Irrigation Department
Government of Sindh, Pakistan

World Bank

SINDH BARRAGES IMPROVEMENT PROJECT

RFB No: PK-AFOF SBIP-494022-CW-RFB

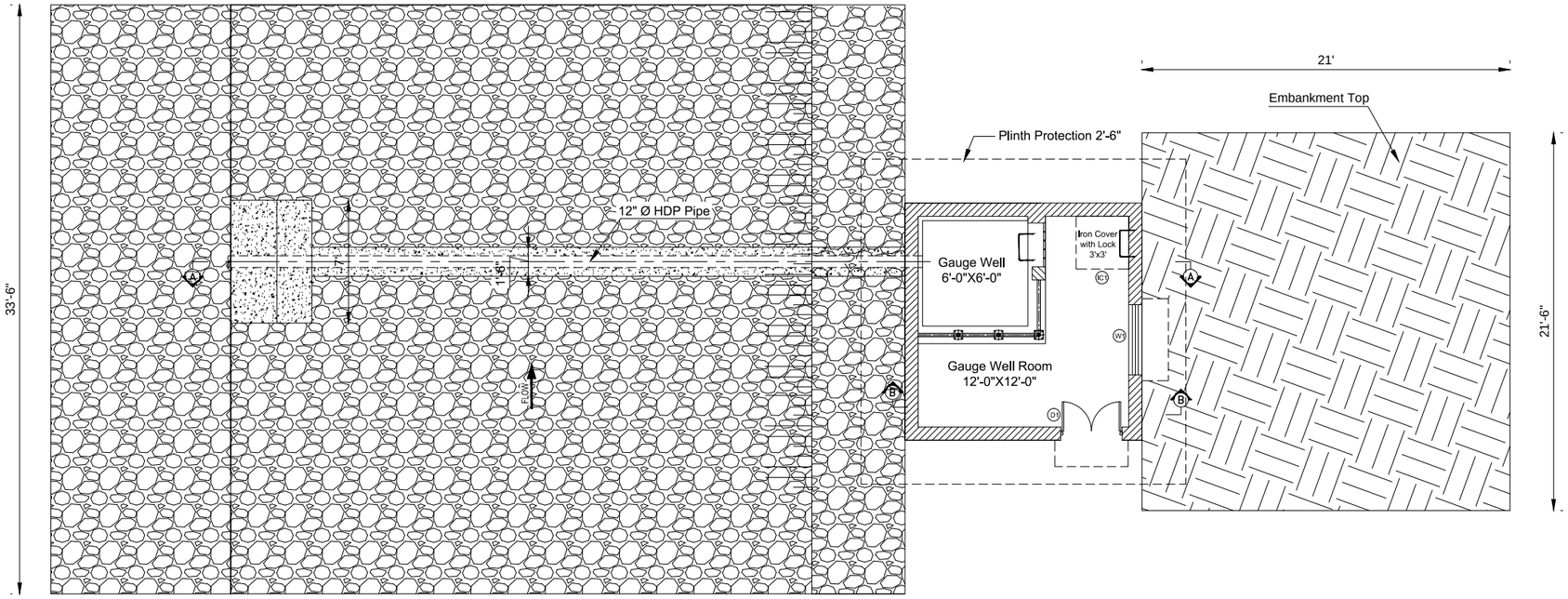
Contract: SBIP/K2

Construction of Gauge Wells at Kotri Barrage

Bidding Documents

Volume 3
Drawings

November 2026



GUAGE WELL PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

MOTT MACDONALD
in association with
MMP

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Hyderabad, Sindh
Pakistan.
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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

Contract

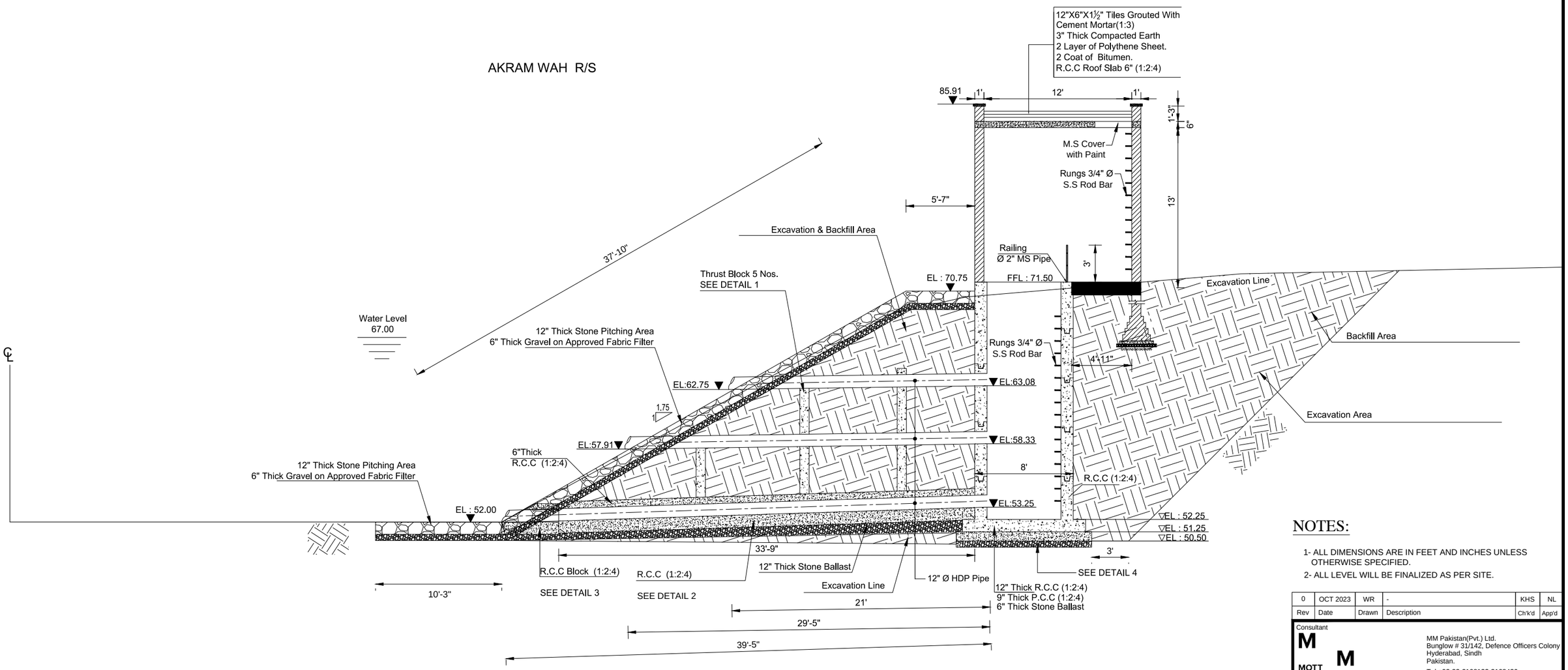
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL PLAN

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1001				Rev. 0

AKRAM WAH R/S



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.
2- ALL LEVEL WILL BE FINALIZED AS PER SITE.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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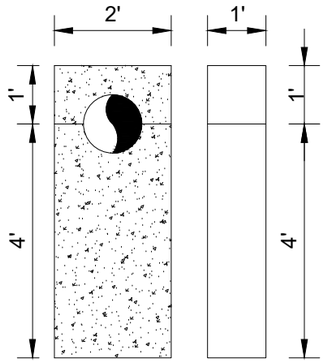
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

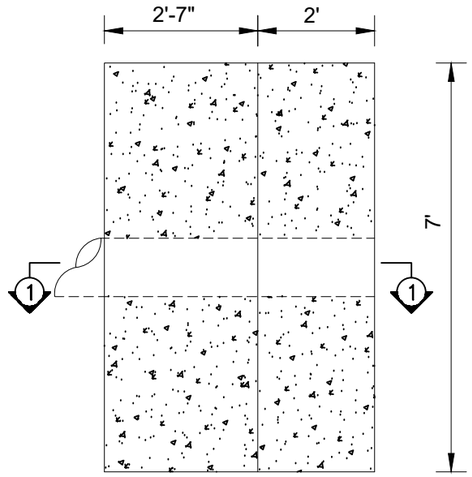
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL SECTION A-A

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1002				Rev. 0

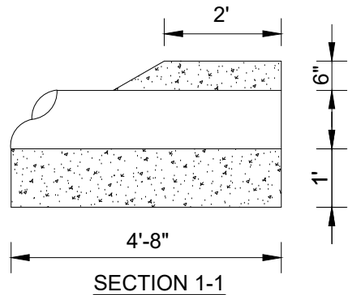


Thrust Block 5 Nos.

DETAIL - 1



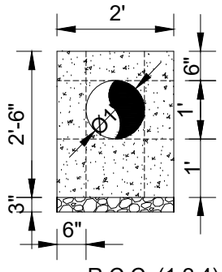
PLAN



SECTION 1-1

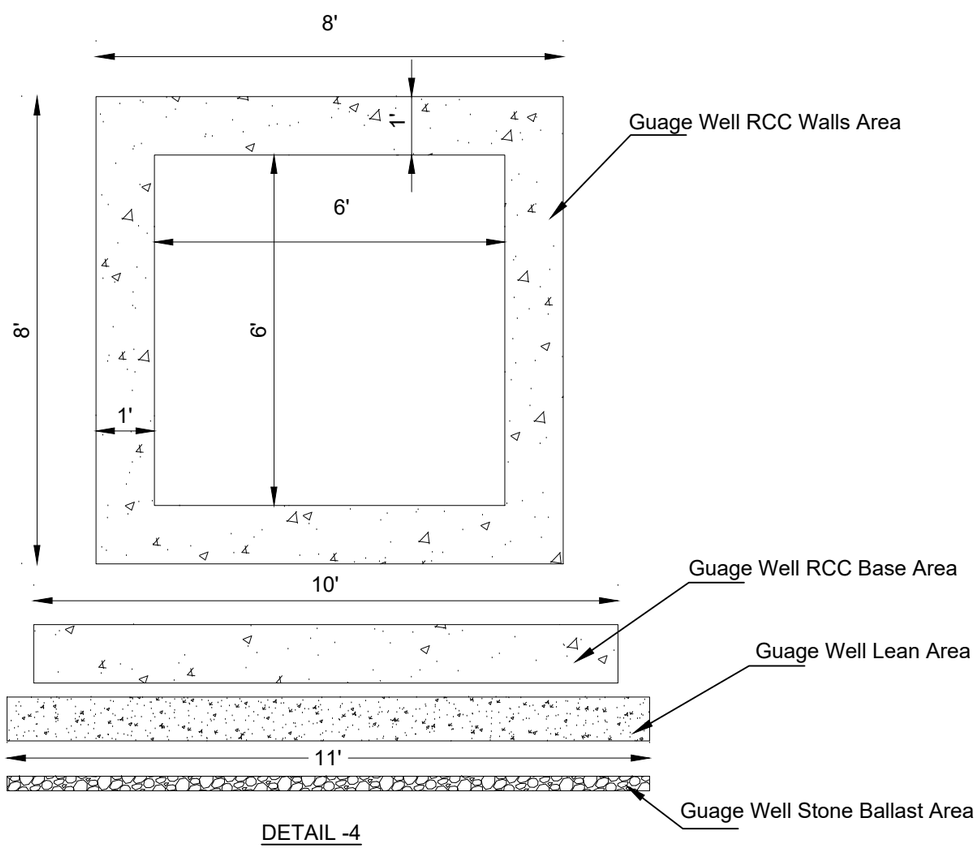
R.C.C Block (1:2:4)

DETAIL -3



R.C.C (1:2:4) Around HDP

DETAIL -2



DETAIL -4

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

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Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

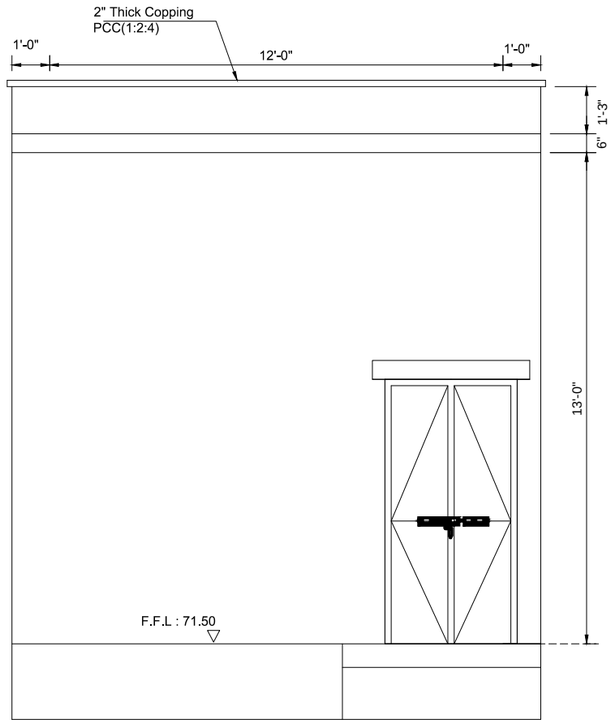
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

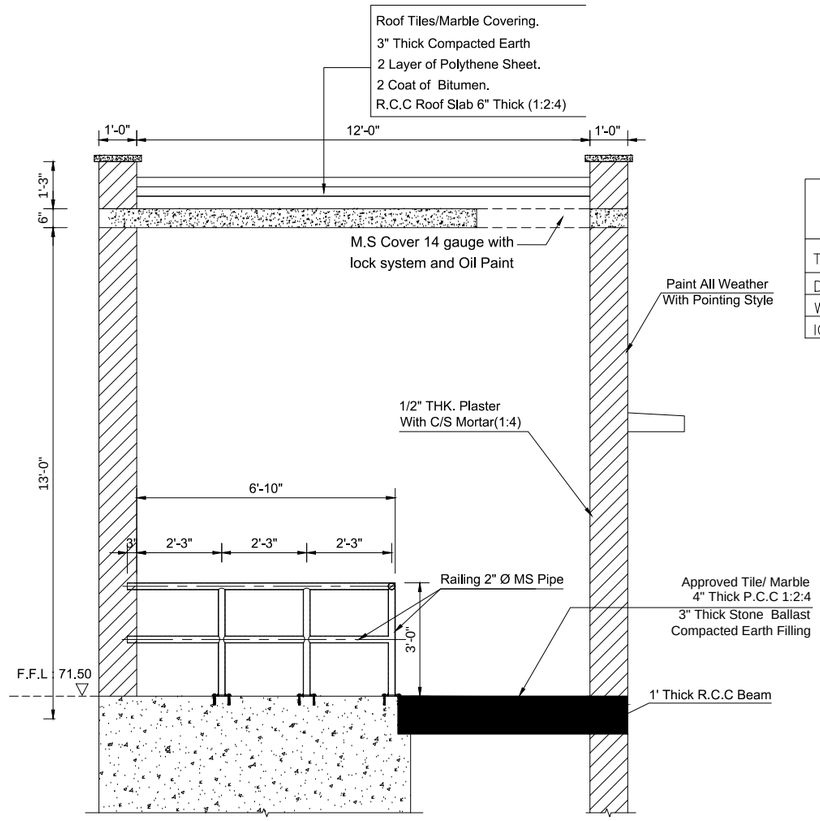
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
DETAIL 1,2,3,4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1003				Rev. 0



FRONT ELEVATION



SECTION B-B

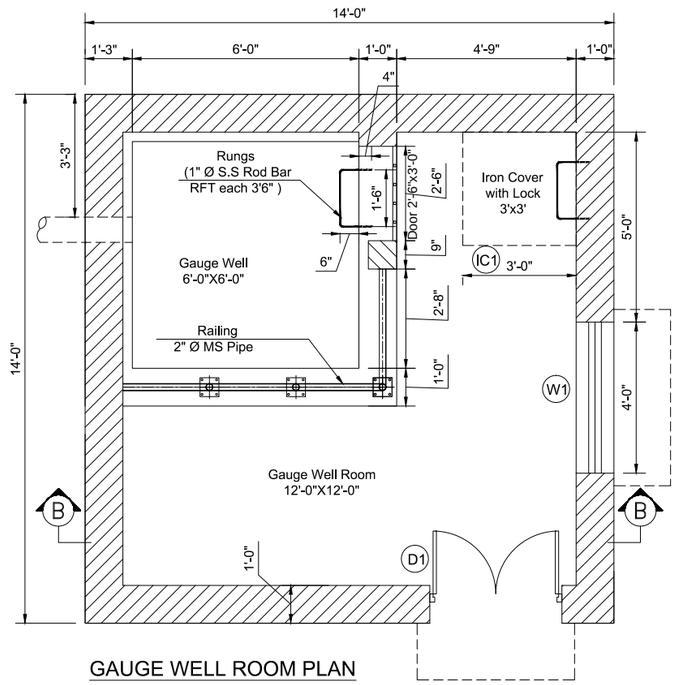
SCHEDULE OF OPENINGS					
TYPE	SIZE	SILL	NOS	STYLE	DESCRIPTION
D-1	3'-6"x7'-0"	0'-0"	01	DOUBLE LEAF	M.S DOOR(GAUGE 18)
W-1	4'-0"x4'-0"	2'-0"	01	–	M.S WINDOW(GAUGE 18)
IC-1	3'-0"x3'-0"	–	01	–	M.S IRON COVER(GAUGE 14)

FINISHES:

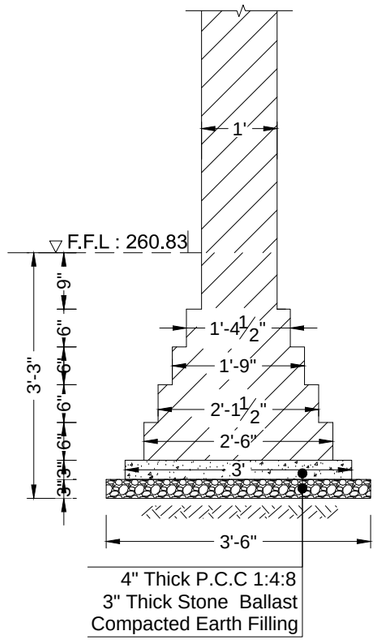
1- ROOM FINISHING SHALL BE AS PER ORIGINAL CONTRACT (BILL # 15) BUILDINGS (SERVANT QUARTER)

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.



GAUGE WELL ROOM PLAN



ROOM WALL FOUNDATION
TYPICAL DETAIL

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

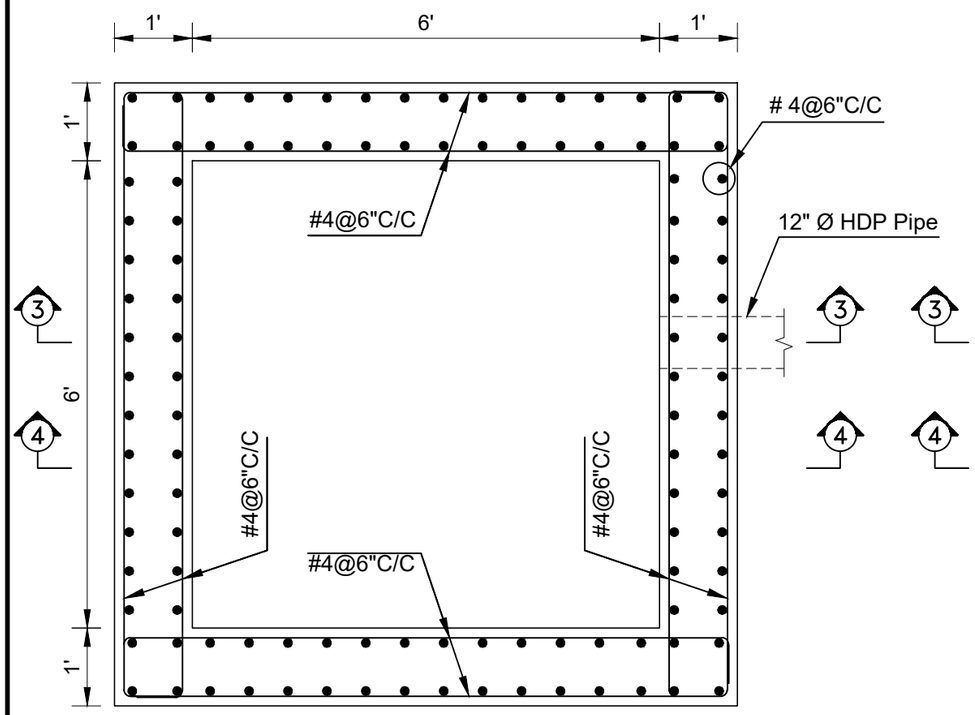
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

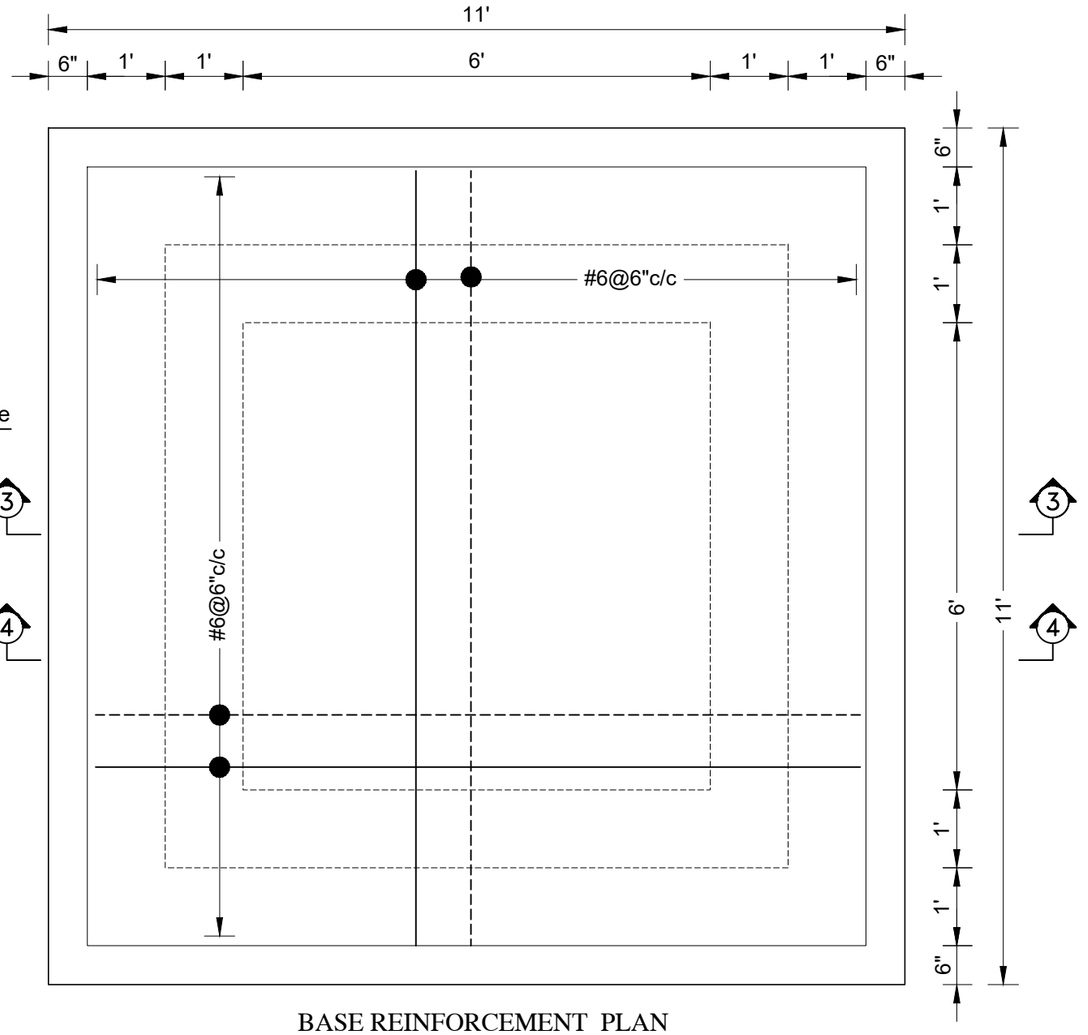
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL ROOM PLAN
SECTION, ELEVATION AND FOUNDATION DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1004				Rev. 0



REINFORCEMENT PLAN



BASE REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
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Consultant
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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

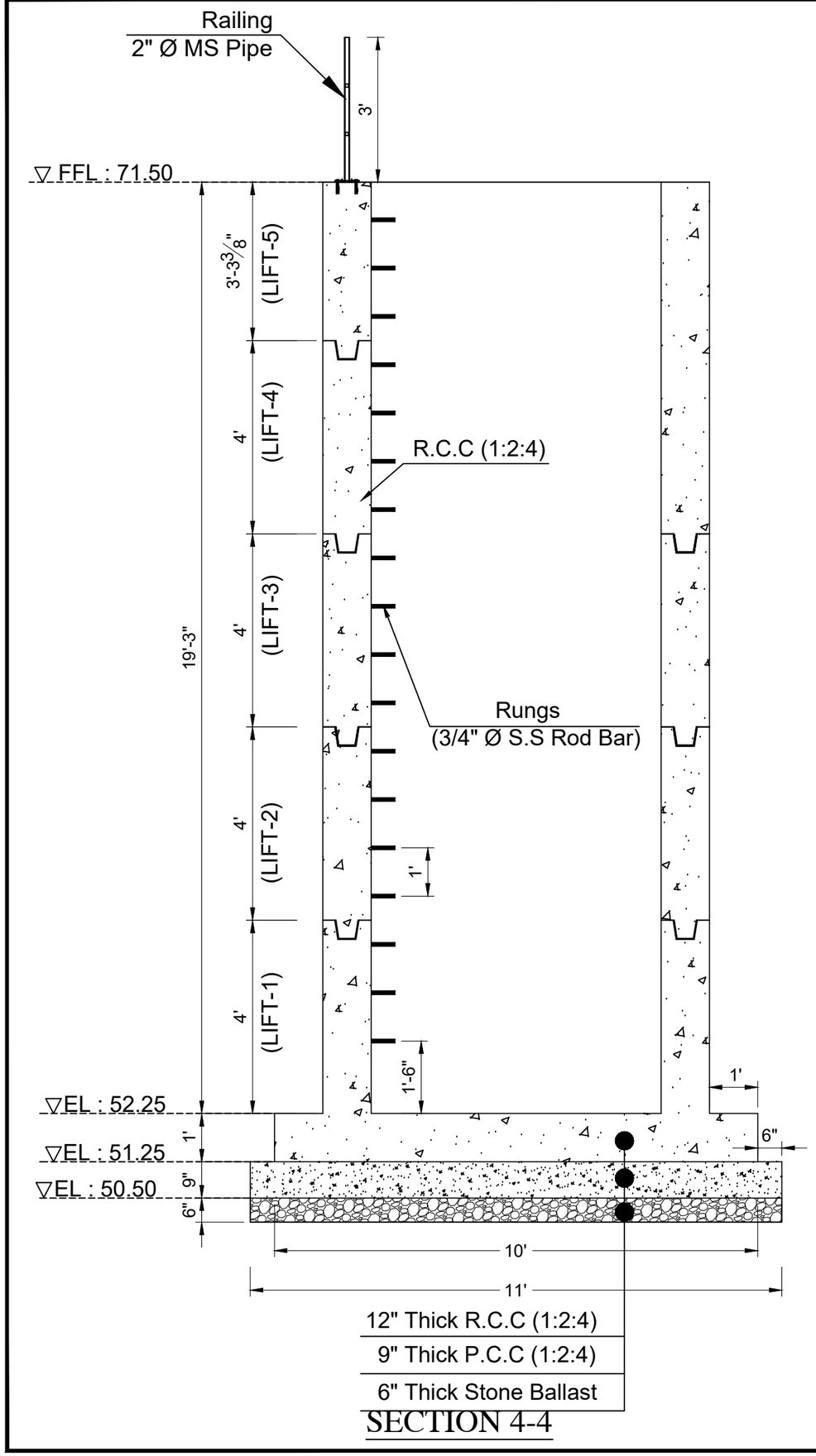
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

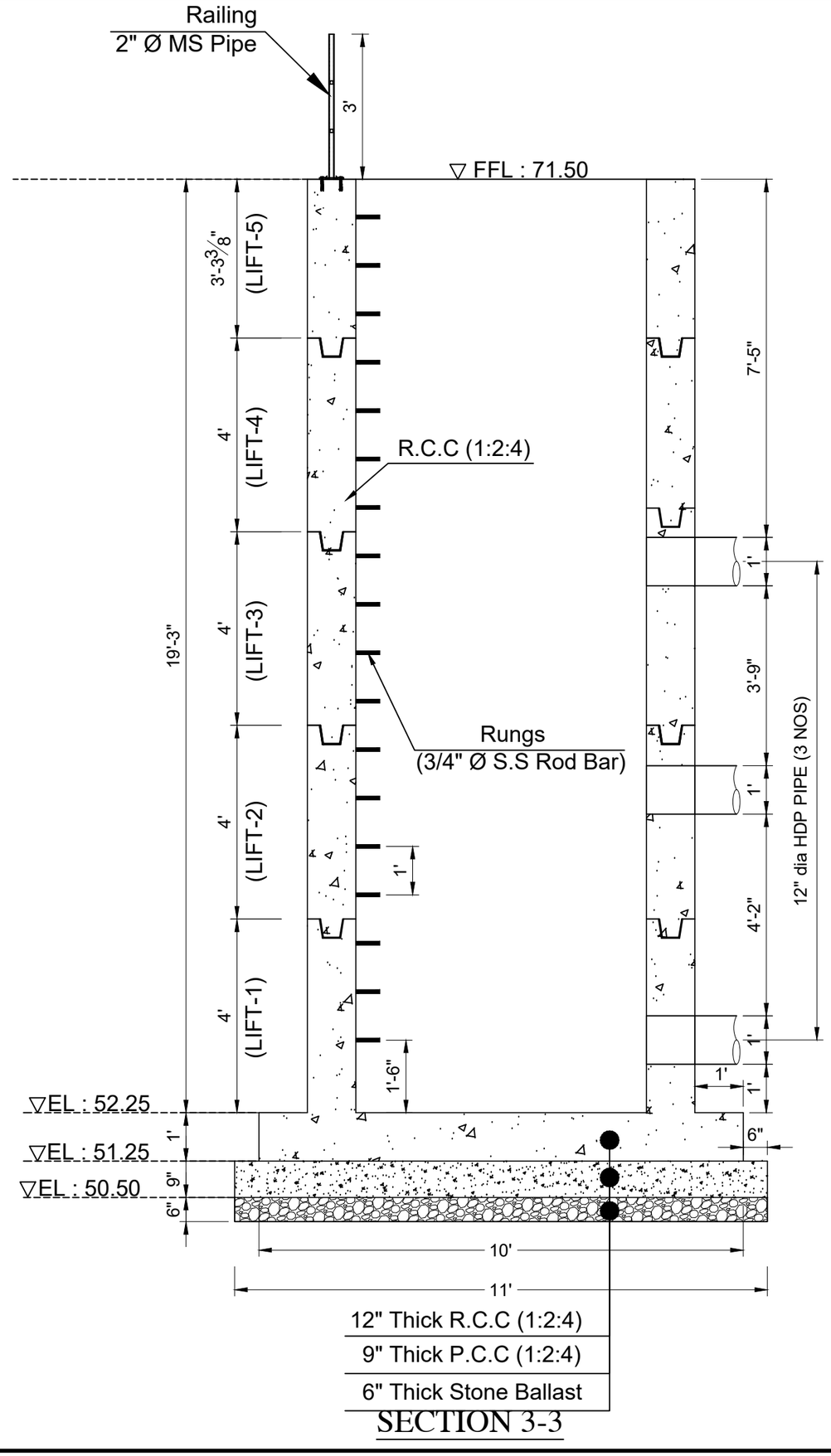
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL ROOM
REINFORCEMENT PLAN

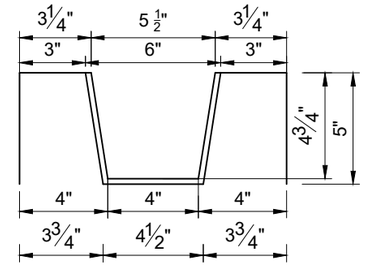
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1005				Rev. 0



SECTION 4-4



SECTION 3-3



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

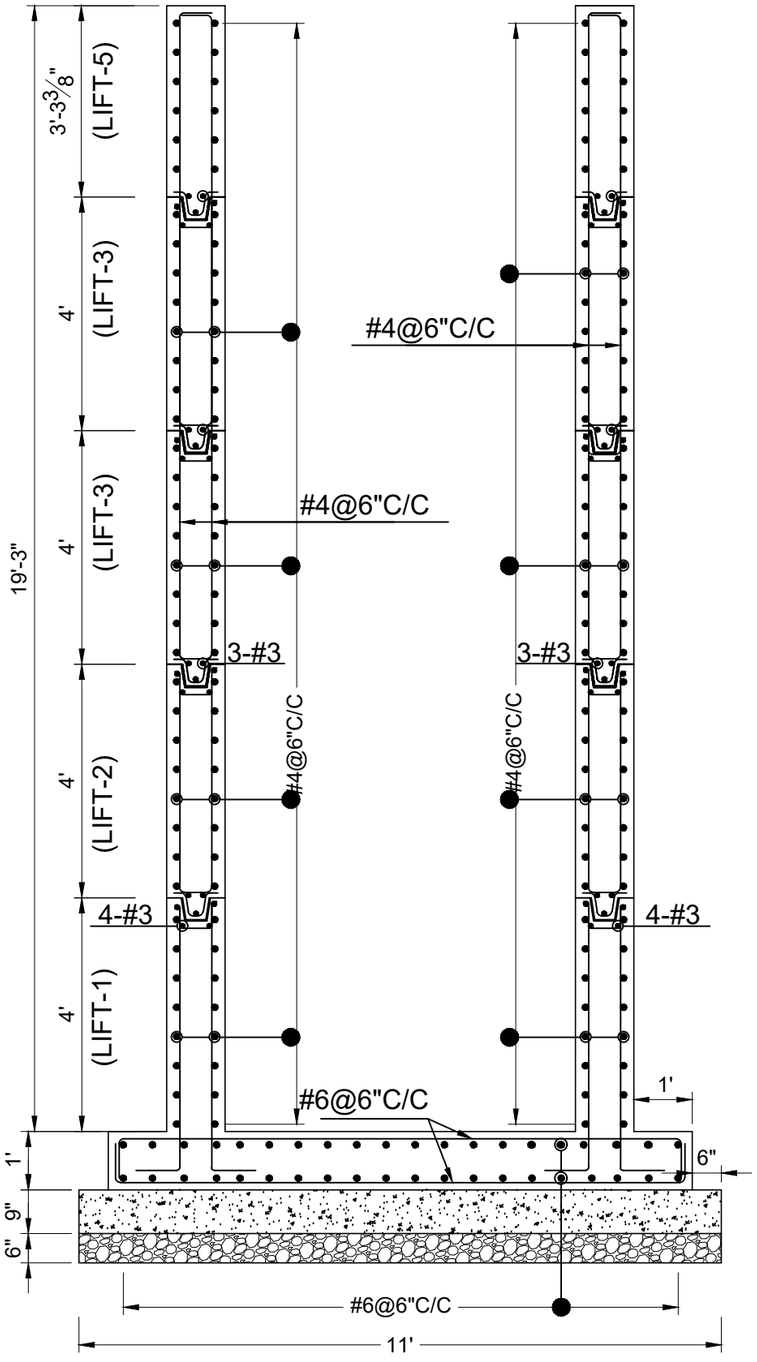
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

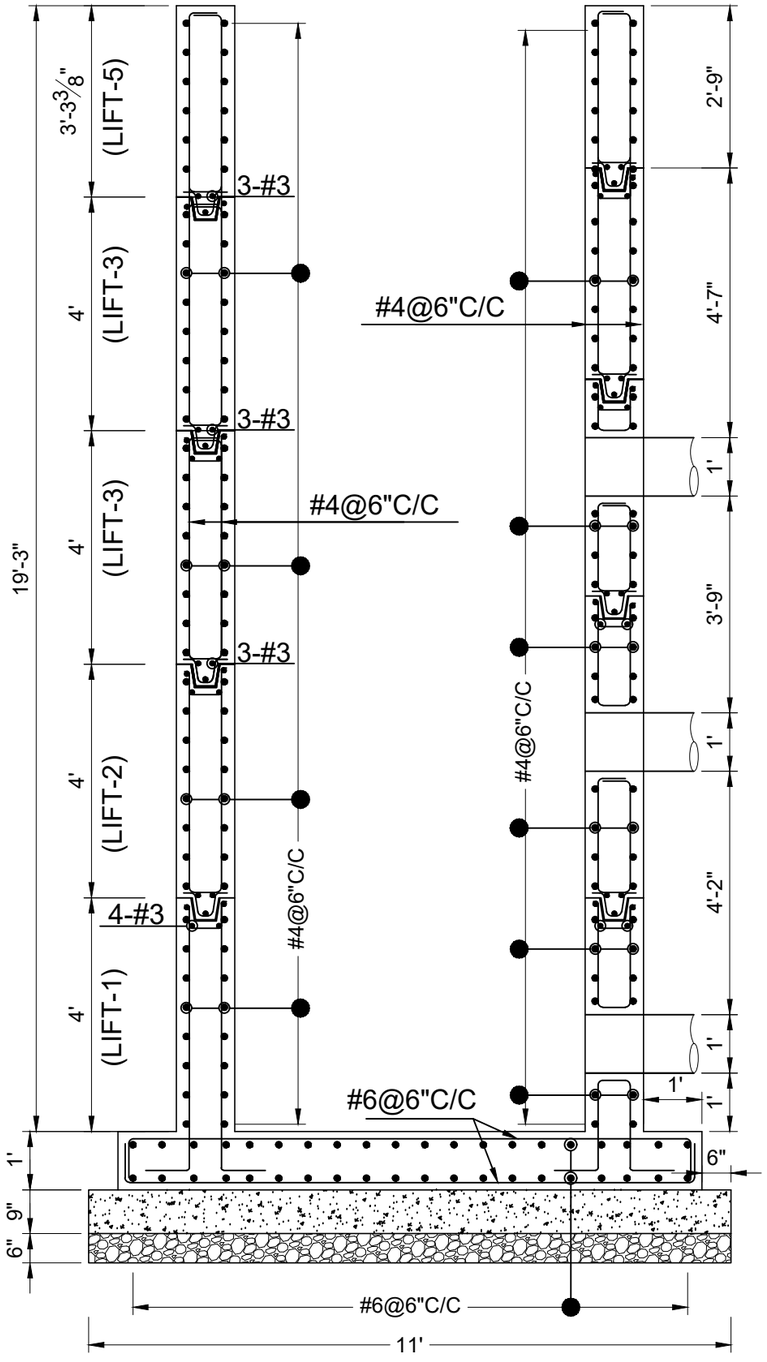
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL ROOM
SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status -
Paper Size	A1	CAD file			
Drawing No	SBIP/S1-VO-KB-AW-1006				Rev. 0



SECTION 4-4



SECTION 3-3

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

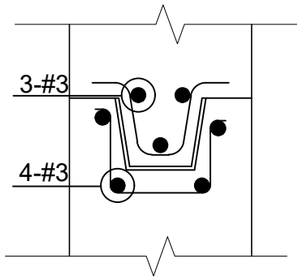
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

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Consultant

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

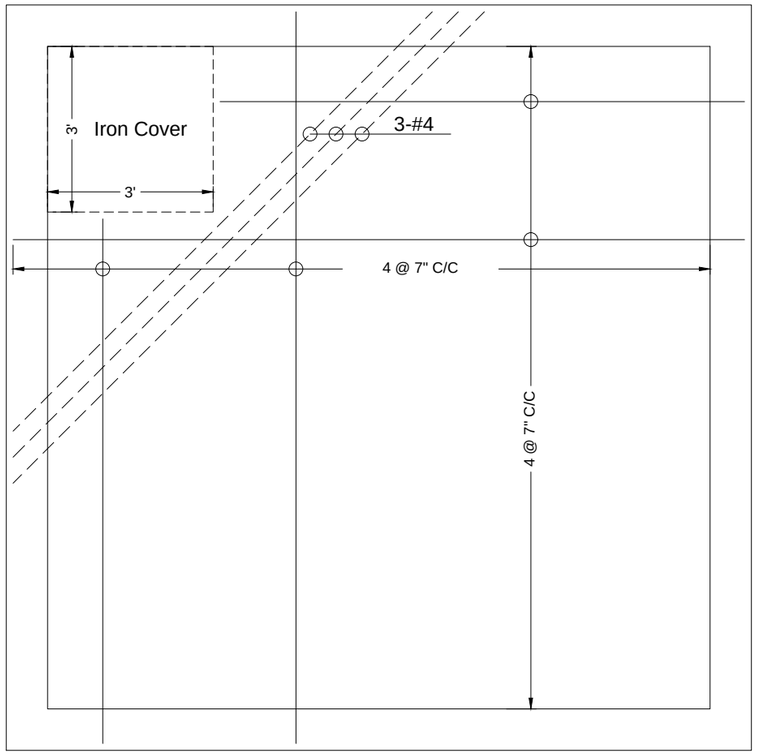
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

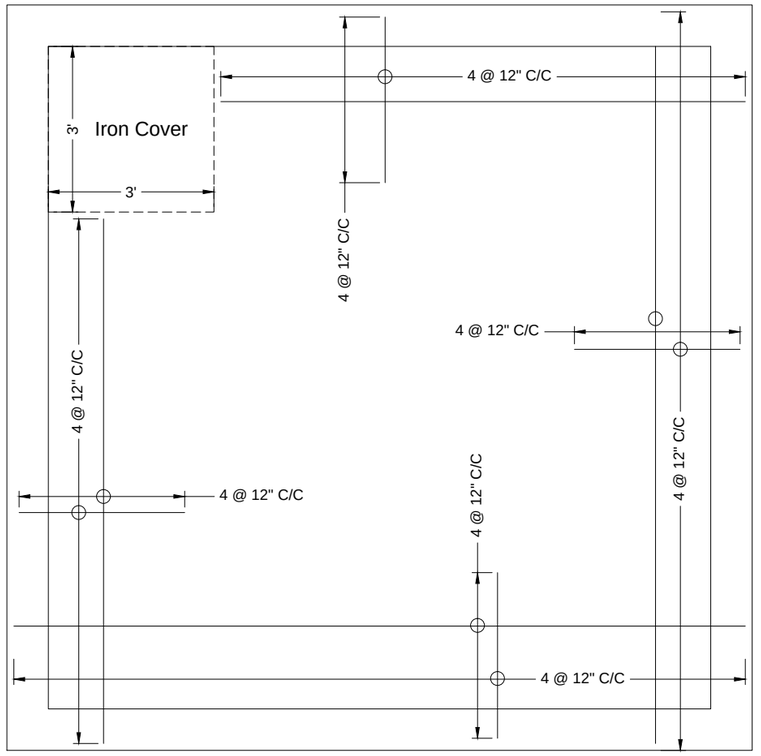
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL ROOM
REINFORCEMENT DETAIL SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale AS SHOWN		Project SBIP			Status -
Paper Size A1		CAD file			
Drawing No SBIP/S1-VO-KB-AW-1007					Rev. 0



SLAB REINFORCEMENT PLAN



SLAB HOLDING BAR REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

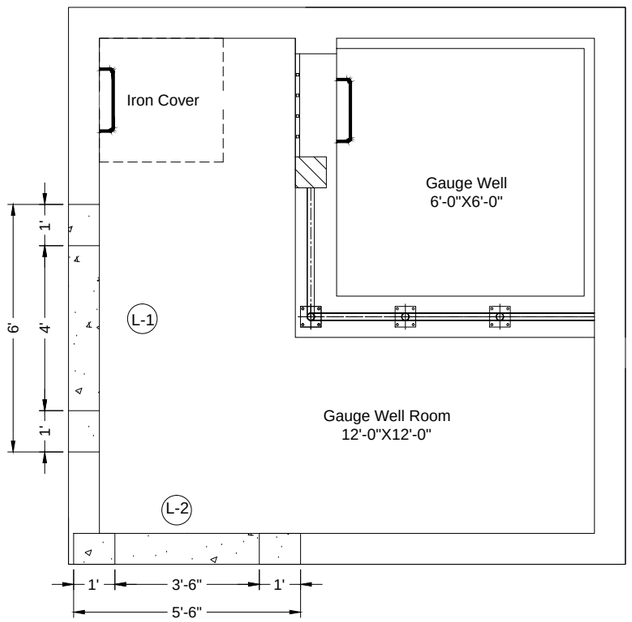
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

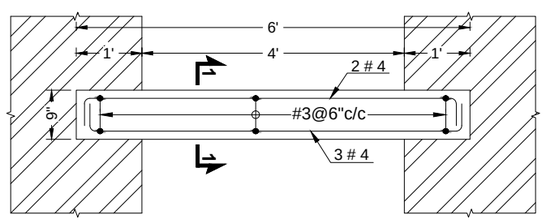
4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

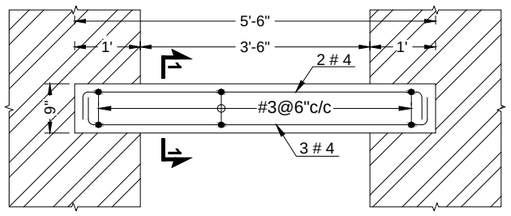
STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



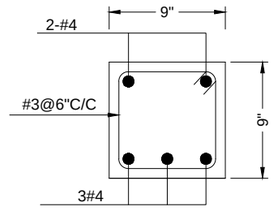
LINTEL LAYOUT PLAN



L-SECTION LINTEL - 1 (01NOS.)



L-SECTION LINTEL - 2 (01NOS.)



