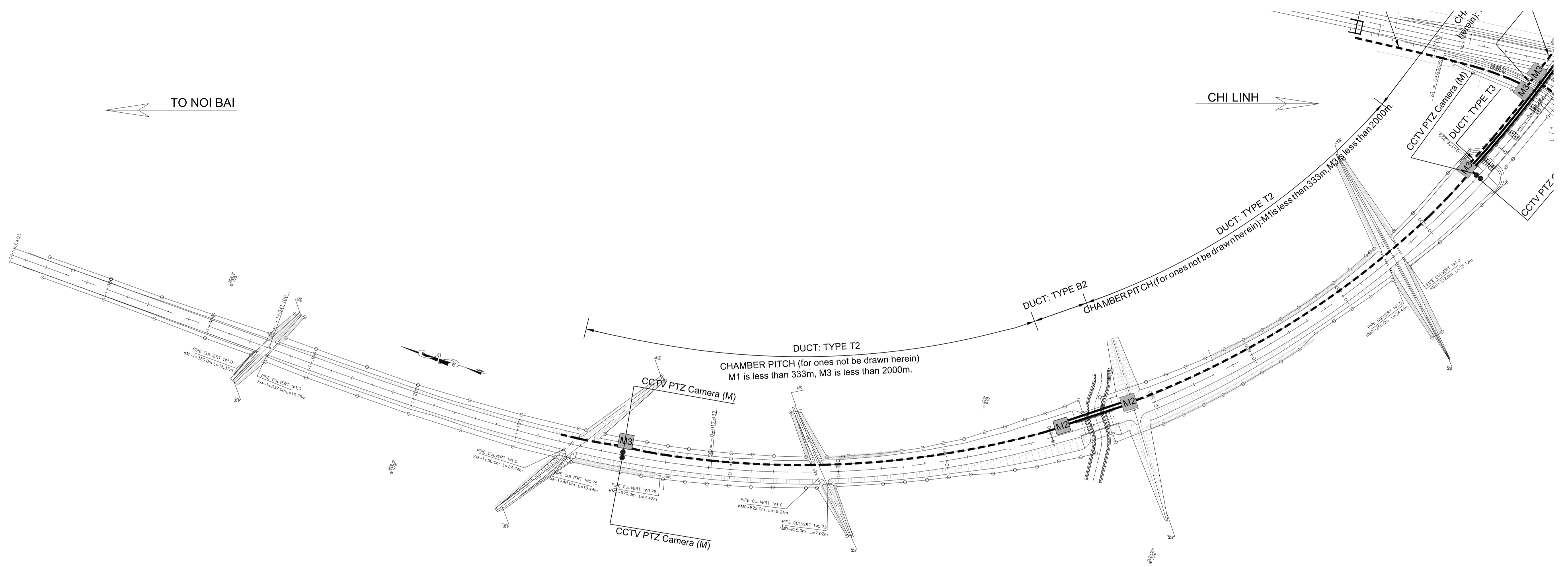


NOI BAI - CA LO BRIDGE EXP.



CONSULTANT				
TITLE	NAME	SIGNATURE	DATE	
ORIENTAL CONSULTANTS GLOBAL CO., LTD				
METROPOLITAN EXPRESSWAY CO., LTD				
NEXCO EAST ENGINEERING CO., LTD				
TRANSPORTATION RESEARCH INSTITUTE CO., LTD				
ABEAM CONSULTING LTD.				
PREPARED BY				
CHECKED BY				
APPROVED BY				

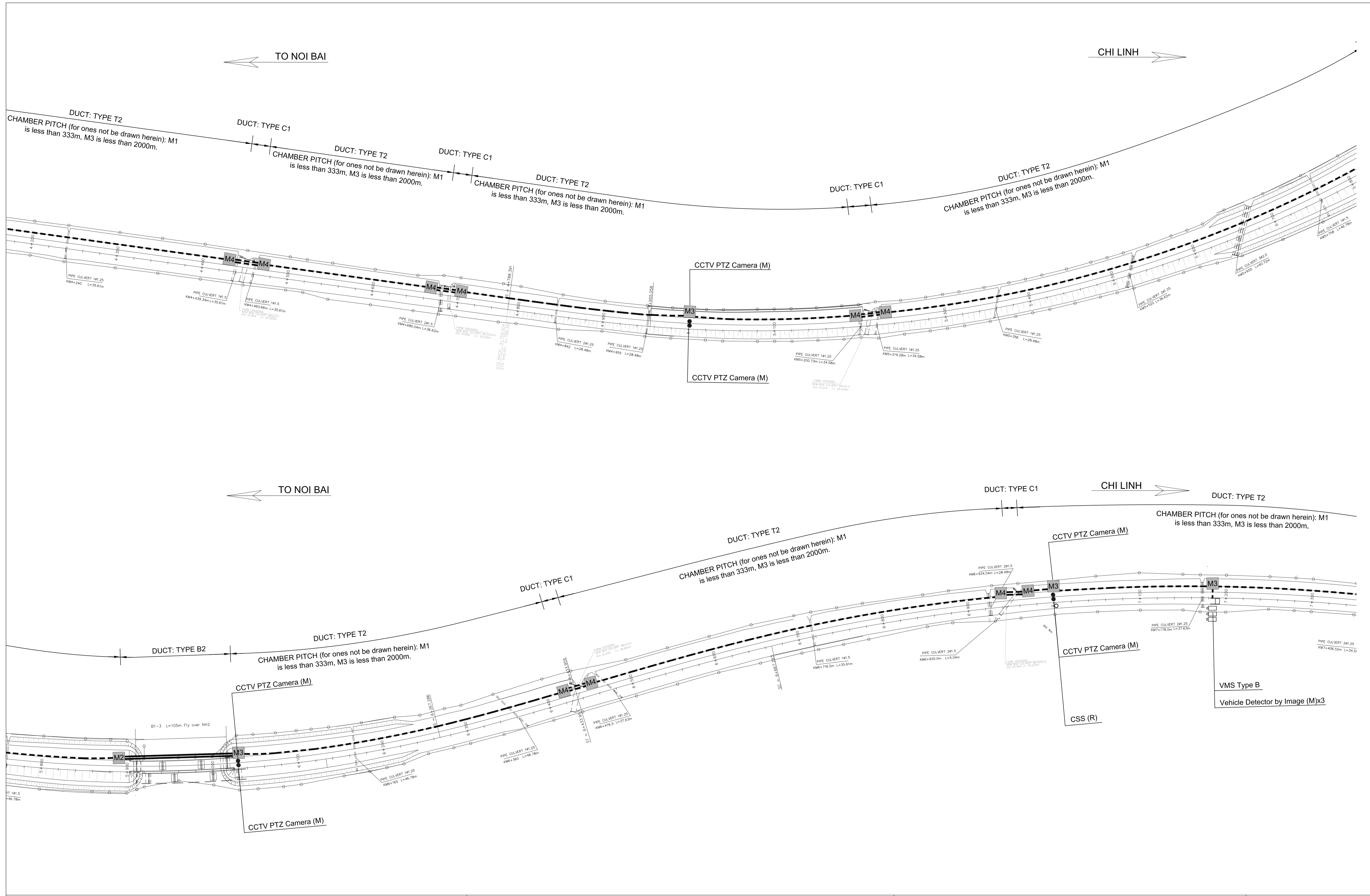
SOCIALIST REPUBLIC OF VIETNAM	
MINISTRY OF TRANSPORT	

ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM	
DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km -1-593 -:- KM -0-100, NOI BAI - CA LO BRIDGE EXP.)	
SCALE: 1/4000	

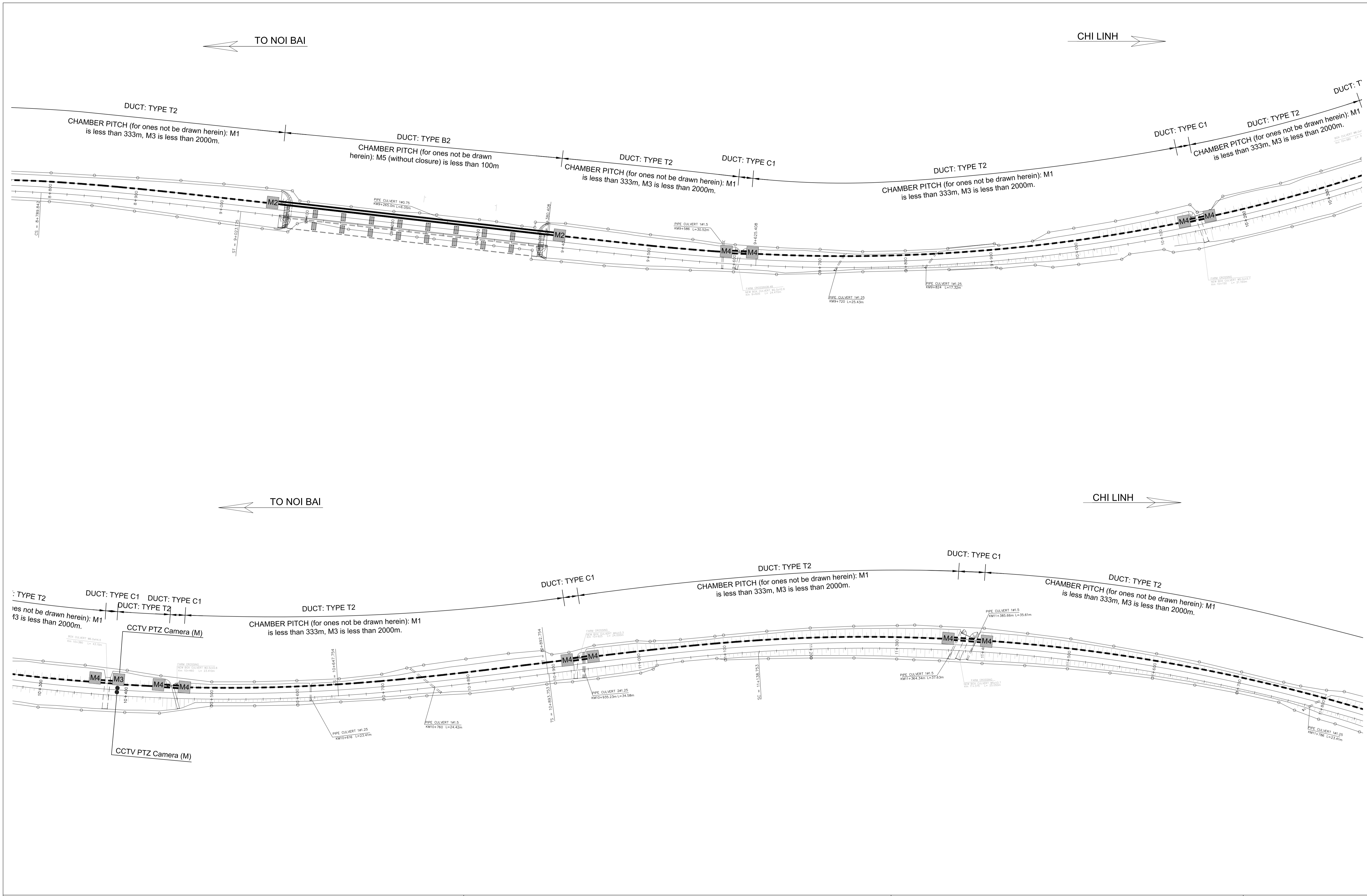
PACKAGE:	
DRAWING No.:	IX.1-01
SHEET No.:	Sheet of
Rev.:	



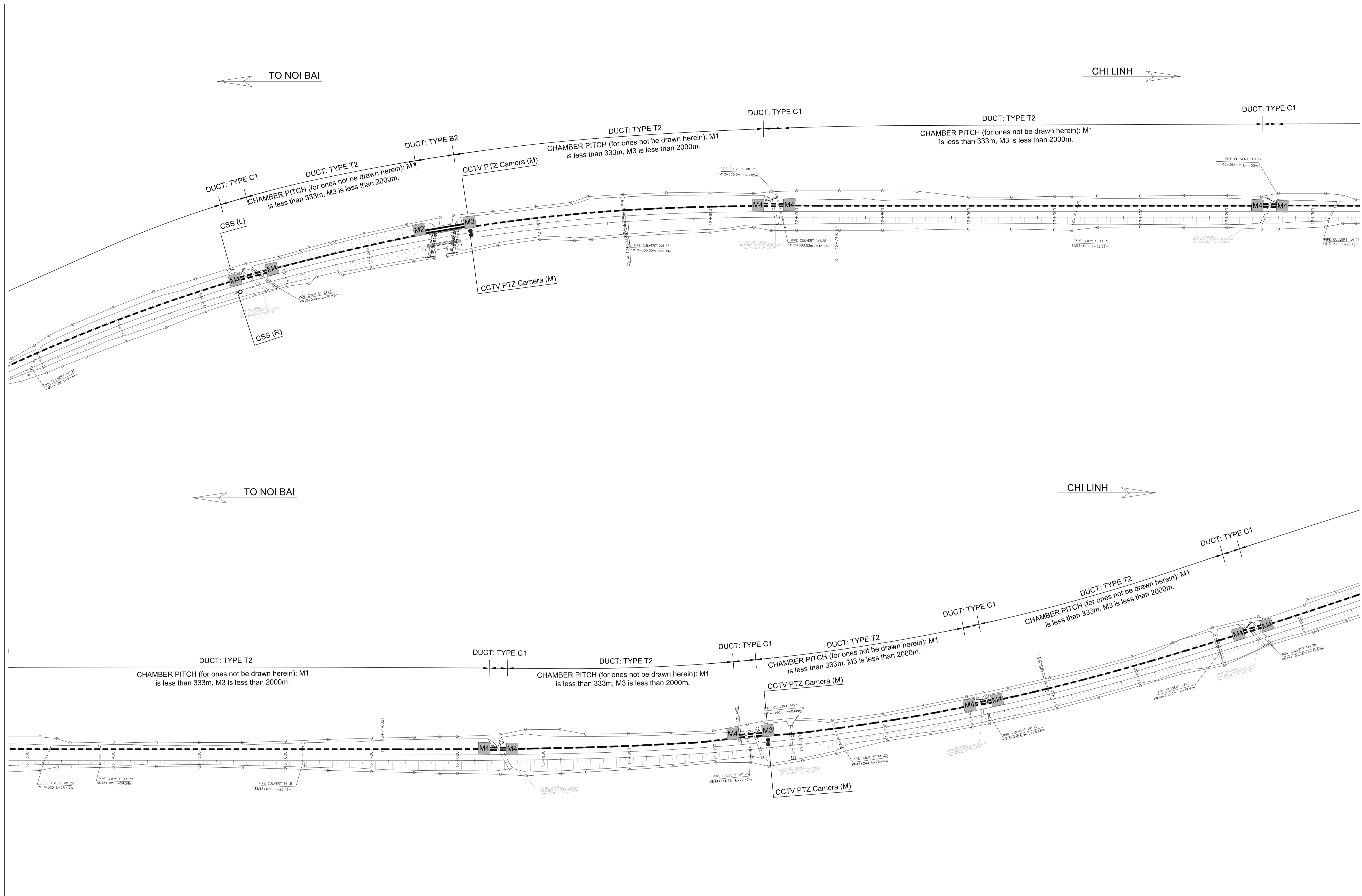
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:			
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING No.: IX.1-03		
					PREPARED BY											
					CHECKED BY											
APPROVED BY				DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 1+200 -:- KM 4+200, NOI BAI - CA LO BRIDGE EXP.)					SHEET No.:		Rev.:					
									SCALE: 1/4000		Sheet of					



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:					
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 4+200 -:- KM 7+300, NOI BAI - CA LO BRIDGE EXP.)					DRAWING No.:	
					PREPARED BY									SCALE: 1/4000		IX.1-04				
					CHECKED BY											SHEET No.:		Rev.:		
					APPROVED BY									Sheet of						

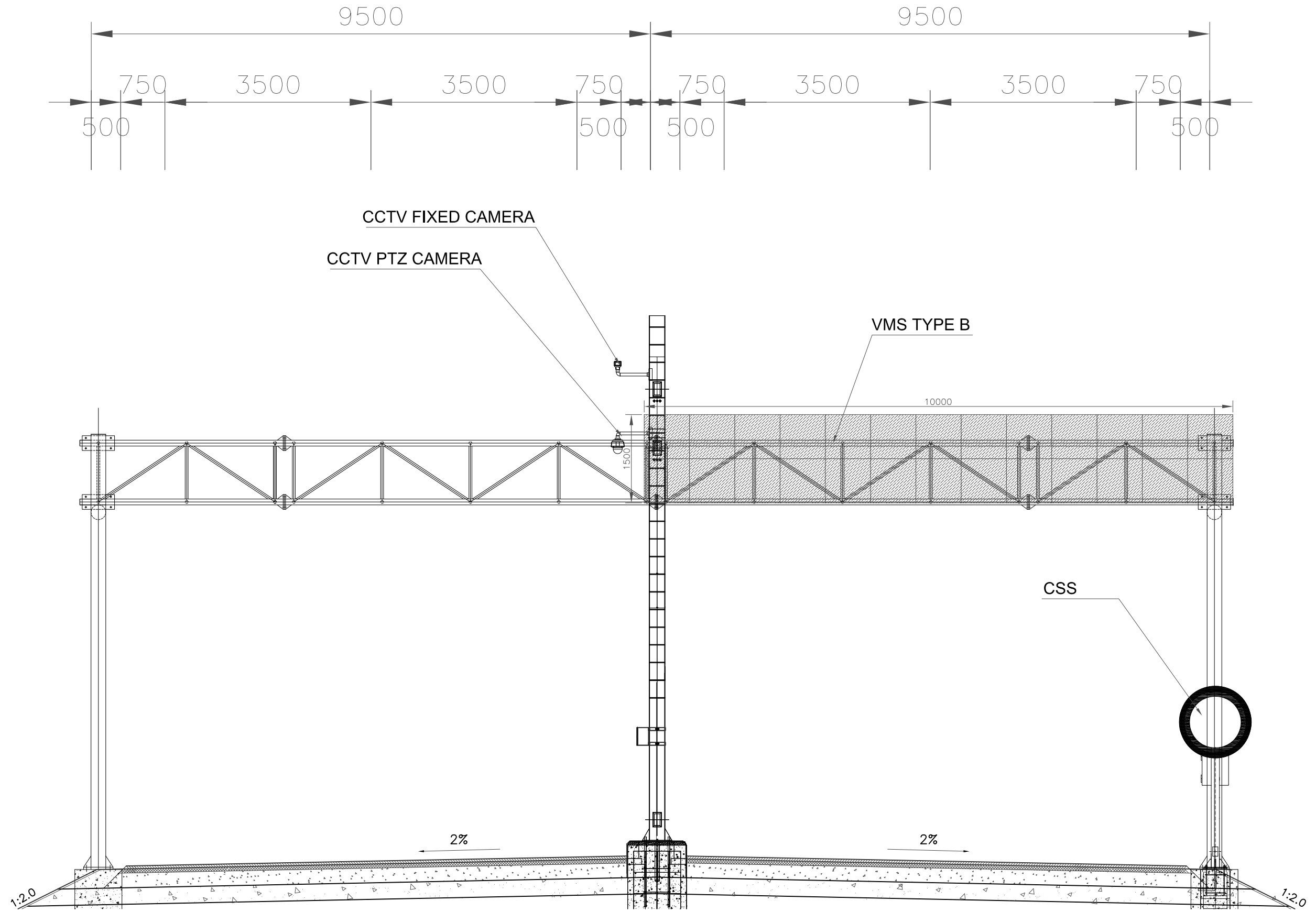


CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:					
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 8+800 -:- KM 11+800, NOI BAI - CA LO BRIDGE EXP.)			DRAWING No.:	
					PREPARED BY												IX.1-06	
					CHECKED BY												SHEET No.:	
APPROVED BY									SCALE: 1/4000		Sheet of		Rev.					



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:						
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 11+800 -:- KM 14+800, NOI BAI - CA LO BRIDGE EXP.)					DRAWING No.:						
															TITLE					IX.1-07	
															PREPARED BY					SHEET No.:	
CHECKED BY					SCALE: 1/4000					Sheet		of									
APPROVED BY																					

TYPICAL CROSS SECTION



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: TYPICAL CROSS SECTION OF EQUIPMENT ARRANGEMENT OF NOI BAI - CA LO BRIDGE EXP.			DRAWING No.:	
													IX.2-01	
										TITLE NAME SIGNATURE DATE PREPARED BY CHECKED BY APPROVED BY				
								Sheet		of				

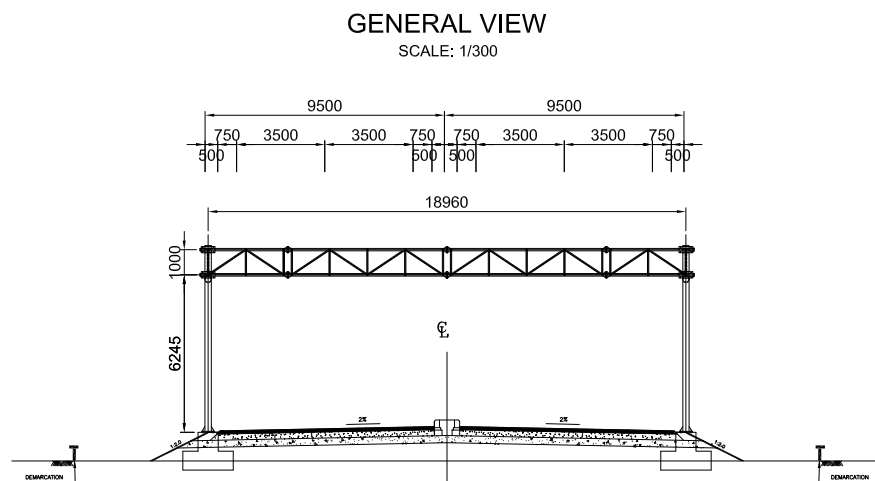
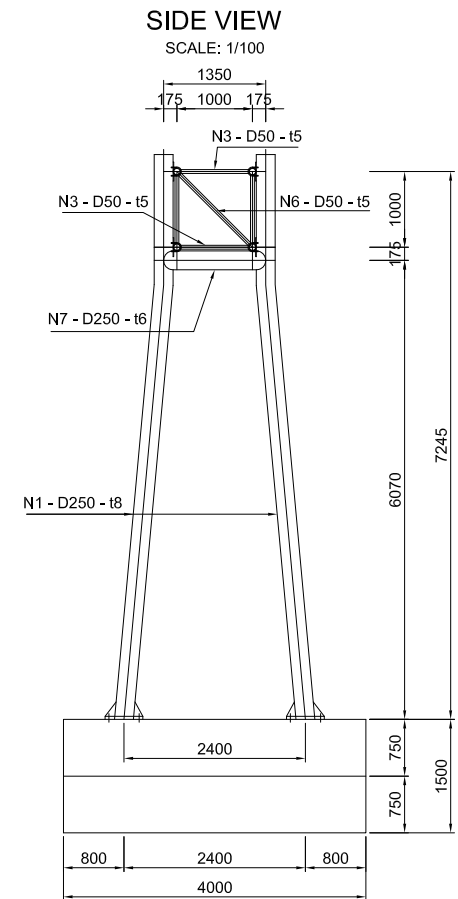
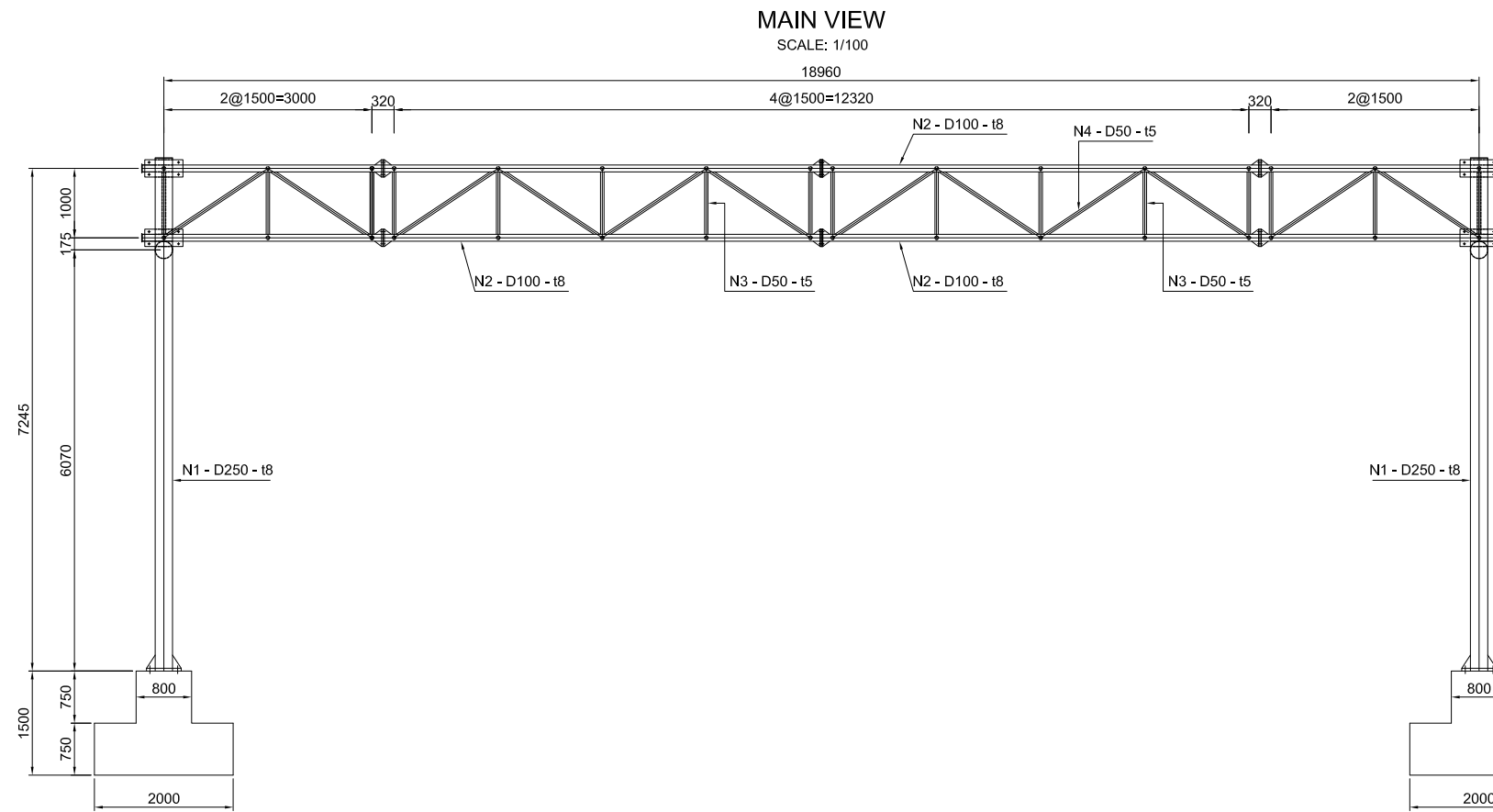


TABLE OF QUANTITY

Element	Type	Weight	Number	Total weight	Notes
		of 1 element	of element		
		(mm)	(kg)	(items)	(kg)
N1	Tube D250 t=8 L=7494	357.80	4	1431.19	Main column (upper part)
N2	Tube D100 t=8 L=19590	355.58	4	1422.30	Top chord, Bottom chord
N3	Tube D50 t=5 L=1000	5.55	64	355.13	Vertical web bar
N4	Tube D50 t=5 L=1803	10.00	48	480.22	Diagonal web bar
N6	Tube D50 t=5 L=1414	7.85	16	125.54	Diaphragm
N7	Tube D250 t=6 L=1350	48.74	2	97.48	Diaphragm
Total steel					3911.86
Concrete M200					16.80m ³ Assumed

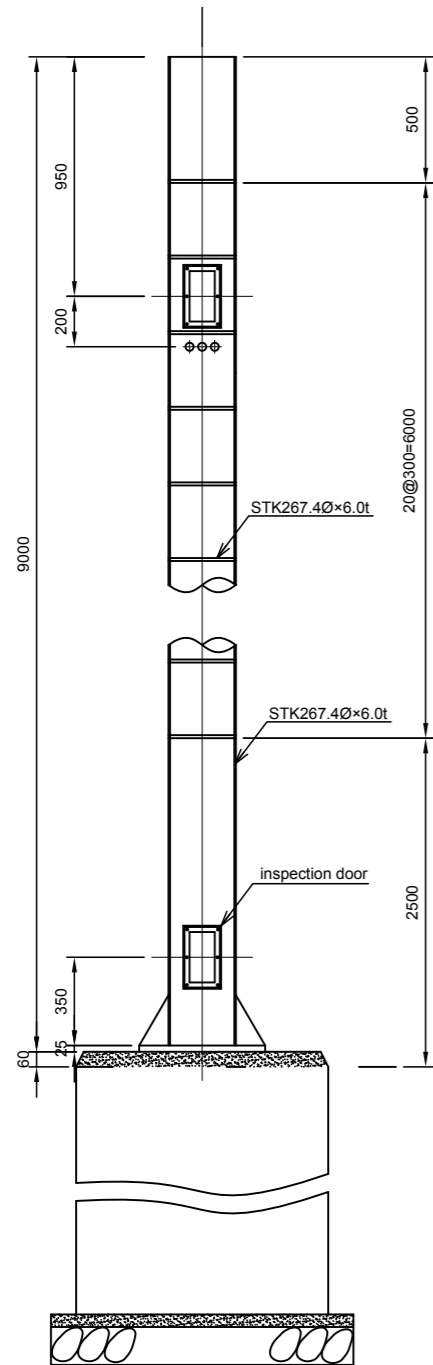
NOTES:

- Dimensions are in millimeter.
- Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- Concrete structure equivalence with:
Concrete strength: $F_c' = 18$ MPa
Reinforcing Bar (CB300-II) : Yield strength: $F_y = 300$ MPa
Tensile strength: $F_u = 450$ MPa
- The depth of foundation is just an estimated value.
The final depth of foundation shall be based on the real soil condition.
These structure should be redesigned to meet site condition.
- In case without any recommendation about zincing in details all metal member exposed to weather or soil must be zinced with amount of 500g/m²

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE: NOI BAI - CA LO BRIDGE EXPRESSWAY DETAIL OF GANTRY AT EARTHWORK SECTION			DRAWING No.:	
	PREPARED BY										IX.2-02	
	CHECKED BY							SHEET No.:		Rev:		
	APPROVED BY							SCALE: Varles		Sheet of		

SUPPORT POLE FOR CAMERA

SUPPORT POLE FOR CAMERA scale:1/30



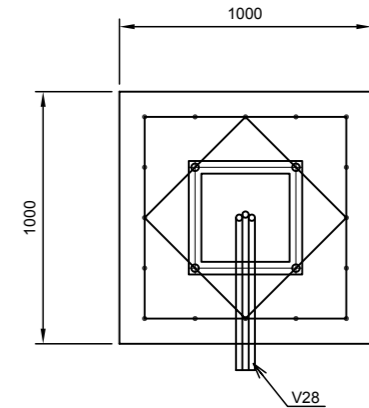
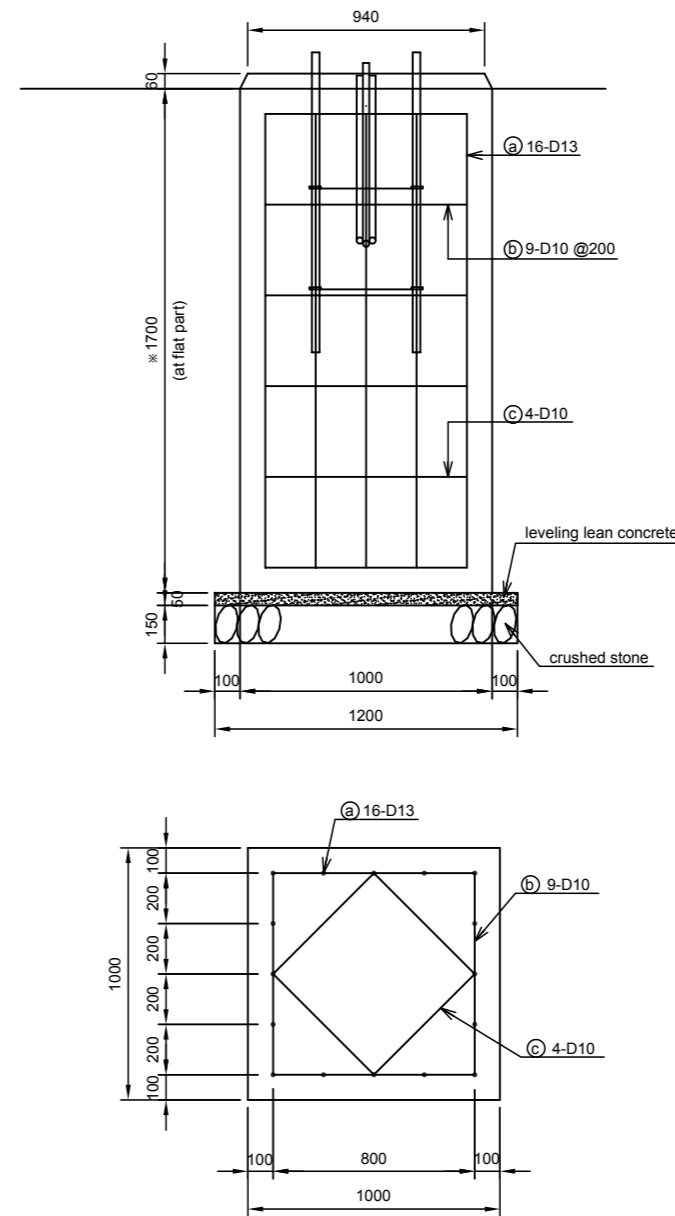
Volume table of support pole

	Material	Dimension	Weight (kg)
Pole	Steel	267.4Φx6t	348.3
Step	Steel	RB13Φ	9.4
Base	Steel	25t	49.2
Base	Steel	12t	9.0
Total weight			416

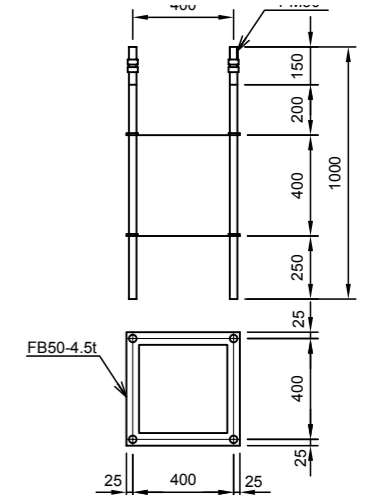
Volume table of foundation

items	class	unit	volume		remarks
			at flat part	at embankment	
concrete	M200	m ³	1.700	2.200	
formwork		m ²	6.800	8.800	
rebar	D13	kg	28.66	36.62	
rebar	D10	"	22.87	26.71	
anchor bolt	M30x1000lx4	set	1	1	
normal bend	VE28	m	4.5	4.5	1.5mx3
crushed stone		m ³	0.216	0.216	
leveling lean concrete		m ³	0.072	0.072	
excavation		m ³	7.600	8.491	
backfill		m ³	5.612	6.220	
disposal of waste soil		m ³	1.988	2.272	

FOUNDATION scale:1/30



ANCHOR BOLT scale:1/30



Volume table of rebar at flat part

type	shape	length (m)	volume	weight (kg)
a	— D13	1.80	16	28.66
b	□ D10	3.43	9	17.29
c	◇ D10	2.49	4	5.58

Volume table of rebar at embankment part

type	shape	length (m)	volume	weight (kg)
a	— D13	2.30	16	36.62
b	□ D10	3.43	11	21.13
c	◇ D10	2.49	4	5.58

*1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa

*2 Concrete structure equivalence with:
Concrete strength: $F_c' = 18$ MPa
Reinforcing Bar (CB300-II) : Yield strength: $F_y = 300$ MPa
Tensile strength: $F_u = 450$ MPa

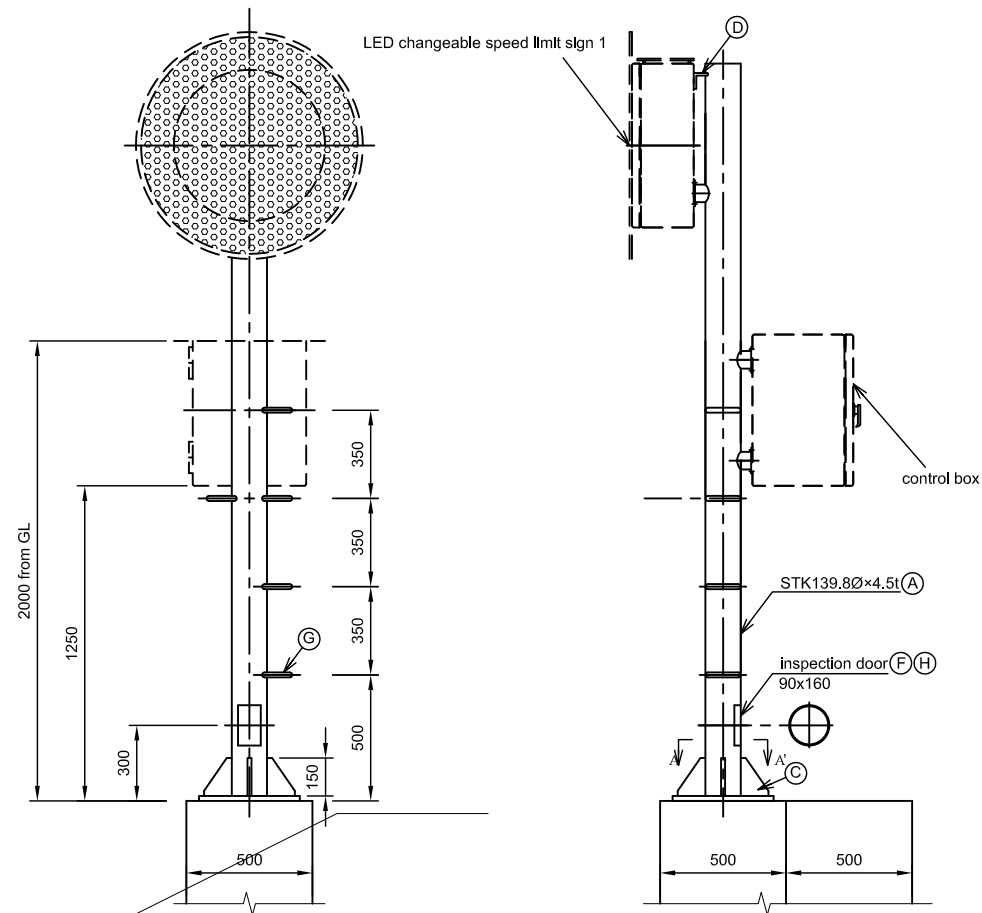
*3 In case without any recommendation about zincing in details, all metal members exposed to weather or soil must be zined with amount of 550g/m².

