



**WORKS & SERVICES DEPARTMENT  
GOVERNMENT OF SINDH  
AND PPP UNIT (FINANCE DEPARTMENT)**

**LINK ROAD PROJECT  
NATIONAL HIGHWAY (N-5) TO SUPER HIGHWAY (M-9)**

***GENERAL DRAWINGS***

**PRELIMINARY DESIGN DRAWINGS**  
OCTOBER 2019

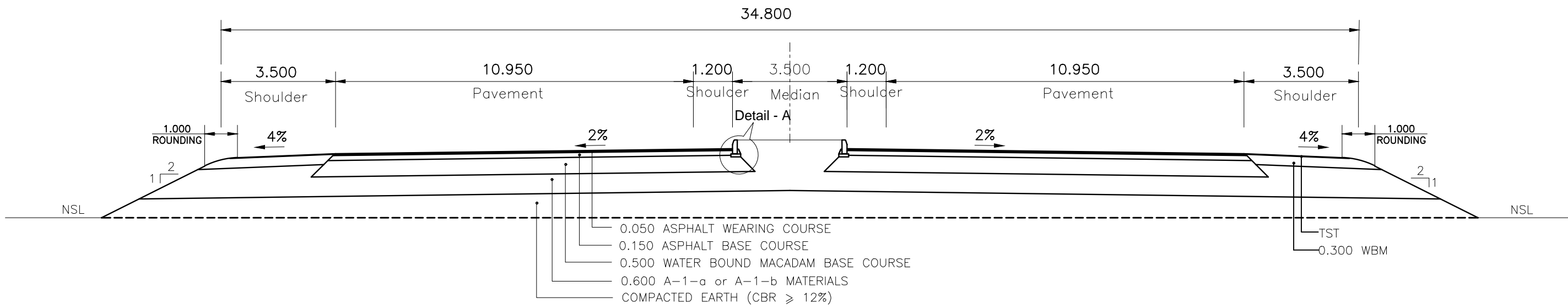


Consultants:-

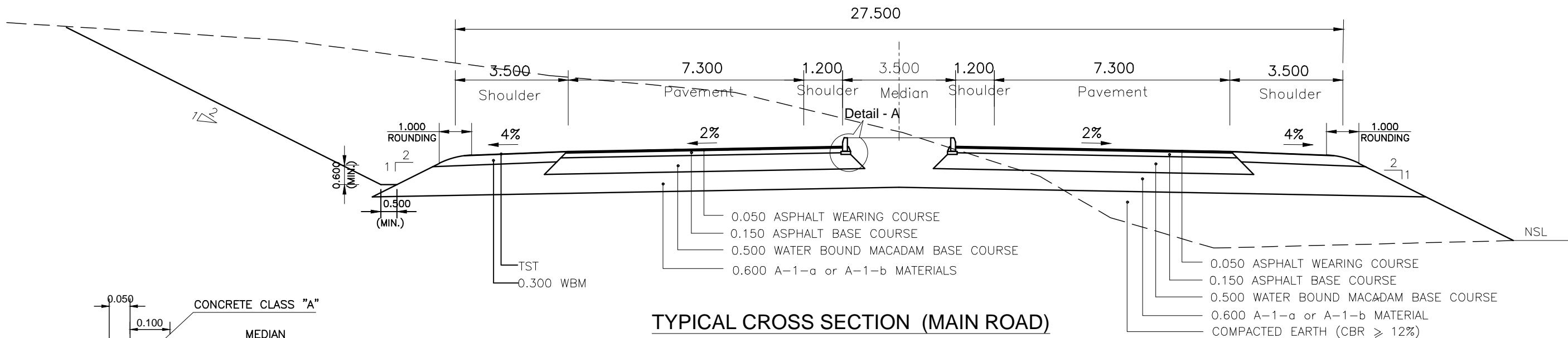
**Loya associates**   
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS

in association with

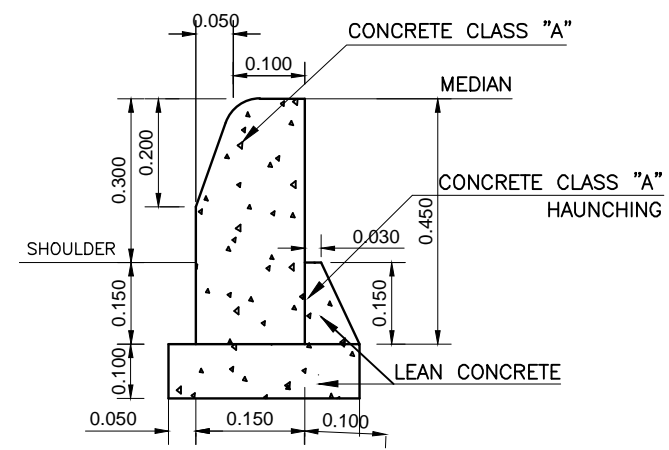
**REC** REPUBLIC ENGINEERING  
CORPORATION (PVT) LTD.  
FIRST FLOOR, PAAF BUILDING  
7-D KASHMIR/EGERTON ROAD LAHORE  
TEL. (042) 36360180-3 ; FAX 92-42-36369655



**TYPICAL CROSS SECTION (MAIN ROAD)  
SECTION A-A (TOLL PLAZA TO END OF  
INTERCHANGE)**



**TYPICAL CROSS SECTION (MAIN ROAD)  
(N-5 TO TOLL PLAZA)**





**DETAIL - A**

**Note**

1-A LAYER OF 0.6m THICKNESS OF A-1-a or A-1-b MATERIALS SHALL BE PROVIDED BELOW WBM. WHERE ROAD IS LOCATED ON HIGH EMBANKMENT, MATERIALS BELOW 0.6m LAYER OF A-1-a or A-1-b SHALL CONSIST OF LAYERS HAVING CBR >= 12%.  
2-ALL DIMENSIONS ARE IN METERS.

Client:-  

**WORKS & SERVICES DEPARTMENT  
GOVERNMENT OF SINDH**

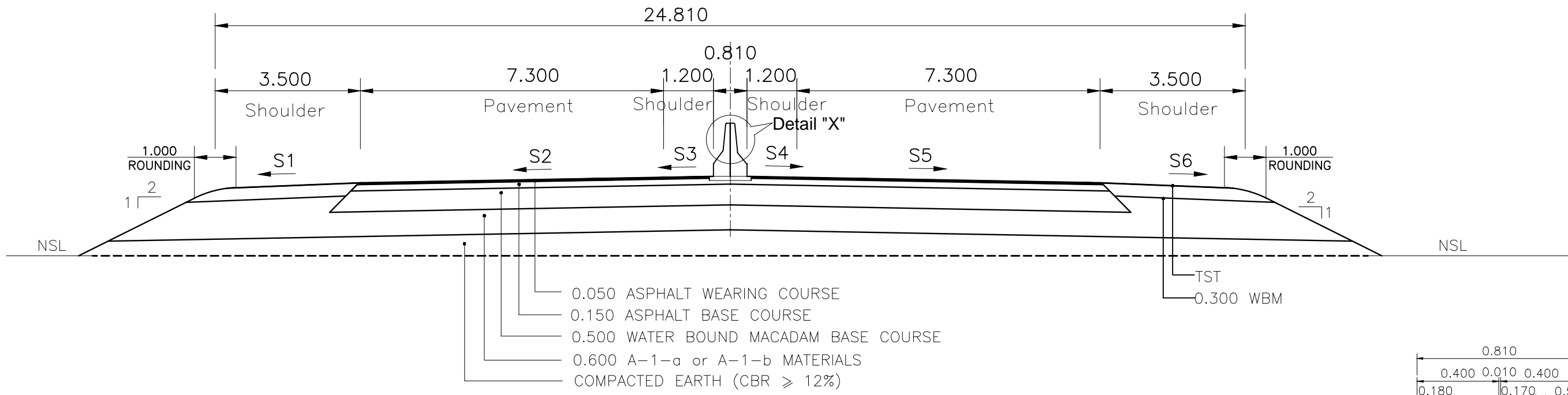
Consultant:-  

**Loya associates**  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 in association with  

**REC**  
 REPUBLIC ENGINEERING CORPORATION (PVT) LTD.  
 FIRST FLOOR, PAF F BUILDING  
 7-D KARAWA (SECTOR) ROAD, LAHORE  
 TEL: (042) 36360180-3 | FAX: 92-42-36369055

Title:-  
**TYPICAL CROSS SECTIONS**

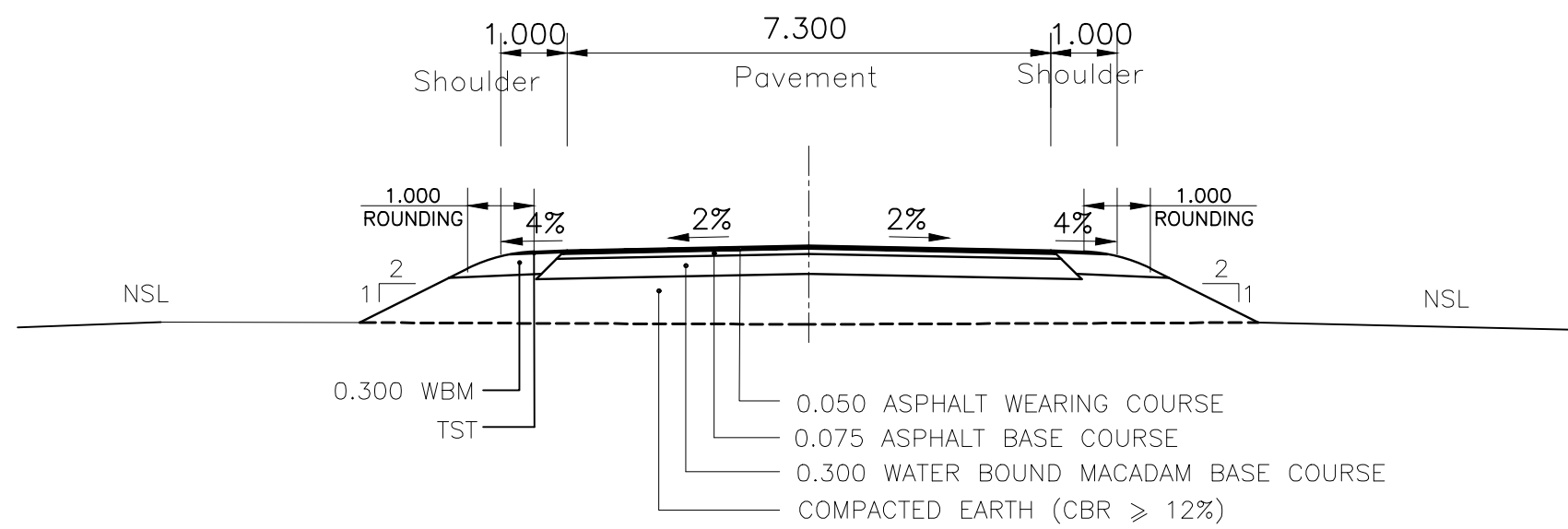
REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A

Project:-  
**SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5)  
LINK ROAD PROJECT**

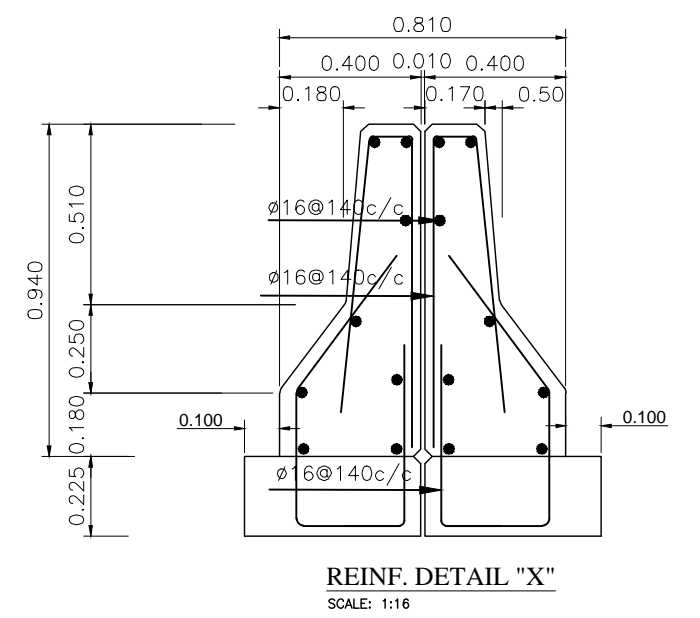
DRAWN BY	M. FAHEEM	DATE:	FEB.2017	JOB NO.	07 / 2016	REVISION
DESIGNED BY	A.F.	SCALE:	AS SHOWN	DRG.NO.	GEN-02	0
APPROVED BY	K.A					



**TYPICAL CROSS SECTION (INTERCHANGE LOOP))  
SECTION C-C**



**TYPICAL CROSS SECTION (SERVICE ROAD)  
SECTION B-B**





**REINF. DETAIL "X"**  
SCALE: 1:16

**Note**

1-A LAYER OF 0.6m THICKNESS OF A-1-a or A-1-b MATERIALS SHALL BE PROVIDED BELOW WBM. WHERE ROAD IS LOCATED ON HIGH EMBANKMENT, MATERIALS BELOW 0.6m LAYER OF A-1-a or A-1-b SHALL CONSIST OF LAYERS HAVING CBR ≥ 12%.  
2-ALL DIMENSIONS ARE IN METERS.

