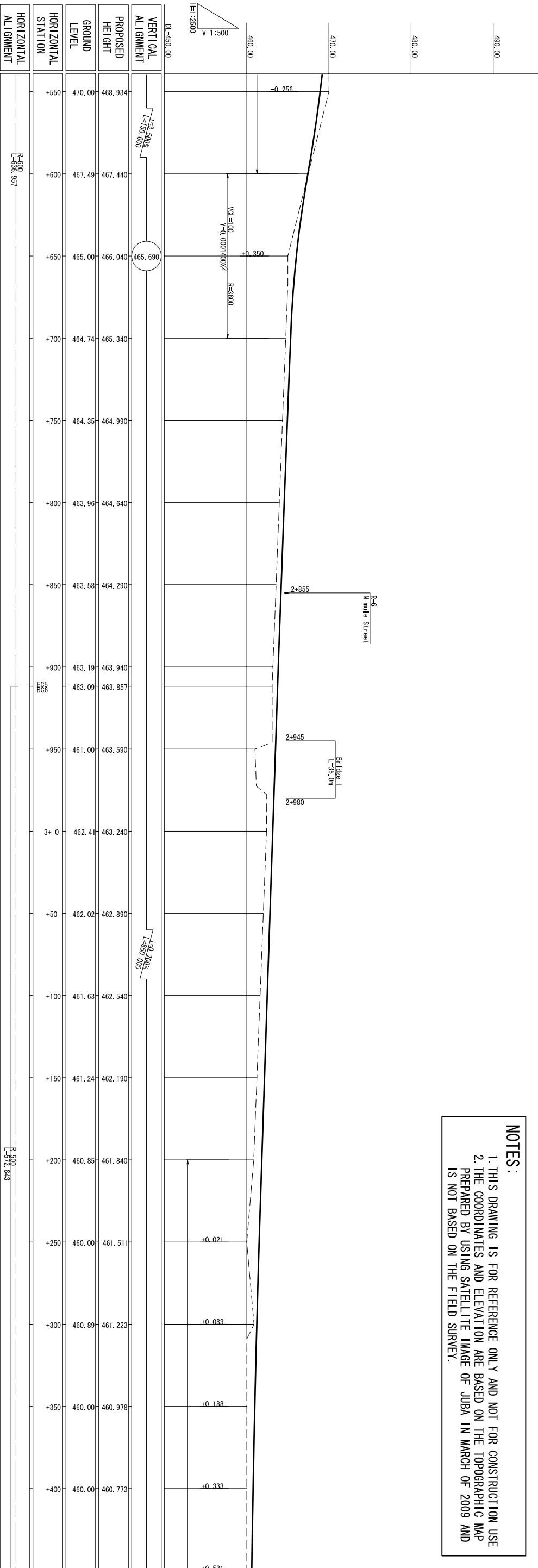


HORIZONTAL ALIGNMENT	HORIZONTAL STATION	GROUND LEVEL	PROPOSED HEIGHT	VERTICAL ALIGNMENT	
EC3	+650	465.00	465.640	L=240.000 R=8300	
	+700	465.00	466.940		
	+750	470.00	468.240		
	+800	470.00	469.390		
	+850	470.00	470.240		
	+900	470.00	470.790		
	+950	470.00	471.040		
BC4	+0	470.00	470.990		L=300.000 R=8300
	+50	470.00	470.640		
	+100	470.00	470.207		
	+150	470.00	469.907		
	+200	468.00	469.740		
	+250	468.88	469.707		
	+300	468.97	469.807		
EC4	+350	469.14	470.040	L=240.000 R=8300	
	+400	470.00	470.340		
	+450	470.00	470.384		
	+500	470.00	469.915		
	+550	470.00	468.934		

MINISTRY OF TRANSPORT AND ROADS GOVERNMENT OF SOUTHERN SUDAN MINISTRY OF PHYSICAL INFRASTRUCTURE CENTRAL EQUATORIA STATE		JUBA URBAN TRANSPORT INFRASTRUCTURE AND CAPACITY DEVELOPMENT STUDY IN THE SOUTHERN SUDAN		CTI ENGINEERING INTERNATIONAL CO.,LTD YACHYO ENGINEERING CO.,LTD.		TITLE : PLAN AND PROFILE (ROUTE-C2) (3/10)		SCALE H=1:2500, V=1:500		Drawing No. Sheet No.		PL2-3 7	
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VERTICAL ALIGNMENT	PROPOSED HEIGHT	GROUND LEVEL	HORIZONTAL STATION	HORIZONTAL ALIGNMENT

468.934	467.440	465.040	464.440	464.990	464.640	464.290	463.940	463.857	463.590	463.240	462.890	462.540	462.190	461.840	461.511	461.223	460.978	460.773	
470.00	467.49	465.00	464.74	464.35	463.96	463.58	463.19	463.09	462.60	462.41	462.02	461.63	461.24	460.85	460.46	460.07	460.00	460.00	460.00
+550	+600	+650	+700	+750	+800	+850	+900	+950	3+0	+50	+100	+150	+200	+250	+300	+350	+400		

MINISTRY OF TRANSPORT AND ROADS GOVERNMENT OF SOUTHERN SUDAN MINISTRY OF PHYSICAL INFRASTRUCTURE CENTRAL EQUATORIA STATE	JUBA URBAN TRANSPORT INFRASTRUCTURE AND CAPACITY DEVELOPMENT STUDY IN THE SOUTHERN SUDAN	CTI ENGINEERING INTERNATIONAL CO.,LTD YACHYO ENGINEERING CO.,LTD.	TITLE : PLAN AND PROFILE (ROUTE-C2) (4/10)	SCALE H=1:2500, V=1:500	Drawing No. Sheet No.	PL2-4 8
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