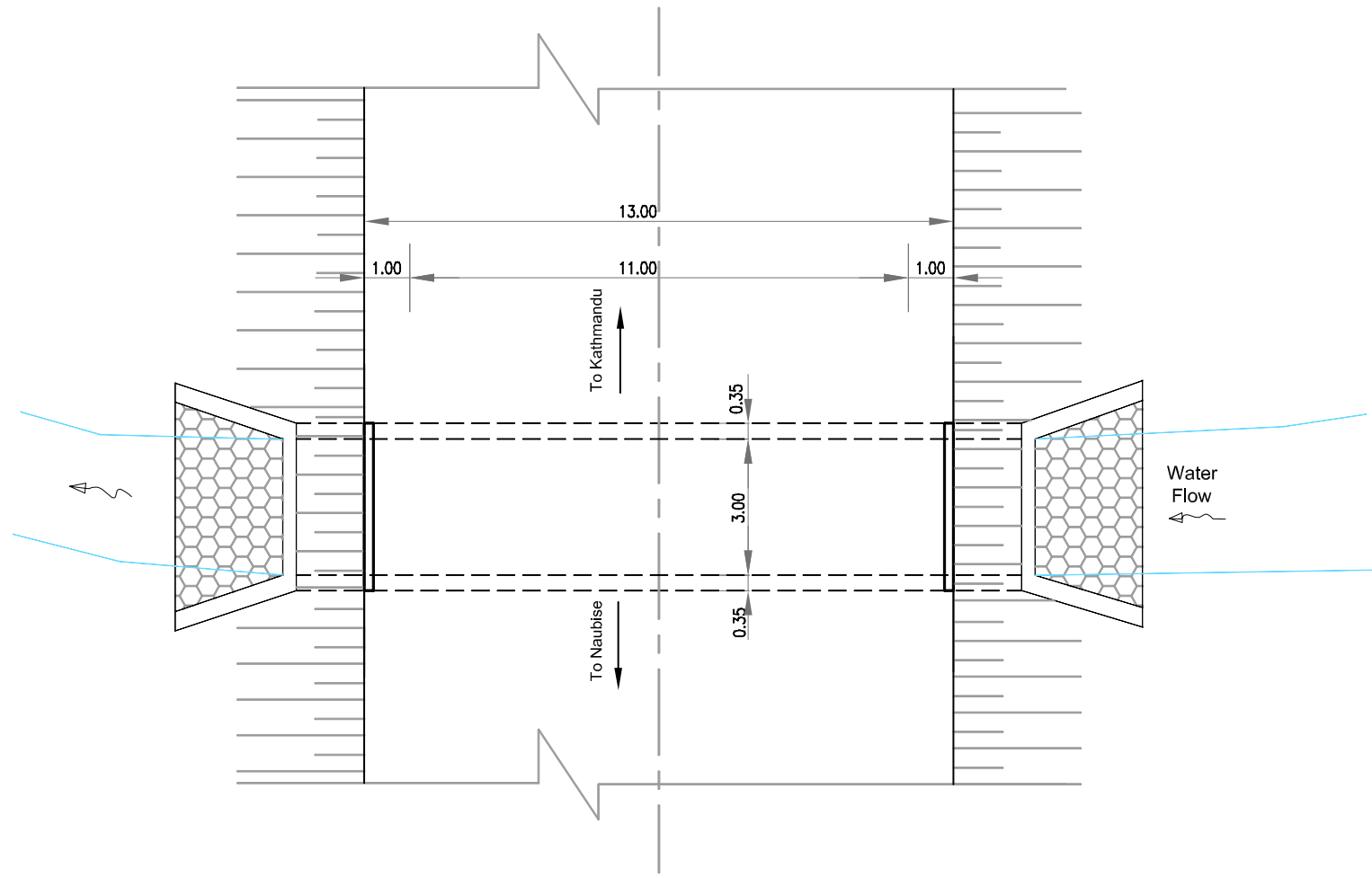
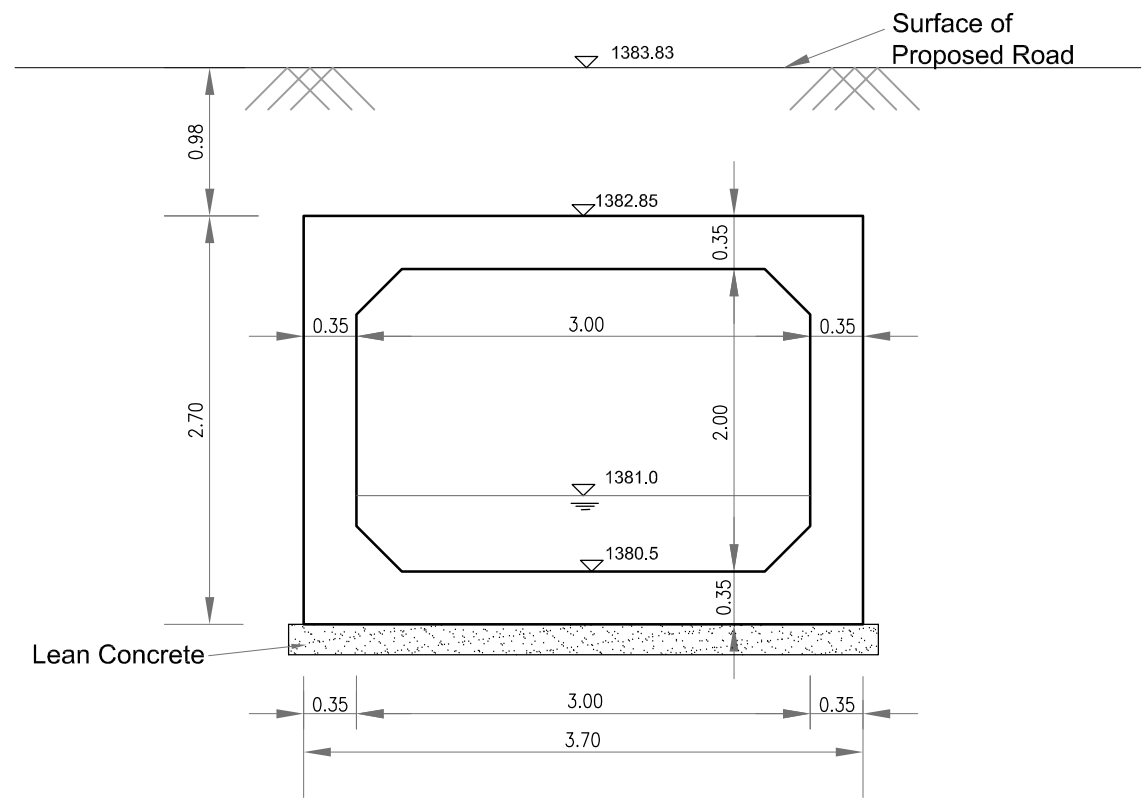