Client:-  
  
**WORKS & SERVICES DEPARTMENT**  
**GOVERNMENT OF SINDH**

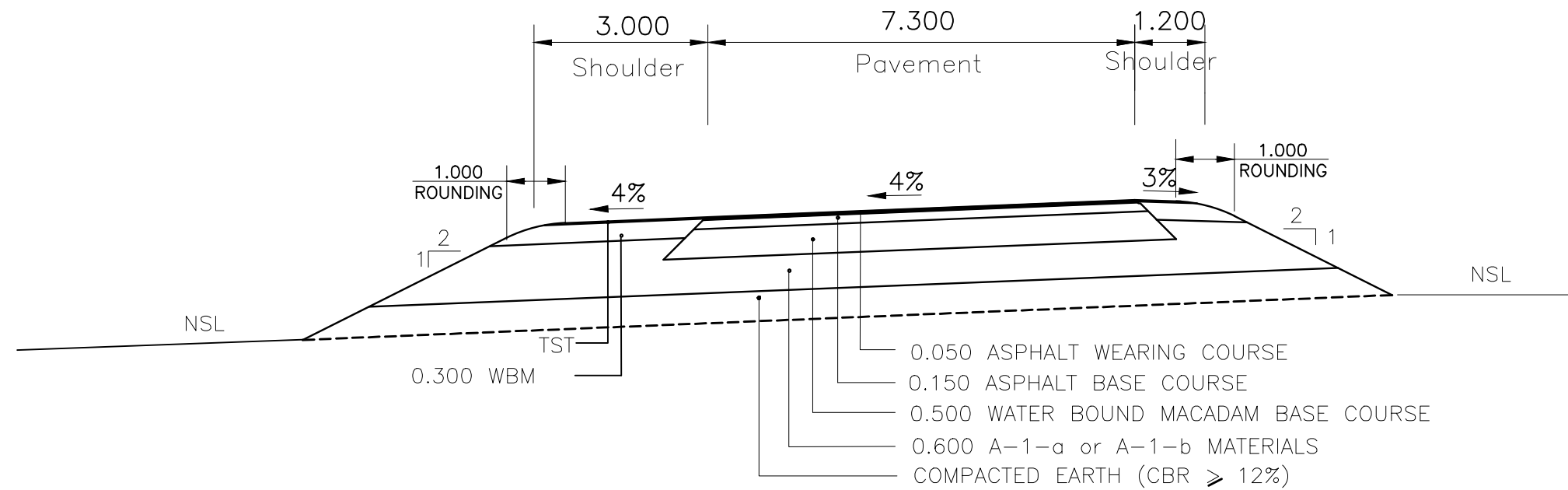
Consultant:-  
  
**Loya associates**  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 in association with  
  
**REC**  
 REPUBLIC ENGINEERING CORPORATION (PVT) LTD.  
 FIRST FLOOR, PAF BUILDING  
 7-10 KASBAH QADIRIA ROAD, LAHORE  
 TEL: (042) 36360180-3 | FAX: 92-42-36369955

Title:-  
**TYPICAL CROSS SECTIONS**

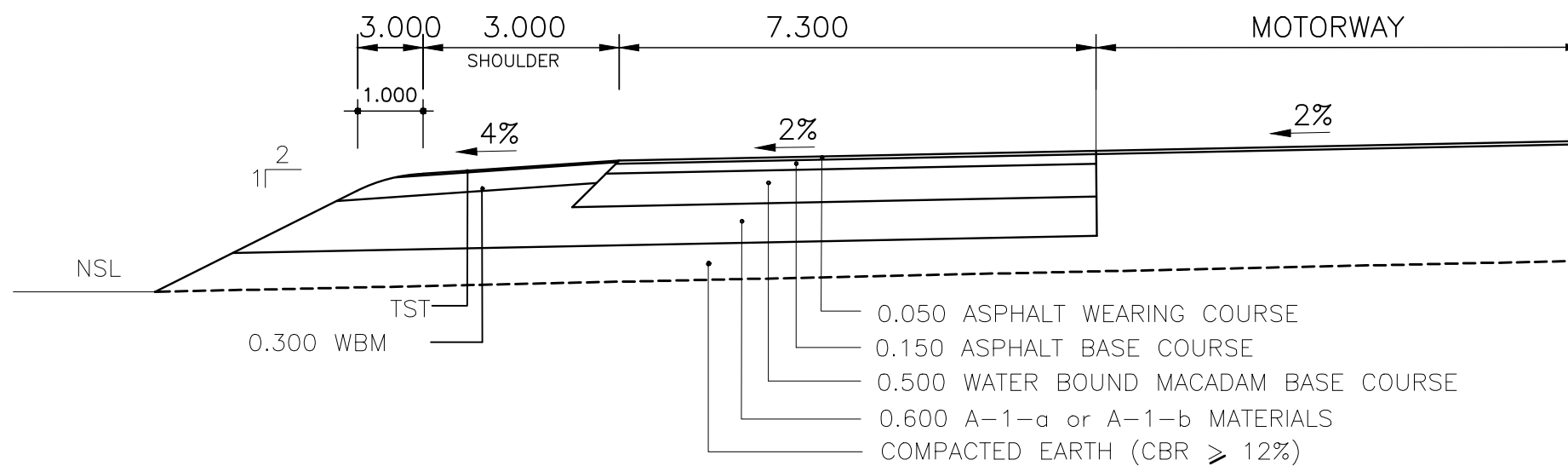
REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A

Project:-  
**SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5)  
 LINK ROAD PROJECT**

DRAWN BY	M. FAHEEM	DATE	FEB.2017	JOB NO.	07 / 2016	REVISION
DESIGNED BY	A.F.	SCALE	AS SHOWN	DRG.NO.	GEN-03	0
APPROVED BY	K.A					



**TYPICAL CROSS SECTION (INTERCHANGE RAMPS)  
SECTION D-D**



**TYPICAL CROSS SECTION (INTERCHANGE RAMPS)  
SECTION E-E**

**Note**

1-A LAYER OF 0.6m THICKNESS OF A-1-a or A-1-b MATERIALS SHALL BE PROVIDED BELOW WBM. WHERE ROAD IS LOCATED ON HIGH EMBANKMENT, MATERIALS BELOW 0.6m LAYER OF A-1-a or A-1-b SHALL CONSIST OF LAYERS HAVING CBR  $\geq$  12%.  
2-ALL DIMENSIONS ARE IN METERS.

Client:-  
**WORKS & SERVICES DEPARTMENT  
GOVERNMENT OF SINDH**

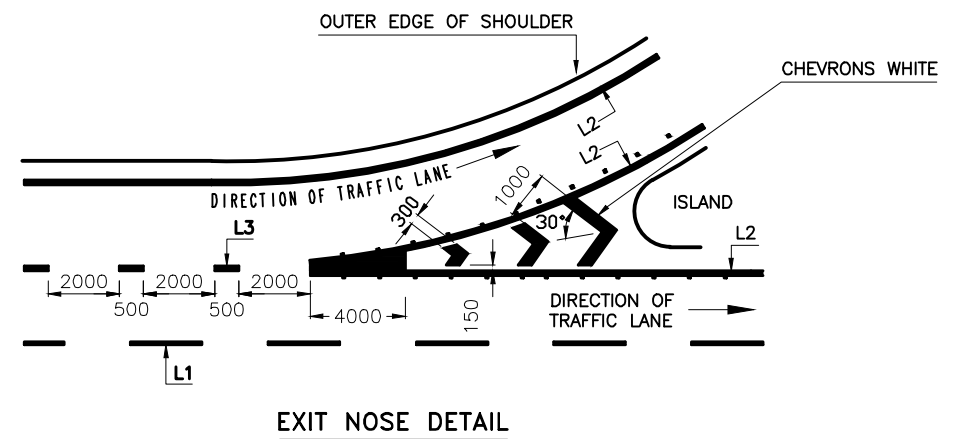
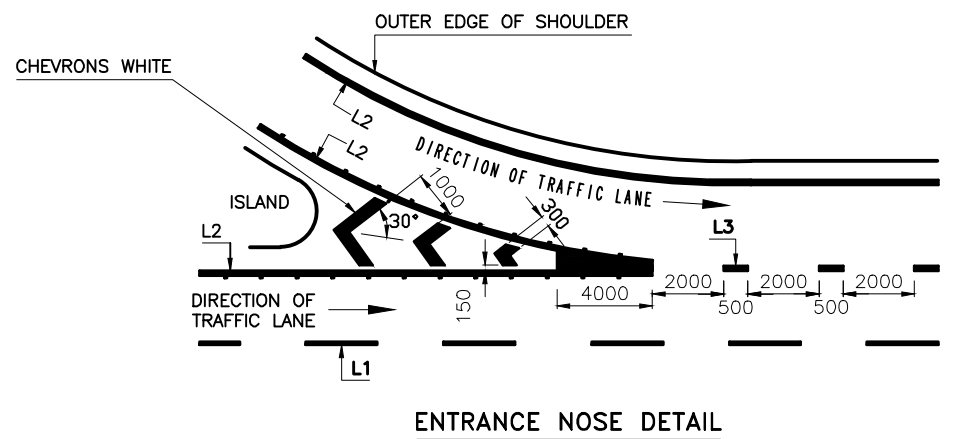
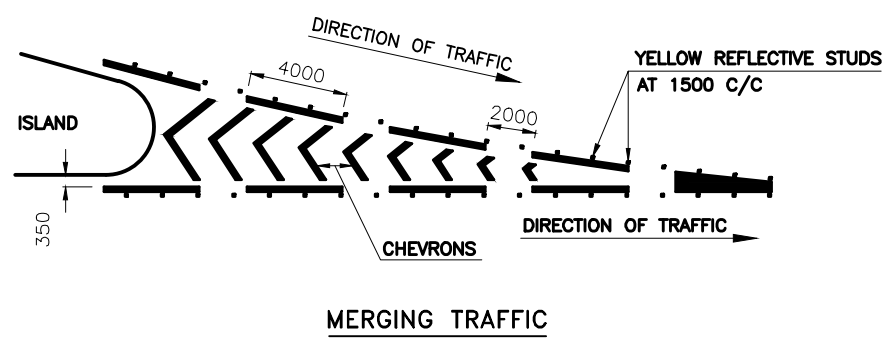
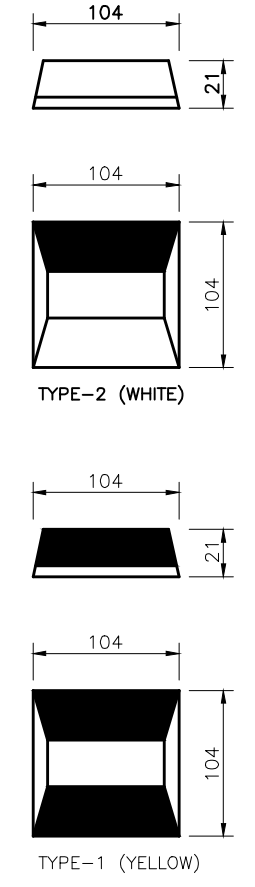
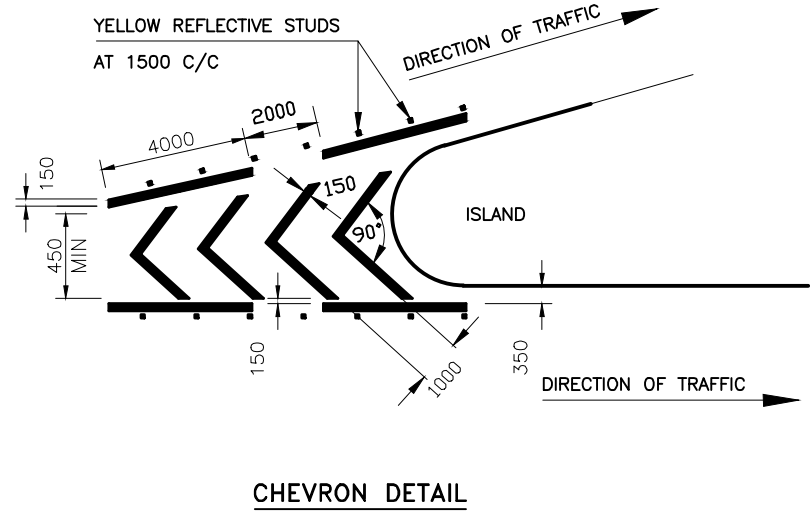
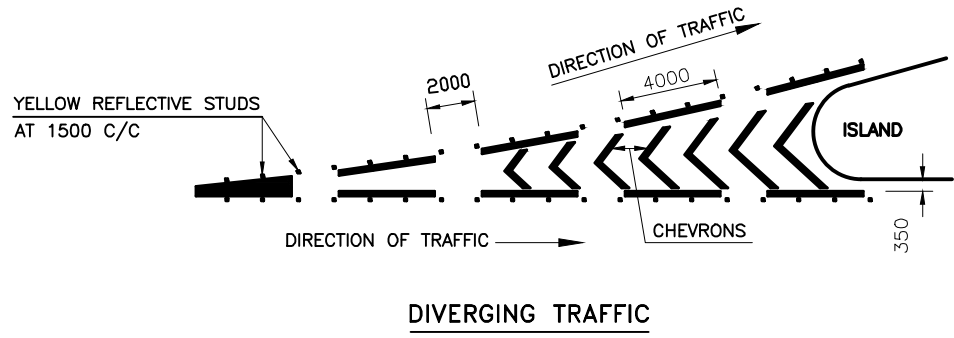
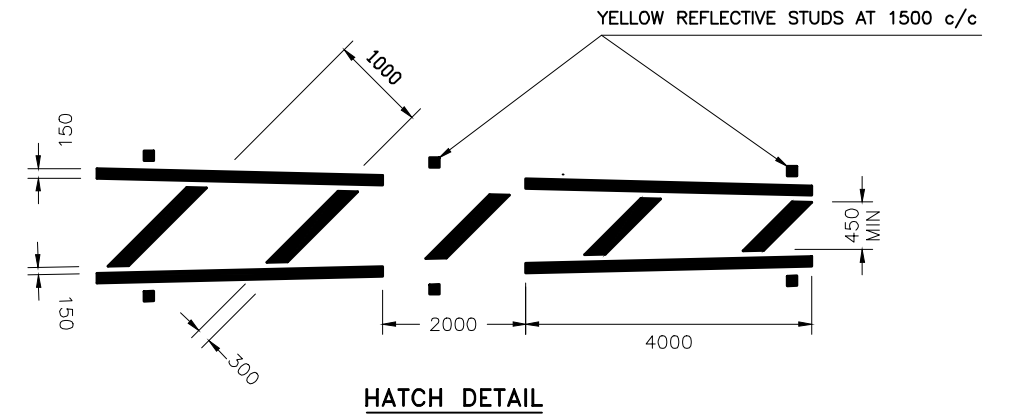
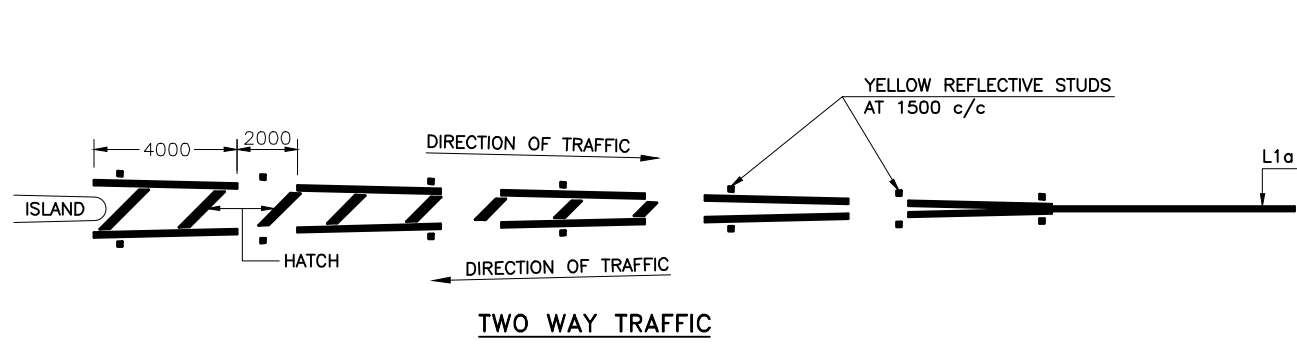
**UBL**  
where you come first  
**FAROOQ, KHAN & MIRZA**  
ADVOCATES & CORPORATE COUNSELLORS

