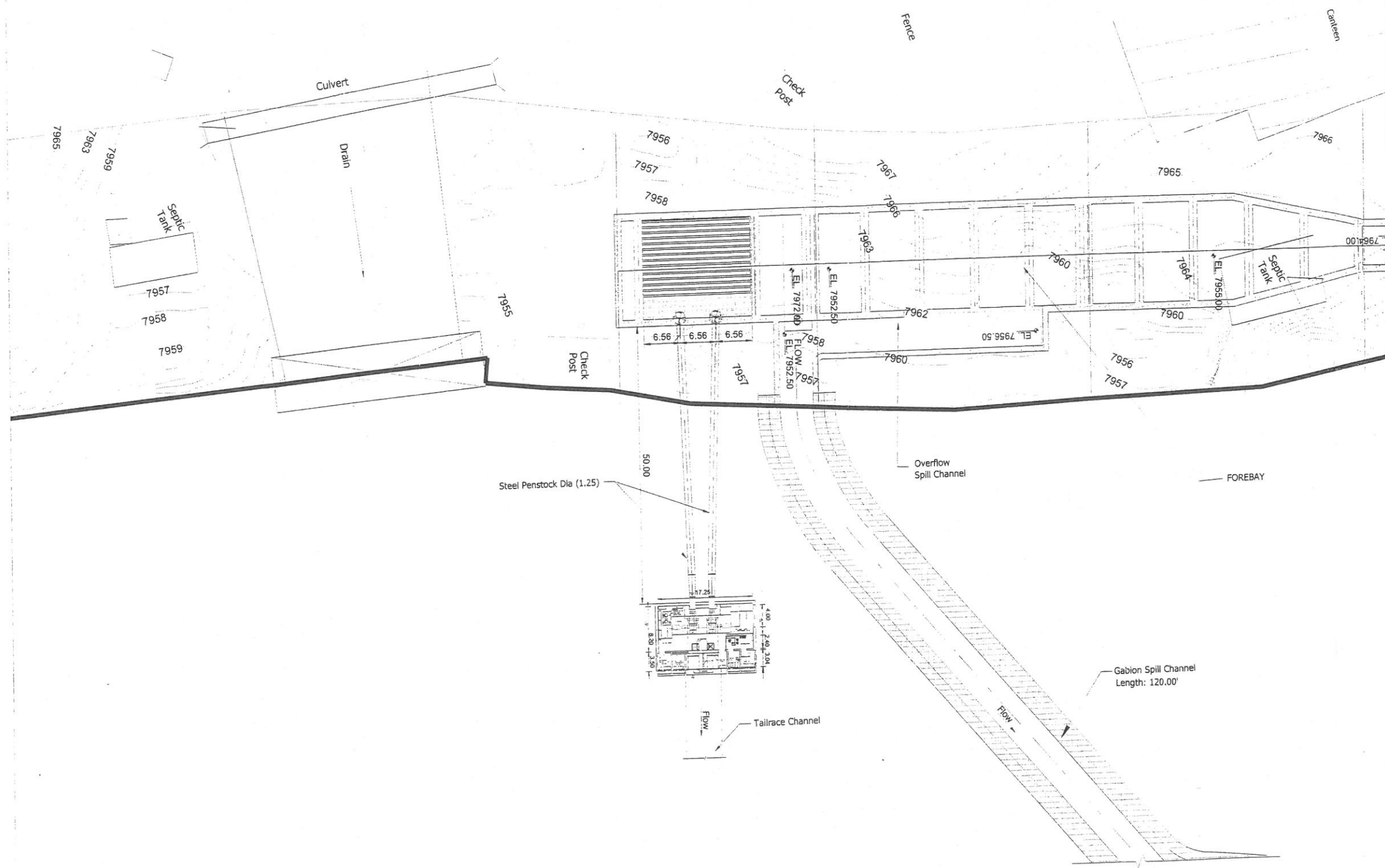


NOTE:

1. ALL LEVELS IN FEET
2. ALL DIMENSIONS ARE IN METERS.



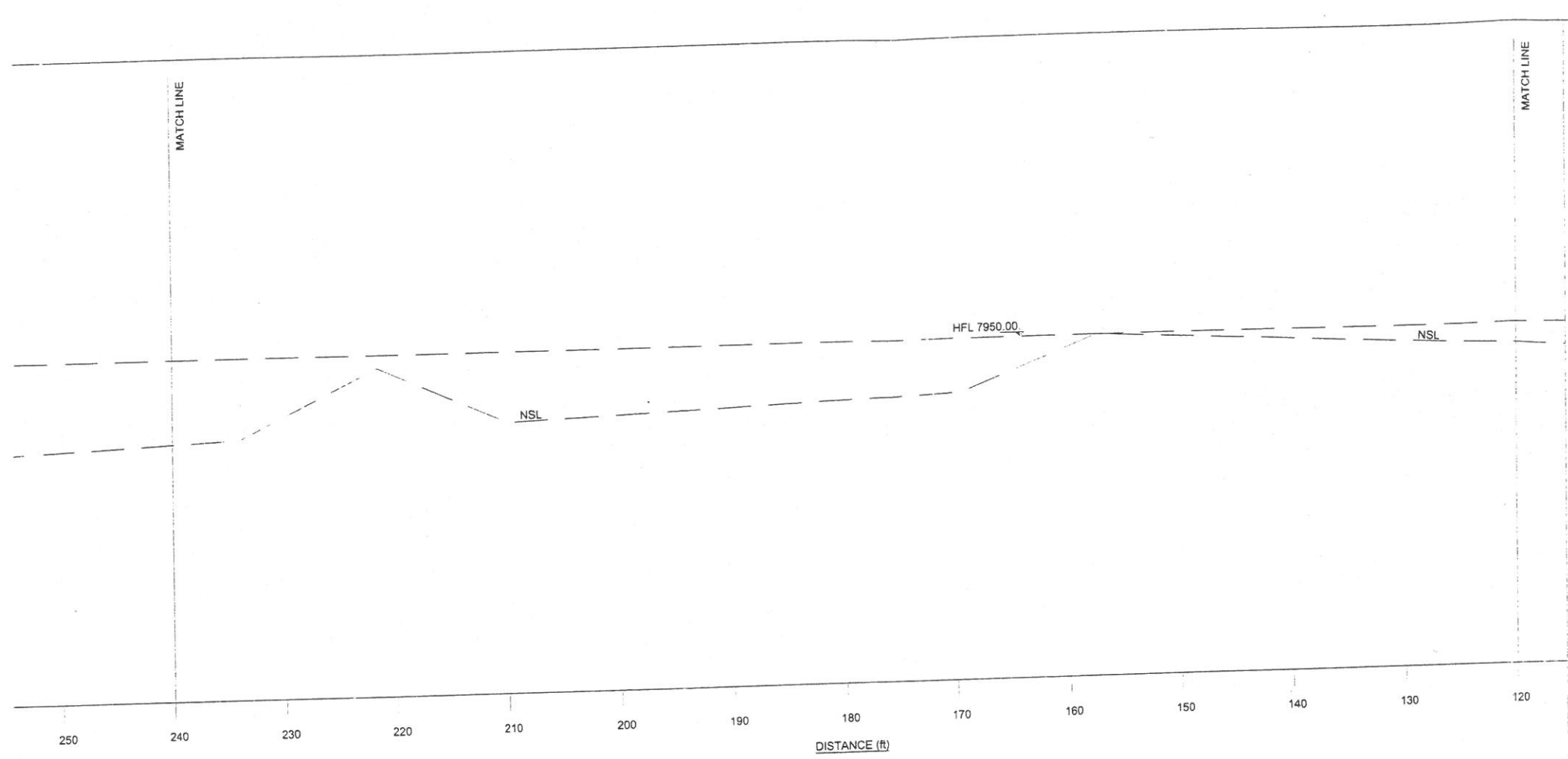
250 KW MINI HYDEL STATION IN SBBU,
SHERINGAL UPPER DIR.

CLIENT:
SHAHEED BENAZIR BHUTTO UNIVERSITY,
SHERINGAL UPPER DIR.

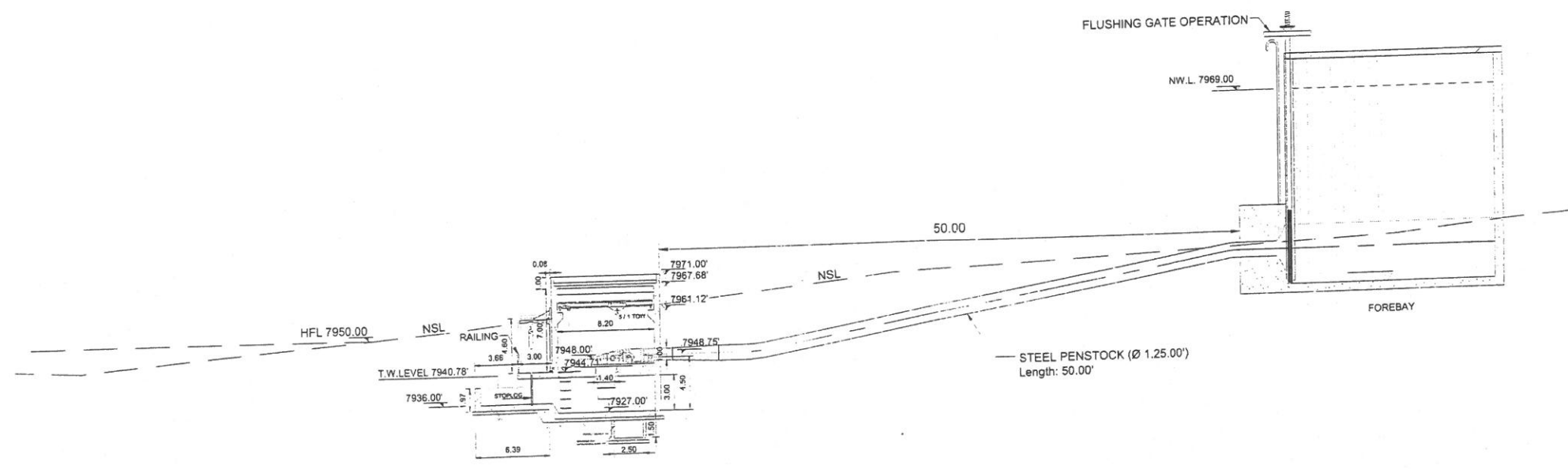
CONSULTANTS:
Associated Consulting Engineers - ACE (Pvt.) Ltd,
1-C/2, M.M. Alam Road, Gulberg-III, Lahore
PH: (92-42) 35759417-9
FAX: (92-42) 35878278

**LAYOUT PLAN OF
POWER HOUSE**

Drawn	Scale	Dated
Adnan	As Shown	-
Designed Mohsin Masood	Approved	
Checked Farooq Bhutta		
	Drawing No	Revision



NOTE:
 1. ALL LEVELS IN FEET.
 2. ALL DIMENSIONS ARE IN METERS.



