

LIST OF DRAWING

DESIGN NOTES

GENERAL

BRIDGE - 01

BRIDGE - 02

LIST OF DRAWINGS

BRIDGE - 03

\\user:horncell_marcos
Date: Mon, 21 Nov 2016 - 4:22pm File: T:\008_PROJECT\PROJECTS\MPW-ADC-Airport Link Roads\Drawings\Structure\ST_GENERAL\GE_00_DL_0021.dwg

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

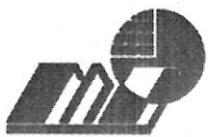
Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



ORIENTAL CONSULTANTS
COMPANY LIMITED

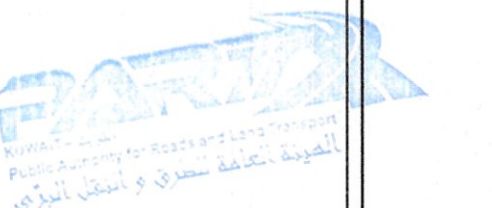
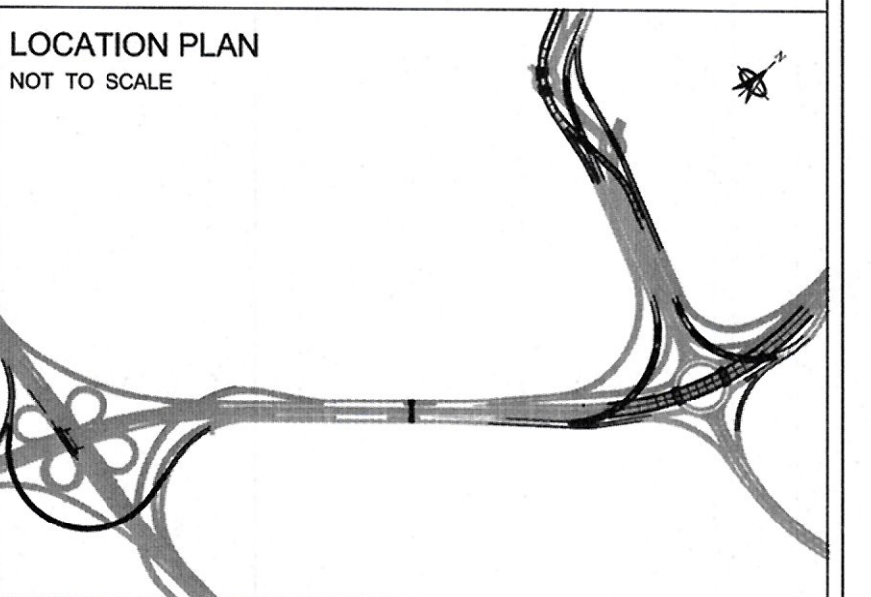
IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN

NOT TO SCALE



Rev. No.	Date	Description	By
DRAWING TITLE:			
LIST OF DRAWINGS STRUCTURAL (SHEET - 01)			
DRAWING NO: GE_00_DL_0021			
DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	N.T.S	A1 SCALE:	N.T.S
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	SBB	APPROVED BY:	AZ

LIST OF DRAWINGS

DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0361_06	00	BRIDGE - 03 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 06)
ST_00_BR_0361_07	00	BRIDGE - 03 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 07)
ST_00_BR_0371_01	00	BRIDGE - 03 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0371_02	00	BRIDGE - 03 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0371_03	00	BRIDGE - 03 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 03)
ST_00_BR_0371_04	00	BRIDGE - 03 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 04)
ST_00_BR_0371_05	00	BRIDGE - 03 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 05)
ST_00_BR_0371_06	00	BRIDGE - 03 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 06)
ST_00_BR_0371_07	00	BRIDGE - 03 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 07)
ST_00_BR_0381_01	00	BRIDGE - 03 POST-TENSIONING DETAILS (SHEET - 01)
ST_00_BR_0381_02	00	BRIDGE - 03 POST-TENSIONING DETAILS (SHEET - 02)
ST_00_BR_0381_03	00	BRIDGE - 03 PIER-06 DIAPHRAGM POST-TENSIONING DETAILS
ST_00_BR_0391_01	00	BRIDGE - 03 DEFLECTION DIAGRAM (SHEET - 01)
ST_00_BR_0391_02	00	BRIDGE - 03 DEFLECTION DIAGRAM (SHEET - 02)
ST_00_BR_0391_03	00	BRIDGE - 03 DEFLECTION DIAGRAM (SHEET - 03)

BRIDGE - 04

DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0401_01	00	BRIDGE - 04 STRUCTURAL LOCATION PLAN
ST_00_BR_0411_01	00	BRIDGE - 04 GENERAL ARRANGEMENT AND DETAILS (SHEET-01)
ST_00_BR_0411_02	00	BRIDGE - 04 GENERAL ARRANGEMENT AND DETAILS (SHEET-02)
ST_00_BR_0411_03	00	BRIDGE - 04 GENERAL ARRANGEMENT AND DETAILS (SHEET- 03)
ST_00_BR_0411_04	00	BRIDGE - 04 CONSTRUCTION SEQUENCE (SHEET- 01)
ST_00_BR_0411_05	00	BRIDGE - 04 CONSTRUCTION SEQUENCE (SHEET- 02)
ST_00_BR_0411_06	00	BRIDGE - 04 FOUNDATION PLAN & SETTING OUT DATA
ST_00_BR_0411_07	00	BRIDGE - 04 MSE WALL AND ELEVATION (SHEET - 01)
ST_00_BR_0411_08	00	BRIDGE - 04 MSE WALL AND ELEVATION (SHEET - 02)
ST_00_BR_0421_01	00	BRIDGE - 04 ABUTMENT - 01 DIMENSIONAL DETAILS (SHEET- 01)
ST_00_BR_0421_02	00	BRIDGE - 04 ABUTMENT - 01 DIMENSIONAL DETAILS (SHEET- 02)
ST_00_BR_0421_03	00	BRIDGE - 04 ABUTMENT - 01 DIMENSIONAL DETAILS (SHEET- 03)
ST_00_BR_0421_04	00	BRIDGE - 04 ABUTMENT - 02 DIMENSIONAL DETAILS (SHEET- 01)
ST_00_BR_0421_05	00	BRIDGE - 04 ABUTMENT - 02 DIMENSIONAL DETAILS (SHEET- 02)
ST_00_BR_0421_06	00	BRIDGE - 04 ABUTMENT - 03 DIMENSIONAL DETAILS
ST_00_BR_0421_07	00	BRIDGE - 04 ABUTMENT - 01 REINFORCEMENT DETAILS (SHEET- 01)
ST_00_BR_0421_08	00	BRIDGE - 04 ABUTMENT - 01 REINFORCEMENT DETAILS (SHEET- 02)
ST_00_BR_0421_09	00	BRIDGE - 04 ABUTMENT - 02 REINFORCEMENT DETAILS
ST_00_BR_0421_10	00	BRIDGE - 04 ABUTMENT - 03 REINFORCEMENT DETAILS
ST_00_BR_0431_01	00	BRIDGE - 04 PIER - 01 DIMENSIONAL DETAILS
ST_00_BR_0431_02	00	BRIDGE - 04 PIER - 02 DIMENSIONAL DETAILS
ST_00_BR_0431_03	00	BRIDGE - 04 PIER - 03 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0431_04	00	BRIDGE - 04 PIER - 03 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0431_05	00	BRIDGE - 04 PIER - 04 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0431_06	00	BRIDGE - 04 PIER - 04 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0431_07	00	BRIDGE - 04 PIER - 05 DIMENSIONAL DETAILS
ST_00_BR_0431_08	00	BRIDGE - 04 PIER - 06 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0431_09	00	BRIDGE - 04 PIER - 06 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0431_10	00	BRIDGE - 04 PIER - 07 DIMENSIONAL DETAILS
ST_00_BR_0431_11	00	BRIDGE - 04 PIER - 08 DIMENSIONAL DETAILS
ST_00_BR_0431_12	00	BRIDGE - 04 PIER - 1A DIMENSIONAL DETAILS
ST_00_BR_0441_01	00	BRIDGE - 04 PIER - 01 REINFORCEMENT DETAILS
ST_00_BR_0441_02	00	BRIDGE - 04 PIER - 02 REINFORCEMENT DETAILS
ST_00_BR_0441_03	00	BRIDGE - 04 PIER - 03 REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0441_04	00	BRIDGE - 04 PIER - 03 REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0441_05	00	BRIDGE - 04 PIER - 04 REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0441_06	00	BRIDGE - 04 PIER - 04 REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0441_07	00	BRIDGE - 04 PIER - 05 REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0441_08	00	BRIDGE - 04 PIER - 05 REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0441_09	00	BRIDGE - 04 PIER - 06 REINFORCEMENT DETAILS
ST_00_BR_0441_10	00	BRIDGE - 04 PIER - 07 REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0441_11	00	BRIDGE - 04 PIER - 07 REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0441_12	00	BRIDGE - 04 PIER - 08 REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0441_13	00	BRIDGE - 04 PIER - 08 REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0441_14	00	BRIDGE - 04 PIER- 01A REINFORCEMENT DETAILS
ST_00_BR_0451_01	00	BRIDGE - 04 BEARING LAYOUT PLAN (SHEET - 01)
ST_00_BR_0451_02	00	BRIDGE - 04 BEARING LAYOUT PLAN (SHEET - 02)
ST_00_BR_0451_03	00	BRIDGE - 04 BEARING LAYOUT PLAN (SHEET - 03)
ST_00_BR_0461_01	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0461_02	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0461_03	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 03)
ST_00_BR_0461_04	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 04)
ST_00_BR_0461_05	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 05)
ST_00_BR_0461_06	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 06)

DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0461_07	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 07)
ST_00_BR_0461_08	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 08)
ST_00_BR_0461_09	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 09)
ST_00_BR_0461_10	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 10)
ST_00_BR_0461_11	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 11)
ST_00_BR_0461_12	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 12)
ST_00_BR_0461_13	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 13)
ST_00_BR_0461_14	00	BRIDGE - 04 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 14)
ST_00_BR_0471_01	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0471_02	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0471_03	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 03)
ST_00_BR_0471_04	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 04)
ST_00_BR_0471_05	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 05)
ST_00_BR_0471_06	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 06)
ST_00_BR_0471_07	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 07)
ST_00_BR_0471_08	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 08)
ST_00_BR_0471_09	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 09)
ST_00_BR_0471_10	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 10)
ST_00_BR_0471_11	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 11)
ST_00_BR_0471_12	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 12)
ST_00_BR_0471_13	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 13)
ST_00_BR_0471_14	00	BRIDGE - 04 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 14)
ST_00_BR_0481_01	00	BRIDGE - 04 POST-TENSIONING DETAILS (SHEET - 01)
ST_00_BR_0481_02	00	BRIDGE - 04 POST-TENSIONING DETAILS (SHEET - 02)
ST_00_BR_0481_03	00	BRIDGE - 04 POST-TENSIONING DETAILS (SHEET - 03)
ST_00_BR_0481_04	00	BRIDGE - 04 PIER - 03 DIAPHRAGM POST-TENSIONING DETAILS
ST_00_BR_0481_05	00	BRIDGE - 04 PIER - 04 DIAPHRAGM POST-TENSIONING DETAILS
ST_00_BR_0491_01	00	BRIDGE - 04 DEFLECTION DIAGRAM (SHEET - 01)
ST_00_BR_0491_02	00	BRIDGE - 04 DEFLECTION DIAGRAM (SHEET - 02)
ST_00_BR_0491_03	00	BRIDGE - 04 DEFLECTION DIAGRAM (SHEET - 03)
ST_00_BR_0491_04	00	BRIDGE - 04 DEFLECTION DIAGRAM (SHEET - 04)
ST_00_BR_0491_05	00	BRIDGE - 04 DEFLECTION DIAGRAM (SHEET - 05)

BRIDGE - 05

DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0501_01	00	BRIDGE - 05 STRUCTURAL LOCATION PLAN
ST_00_BR_0511_01	00	BRIDGE - 05 GENERAL ARRANGEMENT AND DETAILS
ST_00_BR_0511_02	00	BRIDGE - 05 CONSTRUCTION SEQUENCE
ST_00_BR_0511_03	00	BRIDGE - 05 FOUNDATION PLAN & SETTING OUT DATA
ST_00_BR_0511_04	00	BRIDGE - 05 MSE WALL AND ELEVATION (SHEET - 01)
ST_00_BR_0511_05	00	BRIDGE - 05 MSE WALL AND ELEVATION (SHEET - 02)
ST_00_BR_0521_01	00	BRIDGE - 05 ABUTMENT - 01 & 02 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0521_02	00	BRIDGE - 05 ABUTMENT - 01 & 02 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0521_03	00	BRIDGE - 05 ABUTMENT - 01 & 02 REINFORCEMENT DETAILS
ST_00_BR_0531_01	00	BRIDGE - 05 PIER - 01 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0531_02	00	BRIDGE - 05 PIER - 01 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0541_01	00	BRIDGE - 05 PIER - 01 REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0541_02	00	BRIDGE - 05 PIER - 01 REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0551_01	00	BRIDGE - 05 BEARING LAYOUT PLAN
ST_00_BR_0561_01	00	BRIDGE - 05 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0561_02	00	BRIDGE - 05 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0571_01	00	BRIDGE - 05 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0571_02	00	BRIDGE - 05 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0581_01	00	BRIDGE - 05 POST-TENSIONING DETAILS
ST_00_BR_0591_01	00	BRIDGE - 05 DEFLECTION DIAGRAM

BRIDGE - 06

DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0601_01	00	BRIDGE - 06 STRUCTURAL LOCATION PLAN
ST_00_BR_0611_01	00	BRIDGE - 06 GENERAL ARRANGEMENT AND DETAILS
ST_00_BR_0611_02	00	BRIDGE - 06 CONSTRUCTION SEQUENCE
ST_00_BR_0611_03	00	BRIDGE - 06 FOUNDATION PLAN & SETTING OUT DATA
ST_00_BR_0611_04	00	BRIDGE - 06 MSE WALL AND ELEVATION
ST_00_BR_0621_01	00	BRIDGE - 06 ABUTMENT - 01 & 02 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0621_02	00	BRIDGE - 06 ABUTMENT - 01 & 02 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0621_03	00	BRIDGE - 06 ABUTMENT 01 & 02 REINFORCEMENT DETAILS
ST_00_BR_0631_01	00	BRIDGE - 06 PIER - 01 & 03 DIMENSIONAL DETAILS
ST_00_BR_0631_02	00	BRIDGE - 06 PIER - 02 DIMENSIONAL DETAILS
ST_00_BR_0641_01	00	BRIDGE - 06 PIER - 01 & 03 REINFORCEMENT DETAILS

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



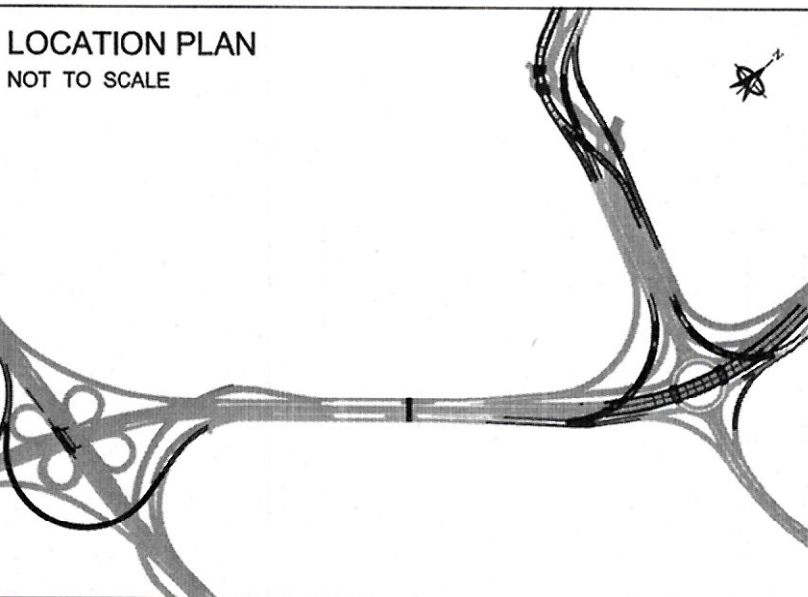
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



İNSAAT SANAYİ VE TİCARET A.Ş.
İstanbul Sokak No: 8 G.O.P. - AKHARA
Tel: 0212 448 88 00 (170 Hat)
Adanara Katunlar V.D. 6034063462

Rev. No.	Date	Description	By

DRAWING TITLE:

LIST OF DRAWINGS STRUCTURAL
(SHEET - 02)

DRAWING NO: GE_00_DL_0022

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	N.T.S	A1 SCALE:	N.T.S
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	SBB	APPROVED BY:	AZ

LIST OF DRAWINGS

DRAWING NUMBER	REV.	DRAWING TITLE	DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0641_02	00	BRIDGE - 06 PIER - 02 REINFORCEMENT DETAILS (SHEET - 01)	ST_00_BR_0921_01	00	BRIDGE - 10 ABUTMENT - 01 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0641_03	00	BRIDGE - 06 PIER - 02 REINFORCEMENT DETAILS (SHEET - 02)	ST_00_BR_0921_02	00	BRIDGE - 10 ABUTMENT - 01 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0661_01	00	BRIDGE - 06 BEARING LAYOUT PLAN	ST_00_BR_0921_03	00	BRIDGE - 10 ABUTMENT - 02 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0661_01	00	BRIDGE - 06 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 01)	ST_00_BR_0921_04	00	BRIDGE - 10 ABUTMENT - 02 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0661_02	00	BRIDGE - 06 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 02)	ST_00_BR_0921_05	00	BRIDGE - 10 ABUTMENT 01 REINFORCEMENT DETAILS
ST_00_BR_0661_03	00	BRIDGE - 06 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 03)	ST_00_BR_0921_06	00	BRIDGE - 10 ABUTMENT 02 REINFORCEMENT DETAILS
ST_00_BR_0671_01	00	BRIDGE - 06 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 01)	ST_00_BR_0951_01	00	BRIDGE - 10 BEARING LAYOUT PLAN
ST_00_BR_0671_02	00	BRIDGE - 06 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 02)	ST_00_BR_0961_01	00	BRIDGE - 10 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0671_03	00	BRIDGE - 06 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 03)	ST_00_BR_0961_02	00	BRIDGE - 10 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0681_01	00	BRIDGE - 06 POST-TENSIONING DETAILS	ST_00_BR_0961_03	00	BRIDGE - 10 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 03)
ST_00_BR_0691_01	00	BRIDGE - 06 DEFLECTION DIAGRAM	ST_00_BR_0971_01	00	BRIDGE - 10 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 01)
BRIDGE - 07 & 08			ST_00_BR_0971_02	00	BRIDGE - 10 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 02)
DRAWING NUMBER	REV.	DRAWING TITLE	ST_00_BR_0971_03	00	BRIDGE - 10 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 03)
ST_00_BR_0701_01	00	BRIDGE - 07 & 08 STRUCTURAL LOCATION PLAN	ST_00_BR_0971_04	00	BRIDGE - 10 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 04)
ST_00_BR_0711_01	00	BRIDGE - 07 & 08 GENERAL ARRANGEMENT AND DETAILS (SHEET - 01)	ST_00_BR_0981_01	00	BRIDGE - 10 GIRDER POST-TENSIONING DETAILS
ST_00_BR_0711_02	00	BRIDGE - 07 & 08 GENERAL ARRANGEMENT AND DETAILS (SHEET - 02)	ST_00_BR_0991_01	00	BRIDGE - 10 DEFLECTION DIAGRAM
ST_00_BR_0711_03	00	BRIDGE - 07 & 08 CONSTRUCTION SEQUENCE	BRIDGE - 11		
ST_00_BR_0711_04	00	BRIDGE - 07 & 08 FOUNDATION PLAN & SETTING OUT DATA (SHEET - 01)	DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0711_05	00	BRIDGE - 07 & 08 FOUNDATION PLAN & SETTING OUT DATA (SHEET - 02)	ST_00_BR_1001_01	00	BRIDGE - 11 STRUCTURAL LOCATION PLAN
ST_00_BR_0721_01	00	BRIDGE - 07 & 08 ABUTMENT - 01 & 02 DIMENSIONAL DETAILS (SHEET - 01)	ST_00_BR_1011_01	00	BRIDGE - 11 GENERAL ARRANGEMENT AND DETAILS
ST_00_BR_0721_02	00	BRIDGE - 07 & 08 ABUTMENT - 01 & 02 DIMENSIONAL DETAILS (SHEET - 02)	ST_00_BR_1011_02	00	BRIDGE - 11 CONSTRUCTION SEQUENCE
ST_00_BR_0721_03	00	BRIDGE - 07 & 08 ABUTMENT - 01 & 02 DIMENSIONAL DETAILS (SHEET - 03)	ST_00_BR_1011_03	00	BRIDGE - 11 FOUNDATION PLAN & SETTING OUT DATA
ST_00_BR_0721_04	00	BRIDGE - 07 & 08 ABUTMENT - 01 & 02 REINFORCEMENT DETAILS (SHEET - 01)	ST_00_BR_1011_04	00	BRIDGE - 11 MSE WALL AND ELEVATION
ST_00_BR_0721_05	00	BRIDGE - 07 & 08 ABUTMENT - 01 & 02 REINFORCEMENT DETAILS (SHEET - 02)	ST_00_BR_1021_01	00	BRIDGE - 11 ABUTMENT - 01 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0731_01	00	BRIDGE - 07 & 08 PIER DIMENSIONAL DETAILS (SHEET - 01)	ST_00_BR_1021_02	00	BRIDGE - 11 ABUTMENT - 01 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0731_02	00	BRIDGE - 07 & 08 PIER DIMENSIONAL DETAILS (SHEET - 02)	ST_00_BR_1021_03	00	BRIDGE - 11 ABUTMENT - 02 DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0741_01	00	BRIDGE - 07 & 08 PIER REINFORCEMENT DETAILS (SHEET - 01)	ST_00_BR_1021_04	00	BRIDGE - 11 ABUTMENT - 02 DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0741_02	00	BRIDGE - 07 & 08 PIER REINFORCEMENT DETAILS (SHEET - 02)	ST_00_BR_1021_05	00	BRIDGE - 11 ABUTMENT - 01 REINFORCEMENT DETAILS
ST_00_BR_0751_01	00	BRIDGE - 07 & 08 BEARING LAYOUT PLAN	ST_00_BR_1021_06	00	BRIDGE - 11 ABUTMENT - 02 REINFORCEMENT DETAILS
ST_00_BR_0761_01	00	BRIDGE - 07 & 08 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 01)	ST_00_BR_1051_01	00	BRIDGE - 11 BEARING LAYOUT PLAN
ST_00_BR_0761_02	00	BRIDGE - 07 & 08 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 02)	ST_00_BR_1161_01	00	BRIDGE - 11 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 01)
ST_00_BR_0761_03	00	BRIDGE - 07 & 08 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 03)	ST_00_BR_1161_02	00	BRIDGE - 11 SUPERSTRUCTURE DIMENSIONAL DETAILS (SHEET - 02)
ST_00_BR_0771_01	00	BRIDGE - 07 & 08 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 01)	ST_00_BR_1071_01	00	BRIDGE - 11 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 01)
ST_00_BR_0771_02	00	BRIDGE - 07 & 08 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 02)	ST_00_BR_1071_02	00	BRIDGE - 11 SUPERSTRUCTURE REINFORCEMENT DETAILS (SHEET - 02)
ST_00_BR_0781_01	00	BRIDGE - 07 & 08 POST-TENSIONING DETAILS	ST_00_BR_1081_01	00	BRIDGE - 11 POST-TENSIONING DETAILS
ST_00_BR_0791_01	00	BRIDGE - 07 & 08 DEFLECTION DIAGRAM	ST_00_BR_1091_01	00	BRIDGE - 11 DEFLECTION DIAGRAM
BRIDGE - 09			CULVERT		
DRAWING NUMBER	REV.	DRAWING TITLE	DRAWING NUMBER	REV.	DRAWING TITLE
ST_00_BR_0801_01	00	BRIDGE - 09 STRUCTURAL LOCATION PLAN	ST_00_CT_1100_01		

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DRAWING NO: GE_00_DL_0023			
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User: thoombl, manaoor
Date: Mon, 21 Nov 2016 - 4:28pm
File: T:\006 PROJECT SUPPORT\6.1 CURRENT PROJECTS\MPW-ADC-Airport Link Roads\Drawings\Structure\ST_GENERAL\GE_00_DL_0023.dwg

CLIENT:



MINISTRY OF PUBLIC WORKS



STATE OF KUWAIT

PROJECT:

STUDY, DESIGN AND CONSTRUCTION SUPERVISION FOR CONSTRUCTION AND MAINTENANCE OF
REGIONAL ROAD SOUTH PART (SECTION -2) AGREEMENT NO. EF/R/193
DESIGN OF NEW AIRPORT INTERCHANGES FOR THE KUWAIT INTERNATIONAL AIRPORT TERMINAL II
VARIATION ORDER NO. (2) CONTRACT NO. RA/268

DISCIPLINE:

STRUCTURE DESIGN DRAWINGS BOOK 1 OF 5

DRAWINGS:

2- DESIGN NOTES

CONSULTANT:



ORIENTAL CONSULTANTS GLOBAL
Global Consulting for Sustainable Development



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

ANKARA
İNŞAAT SANAYİ VE TİCARET A.Ş.
1974 Sokak No: 9/10
16112 Çiğdem (10. H-1)
Ankara Kurumlar Yolu, 6080063463

DESIGN SPECIFICATIONS

THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) PUBLICATION. AASHTO LRFD BRIDGE DESIGN SPECIFICATION 2012 OR IF NOTED OTHERWISE AND PART 2 OF THE KUWAIT BRIDGES AND HIGHWAY STRUCTURES DESIGN MANUAL -EDITION 2 (JANUARY 2012) OF THE STATE OF KUWAIT -MINISTRY OF PUBLIC WORKS AND KUWAIT MUNICIPALITY DESIGN MANUAL FOR ROADS AND BRIDGED UNLESS OTHERWISE NOTED HEREIN.

GENERAL

1. THE CONTRACTOR SHALL ENSURE THE SAFETY OF ALL ADJACENT UTILITIES AND STRUCTURES. THE MINIMUM CLEARANCES SHOWN TO EXISTING PIPELINES SHALL BE MAINTAINED. THE CONTRACTOR IS SOLELY AND ULTIMATE LY RESPONSIBLE FOR PROTECTING EXISTING PIPELINES AND UTILITIES. ANY DAMAGE TO THIS PIPELINES OR UTILITIES SHALL BE RECTIFIED AT NO COST TO OWNER.
2. ALL BRIDGES ELEMENTS IN VICINITY OF OIL/GAS PIPELINES SHALL BE PROTECTED USING AN ADEQUATE FIREPROOFING SYSTEM.
3. FOR CULVERTS INFORMATION. REFER TO UTILITIES DRAWINGS.

WATERPROOFING

1. WHERE WATERPROOFING MEMBRANE TERMINATES 300MM BELOW F.G.L PROTECTIVE PAINT SHALL BE APPLIED TO CONCRETE SURFACES FROM THERE TO 100MM ABOVE F.G.L UNLESS NOTED OTHERWISE ON THE DRAWINGS.
2. PROTECTIVE PAINT SHALL ALSO BE APPLIED TO OTHER CONCRETE SURFACES IN ACCORDANCE WITH GENERAL SPECIFICATIONS.

CONSTRUCTION JOINTS

1. CONCRETE SURFACE OF CONSTRUCTION JOINTS, THOSE WITH OR WITHOUT SHEAR KEY, SHALL BE INTENTIONALLY ROUGHENED PRIOR TO CASTING THE NEXT POUR TO REMOVE LAITANCE AND EXPOSE AGGREGATES, THEN CLEANED AND WETTENED BEFORE CASTING. UNLESS OTHERWISE REQUESTED BY SEGMENTAL CONSTRUCTION TECHNIQUES.

CHAMFERS

1. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED TO 20 MILLIMETERS UNLESS OTHERWISE NOTED ON THE DRAWINGS.

ABUTMENT DRAINAGE SYSTEM

1. CONTRACTOR SHALL PREPARE ABUTMENT DRAINAGE DETAILS TO ENSURE THAT THE ABUTMENT SEATS AND WALLS ARE PROTECTED FROM ANY LEAKAGE DUE TO STORM WATER DRAINAGE. THE CONTRACTOR SHALL SUBMIT THESE DETAILS TO THE ENGINEER FOR APPROVAL.

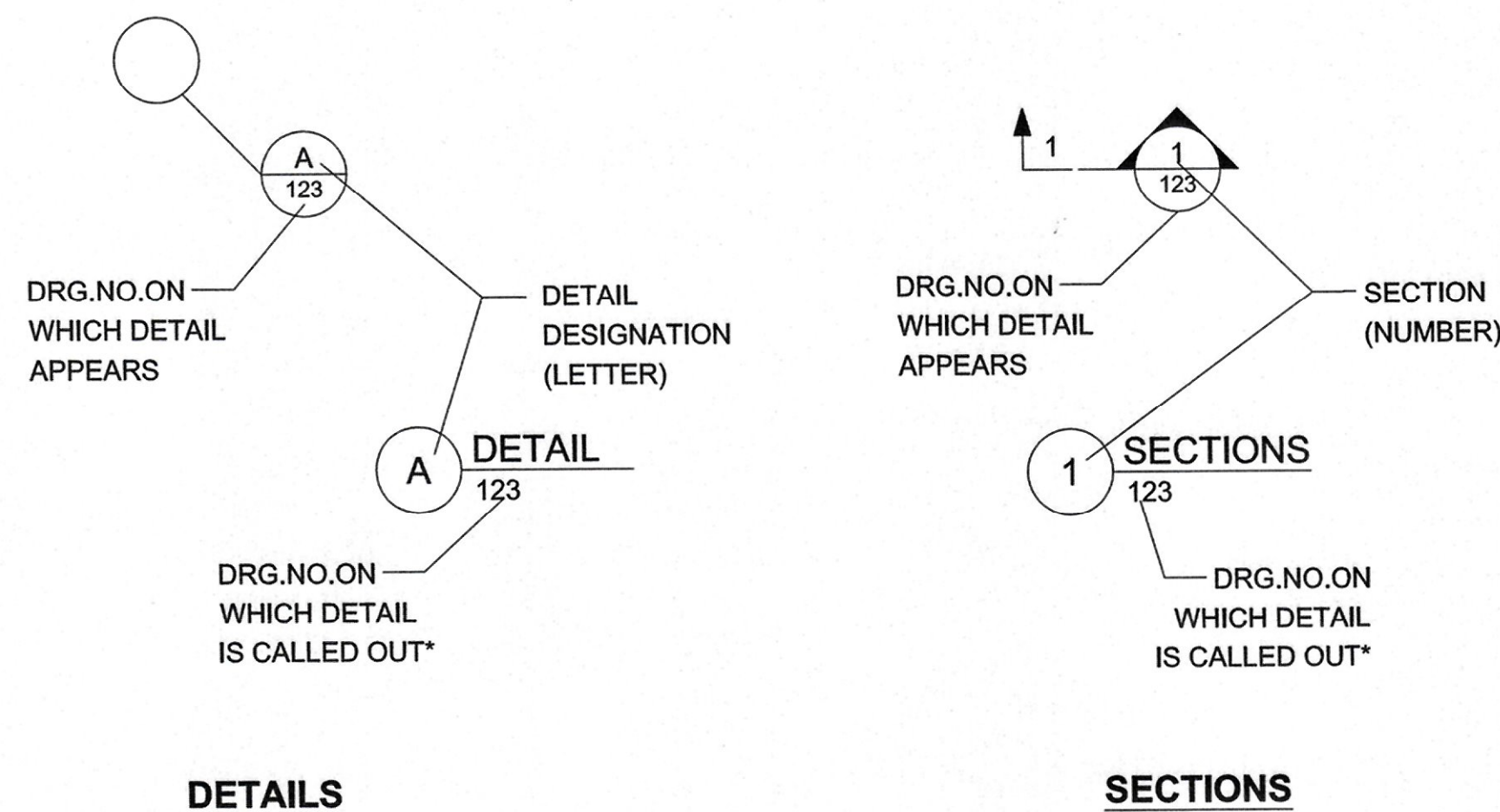
DRAWINGS SETTING OUT DATA

FOR THE HORIZONTAL AND VERTICAL ALIGNMENT REFER HIGHWAY DRAWINGS.

THE TOP OF DECK ELEVATIONS FOR BRIDGES SHALL BE CALCULATED BY THE CONTRACTOR BASED ON THE ROADWAY PROFILE INFORMATION PROVIDED IN THE HIGHWAY DRAWINGS.

DIMENSIONS

1. ALL DIMENSIONS SHOWN ARE GIVEN IN MILLIMETERS EXCEPT FOR ELEVATIONS AND STATIONS WHICH ARE GIVEN IN METERS OR OTHERWISE NOTED.
2. ALL EXISTING DIMENSIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO PREPARATION OF DETAILED DRAWINGS, FABRICATION OR ERECTION OF STRUCTURES.



PERMANENT LOADS

DEAD LOAD (DC):

1. DENSITY OF NORMAL WEIGHT CONCRETE SHALL BE TAKEN AS 25 kN/m³

SUPERIMPOSED DEAD LOAD (DW):

1. FOR DESIGN PURPOSES A SURFACING THICKNESS OF 70MM TO BE ASSUMED AND APPLIES WITH MAXIMUM AND MINIMUM LOAD FACTORS ACCORDING TO AASHTO.
2. THE WEIGHT OF KNOWN UTILITIES CARRIED BY THE BRIDGE TO BE TAKEN INTO CONSIDERATION. IN ADDITION A UNIFORMLY DISTRIBUTED SERVICE LOAD OF 5kN/m PER CARRIAGEWAY TO BE CONSIDERED WITH LOAD FACTORS OF MAX. 1.5 AND MIN.0.0
3. BRIDGE CONCRETE BARRIER LOAD = 14.8 kN/m
4. UNIT WEIGHT OF SOIL ABOVE WATER TABLE = 20 kN/m³
5. UNIT WEIGHT OF SOIL BELOW WATER TABLE = 10 kN/m³

LIVE LOADS

STANDARD LIVE LOAD

1. DESIGN TRUCK TO BE TAKEN AS AASHTO HL -93, MULTIPLIED BY FACTOR 1.5
2. DESIGN TANDEM TO CONSIST OF A PAIR OF 110 KN AXLES AS PER AASHTO MULTIPLIED BY FACTOR 1.5
3. DESIGN LANE LOAD TO CONSIST OF A LOAD OF 9.3 kN/m MULTIPLIED BY FACTOR 1.5
4. THE MULTIPLE PRESENCE FACTOR, m TO BE APPLIED AS PER AASTHO TABLE 3.6.1.1.2-1

OWNER-SPECIFIED SPECIAL DESIGN VEHICLE

THE OWNER-SPECIFIED SPECIAL DESIGN VEHICLE TO CONSIST OF THE FOLLOWING 90 TONNE (900 KN) 5-AXLE MILITARY VEHICLE.

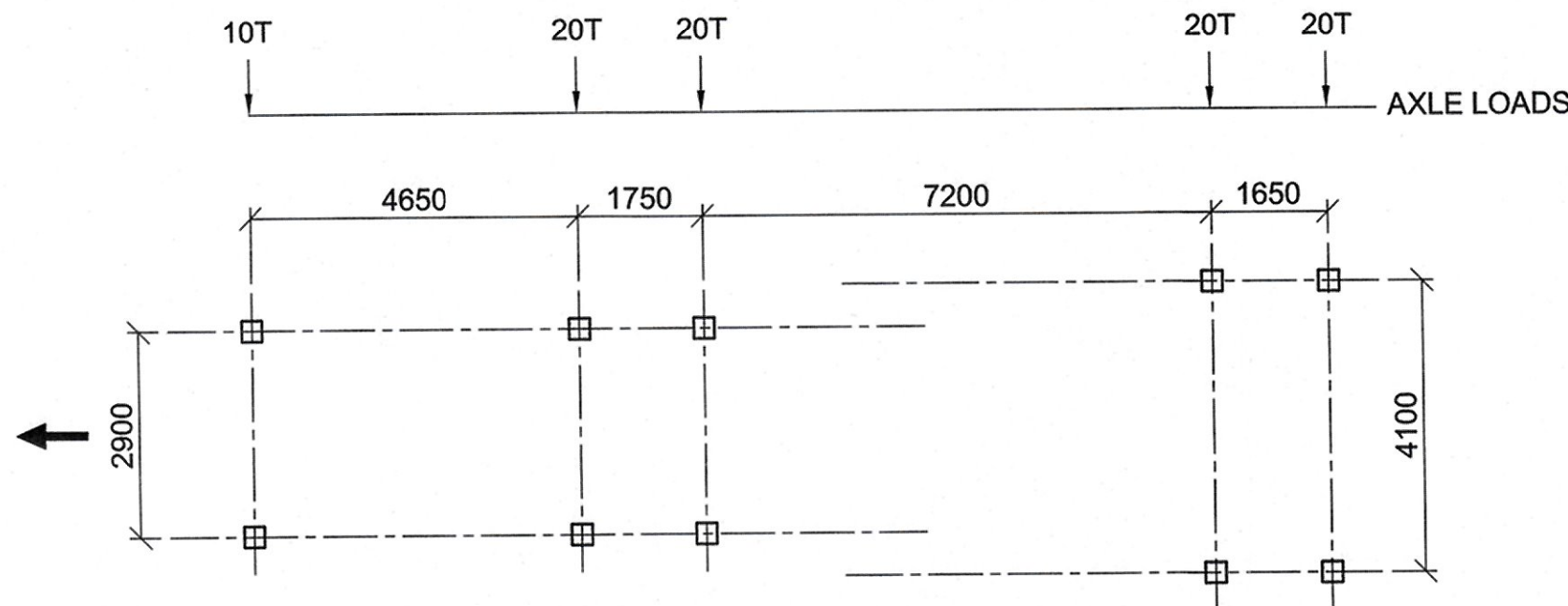


FIGURE - 1 OWNER SPECIFIED SPECIAL DESIGN VEHICLE 90 TONNE MILITARY VEHICLE (DIMENSIONS IN MM ; AXLE LOADS IN TONNES=10 T AND 20 T RESPECTIVLY)

THE SPECIAL DESIGN VEHICLE SHALL BE APPLIED IN THE FOLLOWING MANNER:

1. ONE SINGLE MILITARY VEHICLE IN ONE DIRECTION ONLY TO CROSS THE BRIDGE AT ANY ONE TIME.
2. THE VEHICLE TO OCCUPY ANY TRAFFIC LANE WITHOUT CONCURRENT LOADING IN THE REST OF THIS LANE (NO OTHER TRAFFIC)
3. THE REST OF THE BRIDGE (ALL OTHER LANES) CAN BE LOADED WITH NORMAL TRAFFIC IN BOTH DIRECTIONS.
4. THE LOAD FACTORS FOR THE OWNER SPECIFIED DESIGN VEHICLE ARE GIVEN IN AASHTO USING LOAD COMBINATIONS STRENGTH II FOR THE ULTIMATE LIMIT STATE AND SERVICES III FOR SERVICEABILITY LIMIT STATE.
5. IMPACT FACTOR TO BE APPLIED TO THE SPECIAL DESIGN VEHICLE.

WIND LOAD

1. DESIGN WIND VELOCITY, V₁₀ = 150 KMi/h AT 10.0M HEIGHT ABOVE GROUND LEVEL.

THERMAL EFFECTS

1. AMBIENT TEMPERATURE RANGE: + 5°C (T_{Min Design}) TO + 55°C (T_{max Design})
2. ASSUMED AMBIENT TEMPERATURE RANGE DURING CONSTRUCTION +15°C TO + 39 °C:
3. ASSUMED TEMPERATURE RISE (FROM 15°C TO 55°C)=40°C
4. ASSUMED TEMPERATURE FALL (FROM 39°C TO 5°C) = 34°C
5. MEAN RELATIVE HUMIDITY: 20% TO 60%
6. TEMPERATURE GRADIENT (ARTICLE 3.12.3) KUWAIT ASSUMED SIMILAR TO ZONE 1 (AASHTO LRFD FIGURE 3.12.3-1). TEMPREATURE GRADIENTS T1=30°C AND T2 =7.8°C
7. COEFFICIENT OF THERMAL EXPANSION, α = 10.8 x 10⁻⁶ MM/MM/ °c

SEISMIC LOADING

ACCORDING TO THE LATEST AASTHO LRFD METRIC EDITION.

1. SEISMIC ZONE 1 (ACCELERATION COEFFICIENT, A= 0.09)
2. IMPORTANCE CLASSIFICATION -CRITICAL
3. SOIL PROFILE TYPE II (SITE COEFFICIENT, S = 1.2)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



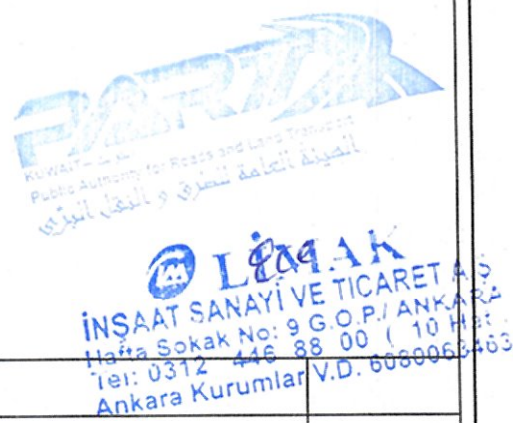
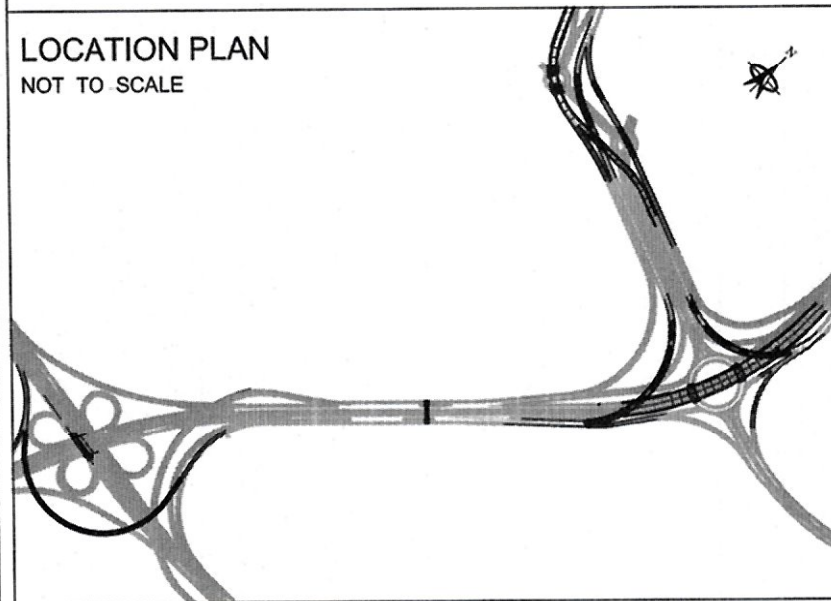
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



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DRAWING TITLE:			
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DRAWN BY:	SG	APPROVED BY:	AZ

DURABILITY REQUIREMENTS

1. UNLESS SHOWN OTHERWISE MINIMUM CONCRETE COVER TO REINFORCEMENT SHALL BE :

CONCRETE OF ALL STRUCTURE ELEMENTS CAST AGAINST EARTH	100 mm
CONCRETE OF ALL STRUCTURE ELEMENTS EXPOSED TO WEATHER	75 mm
APPROACH SLABS	60 mm
SUPERSTRUCTURE CAST-IN-SITU CONCRETE EXPOSED TO WEATHER	60 mm
INTERIOR FACES OF SUPERSTRUCTURE CAST-IN-PLACE CONCRETE EXCEPT SLABS	40 mm
CAST-IN-SITU SLABS	30 mm
PRECAST SUPERSTRUCTURE ELEMENTS, EXPOSED SURFACES	40 mm
PRECAST SUPERSTRUCTURE ELEMENTS, INTERIOR FACES	30 mm
PRECAST PARAPETS, CONCRETE BARRIERS, CURBS, ETC	30 mm

THE CONCRETE COVERS SHOWN ABOVE ARE COVER FOR THE MAIN REINFORCEMENT. THE COVER FOR STIRRUPS AND TIES MAY 12 mm LESS THAN THE VALUES SPECIFIED ABOVE BUT SHALL NOT BE LESS THAN 25 mm.

WHERE BUNDILED OR PAIRED BARS ARE USED THEN THE EQUIVALENT DIAMETERS SHALL BE CONSIDERED IN DETERMINING COVER REQUIREMENT.

COVER TO PRESTRESSING SHEATING SHALL NOT BE LESS THAN THAT SPECIFIED FOR MAIN REINFORCEMENT OR ONE HALF OF SHEATING DIAMETER.

2. ALL REINFORCED CONCRETE SURFACES BELOW EXISTING GROUND LEVEL EXCEPT PILES SHALL BE FULLY ENCAPSULATED BY AN APPROVED SHEET APPLIED WATER PROOFING MEMBRANE SYSTEM.
3. ALL BRIDGE DECKS SHALL BE WATER PROOFED WITH AN APPROVED PROPRIETARY SPRAY APPLIED MEMBRANE PROTECTED BY a 20mm SAND ASPHALT LAYER.
4. AN APPROVED ANTI-CARBONATION COATING SHALL BE APPLIED TO ALL EXTERNAL SURFACES IN ACCORDANCE WITH THE SPECIFICATION.

BEARING REPLACEMENT

1. THE BRIDGE DECKS AND SUBSTRUCTURE TO BE DESIGNED AND DETAILED TO PERMIT FUTURE BEARING REPLACEMENT OF EACH AND EVERY BEARING. JACKING POINTS TO BE IDENTIFIED ON THE STRUCTURE DRAWINGS. THE BRIDGE IS NOT TO BE CLOSED TO TRAFFIC DURING ANY BEARING REPLACEMENT.
2. MINIMUM JACKING ALLOWANCE = 10MM TO BE ASSUMED FOR BEARING REPLACEMENT.
3. PERMANENT LOAD REACTION AT THE BEARING FACTORED BY YP= 1.3 (AASHTO ARTICLE 3.4,3.1).
4. LIVE LOAD REACTION FACTORED BY THE APPROPRIATE LIVE LOAD FACTOR.

MINIMUM CONCRETE STRENGTH

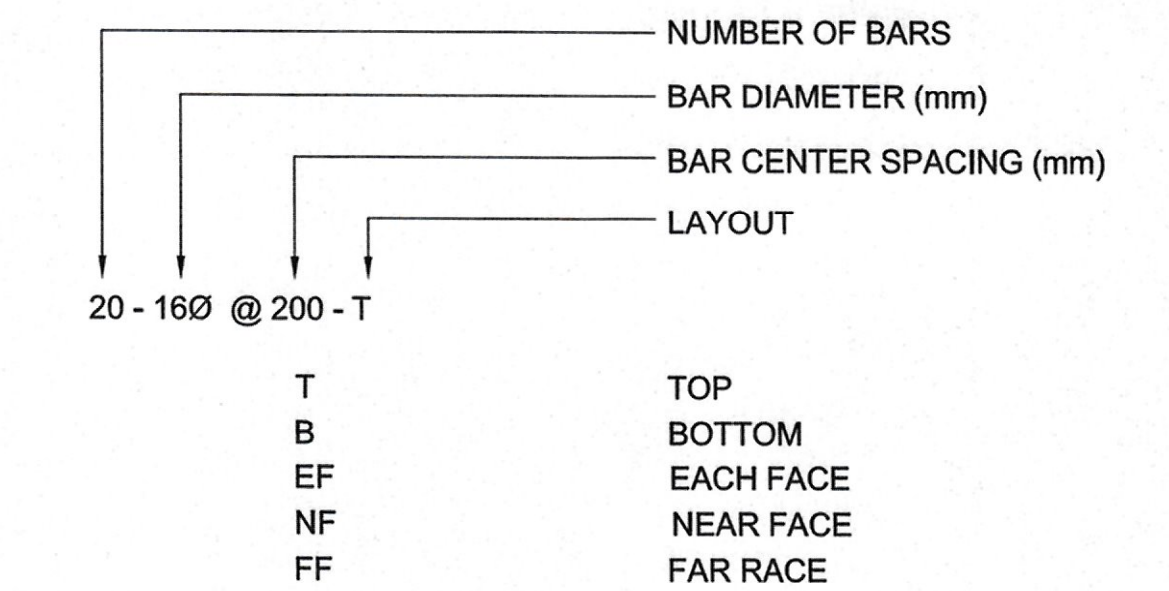
STRUCTURAL ELEMENT	MINIMUM CONCRETE (K-CLASS)	DESIGN CUBE STRENGTH (fcu)	DESIGN CYLINDER STRENGTH (f' c)	MINIMUM TRANSFER STRENGTH (fci)
FOOTINGS	K300	29.4 N/MM²	25 N/MM²	N/A
PIER, ABUTMENT & WALL	K350	34.3 N/MM²	30.9 N/MM²	N/A
BRIDGE DECK & BARRIERS	K415	40.7 N/MM²	36.6 N/MM²	N/A
PRE-STRESSED CONCRETE	K415	40.7 N/MM²	36.6 N/MM²	32 N/MM²

TYPE OF REINFORCEMENT

1. ALL STEEL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A615M AND SHALL BE GRADE 60 DEFORMED BILLET STEEL BARS WITH MINIMUM YIELD STRENGTH OF 500 MPa.

REINFORCEMENT DETAILS

REINFORCING STEEL CALL OUTS SHALL BE READ AS SHOWN BELOW :



REINFORCEMENT SPLICING

UNLESS SHOWN OTHERWISE THE FOLLOWING SPLICE LENGTH SHALL BE USED FOR GRADE 60 DEFORMED BARS.

BAR DIA (mm)	CONCRETE CLASS ≤ K415 SPLICE LENGTH (mm)		CONCRETE CLASS ≤ K450 SPLICE LENGTH (mm)	
	TOP BAR	NOT TOP BAR	TOP BAR	NOT TOP BAR
12	780	558	780	558
16	959	685	959	685
20	1367	976	1319	942
25	1766	1261	1552	1108
32	2892	2066	2542	1816

1. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT WHERE THERE IS MORE THAN 300mm OF FRESH CONCRETE CAST BELOW SPLICE.
2. SPLICE LENGTH FOR 3 BARS BUNDLE SHALL BE INCREASED BY 20%.
3. SPLICE LENGTH FOR 4 BARS BUNDLE SHALL BE INCREASED BY 33%.
4. THE CONTRACTOR SHOULD SUBMIT FOR APPROVAL COMPLETE DETAILS FOR ANY MECHANICAL JOINTS.