Consultant:-  
**Loya associates**  
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
in association with  
**REC**  
REPUBLIC ENGINEERING CORPORATION (PVT) LTD.  
FIRST FLOOR, PAF F BUILDING  
7-D HAFS ROAD (SECTION) ROAD LAHORE  
TEL: (042) 36360180-3 | FAX: 92-42-36369055

Title:-  
**TYPICAL CROSS SECTIONS**

REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A

Project:- <b>SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5) LINK ROAD PROJECT</b>					
DRAWN BY	M. FAHEEM	DATE:	FEB.2017	JOB NO.	07 / 2016
DESIGNED BY	A.F.	SCALE:	AS SHOWN	DRG.NO.	GEN-04
APPROVED BY	K.A			REVISION	0



Client:-  
  
**WORKS & SERVICES DEPARTMENT**  
**GOVERNMENT OF SINDH**

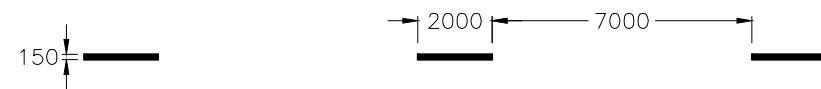
  
 where you come first  
**FAROOQ, KHAN & MIRZA**  
 ADVISORY & CORPORATE FOUNDRIES

Consultant:-  
**Loya associates**  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 in association with  
**REC**  
 REPUBLIC ENGINEERING CORPORATION (PVT) LTD.  
 FIRST FLOOR, PAFK BUILDING,  
 7-D ICHRAM/SEWERTON ROAD LAHORE  
 TEL: (042) 3636180-3 ; FAX: 02-3636965

Title:-  
**LANE MARKING & TRAFFIC DETAILS-1**

REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A

Project:-		SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5) LINK ROAD PROJECT	
DRAWN BY	M. FAHEEM	DATE:	FEB.2017
DESIGNED BY	A.F.	SCALE:	AS SHOWN
APPROVED BY	K.A	JOB NO.	07 / 2016
		DRG.NO.	GEN-13
		REVISION	0



L1, TRAFFIC LANE LINE, BROKEN - WHITE



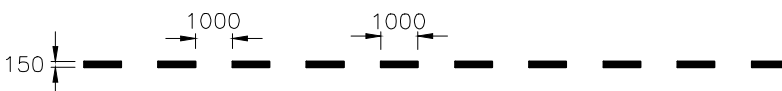
L1a, TRAFFIC LANE LINE, CONTINUOUS - WHITE



L2, CONTINUOUS EDGE LINE - YELLOW  
AT COMMON EDGE, OF PAVEMENT AND SHOULDER OF ROAD



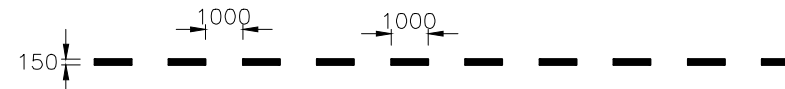
L3, DASHED LINE - WHITE  
AT EDGE OF THROUGH LANE WHERE SEPARATING FROM  
ACCELERATION / DECELERATION LANE



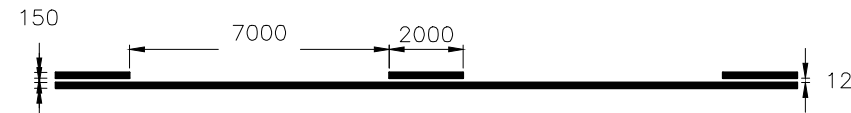
L4, DOTTED LINE - WHITE  
FOR DEFINING VEHICLE PATHS WITHIN INTERSECTIONS



L5, STOP LINE - WHITE  
AT INTERSECTION ACROSS PAVEMENT



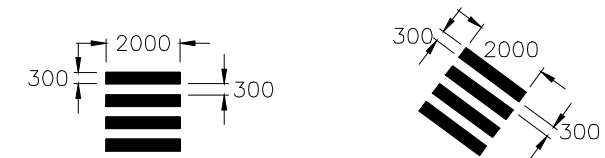
L6, TRANSVERSE YIELD LINE - WHITE  
AT INTERSECTIONS ACROSS PAVEMENT IN THE SAME  
POSITION AS STOP LINE TO INDICATE GIVE WAY



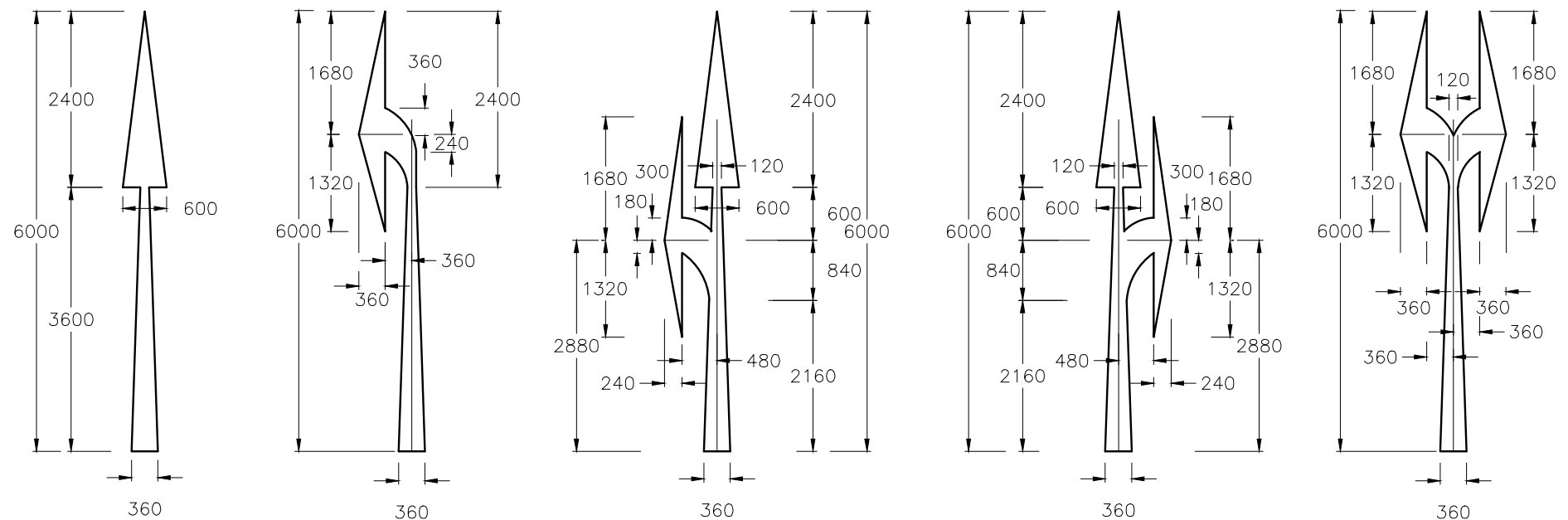
L7, NO PASSING-ONE SIDE




L8, NO PASSING-BOTH SIDE



ZEBRA CROSSINGS - WHITE  
ACROSS PAVEMENT FOR PEDESTRIANS



NOTE:-  
1. SHAPES AND DIMENSIONS OF ALL THE ROAD SURFACE  
MARKINGS MAY BE ADJUSTED BASED ON FIELD CONDITIONS  
UNDER THE APPROVAL OF RESIDENT ENGINEER.

Client:-  
  
**WORKS & SERVICES DEPARTMENT**  
GOVERNMENT OF SINDH

  
where you come first  
  
FAROOQ, KHAN & MIRZA  
ADVOCATES & CORPORATE COUNSELLORS

Consultant:-  
**Loya associates**  
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
in association with  
**REC** REPUBLIC ENGINEERING  
CORPORATION (PVT) LTD.  
FIRST FLOOR, PHAF BUILDING  
7-D SAHIBAN, RAJASTHAN ROAD LAHORE  
TEL. (042) 36280180-3 | FAX 02-42-36288888

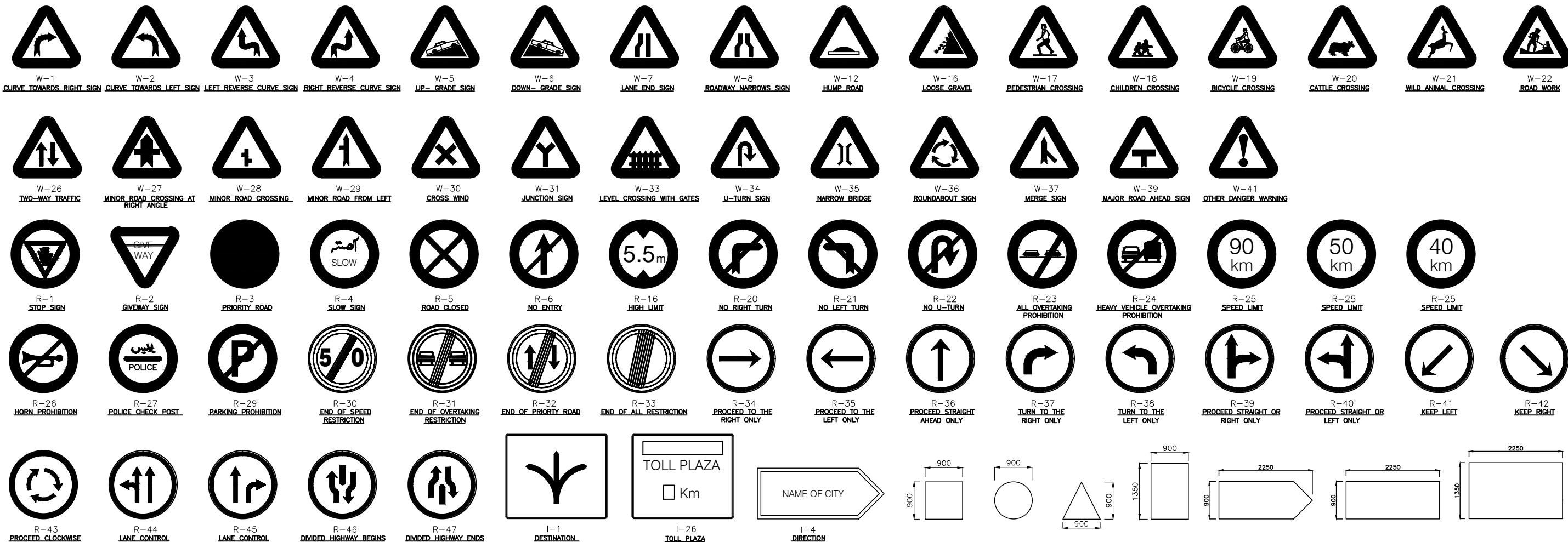
Title:-  
**LANE MARKING & TRAFFIC  
DETAILS-2**

REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A

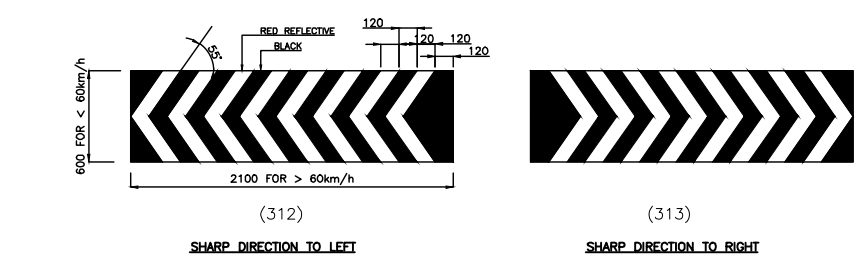
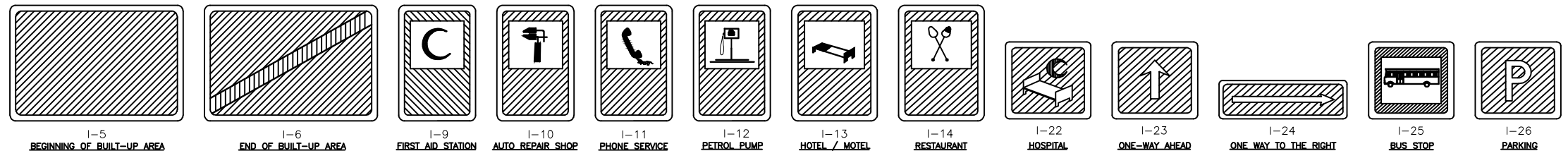
Project:-  
**SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5)  
LINK ROAD PROJECT**

DRAWN BY	M. FAHEEM	DATE:	FEB.2017	JOB NO.	07 / 2016	REVISION
DESIGNED BY	A.F.	SCALE:	AS SHOWN	DRG.NO.	GEN-14	0
APPROVED BY	K.A					





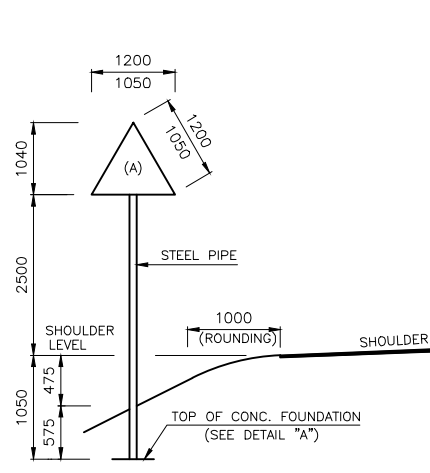
ALTERNATIVE PANELS FOR SIGNS



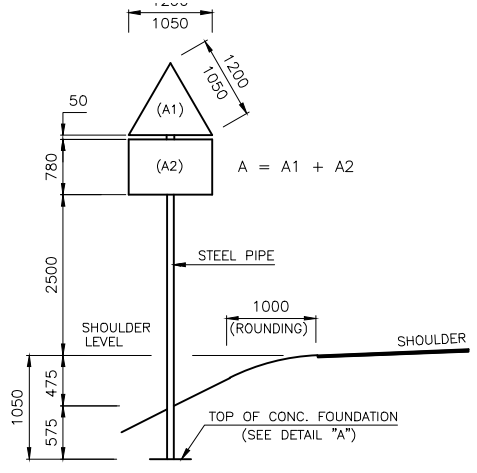
SIGNS SHOWN ON DRAWINGS		
CATEGORY	SHAPE OR MODEL	TYPE
1		WARNING / DANGER
2		REGULATORY / PROHIBITORY
3a		INFORMATORY
3b		
3c		