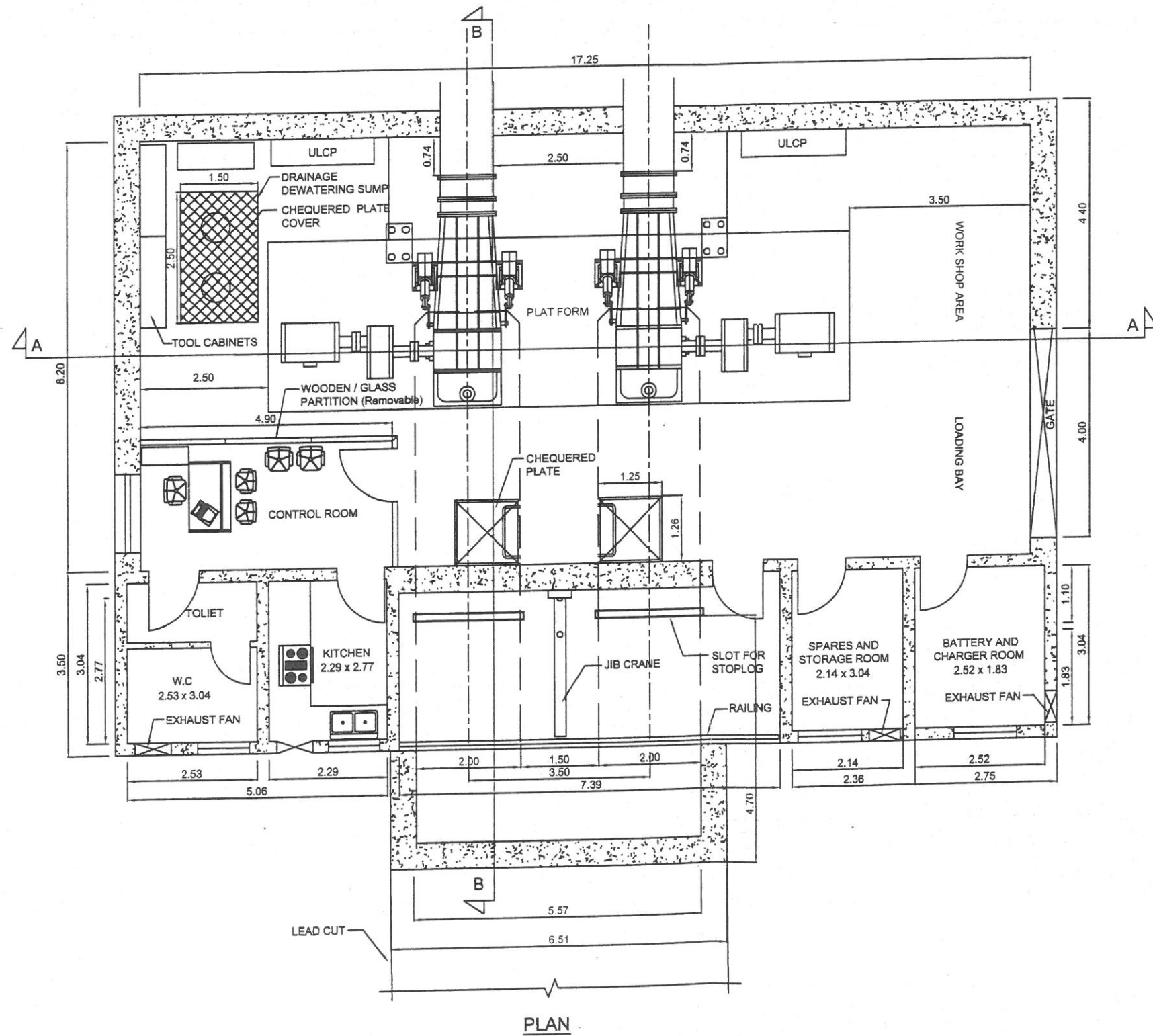
250 KW MINI HYDEL STATION IN SBBU,
 SHERINGAL UPPER DIR.

CLIENT:
 SHAHEED BENAZIR BHUTTO UNIVERSITY,
 SHERINGAL UPPER DIR.

CONSULTANTS:
 Associated Consulting Engineers - ACE (Pvt.) Ltd,
 1-C/2, M.M. Alam Road, Gulberg-III, Lahore
 PH: (92-42) 35759417-9
 FAX: (92-42) 35878278

**POWER HOUSE
 L-SECTION**

Drawn	Scale	Dated
Adnan	As Shown	-
Designed	Approved	



NOTE:

1. ALL LEVELS ARE IN FEET.
2. ALL DIMENSIONS ARE IN METERS.
3. CONCRETE OUTLINE IS SHOWN JUST FOR REFERENCE. STRUCTURE STABILITY ANALYSIS TO BE CARRIED OUT BY CIVIL ENGINEER.



250 KW MINI HYDEL STATION IN SBBU,
SHERINGAL UPPER DIR.

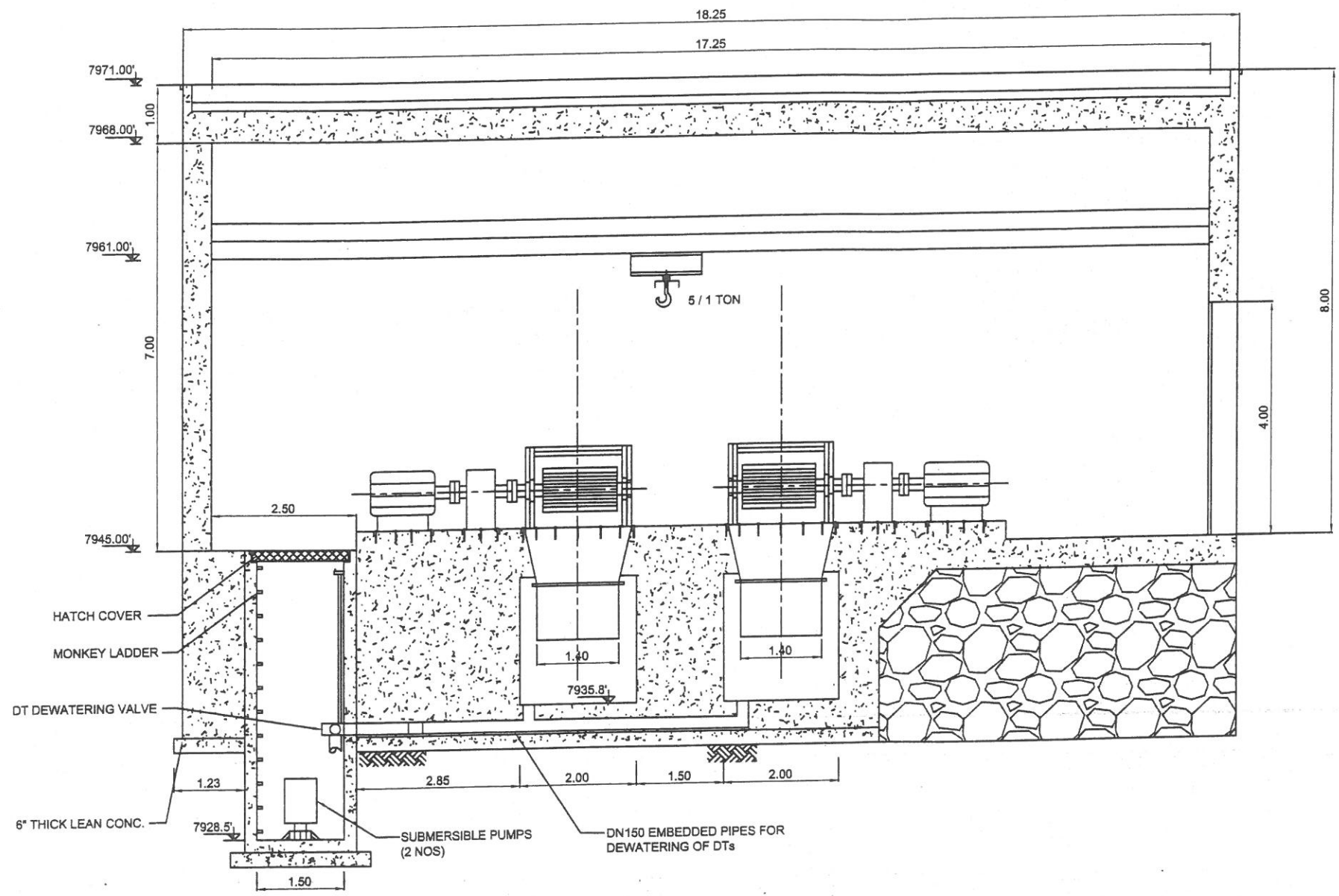
CLIENT:
SHAHEED BENAZIR BHUTTO UNIVERSITY,
SHERINGAL UPPER DIR.

CONSULTANTS:

 Associated Consulting Engineers - ACE (Pvt.) Ltd.
 1-C/2, M.M. Alam Road, Gulberg-III, Lahore
 PH: (92-42) 35759417-9
 FAX: (92-42) 35878278

POWER HOUSE PLAN

Drawn Adnan	Scale -	Dated 30.03.2021
Designed Mohsin Masood	Approved ----	
Checked Farooq Bhutta		
Drawing No -		Revision



SECTION A-A


NOTE:

1. ALL LEVELS ARE IN FEET.
2. ALL DIMENSIONS ARE IN METERS.
3. CONCRETE OUTLINE IS SHOWN JUST FOR REFERENCE. STRUCTURE STABILITY ANALYSIS TO BE CARRIED OUT BY CIVIL ENGINEER.



250 KW MINI HYDEL STATION IN SBBU,
SHERINGAL UPPER DIR.

CLIENT:
SHAHEED BENAZIR BHUTTO UNIVERSITY,
SHERINGAL UPPER DIR.

