



50  
YEARS

United Nations Development Programme



REPUBLIC OF IRAQ



**P-AM-047-17**

ARCHITECTURAL-AND-CIVIL-ENGINEERING-DESIGN-SERVICES-IN-FOUR-LOTS

LOT 01 : 2/3 JAPANESE BRIDGE REHABILITATION

FINAL DESIGN REV 0

DRAWINGS



NUDHUM ALBENAA  
CONSULTANCY

APRIL, 2017



# LIST OF DRAWINGS

## JAPANESE BRIDGE

# STRUCTURAL

## Drawing Name

# Drawing No.

Existing Condition Plan .....	ST-100
Existing Condition Plan Span 1 (A01-P01) .....	ST-101
Existing Condition Plan Span 2 (P01-P02) .....	ST-102
Existing Condition Plan Span 3 (P02-P03) .....	ST-103
Existing Condition Plan Span 4 (P03-P04) .....	ST-104
Existing Condition Plan Span 6 (P05-P06) .....	ST-105
Existing Condition Plan Span 1 (A01-P01) .....	ST-106
Existing Condition Plan Span 2 (P01-P02) .....	ST-107
Existing Condition Plan Span 3 (P02-P03) .....	ST-108
Existing Condition Plan Span 4 (P03-P04) .....	ST-109
Existing Condition Plan Span 5 (P04-P05) .....	ST-110
Existing Condition Plan Span 6 (P05-A02) .....	ST-111
Existing Condition Northern Pier (P01) .....	ST-112
Existing Condition Northern Pier (P02) .....	ST-113
Existing Condition Southern Pier (P01) .....	ST-114
Existing Condition Southern Pier (P02) .....	ST-115
Existing Condition Southern Pier (P05) .....	ST-116
General Plan .....	ST-117
Profile.....	ST-118
Cross Section .....	ST-119
Cross Section .....	ST-120
Superstructure .....	ST-121
Abutment .....	ST-122
Pier .....	ST-123
Sidewalk .....	ST-124
Expansion Joints .....	ST-125
Railing .....	ST-126
Anchorage Railing Post and Guard Rail Post .....	ST-127
Prefabricated Girder .....	ST-128
Girder Reinforcement .....	ST-129
Perstress Cable Details .....	ST-130
Girder Reinforcement Details .....	ST-131
Pier Reinforcement .....	ST-132
Cross Beam Rein .....	ST-133
Deck Slab .....	ST-134
Deck Slab .....	ST-135
Deck Slab Reinforcement .....	ST-136
Sidewalk Reinforcement .....	ST-137
Joints Reinforcement.....	ST-138

## ROADS

Plan & Profile .....	TR-201
Plan & Profile .....	TR-202
Making Plan .....	TR-203
TypicalDetails.....	TR-204

## SANITARY

Location Of Storm Water Gullies .....	SD-301
Typical Details .....	SD-302

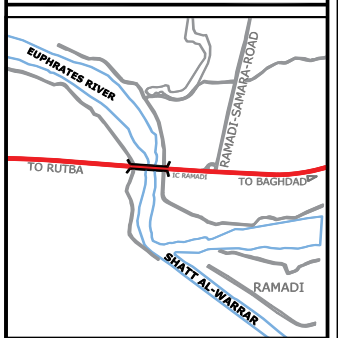
## ANNEX

DORSCH DRAWINGS



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

## KEY MAP



## NOTES

A. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.  
B. ALL DIMENSIONS ARE IN METRIC UNLESS OTHERWISE STATED.  
C. BUILDER TO CHECK ALL DIMENSIONS AT SITE PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.  
D. ALL WORKS ARE ACCORDING TO SPECIFICATIONS OF GENERAL DIRECTORATE FOR ROADS AND BRIDGES OF IRAQ.

05			
04			
03			
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REV	DATE	DESCRIPTION	BY

PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL and CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION: AL-ANBAR - IRAQ  
(JAPANESE BRIDGE)

**CLIENT:**



GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES

SERVICES NAME:

DESIGN BY:

SUPERVISOR:

DRAWING NAME:

## LIST OF DRAWINGS

DRAWING NO.

SCALE:

@A3

DRAWN BY

PROJECT NO:

Q-17-001

DATE:

APRIL 2017

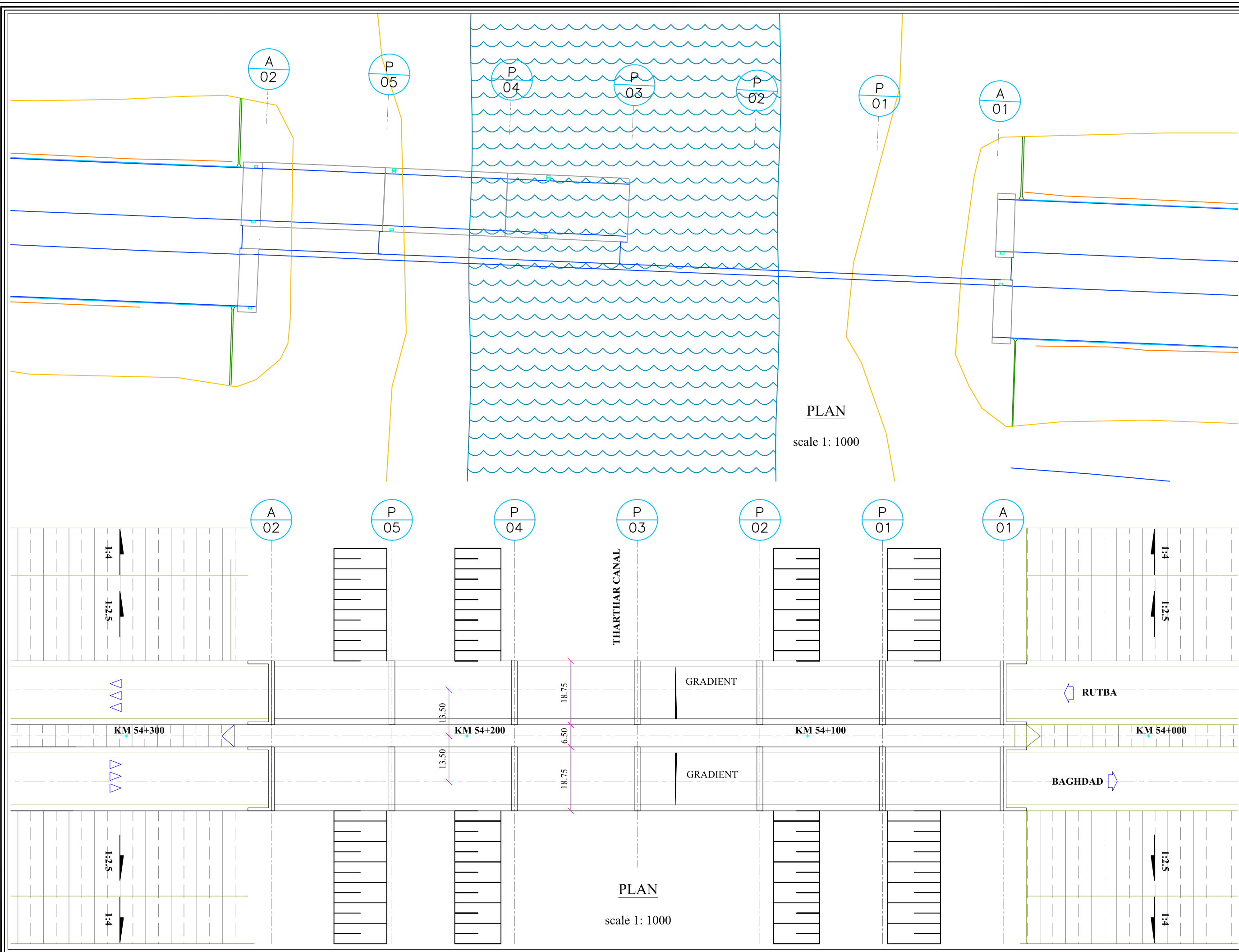



NUDHUM ALBENAA  
CONSULTANCY



# STRUCTURAL DESIGN

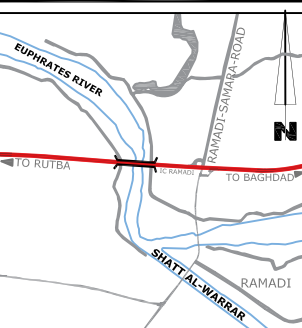






REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



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- ROADS FEATURES ARE BASED ON EXPRESSWAY No.1 SPECIFICATIONS, IN ADDITION TO THE APPROVAL OF SUPERVISED ENGINEER.

REV.	DATE	DESCRIPTION	BY
05			
04			
03			
02			
01			
00			


PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
PLAN**

DRAWING NO.

**ST.100**

SCALE:

**AS SHOWING**

DRAWN BY:


**MUHANED SHALLAL**

PROJECT NO:


**IQ-17-001**

DATE:

**MARCH 2017**

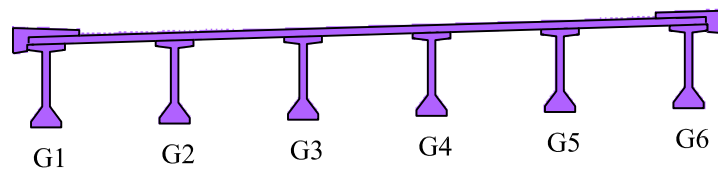


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**NUDHUM ALBENAA  
CONSULTANCY**



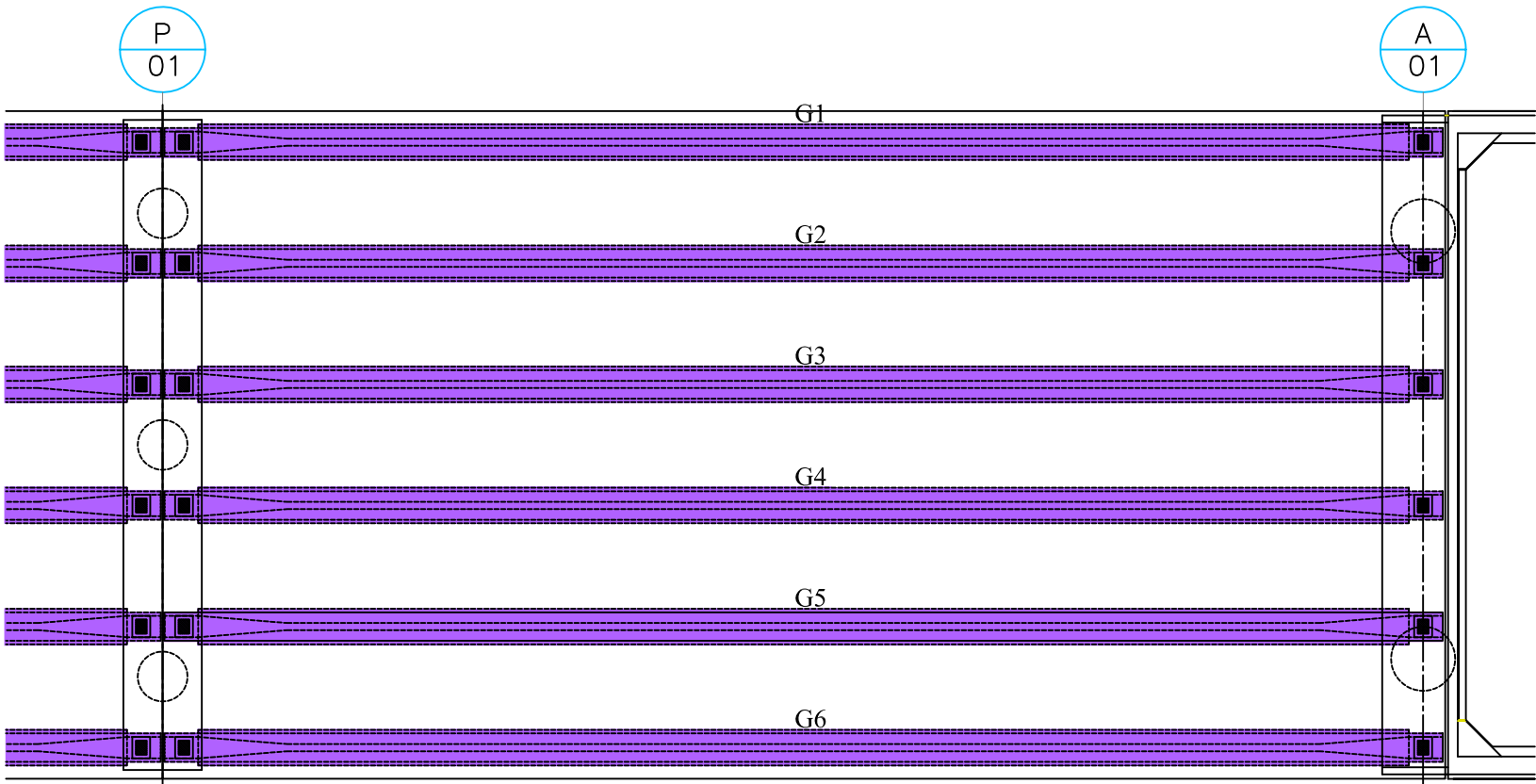


CROSS SECTION (A01 TO P01)  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

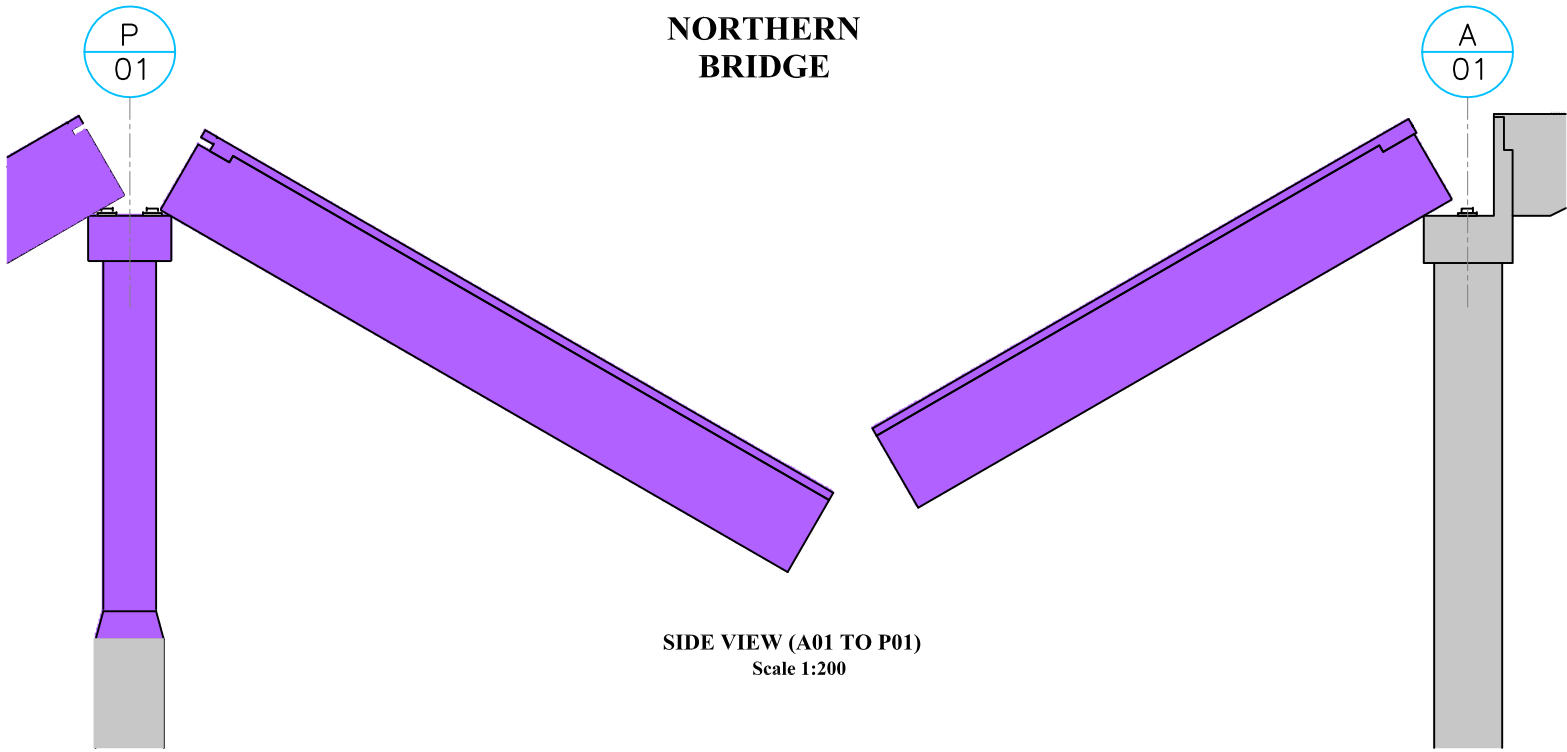
SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137

OF EXPRESSWAY



TOP VIEW (A01 TO P01)  
Scale 1:200

OF EXPRESSWAY



SIDE VIEW (A01 TO P01)  
Scale 1:200

LEGEND

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
- RED COLOR INDICATION REFERS TO THAT REHABILITATION REQUIRED AT THE MARKED ITEM
- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP

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**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 1 (A01-P01)**

DRAWING NO.