**NOTE**  
FOR COLOURS OF TRAFFIC SIGNS REFER TO "MANUAL OF SIGNS, SIGNALS & ROAD MARKINGS" BY NTRC, JULY 1989.

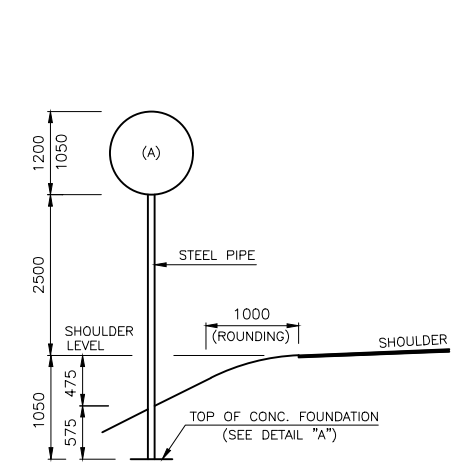
Client:- <b>WORKS &amp; SERVICES DEPARTMENT</b> GOVERNMENT OF SINDH	Consultant:- <b>Loya associates</b> CONSULTING ENGINEERS, ARCHITECTS & PLANNERS in association with <b>FAROQ, KHAN &amp; MIRZA</b> ADVOCATES & CORPORATE COUNSEL	Consultant:- <b>REC</b> REPUBLIC ENGINEERING CORPORATION (PVT) LTD. FIRST FLOOR, PHASE BUILDING 7-D KARACHI/SECTOR ROAD LAHORE TEL. (042) 36360180-3 ; FAX 02-02-36360000	Title:- <h2 style="text-align: center;">ROAD SIGNS</h2>																								
Project:- <h3 style="text-align: center;">SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5) LINK ROAD PROJECT</h3>		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">DRAWN BY</td> <td style="width:15%;">M. FAHEEM</td> <td style="width:15%;">DATE</td> <td style="width:15%;">FEB.2017</td> <td style="width:15%;">JOB NO.</td> <td style="width:15%;">07 / 2016</td> <td style="width:10%;">REVISION</td> </tr> <tr> <td>DESIGNED BY</td> <td>A.F.</td> <td>SCALE</td> <td>AS SHOWN</td> <td>DRG. NO.</td> <td>GEN-15</td> <td>0</td> </tr> <tr> <td>APPROVED BY</td> <td>K.A.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		DRAWN BY	M. FAHEEM	DATE	FEB.2017	JOB NO.	07 / 2016	REVISION	DESIGNED BY	A.F.	SCALE	AS SHOWN	DRG. NO.	GEN-15	0	APPROVED BY	K.A.								
DRAWN BY	M. FAHEEM	DATE	FEB.2017	JOB NO.	07 / 2016	REVISION																					
DESIGNED BY	A.F.	SCALE	AS SHOWN	DRG. NO.	GEN-15	0																					
APPROVED BY	K.A.																										
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>REV. NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CKD.</th> <th>APPRO</th> </tr> <tr> <td>0</td> <td>21-04-17</td> <td>ISSUE FOR REVIEW</td> <td>F.K</td> <td>A.F</td> <td>K.A</td> </tr> </table>		REV. NO.	DATE	DESCRIPTION	BY	CKD.	APPRO	0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>REV. NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CKD.</th> <th>APPRO</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		REV. NO.	DATE	DESCRIPTION	BY	CKD.	APPRO						
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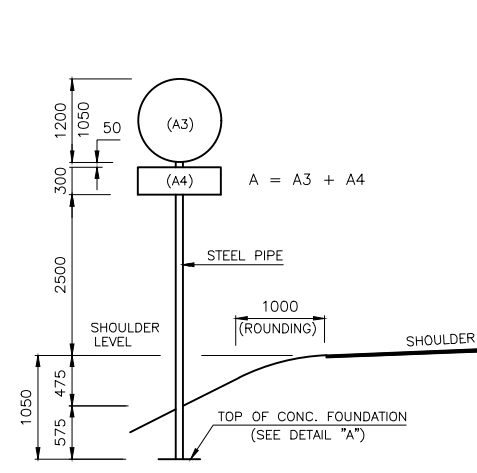
SINGLE SIGN



DOUBLE SIGN



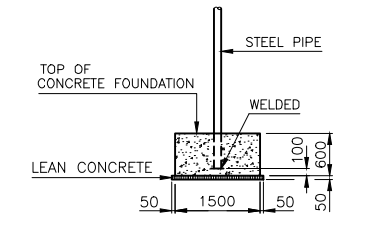
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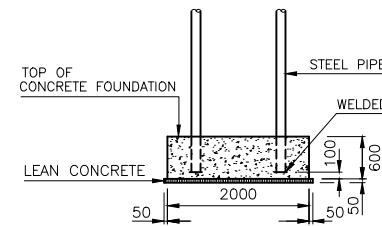
DOUBLE SIGN

WARNING SIGNS ( $A \leq 1.25m^2$ )

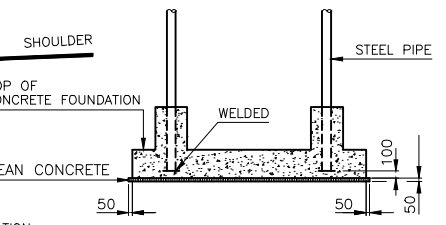
REGULATORY SIGNS ( $A \leq 1.25m^2$ )



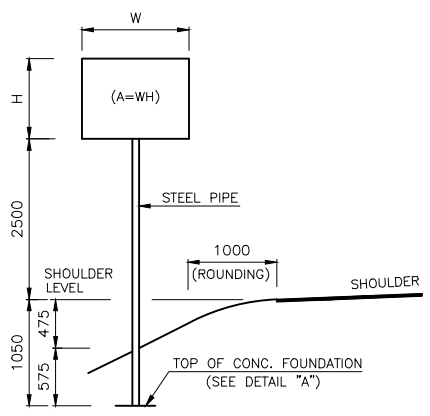
DETAIL "A"  
FOUNDATION TYPE-F1  
(SEE DRG. NO. 19)



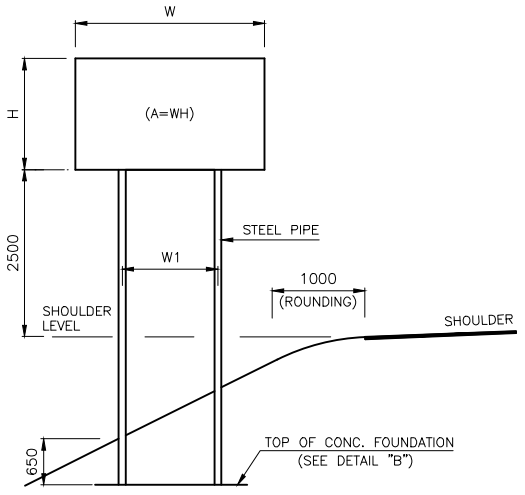
DETAIL "B"  
FOUNDATION TYPE-F2  
(SEE DRG. NO. 19)



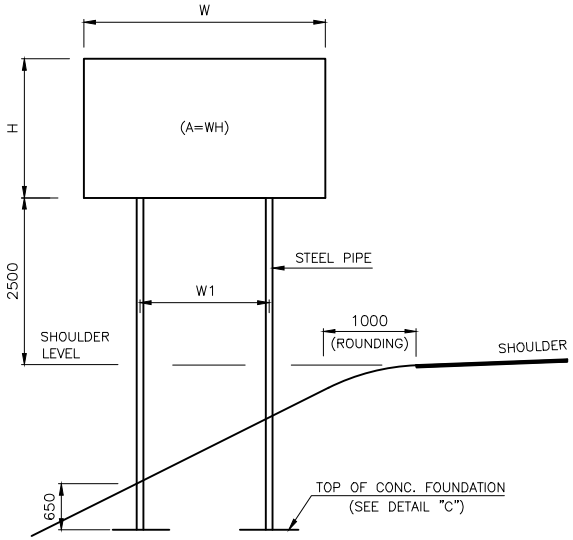
DETAIL "C"  
(SEE DRG. NO. 19 & 20)



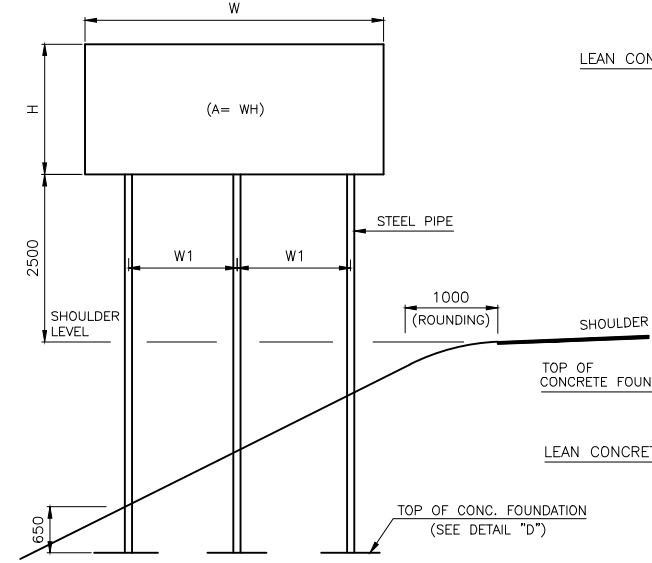
SINGLE POST ( $A \leq 1.25m^2$ )



DOUBLE POST ( $A \leq 3m^2$ )

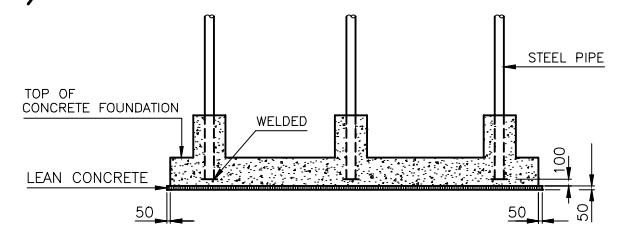


DOUBLE POST ( $A > 3m^2$ )

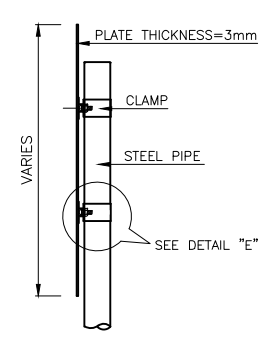


TRIPLE POST ( $A > 9m^2$ )

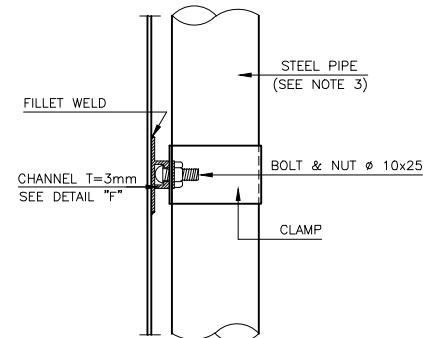
INFORMATION SIGNS



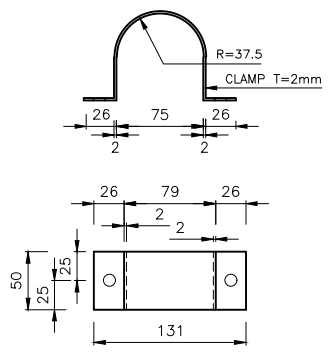
DETAIL "D"  
(SEE DRG. NO. 19 & 20)



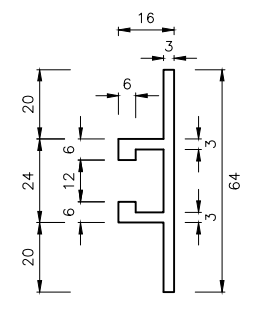
SIDE VIEW OF POST



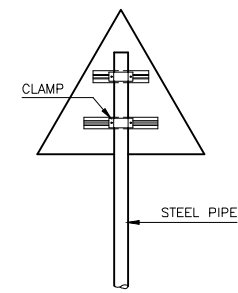
DETAIL "E"



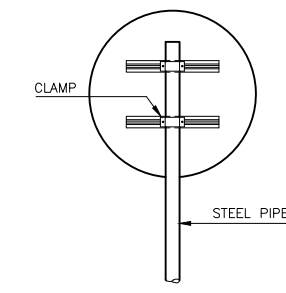
DETAIL OF CLAMP



DETAIL "F"



W-SIGNS



R-SIGNS

REAR VIEW

NOTES:-

1. FOUNDATION SHALL BE MADE OF CAST-IN-SITU CONCRETE CLASS "A",
2. ALL SIGNS AND POSTS SHALL BE STEEL OR ALUMINIUM AND SHALL BE PAINTED. ALL PAINTS USED SHALL CONFORM WITH THE SPECIFICATIONS.
3. POSTS FOR ALL SIGNS SHALL USE TUBULAR STEEL POSTS WITH MINIMUM EXTERNAL DIAMETERS AS SPECIFIED IN DRG. NO. TUI-TYP/19&20 CONFORMING TO ASTM-A 501.