*4 This drawing be based on NEXCO(Japan) drawings.
*5 These structures should be redesigned to meet site condition.

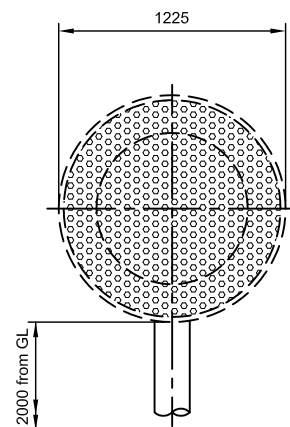
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: NOI BAI - CA LO BRIDGE EXPRESSWAY SUPPORT POLE FOR CAMERA					DRAWING No.:	
															IX.2-03	
															SHEET No.:	
															Sheet of	
TITLE					NAME					SIGNATURE					Rev.:	
PREPARED BY																
CHECKED BY																
APPROVED BY																
SCALE: 1/30																

SUPPORT POLE FOR CHANGEABLE SPEED LIMIT SIGN

SUPPORT POLE FOR CHANGEABLE SPEED LIMIT SIGN (CSS) scale:1/30
(AT ENDS)



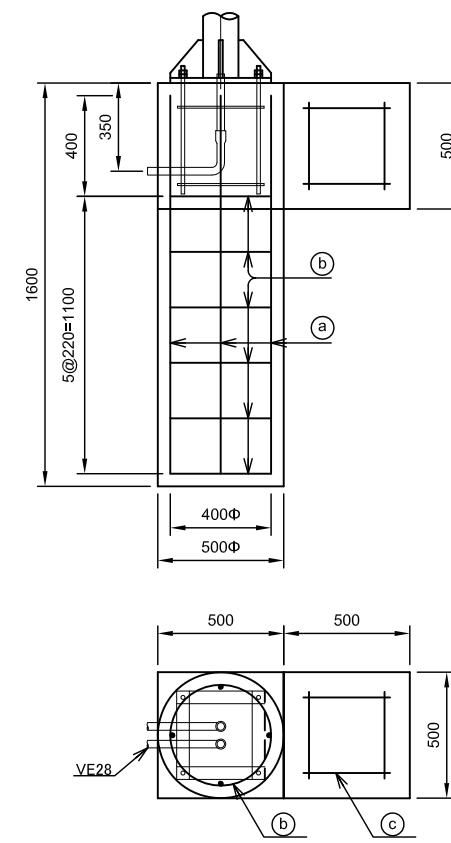
(AT MIDDLE)



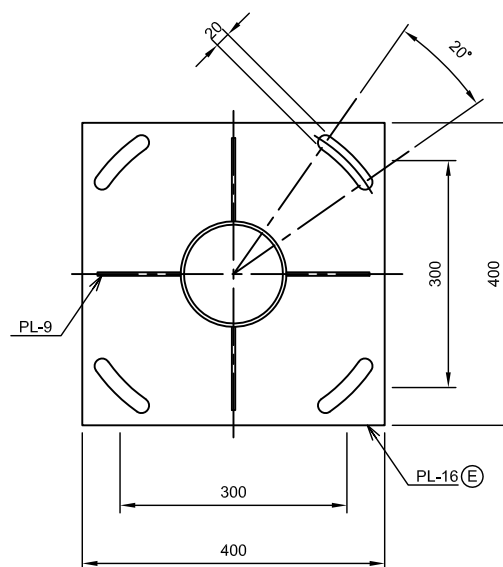
Volume table of support pole

	Material	Dimension	Weight (kg)	
			at ends	at middle
(A)	Steel	139.8Øx4.5t	47.0	42.0
(C)	Steel	9t	18.0	16.0
(D)	Steel	6t	1.4	1.4
(E)	Steel	16t	20.0	20.0
(F)	Steel	3.2t	1.4	1.4
(G)	Steel	RB13Ø	4.0	4.0
(H)	Steel	FB50x6t	1.0	1.0
		Total weight	95	87

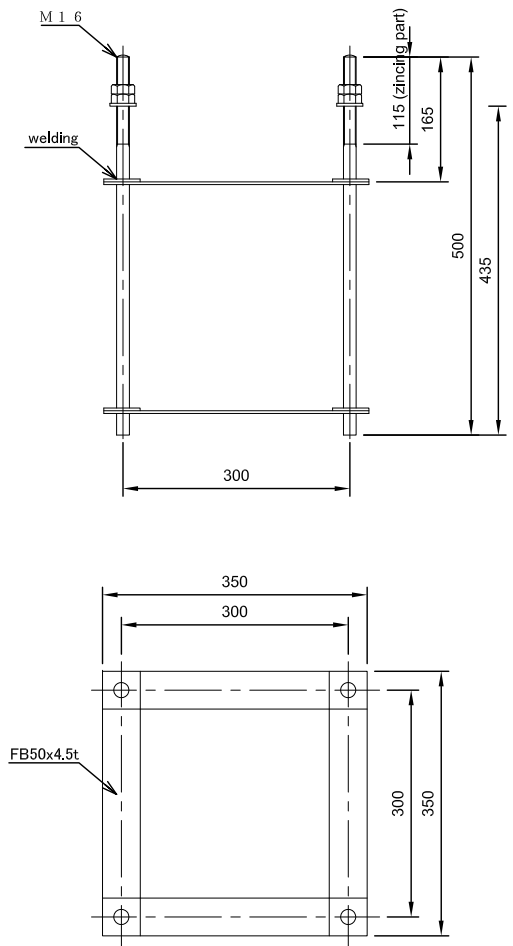
FOUNDATION scale:1/30



BASE PLATE SCALE:1/10



ANCHOR BOLT scale:1/10



Rebar processing table of foundation

type	shape	volume
		at embankment
a	D13	4
b	D10	6
c	D13	12

*c is used for maintenance.

Volume table of foundation

items	class	unit	volume
			at embankment
concrete		m ³	0.466
rebar	D13	kg	9.719
rebar	D10	"	5.860
formwork		m ²	1.5
disposal of waste soil		m ³	0.316
anchor bolt	16Øx500x4	set	1
normal bend	VE28	pipe	2

*1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: F_y = 250 MPa
Tensile strength: F_u = 400 MPa

*2 Concrete structure equivalence with:
Concrete strength: F_c' = 18MPa
Reinforcing Bar (CB300-II) : Yield strength: F_y = 300 MPa
Tensile strength: F_u = 450 MPa

*3 In case without any recommendation about zincing in details, all metal members exposed to weather or soil must be zincing with amount of 550g/m².

*4 This drawing be based on NEXCO(Japan) drawings.
*5 These structures should be redesigned to meet site condition.

CONSULTANT

ORIENTAL CONSULTANTS GLOBAL CO., LTD
METROPOLITAN EXPRESSWAY CO., LTD
NEXCO EAST ENGINEERING CO., LTD
TRANSPORTATION RESEARCH INSTITUTE CO., LTD
ABEAM CONSULTING LTD.

TITLE	NAME	SIGNATURE	DATE
PREPARED BY			
CHECKED BY			
APPROVED BY			

SOCIALIST REPUBLIC OF VIETNAM

MINISTRY OF TRANSPORT

ITS INTEGRATION PROJECT
IN NORTHERN AREA OF VIETNAM

DRAWING TITLE:

NOI BAI - CA LO BRIDGE EXPRESSWAY
SUPPORT POLE FOR CHANGEABLE SPEED LIMIT SIGN

SCALE: Varies

PACKAGE:

DRAWING No.:

IX.2-04

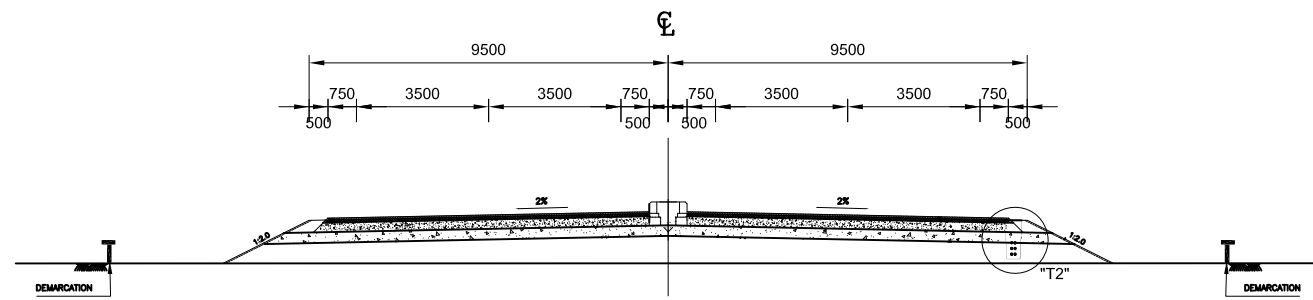
SHEET No.:

Rev:

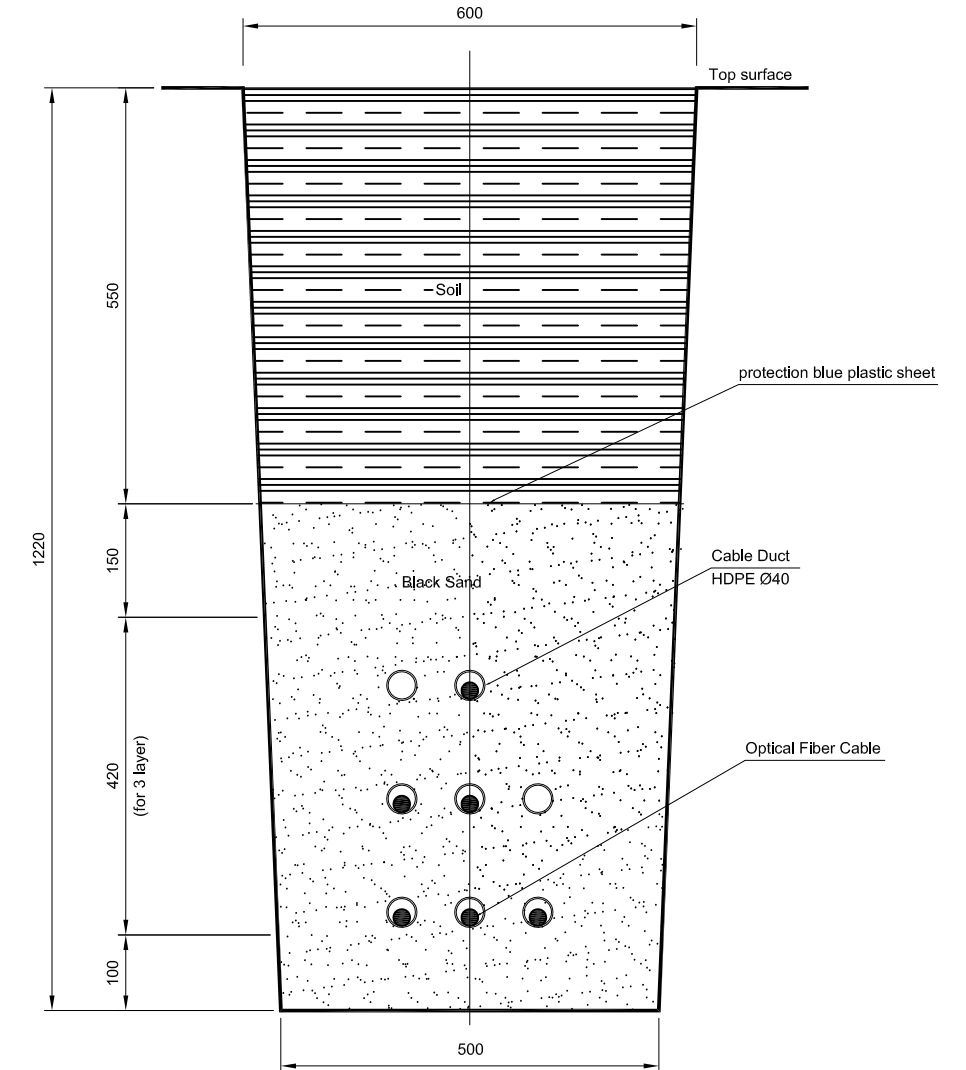
Sheet of

TYPICAL CROSS SECTION OF COMMUNICATION DUCT(TYPE T2,T3) IN EARTHWORK SECTION

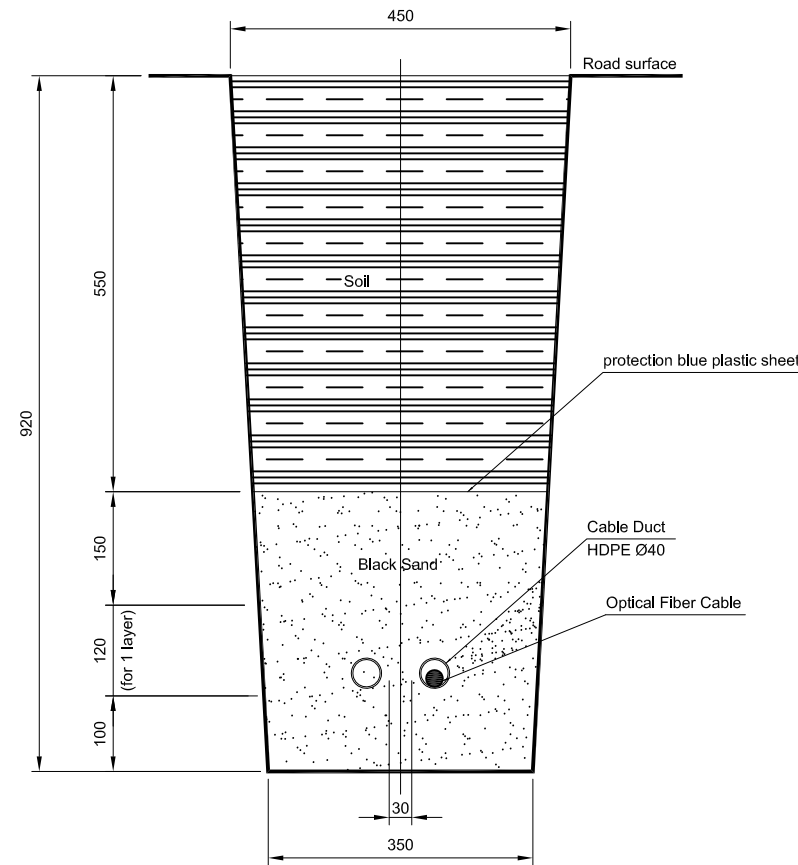
ARRANGEMENT OF COMMUNICATION DUCT IN SHOULDER (T2 TYPE)
(WHEN MEDIAN WIDTH BE LESS THAN 2.0M)



T2 DETAIL scale:1/10



COMMUNICATION DUCT TYPE T3 DETAIL scale:1/10
(USE FOR COMMUNICATION DUCT SPREAD FOR ROADSIDE EQUIPMENT)



PROTECTION BLUE PLASTIC SHEET scale:1/20



Volume table of T2 Duct (for 1 kilometer in length)

	Volume
Disposal soil	671 m ³
Black sand	353 m ³
Backfill soil	318 m ³
Protection blue plastic sheet	500 m ²

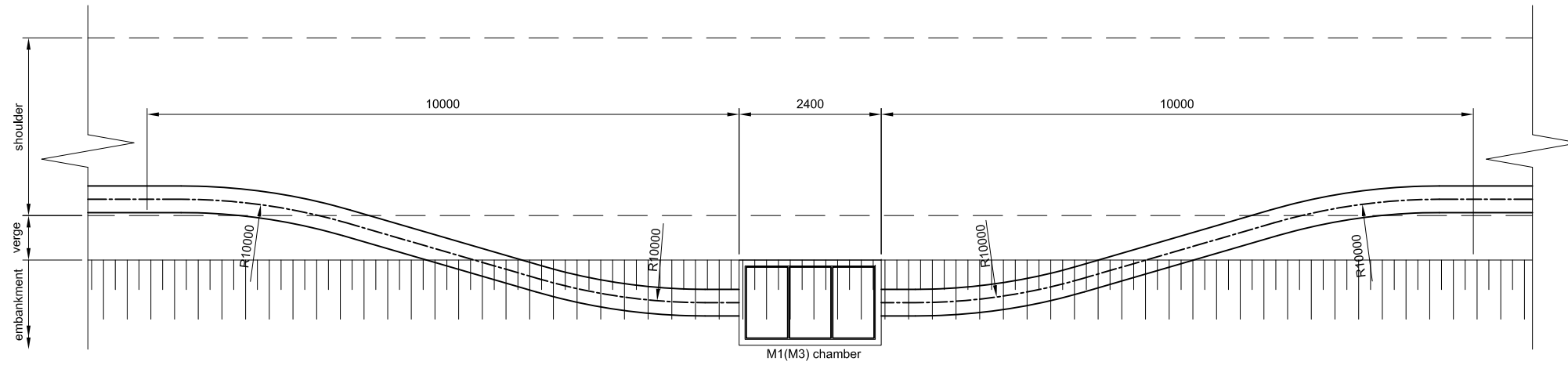
Volume table of T3 Duct (for 1 kilometer in length)

	Volume
Disposal soil	368 m ³
Black sand	137 m ³
Backfill soil	231 m ³
Protection blue plastic sheet	350 m ²

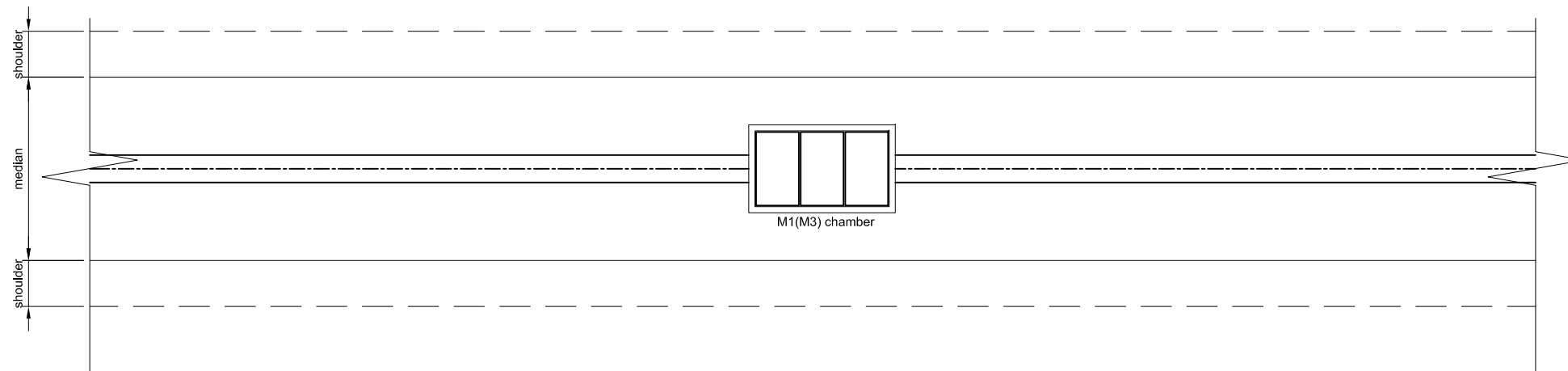
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:				
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE:			DRAWING No.:				
										NOI BAI - CA LO BRIDGE EXPRESSWAY			TYPICAL CROSS SECTION OF COMMUNICATION DUCT(TYPE T2,T3) IN EARTHWORK SECTION			IX.3-01	
										SCALE: Varies			SHEET No.:		Rev:		
										Sheet		of					

ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (1)

CHAMBER FOR COMMUNICATION DUCT ON ROAD scale: 1/100



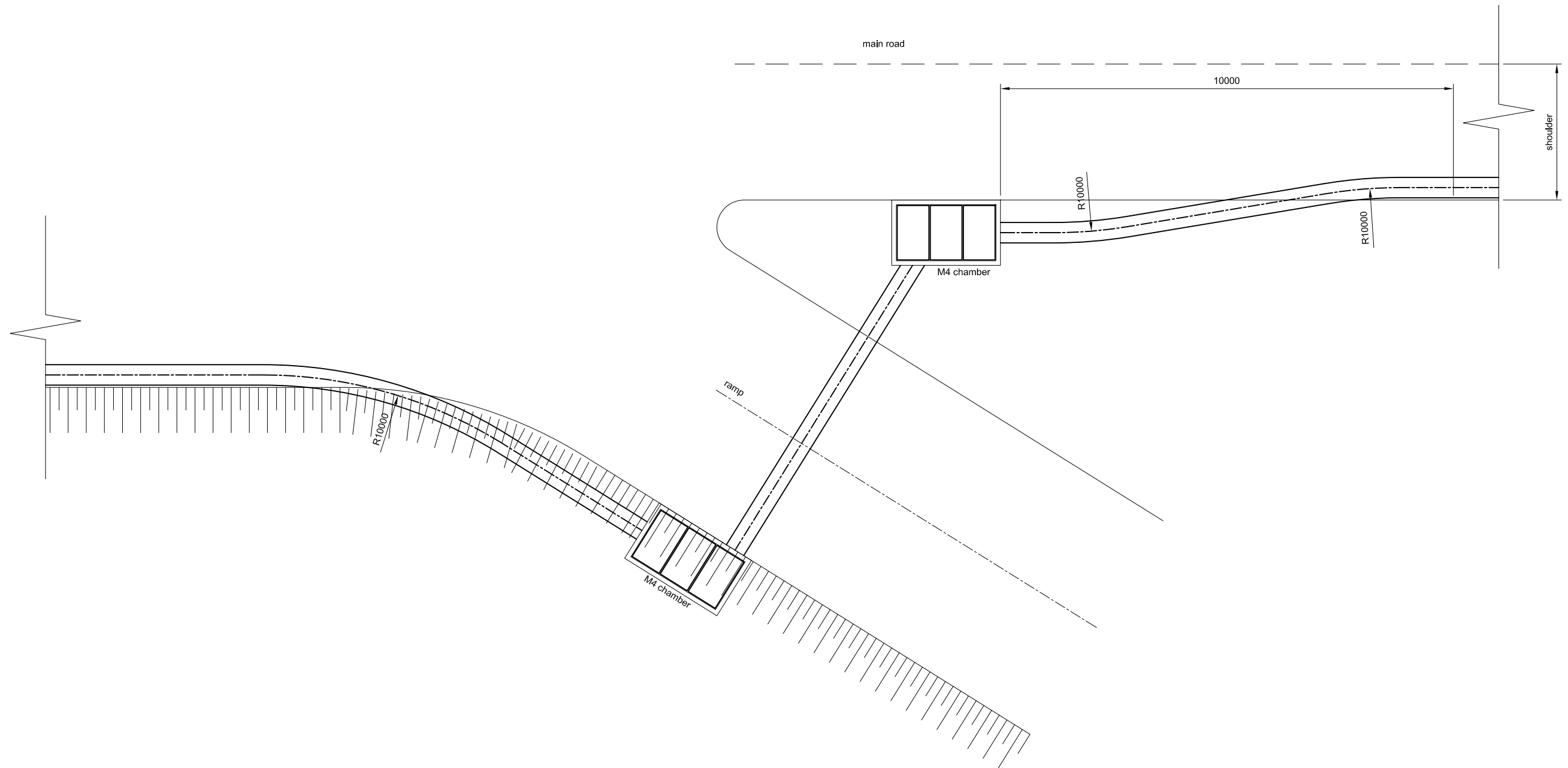
CHAMBER FOR COMMUNICATION DUCT ON MEDIAN scale: 1/100



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE:	DRAWING No.:	
	PREPARED BY							NOI BAI - CA LO BRIDGE EXPRESSWAY		IX.3-02
	CHECKED BY							ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (1)		SHEET No.:
	APPROVED BY							SCALE: 1/100	Sheet of	Rev:

ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (2)

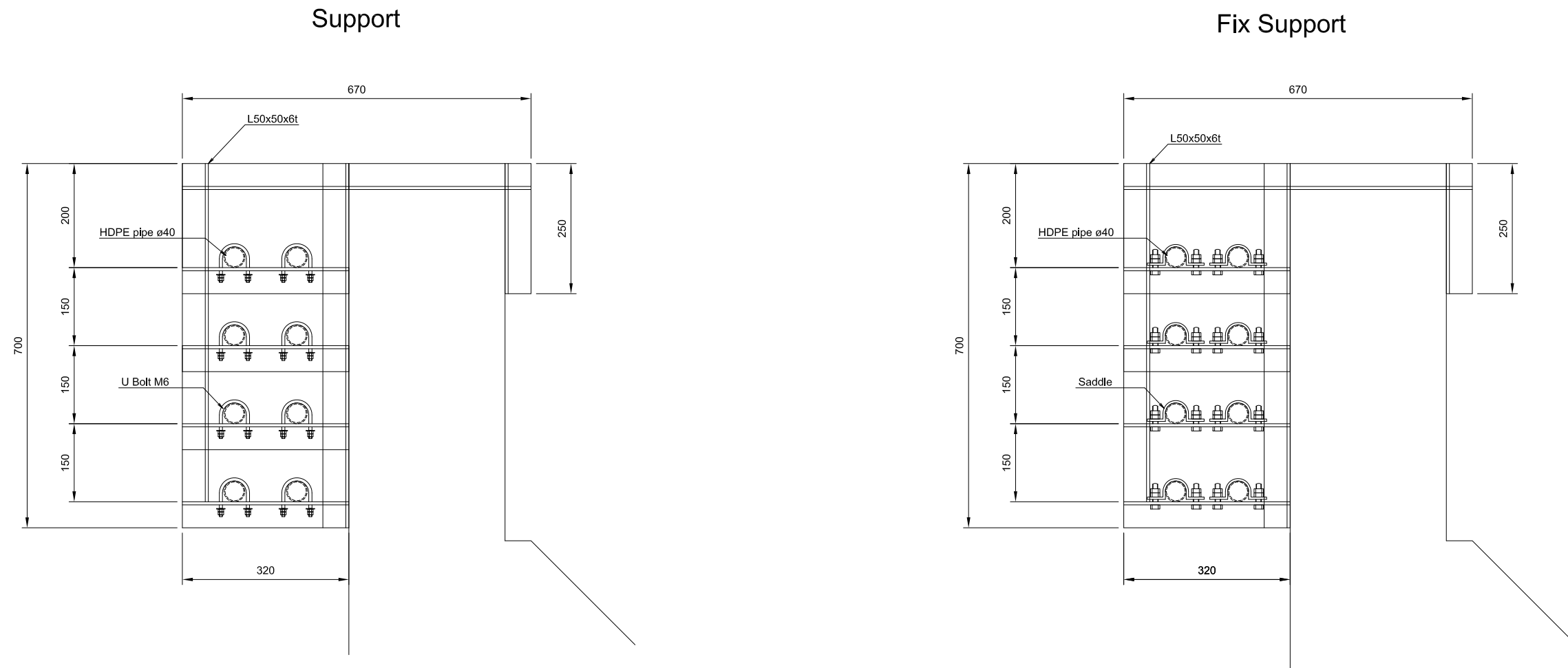
CHAMBER FOR CHANGING DIRECTION OF COMMUNICATION DUCT ON ROAD scale: 1/100



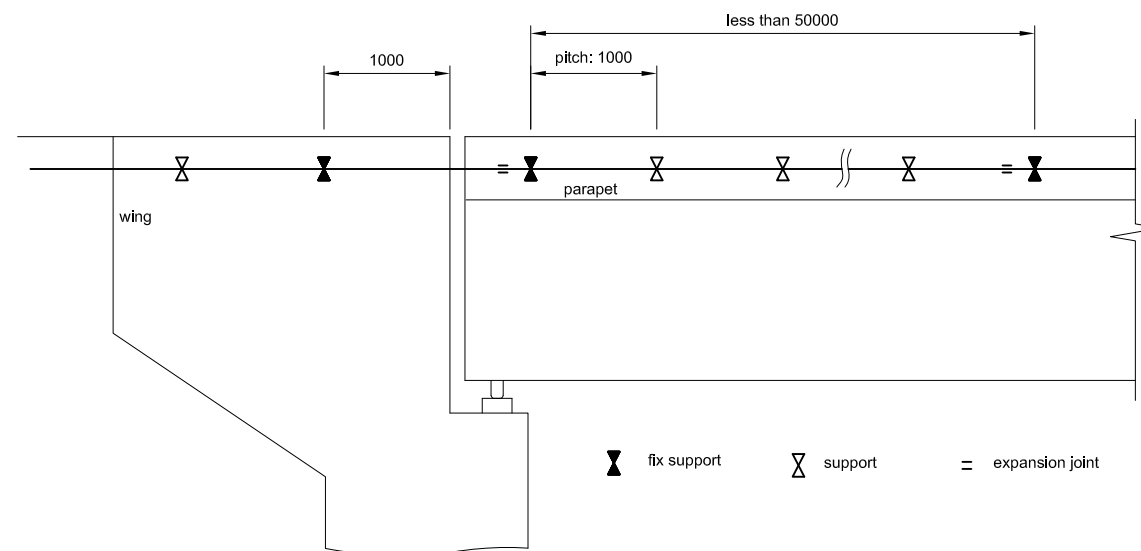
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE:	DRAWING No.:	
	PREPARED BY							NOI BAI - CA LO BRIDGE EXPRESSWAY		IX.3-03
	CHECKED BY							ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (2)		SHEET No.:
	APPROVED BY							SCALE: 1/100	Sheet of	Rev:

DETAIL OF COMMUNICATION DUCT (TYPE B1) ON BRIDGE

ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (CROSS SECTION VIEW) scale:1/10



ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (SIDE VIEW)



Volume table of supporting rack(for 1 place)