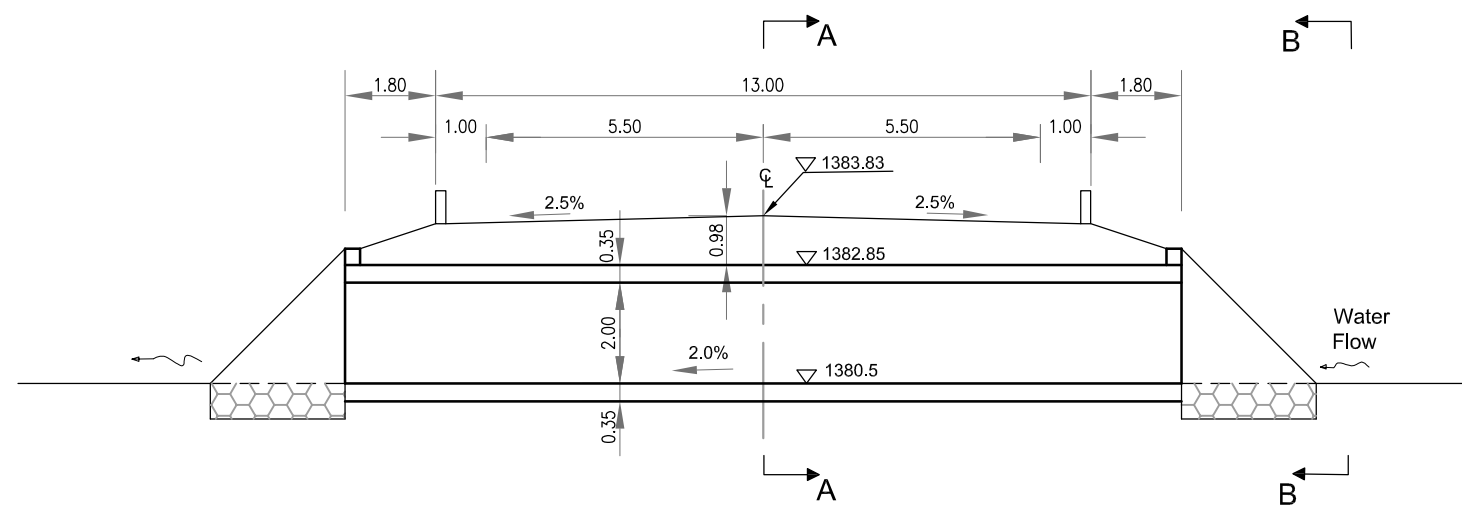
BOX CULVERTS AND BRIDGES



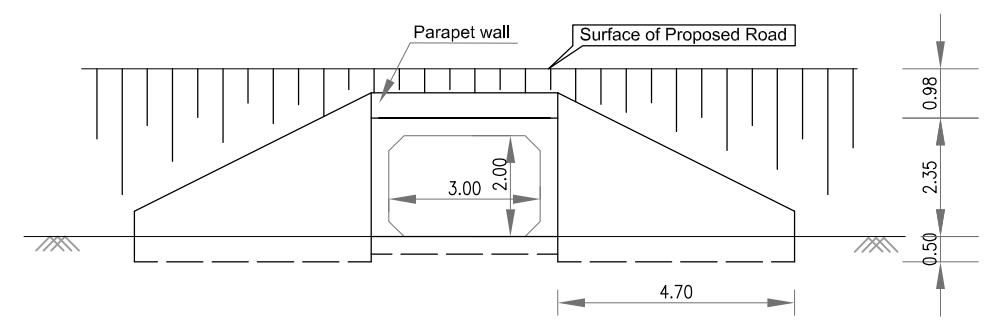
Plan
Scale 1:150



Section A-A
Scale 1:50

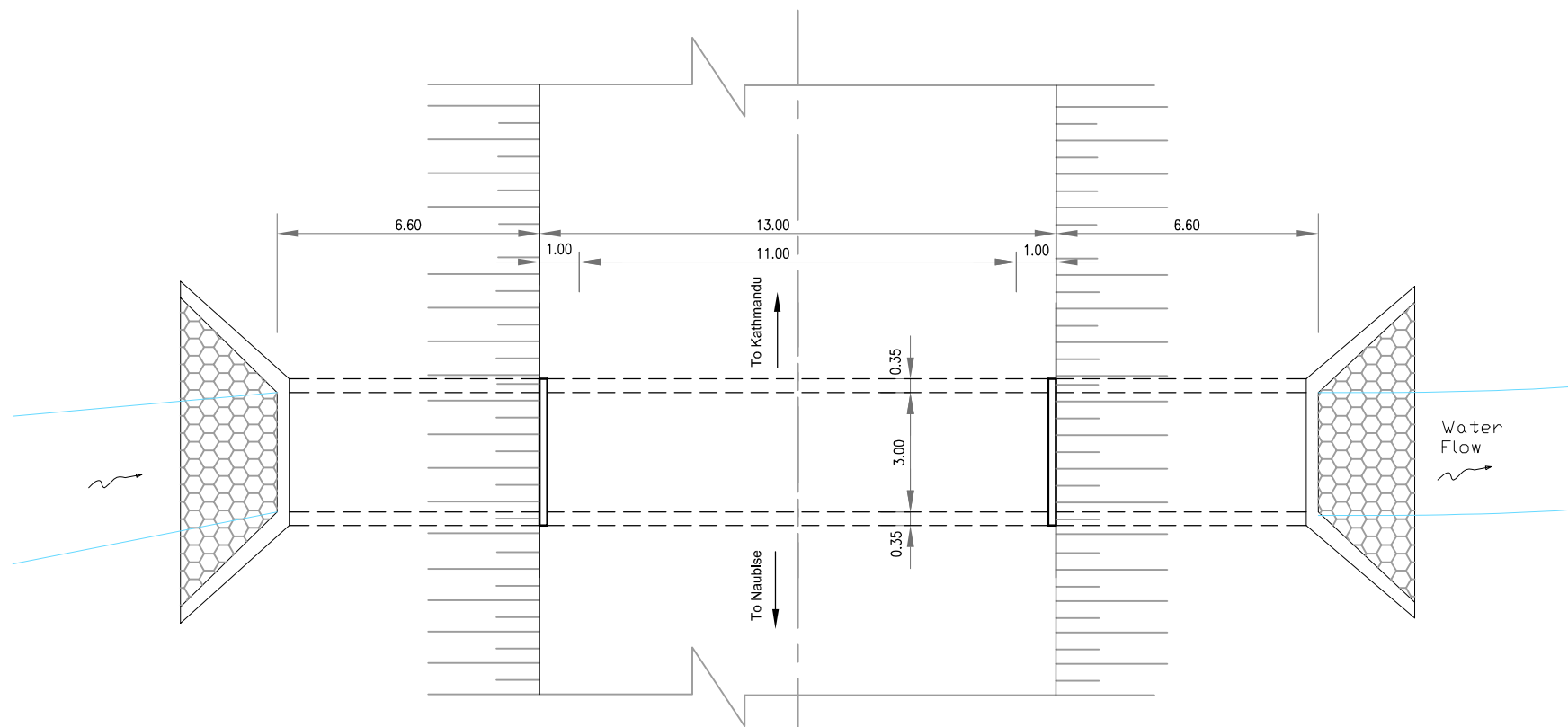


Cross Section
Scale 1:150

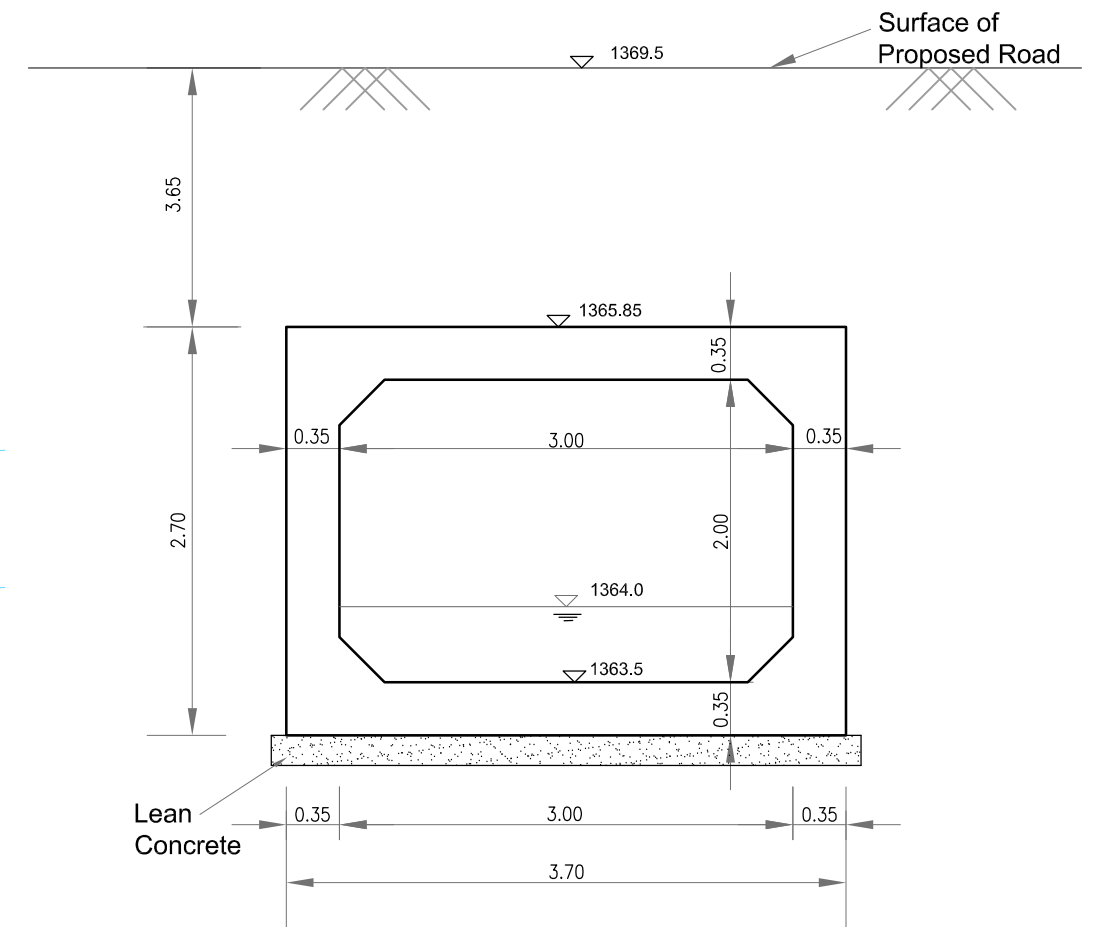


Section B-B
Scale 1:150

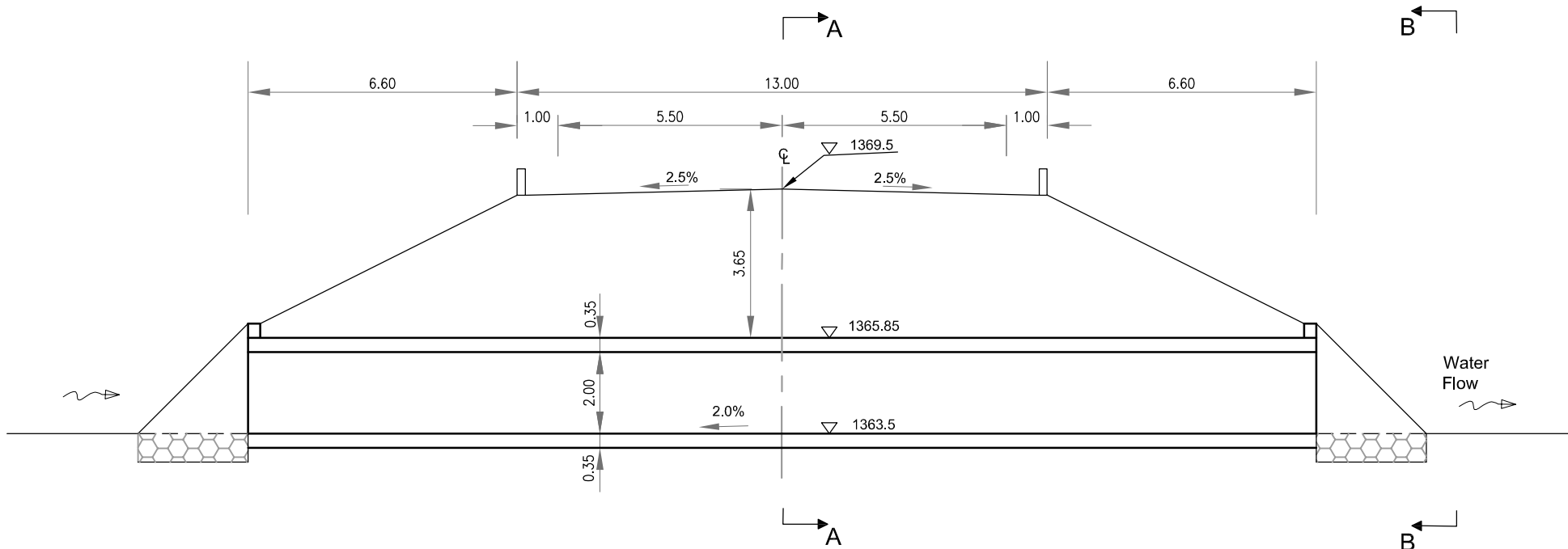
Clients: Japan International Cooperation Agency	Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal	Consultants: CTI Engineering International Co., Ltd. Tonichi Engineering Consultants, Inc. Metropolitan Expressway Co., Ltd. Oriental Consultants, Co., Ltd.	Project Title: Preparatory survey for Nagdhunga Tunnel Construction in Nepal	Sheet Contents: Box Culvert-1	Scale: As Shown	SHT. NO. 39
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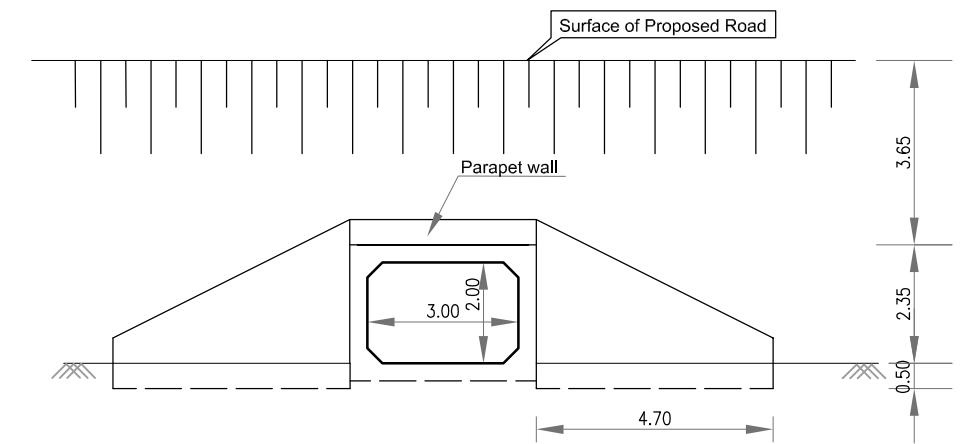
Plan
Scale 1:150