Client:-



WORKS & SERVICES DEPARTMENT  
GOVERNMENT OF SINDH



Consultant:-



Title:-

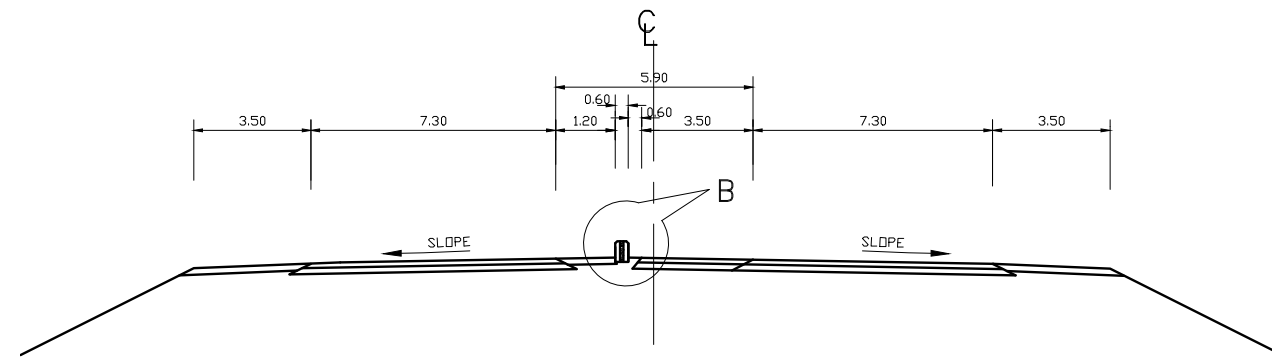
ROAD SIGNS FIXING  
DETAILS

Project:-

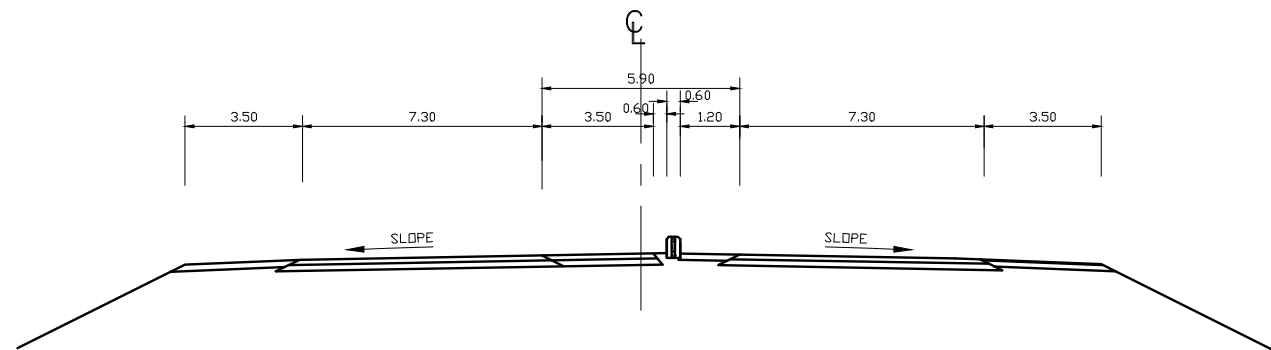
SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5)  
LINK ROAD PROJECT

0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A	DRAWN BY	M. FAHEEM	DATE:	FEB.2017	JOB NO.	07 / 2016	REVISION
REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO	DESIGNED BY	A.F.	SCALE:	AS SHOWN	DRG.NO.	GEN-16	0
						APPROVED BY	K.A					

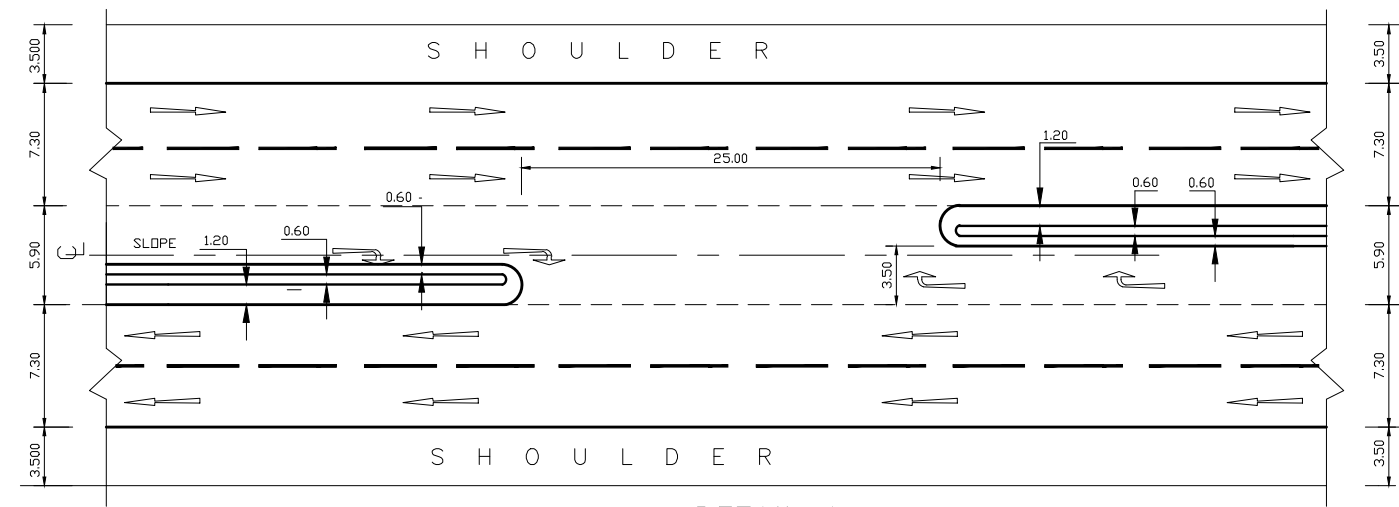




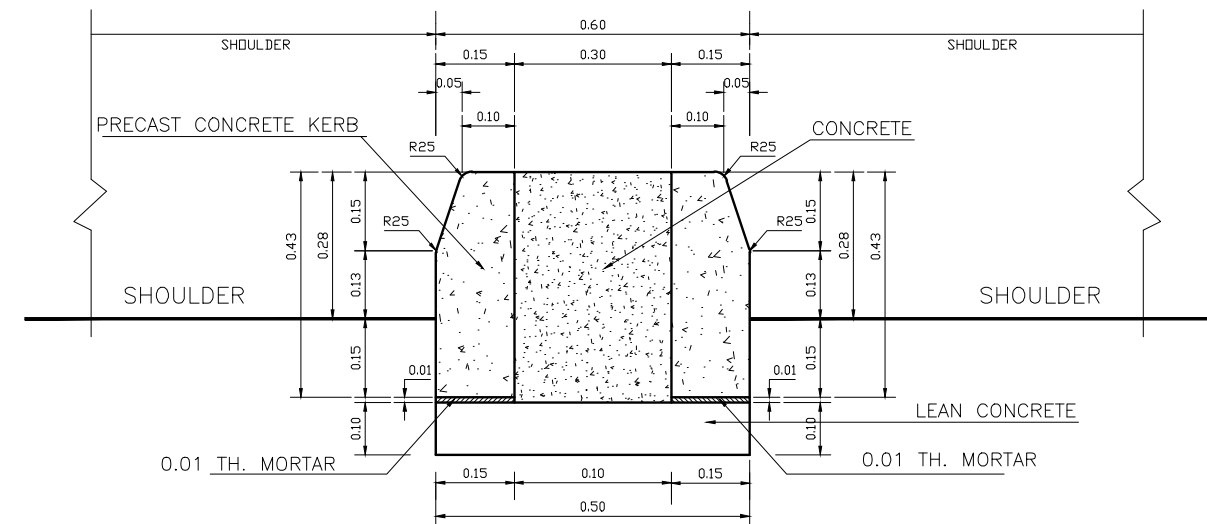
SEC. 1-1



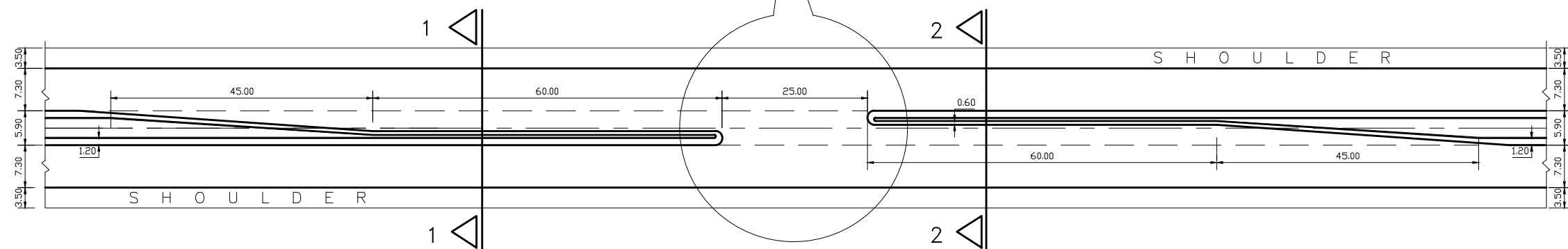
SEC. 2-2



DETAIL A



PRECAST CONCRETE KERB  
DETAIL - B



MEDIAN OPENING DETAIL

Client:-



**WORKS & SERVICES DEPARTMENT**  
**GOVERNMENT OF SINDH**



**FAROOQ, KHAN & MIRZA**  
ADVOCATES & CORPORATE COUNSELLORS

Consultant:-

**Loya associates**  
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS

in association with  
**REC** **REPUBLIC ENGINEERING CORPORATION (PVT) LTD.**  
FIRST FLOOR, PHAF BUILDING  
7-D RAJWARI/TOLETON ROAD LAHORE  
TEL. (042) 36360180-3 ; FAX 92-42-3636985

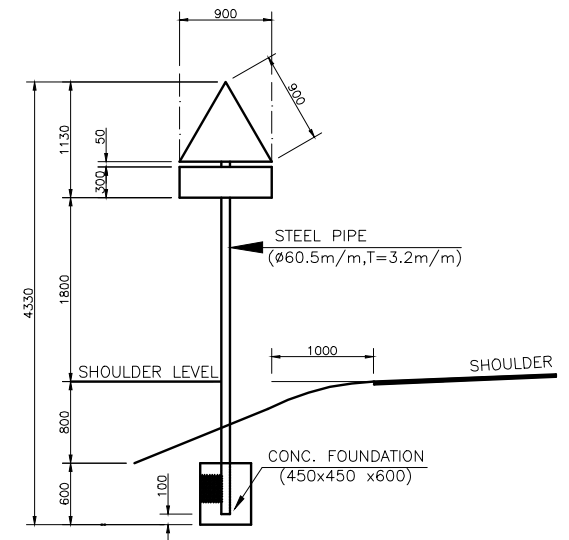
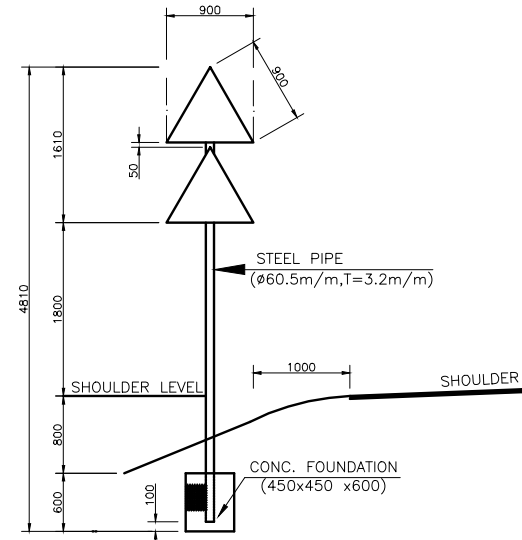
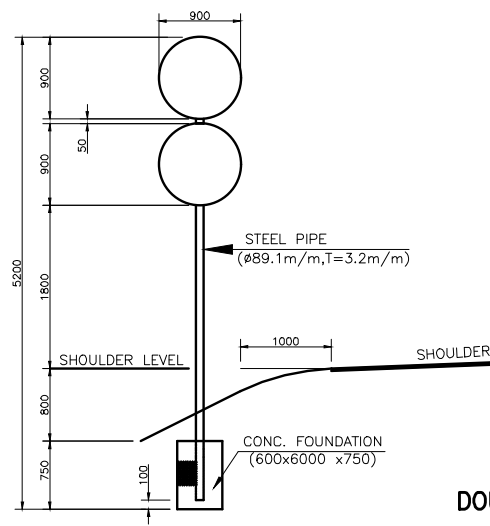
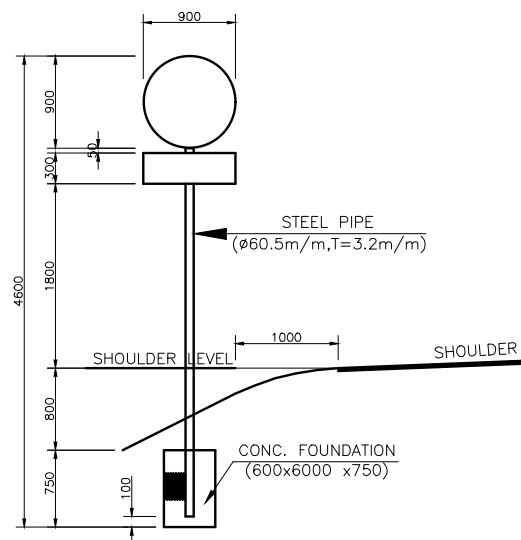
Title:-

MEDIAN OPENING DETAIL

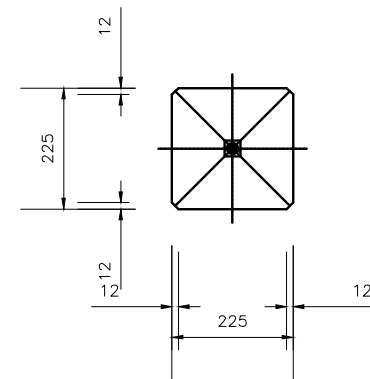
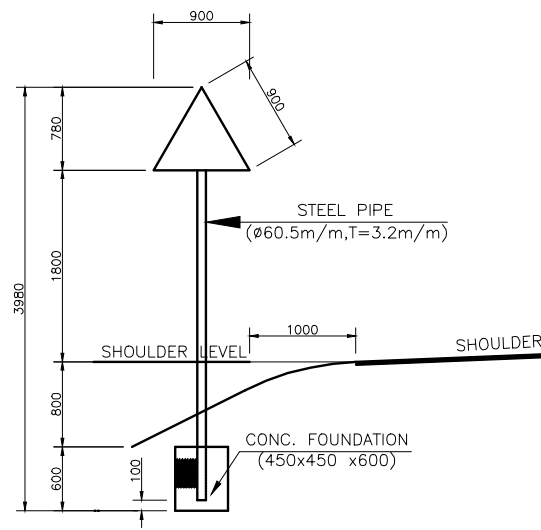
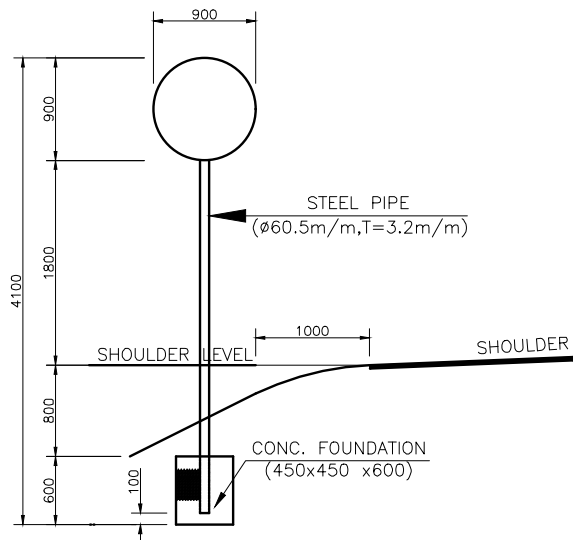
Project:-

**SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5)**  
**LINK ROAD PROJECT**

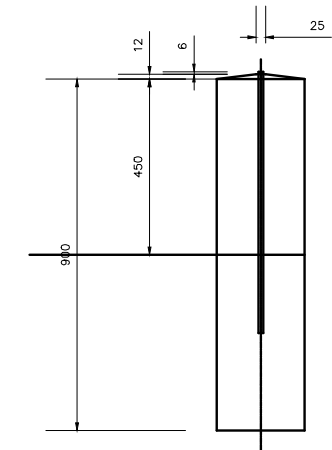
REV. NO.	DATE	DESCRIPTION	BY	CKD.	APPRO	DRAWN BY	DESIGNED BY	APPROVED BY	DATE	SCALE	JOB NO.	DRG. NO.	REVISION
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A	M. FAHEEM	A.F.	K.A	FEB.2017	AS SHOWN	07 / 2016	GEN -17	0



DOUBLE SIGNS  
WARNING/REGULATORY (TRIANGLE/CIRCULAR) SIGNS.