**ST.101**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

**IQ-17-001**

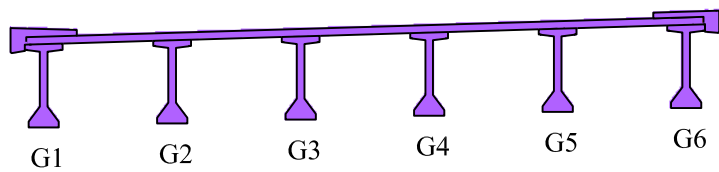
DATE:

**MARCH 2017**

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Development Programme

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CONSULTANCY



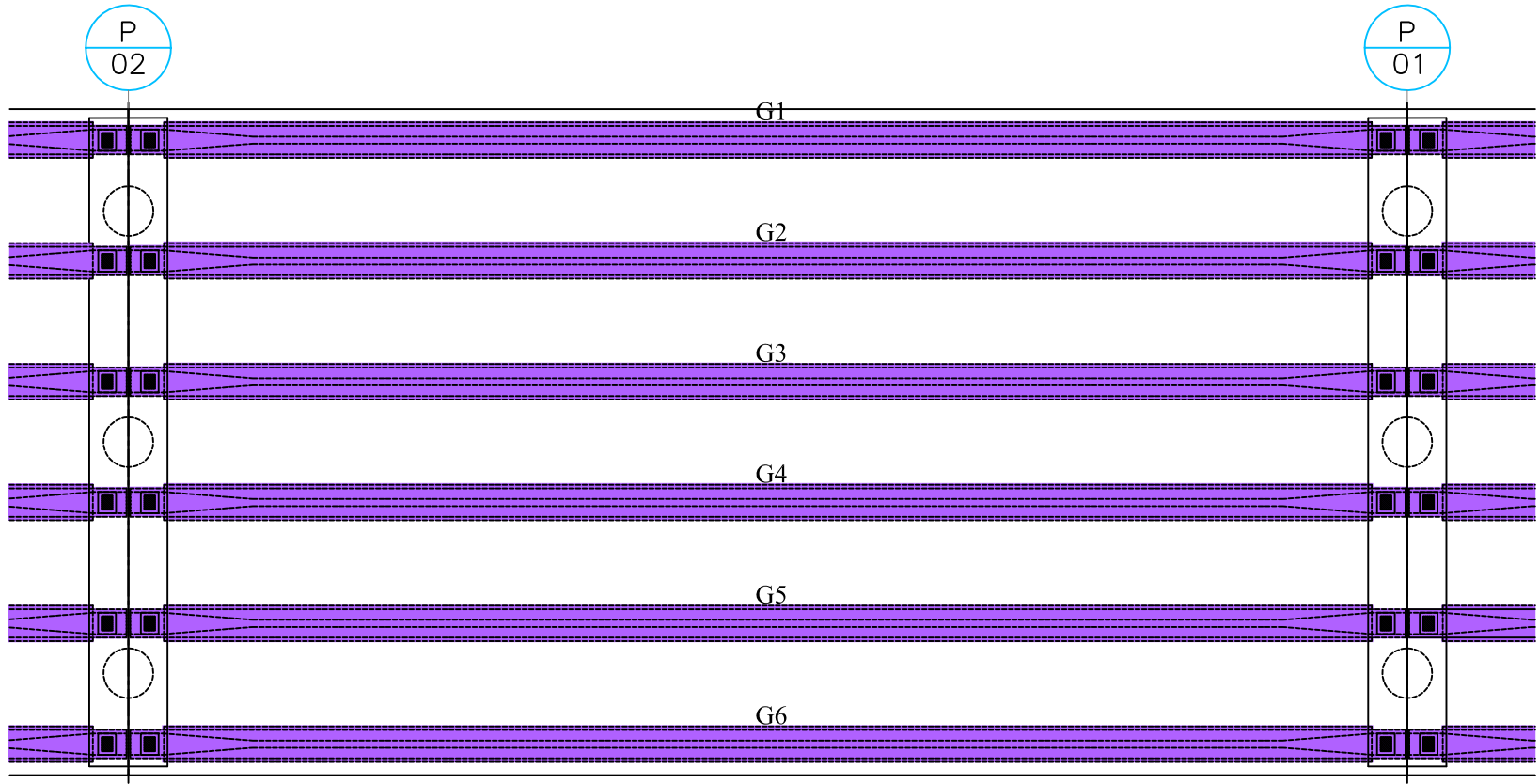


CROSS SECTION (P01 TO P02)  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

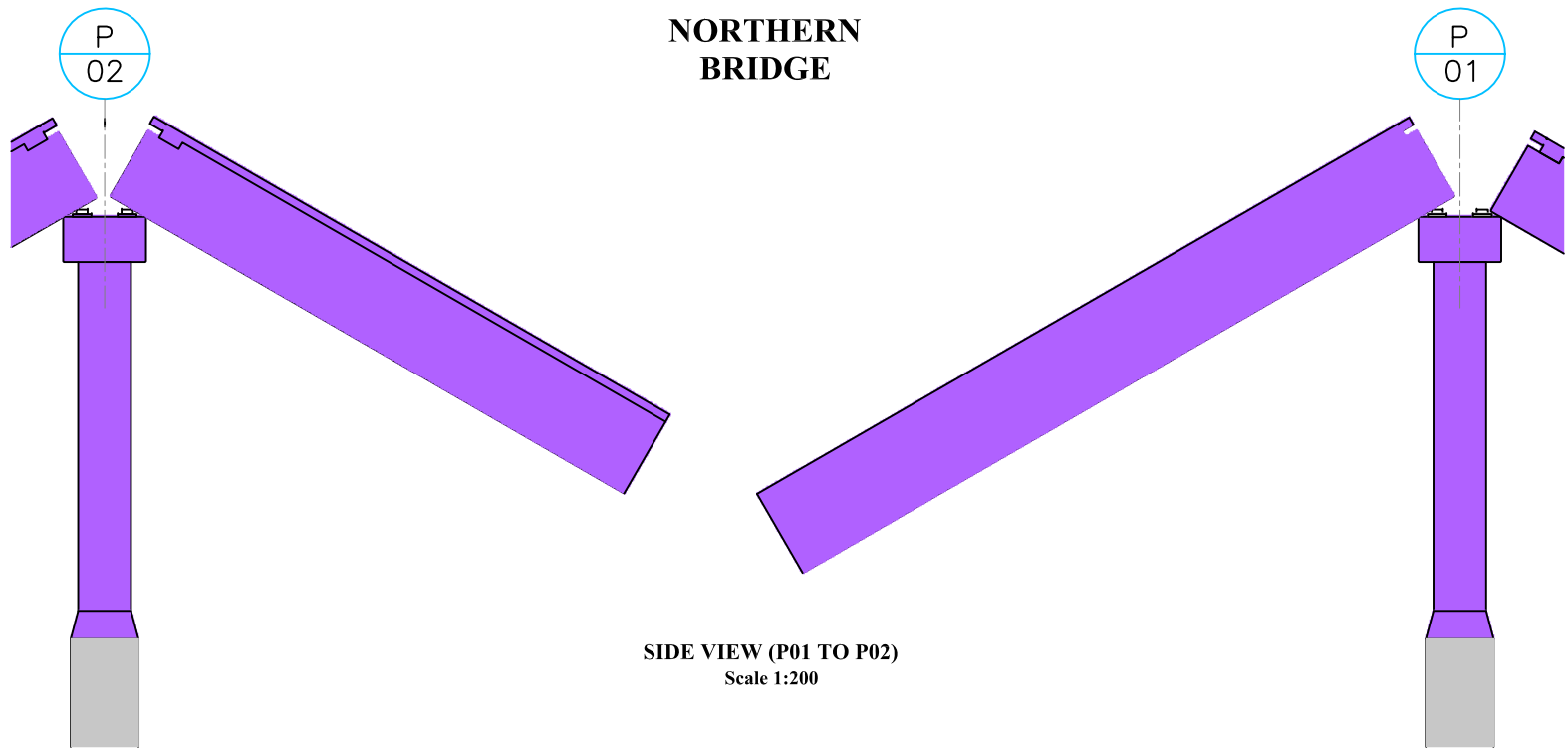
SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137

OF EXPRESSWAY



TOP VIEW (P01 TO P02)  
Scale 1:200

OF EXPRESSWAY



SIDE VIEW (P01 TO P02)  
Scale 1:200

LEGEND

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
- RED COLOR INDICATION REFERS TO THAT REHABILITATION REQUIRED AT THE MARKED ITEM
- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

REPUBLIC OF IRAQ  
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ROADS AND BRIDGES DIRECTORATE

KEY MAP

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REV.	DATE	DESCRIPTION	BY

PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 2 (P01-P02)**

DRAWING NO.

**ST.102**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

**IQ-17-001**

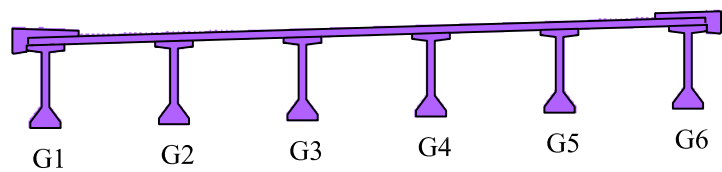
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**MARCH 2017**

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Development Programme

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CONSULTANCY





**CROSS SECTION (P02 TO P03)**  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

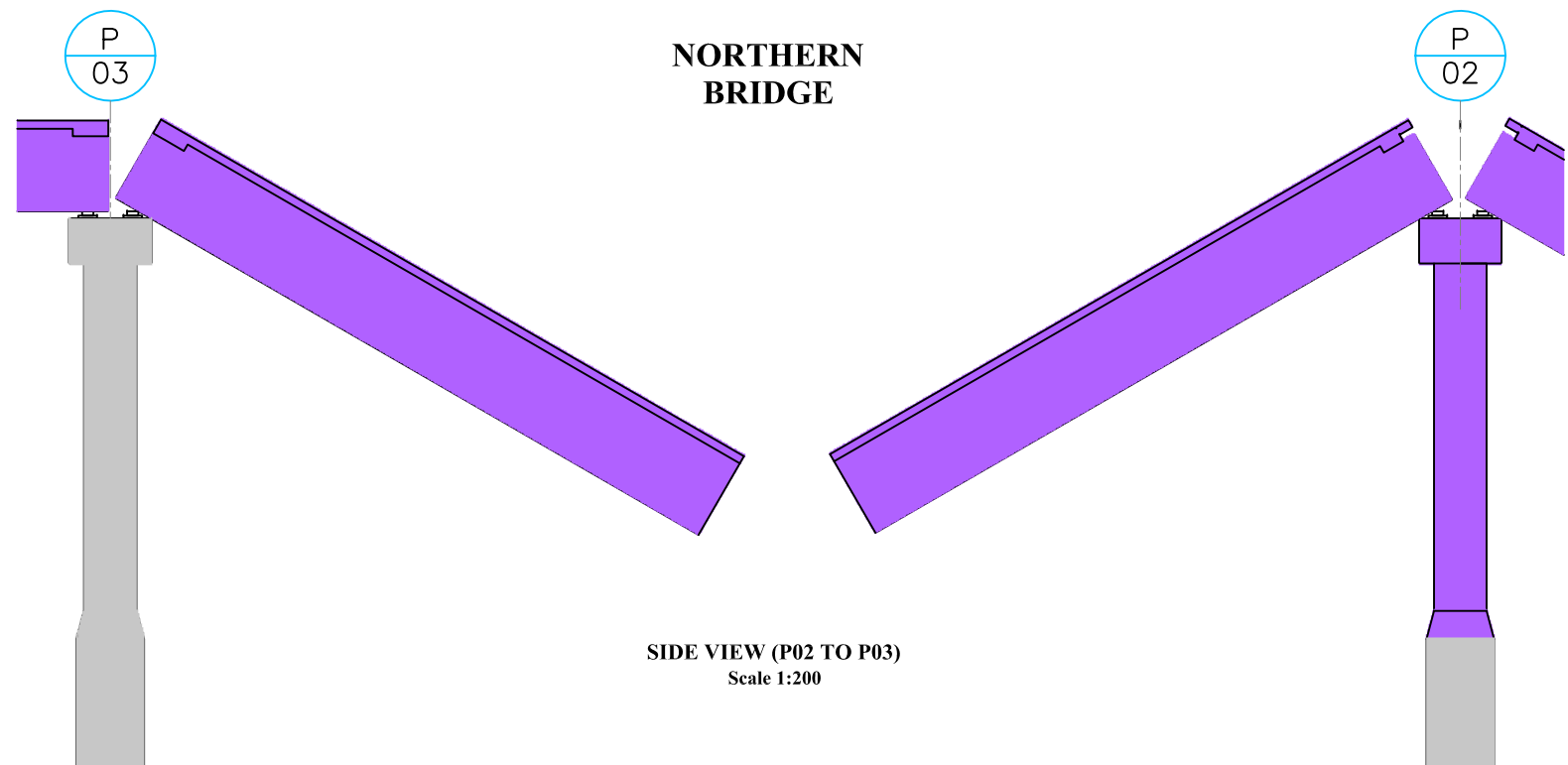
SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137

κ OF EXPRESSWAY



**TOP VIEW (P02 TO P03)**  
Scale 1:200

κ OF EXPRESSWAY



**SIDE VIEW (P02 TO P03)**  
Scale 1:200

LEGEND

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- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

**KEY MAP**

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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 3 (P02-P03)**

DRAWING NO.

**ST.103**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

**IQ-17-001**

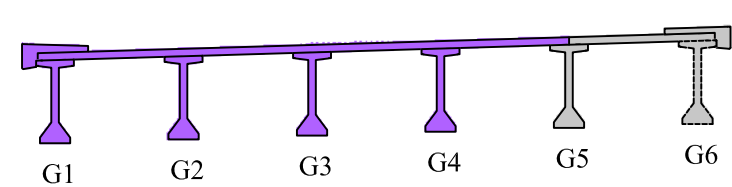
DATE:

**MARCH 2017**

United Nations  
Development Programme

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CONSULTANCY

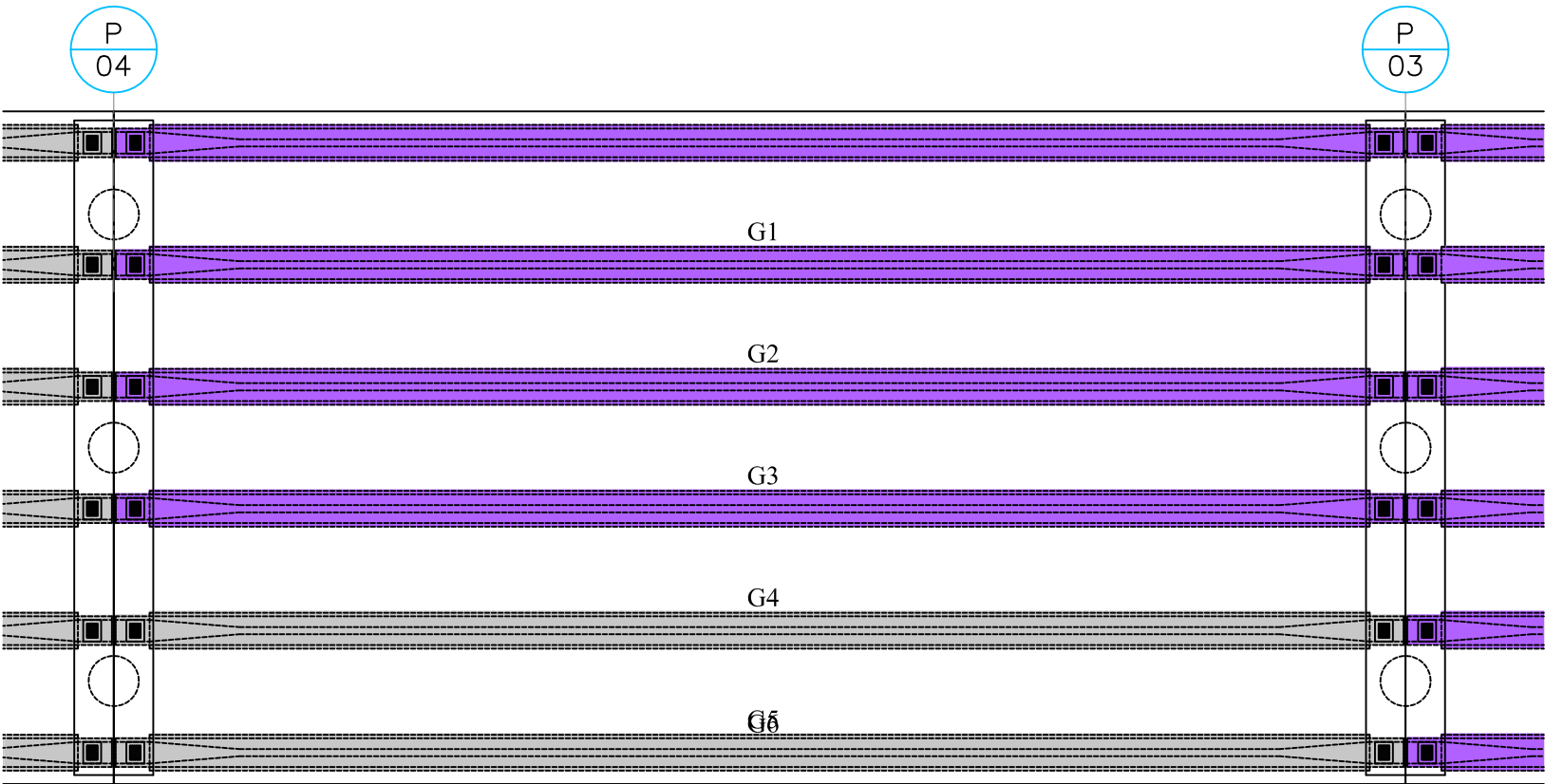




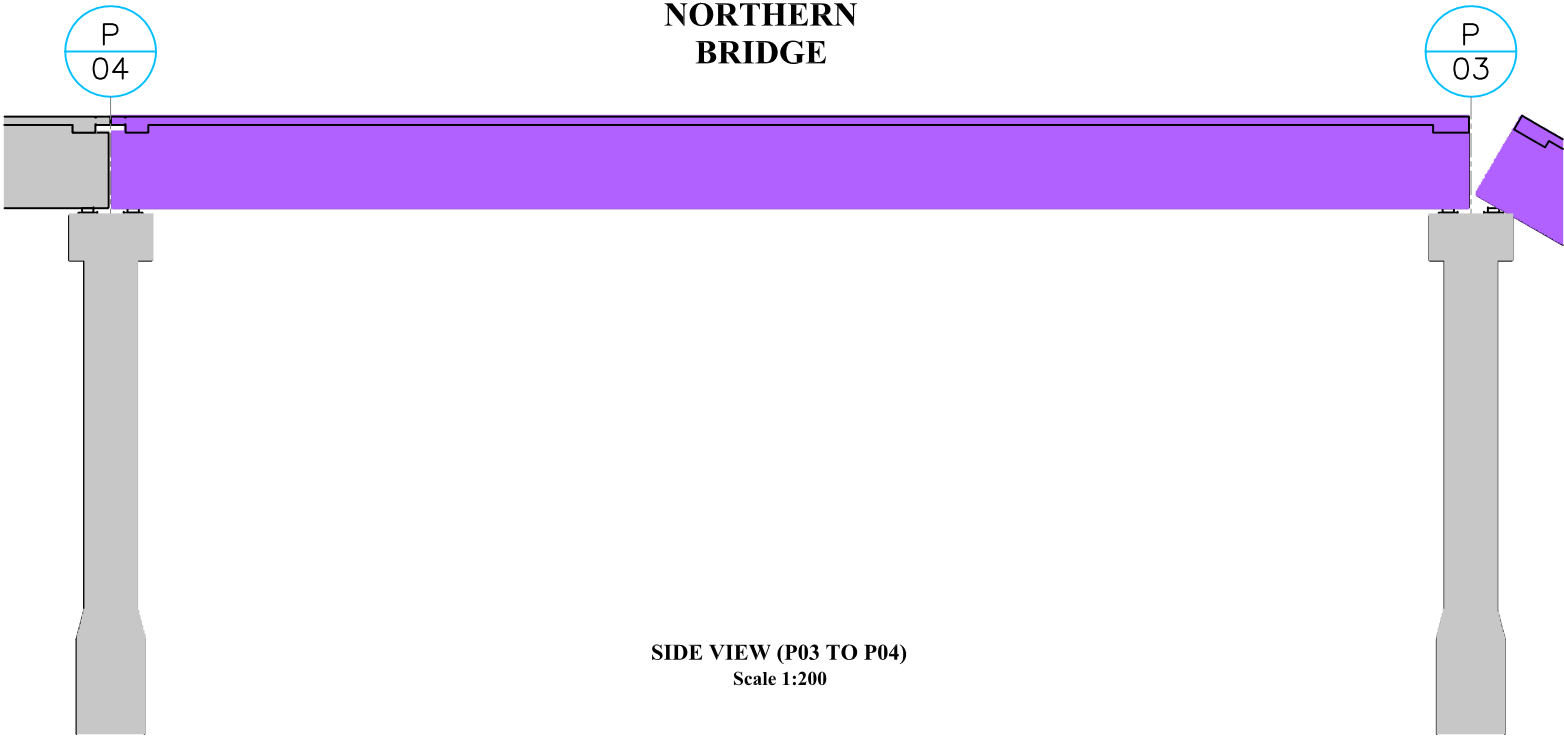
CROSS SECTION (P03 TO P04)  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	-	-
G6	DESTROYED	-	-

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED 80%	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	-	-



TOP VIEW (P03 TO P04)  
Scale 1:200



SIDE VIEW (P03 TO P04)  
Scale 1:200

LEGEND

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REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

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05			
04			
03			
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REV.	DATE	DESCRIPTION	BY

PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 4 (P03-P04)**

DRAWING NO.