Section A-A
Scale 1:50

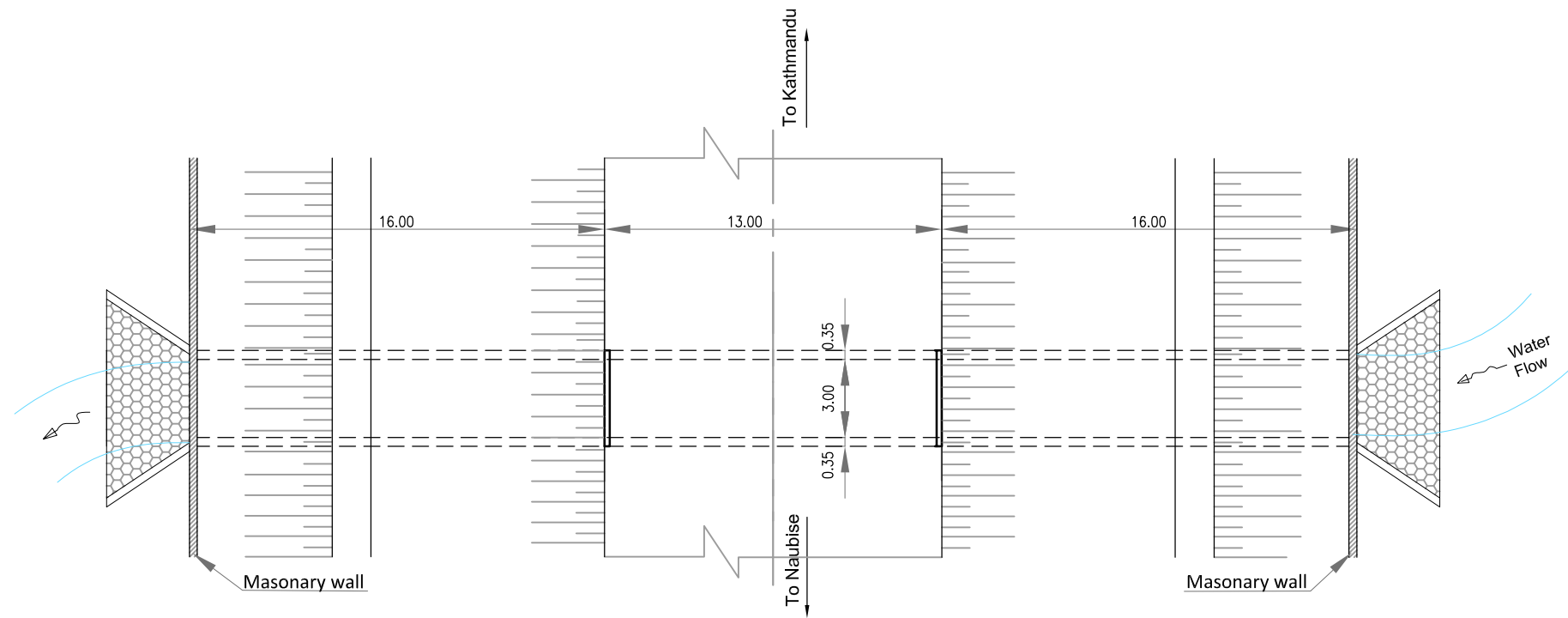


Cross Section
Scale 1:150

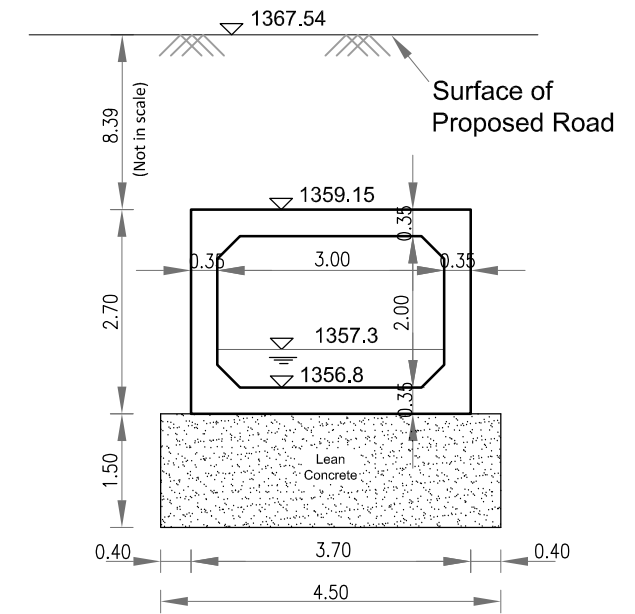


Section B-B
Scale 1:150

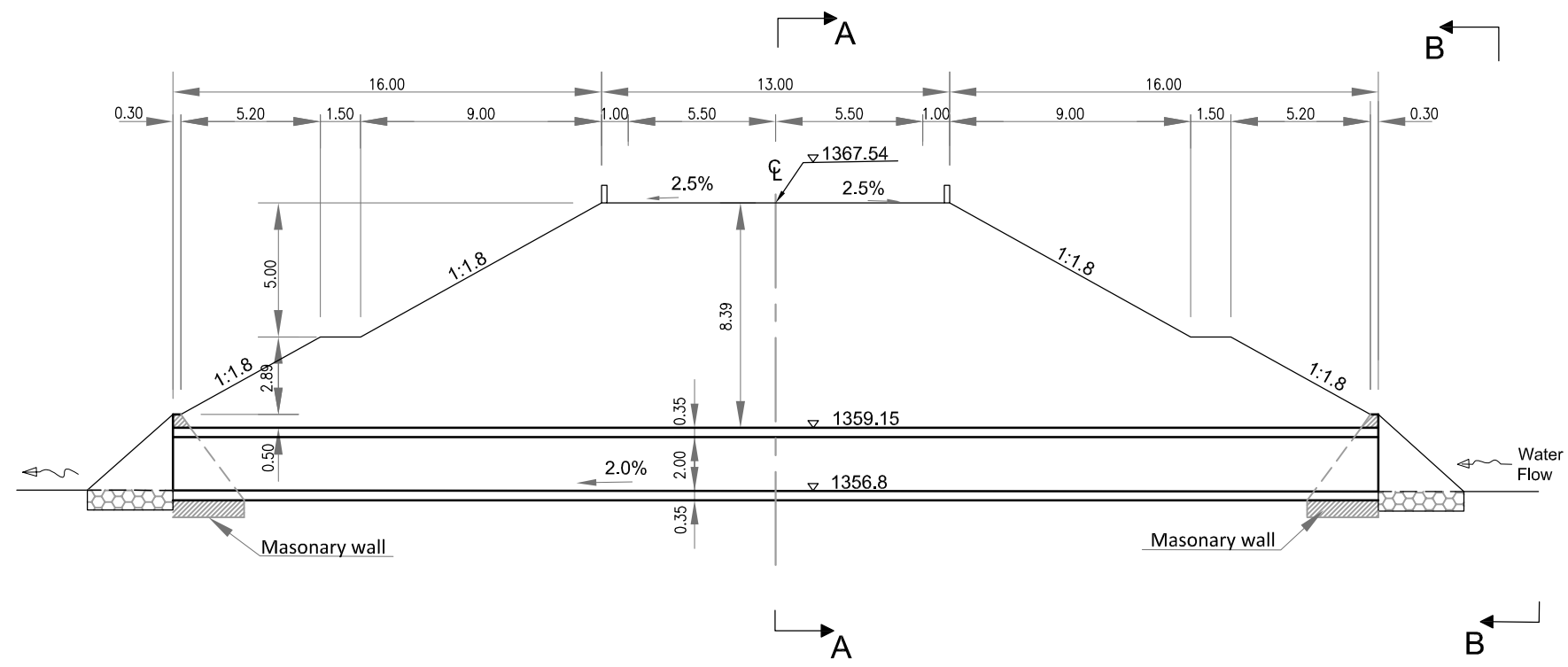
Clients:	Consultants:	Project Title:	Sheet Contents:	Scale:	SHT. NO.
Japan International Cooperation Agency	Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal	CTI Engineering International Co., Ltd. Tonichi Engineering Consultants, Inc. Metropolitan Expressway Co., Ltd. Oriental Consultants, Co., Ltd.	Preparatory survey for Nagdhunga Tunnel Construction in Nepal	Box Culvert-2	As Shown



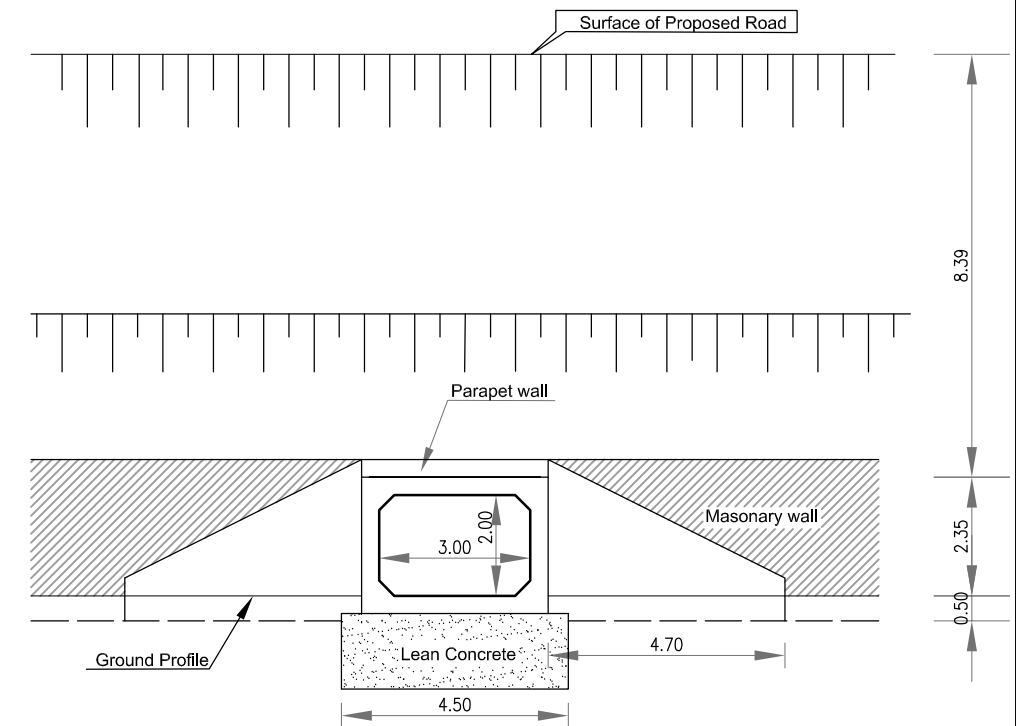
Plan
Scale 1:250



Section A-A
Scale 1:100

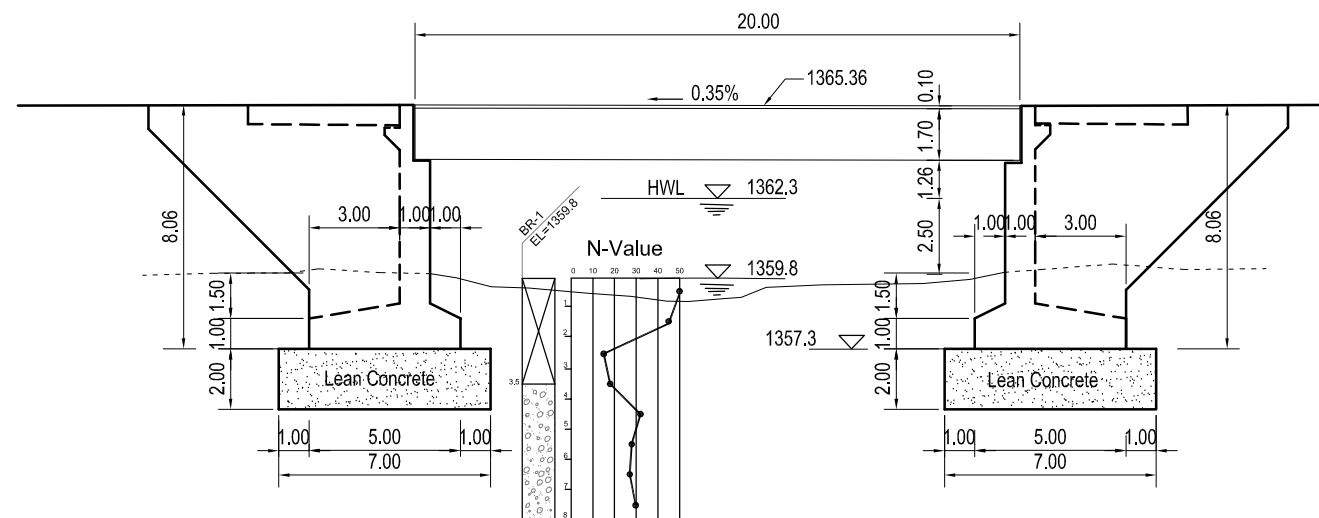
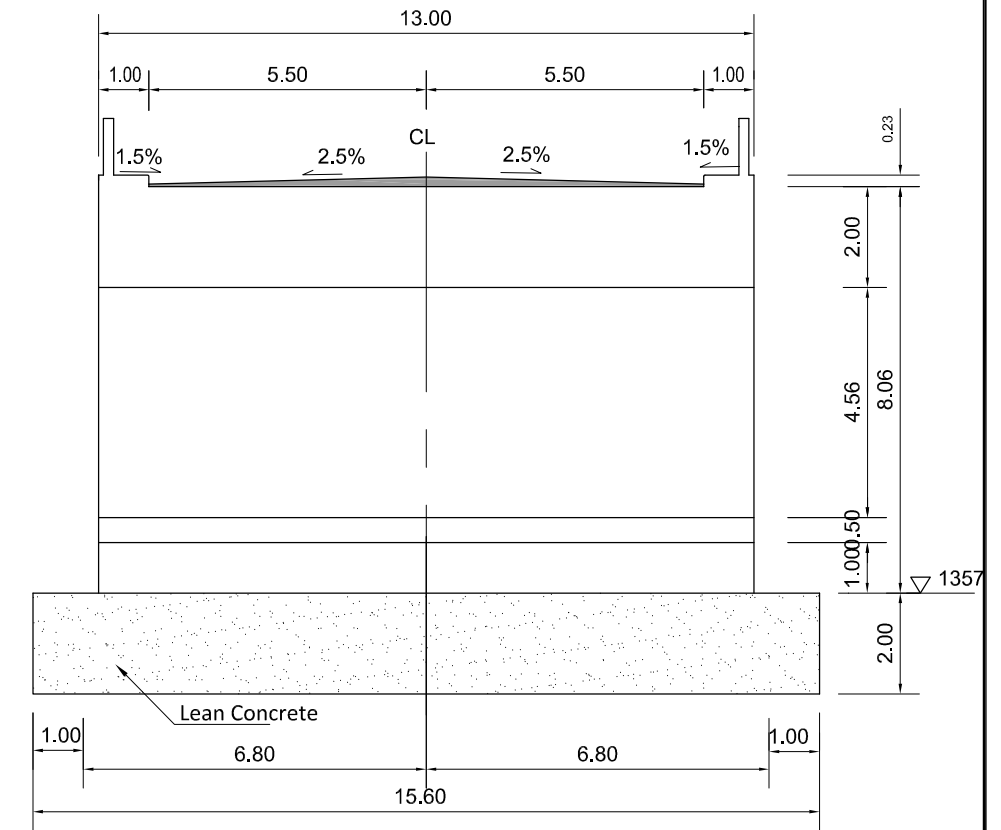
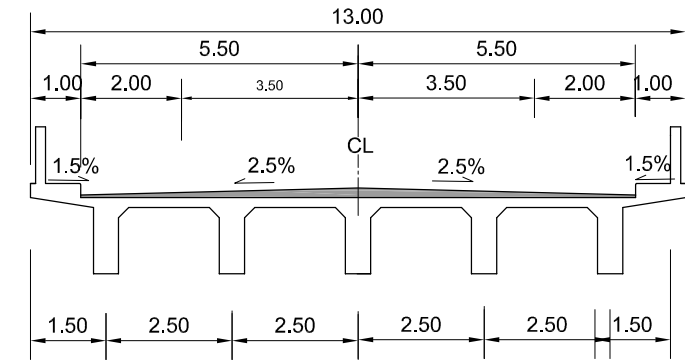
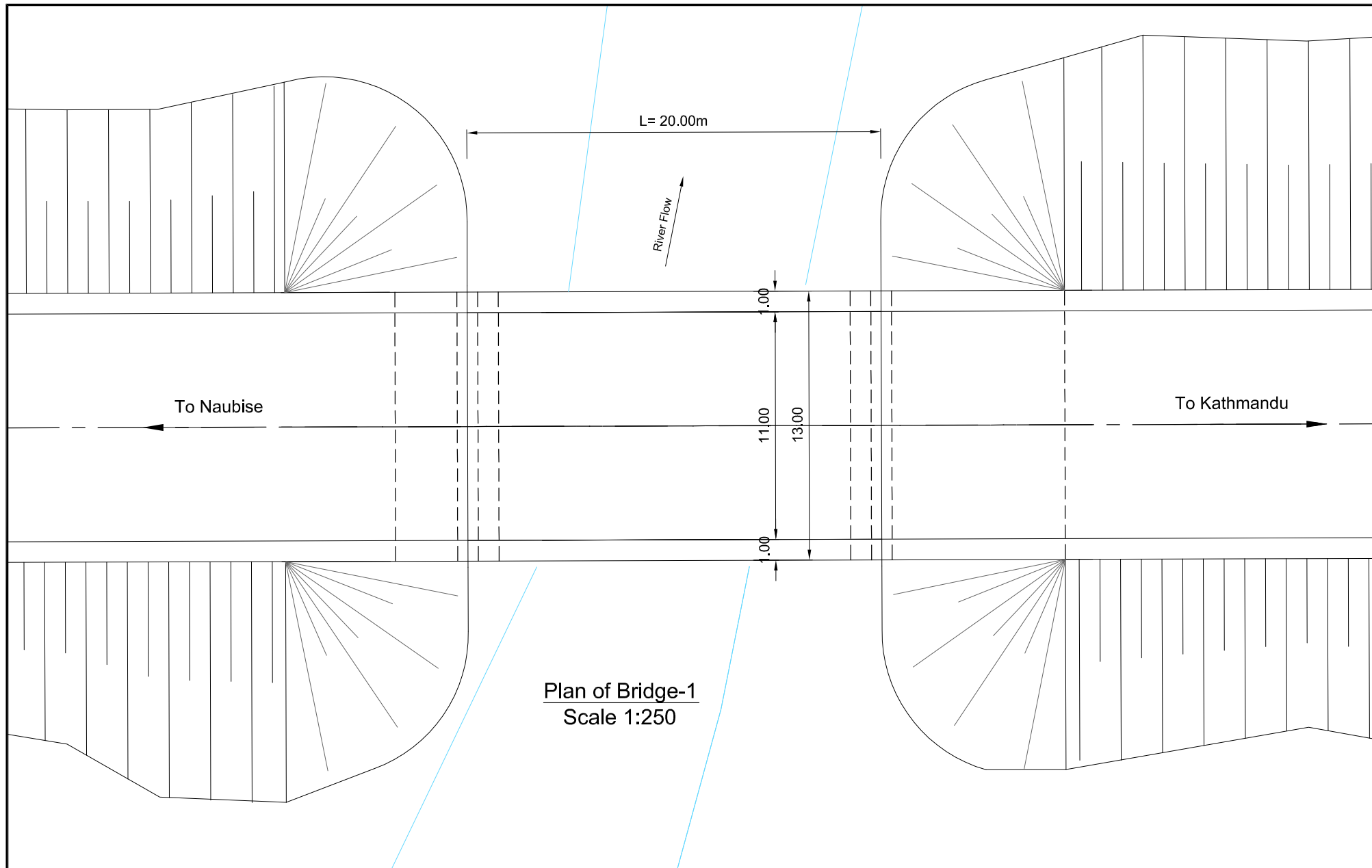