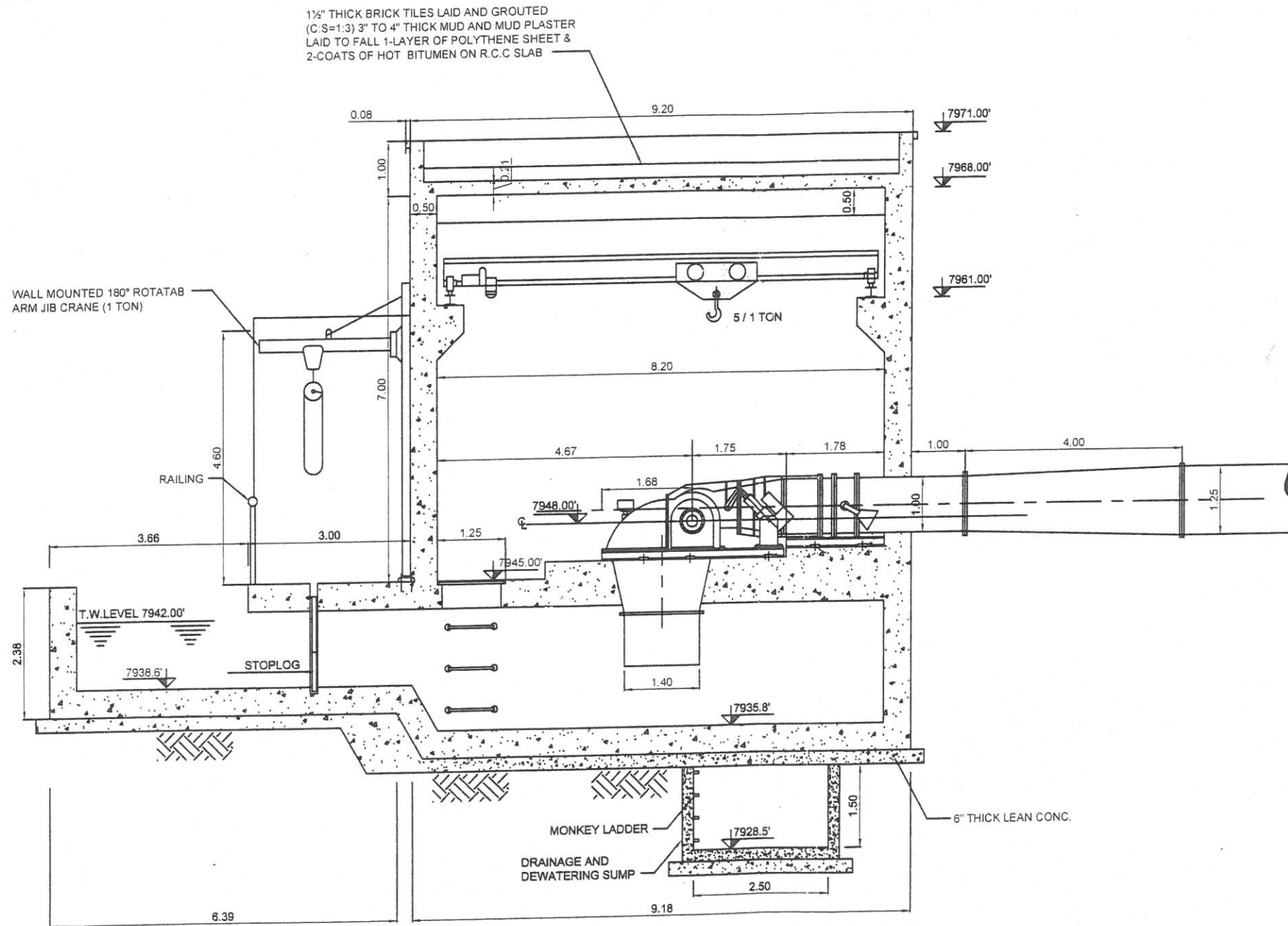
CONSULTANTS:

 Associated Consulting Engineers - ACE (Pvt.) Ltd,
 1-C/2, M.M. Alam Road, Gulberg-III, Lahore
 PH: (92-42) 35759417-9
 FAX: (92-42) 35878278

POWER HOUSE
SECTION A-A

Drawn Adnan	Scale -	Dated 30.03.2021
Designed Mohsin Masood	Approved ---	
Checked Farooq Bhutta	---	
Drawing No -		Revisor ---

NOTE:

1. ALL LEVELS IN FEET.
2. ALL DIMENSIONS ARE IN METERS
3. CONCRETE OUTLINE IS SHOWN JUST FOR REFERENCE. STRUCTURE STABILITY ANALYSIS TO BE CARRIED OUT BY CIVIL ENGINEER.



SECTION B-B

250 KW MINI HYDEL STATION IN SBBU,
SHERINGAL UPPER DIR.

CLIENT:

SHAHEED BENAZIR BHUTTO UNIVERSITY,
SHERINGAL UPPER DIR.

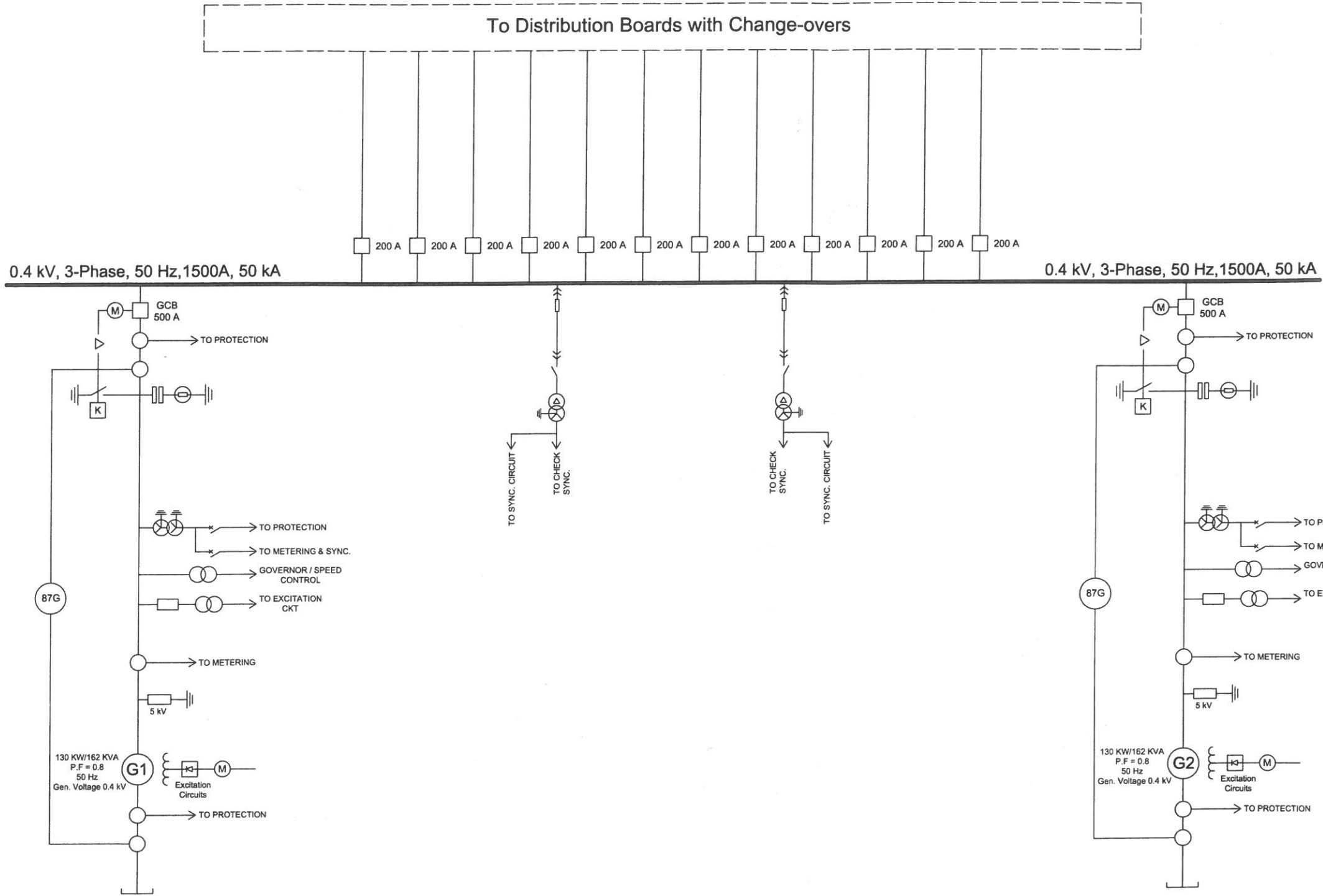
CONSULTANTS:




Associated Consulting Engineers - ACE (Pvt.) Ltd,
1-C/2, M.M.Alam Road, Gulberg-III, Lahore
PH: (92-42) 35759417-9
FAX: (92-42) 35878278

**POWER HOUSE
SECTION B-B**

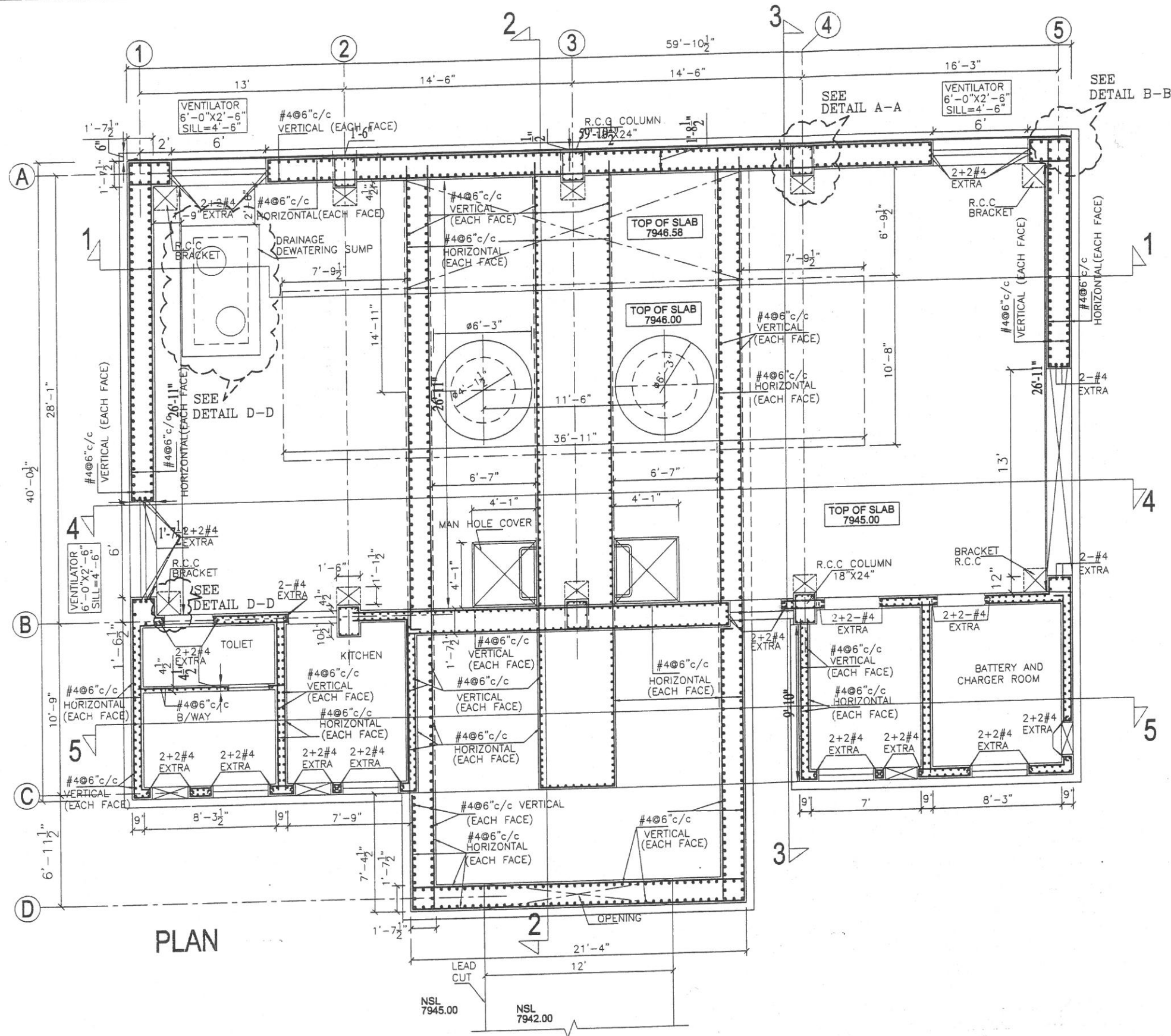
Drawn Adnan	Scale -	Dated 30.03.2021
Designed Mohsin Masood	Approved ---	
Checked Farooq Bhutta	Revision -	
Drawing No -		Revision -