SECTION 1-1

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

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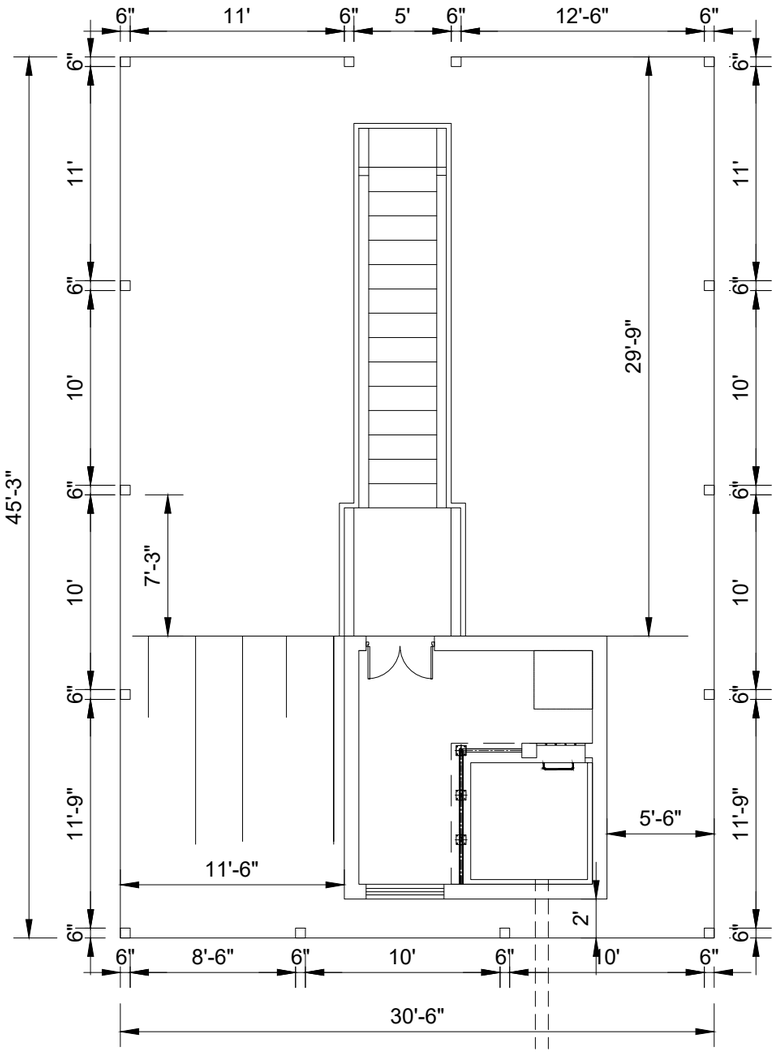
Consultant
MOTT MACDONALD
in association with
MM Pakistan(Pvt.) Ltd.
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Tel +92-22-2108122-2108436
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Client
IRRIGATION DEPARTMENT
GOVT. OF SINDH

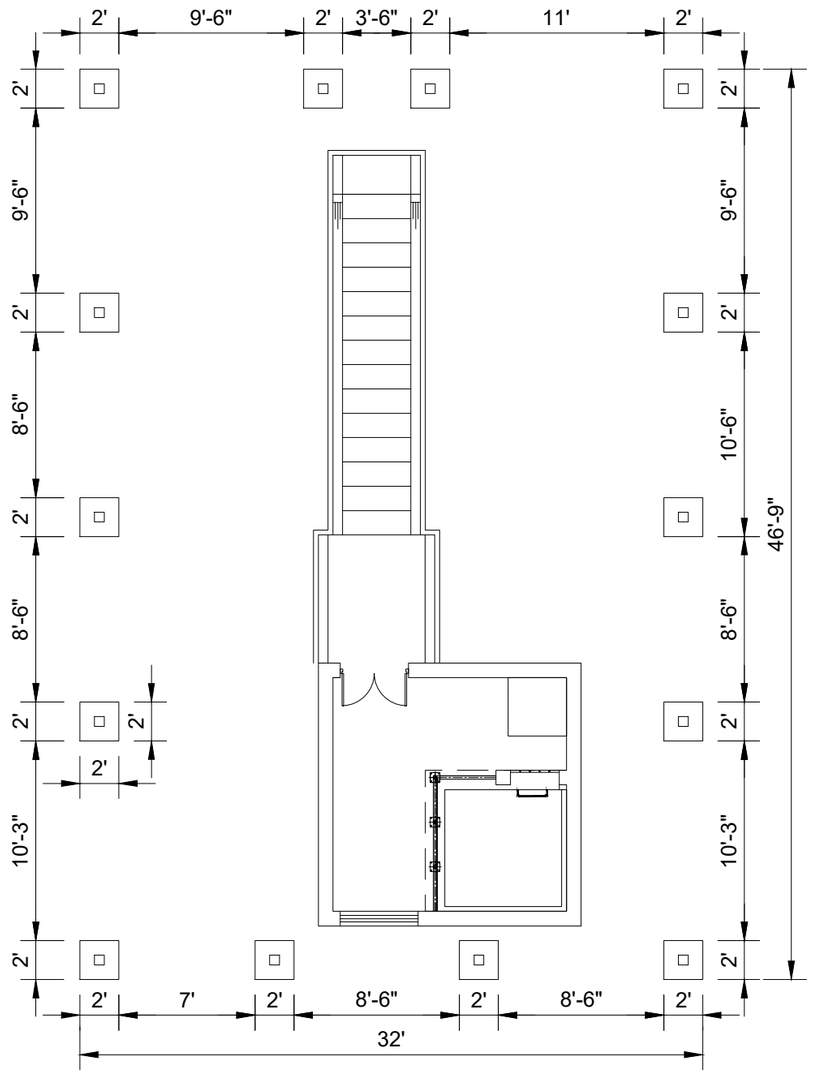
Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL ROOM
SLAB AND LINTEL REINFORCEMENT DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1008				Rev. 0



GUAGE WELL FENCE LAYOUT PLAN



EXCAVATION PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

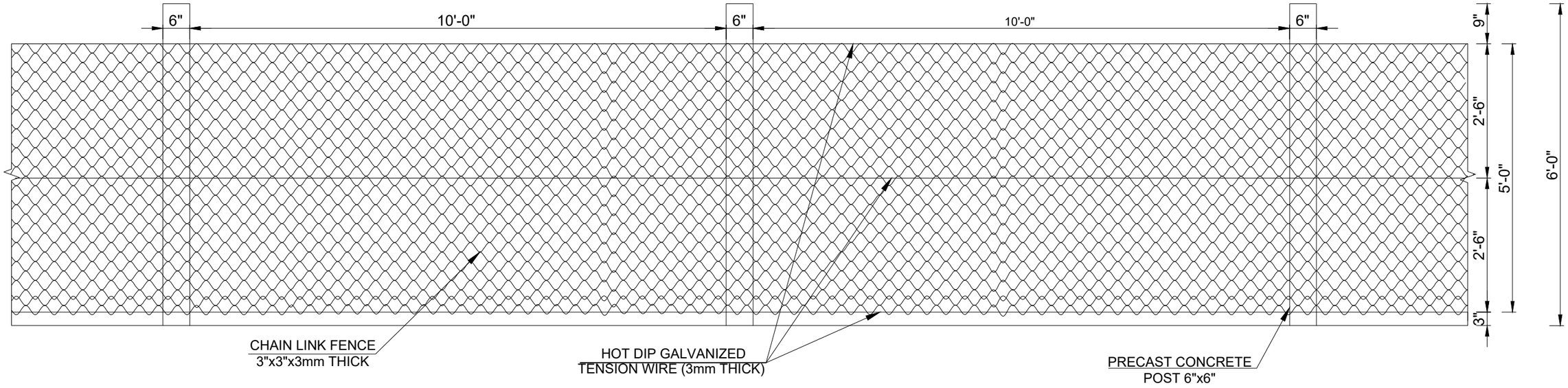
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

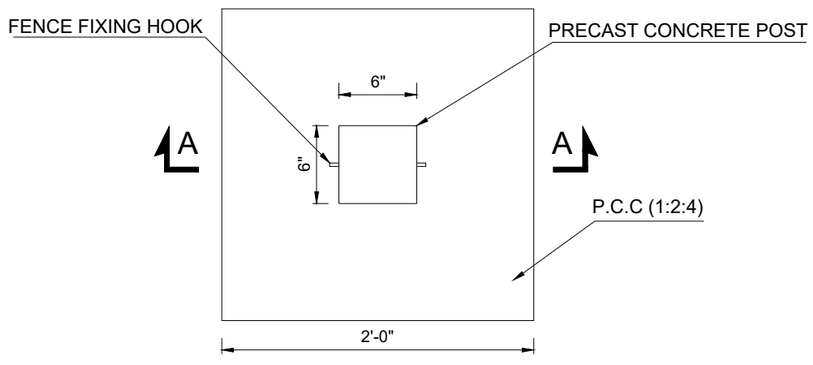
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL FENCE LAYOUT PLAN
AND EXCAVATION PLAN

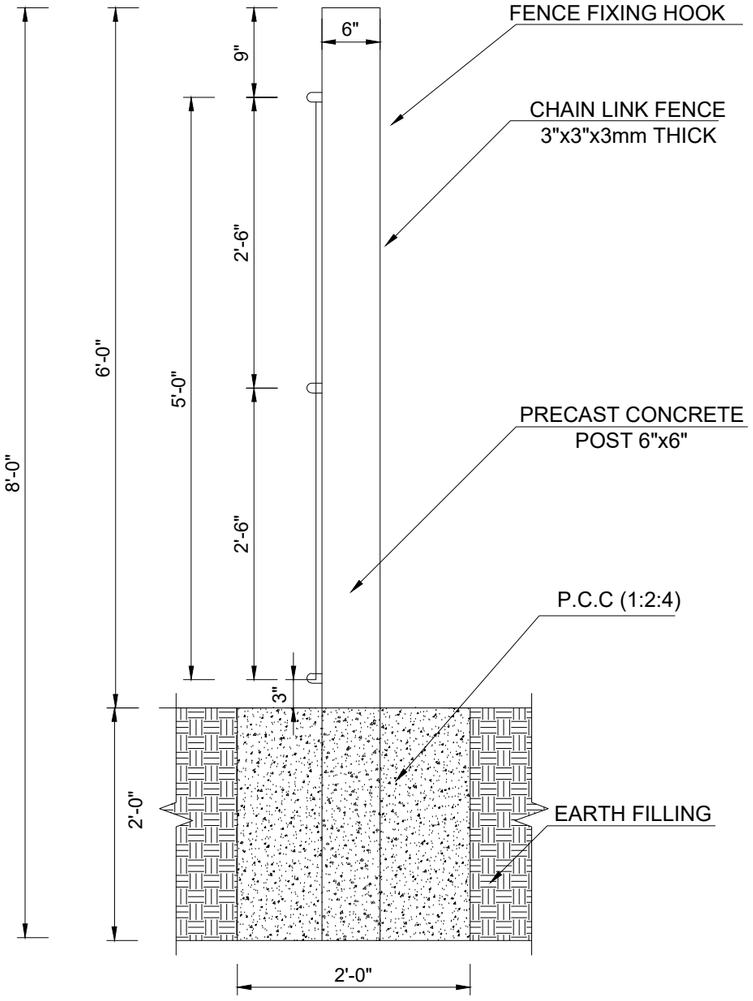
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1009				Rev. 0



TYP. ELEVATION



TYP. FOUNDATION PLAN



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

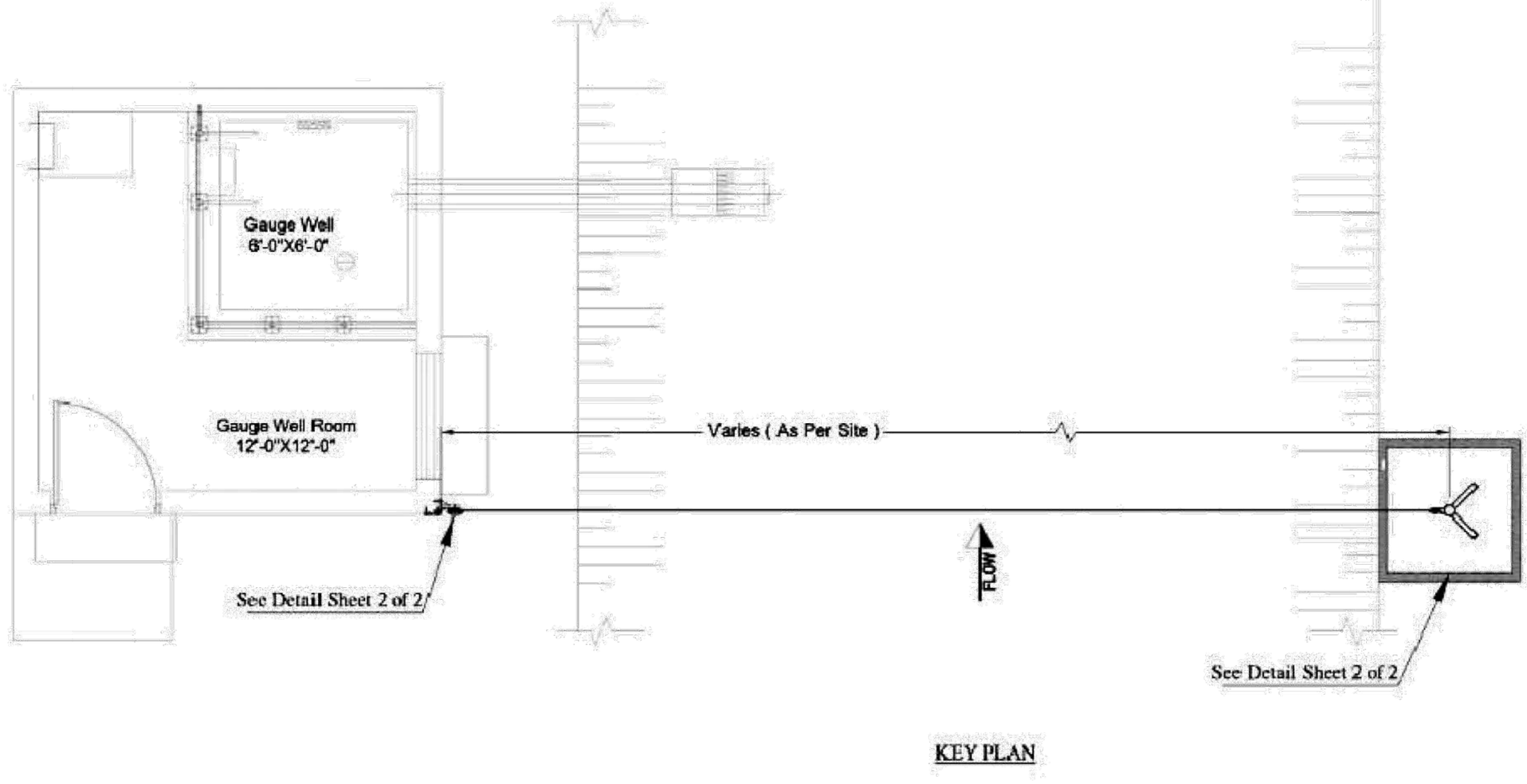
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GUAGE WELL CHAIN LINK FENCE
ELEVATION AND SECTION

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-AW-1010				Rev. 0



KEY PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

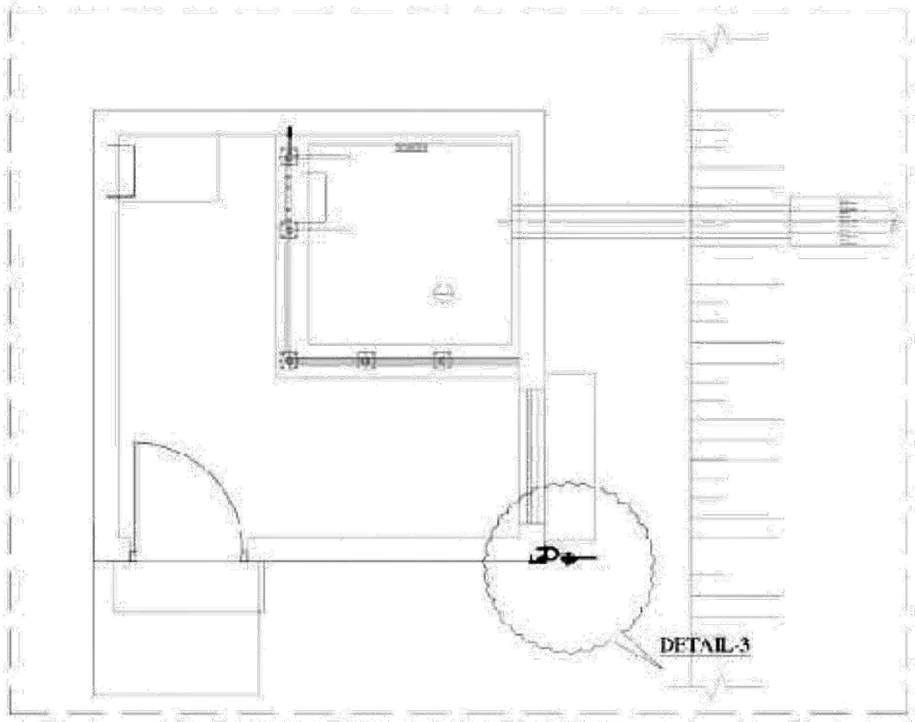
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

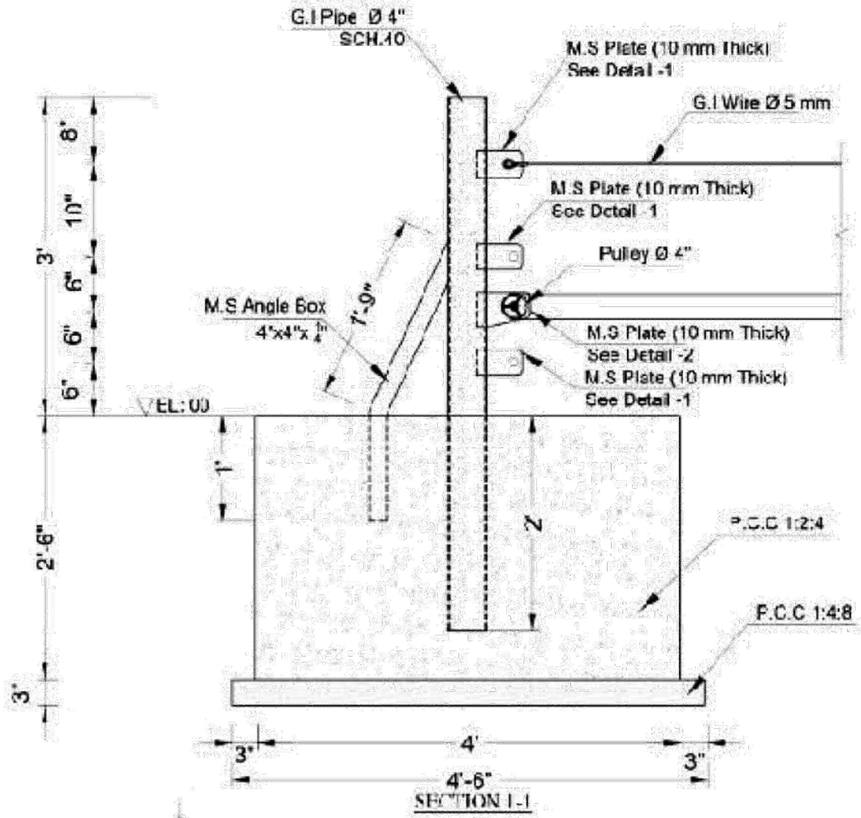
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

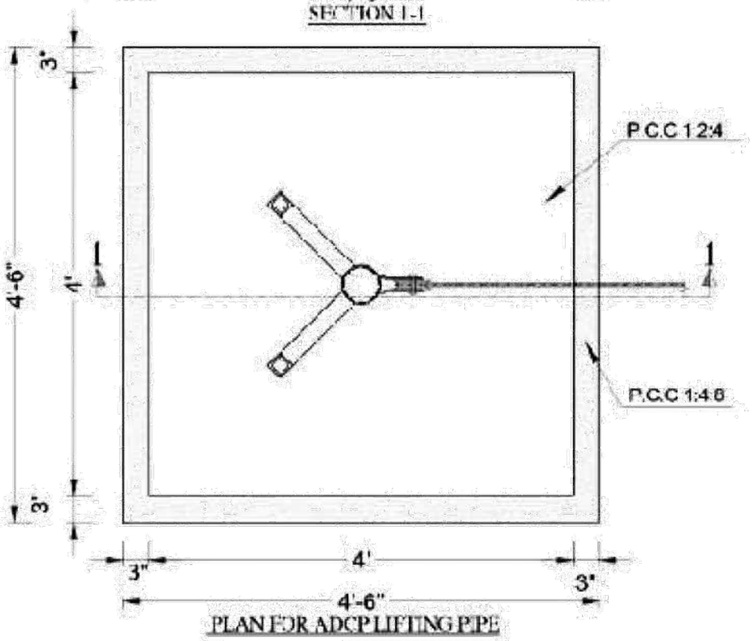
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
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Drawing No	SBIP/1-VO-KB-AW-1011				Rev. 0



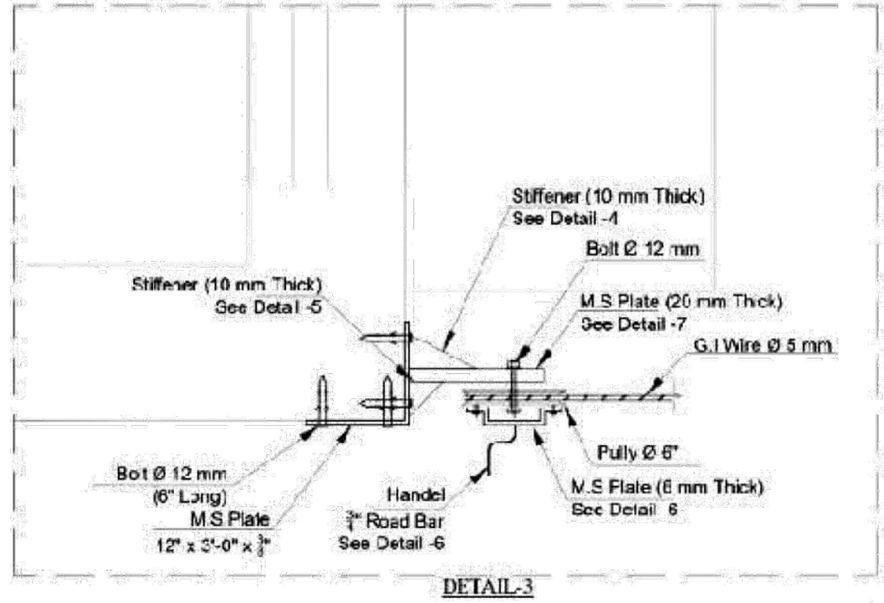
PLAN FOR ADCP LIFTING AT GAUGE WELL



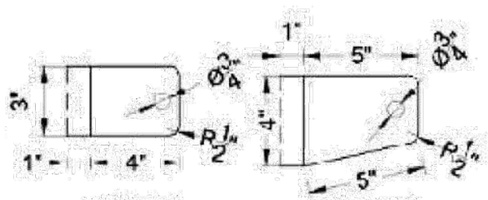
SECTION 1-1



PLAN FOR ADCP LIFTING PIPE

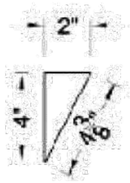


DETAIL-3

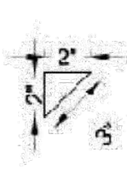


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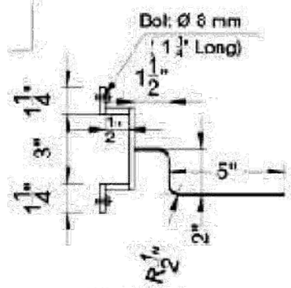
DETAIL-2



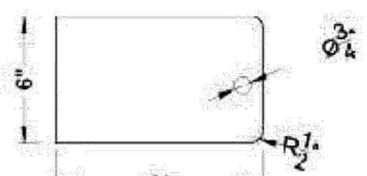
DETAIL-4



DETAIL-5



DETAIL-6



DETAIL-7

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

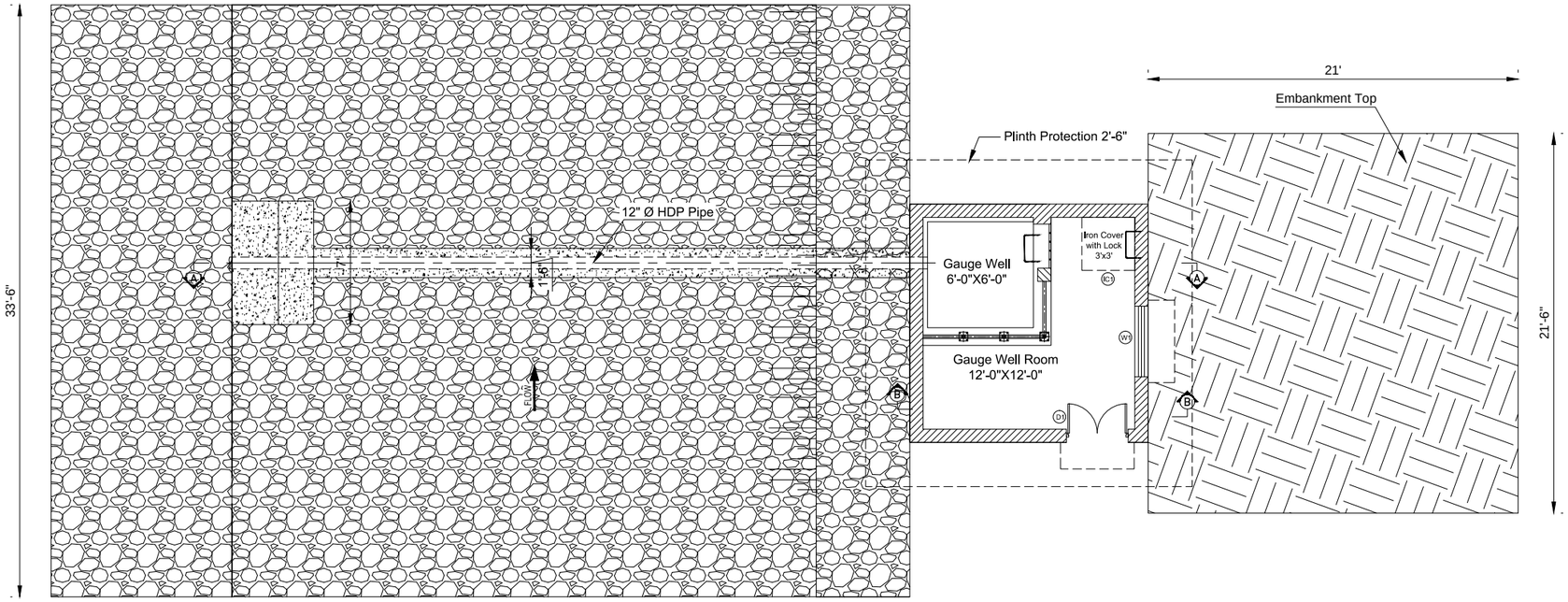
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
AKRAM WAH CANAL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale AS SHOWN		Project SBIP			Status -
Paper Size A1		CAD file			
Drawing No SBIP/1-VO-KB-AW-1012					Rev. 0



GUAGE WELL PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

Contract

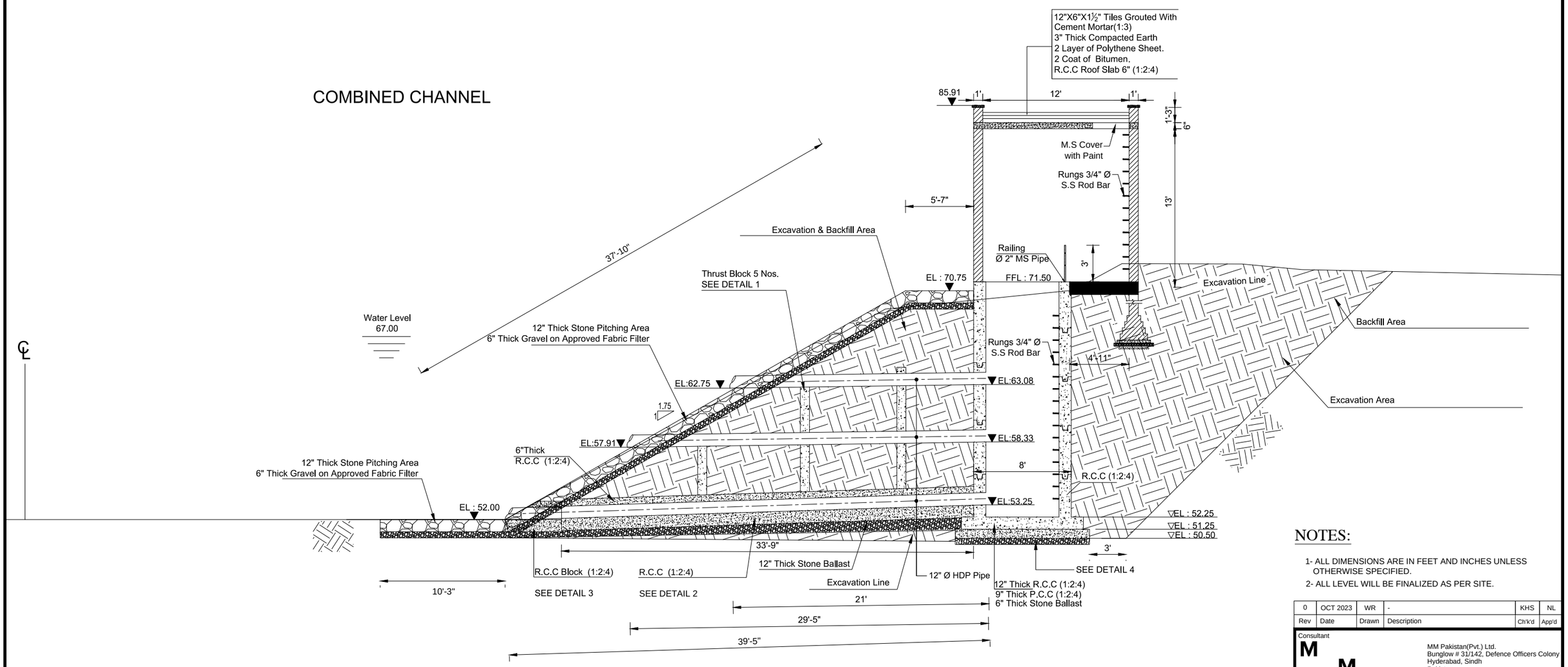
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL PLAN

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-CC-2001				Rev. 0

COMBINED CHANNEL



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

2- ALL LEVEL WILL BE FINALIZED AS PER SITE.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

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GOVT. OF SINDH

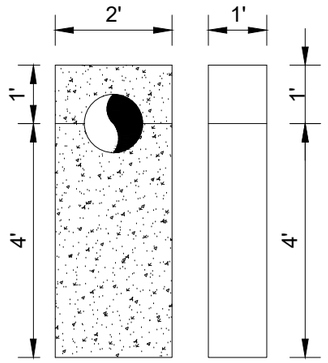
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

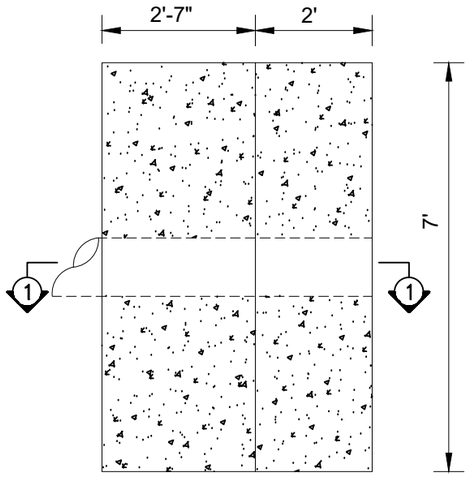
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL SECTION A-A

Designed	-		Eng.Chk.	KHS	
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Dwg.Chk.	KHS		Approved	NL	
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Drawing No	SBIP/S1-VO-KB-CC-2002				Rev. 0

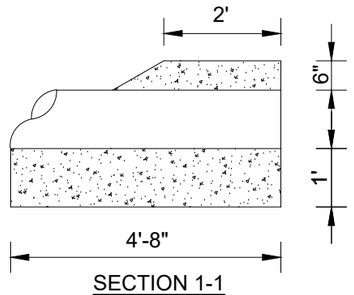


Thrust Block 5 Nos.

DETAIL - 1

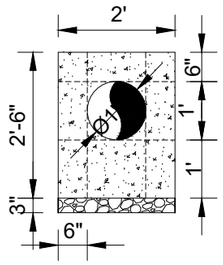


PLAN



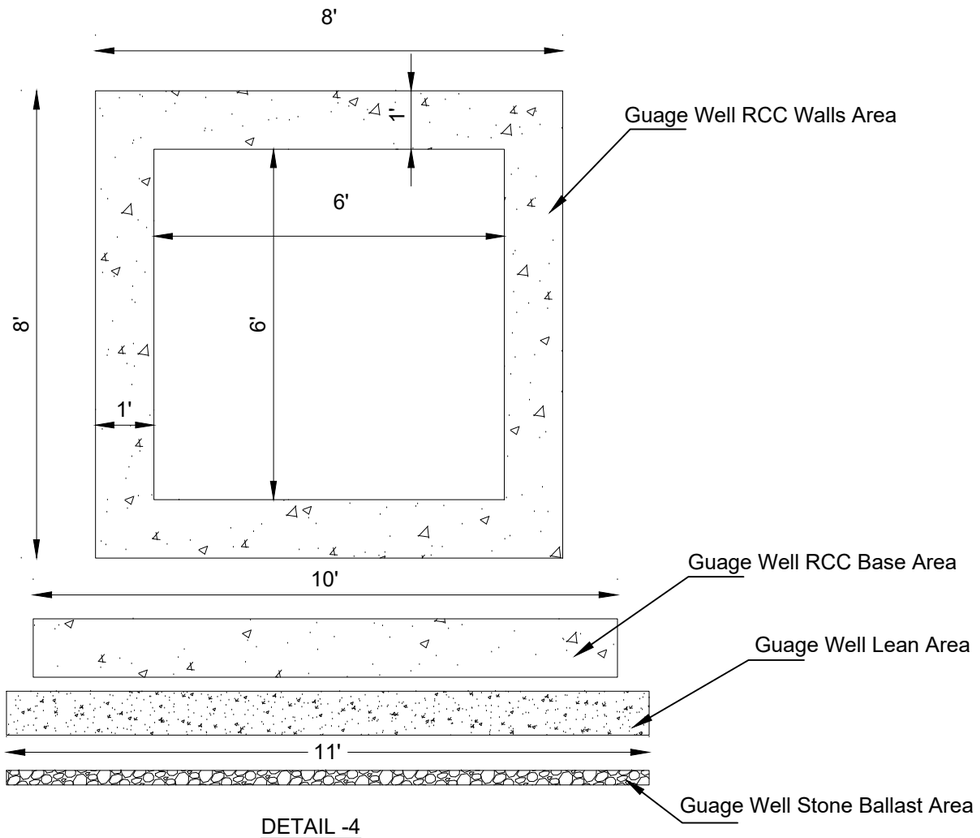
SECTION 1-1
R.C.C Block (1:2:4)

DETAIL -3



R.C.C (1:2:4) Around HDP

DETAIL -2



DETAIL -4

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

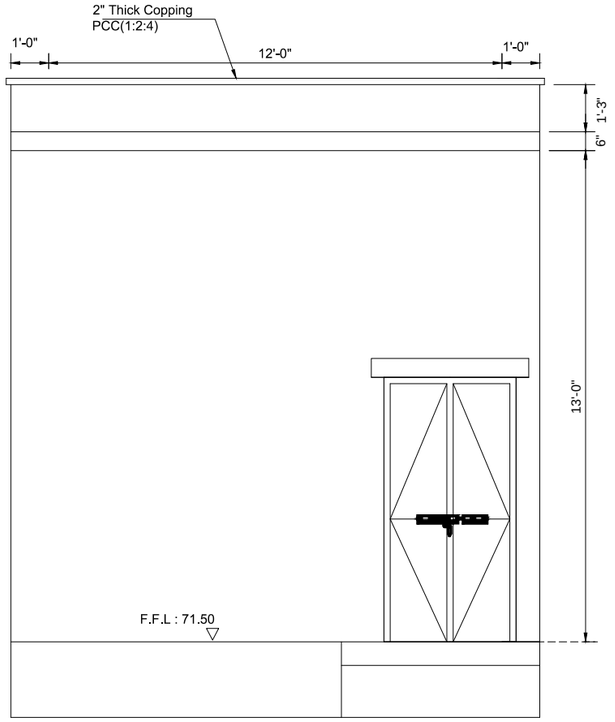
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

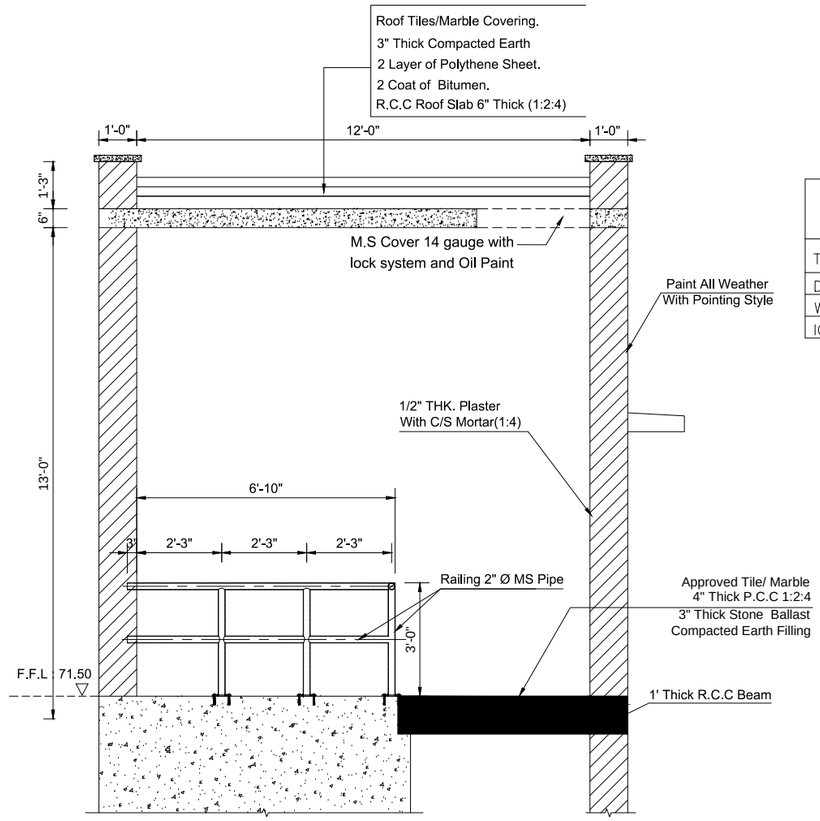
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
DETAIL 1,2,3,4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-CC-2003				Rev. 0



FRONT ELEVATION



SECTION B-B

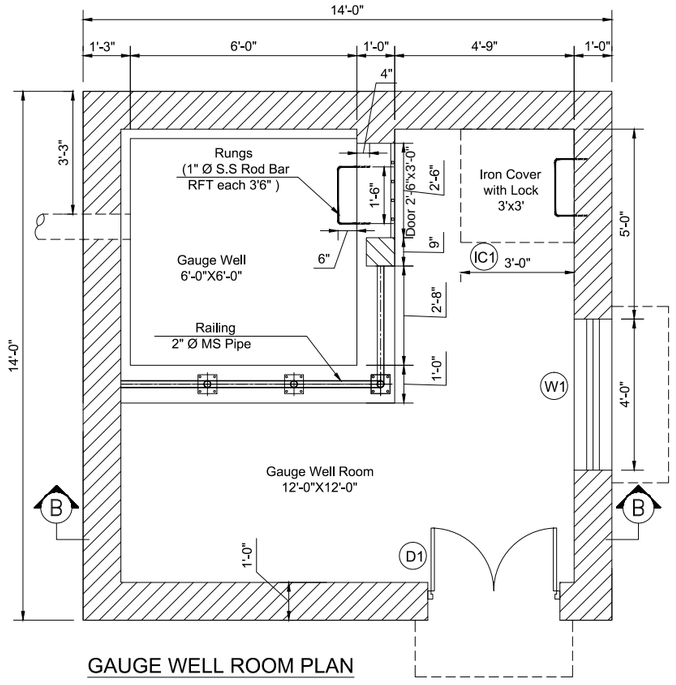
SCHEDULE OF OPENINGS					
TYPE	SIZE	SILL	NOS	STYLE	DESCRIPTION
D–1	3'–6"x7'–0"	0'–0"	01	DOUBLE LEAF	M.S DOOR(GAUGE 18)
W–1	4'–0"x4'–0"	2'–0"	01	–	M.S WINDOW(GAUGE 18)
IC–1	3'–0"x3'–0"	–	01	–	M.S IRON COVER(GAUGE 14)

FINISHES:

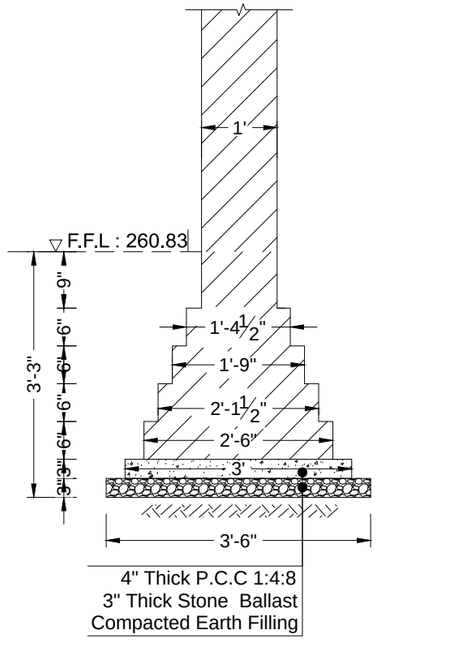
1- ROOM FINISHING SHALL BE AS PER CONTRACT (BILL # 15) BUILDINGS (SERVANT QUARTER)

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.