Cross Section
Scale 1:250



Section B-B
Scale 1:150

<p>Clients: Japan International Cooperation Agency</p>	<p>Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal</p>	<p>Consultants: CTI Engineering International Co., Ltd. Tonichi Engineering Consultants, Inc. Metropolitan Expressway Co., Ltd. Oriental Consultants, Co., Ltd.</p>	<p>Project Title: Preparatory survey for Nagdhunga Tunnel Construction in Nepal</p>	<p>Sheet Contents: Box Culvert-3</p>	<p>Scale: As Shown</p>	<p>SHT. NO. 41</p>
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Clients:



Department of Roads
Ministry of Physical Infrastructure and Transport
Federal Democratic Republic of Nepal

Consultants:



Project Title:

Preparatory survey for
Nagdhunga Tunnel Construction in Nepal

Sheet Contents:

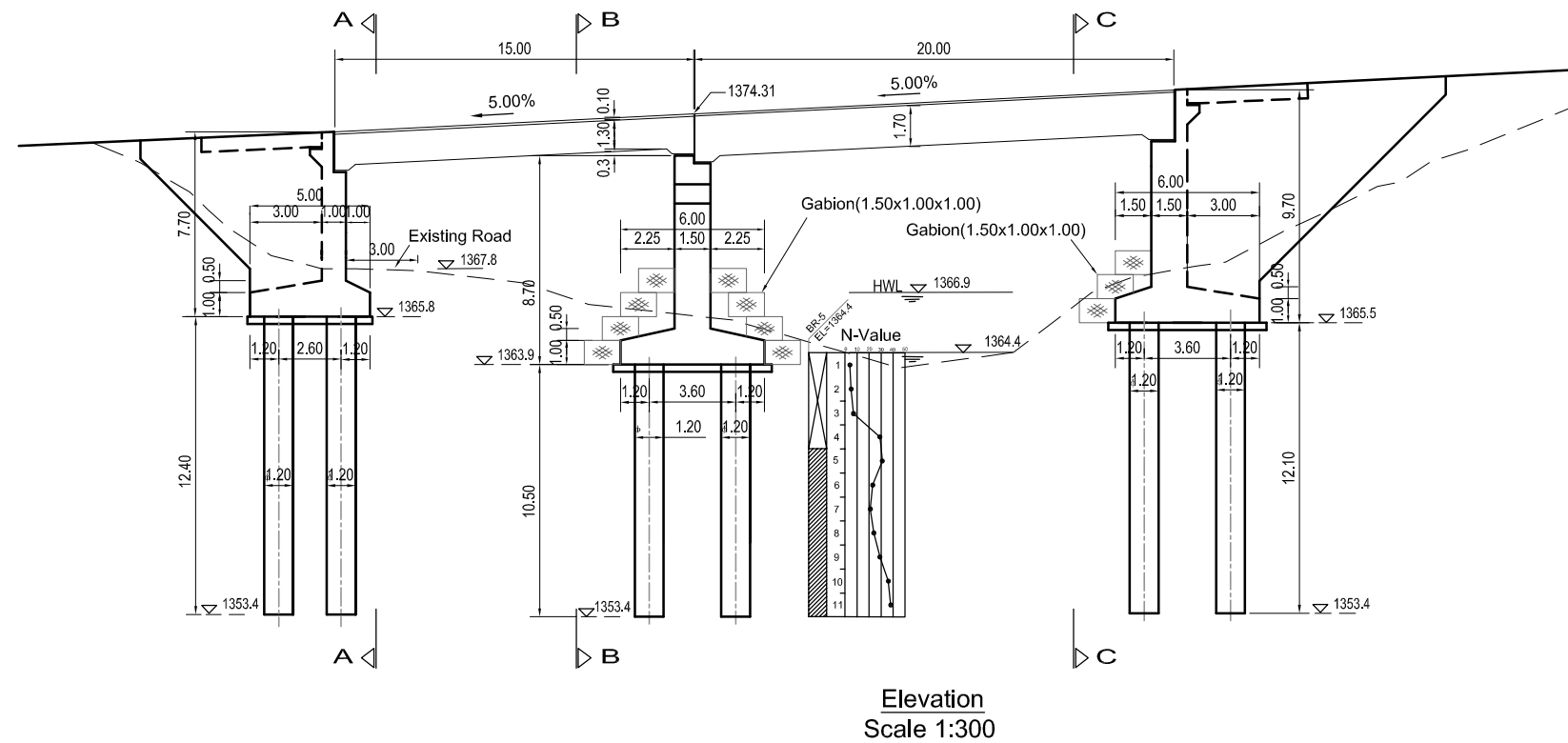
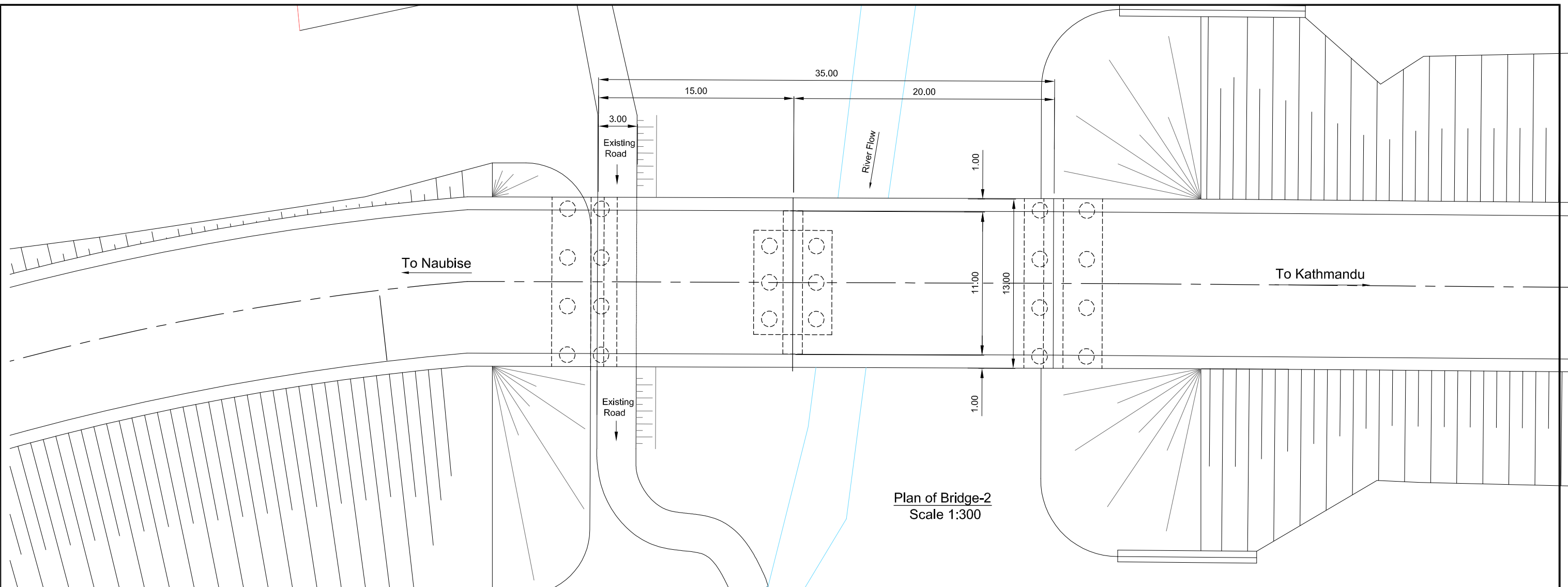
General Arrangement
Bridge-1


Scale:

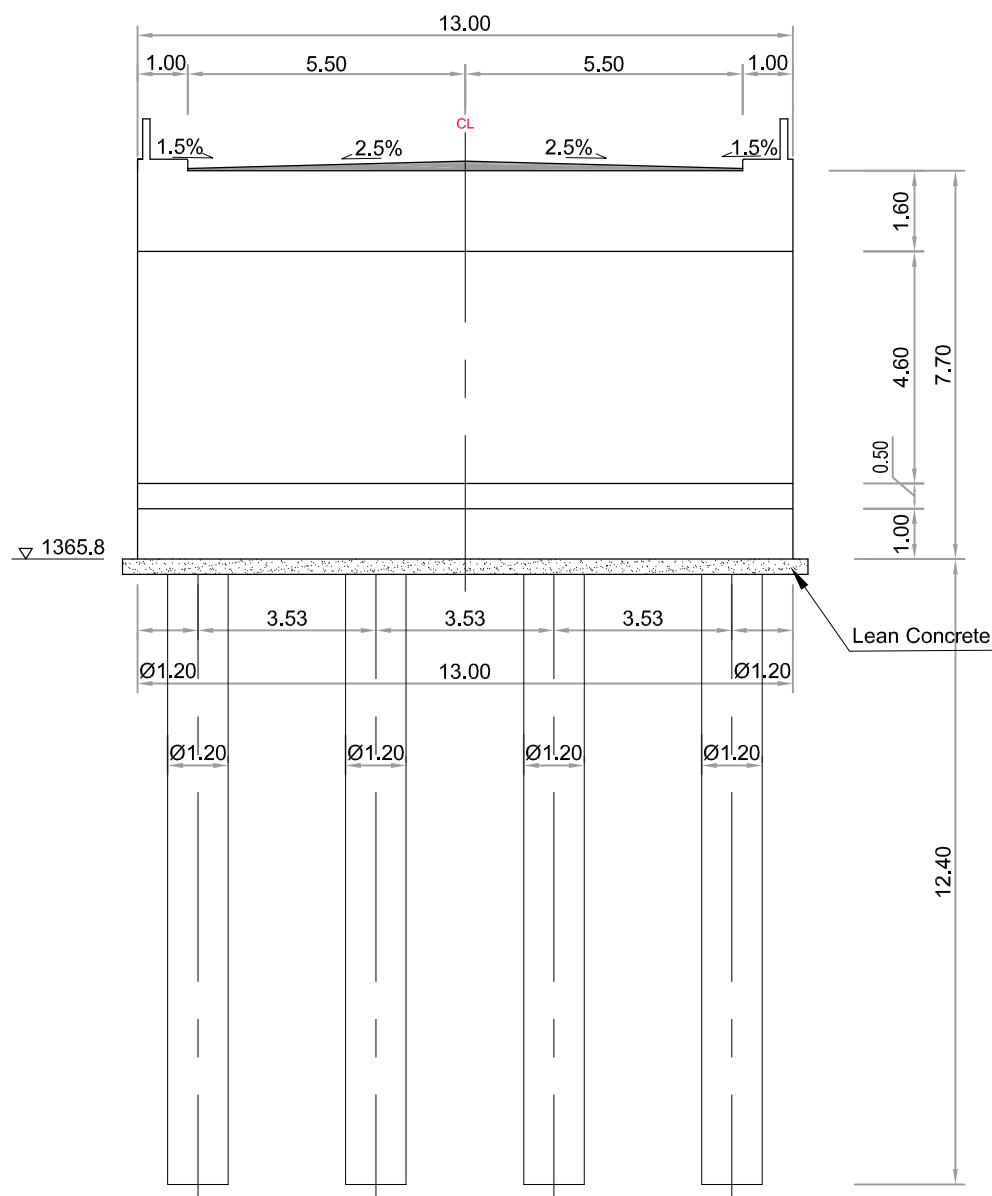
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SHT. NO.