	Weight(kg)
L50x50x6t	16

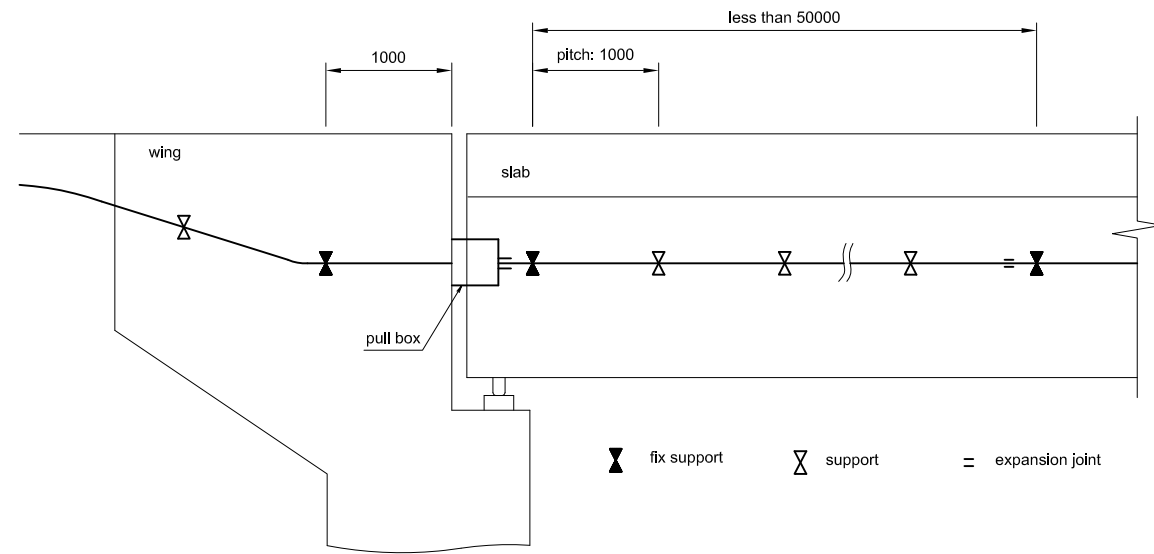
- *1 Structural steel conforms ASTM A-709M Grade 250 as equivalent to the recommendation about zinking in details, all metal members be exposed to weather or soil must be zinned with amount of 550g/m².
- *2 Concrete structure equivalence with: Concrete strength: F'c = 18 MPa; Reinforcing Bar (CB300-II): Yield strength: Fy = 300 MPa; Tensile strength: Fu = 450 MPa;
- *3 This drawing be based on NEXCO(Japan) drawings.
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:		
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE:		DRAWING No.:		
	PREPARED BY							NOI BAI - CA LO BRIDGE EXPRESSWAY		ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (TYPE B1)		IX.3-04
	CHECKED BY							SCALE: Varies		SHEET No.:	Rev:	
	APPROVED BY									Sheet	of	

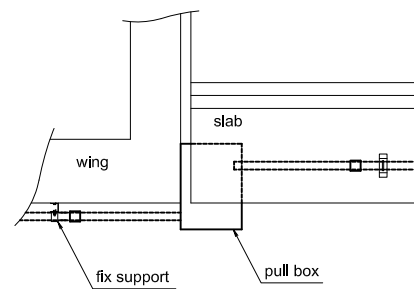
DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE (1)

ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (SIDE VIEW)

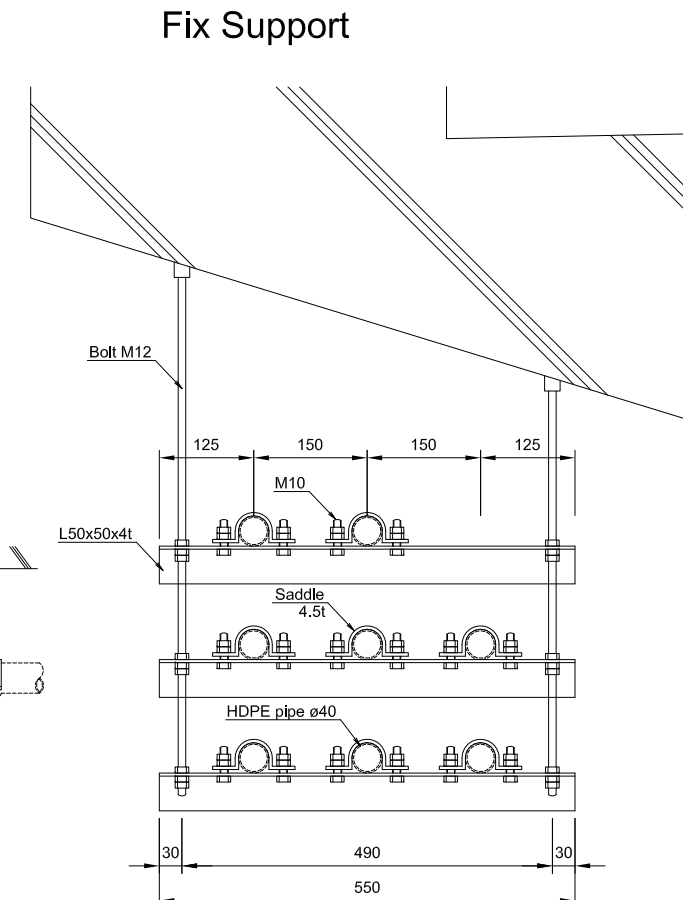
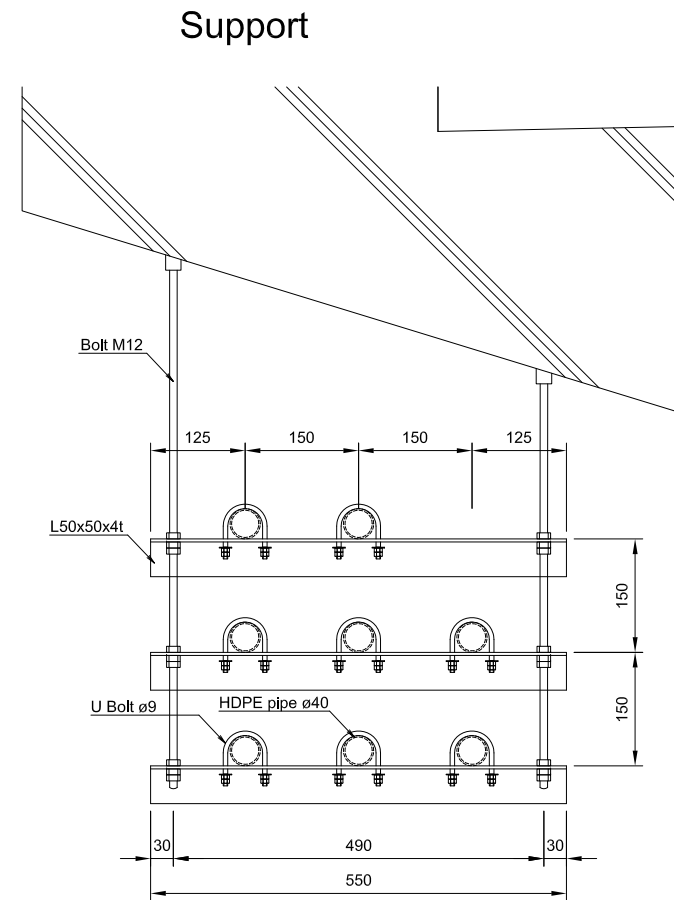
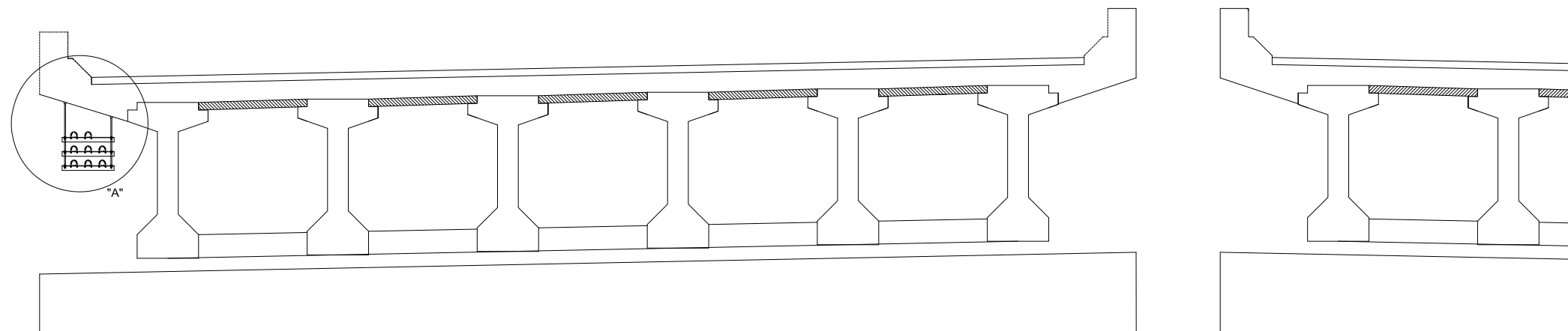
"A" DETAIL scale: 1/10



ARRANGEMENT OF COMMUNICATION DUCT AT JOINT AREA (PLAN VIEW)



ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (CROSS SECTION VIEW)



Volume table of supporting rack B2(for 1 place)

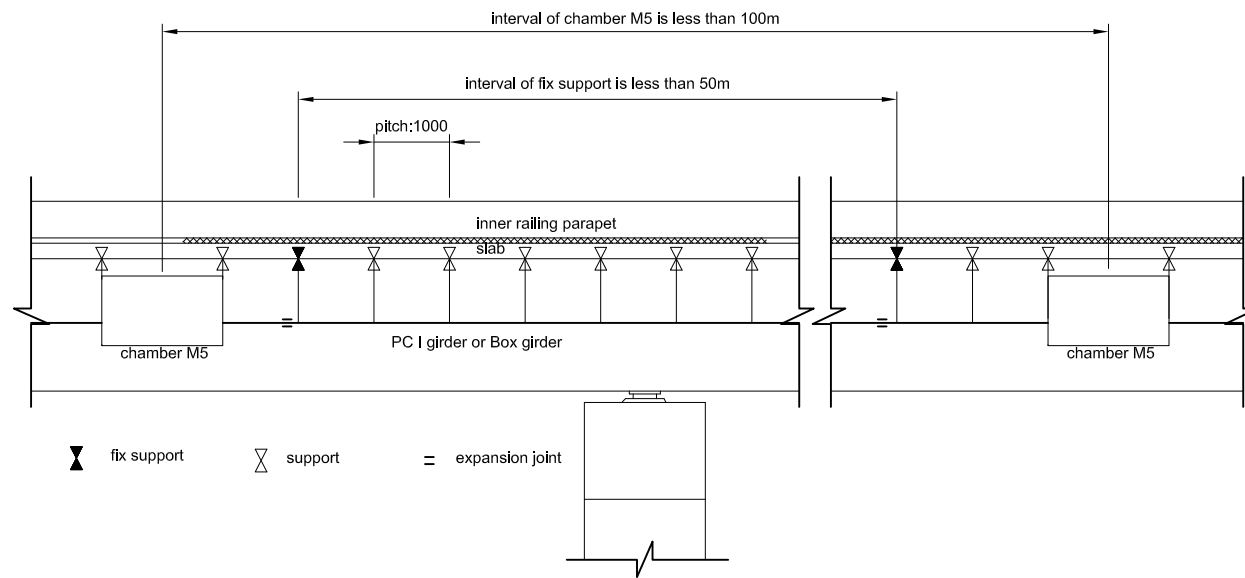
	Weight(kg)
L50x50x4t	6
Anchor bolt M12	1.3

- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- *2 Concrete structure equivalence with:
Concrete strength: $F'_c = 18$ MPa;
Reinforcing Bar (CB300-II): Yield strength: $F_y = 300$ MPa;
Tensile strength: $F_u = 450$ MPa;
- *3 In case without any recommendation about zincing in details, all metal members be exposed to weather or soil must be zinced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM		ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT		DRAWING TITLE:	DRAWING No.:	
	PREPARED BY						NOI BAI - CA LO BRIDGE EXPRESSWAY DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE (1)	IX.3-05	
	CHECKED BY						SHEET No.:	Rev:	
	APPROVED BY						Sheet	of	
							SCALE: Varies		

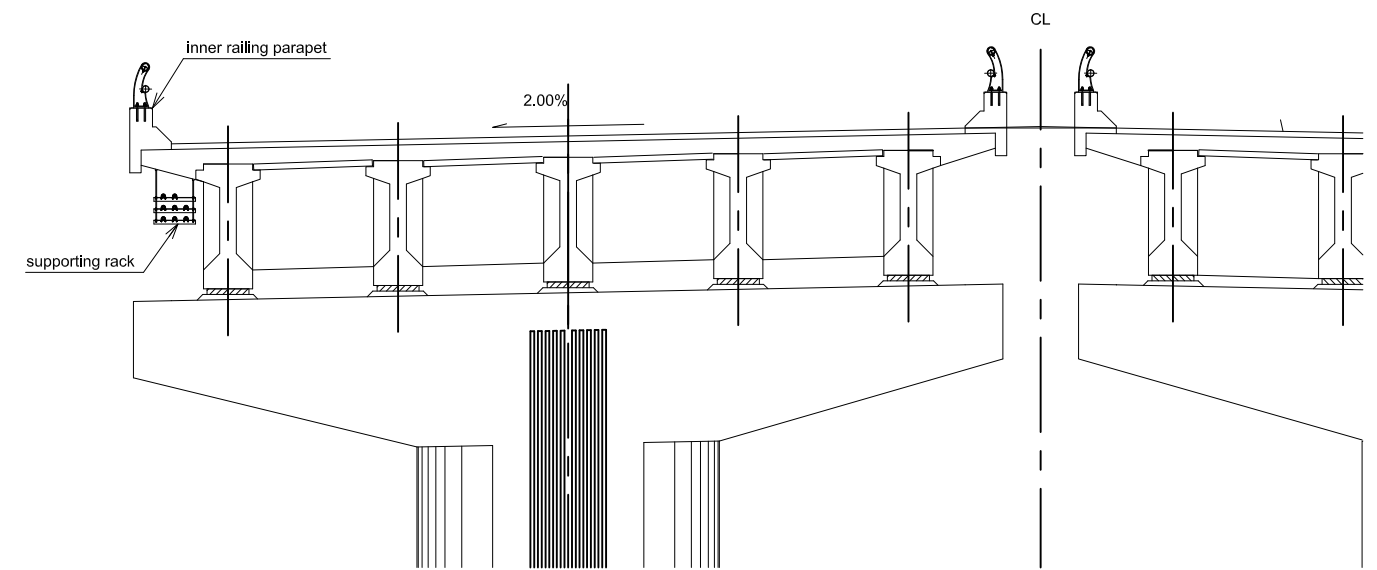
DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE(2)

SIDE VIEW



CROSS SECTION VIEW

(PC I girder section)

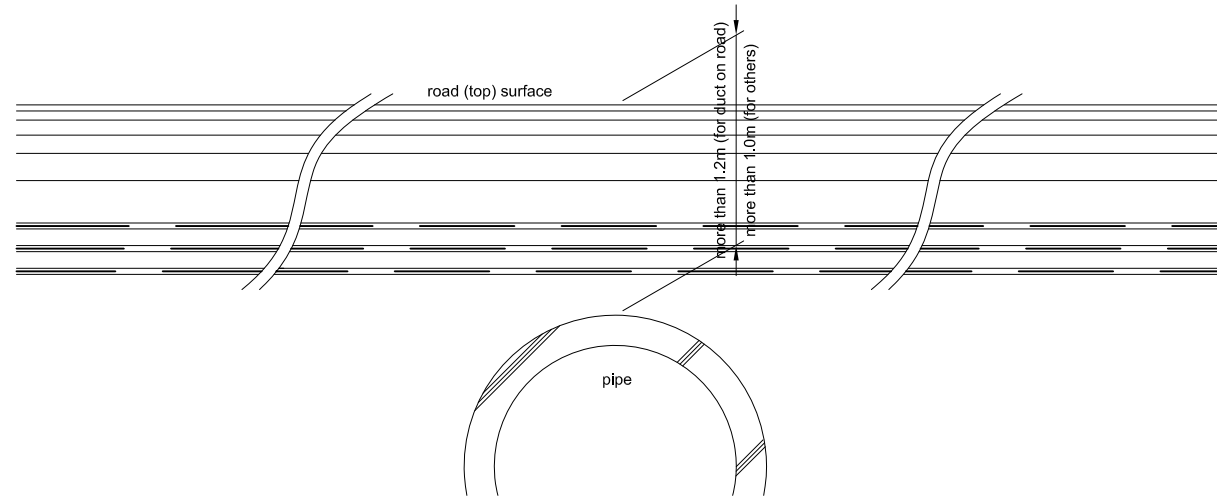


- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- *2 Concrete structure equivalence with:
Concrete strength: $F'_c = 18$ MPa;
Reinforcing Bar (CB300-II): Yield strength: $F_y = 300$ MPa;
Tensile strength: $F_u = 450$ MPa;
- *3 In case without any recommendation about zncing in details, all metal members be exposed to weather or soil must be znced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

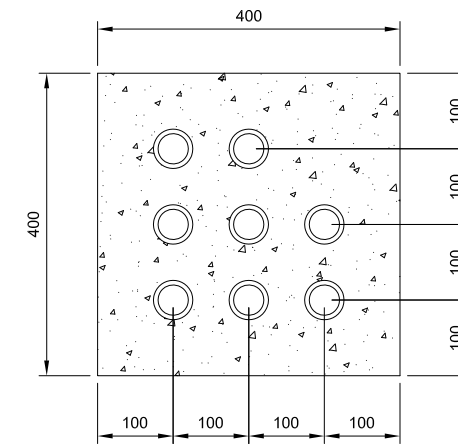
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:					
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING TITLE:					DRAWING No.:	
					PREPARED BY									NOI BAI - CA LO BRIDGE EXPRESSWAY					IX.3-06	
					CHECKED BY									DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE(2)					SHEET No.:	Rev.:
					APPROVED BY									SCALE: 1/100					Sheet	of

ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREAS

ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREA scale: 1/50
(WHEN EARTH COVERING LESS THAN 1.2M)

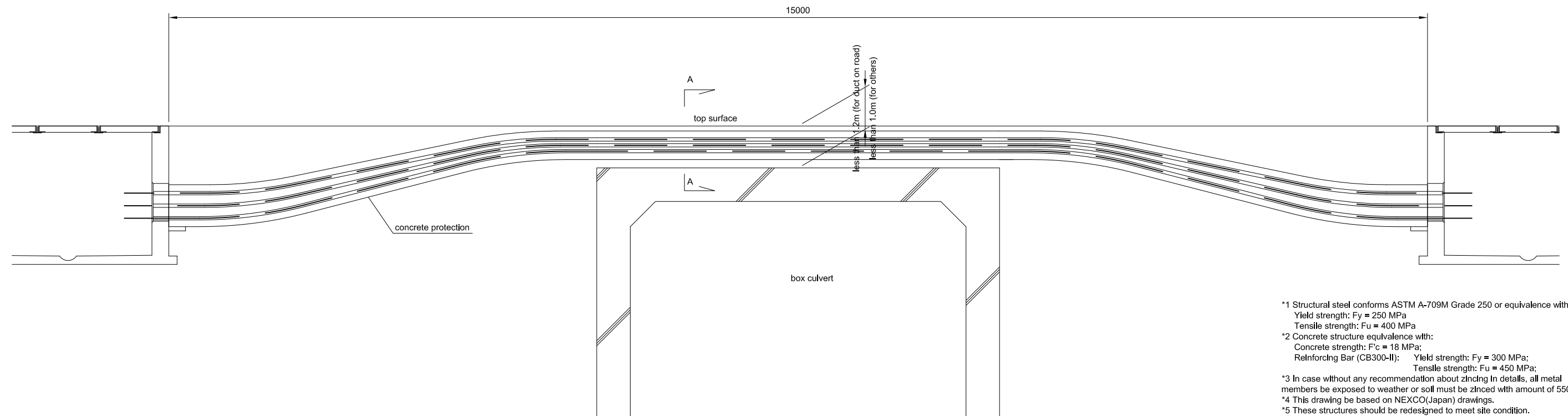


A-A SECTION scale: 1/10



Volume table of TYPE C1 (for 15 meters in length)	
	Volume
Concrete	3.0 m ³

ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREA (TYPE C1) scale: 1/50
(WHEN EARTH COVERING MORE THAN 1.2M)

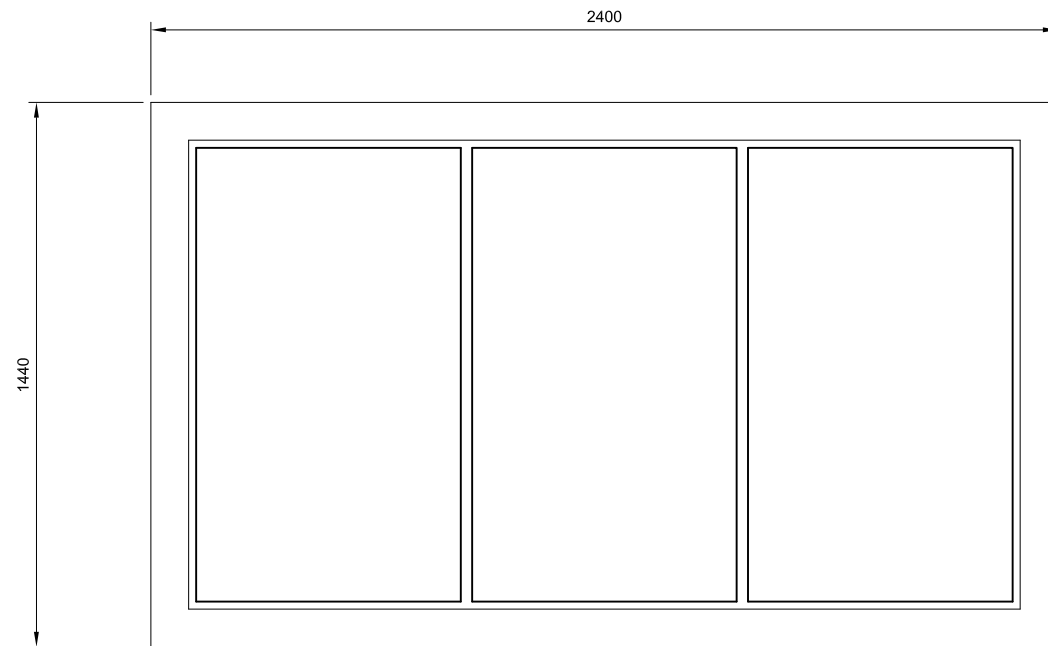


- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: F_y = 250 MPa
Tensile strength: F_u = 400 MPa
- *2 Concrete structure equivalence with:
Concrete strength: F_c = 18 MPa;
Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
Tensile strength: F_u = 450 MPa;
- *3 In case without any recommendation about zncing in details, all metal members be exposed to weather or soil must be znced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE:			DRAWING No.:	
										NOI BAI - CA LO BRIDGE EXPRESSWAY			IX,3-07	
										ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREAS			SHEET No.:	
										SCALE: Varies			Sheet of	
TITLE PREPARED BY CHECKED BY APPROVED BY					NAME SIGNATURE DATE					Rev:				

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M1)

(INSTALL AT MEDIAN or ON EMBANKMENT; WITH PITCH LESS THAN 333m)

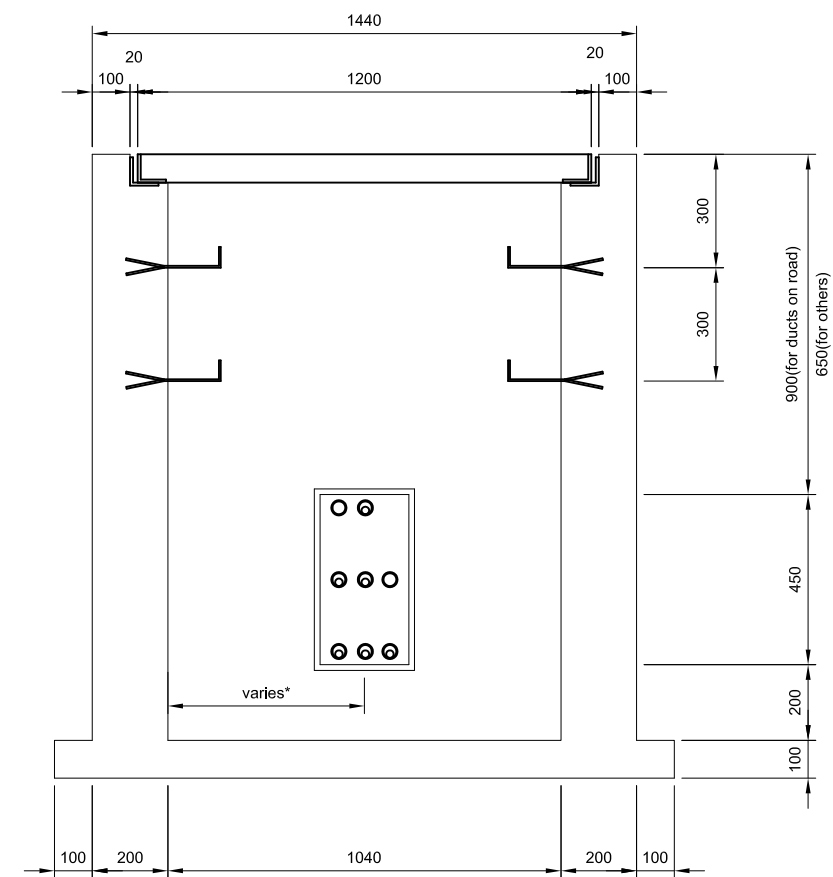
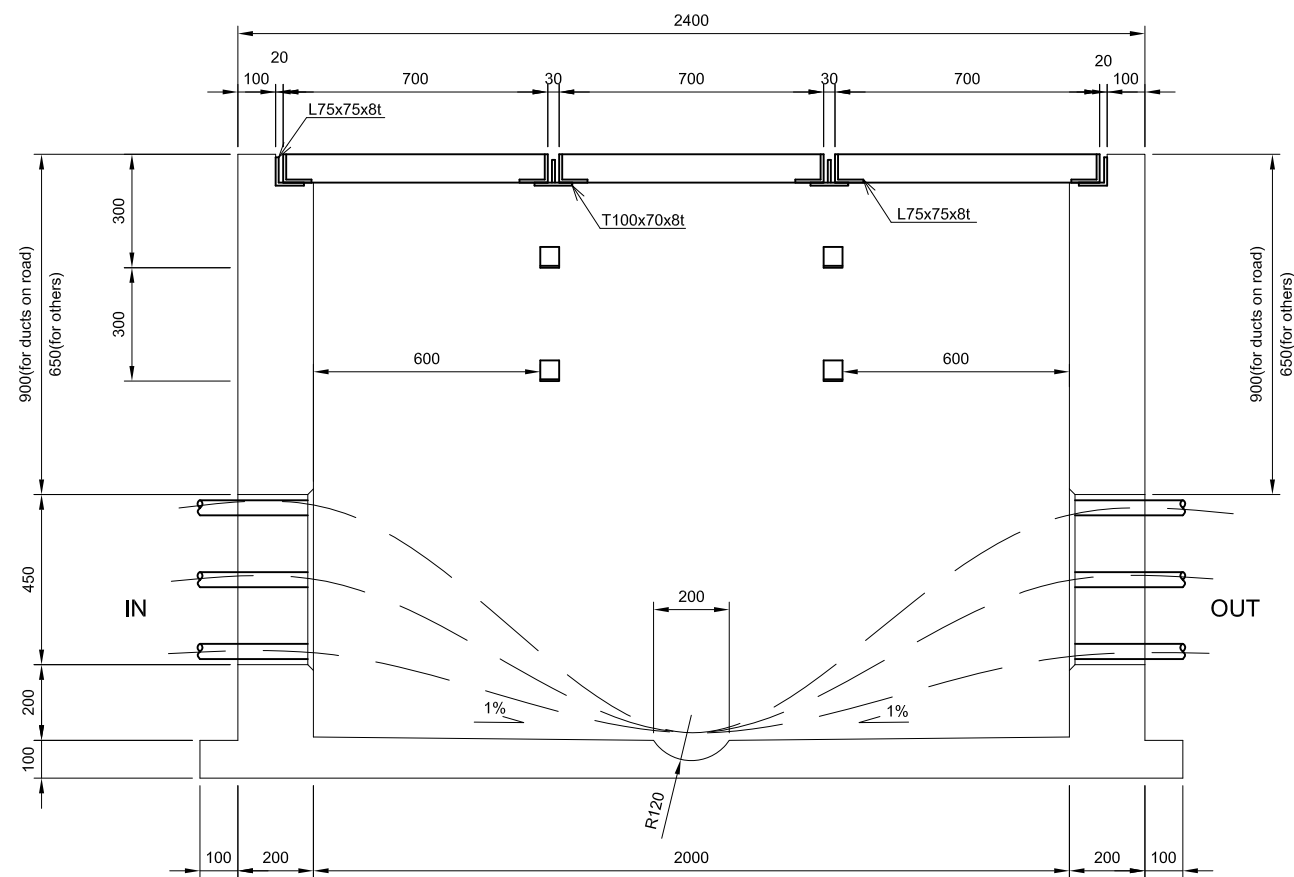


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



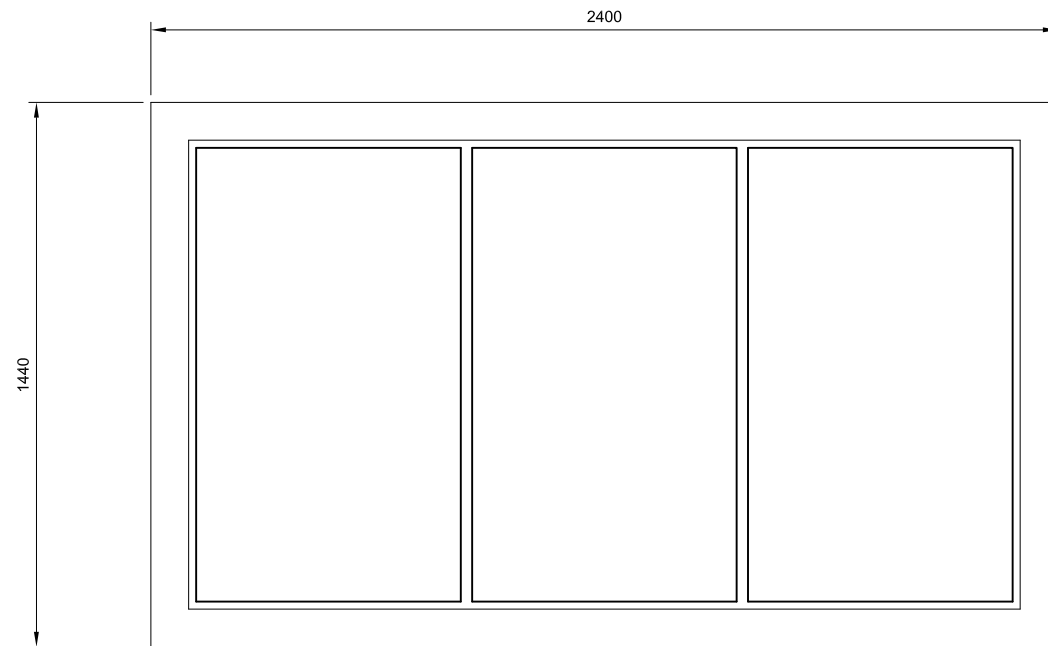
* Depending to duct arrangement.