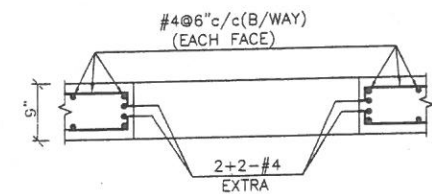
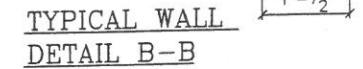
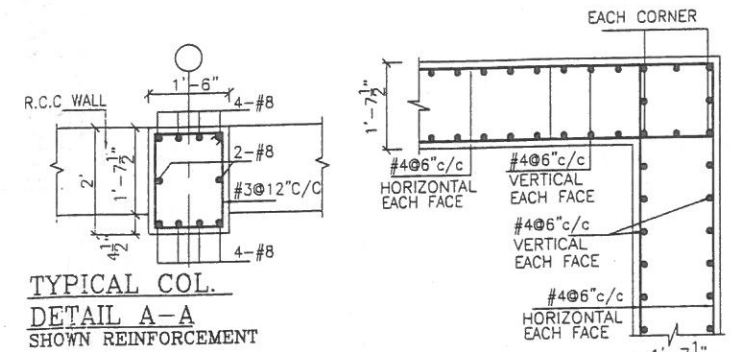
250 KW MINI HYDEL STATION IN SBBU, SHERINGAL UPPER DIR.		
CLIENT: SHAHEED BENAZIR BHUTTO UNIVERSITY, SHERINGAL UPPER DIR.		
CONSULTANTS:  Associated Consulting Engineers - ACE (Pvt.) Ltd, 1-C/2,M.M.Alam Road,Gulberg-III,Lahore PH:(92-42) 35759417-9 FAX: (92-42) 35878278		

MAIN SINGLE LINE DIAGRAM

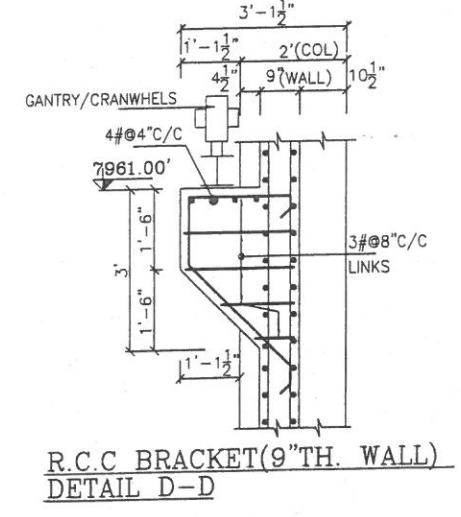
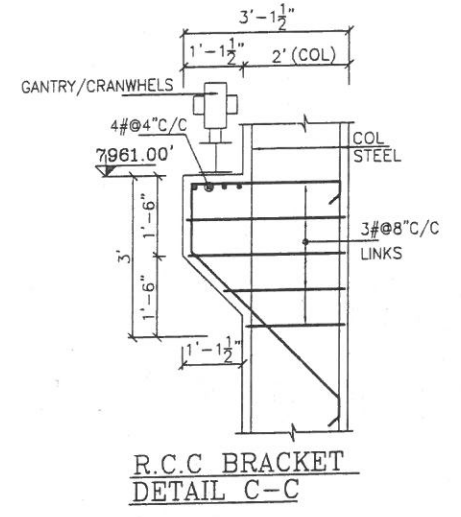
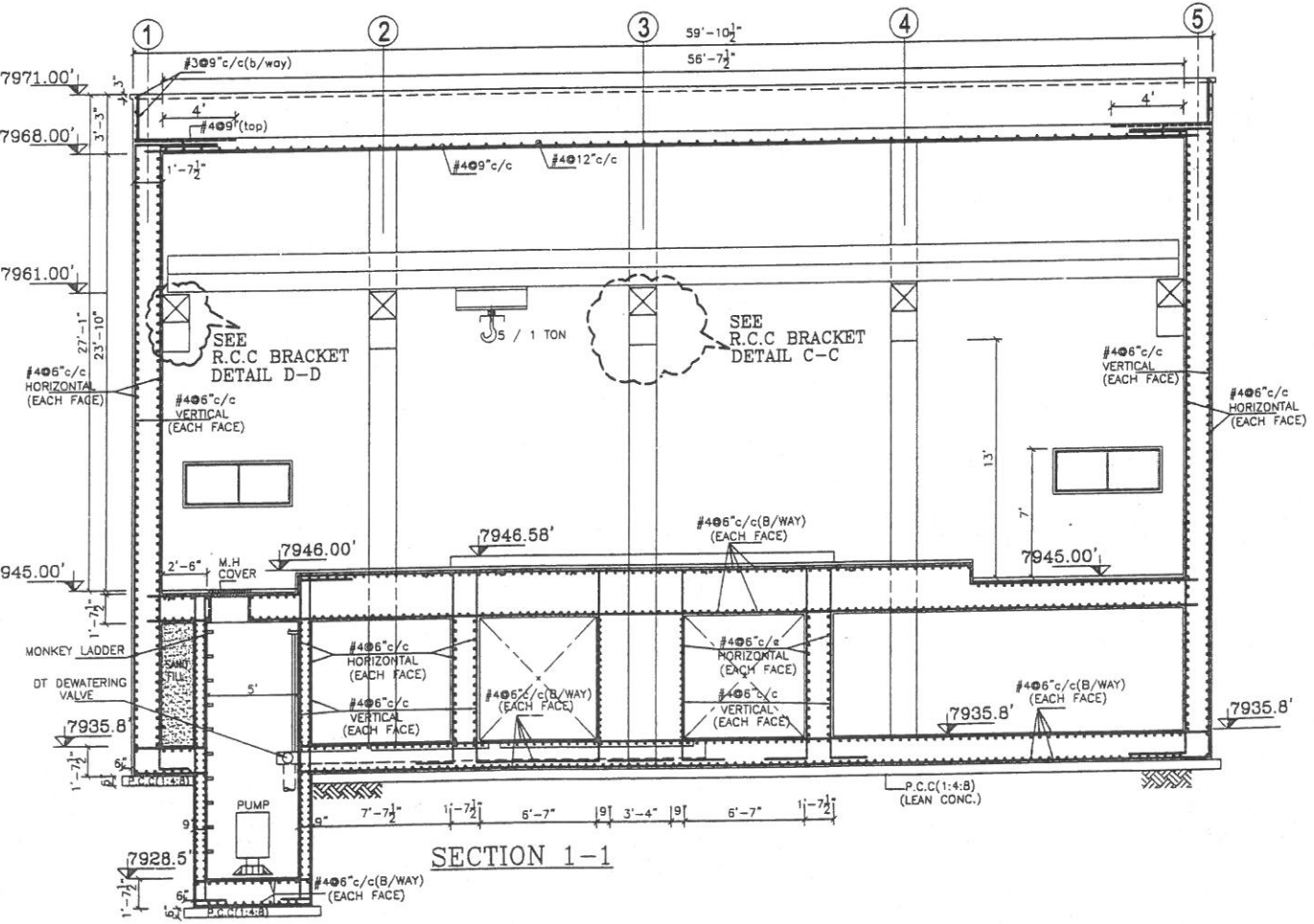
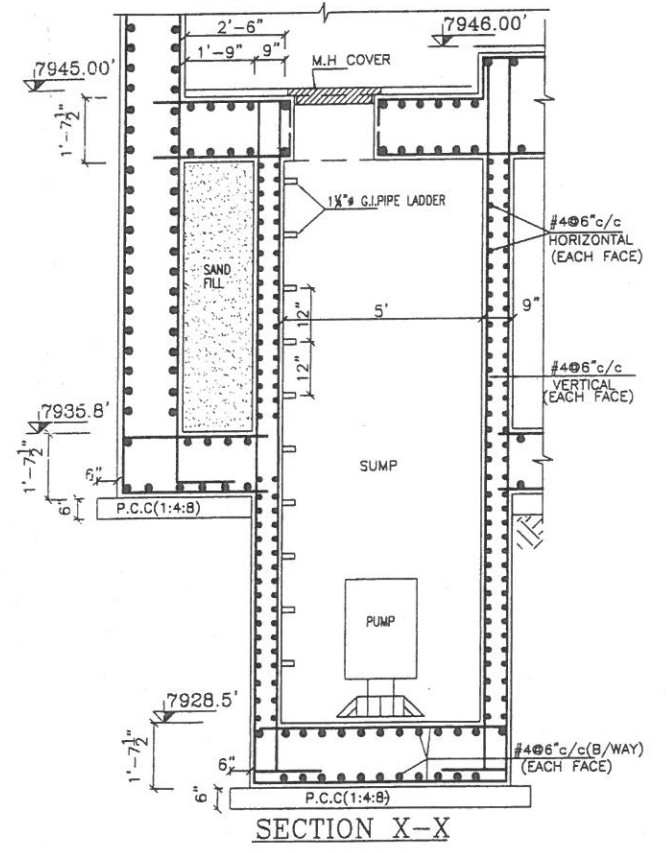
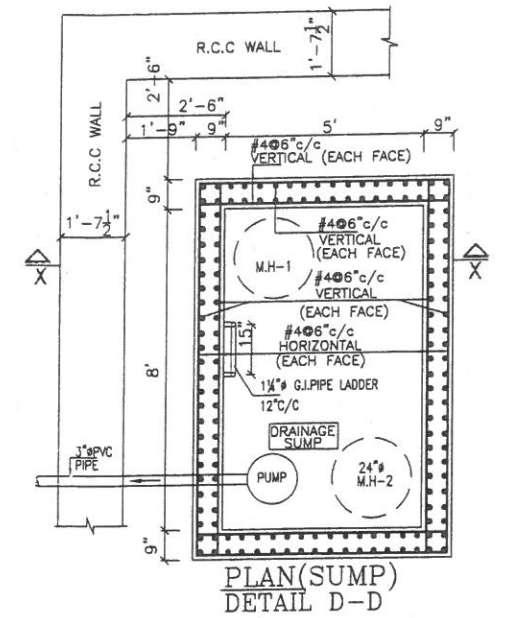
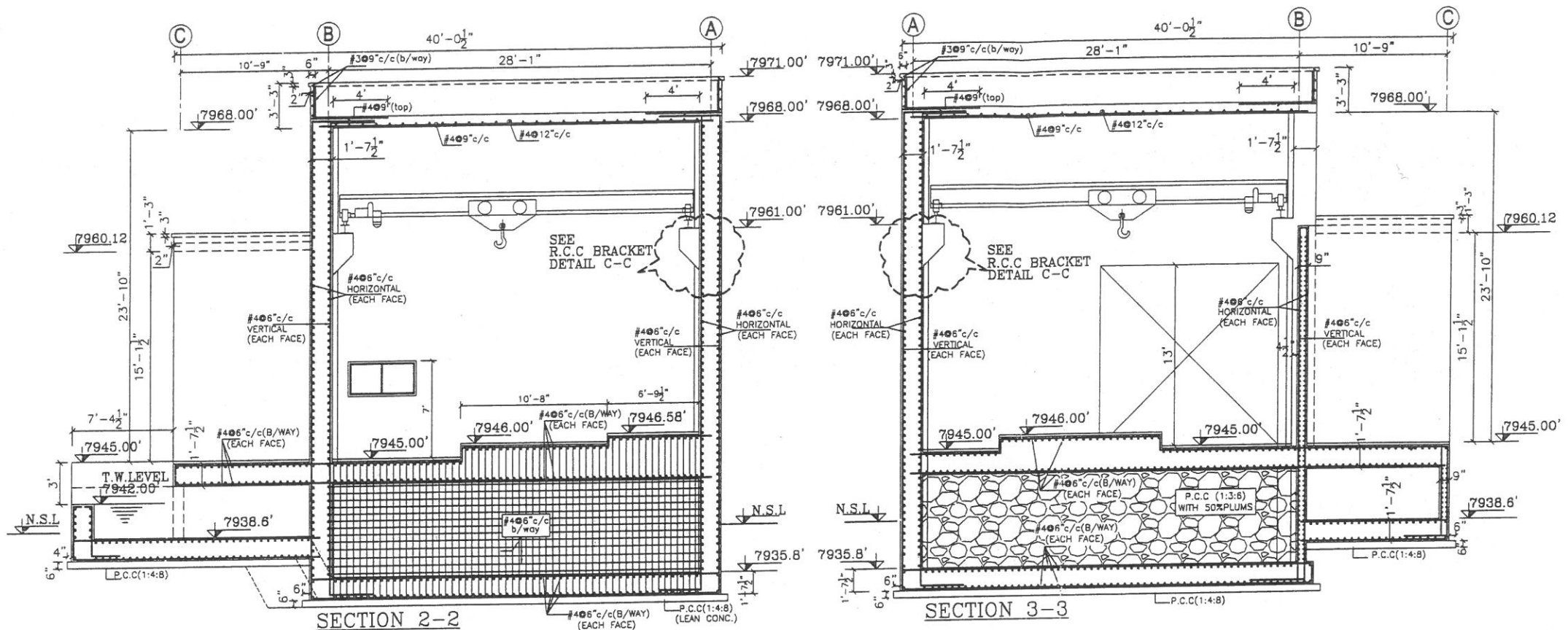
Drawn Adnan	Scale -	Dated 27.01.2022
Designed Asad Naseer	Approved ---	
Checked Farooq Bhutta		
Drawing No -		Revision R2