PRESTRESSING REINFORCEMENT

1. UNCOATED SEVEN-WIRE HIGH TENSILE, COLD DRAWN LOW RELAXATION STRAND, COMPLYING WITH THE REQUIREMENTS OF ASTM A416-80, GRADE 270 SPECIFICATION HAVING NOMINAL TENSILE STRENGTH OF (Fpu) OF 1860 Mpa

POST-TENSIONING SYSTEM

1. THE POST -TENSIONING SYSTEM TO BE UTILIZED SHALL BE AS PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
2. THE PRESTRESSING DESIGN JACKING FORCE AND ELONGATION ARE BASED ON THE FOLLOWING PARAMETERS:
- | | |
|--------------------------------|-------------|
| AREA OF STRAND 0.6"Ø | 140mm² |
| WOBBLE COEFFICIENT | k= 0.0017/m |
| FRICTION CURVATURE COEFFICIENT | μ= 0.20 |
| DRAW-IN WEDGE (ANCHORAGE SET) | 6mm |
| MODULUS OF ELASTICITY | 195000Mpa |
3. DUCTS FOR BONDED POST -TENSIONING STRAND SHALL BE FLEXIBLE, GALVANIZED, INTERLOCKED, MORTAR AND GROUT TIGHT, AND FABRICATED OF NOT LIGHTER THAN 28 GAUGE STEEL

GROUTING

1. GROUT USED IN CONJUNCTION WITH PRESTRESSING SHALL BE NON-SHRINKAGE GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 33Mpa AT 7 DAYS AND 55Mpa AT 28 DAYS

MECHANICALLY STABILISED EARTH RETAINING WALLS


1. THE SUPPLIER IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF THE MECHANICALLY STABILISED EARTH RETAINING WALLS AND ALL LIMITED COMPONENT INCLUDING BUT NOT LIMITED TO COPING BEAM, APPROACH SLAB, WALL PANELS, FOOTING BEAM etc.
2. ALL DESIGNS AND DETAILS FOR MECHANICALLY STABILISED EARTH RETAINING WALLS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

FOUNDATION DESIGN

1. PLATE BEARING TEST SHALL BE UNDERTAKEN AT FOUNDING LEVEL FOR EVERY 100m² OF FOUNDATION AND AT LEAST 1 PER FOUNDATION. THIS TEST SHALL BE LOADED TO 150% THE RESPECTIVE ALLOWABLE BEARING CAPACITY FOR THAT FOUNDATION. THE TEST SHALL BE UNDERTAKEN PRIOR TO PLACING BLINDING CONCRETE. NO PART OF THE PERMANENT STRUCTURE SHALL BE USED AS REACTION. BEARING CAPACITY FOR SHALLOW FOUNDATION IS CONSIDERED 300kPa. CONTRACTOR HAS TO ENSURE THAT THE REQUIRED BEARING CAPACITY IS ACHIEVED.

PILE TESTING

1. ALL PILE TESTING TO BE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
2. METHOD STATEMENT FOR ALL PILE TESTING TO BE APPROVED BY THE DESIGNER PRIOR TO COMMENCING TESTING.
3. PRELIMINARY PILE LOAD TESTING:
- A. PRELIMINARY PILE LOAD TESTING SHALL BE A STATIC LOAD TEST.
 - B. A PRELIMINARY PILE LOAD TEST SHALL BE UNDERTAKE AT A FREQUENCY OF 1 PER BRIDGE / STRUCTURE.
 - C. THE PRELIMINARY PILE LOAD TEST SHALL BE UNDERTAKEN ON A NON-WORKING PILE.
 - D. THE PRELIMINARY PILE LOAD IS TO PROVE THE PILE DESIGN AND SHALL BE UNDERTAKEN PRIOR TO THE CONSTRUCTION OF ANY PILES FOR THE RELEVANT BRIDGE / STRUCTURE.
 - E. THE PILE SHALL BE LOADED TO A MINIMUM OF 200% THE SPECIFIED WORKING LOAD OF THE PILES.
 - F. THE PILING METHOD SHALL BE THE SAME AS THAT WILL BE USED FOR THE WORKING PILES.




STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

CLIENT:


PROJECT:

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CONSULTANT:

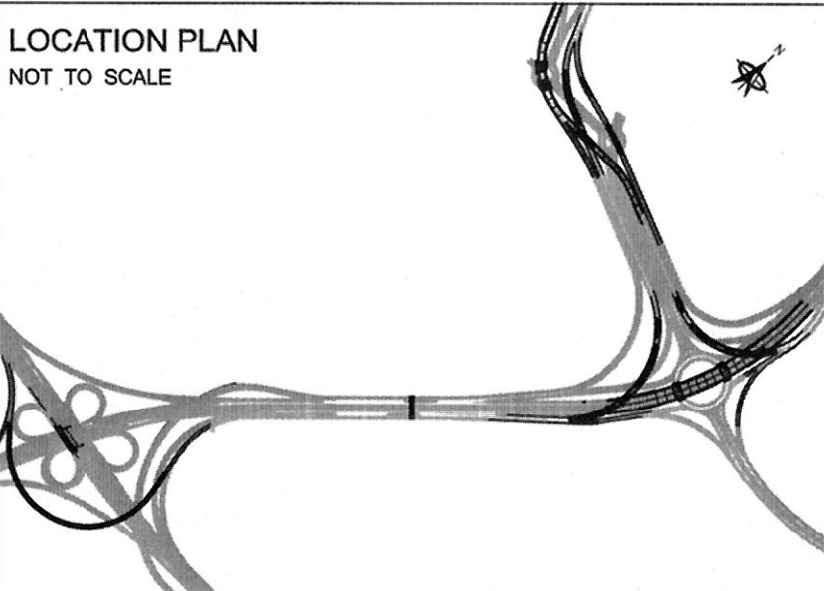


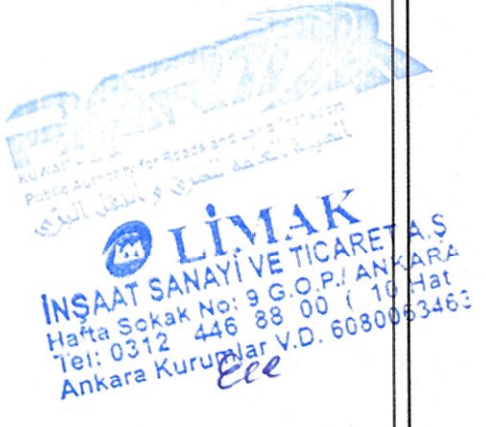
IN ASSOCIATION WITH:



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DRAWN BY:	SG	APPROVED BY:	AZ

G. THE FOLLOWING SHALL BE PROVIDED AS A MINIMUM:

G1. A LOAD MEASURE SYSTEM IN LINE WITH THE LOADING AXIS AND SEPARATE TO THE FORCE APPLICATION SYSTEM (I.E. NOT THE PRESSURE GAUGE ON THE HYDRAULIC JACK).

G2. PILE HEAD DEFLECTIONS TO BE MEASURED BY 2 SEPARATE SYSTEMS. 1 SYSTEM SHALL BE AT LEAST 4 DIAL GAUGES (OR SIMILAR) AND THE OTHER IS TO BE AGREED WITH THE ENGINEER.

H. LOADING SEQUENCE SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND AGREED WITH THE ENGINEER IN ADVANCE.

4. WORKING PILE TEST:

A. WORKING PILE LOAD TESTS SHALL BE STATIC LOAD TESTS, SHOULD THE CONTRACTOR WISH TO CHANGE TO DYNAMIC LOAD TESTING THIS SHALL BE AGREED WITH THE DESIGNER IN ADVANCE.

B. A WORKING PILE LOAD TEST SHALL BE UNDERTAKE AT A FREQUENCY OF 1% OF ALL PILES AND AT LEAST 1 PER BRIDGE SUPPORT.

C. THE WORKING PILE LOAD TEST LOCATIONS SHALL BE SELECTED BY THE ENGINEER AFTER THE COMPLETION OF PILING WORKS.

D. THE PILE SHALL BE LOADED TO A MINIMUM OF 150% THE SPECIFIED WORKING LOAD OF THE PILES.

E. THE FOLLOWING SHALL BE PROVIDED AS A MINIMUM.

E1. A LOAD MEASURE SYSTEM IN LINE WITH THE LOADING AXIS AND SEPARATE TO THE FORCE APPLICATION SYSTEM (I.E. NOT THE PRESSURE GAUGE ON THE HYDRAULIC JACK).

E2. PILE HEAD DEFLECTIONS TO BE MEASURED BY 2 SEPARATE SYSTEMS. 1 SYSTEM SHALL BE AT LEAST 4 DIAL GAUGES (OR SIMILAR) AND THE OTHER IS TO BE AGREED WITH THE DESIGNER.

F. LOADING SEQUENCE SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND AGREED WITH THE DESIGNER IN ADVANCE.

5. INTEGRITY TESTING:

A. PRELIMINARY PILE LOAD TEST PILES

A1. 100% CAPILLARY LOGGING.

A2. 100% PIT.

A3. 100% CROSSHOLE SONIC LOGGING WITH A MINIMUM OF 4 TUBES.

B. WORKING PILES

B1. 100% PIT.

B2. CROSSHOLE SONIC LOGGING

B2.A 100% TUBES INSTALLED.

B2.B 25% LOGGED TO BE SELECTED BY THE DESIGNER AFTER THE COMPLETION OF PILING.

6. PILING OPERATION

A. ALL PILING WORK SHALL BE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.

B. METHOD STATEMENT FOR PILING TO BE APPROVED BY THE DESIGNER PRIOR TO COMMENCING ANY PILING WORKS.

C. ONLY CLEAN WATER SHALL BE USED FOR PILING. NO OTHER SUPPORT FLUIDS (INCLUDING BENTONITE) SHOULD BE USED UNLESS APPROVED BY THE ENGINEER AND APPROPRIATE ADJUSTMENTS TO THE PILE DESIGN HAVE BEEN MADE.

D. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING A STABLE PILE WORKING PLATFORM.

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.	km/hl	KILOMETER PER HOUR
ACI	AMERICAN CONCRETE INSTITUTE	KN, KN	KILONEWTON
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION.	kV	KILOVOLT
ASTM	AMERICAN STANDARD FOR TESTING OF MATERIALS.	LL	LIVE LOAD
ABUT.	ABUTMENT	LONG.	LONGITUDINAL
APPR.	APPROACH	LT.	LEFT
APPROX.	APPROXIMATELY	M	METER
ALT.	ALTERNATE	MAX.	MAXIMUM
BL	BASELINE	MIN.	MINIMUM
BF	BACKFACE	MISC.	MISCELLANEOUS
B/C	BARRIER CURB	MM, mm	MILLIMETER
BOT. or B	BOTTOM	MPa, MPA	MEGA PASCAL
BRGS.	BEARINGS	MED.	MEDIAN
BR	BARRIERS	MGL	MODIFIED GROUND LEVEL
C/L	CENTER LINE	NB	NORTHBOUND
C/C	CENTER TO CENTER	NE	NORTHEAST
Ch.	CHAINAGE	NF	NEAR FACE
CONTR.	CONTRACTION	No.	NUMBER
CLR.	CLEARANCE, CLEAR	NOM.	NOMINAL
COL.	COLUMN	NTS	NOT TO SCALE
CONC.	CONCRETE	NW	NORTHWEST
CONST.	CONSTRUCTION	OPP.	OPPOSITE
cu	CUBIC	P/C	PRESTRESSED CONCRETE
CM	CENTIMETER	PGL	PROFILE GRADE LINE
CW	CARRIAGEWAY	PL	PLATE
CJ	CONSTRUCTION JOINT	PROP.	PROPOSED
DL	DEAD LOAD	P/S	PRESTRESSED
DEG.	DEGREE	QTY.	QUANTITY
DIA. or Ø	DIAMETER	R	RADIUS
DIAPH.	DIAPHRAGM	RC	REINFORCED CONCRETE
DRG	DRAWING	RDWY.	ROADWAY
DIST.	DISTANCE	RE	REINFORCED EARTH
DIM.	DIMENSIONS	REBAR	REINFORCING STEEL
EA.	EACH	REF.	REFERENCE
EB	EASTBOUND	REINF.	REINFORCEMENT
EE	EACH END	REQ'D.	REQUIRED
EF	EACH FACE	RET.	RETAINING
EGL	EXISTING GROUND LEVEL	RL	REFERENCE LINE
EJ	EXPANSION JOINT	ROW	RIGHT OF WAY
EL.	ELEVATION	RT.	RIGHT
EQUAL.	EQUALLY	S	SOUTH
EXIST.	EXISTING	SB	SOUTHBOUND
EXP. or E	EXPANSION	SDWK.	SIDEWALK
FF	FRONT FACE	SE	SOUTHEAST
FRL	FINISHED ROAD LEVEL	SH.	SHOULDER
FRP	FIBER REINFORCED PLASTIC	SPEC.	SPECIFICATION
FIX. or F	FIXED	SQ	SQUARE
FTG.	FOOTING	SS	STAINLESS STEEL
GALV.	GALVANIZED	STA.	STATION, STATIONING
GL	GROUND LEVEL	STD.	STANDARD
GR	GUARDRAIL	SW	SOUTHWEST
HORIZ.	HORIZONTAL	SYMM.	SYMMETRICAL
H.S.	HIGH STRENGTH	T	TON , METRIC TONNES
INT.	INTERIOR	TAN.	TANGENT
INV.	INVERT	TEL.	TELEPHONE
INTR.	INTERMEDIATE	TEMP.	TEMPORARY
INF.	INNER NEAR FACE	THK.	THICK
IFF.	INNER FAR FACE	T.O.C	TOP OF CONCRETE
JB	JUNCTION BOX	T.O.S	TOP OF SLAB
JT.	JOINT	TYP.	TYPICAL
kg	KILOGRAM	U.N.O	UNLESS OTHERWISE NOTED
km	KILOMETER	VAR.	VARIES
		VERT.	VERTICAL
		WB	WESTBOUND
		W/O	WITHOUT
		WP	WORKING POINT
		W/	WITH

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



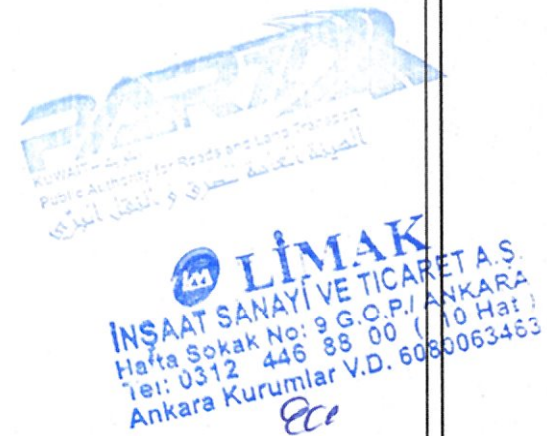
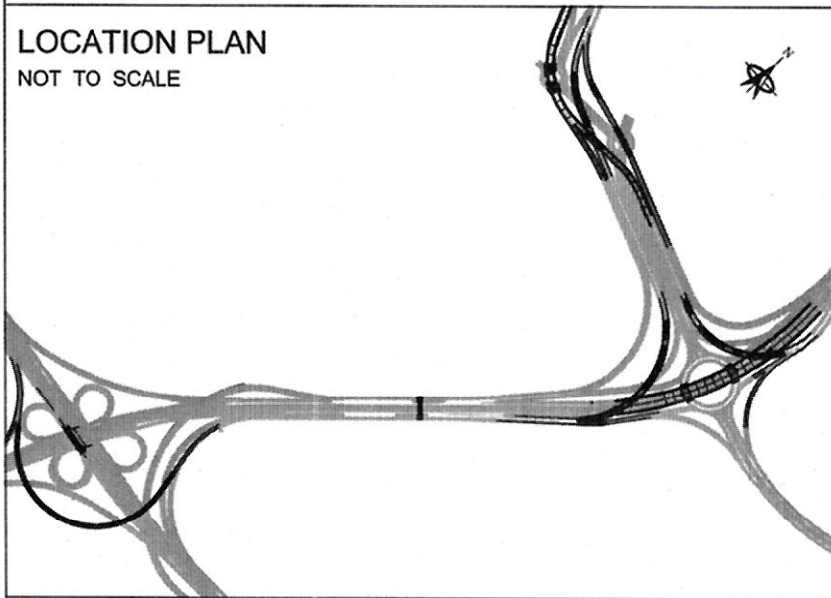
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



Rev. No.	Date	Description	By
DRAWING TITLE:			
GENERAL NOTES (SHEET-03)			
DRAWING NO: GE_00_GN_0003			
DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	N.T.S	A1 SCALE:	N.T.S
DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SG	APPROVED BY:	AZ

CLIENT:



MINISTRY OF PUBLIC WORKS



STATE OF KUWAIT

PROJECT:

STUDY, DESIGN AND CONSTRUCTION SUPERVISION FOR CONSTRUCTION AND MAINTENANCE OF
REGIONAL ROAD SOUTH PART (SECTION -2) AGREEMENT NO. EF/R/193
DESIGN OF NEW AIRPORT INTERCHANGES FOR THE KUWAIT INTERNATIONAL AIRPORT TERMINAL II
VARIATION ORDER NO. (2) CONTRACT NO. RA/268

DISCIPLINE:

STRUCTURE DESIGN DRAWINGS BOOK 1 OF 5

DRAWINGS:

3- GENERAL DRAWINGS

CONSULTANT:



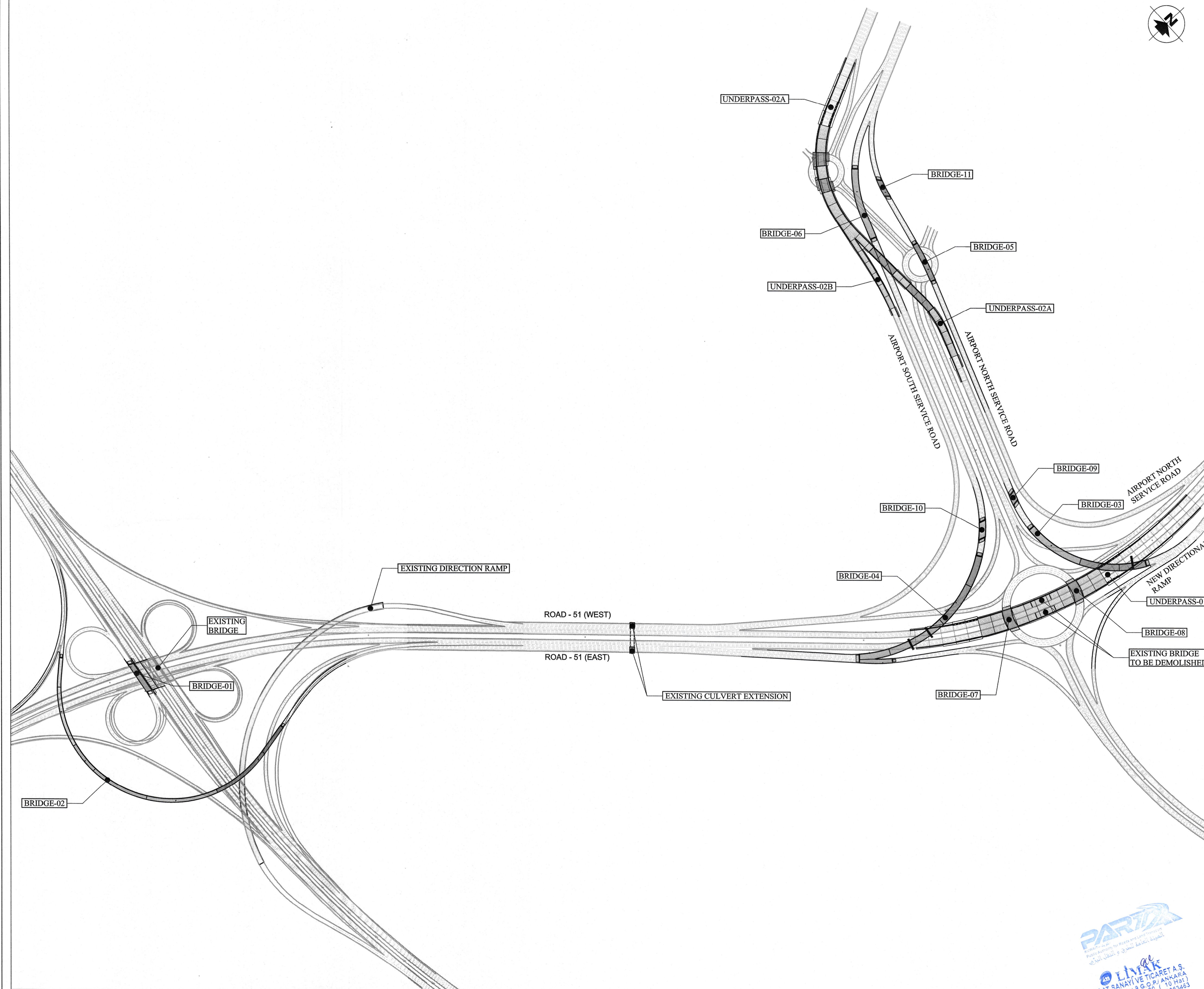
ORIENTAL CONSULTANTS GLOBAL
Global Consulting for Sustainable Development



Dar Al-Dowailah
Engineering Consultants
& Construction Managers



LİMAK
İNŞAAT SANAYİ VE TİCARET A.Ş.
Hıran Sokak No: 98 06110 ANKARA
Tic. Sic. No: 244858 00110 Hatırlı
Ankara Kurumlar V.D. 6080063453



CLIENT:



MINISTRY OF PUBLIC WORKS



STATE OF KUWAIT

PROJECT:

STUDY, DESIGN AND CONSTRUCTION SUPERVISION FOR CONSTRUCTION AND MAINTENANCE OF
REGIONAL ROAD SOUTH PART (SECTION -2) AGREEMENT NO. EF/R/193
DESIGN OF NEW AIRPORT INTERCHANGES FOR THE KUWAIT INTERNATIONAL AIRPORT TERMINAL II
VARIATION ORDER NO. (2) CONTRACT NO. RA/268

DISCIPLINE:

STRUCTURE DESIGN DRAWINGS BOOK 1 OF 5

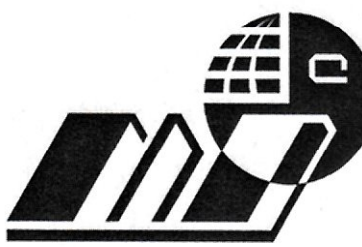
DRAWINGS:

4- BRIDGE NO. 1 STRUCTURE DESIGN DRAWINGS

CONSULTANT:



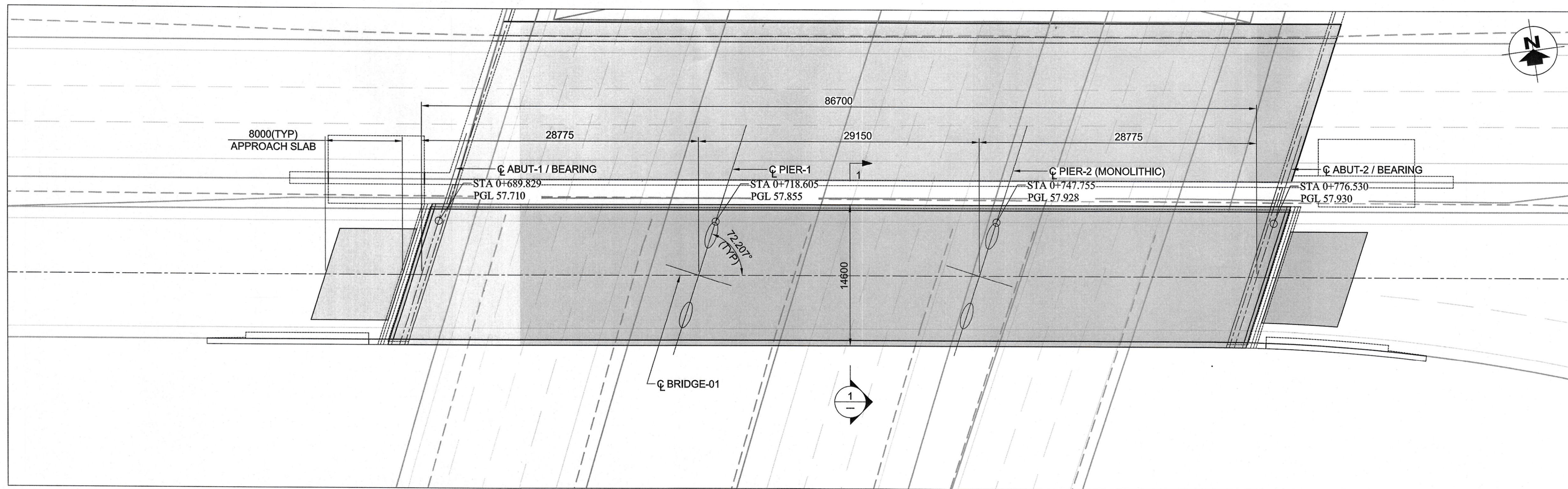
ORIENTAL CONSULTANTS GLOBAL
Global Consulting for Sustainable Development



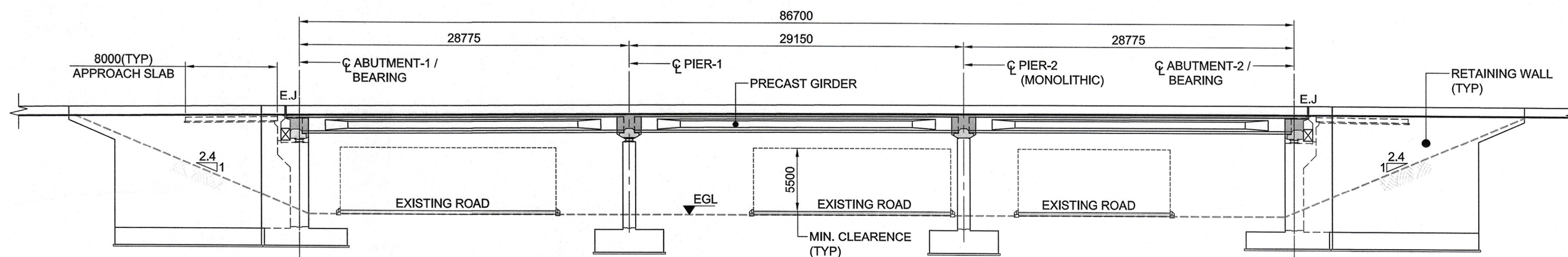
Dar Al-Dowailah
Engineering Consultants
& Construction Managers



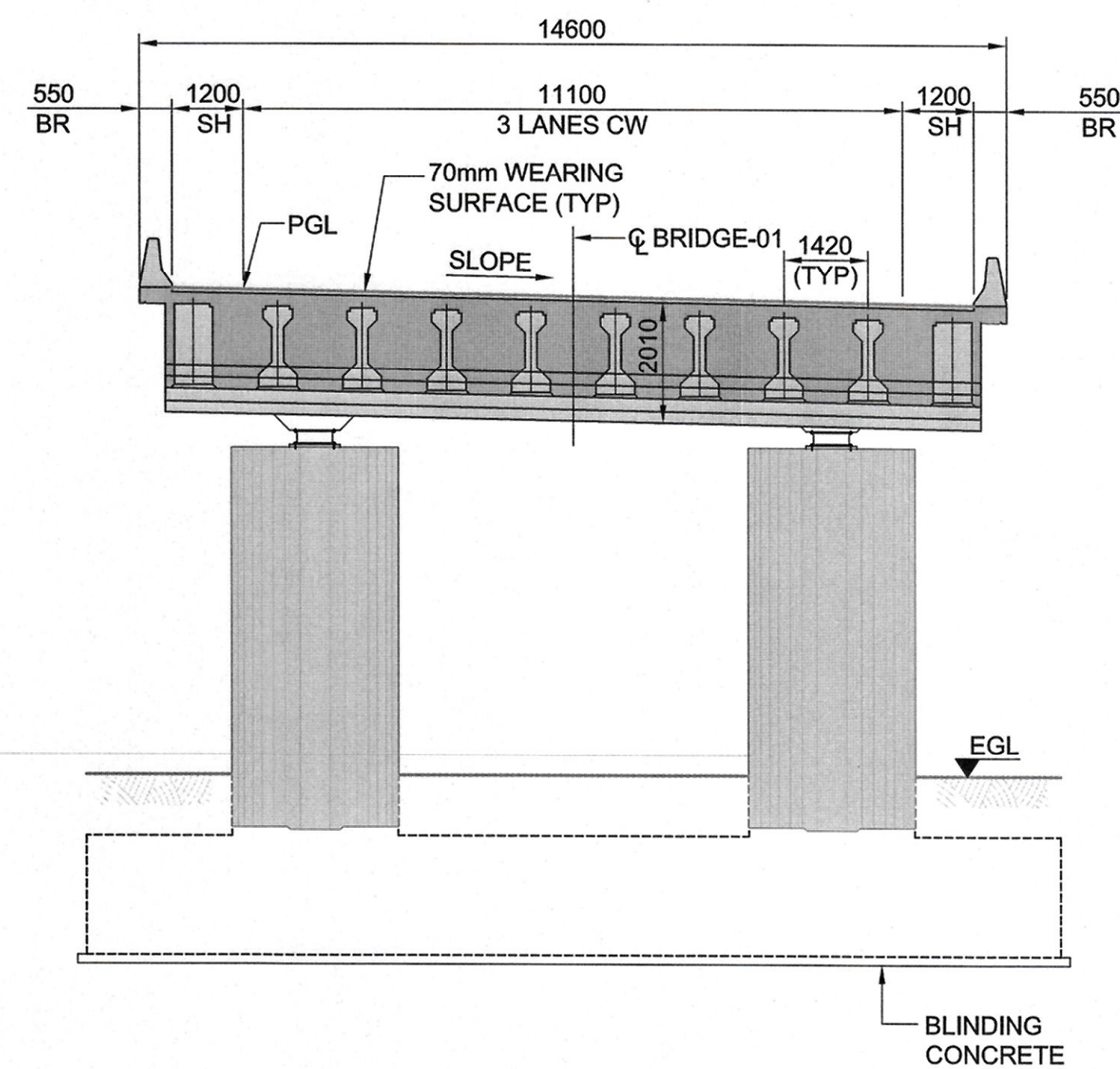
\\nasir\cadd\drawing\1000\PROJECT SUPPORT\1. CURRENT PROJECT\MPV\A3C-Airport Link Road\Drawings\Structure\BR-01-ST_00_BR_0111_01.dwg
Date: Nov 17 Nov 2016 11:21am Pk: 1000\PROJECT SUPPORT\1. CURRENT PROJECT\MPV\A3C-Airport Link Road\Drawings\Structure\BR-01-ST_00_BR_0111_01.dwg



PLAN
SCALE 1:250 (A1), 1:500 (A3)
DIMENSIONS ARE MEASURED ALONG Q BRIDGE



ELEVATION
SCALE 1:250 (A1), 1:500 (A3)
DIMENSIONS ARE MEASURED ALONG Q BRIDGE



1 SECTION
SCALE 1:100 (A1), 1:200 (A3)
DIMENSIONS ARE MEASURED PERPENDICULAR TO Q BRIDGE

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



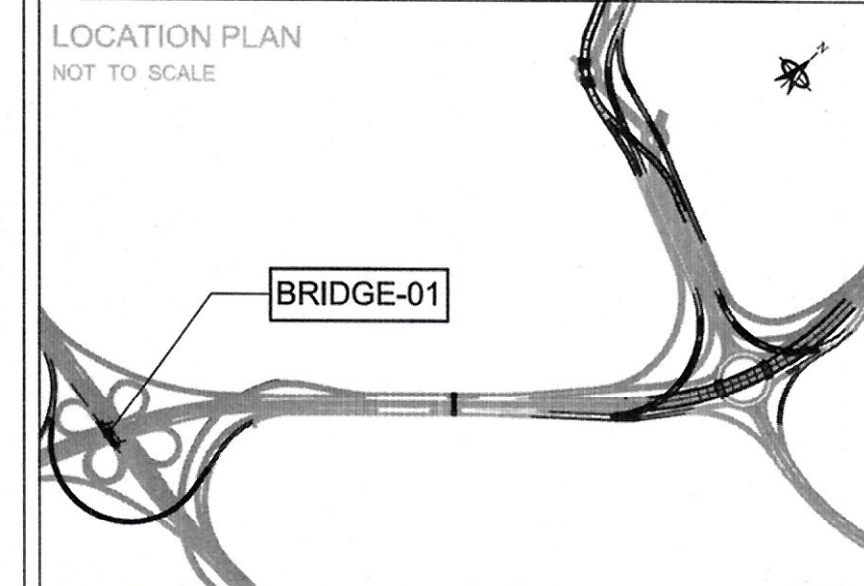
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED; COORDINATES, LEVELS AND CHAINAGES ARE IN METERS.
2. FRL'S AND DECK CROSS SLOPE SHALL BE VERIFIED WITH RELEVANT HIGHWAY DRAWINGS.
3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GENERAL NOTES, CONSTRUCTION SEQUENCE MISCELLANEOUS, HIGHWAY AND UTILITY DRAWINGS.
4. DECK CROSS SLOPE SHOWN IS INDICATIVE ONLY.
5. ALL SHOWN LEVELS SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AS PER EXISTING SITE CONDITIONS AND RELEVANT HIGHWAY DRAWINGS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.

Rev. No.	Date	Description	By

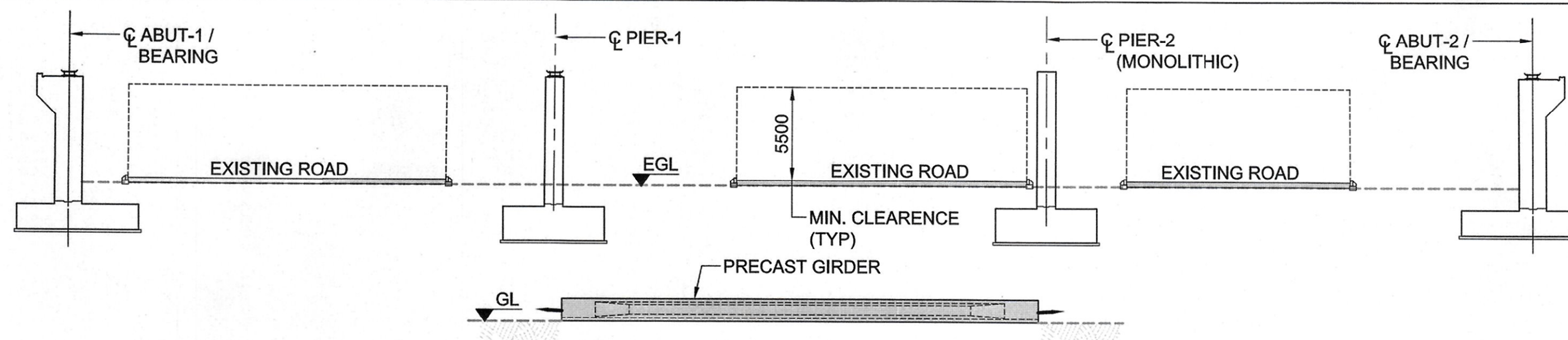
DRAWING TITLE:

BRIDGE - 01
GENERAL ARRANGEMENT AND DETAILS

DRAWING NO: ST_00_BR_0111_01

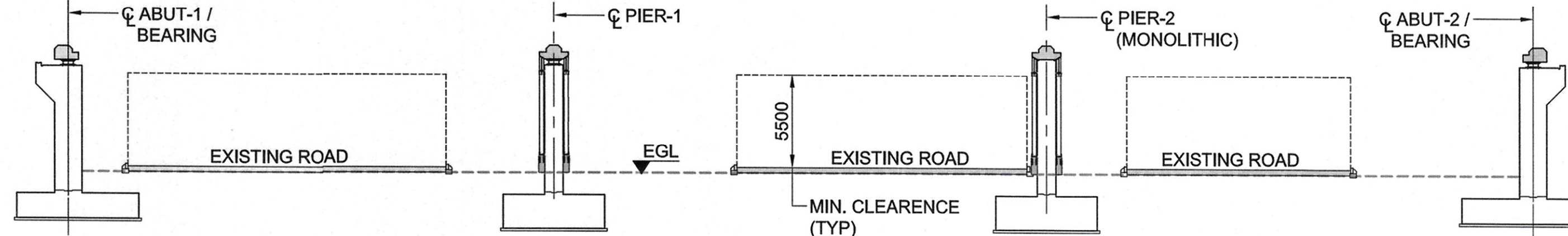
DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	SBB	APPROVED BY:	AZ

INSAAAT SANAYI VE TICARET A.S.
Hatta Sokak No: 9 G.O.P. ANKARA
Tel: 0312 448 88 00 10 Hat
Ankara Kurumlar V.D. 8080063463
Ece



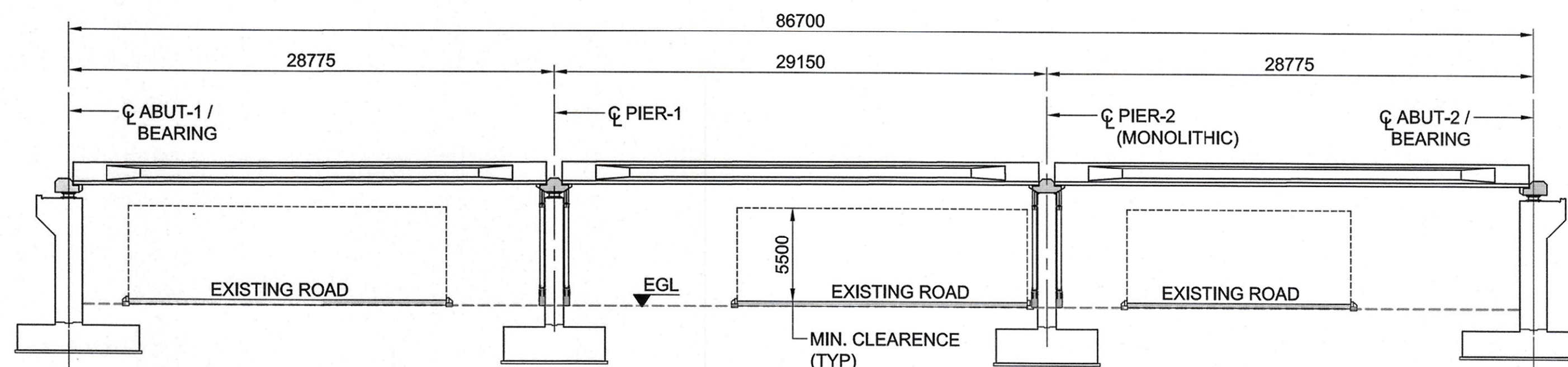
CONSTRUCTION STAGE - 1

1. CONSTRUCT ABUTMENTS AND TEMPORARY BEARINGS (UNROUTED).
2. FORM THE PRECAST GIRDER AND AFTER THE CONCRETE GAINS THE REQUIRED STRENGTH, PRESTRESS IT.



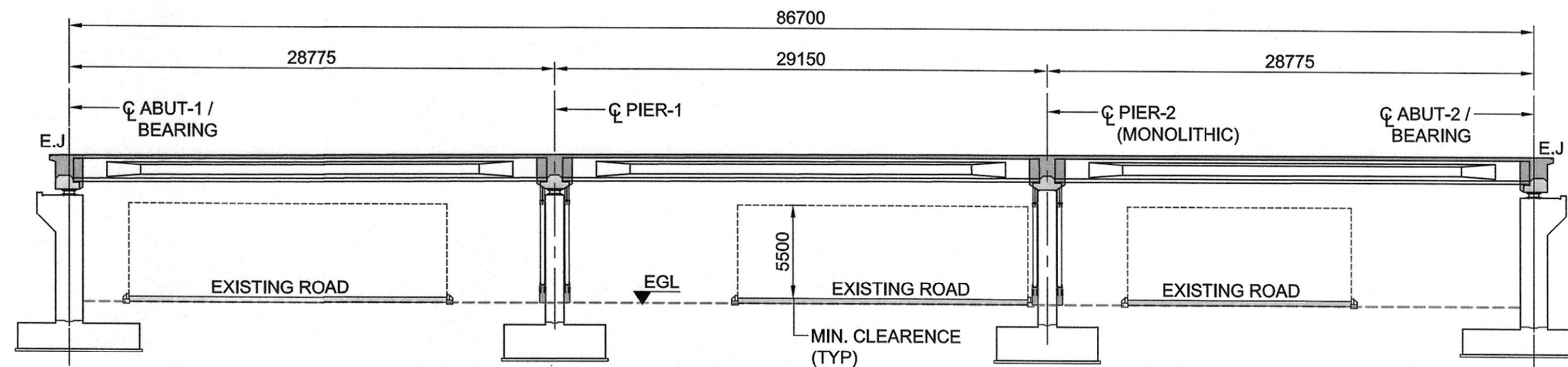
CONSTRUCTION STAGE - 2

1. PRECAST GIRDERS SHALL BE LAUNCHED AND PLACED ON TOP OF THE TEMPORARY BEARINGS AT ABUTMENT CAP.
2. PLACE PRECAST SLAB PANELS BETWEEN THE GIRDERS.
3. CONTRACTOR HAS TO PROVIDE TEMPORARY ASSURING FOR THE BEAM UNTIL CONCRETE IS POURED.



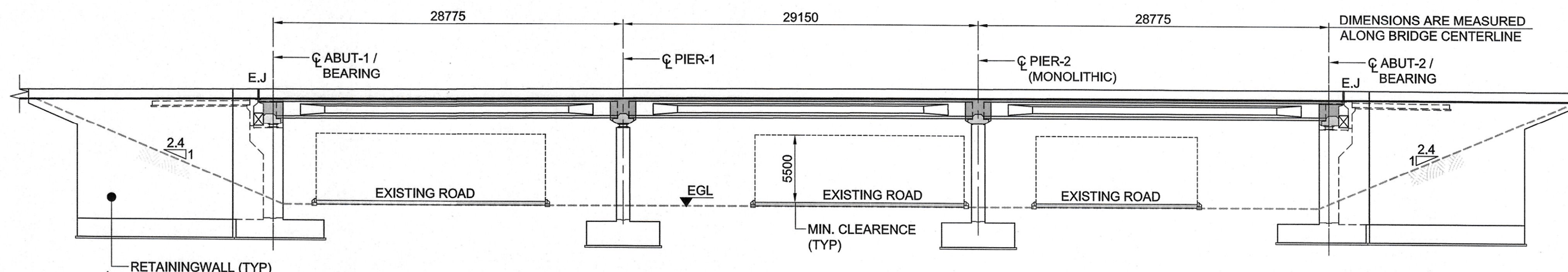
CONSTRUCTION STAGE - 3

1. PRECAST GIRDERS SHALL BE LAUNCHED AND PLACED ON TOP OF THE TEMPORARY BEARINGS AT ABUTMENT CAP.
2. PLACE PRECAST SLAB PANELS BETWEEN THE GIRDERS.
3. CONTRACTOR HAS TO PROVIDE TEMPORARY ASSURING FOR THE BEAM UNTIL CONCRETE IS POURED.



CONSTRUCTION STAGE - 4

1. FORM WORK SHALL BE FIXED FOR DECK SLAB, DIAPHRAGM AND WHEREVER NEEDED.
2. CAST THE DECK SLAB & DIAPHRAGM IN ONE GO.
3. CONTRACTOR HAS TO PROVIDE TEMPORARY ASSURING FOR THE BEAM UNTIL CONCRETE IS POURED.



CONSTRUCTION STAGE - 5

1. REMOVE THE TEMPORARY BEARING BELOW EACH GIRDER AND FIX THE PERMANENT BEARINGS AT THE DESIGNATED LOCATION.
2. CONSTRUCT BACK WALL AND APPROACH SLAB.
3. CONSTRUCT MSE WALLS AND FINISHING OF THE BRIDGE.

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

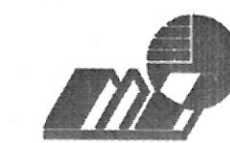
Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



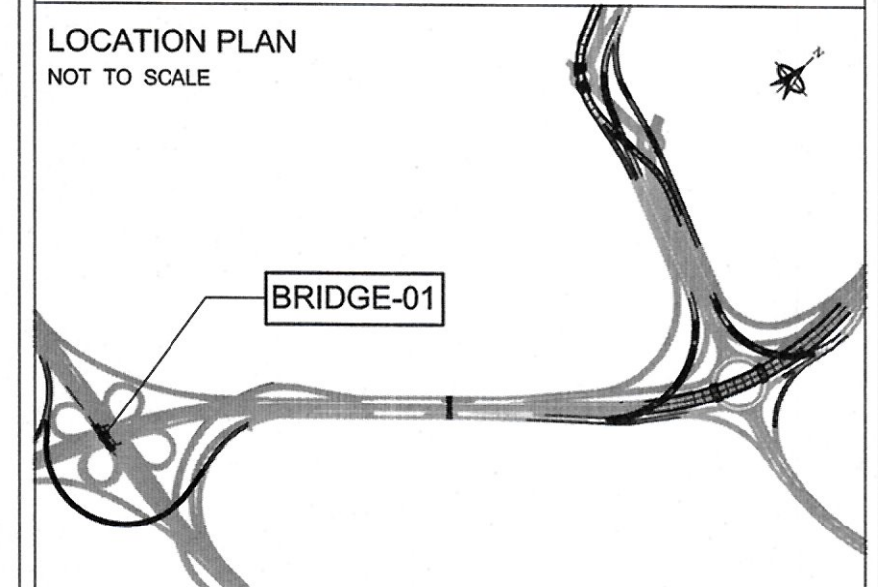
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.



LIMAK
İNŞAAT SANAYİ VE TİCARET A.Ş.
Hatta Sokak No: 9 G.O.P. ANKARA
Teli: 0312 446 88 99 / 10 Hat
Ankara Kültür V.D. 6080063463

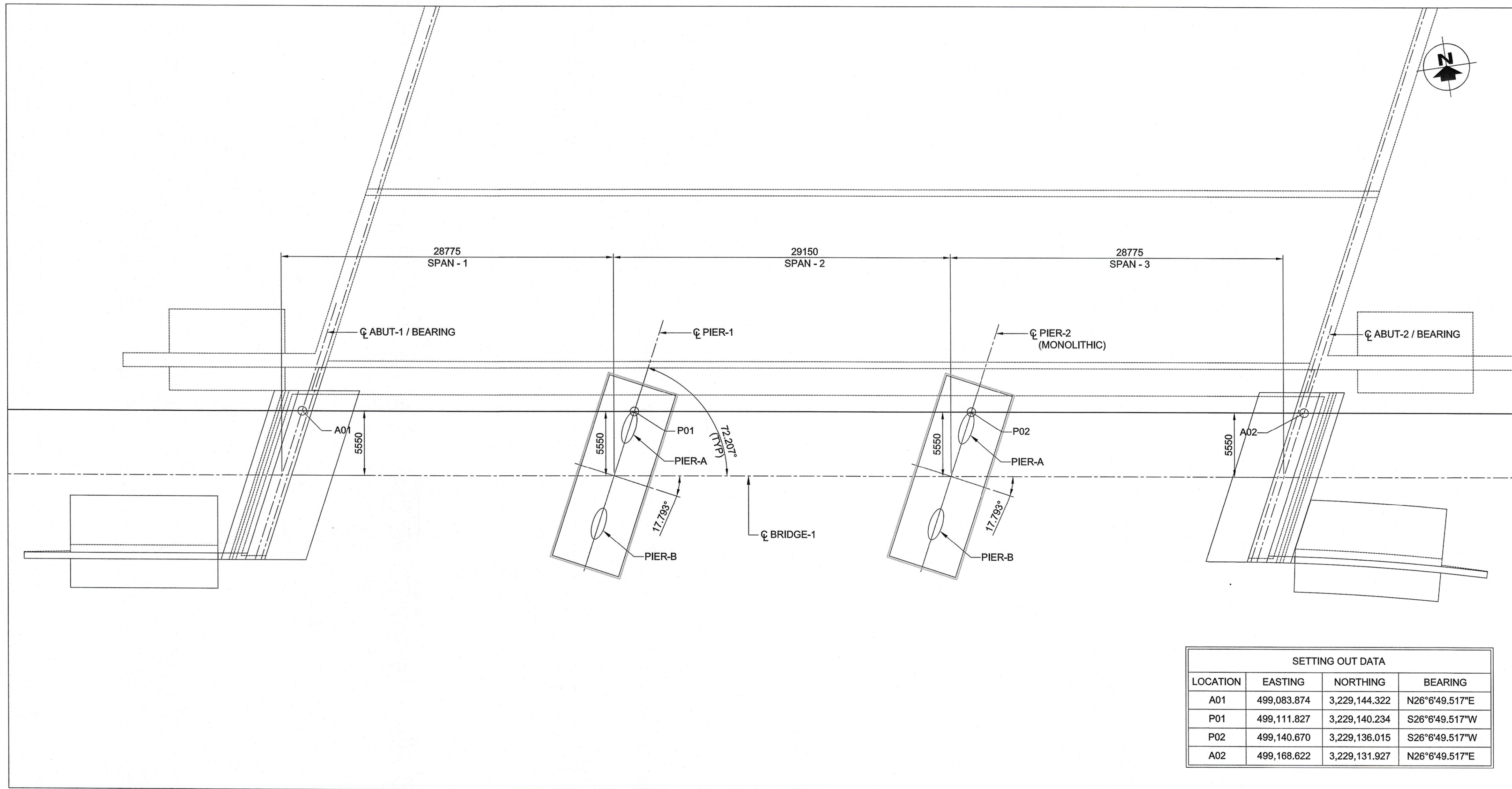
Rev. No.	Date	Description	By

DRAWING TITLE:

BRIDGE - 01
CONSTRUCTION SEQUENCE

DRAWING NO: ST_00_BR_0111_02

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	500	A1 SCALE:	250
DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SBB	APPROVED BY:	AZ



FOUNDATION PLAN
SCALE 1:200 (A1), 1:400 (A3)


CLIENT:


STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

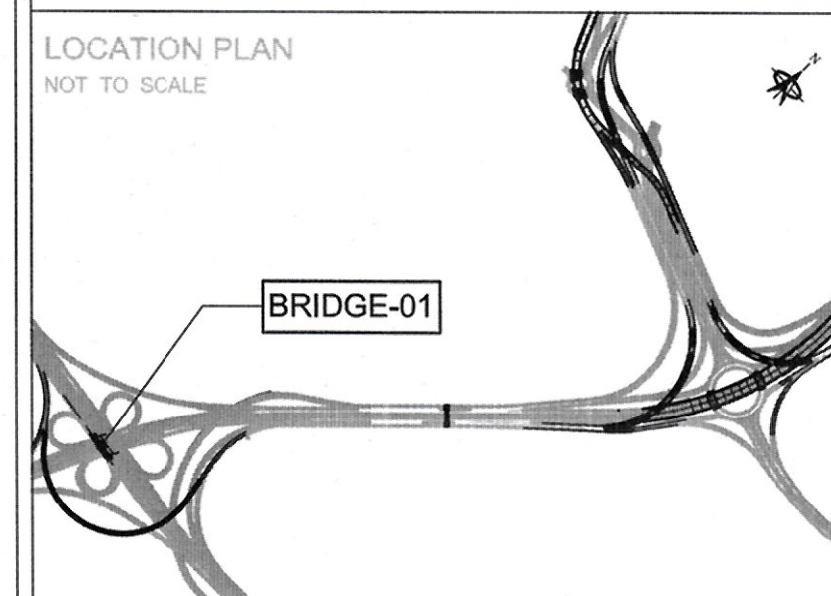
Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:

 **ORIENTAL CONSULTANTS**
COMPANY LIMITED


IN ASSOCIATION WITH:

 **Dar Al-Dowailah**
Engineering Consultants
& Construction Managers



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS
OTHERWISE NOTED; COORDINATES, LEVELS AND
CHAINAGES ARE IN METERS.