*1 Concrete structure equivalence with:
 Concrete strength: F_c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
 Tensile strength: F_u = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE:			DRAWING No.:	
										NOI BAI - CA LO BRIDGE EXPRESSWAY			IX.3-08	
										DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M1)			SHEET No.:	
										SCALE: 1/20			Sheet of	

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M2)

(INSTALL AT BACK OF ABUTMENT)

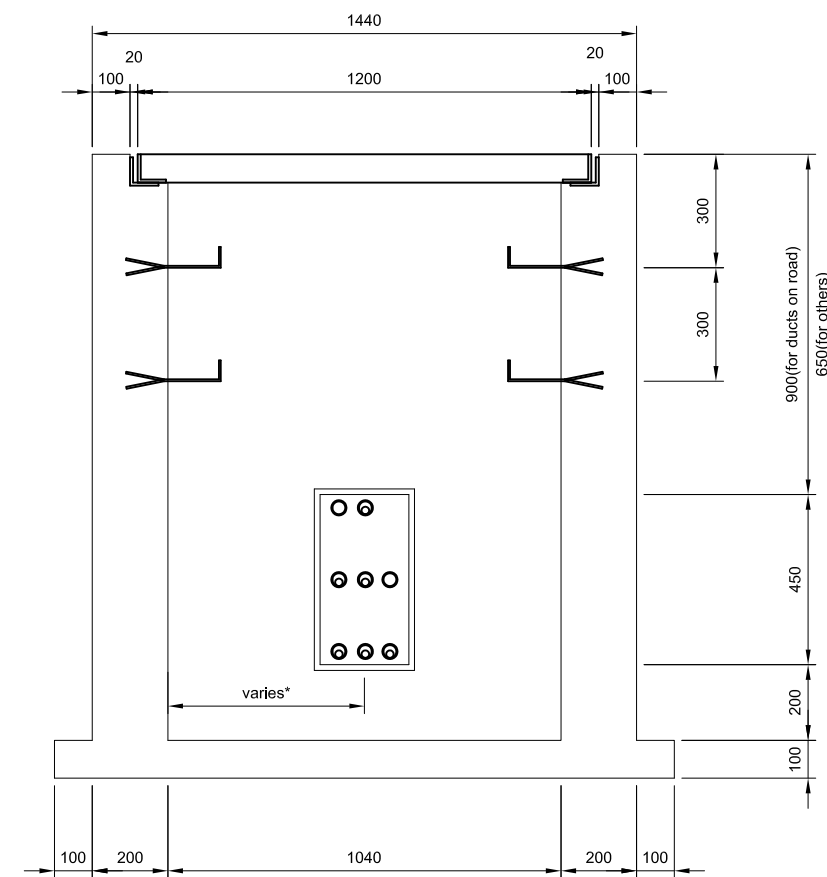
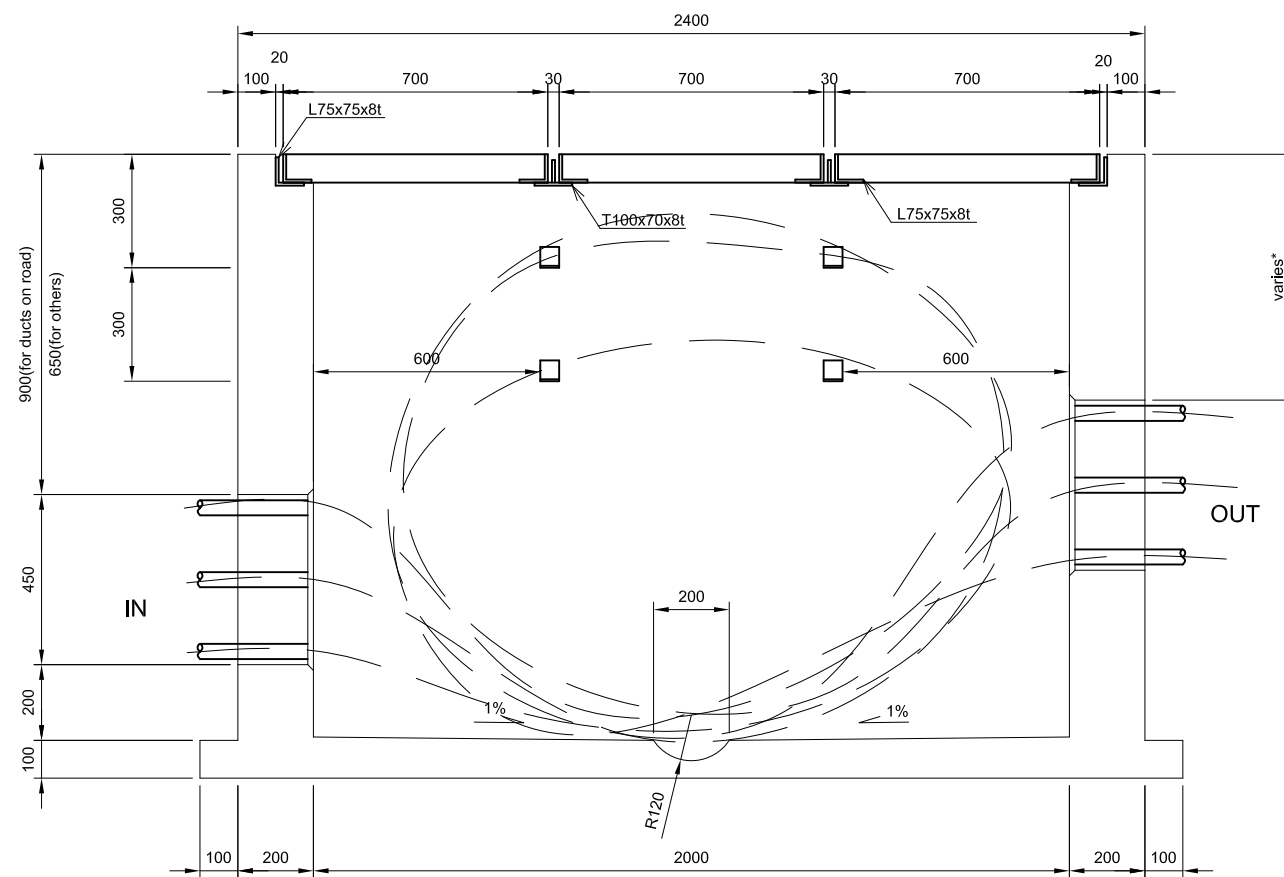


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



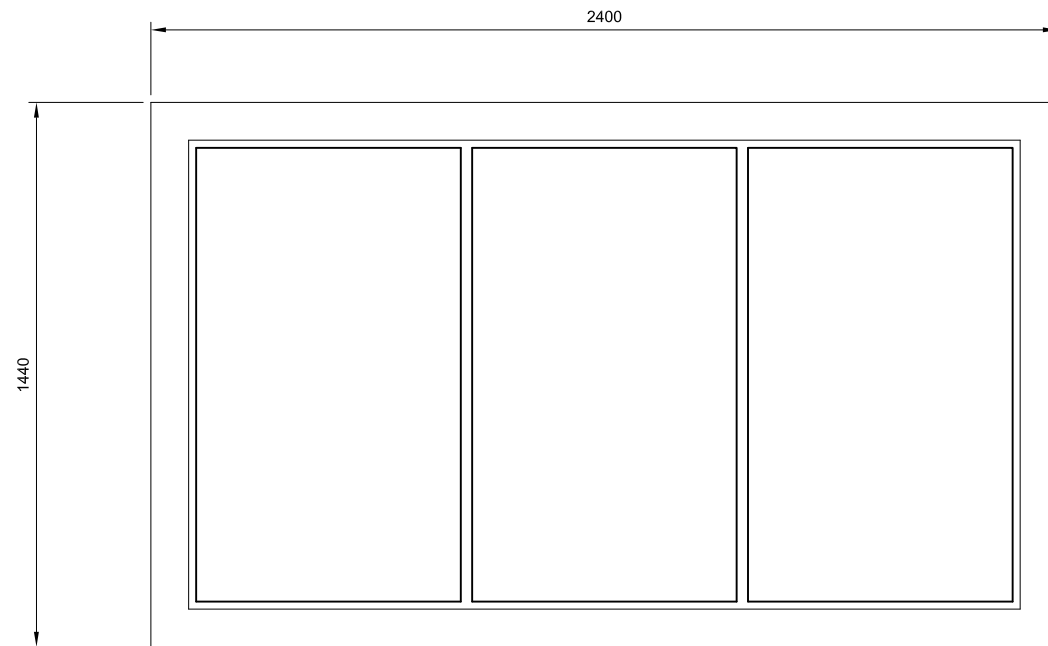
* Depending to duct arrangement.

*1 Concrete structure equivalence with:
 Concrete strength: F_c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
 Tensile strength: F_u = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:					
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE:					DRAWING No.:					
										NOI BAI - CA LO BRIDGE EXPRESSWAY					IX,3-09					
										DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M2)					SCALE: 1/20		SHEET No.:		Rev:	
															Sheet		of			

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M3)

(INSTALL AT MEDIAN or EMBANKMENT; WITH PITCH LESS THAN 2000M)

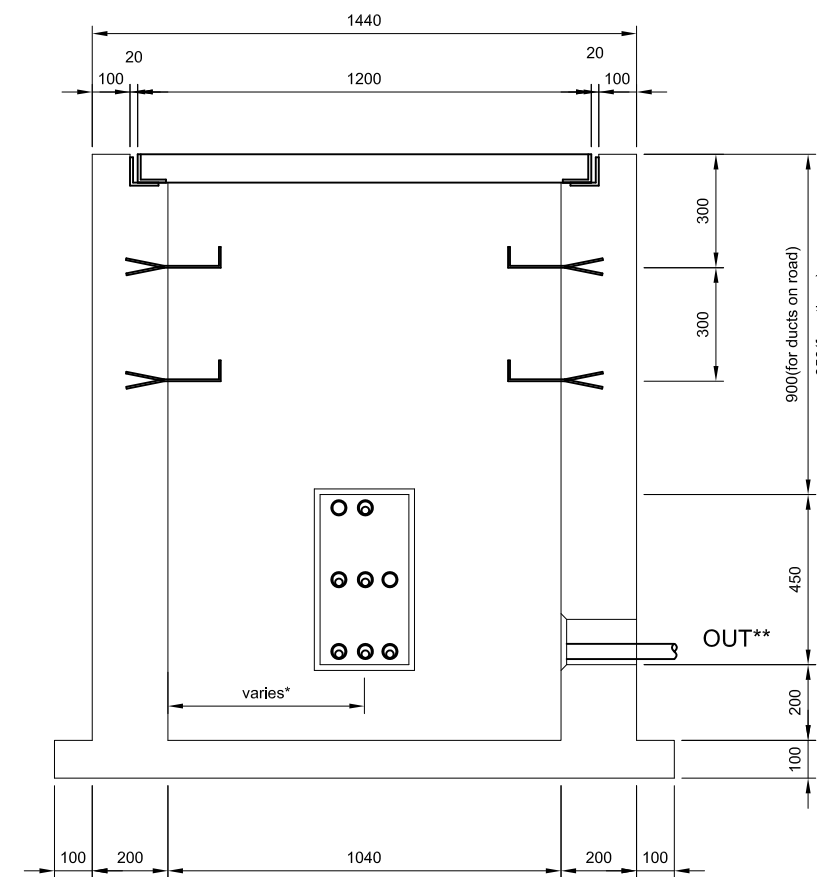
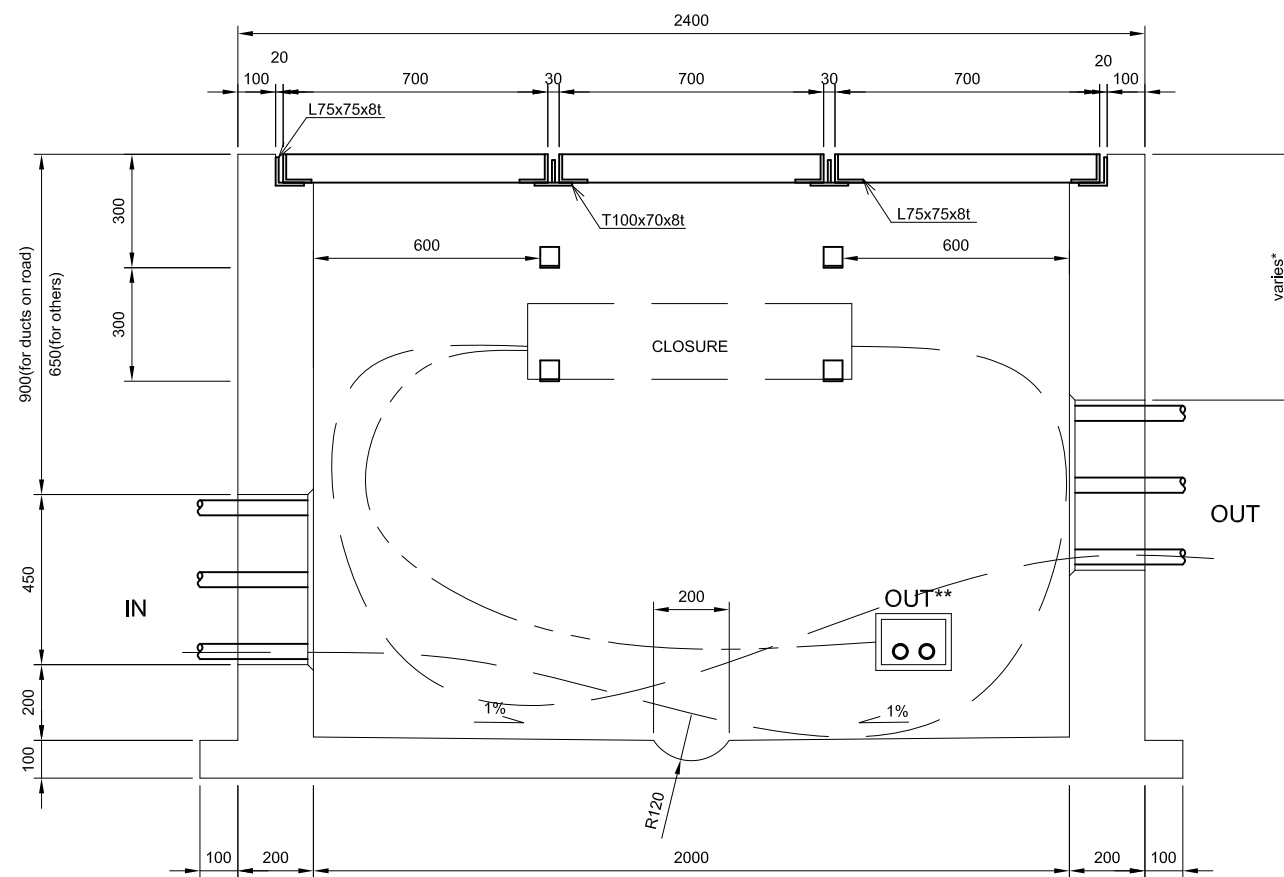


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



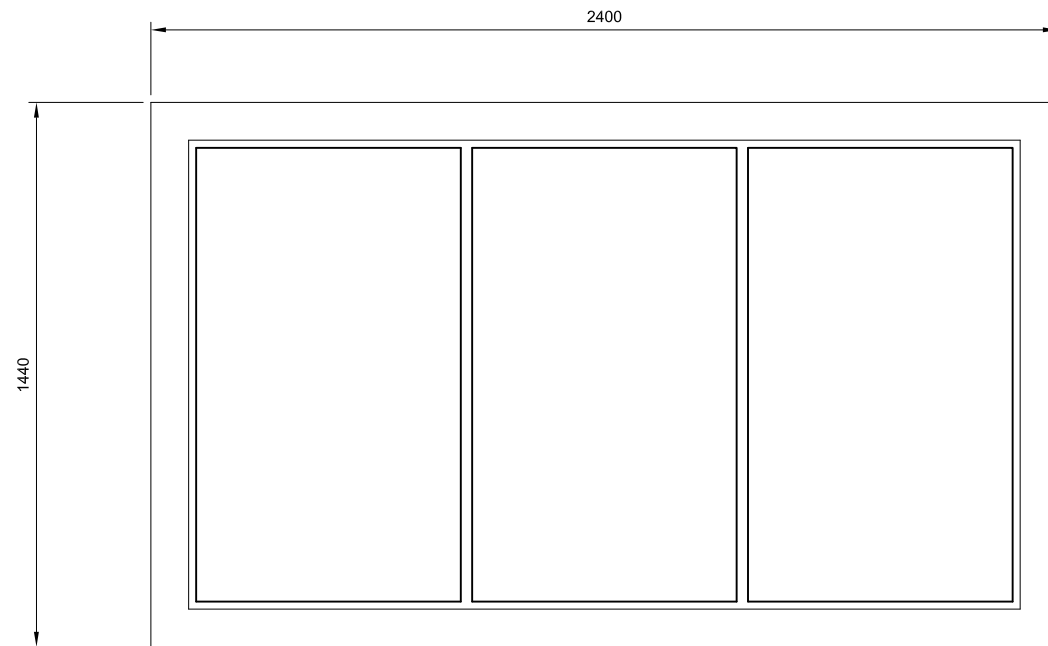
* Depending to duct arrangement.
 ** Divergence exits be used for roadside equipments.

*1 Concrete structure equivalence with:
 Concrete strength: F'c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: Fy = 300 MPa;
 Tensile strength: Fu = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					NOI BAI - CA LO BRIDGE EXPRESSWAY DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M3)					DRAWING No.:	
															IX,3-10	
															SHEET No.:	
															Sheet of	
TITLE					NAME					SIGNATURE					DATE	
PREPARED BY					CHECKED BY					APPROVED BY					Rev:	
SCALE: 1/20																

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M4)

(INSTALL AT MEDIAN or EMBANKMENT ; FOR CHANGING DUCT DIRECTION)

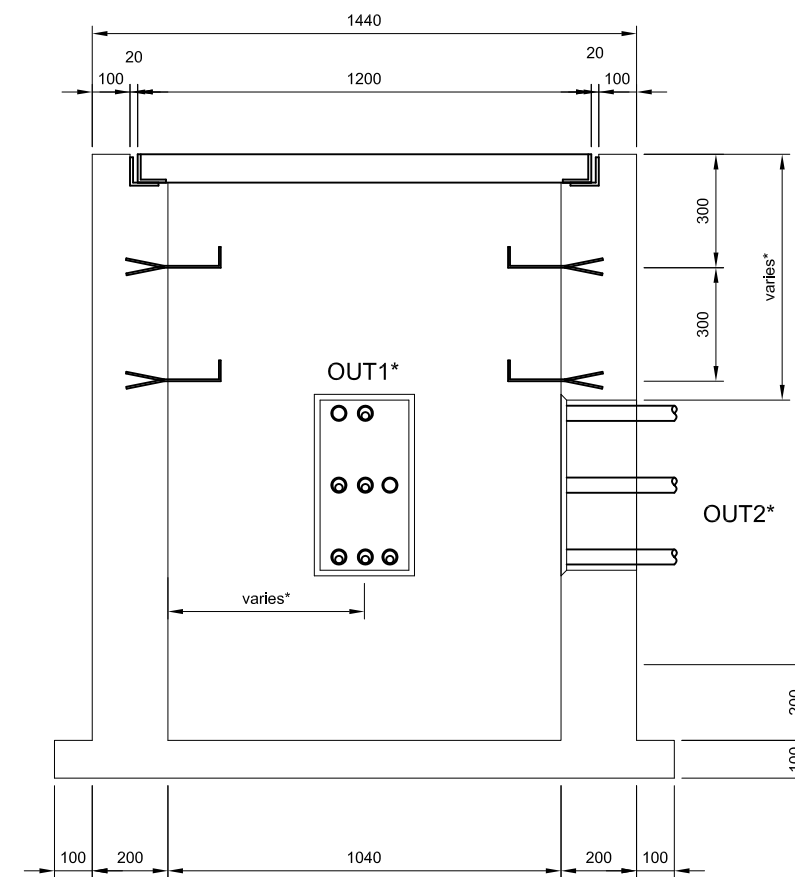
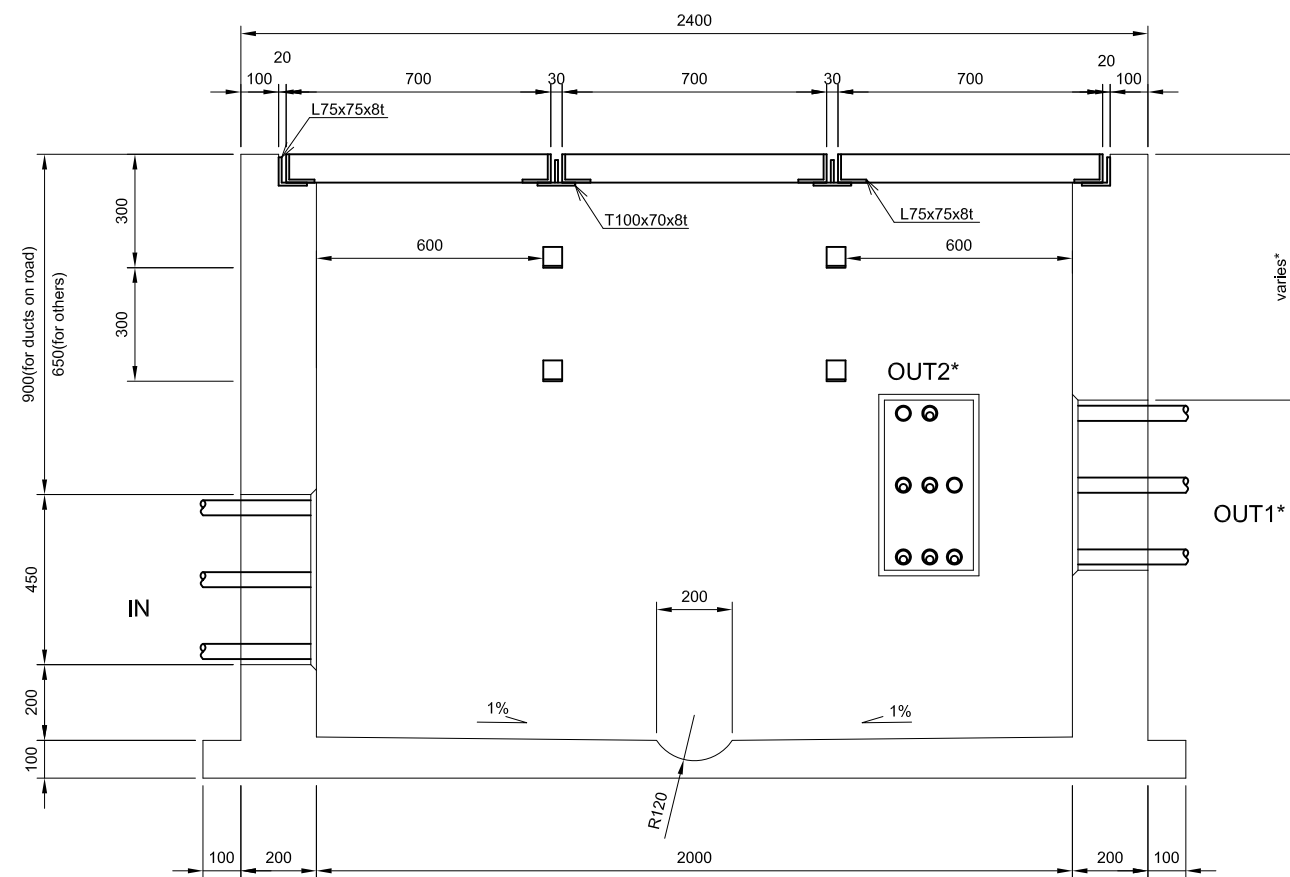


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



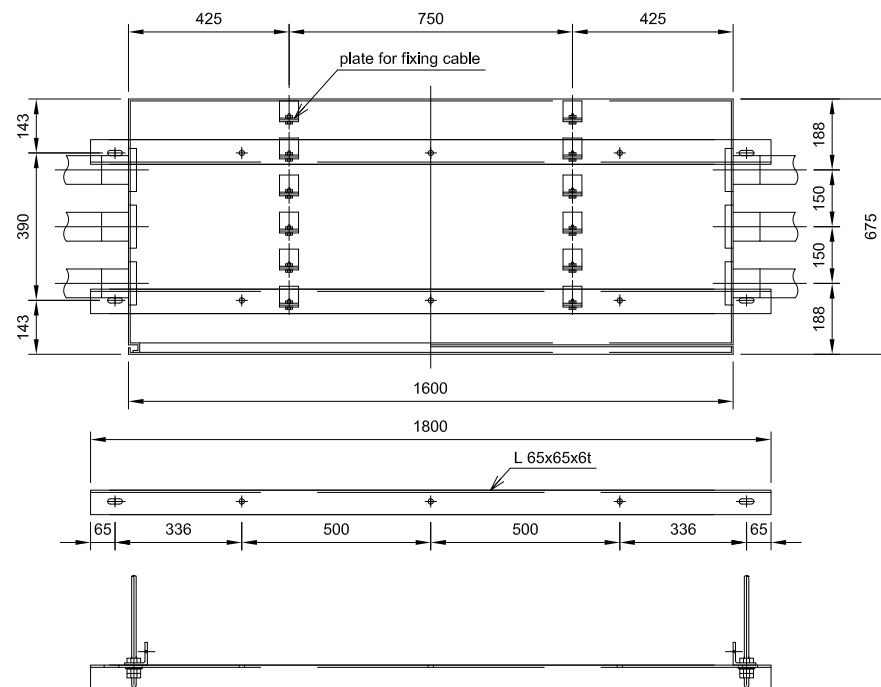
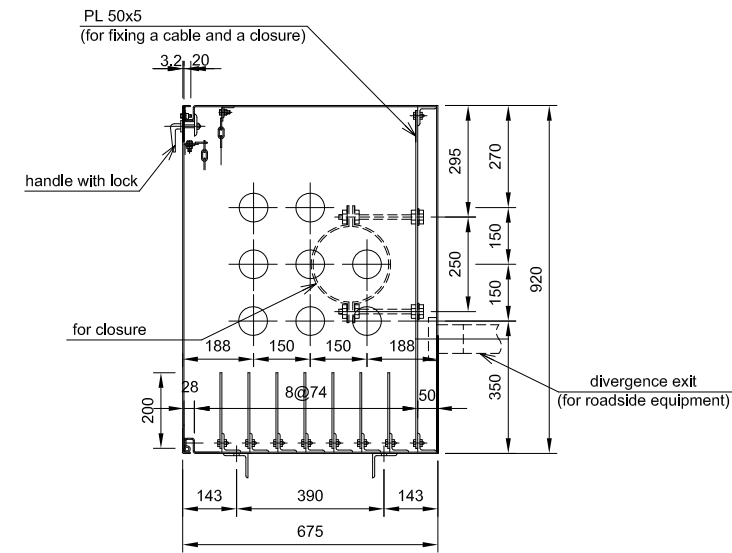
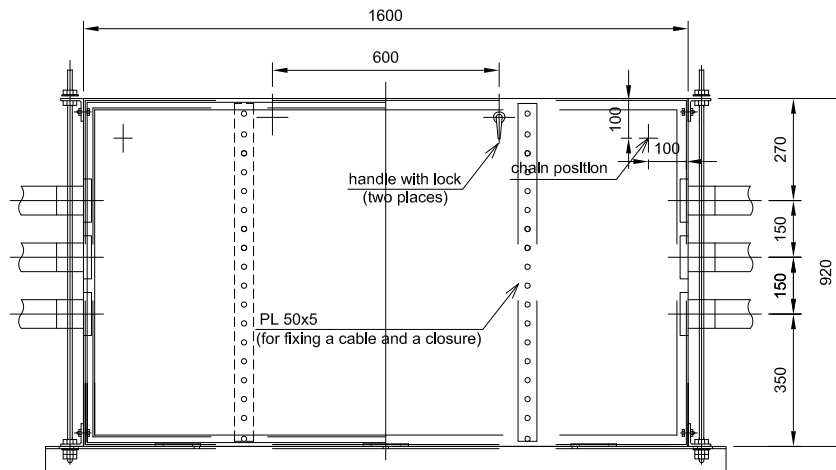
* Depending to duct arrangement.

*1 Concrete structure equivalence with:
 Concrete strength: F_c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
 Tensile strength: F_u = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:			
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: NOI BAI - CA LO BRIDGE EXPRESSWAY DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M4)			DRAWING No.:			
													IX.3-11			
										SCALE: 1/20			SHEET No.:		Rev:	
													Sheet		of	

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M5)

(INSTALL AT BRIDGE SECTION IN WHICH DUCT IS HUNG ON CANTILEVER SLAB)



Volume table

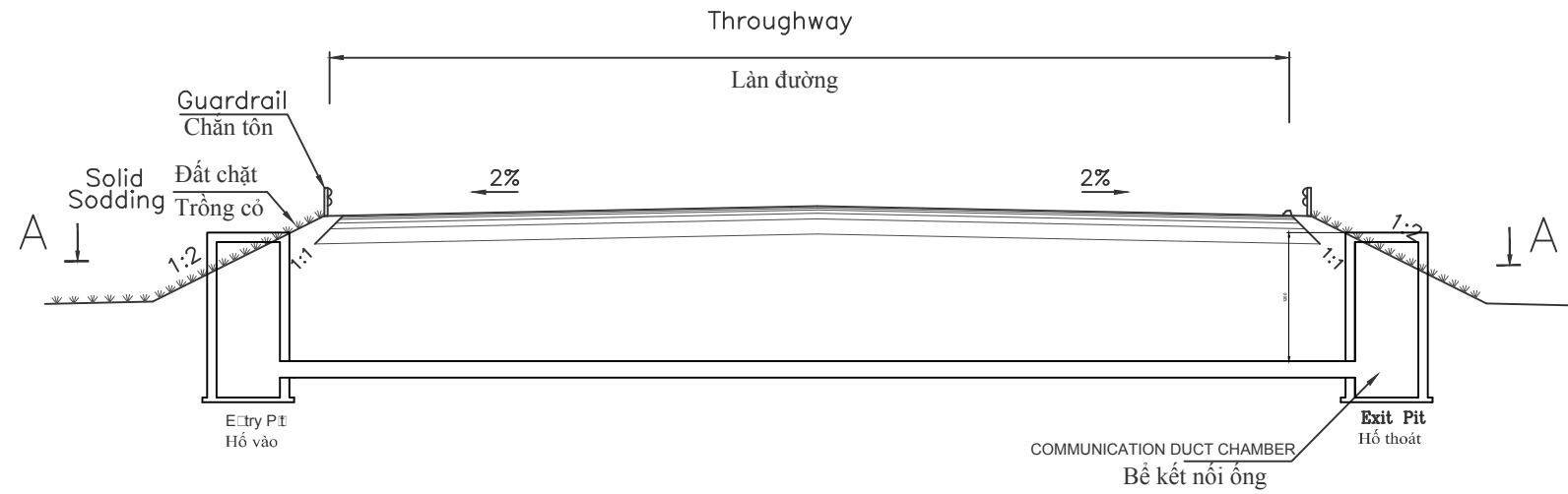
	Length(mm)	Volume	Weight (kg)
L 65x65x6t	1800	2	22.0
L 65x65x6t	60	4	2.0
L 50x50x6t	50	18	4.0
PL 50x5	750	2	3.0
PL 50x5	200	14	6.0
PL920x3.2	1600	2	74.0
PL 675x3.2	1600	2	55.0
PL 675x3.2	920	2	32.0

- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- *2 Concrete structure equivalence with:
Concrete strength: $F'_c = 18$ MPa;
Reinforcing Bar (CB300-II): Yield strength: $F_y = 300$ MPa;
Tensile strength: $F_u = 450$ MPa;
- *3 In case without any recommendation about zncing in details, all metal members be exposed to weather or soil must be znced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

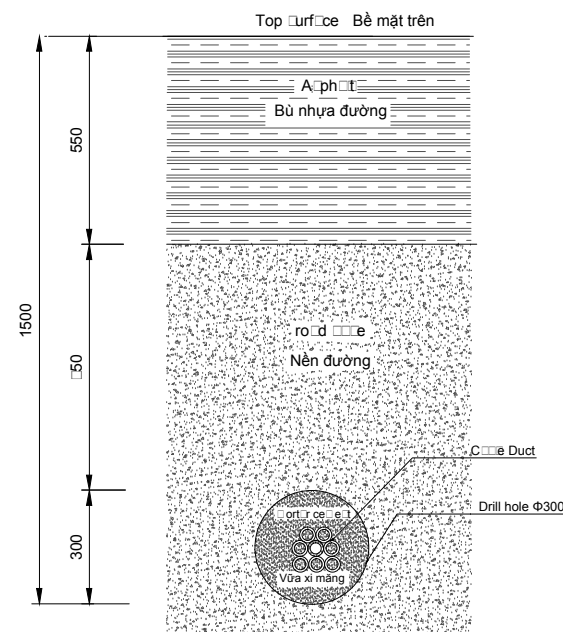
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE:	DRAWING No.:	IX.3-12
	PREPARED BY							NOI BAI - CA LO BRIDGE EXPRESSWAY DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M5)	SHEET No.:	Rev:
	CHECKED BY							SCALE: 1/20	Sheet	of
	APPROVED BY									

TYPICAL CROSS SECTION OF COMMUNICATION DUCT TYPE T5 IN EARTHWORK SECTION

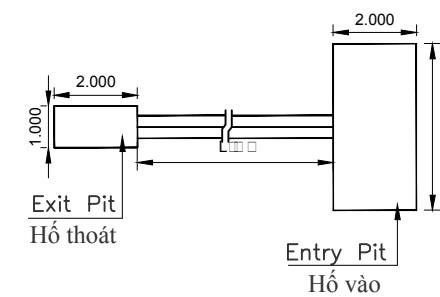
ARRANGEMENT OF COMMUNICATION DUCT IN DRILLING OF ROAD TYPE T5



T5 DETAIL Scale: 1/20



A-A CROSS SECTION

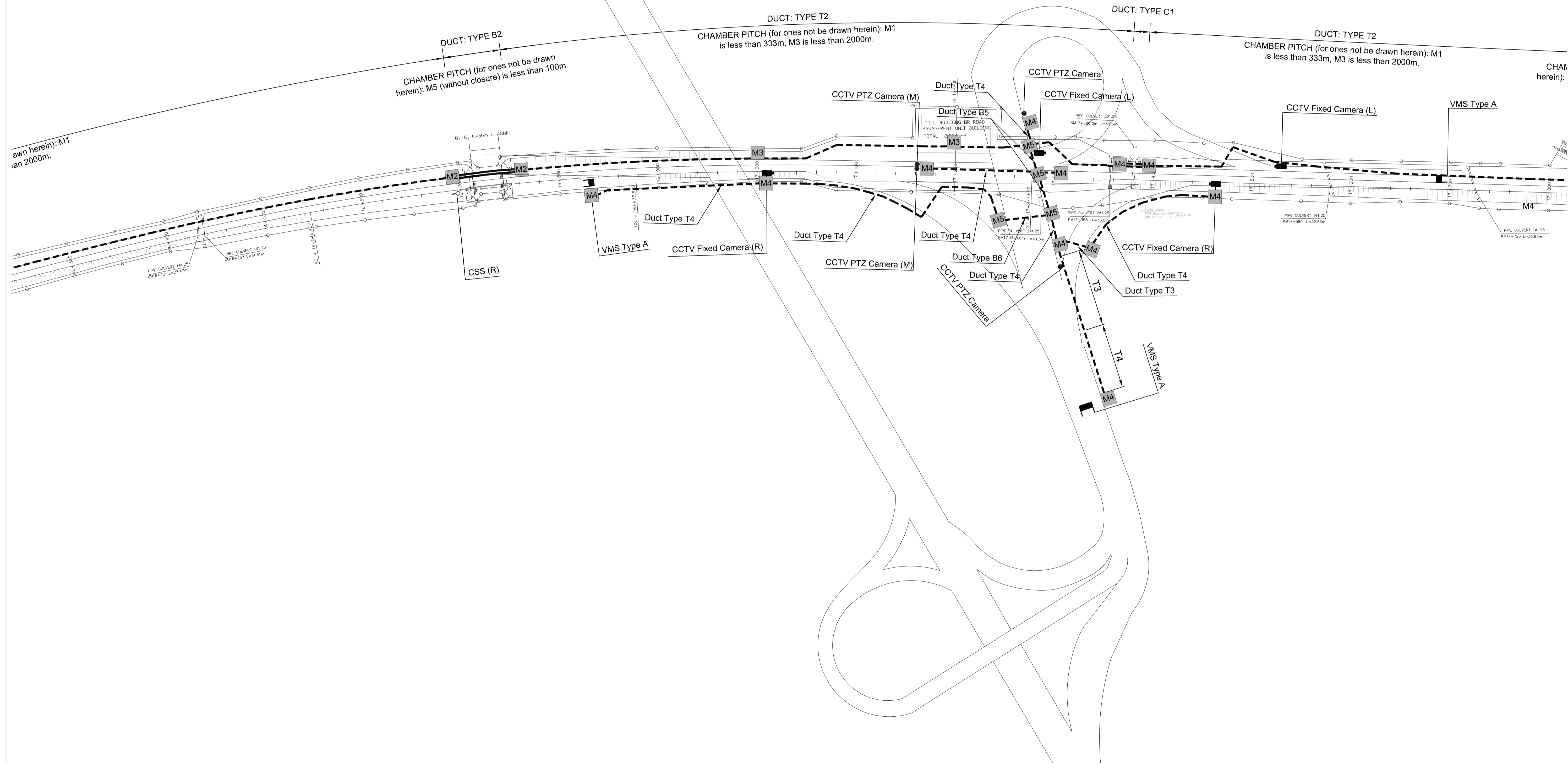


CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:									
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: NOI BAI - CA LO BRIDGE EXPRESSWAY TYPICAL CROSS SECTION OF COMMUNICATION DUCT TYPE T5 IN EARTHWORK SECTION			DRAWING No.: IX.3-13									
													SHEET No.:		Rev:							
										TITLE					NAME					Sheet		of
										PREPARED BY					SIGNATURE					DATE		
CHECKED BY																						
APPROVED BY																						
SCALE: NTS																						

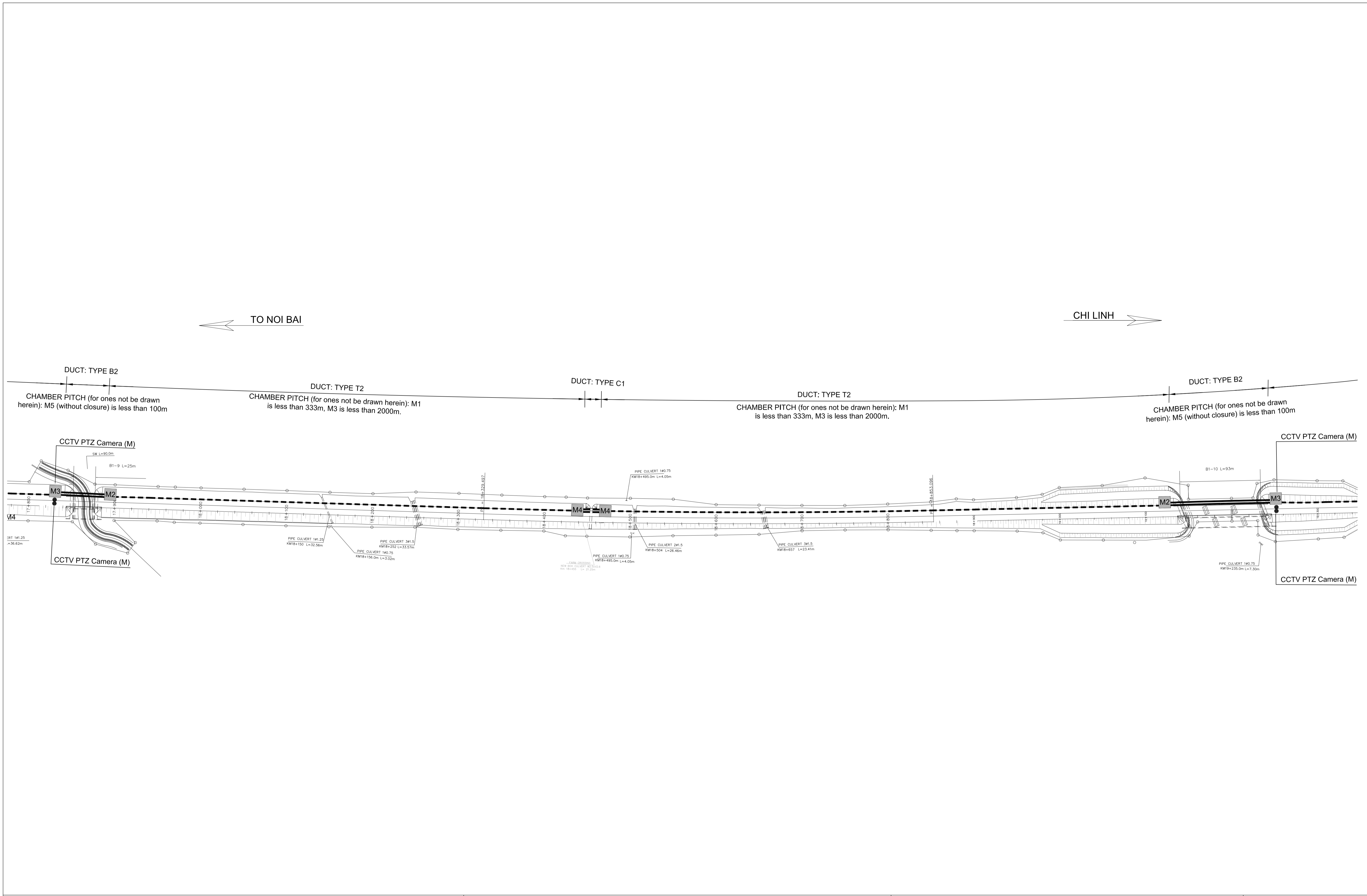
CA LO BRIDGE - BAC NINH EXP.