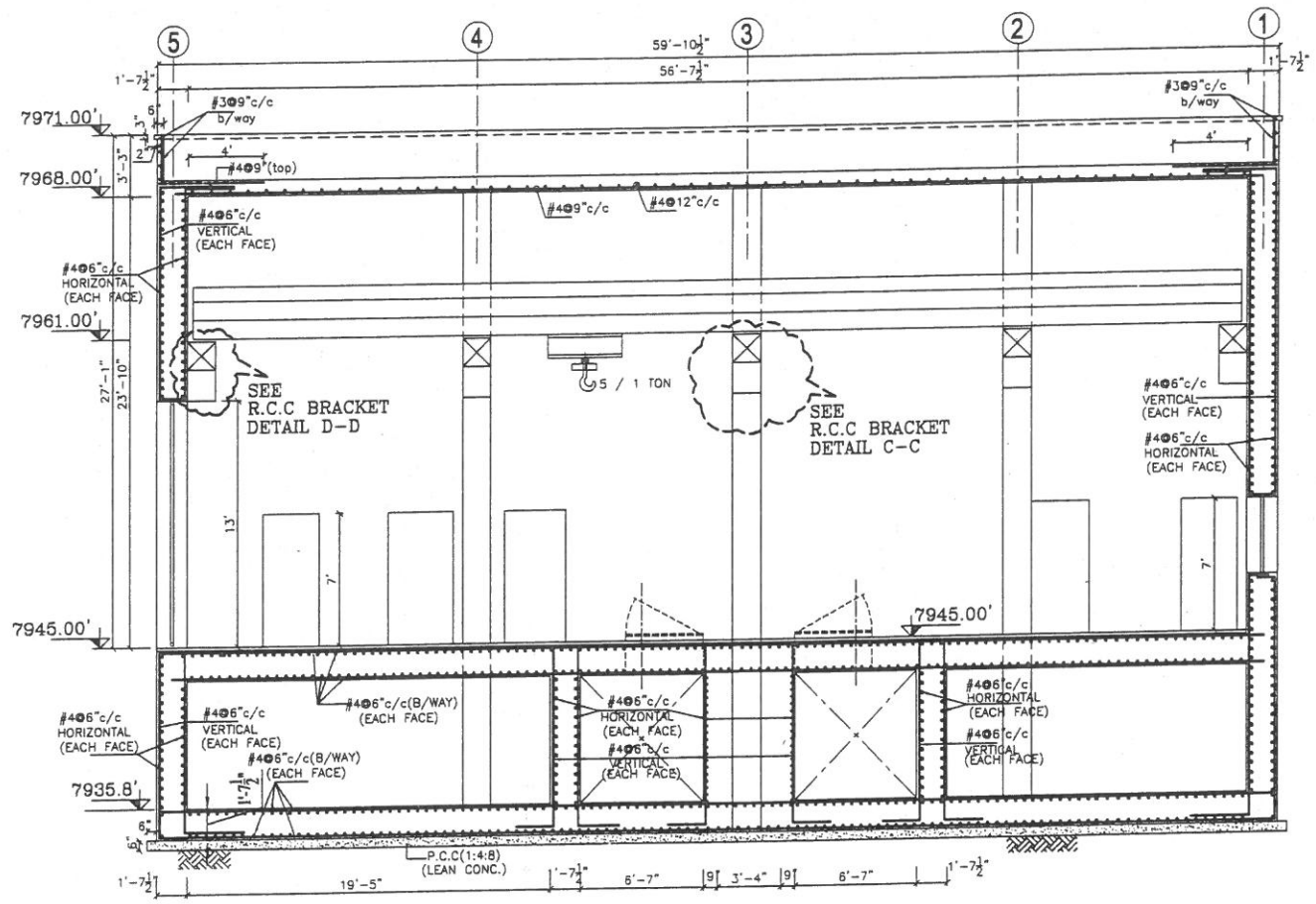
PLAN



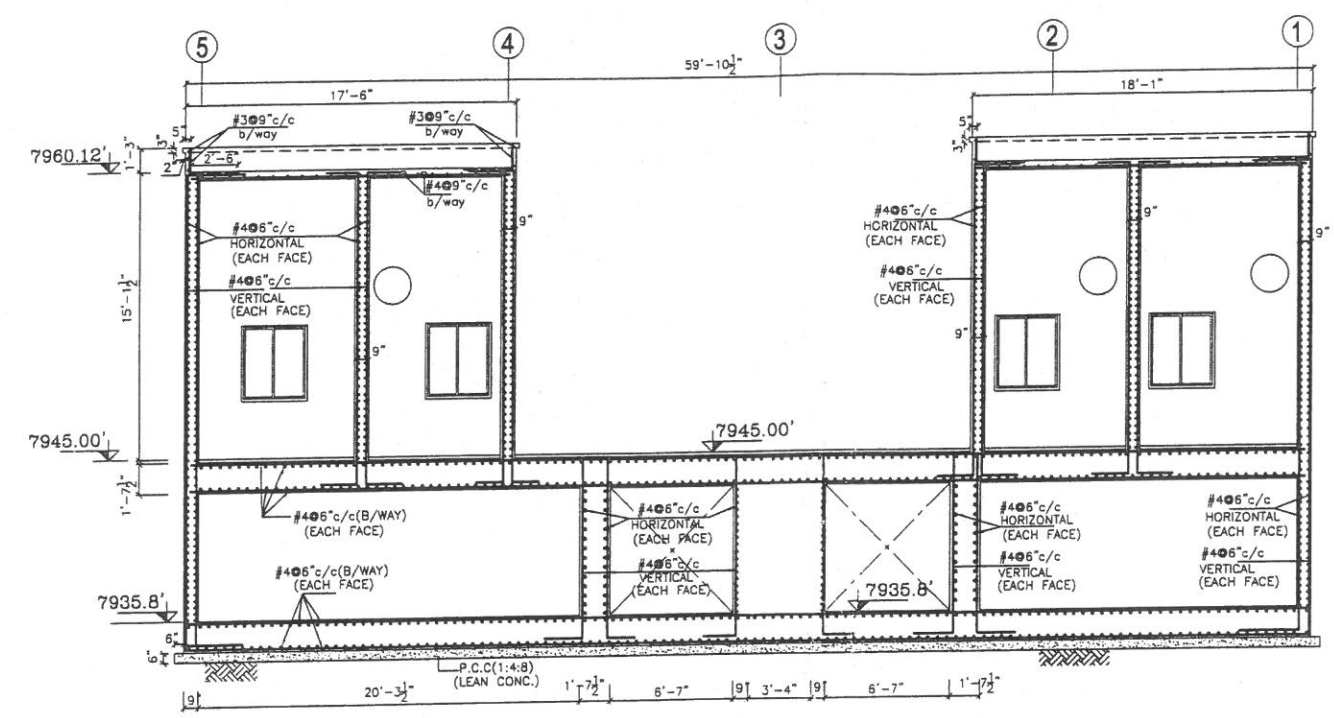
REV.	DATE	DESCRIPTION	DRN.	CHKD.
DRAWN BY:		CONSULTANTS:		
SOHAIL IQBAL		ASSOCIATED CONSULTING ENGINEER ACE-LTD. Architectural & Town Planning Services, Division GROUND FLOOR, 36-CIVIC CENTER-M-BLOCK, MODEL TOWN EXTENSION LAHORE.		
CHECKED BY:		CLIENT:		
MAN KASHID		UNIVERSITY OF DIR SHERINGAL DIR UPPER		
ENGINEER:		PROJECT:		
MAN KASHID		MASTER PLANNING ARCHITECTURAL ENGINEERING DESIGN & CONSTRUCTION SUPERVISION OF UNIVERSITY OF DIR SHERINGAL		
APPROVED BY:		DESCRIPTION:		
AK ARD		POWER HOUSE WALL PLAN (SHOWN REINFORCEMENT)		
TYPE:	SCALE:	JOB NO.	DRG NO.	
ST	N.T.S.	8073	SBBU-PWH-ST-01	
DATE:				
JANUARY 2021				



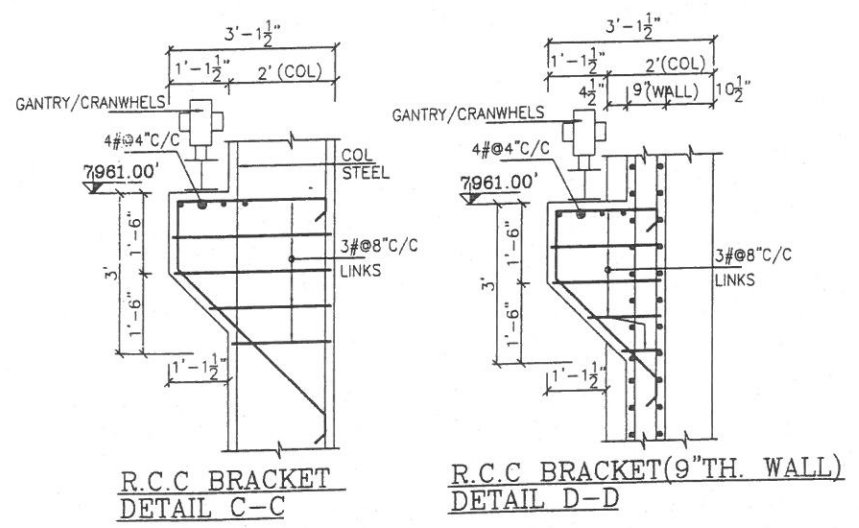
REV	DATE	DESCRIPTION	DRN	CHKD