**ST.104**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

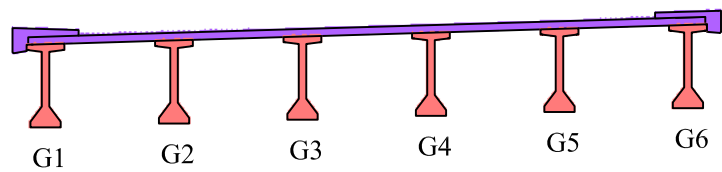
**IQ-17-001**

DATE:

**MARCH 2017**

United Nations  
Development Programme

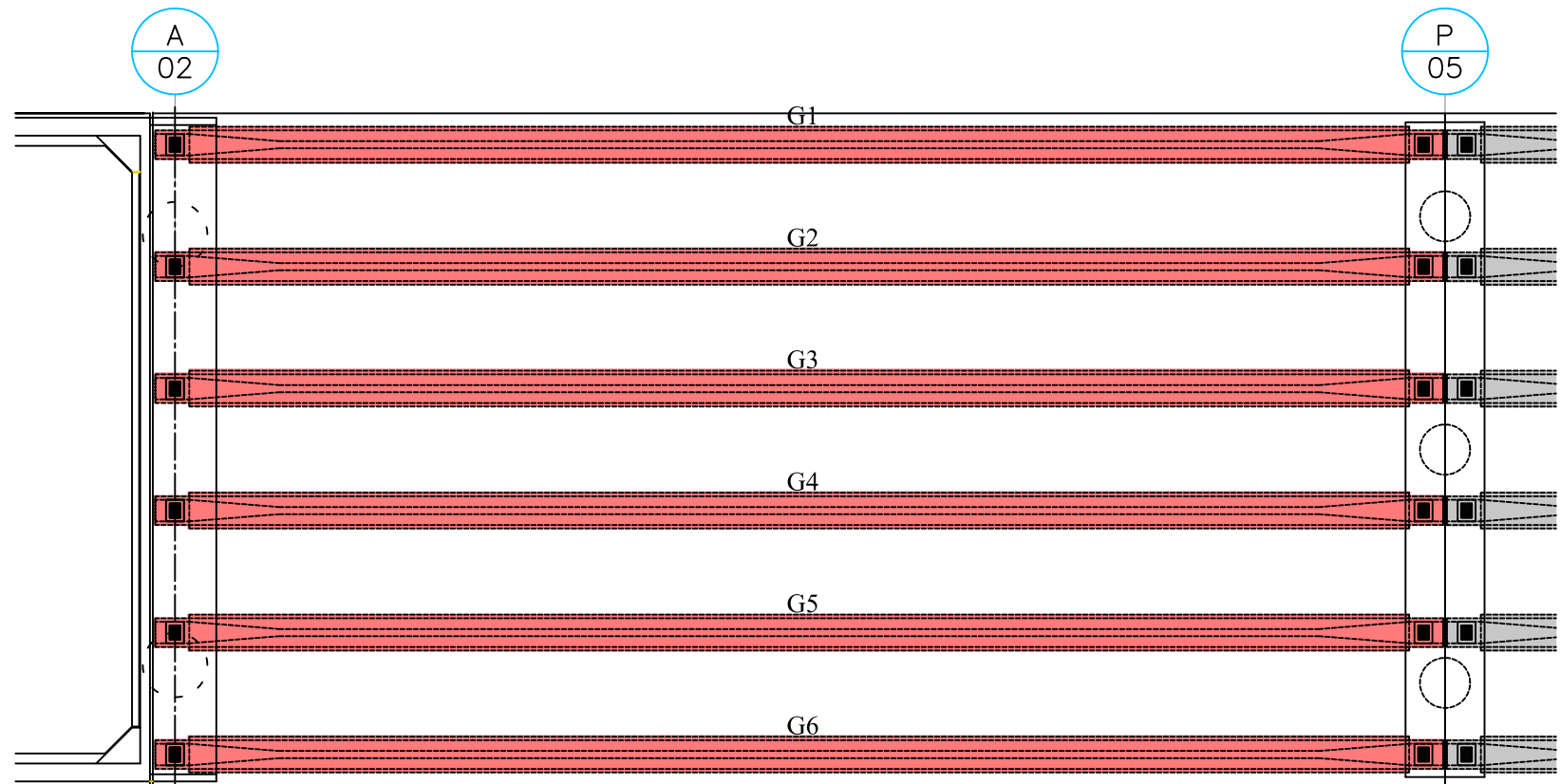
**NUDHUM ALBENAA  
CONSULTANCY**



**CROSS SECTION (P05 TO A02)**  
Scale 1:200

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137

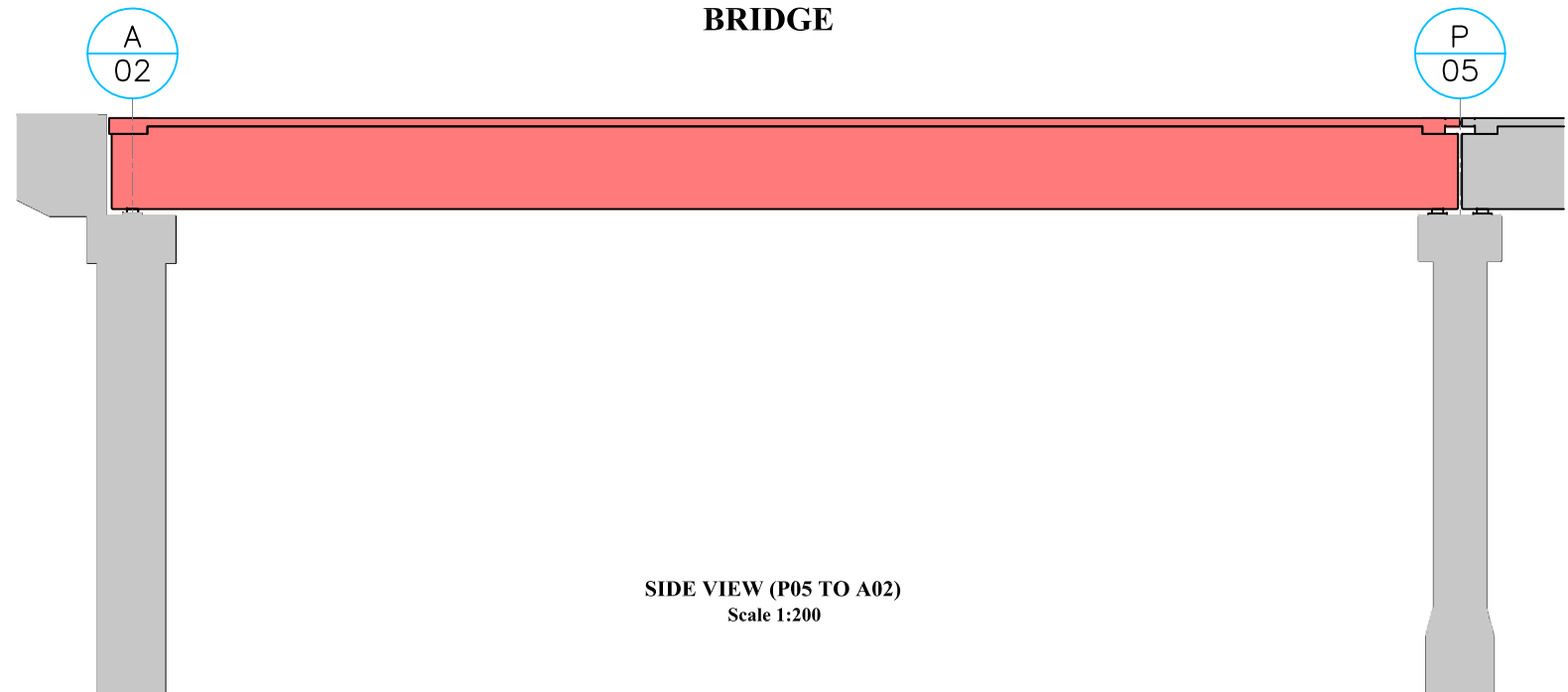
GIRDER	EVALUATION	REPAIR
G1	GOOD	REMOVED THE DECK SLAB AND THEN REMOVED THE GIRDERS CAREFULLY AND REUSED AFTER REPAIR OF CONCRETE PADS
G2	GOOD	
G3	GOOD	
G4	GOOD	
G5	GOOD	
G6	GOOD	



**TOP VIEW (P05 TO A02)**  
Scale 1:200

OF EXPRESSWAY

## NORTHERN BRIDGE



**SIDE VIEW (P05 TO A02)**  
Scale 1:200

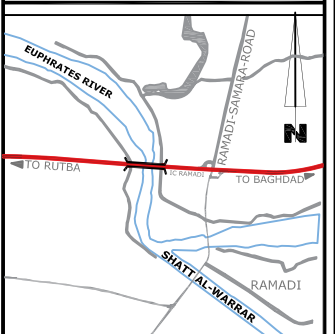
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REPUBLIC OF IRAQ  
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ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

### LOCATION:

**AL-ANBAR - IRAQ**

### CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

### SERVICES NAME:

**CIVIL DESIGN**

### DESIGN BY:

**MUHANED SHALLAL**

### SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 6 (P05-A02)**

### DRAWING NO.

**ST.105**

### SCALE:

**AS SHOWING**

### DRAWN BY:

**MUHANED SHALLAL**

### PROJECT NO:

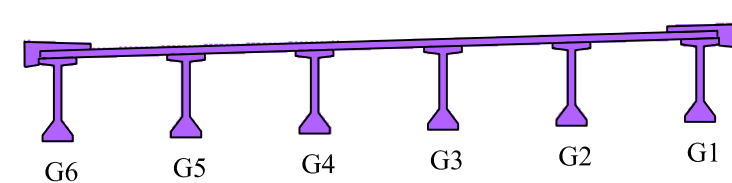
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### DATE:

**MARCH 2017**



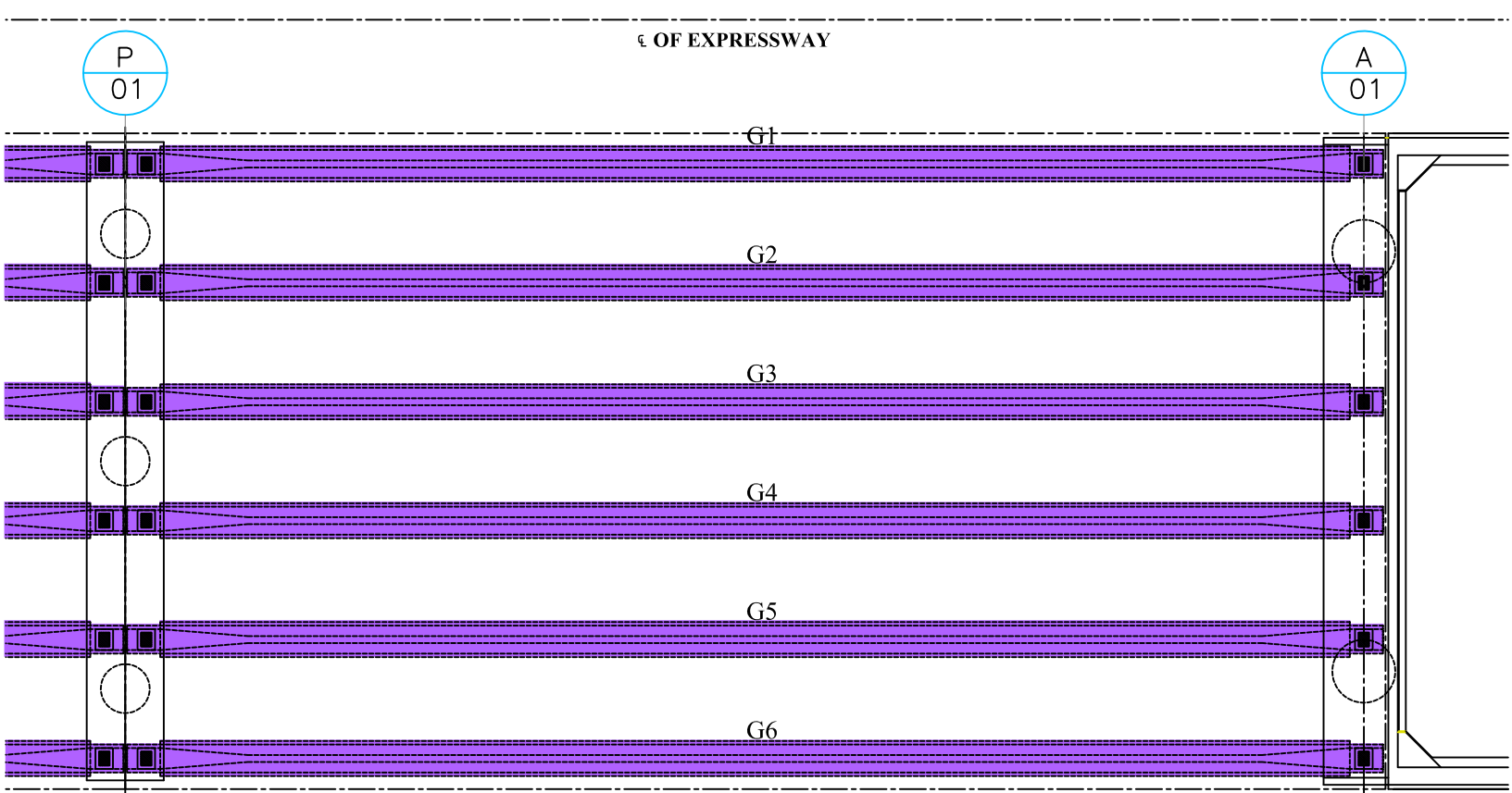




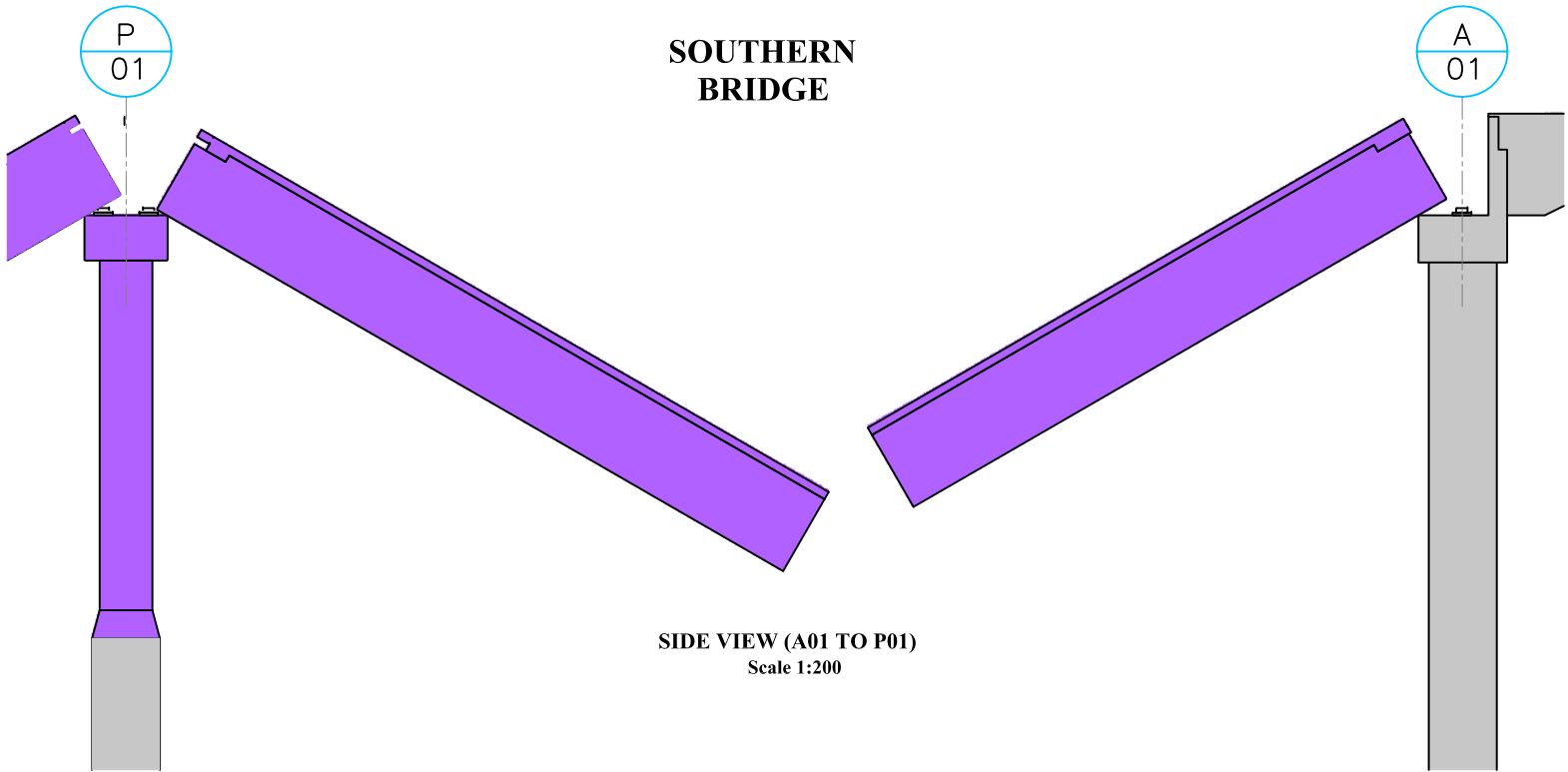
CROSS SECTION (A01 TO P01)  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137



TOP VIEW (A01 TO P01)  
Scale 1:200



SIDE VIEW (A01 TO P01)  
Scale 1:200

LEGEND

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
- RED COLOR INDICATION REFERS TO THAT REHABILITATION REQUIRED AT THE MARKED ITEM
- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP

NOTES

A. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.  
B. ALL DIMENSIONS ARE IN METRIC UNLESS OTHERWISE STATED.  
C. BUILDER TO CHECK ALL DIMENSIONS AT SITE PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.  
D. ALL WORKS ARE ACCORDING TO SPECIFICATIONS OF GENERAL DIRECTORATE FOR ROADS AND BRIDGES OF IRAQ.

NOTES

- THE CONTRACTOR SHALL ADOPT THE EXPRESSWAY No.1 SPECIFICATIONS DURING REHABILITATION EXECUTIVE PERIOD.
- ROADS FEATURES ARE BASED ON EXPRESSWAY No.1 SPECIFICATIONS, IN ADDITION TO THE APPROVAL OF SUPERVISED ENGINEER.

REV.	DATE	DESCRIPTION	BY
05			
04			
03			
02			
01			
00			

PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 1 (A01-P01)**

DRAWING NO.