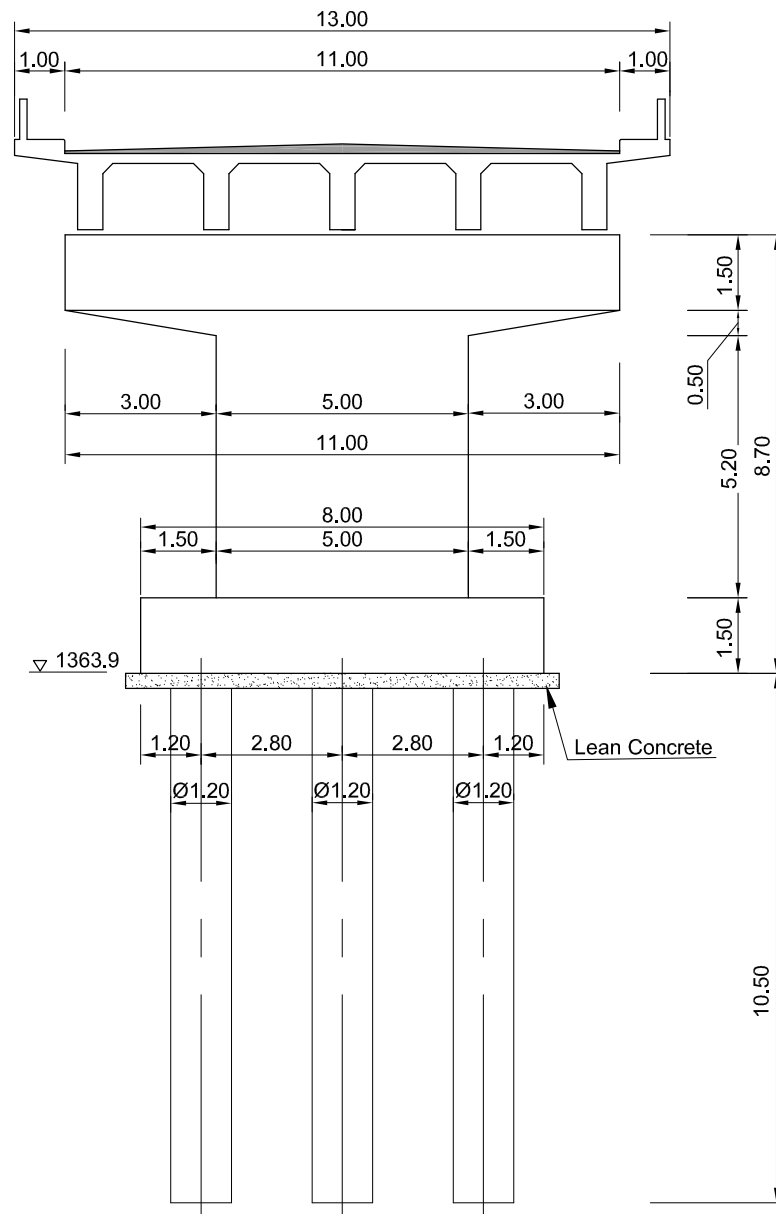
42



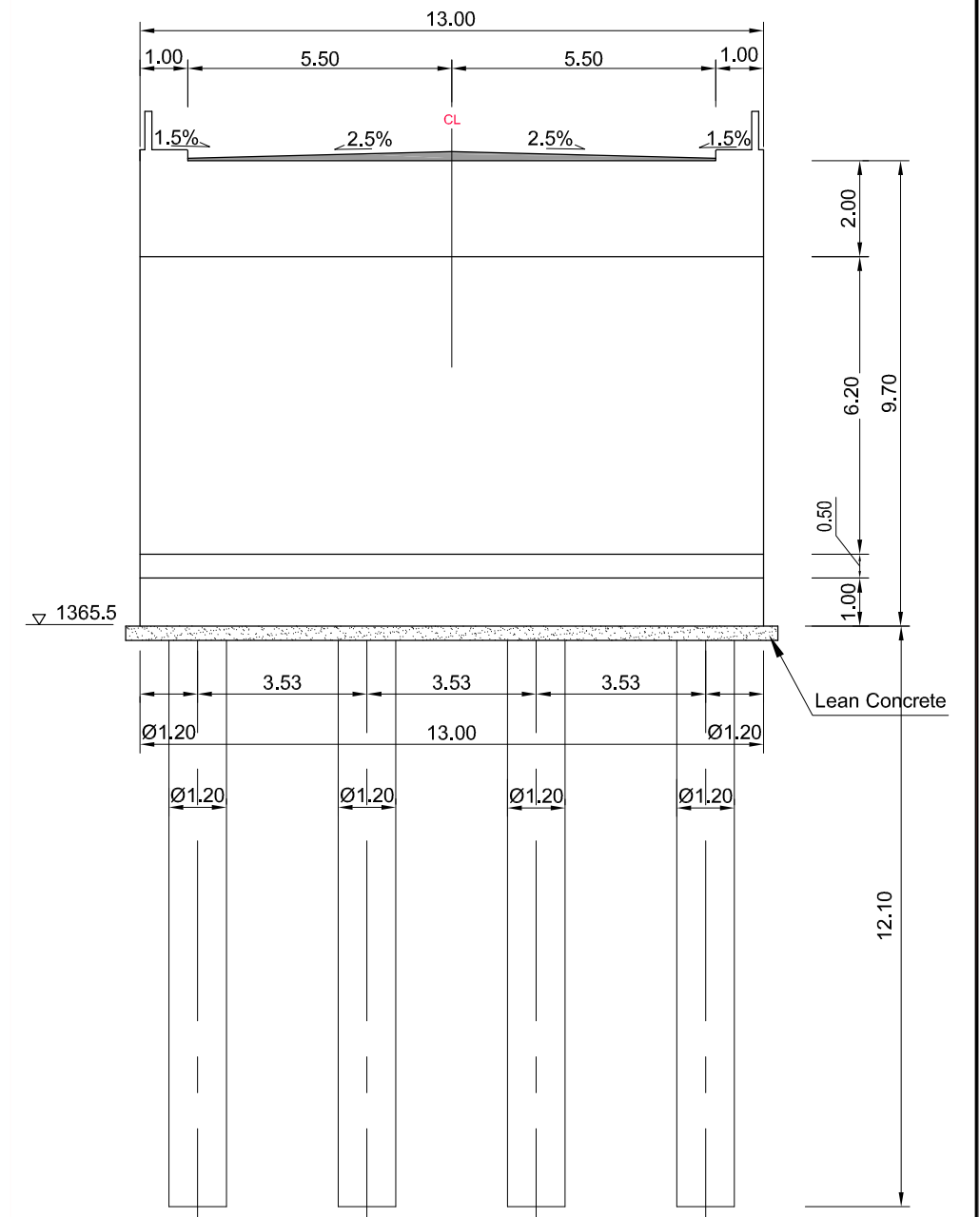
Clients:	Consultants:	Project Title:	Sheet Contents:	Scale:	SHT. NO.
 Japan International Cooperation Agency	Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal	CTI Engineering International Co., Ltd. Tonichi Engineering Consultants, Inc. Metropolitan Expressway Co., Ltd. Oriental Consultants, Co., Ltd.	Preparatory survey for Nagdhunga Tunnel Construction in Nepal	General Arrangement Bridge-2	As Shown





Section A-A



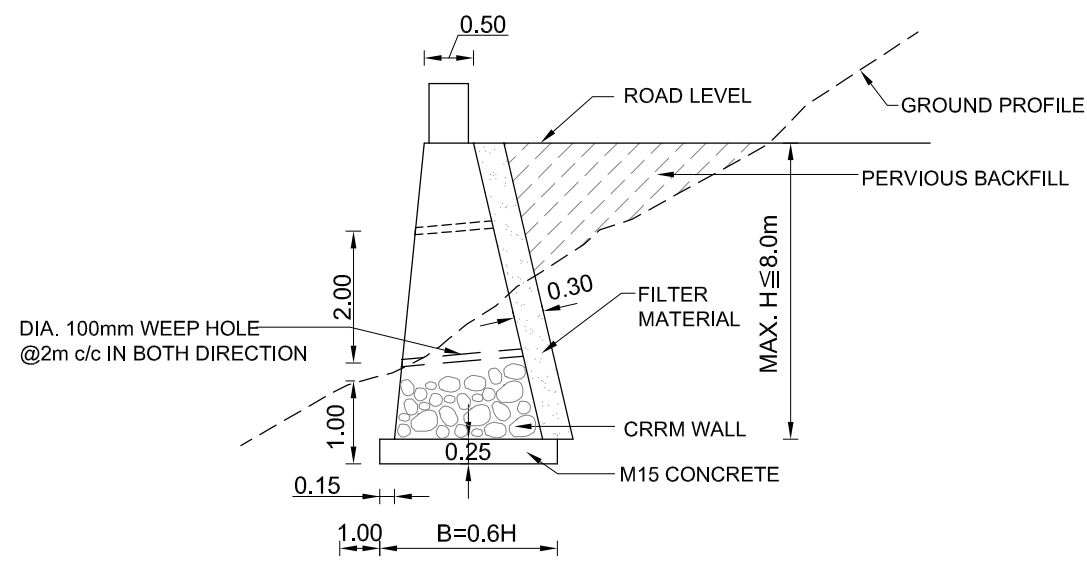
Section B-B



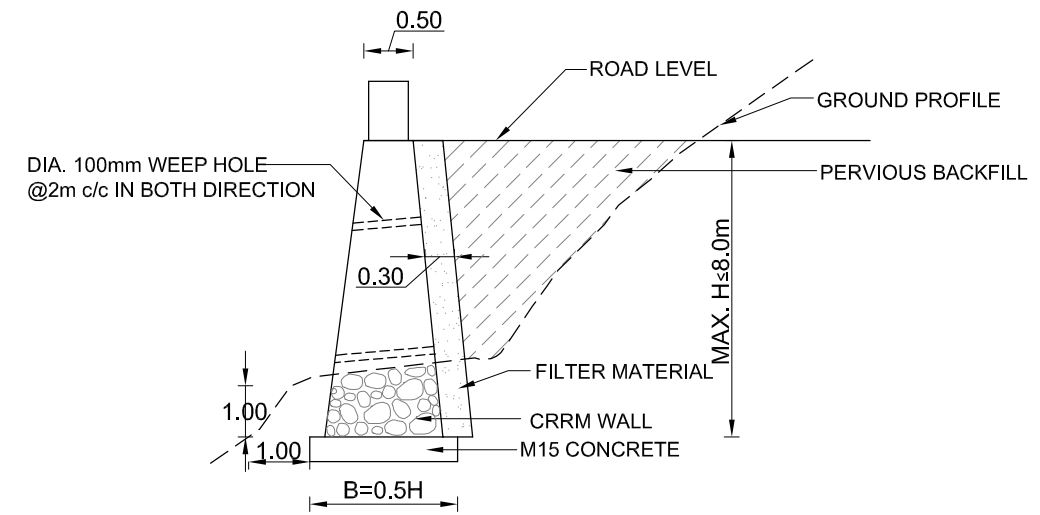
Section C-C

Clients:	Consultants:	Project Title:	Sheet Contents:	Scale:	SHT. NO.
 Japan International Cooperation Agency	 Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal	Preparatory survey for Nagdhunga Tunnel Construction in the Federal Republic of Nepal	Bridge-II	1:150	44

PLUM CONCRETE RETAINING WALL

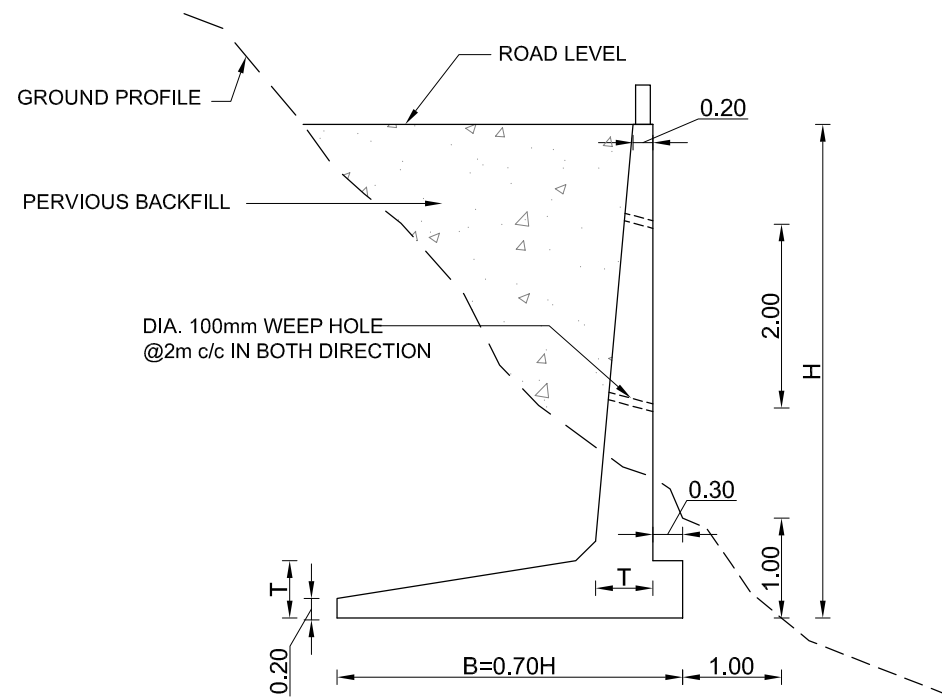


Section Type-A



Section Type -B

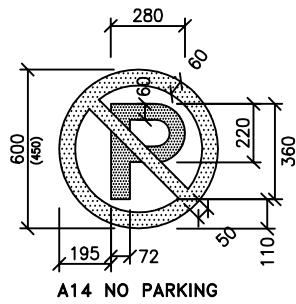
R.C.C. RETAINING WALL



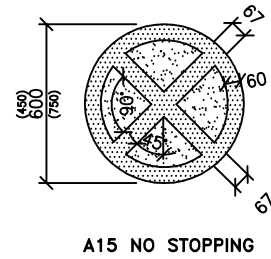
Section Type-A

DIMENSION OF R.C.C. RETAINING WALL

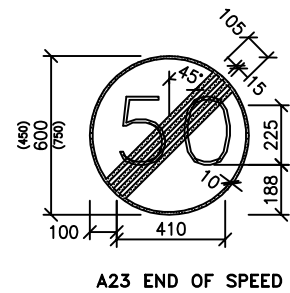
Height(m)	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
T(m)	0.22	0.35	0.45	0.58	0.75	0.85	1.00	1.10