TO NOI BAI

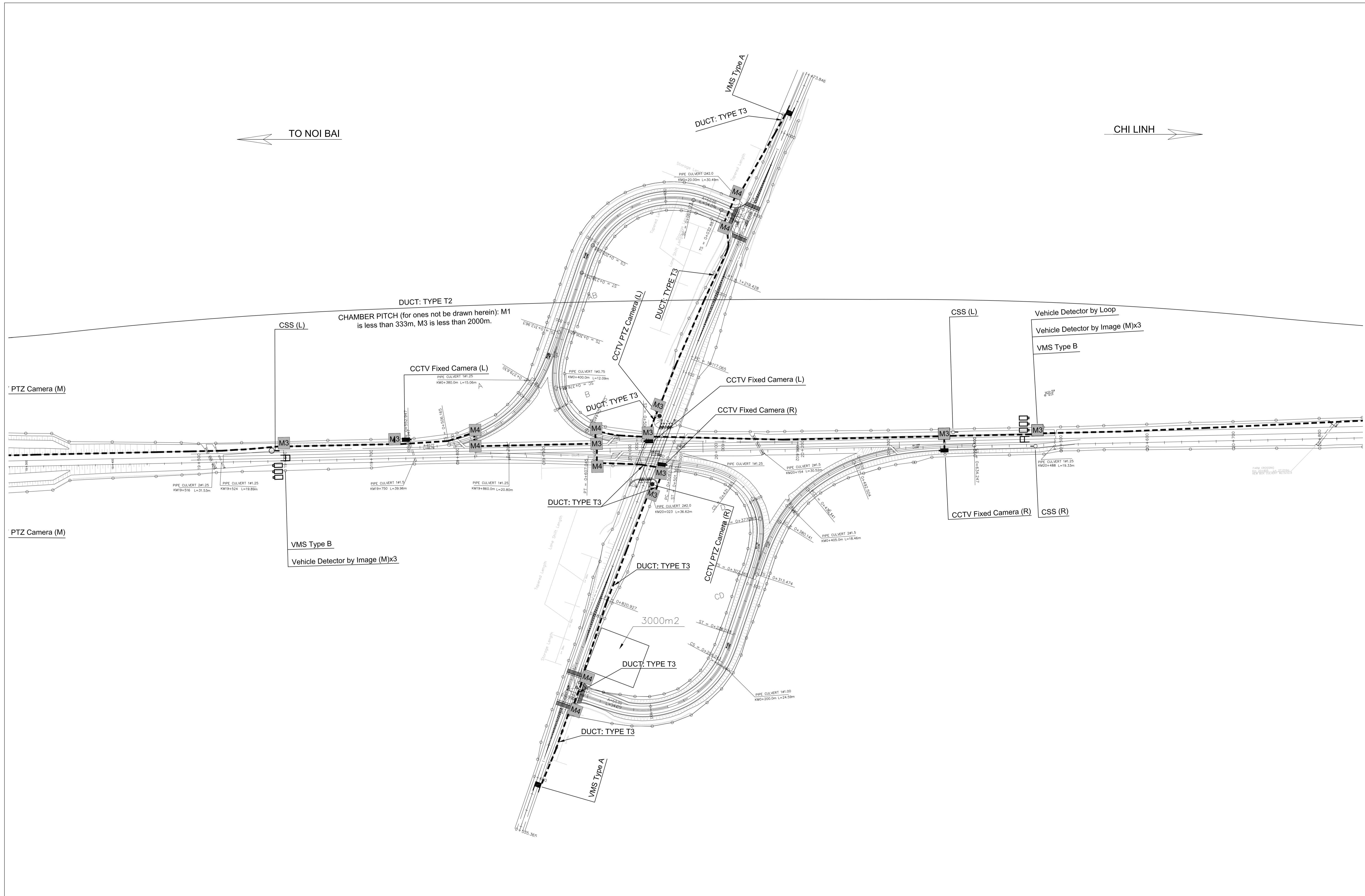
CHI LINH



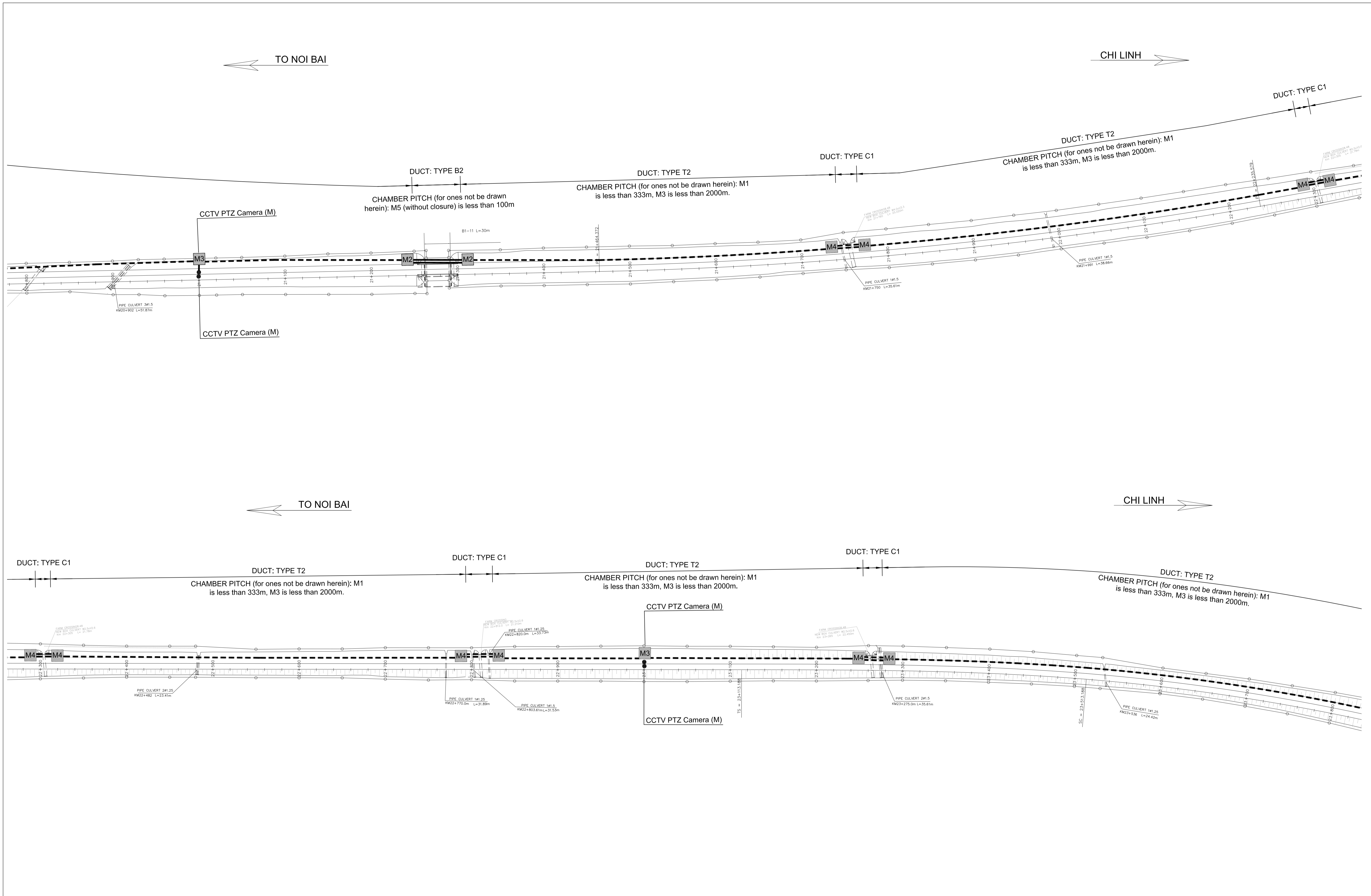
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 16+300 -:- KM 17+800, CA LO BRIDGE - BAC NINH EXP.)			DRAWING No.:	
													X.1-02	
													SHEET No.:	
TITLE PREPARED BY CHECKED BY APPROVED BY					NAME SIGNATURE DATE					Sheet of		SCALE: 1/4000		



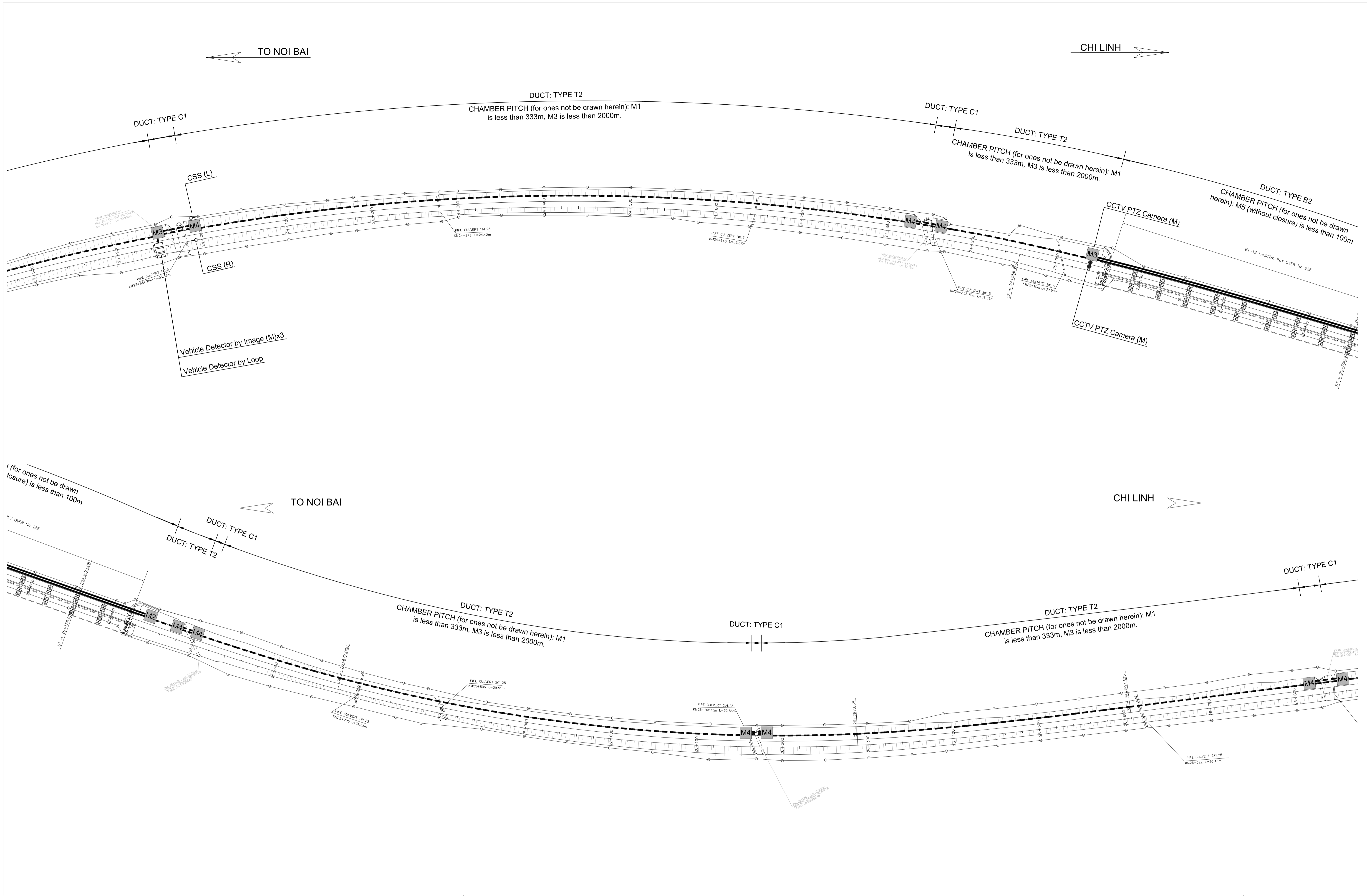
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:						
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 17+800 -:- KM 19+300, CA LO BRIDGE - BAC NINH EXP.)					DRAWING No.:						
																				X.1-03	
																				SHEET No.:	
TITLE					NAME					SIGNATURE					Sheet		of				
PREPARED BY																					
CHECKED BY																					
APPROVED BY																					
SCALE: 1/4000																					



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:					
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING No.:				
					PREPARED BY									LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 19+300 -:- KM 20+800, CA LO BRIDGE - BAC NINH EXP.)			X.1-04	
					CHECKED BY									SHEET No.:		Rev.:		
APPROVED BY									SCALE: 1/4000			Sheet of						



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:																
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE NAME SIGNATURE DATE					MINISTRY OF TRANSPORT					DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 20+800 -:- KM 23+800, CA LO BRIDGE - BAC NINH EXP.)					DRAWING No.:											
																				PREPARED BY CHECKED BY APPROVED BY					SHEET No.:					X.1-05	
																														DATE	
APPROVED BY					SCALE: 1/4000					Sheet of																					

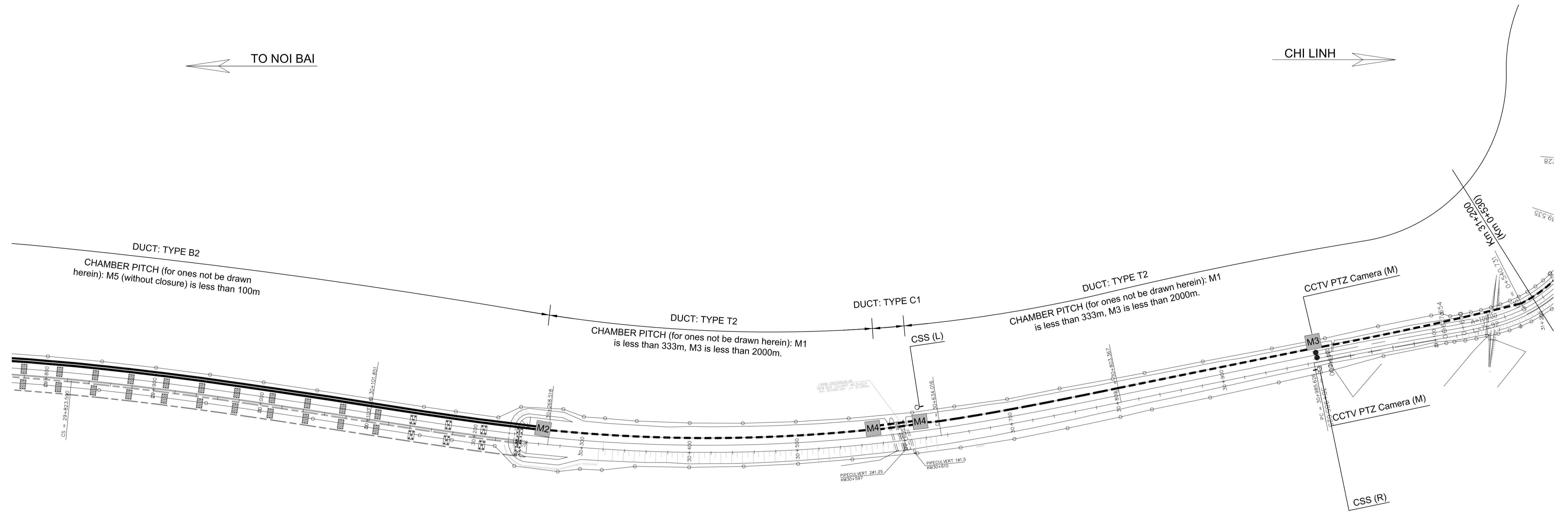


CONSULTANT				
TITLE	NAME	SIGNATURE	DATE	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	PREPARED BY			
	CHECKED BY			
	APPROVED BY			

SOCIALIST REPUBLIC OF VIETNAM

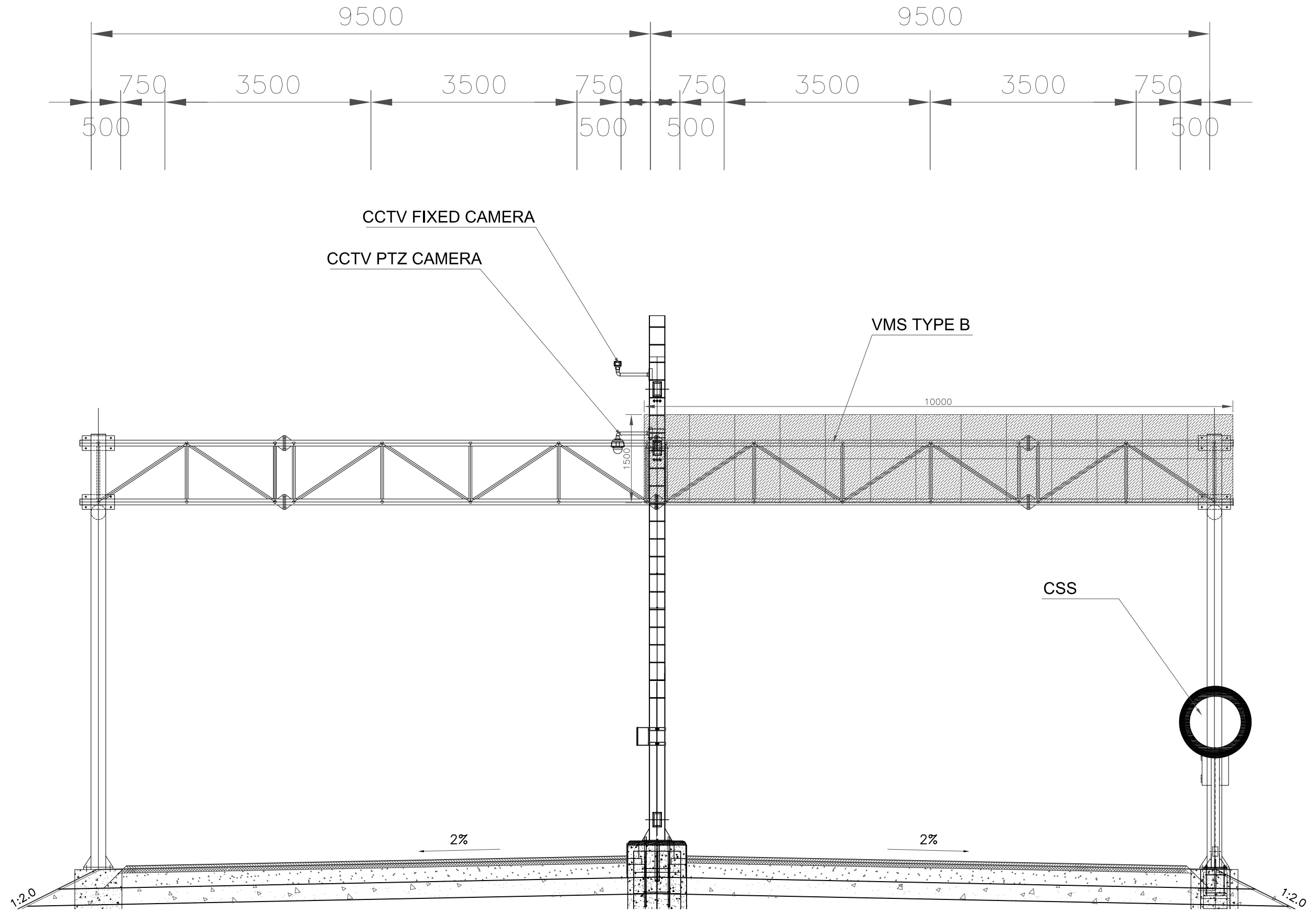
MINISTRY OF TRANSPORT

ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 23+800 -:- KM 26+800, CA LO BRIDGE - BAC NINH EXP.)		DRAWING No.: X.1-06
SCALE: 1/4000		SHEET No.: Sheet of
		Rev:



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:		
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE: LAYOUT PLAN OF ROADSIDE EQUIPMENT & COMMUNICATION DUCT (Km 29+800 -:- KM 31+200, CA LO BRIDGE - BAC NINH EXP.)		DRAWING No.:		
	PREPARED BY							SCALE: 1/4000		X.1-08		Rev:
	CHECKED BY							Sheet		of		
APPROVED BY												

TYPICAL CROSS SECTION



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:				
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING No.:			
					PREPARED BY									TYPICAL CROSS SECTION OF EQUIPMENT ARRANGEMENT OF CA LO BRIDGE - BAC NINH EXP.		X.2-01	
					CHECKED BY									SCALE: 1:100		SHEET No.:	Rev:
					APPROVED BY						Sheet	of					

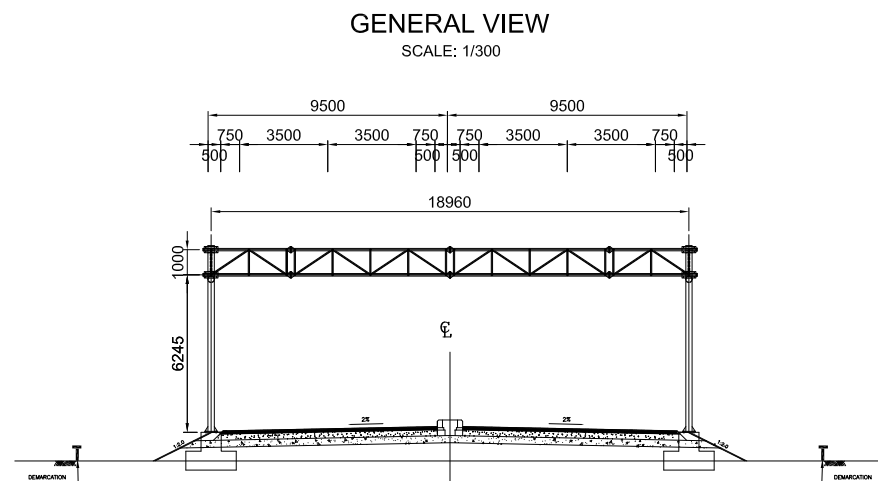
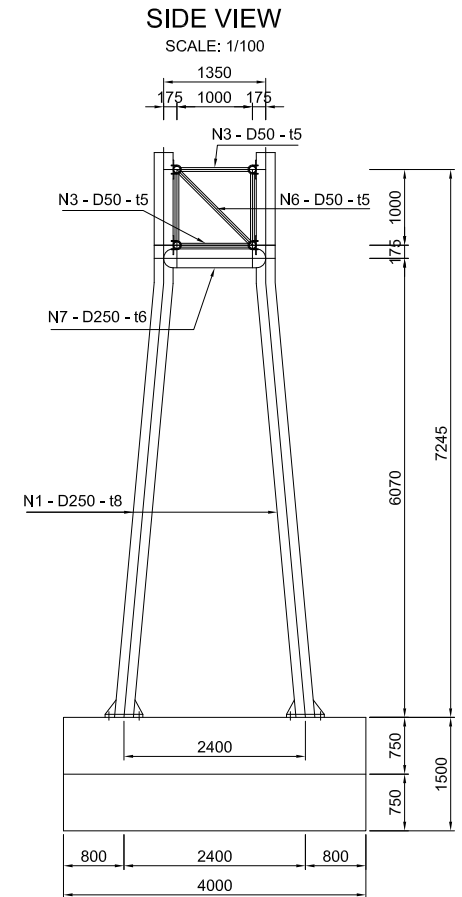
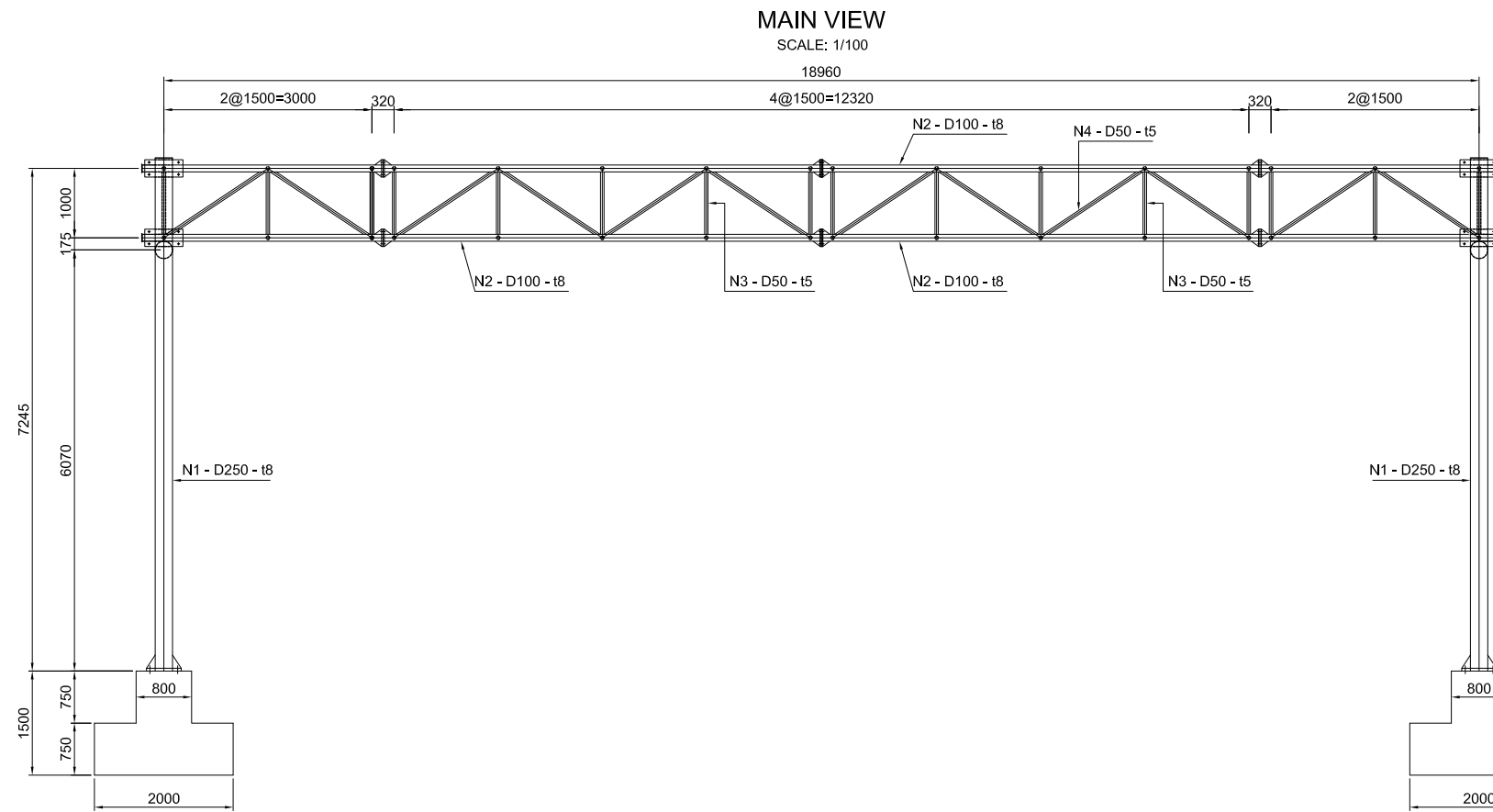


TABLE OF QUANTITY

Element	Type	Weight	Number	Total weight	Notes
		of 1 element	of element		
		(mm)	(kg)	(items)	(kg)
N1	Tube D250 t=8 L=7494	357.80	4	1431.19	Main column (upper part)
N2	Tube D100 t=8 L=19590	355.58	4	1422.30	Top chord, Bottom chord
N3	Tube D50 t=5 L=1000	5.55	64	355.13	Vertical web bar
N4	Tube D50 t=5 L=1803	10.00	48	480.22	Diagonal web bar
N6	Tube D50 t=5 L=1414	7.85	16	125.54	Diaphragm
N7	Tube D250 t=6 L=1350	48.74	2	97.48	Diaphragm
Total steel					3911.86
Concrete M200					16.80m ³ Assumed

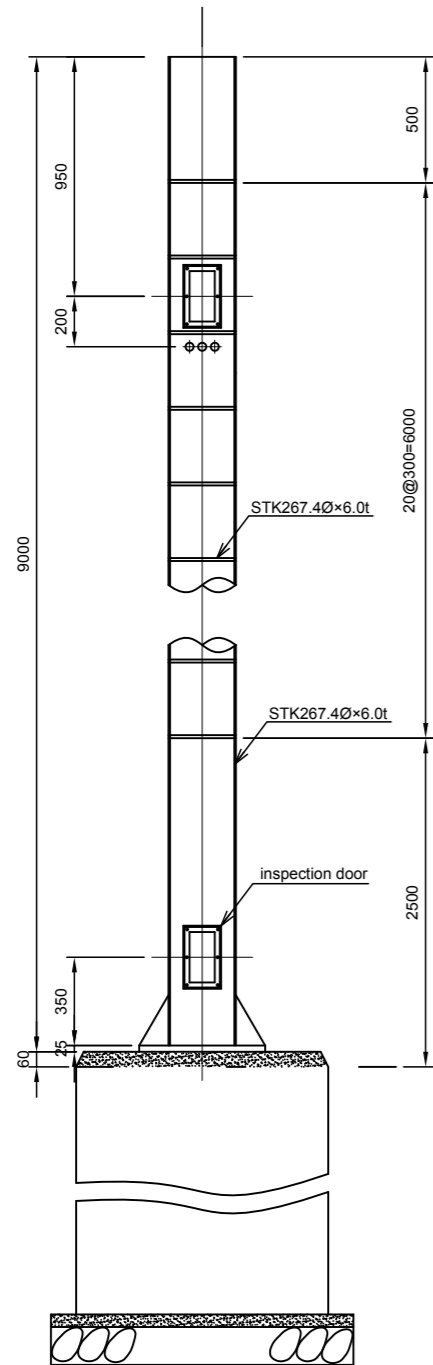
NOTES:

- Dimensions are in millimeter.
- Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- Concrete structure equivalence with:
Concrete strength: $F_c' = 18$ MPa
Reinforcing Bar (CB300-II) : Yield strength: $F_y = 300$ MPa
Tensile strength: $F_u = 450$ MPa
- The depth of foundation is just an estimated value.
The final depth of foundation shall be based on the real soil condition.
These structure should be redesigned to meet site condition.
- In case without any recommendation about zincing in details all metal member exposed to weather or soil must be zinced with amouth of 500g/m²

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:					
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING TITLE: CA LO BRIDGE - BAC NINH EXPRESSWAY DETAIL OF GANTRY AT EARTHWORK SECTION					DRAWING No.:	
					PREPARED BY														X.2-02	
					CHECKED BY														SHEET No.:	
APPROVED BY									SCALE: Varles					Sheet of						