**ST.106**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

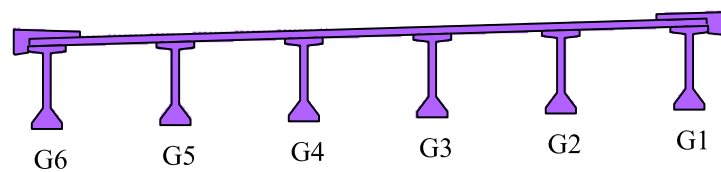
**IQ-17-001**

DATE:

**MARCH 2017**

United Nations  
Development Programme

**NUDHUM ALBENAA  
CONSULTANCY**

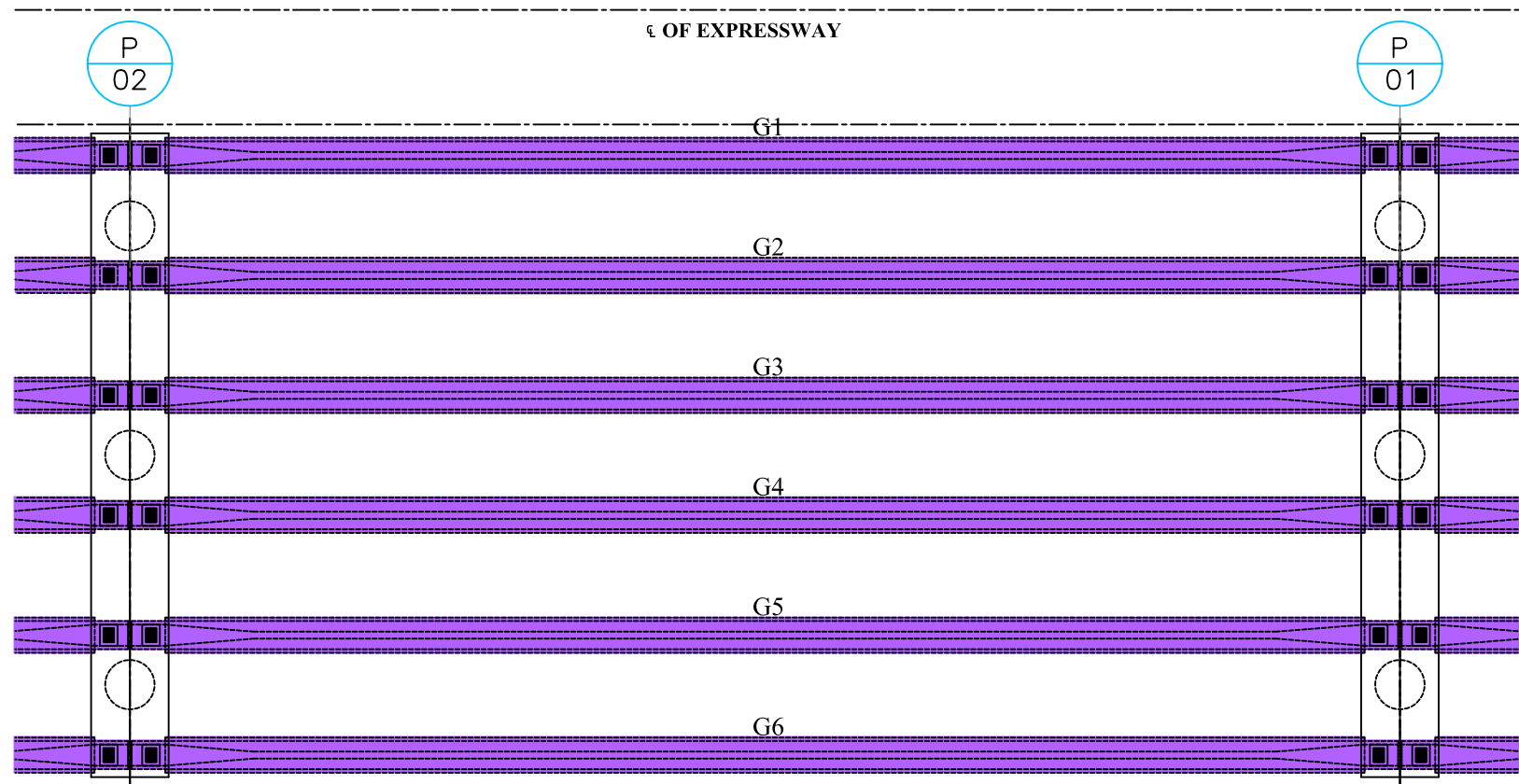


**CROSS SECTION (P01 TO P02)**  
Scale 1:200

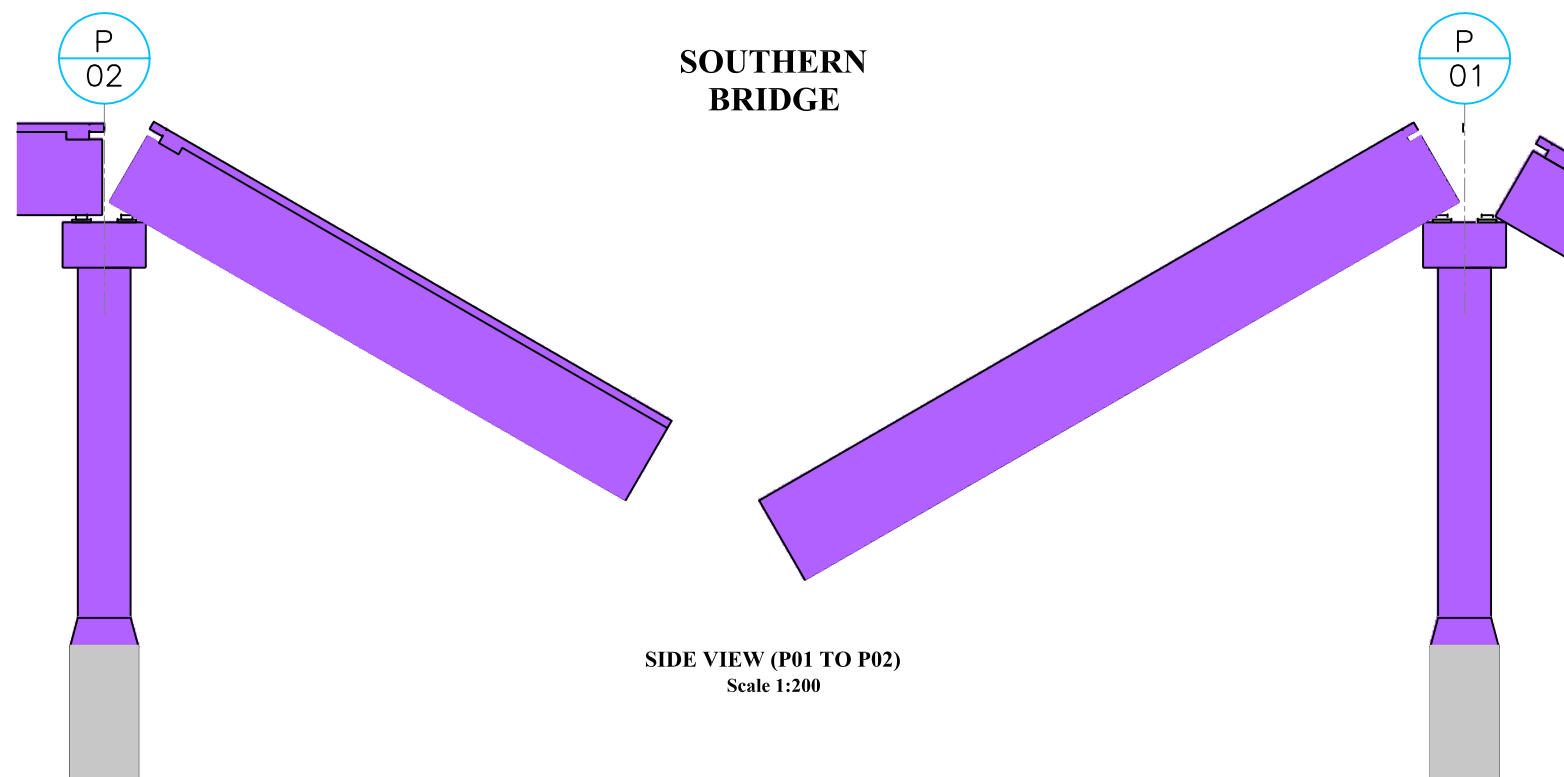
GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137

OF EXPRESSWAY



**TOP VIEW (P01 TO P02)**  
Scale 1:200



**SIDE VIEW (P01 TO P02)**  
Scale 1:200

LEGEND

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
- RED COLOR INDICATION REFERS TO THAT REHABILITATION REQUIRED AT THE MARKED ITEM
- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP

NOTES

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REV.	DATE	DESCRIPTION	BY
05			
04			
03			
02			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 2 (P01-P02)**

DRAWING NO.

**ST.107**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

**IQ-17-001**

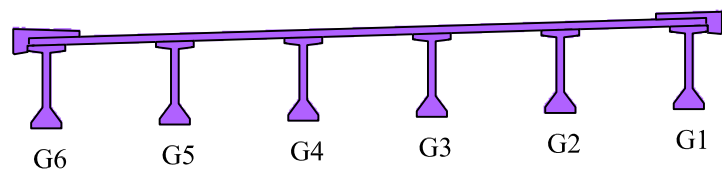
DATE:

**MARCH 2017**

United Nations  
Development Programme

**NUDHUM ALBENAA  
CONSULTANCY**



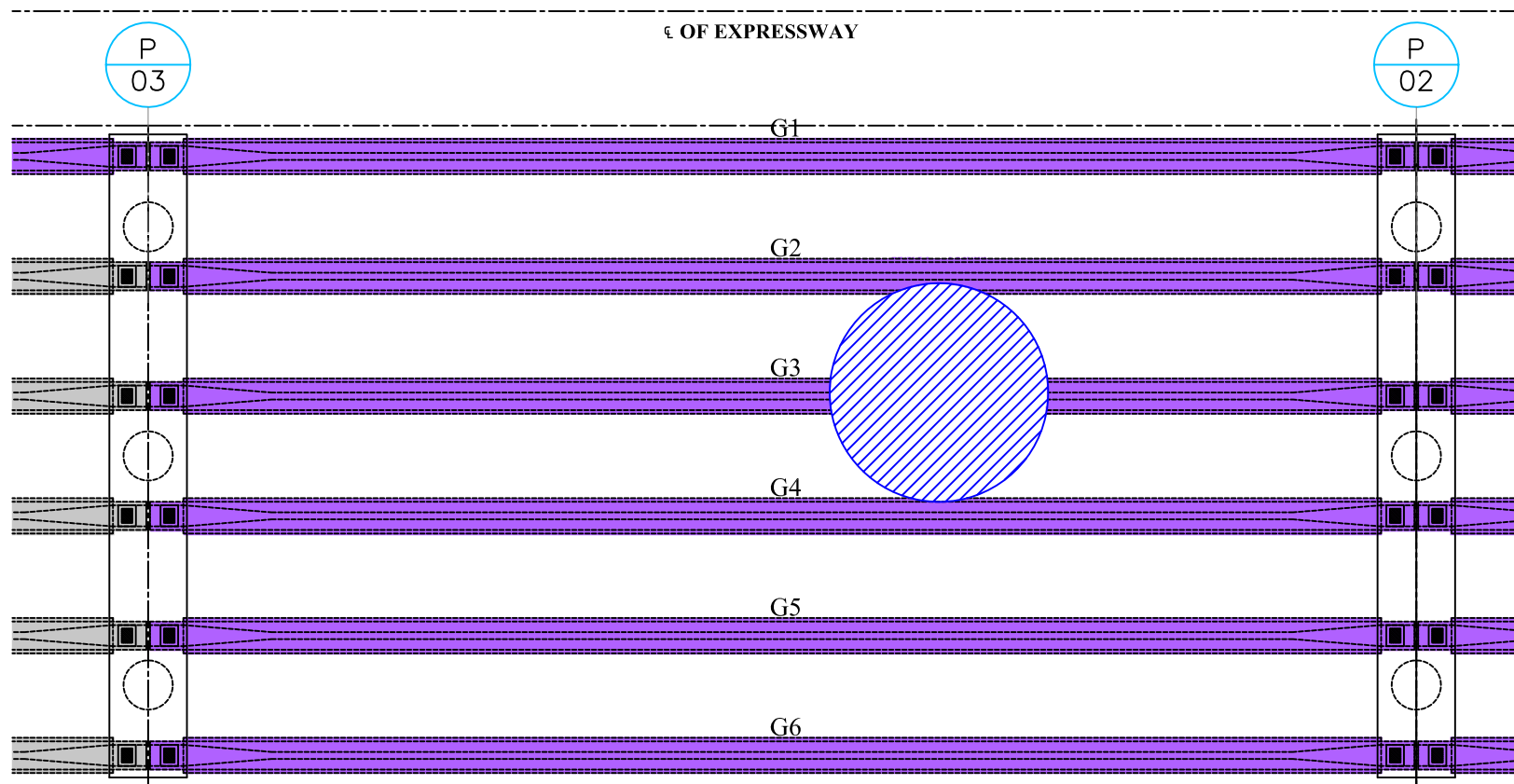


CROSS SECTION (P02 TO P03)  
Scale 1:200

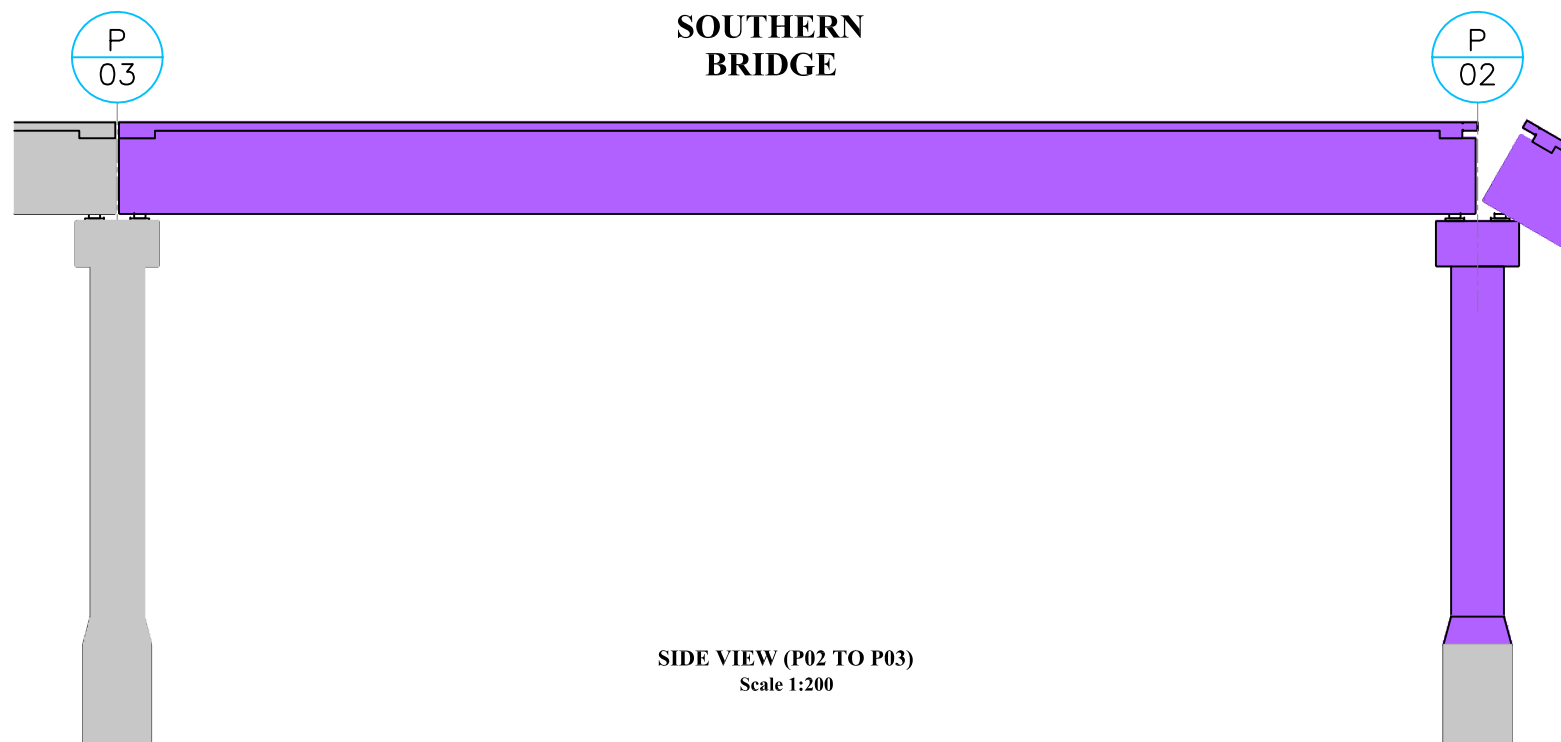
GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137

OF EXPRESSWAY



TOP VIEW (P02 TO P03)  
Scale 1:200



SIDE VIEW (P02 TO P03)  
Scale 1:200

LEGEND

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
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- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP

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REV.	DATE	DESCRIPTION	BY
05			
04			
03			
02			
01			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME:

**EXISTING CONDITION  
SPAN 3 (P02-P03)**

DRAWING NO.

**ST.108**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

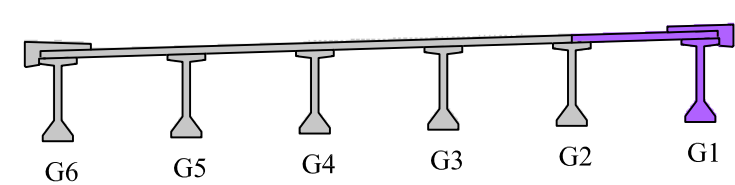
**IQ-17-001**

DATE:

**MARCH 2017**

United Nations  
Development Programme

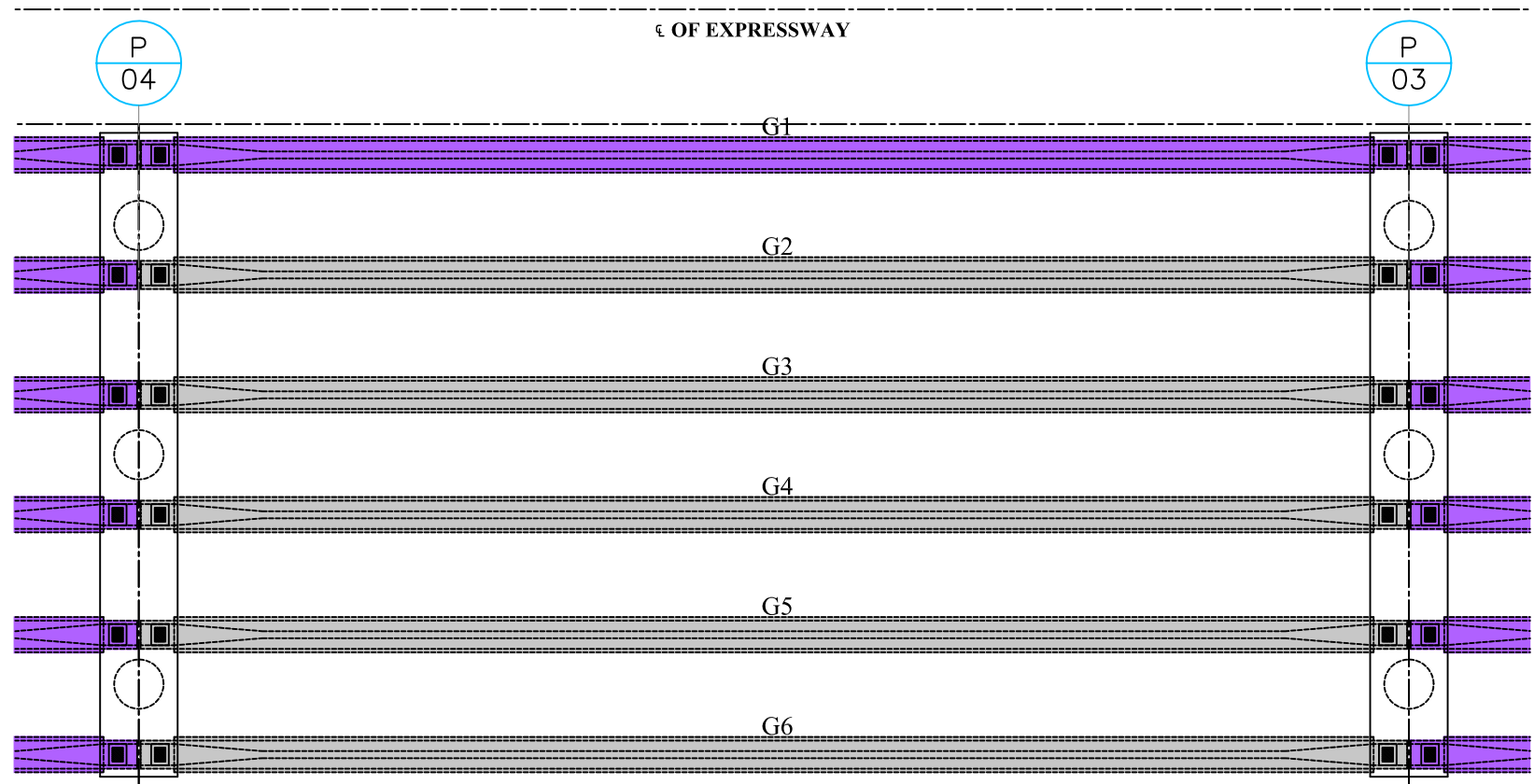
**NUDHUM ALBENAA  
CONSULTANCY**



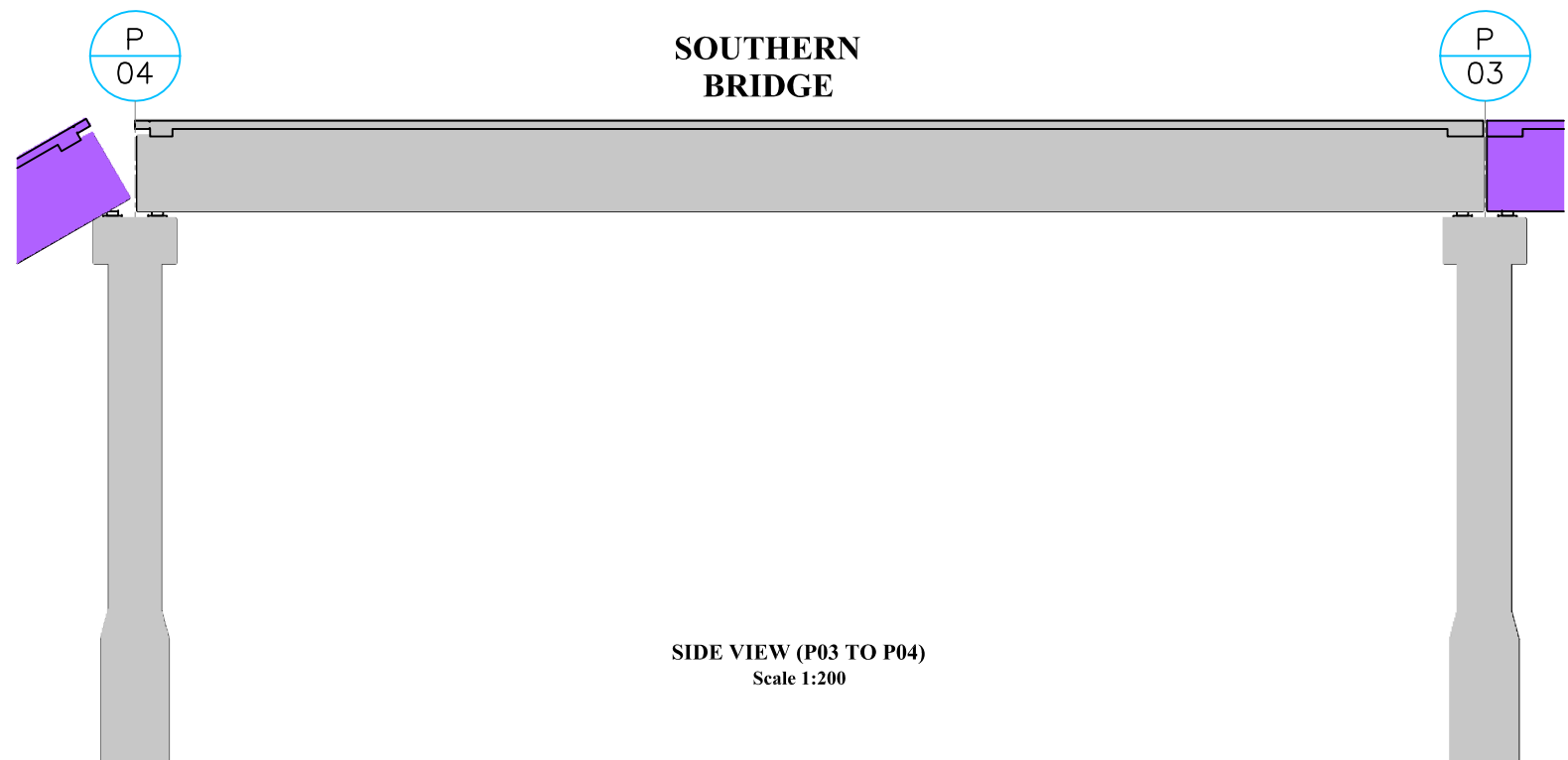
CROSS SECTION (P03 TO P04)  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	-	-
G3	DESTROYED	-	-
G4	DESTROYED	-	-
G5	DESTROYED	-	-
G6	DESTROYED	-	-