GAUGE WELL ROOM PLAN



ROOM WALL FOUNDATION
TYPICAL DETAIL

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

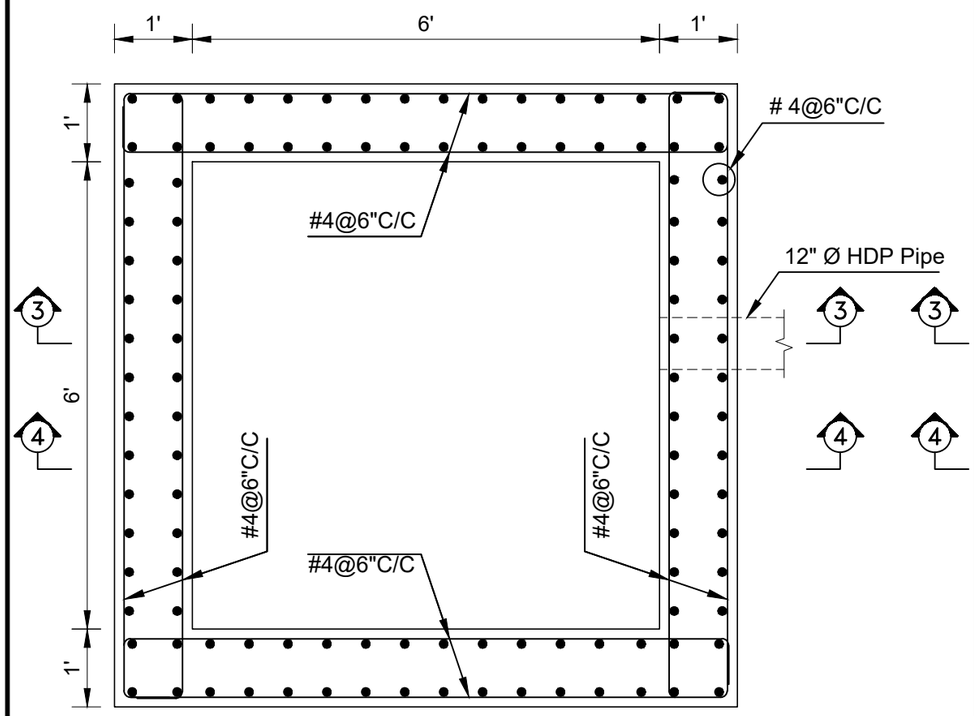
Consultant
MOTT MACDONALD
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Client
IRRIGATION DEPARTMENT
GOVT. OF SINDH

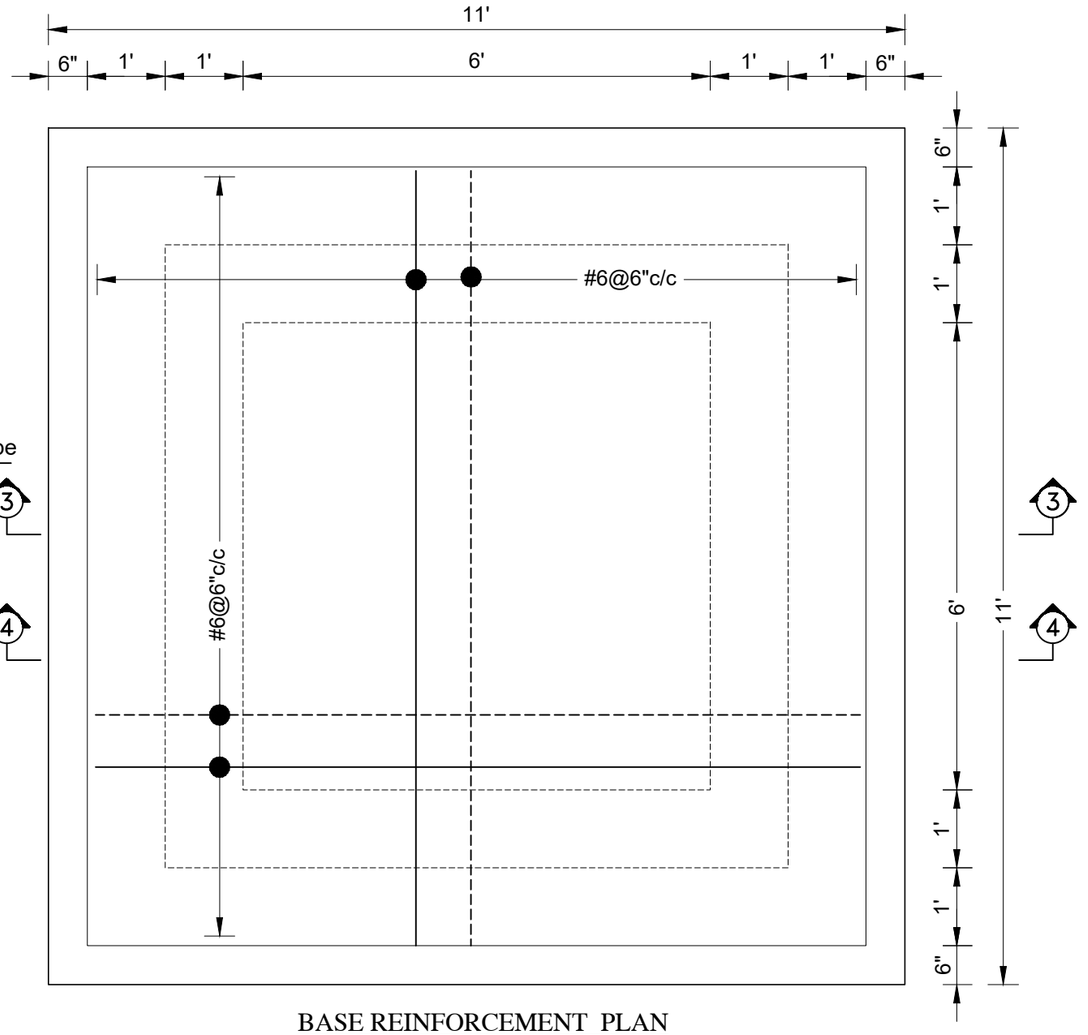
Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL ROOM PLAN
SECTION, ELEVATION AND FOUNDATION DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-CC-2004				Rev. 0



REINFORCEMENT PLAN



BASE REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant
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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

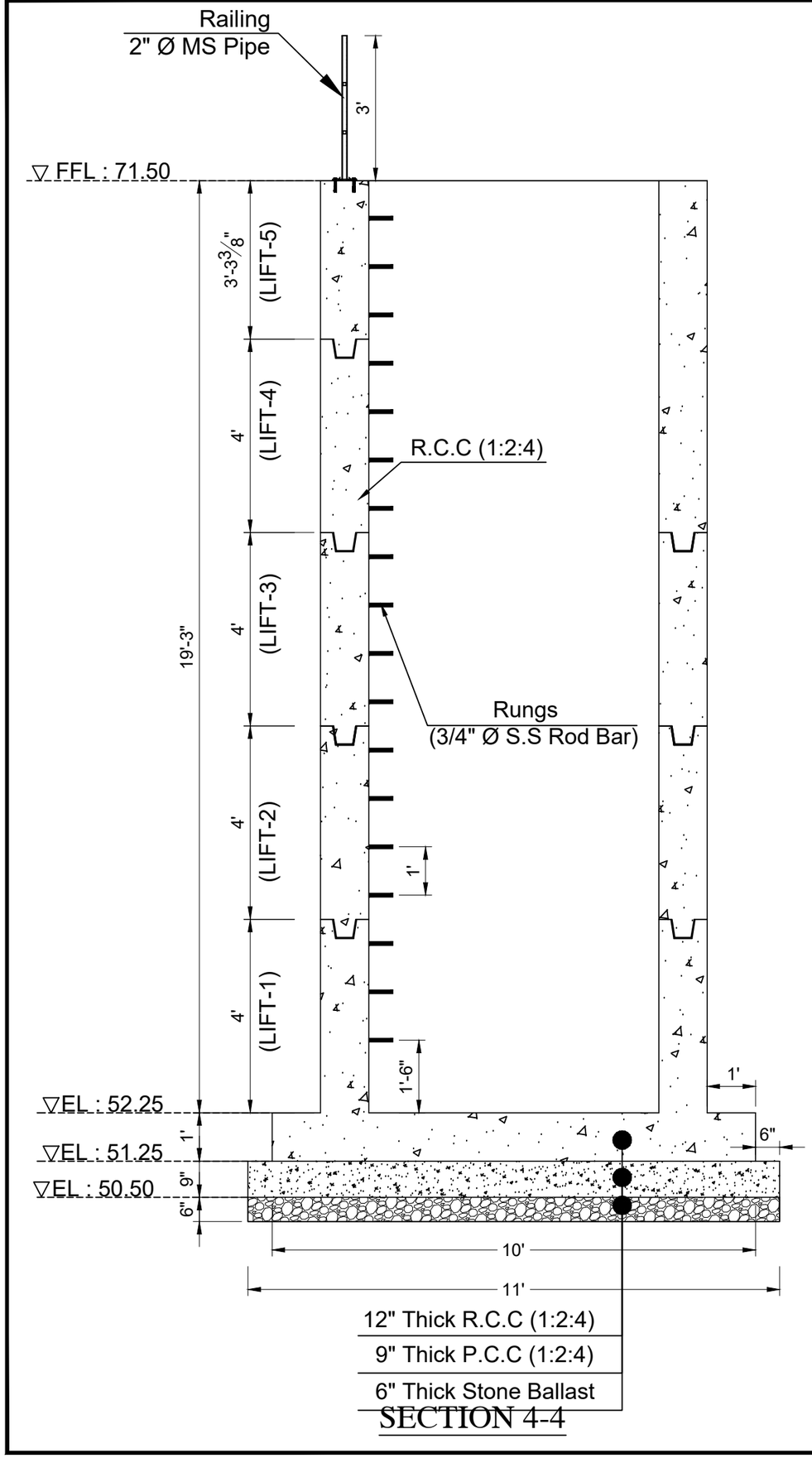
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

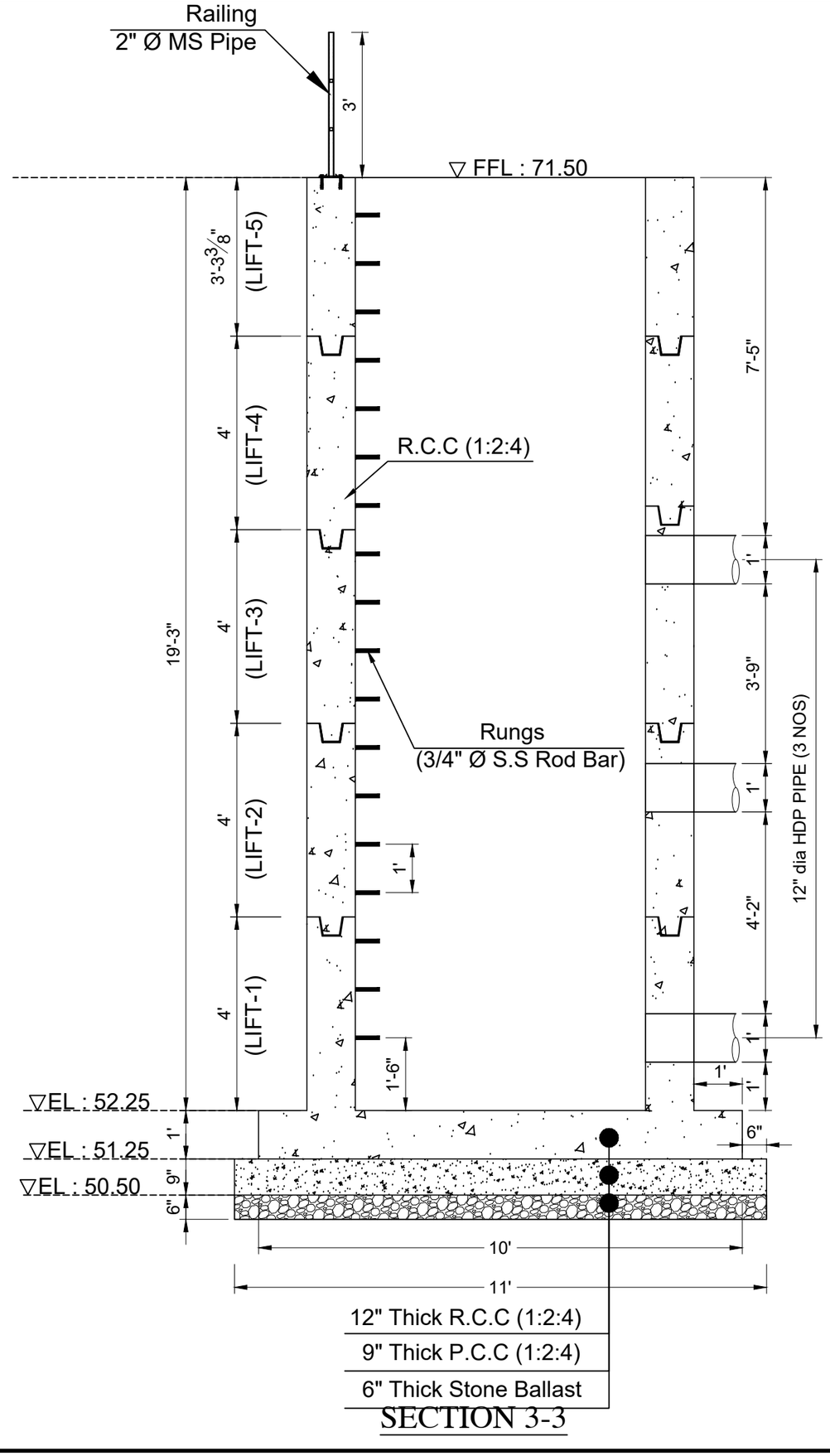
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL ROOM
REINFORCEMENT PLAN

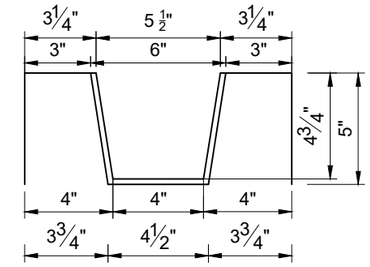
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-CC-2005			Rev. 0



SECTION 4-4



SECTION 3-3



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Pakistan.
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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

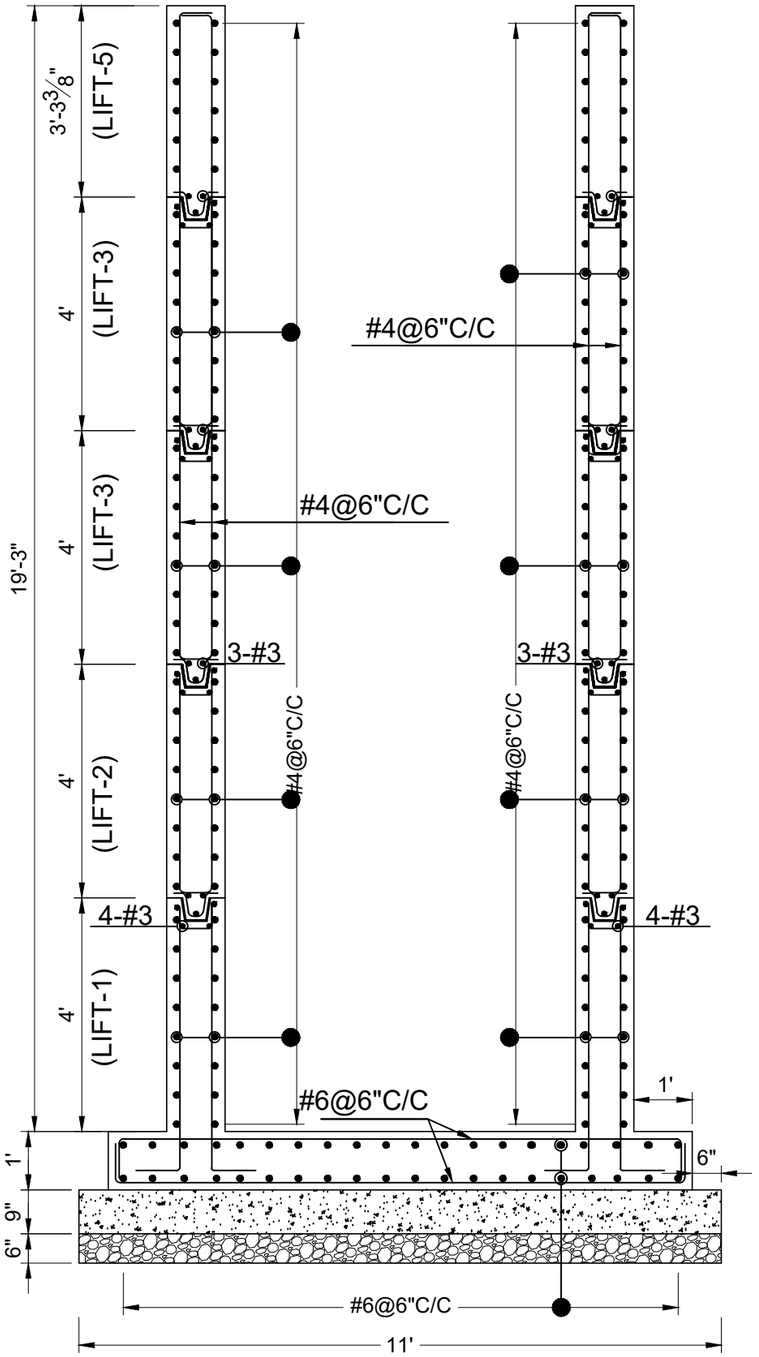
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

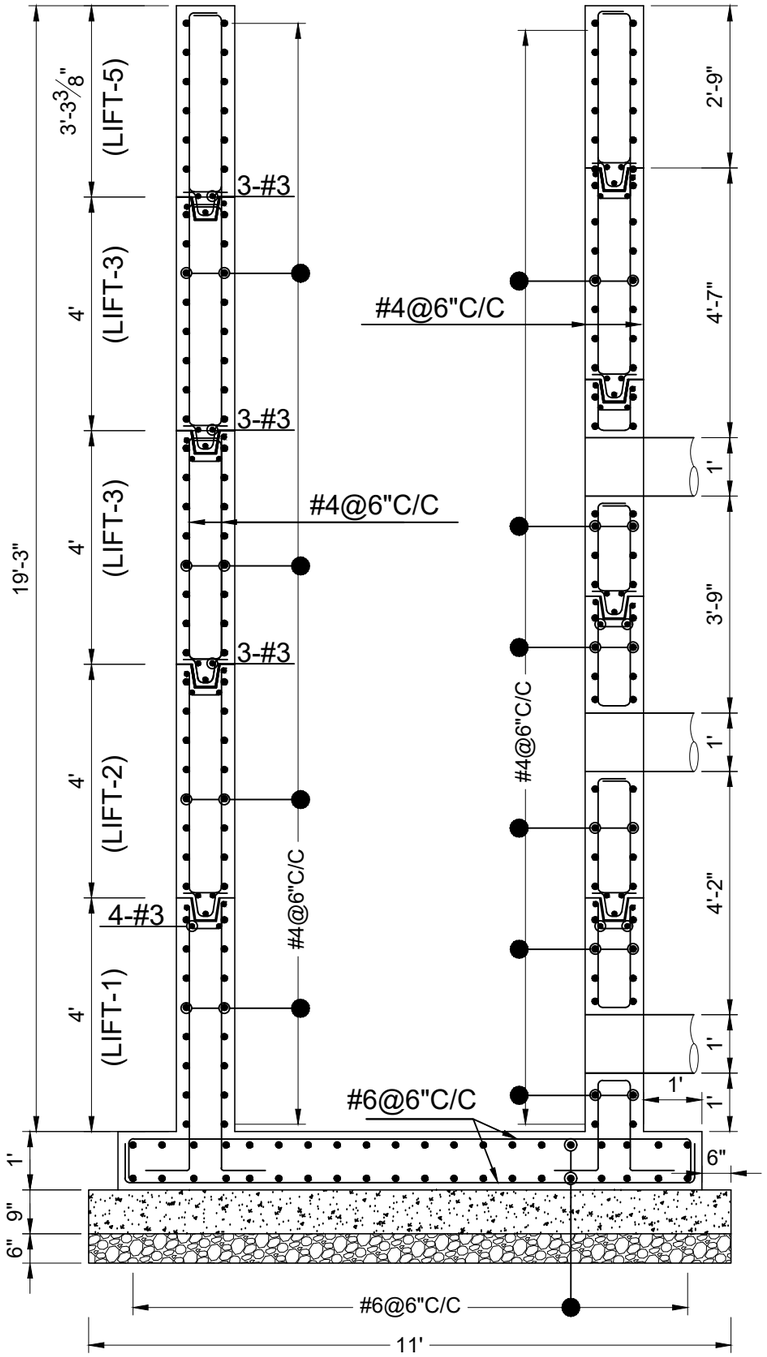
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL ROOM
SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-CC-2006				Rev. 0



SECTION 4-4



SECTION 3-3

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

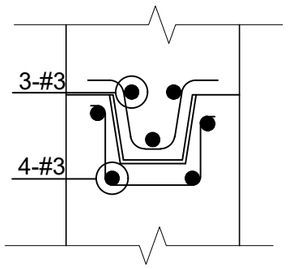
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

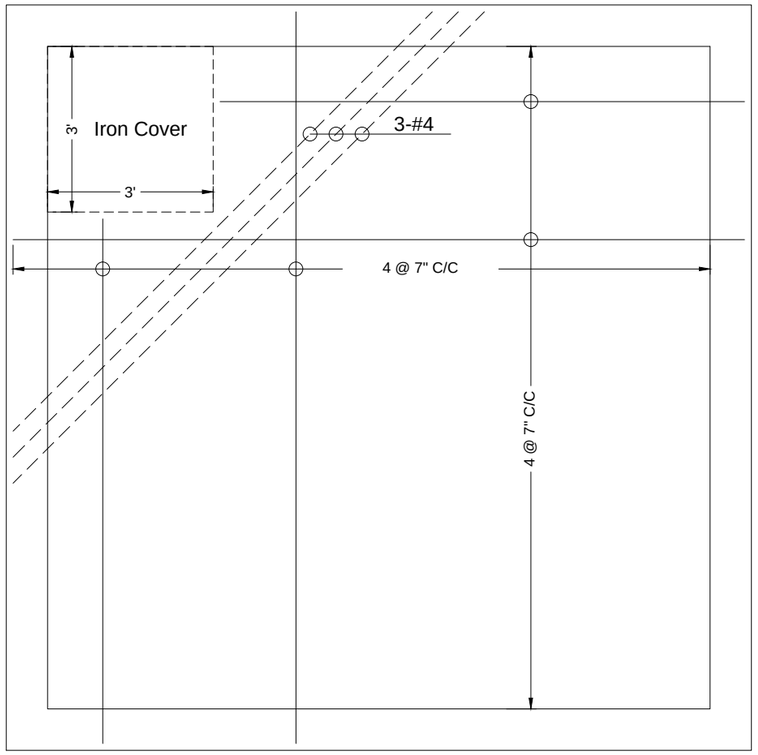
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

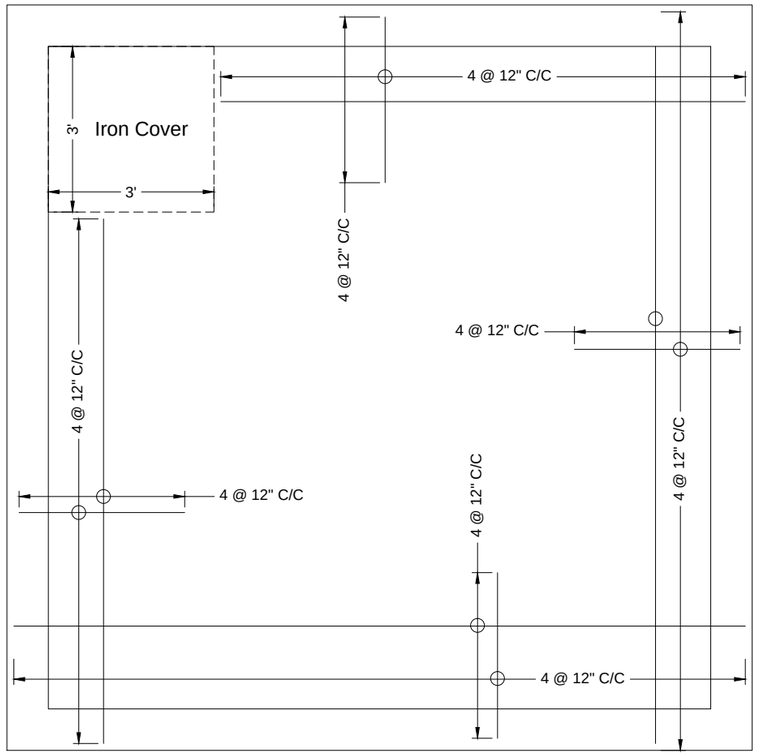
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL ROOM
REINFORCEMENT DETAIL SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-CC-2007			Rev. 0



SLAB REINFORCEMENT PLAN



SLAB HOLDING BAR REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

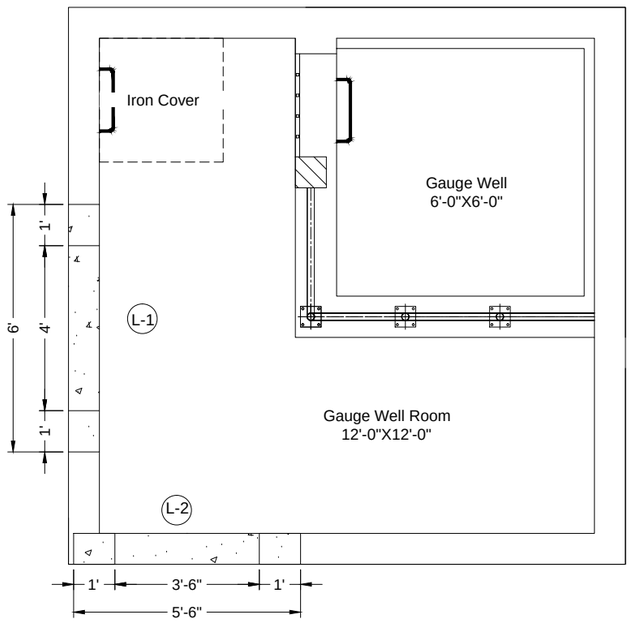
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

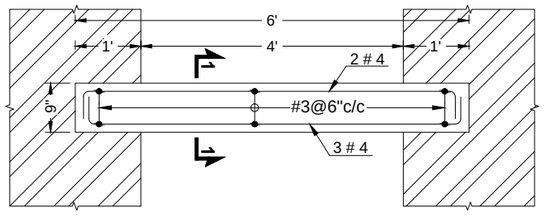
4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

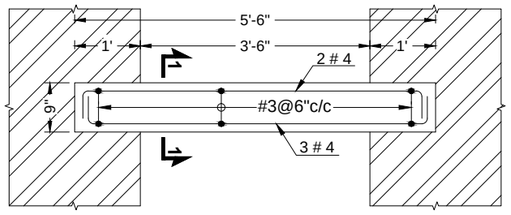
STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



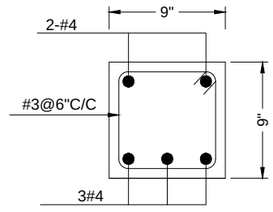
LINTEL LAYOUT PLAN



L-SECTION LINTEL - 1 (01NOS.)



L-SECTION LINTEL - 2 (01NOS.)



SECTION 1-1

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

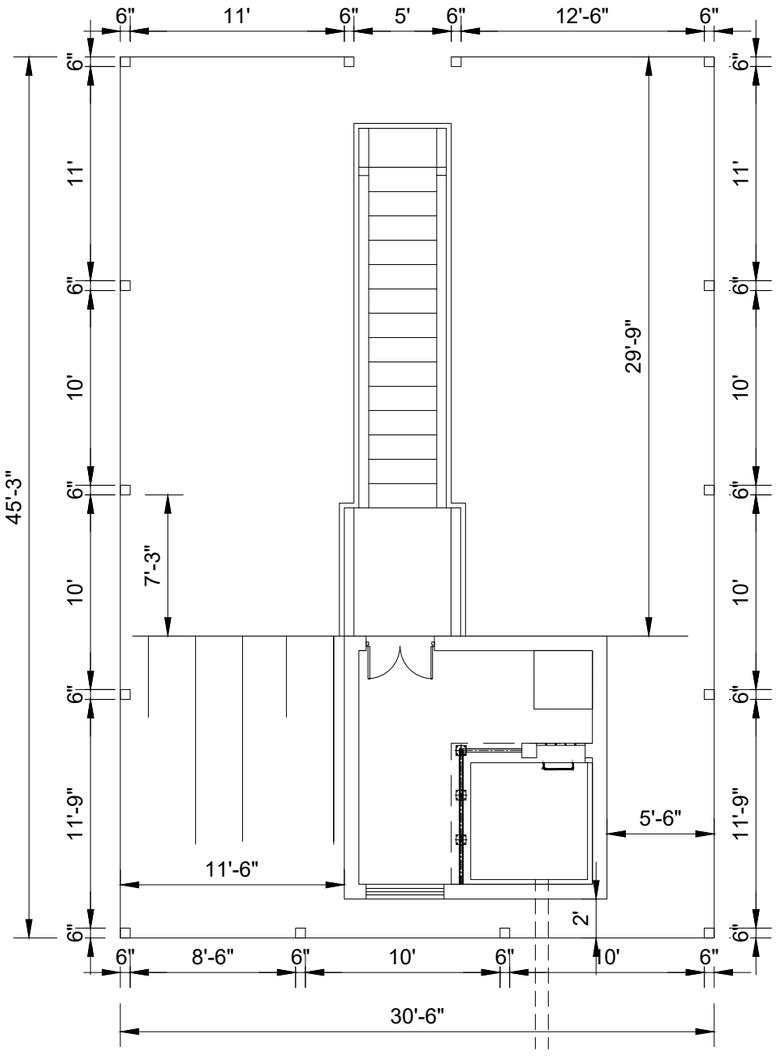
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Client
IRRIGATION DEPARTMENT
GOVT. OF SINDH

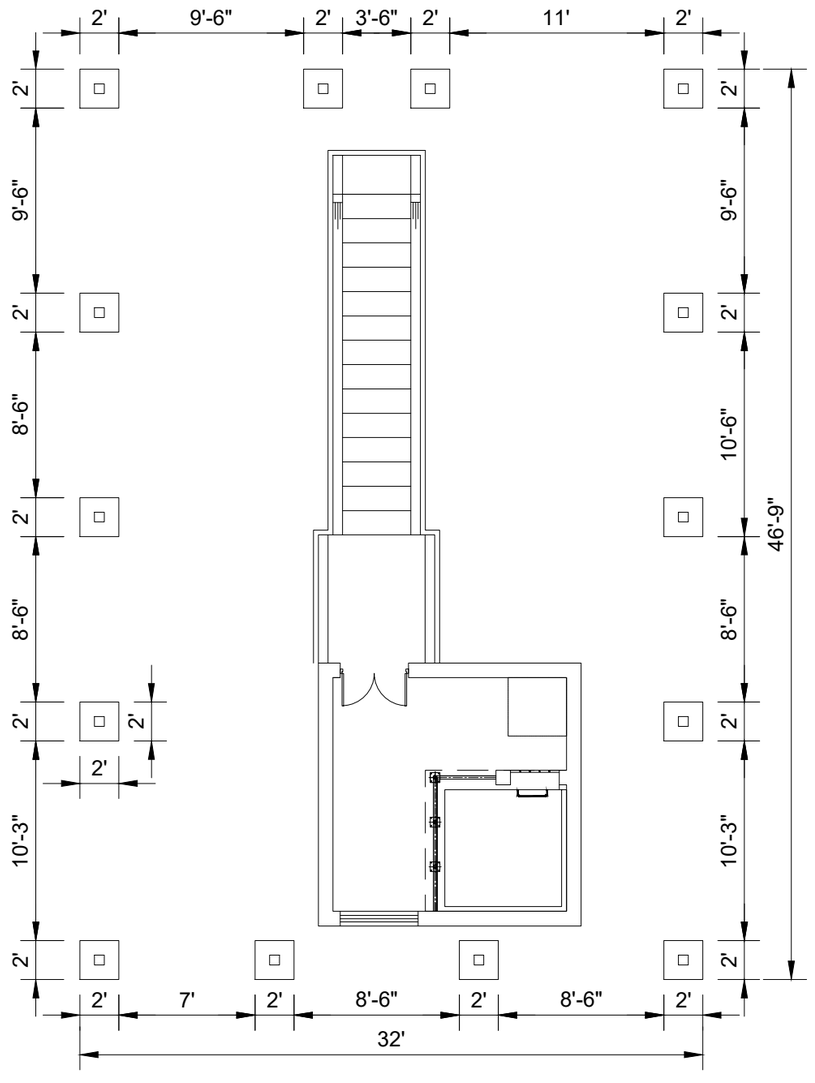
Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL ROOM
SLAB AND LINTEL REINFORCEMENT DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-CC-2008				Rev. 0



GUAGE WELL FENCE LAYOUT PLAN



EXCAVATION PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

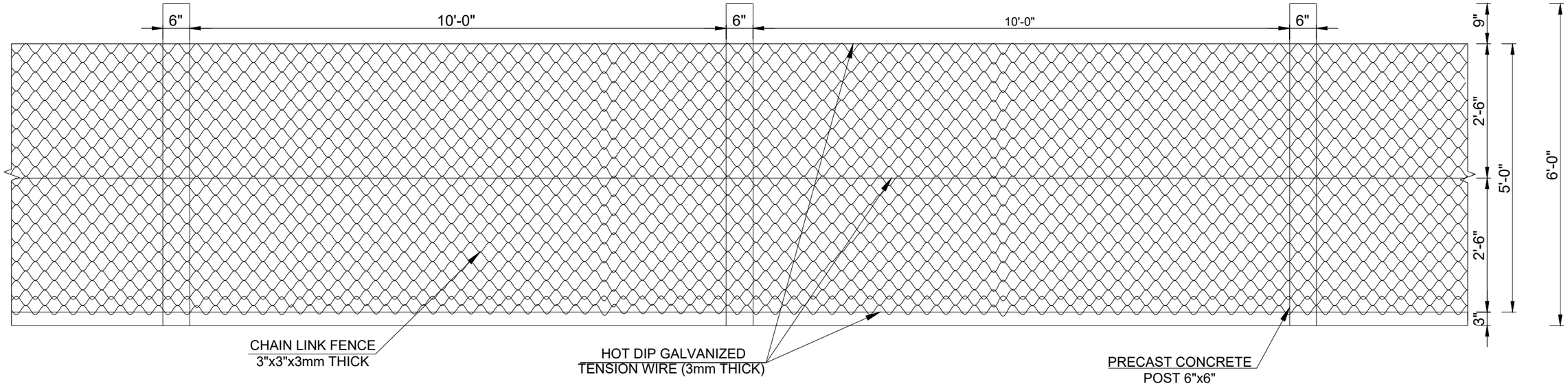
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

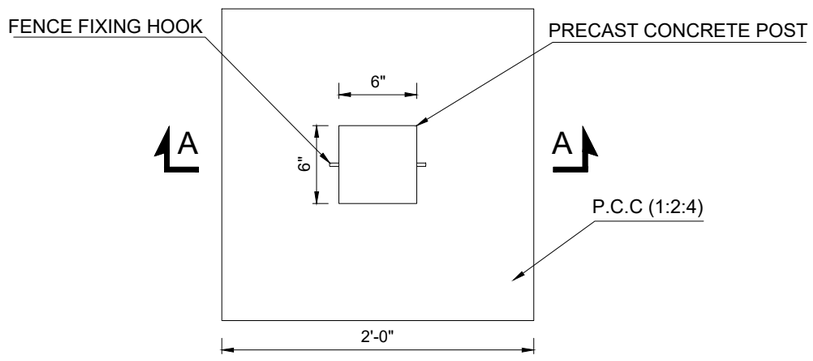
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL FENCE LAYOUT PLAN
AND EXCAVATION PLAN

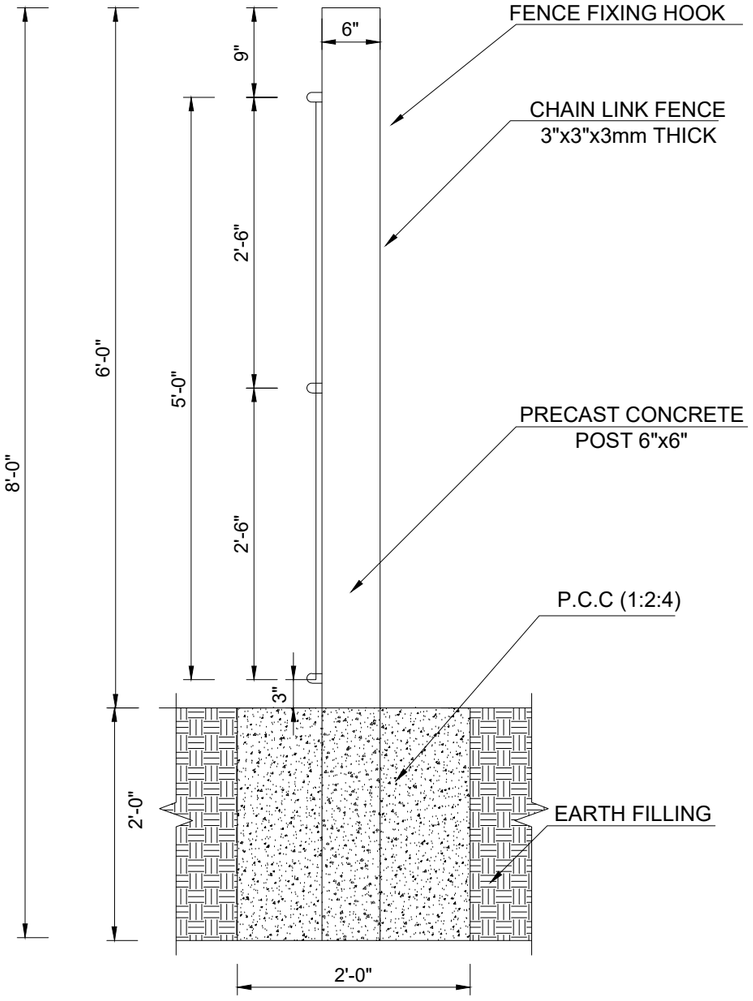
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-CC-2009				Rev. 0



TYP. ELEVATION



TYP. FOUNDATION PLAN



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

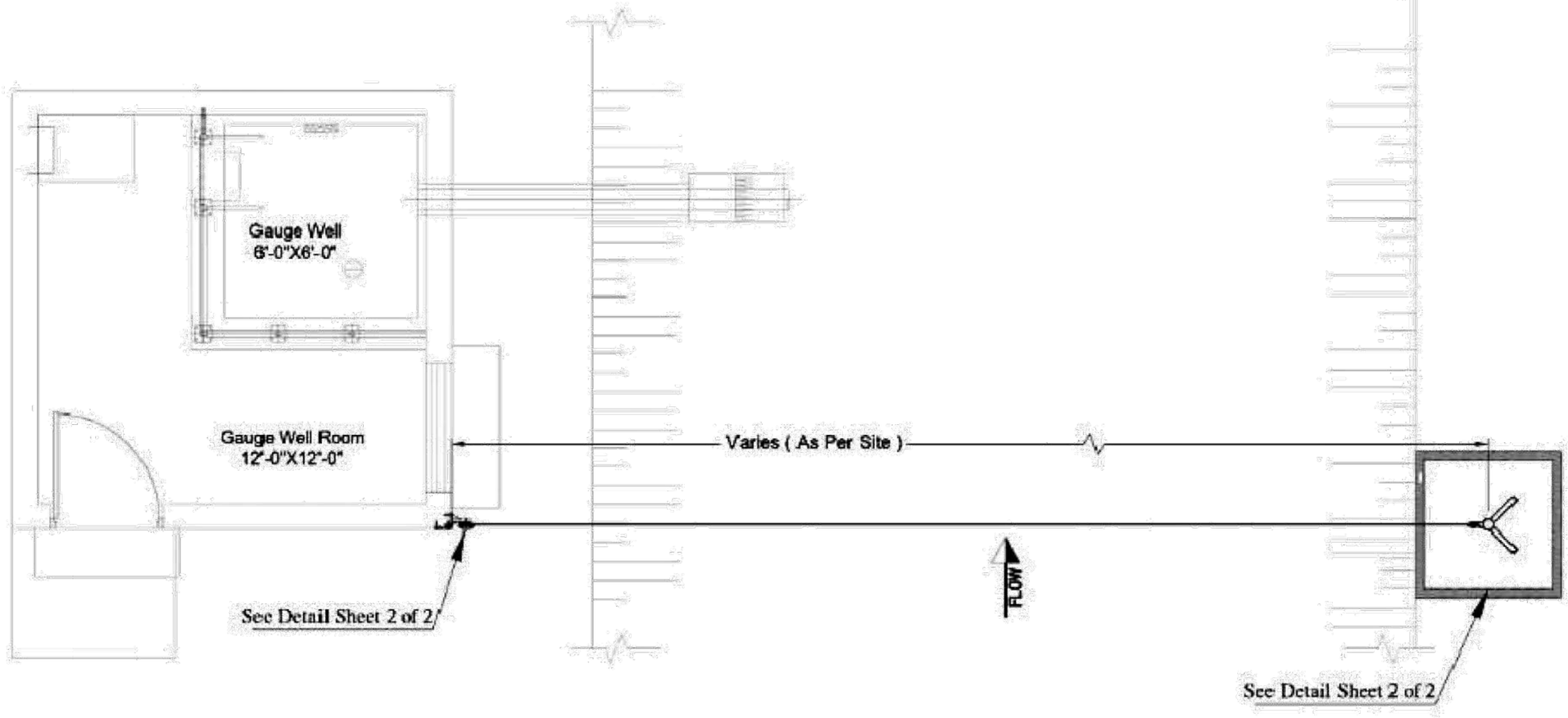
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GUAGE WELL CHAIN LINK FENCE
ELEVATION AND SECTION

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-CC-2010				Rev. 0



KEY PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

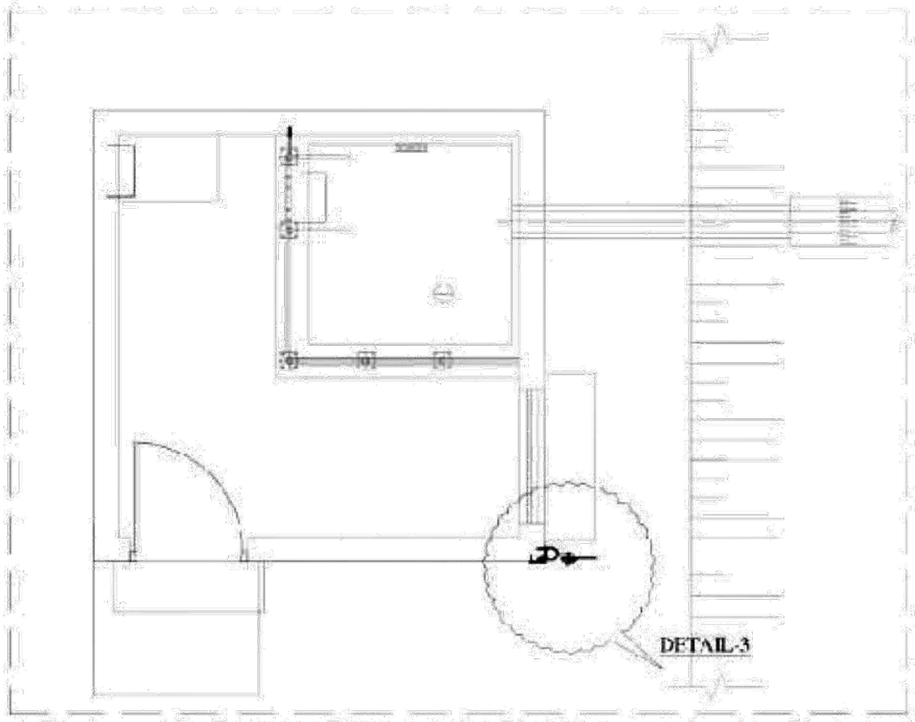
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

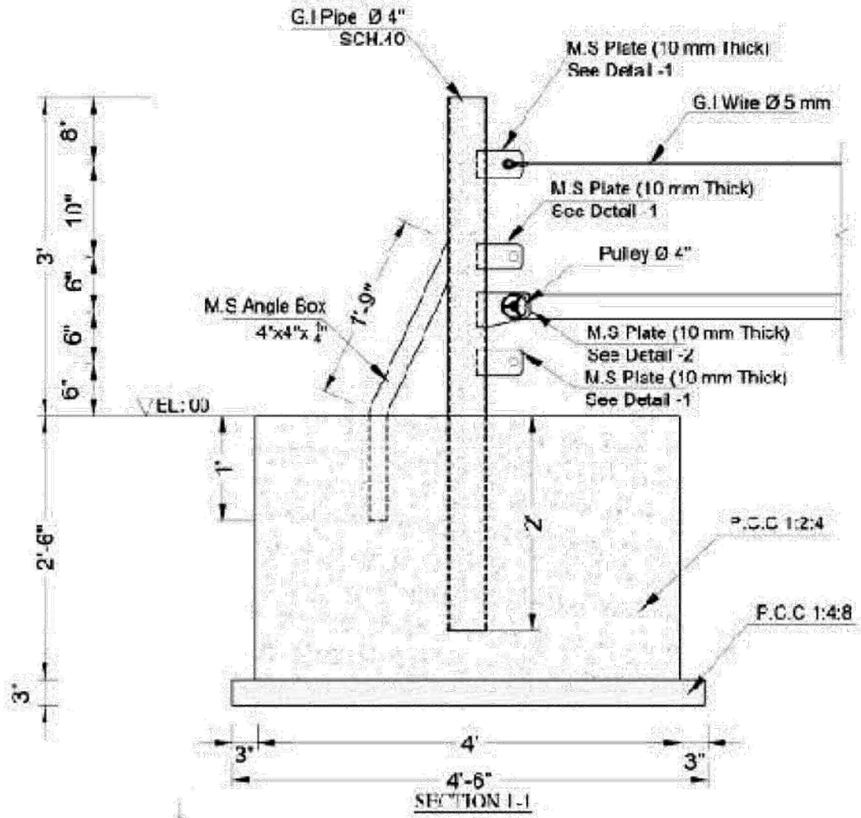
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

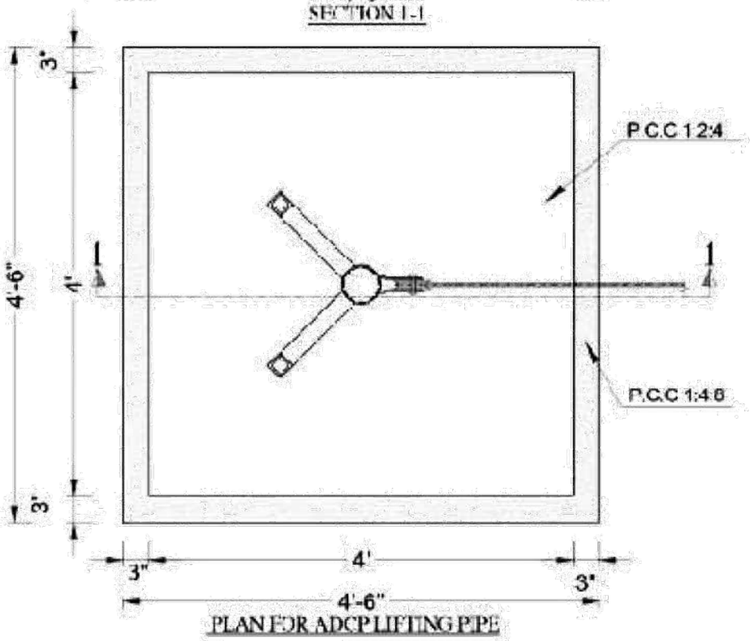
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-CC-2011				Rev. 0