PLAN



ELEVATION

PRECAST R.O.W MONUMENT

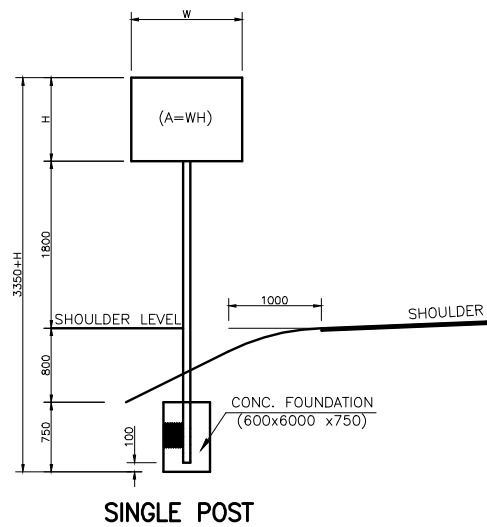
SINGLE SIGNS  
WARNING/REGULATORY (TRIANGLE/CIRCULAR) SIGNS.

LIST OF FOUNDATION SIZE

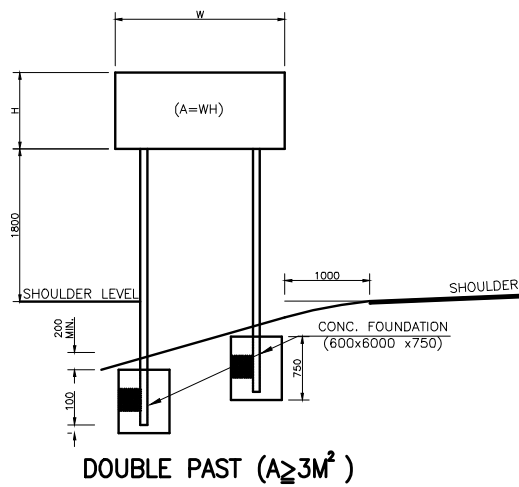
AREA OF SIGN BOARD A (M <sup>2</sup> )	DIMENSION (MM)					
	m <sub>1</sub>	m <sub>2</sub>	m	h <sub>1</sub>	h <sub>2</sub>	h
3 < A ≤ 5	450	325	1100	600	400	1000
3 < A ≤ 10	600	400	1400	750	450	1200
3 < A ≤ 15	700	450	1600	900	500	1400
15 < A	800	500	500	1050	550	1600

NOTES:—

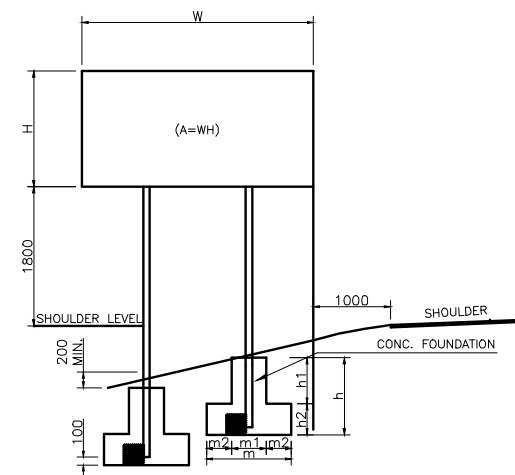
- FOUNDATION FOR THE FOUNDATION BLOCKS SHALL BE IN-SITU CLASS "A".
- SIGN PANELS SHALL BE MADE OF ENAMELLED STEEL OR ALLUMINIUM ALLOY PLATES OF 3MM THICKNESS.
- ALL POSTS FOR INFORMATORY SIGNS SHALL USE WIDE FLANGE OF 10 CMx10CM METAL POSTS OR TABULAR STEEL POSTS WITH MINIMUM INTERNAL AND EXTERNAL DIAMETERS OF 63MM AND 75MM, RESPECTIVELY.



SINGLE POST



DOUBLE POST (A ≥ 3M<sup>2</sup>)



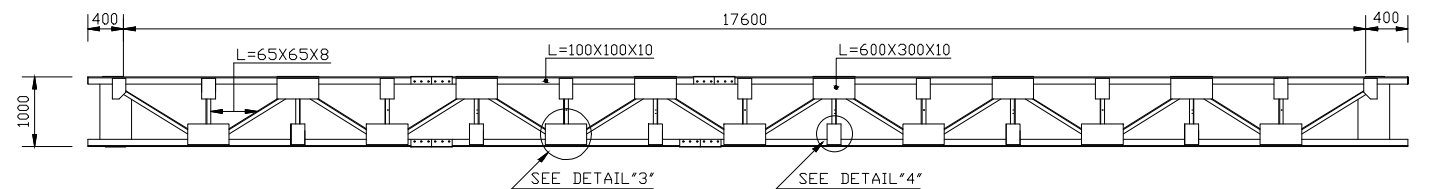
DOUBLE POST (A > 3M<sup>2</sup>)

INFORMATORY (RECTENGLAR) SIGNS.

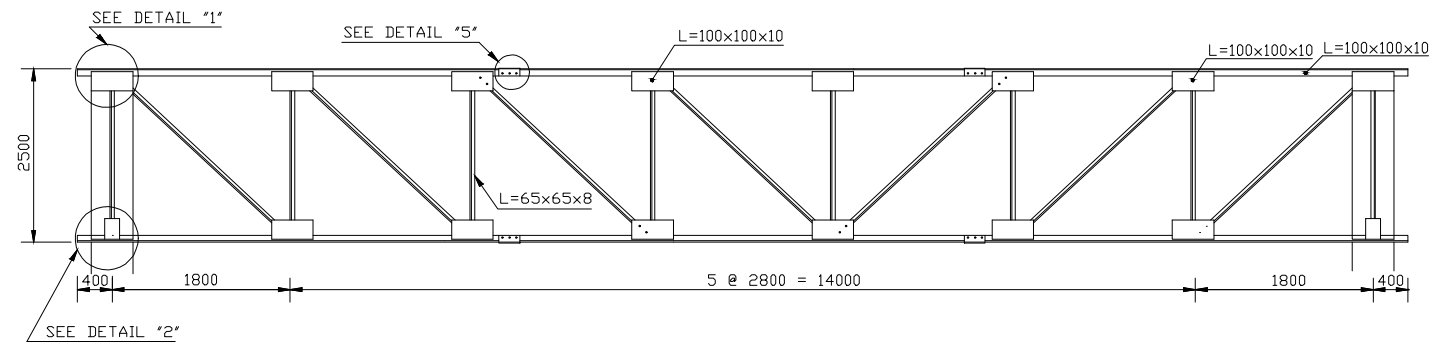
REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A

Project:—  
SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5)  
LINK ROAD PROJECT

DRAWN BY	M. FAHEEM	DATE	FEB.2017	JOB NO.	07 / 2016	REVISION
DESIGNED BY	A.F.	SCALE	AS SHOWN	DRG.NO.	GEN - 20	0
APPROVED BY	K.A					



PLAN

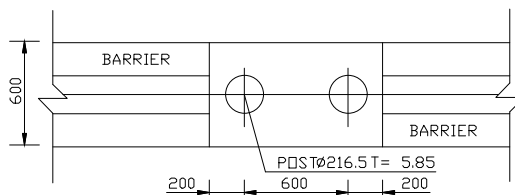


ELEVATION

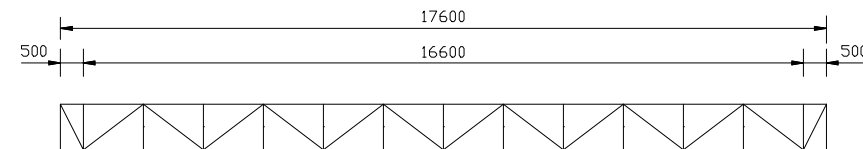
TRUSS DETAILS

NOTES:-

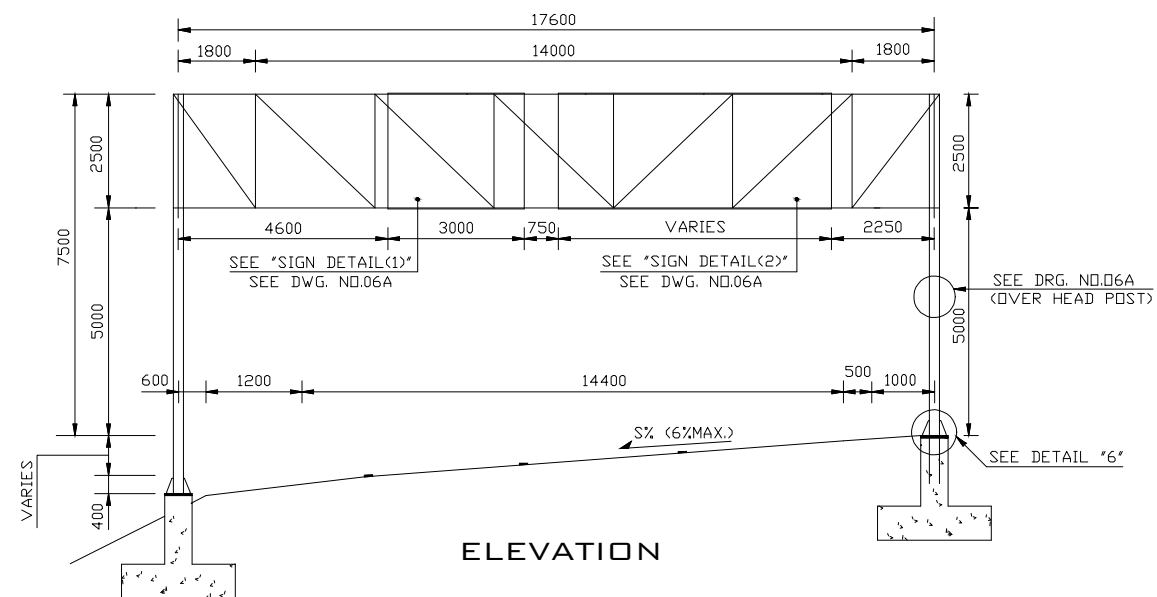
1. STRUCTURAL STEEL SHALL CONFORM TO ASTM A283 GRADE 'D', AND STEEL POST SHALL CONFORM TO ASTM A 501.
2. ALL ANCHOR BOLTS SHALL BE HOT DIPPED GALVANIZED.



DETAIL "6"

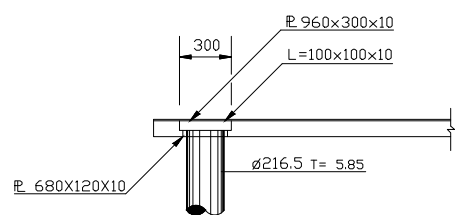


PLAN

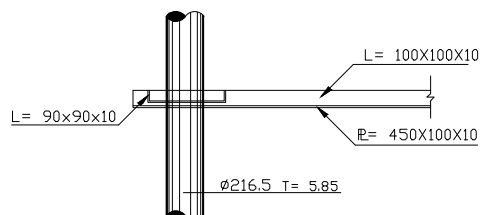


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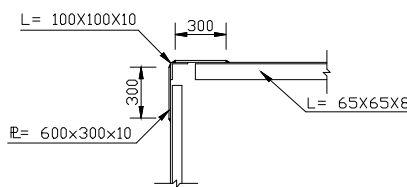
OVERHEAD INFORMATION SIGN



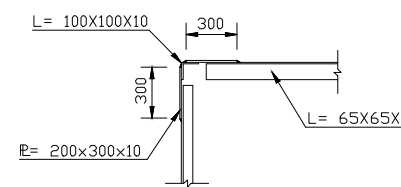
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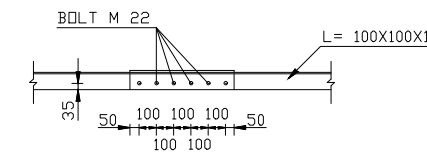
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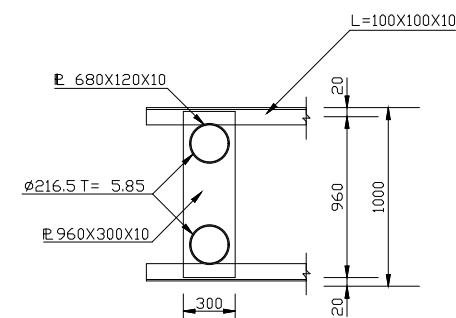
ELEVATION



ELEVATION

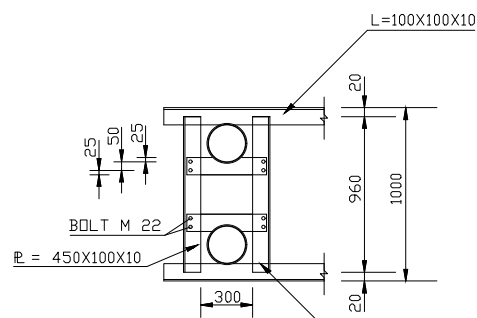


ELEVATION



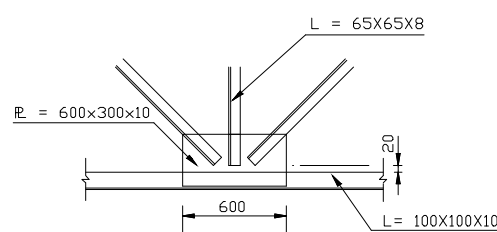
PLAN

DETAIL "1"



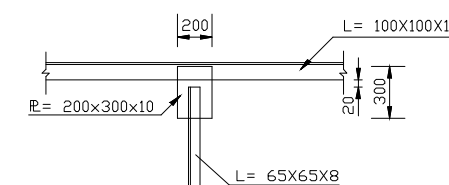
PLAN

DETAIL "2"