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED 20%	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	-	-
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137



TOP VIEW (P03 TO P04)  
Scale 1:200



SIDE VIEW (P03 TO P04)  
Scale 1:200

#### LEGEND

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
- RED COLOR INDICATION REFERS TO THAT REHABILITATION REQUIRED AT THE MARKED ITEM
- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP

NOTES

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REV.	DATE	DESCRIPTION	BY
05			
04			
03			
02			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SPAN 4 (P03-P04)**

DRAWING NO.

**ST.109**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

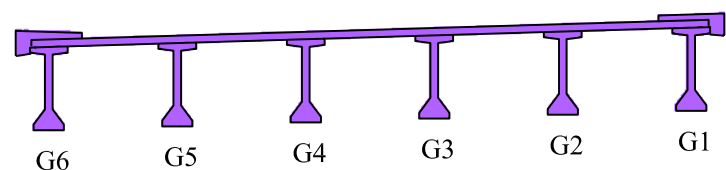
PROJECT NO:

**IQ-17-001**

DATE:

**MARCH 2017**

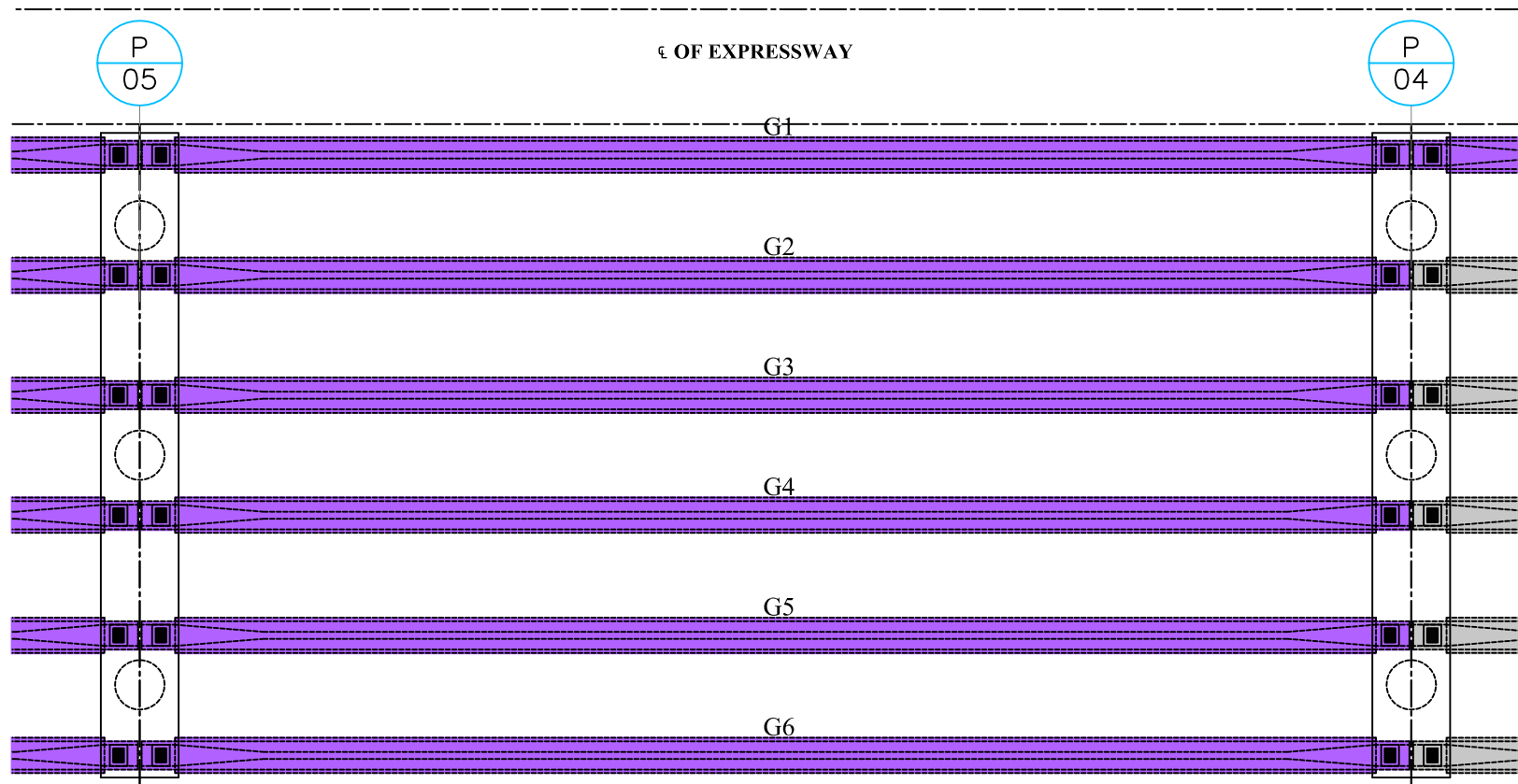




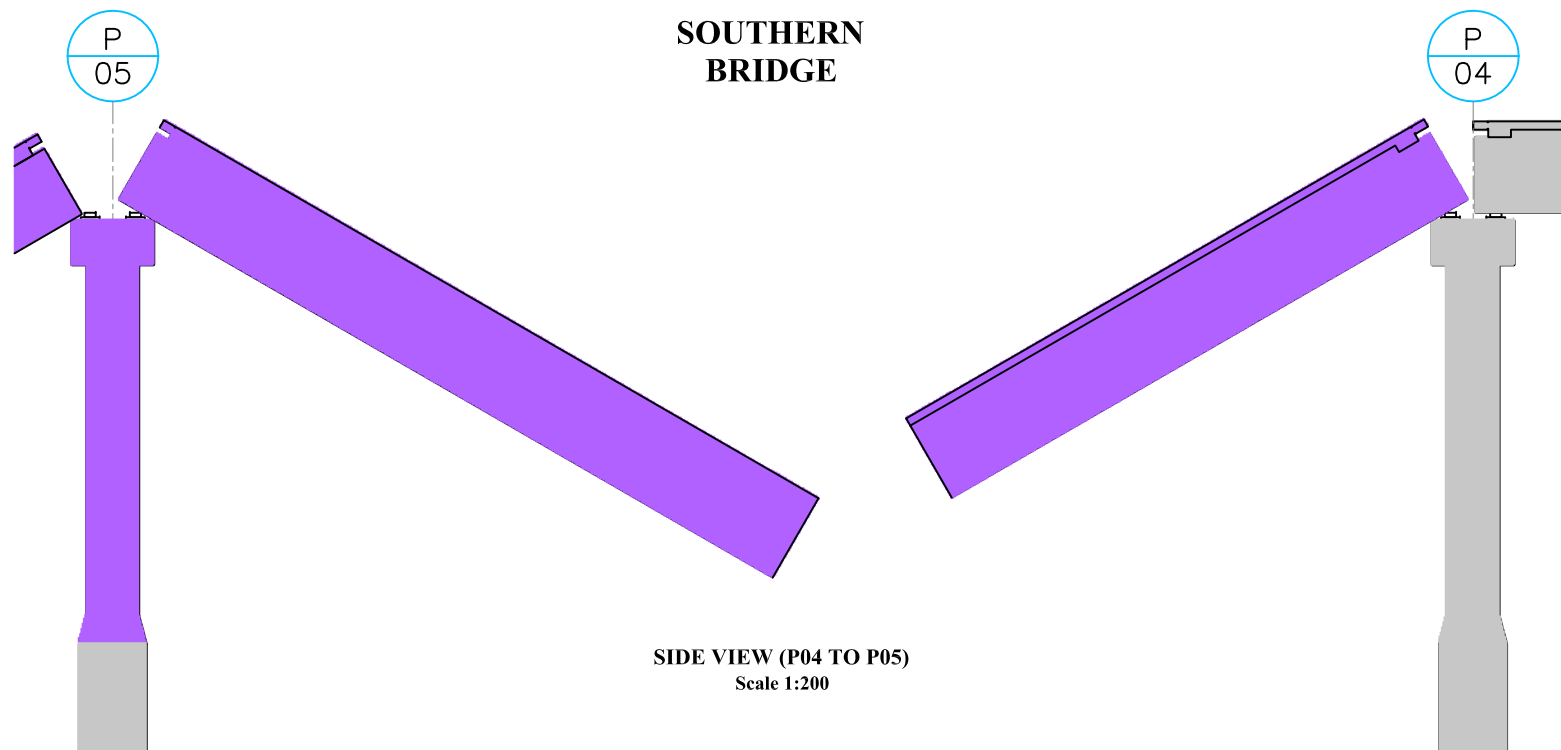
**CROSS SECTION (P04 TO P05)**  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137



**TOP VIEW (P04 TO P05)**  
Scale 1:200



**SIDE VIEW (P04 TO P05)**  
Scale 1:200

**LEGEND**

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
- RED COLOR INDICATION REFERS TO THAT REHABILITATION REQUIRED AT THE MARKED ITEM
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REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

**KEY MAP**

**NOTES**

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REV.	DATE	DESCRIPTION	BY
05			
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**PROJECT NAME:**

**JAPANESE BRIDGE**  
**ARCHITECTURAL & CIVIL**  
**ENGINEERING DESIGN SERVICES**

**LOCATION:**

**AL-ANBAR - IRAQ**

**CLIENT:**

**GENERAL DIRECTORATE FOR ROADS AND BRIDGES**

**SERVICES NAME:**

**CIVIL DESIGN**

**DESIGN BY:**

**MUHANED SHALLAL**

**SUPERVISOR:**

**DRAWING NAME:** EXISTING CONDITION  
SPAN 5 (P04-P05)

**DRAWING NO.**

**ST.110**

**SCALE:**

**AS SHOWING**

**DRAWN BY:**

**MUHANED SHALLAL**

**PROJECT NO:**

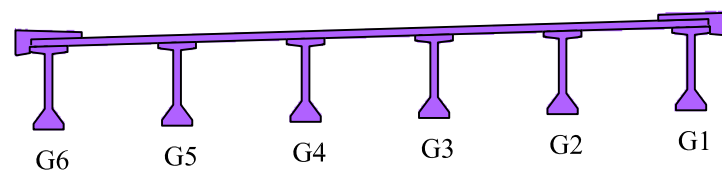
**IQ-17-001**

**DATE:**

**MARCH 2017**

United Nations  
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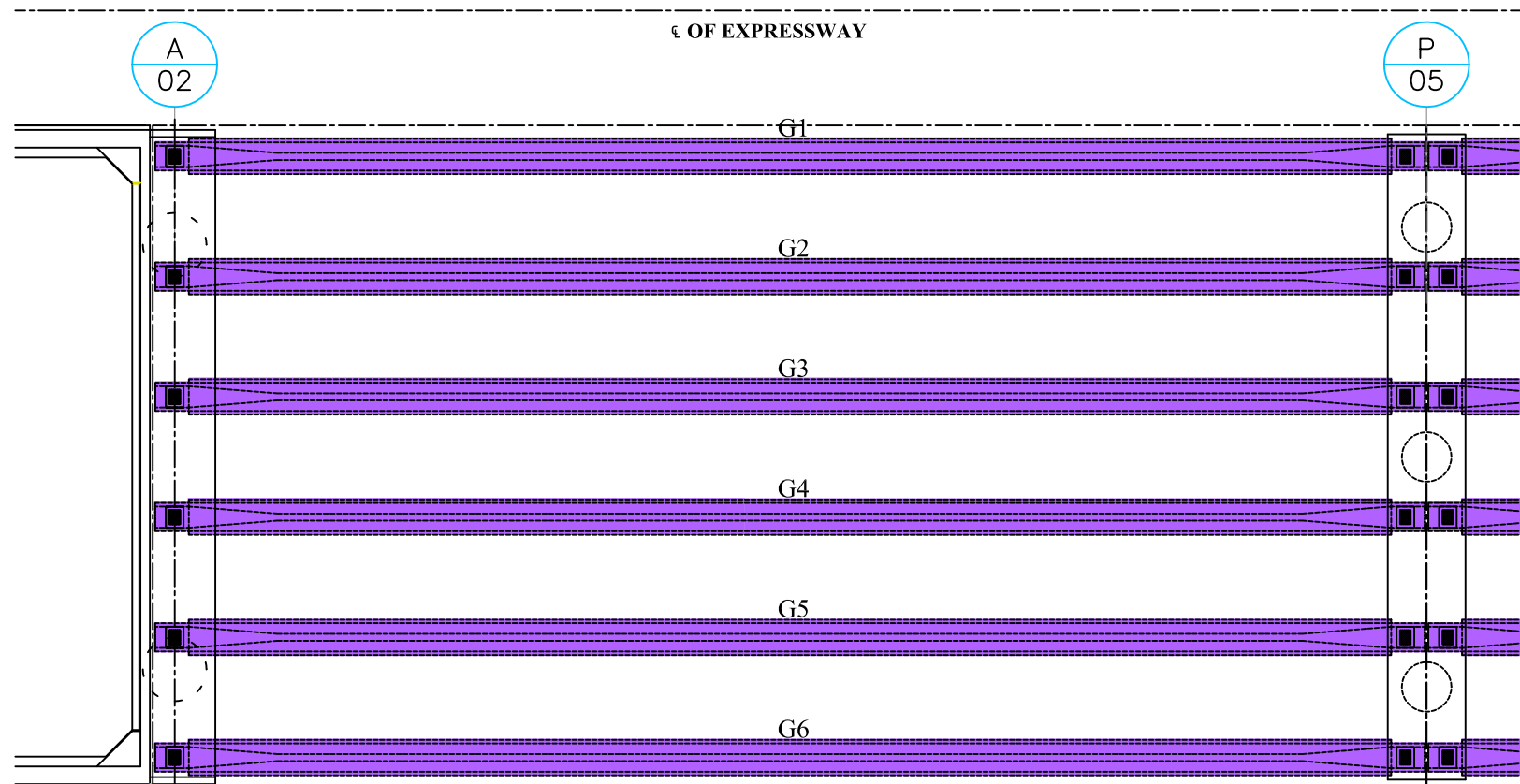
NUDHUM ALBENAA  
CONSULTANCY



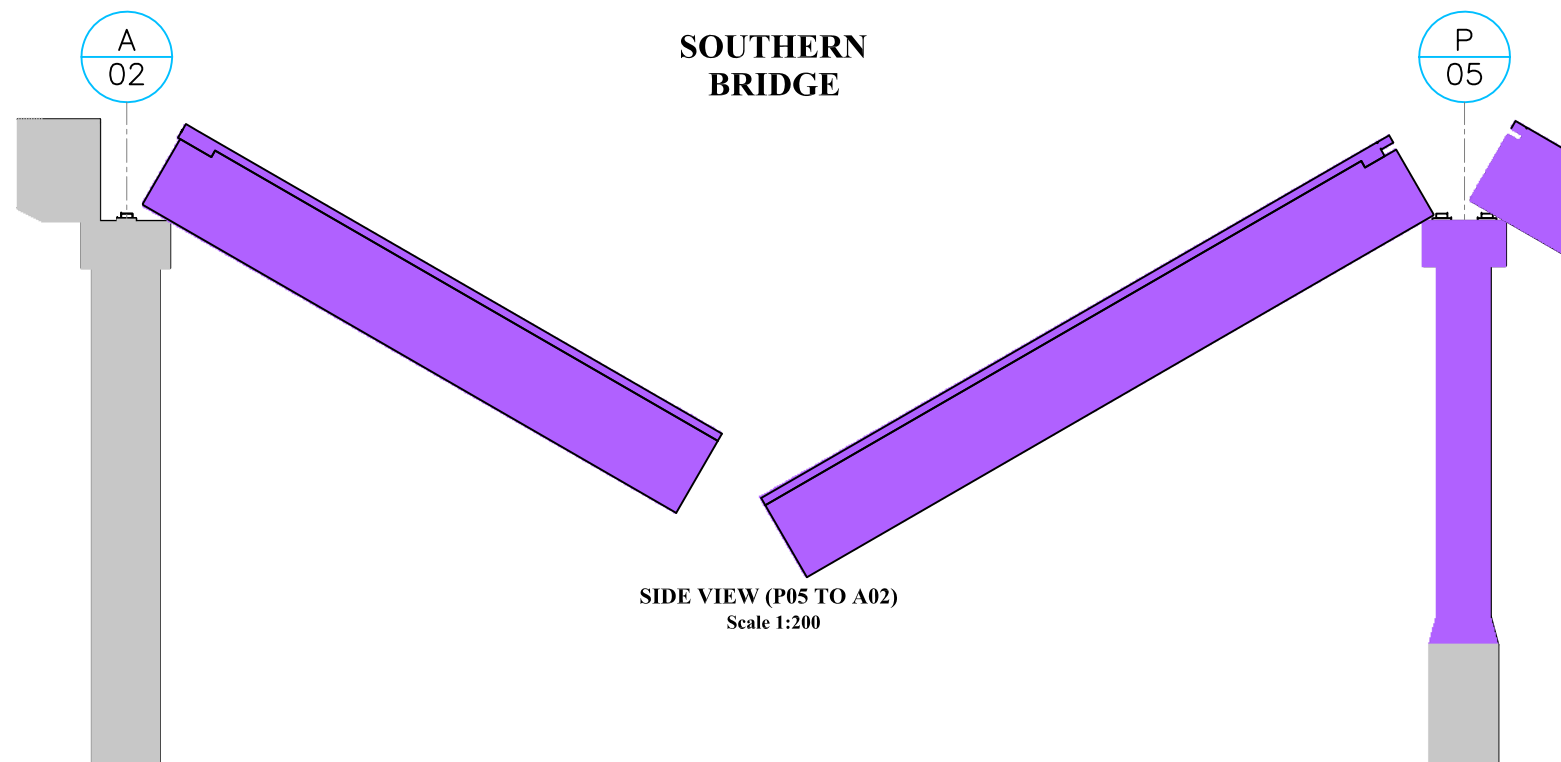
**CROSS SECTION (P05 TO A02)**  
Scale 1:200