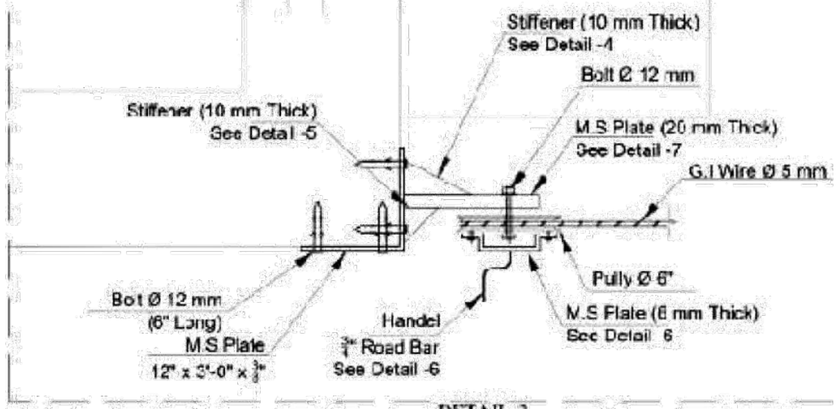
PLAN FOR ADCP LIFTING AT GAUGE WELL



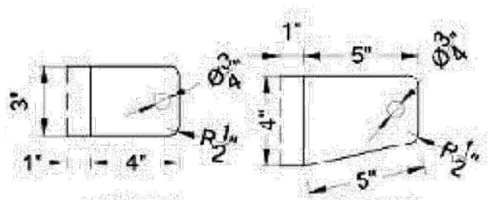
SECTION 1-1



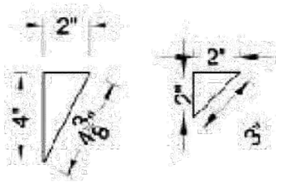
PLAN FOR ADCP LIFTING PIPE



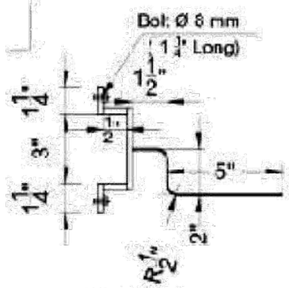
DETAIL-3



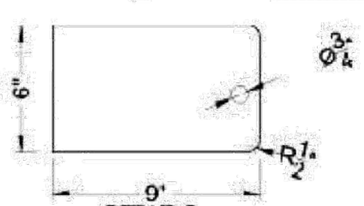
DETAIL-1 DETAIL-2



DETAIL-4 DETAIL-5



DETAIL-6



DETAIL-7

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

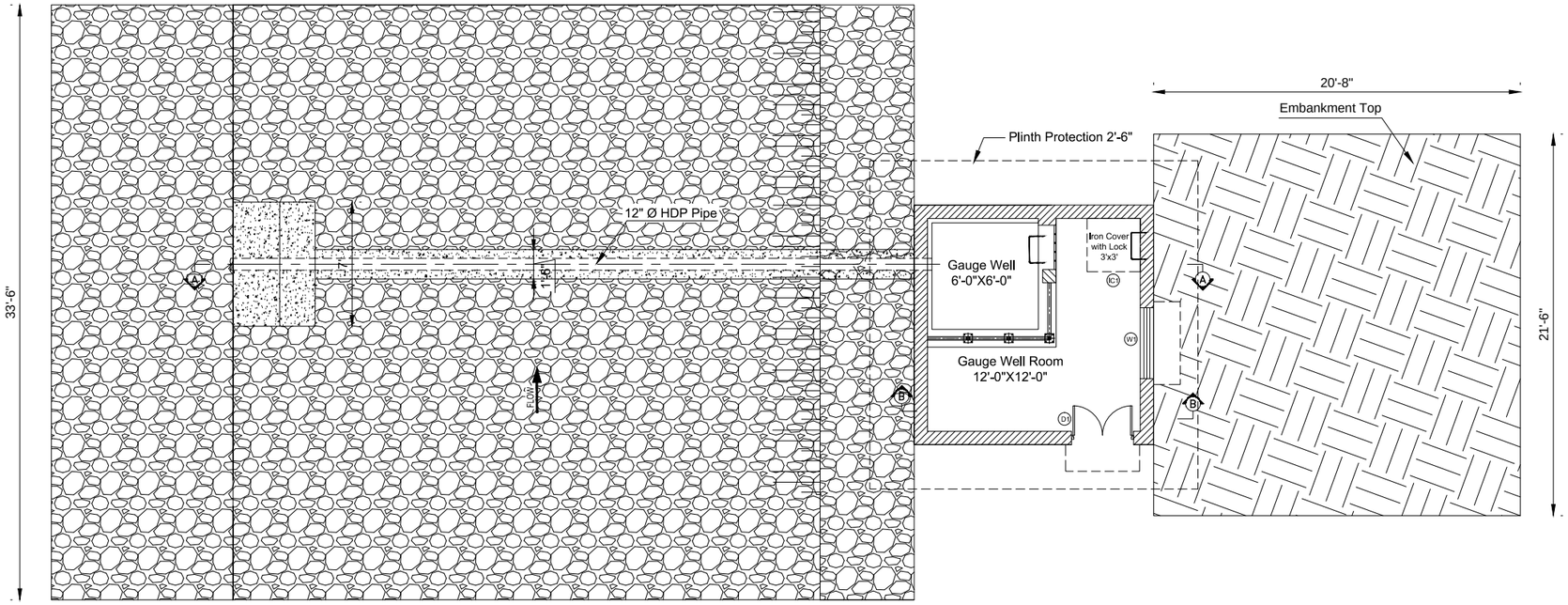
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
COMBINED CHANNEL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale AS SHOWN		Project SBIP			Status -
Paper Size A1		CAD file			
Drawing No SBIP/1-VO-KB-CC-2012					Rev. 0



GUAGE WELL PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

MOTT MACDONALD
in association with
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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

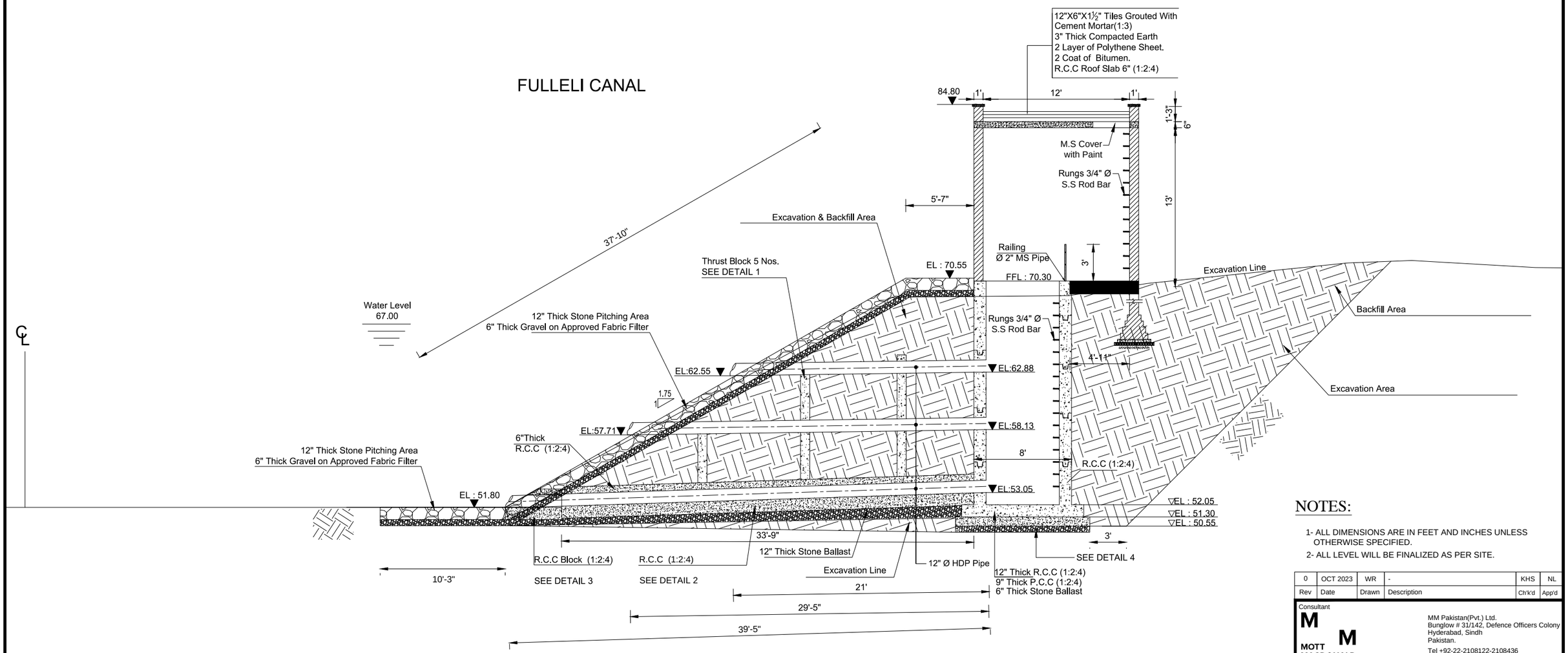
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL PLAN

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-FC-3001				Rev. 0



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

2- ALL LEVEL WILL BE FINALIZED AS PER SITE.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

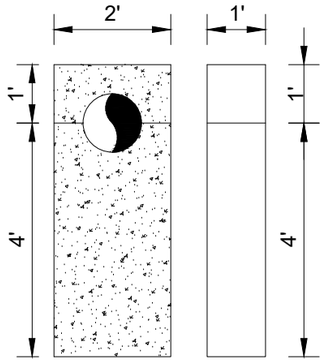
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

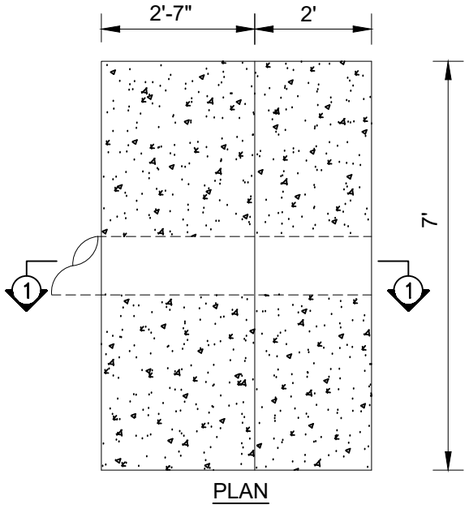
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL SECTION A-A

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-FC-3002				Rev. 0

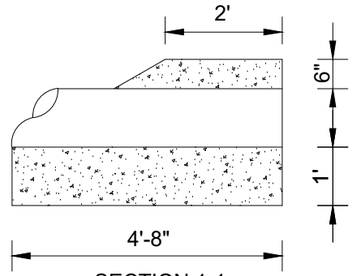


Thrust Block 5 Nos.

DETAIL - 1

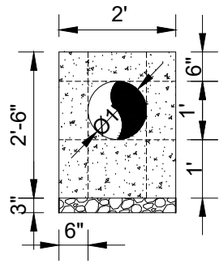


PLAN



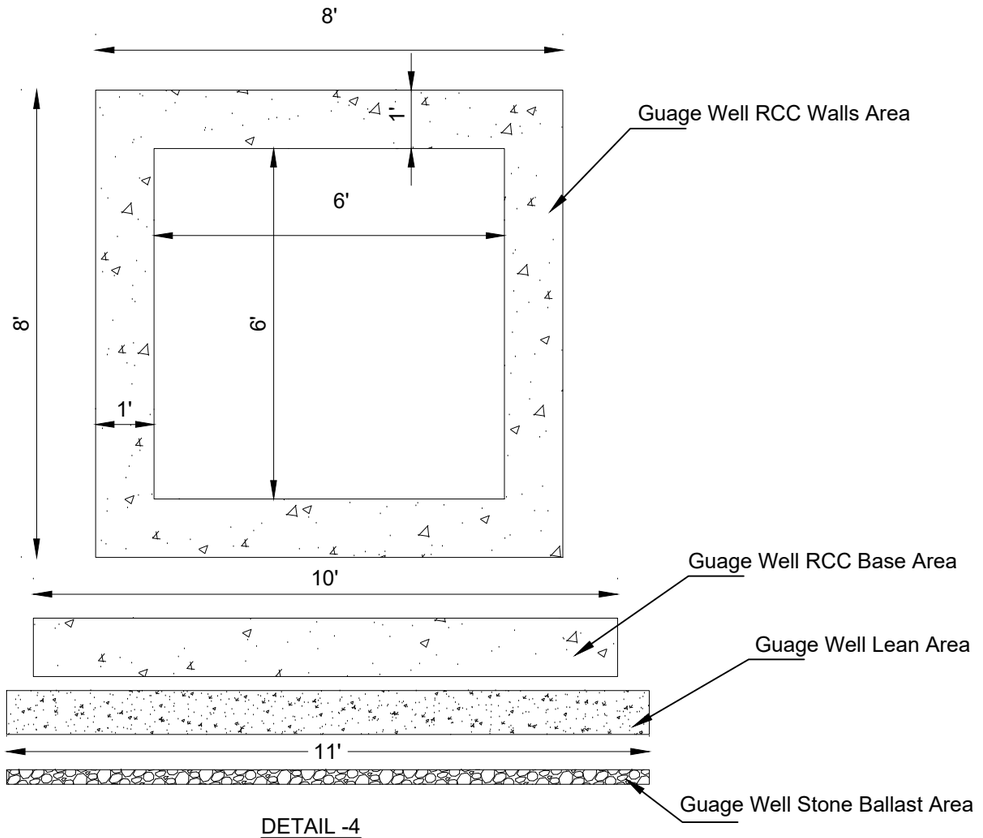
SECTION 1-1
R.C.C Block (1:2:4)

DETAIL -3



R.C.C (1:2:4) Around HDP

DETAIL -2



DETAIL -4

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

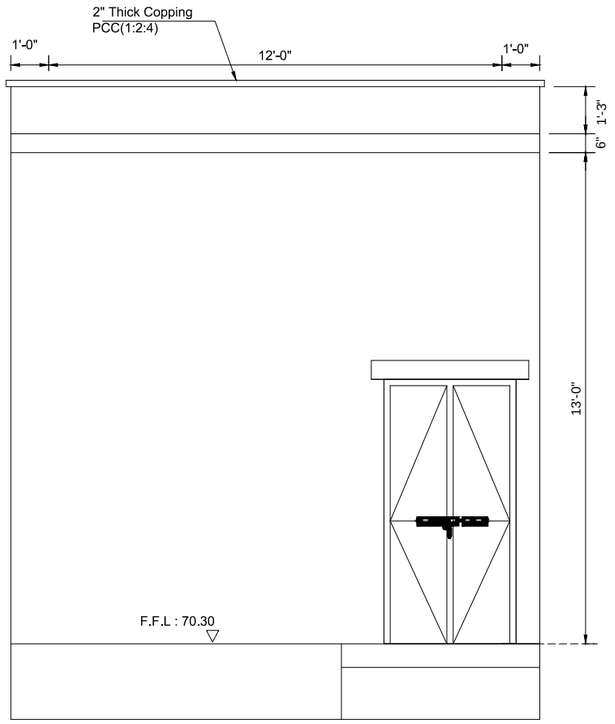
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

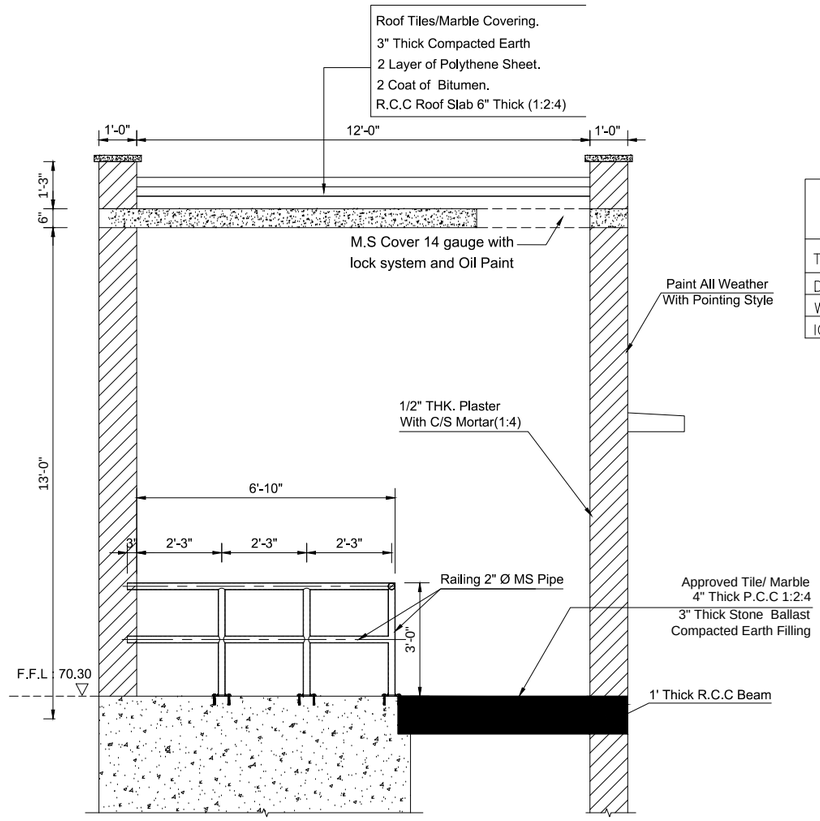
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
DETAIL 1,2,3,4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-FC-3003				Rev. 0



FRONT ELEVATION



SECTION B-B

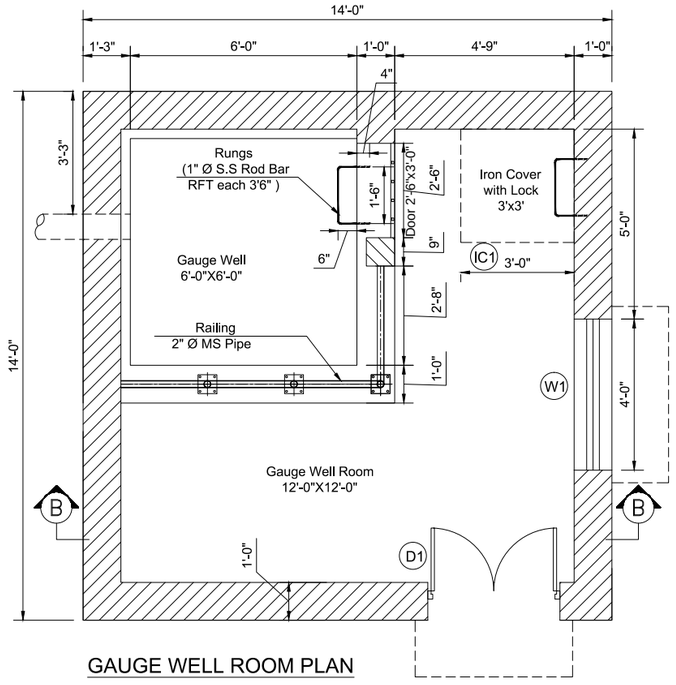
SCHEDULE OF OPENINGS					
TYPE	SIZE	SILL	NOS	STYLE	DESCRIPTION
D-1	3'-6"x7'-0"	0'-0"	01	DOUBLE LEAF	M.S DOOR(GAUGE 18)
W-1	4'-0"x4'-0"	2'-0"	01	-	M.S WINDOW(GAUGE 18)
IC-1	3'-0"x3'-0"	-	01	-	M.S IRON COVER(GAUGE 14)

FINISHES:

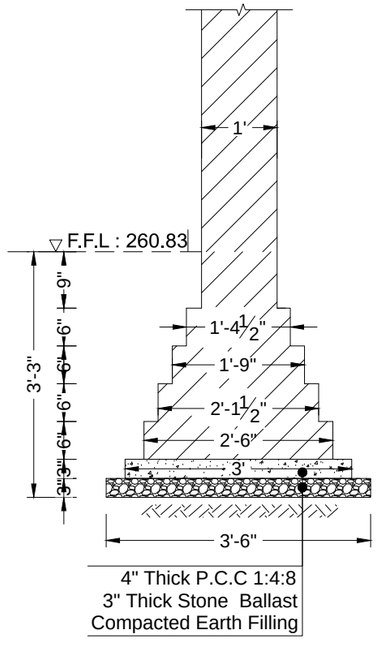
1- ROOM FINISHING SHALL BE AS PER CONTRACT (BILL # 15) BUILDINGS (SERVANT QUARTER)

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.



GAUGE WELL ROOM PLAN



ROOM WALL FOUNDATION
TYPICAL DETAIL

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

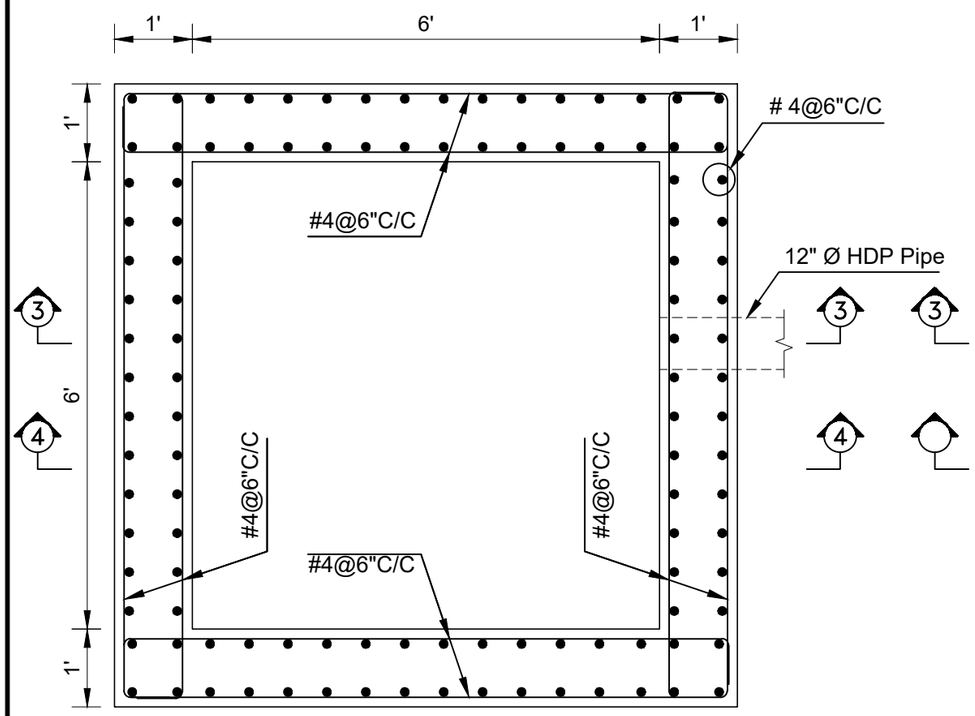
Consultant
MOTT MACDONALD
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MM Pakistan(Pvt.) Ltd.
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Client
IRRIGATION DEPARTMENT
GOVT. OF SINDH

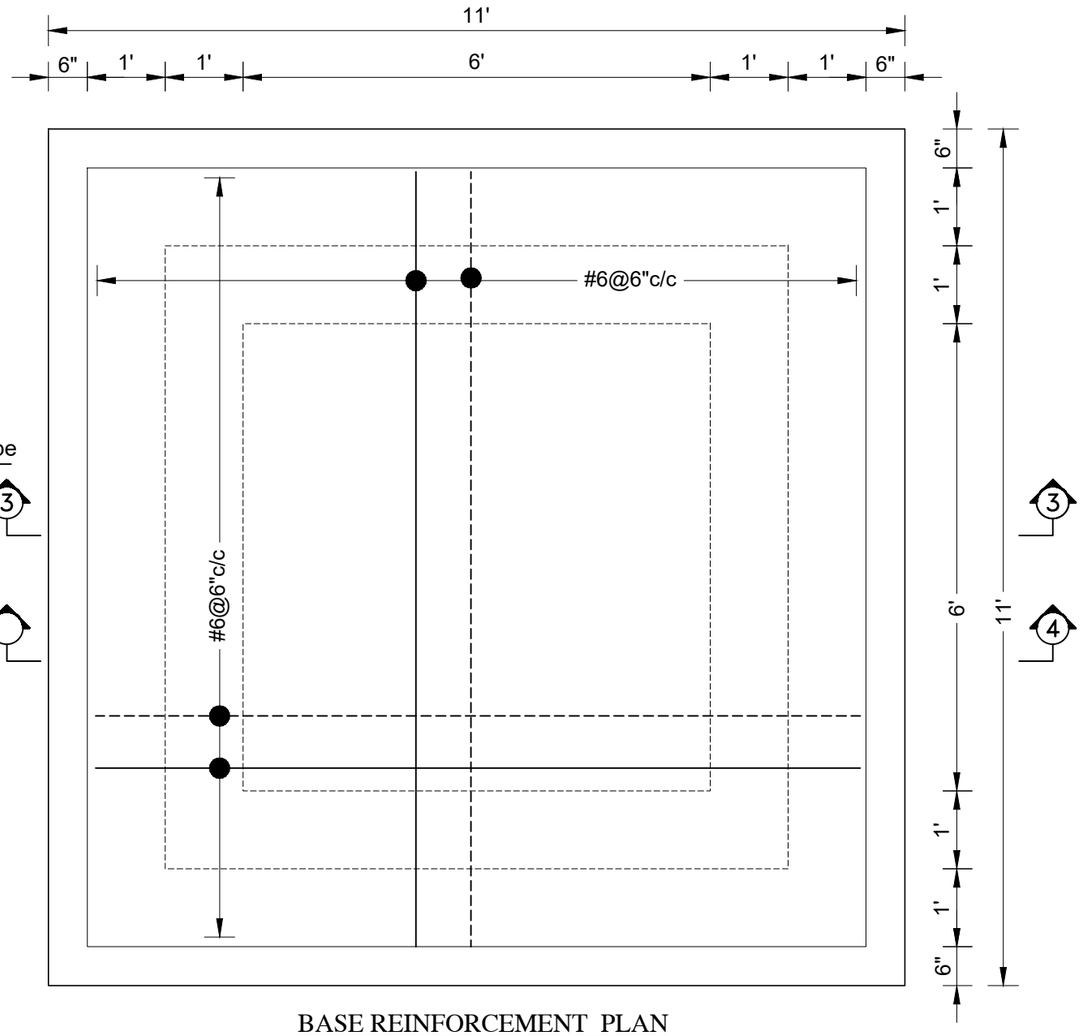
Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL ROOM PLAN
SECTION, ELEVATION AND FOUNDATION DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-FC-3004				Rev. 0



REINFORCEMENT PLAN



BASE REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant
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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

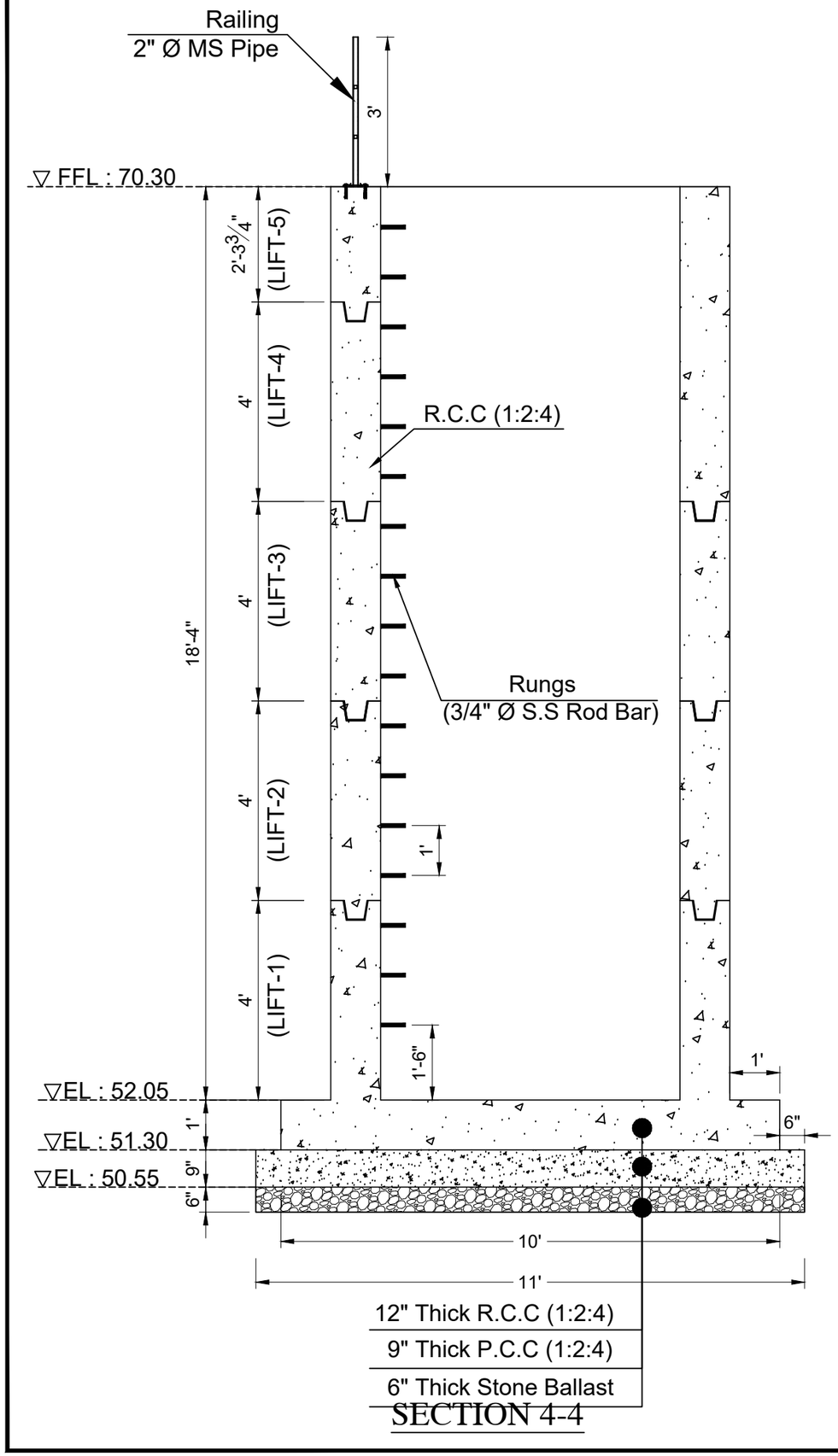
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

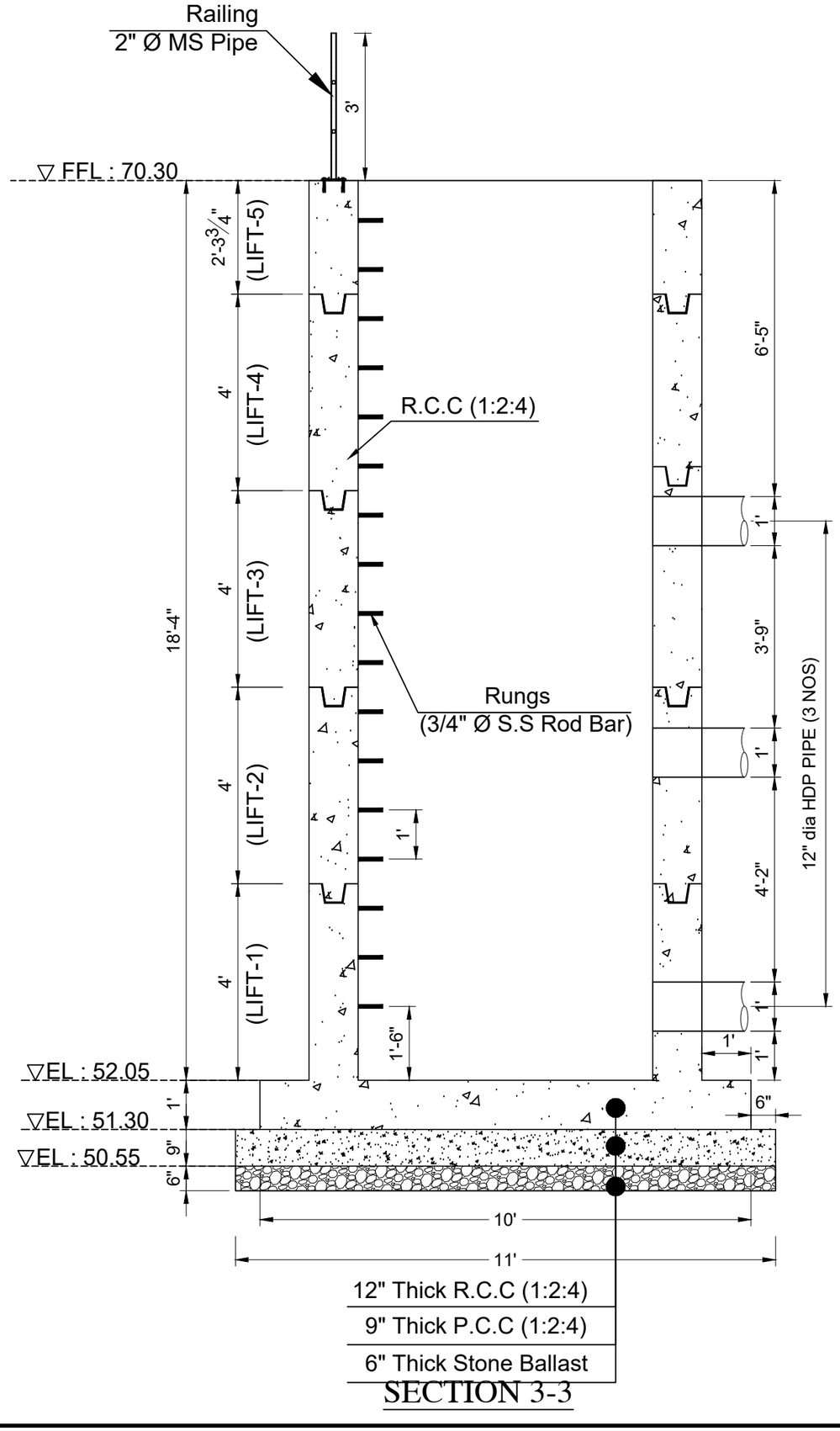
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL ROOM
REINFORCEMENT PLAN

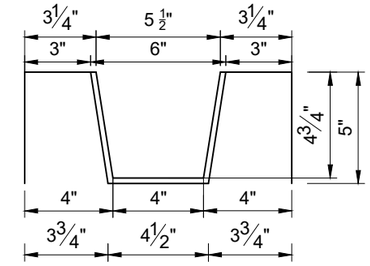
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-FC-3005			Rev. 0



SECTION 4-4



SECTION 3-3



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

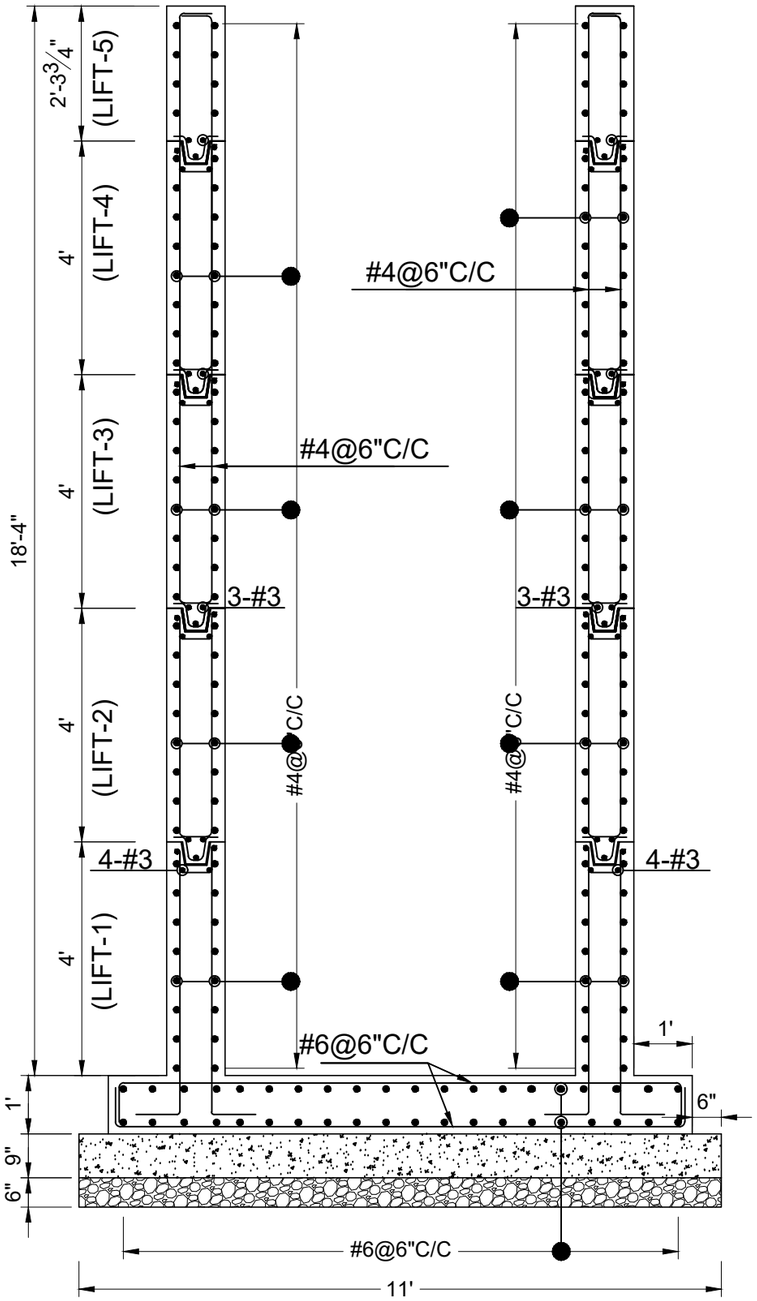
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

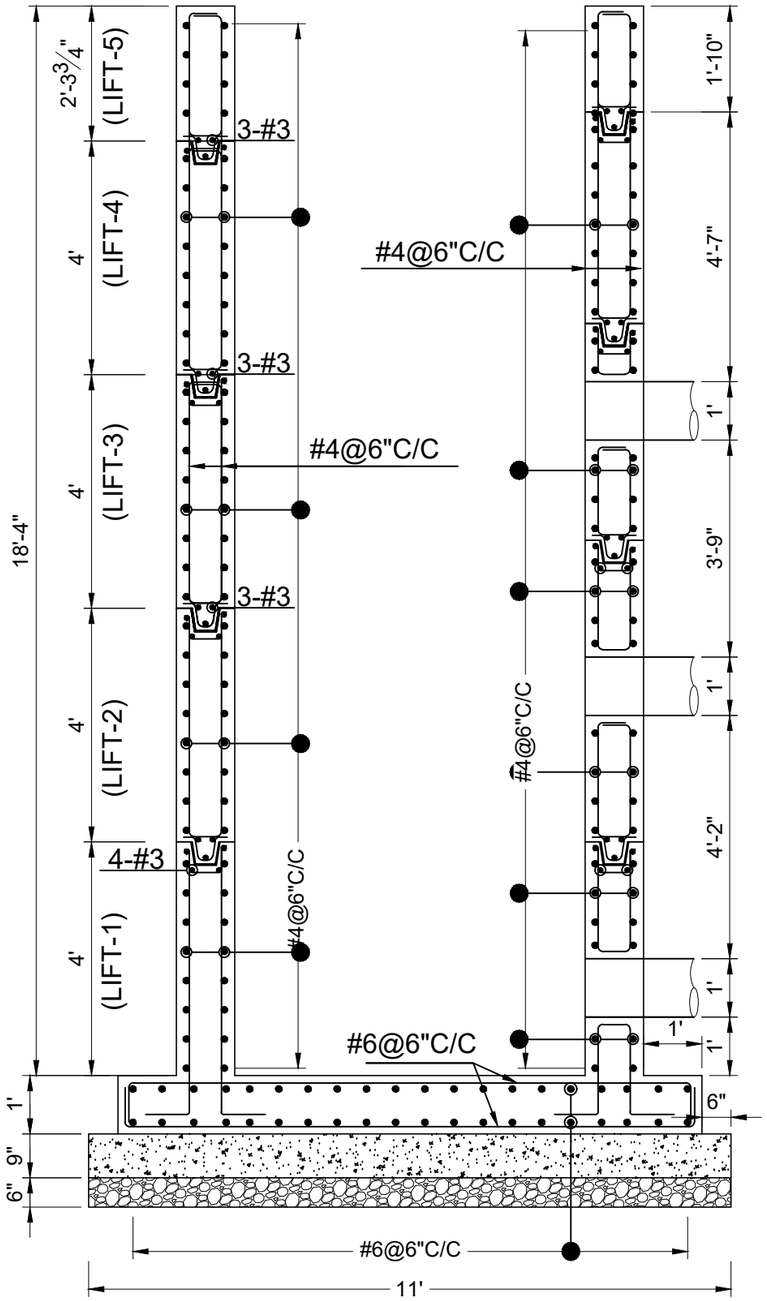
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL ROOM
SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-FC-3006				Rev. 0



SECTION 4-4



SECTION 3-3

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

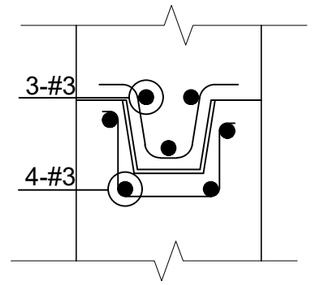
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

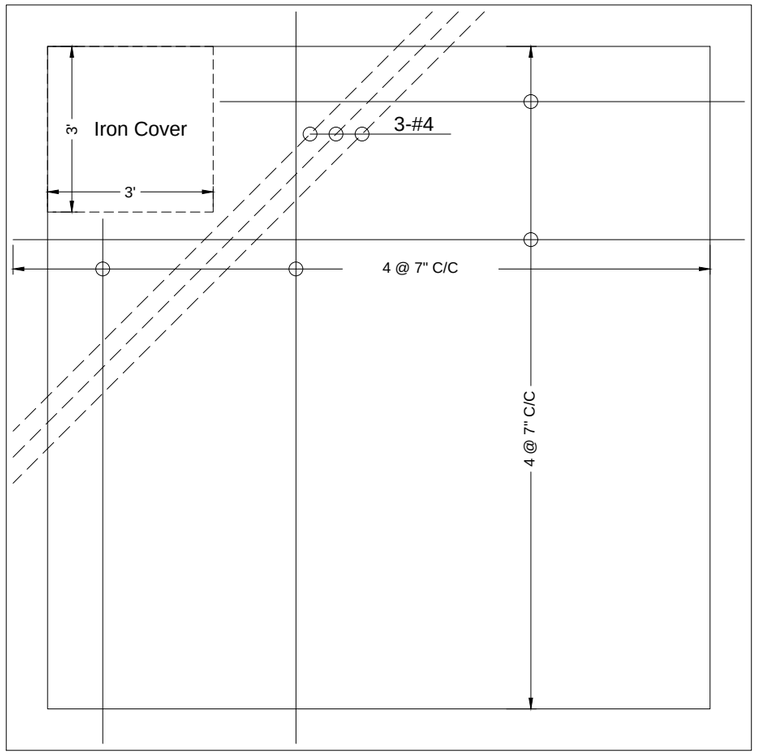
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

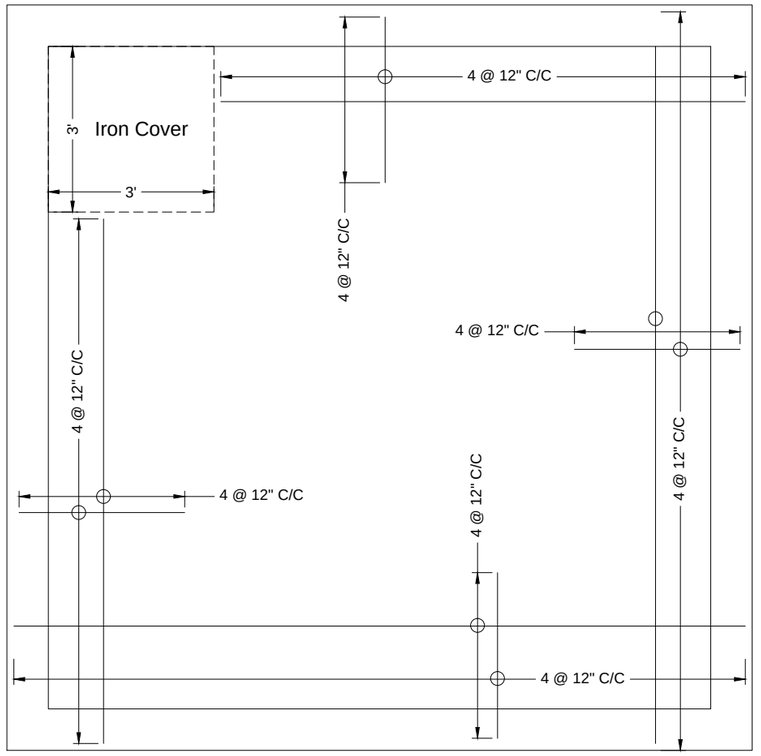
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL ROOM
REINFORCEMENT DETAIL SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-FC-3007			Rev. 0



SLAB REINFORCEMENT PLAN



SLAB HOLDING BAR REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

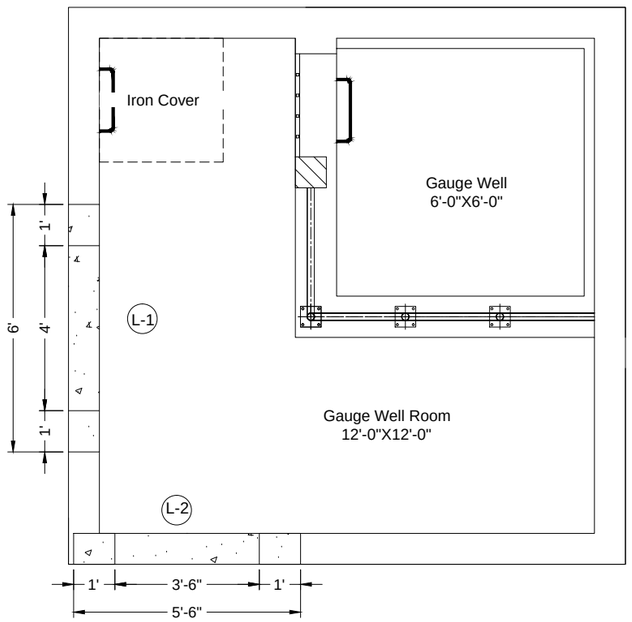
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

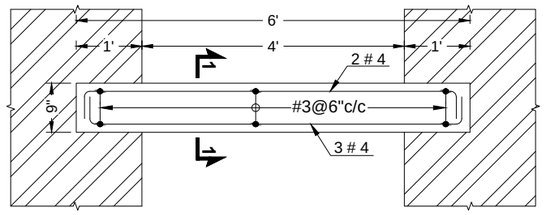
4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

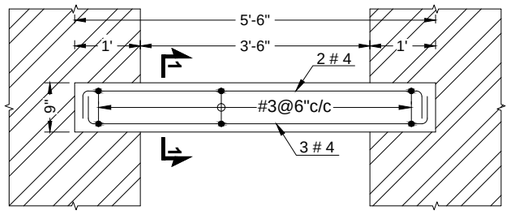
STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



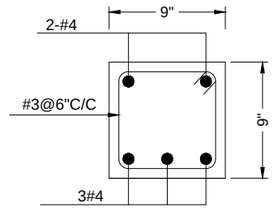
LINTEL LAYOUT PLAN



L-SECTION LINTEL - 1 (01NOS.)



L-SECTION LINTEL - 2 (01NOS.)