DRAWN BY: CONSULTANTS: ASSOCIATED CONSULTING ENGINEER ACE-LTD. Architectural & Town Planning Services, Division GROUND FLOOR, 58-CIVIC CENTER-LAKHMEER BLOCK, MODEL TOWN EXTENSION LAHORE.				
CHECKED BY: CLIENT: UNIVERSITY OF DIR SHERINGAL DIR UPPER				
ENGINEER: PROJECT: MASTER PLANNING ARCHITECTURAL ENGINEERING DESIGN & CONSTRUCTION SUPERVISION OF UNIVERSITY OF DIR SHERINGAL				
DESCRIPTION: POWER HOUSE SECTIONAL ELEVATION 1-1,2-2 AND 3-3				
APPROVED BY:	TYPE:	SCALE:	JOB NO.	DRG NO.
A.K.ABID	ST	N.T.S.	6073	SBBU-PWH-ST-02
		DATE:		
		JANUARY 2021		



SECTION 4-4



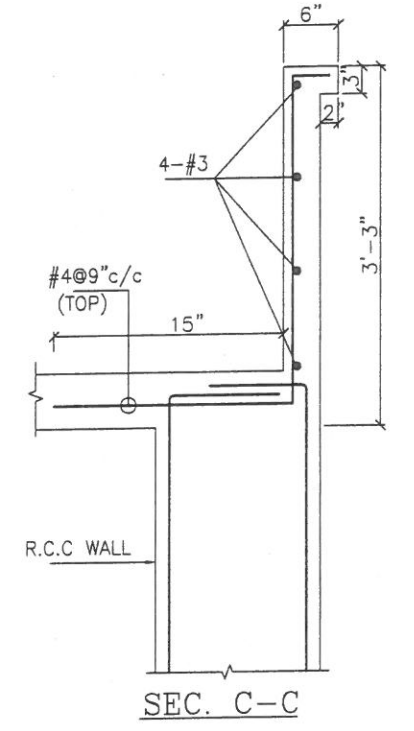
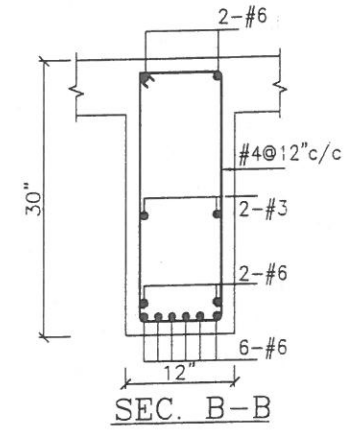
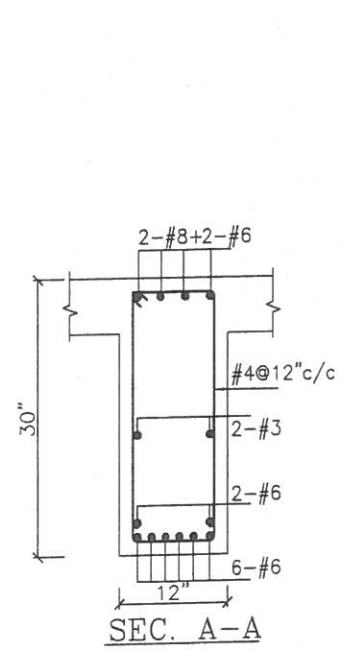
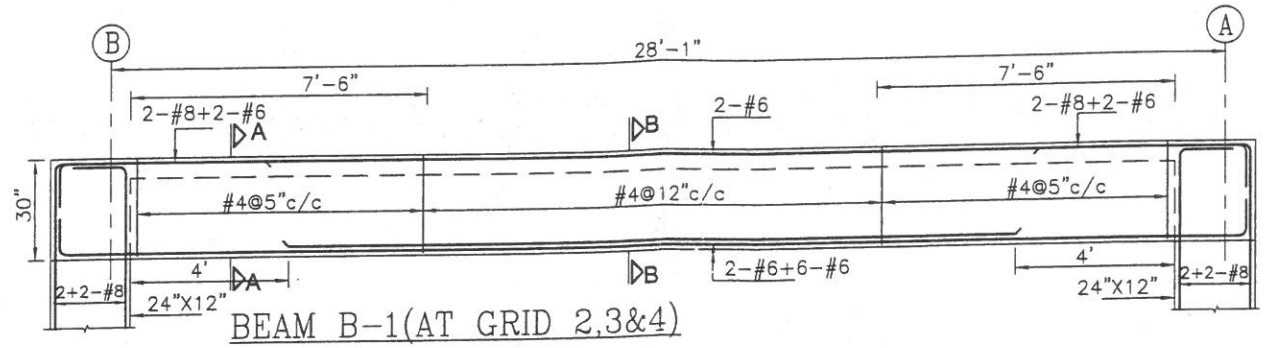
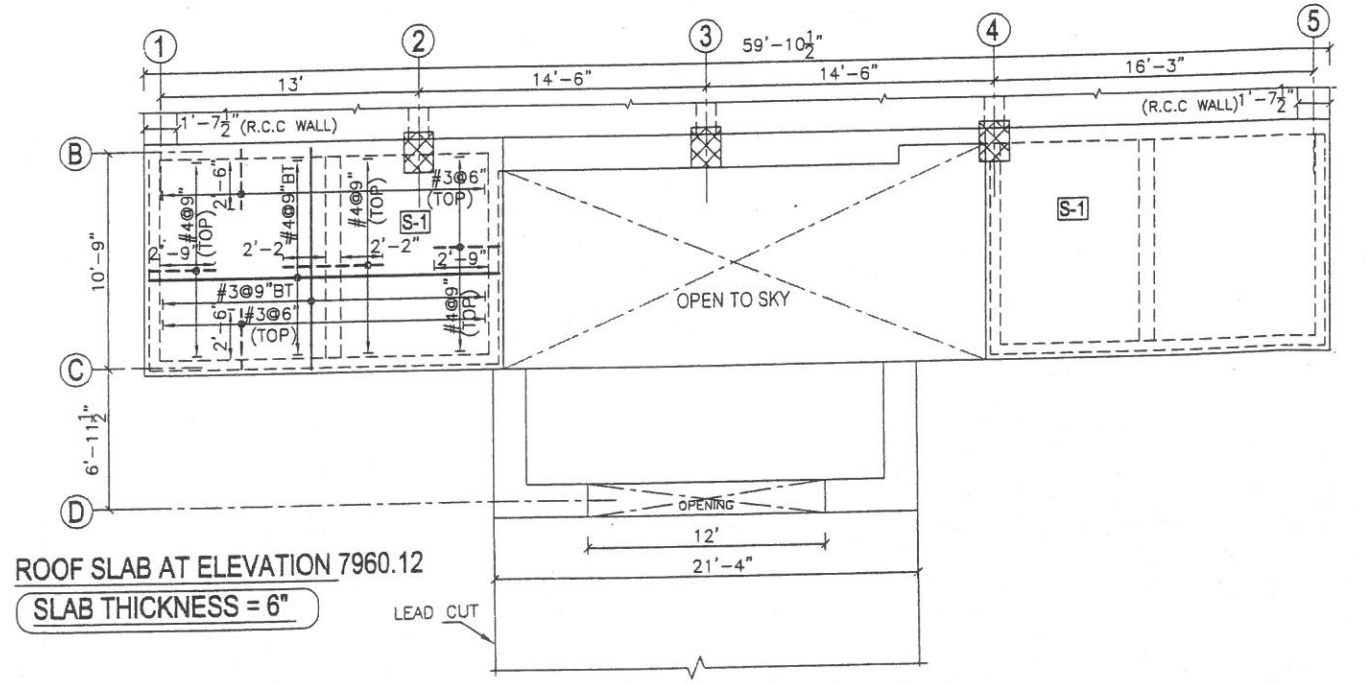
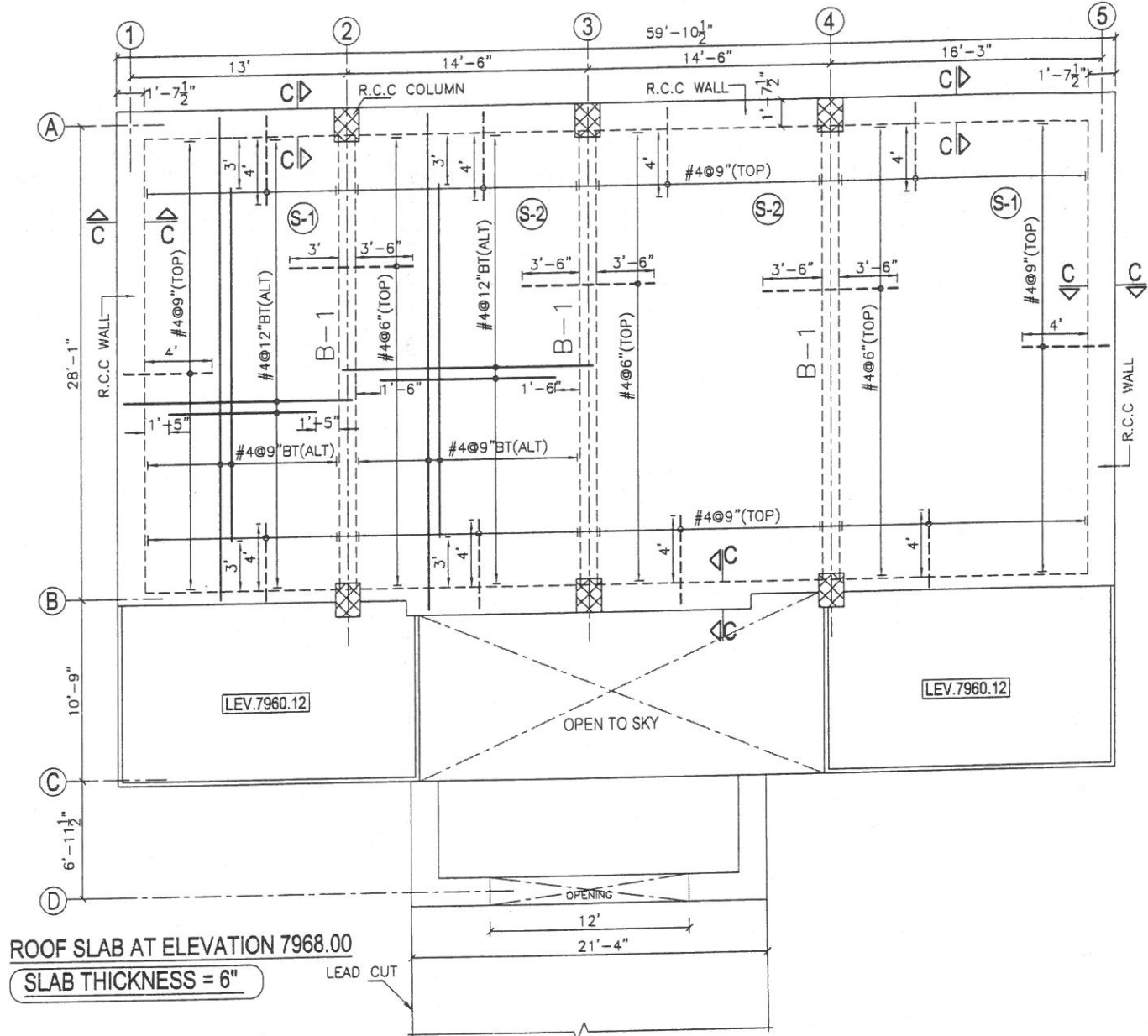
SECTION 5-5