GIRDER	EVALUATION	REPAIR	DESIGN SHEETS
G1	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G2	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G3	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G4	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G5	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131
G6	DESTROYED	REMOVED AND REPLACED	ST-128 TO ST-131

SLAB	EVALUATION	REPAIR	DESIGN SHEETS
DECK SLAB	DESTROYED	REMOVED AND REPLACED	ST-136 & ST-138
SIDEWALK (LEFT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137
SIDEWALK (RIGHT SIDE)	DESTROYED	REMOVED AND REPLACED	ST-137



**TOP VIEW (P05 TO A02)**  
Scale 1:200



**SIDE VIEW (P05 TO A02)**  
Scale 1:200

**LEGEND**

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REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

**KEY MAP**

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REV.	DATE	DESCRIPTION	BY
05			
04			
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02			
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**PROJECT NAME:**

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

**LOCATION:**

**AL-ANBAR - IRAQ**

**CLIENT:**

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

**SERVICES NAME:**

**CIVIL DESIGN**

**DESIGN BY:**

**MUHANED SHALLAL**

**SUPERVISOR:**

**DRAWING NAME:** EXISTING CONDITION  
SPAN 6 (P05-A02)

**DRAWING NO.**

**ST.111**

**SCALE:**

**AS SHOWING**

**DRAWN BY:**

**MUHANED SHALLAL**

**PROJECT NO:**

**IQ-17-001**

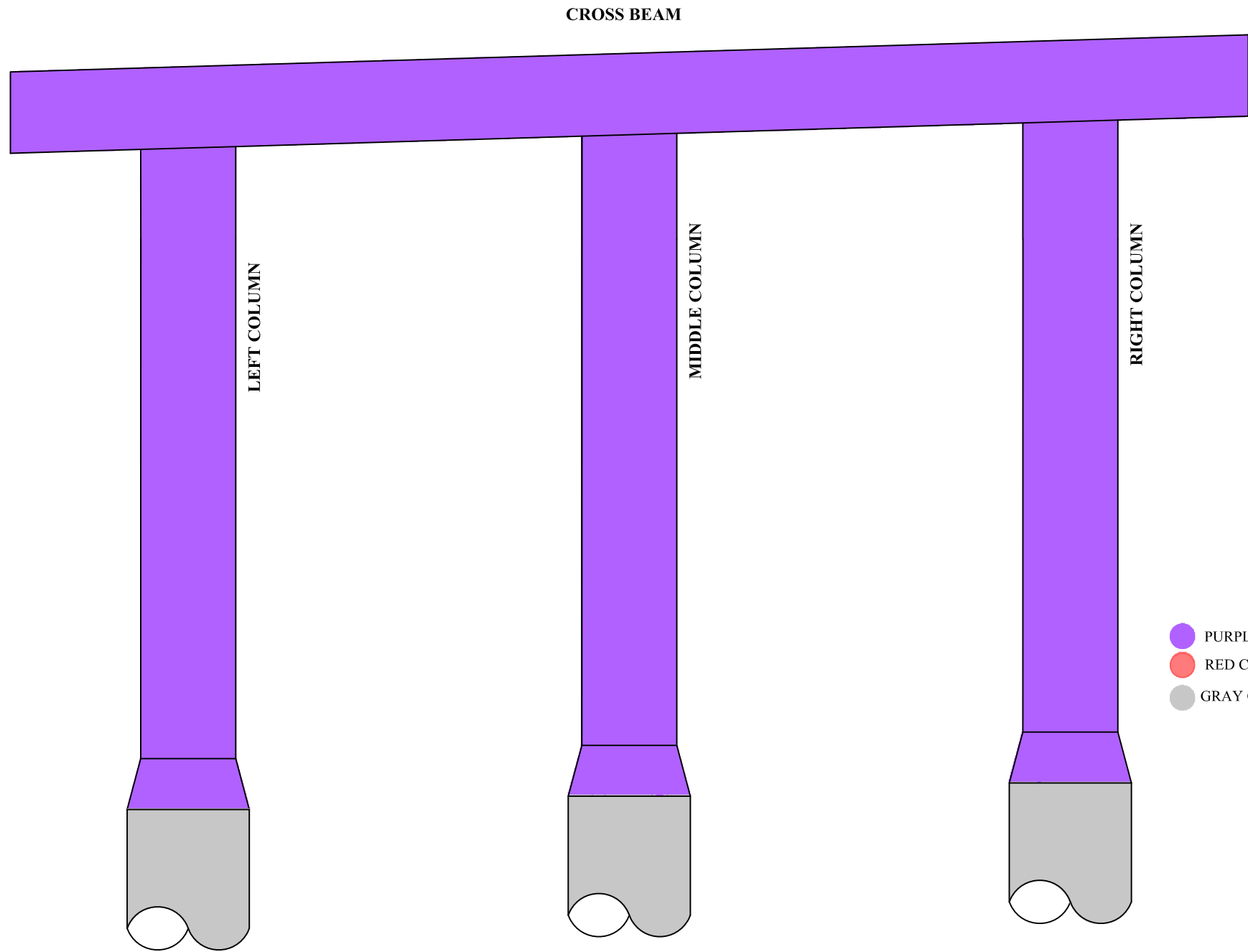
**DATE:**

**MARCH 2017**

United Nations  
Development Programme

NUDHUM ALBENAA  
CONSULTANCY






ELEVATION  
P01 NORTHERN BRIDGES

Scale 1:80

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
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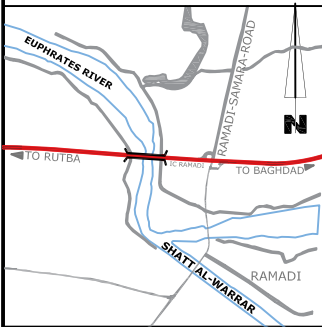
MEMBER	EVALUATION	REPAIR	DESIGN SHEETS
LEFT COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
MIDDLE COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
RIGTH COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
CROSS BEAM	DAMAGE	REMOVED AND REPLACED	ST-132





REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



NOTES

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REV.	DATE	DESCRIPTION	BY


PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME:

**EXISTING CONDITION  
NORTHERN PIER (P01)**

DRAWING NO.

**ST.112**

SCALE:

**AS SHOWING**

DRAWN BY:


**MUHANED SHALLAL**

PROJECT NO:


**IQ-17-001**

DATE:

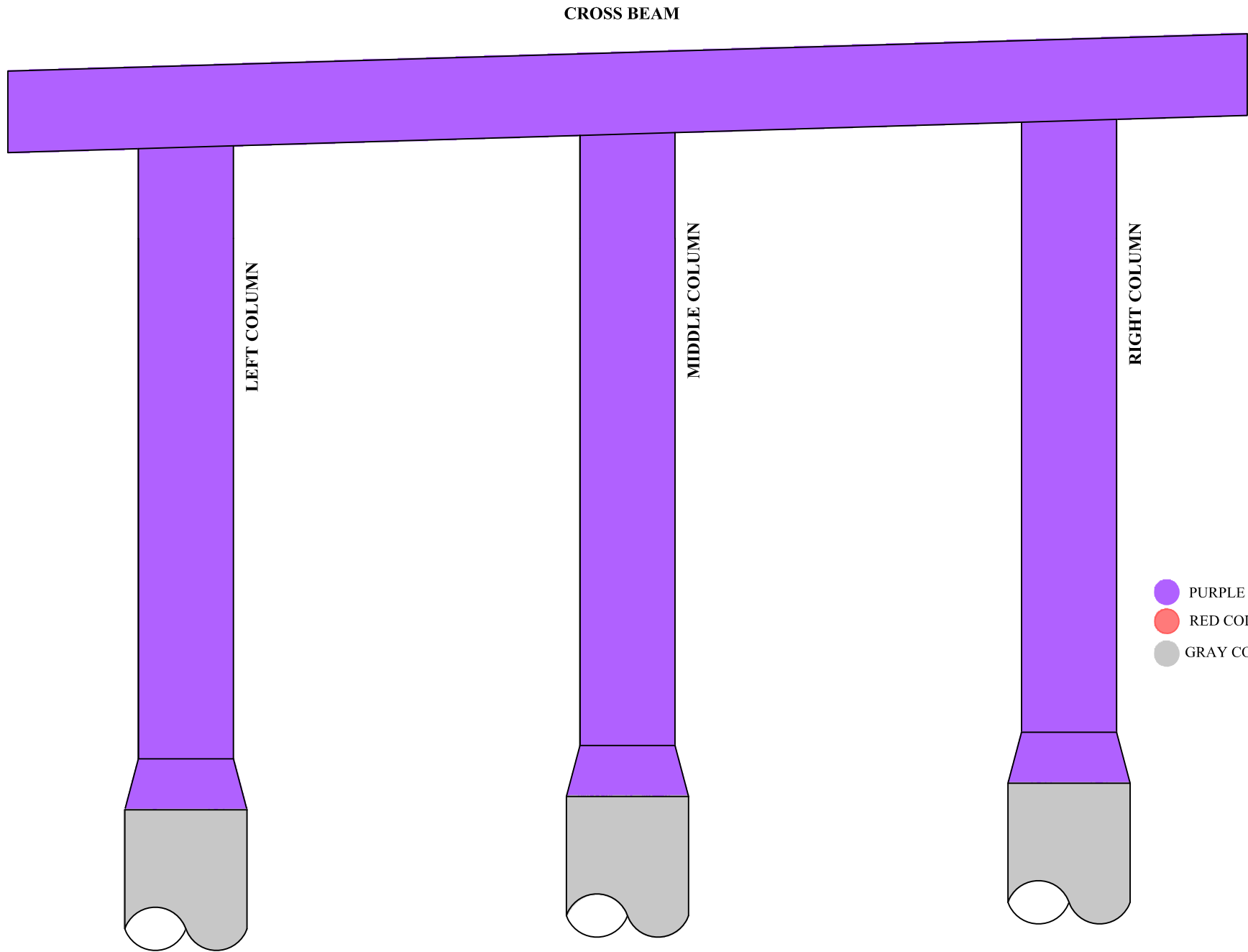
**MARCH 2017**



United Nations  
Development Programme



**NUDHUM ALBENAA  
CONSULTANCY**



ELEVATION  
P02 NORTHERN BRIDGES  
Scale 1:80

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
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- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

MEMBER	EVALUATION	REPAIR	DESIGN SHEETS
LEFT COLUMN	DAMAGE		
MIDDLE COLUMN	DAMAGE		
RIGTH COLUMN	DAMAGE		
CROSS BEAM	DAMAGE		



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP

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D. ALL WORKS ARE ACCORDING TO SPECIFICATIONS OF GENERAL DIRECTORATE FOR ROADS AND BRIDGES OF IRAQ.

NOTES

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- ROADS FEATURES ARE BASED ON EXPRESSWAY No.1 SPECIFICATIONS, IN ADDITION TO THE APPROVAL OF SUPERVISED ENGINEER.

REV.	DATE	DESCRIPTION	BY
05			
04			
03			
02			
01			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
NORTHERN PIER (P02)**

DRAWING NO.

**ST.113**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

**IQ-17-001**

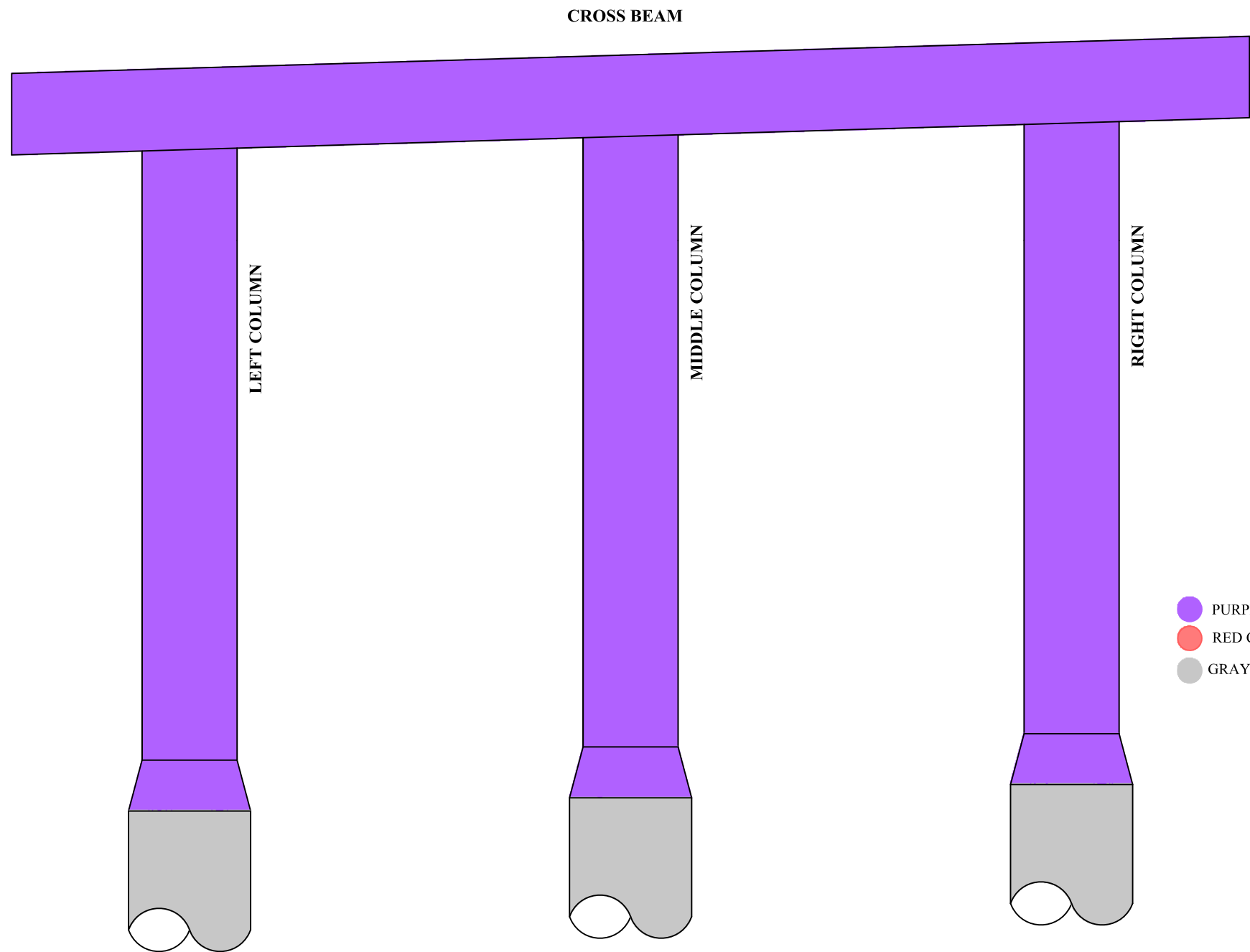
DATE:

**MARCH 2017**

United Nations  
Development Programme

NUDHUM ALBENAA  
CONSULTANCY






ELEVATION  
P01 SOUTHERN BRIDGES

Scale 1:80

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
- RED COLOR INDICATION REFERS TO THAT REHABILITATION REQUIRED AT THE MARKED ITEM
- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

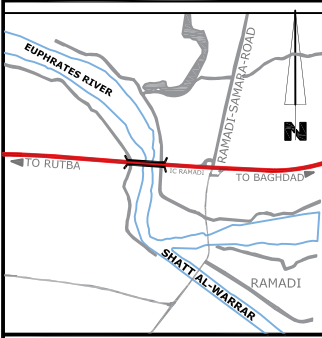
MEMBER	EVALUATION	REPAIR	DESIGN SHEETS
LEFT COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
MIDDLE COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
RIGTH COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
CROSS BEAM	DAMAGE	REMOVED AND REPLACED	ST-132





REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



NOTES

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C. BUILDER TO CHECK ALL DIMENSIONS AT SITE PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.  
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REV.	DATE	DESCRIPTION	BY
05			
04			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SOUTHERN PIER (P01)**

DRAWING NO.

**ST.114**

SCALE:

**AS SHOWING**

DRAWN BY:


**MUHANED SHALLAL**

PROJECT NO:


**IQ-17-001**

DATE:

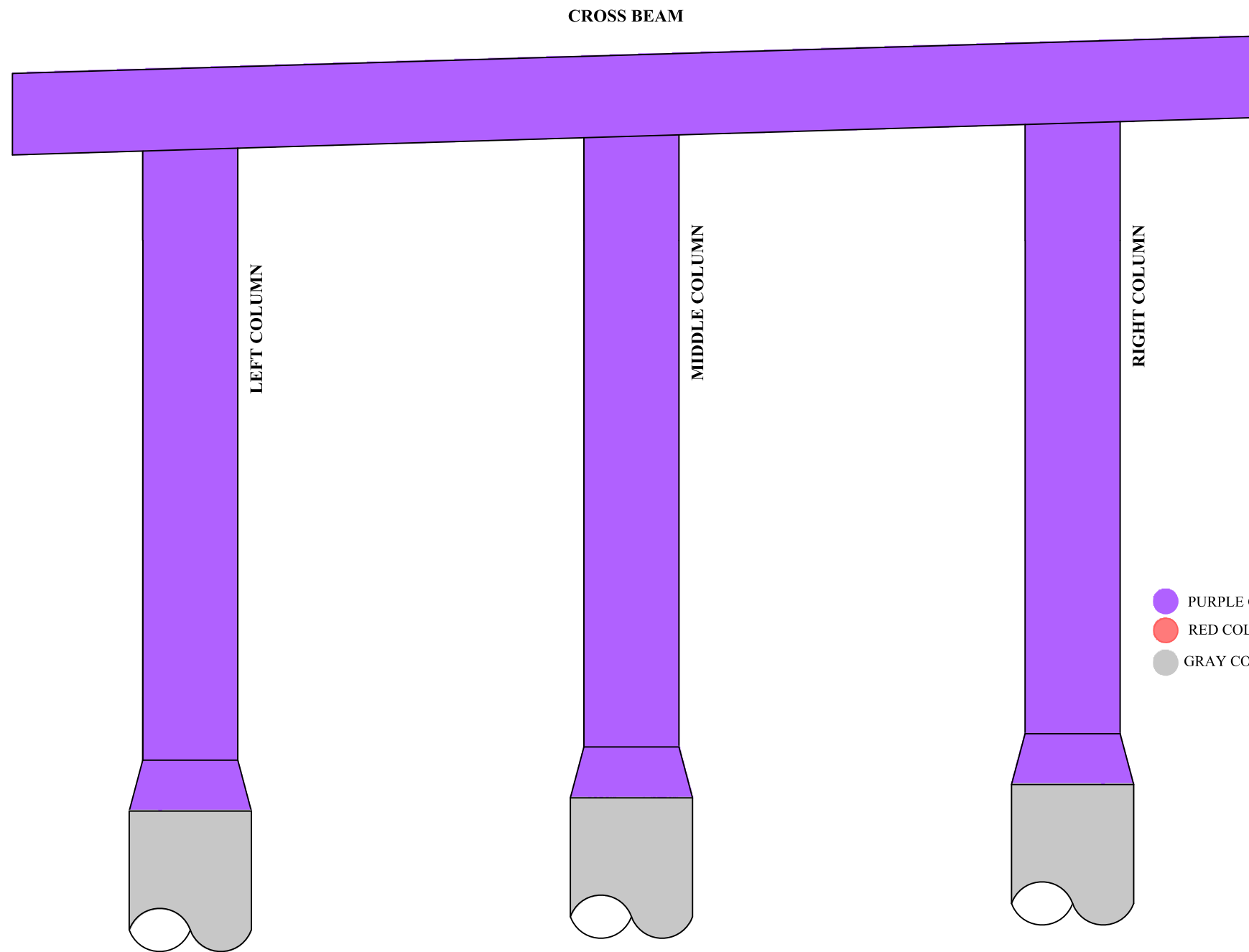
**MARCH 2017**



United Nations  
Development Programme



NUDHUM ALBENAA  
CONSULTANCY



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ELEVATION  
P02 SOUTHERN BRIDGES  
Scale 1:80

MEMBER	EVALUATION	REPAIR	DESIGN SHEETS
LEFT COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
MIDDLE COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
RIGTH COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
CROSS BEAM	DAMAGE	REMOVED AND REPLACED	ST-132



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP

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05			
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REV.	DATE	DESCRIPTION	BY

PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:

**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SOUTHERN PIER (P02)**

DRAWING NO.