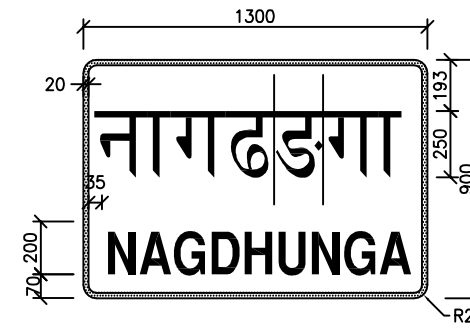
A14 NO PARKING



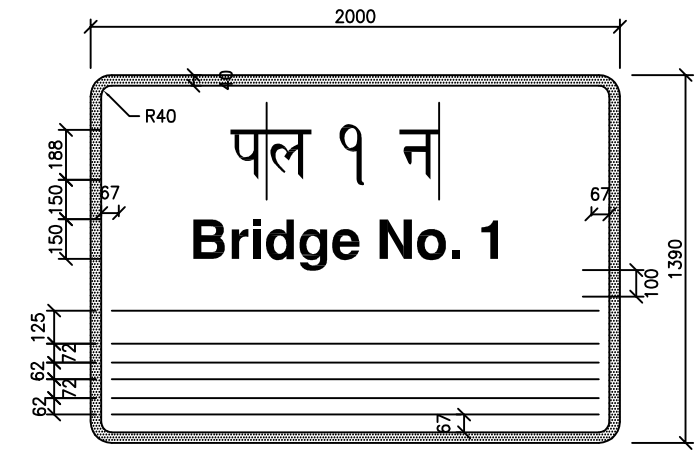
A15 NO STOPPING



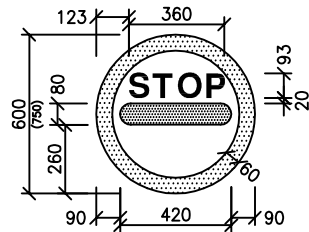
A23 END OF SPEED RESTRICTION



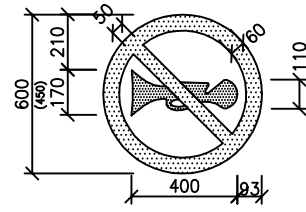
C20 PLACE IDENTIFICATION SIGN (ENTRY TO BUILT-UP AREA)



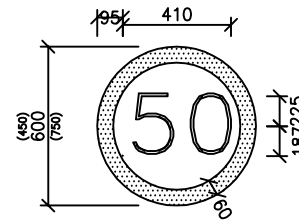
C29 BRIDGE NAME PLATE



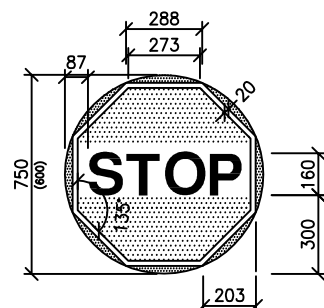
A17 NO PASSING WITHOUT STOPPING



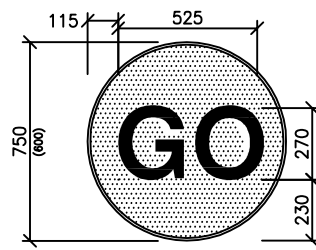
A21 NO USE OF HORN



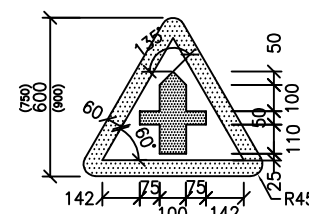
A22 MAXIMUM SPEED



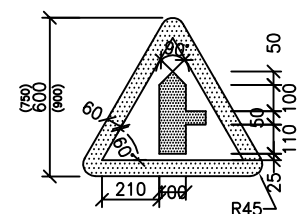
A24 TEMPORARY 'STOP' SIGN



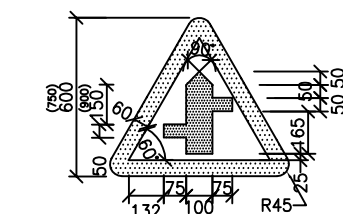
A25 TEMPORARY 'GO' SIGN



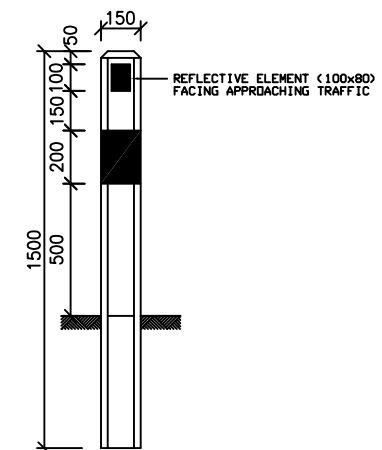
B1 CROSSROADS



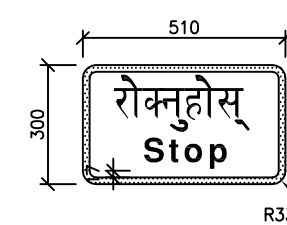
B3 SIDE ROAD (LEFT IF SYMBOL IS REVERSED)



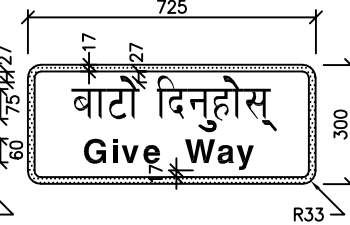
B4 STAGGERED JUNCTION (SYMBOL MAY BE REVERSED)



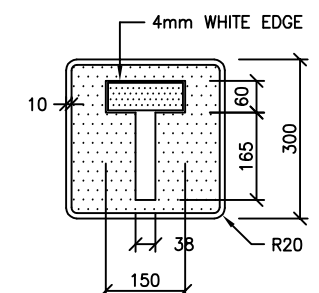
B48 DELINEATOR POST



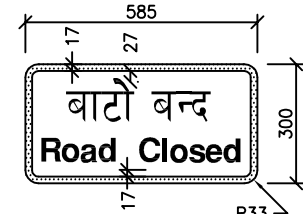
D7 STOP



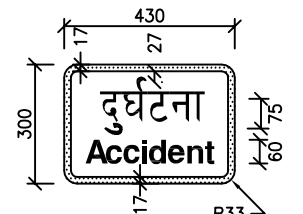
D8 GIVE WAY



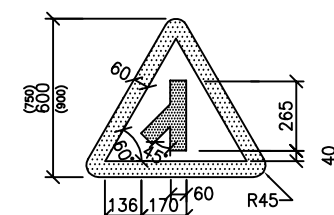
C1 NO THROUGH ROAD



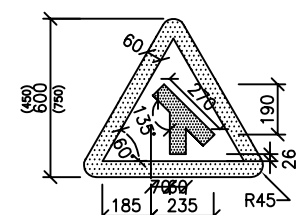
D10 ROAD CLOSED



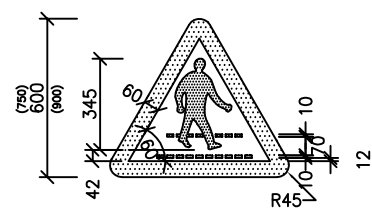
D11 ACCIDENT



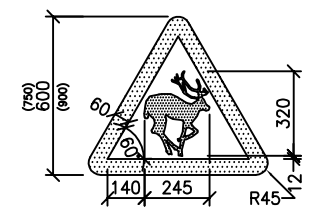
B7 TRAFFIC MERGES FROM LEFT



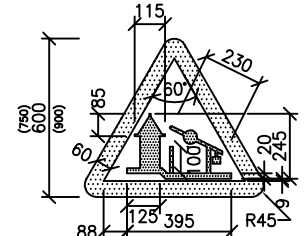
B8 TRAFFIC MERGES FROM RIGHT



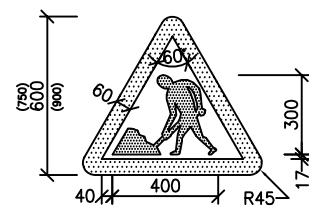
B23 PEDESTRIAN CROSSING



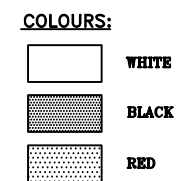
B27 WILD ANIMALS



B37 CHECKPOINT








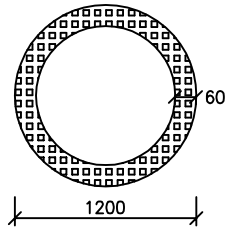
B38 ROAD WORKS



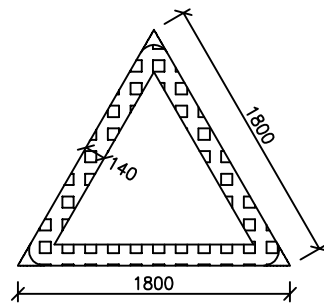
NOTES:

1. AFTER PAINTING OF THE SIGN BOARDS AS PER SPECIFICATION REFLECTIVE STRIPPS SHOULD BE PASTED OVER THE BOARDER LINES, DETTER ETC. AS INSTRUCTED BY ENGINEER
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED

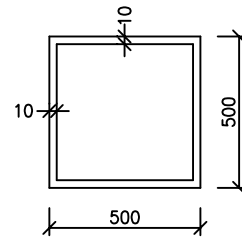
<p>Clients:</p>  Japan International Cooperation Agency	<p>Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal</p>	<p>Consultants:</p>  CTI Engineering International Co., Ltd.  Tonichi Engineering Consultants, Inc.  Metropolitan Expressway Co., Ltd.  Oriental Consultants, Co., Ltd.	<p>Project Title:</p> Preparatory survey for Nagdhunga Tunnel Construction in Nepal	<p>Sheet Contents:</p> Traffic Signs	<p>Scale:</p> Not To Scale	<p>SHT. NO.</p> 46
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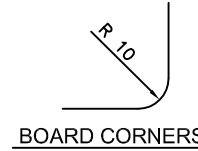
TYPE A