SECTION 1-1

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

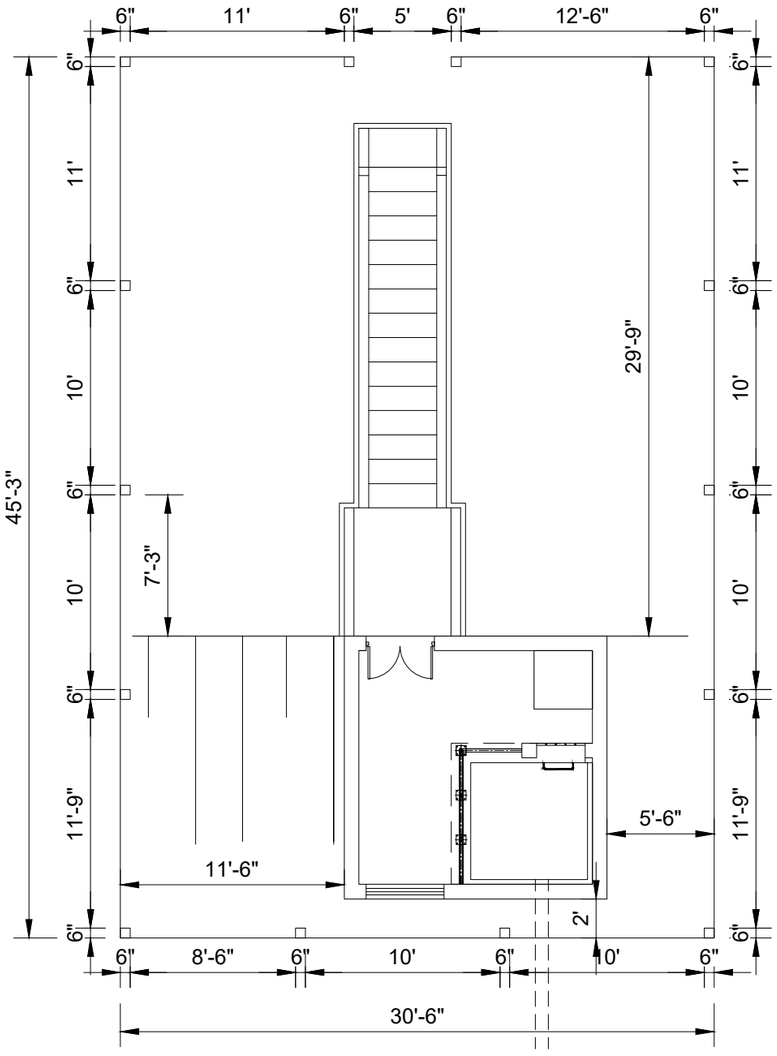
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

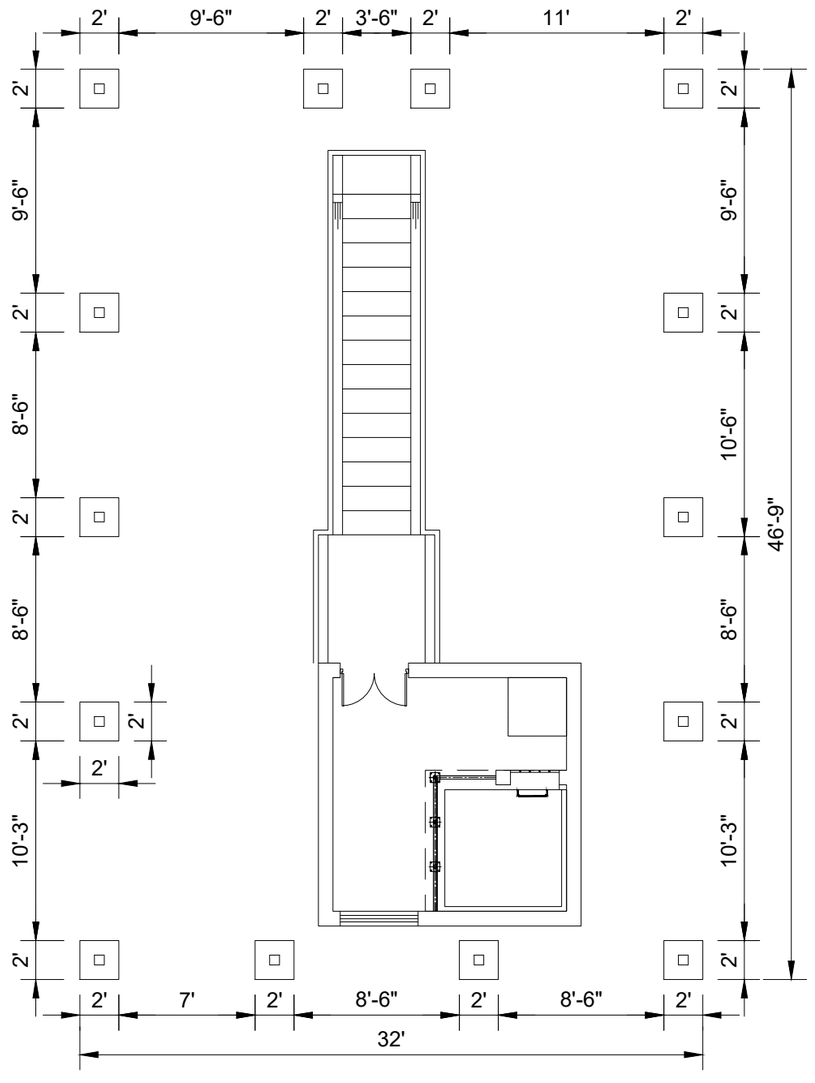
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL ROOM
SLAB AND LINTEL REINFORCEMENT DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-FC-3008				Rev. 0



GUAGE WELL FENCE LAYOUT PLAN



EXCAVATION PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

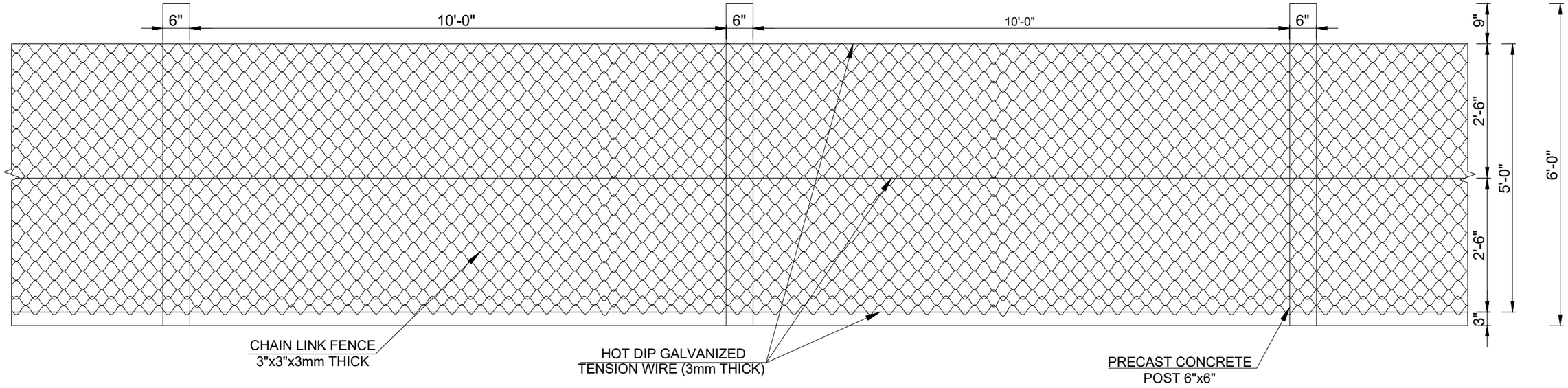
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

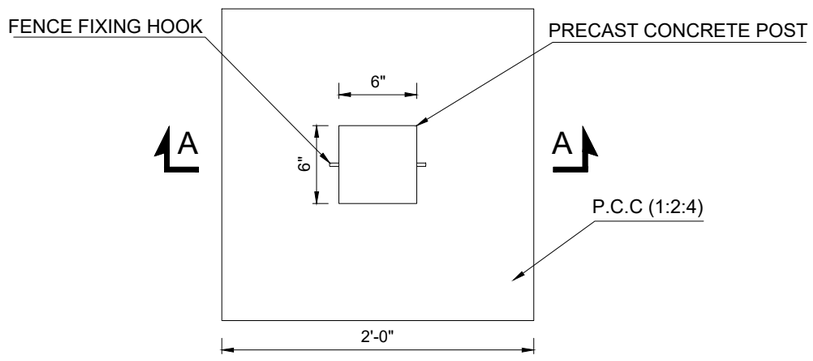
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL FENCE LAYOUT PLAN
AND EXCAVATION PLAN

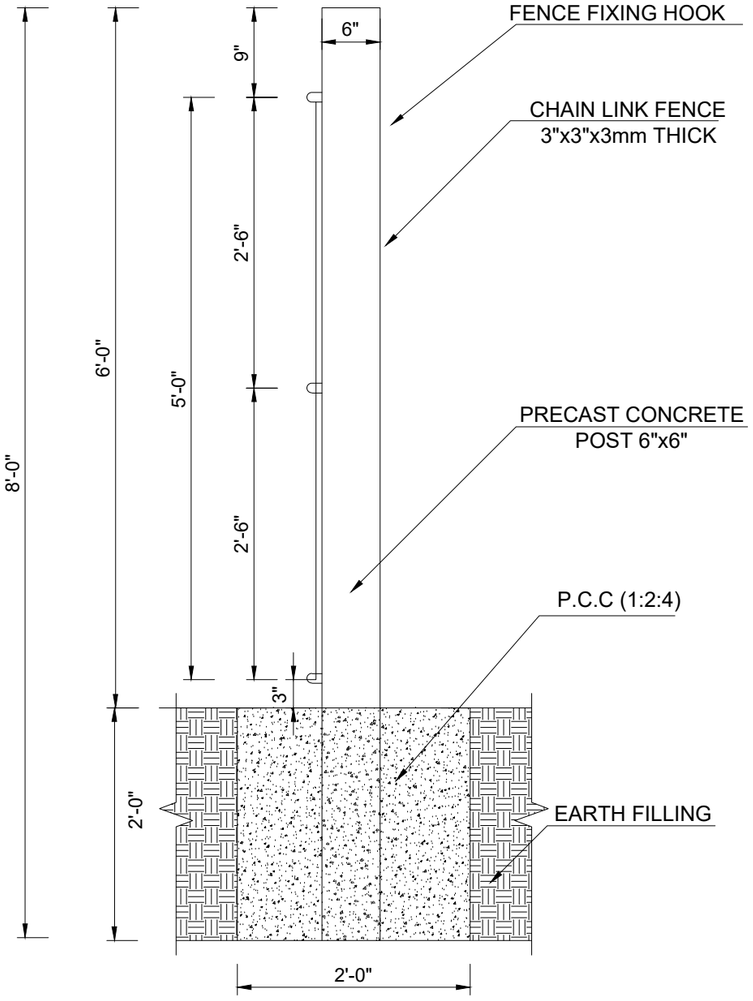
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Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-FC-3009				Rev. 0



TYP. ELEVATION



TYP. FOUNDATION PLAN



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

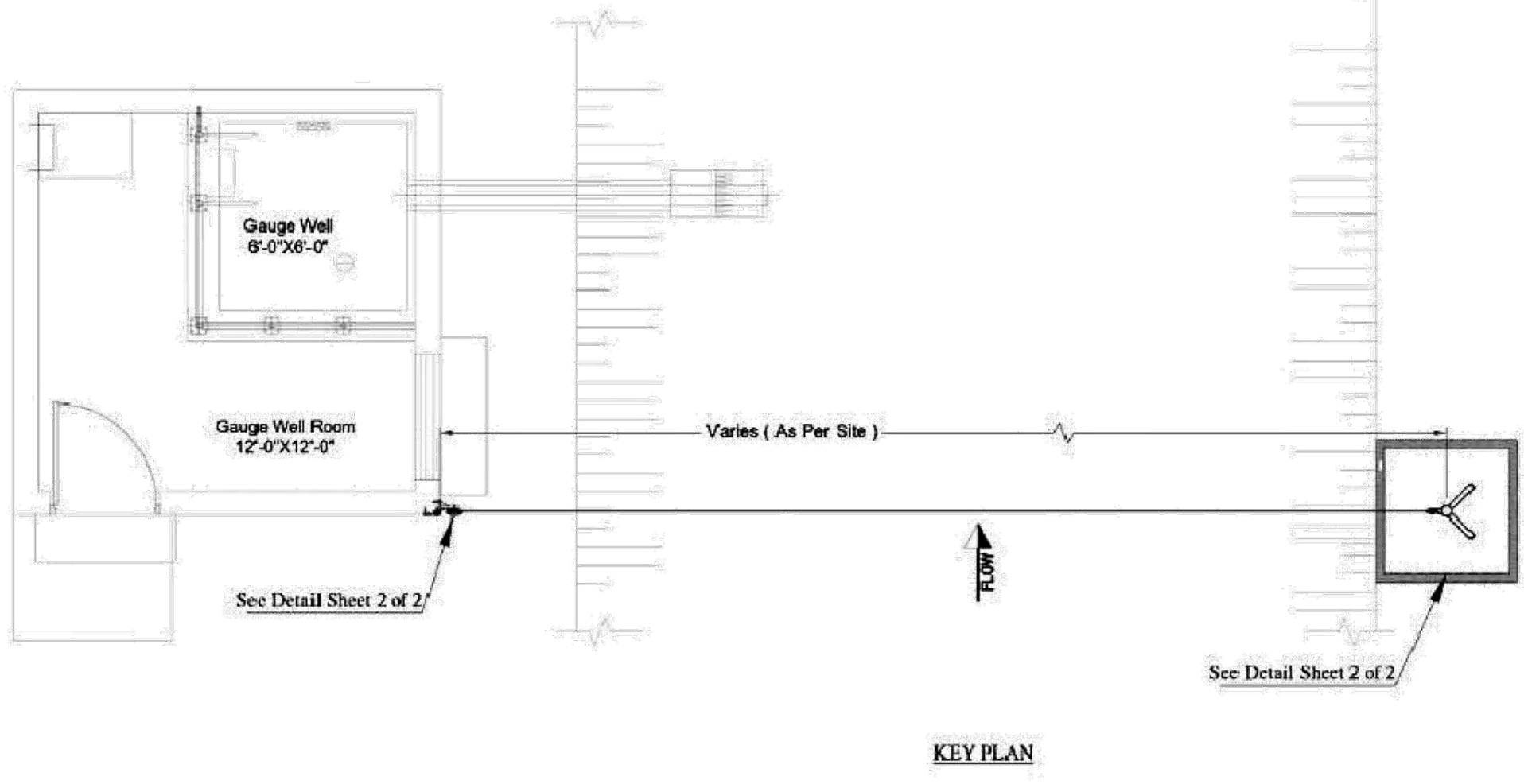
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GUAGE WELL CHAIN LINK FENCE
ELEVATION AND SECTION

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-FC-3010				Rev. 0



KEY PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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in association with
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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

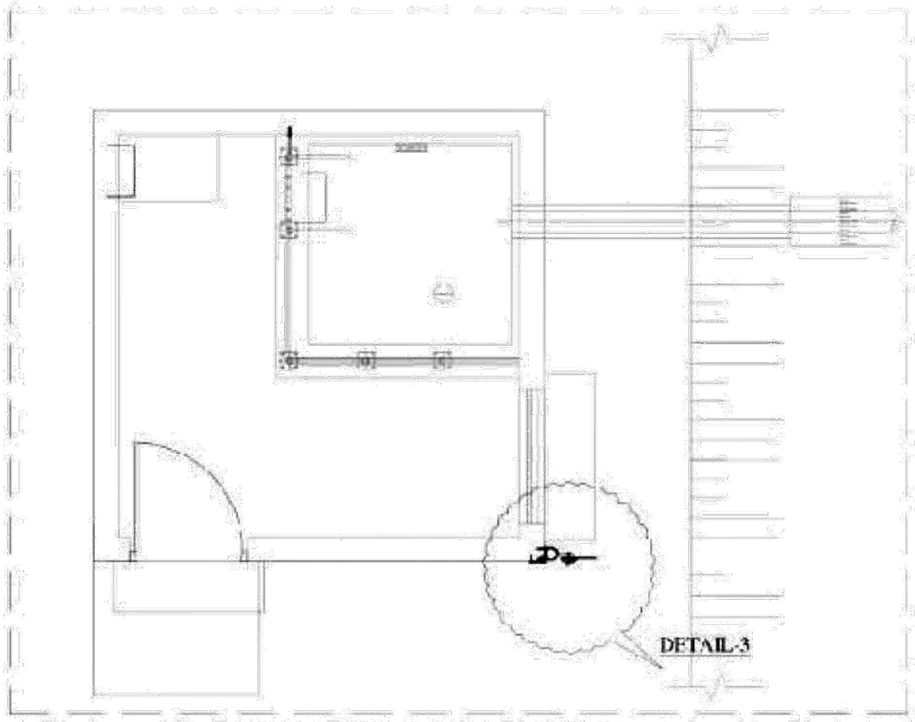
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

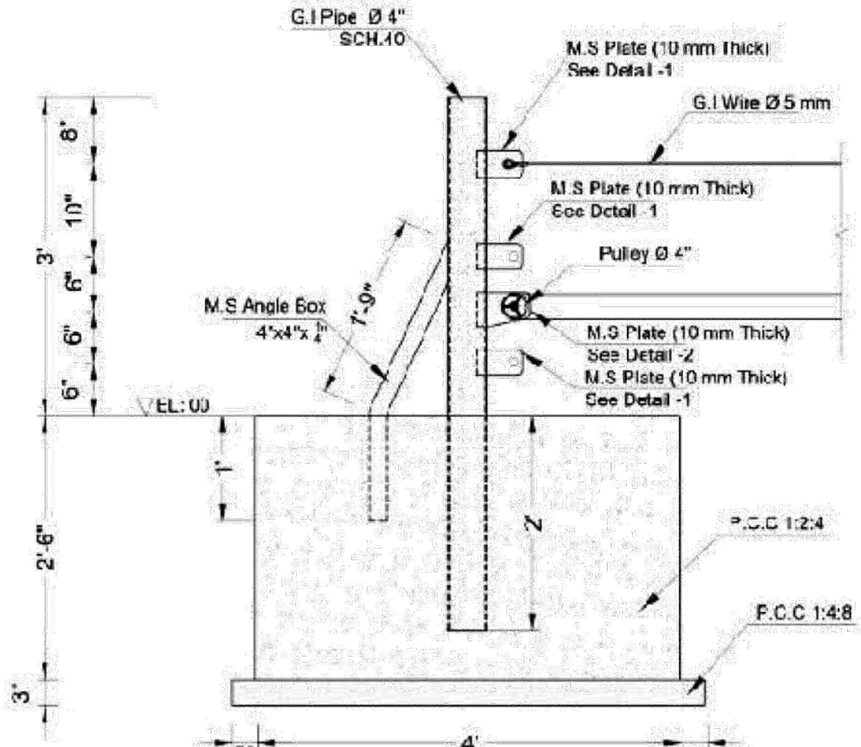
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

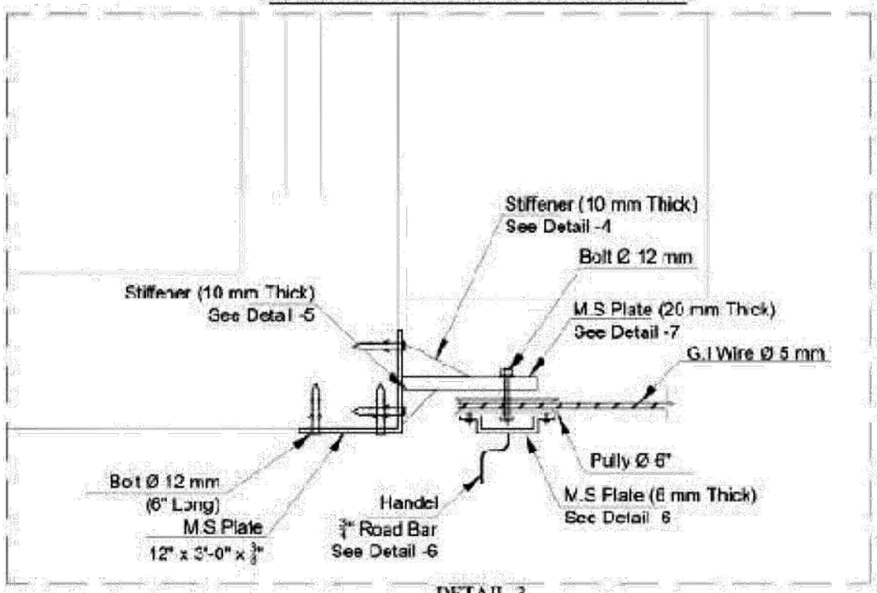
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-FC-3011				Rev. 0



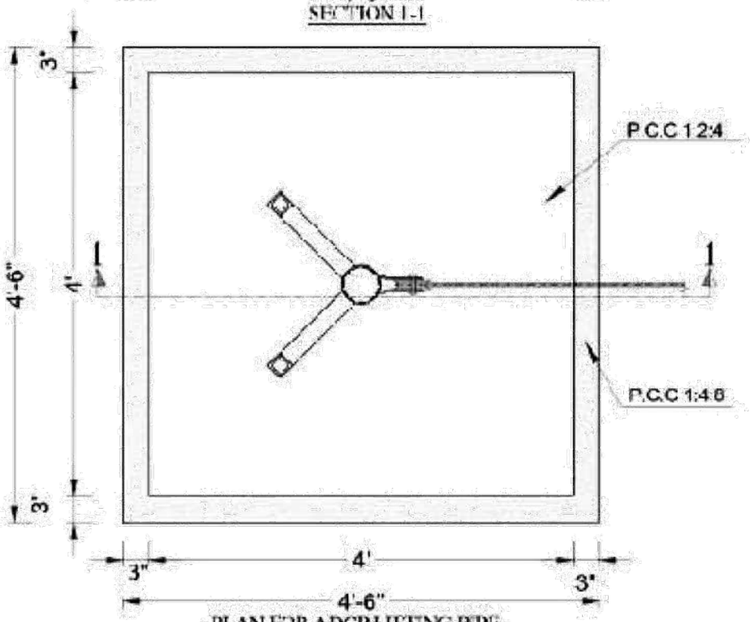
PLAN FOR ADCP LIFTING AT GAUGE WELL



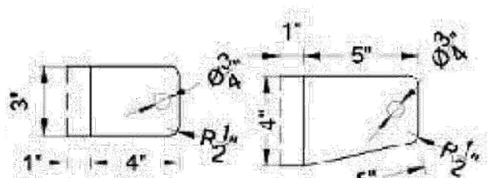
SECTION 1-1



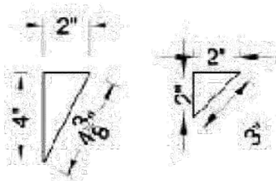
DETAIL-3



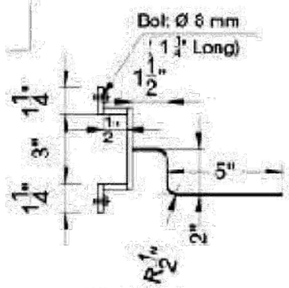
PLAN FOR ADCP LIFTING PIPE



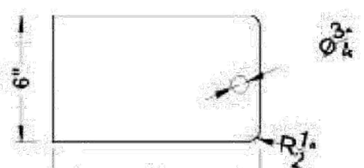
DETAIL-1 DETAIL-2



DETAIL-4 DETAIL-5



DETAIL-6



DETAIL-7

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

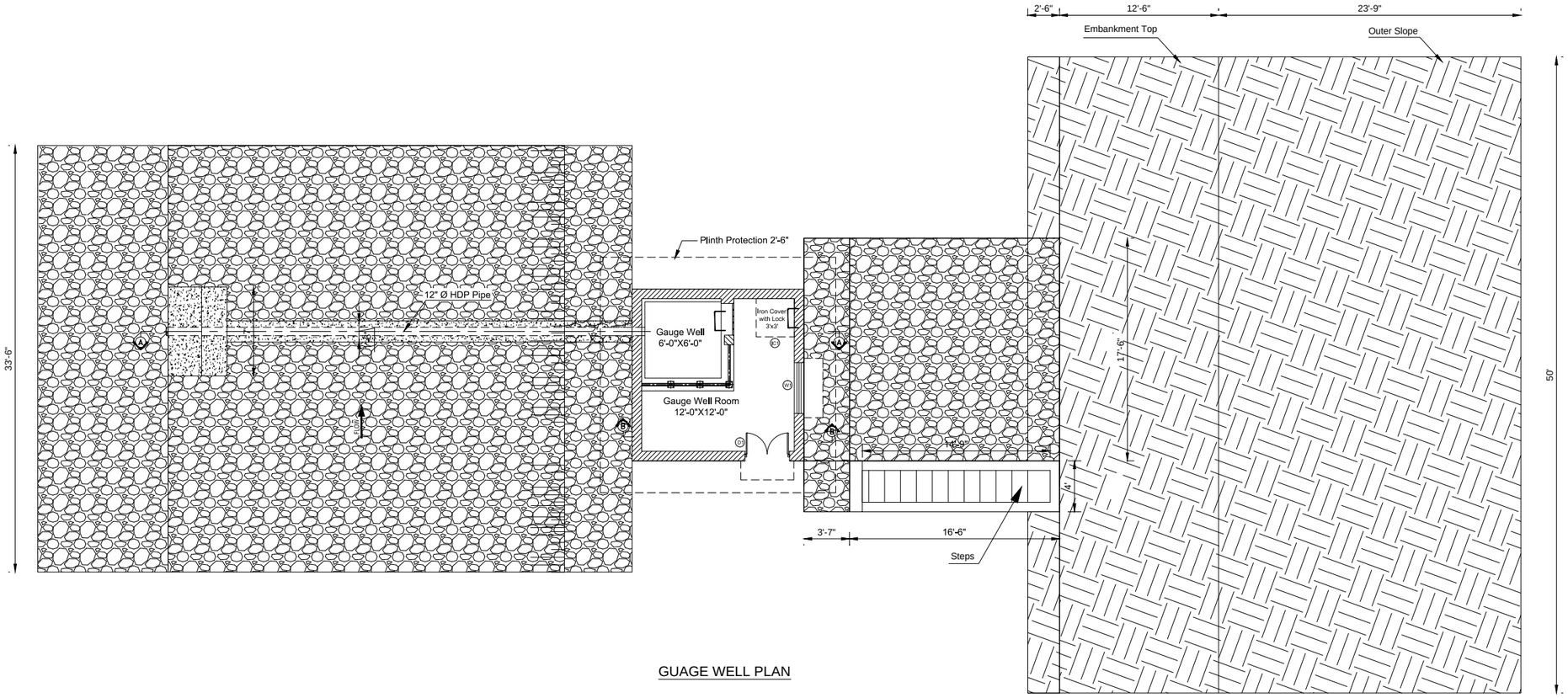
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
FULLELI CANAL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale AS SHOWN		Project SBIP			Status -
Paper Size A1		CAD file			
Drawing No SBIP/1-VO-KB-FC-3012					Rev. 0



GUAGE WELL PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

Contract

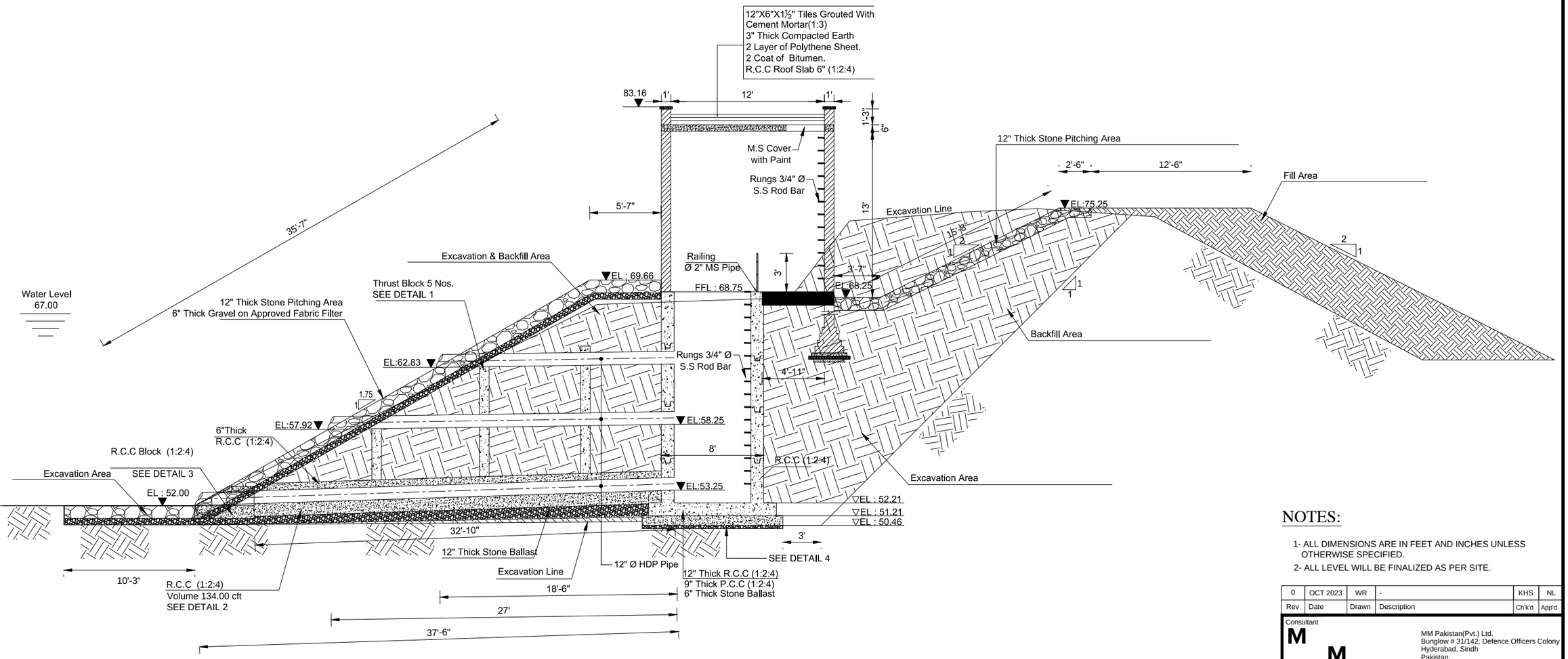
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL PLAN

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-KBF-4001			Rev. 0

KB FEEDER R/S



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

2- ALL LEVEL WILL BE FINALIZED AS PER SITE.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

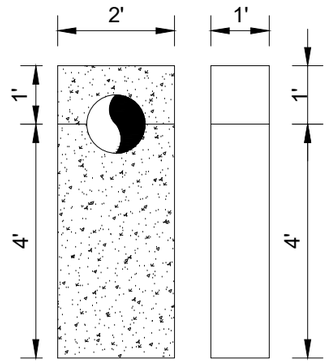
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

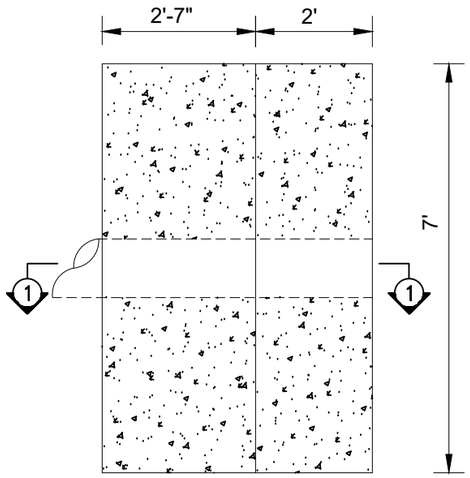
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL SECTION A-A

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-KBF-4002			Rev. 0

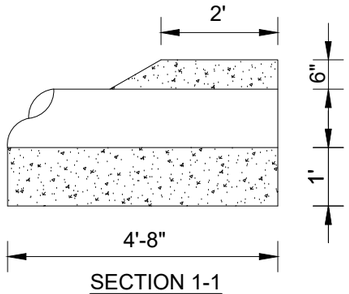


Thrust Block 5 Nos.

DETAIL - 1

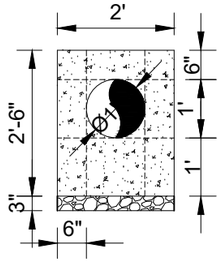


PLAN



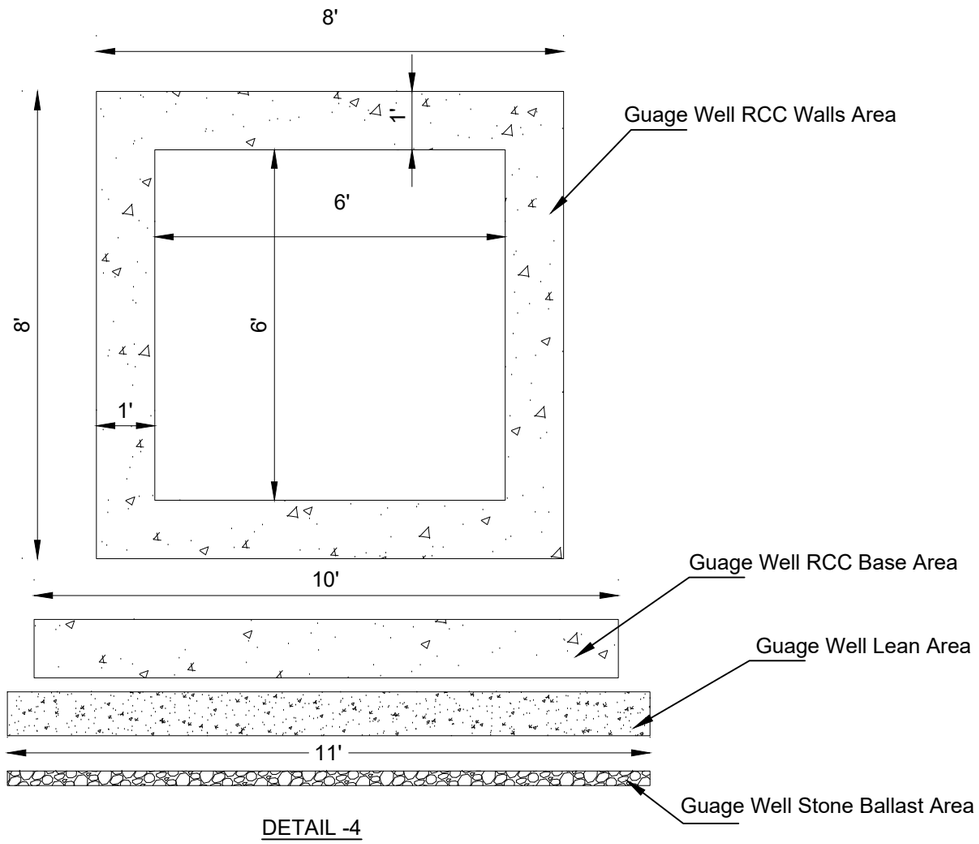
SECTION 1-1
R.C.C Block (1:2:4)

DETAIL -3



R.C.C (1:2:4) Around HDP

DETAIL -2



DETAIL -4

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

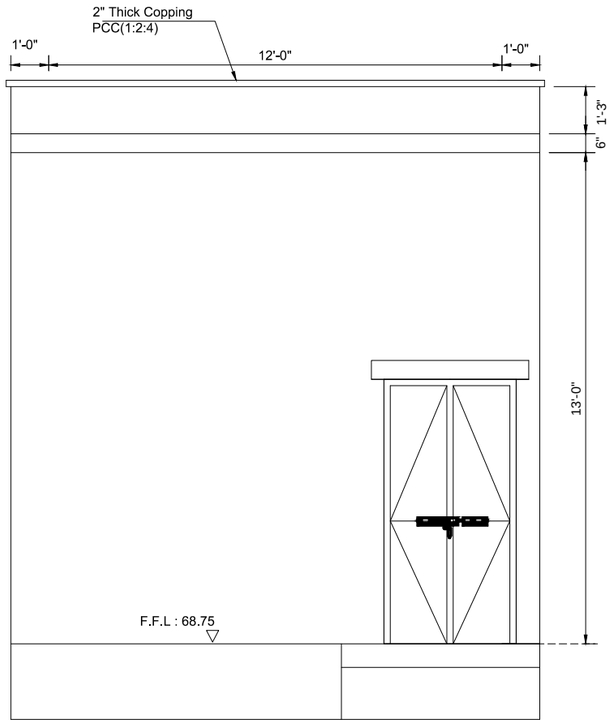
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

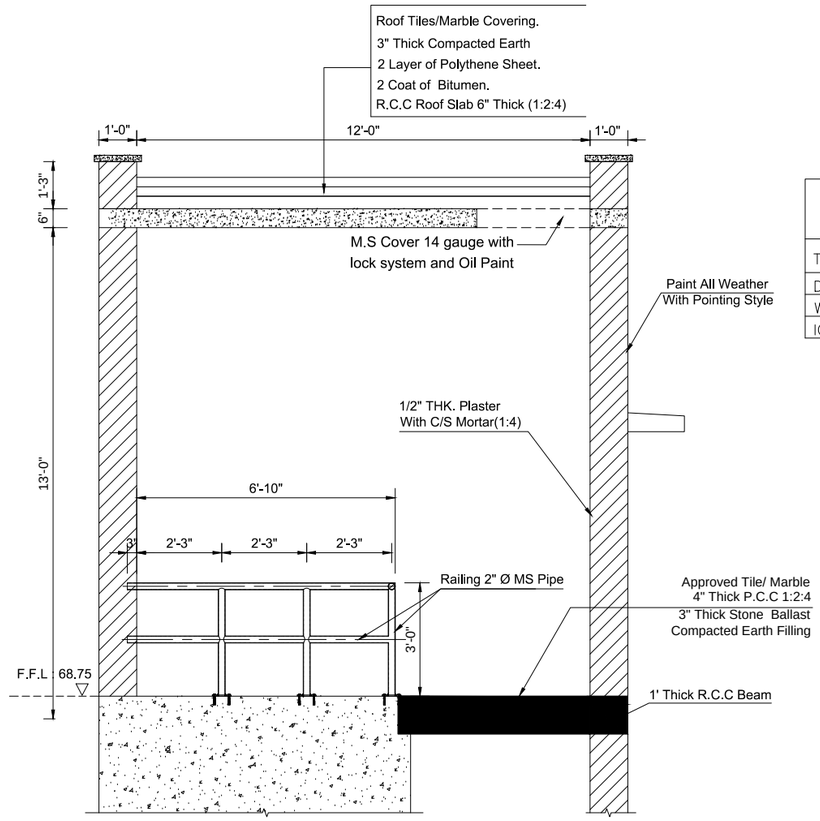
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
DETAIL 1,2,3,4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4003				Rev. 0



FRONT ELEVATION



SECTION B-B

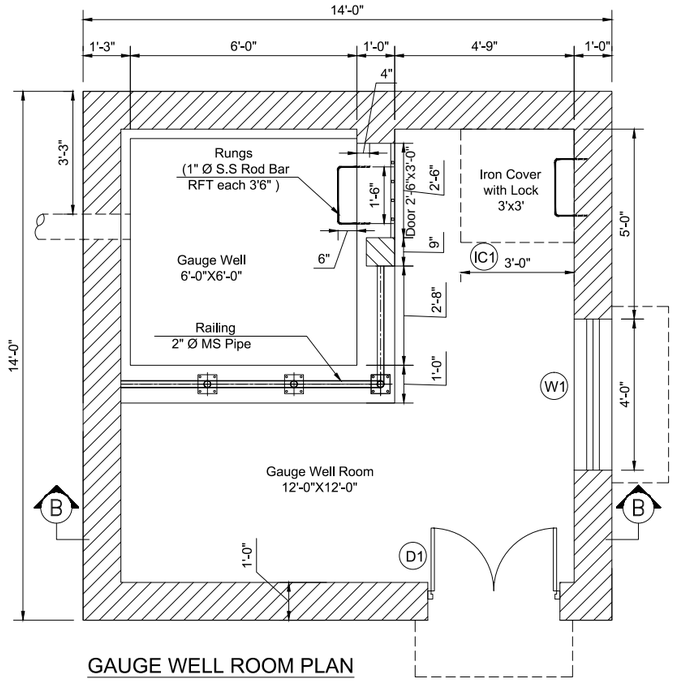
SCHEDULE OF OPENINGS					
TYPE	SIZE	SILL	NOS	STYLE	DESCRIPTION
D-1	3'-6"x7'-0"	0'-0"	01	DOUBLE LEAF	M.S DOOR(GAUGE 18)
W-1	4'-0"x4'-0"	2'-0"	01	–	M.S WINDOW(GAUGE 18)
IC-1	3'-0"x3'-0"	–	01	–	M.S IRON COVER(GAUGE 14)

FINISHES:

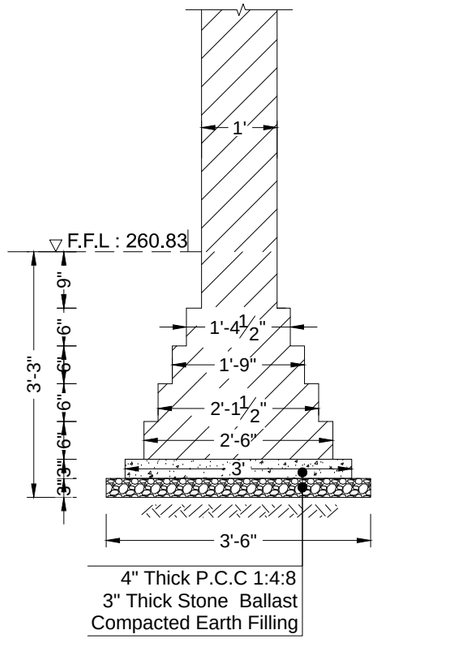
1- ROOM FINISHING SHALL BE AS PER CONTRACT (BILL # 15) BUILDINGS (SERVANT QUARTER)

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.