**ST.115**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

**IQ-17-001**

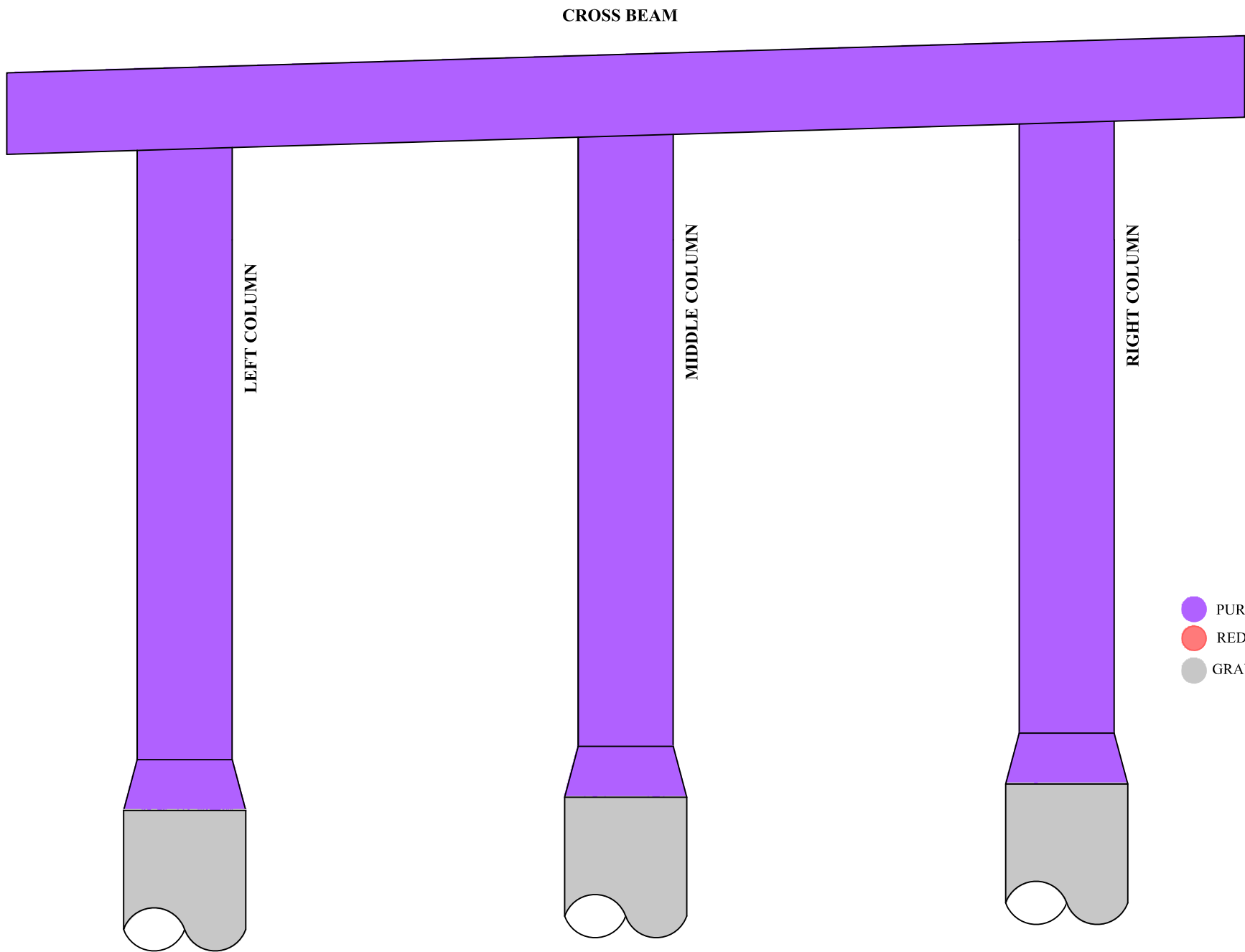
DATE:

**MARCH 2017**

United Nations  
Development Programme

NUDHUM ALBENAA  
CONSULTANCY






ELEVATION  
P05 SOUTHERN BRIDGES

Scale 1:80

- PURPLE COLOR INDICATION REFERS TO ITEM MUST BE REMOVED AND REPLACED.
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- GRAY COLOR INDICATION REFERS TO THAT FAIR AND GOOD CONDITION AT THE MARKED ITEM.

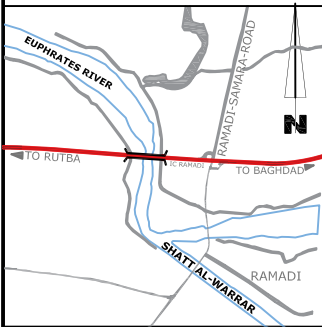
MEMBER	EVALUATION	REPAIR	DESIGN SHEETS
LEFT COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
MIDDLE COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
RIGTH COLUMN	DAMAGE	REMOVED AND REPLACED	ST-132
CROSS BEAM	DAMAGE	REMOVED AND REPLACED	ST-132





REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



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04			
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02			
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REV.	DATE	DESCRIPTION	BY


PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **EXISTING CONDITION  
SOUTHERN PIER (P05)**

DRAWING NO.

**ST.116**

SCALE:

**AS SHOWING**

DRAWN BY:


**MUHANED SHALLAL**

PROJECT NO:


**IQ-17-001**

DATE:

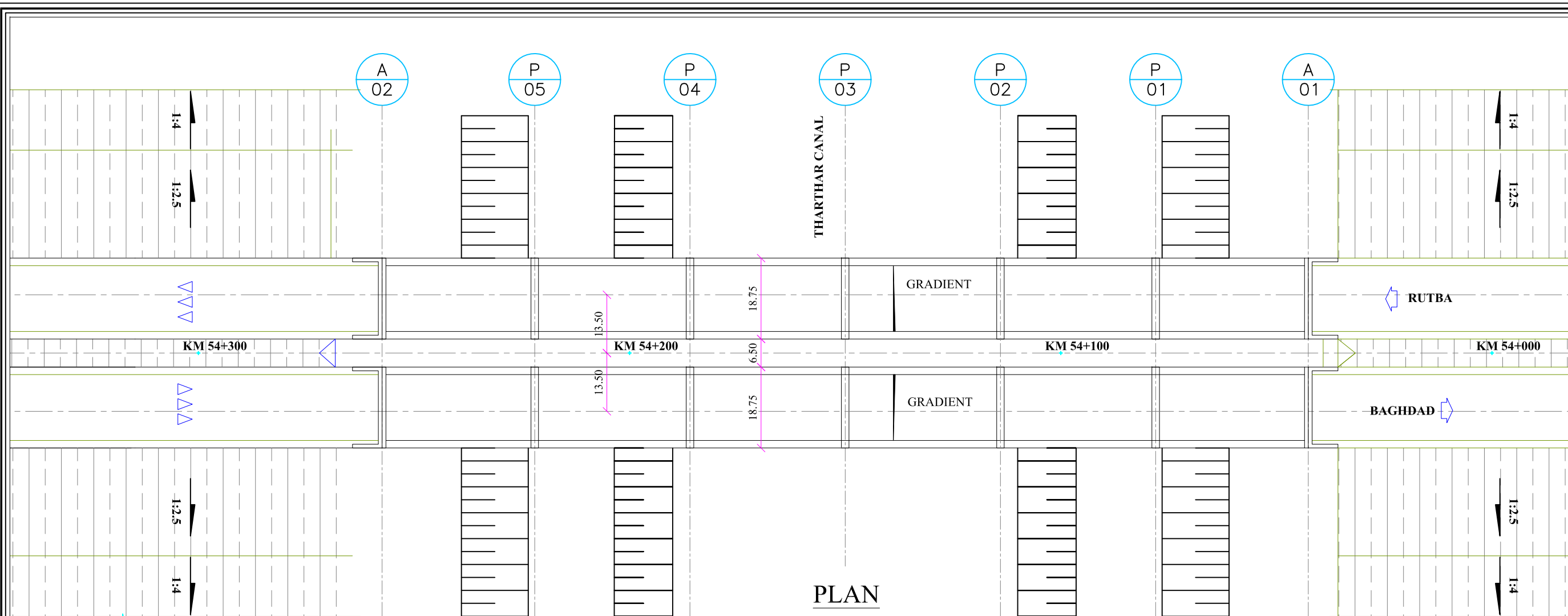
**MARCH 2017**



United Nations  
Development Programme

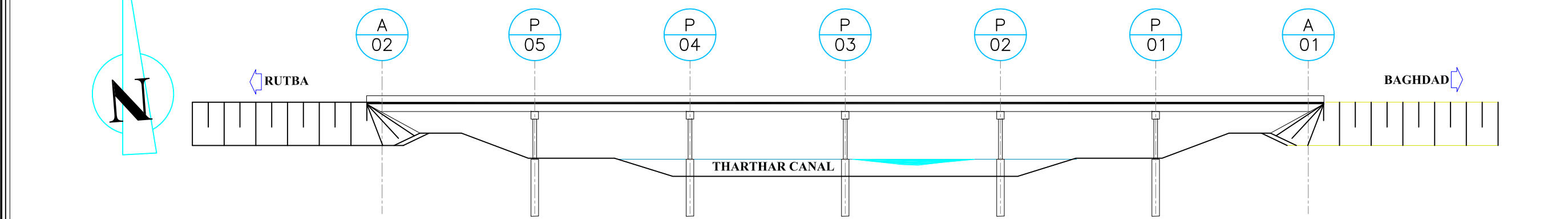


**NUDHUM ALBENAA  
CONSULTANCY**



PLAN


scale 1: 1000



ELEVATION

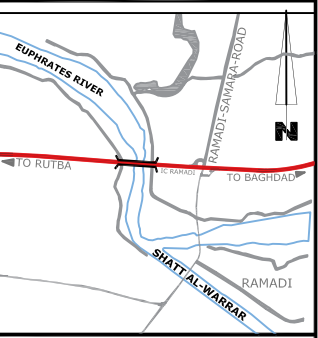
scale 1: 1000

LENGTH (M)	35.40	36.00	36.00	36.00	36.00	35.40
TOTAL LENGTH (M)	214.80					
STATIONS (KM)	54+257.40	54+222.00	54+186.00	54+150.00	54+114.00	54+078.00



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



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REV.	DATE	DESCRIPTION	BY
05			
04			
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02			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME: **GENERAL PLAN**


DRAWING NO. **ST.117**

SCALE: **AS SHOWING**


DRAWN BY: **MUHANED SHALLAL**

PROJECT NO: **IQ-17-001**

DATE: **MARCH 2017**

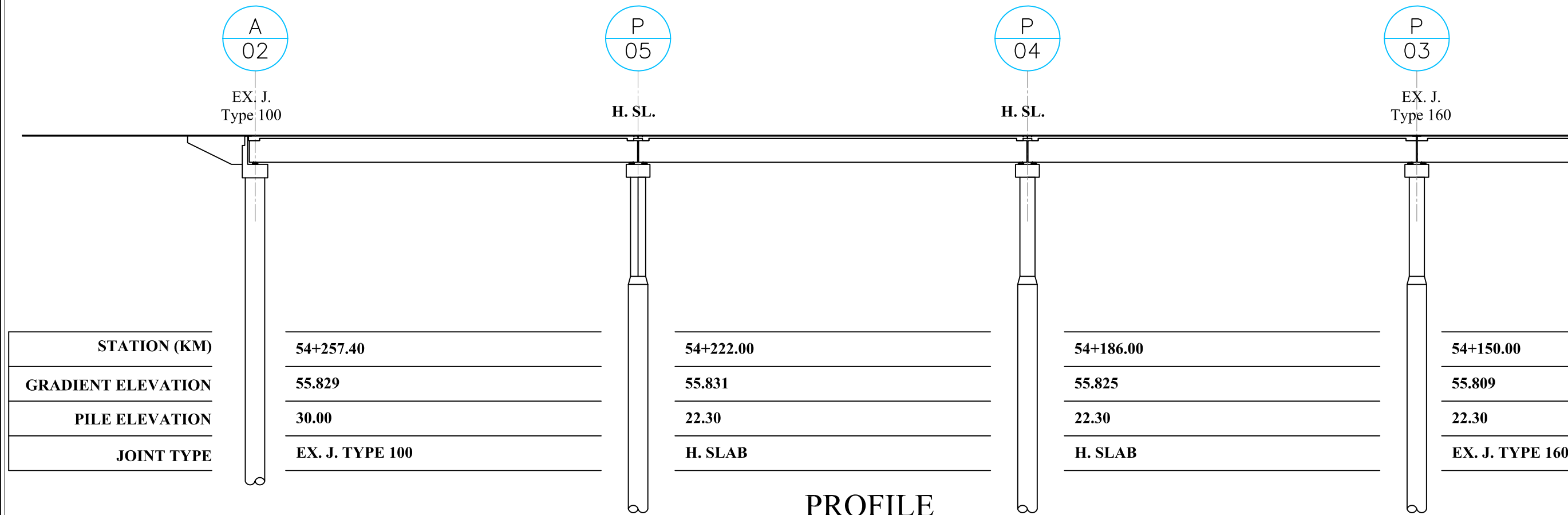


United Nations  
Development Programme

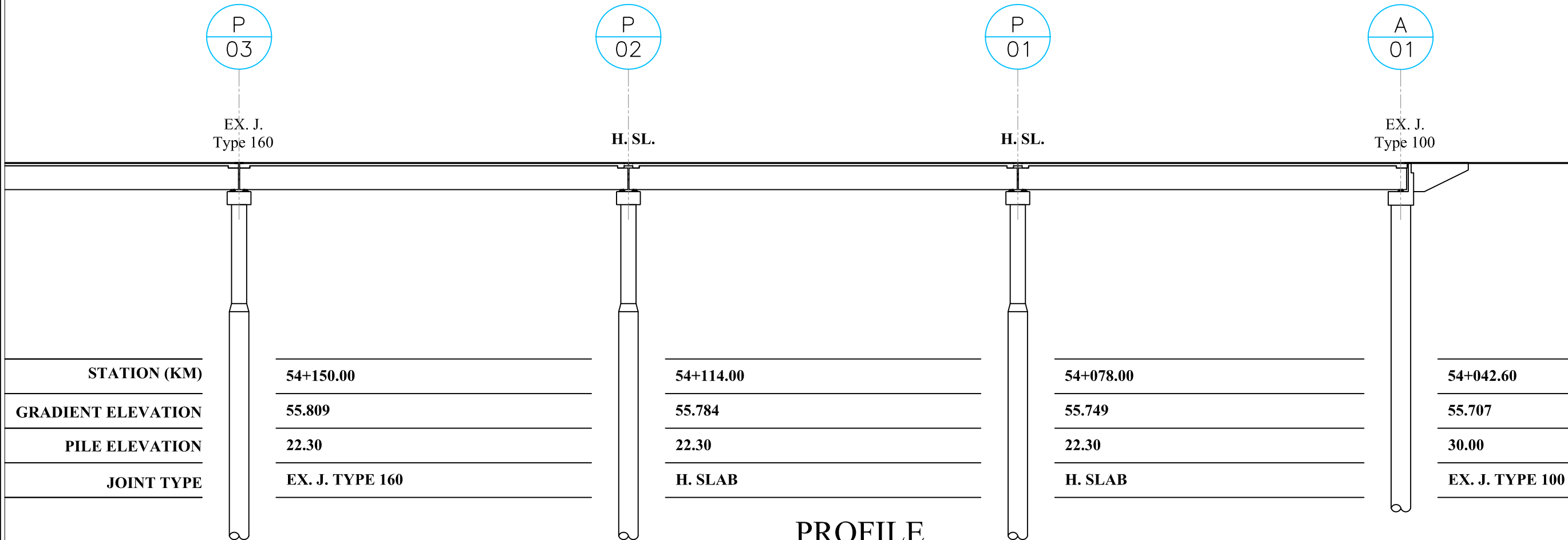


NUDHUM ALBENAA  
CONSULTANCY






PROFILE  
scale 1: 400

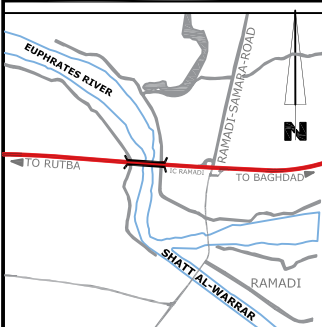


PROFILE  
scale 1: 400



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



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REV.	DATE	DESCRIPTION	BY
05			
04			
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02			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME:

**PROFILE**

DRAWING NO.

**ST.118**

SCALE:

**AS SHOWING**

DRAWN BY:


**MUHANED SHALLAL**

PROJECT NO:


**IQ-17-001**

DATE:

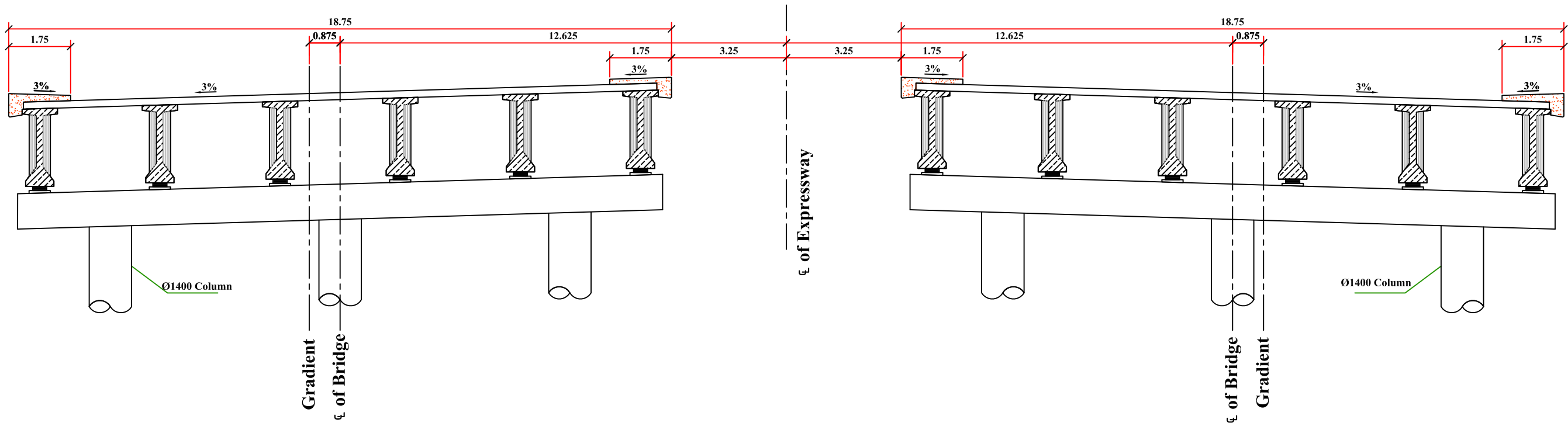
**MARCH 2017**



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Development Programme




NUDHUM ALBENAA  
CONSULTANCY



**Cross Section**  
Scale 1:125



REFERENCE:  
CONTRACT DRAWINGS  
STRUCTURES, PART SIX, VOLUME A  
R9/A, SECTION: BAGHD, WEST-HABBANIYA  
S.54.1 THARTHAR CANAL BRIDGE



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



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REV.	DATE	DESCRIPTION	BY
05			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME:

**CROSS SECTION**

DRAWING NO.