TYPE B



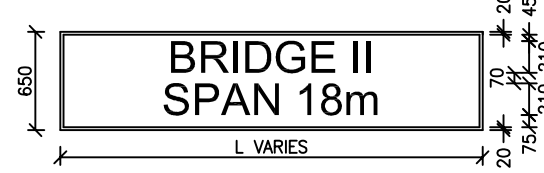
TYPE C



BOARD CORNERS

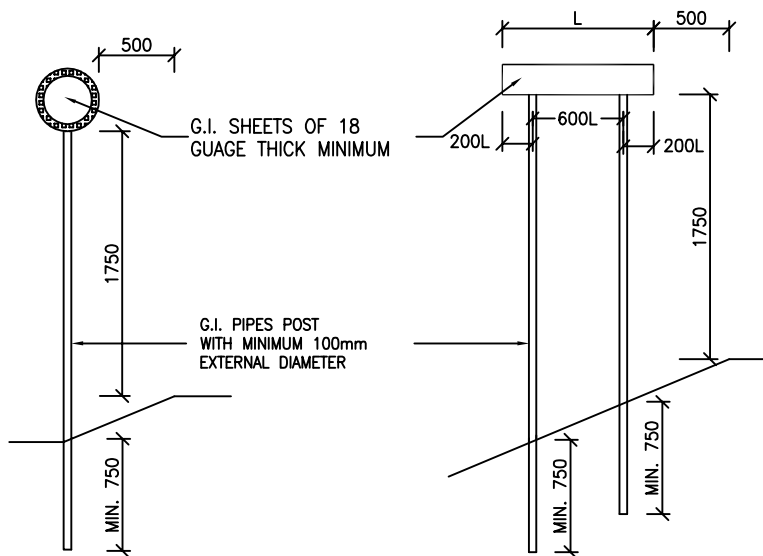


TYPE D



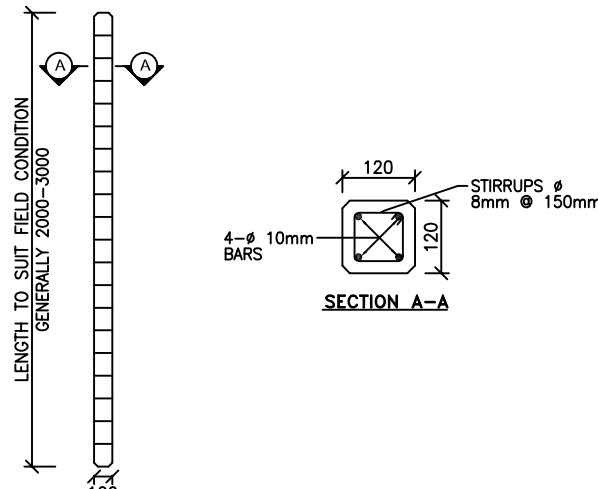
TYPE E

INSTALLATION DETAILS

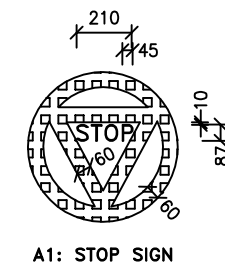


INSTALLATION DETAILS

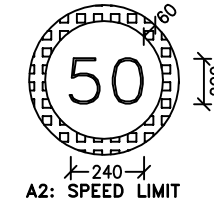
REINFORCED CONCRETE POST



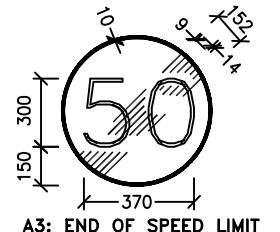
POST DETAIL



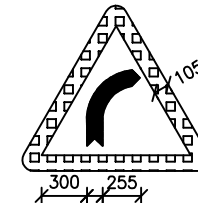
A1: STOP SIGN



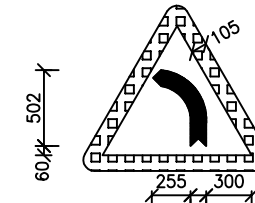
A2: SPEED LIMIT



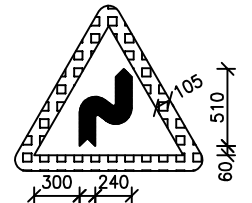
A3: END OF SPEED LIMIT



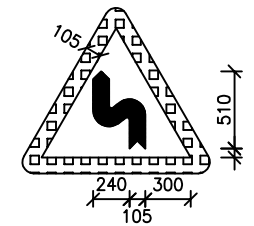
B1: RIGHT BEND



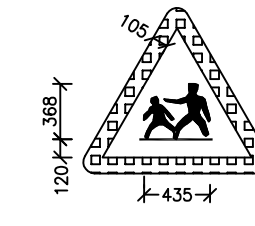
B2: LEFT BEND



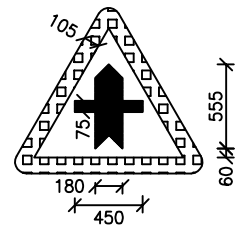
B3: DOUBLE BEND FIRST TO THE RIGHT



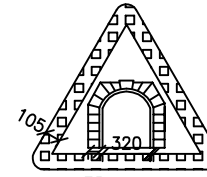
B4: DOUBLE BEND FIRST TO THE LEFT



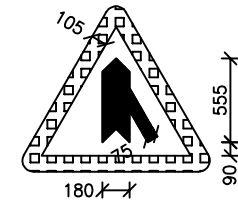
B5: CHILDREN



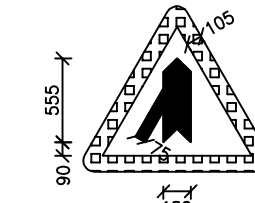
B6: INTERSECTION



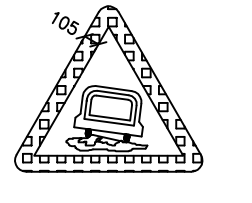
K1: TUNNEL AHEAD



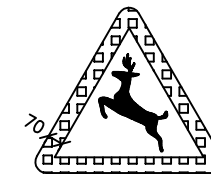
B7: INTERSECTION



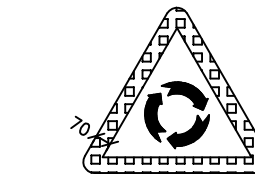
B8: INTERSECTION



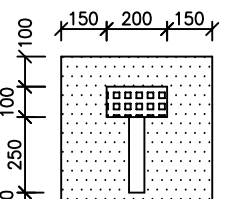
B9: RIGHT BEND



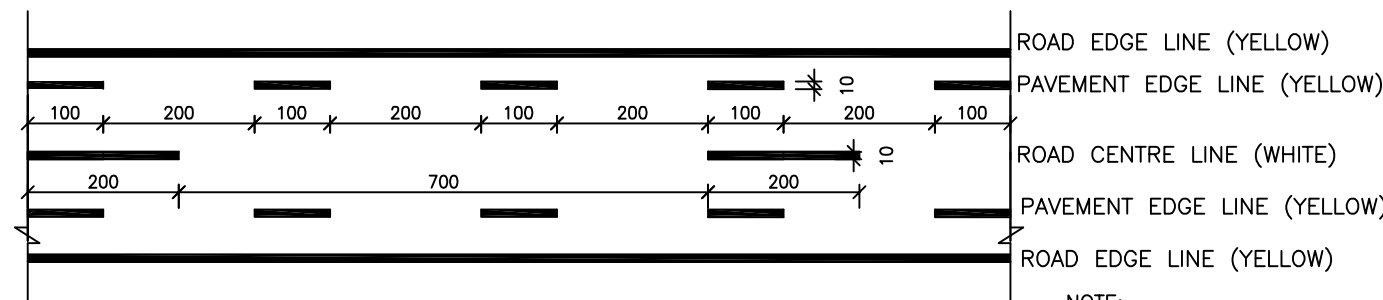
B10: WILD ANIMALS



B11: ROUNDABOUT



C1: DEAD END



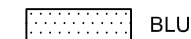
ROAD MARKINGS

NOTE:-

1. PROVIDE CONTINUOUS VERGE SIDE MARKINGS ON 10m. STRETCH APPROACH TO BRIDGES AND IN SHARP BENDS



RED



BLUE



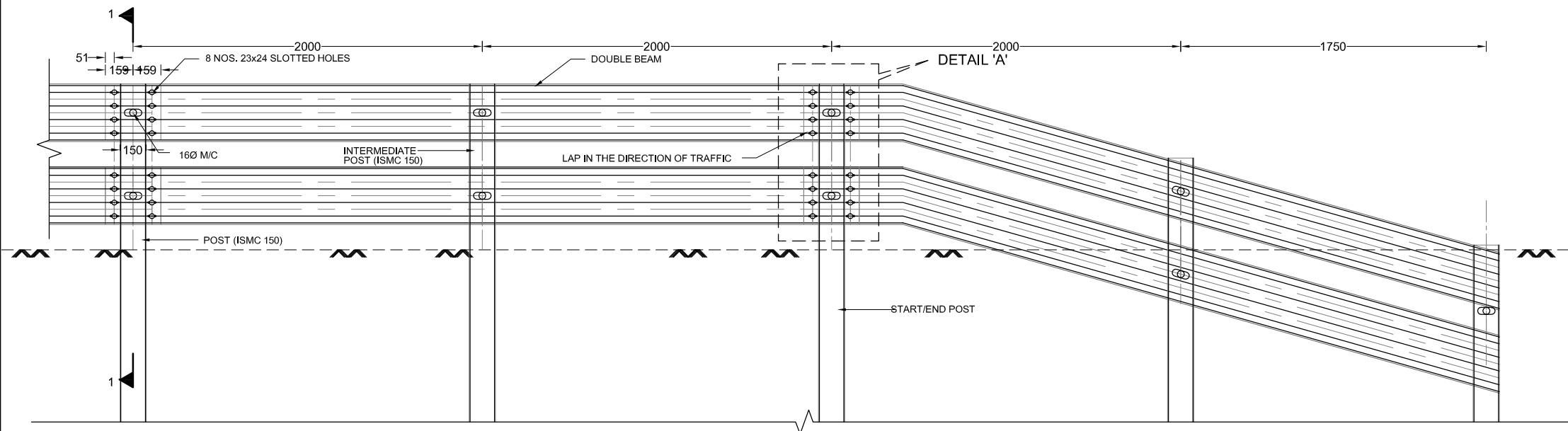
BLACK

NOTES:-

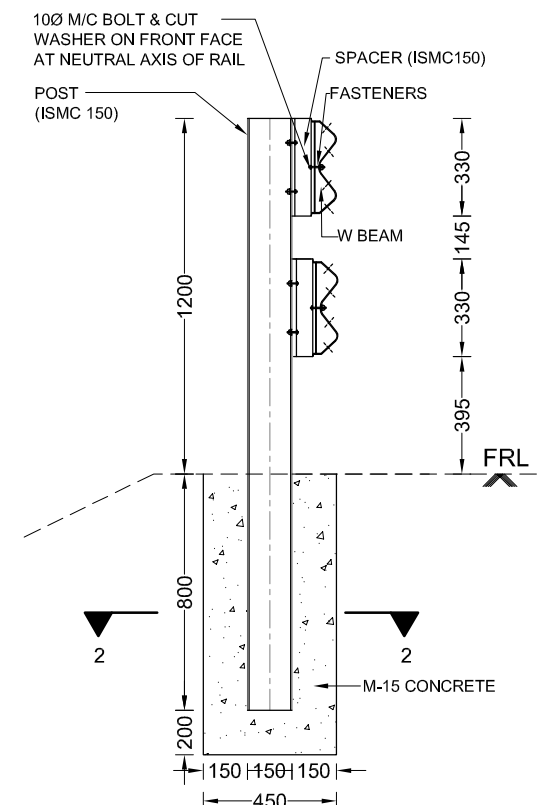
1. CONCRETE 25/20
2. BOLT HOLES SHALL SUIT SIZES TO BE INSTALLED
3. CHAMFER SHALL BE 1cm.
4. BOLTS SHALL BE GALVANIZED (MIN.#10mm)
5. ADDITIONAL OR DIFFERENT SIGNS BE DIRECTED BY THE ENGINEER
6. SIGN LOCATION SHALL BE AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER
7. THE LETTER HEIGHT H SHALL BE CAPITAL LETTERS SMALL LETTERS SHALL BE 5/7 H HIGH. SPECIAL SMALL LETTERS (a b p q etc) SHALL BE 2/7TH HIGHER OR LOWER THAN OTHER SMALL LETTERS. STROKE SHALL BE COMPRISED BETWEEN 1/6H AND 11/6H
8. LETTER HEIGHT SHALL BE 28cm. ON DESTINATION SIGNS (TYPE D) AND 21cm. ON BRIDGE SIGNS (TYPE E)
9. CONCRETE AND G.I. PIPES POSTS ARE PAINTED IN 20 cm STRIPS IN EXPOSED SURFACE
10. SIGN POST SHALL BE FOUNDED IN MIN 50 CM THICK PCC(M15/40)

<p>Clients:</p> Japan International Cooperation Agency	<p>Consultants:</p> CTI Engineering International Co., Ltd. Tonichi Engineering Consultants, Inc. Metropolitan Expressway Co., Ltd. Oriental Consultants, Co., Ltd.	<p>Project Title:</p> Preparatory survey for Nagdhunga Tunnel Construction in Nepal	<p>Sheet Contents:</p> Traffic Signs and Road Markings	<p>Scale:</p> Not to Scale	<p>SHT. NO.</p> 47
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DETAILING OF W-BEAM BARRIER



ELEVATION FROM CENTERLINE OF ROADWAY



SECTION 1-1

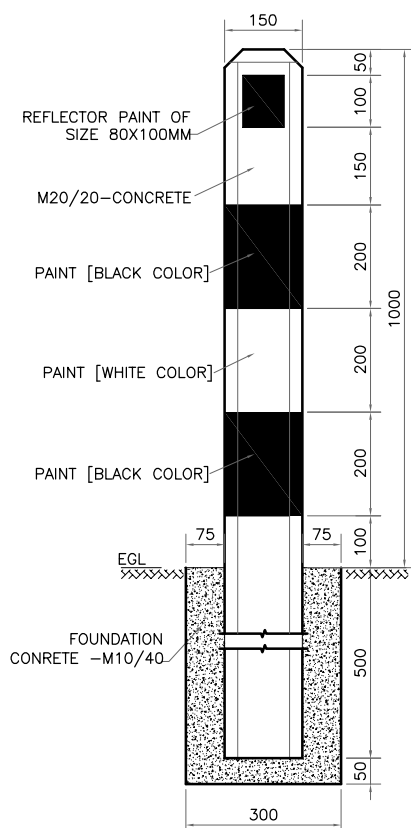
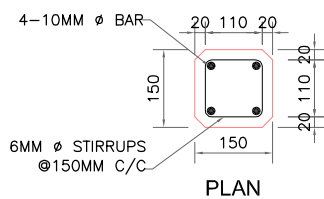
DETAILING OF DELINEATOR POST

WORK QUANTITIES (For 2.0m Height)

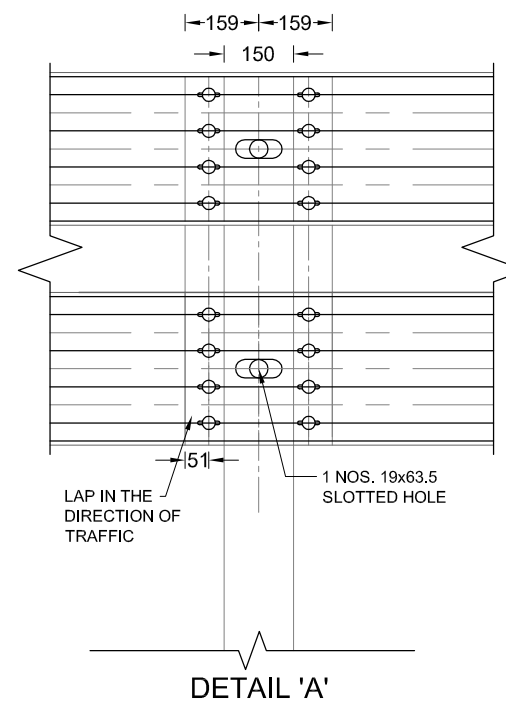
ITEM NO	Description	UNIT	QUANTITY
	EARTH WORK EXCAVATION	m ³	0.03
	M20/20 - CONCRETE	m ³	0.045
	M10/40 - CONCRETE	m ³	0.02
	FORMWORK (F2)	m ²	0.945
	10MM Ø BAR	Kg.	4.96
	6MM Ø STIRRUPS	Kg.	1.50

WORK QUANTITIES (For 1.50m Height)

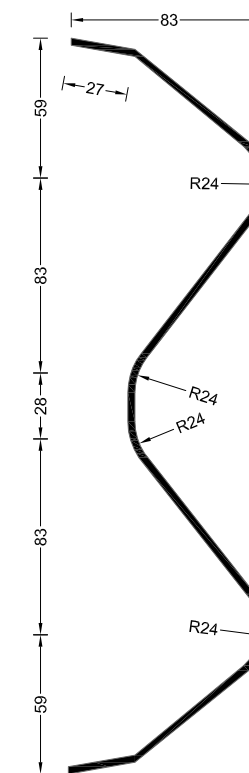
ITEM NO	Description	UNIT	QUANTITY
	EARTH WORK EXCAVATION	m ³	0.03
	M20/20 - CONCRETE	m ³	0.033
	M10/40 - CONCRETE	m ³	0.02
	FORMWORK (F2)	m ²	0.735
	10MM Ø BAR	Kg.	3.72
	6MM Ø STIRRUPS	Kg.	1.20