GAUGE WELL ROOM PLAN



ROOM WALL FOUNDATION
TYPICAL DETAIL

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant
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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

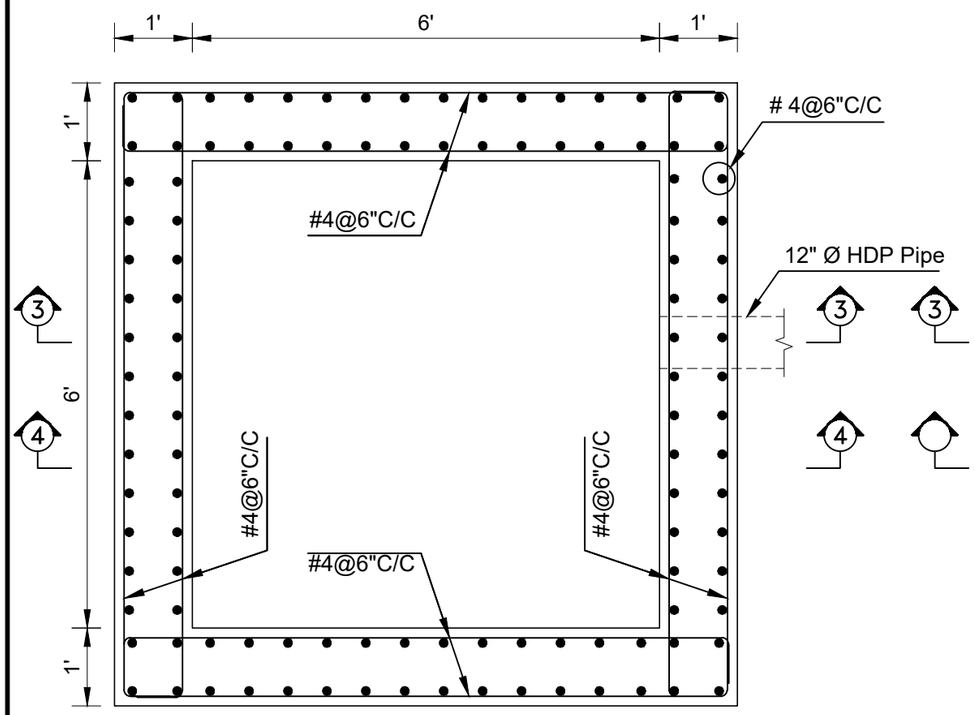
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

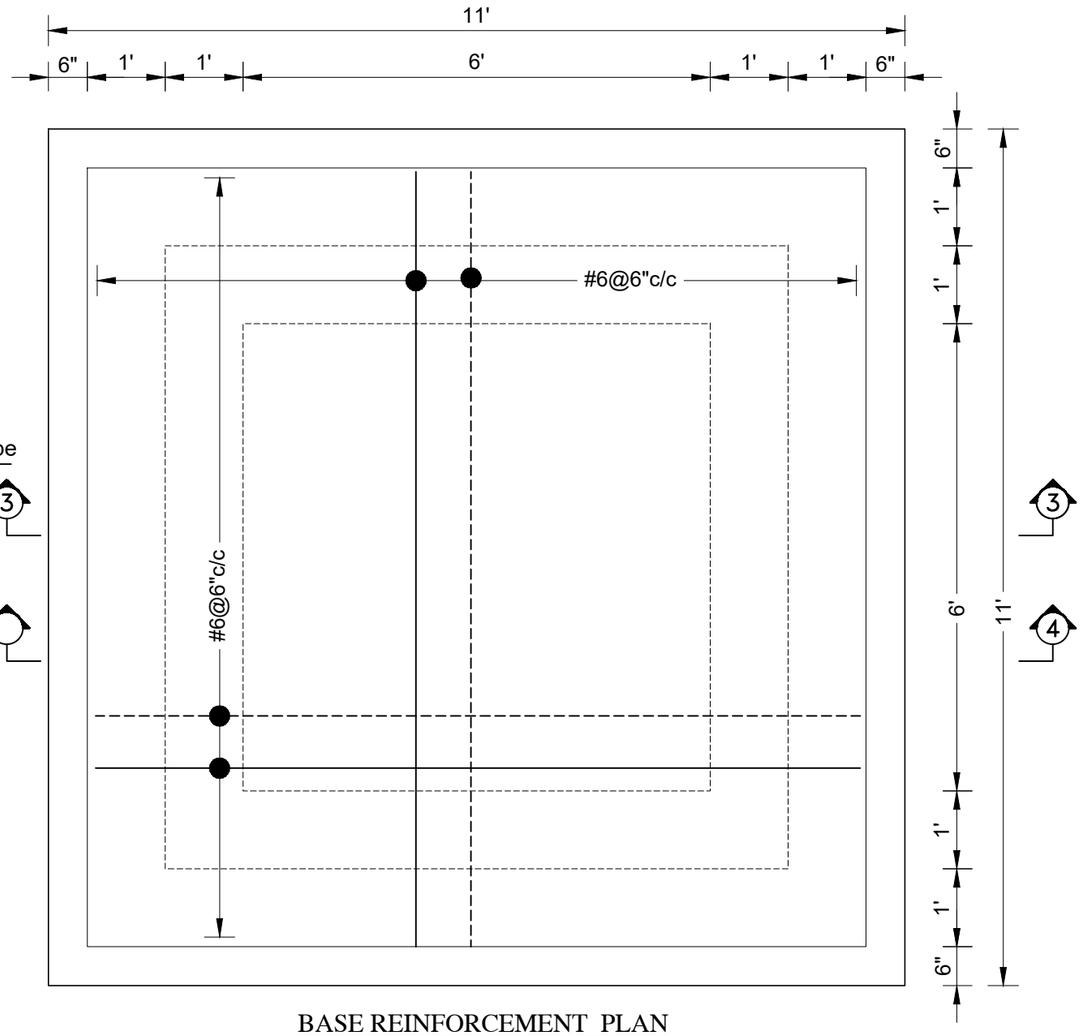
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL ROOM PLAN
SECTION, ELEVATION AND FOUNDATION DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4004				Rev. 0



REINFORCEMENT PLAN



BASE REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant
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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

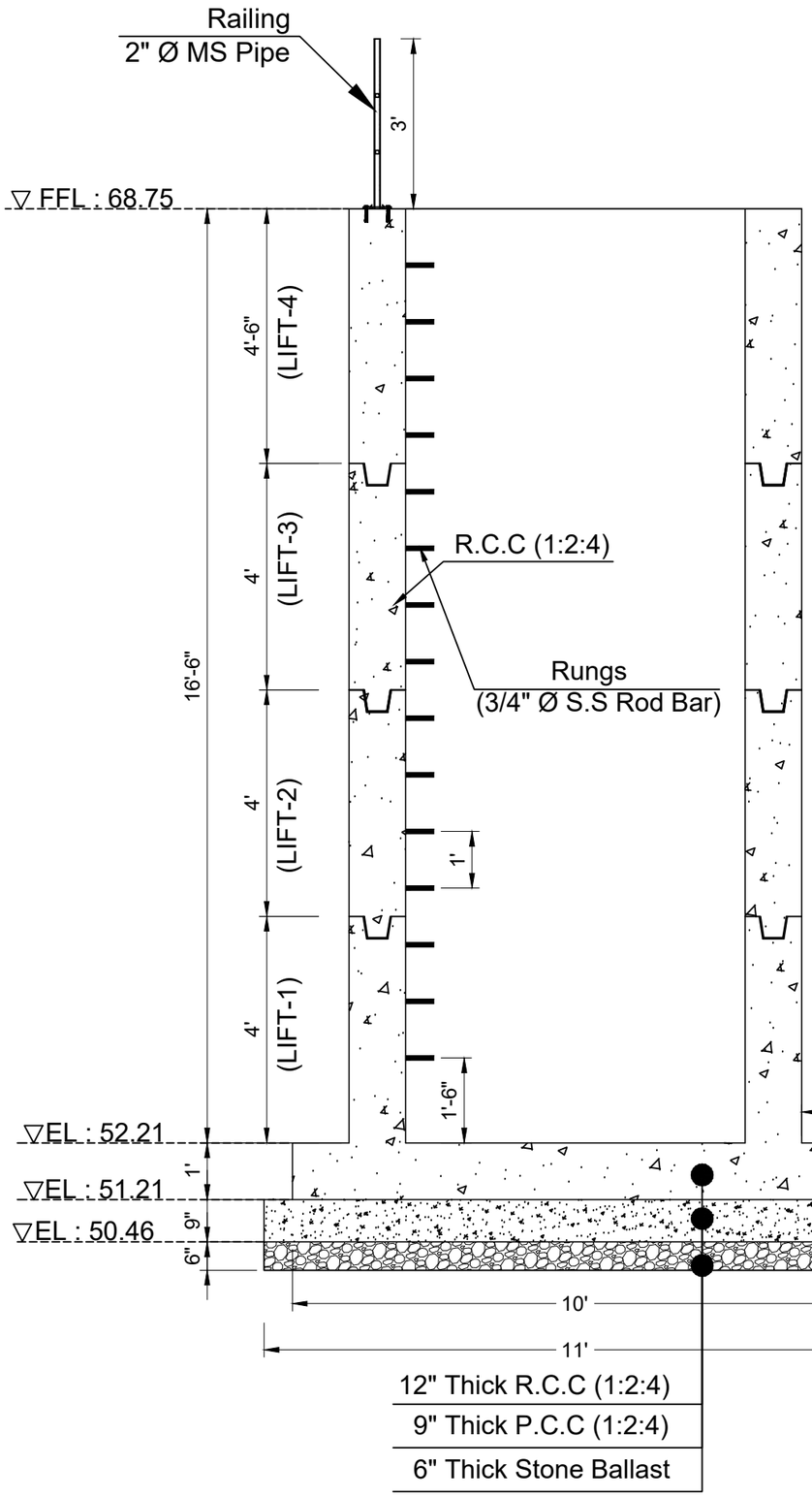
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

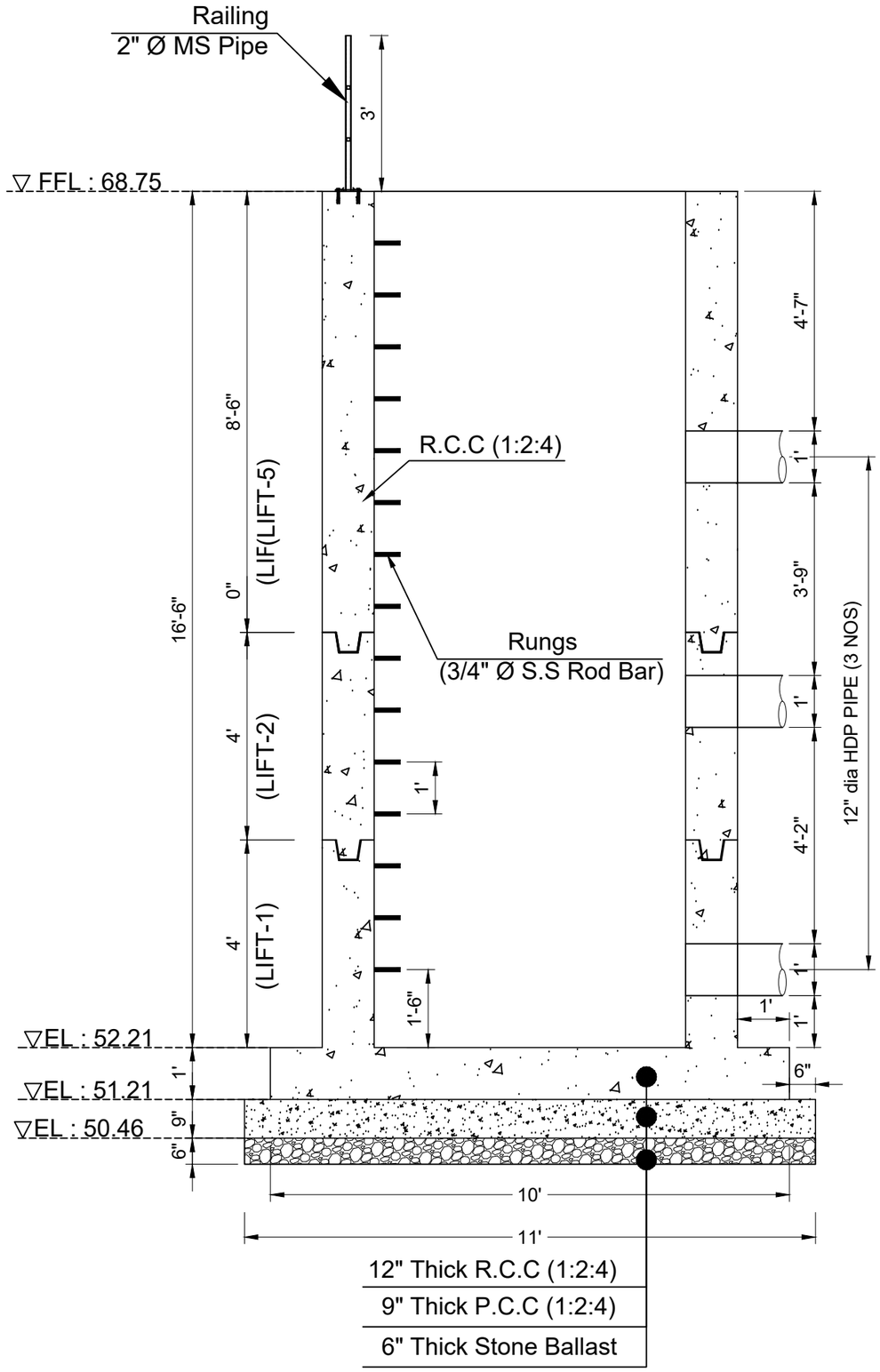
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL ROOM
REINFORCEMENT PLAN

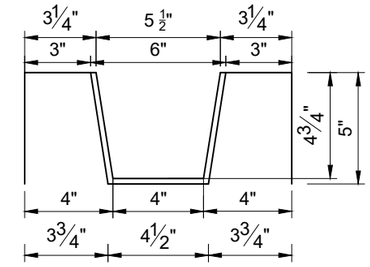
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-KBF-4005			Rev. 0



SECTION 4-4



SECTION 3-3



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

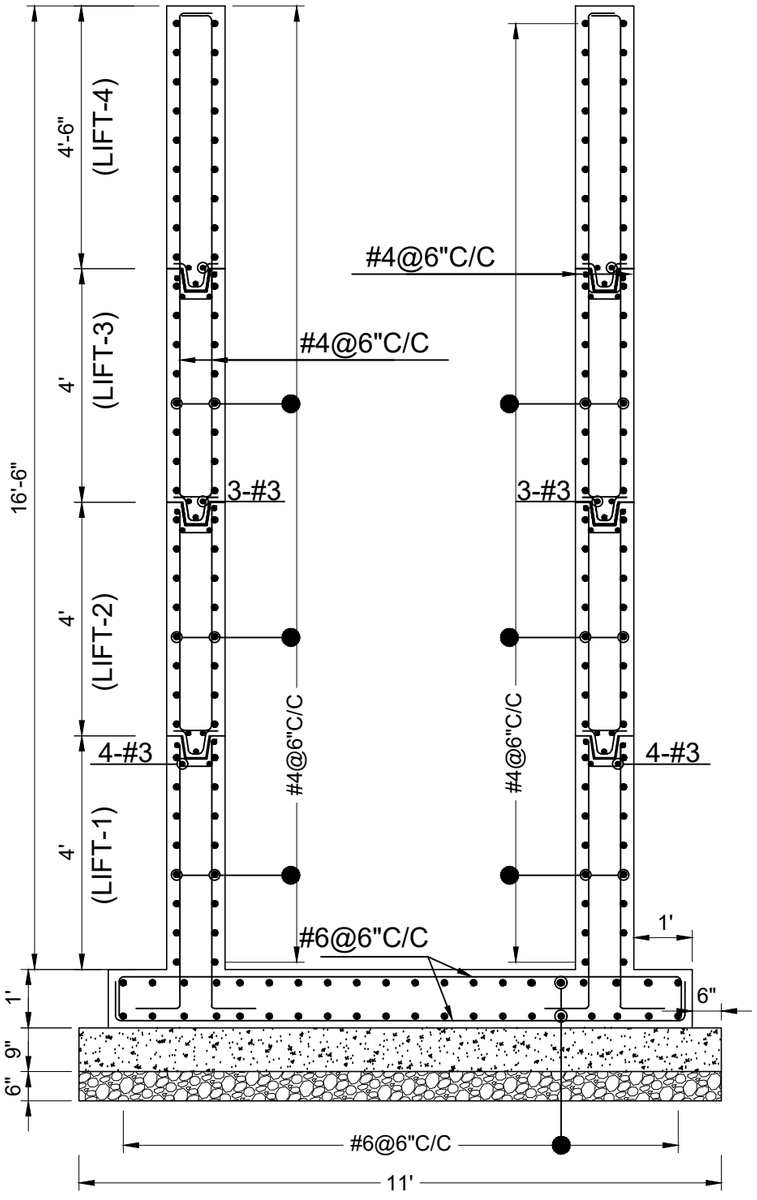
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

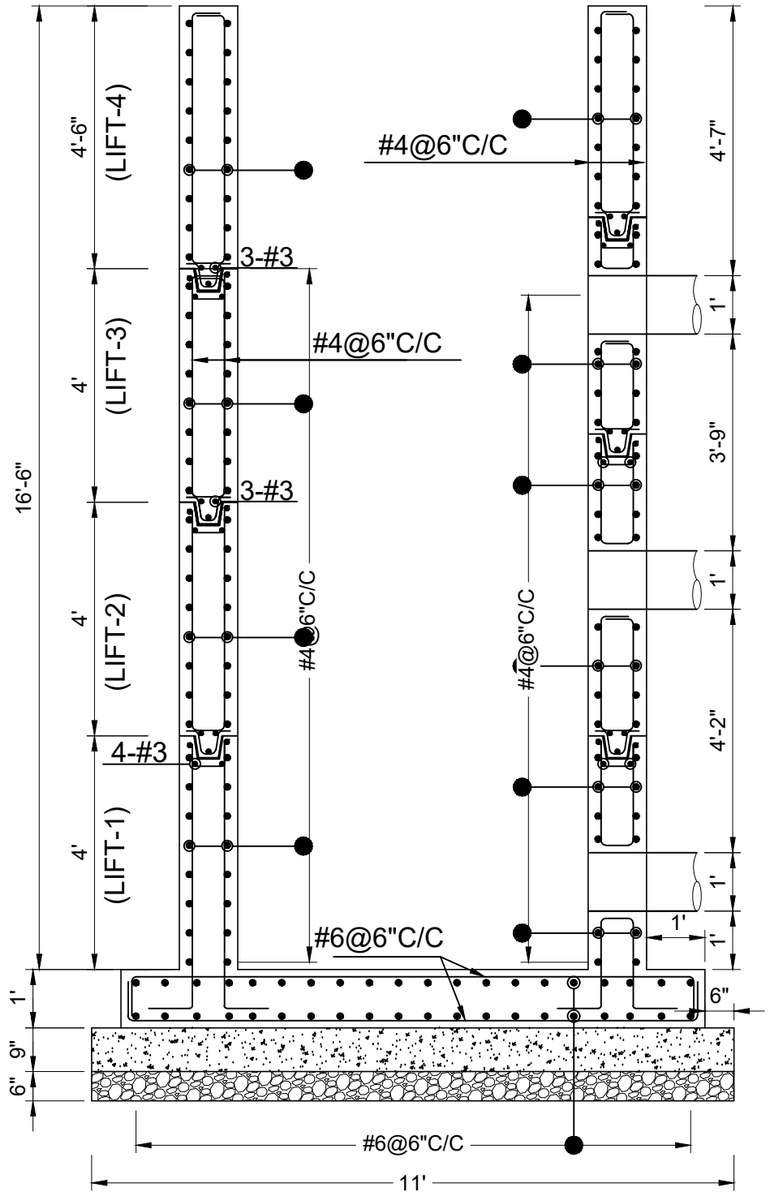
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL ROOM
SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4006				Rev. 0



SECTION 4-4



SECTION 3-3

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

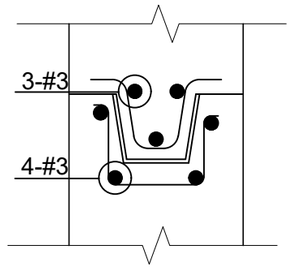
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

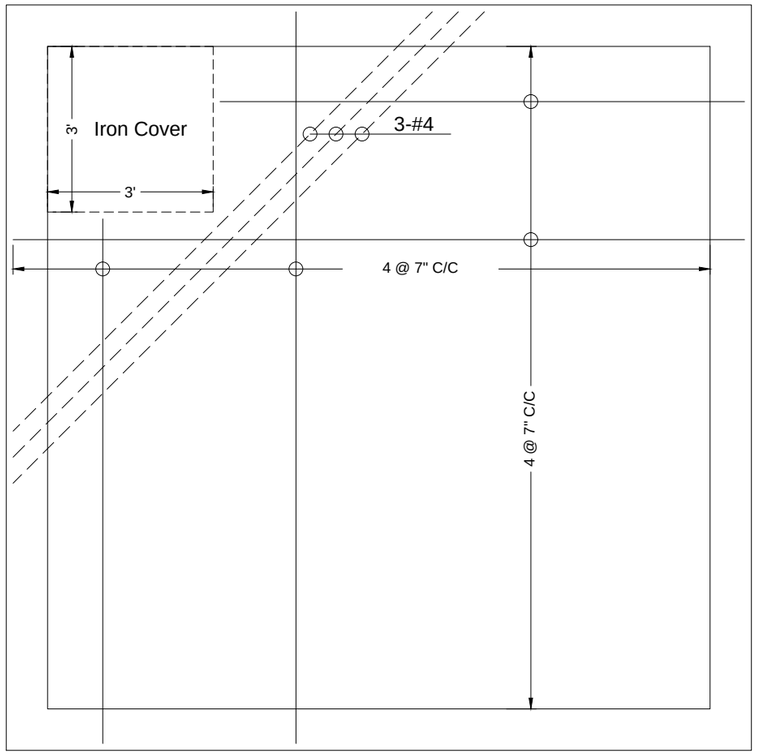
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

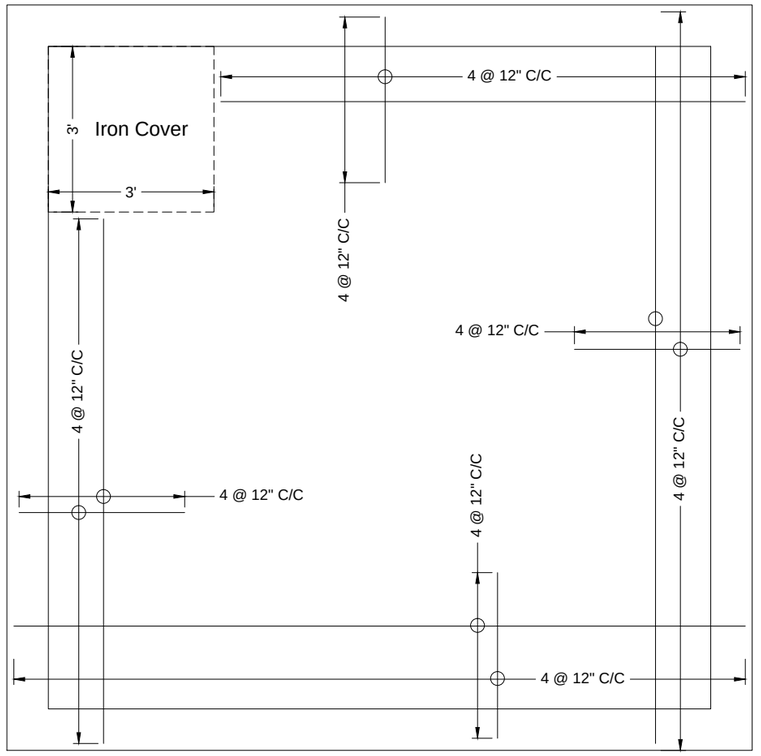
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL ROOM
REINFORCEMENT DETAIL SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4007				Rev. 0



SLAB REINFORCEMENT PLAN



SLAB HOLDING BAR REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

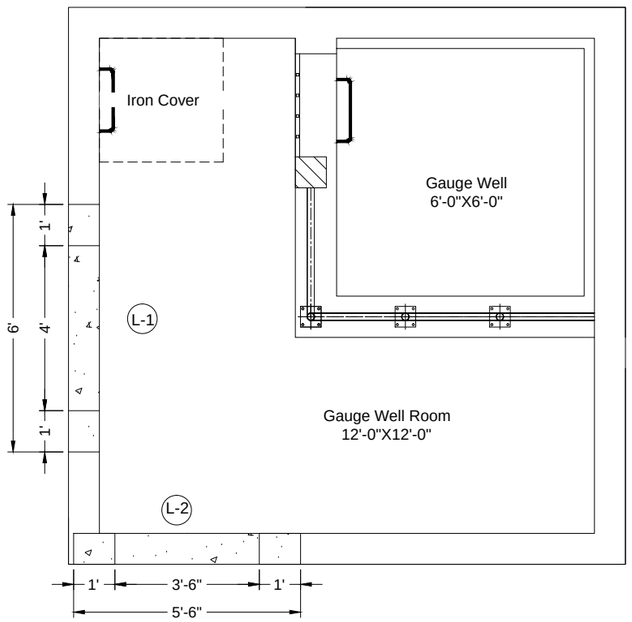
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

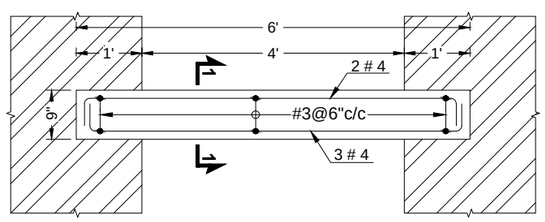
4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

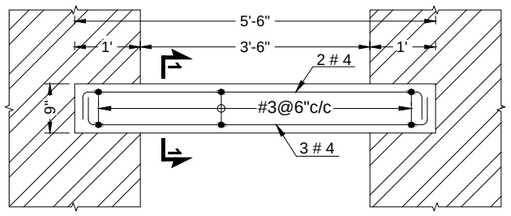
STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



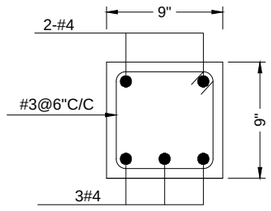
LINTEL LAYOUT PLAN



L-SECTION LINTEL - 1 (01NOS.)



L-SECTION LINTEL - 2 (01NOS.)



SECTION 1-1

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

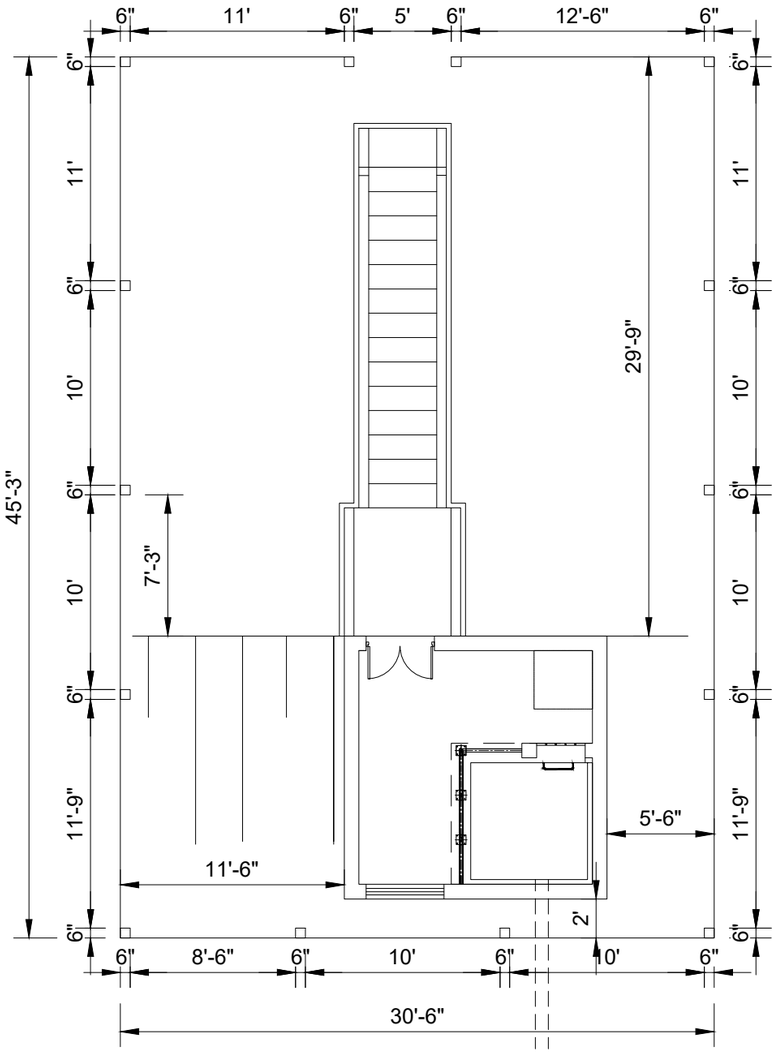
Consultant
MOTT MACDONALD
in association with
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Hyderabad, Sindh
Pakistan.
Tel +92-22-2108122-2108436
Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client
IRRIGATION DEPARTMENT
GOVT. OF SINDH

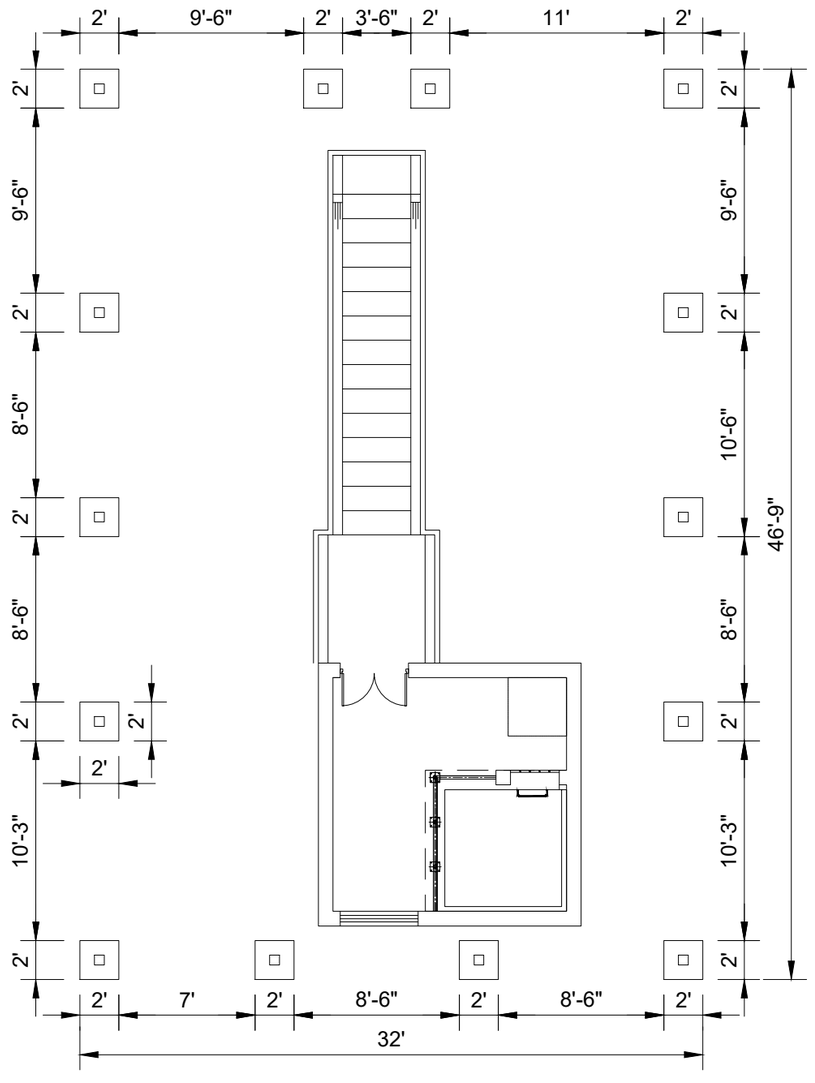
Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL ROOM
SLAB AND LINTEL REINFORCEMENT DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4008				Rev. 0



GUAGE WELL FENCE LAYOUT PLAN



EXCAVATION PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

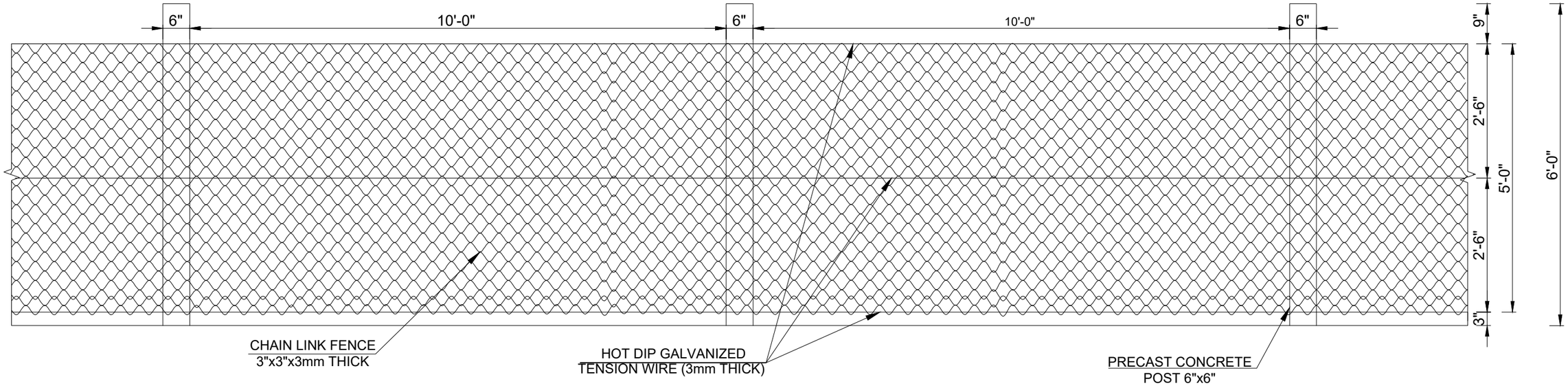
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

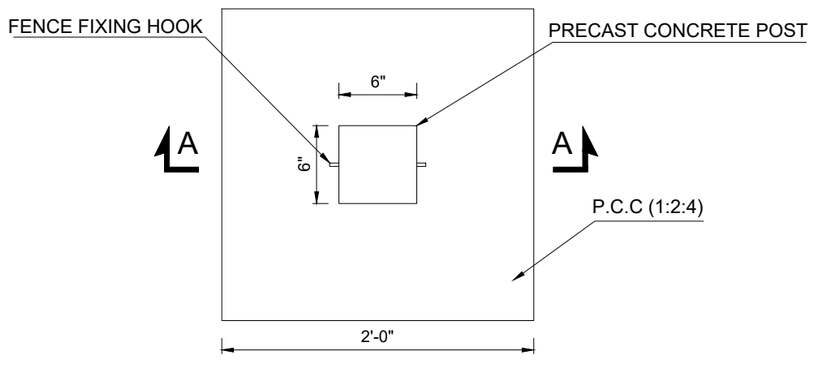
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL FENCE LAYOUT PLAN
AND EXCAVATION PLAN

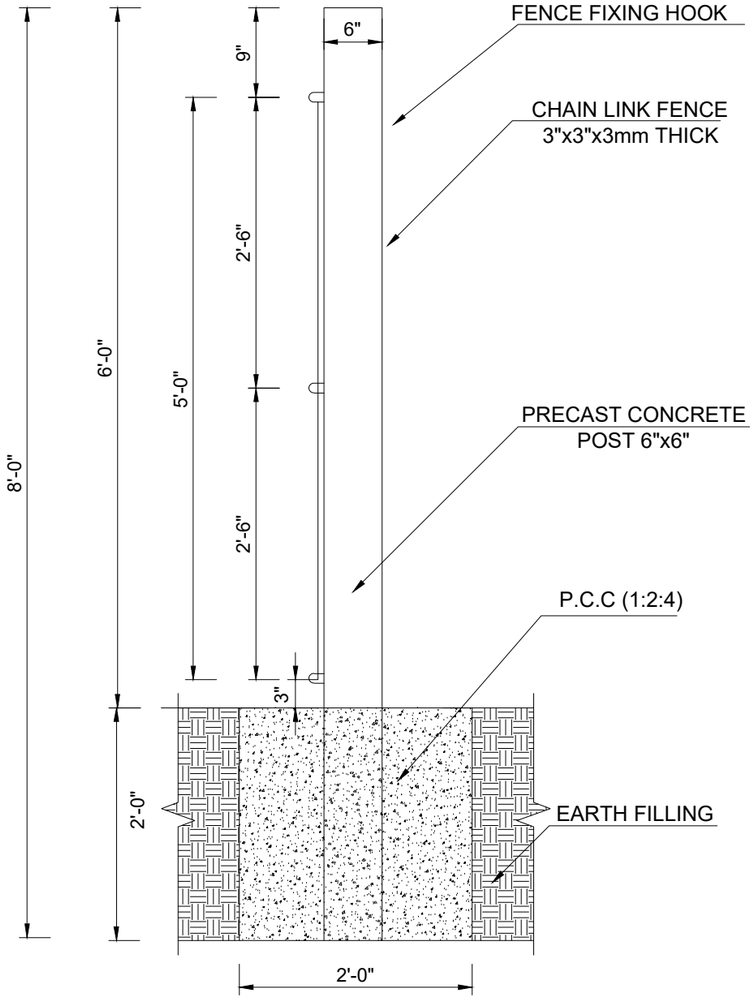
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4009				Rev. 0



TYP. ELEVATION



TYP. FOUNDATION PLAN



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

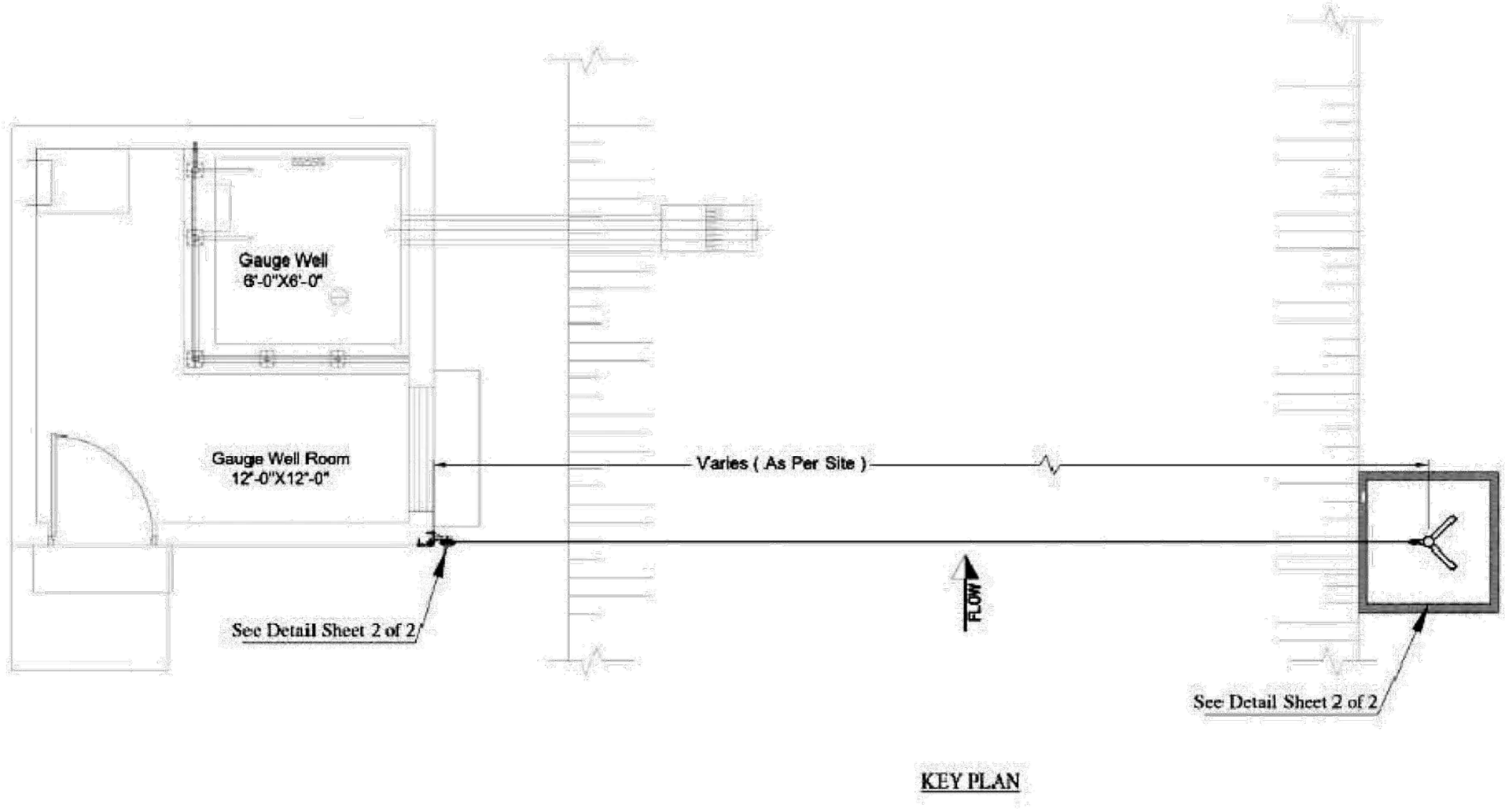
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GUAGE WELL CHAIN LINK FENCE
ELEVATION AND SECTION

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4010				Rev. 0



KEY PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

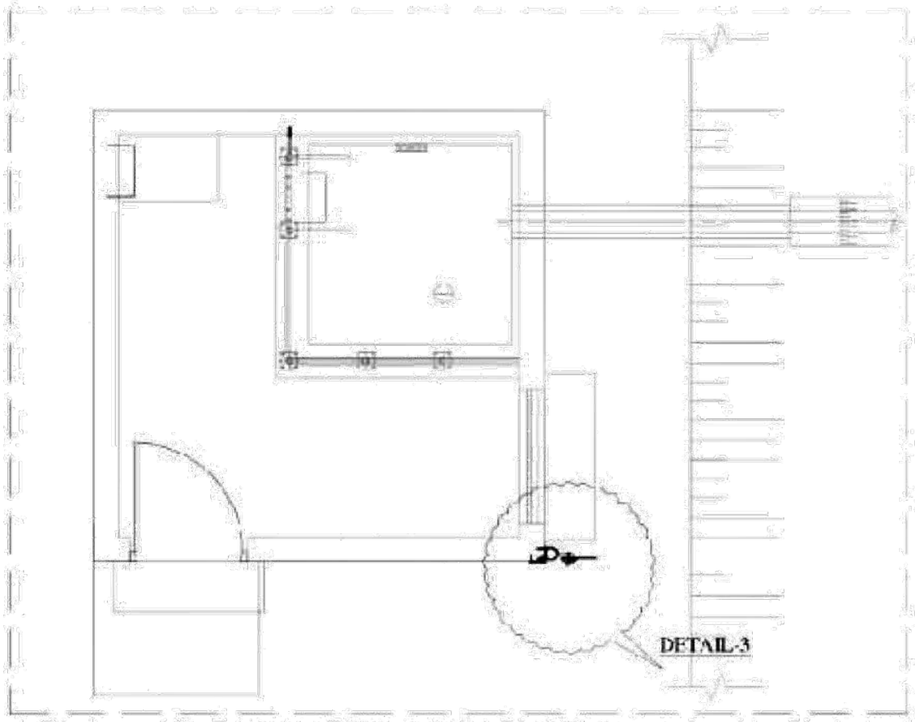
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

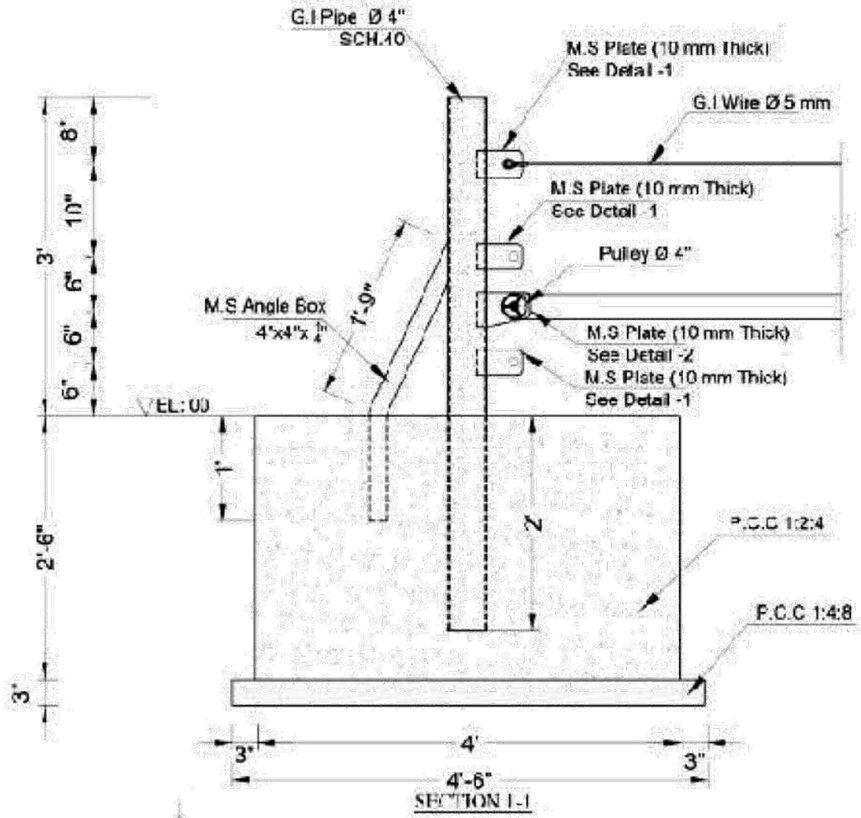
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

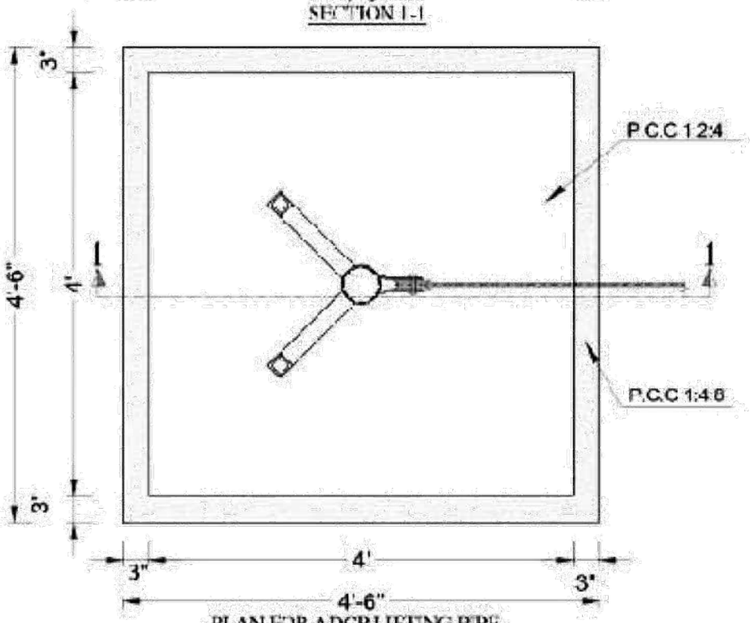
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Drawn	WR		Coordination	-	
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Drawing No	SBIP/1-VO-KB-KBF-4011				Rev. 0



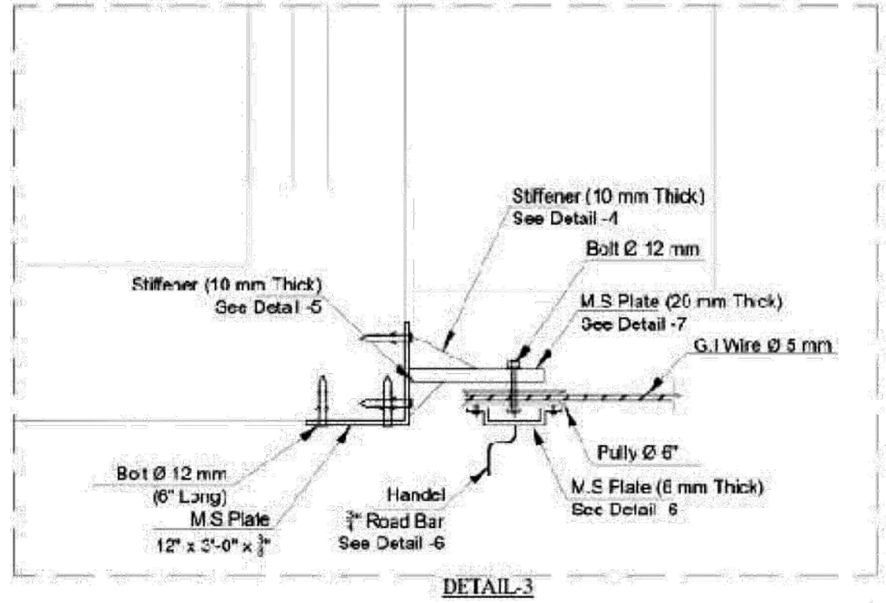
PLAN FOR ADCP LIFTING AT GAUGE WELL



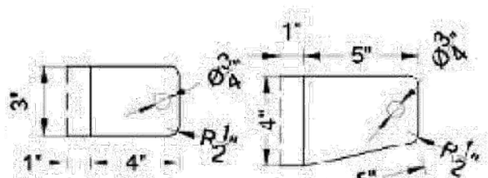
SECTION 1-1



PLAN FOR ADCP LIFTING PIPE

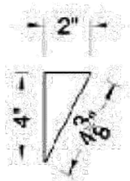


DETAIL-3

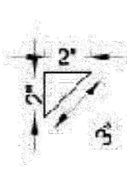


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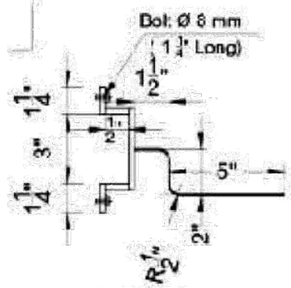
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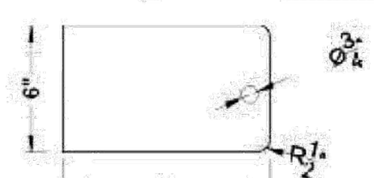
DETAIL-4