LIMAK
İNŞAAT SANAYİ VE TİCARET A.Ş.
Halkın Sokağı No: 5 G.O.P. ANKARA
Tic. Sic. No: 274468 Şişli - Beşiktaş / İstanbul
Ankara Kurumlar V.D. 6642063463

Rev. No.	Date	Description	By

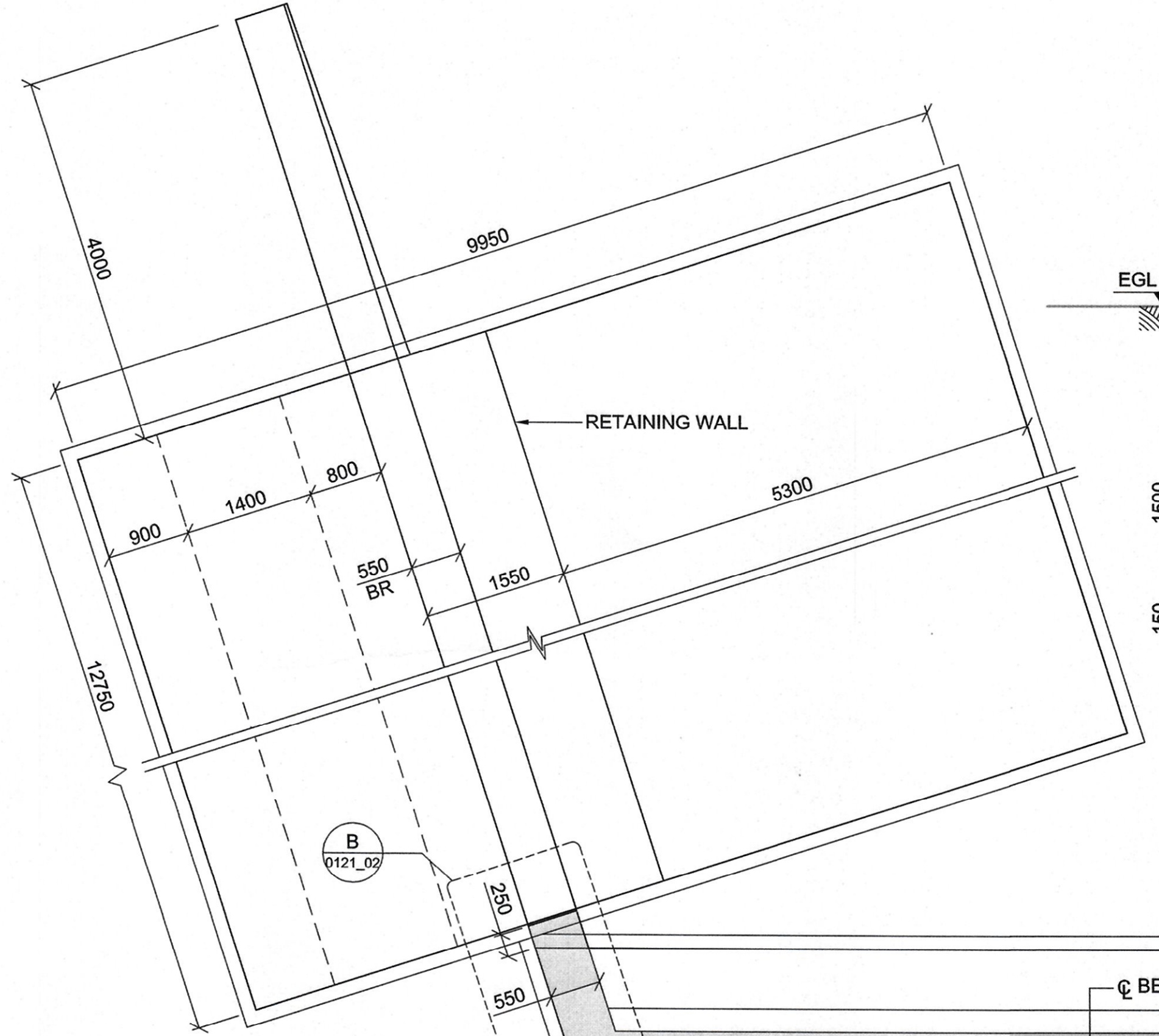
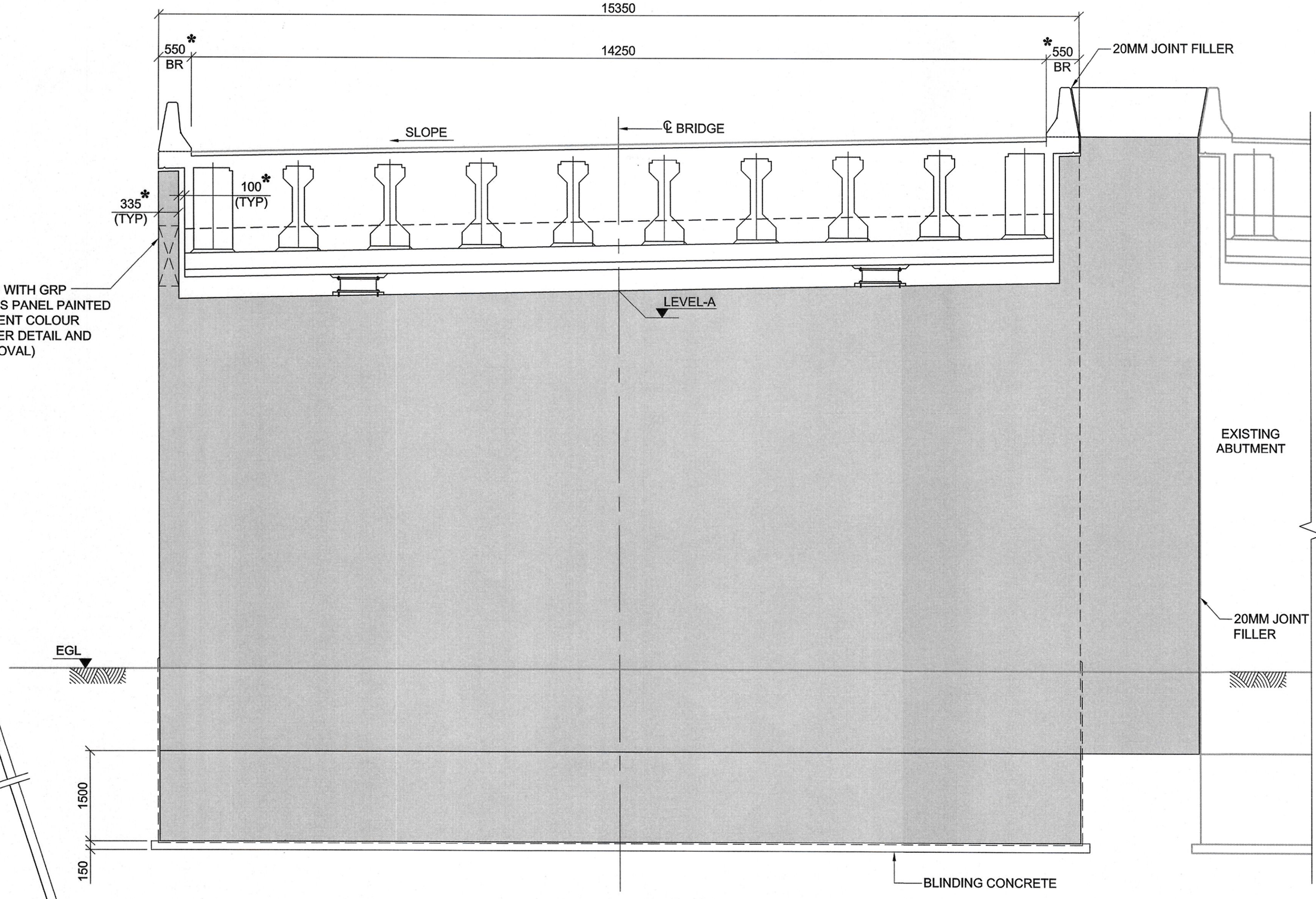
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BRIDGE - 01
FOUNDATION PLAN & SETTING OUT DATA

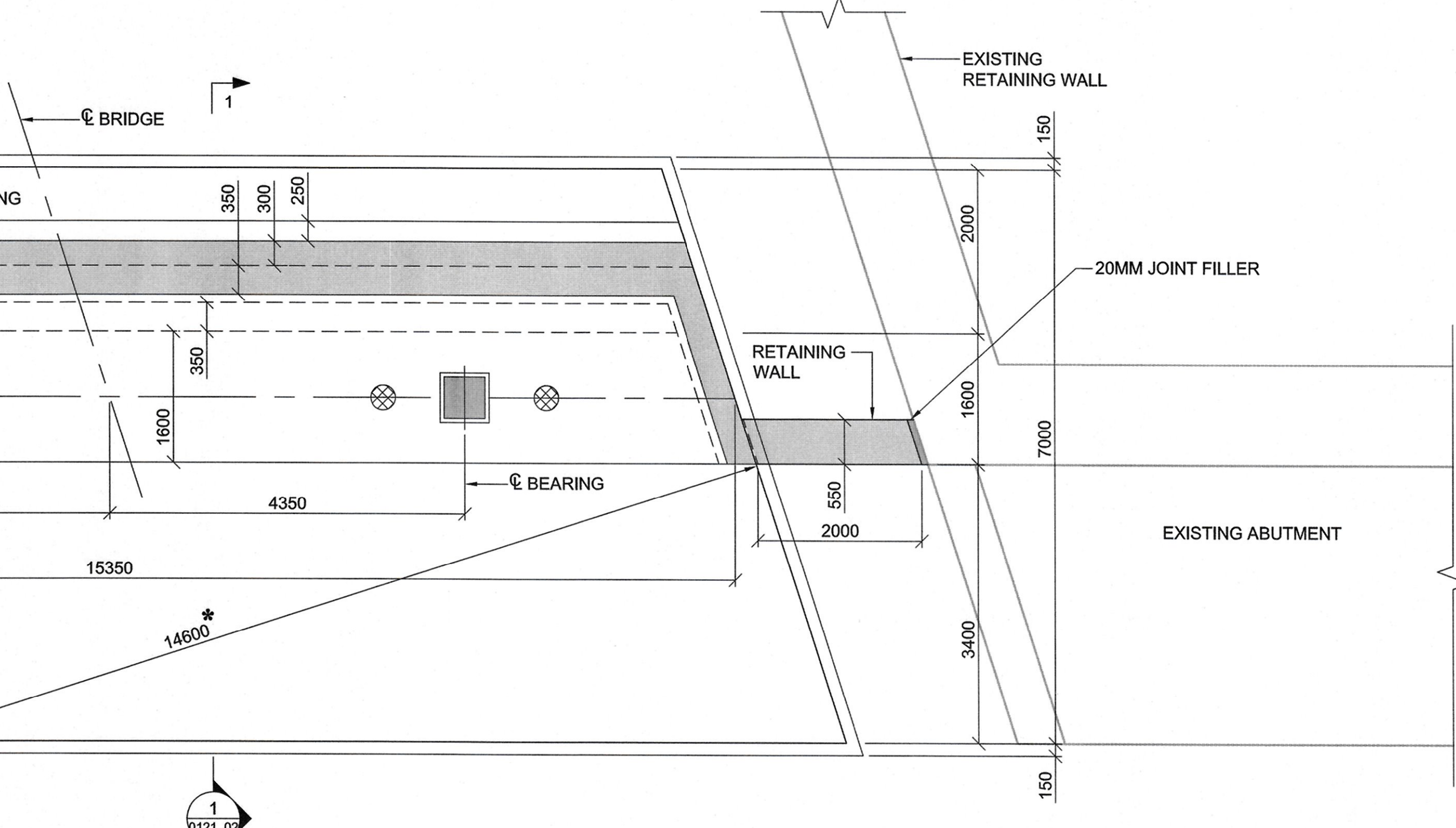
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DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	SBB	APPROVED BY:	AZ

ABUTMENT No.	LEVEL-A	EGL	ALLOWABLE BEARING CAPACITY (kPa)
ABUT-1	55.159	50.00	350

800x1000 OPENING WITH GRP LOCKABLE ACCESS PANEL PAINTED TO MATCH ABUTMENT COLOUR (TO MANUFACTURER DETAIL AND ENGINEER'S APPROVAL)



800x1000 OPENING WITH GRP LOCKABLE ACCESS PANEL PAINTED TO MATCH ABUTMENT COLOUR (TO MANUFACTURER DETAIL AND ENGINEER'S APPROVAL)



PLAN AT FOUNDATION LEVEL
SCALE 1:50 (A1), 1:100 (A3)

* PERPENDICULAR TO THE BRIDGE CENTER LINE

STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

CLIENT:

PROJECT:

Construction, Developing And Maintenance Of Roads And Interchanges For New Terminal Building In Kuwait International Airport At Magwa Road RA268/

CONSULTANT:

ORIENTAL CONSULTANTS COMPANY LIMITED

IN ASSOCIATION WITH:

Dar Al-Dowailah Engineering Consultants & Construction Managers

LOCATION PLAN NOT TO SCALE

NOTES:

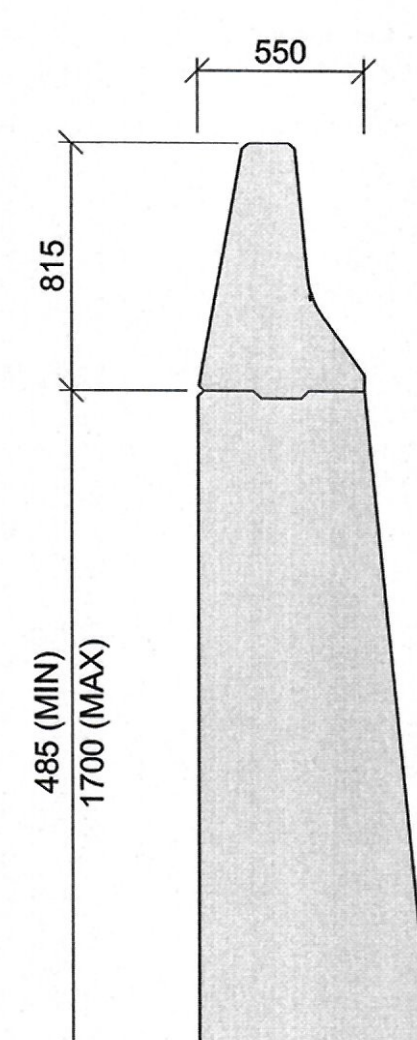
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED; COORDINATES, LEVELS AND CHAINAGES ARE IN METERS.
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GENERAL NOTES, MISCELLANEOUS, HIGHWAY AND UTILITY DRAWINGS.
- DECK CROSS SLOPE DIRECTION SHOWN IS INDICATIVE ONLY.
- FRL'S AND DECK CROSS SLOPE SHALL BE VERIFIED WITH RELEVANT HIGHWAY DRAWINGS.
- JACKING LOCATION SHALL BE PROPERLY ETCHED ON ABUTMENT BEAM.
- THE PROPOSED JACK LOCATIONS ARE INDICATIVE AND SHALL BE VERIFIED BY THE BEARING MANUFACTURER.
- TOP OF THE ABUTMENT LEVEL IS BASED ON A HEIGHT OF 350MM BETWEEN THE GIRDER AND TOP OF THE ABUTMENT.
- SHOWN LEVELS SHOULD BE REVIEWED WITH LATEST REVISION OF HIGHWAY DRAWINGS AND IF ANY DISCREPANCY MORE THAN 50mm IT SHOULD BE REPORTED TO THE ENGINEER.

BRIDGE - 01
ABUTMENT - 01
DIMENSION DETAILS (SHEET-01)

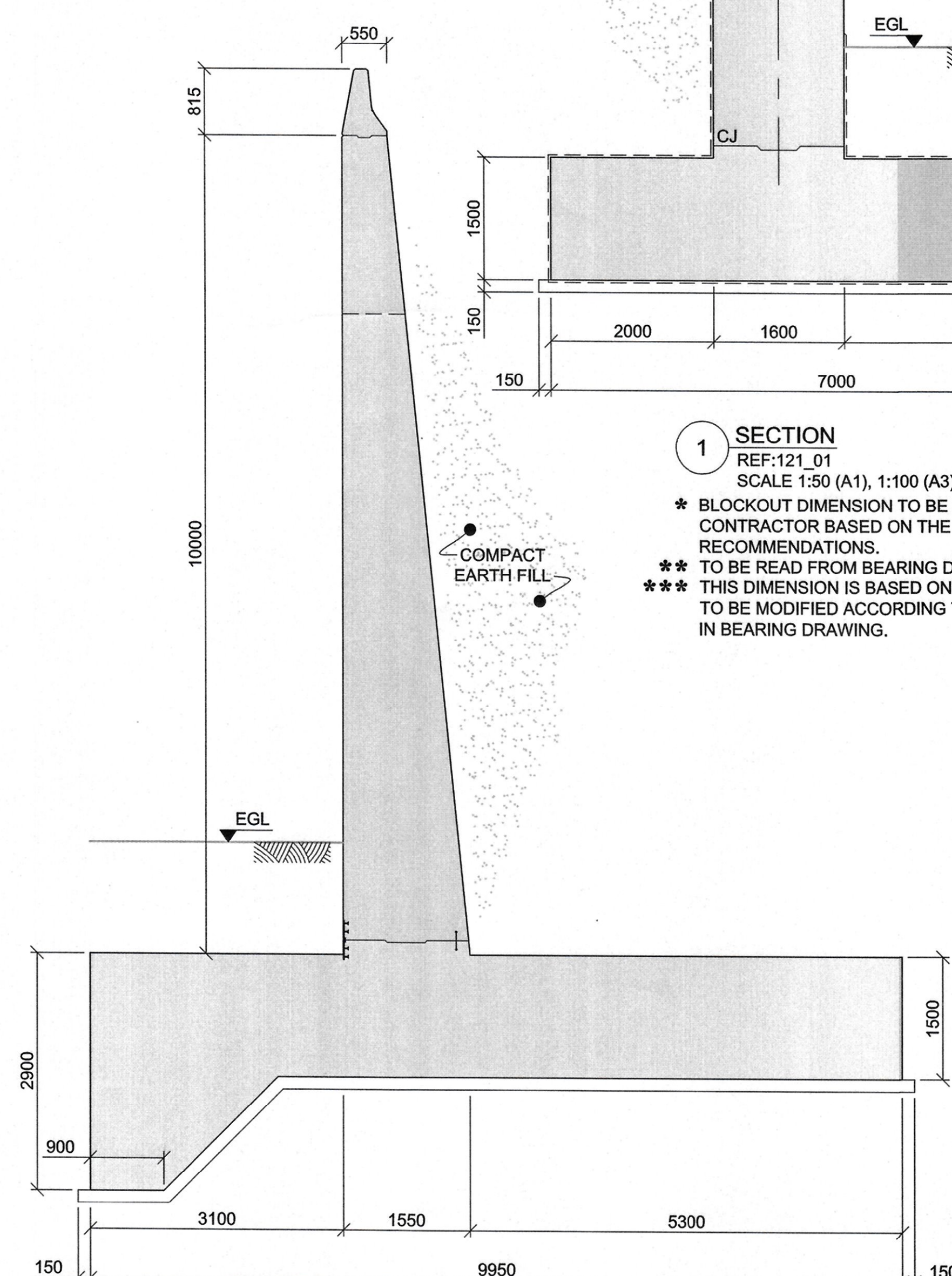
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DATE:	NOV.14, 2016	STATUS:	FINAL
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DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	MA	APPROVED BY:	AZ

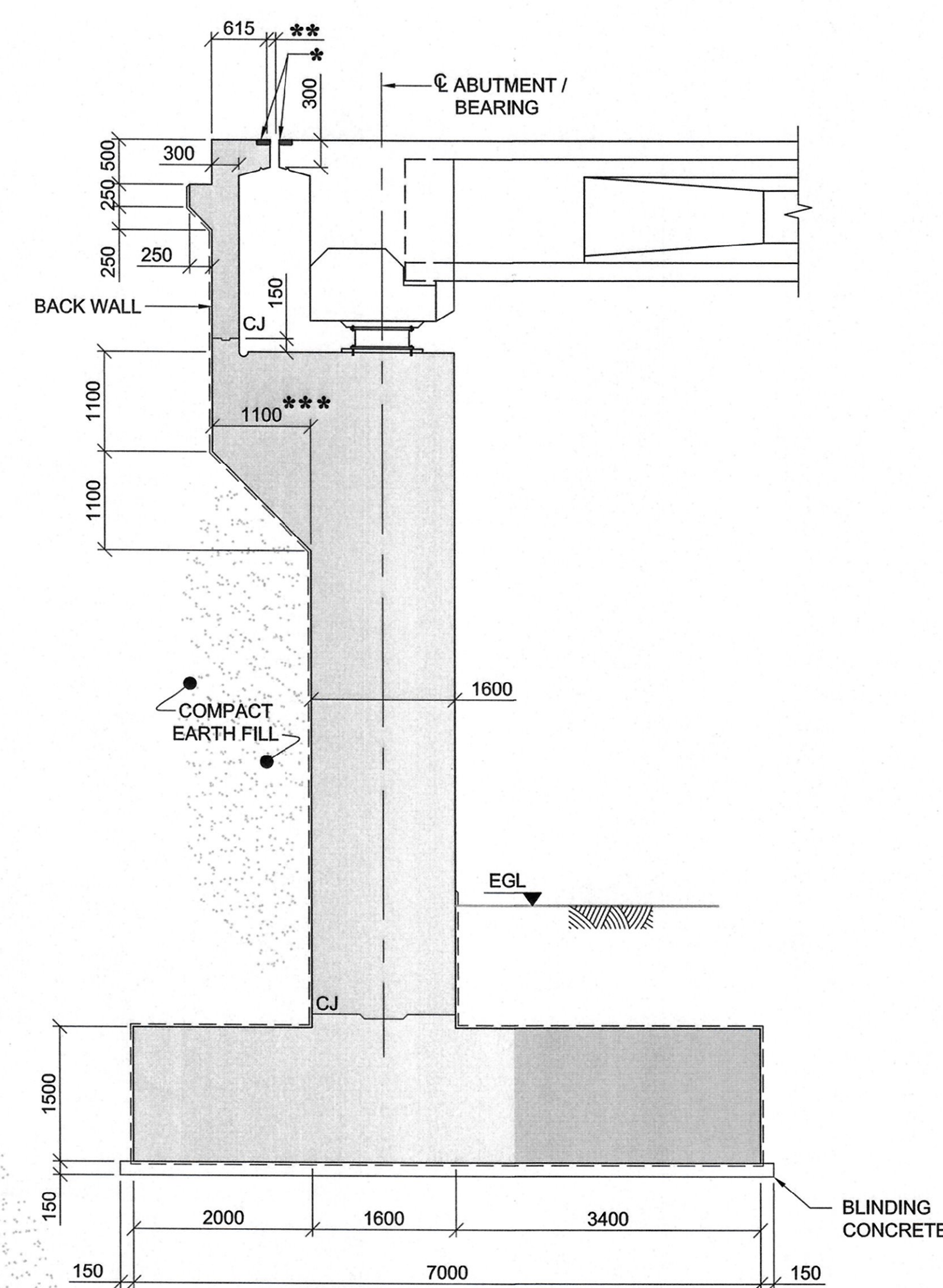
INSAT SANATVE TICARET A.S.
Hizmet Sokak No: 9 G.O. ANKARA
Tel: 0312 446 88 00 10 Hat 1
Ankara Kurumlar Y.D. 0680063452



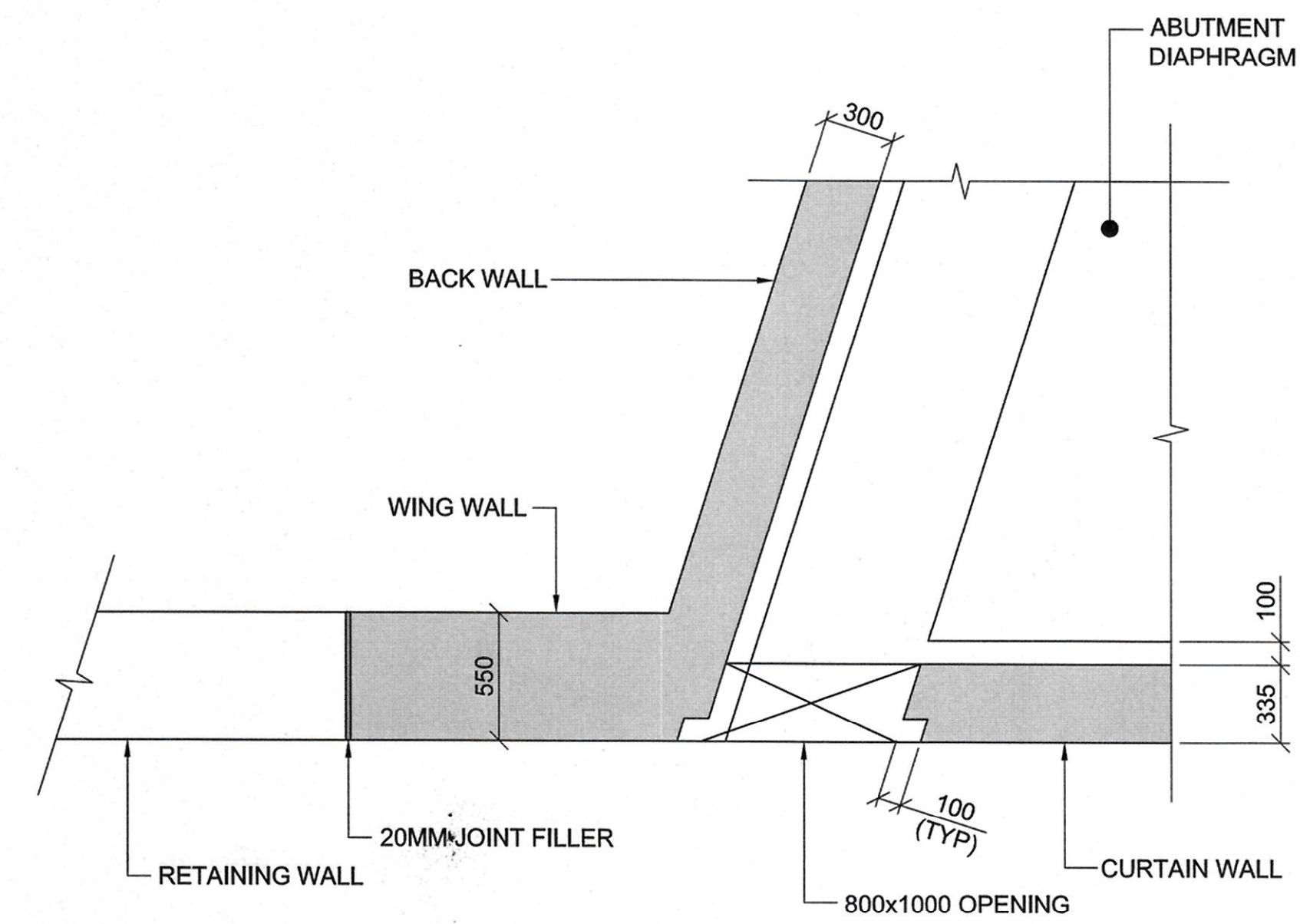
2 SECTION
SCALE 1:25 (A1) 1:50 (A3)



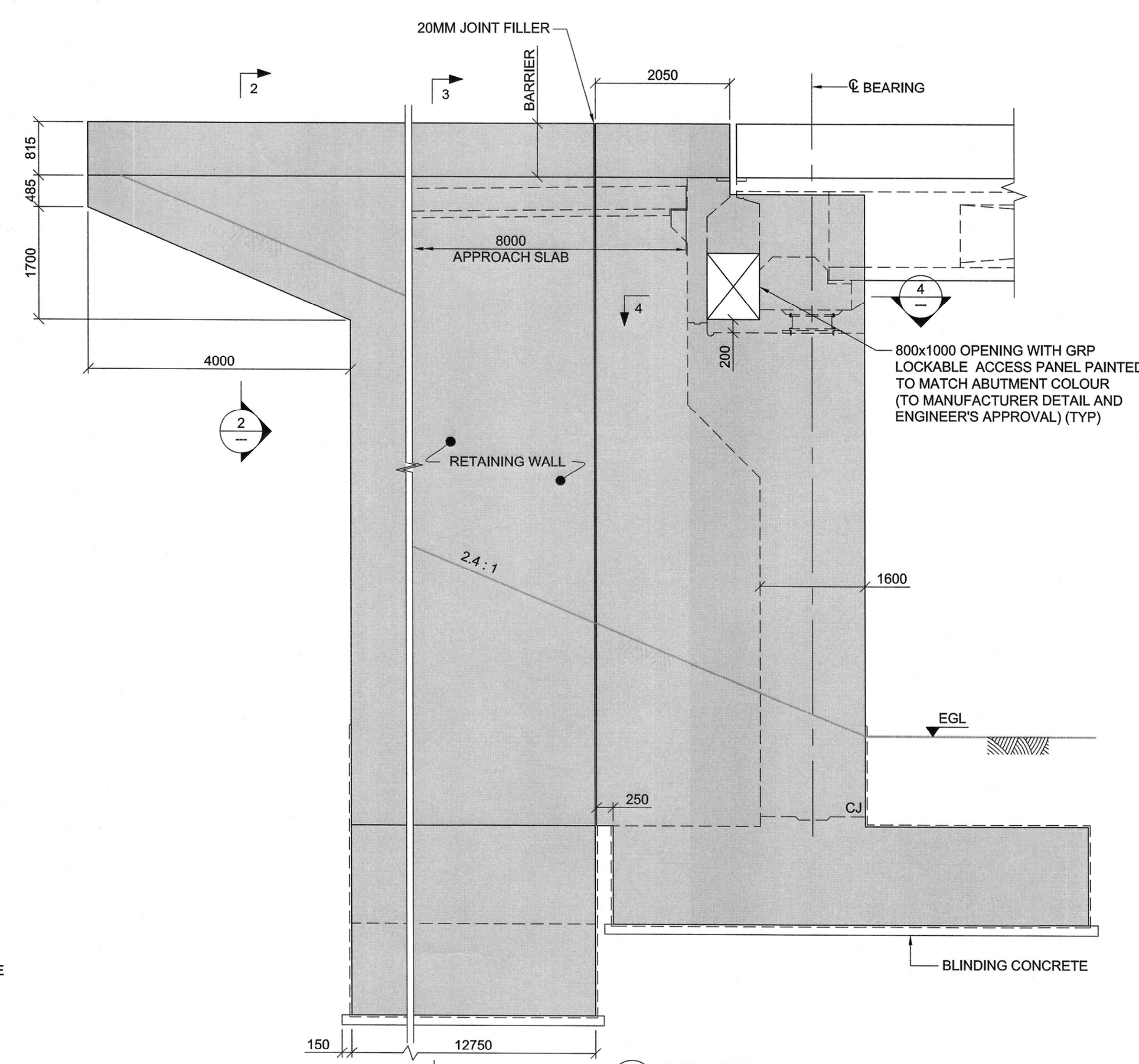
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SCALE 1:50 (A1) 1:100 (A3)



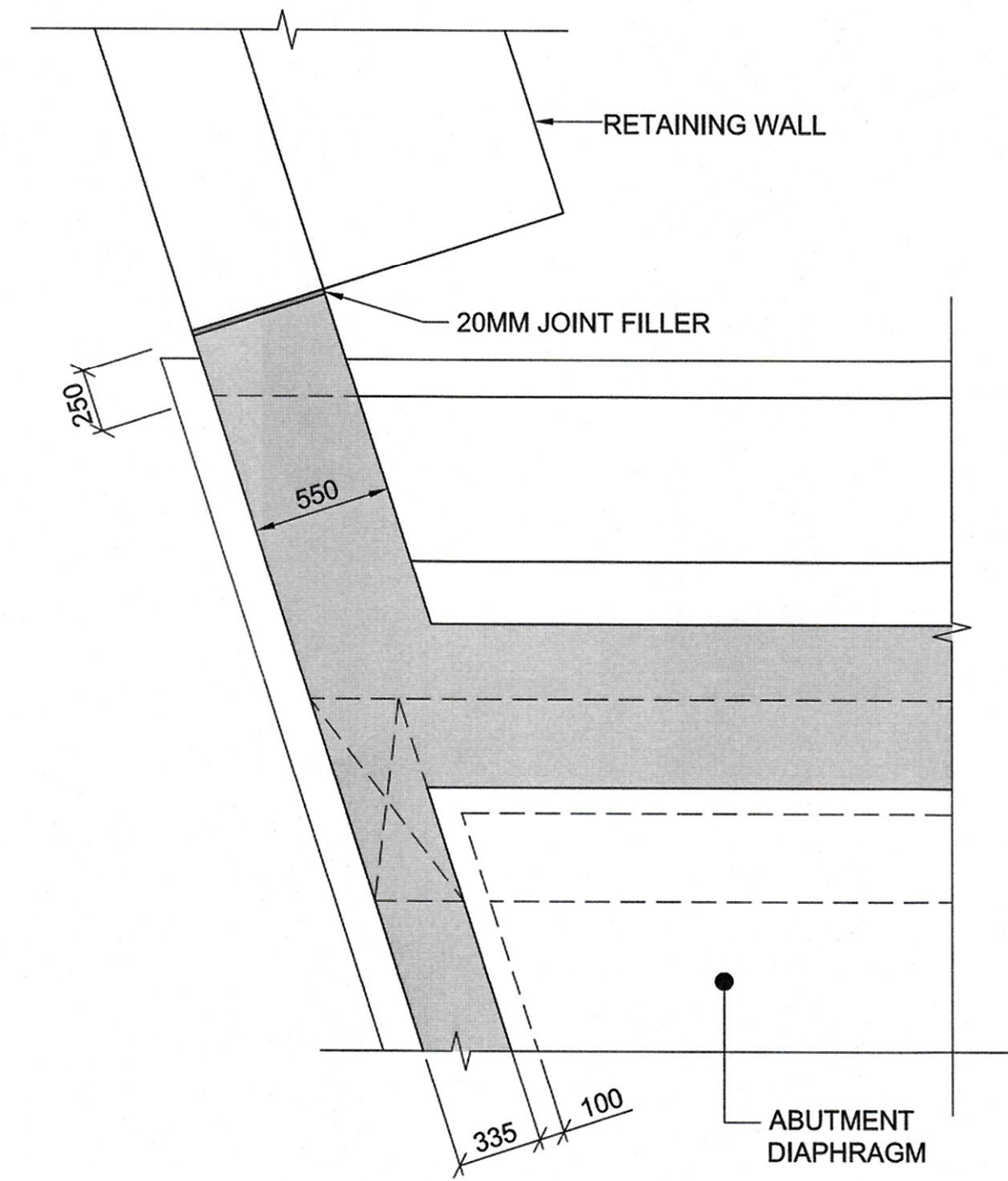
1 SECTION
REF:121_01
SCALE 1:50 (A1), 1:100 (A3)
* BLOCKOUT DIMENSION TO BE PROPOSED BY CONTRACTOR BASED ON THE MANUFACTURER'S RECOMMENDATIONS.
** TO BE READ FROM BEARING DRAWING.
*** THIS DIMENSION IS BASED ON THE ASSUMPTION OF 100MM GAP, TO BE MODIFIED ACCORDING TO REAL GAP DIMENSIONS AS SHOWN IN BEARING DRAWING.




4 SECTION
SCALE 1:25 (A1) 1:50 (A3)



A ELEVATION
REF:121_01
SCALE 1:50 (A1), 1:100 (A3)




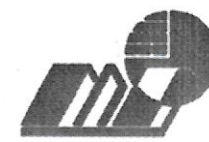
B DETAIL
REF:121_01
SCALE 1:25 (A1), 1:50 (A3)



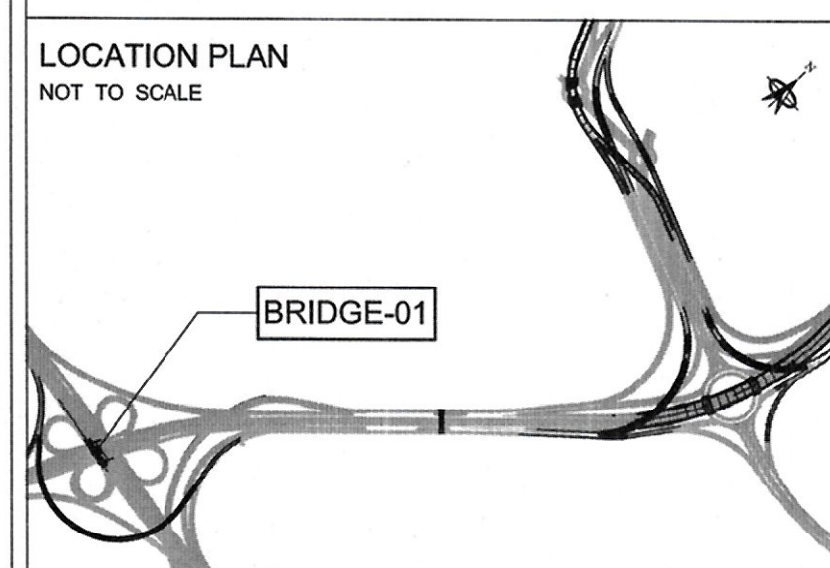
STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:
Construction, Developing And Maintenance Of Roads And Interchanges For New Terminal Building In Kuwait International Airport At Magwa Road RA268/

CONSULTANT:
 **ORIENTAL CONSULTANTS**
COMPANY LIMITED

IN ASSOCIATION WITH:
 **Dar Al-Dowailah**
Engineering Consultants & Construction Managers


LOCATION PLAN
NOT TO SCALE



BRIDGE-01

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED; COORDINATES, LEVELS AND CHAINAGES ARE IN METERS.
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GENERAL NOTES, MISCELLANEOUS, HIGHWAY AND UTILITY DRAWINGS.
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- SHOWN LEVELS SHOULD BE REVIEWED WITH LATEST REVISION OF HIGHWAY DRAWINGS AND IF ANY DISCREPANCY MORE THAN 50mm IT SHOULD BE REPORTED TO THE ENGINEER.

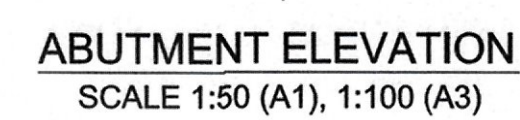

LIMAK
 INSAAT SANAYI VE TICARET A.Ş.
 Hürriyet Sokak No: 8 06 060 ANKARA
 Tel: 0312 448 88 00 / 10 Hat
 Ankara Kurumlar V.D. 0606063463

Rev. No.	Date	Description	By

DRAWING TITLE:
BRIDGE - 01
ABUTMENT - 01
DIMENSION DETAILS (SHEET-02)

DRAWING NO: ST_00_BR_01_0121_02

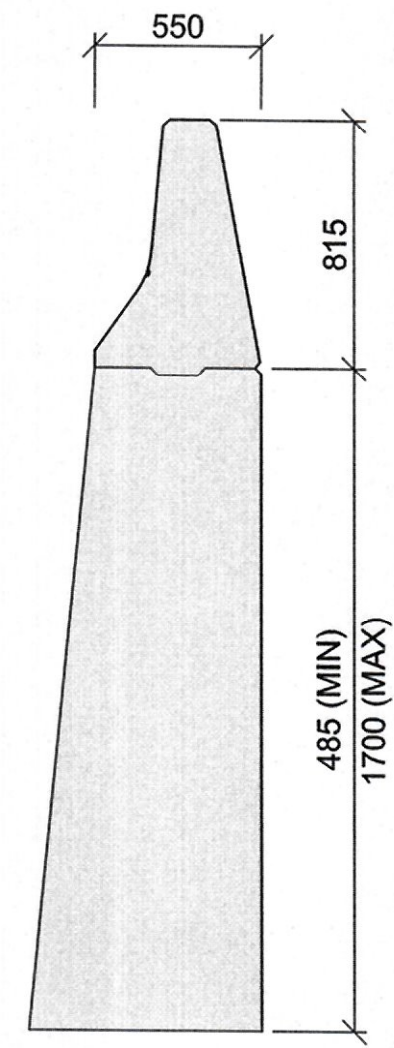
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DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	MA	APPROVED BY:	AZ



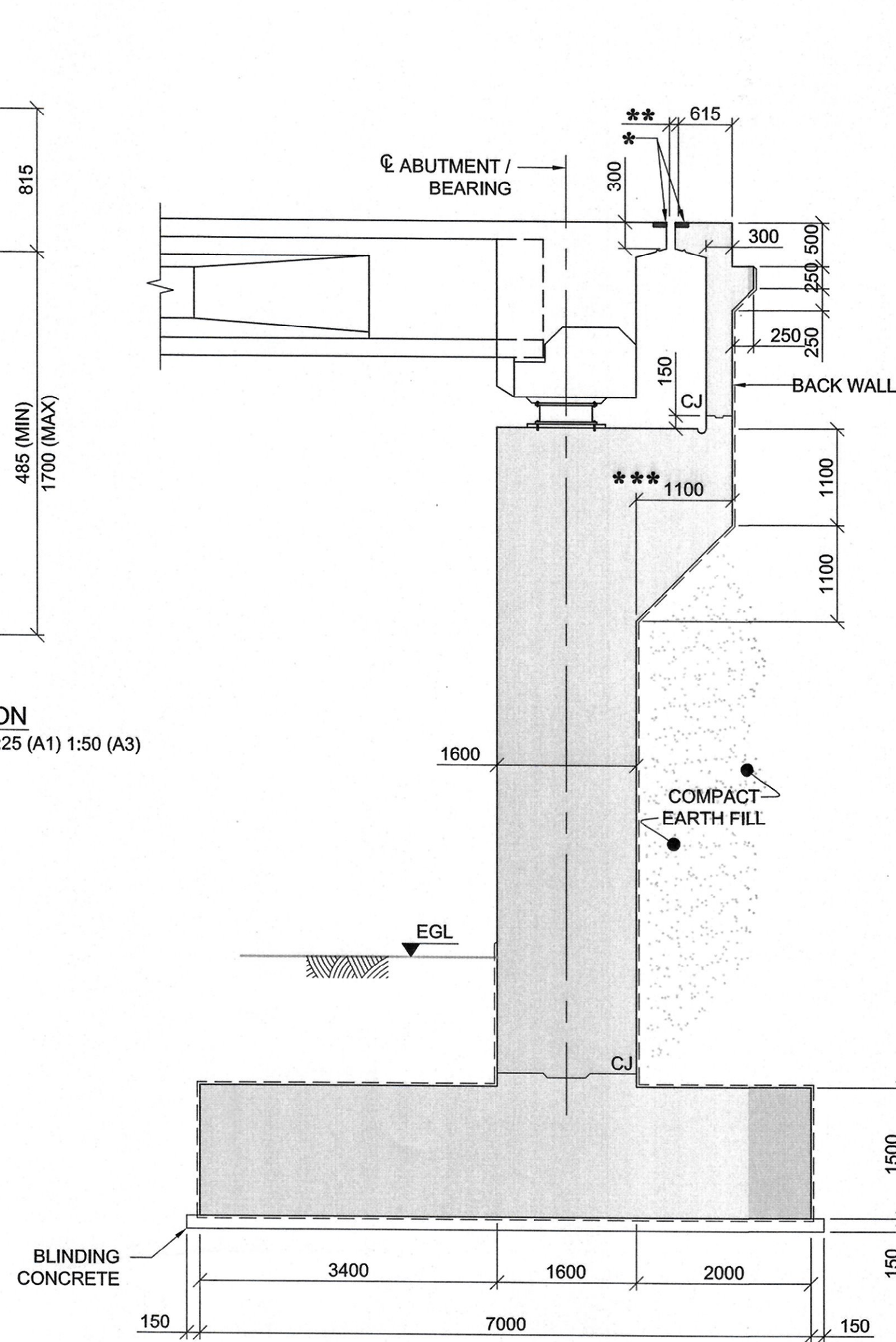
800x1000 OPENING WITH GRP
LOCKABLE ACCESS PANEL PAINTED
TO MATCH ABUTMENT COLOUR
(TO MANUFACTURER DETAIL AND
ENGINEER'S APPROVAL)



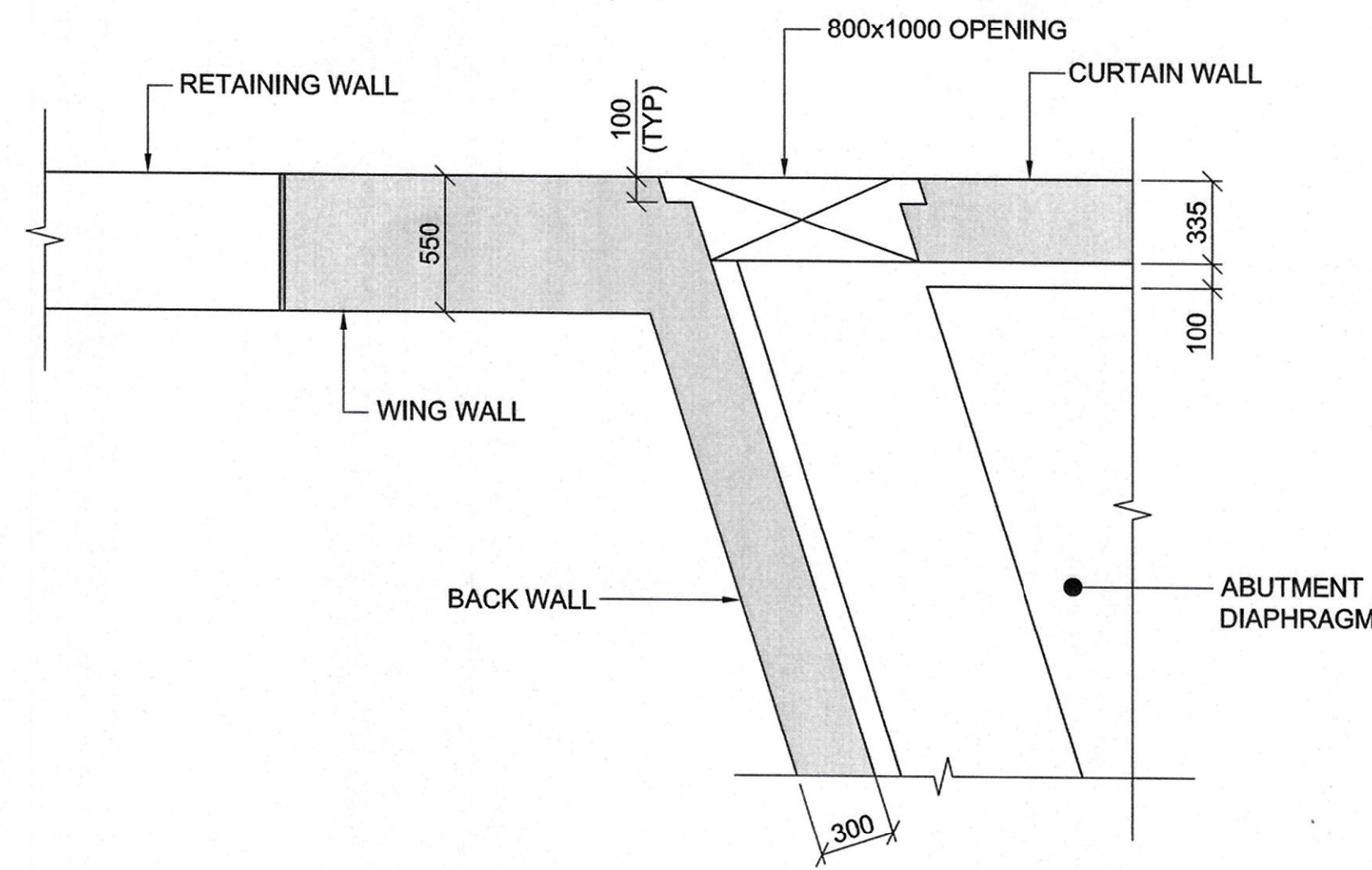
DATE:	NOV.14, 2016	STATUS:	FINAL
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DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	MA	APPROVED BY:	AZ



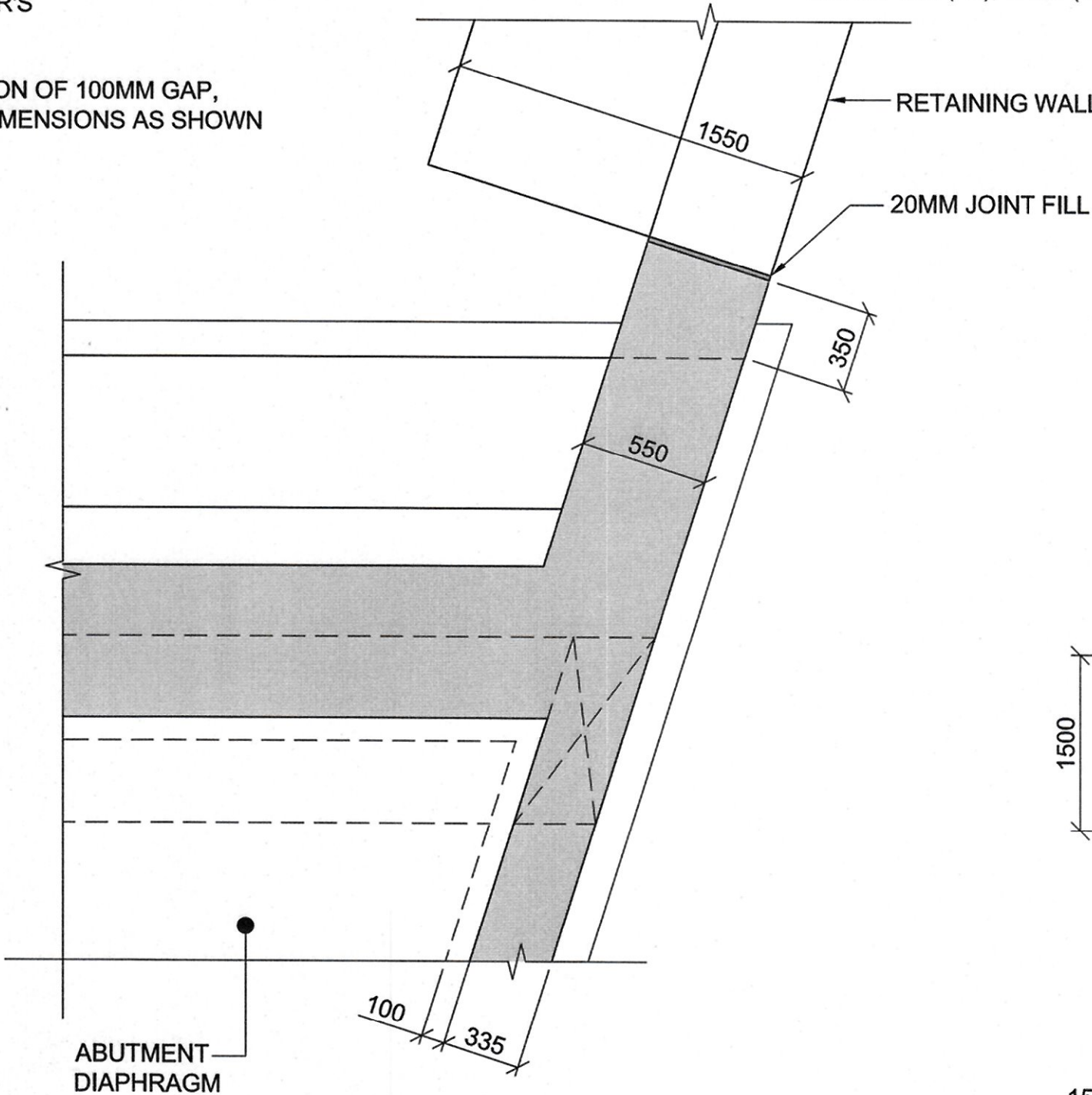
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SCALE 1:25 (A1) 1:50 (A3)



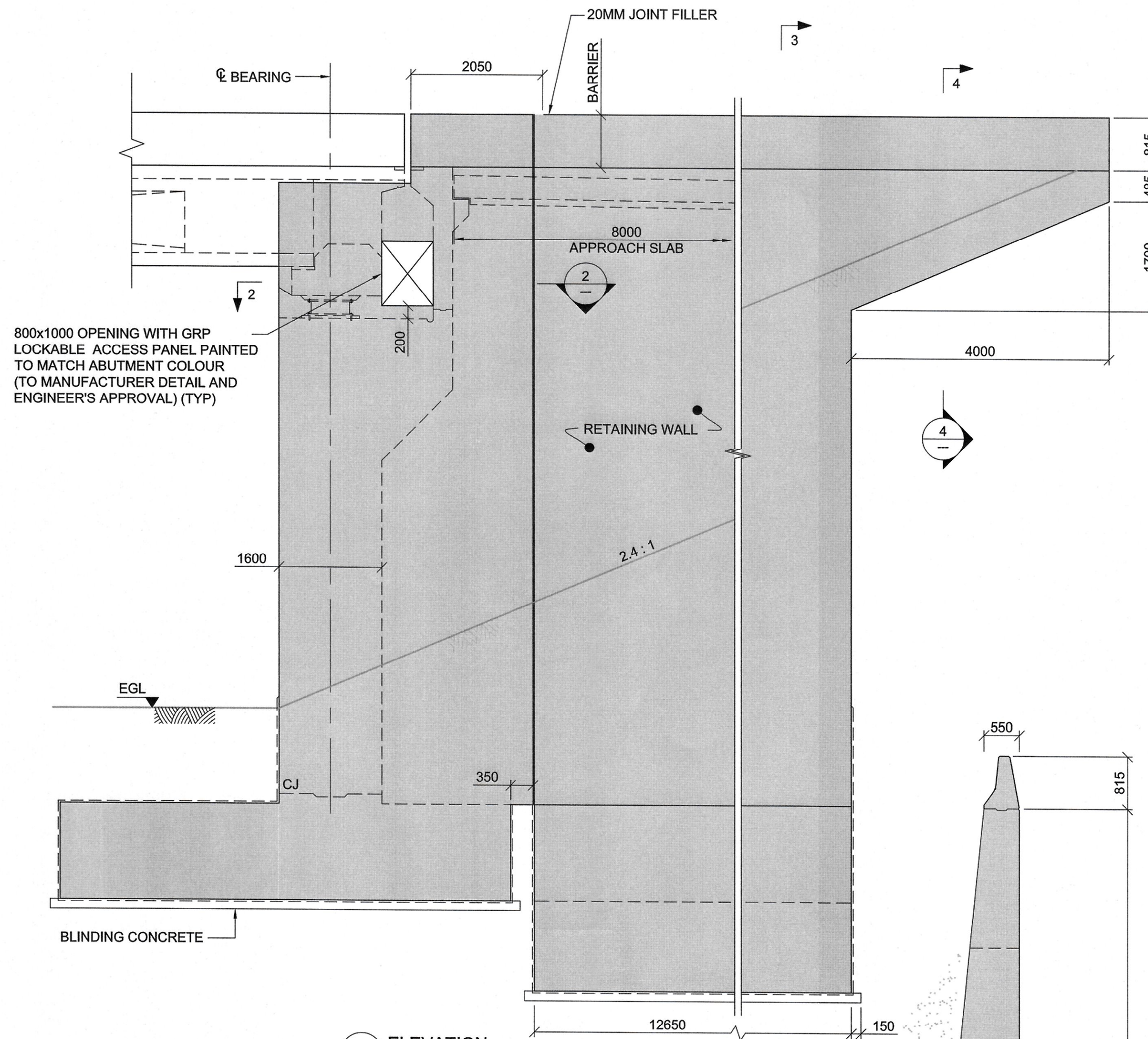
1 SECTION
REF:121_03
SCALE 1:50 (A1), 1:100 (A3)
* BLOCKOUT DIMENSION TO BE PROPOSED BY CONTRACTOR BASED ON THE MANUFACTURER'S RECOMMENDATIONS.
** TO BE READ FROM BEARING DRAWING.
*** THIS DIMENSION IS BASED ON THE ASSUMPTION OF 100MM GAP, TO BE MODIFIED ACCORDING TO REAL GAP DIMENSIONS AS SHOWN IN BEARING DRAWING.