R.C.C BRACKET
DETAIL C-C

R.C.C BRACKET (9" TH. WALL)
DETAIL D-D

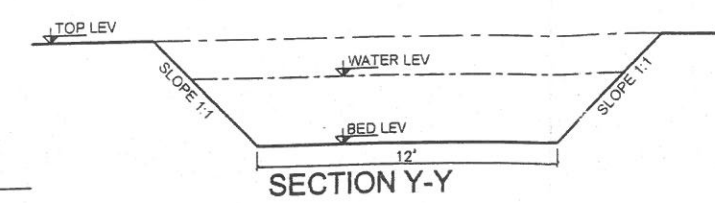
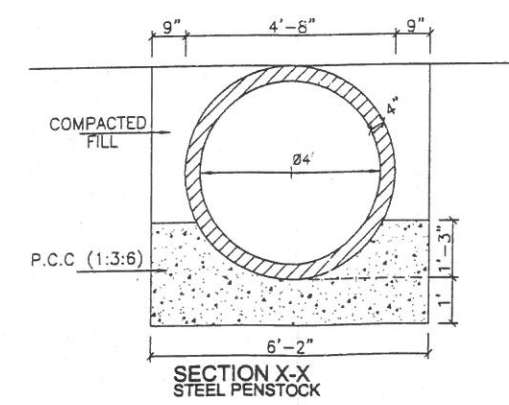
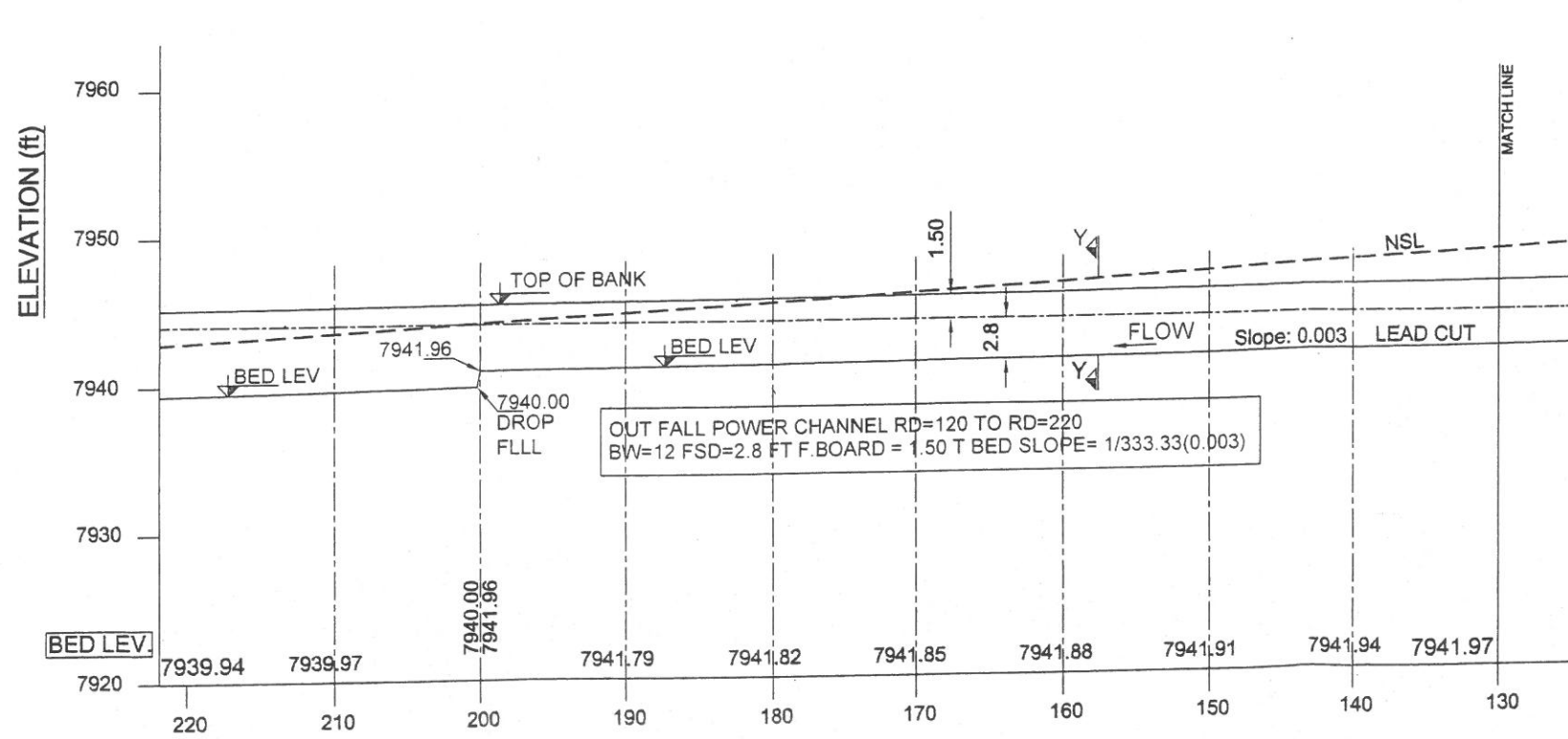
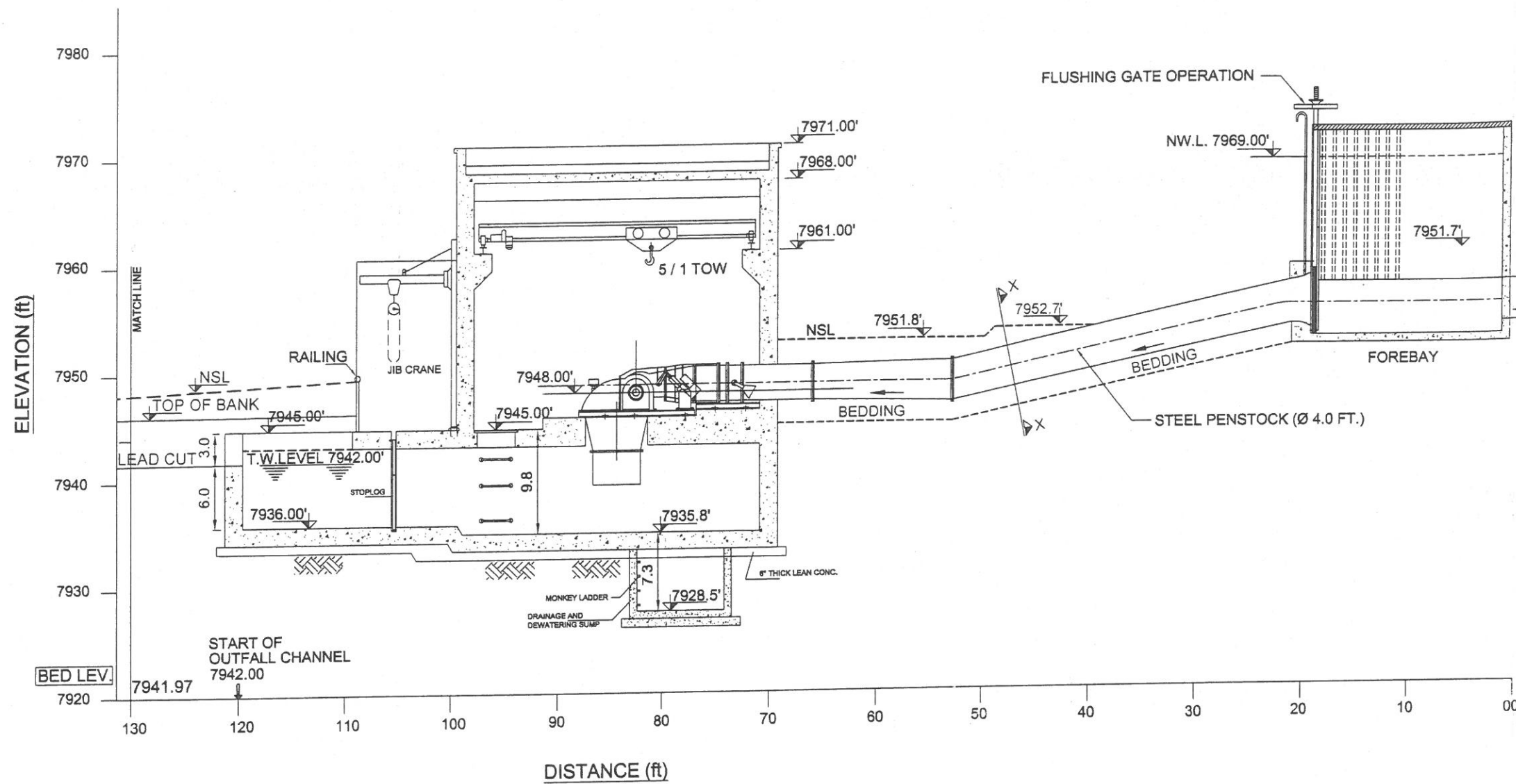
REV.	DATE	DESCRIPTION	DRN.	CHKD.
DRAWN BY: CONSULTANTS: ASSOCIATED CONSULTING ENGINEER ACE-LTD. Architectural & Town Planning Services, Division SOHAIL IQBAL GROUND FLOOR, 56-CIVIC CENTER, M-BLOCK, MODEL TOWN EXTENSION LAHORE.				
CHECKED BY: CLIENT: UNIVERSITY OF DIR SHERINGAL DIR UPPER				
PROJECT: MASTER PLANNING ARCHITECTURAL ENGINEERING DESIGN & CONSTRUCTION SUPERVISION OF UNIVERSITY OF DIR SHERINGAL				
ENGINEER DESCRIPTION: POWER HOUSE SECTIONAL ELEVATION 4-4 AND 5-5				
APPROVED BY:	TYPE:	SCALE:	JOB NO.	DRG NO.
ST		N.T.S.	6073	SBBU-PWH-ST-03
DATE:	JANUARY 2021			