DETAIL-5



DETAIL-6



DETAIL-7

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

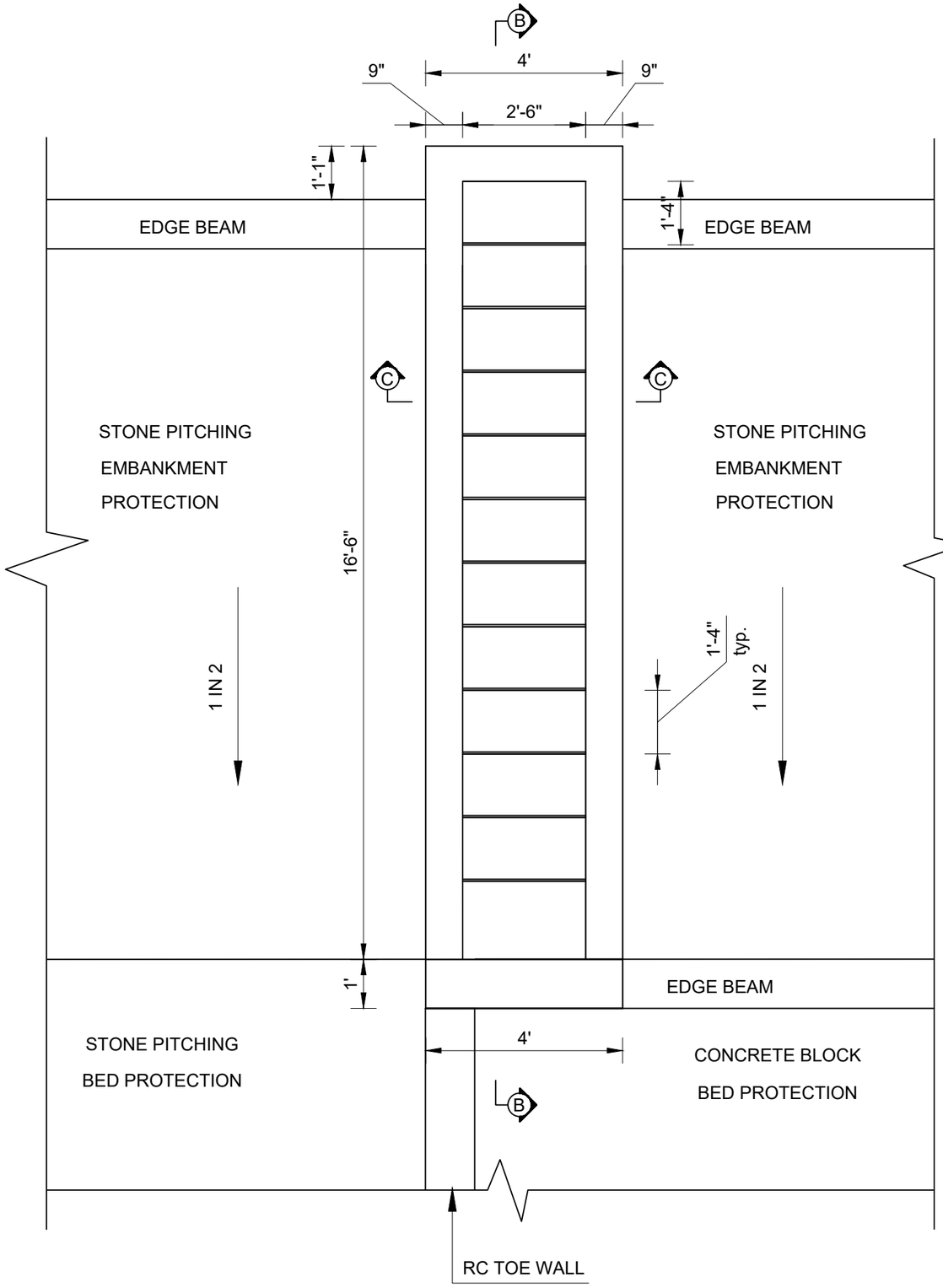
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

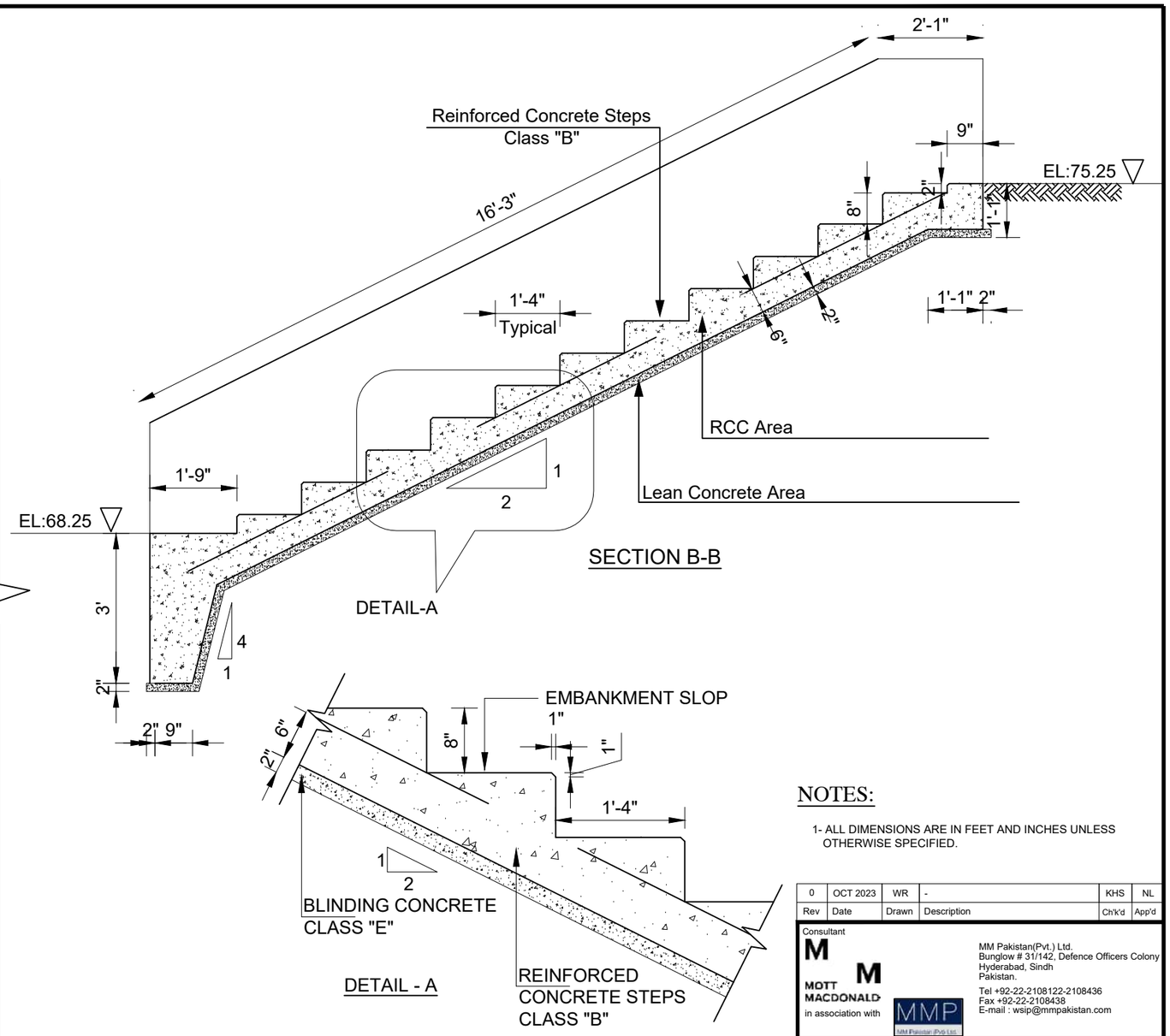
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale AS SHOWN		Project SBIP			Status -
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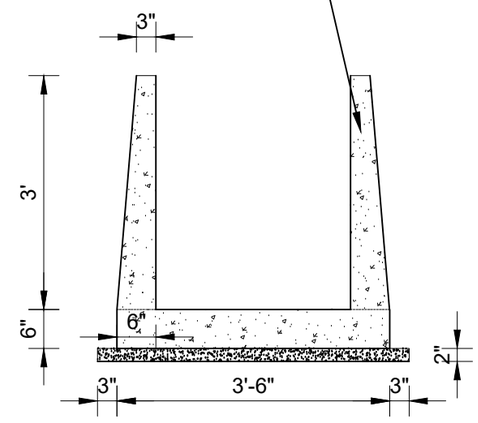
PART PLAN FOR STEPS



SECTION B-B

DETAIL - A

RCC Parapet Wall Area



SECTION C-C

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

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GOVT. OF SINDH

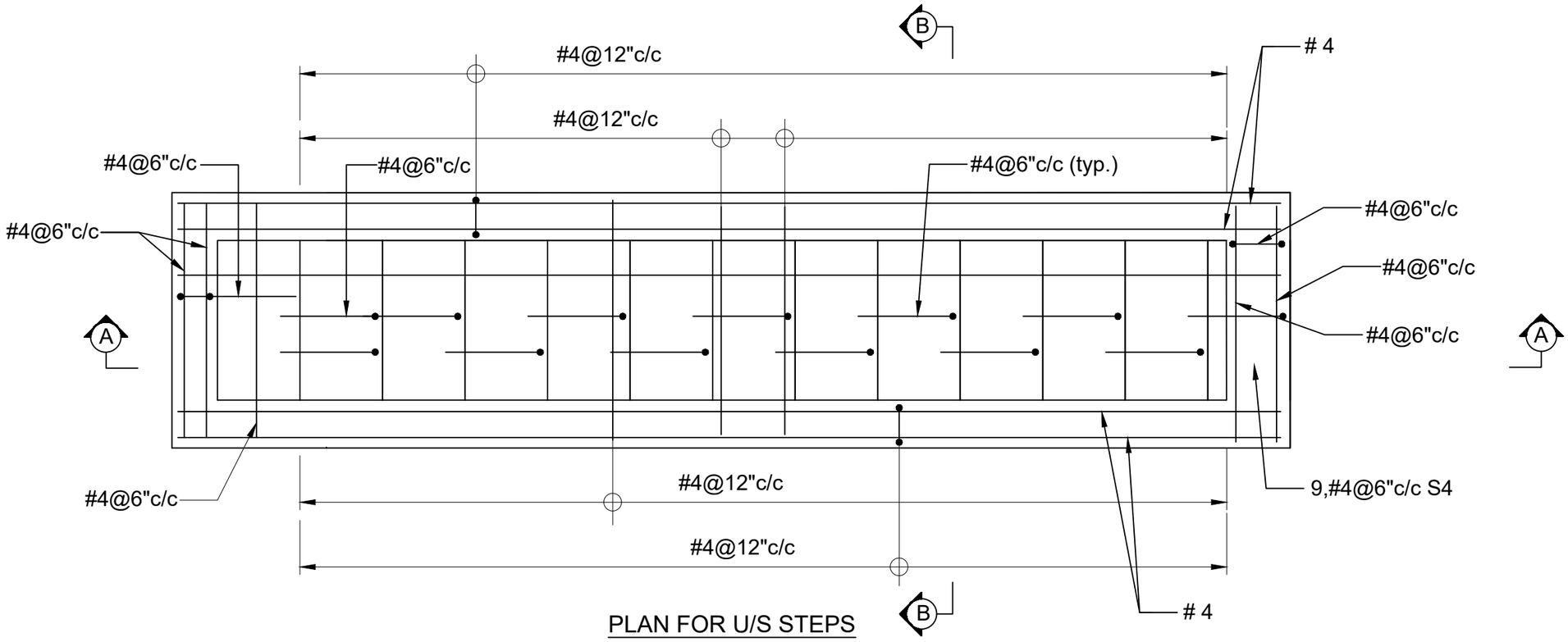
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

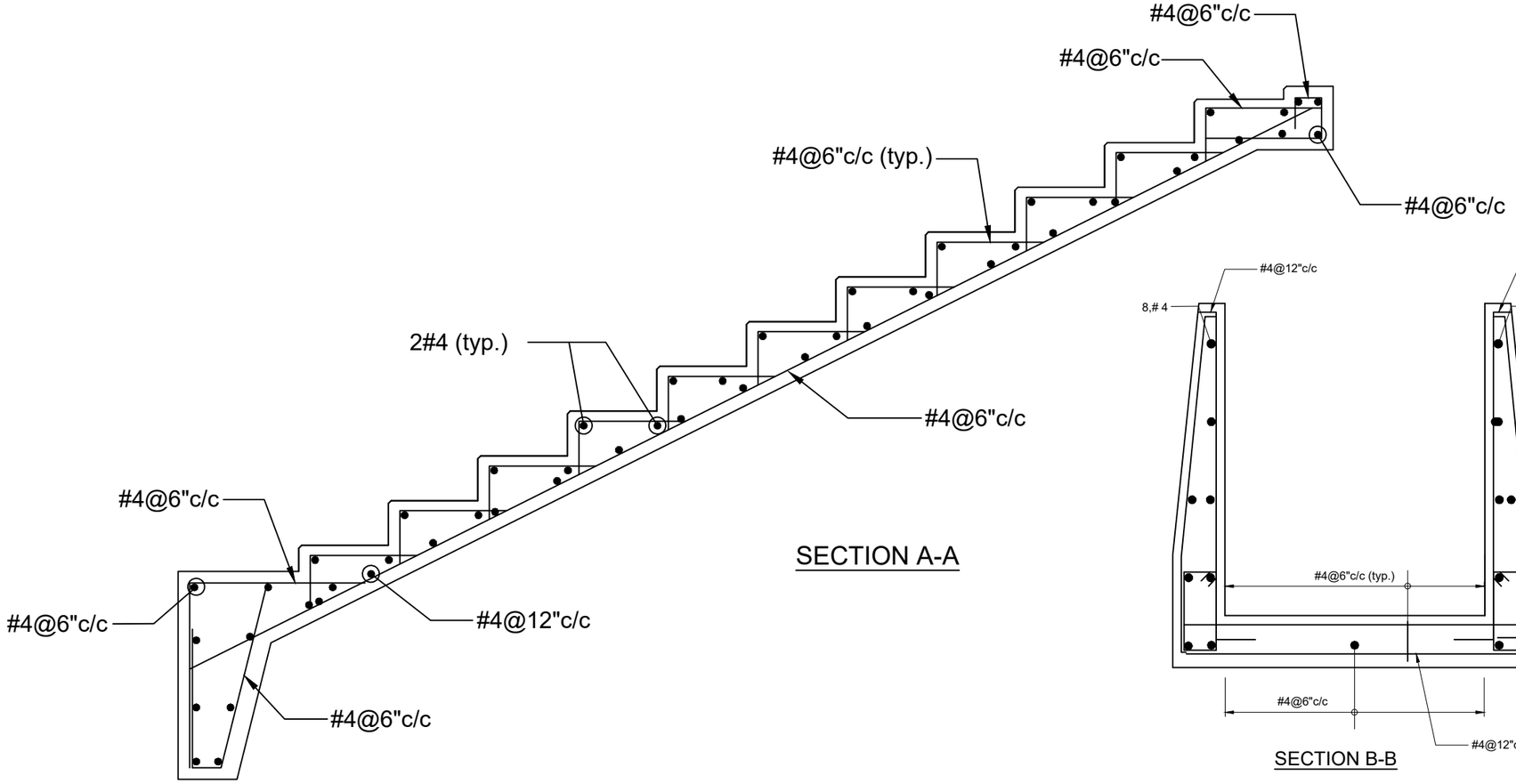
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
STAIRS PLAN & SECTIONS

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4013				Rev. 0



PLAN FOR U/S STEPS



SECTION A-A

SECTION B-B

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

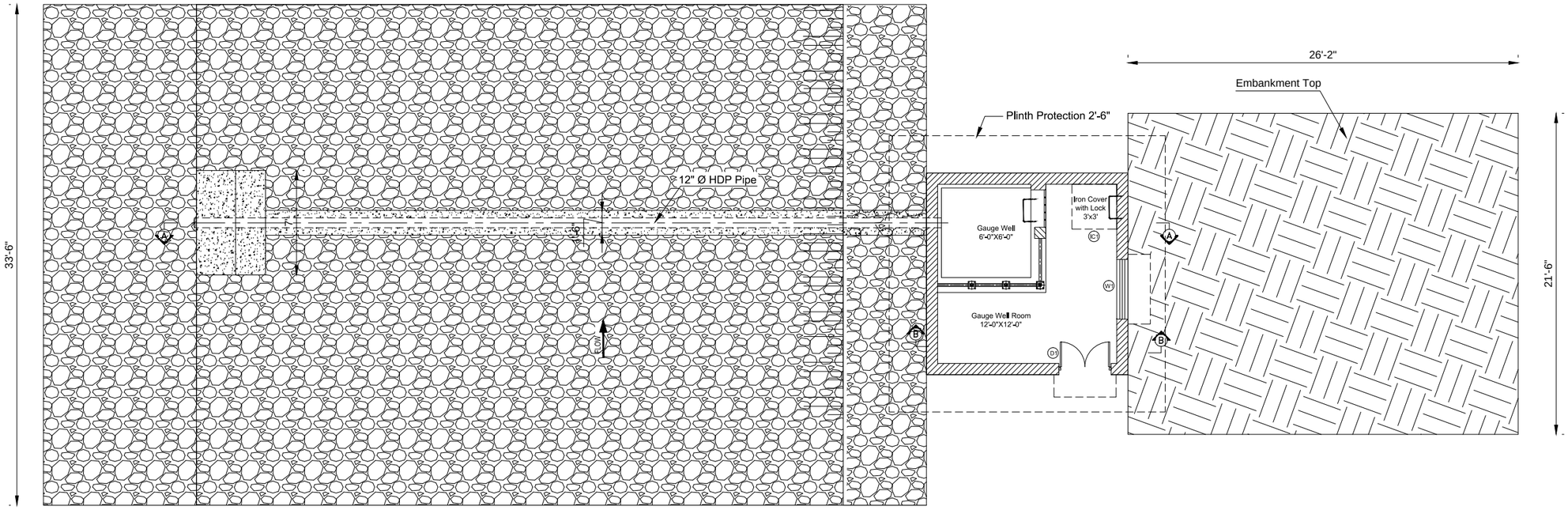
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
KB FEEDER
STAIRS REINFORCEMENT DETAIL
SECTIONS A-A & B-B

Designed	-		Eng.Chk.	KHS	
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Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-KBF-4014				Rev. 0



GUAGE WELL PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Fax +92-22-2108438
E-mail : wslp@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

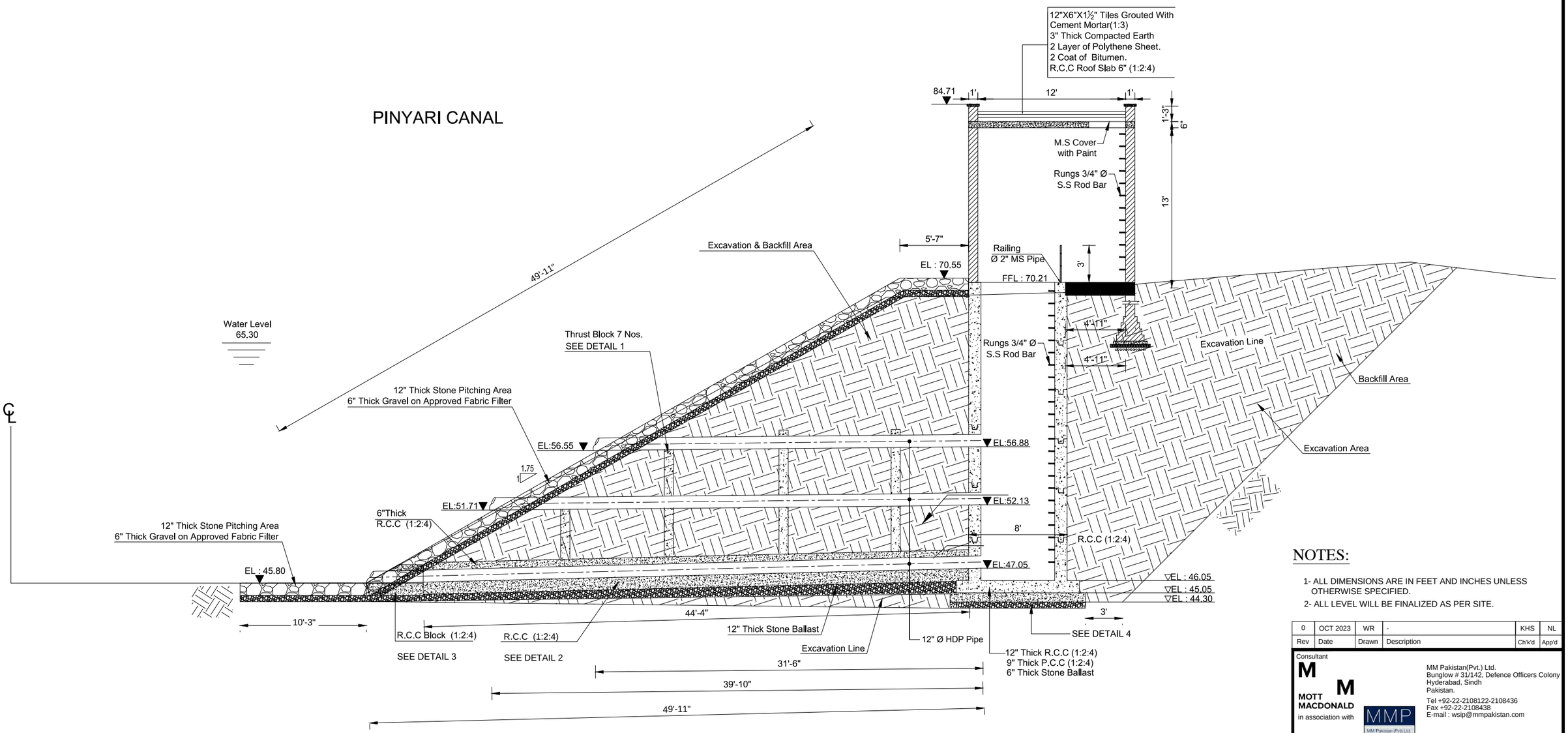
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL PLAN

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP	Status	
Paper Size	A1	CAD file		-	
Drawing No	SBIP/S1-VO-KB-PC-5001			Rev.	0



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

2- ALL LEVEL WILL BE FINALIZED AS PER SITE.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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Fax +92-22-2108438
E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

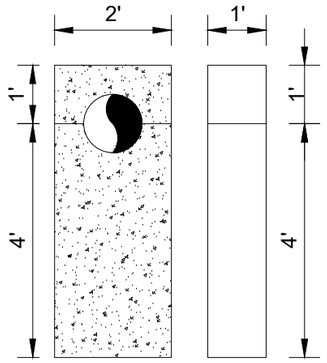
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

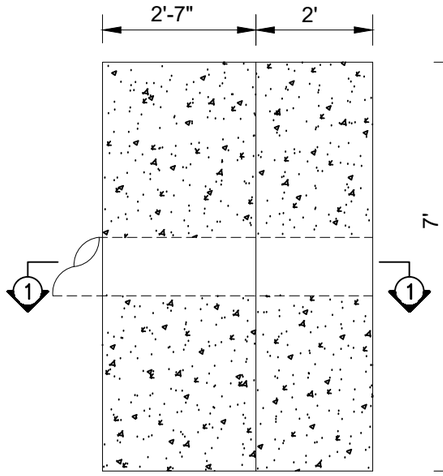
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL SECTION A-A

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
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Drawing No	SBIP/S1-VO-KB-PC-5002				Rev. 0

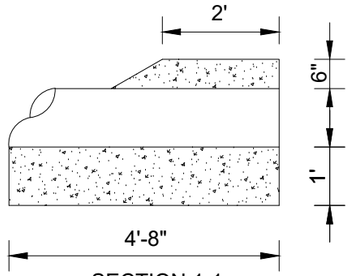


Thrust Block 7 Nos.

DETAIL - 1



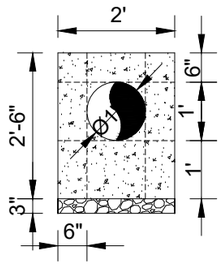
PLAN



SECTION 1-1

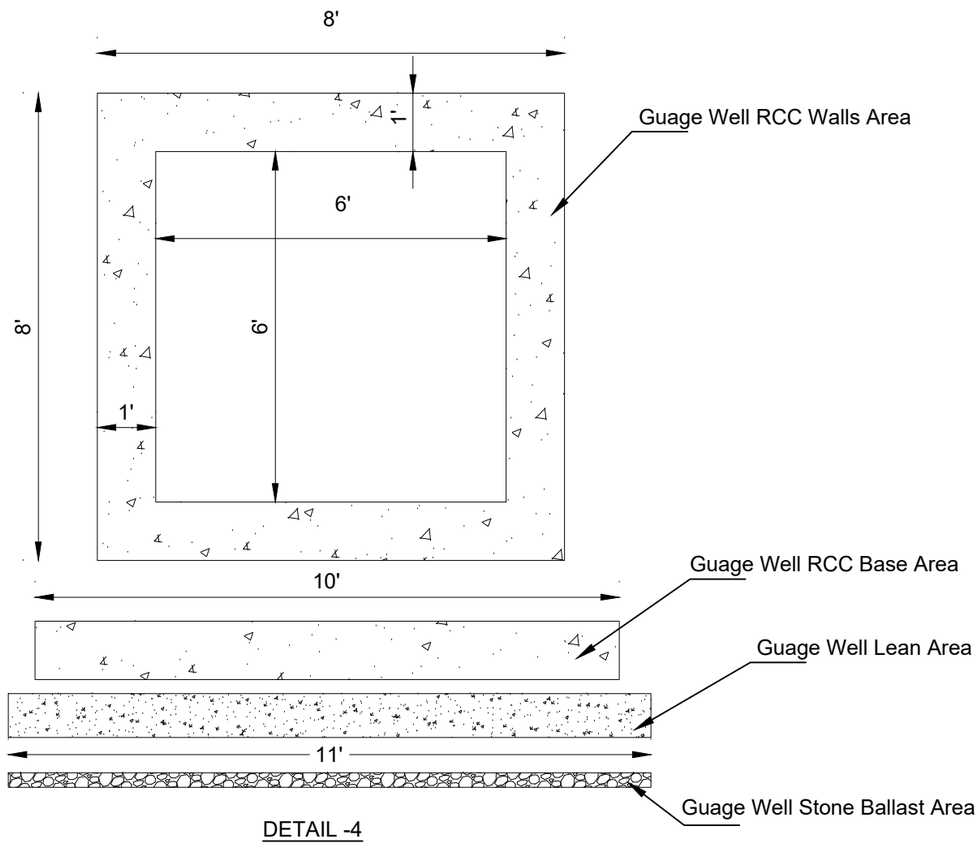
R.C.C Block (1:2:4)

DETAIL -3



R.C.C (1:2:4) Around HDP

DETAIL -2



DETAIL -4

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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in association with MMP (MM Pakistan (Pvt) Ltd.)

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

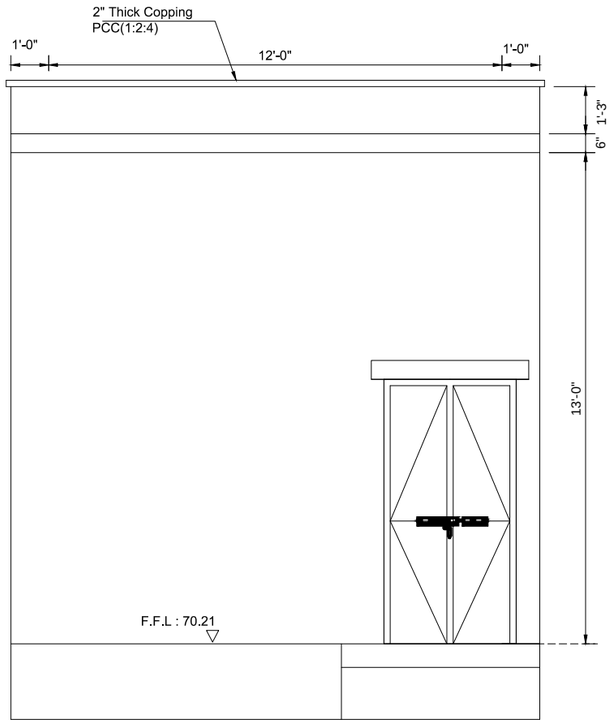
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

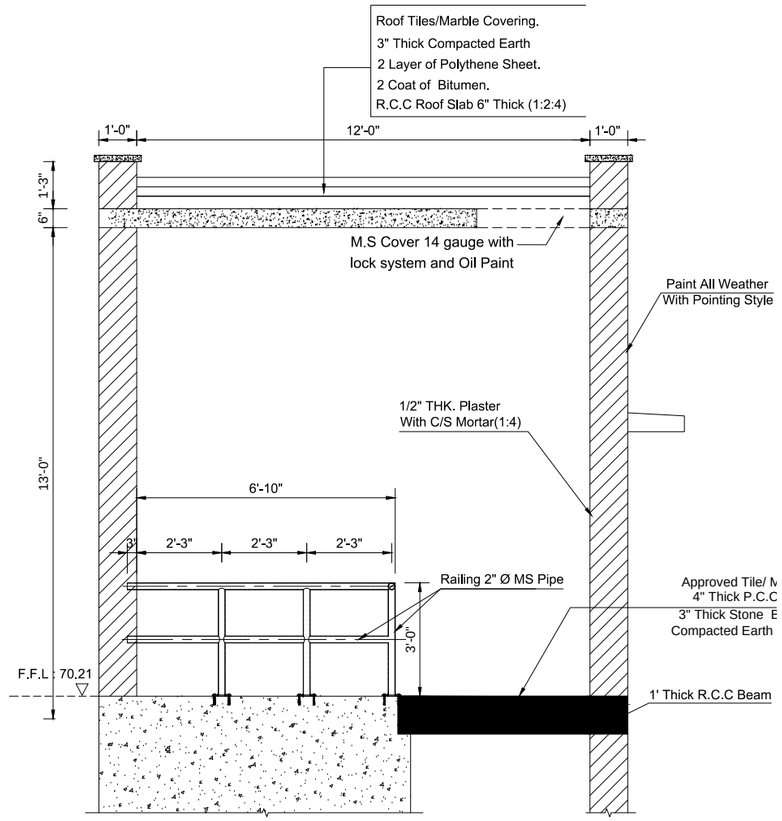
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
DETAIL 1,2,3,4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-PC-5003				Rev. 0



FRONT ELEVATION



SECTION B-B

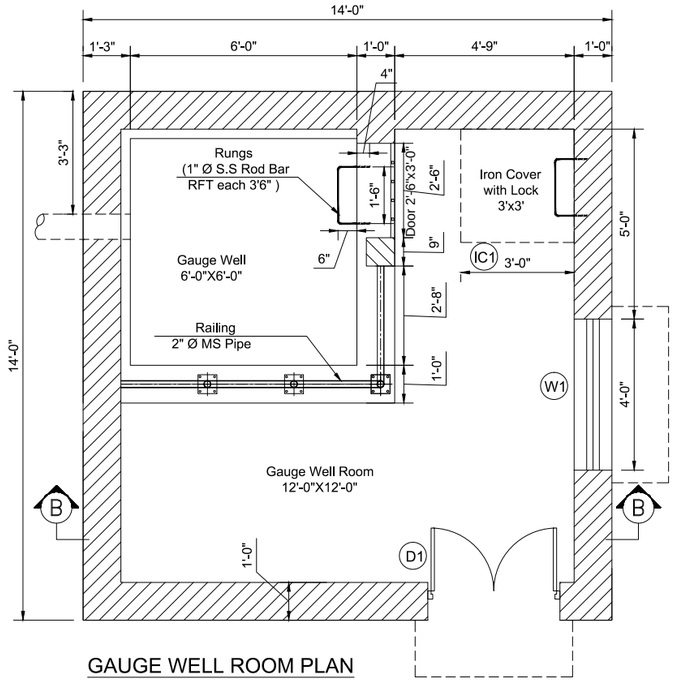
SCHEDULE OF OPENINGS					
TYPE	SIZE	SILL	NOS	STYLE	DESCRIPTION
D–1	3'–6"x7'–0"	0'–0"	01	DOUBLE LEAF	M.S DOOR(GAUGE 18)
W–1	4'–0"x4'–0"	2'–0"	01	–	M.S WINDOW(GAUGE 18)
IC–1	3'–0"x3'–0"	–	01	–	M.S IRON COVER(GAUGE 14)

FINISHES:

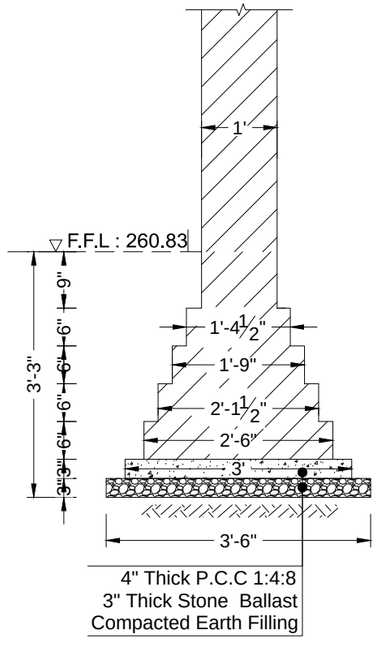
1- ROOM FINISHING SHALL BE AS PER CONTRACT (BILL # 15) BUILDINGS (SERVANT QUARTER)

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.



GAUGE WELL ROOM PLAN



ROOM WALL FOUNDATION
TYPICAL DETAIL

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

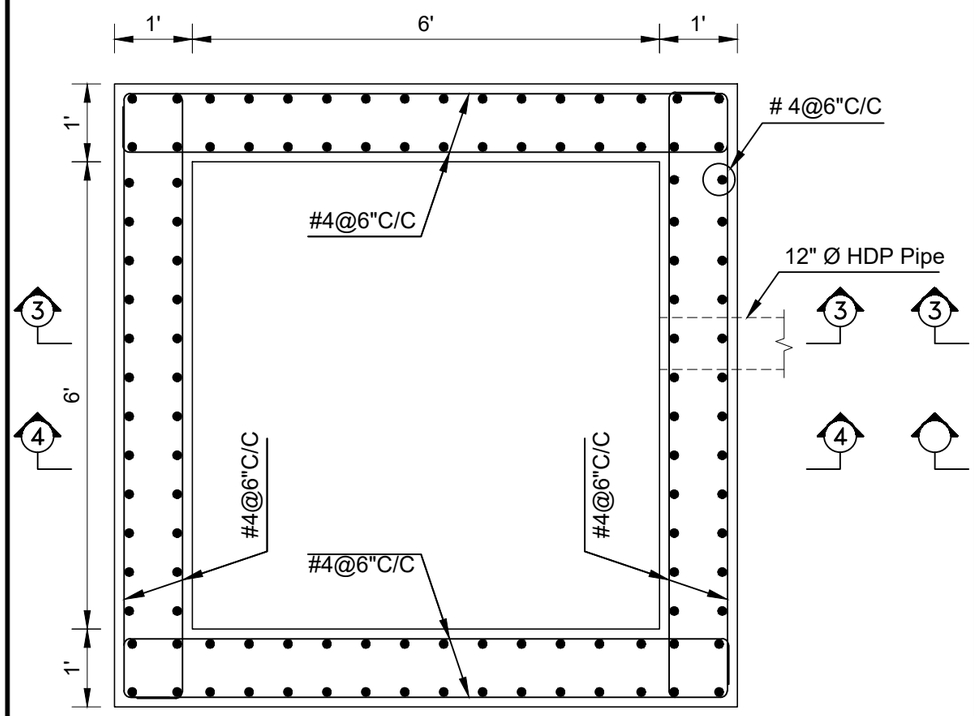
Consultant
MOTT MACDONALD
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MM Pakistan(Pvt.) Ltd.
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E-mail : wsip@mmpakistan.com

Client
IRRIGATION DEPARTMENT
GOVT. OF SINDH

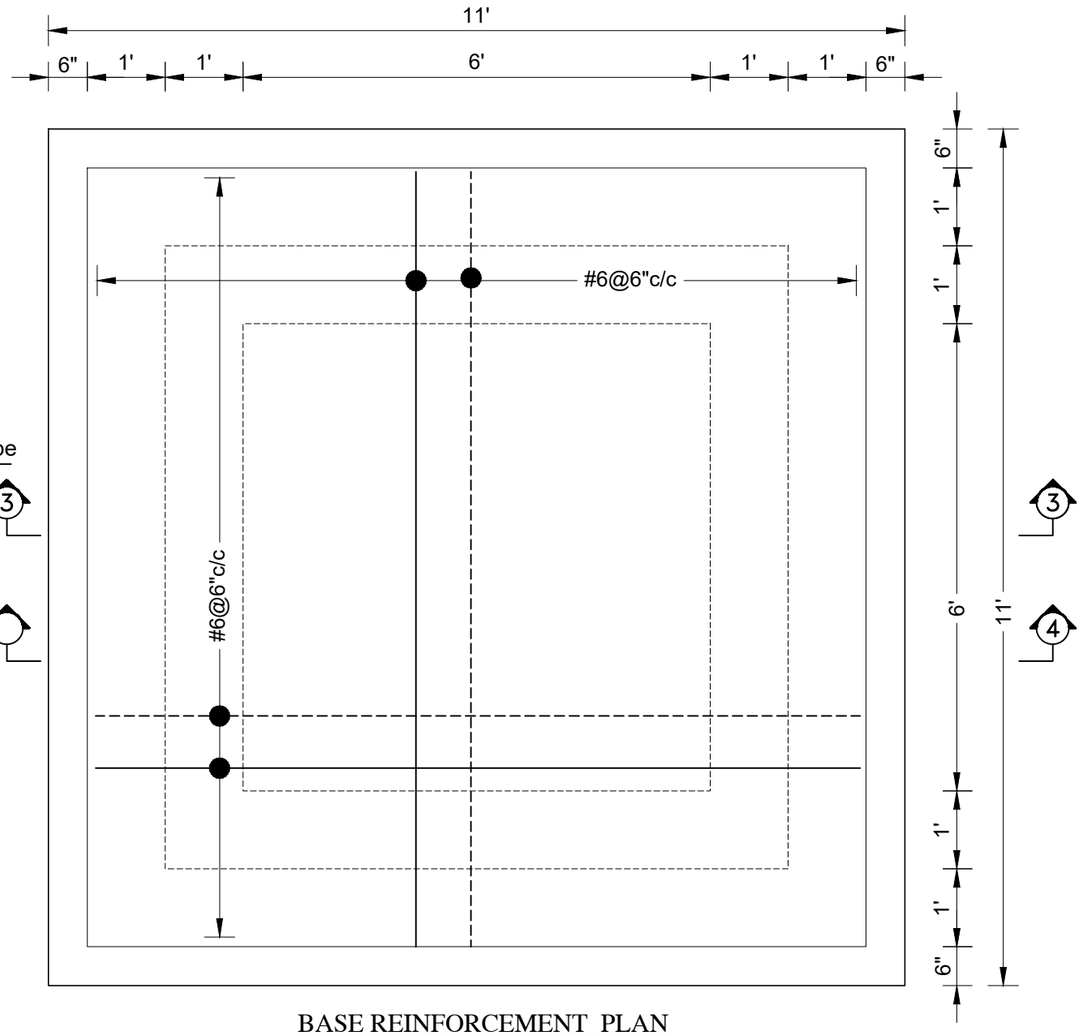
Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL ROOM PLAN
SECTION, ELEVATION AND FOUNDATION DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-PC-5004				Rev. 0



REINFORCEMENT PLAN



BASE REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant
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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

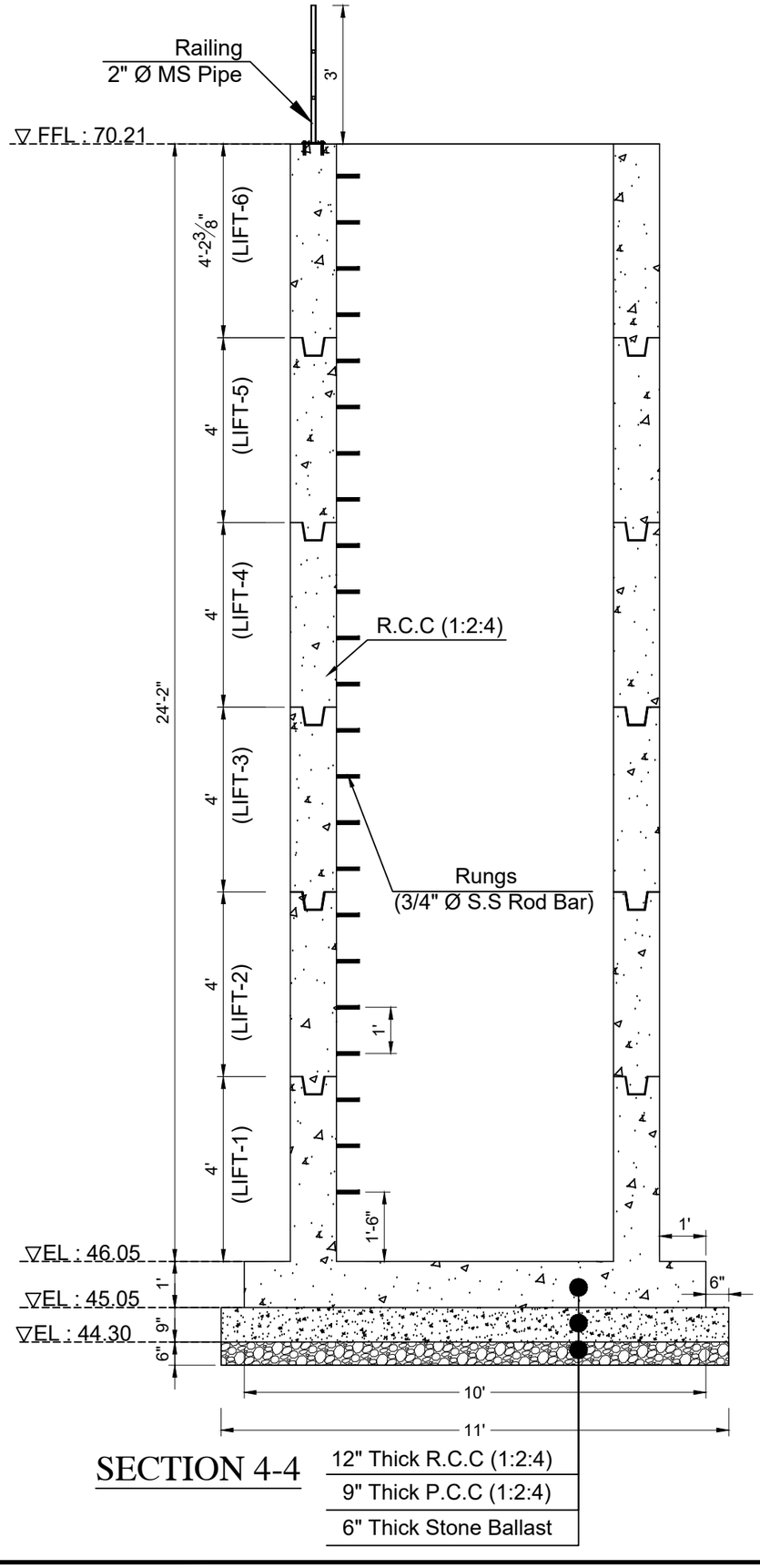
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

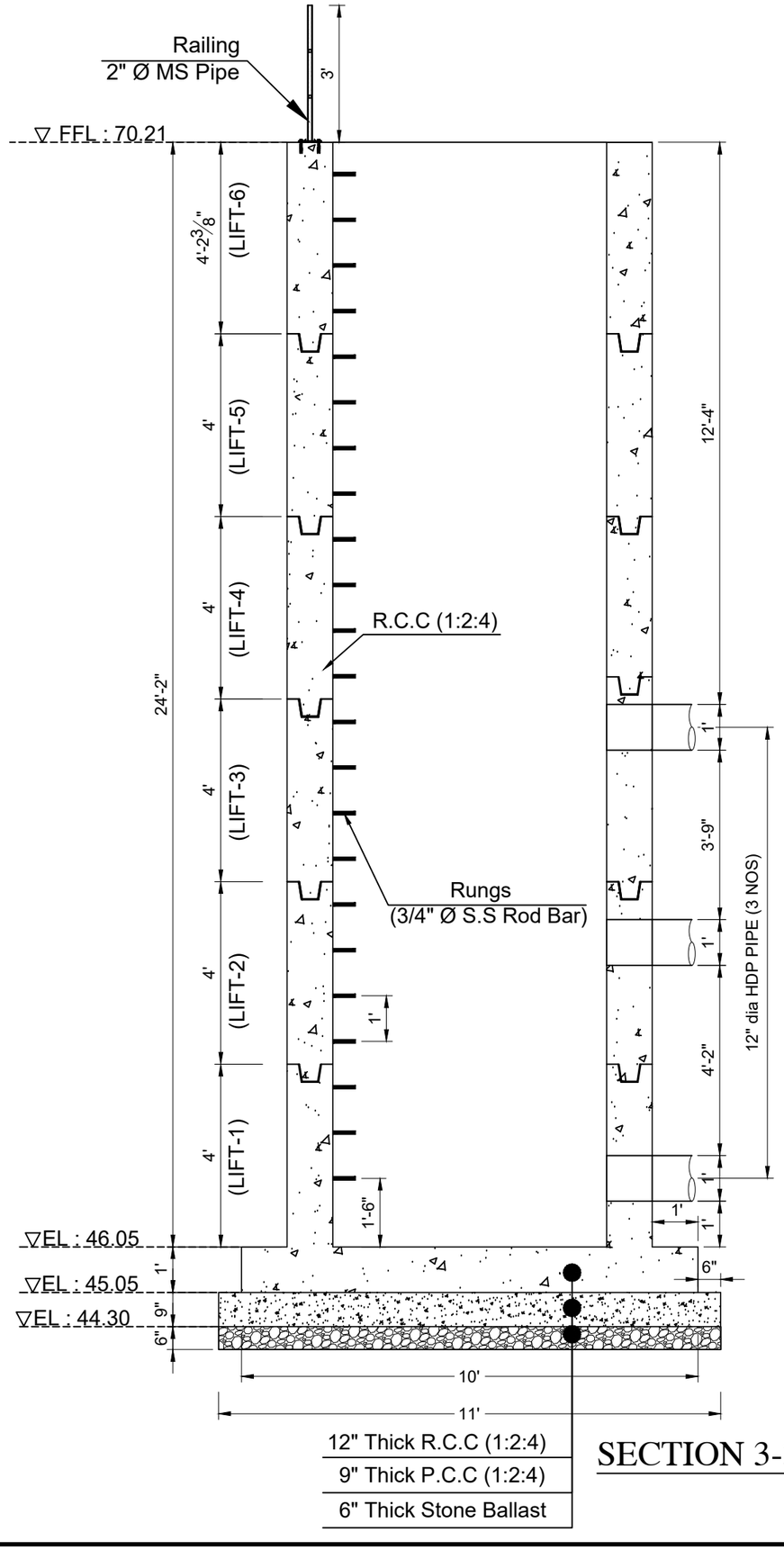
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL ROOM
REINFORCEMENT PLAN