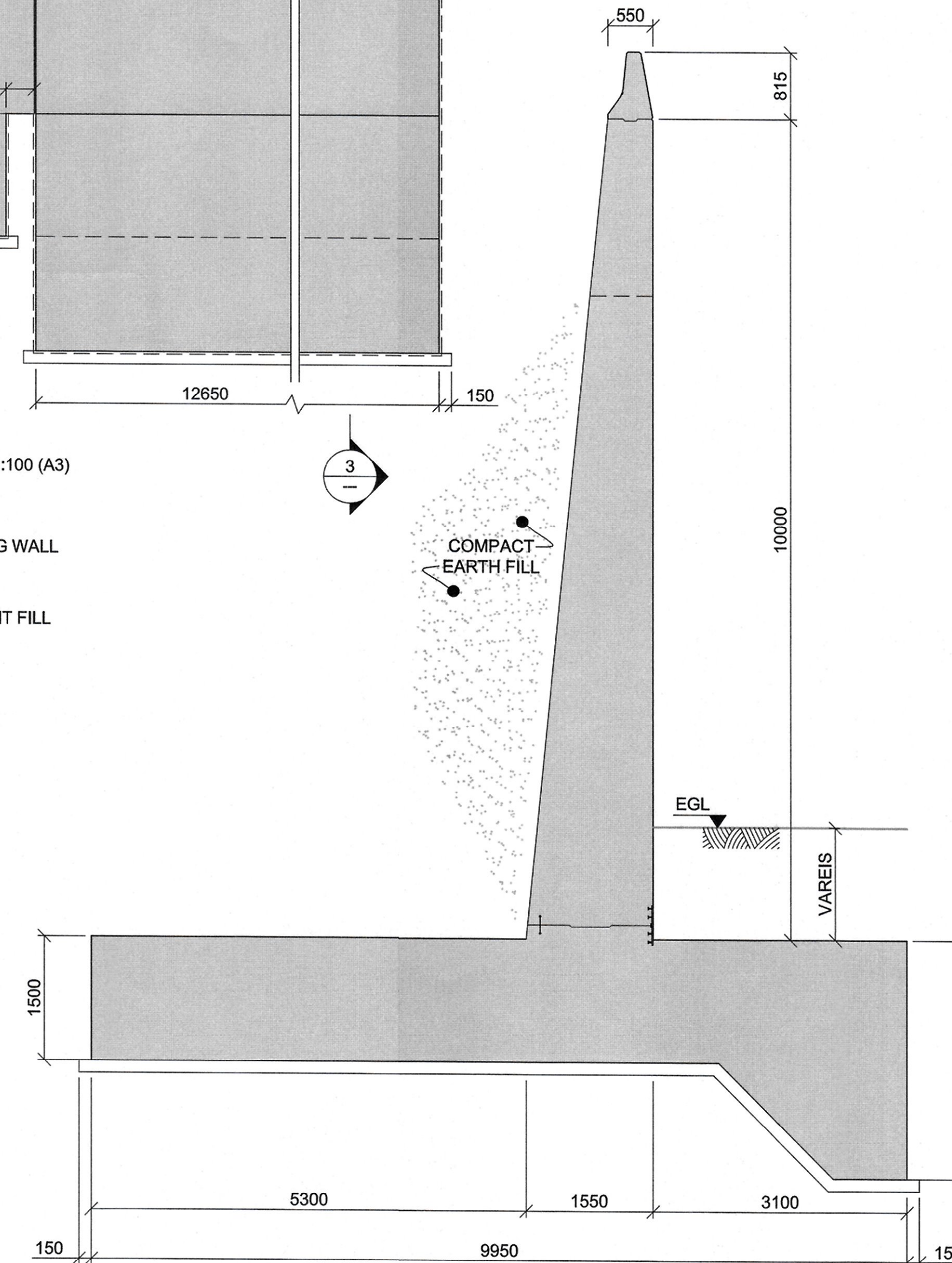
2 SECTION
SCALE 1:25 (A1) 1:50 (A3)



B DETAIL
REF:121_03
SCALE 1:25 (A1), 1:50 (A3)



A ELEVATION
REF:121_03
SCALE 1:50 (A1), 1:100 (A3)



3 SECTION
SCALE 1:50 (A1) 1:100 (A3)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

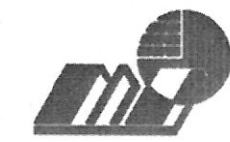
Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



ORIENTAL CONSULTANTS
COMPANY LIMITED

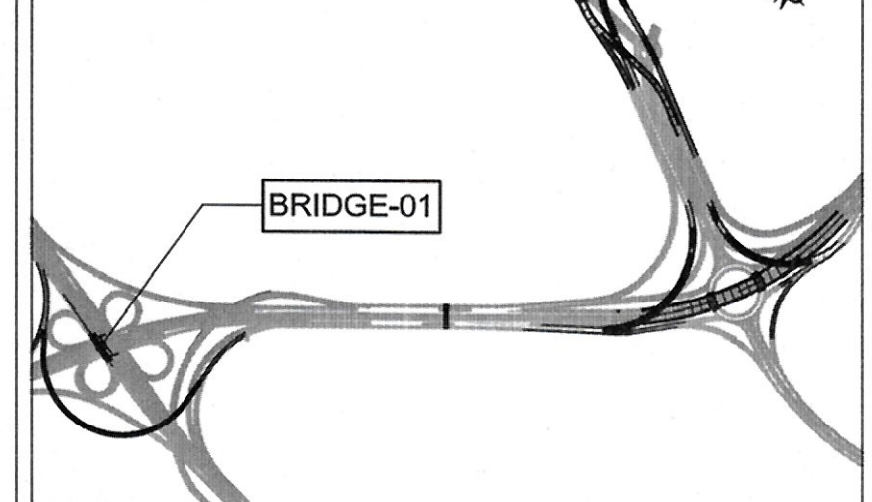
IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

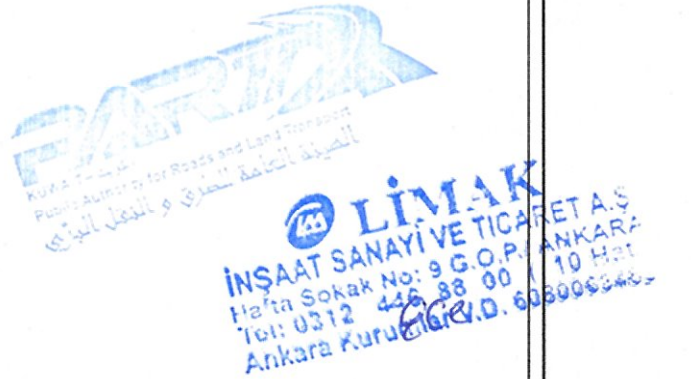
LOCATION PLAN

NOT TO SCALE



NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED; COORDINATES, LEVELS AND CHAINAGES ARE IN METERS.
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GENERAL NOTES, MISCELLANEOUS, HIGHWAY AND UTILITY DRAWINGS.
- DECK CROSS SLOPE DIRECTION SHOWN IS INDICATIVE ONLY.
- FRL'S AND DECK CROSS SLOPE SHALL BE VERIFIED WITH RELEVANT HIGHWAY DRAWINGS.
- JACKING LOCATION SHALL BE PROPERLY ETCHED ON ABUTMENT BEAM.
- THE PROPOSED JACK LOCATIONS ARE INDICATIVE AND SHALL BE VERIFIED BY THE BEARING MANUFACTURER.
- TOP OF THE ABUTMENT LEVEL IS BASED ON A HEIGHT OF 350MM BETWEEN THE GIRDER AND TOP OF THE ABUTMENT.
- SHOWN LEVELS SHOULD BE REVIEWED WITH LATEST REVISION OF HIGHWAY DRAWINGS AND IF ANY DISCREPANCY MORE THAN 50mm IT SHOULD BE REPORTED TO THE ENGINEER.

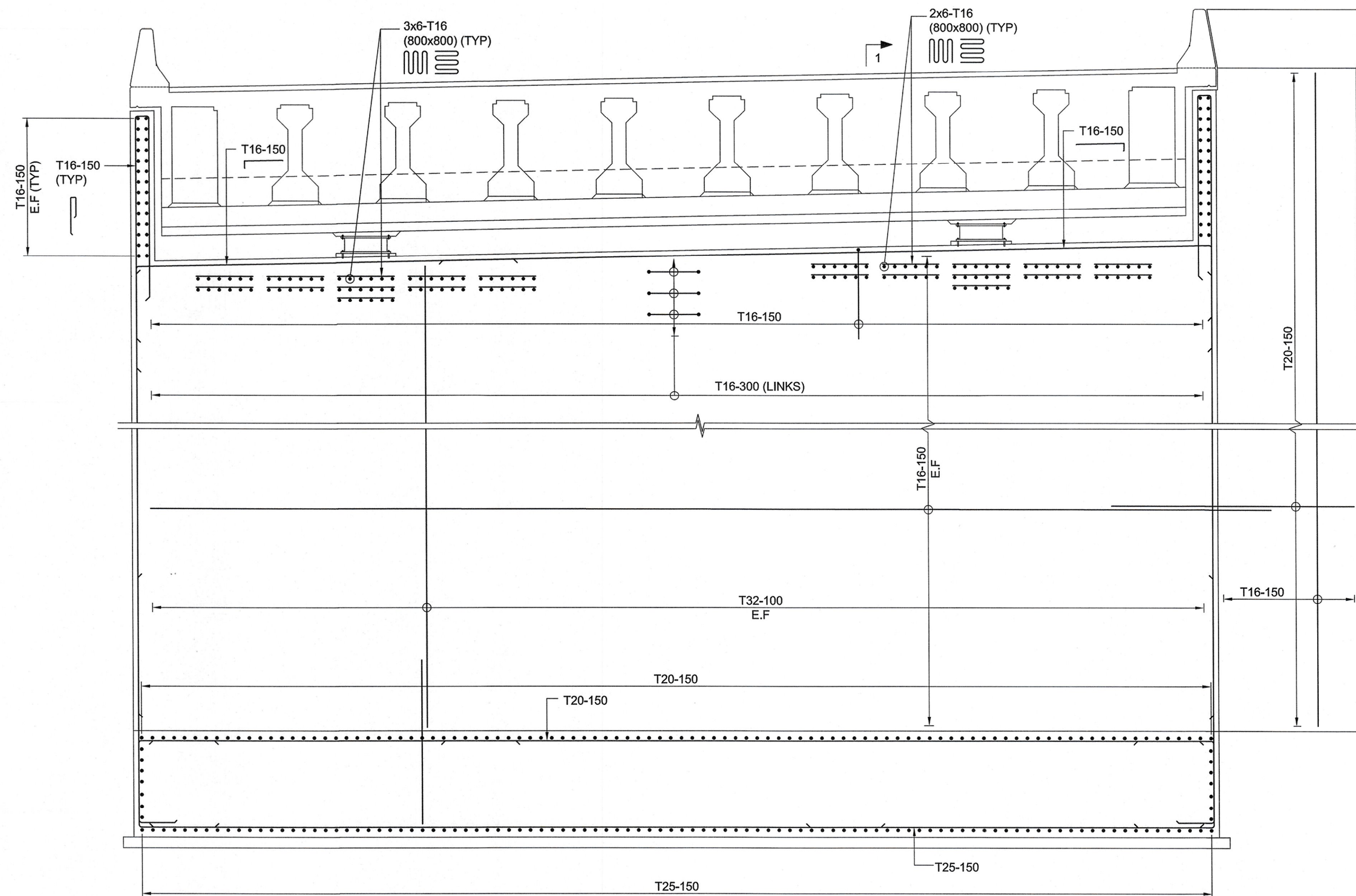


Rev. No.	Date	Description	By

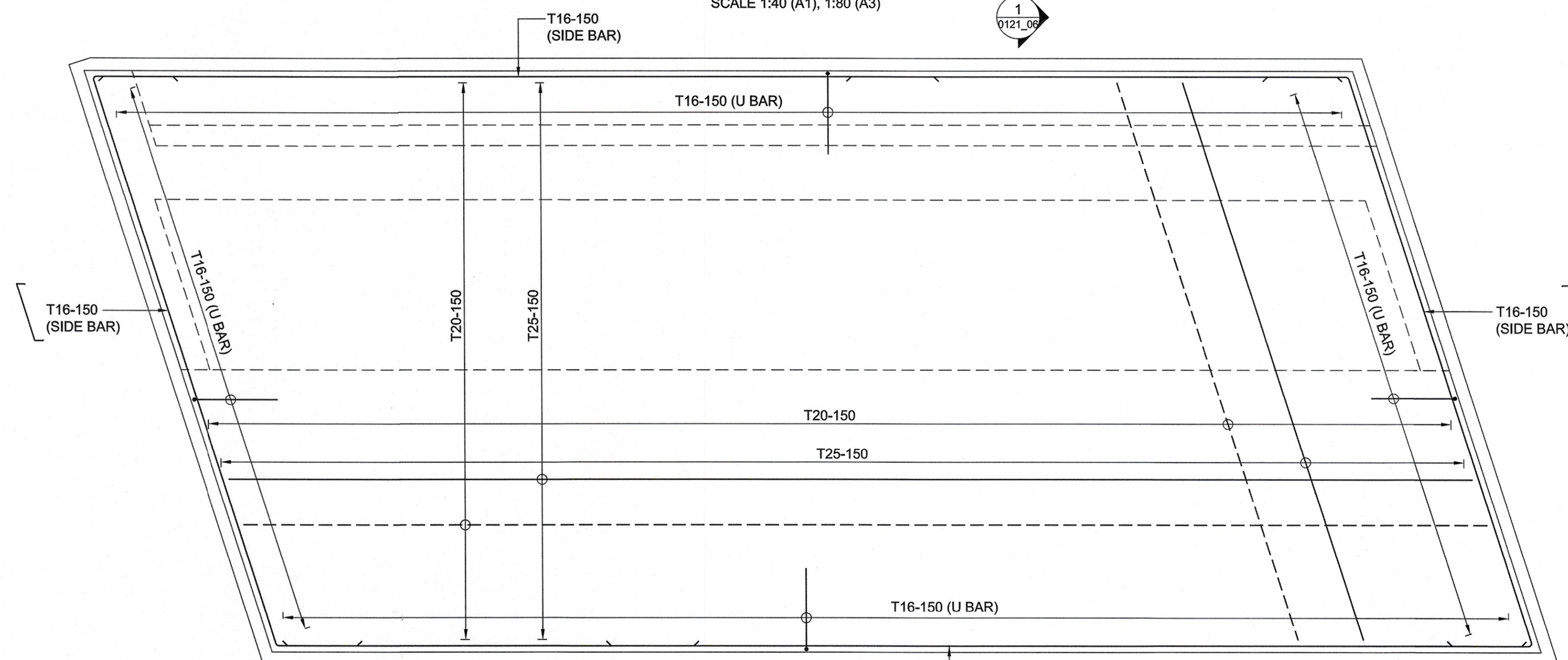
DRAWING TITLE:
BRIDGE - 01
ABUTMENT - 02
DIMENSION DETAILS (SHEET-02)

DRAWING NO: ST_00_BR_01_0121_04

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	MA	APPROVED BY:	AZ



SECTIONAL ELEVATION
SCALE 1:40 (A1), 1:80 (A3)



FOUNDATION PLAN
SCALE 1:40 (A1), 1:80 (A3)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

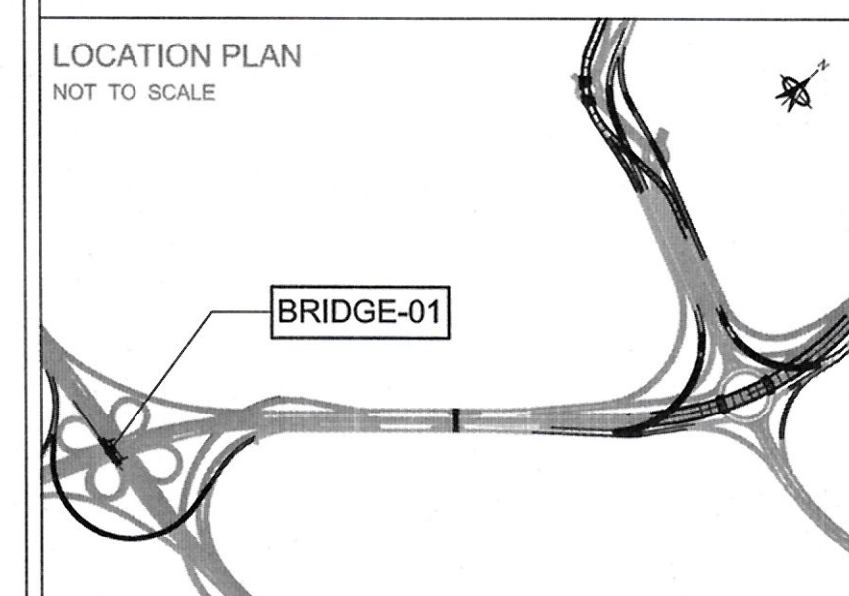
CONSULTANT:



IN ASSOCIATION WITH:



LOCATION PLAN
NOT TO SCALE

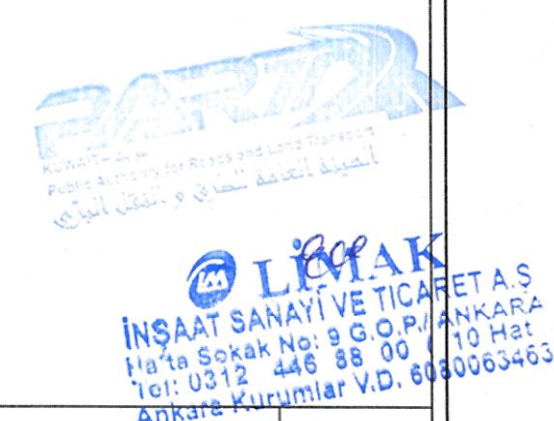


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. ALL LAPS SHALL BE STAGGERED UNLESS OTHERWISE NOTED.
3. LAPPING OF SPIRALS IN THE TRANSVERSE CONFINEMENT REGION SHALL NOT BE PERMITTED. CONNECTION OF SPIRALS IN THIS REGION MUST BE FULL STRENGTH LAP WELDS.
4. ALL LAPS SHALL BE STAGGERED UNLESS NOTED OTHERWISE.

LEGEND:

- TOP REINFORCEMENT
——— BOTTOM REINFORCEMENT

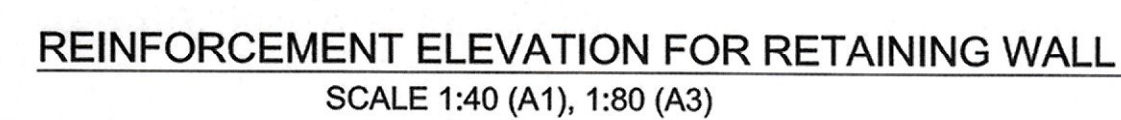


Rev. No.	Date	Description	By

DRAWING TITLE:
BRIDGE - 01
ABUTMENT - 01 & 02
REINFORCEMENT DETAILS (SHEET-01)

DRAWING NO: ST_00_BR_0121_05

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	MA	APPROVED BY:	AZ



ser: thomball, mancoor
res: Mon, 21 Nov 2016 - 11:24am File: T:\008 PROJECT SUPPORT\1 CURRENT PROJECTS\MPW\ADC- Accord UNIV Roads\Drawings\Structure\BR-01ST 00 BR 0121 06.dwg

PARTIDA
Kurultay ve
Public Authority for Water and Land Management
المجلس الأعلى للمياه والأراضي
LIMAK
İNSAAT SANAYİ VE TİCARET A.Ş.
Hatta Sokak No: 9 G. O. P. ANKARA
Tel: 0312 446 88 00 / 10 Hat
Ankara Kurumlar V.D. 608000634
ee




STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

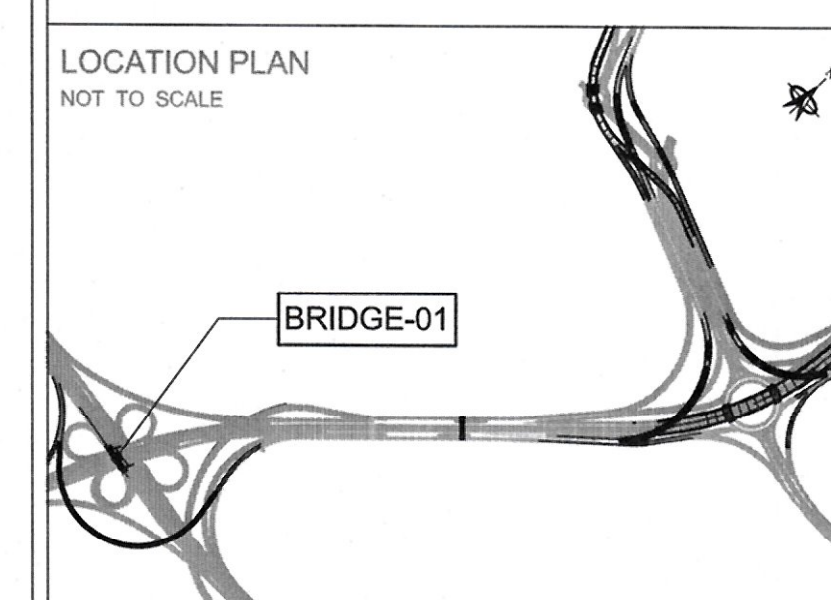
CONSULTANT:

 **ORIENTAL CONSULTANTS**
COMPANY LIMITED

IN ASSOCIATION WITH:

 **Dar Al-Dowailah**
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

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3. LAPPING OF SPIRALS IN THE TRANSVERSE CONFINEMENT REGION SHALL NOT BE PERMITTED. CONNECTION OF SPIRALS IN THIS REGION MUST BE FULL STRENGTH LAP WELDS.
4. ALL LAPS SHALL BE STAGGERED UNLESS NOTED OTHERWISE.

Rev. No.	Date	Description	By

NO.	
DRAWING TITLE:	

BRIDGE - 01
ABUTMENT - 01 & 02
REINFORCEMENT DETAILS (SHEET-02)


DRAWING NO: ST_00_BR_0121_06

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	MA	APPROVED BY:	AZ

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

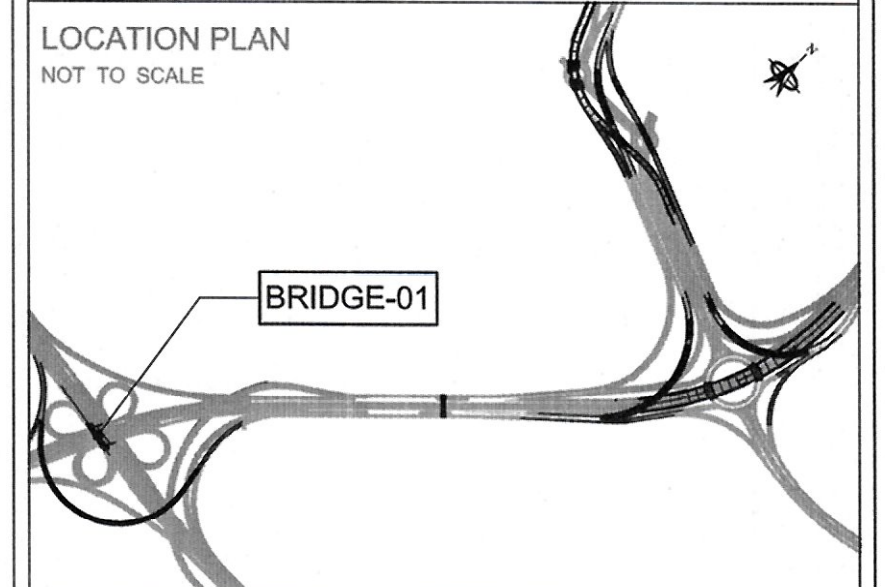
CONSULTANT:

 ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:

 **Dar Al-Dowailah**
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

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4. ALL LAPS SHALL BE STAGGERED UNLESS NOTED OTHERWISE.

LEGEND:

----- NEAR FACE
 _____ FAR FACE

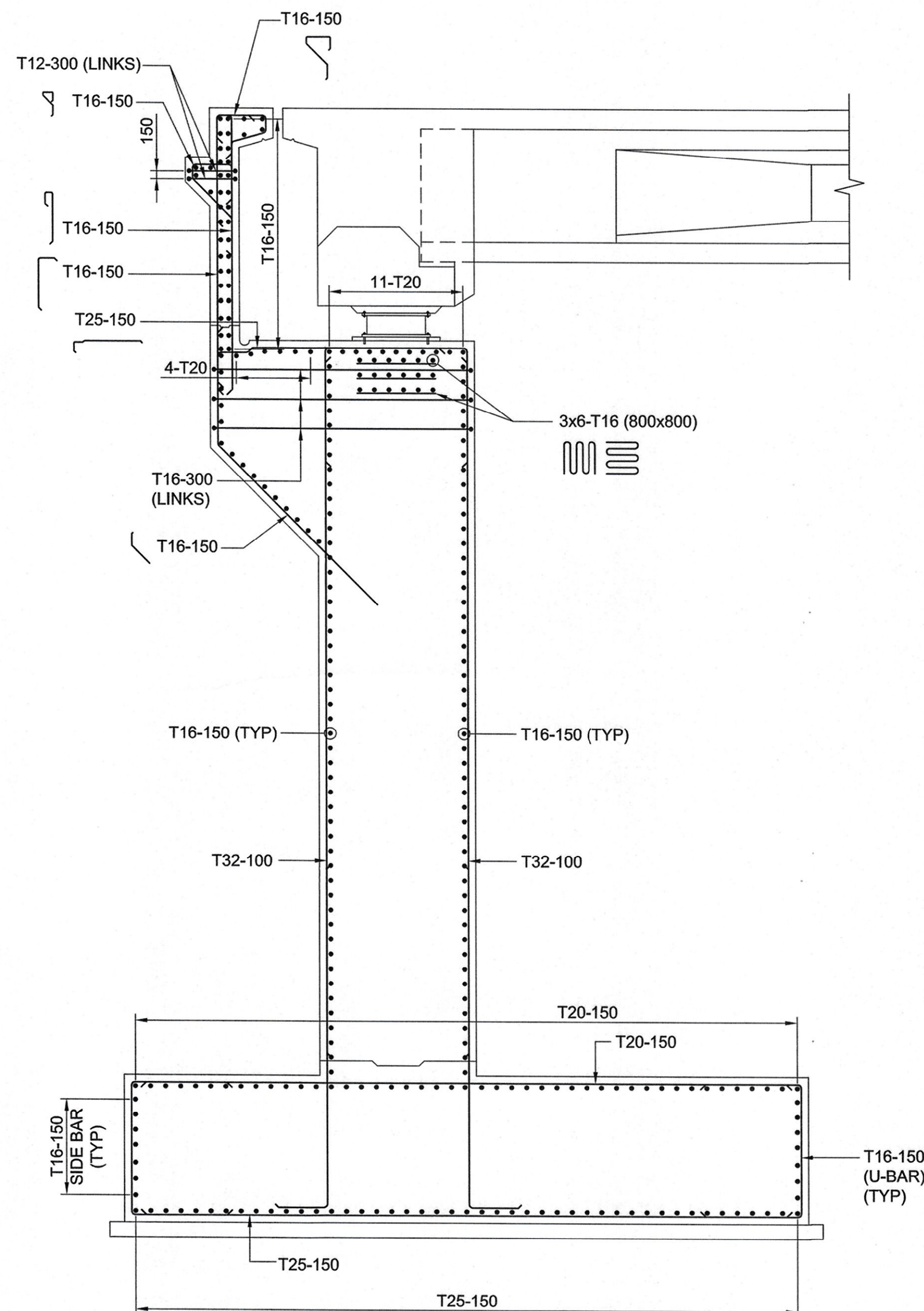
Rev. No.	Date	Description	By

NO.	
DRAWING TITLE:	

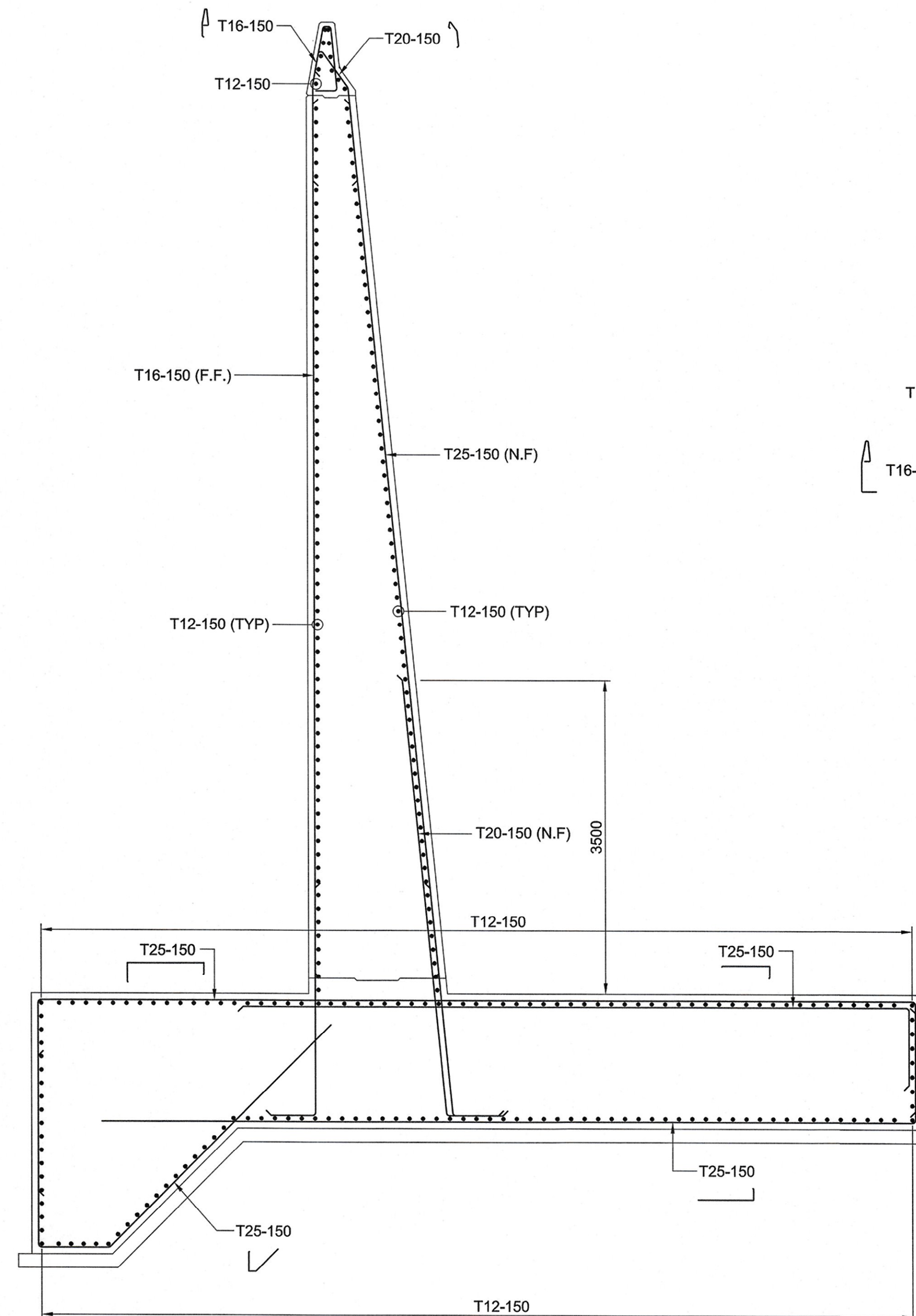
BRIDGE - 01
ABUTMENT - 01 & 02
REINFORCEMENT DETAILS (SHEET-03)

DRAWING NO: ST_00_BR_0121_07

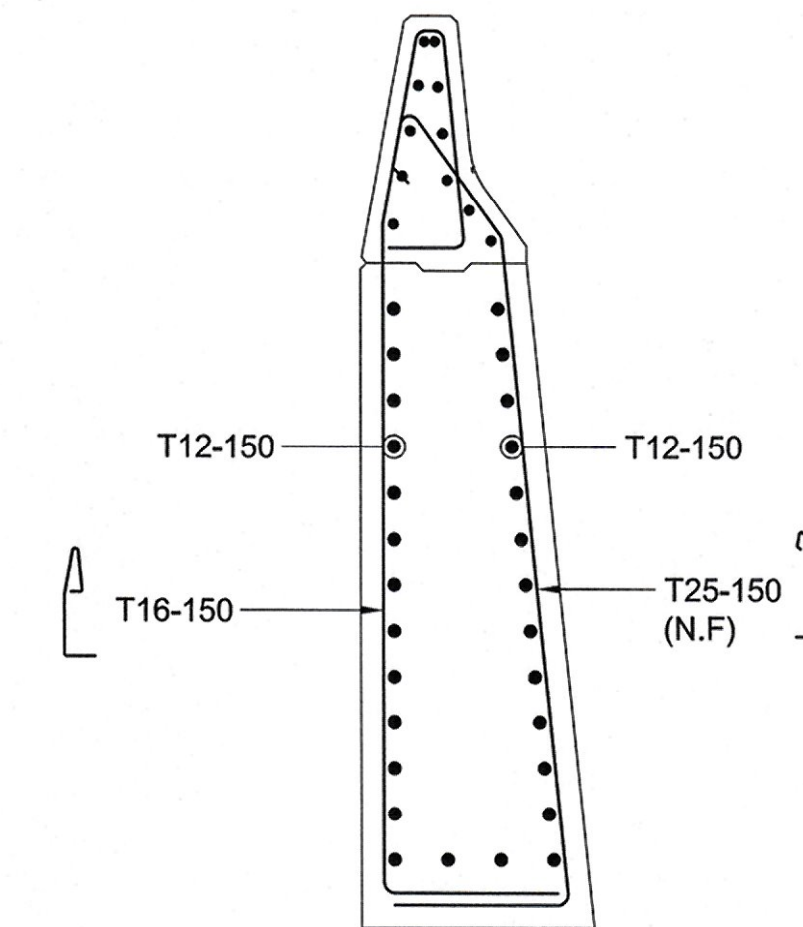
DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	MA	APPROVED BY:	AZ



1 SECTION
REF:0121_05
SCALE 1:40 (A1), 1:80 (A3)



2 SECTION
REF:0121_06
SCALE 1:40 (A1), 1:80 (A3)

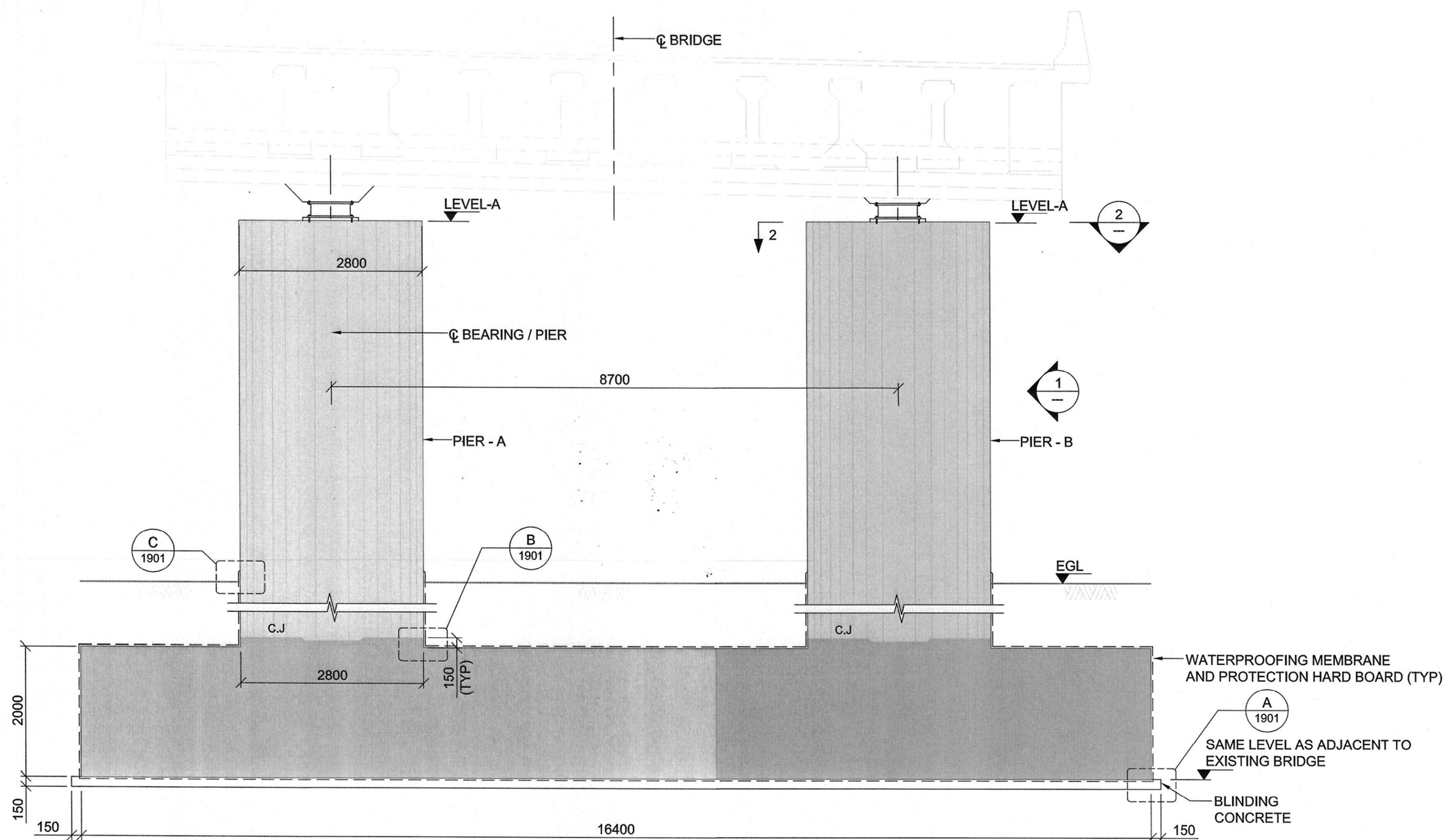


3 SECTION
REF:0121_06
SCALE 1:25 (A1), 1:50 (A3)

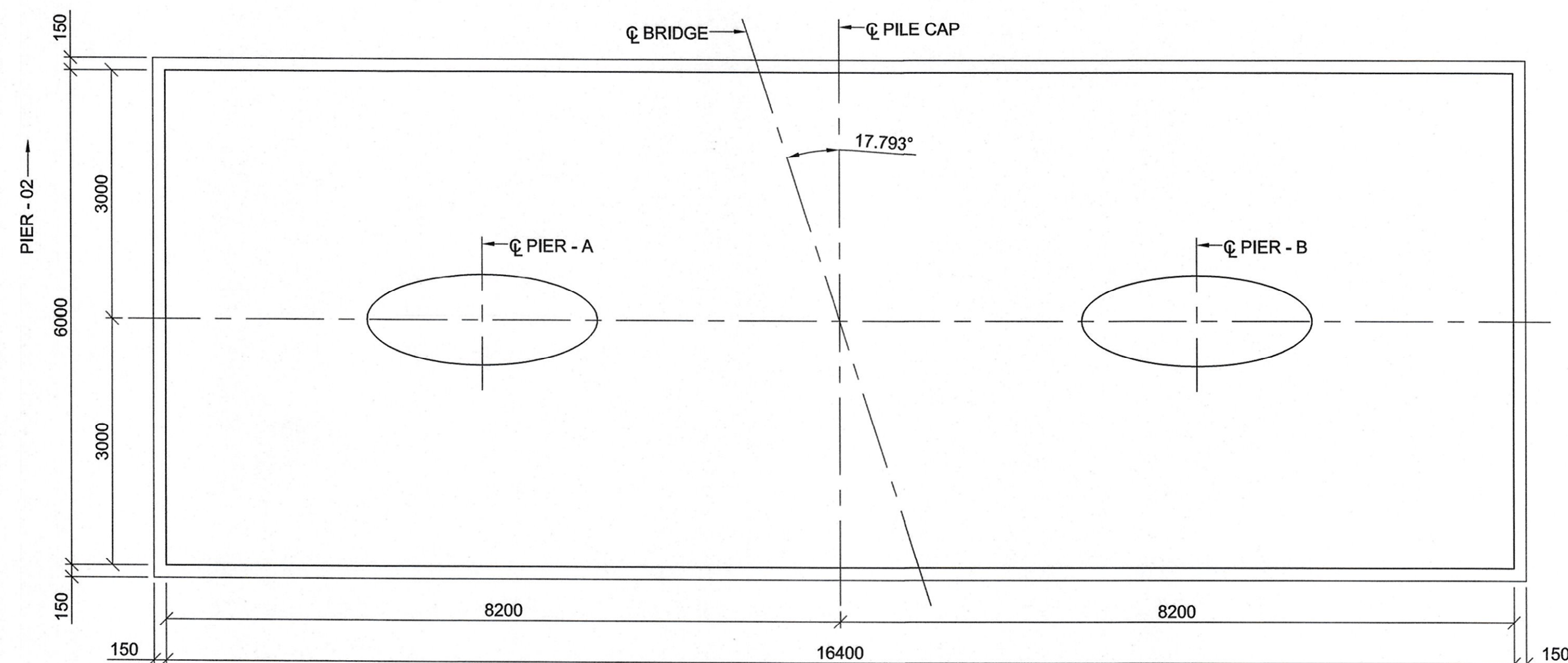
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PARTIDA
Prestige - luxury
Prestige housing for Arabs and expatriates
في الجبل العالي والخليج العربي

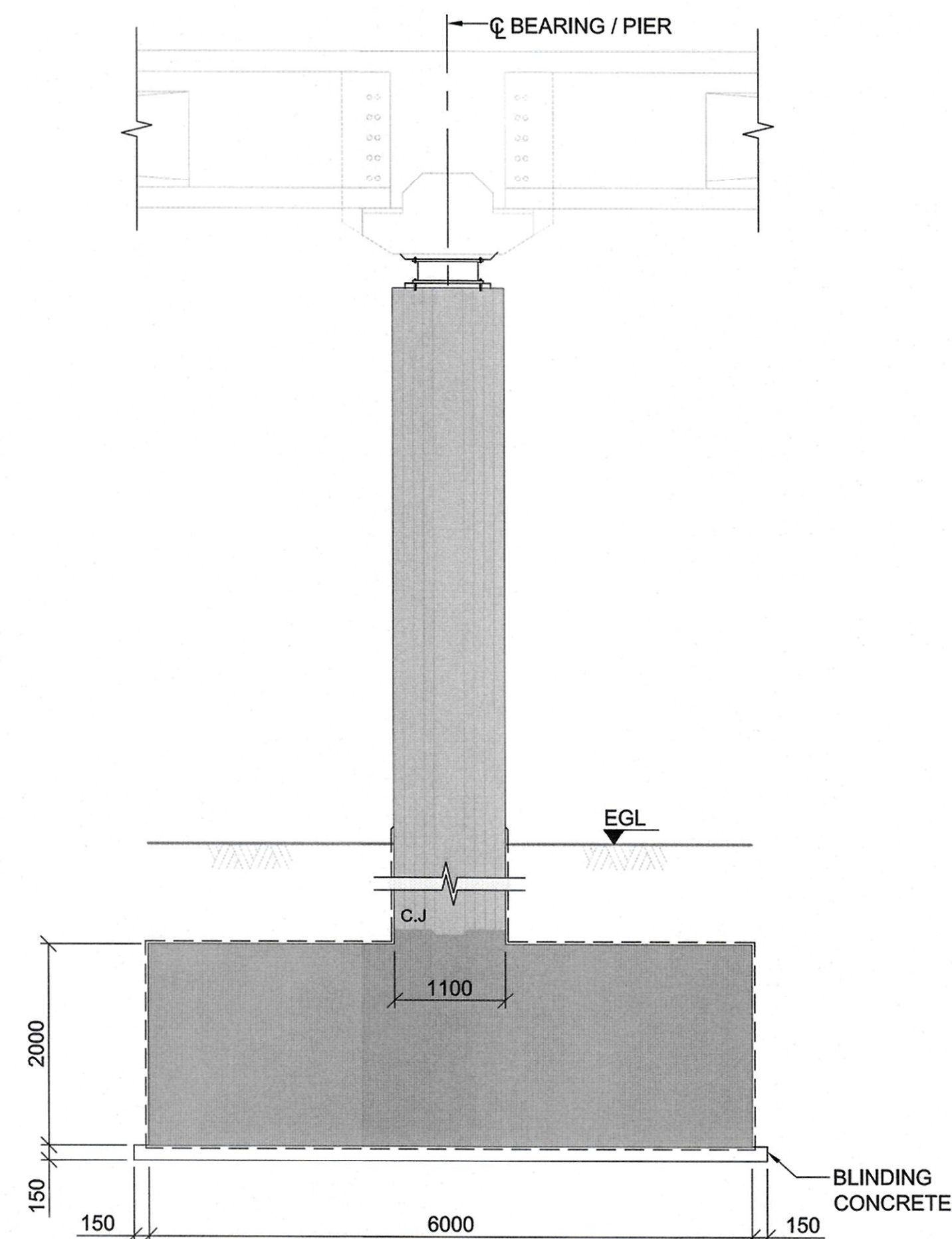
1450 **LIVAK**
İNŞAAT SANAYİ VE TİCARET A.Ş.
Hırtı Sokak No: 9 G. D. 05/ANKARA
Tel: 0312 445 88 00 / 10 Hat
Ankara Kurumlar V.D. 60500346
cc