SUPPORT POLE FOR CAMERA

SUPPORT POLE FOR CAMERA scale:1/30



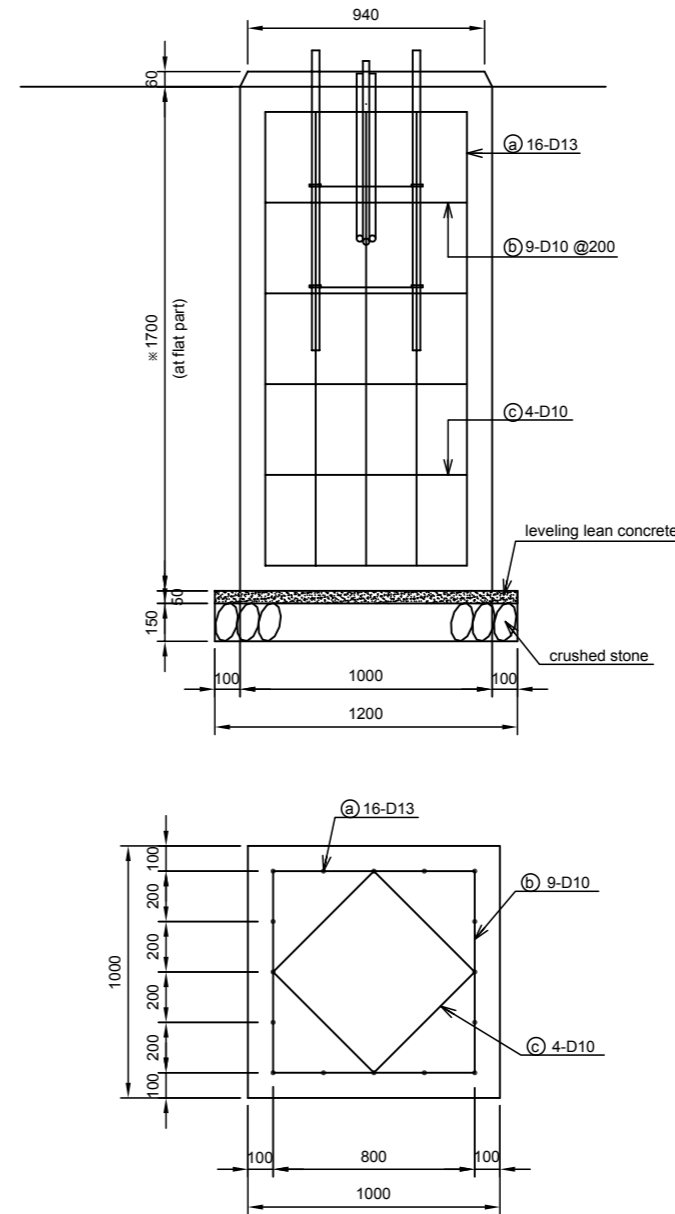
Volume table of support pole

	Material	Dimension	Weight (kg)
Pole	Steel	267.4Φx6t	348.3
Step	Steel	RB13Φ	9.4
Base	Steel	25t	49.2
Base	Steel	12t	9.0
Total weight			416

Volume table of foundation

items	class	unit	volume		remarks
			at flat part	at embankment	
concrete	M200	m ³	1.700	2.200	
formwork		m ²	6.800	8.800	
rebar	D13	kg	28.66	36.62	
rebar	D10	"	22.87	26.71	
anchor bolt	M30x1000lx4	set	1	1	
normal bend	VE28	m	4.5	4.5	1.5mx3
crushed stone		m ³	0.216	0.216	
leveling lean concrete		m ³	0.072	0.072	
excavation		m ³	7.600	8.491	
backfill		m ³	5.612	6.220	
disposal of waste soil		m ³	1.988	2.272	

FOUNDATION scale:1/30

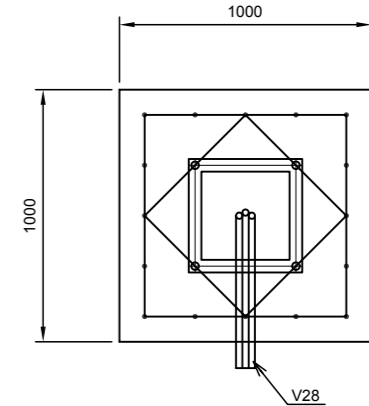


Volume table of rebar at flat part

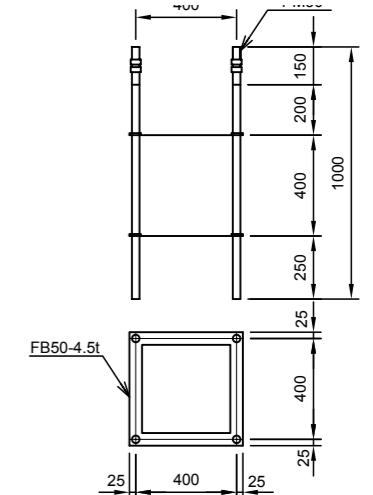
type	shape	length (m)	volume	weight (kg)
a	D13	1.80	16	28.66
b	D10	3.43	9	17.29
c	D10	2.49	4	5.58

Volume table of rebar at embankment part

type	shape	length (m)	volume	weight (kg)
a	D13	2.30	16	36.62
b	D10	3.43	11	21.13
c	D10	2.49	4	5.58



ANCHOR BOLT scale:1/30



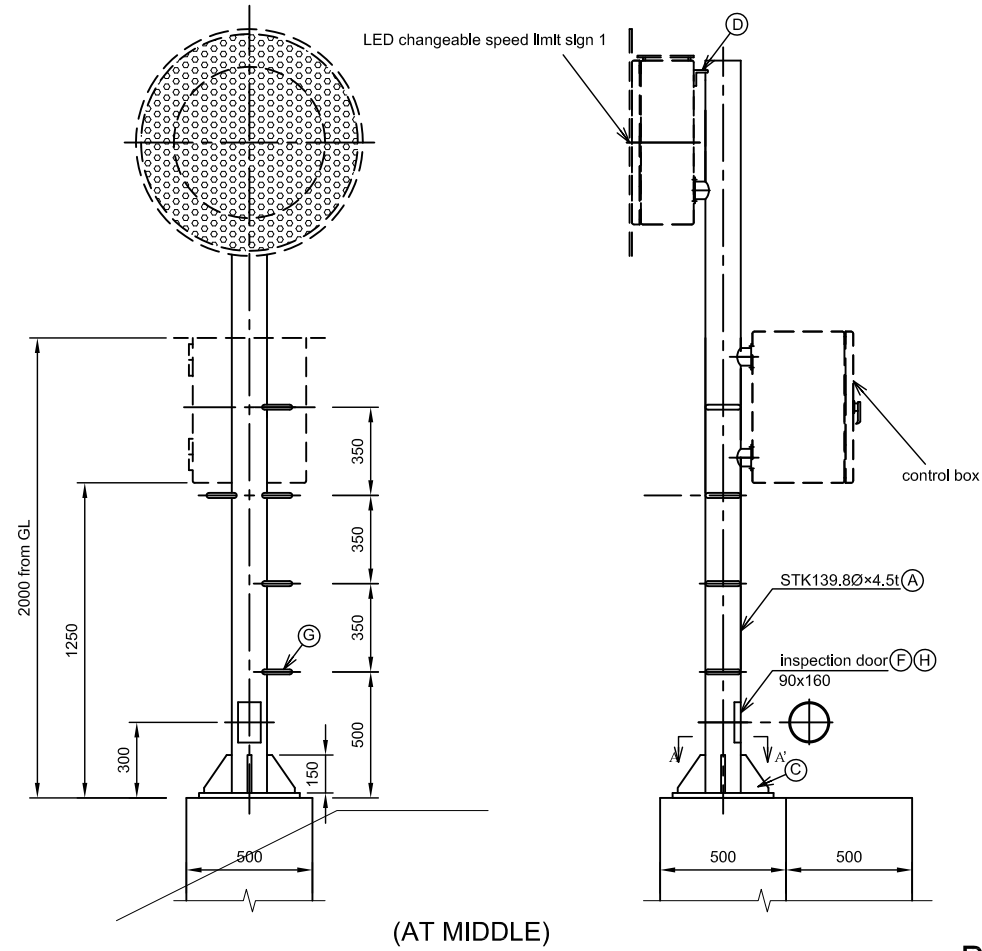
*1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: Fy = 250 MPa
Tensile strength: Fu = 400 MPa
*2 Concrete structure equivalence with:
Concrete strength: Fc' = 18Mpa
Reinforcing Bar (CB300-II) : Yield strength: Fy = 300 MPa
Tensile strength: Fu = 450 MPa

*3 In case without any recommendation about zincing in details, all metal members exposed to weather or soil must be zined with amount of 550g/m².
*4 This drawing be based on NEXCO(Japan) drawings.
*5 These structures should be redesigned to meet site condition.

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM		ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT		DRAWING TITLE:	CA LO BRIDGE - BAC NINH EXPRESSWAY SUPPORT POLE FOR CAMERA	DRAWING No.:
	PREPARED BY						X.2-03		
	CHECKED BY						SHEET No.:	Rev.	
	APPROVED BY						Sheet	of	
							SCALE: 1/30		

SUPPORT POLE FOR CHANGEABLE SPEED LIMIT SIGN

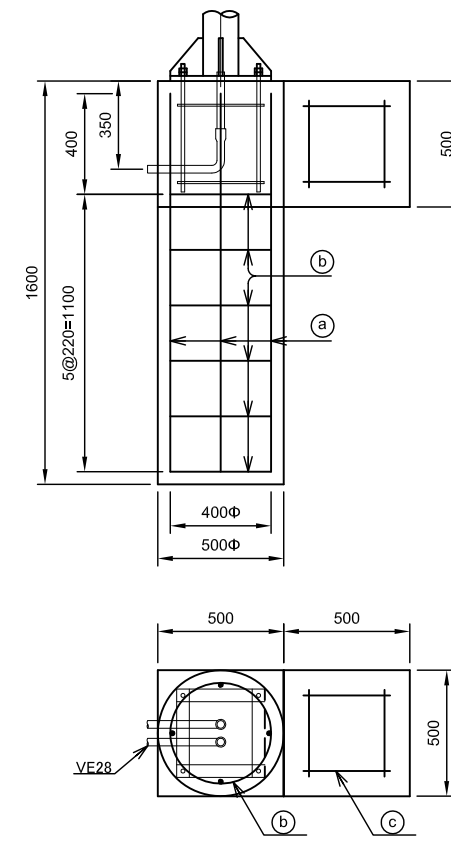
SUPPORT POLE FOR CHANGEABLE SPEED LIMIT SIGN (CSS) scale:1/30
(AT ENDS)



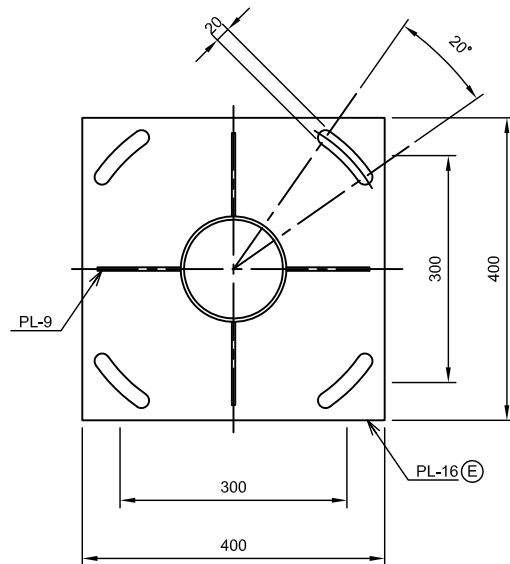
Volume table of support pole

Material	Dimension	Weight (kg)	
		at ends	at middle
(A) Steel	139.8Φx4.5t	47.0	42.0
(C) Steel	9t	18.0	16.0
(D) Steel	6t	1.4	1.4
(E) Steel	16t	20.0	20.0
(F) Steel	3.2t	1.4	1.4
(G) Steel	RB13Φ	4.0	4.0
(H) Steel	FB50x6t	1.0	1.0
Total weight		95	87

FOUNDATION scale:1/30



BASE PLATE SCALE:1/10

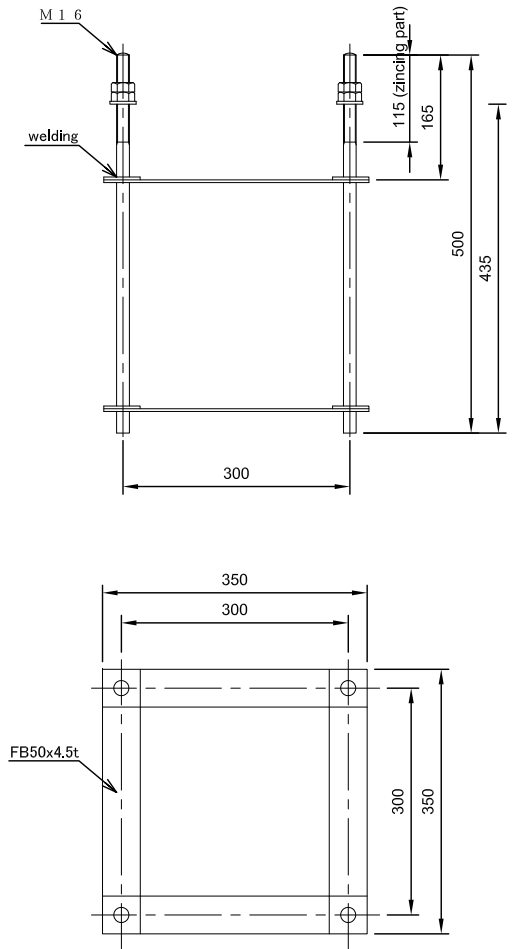


Rebar processing table of foundation

type	shape	volume
		at embankment
a	D13	4
b	D10	6
c	D13	12

*c is used for maintenance.

ANCHOR BOLT scale:1/10



Volume table of foundation

items	class	unit	volume
			at embankment
concrete		m ³	0.466
rebar	D13	kg	9.719
rebar	D10	"	5.860
formwork		m ²	1.5
disposal of waste soil		m ³	0.316
anchor bolt	16Φx500x4	set	1
normal bend	VE28	pipe	2

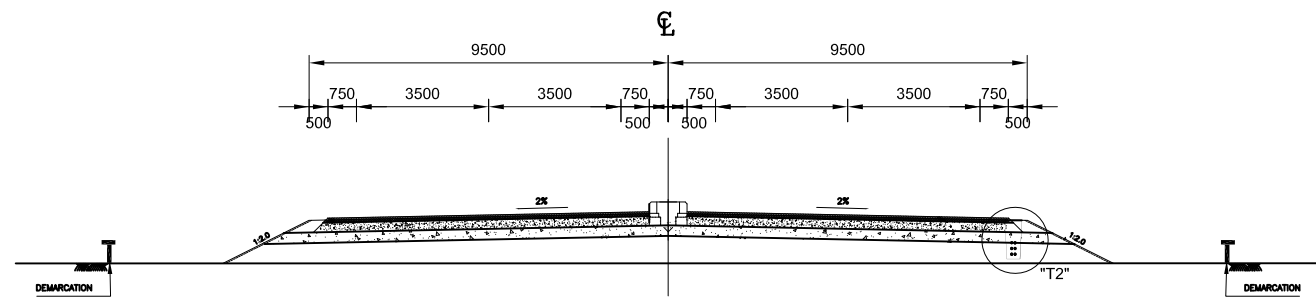
*1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: F_y = 250 MPa
Tensile strength: F_u = 400 MPa
*2 Concrete structure equivalence with:
Concrete strength: F_c' = 18MPa
Reinforcing Bar (CB300-II) : Yield strength: F_y = 300 MPa
Tensile strength: F_u = 450 MPa

*3 In case without any recommendation about zinging in details, all metal members exposed to weather or soil must be zinged with amount of 550g/m².
*4 This drawing be based on NEXCO(Japan) drawings.
*5 These structures should be redesigned to meet site condition.

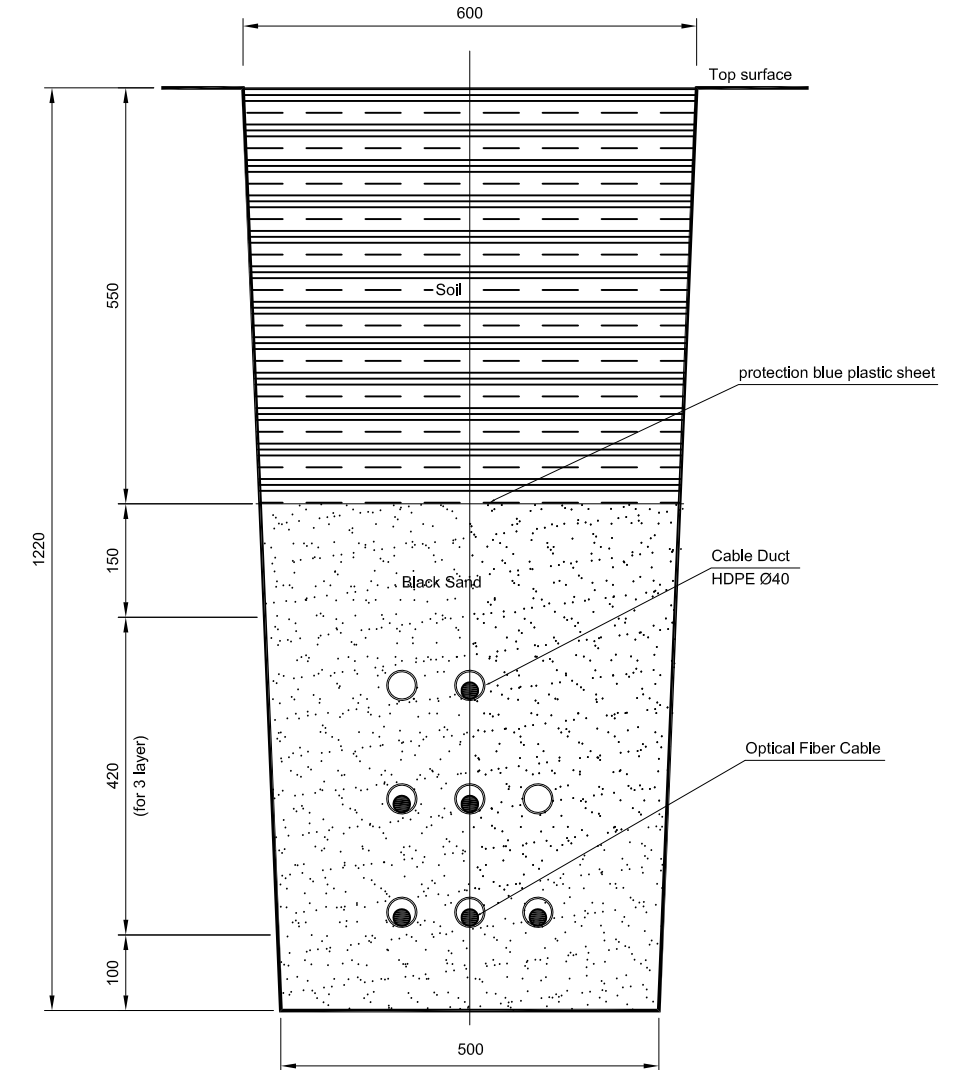
CONSULTANT				SOCIALIST REPUBLIC OF VIETNAM				ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM				PACKAGE:			
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.				MINISTRY OF TRANSPORT				DRAWING TITLE: CA LO BRIDGE - BAC NINH EXPRESSWAY SUPPORT POLE FOR CHANGEABLE SPEED LIMIT SIGN				DRAWING No.:			
												X.2-04			
												SHEET No.:		Rev:	
												Sheet		of	
TITLE				NAME				SIGNATURE				DATE			
PREPARED BY															
CHECKED BY															
APPROVED BY															
SCALE: Varies															

TYPICAL CROSS SECTION OF COMMUNICATION DUCT (TYPE T2, T3) IN EARTHWORK SECTION

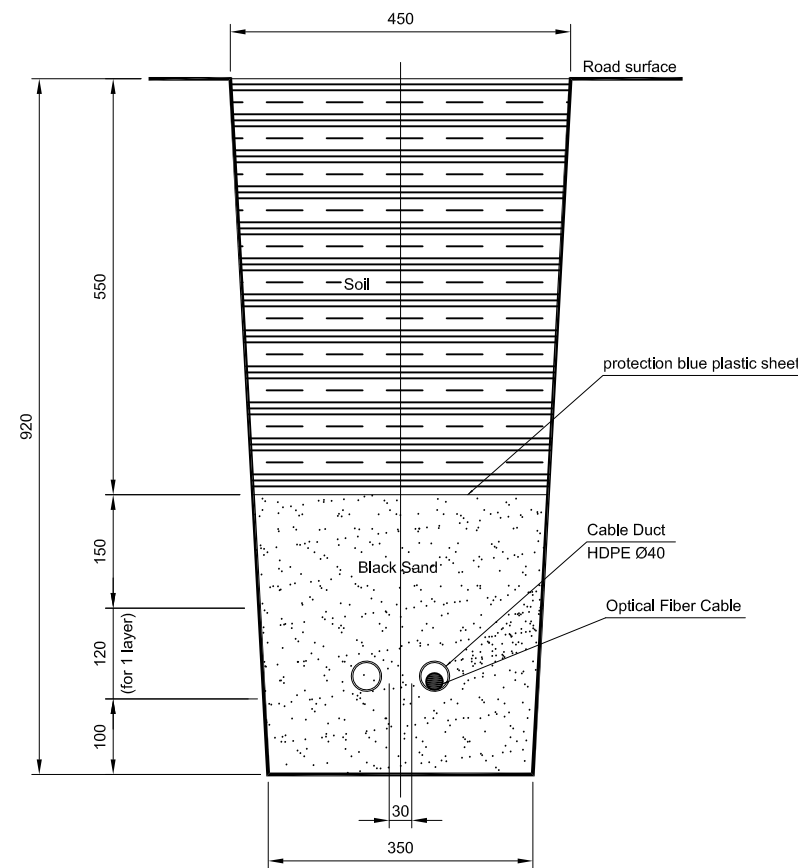
ARRANGEMENT OF COMMUNICATION DUCT IN SHOULDER (T2 TYPE)
(WHEN MEDIAN WIDTH BE LESS THAN 2.0M)



T2 DETAIL scale:1/10



COMMUNICATION DUCT TYPE T3 DETAIL scale:1/10
(USE FOR COMMUNICATION DUCT SPREAD FOR ROADSIDE EQUIPMENT)



PROTECTION BLUE PLASTIC SHEET scale:1/20



Volume table of T2 Duct (for 1 kilometer in length)

	Volume
Disposal soil	671 m ³
Black sand	353 m ³
Backfill soil	318 m ³
Protection blue plastic sheet	500 m ²

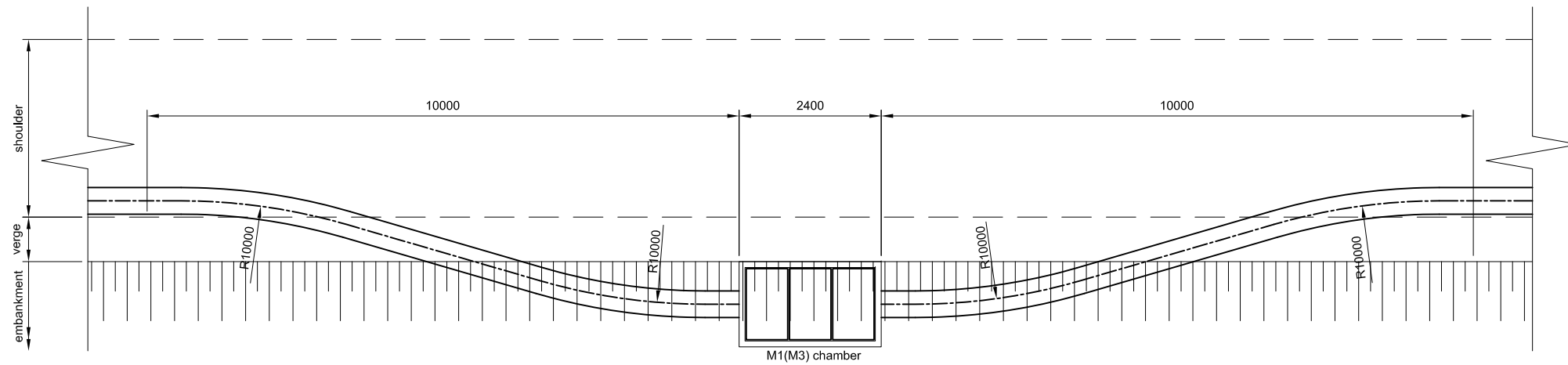
Volume table of T3 Duct (for 1 kilometer in length)

	Volume
Disposal soil	368 m ³
Black sand	137 m ³
Backfill soil	231 m ³
Protection blue plastic sheet	350 m ²

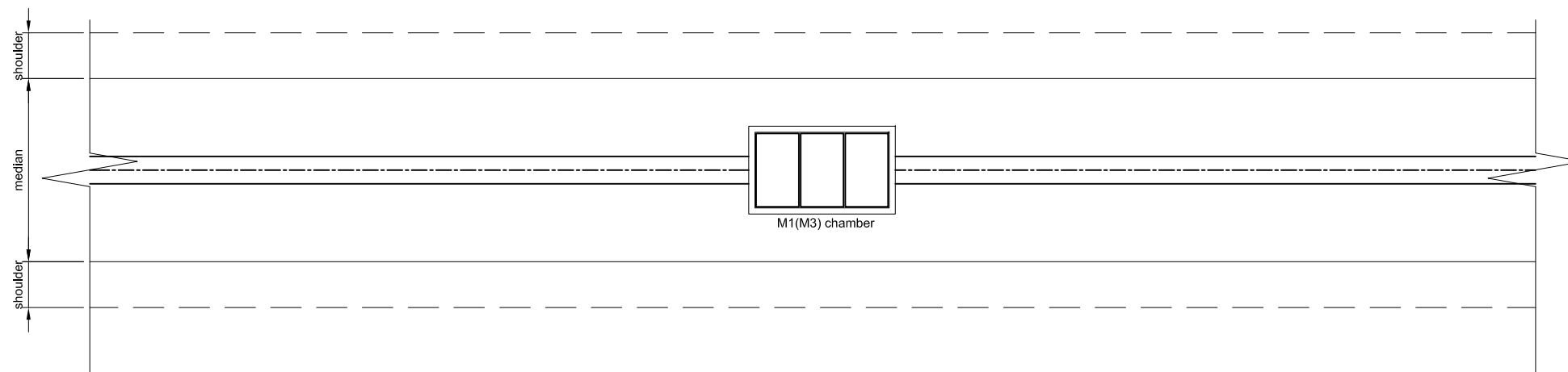
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:			
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING No.:		
					PREPARED BY									CA LO BRIDGE - BAC NINH EXPRESSWAY		X.3-01
					CHECKED BY									TYPICAL CROSS SECTION OF COMMUNICATION DUCT (TYPE T2, T3) IN EARTHWORK SECTION		SHEET No.:
APPROVED BY									SCALE: Varies			Sheet	of			

ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (1)

CHAMBER FOR COMMUNICATION DUCT ON ROAD scale: 1/100



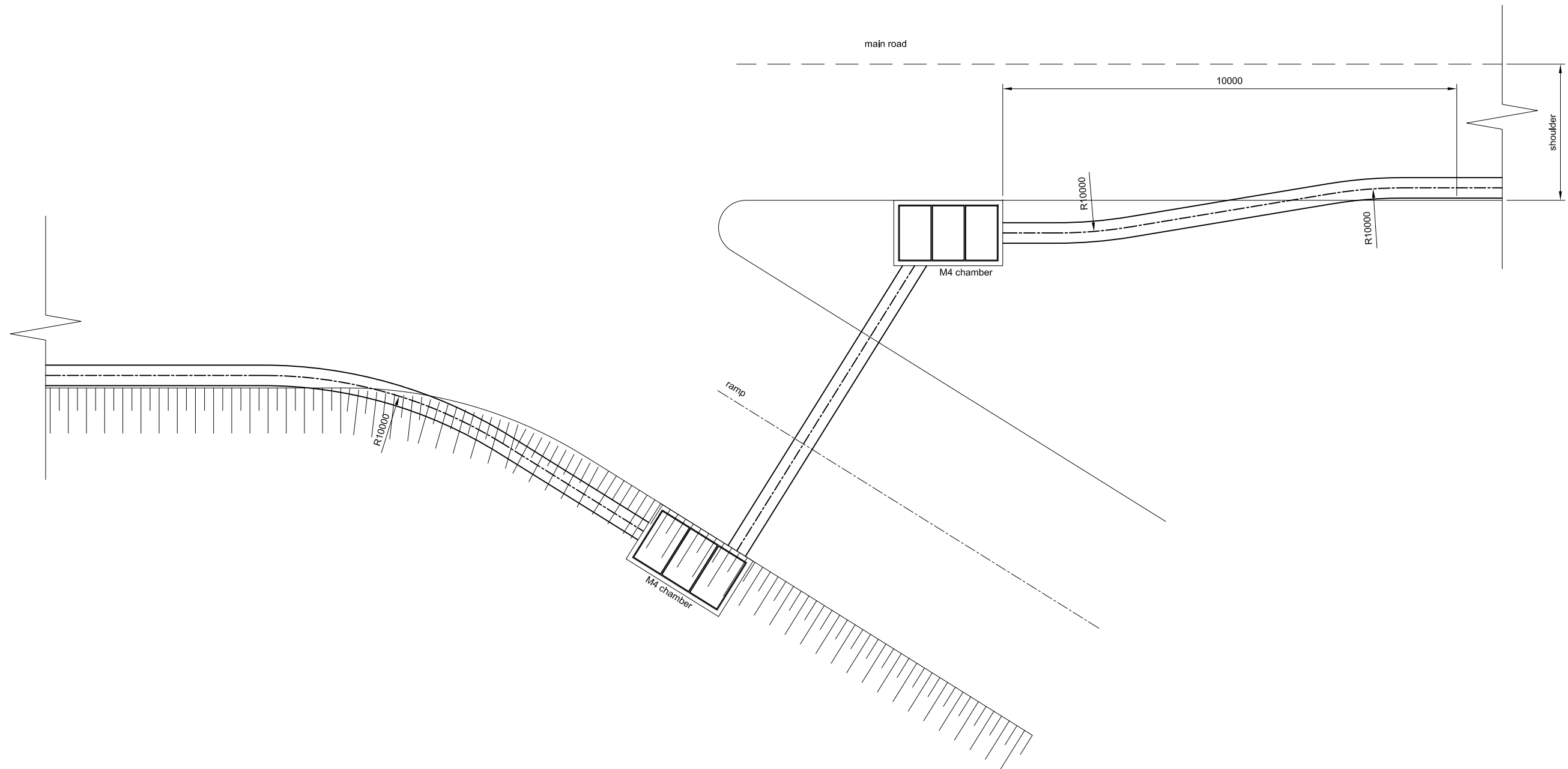
CHAMBER FOR COMMUNICATION DUCT ON MEDIAN scale: 1/100



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE:	DRAWING No.:	
	PREPARED BY							CA LO BRIDGE - BAC NINH EXPRESSWAY	X.3-02	
	CHECKED BY							ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (1)	SHEET No.:	
	APPROVED BY							SCALE: 1/100	Sheet of	Rev:

ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (2)

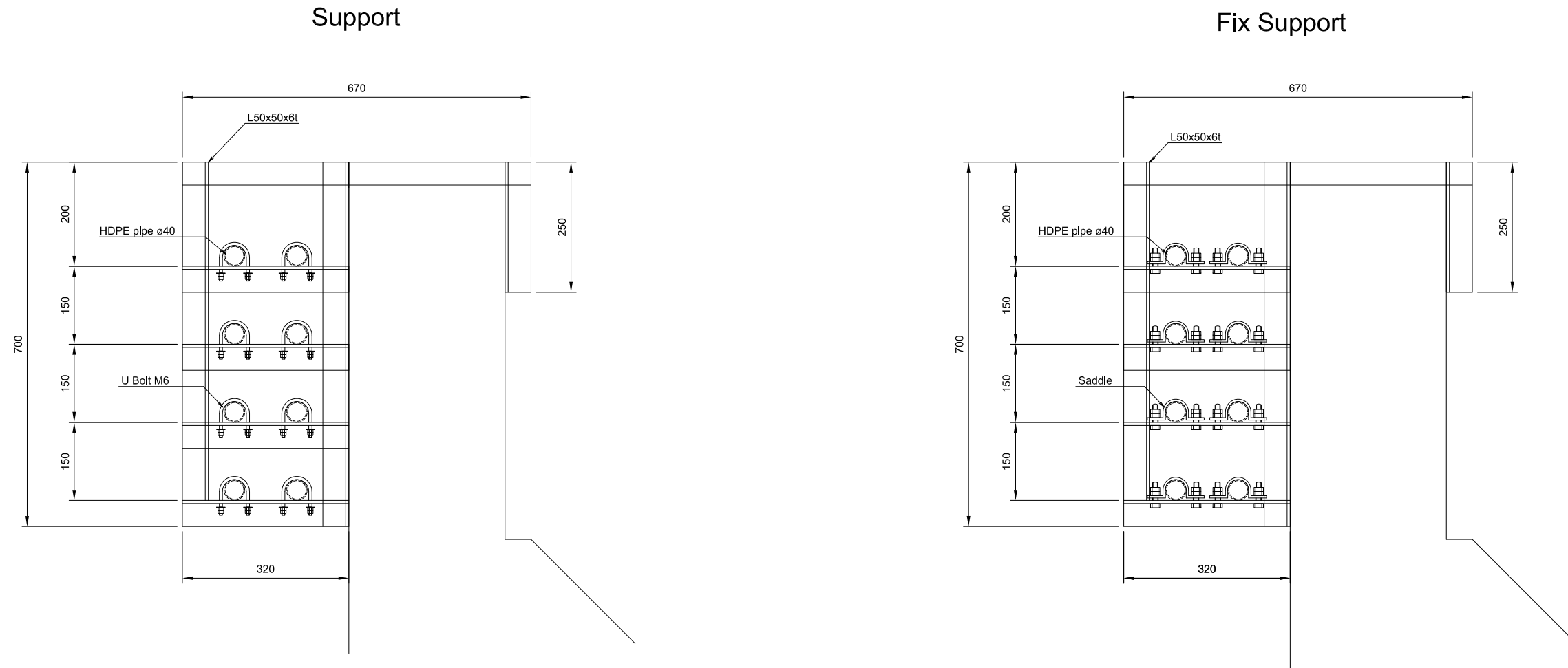
CHAMBER FOR CHANGING DIRECTION OF COMMUNICATION DUCT ON ROAD scale: 1/100



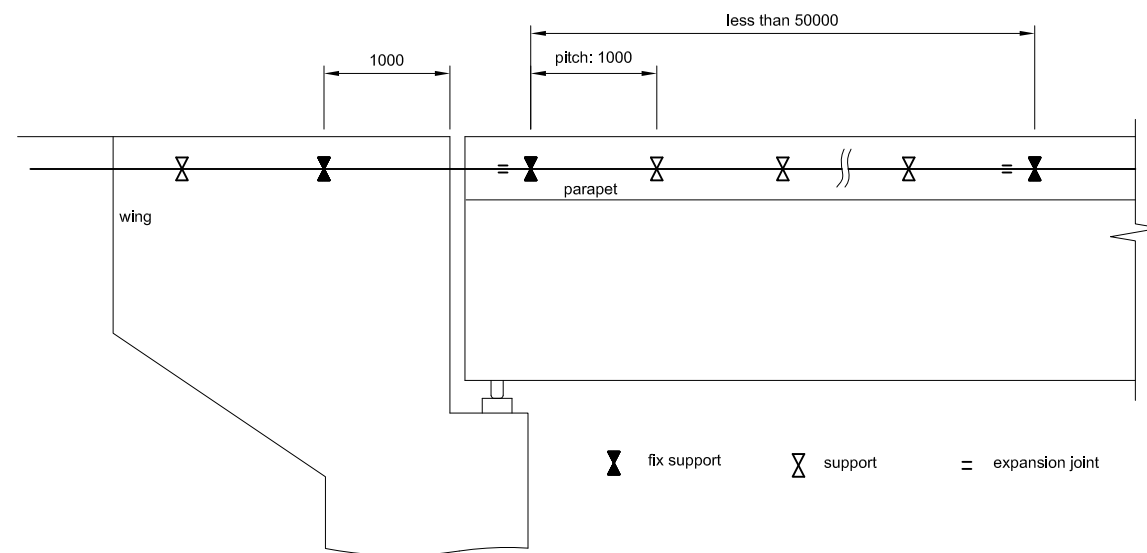
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT	DRAWING TITLE:		DRAWING No.:		
	PREPARED BY					CA LO BRIDGE - BAC NINH EXPRESSWAY ARRANGEMENT OF COMMUNICATION DUCT AT CHAMBER (2)		X.3-03		
	CHECKED BY					SCALE: 1/100		SHEET No.:	Rev:	
	APPROVED BY					Sheet of				