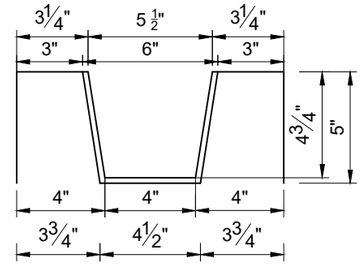
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Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-PC-5005			Rev. 0



SECTION 4-4



SECTION 3-3



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

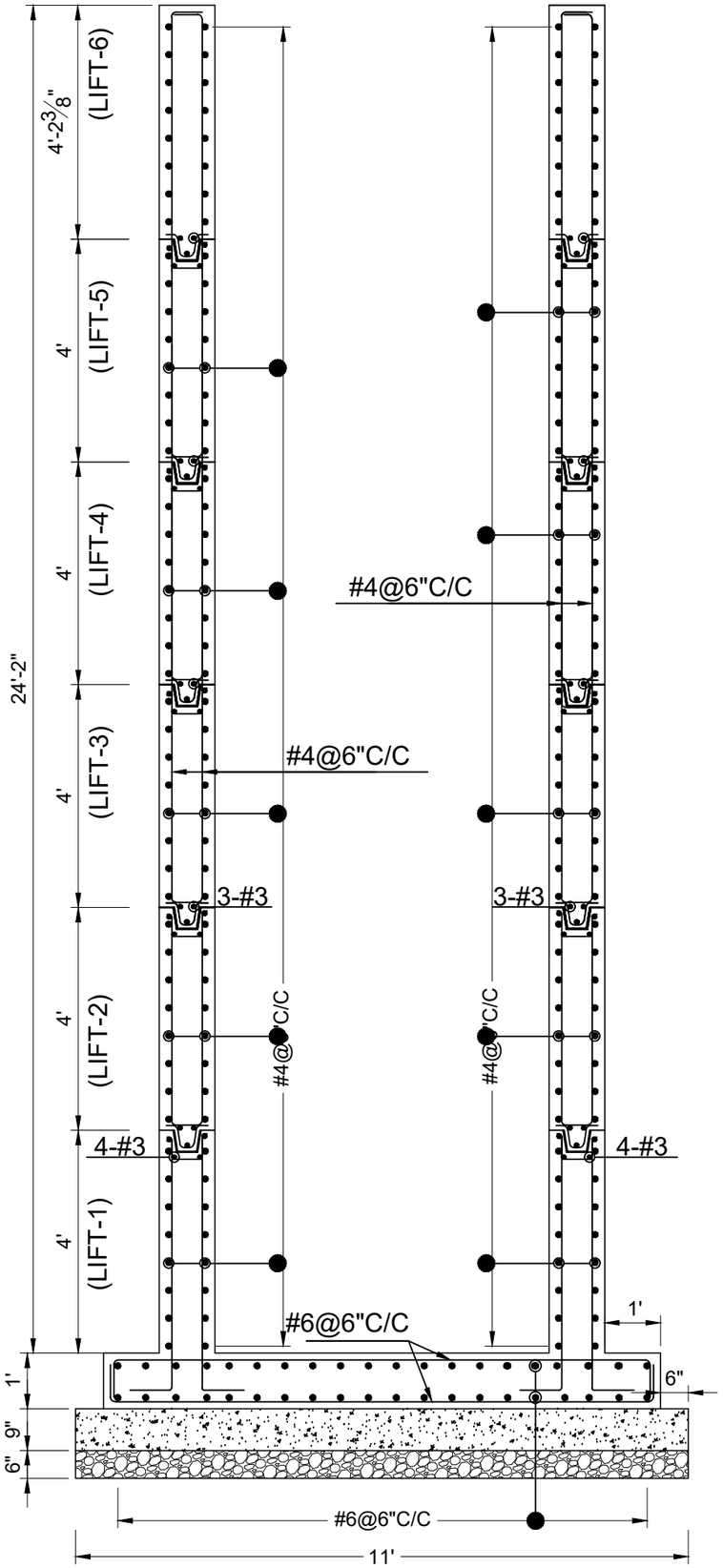
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

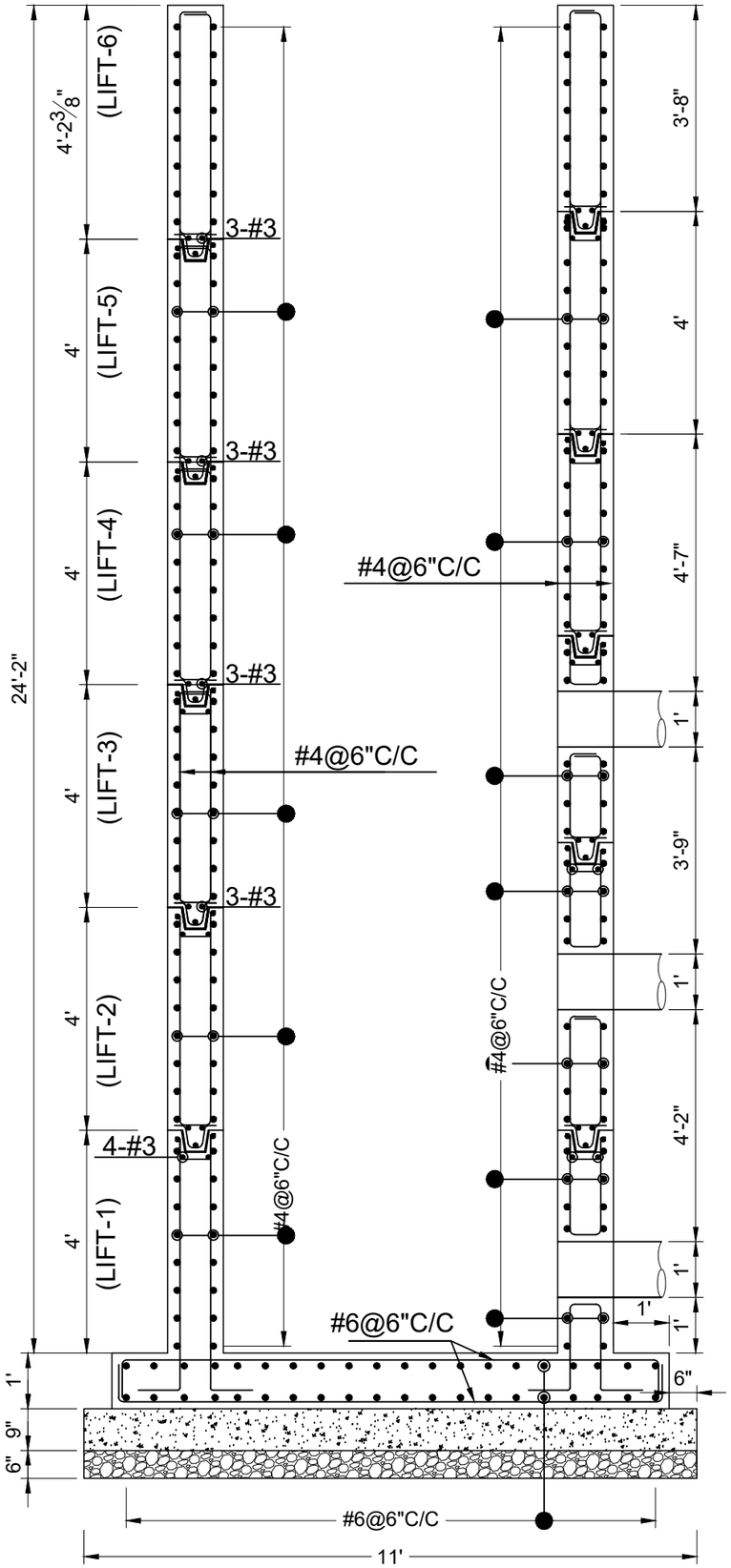
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL ROOM
SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-PC-5006				Rev. 0



SECTION 4-4



SECTION 3-3

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

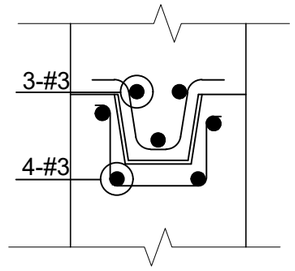
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



KEY DETAIL

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

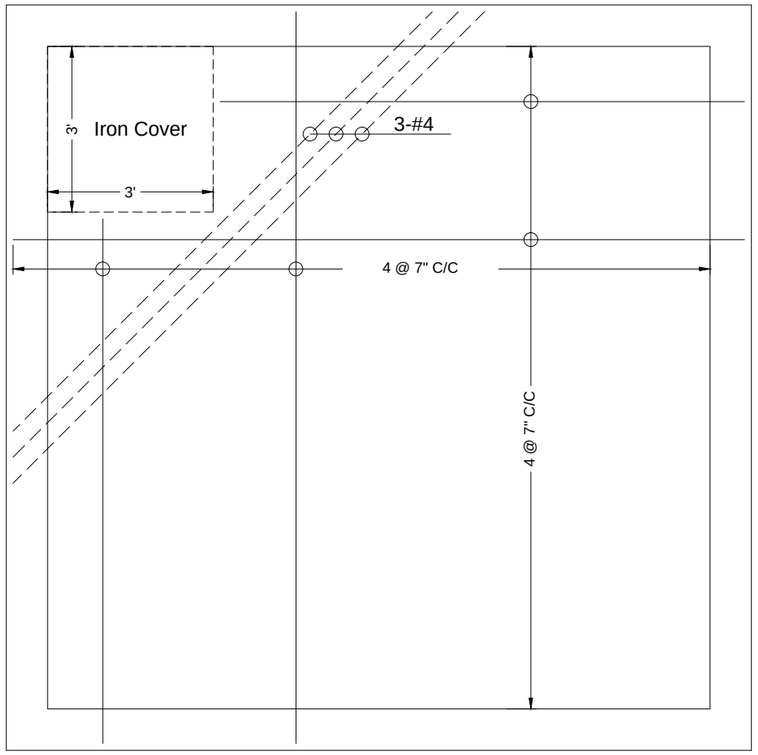
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

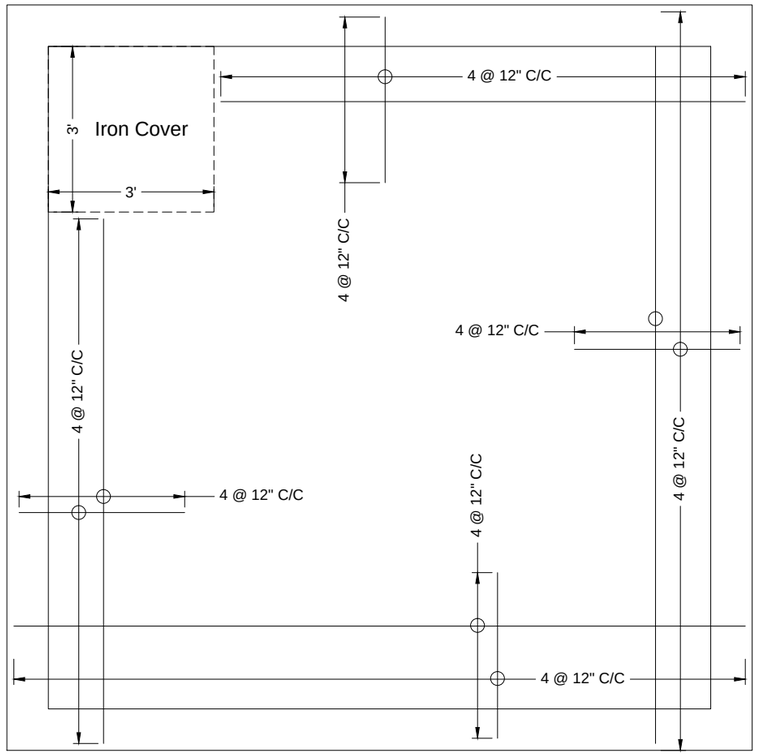
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL ROOM
REINFORCEMENT DETAIL SECTIONS 3-3 & 4-4

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No		SBIP/S1-VO-KB-PC-5007			Rev. 0



SLAB REINFORCEMENT PLAN



SLAB HOLDING BAR REINFORCEMENT PLAN

NOTES:

1- ALL DIMENSIONS ARE IN INCHES AND METERS UNLESS OTHERWISE SPECIFIED.

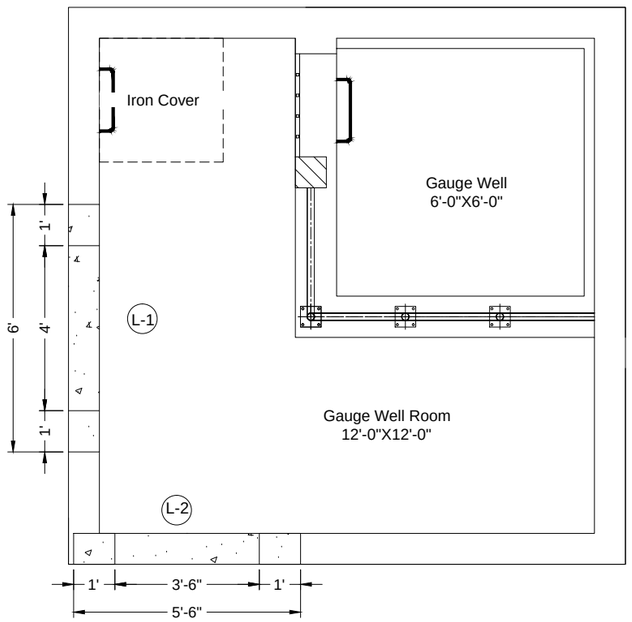
2- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF BLINDING CONCRETE (CLASS -E) SHALL BE 1160 PSI AT 28 DAYS.

3- THE MINIMUM COMPRESSIVE CUBICLE STRENGTH OF STRUCTURE CONCRETE IN SLABS, RETAINING WALLS, RAFT AND FOUNDATION FOOTING CONCRETE (CLASS -C) SHALL BE 3750 PSI AT 28 DAYS.

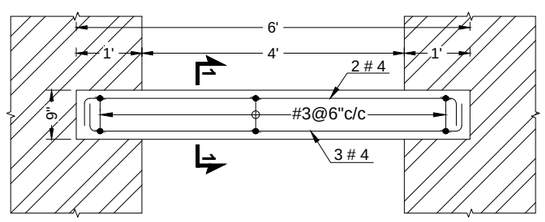
4- ALL REINFORCEMENT SHALL BE DEFORMED, HOT ROLLED BILLET STEEL BARS CONFORMING TO ASTM A-615 GRADE 60 WITH SPECIFIED YIELD STRENGTH NOT LESS THEN 60,000 PSI. RATIO OF ACTUAL ULTIMATE TENSILE/YIELD STRENGTH IS NOT LESS THAN 1.25.

5- CLEAR COVER TO REINFORCEMENT BARS SHALL BE:

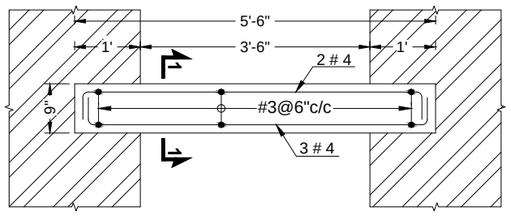
STRUCTURE ELEMENT	CONCRETE COVER
FOOTINGS / RAFT	2"
RETAINING WALLS	2"
SLABS	3/4"



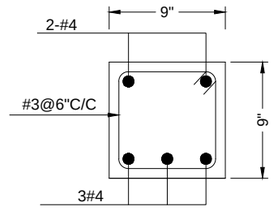
LINTEL LAYOUT PLAN



L-SECTION LINTEL - 1 (01NOS.)



L-SECTION LINTEL - 2 (01NOS.)



SECTION 1-1

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

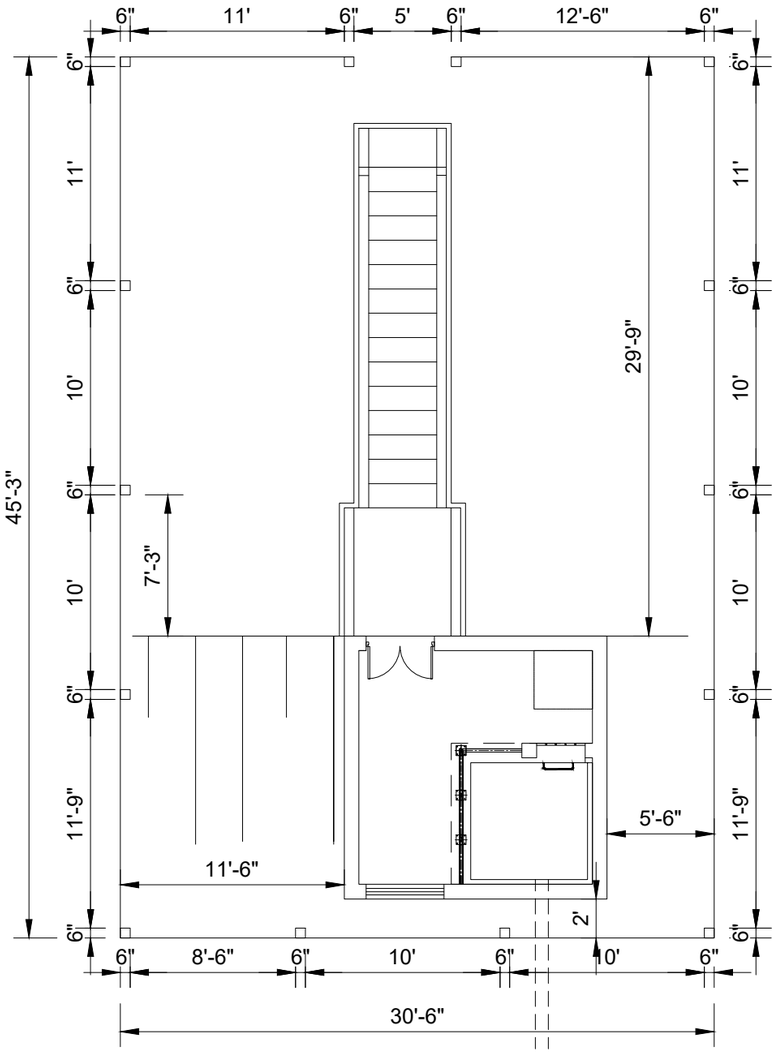
Consultant
MOTT MACDONALD
in association with
MMP
MM Pakistan (Pvt) Ltd.
MM Pakistan(Pvt.) Ltd.
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Hyderabad, Sindh
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Client
IRRIGATION DEPARTMENT
GOVT. OF SINDH

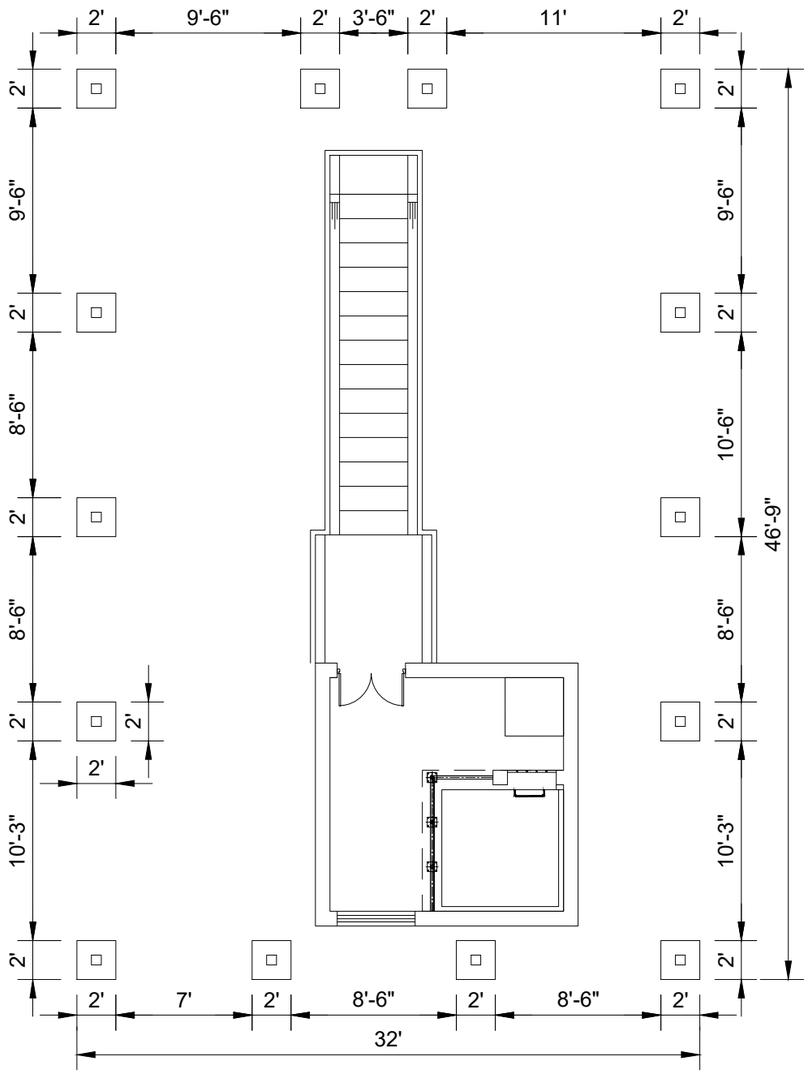
Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL ROOM
SLAB AND LINTEL REINFORCEMENT DETAIL

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-PC-5008				Rev. 0



GUAGE WELL FENCE LAYOUT PLAN



EXCAVATION PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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E-mail : wsip@mmpakistan.com

Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

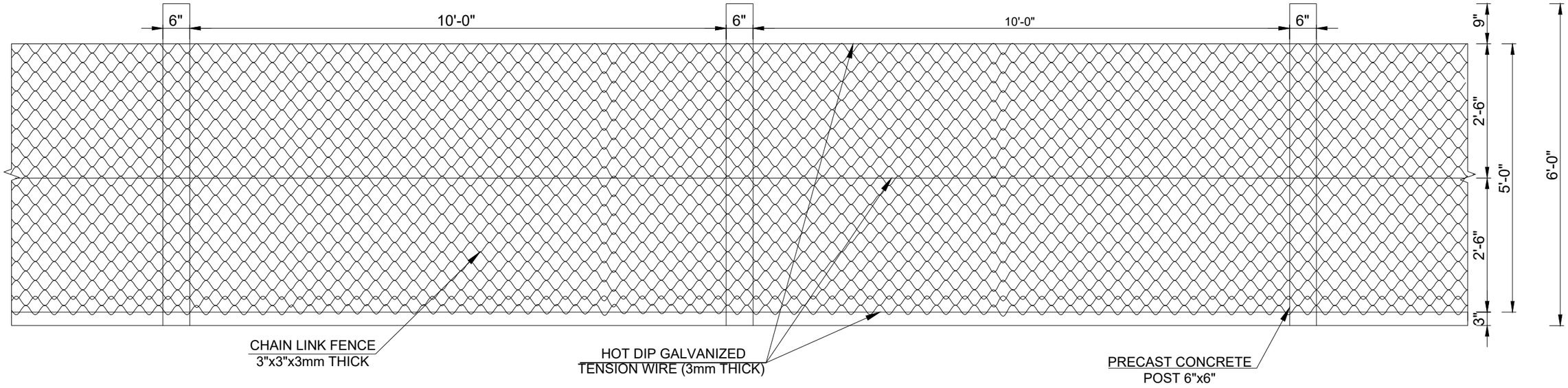
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

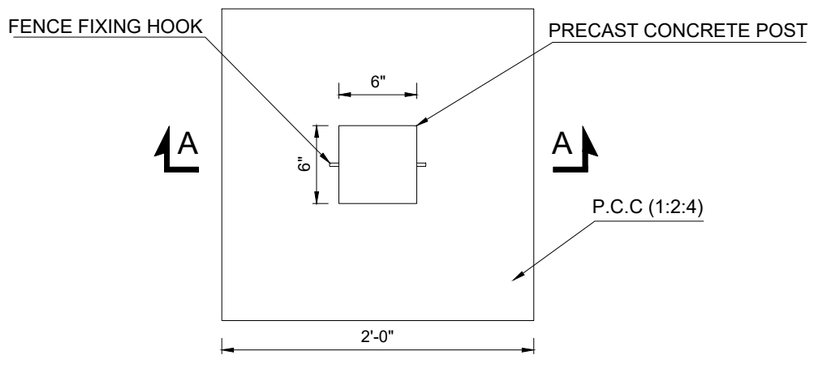
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL FENCE LAYOUT PLAN
AND EXCAVATION PLAN

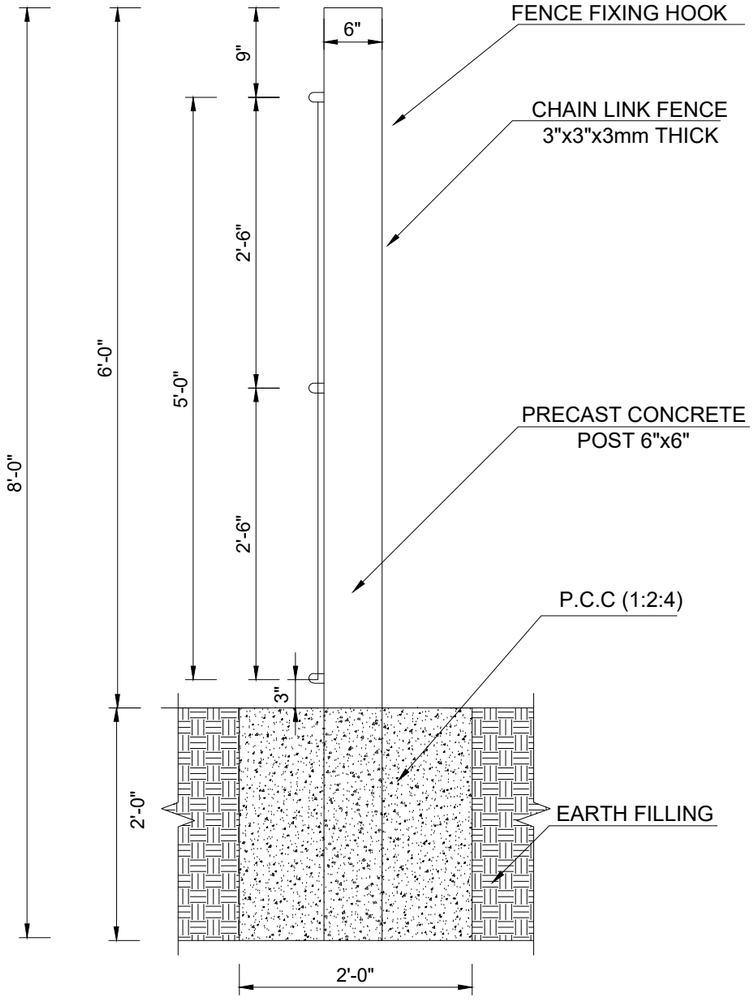
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Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-PC-5009				Rev. 0



TYP. ELEVATION



TYP. FOUNDATION PLAN



SECTION A-A

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

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Client

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GOVT. OF SINDH

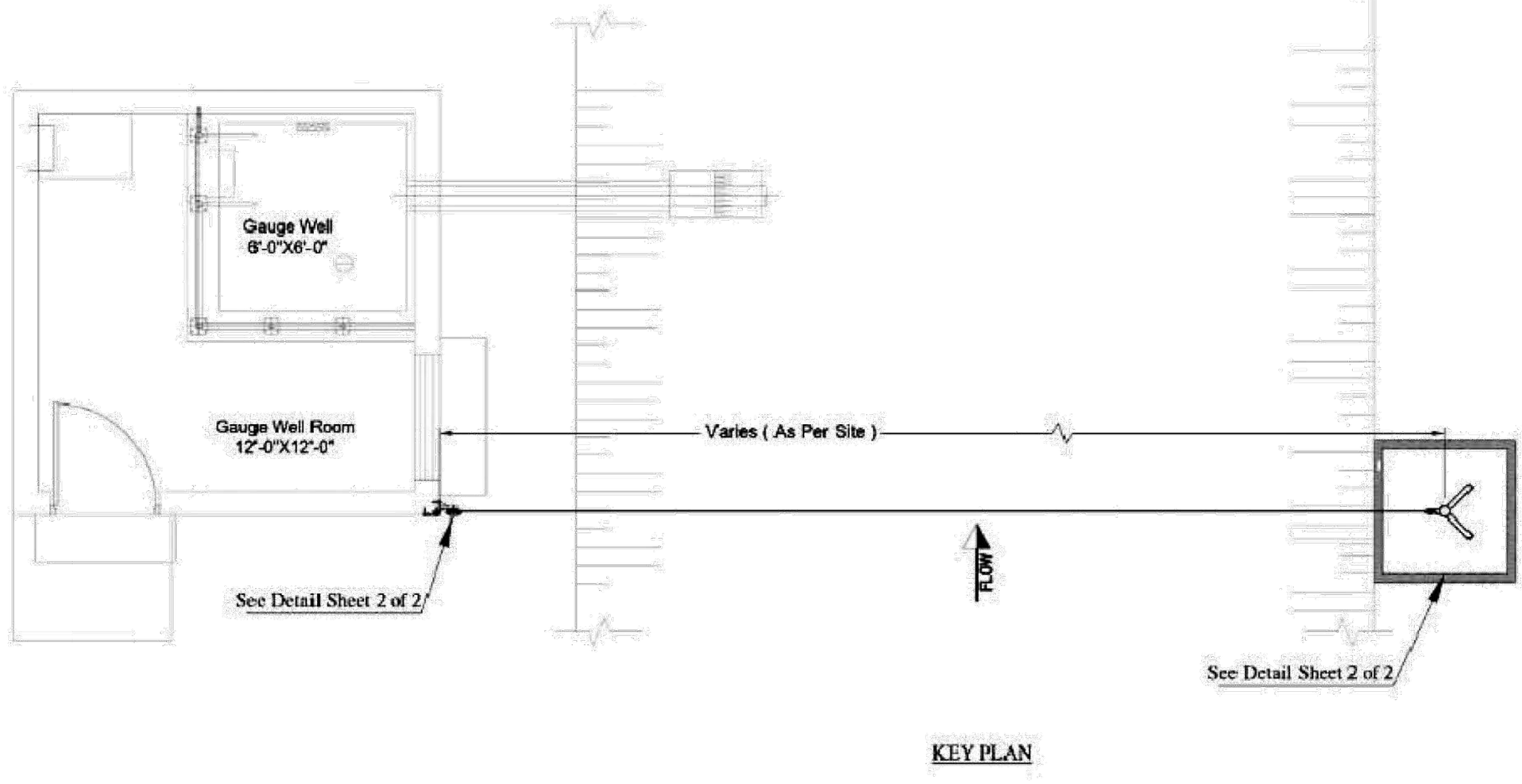
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GUAGE WELL CHAIN LINK FENCE
ELEVATION AND SECTION

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/1-VO-KB-PC-5010				Rev. 0



KEY PLAN

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

Consultant

MOTT MACDONALD
in association with
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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

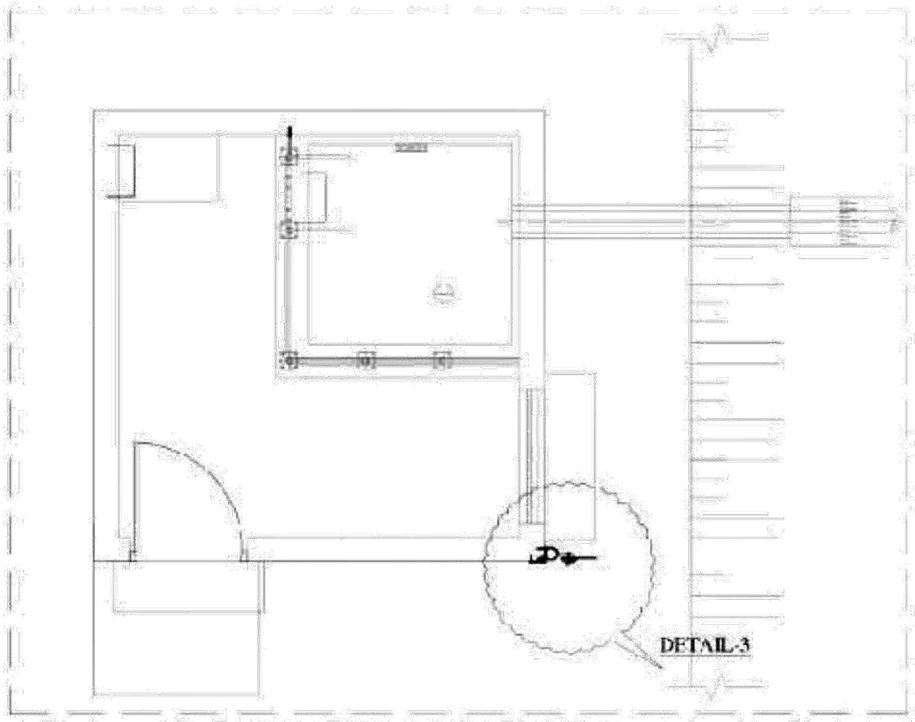
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

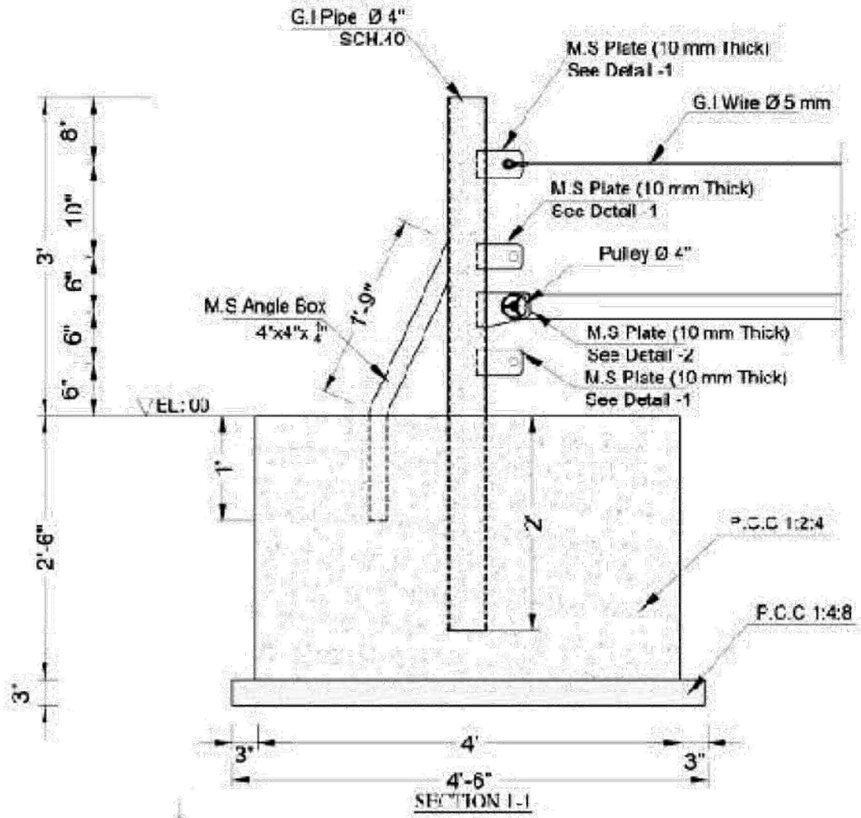
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

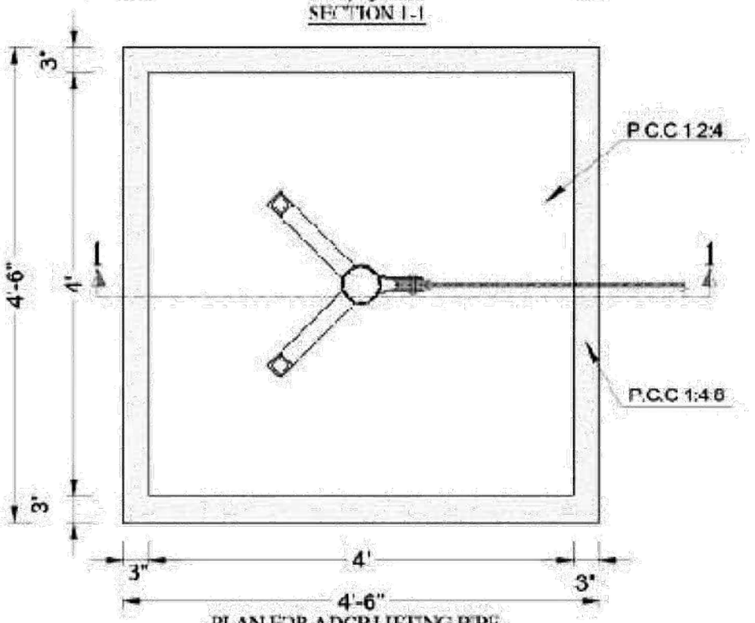
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Drawing No	SBIP/1-VO-KB-PC-5011				Rev. 0



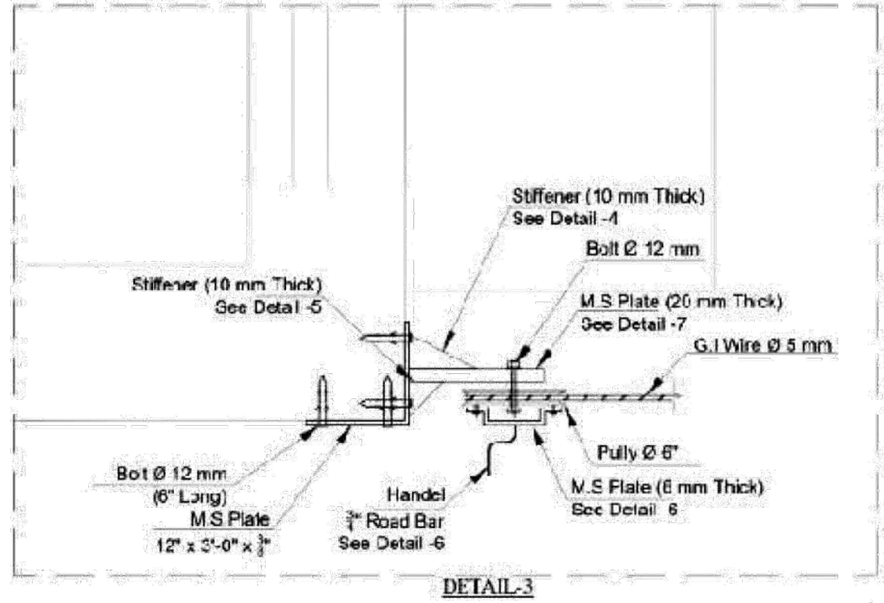
PLAN FOR ADCP LIFTING AT GAUGE WELL



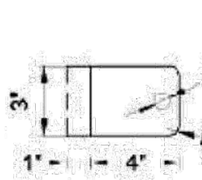
SECTION 1-1



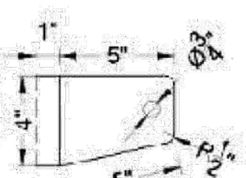
PLAN FOR ADCP LIFTING PIPE



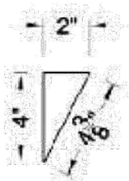
DETAIL-3



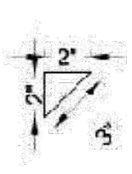
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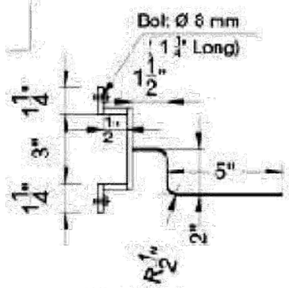
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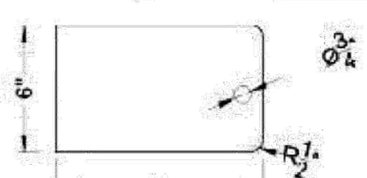
DETAIL-4



DETAIL-5



DETAIL-6



DETAIL-7

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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Client

IRRIGATION DEPARTMENT
GOVT. OF SINDH

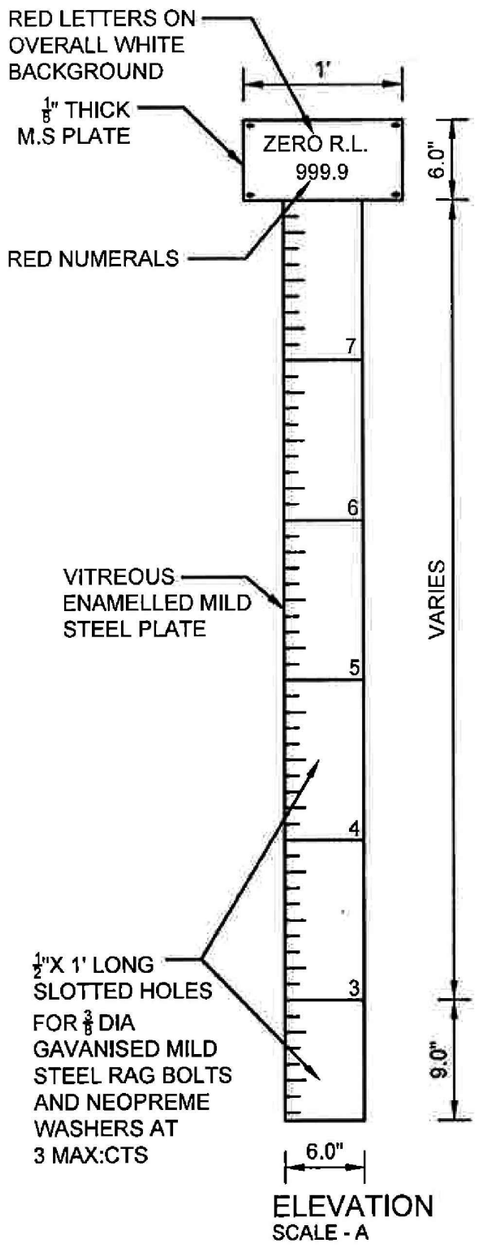
Contract

PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

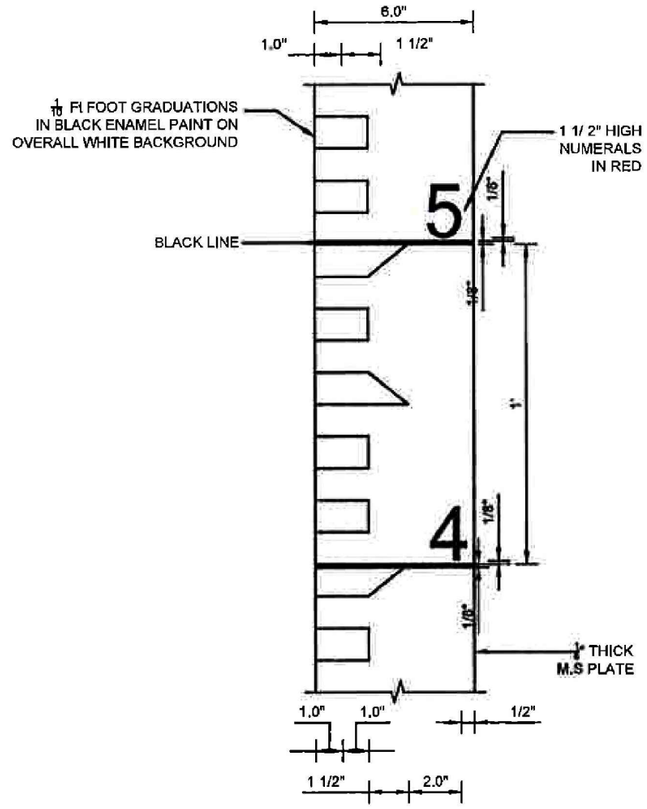
Title

REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
PINYARI CANAL
GENERAL ARRANGEMENT FOR MEASUREMENT
OF CANALS WATER FLOW WITH ADCP

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale AS SHOWN		Project SBIP			Status -
Paper Size A1		CAD file			
Drawing No SBIP/1-VO-KB-PC-5012					Rev. 0



ELEVATION
SCALE - A



GAUGE DETAIL
SCALE - B

WALL MOUNTED WATER LEVEL GAUGE

NOTES:

1- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	OCT 2023	WR	-	KHS	NL

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IRRIGATION DEPARTMENT
GOVT. OF SINDH

Contract
PACKAGE 1:
RESTORATION AND UPGRADATION
OF SUKKUR BARRAGE

Title
REHABILITATION AND MODERNIZATION
OF SUKKUR BARRAGE
KOTRI BARRAGE
WATER LEVEL GAUGE
PLAN & DETAILS

Designed	-		Eng.Chk.	KHS	
Drawn	WR		Coordination	-	
Dwg.Chk.	KHS		Approved	NL	
Scale	AS SHOWN	Project	SBIP		Status
Paper Size	A1	CAD file			-
Drawing No	SBIP/S1-VO-KB-6000				Rev. 0