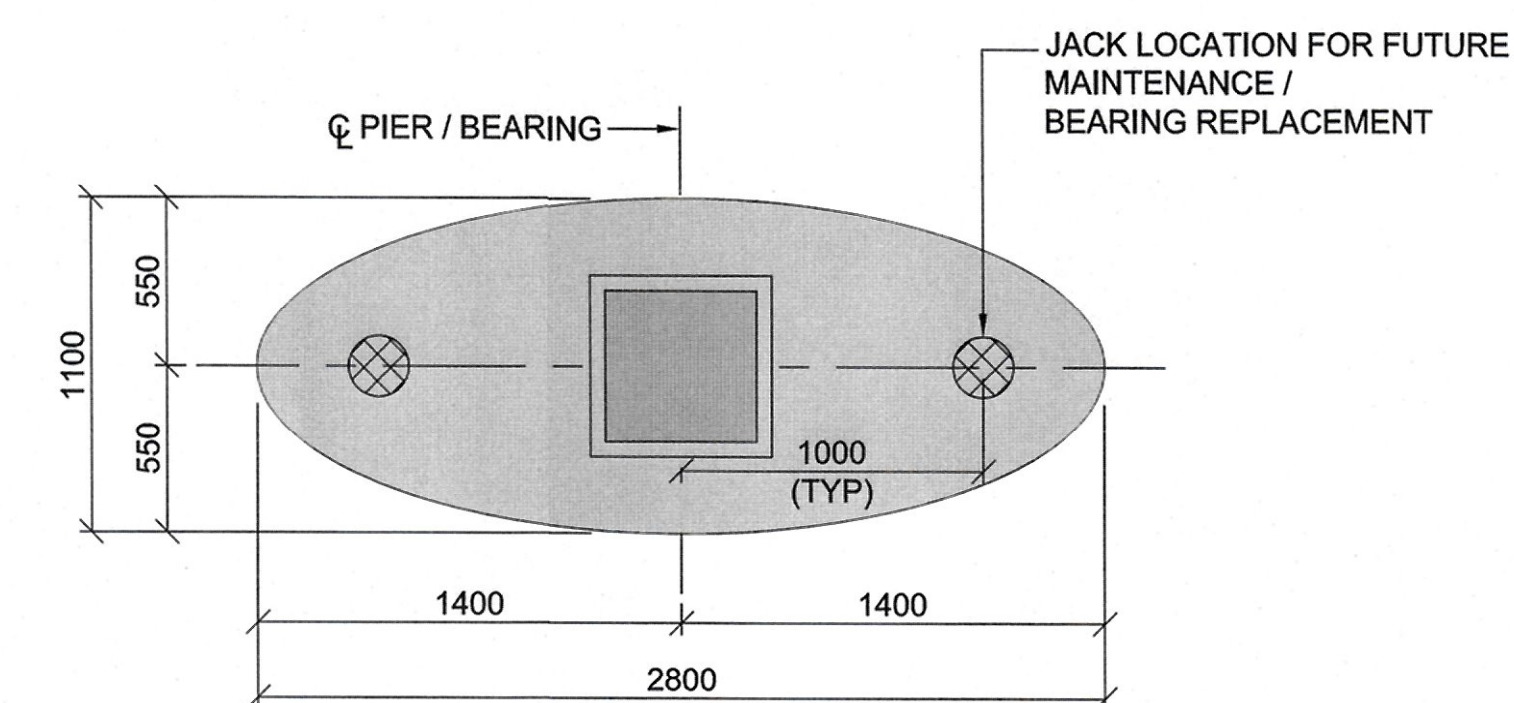
PIER ELEVATION
SCALE 1:50 (A1), 1:100 (A3)



PILES AND PILE CAP ARRANGEMENT PLAN
SCALE 1:50 (A1), 1:100 (A3)



1 ELEVATION
SCALE 1:50 (A1), 1:100 (A3)



2 SECTION
SCALE 1:25 (A1), 1:50 (A3)

PIER No.	LEVEL-A	LEVEL-B	EGL	ALLOWABLE BEARING CAPACITY (kPa)
PIER-1	55.395	55.219	50.00	350

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

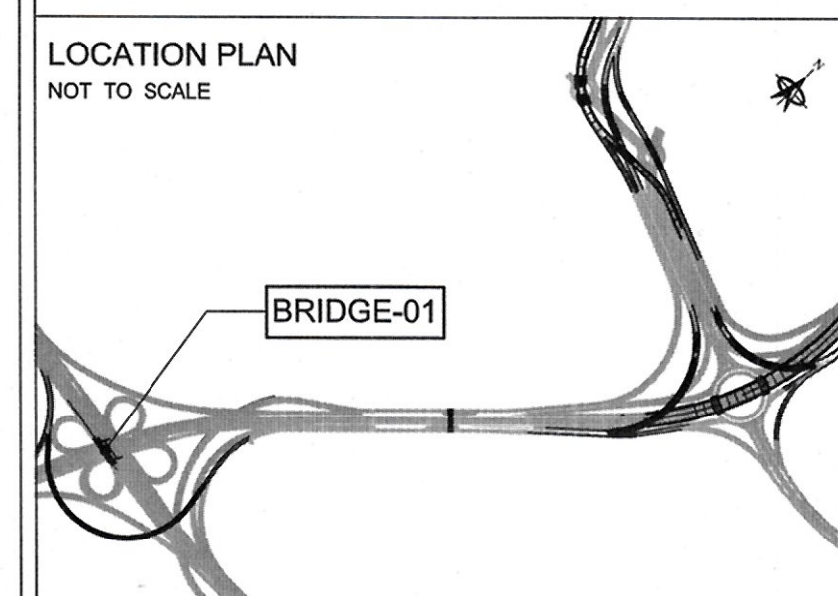
CONSULTANT:



IN ASSOCIATION WITH:



LOCATION PLAN
NOT TO SCALE



NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED; COORDINATES, LEVELS AND CHAINAGES ARE IN METERS.
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- SHOWN DECK CROSS SLOPE IS INDICATIVE ONLY.
- THE TOP OF THE PIER LEVEL IS BASED ON A HEIGHT OF 350mm BETWEEN THE SOFFIT OF THE PIER DIAPHRAGM AND TOP OF THE PIER.
- THE PROPOSED JACK LOCATIONS ARE INDICATIVE AND SHALL BE VERIFIED BY THE BEARING MANUFACTURER.
- ALL SHOWN LEVELS SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AS PER EXISTING SITE CONDITIONS AND RELEVANT HIGHWAY DRAWINGS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
- SHOWN LEVELS SHOULD BE REVIEWED WITH LATEST REVISION OF HIGHWAY DRAWINGS AND IF ANY DISCREPANCY MORE THAN 50mm IT SHOULD BE REPORTED TO THE ENGINEER.

Rev. No.	Date	Description	By

DRAWING TITLE:

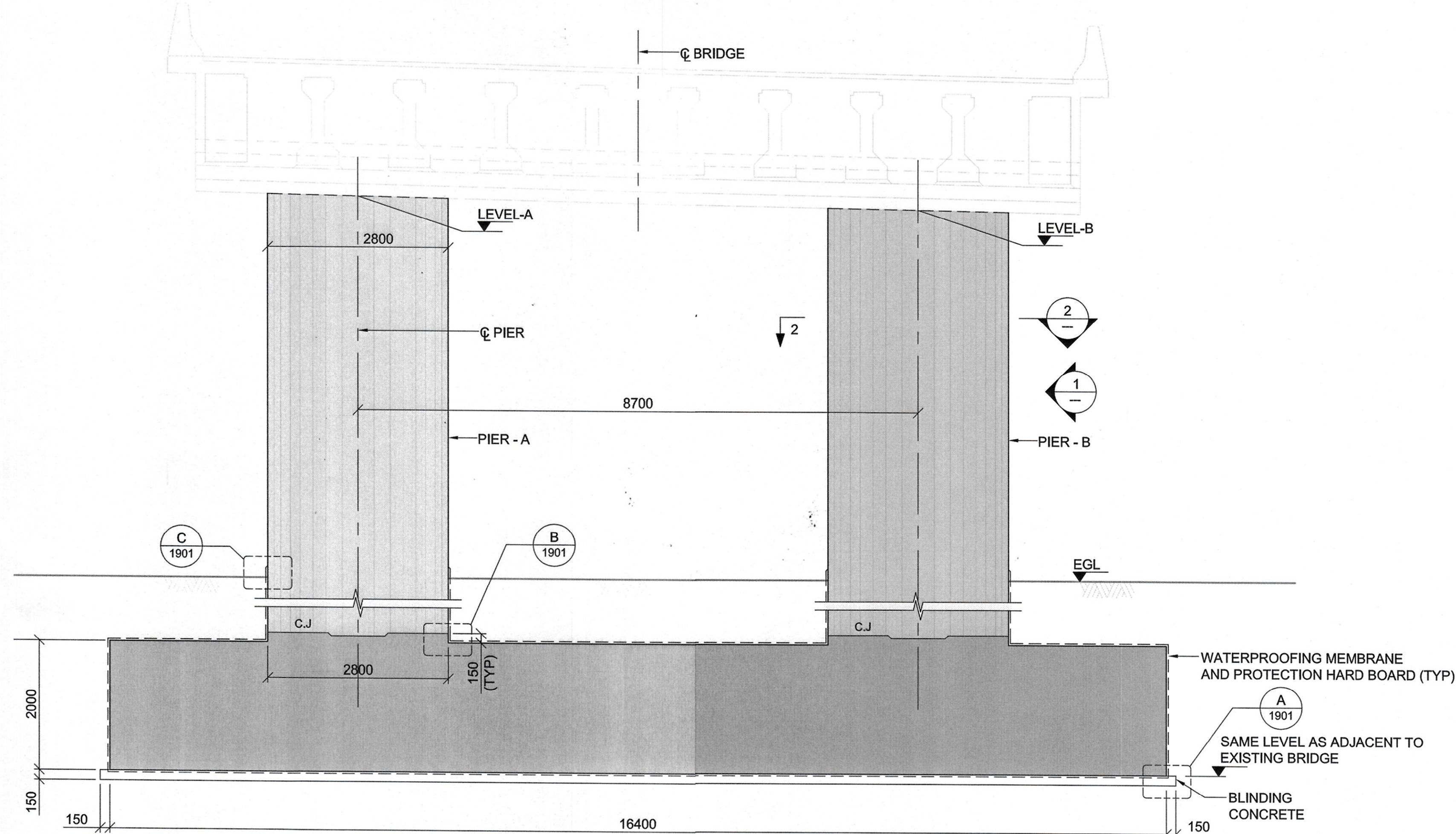
BRIDGE - 01
PIER - 01
DIMENSIONAL DETAILS

DRAWING NO: ST_00_BR_0131_01

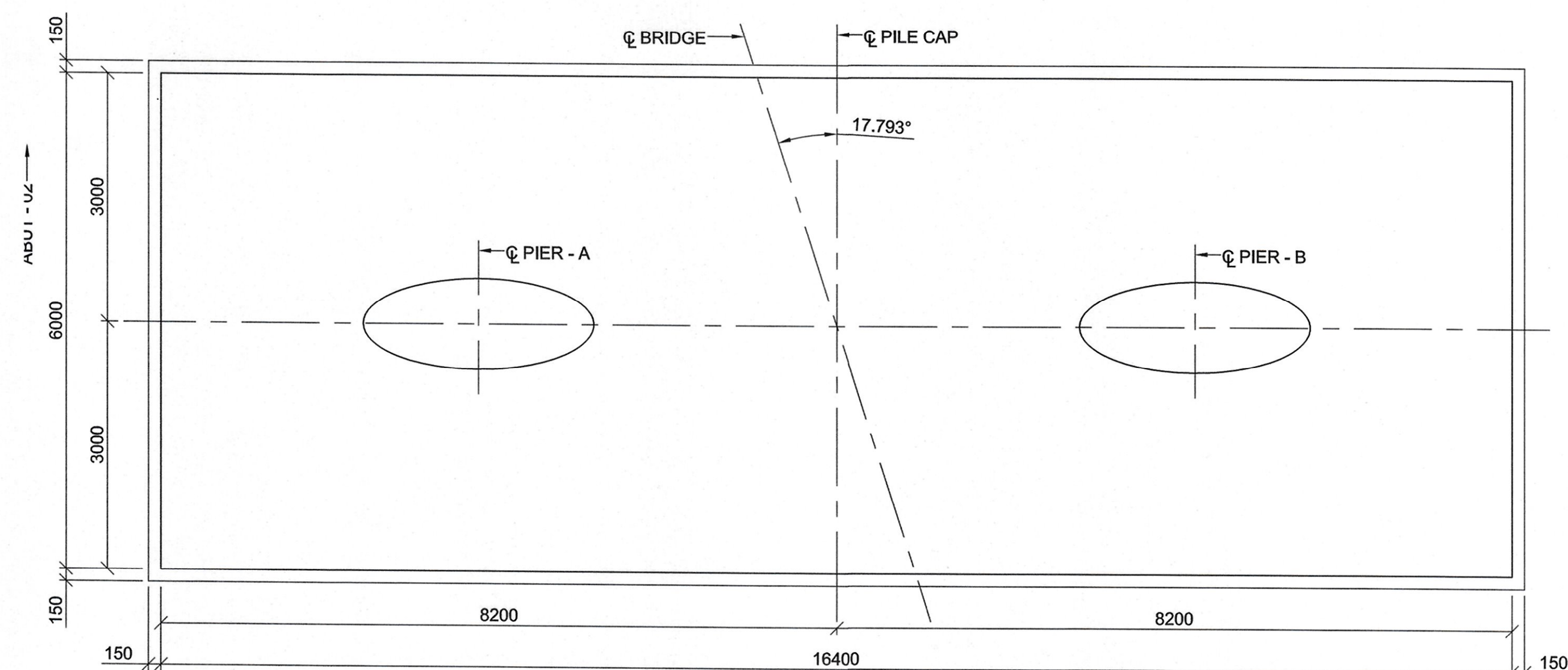
DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	MA	APPROVED BY:	AZ



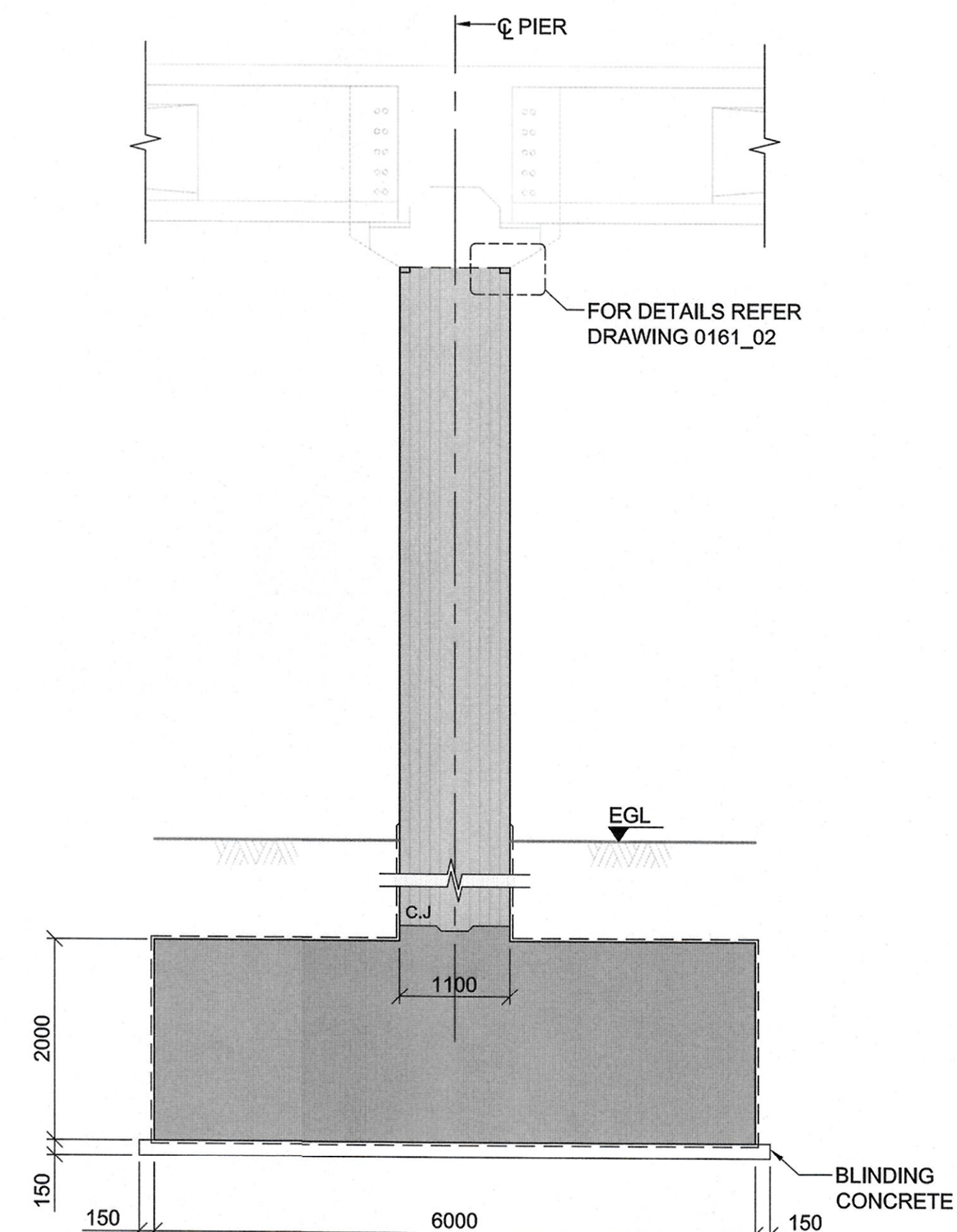
İNSAAT SANAYİ VE TİCARET A.Ş.
Hıfzı Sokak No: 39 Ç. P. ANKARA
Tel: 0312 448 88 00 (10 Hattı)
Ankara Kurumlar V.D. 6060063463



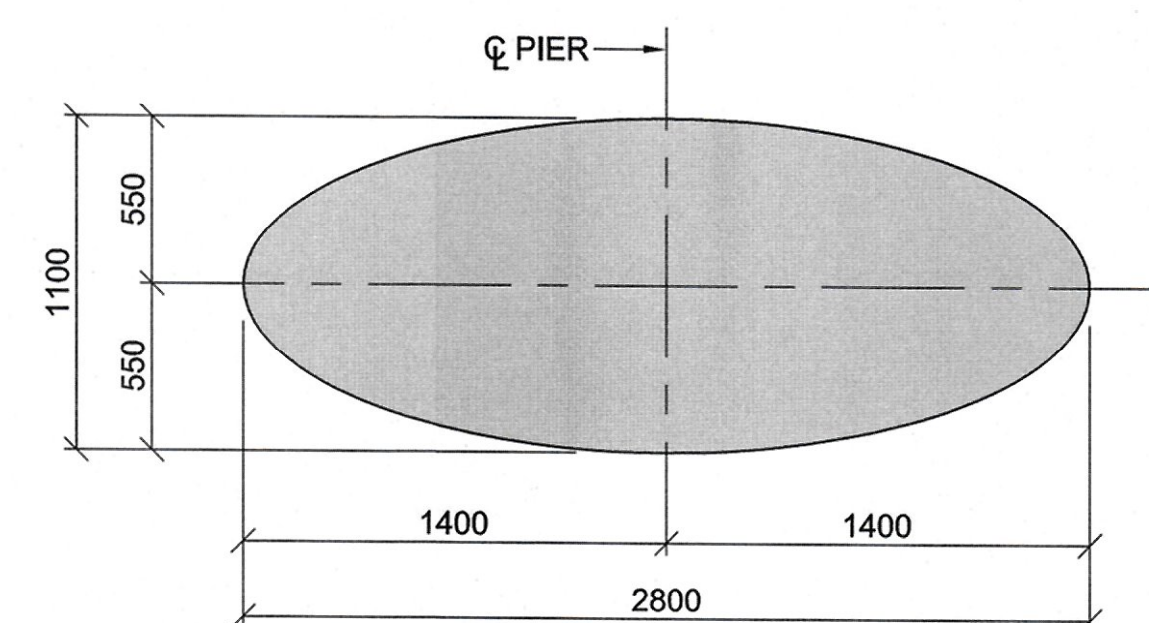
PIER ELEVATION
SCALE 1:50 (A1), 1:100 (A3)



PILES AND PILE CAP ARRANGEMENT PLAN
SCALE 1:50 (A1), 1:100 (A3)



1 ELEVATION
SCALE 1:50 (A1), 1:100 (A3)



2 SECTION
SCALE 1:25 (A1), 1:50 (A3)

PIER No.	LEVEL-A	LEVEL-B	EGL	ALLOWABLE BEARING CAPACITY (kPa)
PIER-2	55.470	55.300	50.00	350

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

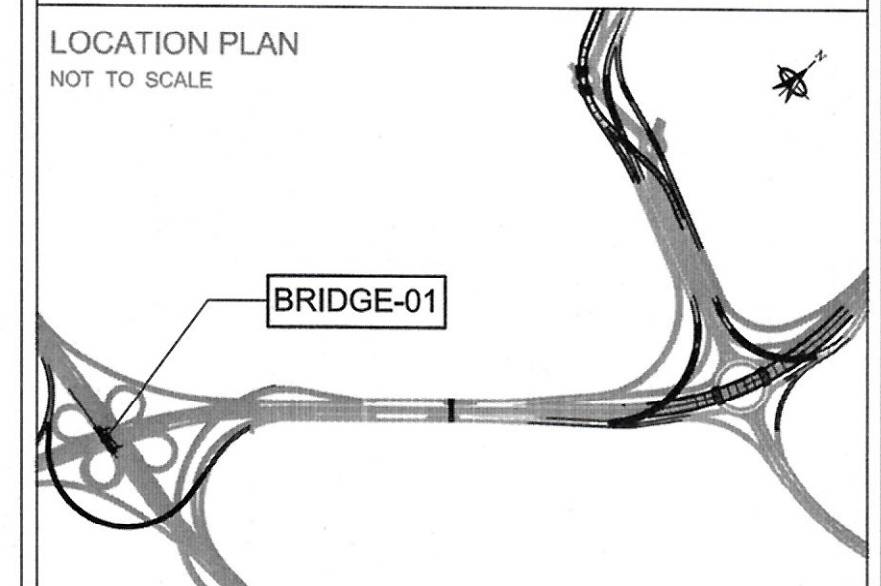
CONSULTANT:



IN ASSOCIATION WITH:



LOCATION PLAN
NOT TO SCALE



NOTES:

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7. SHOWN LEVELS SHOULD BE REVIEWED WITH LATEST REVISION OF HIGHWAY DRAWINGS AND IF ANY DISCREPANCY MORE THAN 50mm IT SHOULD BE REPORTED TO THE ENGINEER.



Rev. No. Date Description By

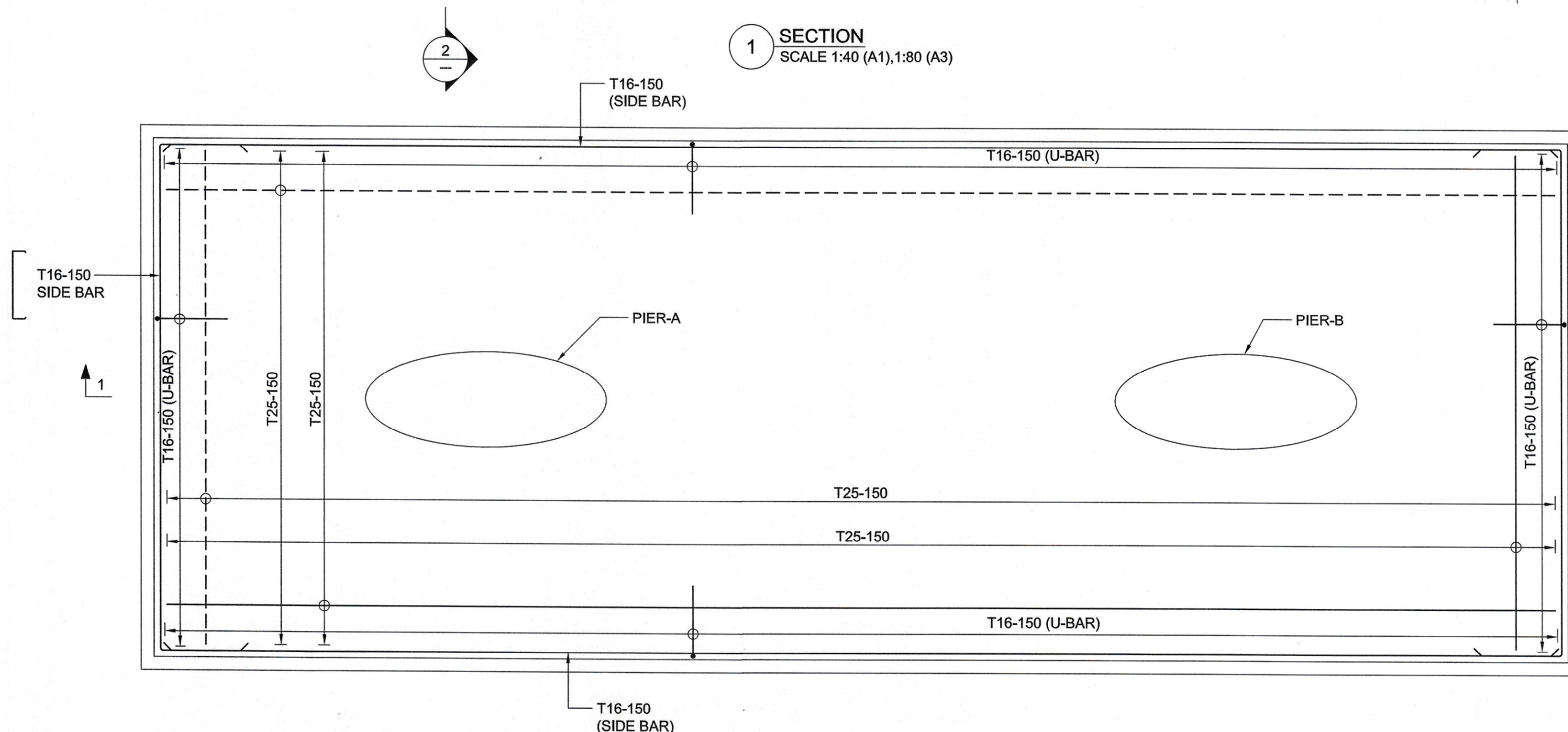
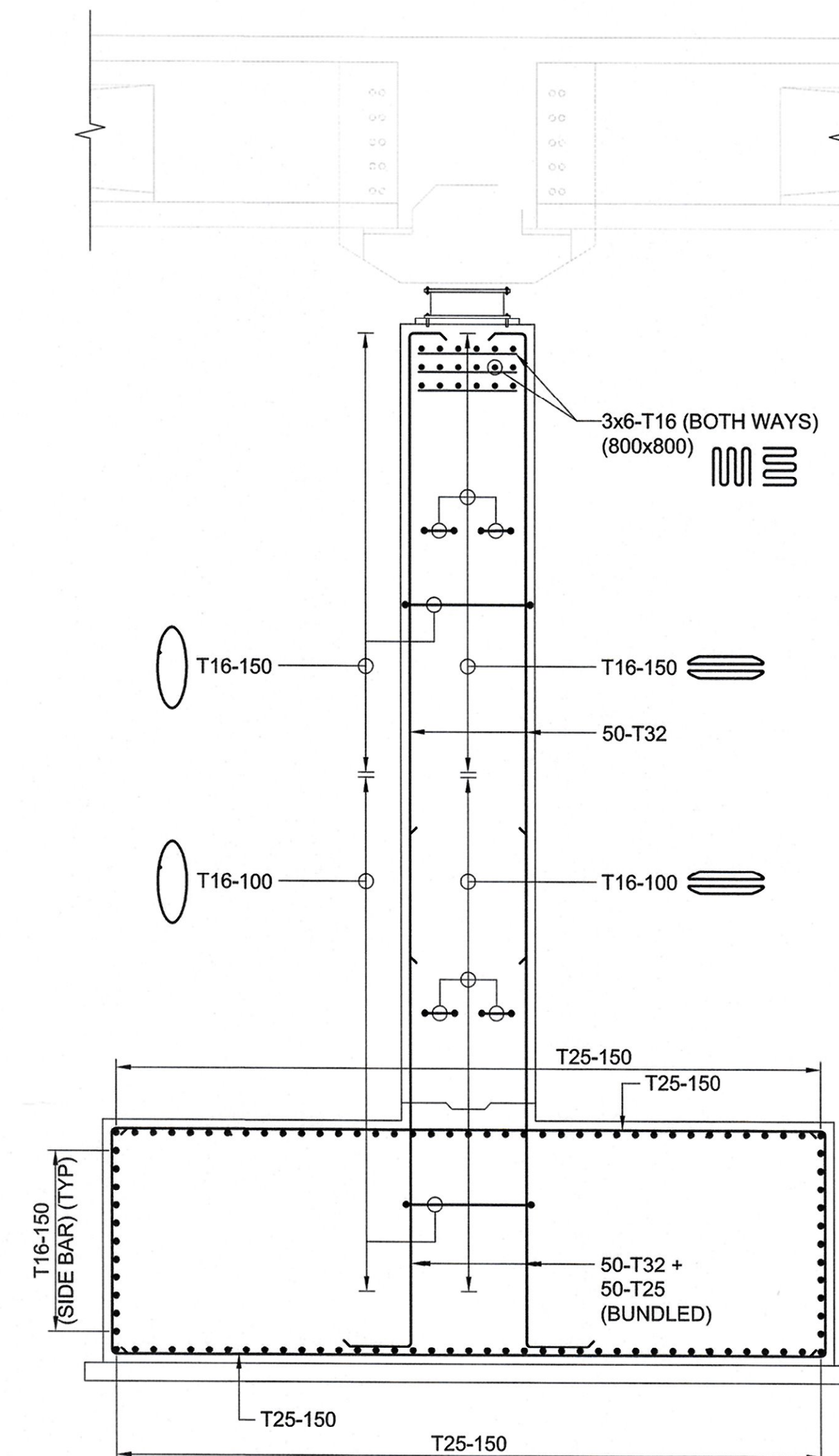
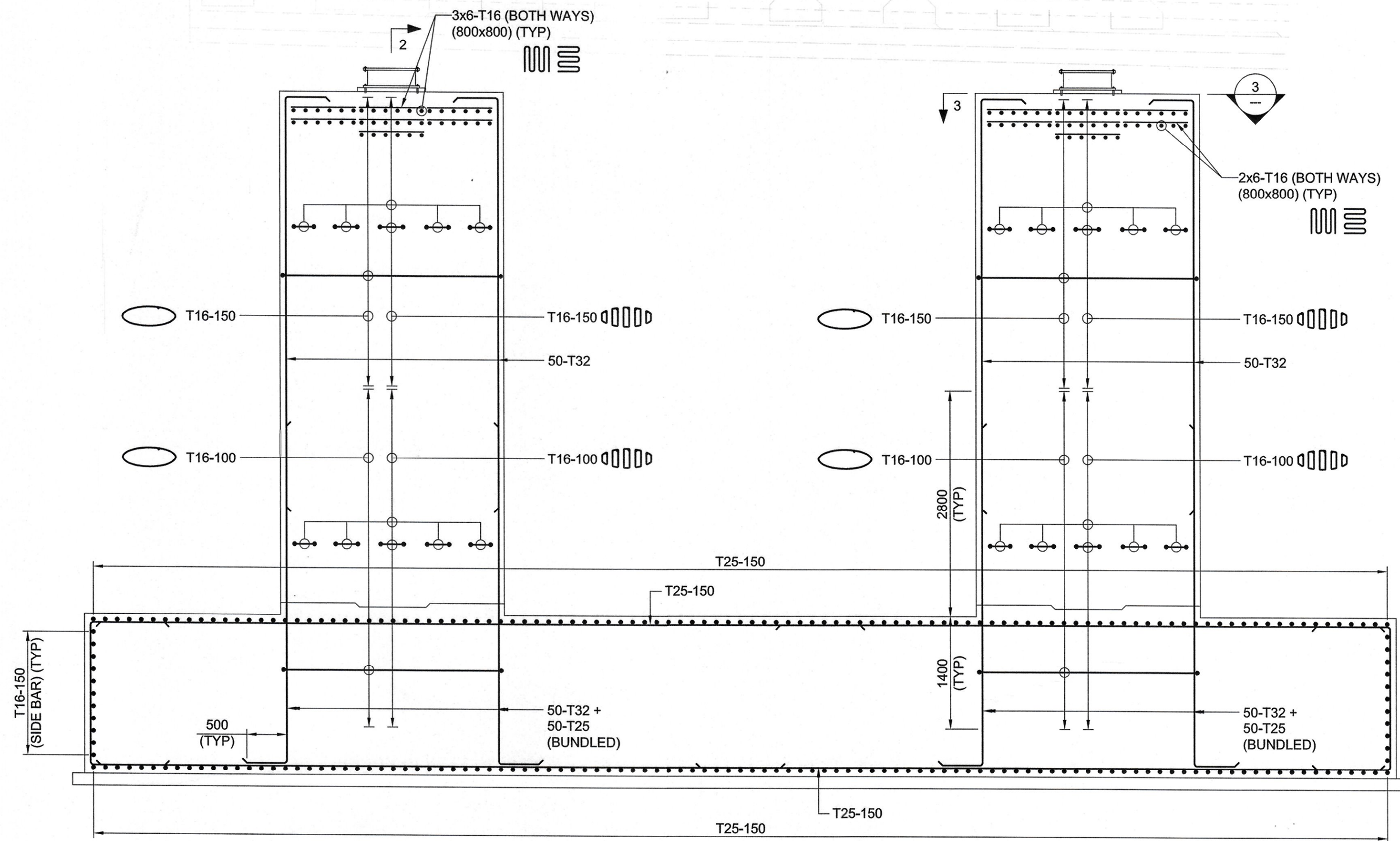
DRAWING TITLE:

BRIDGE - 01
PIER - 02
DIMENSIONAL DETAILS

DRAWING NO: ST_00_BR_0131_02

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	MA	APPROVED BY:	AZ

İNŞAAT SANAYİ VE TİCARET A.Ş.
Hizmet Sahibi No: 98 00 170 HAT
Tic. Sic. No: 271244 448 98 00 170 HAT
Ankara Kurumlar V.D. 271244 448 98 00 170 HAT



PILE CAP PLAN
SCALE 1:40 (A1), 1:80 (A3)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



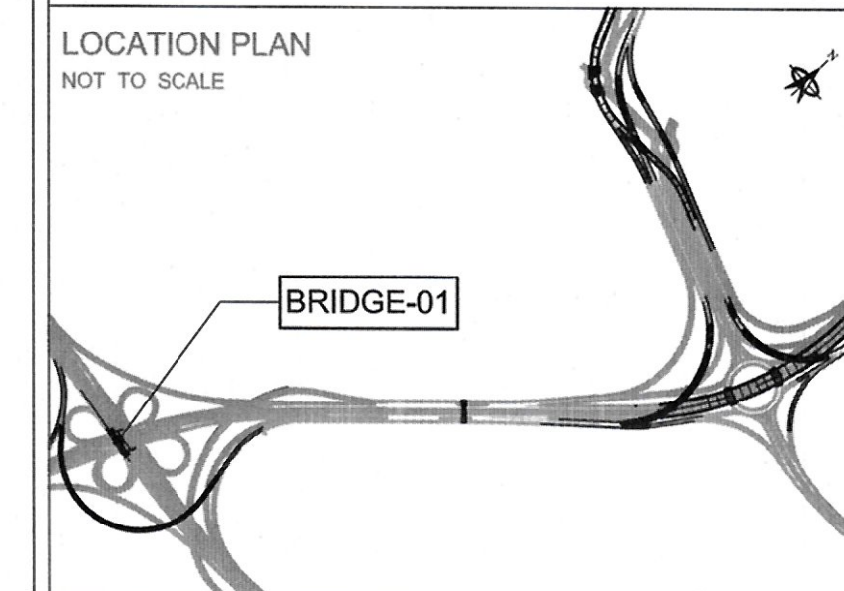
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

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- LAP SPLICES IN LONGITUDINAL STEEL BARS REINFORCEMENT SHALL BE AVOIDED IN THE END REGIONS OF THE PIER, DEFINED AS SHOWN IN THE ELEVATION AND SECTION OF THE PIER COLUMN.

LEGEND:

----- TOP REINFORCEMENT
——— BOTTOM REINFORCEMENT

Rev. No.	Date	Description	By

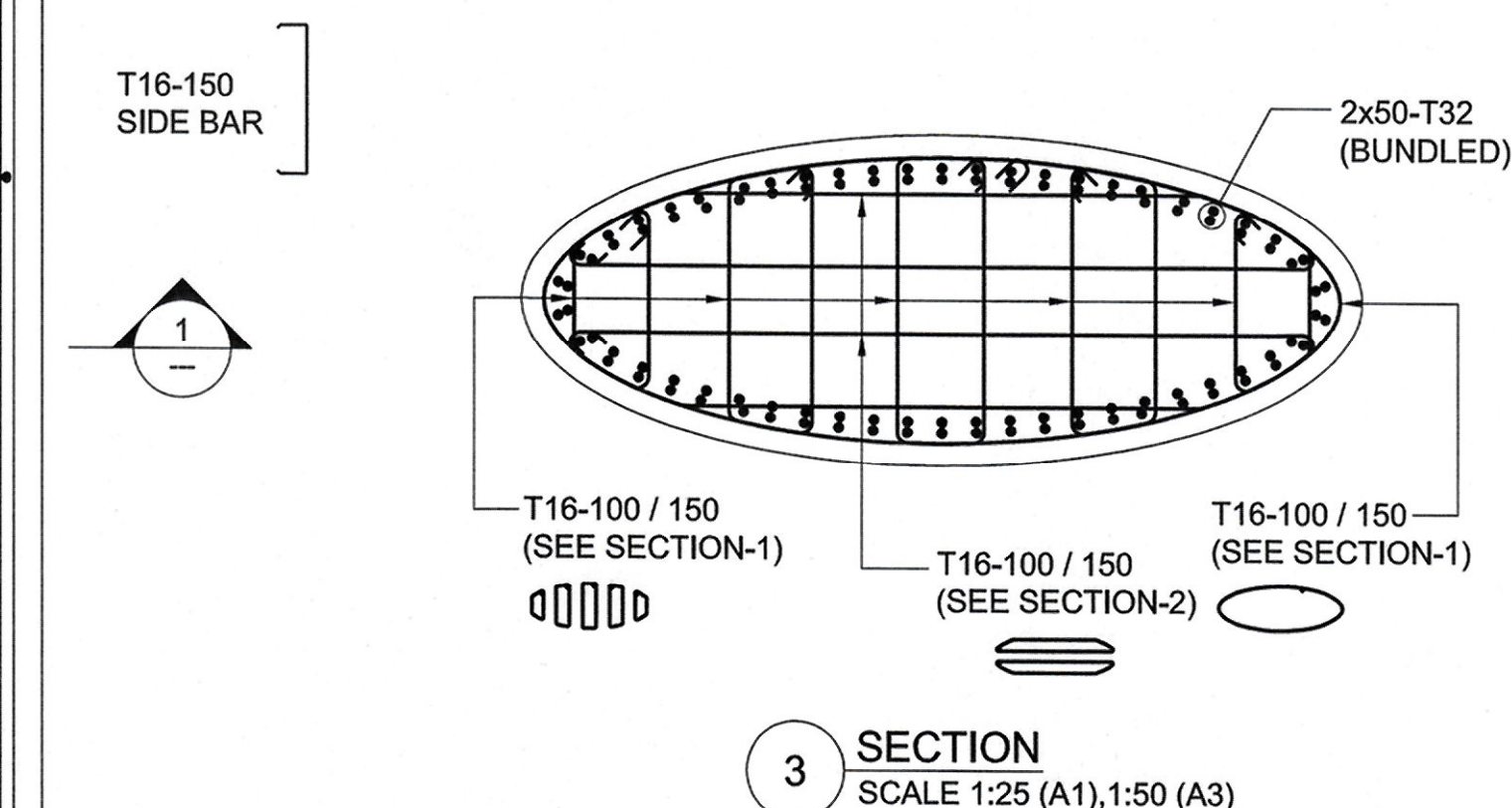
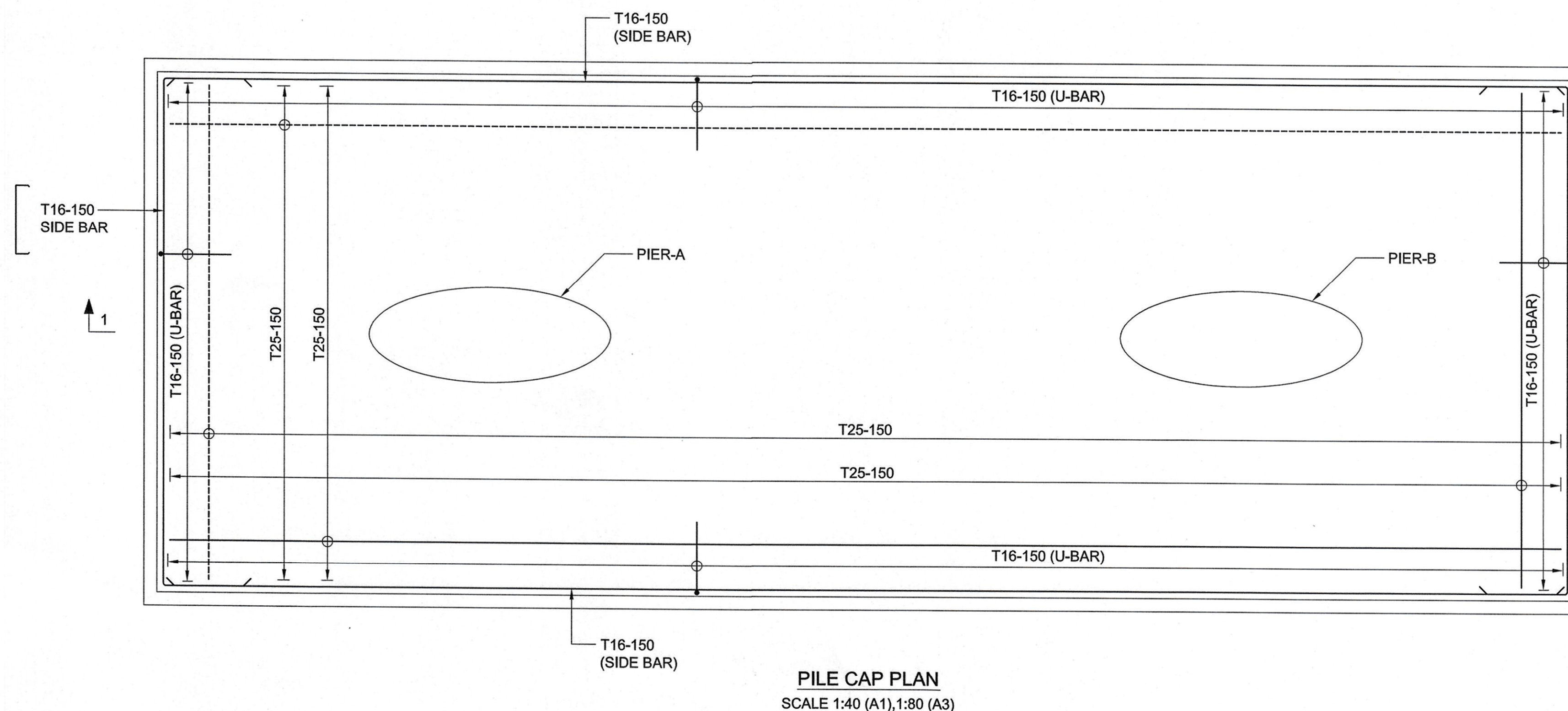
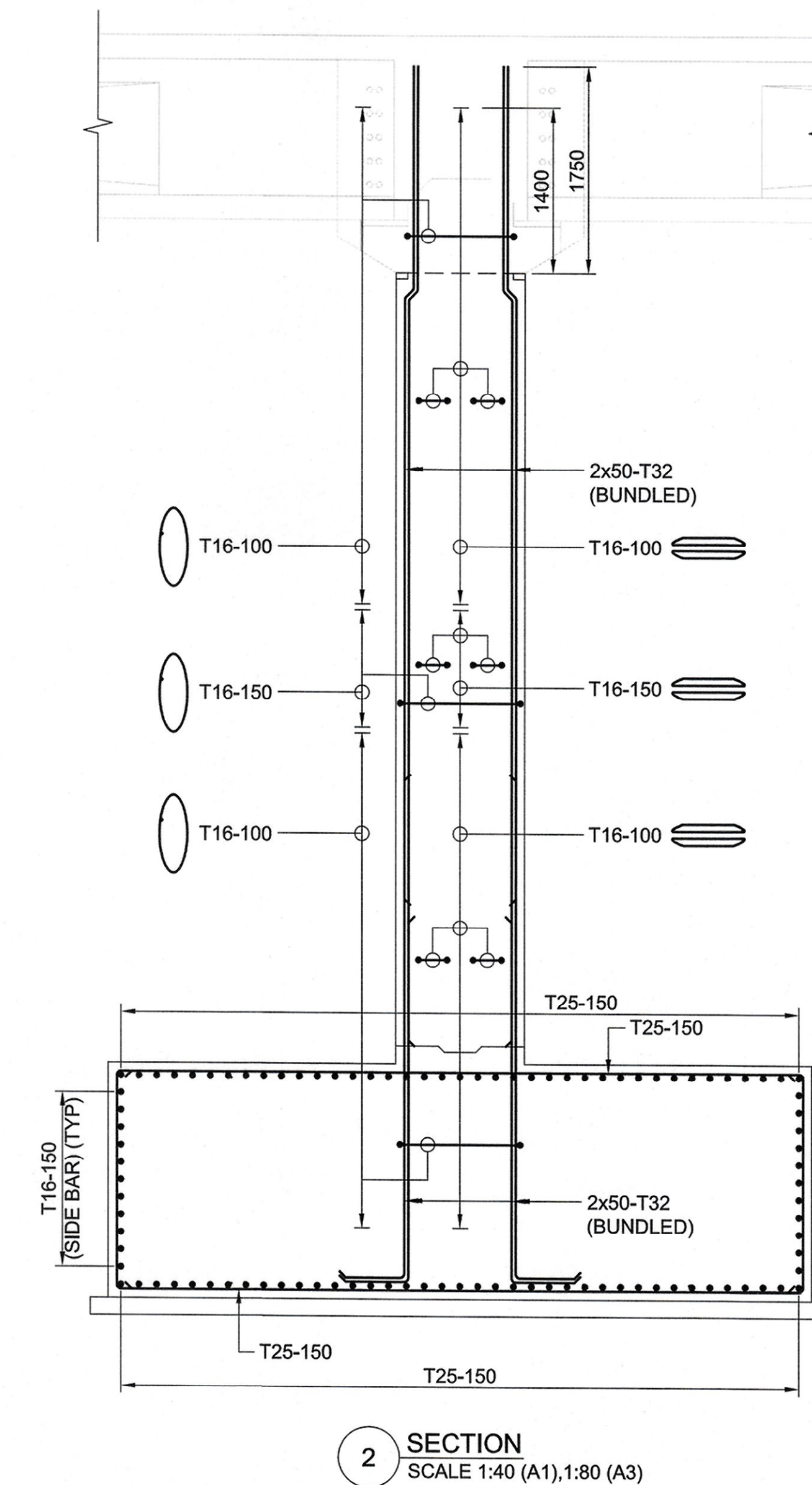
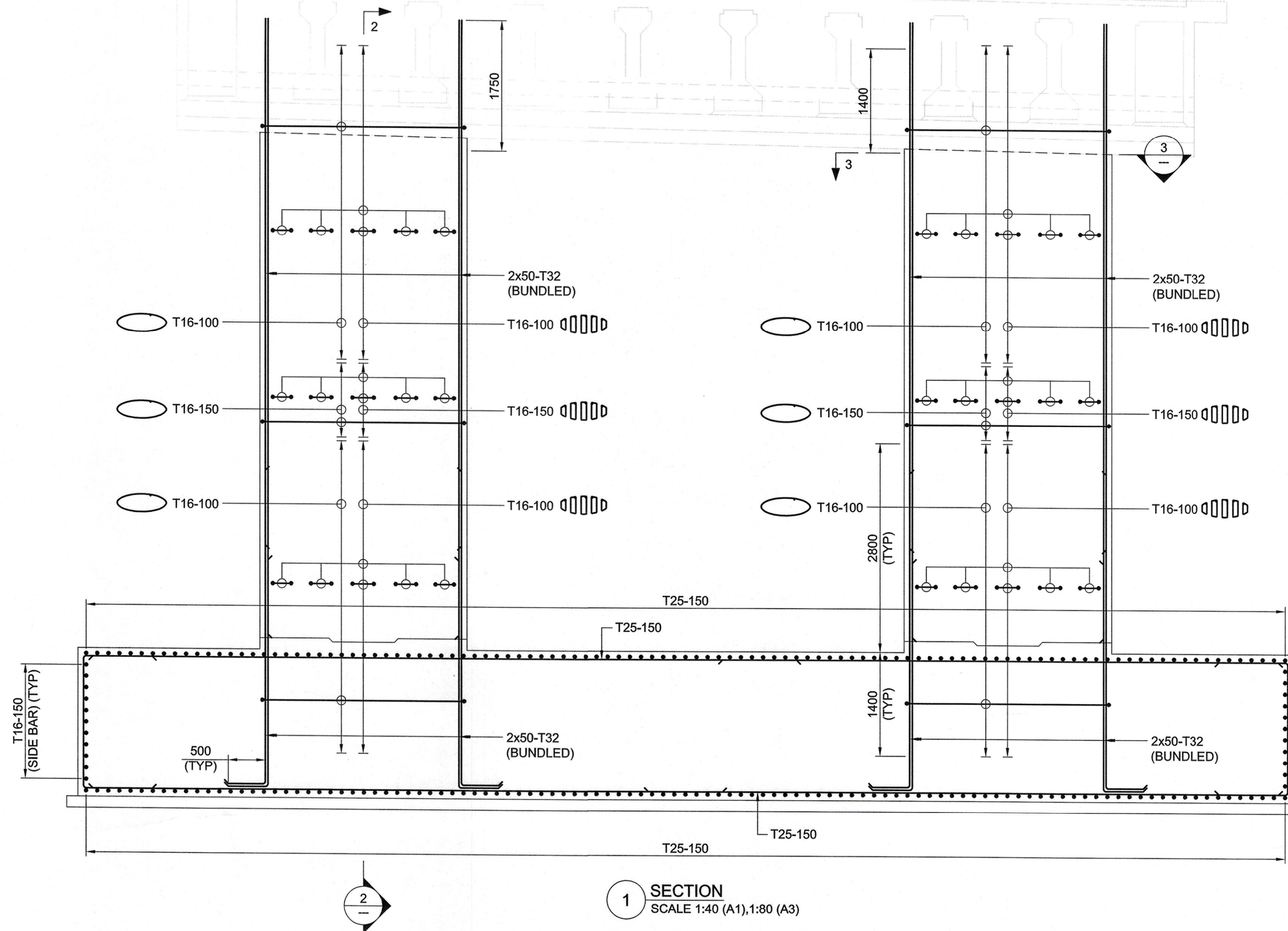
DRAWING TITLE:

BRIDGE - 01
PIER-01
REINFORCEMENT DETAILS

DRAWING NO: ST_00_BR_0141_01

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	SSB	APPROVED BY:	AZ





CLIENT:

STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And Maintenance Of Roads And Interchanges For New Terminal Building In Kuwait International Airport At Magwa Road RA268/

CONSULTANT:

ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:

Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE

BRIDGE-01

NOTES:

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- LAP SPLICES IN LONGITUDINAL STEEL BARS REINFORCEMENT SHALL BE AVOIDED IN THE END REGIONS OF THE PIER, DEFINED AS SHOWN IN THE ELEVATION AND SECTION OF THE PIER COLUMN.