**ST.119**

SCALE:

**AS SHOWING**

DRAWN BY:

**MUHANED SHALLAL**

PROJECT NO:

**IQ-17-001**

DATE:

**MARCH 2017**

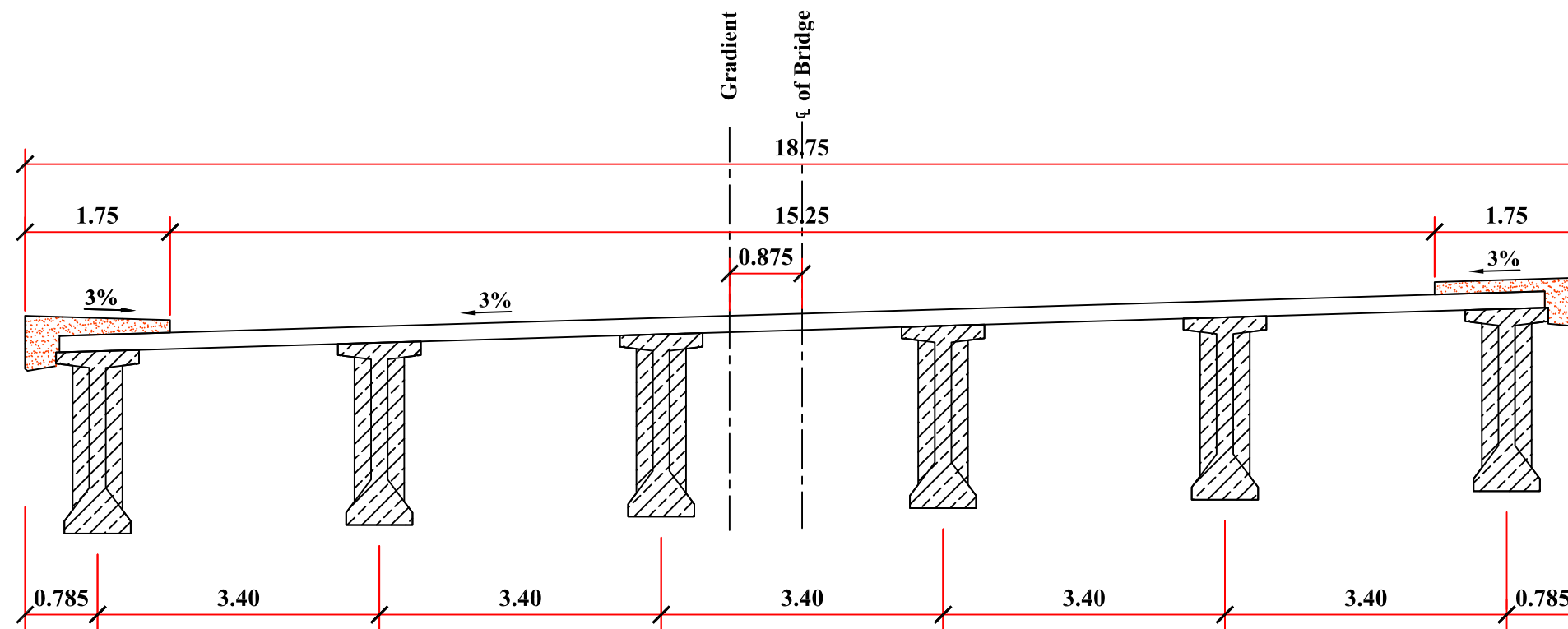


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Development Programme

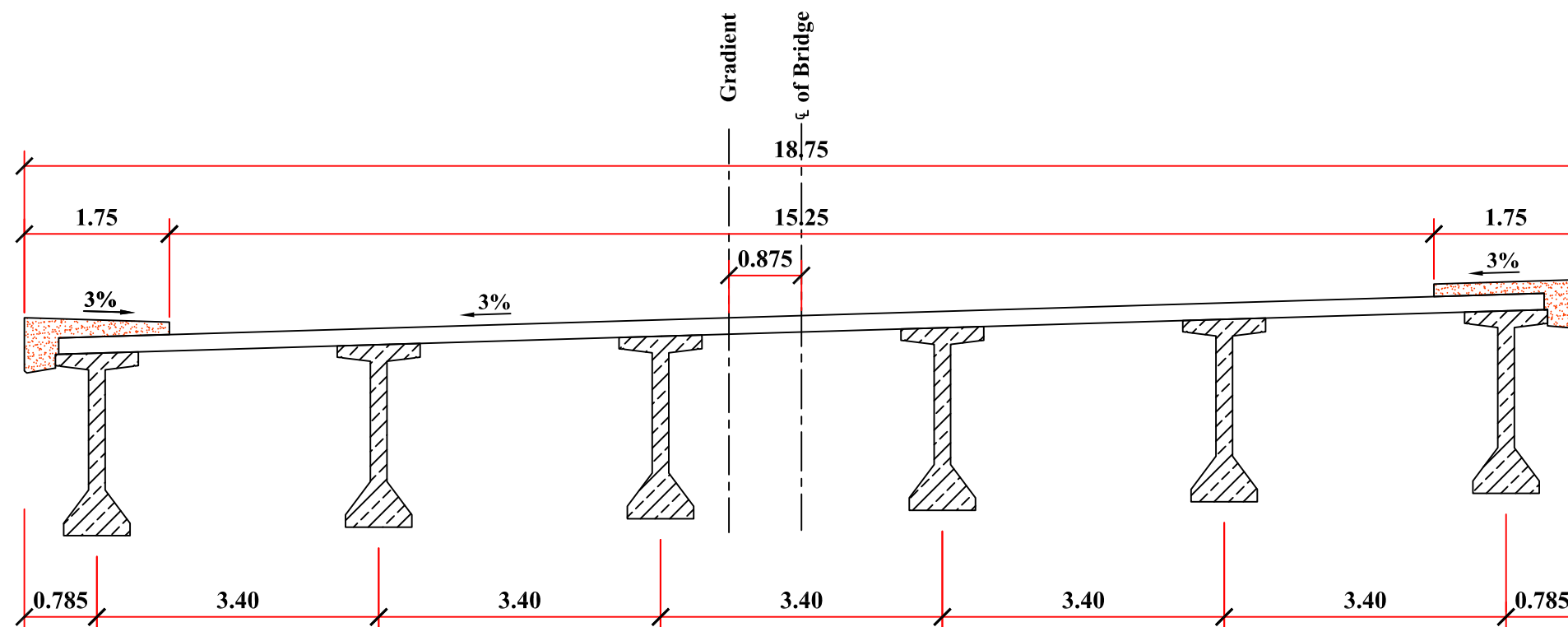


**NUDHUM ALBENAA  
CONSULTANCY**






**Cross Section  
@ PIER / ABUTMENT**  
Scale 1:75



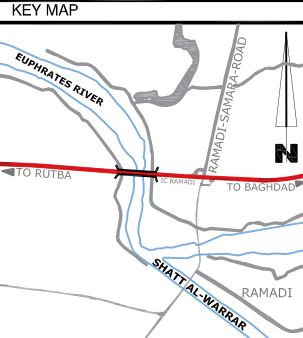
**CROSS SECTION  
@ MID-SPAN**  
Scale 1:75



REFERENCE:  
CONTRACT DRAWINGS  
STRUCTURES, PART SIX, VOLUME A  
R9/A, SECTION: BAGHD, WEST-HABBANIYA  
S.54.1 THARTHAR CANAL BRIDGE



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE



KEY MAP

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05			
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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:

**AL-ANBAR - IRAQ**

CLIENT:



**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:

**CIVIL DESIGN**

DESIGN BY:

**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME:

**CROSS SECTION**

DRAWING NO.

**ST.120**

SCALE:

**AS SHOWING**

DRAWN BY:


**MUHANED SHALLAL**

PROJECT NO:


**IQ-17-001**

DATE:

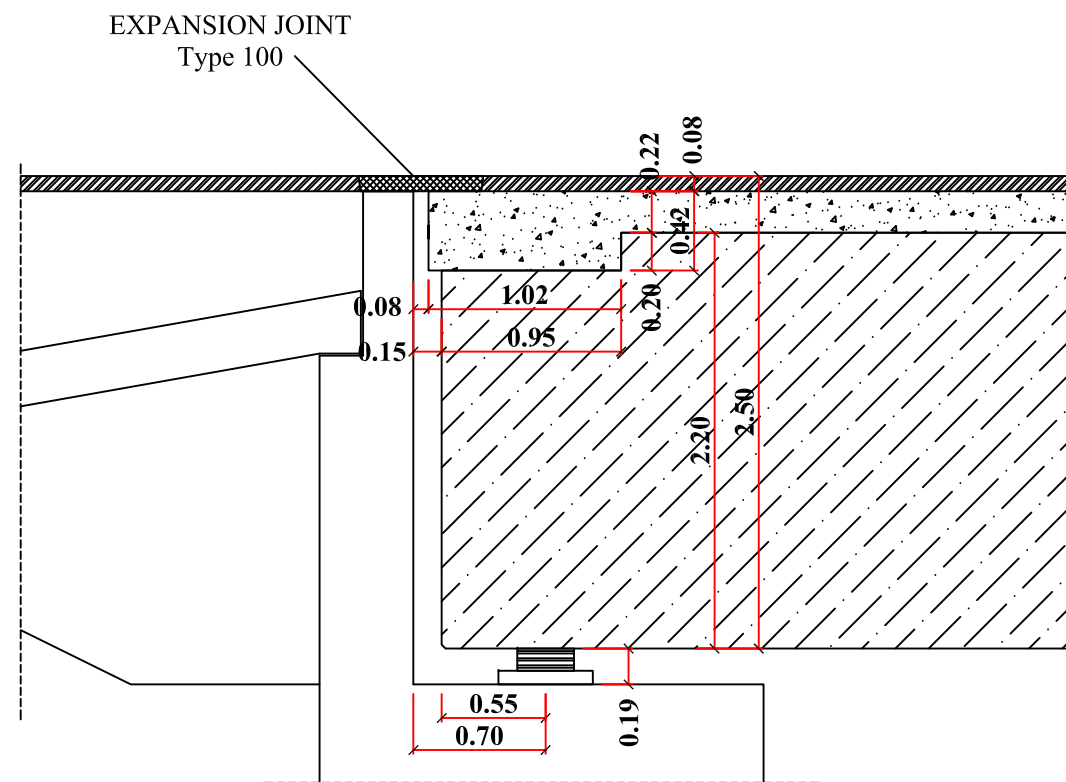
**MARCH 2017**



United Nations  
Development Programme

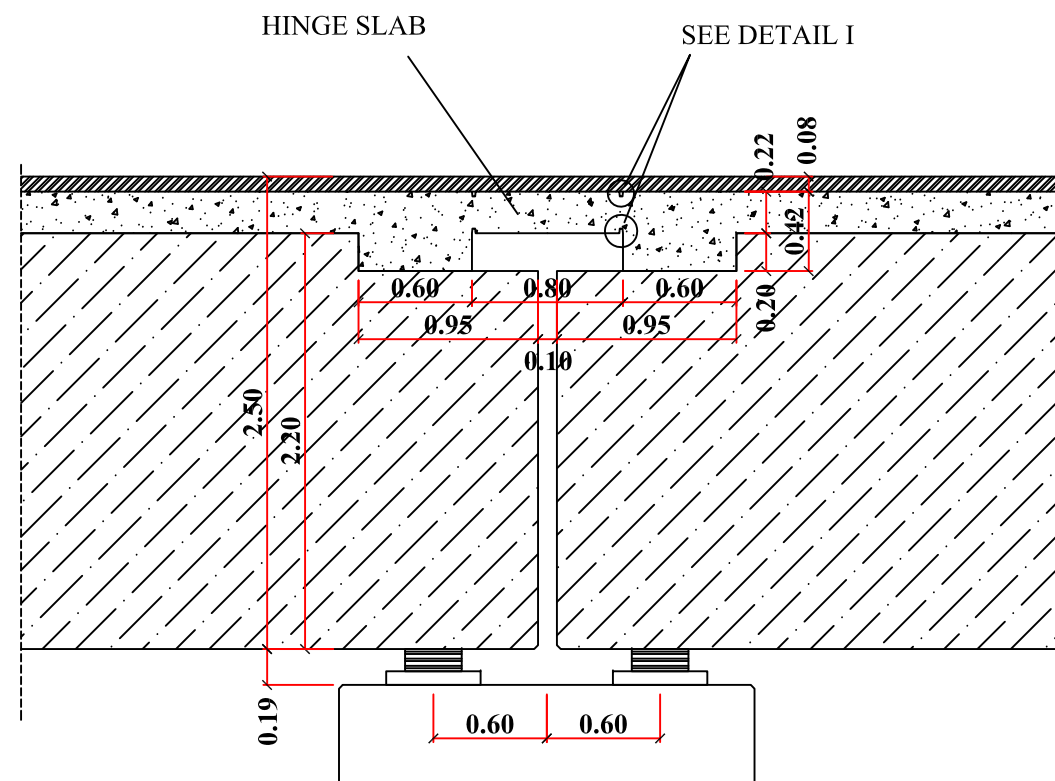


NUDHUM ALBENAA  
CONSULTANCY



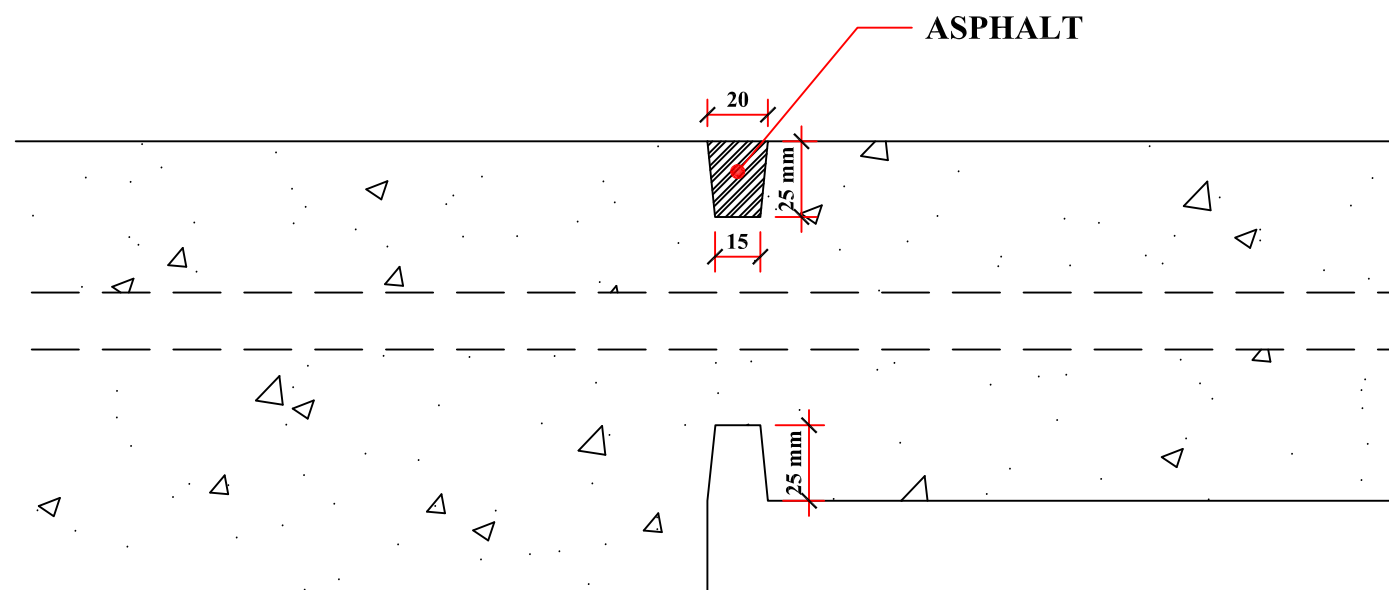
**ABUTMENT  
EXPANSION JOINT**

Scale 1:40



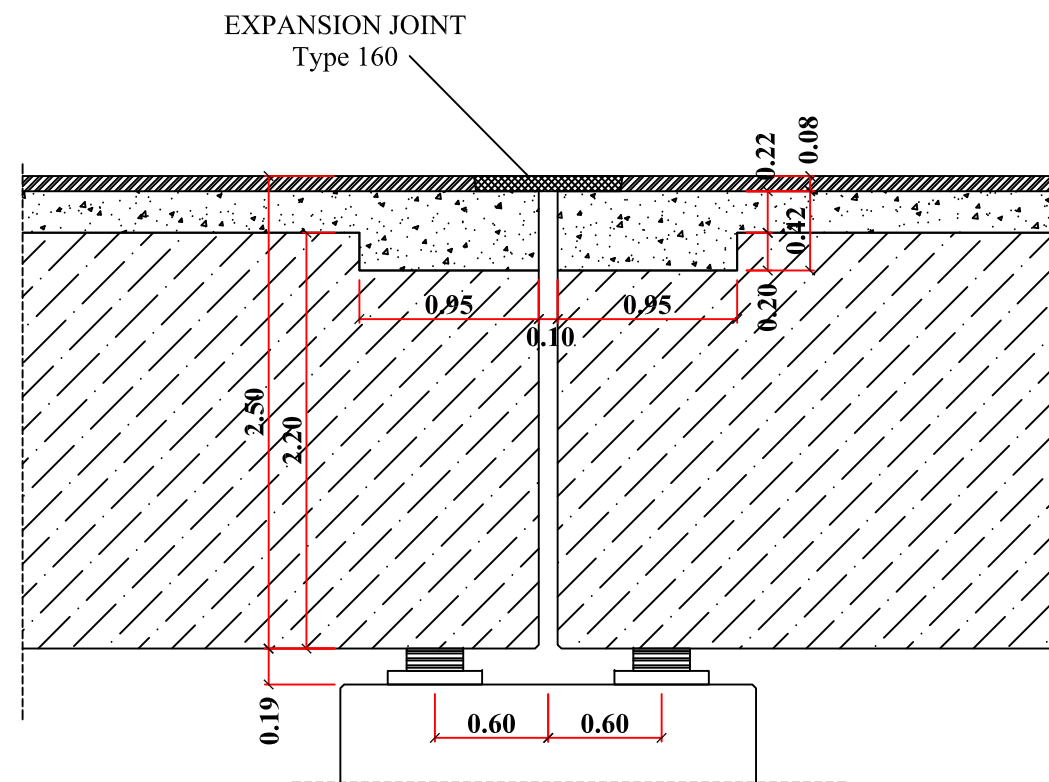
**PIER  
HINGE SLAB**  
P01,P03,P04,P06,P07,P09,P10,P12,P13

Scale 1:40



**DETAIL I**

**DIMENSIONS IN MM**  
Scale 1:2.5



**PIER  
EXPANSION JOINT**  
P02, P05, P08, P11

Scale 1:40

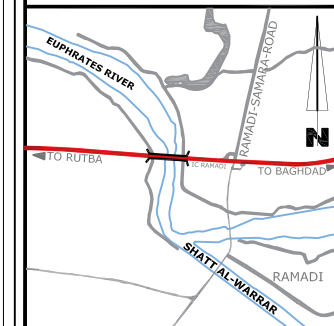


REFERENCE:  
CONTRACT DRAWINGS  
STRUCTURES, PART SIX, VOLUME A  
R9/A, SECTION: BAGHD, WEST-HABBANIYA  
S.54.1 THARTHAR CANAL BRIDGE



REPUBLIC OF IRAQ  
MINISTRY OF CONSTRUCTION AND HOUSING AND PUBLIC MUNICIPALITIES  
ROADS AND BRIDGES DIRECTORATE

KEY MAP



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PROJECT NAME:

**JAPANESE BRIDGE  
ARCHITECTURAL & CIVIL  
ENGINEERING DESIGN SERVICES**

LOCATION:  
**AL-ANBAR - IRAQ**

CLIENT:  
  
**GENERAL DIRECTORATE FOR ROADS  
AND BRIDGES**

SERVICES NAME:  
**CIVIL DESIGN**

DESIGN BY:  
**MUHANED SHALLAL**

SUPERVISOR:

DRAWING NAME:  
**SUPERSTRUCTURE**

DRAWING NO.  
**ST.121**

SCALE:  
**AS SHOWING**

DRAWN BY:  
**MUHANED SHALLAL**

PROJECT NO:  
**IQ-17-001**

DATE:  
**MARCH 2017**