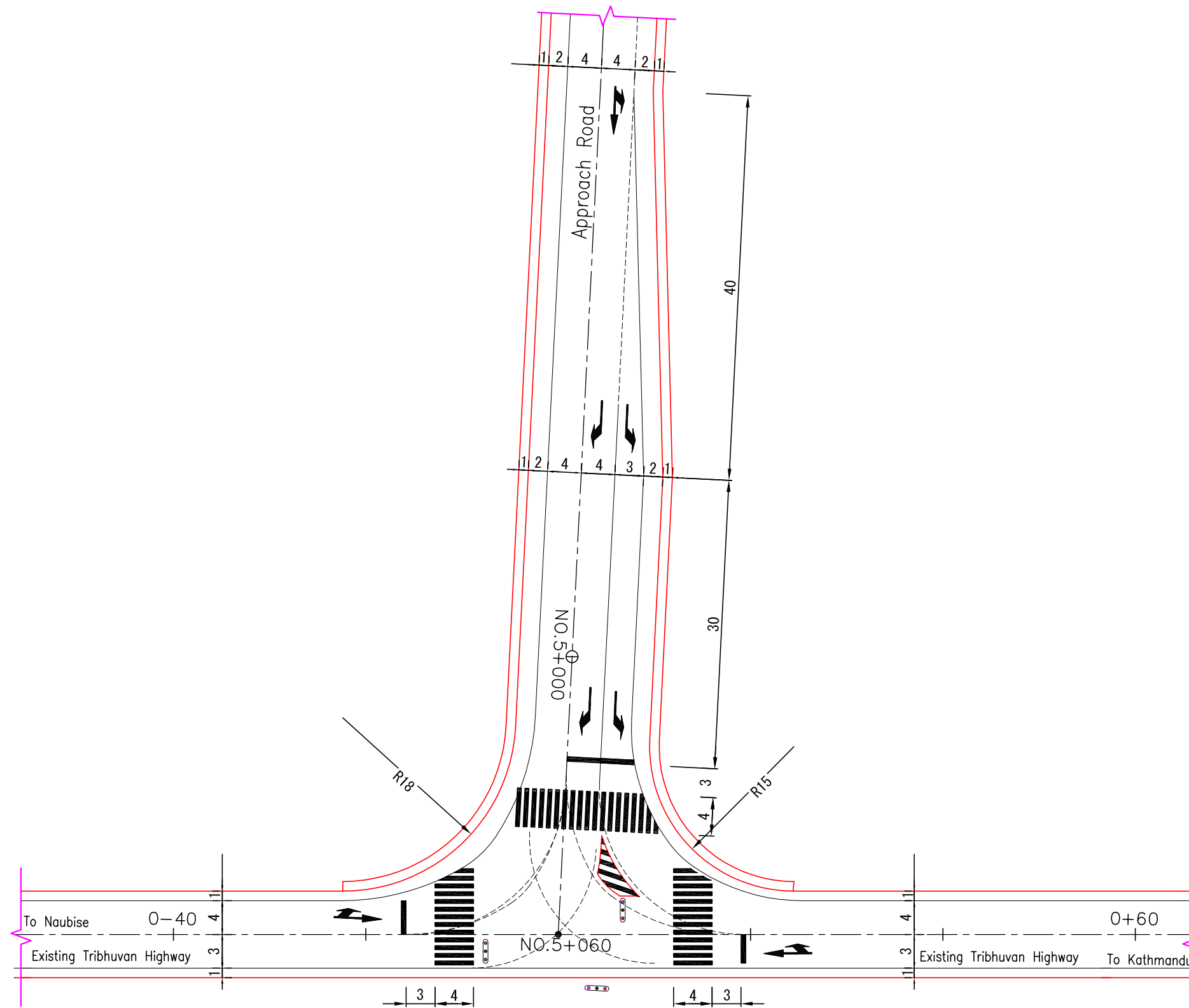
SECTIONAL ELEVATION









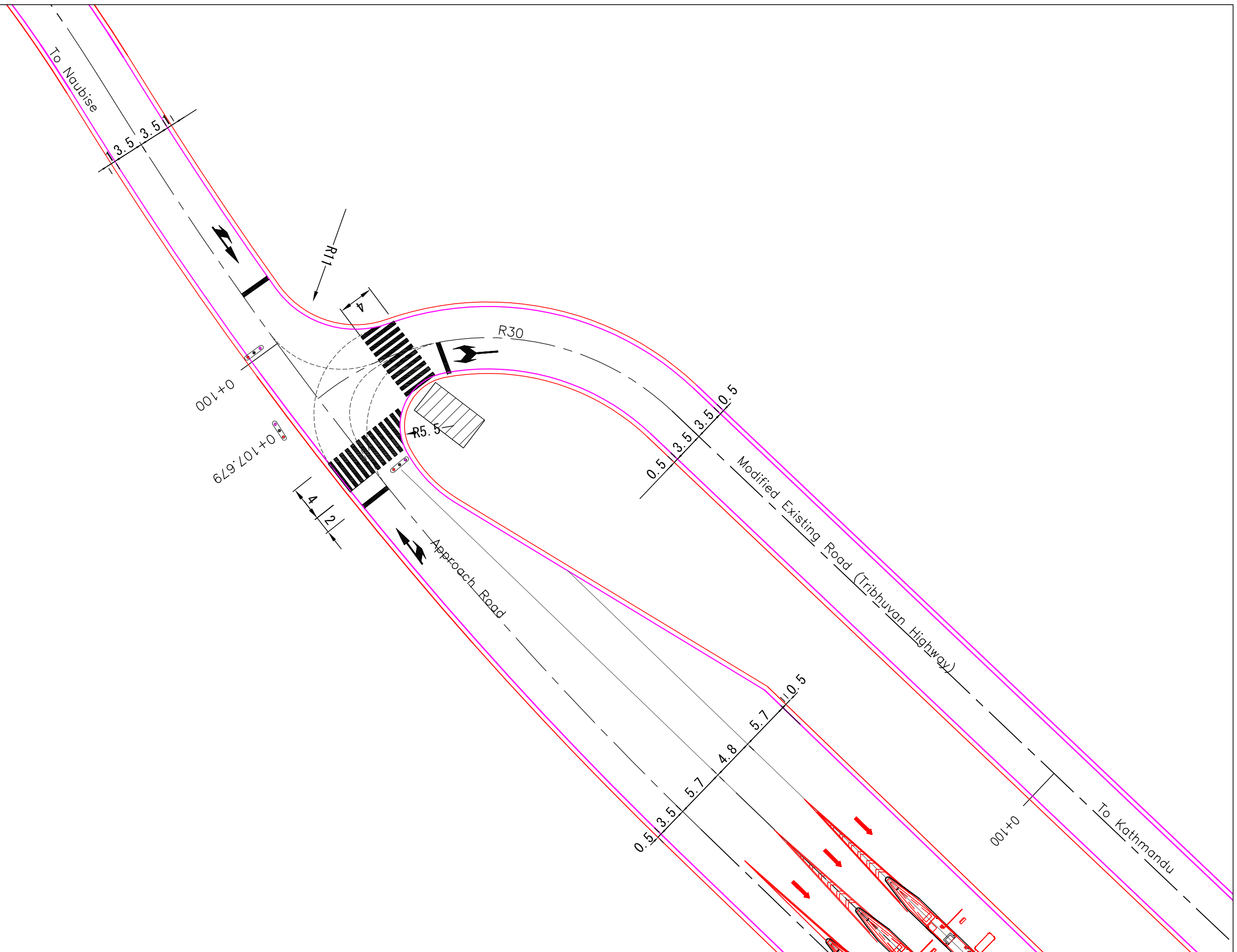
DETAIL 'A'









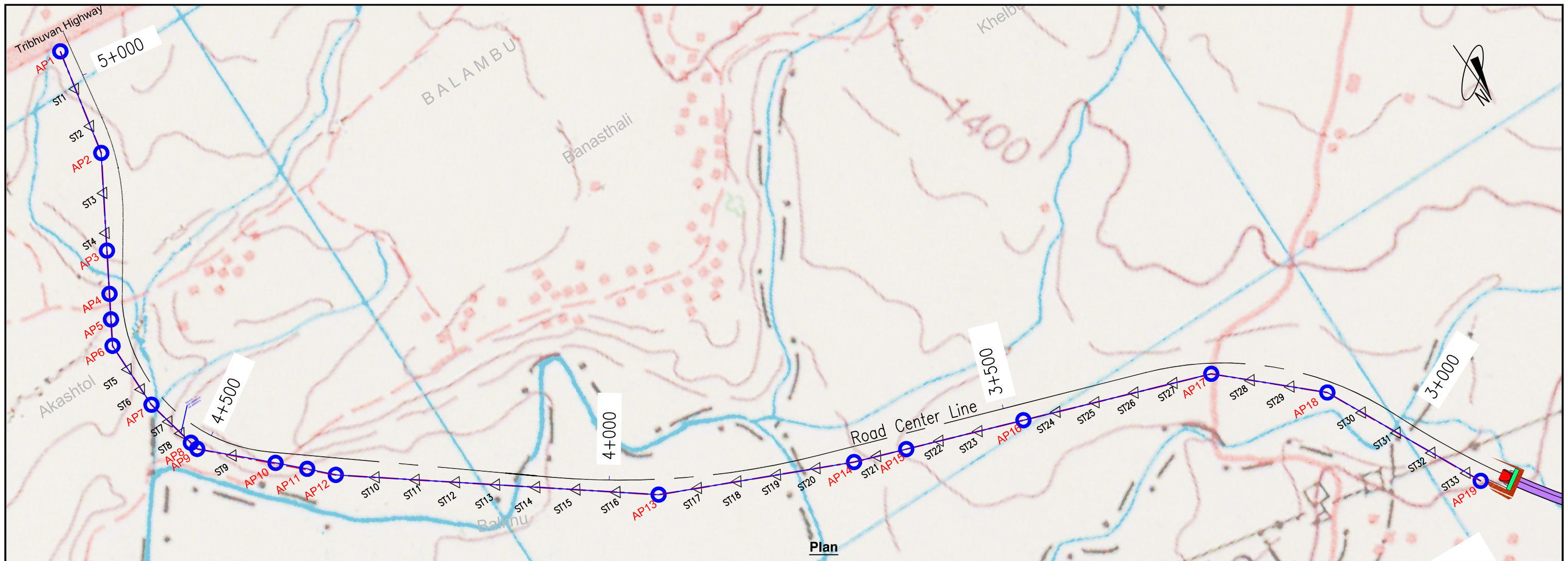
W-BEAM SECTION



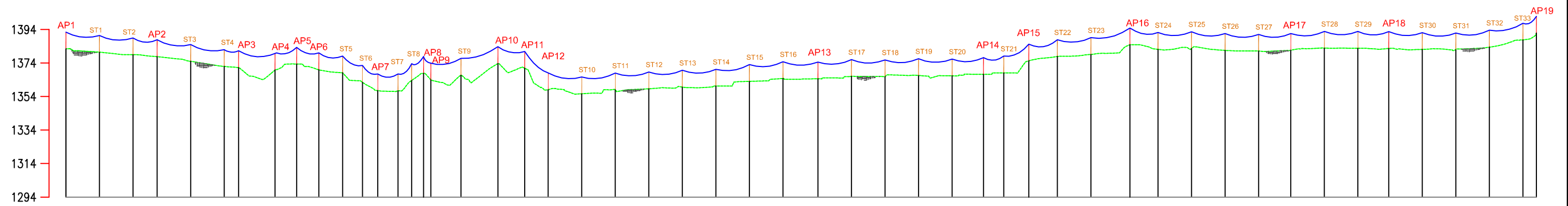
Clients:	Consultants:	Project Title:	Sheet Contents:	Scale:	SHT. NO.
 Japan International Cooperation Agency	 Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal	 CTI Engineering International Co., Ltd.  Tonichi Engineering Consultants, Inc.  Metropolitan Expressway Co., Ltd.  Oriental Consultants, Co., Ltd.	Preparatory survey for Nagdhunga Tunnel Construction in Nepal	Intersection East Side	Not To Scale



Clients:	Consultants:	Project Title:	Sheet Contents:	Scale:	SHT. NO.
 Japan International Cooperation Agency	 Department of Roads Ministry of Physical Infrastructure and Transport Federal Democratic Republic of Nepal	 CTI Engineering International Co., Ltd.  Tonichi Engineering Consultants, Inc.  Metropolitan Expressway Co., Ltd.  Oriental Consultants, Co., Ltd.	Preparatory survey for Nagdhunga Tunnel Construction in Nepal	Intersection West Side	Not To Scale



Plan



Profile

EXISTING LEVEL (m)	1382.465	1378.981	1374.126	1365.885	1368.508	1357.353	1366.114	1361.390	1356.813	1359.096	1362.792	1364.495	1365.975	1366.328	1368.124	1378.118	1384.966	1382.607	1381.112	1382.888	1381.893	1382.711	1391.836
CHAINAGE (km)	0+000.00	0+100.00	0+200.00	0+300.00	0+400.00	0+500.00	0+600.00	0+700.00	0+800.00	0+900.00	1+000.00	1+100.00	1+200.00	1+300.00	1+400.00	1+500.00	1+600.00	1+700.00	1+800.00	1+900.00	2+000.00	2+100.00	2+192.00