LEGEND:

----- TOP REINFORCEMENT

----- BOTTOM REINFORCEMENT

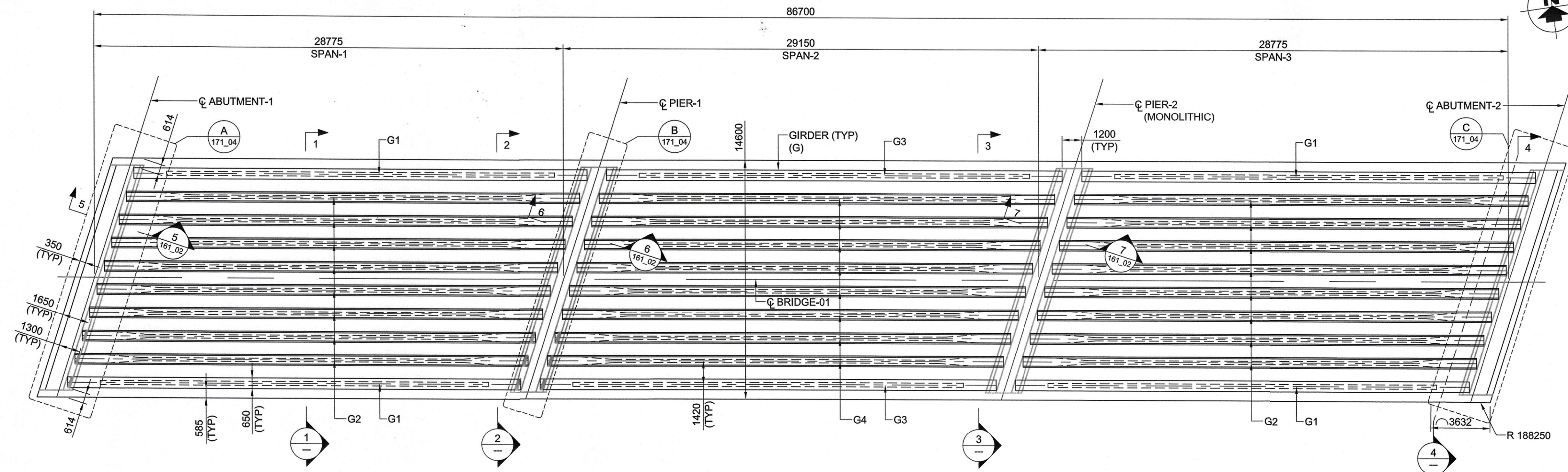
Rev. No.	Date	Description	By

DRAWING TITLE:

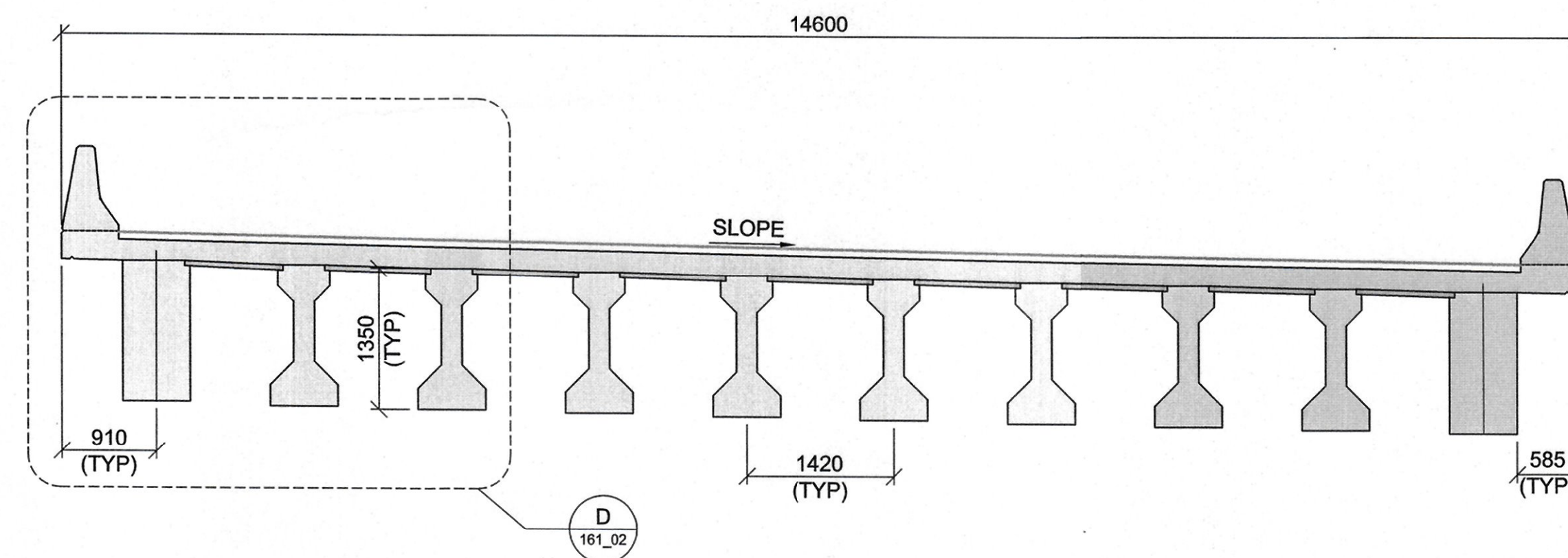
BRIDGE - 01
PIER-02
REINFORCEMENT DETAILS

DRAWING NO: ST_00_BR_0141_02

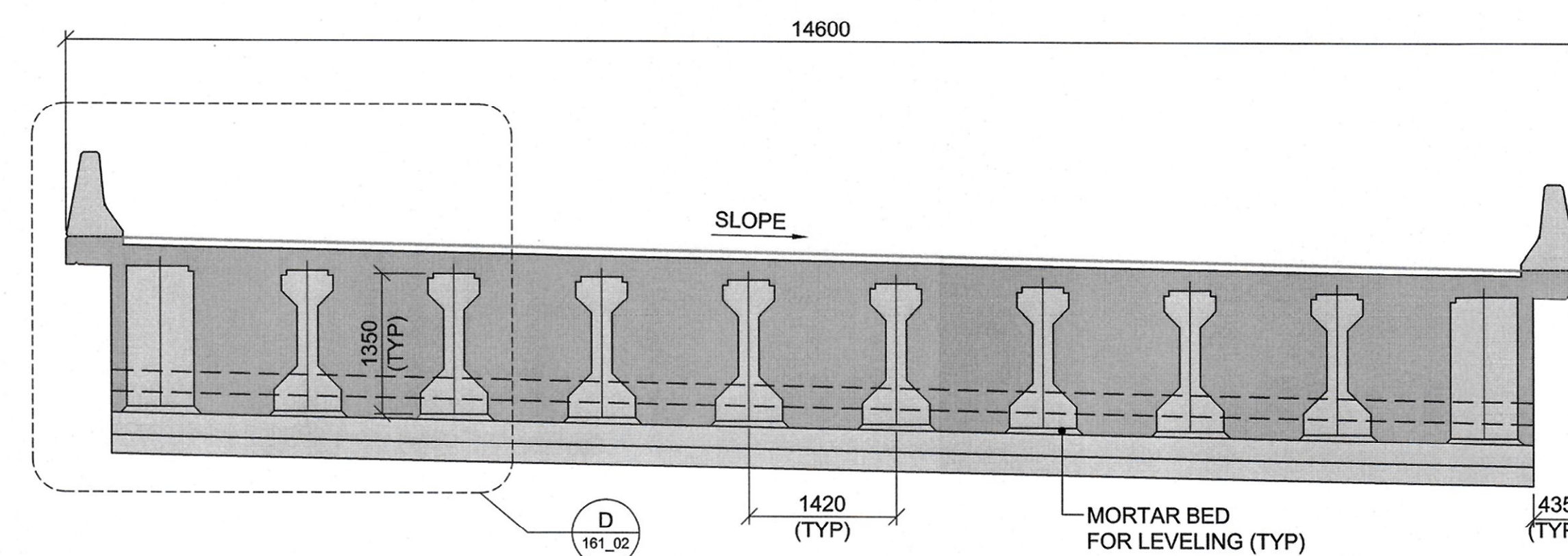
DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	SSB	APPROVED BY:	AZ



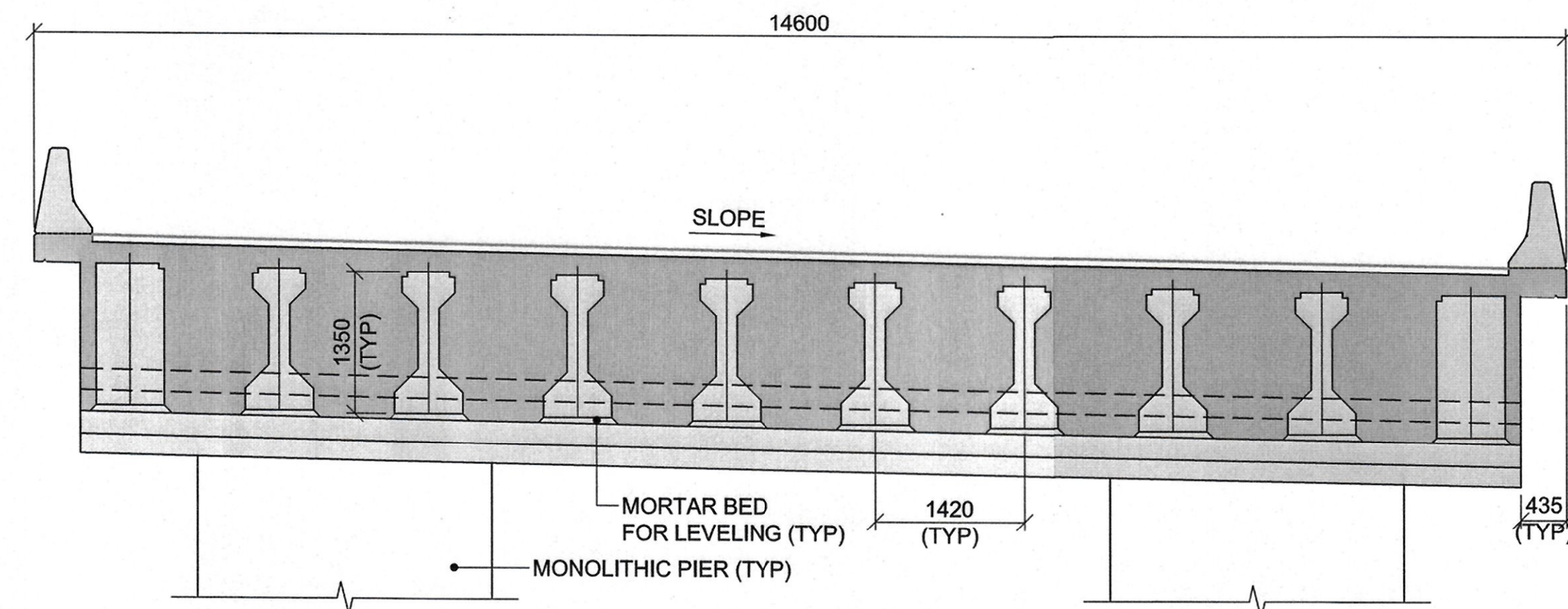
TOP SLAB PLAN
SCALE 1:150 (A1), 1:300 (A3)
* SPAN DIMENSIONS ARE MEASURED ALONG BRIDGE CENTERLINE
** DIMENSIONS ARE MEASURED PERPENDICULAR TO BRIDGE CENTERLINE



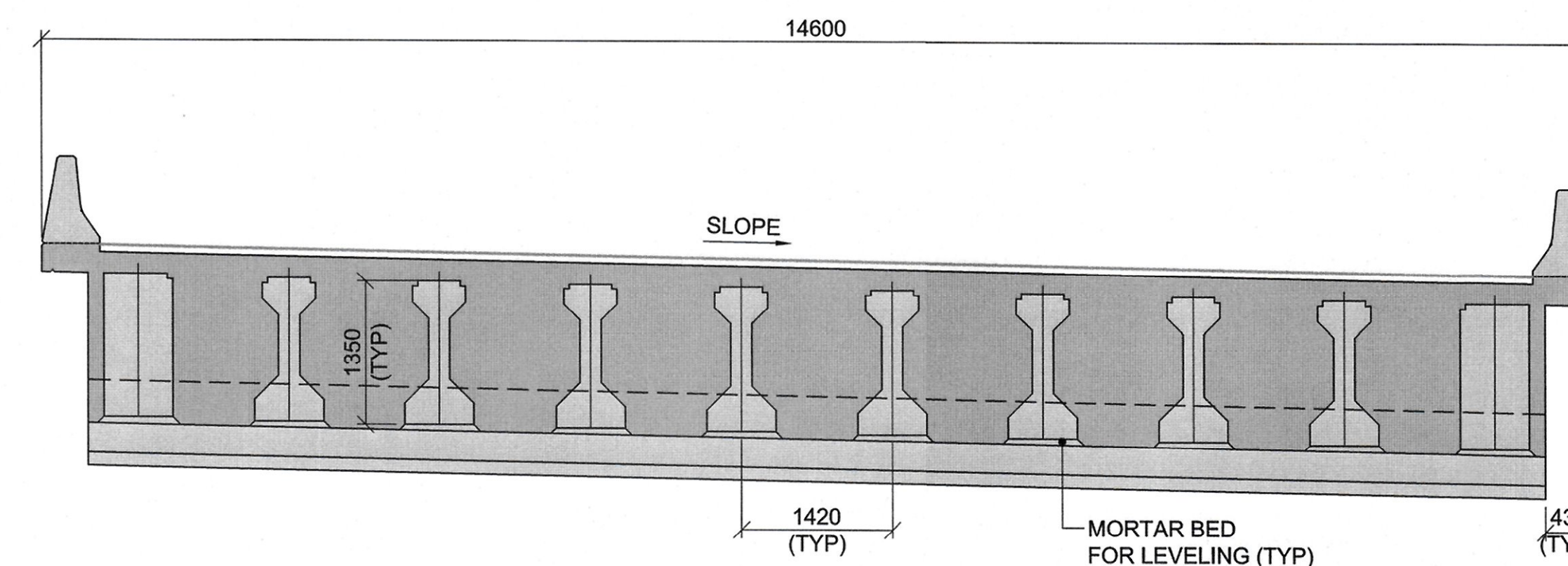
1 SECTION
SCALE 1:50 (A1), 1:100 (A3)



2 SECTION
SCALE 1:50 (A1), 1:100 (A3)



3 SECTION
SCALE 1:50 (A1), 1:100 (A3)



4 SECTION
SCALE 1:50 (A1), 1:100 (A3)

CLIENT:

STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And Maintenance Of Roads And Interchanges For New Terminal Building In Kuwait International Airport At Magwa Road RA268/

CONSULTANT:

ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:

Dar Al-Dowailah
Engineering Consultants & Construction Managers

LOCATION PLAN
NOT TO SCALE

BRIDGE-01

NOTES:

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- DECK CROSS SLOPE SHOWN IS INDICATIVE ONLY.
- FORMWORK OF DECK OVERHANG TO BE SUPPORTED BY EXTERIOR GIRDER.

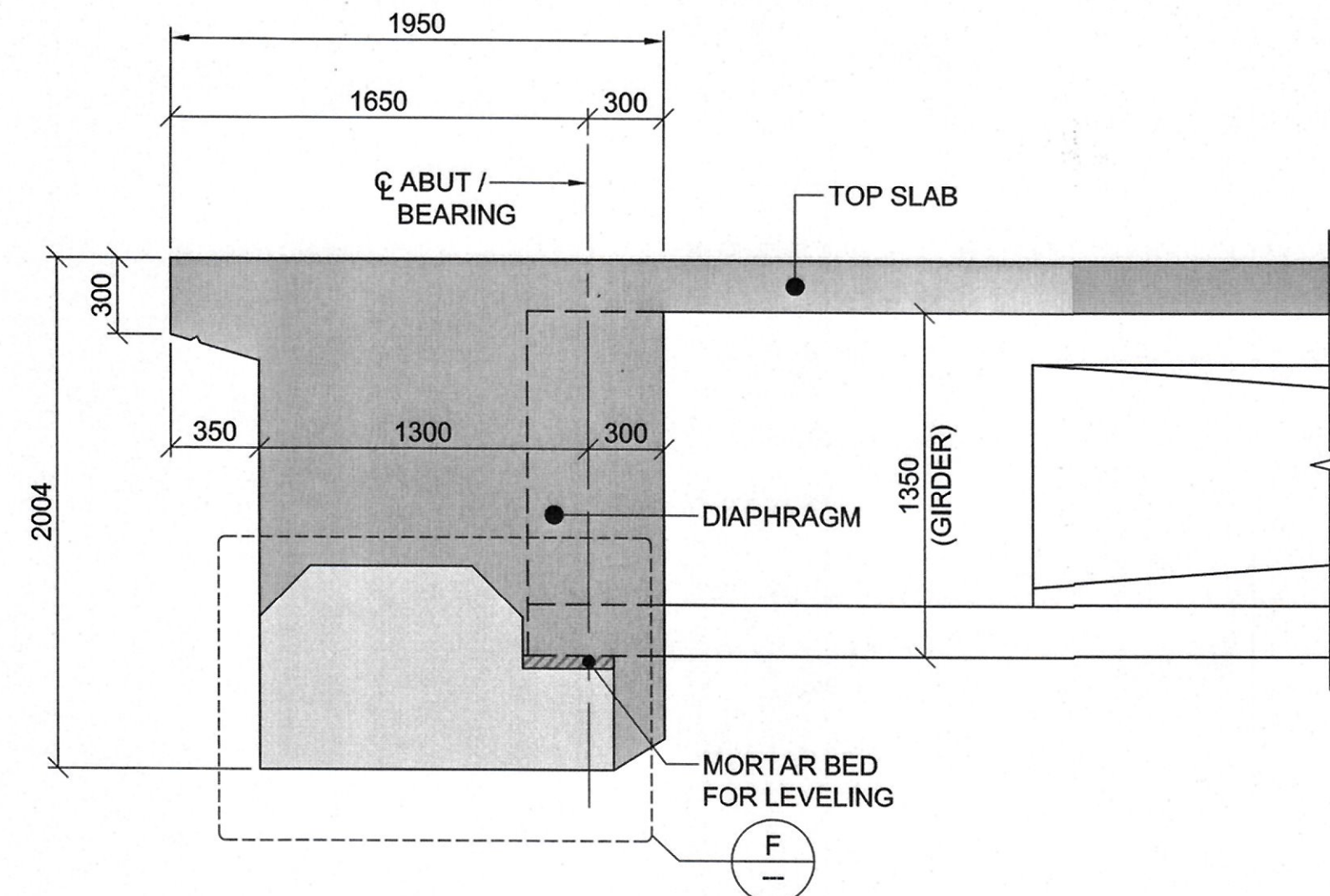
BRIDGE - 01
SUPERSTRUCTURE
DIMENSIONAL DETAILS (SHEET-01)

DRAWING NO: ST_00_BR_0161_01

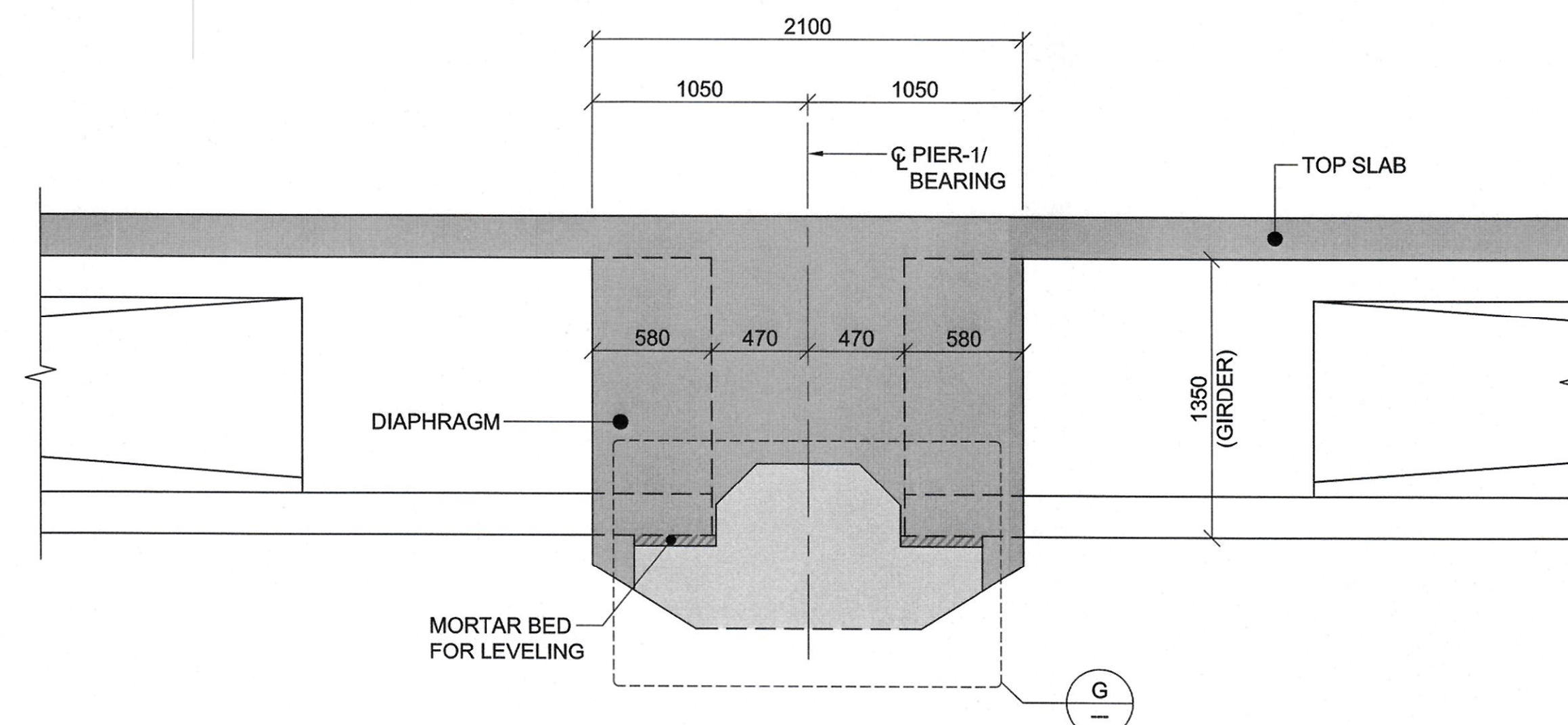
Rev. No.	Date	Description	By

DATE: NOV.14, 2016 STATUS: FINAL
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DESIGNED BY: MS CHECKED BY: MC
DRAWN BY: SBB APPROVED BY: AZ

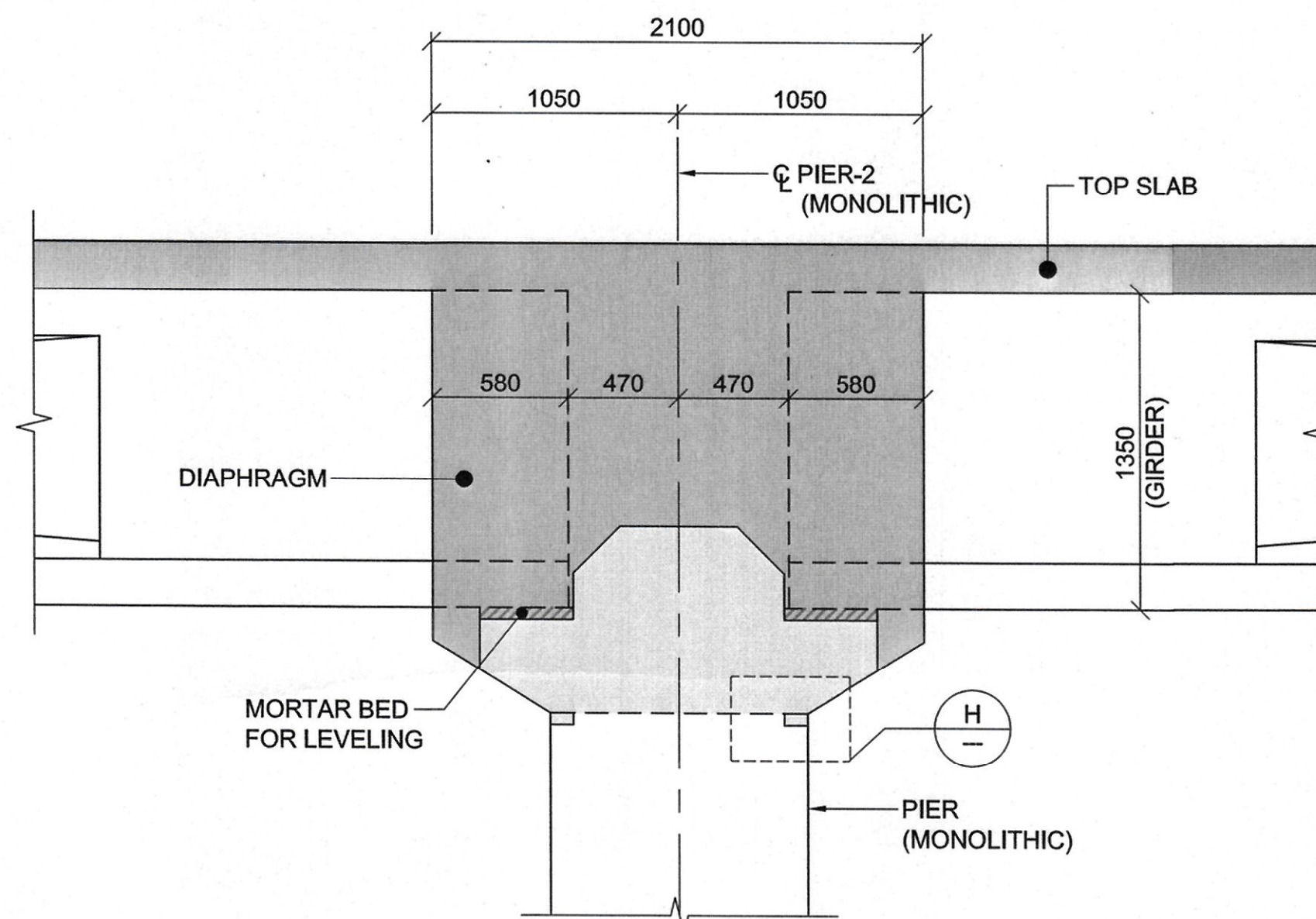
LIMAK
İNSAAT SANATİVE TİCARET A.Ş.
Hafsa Sokak No: 3 G.O.P. ANKARA
Tic. Sic. No: 271800 Şirket Sic. No: 271800
Ankara Kurumlar V.D. 6080063463



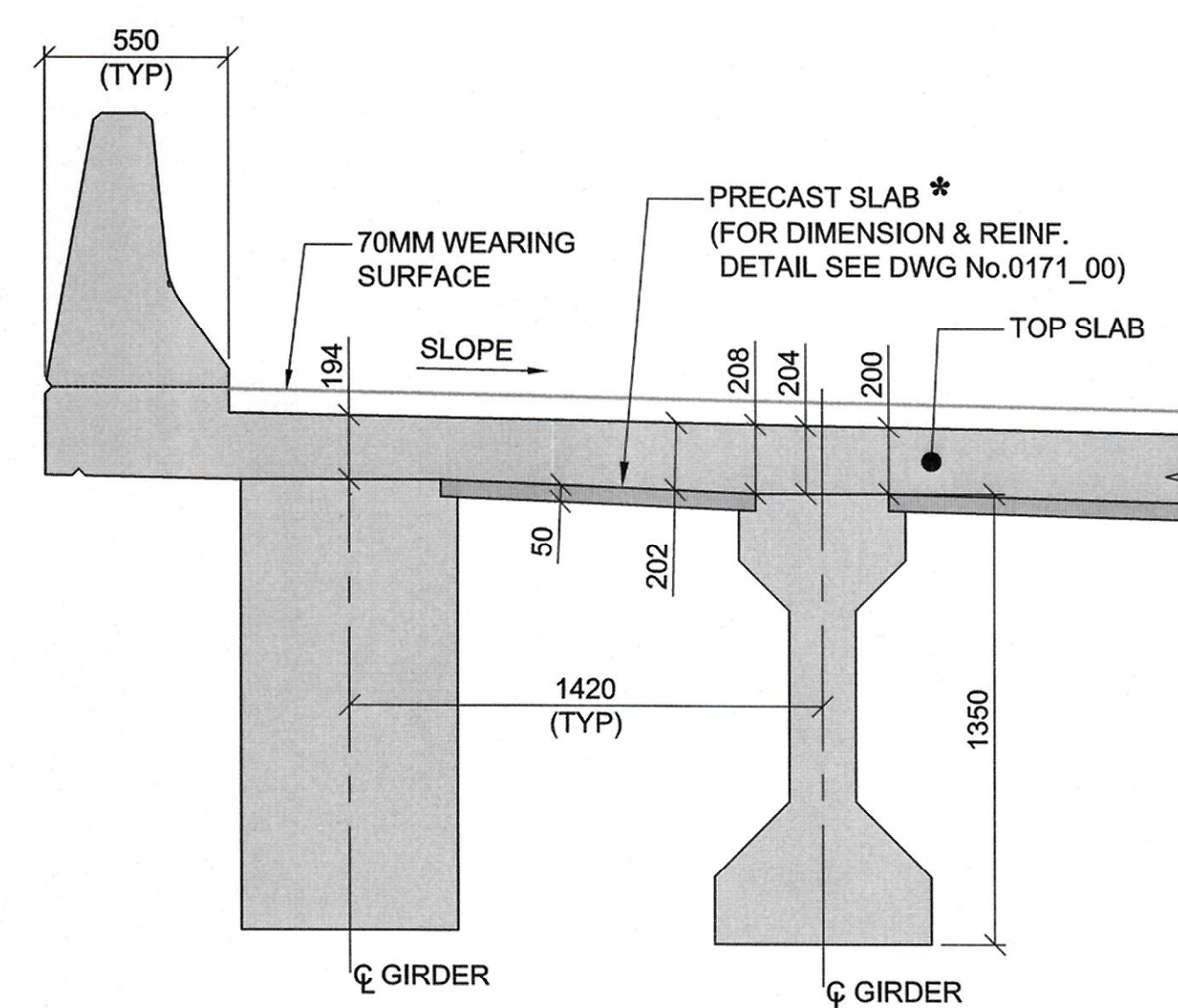
5 SECTION
REF. 0161_01
SCALE 1:25 (A1), 1:50 (A3)
(ABUTMENT-2 SAME BUT MIRRORED)



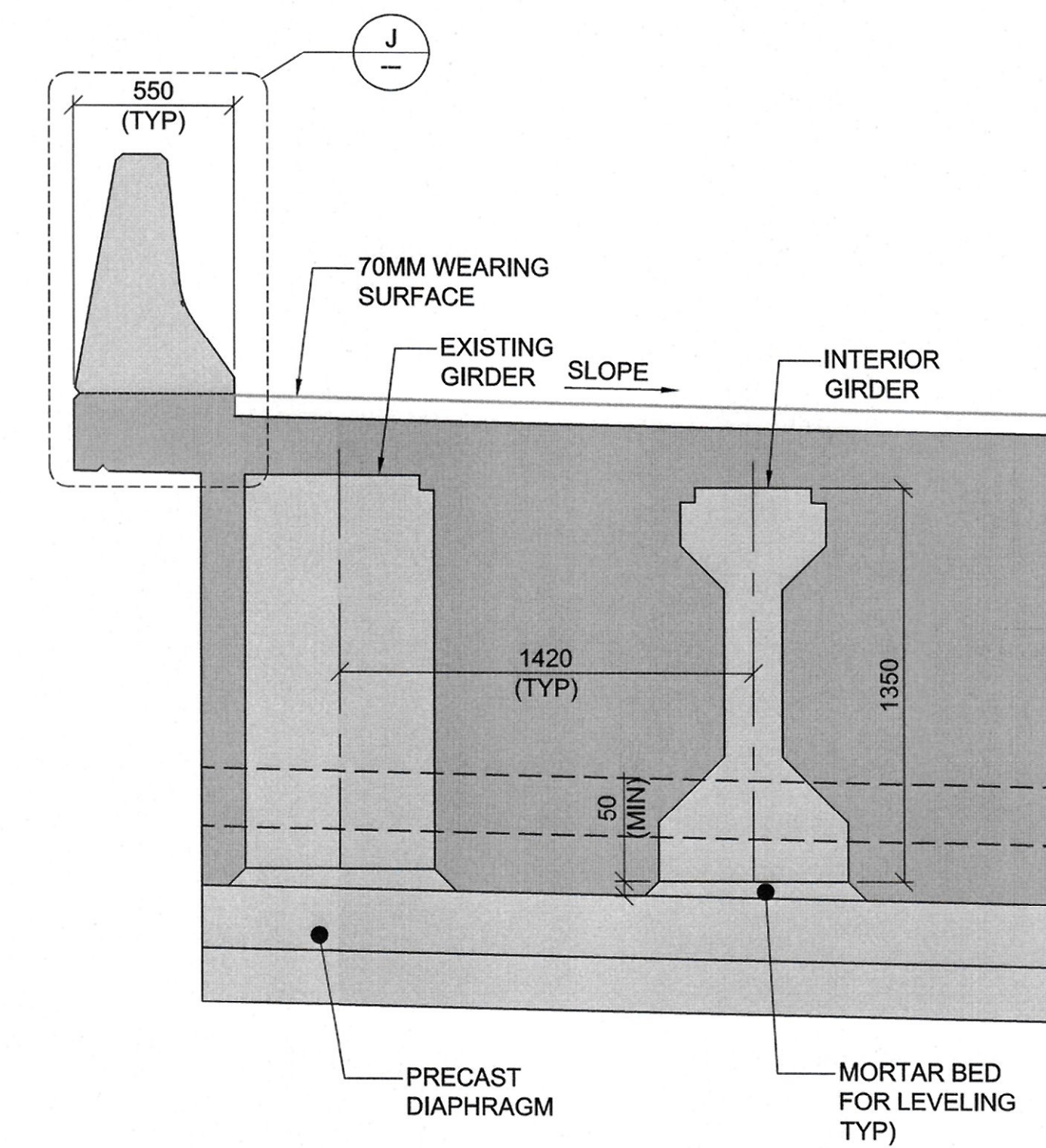
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REF. 0161_01
SCALE 1:25 (A1), 1:50 (A3)



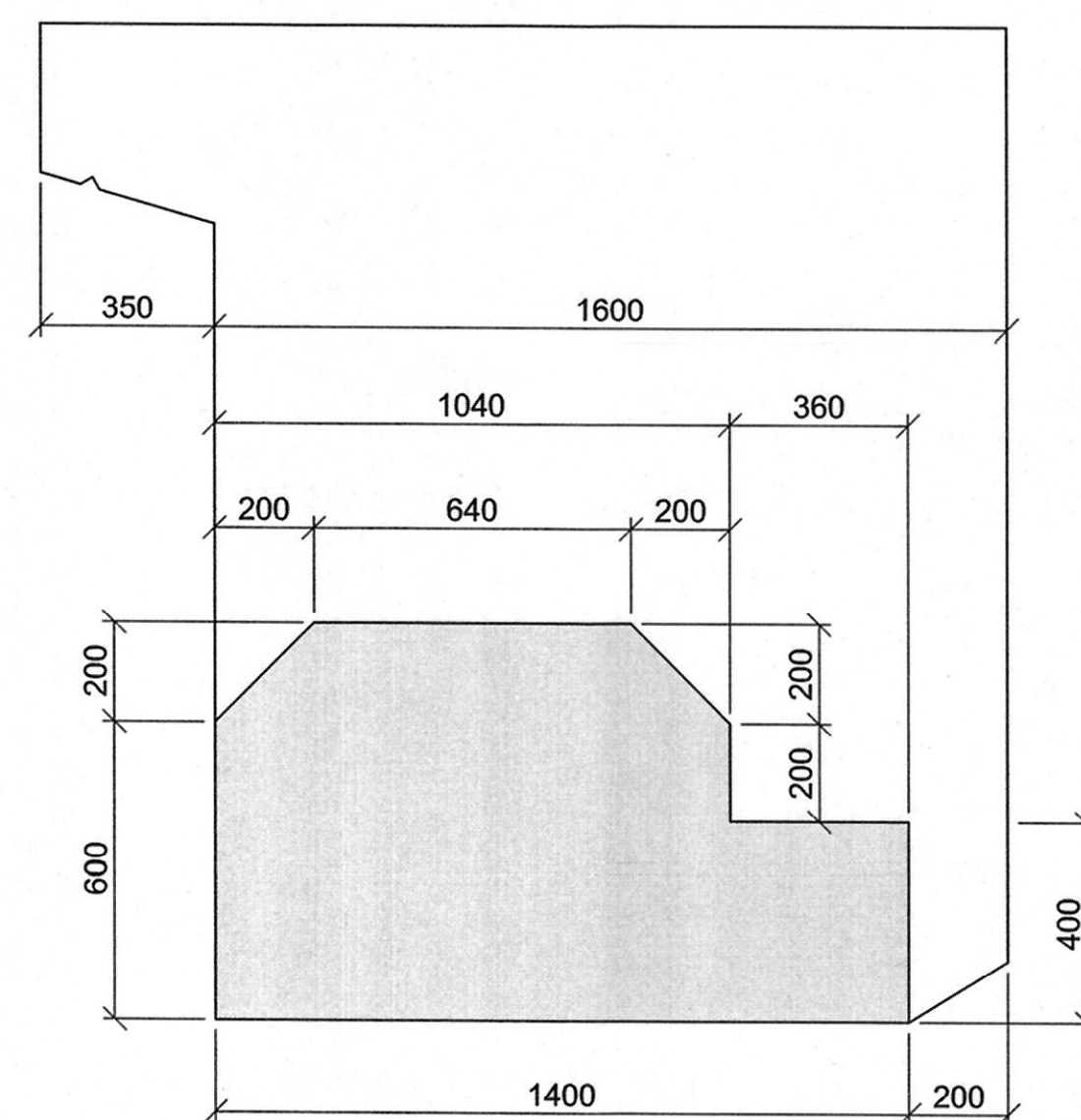
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REF. 0161_01
SCALE 1:25 (A1), 1:50 (A3)



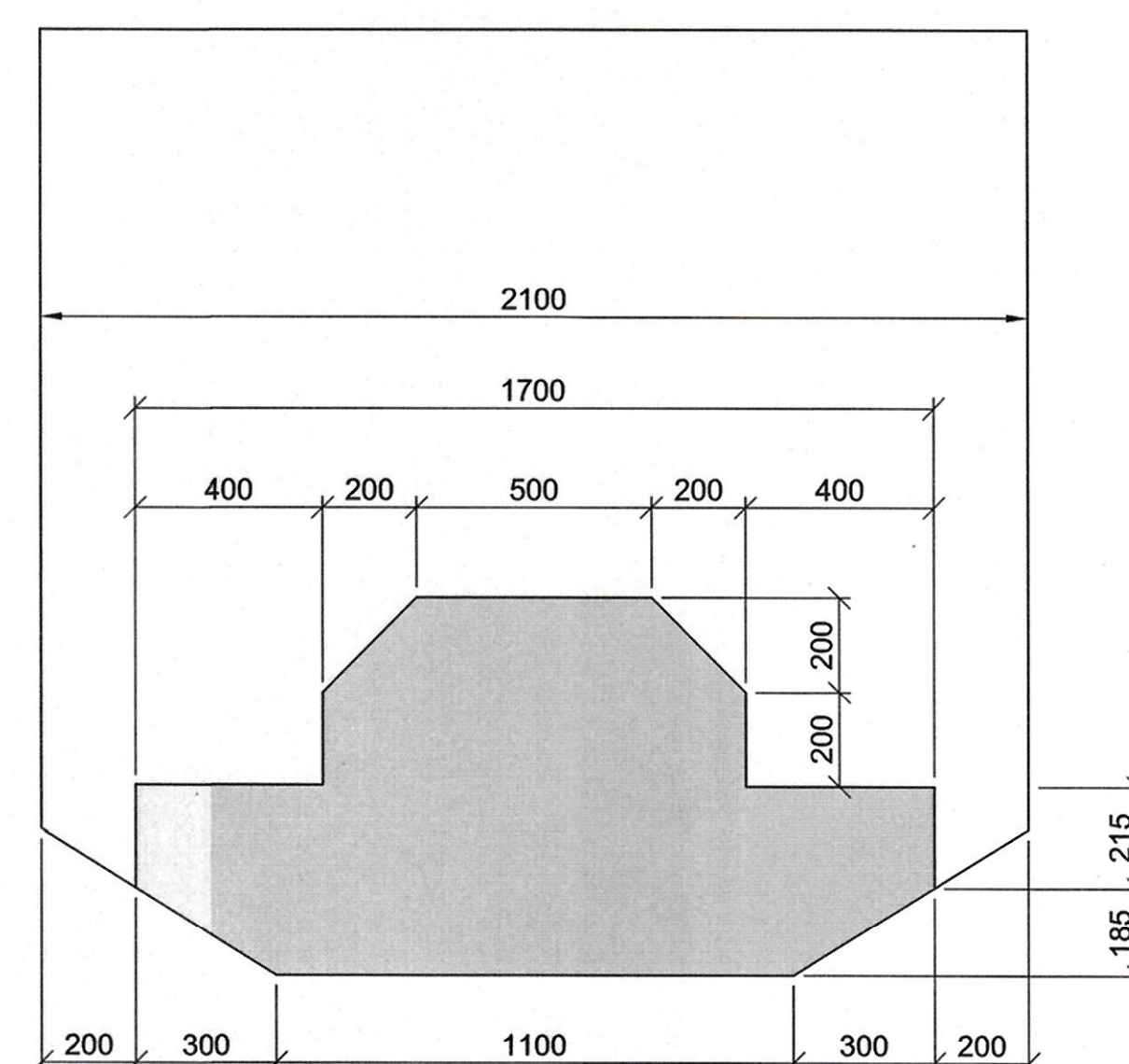
D DETAIL
REF. 0161_01
SCALE 1:20 (A1), 1:40 (A3)
* SURFACE OF PRECAST SLAB TO BE INTENTIONALLY ROUGHENED TO 6MM.