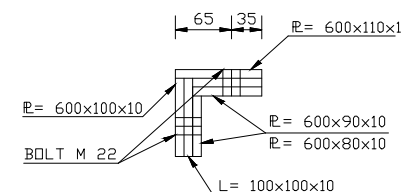
PLAN

DETAIL "3"



PLAN

DETAIL "4"



PLAN

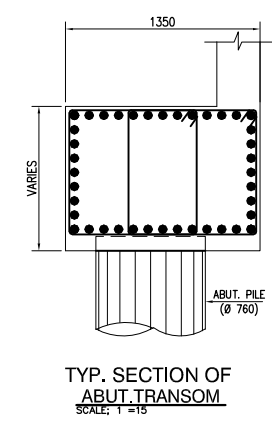
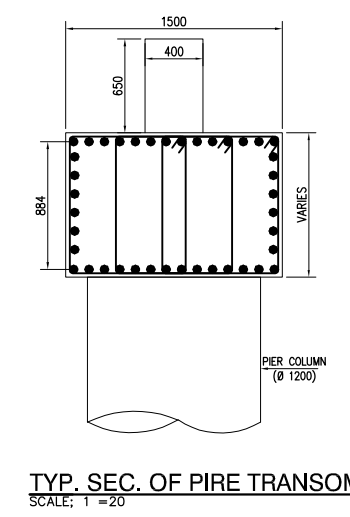
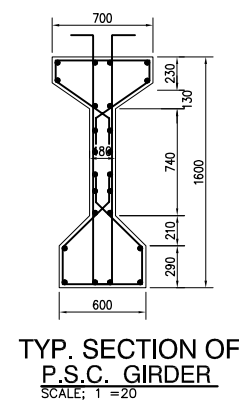
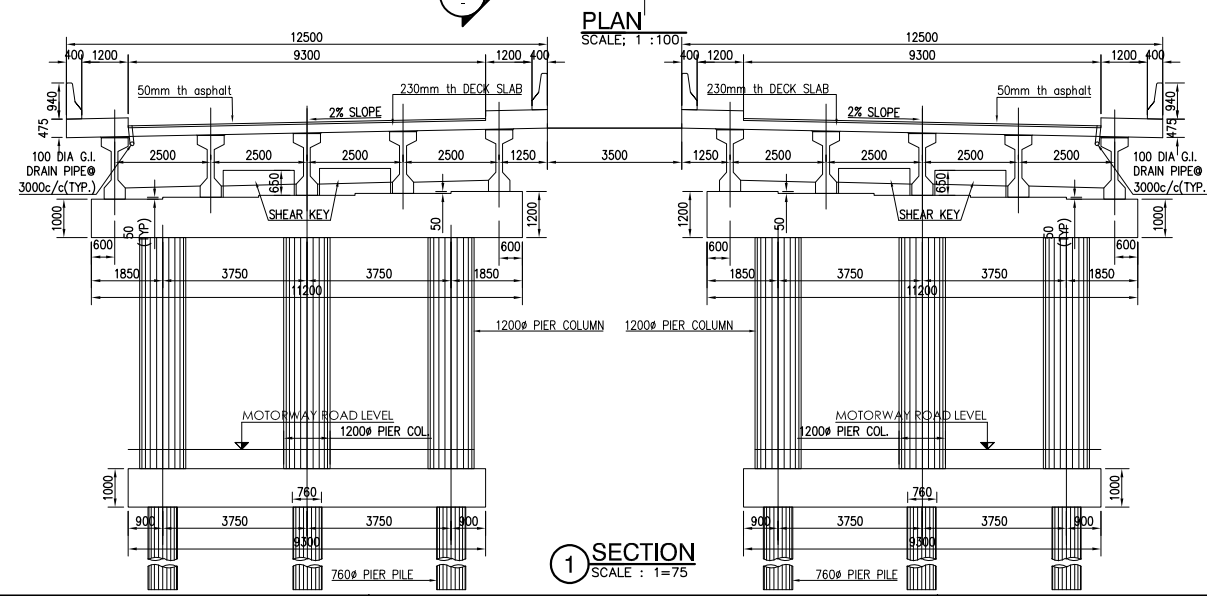
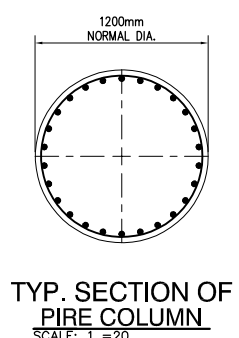
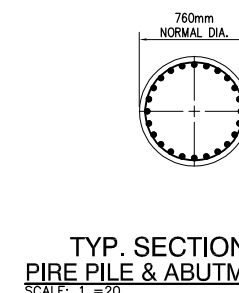
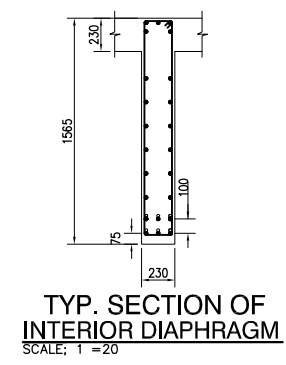
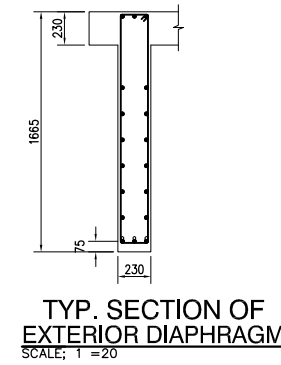
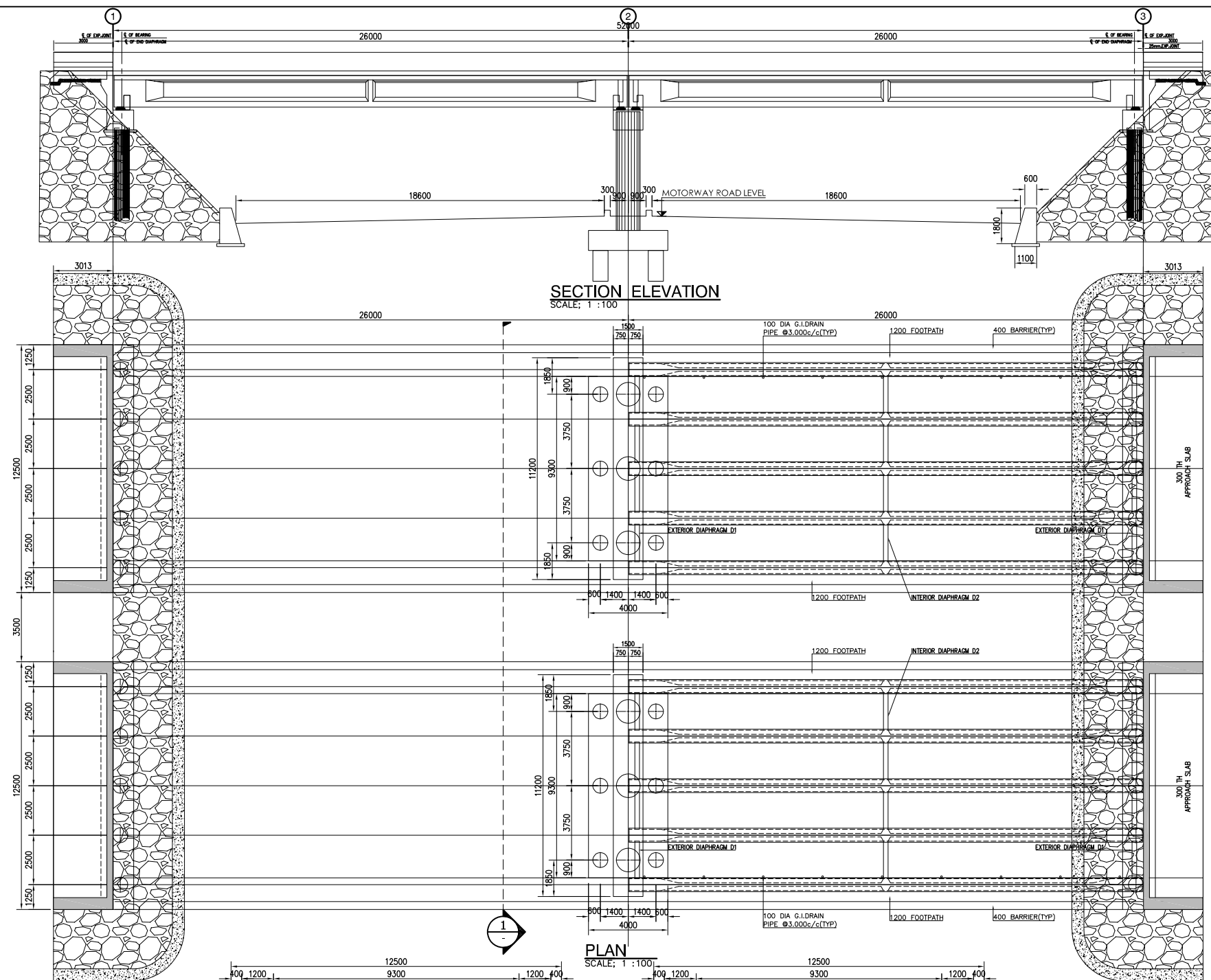
DETAIL "5"

Client:-  
**WORKS & SERVICES DEPARTMENT**  
**GOVERNMENT OF SINDH**

Consultant:-  
**Loya associates**  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 in association with  
**REC**  
 REGISTERED ENGINEERING CONSULTANTS (PVT) LTD.  
 7-D INDUSTRIAL/DESIGN ROAD LAHORE.  
 TEL: (042) 3630180-3 ; FAX 02-02-3630000



Title:-  
**OVERHEAD ROAD SIGNS**

Project:- <b>SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5) LINK ROAD PROJECT</b>					
REV.NO.	DATE	DESCRIPTION	BY	CKD.	APPRO
0	21-04-17	ISSUE FOR REVIEW	F.K	A.F	K.A
DRAWN BY			M. FAHEEM		
DESIGNED BY			A.F.		
APPROVED BY			K.A		
DATE:		FEB.2017		JOB NO. 07 / 2016	
SCALE:		AS SHOWN		DRG.NO. GEN-24	
					REVISION
					0



Client:—  

**WORKS & SERVICES DEPARTMENT**  
 GOVERNMENT OF SINDH

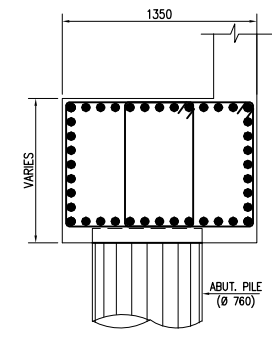
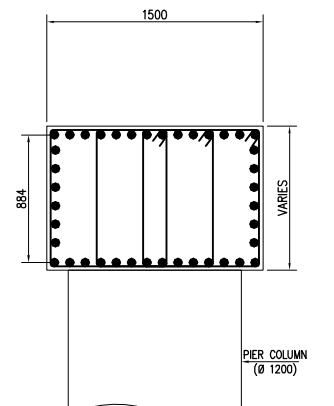
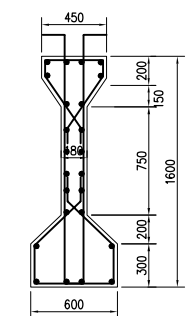
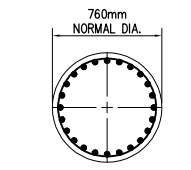
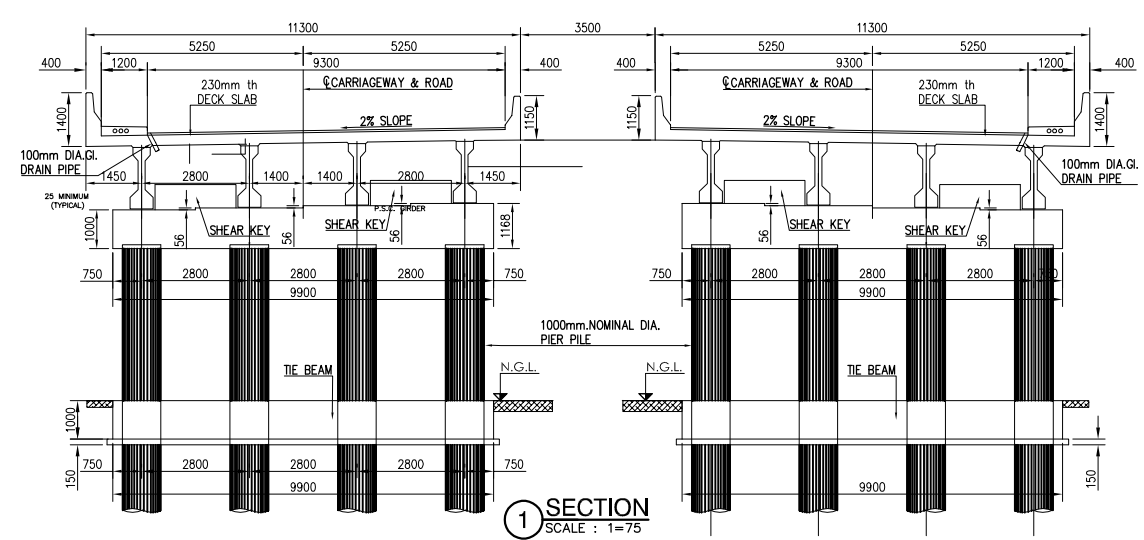
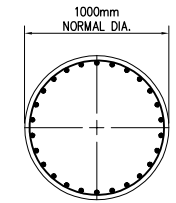
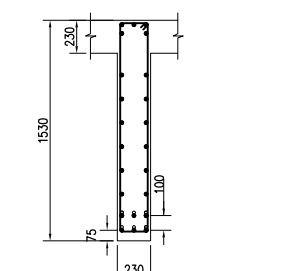
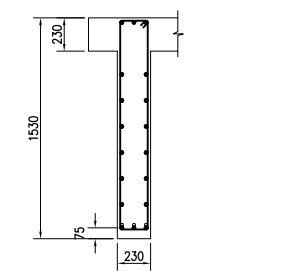
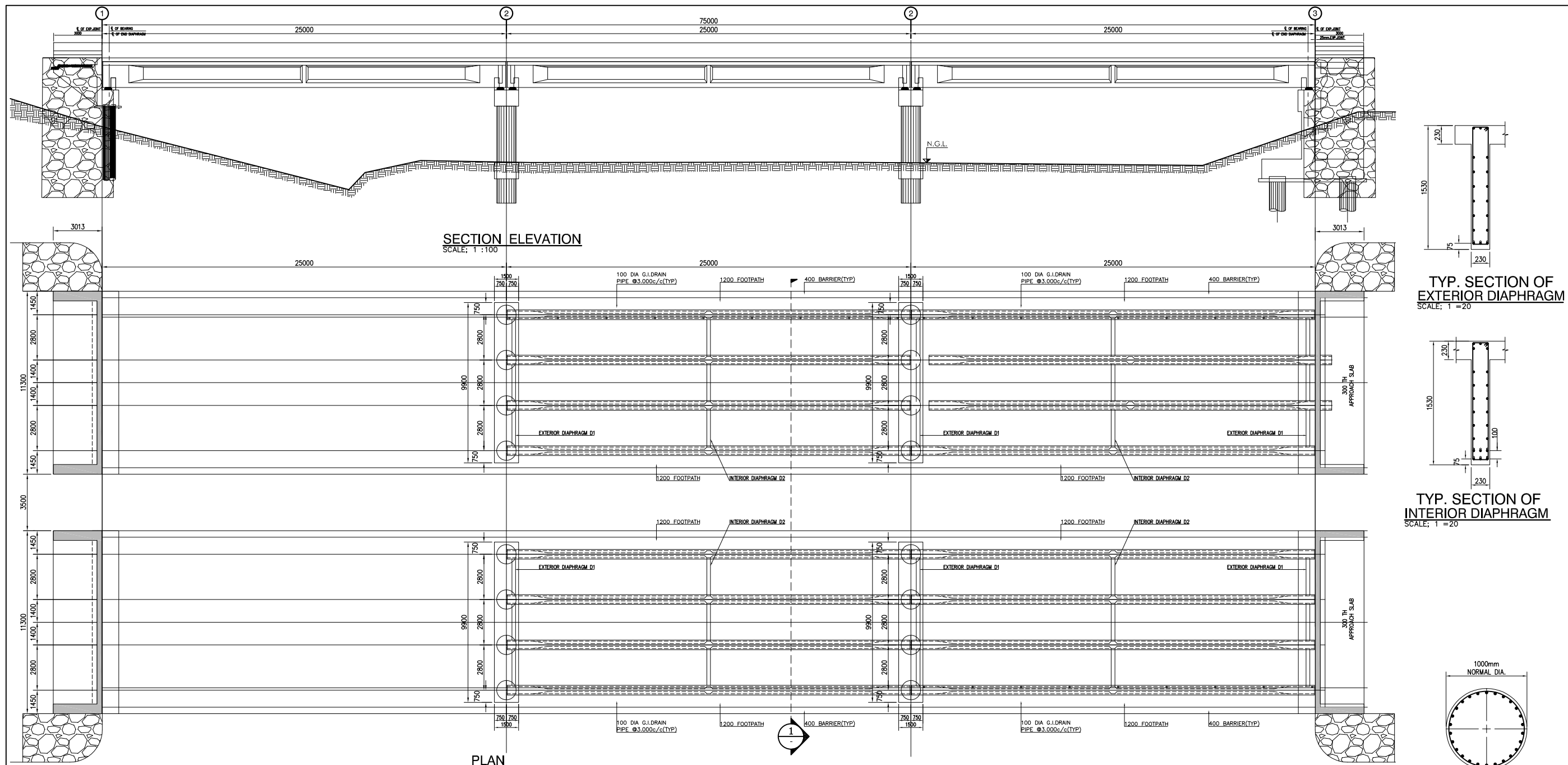
Consultant:—  