DETAIL OF COMMUNICATION DUCT (TYPE B1) ON BRIDGE

ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (CROSS SECTION VIEW) scale:1/10



ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (SIDE VIEW)



Volume table of supporting rack(for 1 place)

	Weight(kg)
L50x50x6t	16

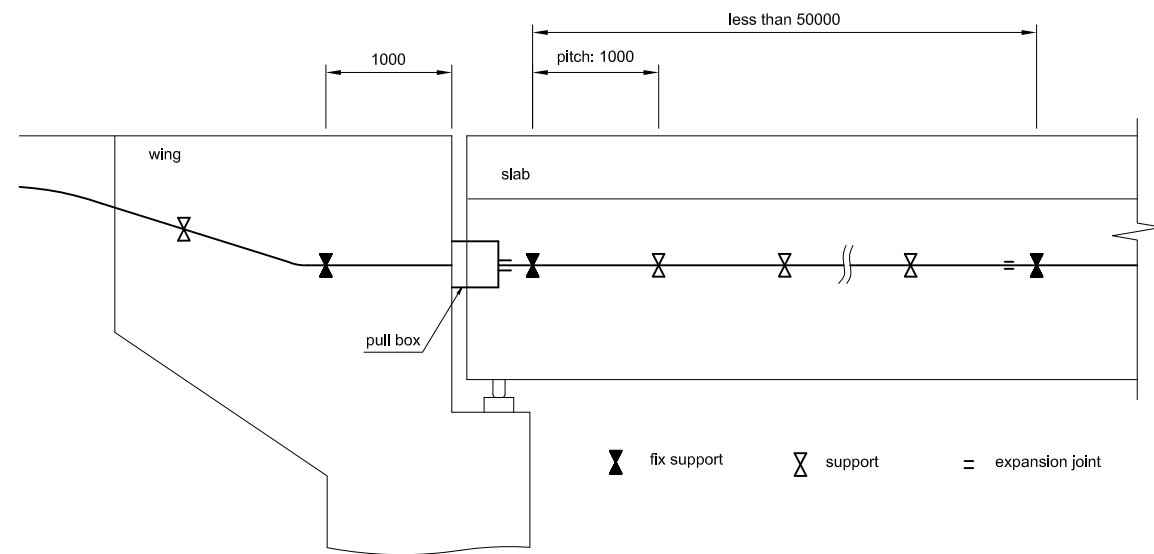
- *1 Structural steel conforms ASTM A-709M Grade 250 as equivalent to the recommendation about zincing in details, all metal members be exposed to weather or soil must be zinced with amount of 550g/m².
- *2 Concrete structure equivalence with: Concrete strength: F'c = 18 MPa; Reinforcing Bar (CB300-II): Yield strength: Fy = 300 MPa; Tensile strength: Fu = 450 MPa;
- *3 This drawing be based on NEXCO(Japan) drawings.
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM			ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT			DRAWING TITLE:		DRAWING No.:	
	PREPARED BY							CA LO BRIDGE - BAC NINH EXPRESSWAY		X.3-04	
	CHECKED BY							ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (TYPE B1)		SHEET No.:	Rev:
	APPROVED BY							SCALE: Varies		Sheet	of

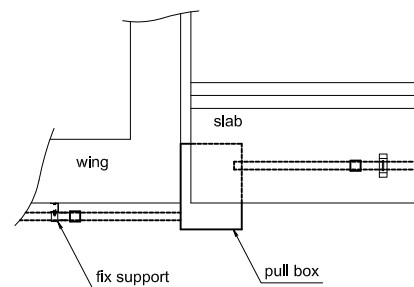
DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE (1)

ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (SIDE VIEW)

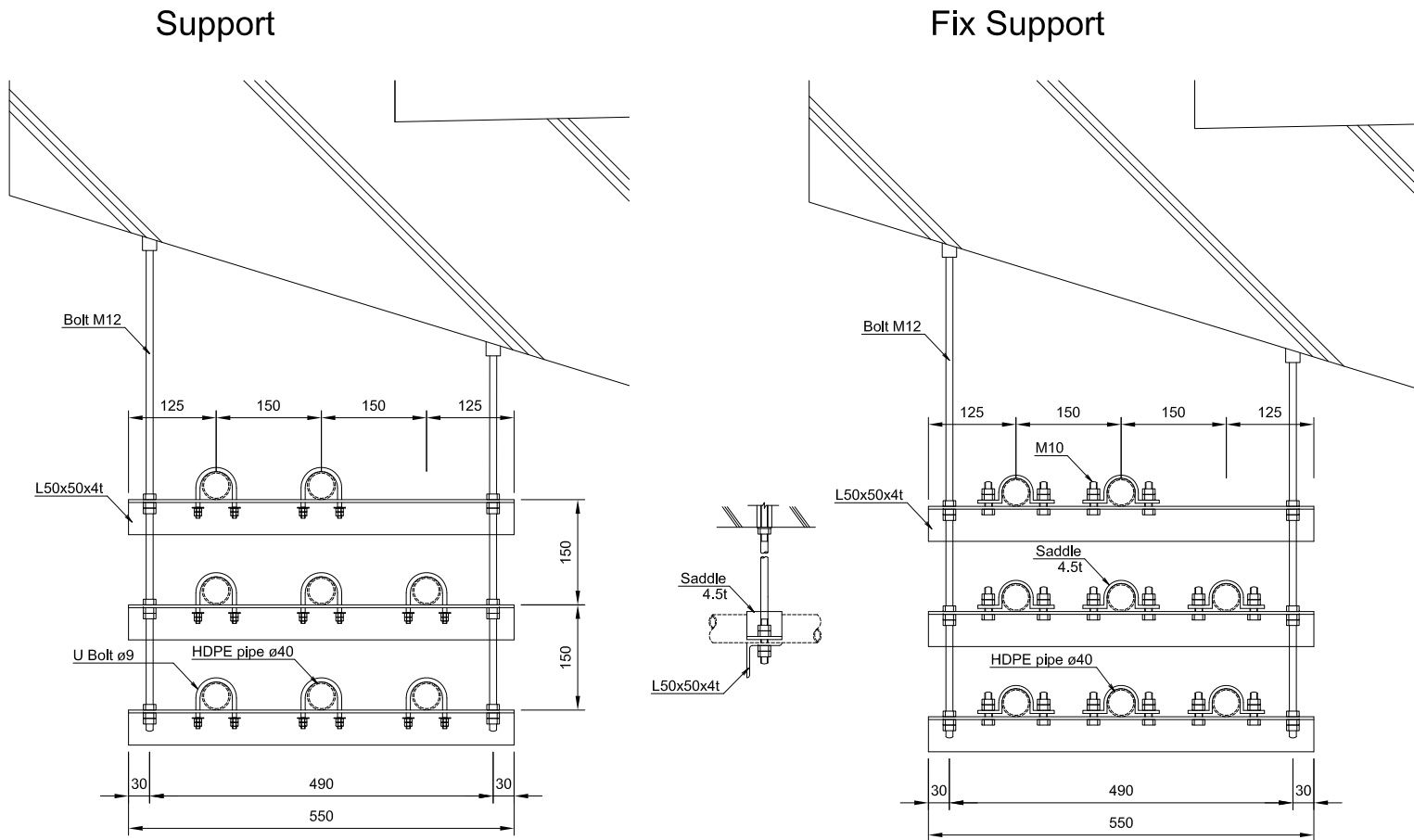
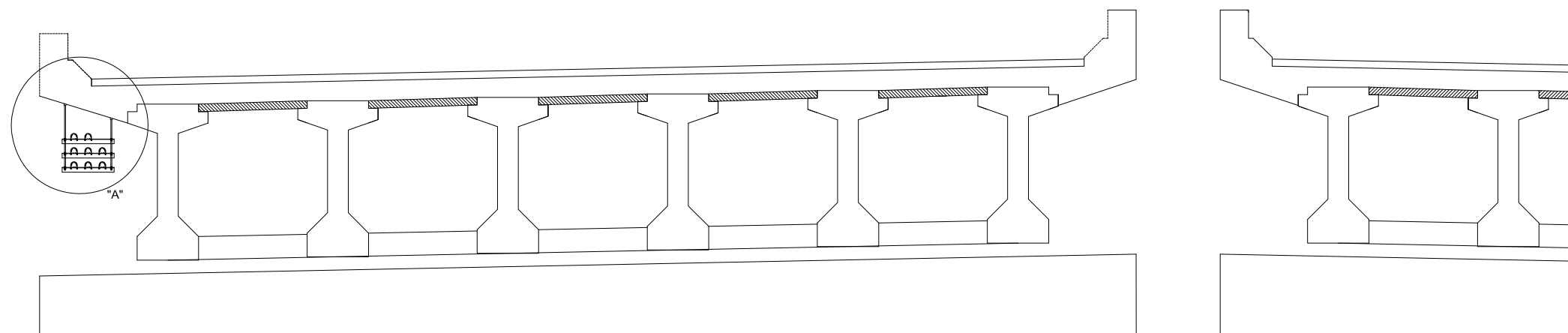
"A" DETAIL scale: 1/10



ARRANGEMENT OF COMMUNICATION DUCT AT JOINT AREA (PLAN VIEW)



ARRANGEMENT OF COMMUNICATION DUCT ON BRIDGE (CROSS SECTION VIEW)



Volume table of supporting rack B2(for 1 place)

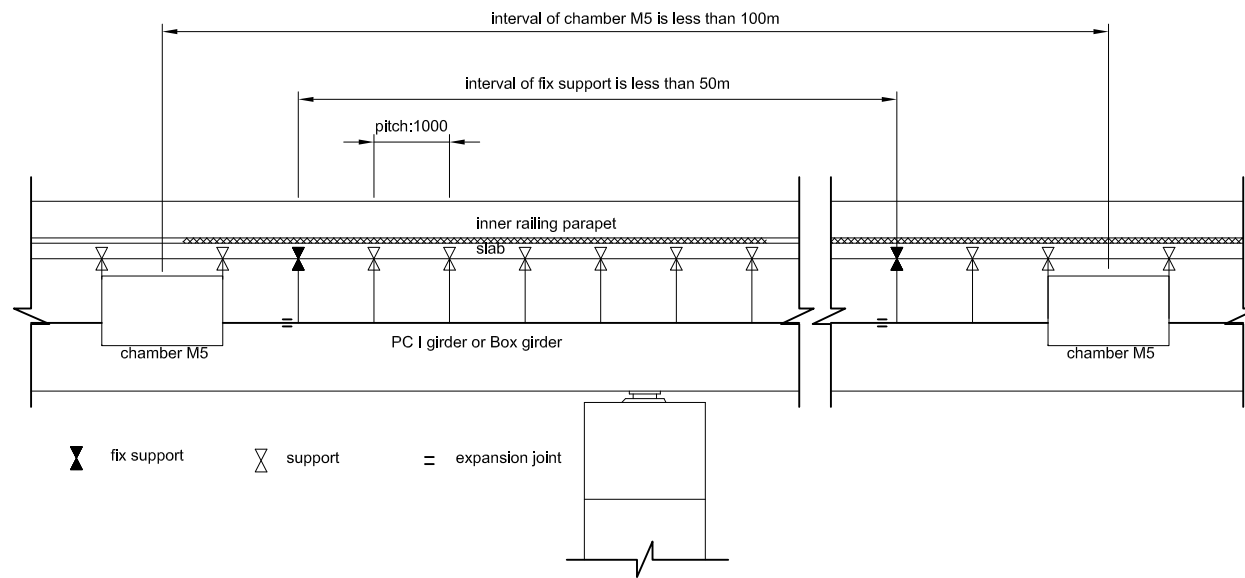
	Weight(kg)
L50x50x4t	6
Anchor bolt M12	1.3

- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- *2 Concrete structure equivalence with:
Concrete strength: $F'_c = 18$ MPa;
Reinforcing Bar (CB300-II): Yield strength: $F_y = 300$ MPa;
Tensile strength: $F_u = 450$ MPa;
- *3 In case without any recommendation about zncing in details, all metal members be exposed to weather or soil must be znced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM		ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM		PACKAGE:
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.	TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT		DRAWING TITLE:	DRAWING No.:	
	PREPARED BY						CA LO BRIDGE - BAC NINH EXPRESSWAY DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE (1)	X.3-05	
	CHECKED BY						SHEET No.:	Rev:	
	APPROVED BY						Sheet of		
							SCALE: Varies		

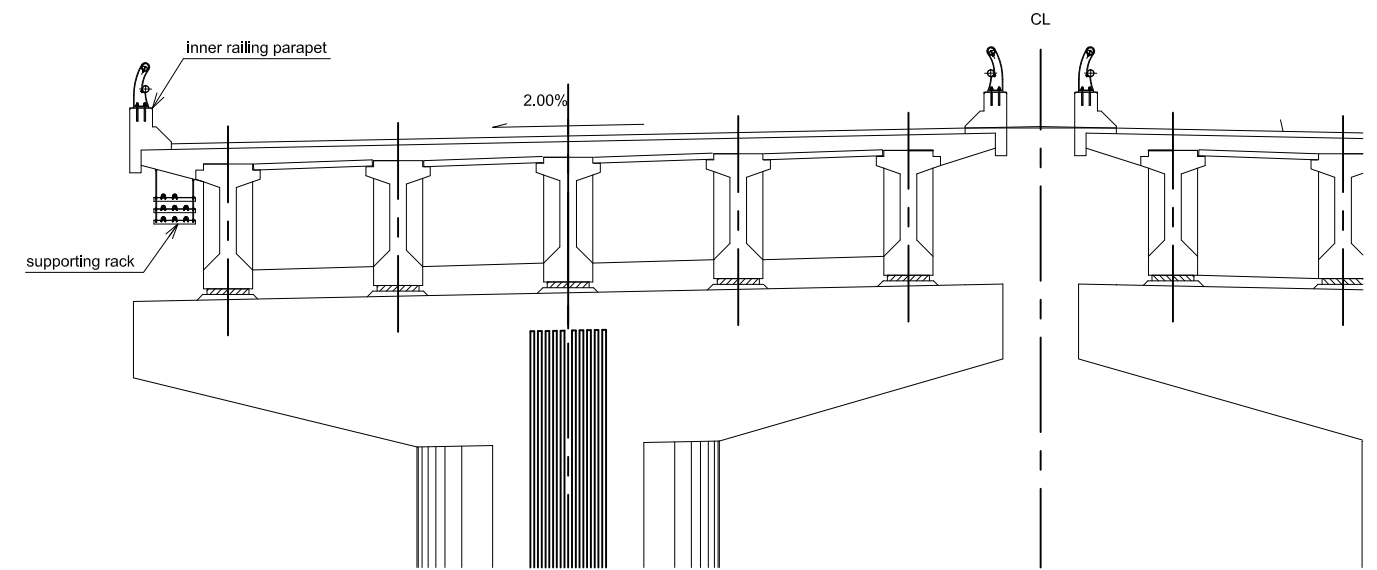
DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE(2)

SIDE VIEW



CROSS SECTION VIEW

(PC I girder section)

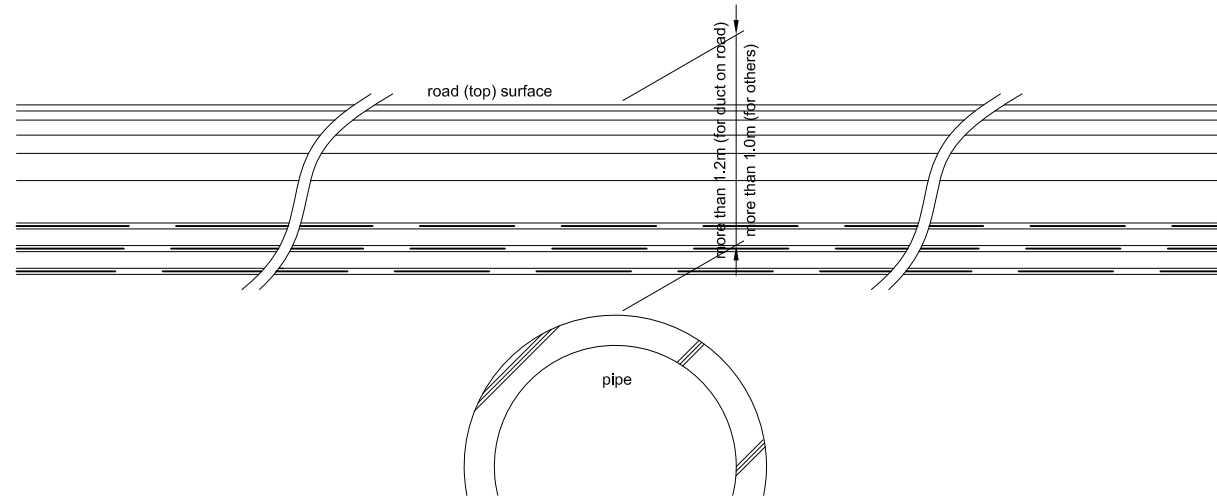


- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- *2 Concrete structure equivalence with:
Concrete strength: $F'_c = 18$ MPa;
Reinforcing Bar (CB300-II): Yield strength: $F_y = 300$ MPa;
Tensile strength: $F_u = 450$ MPa;
- *3 In case without any recommendation about zncing in details, all metal members be exposed to weather or soil must be znced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

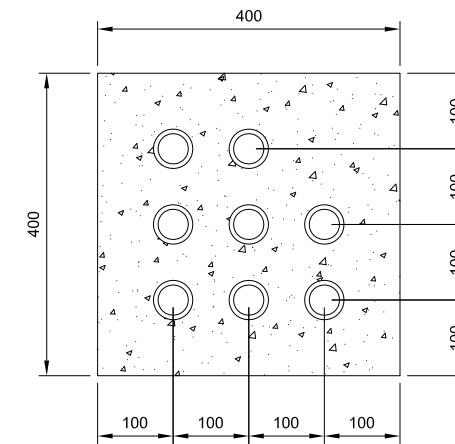
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:							
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					TITLE	NAME	SIGNATURE	DATE	MINISTRY OF TRANSPORT					DRAWING TITLE:					DRAWING No.:			
					PREPARED BY									CA LO BRIDGE - BAC NINH EXPRESSWAY					X.3-06			
					CHECKED BY									DETAIL OF COMMUNICATION DUCT (TYPE B2) ON BRIDGE(2)					SHEET No.:		Rev:	
					APPROVED BY									SCALE: 1/100					Sheet		of	

ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREAS

ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREA scale: 1/50
(WHEN EARTH COVERING LESS THAN 1.2M)

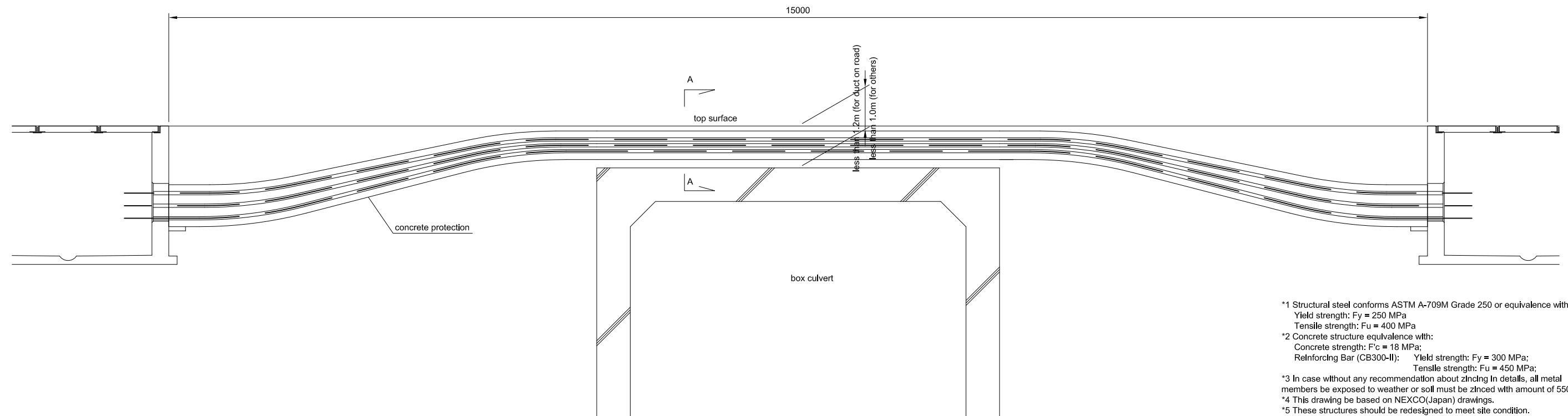


A-A SECTION scale: 1/10



Volume table of TYPE C1 (for 15 meters in length)	
	Volume
Concrete	3.0 m ³

ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREA (TYPE C1) scale: 1/50
(WHEN EARTH COVERING MORE THAN 1.2M)

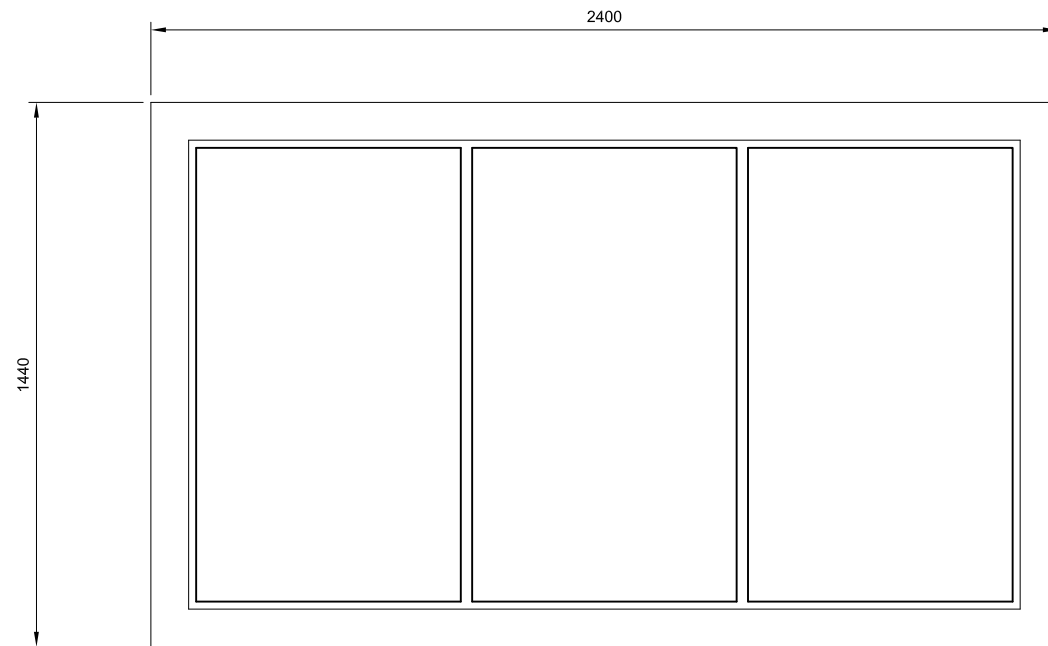


- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: F_y = 250 MPa
Tensile strength: F_u = 400 MPa
- *2 Concrete structure equivalence with:
Concrete strength: F_c = 18 MPa;
Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
Tensile strength: F_u = 450 MPa;
- *3 In case without any recommendation about zncing in details, all metal members be exposed to weather or soil must be znced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:			
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE:			DRAWING No.:			
										CA LO BRIDGE - BAC NINH EXPRESSWAY			X.3-07			
										ARRANGEMENT OF COMMUNICATION DUCT IN BURIED OBJECT AREAS			SHEET No.:			
TITLE					NAME					SIGNATURE					Rev:	
PREPARED BY					DATE					SCALE: Varies					Sheet of	
CHECKED BY					APPROVED BY											

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M1)

(INSTALL AT MEDIAN or ON EMBANKMENT; WITH PITCH LESS THAN 333m)

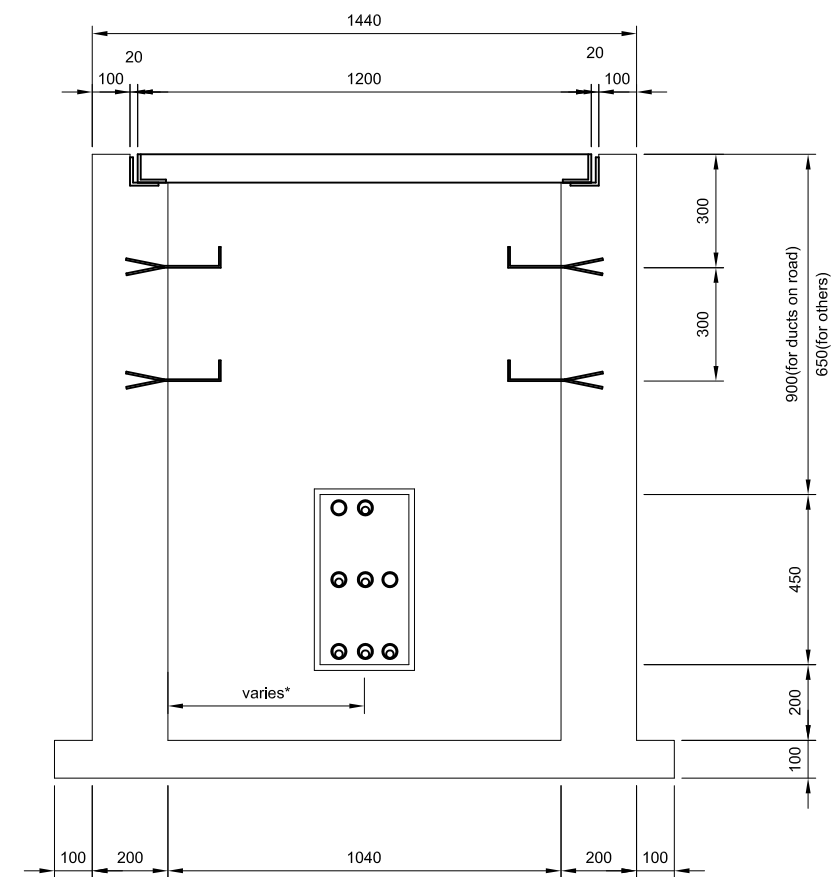
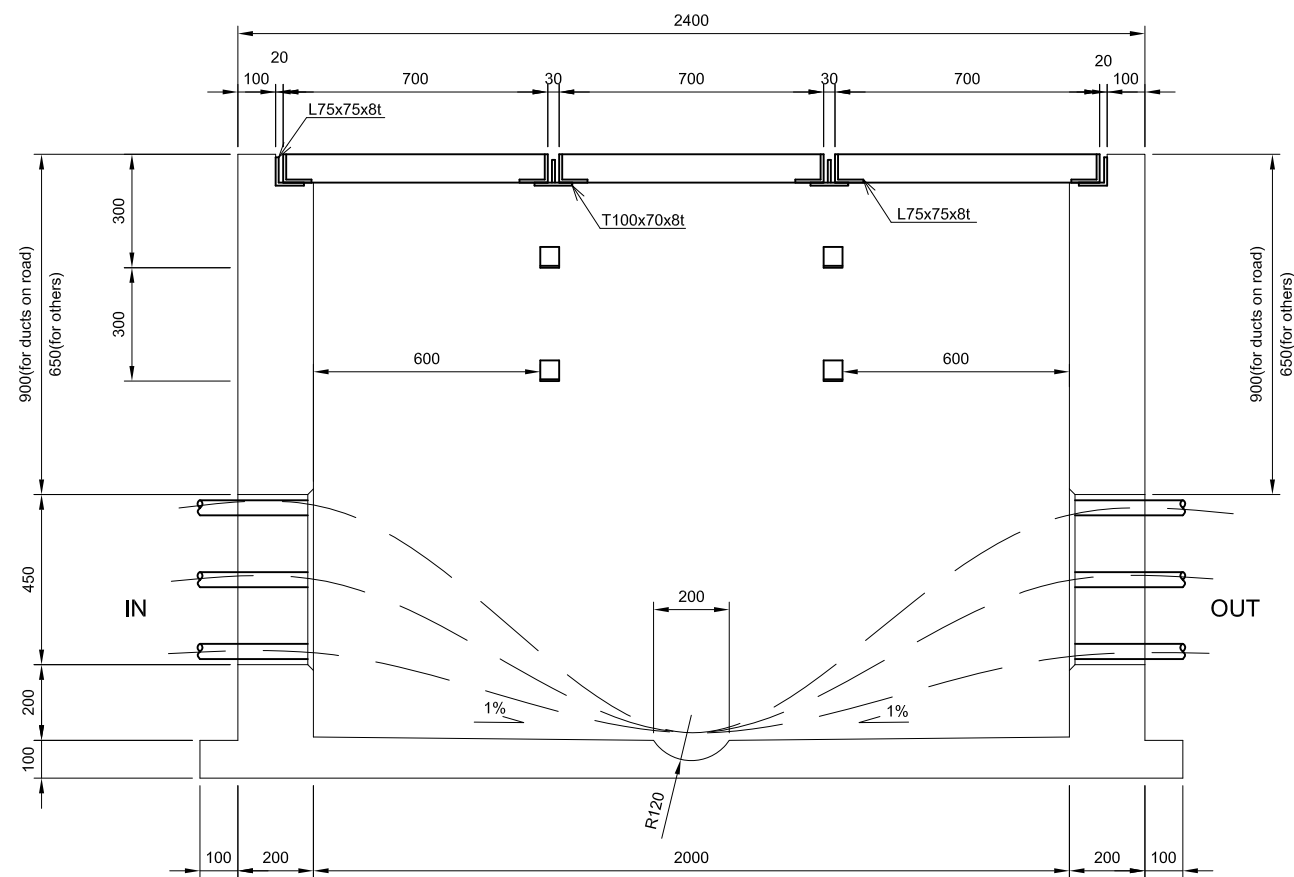


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



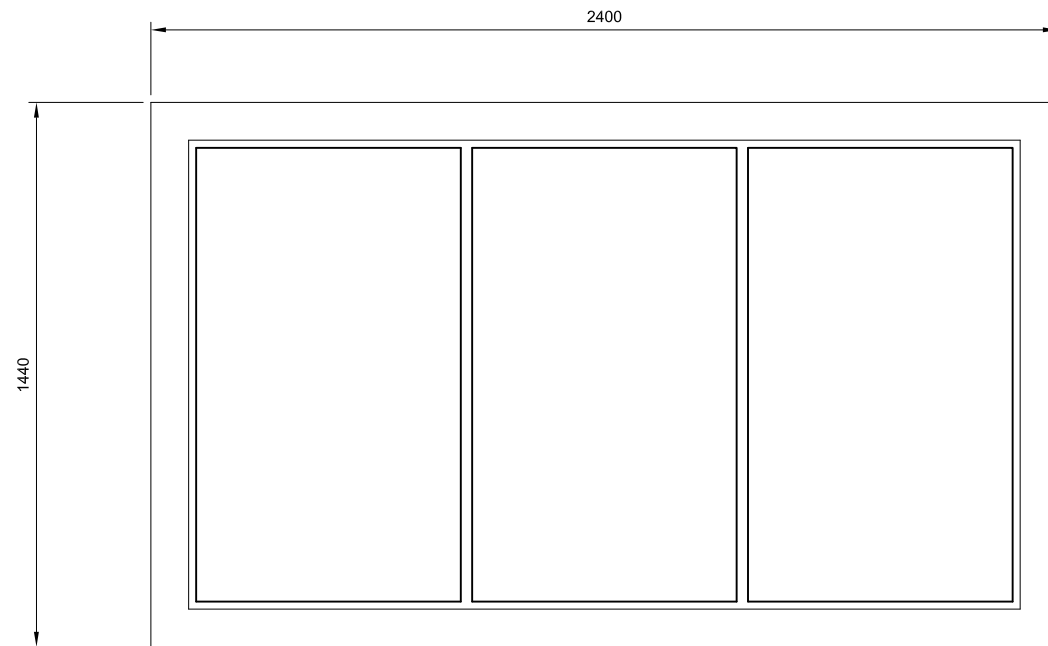
* Depending to duct arrangement.