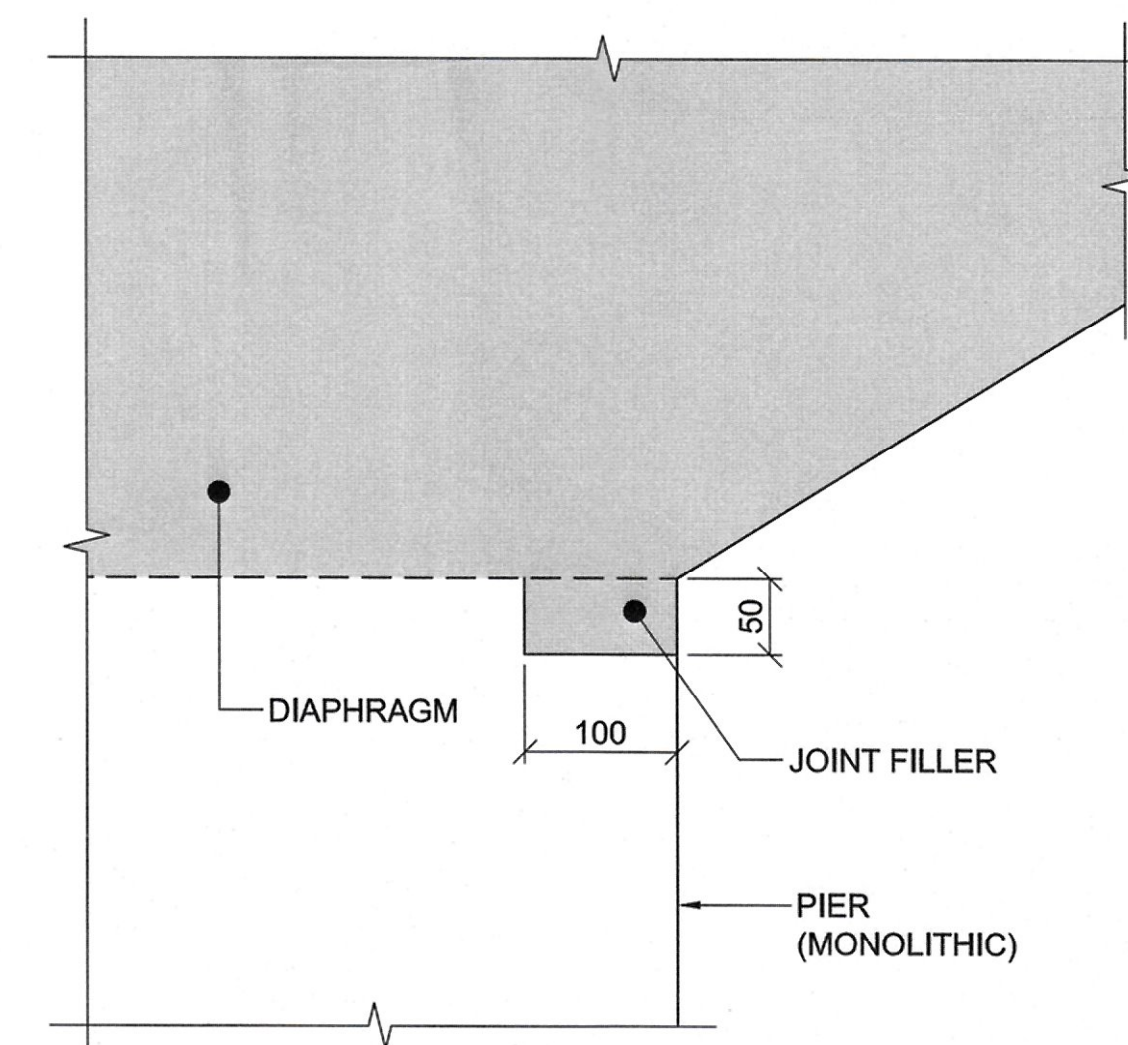
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SCALE 1:20 (A1), 1:40 (A3)



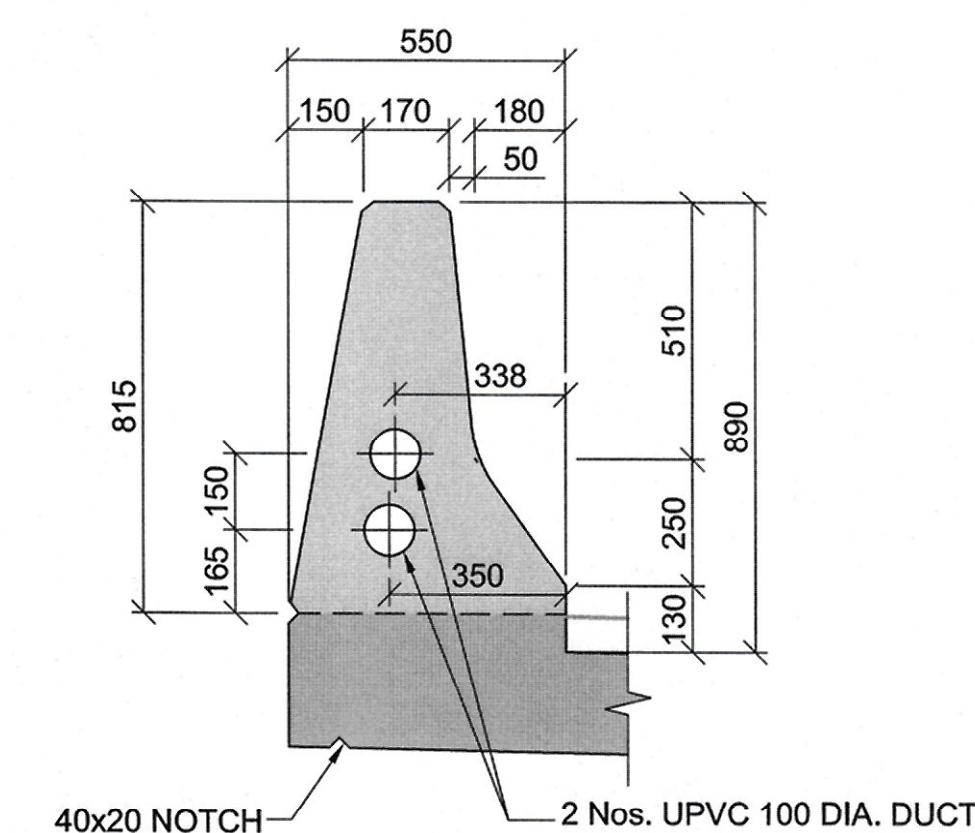
F DETAIL
SCALE 1:15 (A1), 1:30 (A3)



G DETAIL
SCALE 1:15 (A1), 1:30 (A3)



H DETAIL
SCALE 1:5 (A1), 1:10 (A3)



J DETAIL
SCALE 1:15 (A1), 1:30 (A3)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

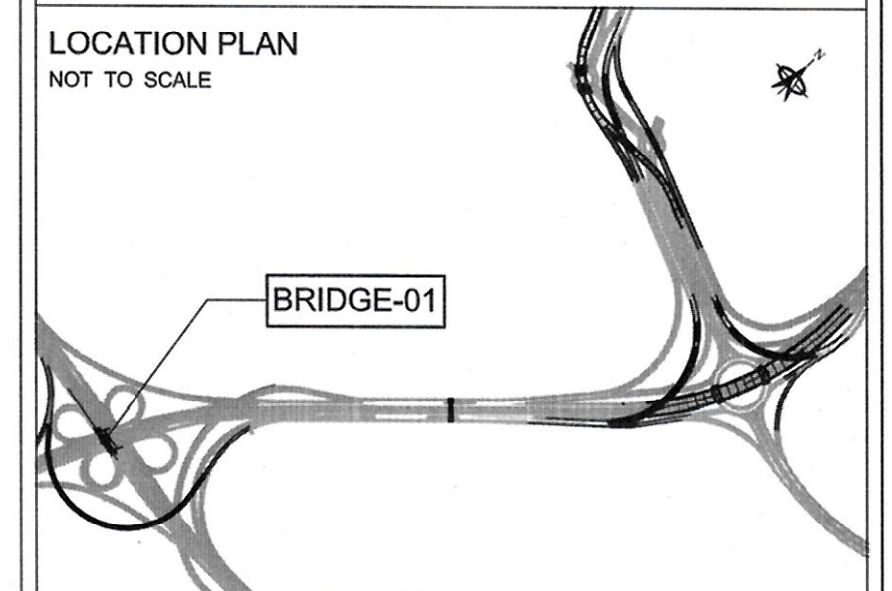
CONSULTANT:



IN ASSOCIATION WITH:



LOCATION PLAN
NOT TO SCALE



NOTES:

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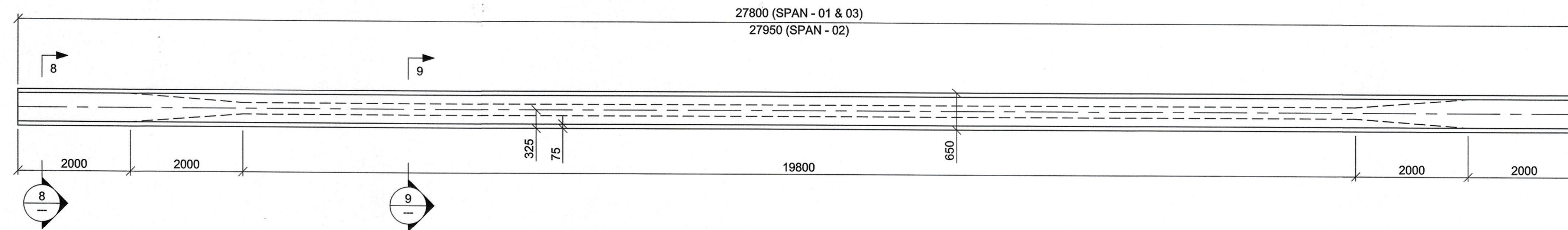


Rev. No.	Date	Description	By

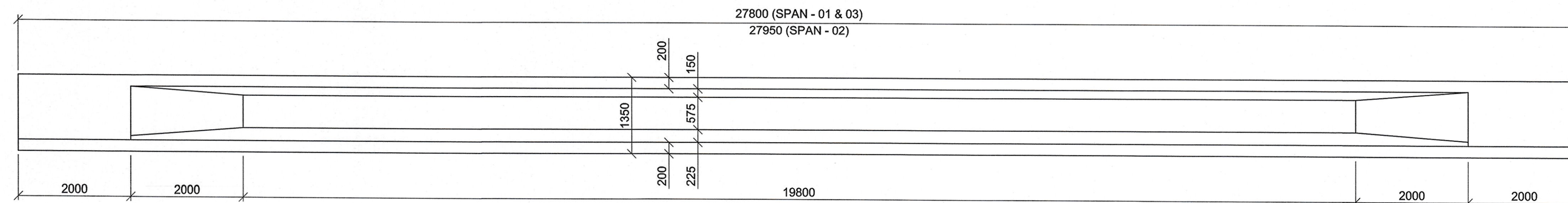
DRAWING TITLE:
BRIDGE - 01
SUPERSTRUCTURE
DIMENSIONAL DETAILS (SHEET-02)

DRAWING NO: ST_00_BR_0161_02

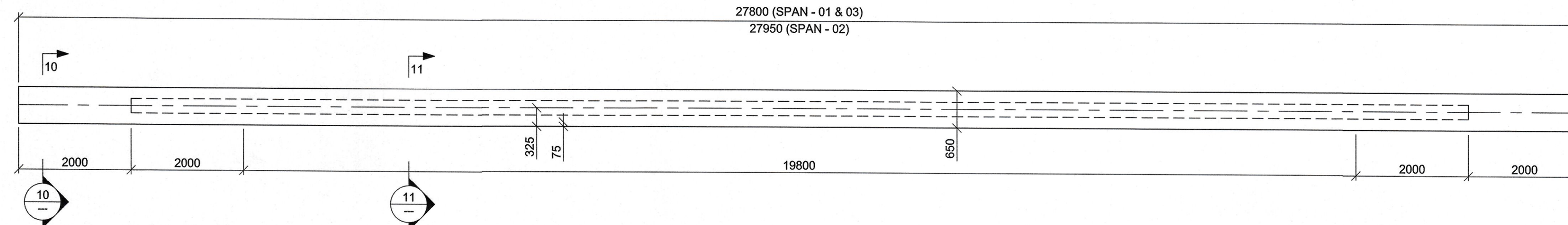
DATE:	NOV.14, 2016	STATUS:	FINAL
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DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SBB	APPROVED BY:	AZ



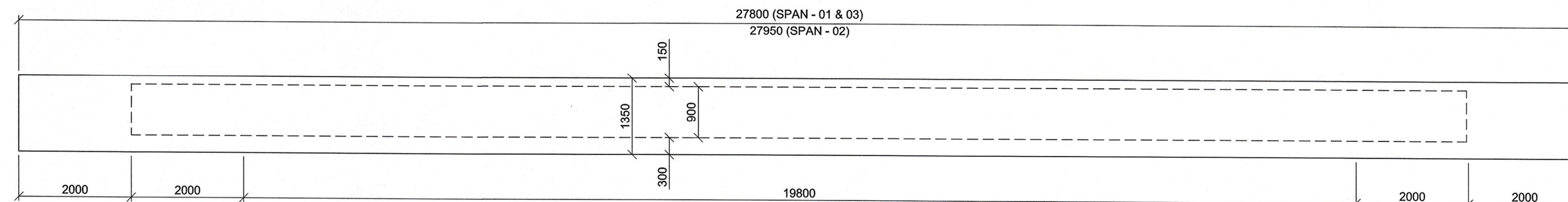
INTERIOR GIRDER TOP PLAN
SCALE 1:75 (A1), 1:150 (A3)



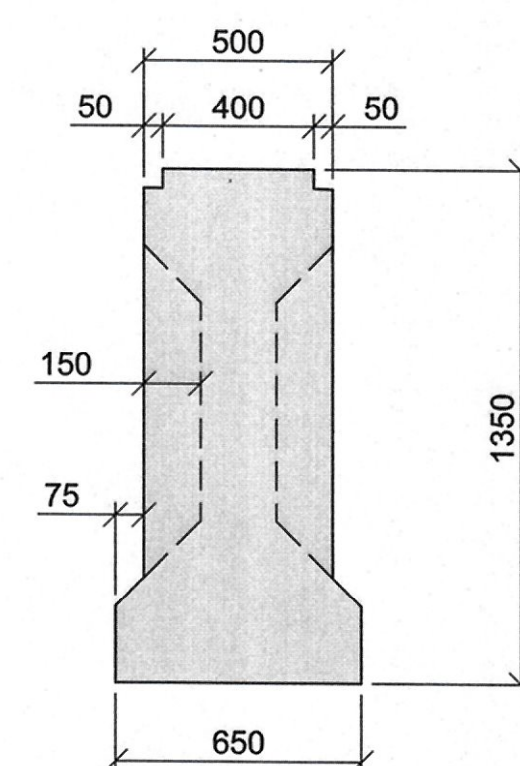
INTERIOR GIRDER ELEVATION
SCALE 1:75 (A1), 1:150 (A3)



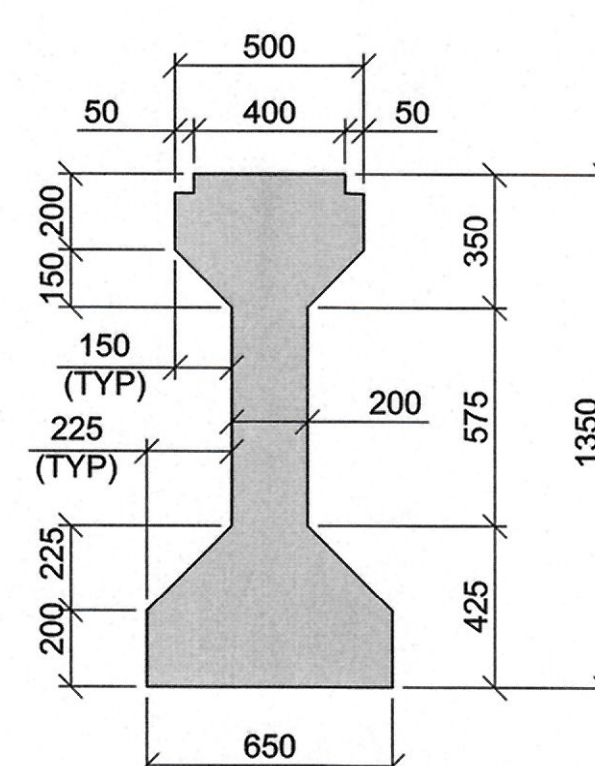
EXTERIOR GIRDER TOP PLAN
SCALE 1:75 (A1), 1:150 (A3)



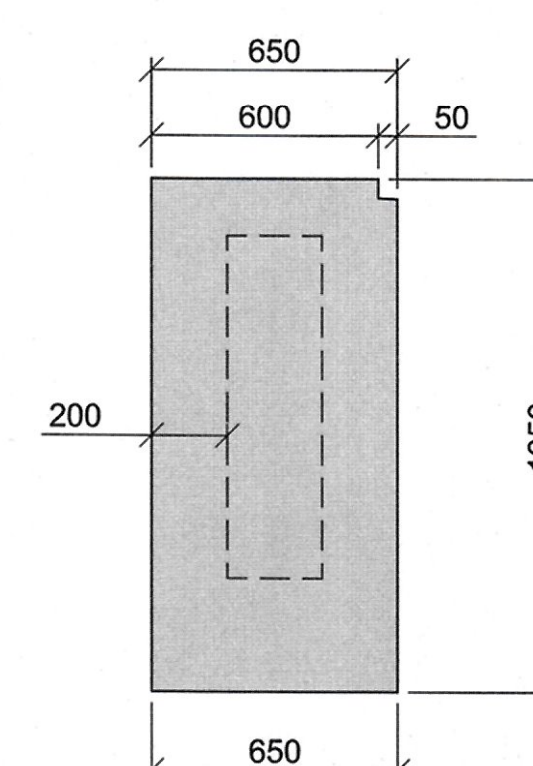
EXTERIOR GIRDER ELEVATION
SCALE 1:75 (A1), 1:150 (A3)



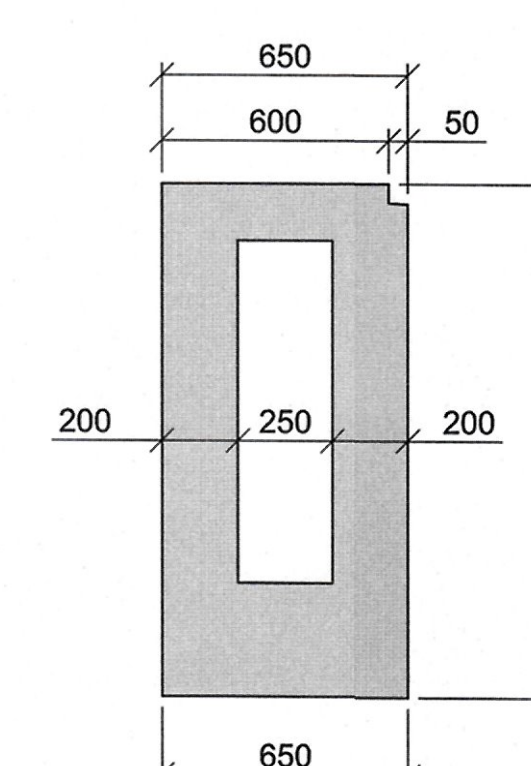
8 SECTION
SCALE 1:20 (A1), 1:40 (A3)




9 SECTION
SCALE 1:20 (A1), 1:40 (A3)



10 SECTION
SCALE 1:20 (A1), 1:40 (A3)




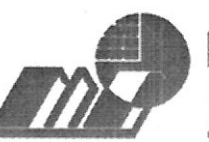
11 SECTION
SCALE 1:20 (A1), 1:40 (A3)



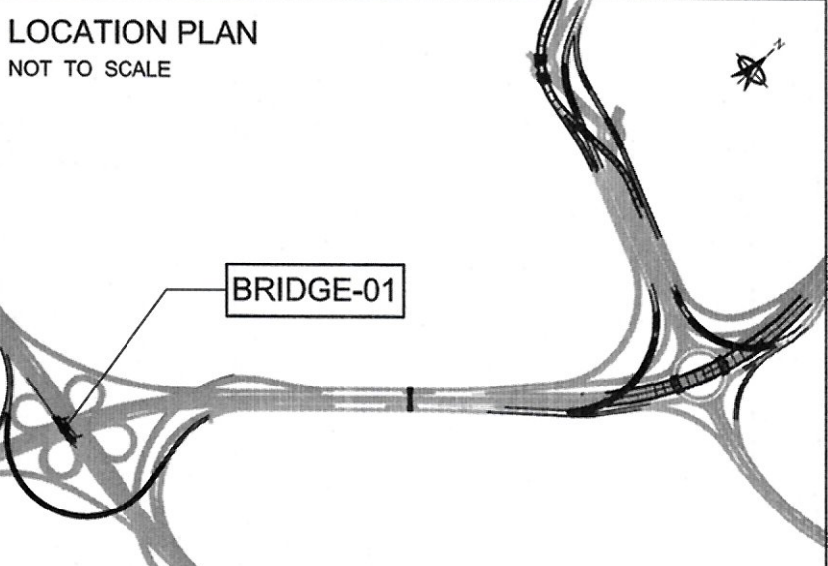
STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:
Construction, Developing And Maintenance Of Roads And Interchanges For New Terminal Building In Kuwait International Airport At Magwa Road RA268/

CONSULTANT:
 **ORIENTAL CONSULTANTS**
COMPANY LIMITED

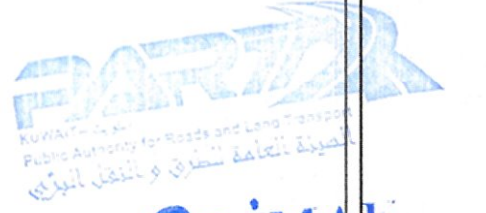
IN ASSOCIATION WITH:
 **Dar Al-Dowailah**
Engineering Consultants & Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
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3. DECK CROSS SLOPE SHOWN IS INDICATIVE ONLY.



LIMAK
İNŞAAT SANAYİ VE TİCARET A.Ş.
Halka Sokak No: 3 G.O.P. ANKARA
Tel: 0312 446 88 00 / 10 Hli
Ankara Kurumlar V.D. 6080063463

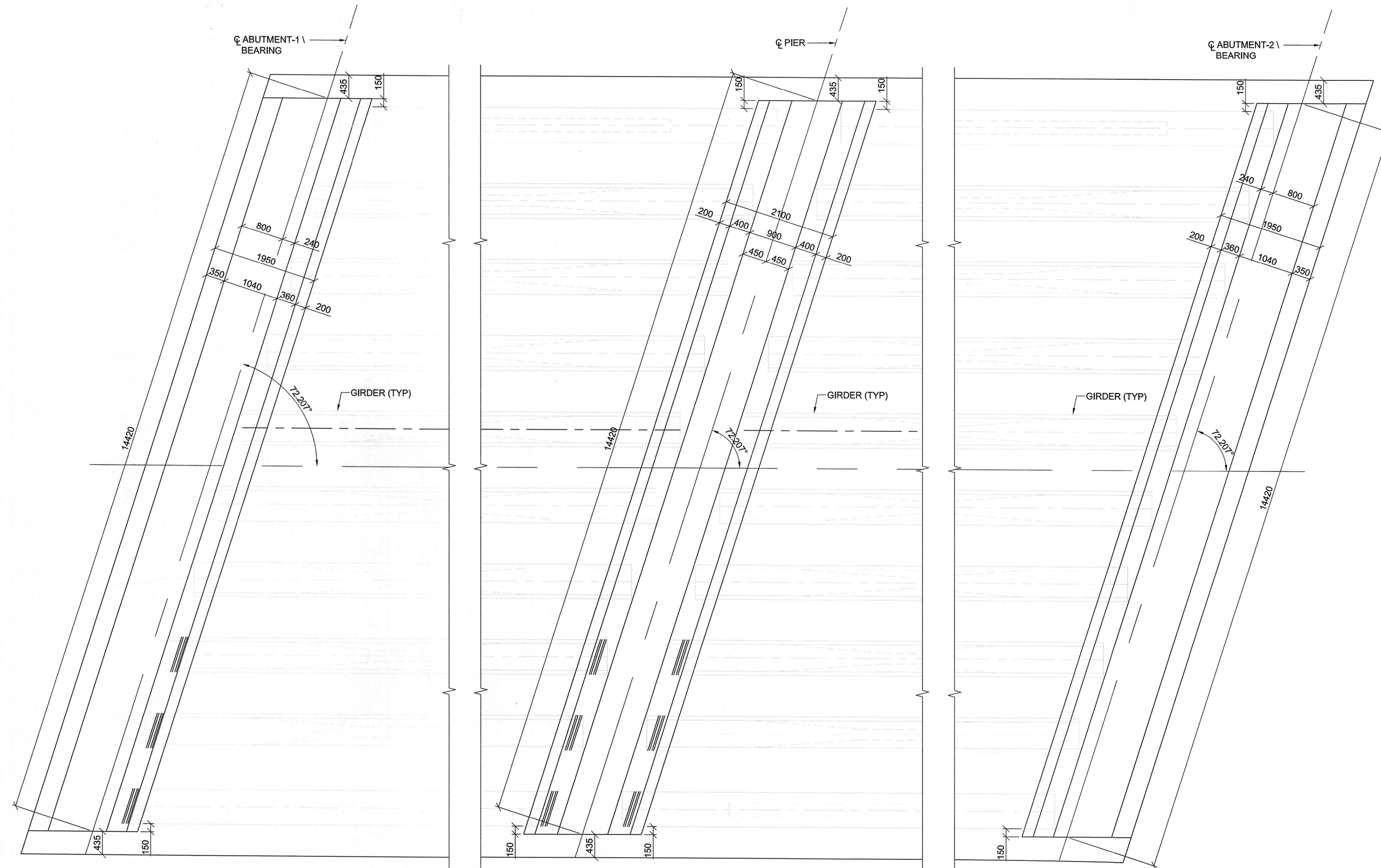
Rev. No.	Date	Description	By

DRAWING TITLE:
BRIDGE - 01
SUPERSTRUCTURE
DIMENSIONAL DETAILS (SHEET-03)

DRAWING NO: ST_00_BR_0161_03

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	AS SHOWN	A1 SCALE:	AS SHOWN
DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SBB	APPROVED BY:	AZ

Date: 14/11/2016, 11:28am File: T:\006_PROJECT_SUPPORT\ALDO_CURRENT_PROJECTS\TUP\A300_Airport Link Roads\Drawings\Superstructure\ST_00_BR_0161_03.dwg



A DETAIL
REF. 0161_01
SCALE 1:40 (A1), 1:80 (A3)

B DETAIL
REF. 0161_01
SCALE 1:40 (A1), 1:80 (A3)

C DETAIL
REF. 0161_01
SCALE 1:40 (A1), 1:80 (A3)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magma Road RA268/

CONSULTANT:



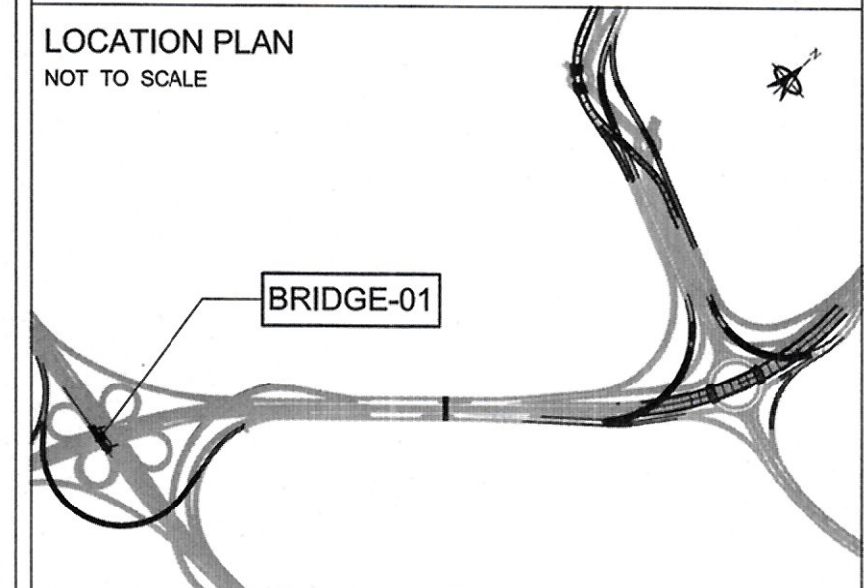
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



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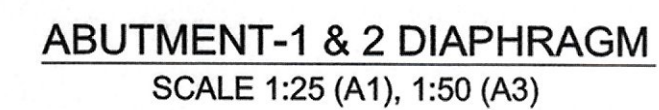
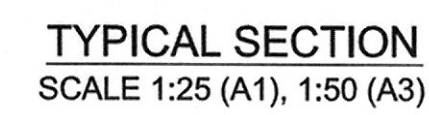
Rev. No.	Date	Description	By

DRAWING TITLE:
BRIDGE - 01
SUPERSTRUCTURE
DIMENSIONAL DETAILS (SHEET-04)

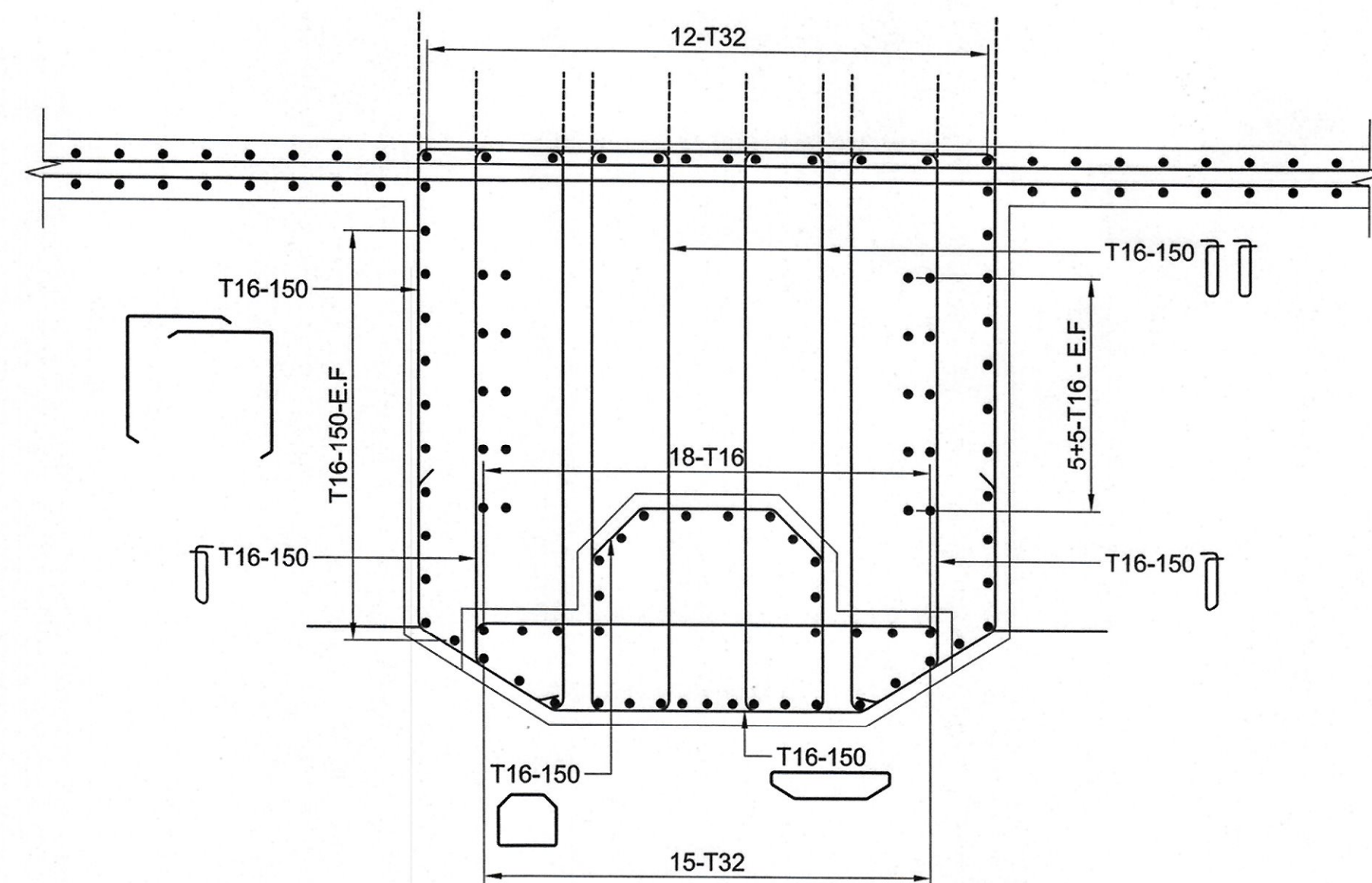
DRAWING NO: ST_00_BR_0161_04

DATE:	NOV.14, 2016	STATUS:	FINAL
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DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SBB	APPROVED BY:	AZ

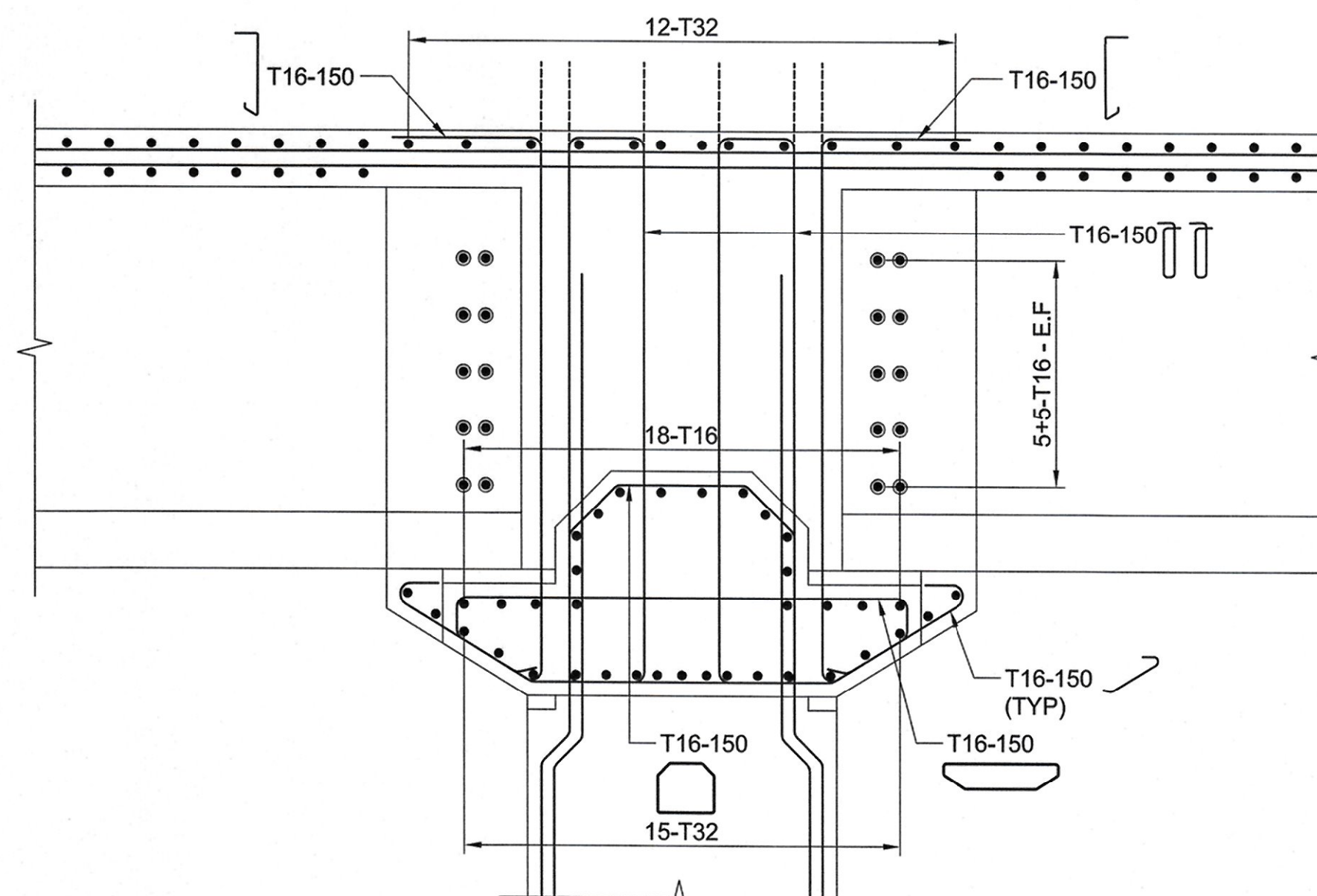




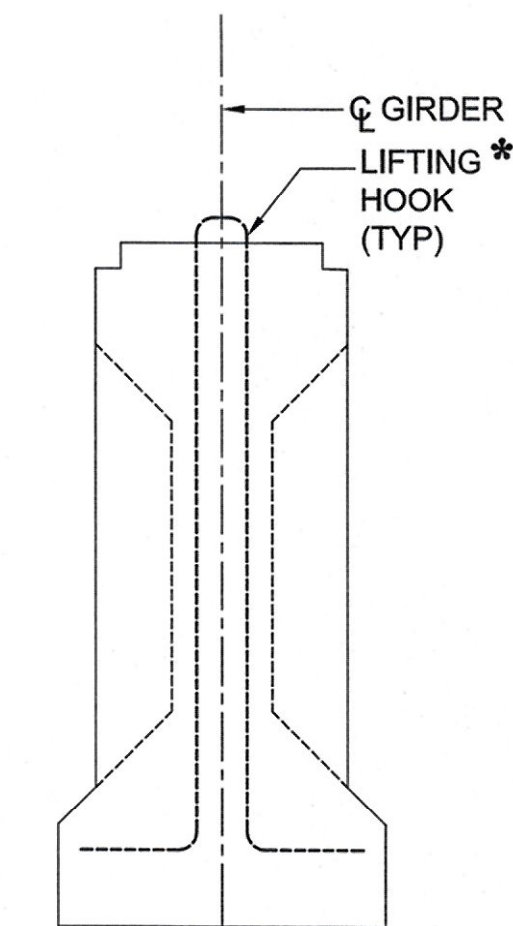
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DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SBB	APPROVED BY:	AZ



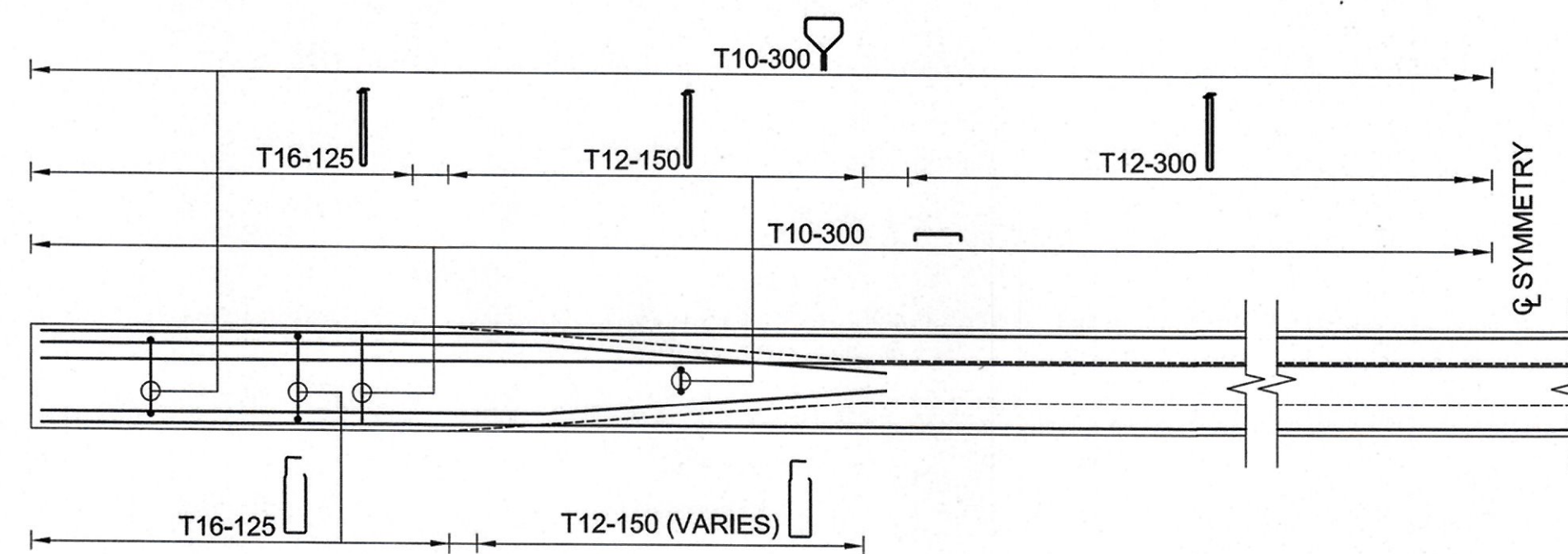
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REF. 0171_02
SCALE 1:20 (A1), 1:40 (A3)



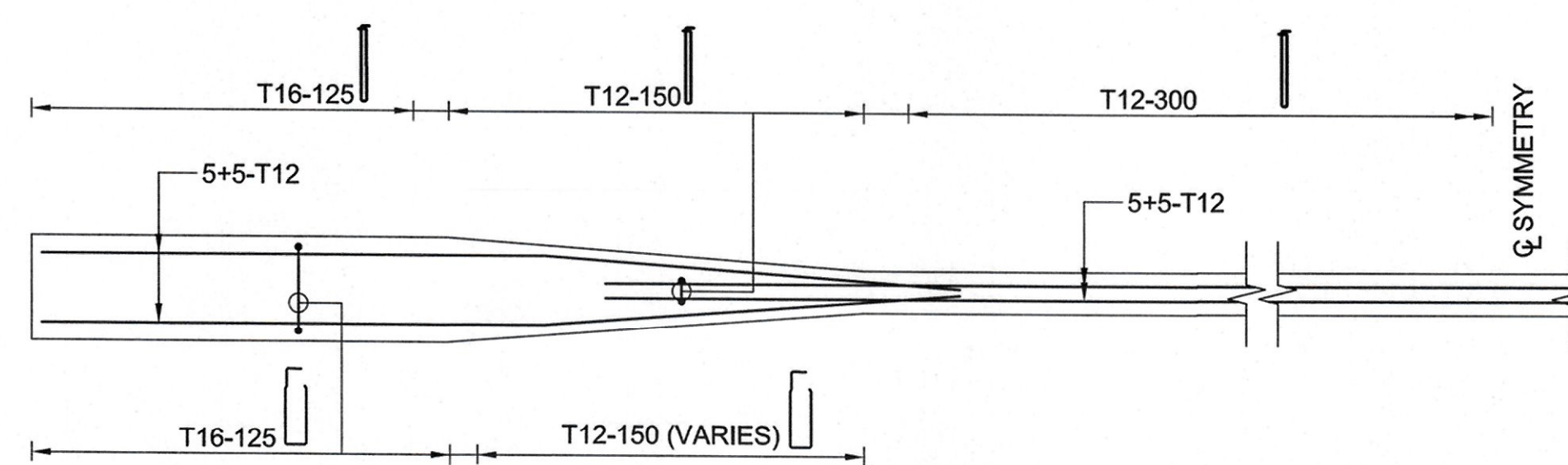
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REF. 0171_02
SCALE 1:20 (A1), 1:40 (A3)



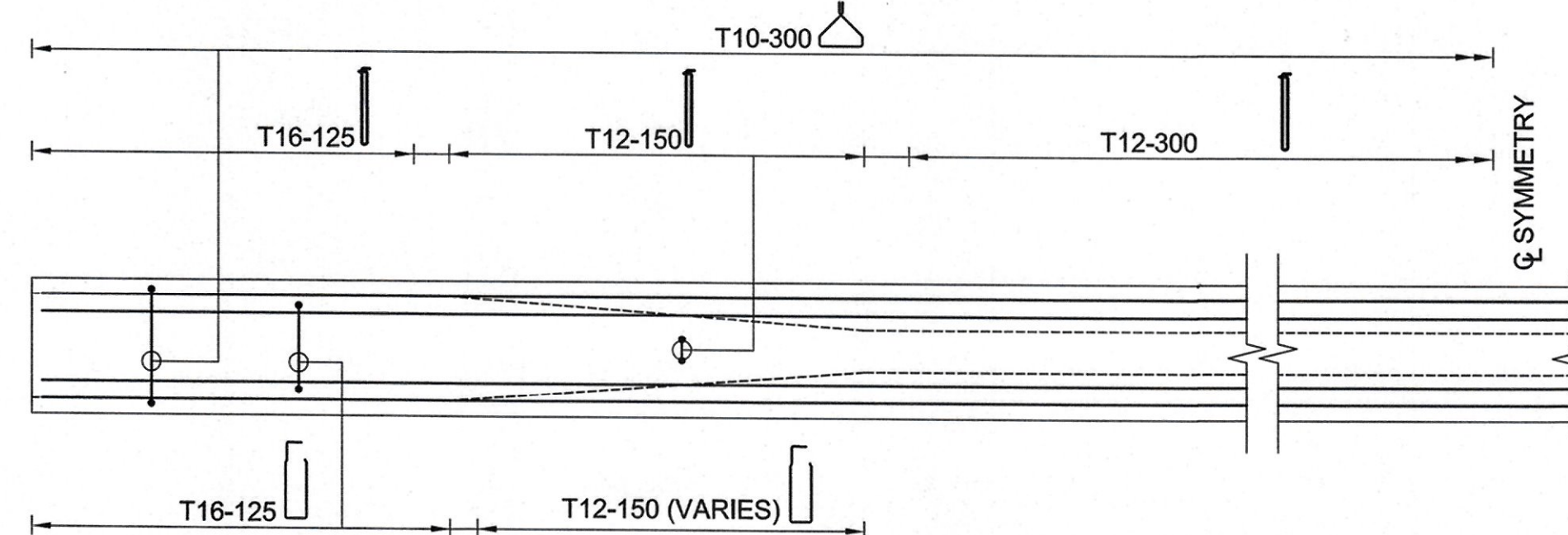
DETAILS OF LIFTING HOOK
SCALE 1:15 (A1), 1:30 (A3)
* TO BE DESIGNED AND DETAILED BY THE
CONTRACTOR AND SUBMITTED TO THE
ENGINEER FOR APPROVAL



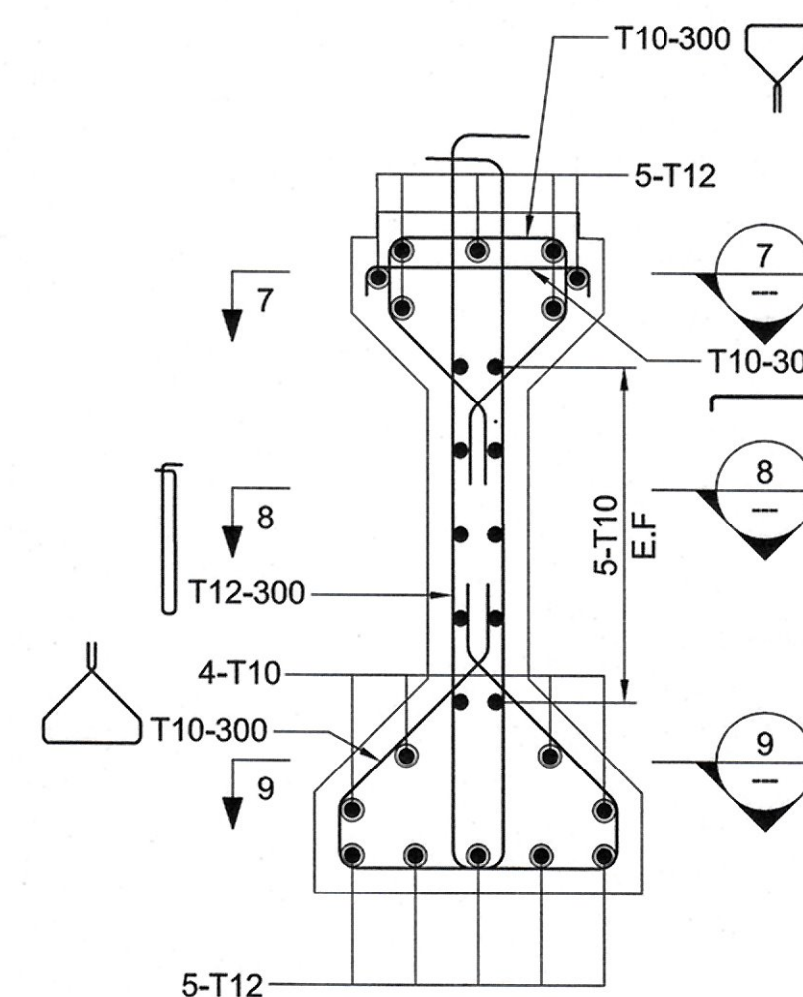
7 SECTION
SCALE 1:30 (A1), 1:60 (A3)



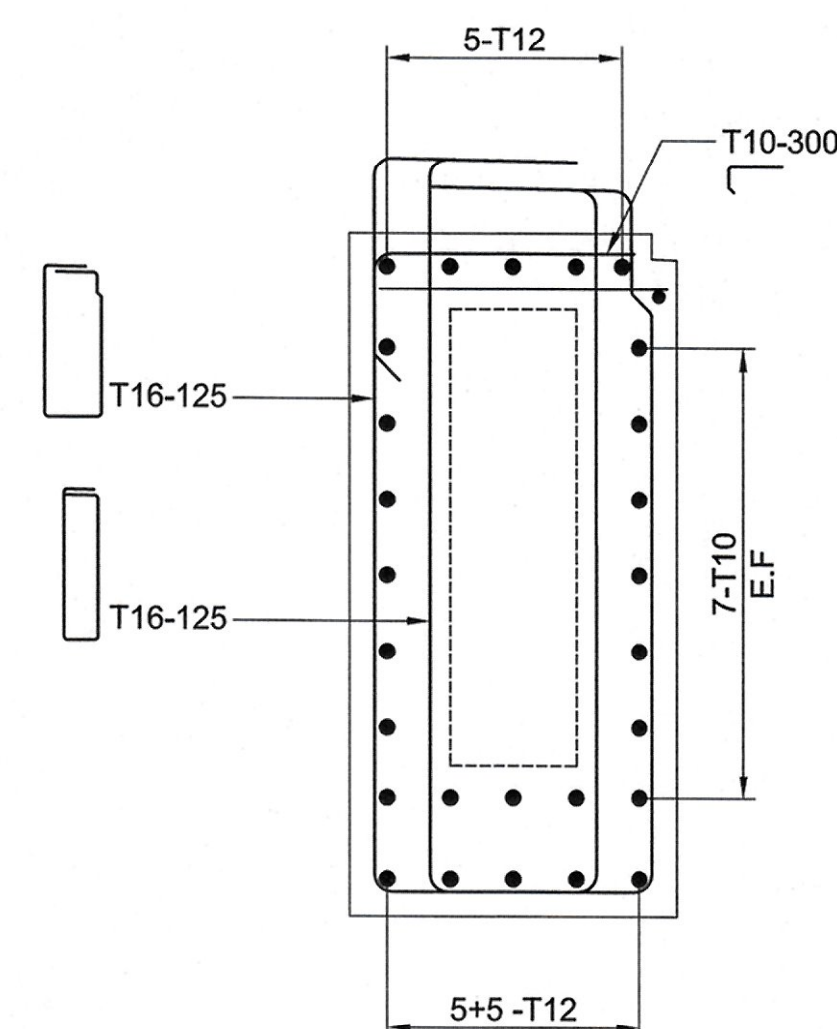
8 SECTION
SCALE 1:30 (A1), 1:60 (A3)



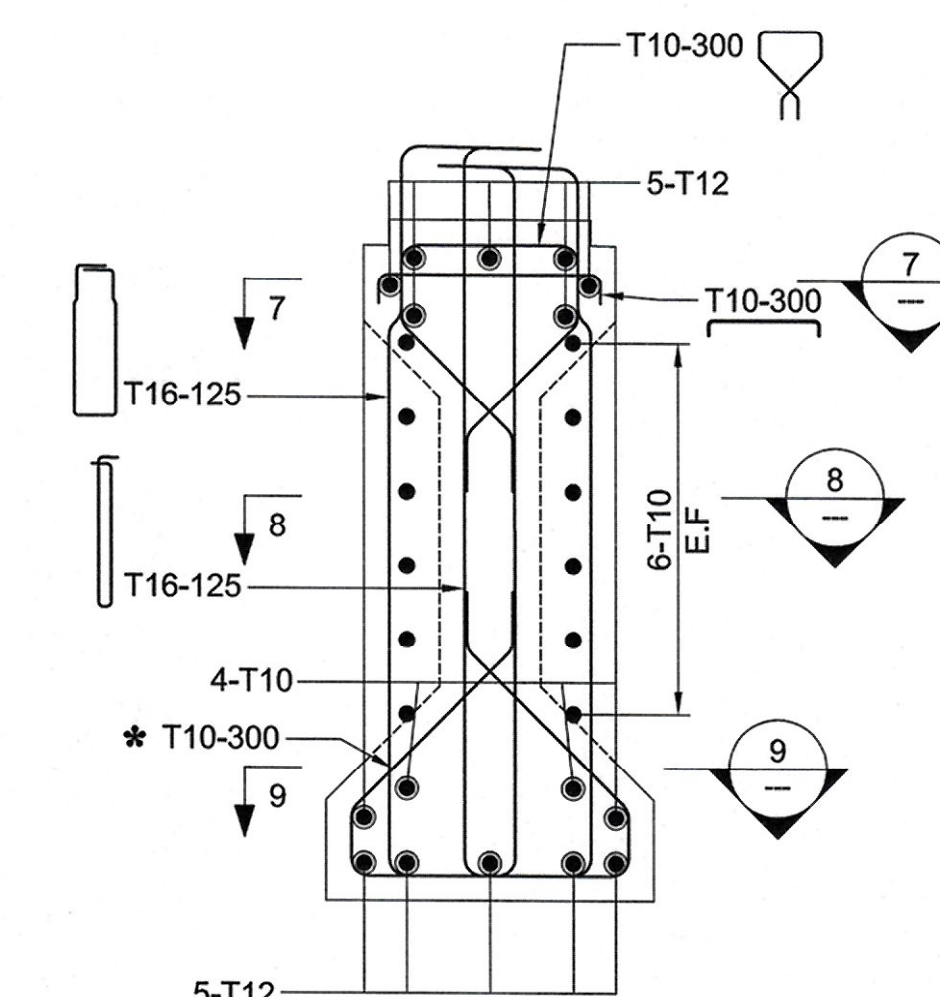
9 SECTION
SCALE 1:30 (A1), 1:60 (A3)



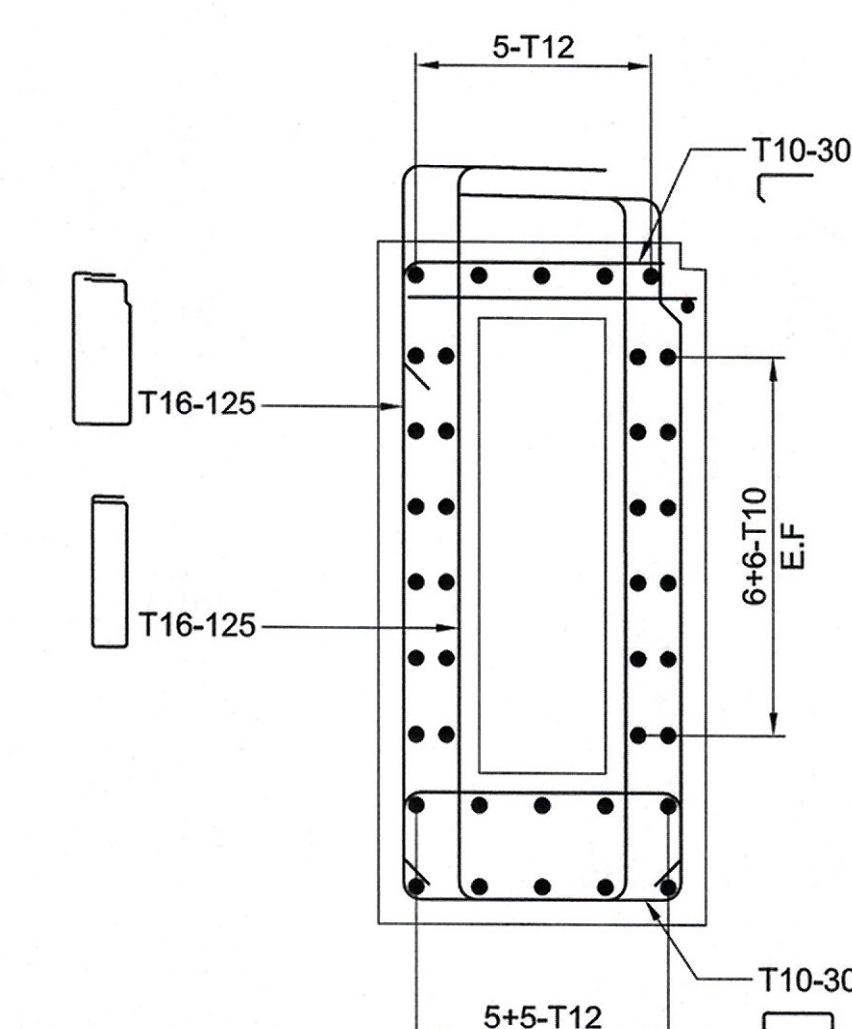
PRECAST INTERIOR GIRDER
SCALE 1:15 (A1), 1:30 (A3)



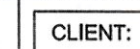
PRECAST EXTERIOR GIRDER AT SUPPORT
SCALE 1:15 (A1), 1:30 (A3)



PRECAST INTERIOR GIRDER AT SUPPORT
SCALE 1:15 (A1), 1:30 (A3)



PRECAST EXTERIOR GIRDER
SCALE 1:15 (A1), 1:30 (A3)



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

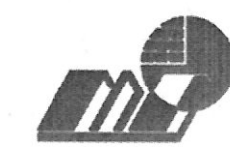
Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



ORIENTAL CONSULTANTS
COMPANY LIMITED

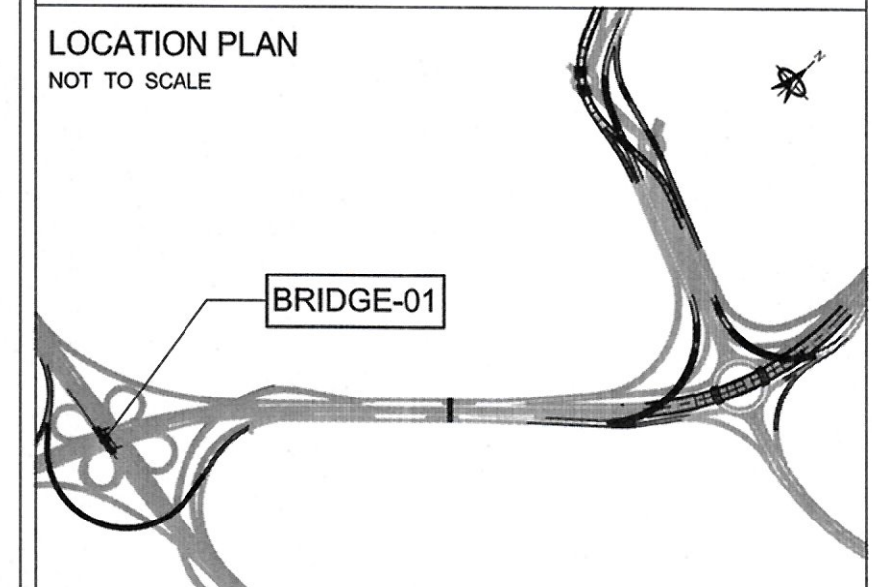
IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN

NOT TO SCALE



NOTES:

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3. FOR LOCAL ZONE REINFORCEMENT CONTRACTOR MUST PROVIDE THE DETAILS OF REINFORCEMENT REQUIRED FOR THE APPROVED POST TENSIONING SYSTEM.
4. JACK LOCATION SHALL BE PROPERLY ETCHED AT THE BOTTOM OF THE EACH DIAPHRAGM.
5. ALL LAPS SHALL BE STAGGERED UNLESS NOTED OTHERWISE.