**Loya associates**  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 in association with  

**REC**  
 REPUBLIC ENGINEERING CORPORATION (PVT) LTD.  
 FIRST FLOOR, PAF BAZAR  
 7-B KHAIRAT/NEEDHAM ROAD LAHORE  
 TEL. (042) 36261160-3 | FAX 02-42-3626988

Title:—  
**INTERCHANGE AT M9**  
**GENERAL ARRANGEMENT AND COMPONENTS DETAILS**

REV. NO.	DATE	DESCRIPTION	BY	CHKD.	APPRO
0	11-10-19	ISSUE FOR REVIEW	F.K.	A.F.	K.A.

Project:—  
**SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5) LINK ROAD PROJECT**

DRAWN BY	A.N.AGHA	DATE:	FEB.2017	JOB NO.	07 / 2016	REVISION
DESIGNED BY	A.F.	SCALE:	AS SHOWN	DRG. NO.	INT-01	0
APPROVED BY	K.A.					



Client:—  

**WORKS & SERVICES DEPARTMENT**  
 GOVERNMENT OF SINDH

Consultant:—  

**Loya associates**  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 in association with  

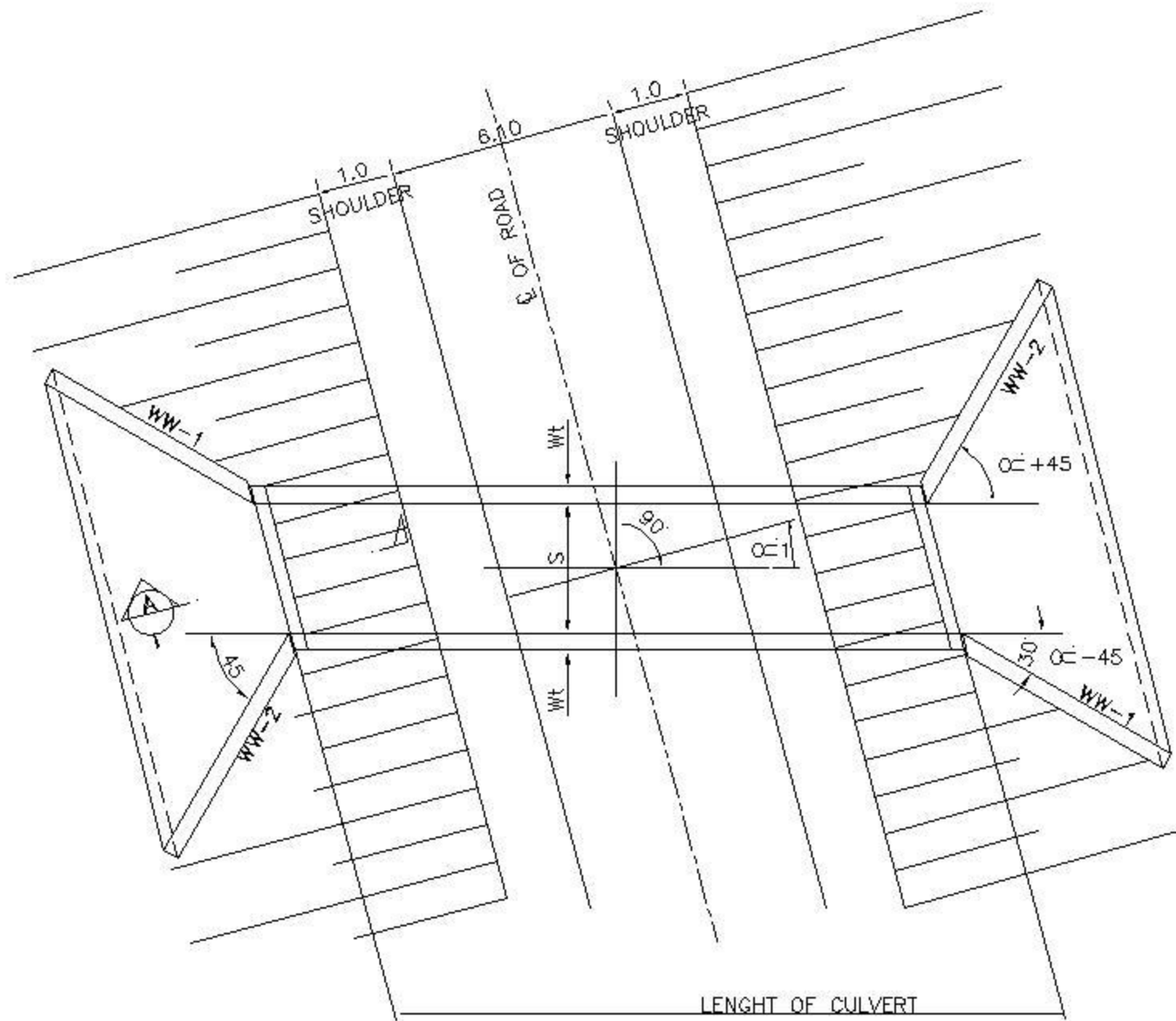
**REC**  
 REPUBLIC ENGINEERING CORPORATION (PVT) LTD.  
 FIRST FLOOR, PAF BLDG. 7-0 KARACHI/SEVEN ROAD KARACHI  
 TEL. (042) 3636190-3 FAX 02-42-3636988

Title:—  
**BRIDGE OVER NULLAH**  
 (AT CH: 14+225)  
 (3x25M SPAN)  
**GENERAL ARRANGEMENT AND COMPONENTS DETAILS**

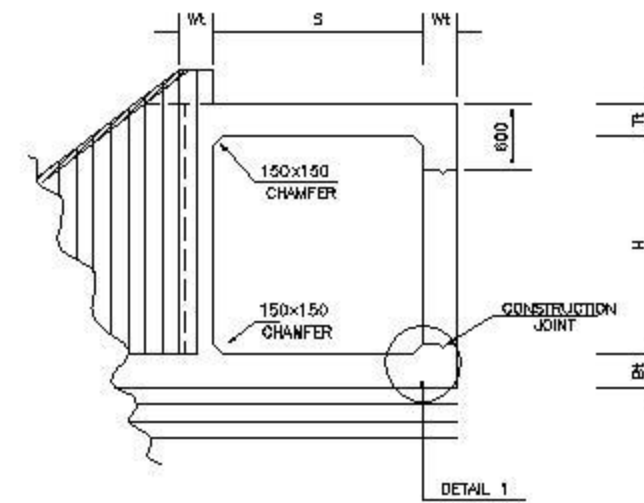
REV. NO.	DATE	DESCRIPTION	BY	CHK.	APPRO.
0	11-10-19	ISSUE FOR REVIEW	F.K.	A.F.	K.A.

Project:—		SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5) LINK ROAD PROJECT	
DRAWN BY	A.N.AGHA	DATE:	FEB.2017
DESIGNED BY	A.F.	SCALE:	AS SHOWN
APPROVED BY	K.A.	JOB NO.	07 / 2016
		DRG. NO.	S-01
		REVISION	0

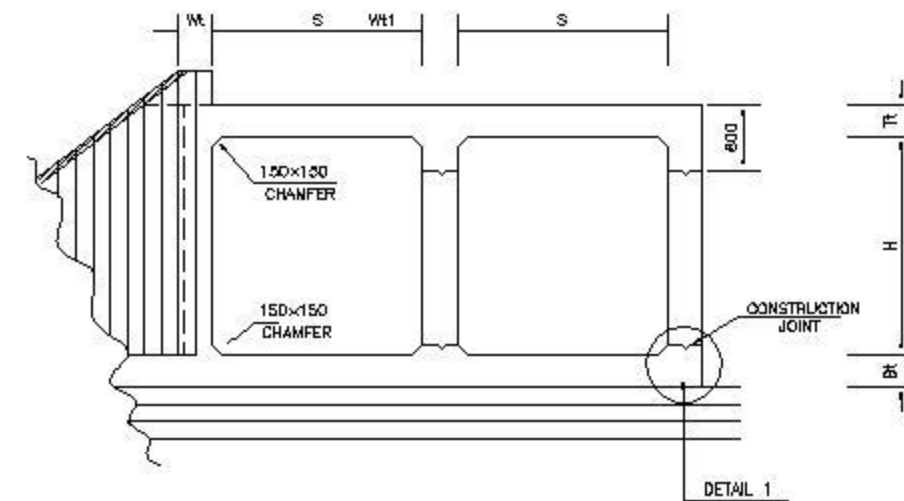




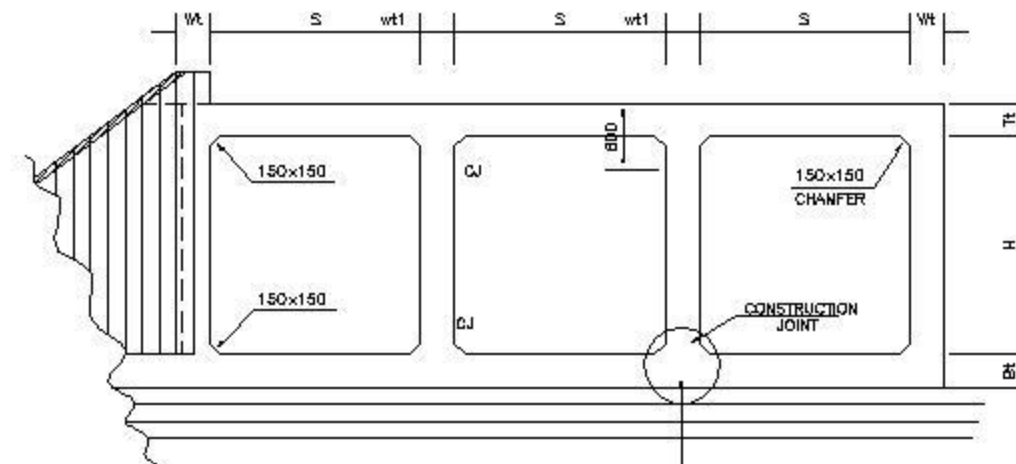
**PLAN OF BOX CULVERT**



**SECTION B-B**



**SECTION B-B**



**SECTION B-B**

Client:-  

**WORKS & SERVICES DEPARTMENT**  
**GOVERNMENT OF SINDH**

  
 where you come first  
  
**FAROOQ, KHAN & MIRZA**

Consultant:-  
**Loya associates**  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 1-Phase 1 & 2  
 MULTISTORY ENGINEERING  
 CONSULTANCY (PVT) LTD.  
 100, PAFI, PAFI, KARACHI  
 100, PAFI, KARACHI, KARACHI  
 TEL: 3463, 3464, 3465, 3466  
**REC**

Title:-  
**STANDARD CONCRETE DETAILS FOR  
 SINGLE, DOUBLE & MULTIPLE CELL  
 BOX CULVERT**

REV. NO.	DATE	DESCRIPTION	BY	CHKD.	APPRO.
0	01-03-17	ISSUE FOR REVIEW	F.K	A.F	K.A

Project:- SUPER HIGHWAY (M-9) - NATIONAL HIGHWAY (N-5) LINK ROAD PROJECT					
DRAWN BY	DATE	JOB NO.	REVISION	DESIGNED BY	SCALE
N. FAHEEN	FEB 2017	07 / 20 16		A.F.	AS SHOWN
APPROVED BY	K.A	DRG. NO.	CUL - 01		