*1 Concrete structure equivalence with:
 Concrete strength: F_c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
 Tensile strength: F_u = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:			
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					CA LO BRIDGE - BAC NINH EXPRESSWAY DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M1)			DRAWING No.:			
													X,3-08			
										SCALE: 1/20			SHEET No.:		Rev:	
													Sheet		of	

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M2)

(INSTALL AT BACK OF ABUTMENT)

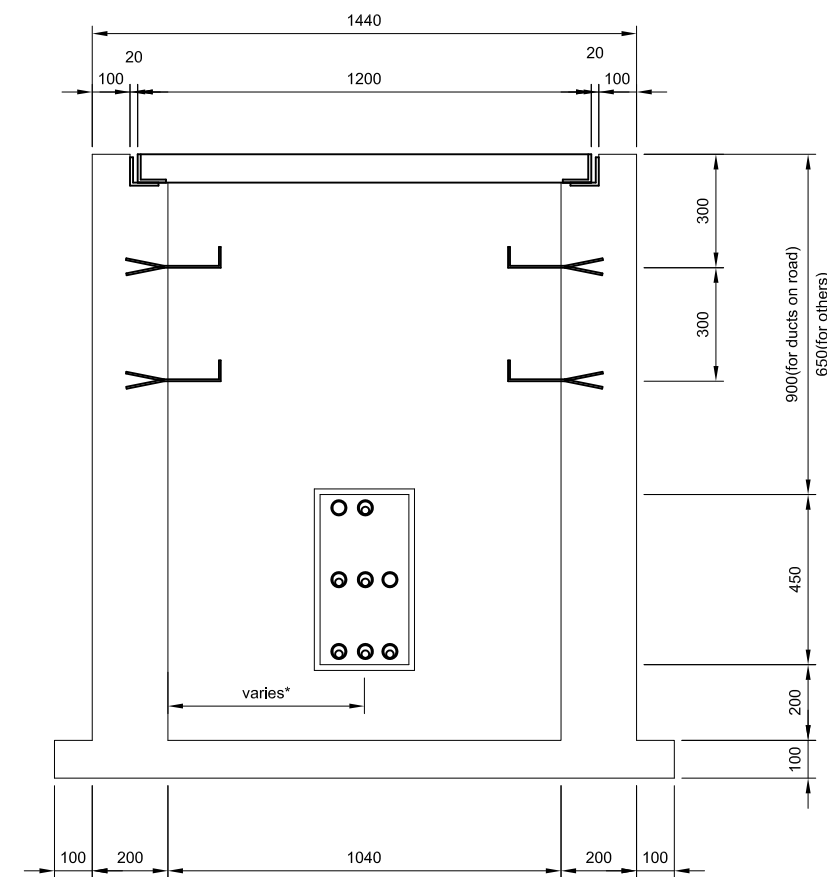
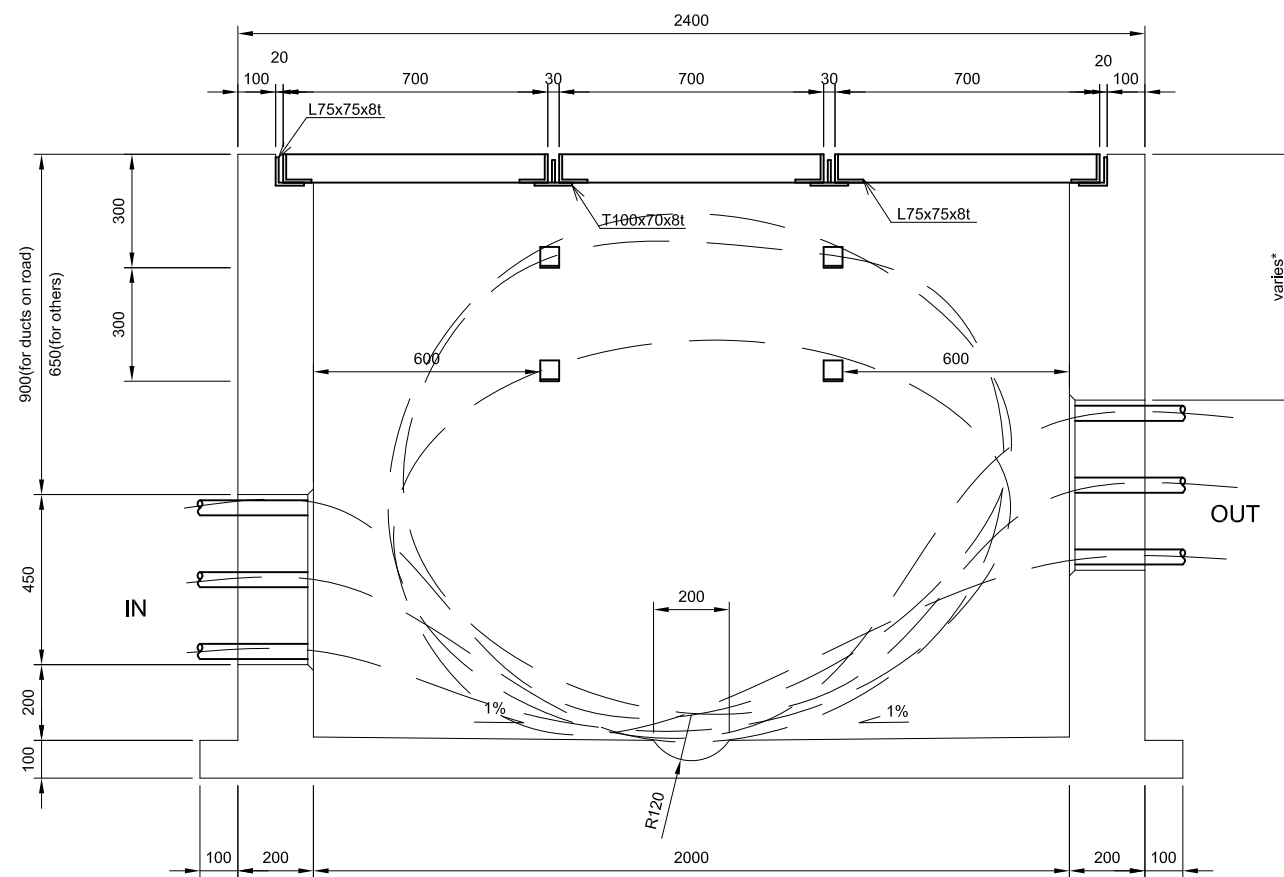


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



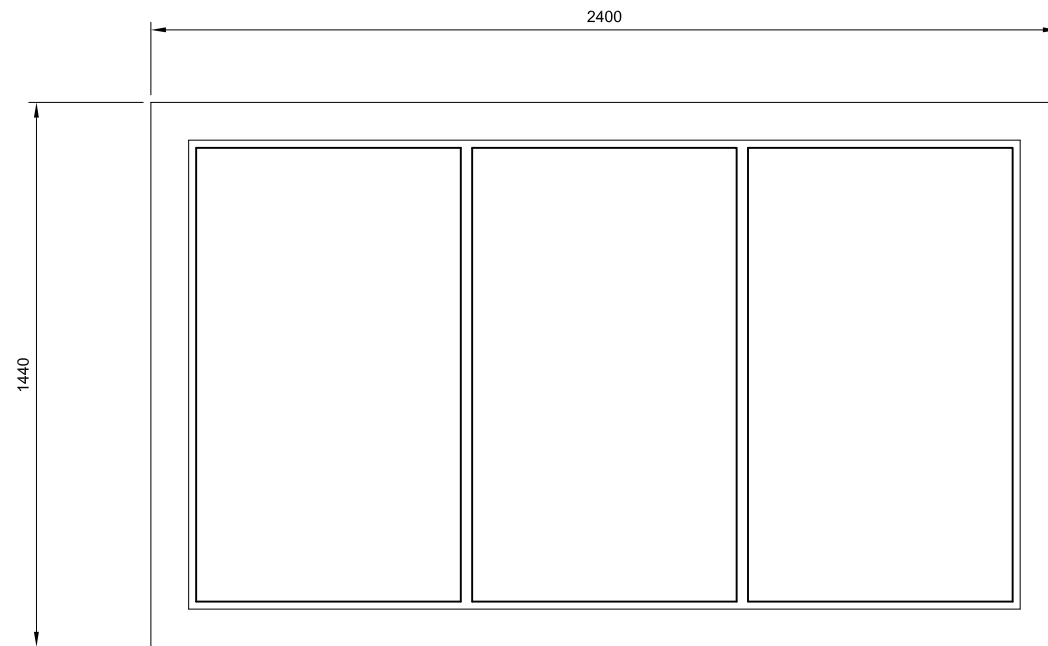
* Depending to duct arrangement.

*1 Concrete structure equivalence with:
 Concrete strength: F_c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
 Tensile strength: F_u = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					CA LO BRIDGE - BAC NINH EXPRESSWAY DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M2)					DRAWING No.:	
															X.3-09	
															SHEET No.:	
															Sheet of	
TITLE					NAME					SIGNATURE					DATE	
PREPARED BY					CHECKED BY					APPROVED BY					SCALE: 1/20	

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M3)

(INSTALL AT MEDIAN or EMBANKMENT; WITH PITCH LESS THAN 2000M)

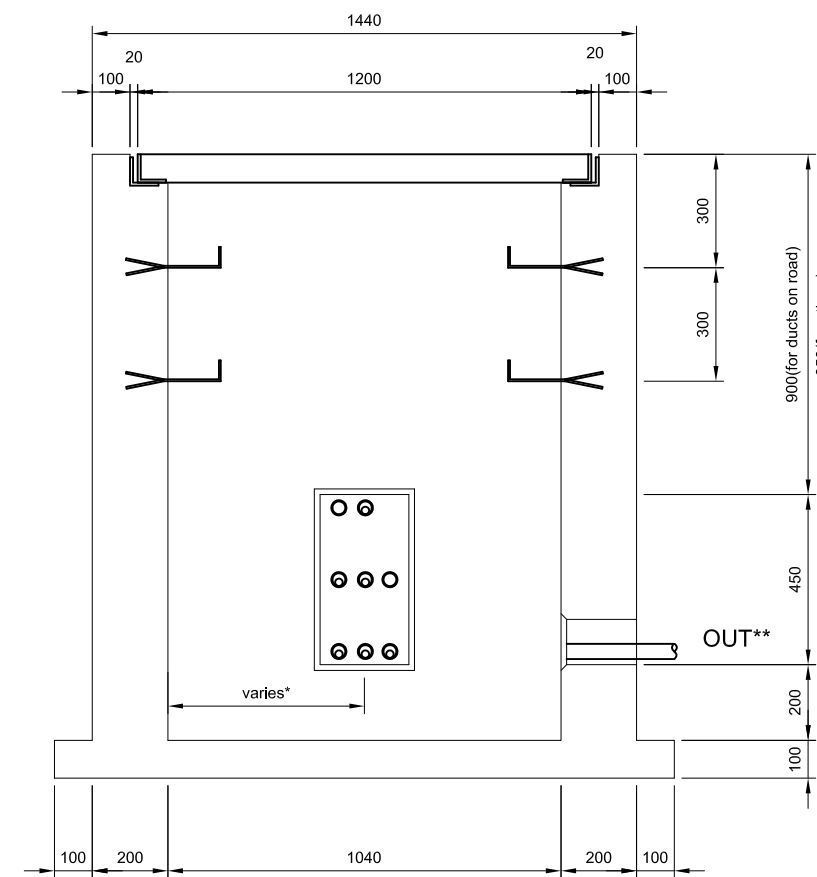
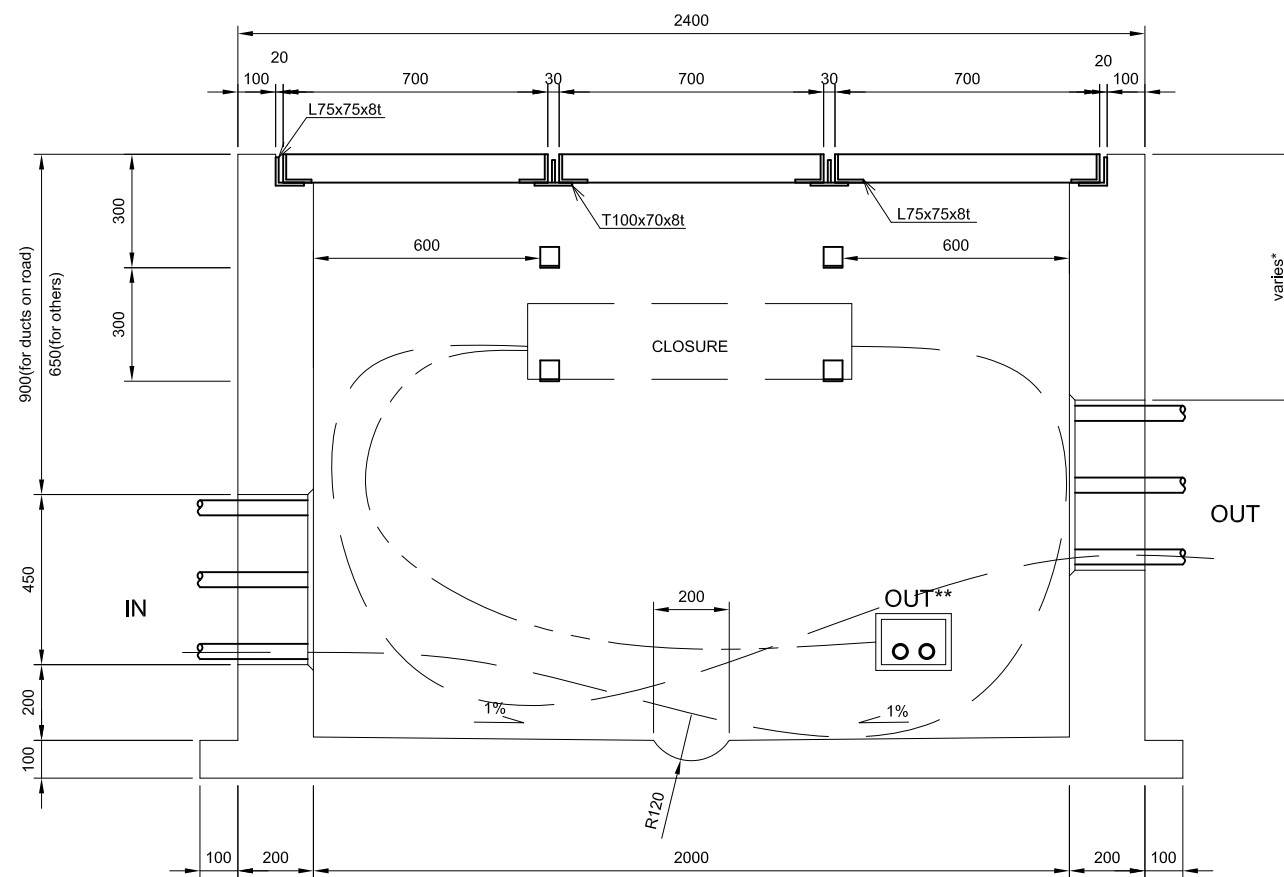


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



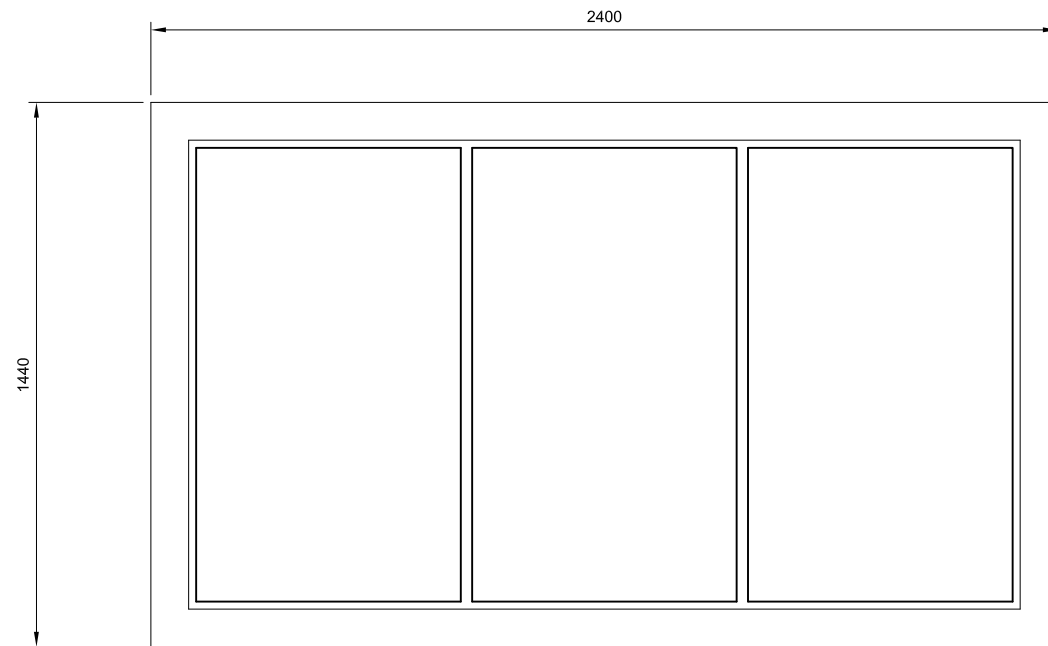
* Depending to duct arrangement.
 ** Divergence exits be used for roadside equipments.

*1 Concrete structure equivalence with:
 Concrete strength: F'c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: Fy = 300 MPa;
 Tensile strength: Fu = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE:			DRAWING No.:	
										CA LO BRIDGE - BAC NINH EXPRESSWAY			X.3-10	
										DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M3)			SHEET No.:	
										SCALE: 1/20			Sheet of	

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M4)

(INSTALL AT MEDIAN or EMBANKMENT ; FOR CHANGING DUCT DIRECTION)

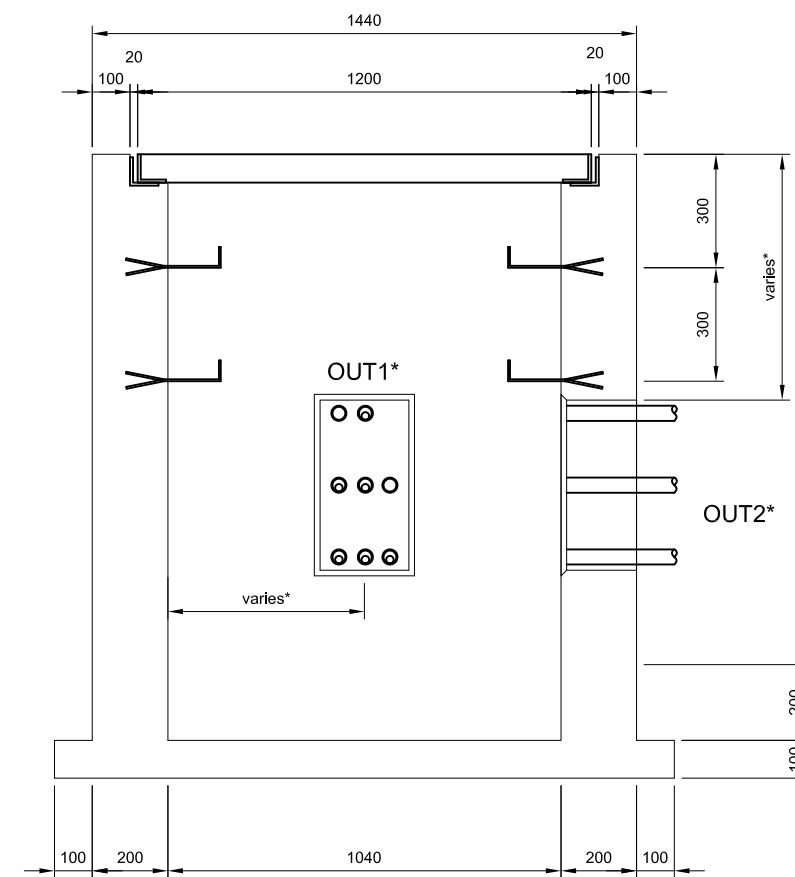
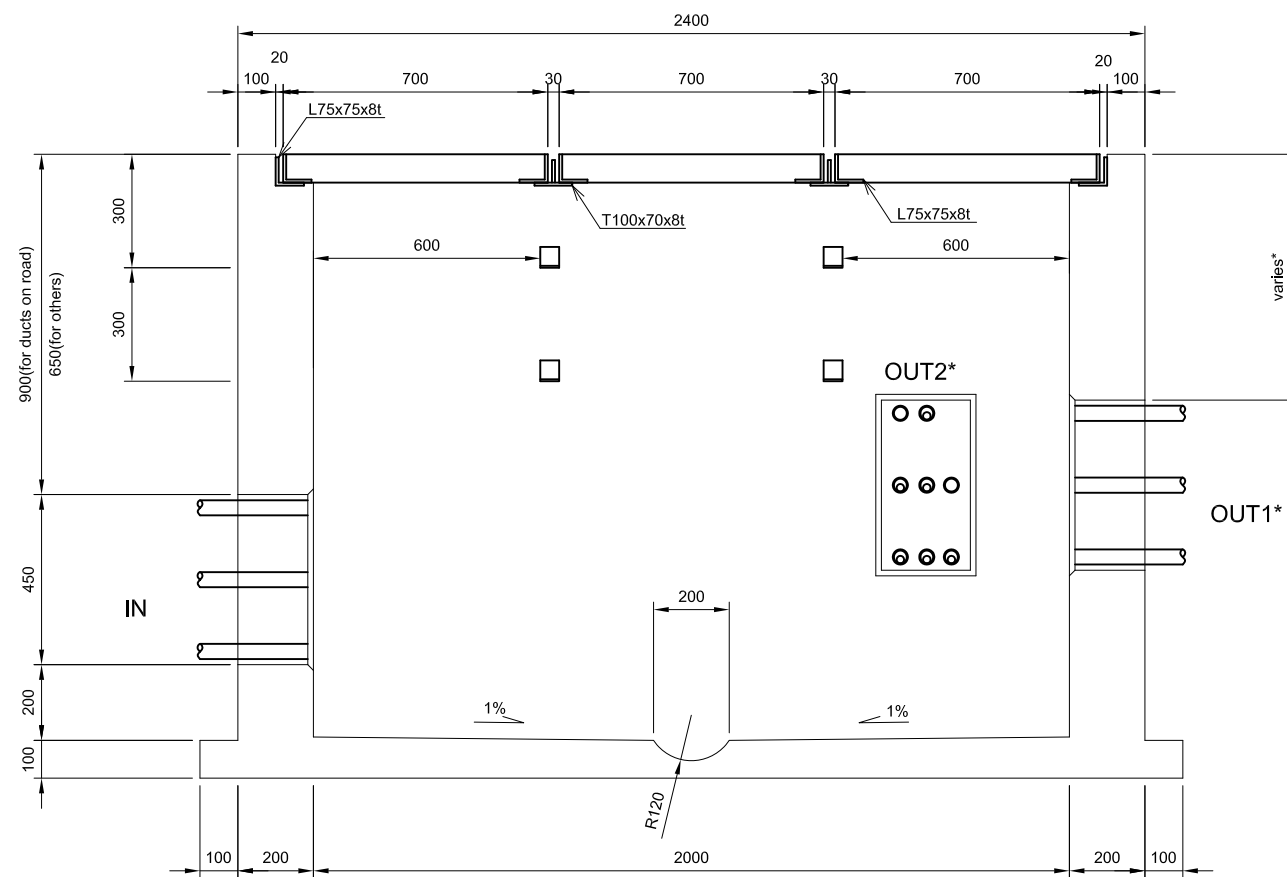


Volume table of chamber for ducts on road

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.9 m ³

Volume table of chamber for others

	Volume
L75x75x8t	183 kg
PL80x8t	10 kg
T100x70x8t	26 kg
Concrete M300	1.7 m ³



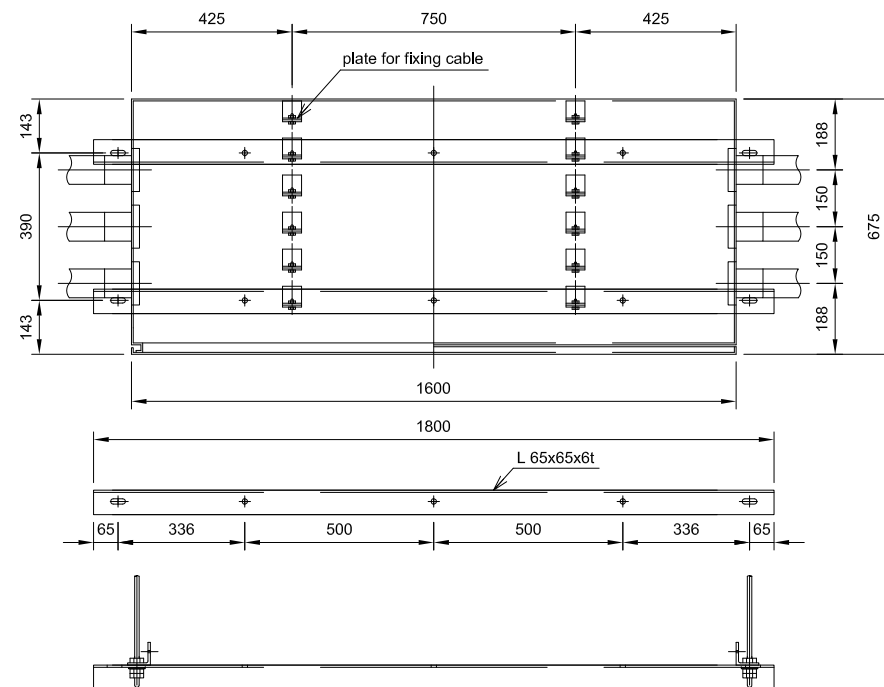
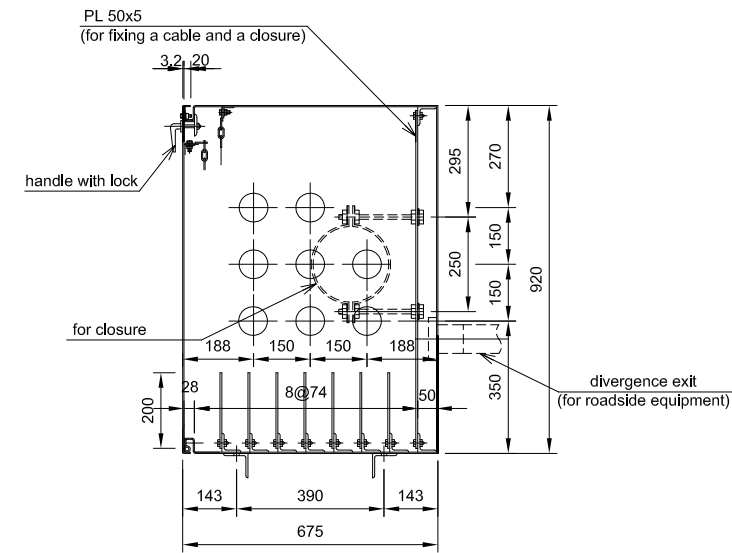
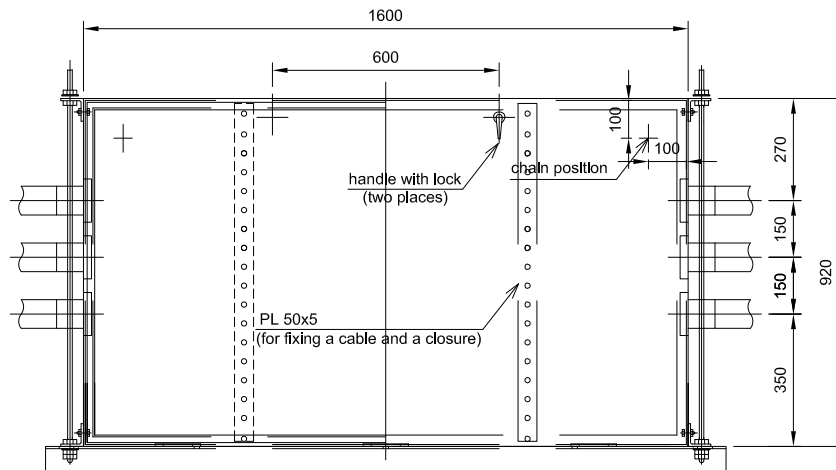
* Depending to duct arrangement.

*1 Concrete structure equivalence with:
 Concrete strength: F_c = 18 MPa;
 Reinforcing Bar (CB300-II): Yield strength: F_y = 300 MPa;
 Tensile strength: F_u = 450 MPa;

CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:	
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE:			DRAWING No.:	
										CA LO BRIDGE - BAC NINH EXPRESSWAY			X.3-11	
										DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M4)			SHEET No.:	
										SCALE: 1/20			Sheet of	
										Rev:				

DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M5)

(INSTALL AT BRIDGE SECTION IN WHICH DUCT IS HUNG ON CANTILEVER SLAB)



Volume table

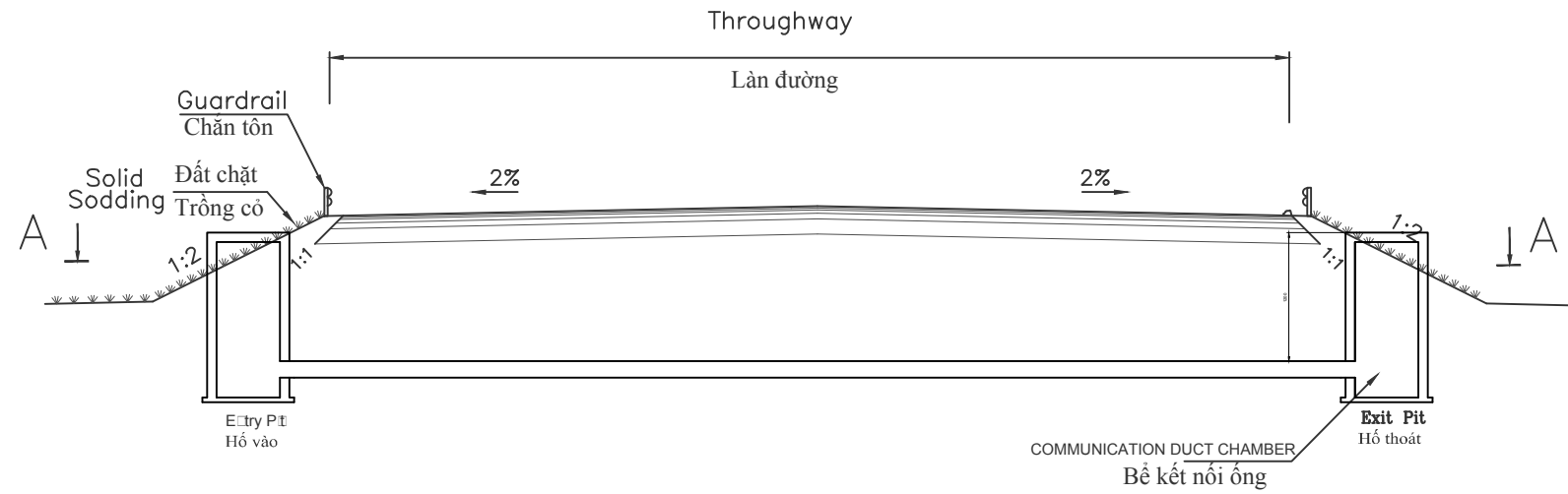
	Length(mm)	Volume	Weight (kg)
L 65x65x6t	1800	2	22.0
L 65x65x6t	60	4	2.0
L 50x50x6t	50	18	4.0
PL 50x5	750	2	3.0
PL 50x5	200	14	6.0
PL920x3.2	1600	2	74.0
PL 675x3.2	1600	2	55.0
PL 675x3.2	920	2	32.0

- *1 Structural steel conforms ASTM A-709M Grade 250 or equivalence with:
Yield strength: $F_y = 250$ MPa
Tensile strength: $F_u = 400$ MPa
- *2 Concrete structure equivalence with:
Concrete strength: $F'_c = 18$ MPa;
Reinforcing Bar (CB300-II): Yield strength: $F_y = 300$ MPa;
Tensile strength: $F_u = 450$ MPa;
- *3 In case without any recommendation about zncing in details, all metal members be exposed to weather or soil must be znced with amount of 550g/m².
- *4 This drawing be based on NEXCO(Japan) drawings.
- *5 These structures should be redesigned to meet site condition.

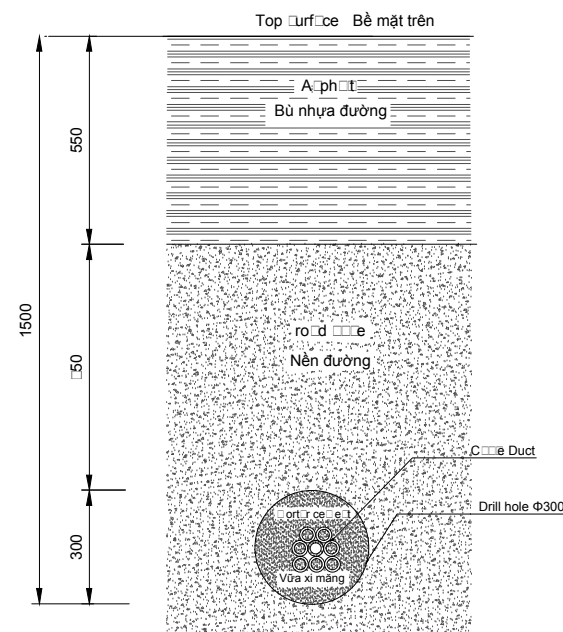
CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM					PACKAGE:			
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: CA LO BRIDGE - BAC NINH EXPRESSWAY DETAIL OF COMMUNICATION DUCT CHAMBER (TYPE M5)					DRAWING No.: X.3-12			
															SHEET No.:		Rev:	
															Sheet		of	
															SCALE: 1/20			

TYPICAL CROSS SECTION OF COMMUNICATION DUCT TYPE T5 IN EARTHWORK SECTION

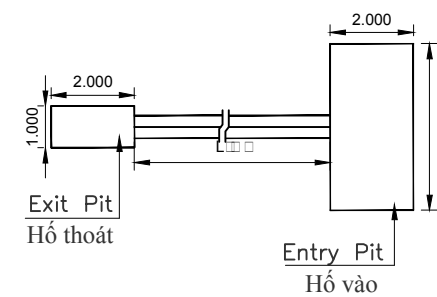
ARRANGEMENT OF COMMUNICATION DUCT IN DRILLING OF ROAD TYPE T5



T5 DETAIL Scale: 1/20



A-A CROSS SECTION



CONSULTANT					SOCIALIST REPUBLIC OF VIETNAM					ITS INTEGRATION PROJECT IN NORTHERN AREA OF VIETNAM			PACKAGE:						
ORIENTAL CONSULTANTS GLOBAL CO., LTD METROPOLITAN EXPRESSWAY CO., LTD NEXCO EAST ENGINEERING CO., LTD TRANSPORTATION RESEARCH INSTITUTE CO., LTD ABEAM CONSULTING LTD.					MINISTRY OF TRANSPORT					DRAWING TITLE: CA LO BRIDGE - BAC NINH EXPRESSWAY TYPICAL CROSS SECTION OF COMMUNICATION DUCT TYPE T5 IN EARTHWORK SECTION			DRAWING No.:						
													TITLE			NAME	SIGNATURE	DATE	X.3-13
													PREPARED BY						SHEET No.:
													CHECKED BY						Rev:
APPROVED BY						SCALE: NTS	Sheet	of											