LİMAK
İNŞAAT SANAYİ VE TİCARET A.Ş.
Hafta Sokak No: 9 G.O.P. ANKARA
Tel: 0312 446 88 00 (10 Hat)
Ankara Kurumlar V.D. 6080063463

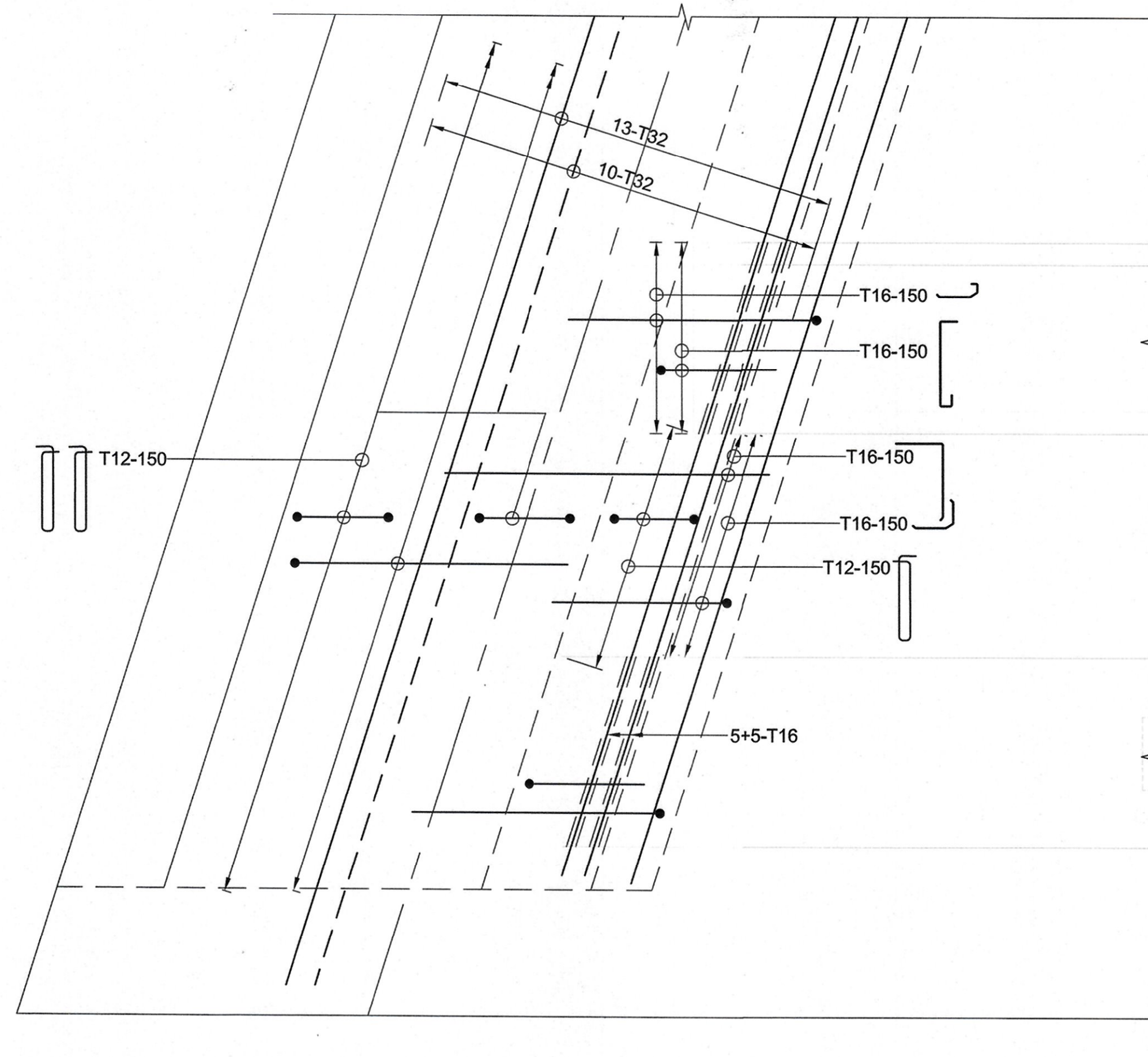
Rev. No.	Date	Description	By

NO.	
DRAWING TITLE:	

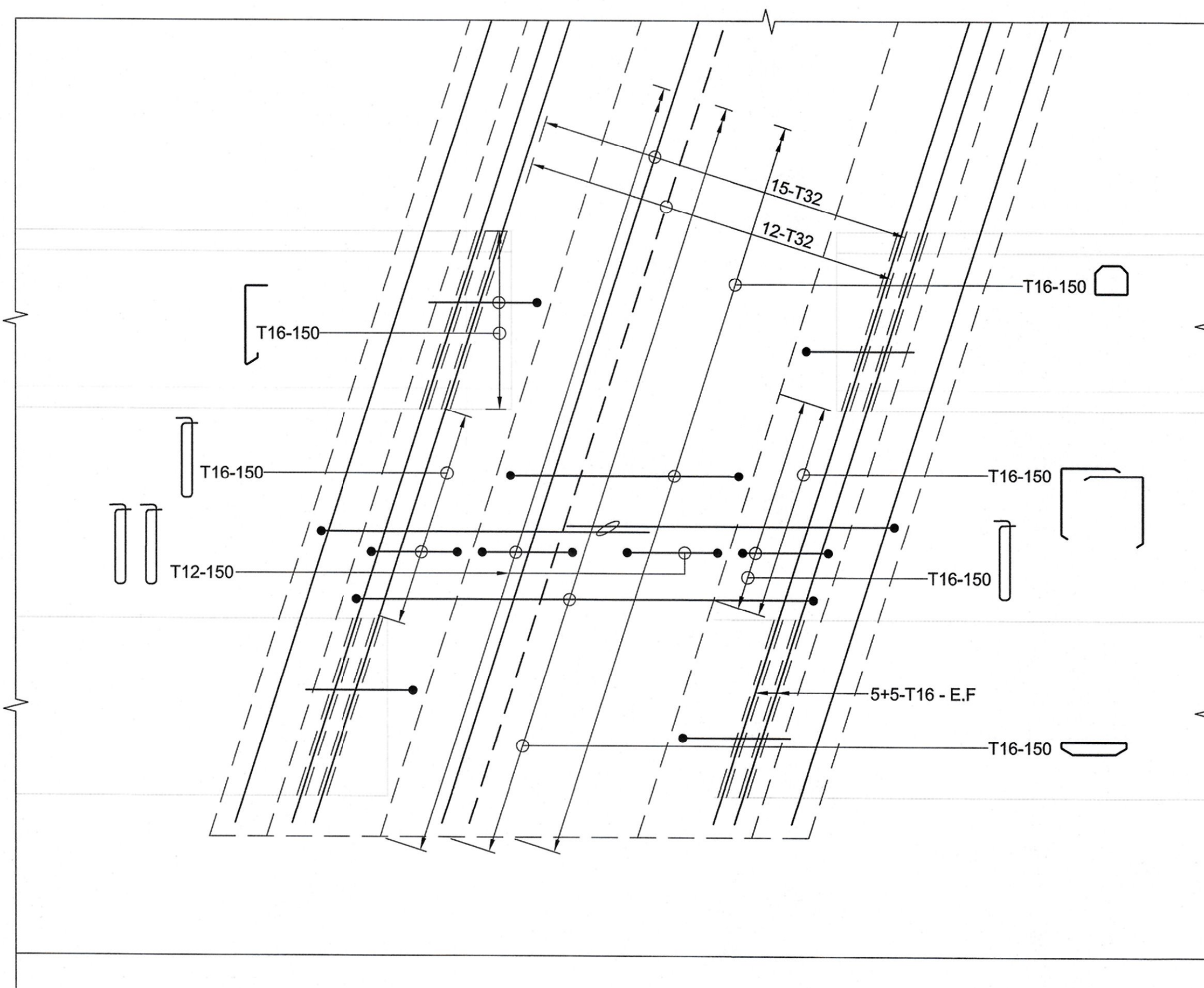
BRIDGE - 01
SUPERSTRUCTURE
REINFORCEMENT DETAILS (SHEET-03)

DRAWING NO: ST_00_BR_0171_03

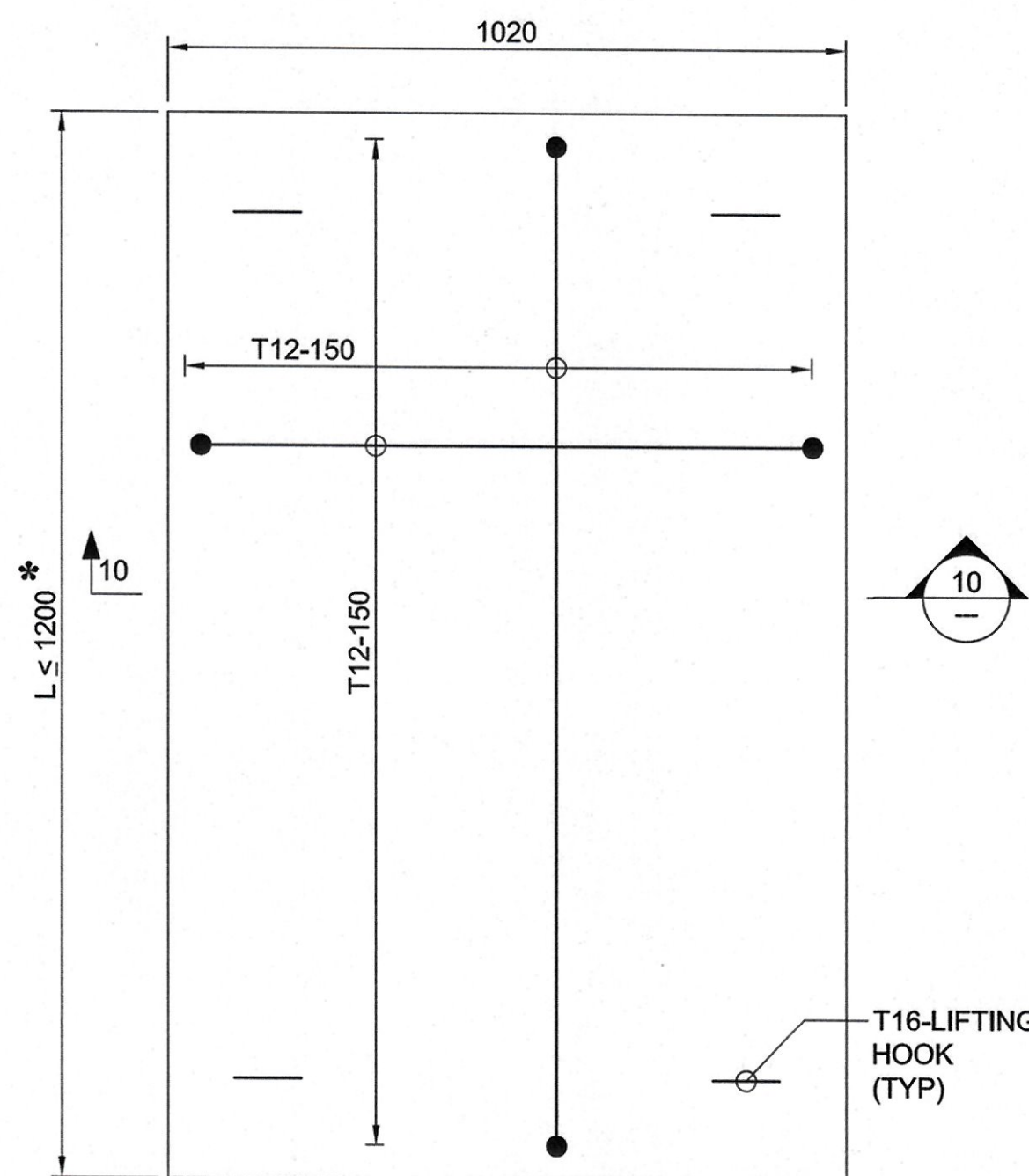
DATE:	NOV.14, 2016	STATUS:	FINAL
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DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SBB	APPROVED BY:	AZ



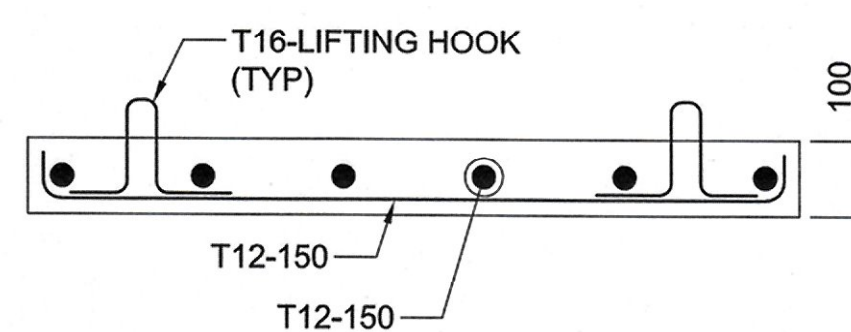
ABUTMENT DIAPHRAGM REINFORCEMENT PLAN
SCALE 1:15 (A1), 1:30 (A3)
NOT SHOWN ALL REINFORCEMENT FOR CLARITY




PIER DIAPHRAGM REINFORCEMENT PLAN
SCALE 1:15 (A1), 1:30 (A3)
NOT SHOWN ALL REINFORCEMENT FOR CLARITY



REINFORCEMENT DETAIL PRECAST SLAB
SCALE 1:10 (A1), 1:20 (A3)
* LENGTH OF THE PRECAST SLAB PANEL
SHALL BE AS PER THE SITE CONDITION




SECTION 10
SCALE 1:10 (A1), 1:20 (A3)




STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

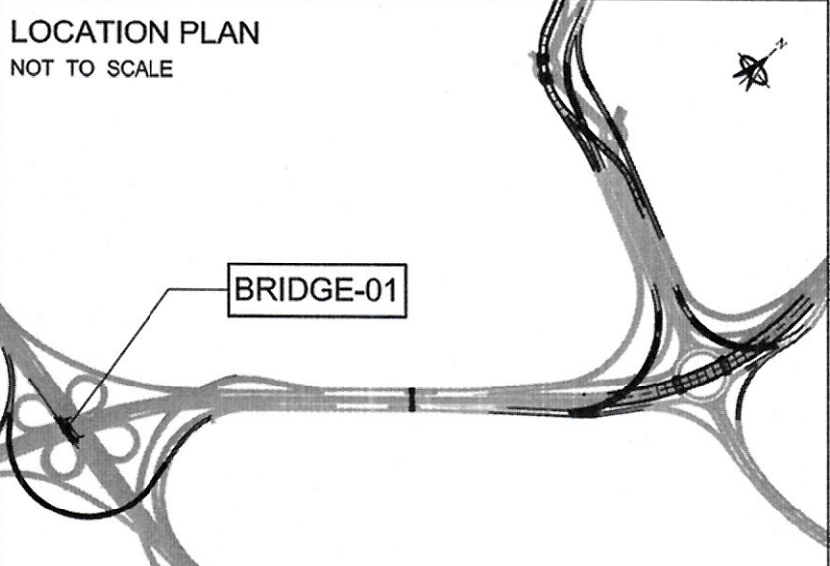
CLIENT:

PROJECT:
Construction, Developing And Maintenance Of Roads And Interchanges For New Terminal Building In Kuwait International Airport At Magwa Road RA268/

CONSULTANT:
 **ORIENTAL CONSULTANTS COMPANY LIMITED**

IN ASSOCIATION WITH:
 **Dar Al-Dowailah Engineering Consultants & Construction Managers**

LOCATION PLAN
NOT TO SCALE



NOTES:

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- ALL LAPS SHALL BE STAGGERED UNLESS NOTED OTHERWISE.

LEGEND:

--- TOP REINFORCEMENT



— BOTTOM REINFORCEMENT

Rev. No.	Date	Description	By

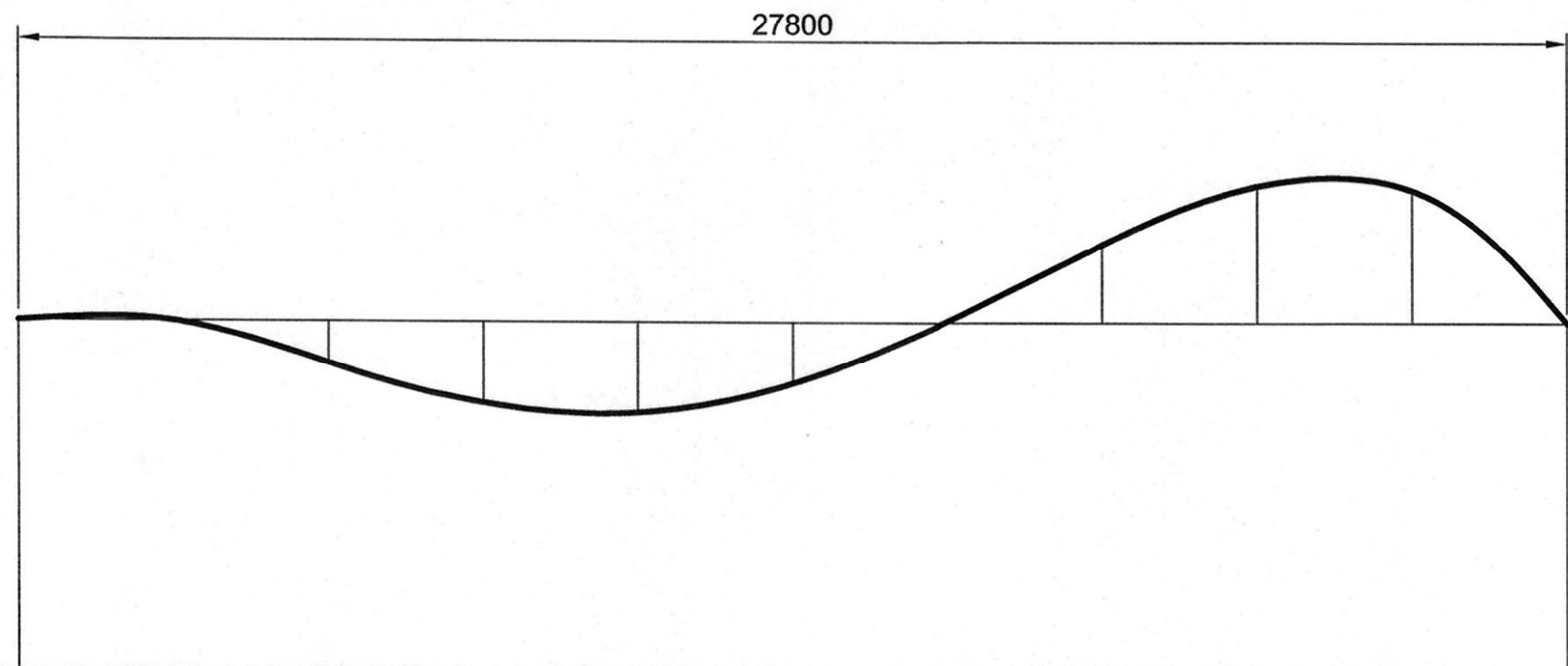
DRAWING TITLE:
**BRIDGE - 01
SUPERSTRUCTURE
REINFORCEMENT DETAILS (SHEET-04)**

DRAWING NO: ST_00_BR_0171_04

DATE:	NOV.14, 2016	STATUS:	FINAL
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DESIGNED BY:	MS	CHECKED BY:	MC
DRAWN BY:	SBB	APPROVED BY:	AZ

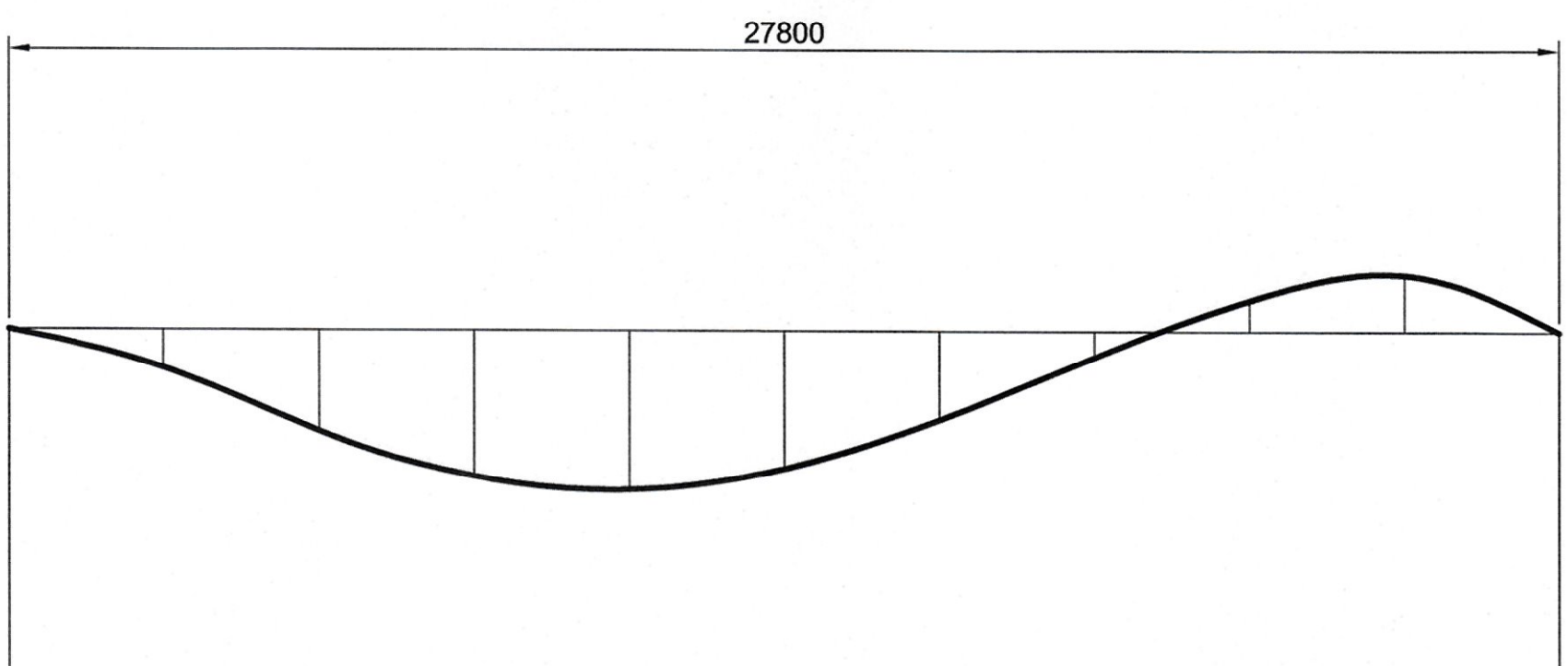



LIMAK
İNŞAAT SANAYİ VE TİCARET A.Ş.
İzmir Sokak No: 90 C. P: ANKARA
T: 0312 448 88 00 F: 0312 448 88 00
Ankara Kurumlar V.D. 608063463



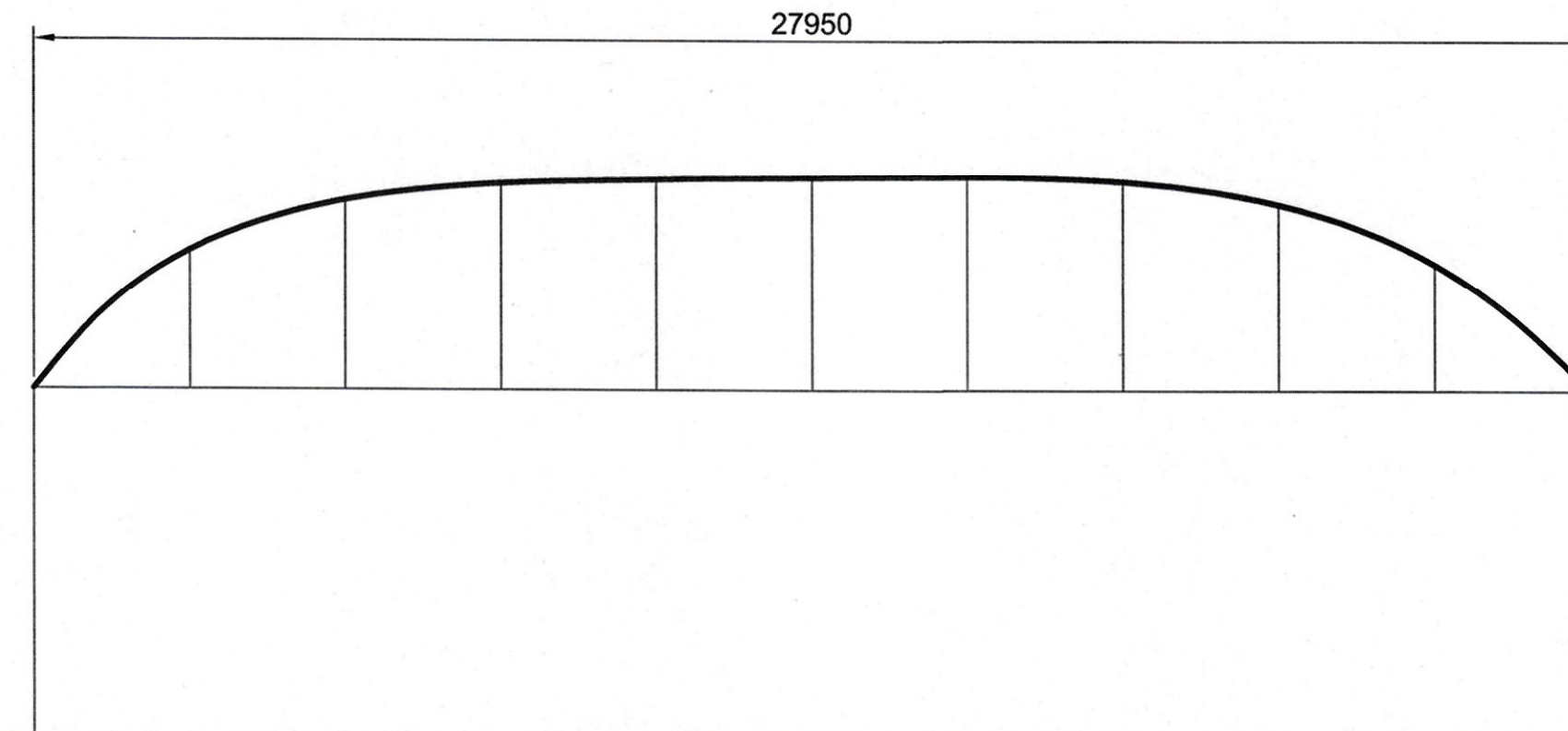
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DEAD LOAD DEFLECTION (mm)	0	-16	-29	-40	-47	-49	-47	-40	-29	-16	0
SUPERIMPOSED LOAD DEFLECTION (mm)	0	-4	-7	-9	-10	-10	-9	-7	-5	-2	0
PRESTRESS DEFLECTION (mm)	0	17	32	44	51	53	51	44	32	17	0
TOTAL DEFLECTION (mm)	0	-2	4	-6	-6	-6	-5	-3	-2	0	0

LONG TERM DEFLECTION G1 (SPAN-01)



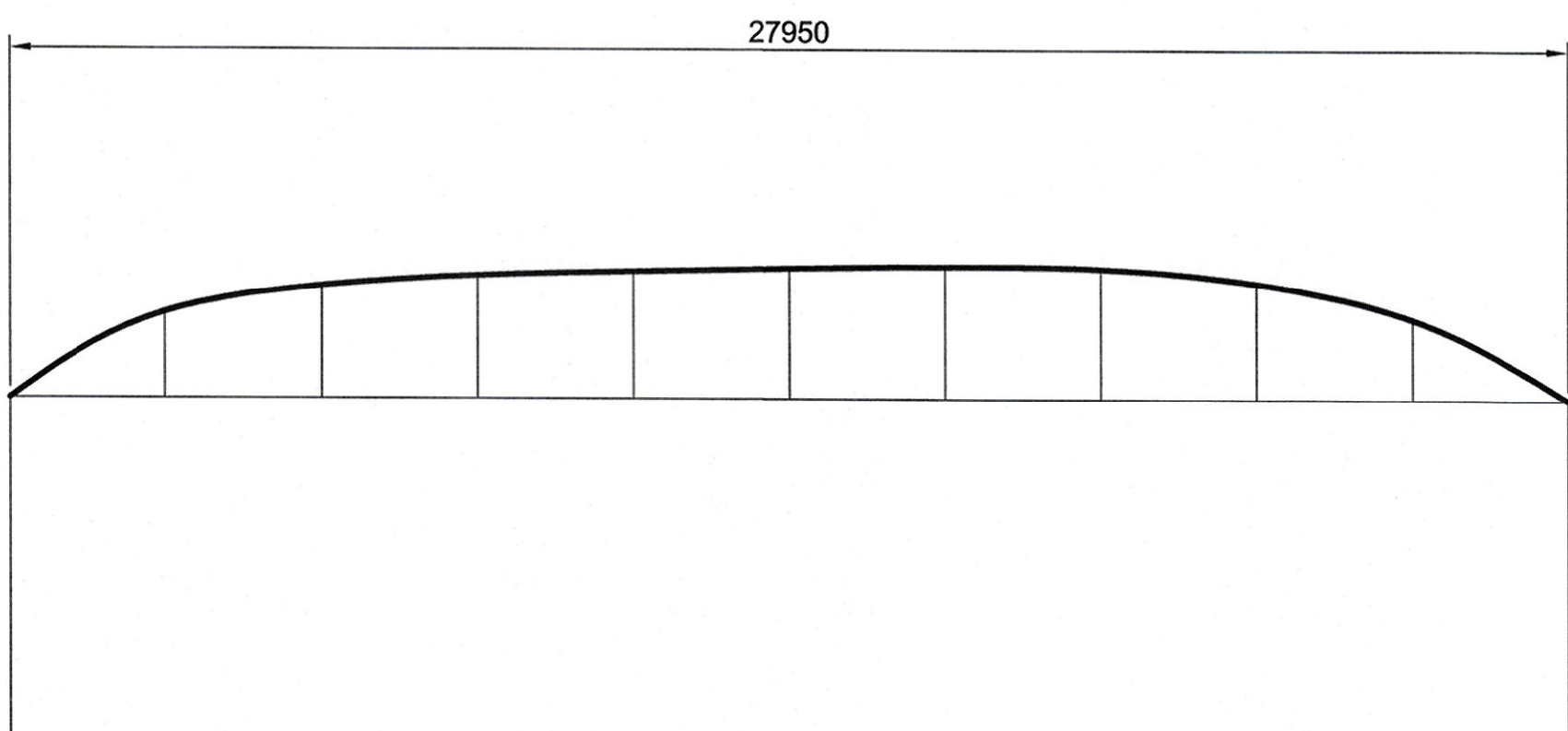
DISTANCE ALONG BRIDGE CENTERLINE (m)	L	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	L
DEAD LOAD DEFLECTION (mm)	0	-15	-29	-39	-46	-48	-46	-39	-28	-15	0
SUPERIMPOSED LOAD DEFLECTION (mm)	0	-2	4	-6	-6	-6	-6	-4	-3	-1	0
PRESTRESS DEFLECTION (mm)	0	16	30	40	47	50	47	41	30	16	0
TOTAL DEFLECTION (mm)	0	-2	-3	-4	-5	-5	-4	-3	-1	0	0

LONG TERM DEFLECTION G2 (SPAN-01)



DISTANCE ALONG BRIDGE CENTERLINE (m)	L	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	L
DEAD LOAD DEFLECTION (mm)	0	-16	-30	-41	-48	-50	-48	-41	-30	-16	0
SUPERIMPOSED LOAD DEFLECTION (mm)	0	0	0	-1	-2	-2	-2	-2	-1	0	0
PRESTRESS DEFLECTION (mm)	0	18	33	44	52	54	52	45	33	18	0
TOTAL DEFLECTION (mm)	0	2	3	2	2	2	2	2	2	2	0

LONG TERM DEFLECTION G3 (SPAN-02)



DISTANCE ALONG BRIDGE CENTERLINE (m)	L	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	L
DEAD LOAD DEFLECTION (mm)	0	-15	-29	-39	-46	-48	-46	-39	-29	-15	0
SUPERIMPOSED LOAD DEFLECTION (mm)	0	1	1	0	0	0	0	0	0	0	0
PRESTRESS DEFLECTION (mm)	0	16	30	41	48	50	48	41	30	16	0
TOTAL DEFLECTION (mm)	0	2	2	2	2	2	2	2	2	1	0

LONG TERM DEFLECTION G4 (SPAN-02)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



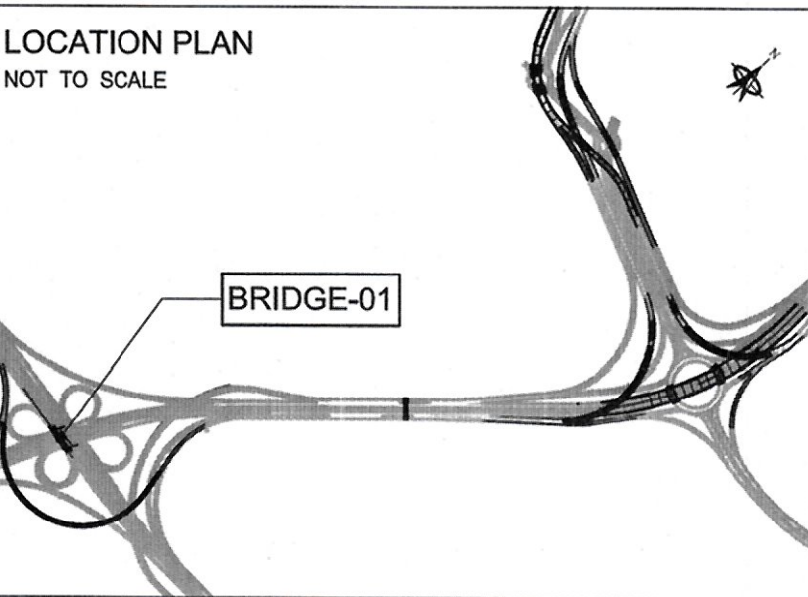
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GENERAL NOTES AND MISCELLANEOUS DRAWINGS.
- DEAD LOAD DEFLECTION INCLUDES DEFLECTION DUE TO OWN WEIGHT OF SUPERSTRUCTURE BOX GIRDER.
- SUPERIMPOSED DEAD LOAD DEFLECTION INCLUDES DEFLECTION FROM WEARING COURSE, CONCRETE BARRIERS AND FUTURE UTILITIES.
- CAMBER SHALL ALLOW FOR LONG TERM DEFLECTIONS DUE TO SUPERSTRUCTURE DEAD LOAD AND SUPERIMPOSED DEAD LOAD, AS WELL AS PRESTRESS DEFLECTION AND FORMWORK DEFORMATIONS IF ANY.
- DOWNWARD DEFLECTION IS NEGATIVE.

LEGEND:

L = CORRESPONDING SPAN LENGTH



Rev. No.

Date

Description

By

DRAWING TITLE:

BRIDGE - 01
DEFLECTION DIAGRAM
(SHEET-01)

DRAWING NO: ST_00_BR_0191_01

DATE:

NOV.14, 2016

STATUS:

FINAL

A3 SCALE:

N.T.S

A1 SCALE:

N.T.S

DESIGNED BY:

MC

CHECKED BY:

MS

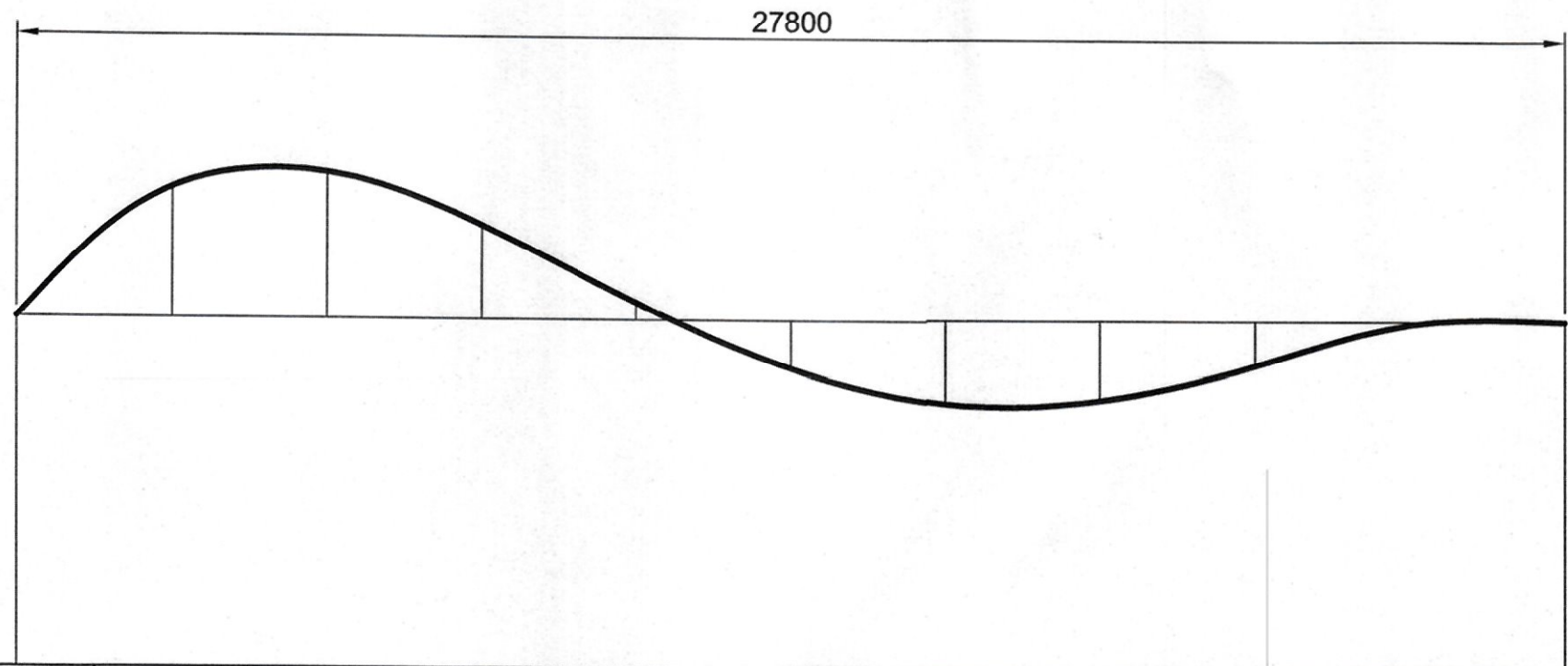
DRAWN BY:

MA

APPROVED BY:

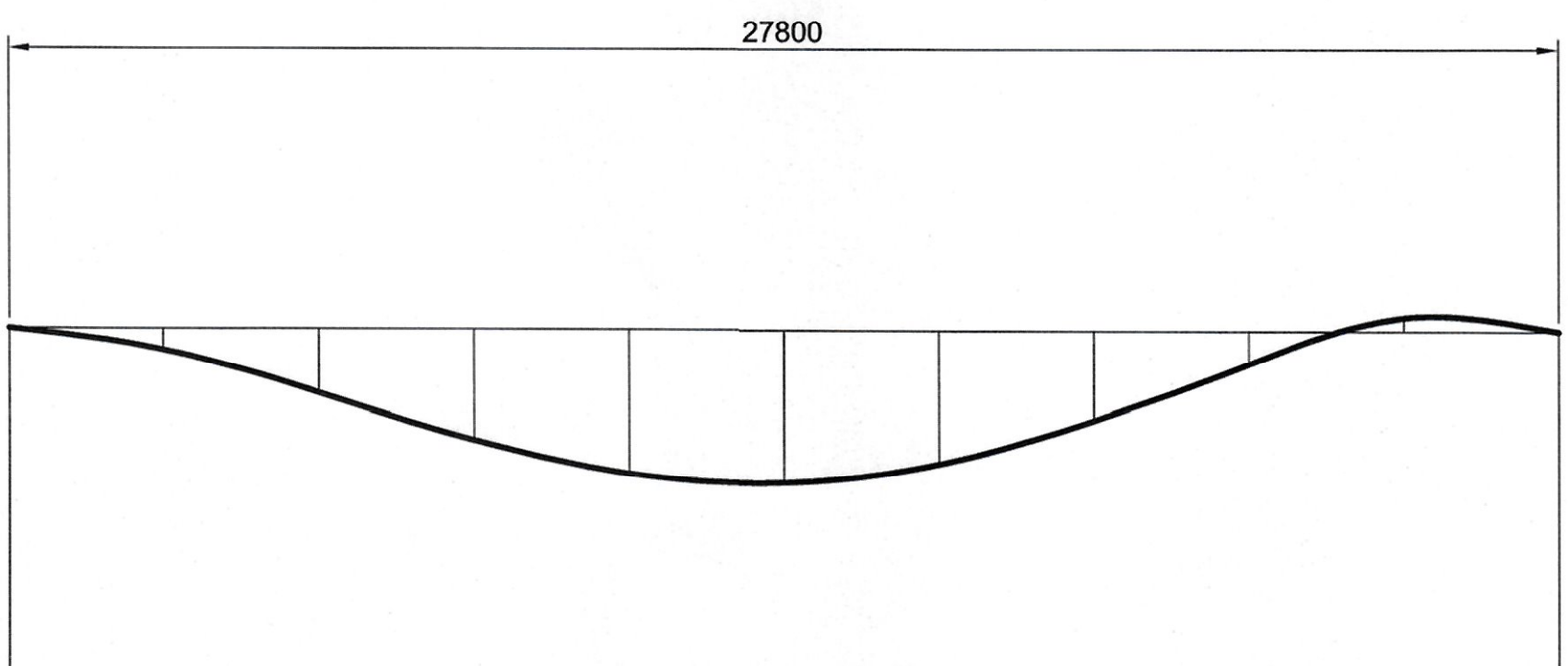
AZ

INSAAAT SANAYI VE TICARET A.S.
Hafif Sokak No: 9 G.D.P./ANKARA
Tut: 0312 448 98 00 (10 Hat)
ANKARA Kurumlar V. 0312 448 98 00



DISTANCE ALONG BRIDGE CENTERLINE (m)	L	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	L
DEAD LOAD DEFLECTION (mm)	0	-15	-29	-40	-47	-49	-47	-40	-29	-16	0
SUPERIMPOSED LOAD DEFLECTION (mm)	0	-2	-5	-7	-9	-10	-10	-9	-7	-4	0
PRESTRESS DEFLECTION (mm)	0	17	32	44	51	53	51	44	32	17	0
TOTAL DEFLECTION (mm)	0	0	-1	-3	-5	-6	-6	-6	-4	-2	0

LONG TERM DEFLECTION G1 (SPAN-03)



DISTANCE ALONG BRIDGE CENTERLINE (m)	L	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	L
DEAD LOAD DEFLECTION (mm)	0	-15	-29	-39	-46	-48	-46	-39	-29	-15	0
SUPERIMPOSED LOAD DEFLECTION (mm)	0	-2	-4	-6	-6	-6	-6	-4	-3	-1	0
PRESTRESS DEFLECTION (mm)	0	16	30	41	47	50	47	40	30	16	0
TOTAL DEFLECTION (mm)	0	-2	-3	-4	-5	-5	-4	-3	-2	-1	0

LONG TERM DEFLECTION G2 (SPAN-03)

CLIENT:



STATE OF KUWAIT
MINISTRY OF PUBLIC WORKS
ROADS ENGINEERING SECTOR

PROJECT:

Construction, Developing And
Maintenance Of Roads And
Interchanges For New Terminal Building
In Kuwait International Airport At
Magwa Road RA268/

CONSULTANT:



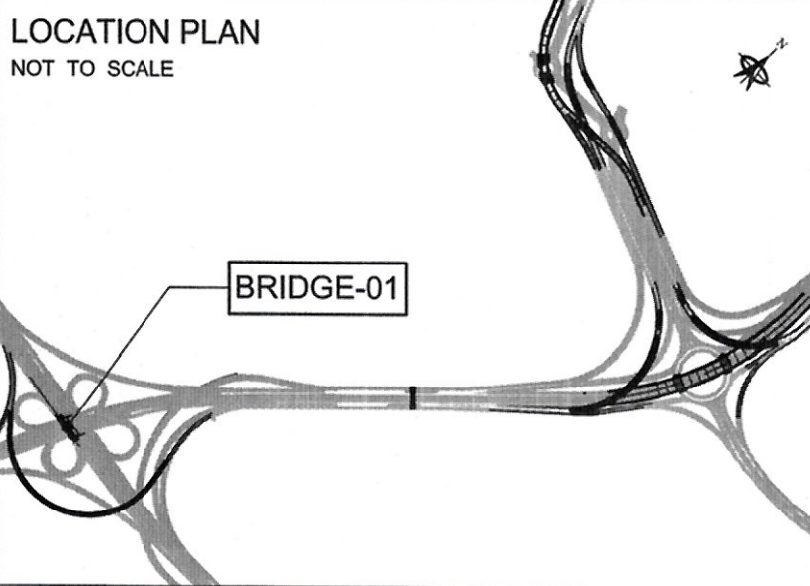
ORIENTAL CONSULTANTS
COMPANY LIMITED

IN ASSOCIATION WITH:



Dar Al-Dowailah
Engineering Consultants
& Construction Managers

LOCATION PLAN
NOT TO SCALE



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GENERAL NOTES AND MISCELLANEOUS DRAWINGS.
3. DEAD LOAD DEFLECTION INCLUDES DEFLECTION DUE TO OWN WEIGHT OF SUPERSTRUCTURE BOX GIRDER.
4. SUPERIMPOSED DEAD LOAD DEFLECTION INCLUDES DEFLECTION FROM WEARING COURSE, CONCRETE BARRIERS AND FUTURE UTILITIES.
5. CAMBER SHALL ALLOW FOR LONG TERM DEFLECTIONS DUE TO SUPERSTRUCTURE DEAD LOAD AND SUPERIMPOSED DEAD LOAD, AS WELL AS PRESTRESS DEFLECTION AND FORMWORK DEFORMATIONS IF ANY.
6. DOWNWARD DEFLECTION IS NEGATIVE.

LEGEND:

L = CORRESPONDING SPAN LENGTH

Rev. No.	Date	Description	By

DRAWING TITLE:

BRIDGE - 01
DEFLECTION DIAGRAM
(SHEET-02)

DRAWING NO: ST_00_BR_0191_02

DATE:	NOV.14, 2016	STATUS:	FINAL
A3 SCALE:	N.T.S	A1 SCALE:	N.T.S
DESIGNED BY:	MC	CHECKED BY:	MS
DRAWN BY:	MA	APPROVED BY:	AZ



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