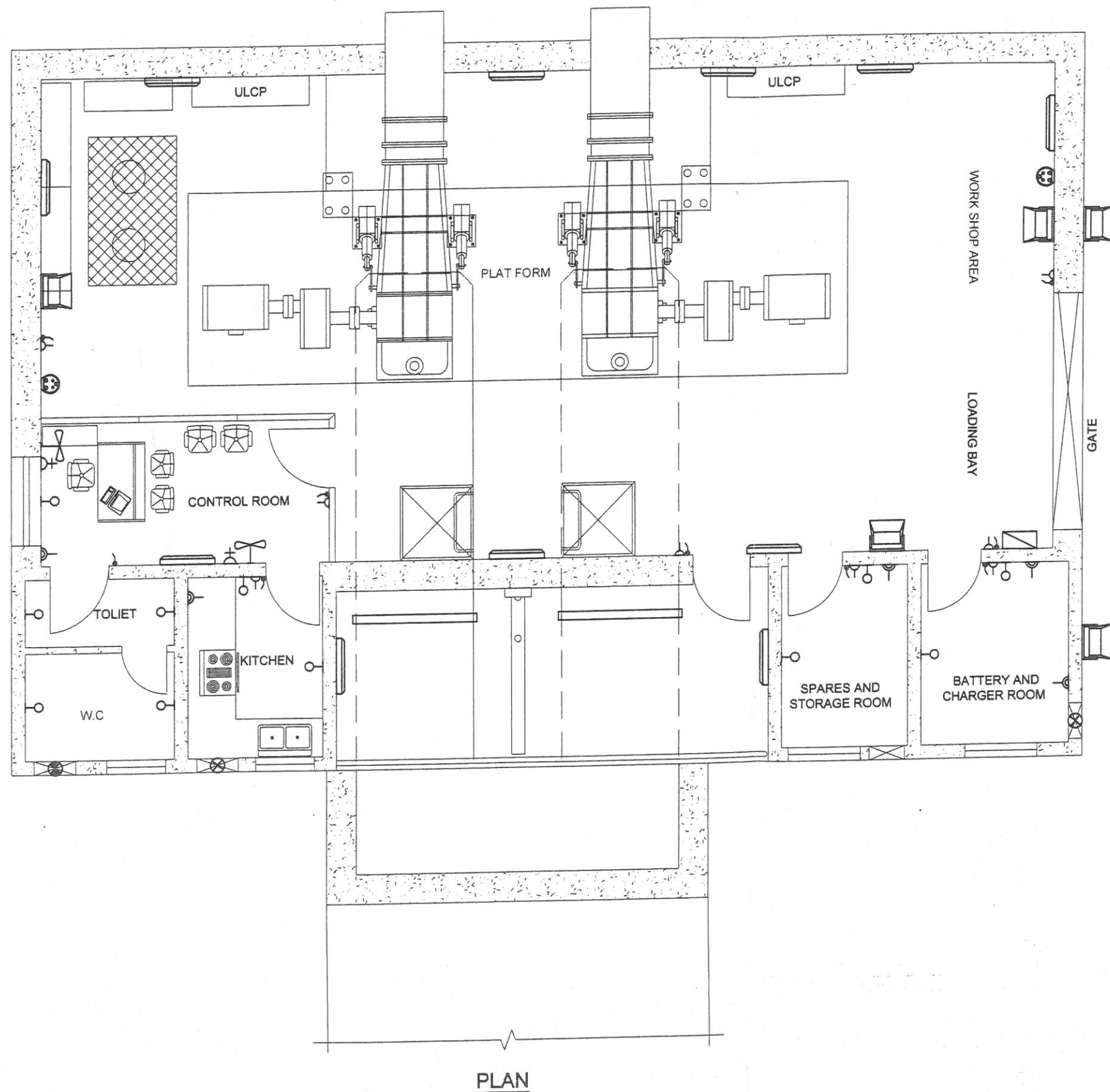
REV.	DATE	DESCRIPTION	DRN.	CHK.
CONSULTANTS: ASSOCIATED CONSULTING ENGINEER ACE-LTD. Architectural & Town Planning Services, Division GROUND FLOOR, 36-CIVIC CENTER, M-BLOCK, MODEL TOWN EXTENSION LAHORE.				
CLIENT: UNIVERSITY OF DIR SHERINGAL DIR UPPER				
PROJECT: MASTER PLANNING ARCHITECTURAL ENGINEERING DESIGN & CONSTRUCTION SUPERVISION OF UNIVERSITY OF DIR SHERINGAL				
DESCRIPTION: POWER HOUSE R.C.C SLAB OVER FIRST FLOOR & BEAMS REINF. SECTION DETAIL				
APPROVED BY:	TYPE:	SCALE:	JOB NO.	DRG NO.
ST		N.T.S	6073	SBBU-PWH-ST-0
DATE:	JANUARY 2021			

NOTE:

1. ALL LEVELS ARE IN FEET.
2. CONCRETE OUTLINE IS SHOWN JUST FOR REFERENCE. STRUCTURE STABILITY ANALYSIS TO BE CARRIED OUT BY CIVIL ENGINEER.



REV.	DATE	DESCRIPTION	DRN	CHKD
DRAWN BY: CONSULTANTS: ASSOCIATED CONSULTING ENGINEER ACE-LTD. Architectural & Town Planning Services, Division				
SOGAIL IQBAL GROUND FLOOR, 36-CIVIC CENTER-M-BLOCK, MODEL TOWN EXTENSION LARORE.				
CHECKED BY: CLIENT: UNIVERSITY OF DIR SHERINGAL DIR UPPER				
PROJECT: MASTER PLANNING ARCHITECTURAL ENGINEERING DESIGN & CONSTRUCTION SUPERVISION OF UNIVERSITY OF DIR SHERINGAL				
DESCRIPTION: POWER HOUSE X-SECTION/L-SECTION OF OUTFALL CHANNEL RD=120-220				
APPROVED BY:	TYPE: ST	SCALE: N.T.S.	JOB NO: 8073	DRG NO: SBBU-PWH-ST-03
DATE: JANUARY 2021				



LEGEND

SR.NO	SYMBOL	DESCRIPTION
01		LED WEATHER PROOF LIGHT 40W COLOR 8000K IP-65
02		LED 18 WATT BULB WITH HOLDER AND ACCESSORIES
03		LED FLOOD LIGHT 50 WATTS IP-65
04		WALL BRACKET FAN 18" SWEEP
05		EXHAUST FAN 12" PLASTIC BODY.
06		EXHAUST FAN 18" METAL BODY
07		SWITCH BOARD
08		3-PIN SOCKET OUTLET UNIVERSAL
09		3-PIN 13AMP DUPLEX SOCKET OUTLET UNIVERSAL
10		15/20 Amps, SOCKET OUTLET
11		5-PIN 63A 400V INDUSTRIAL WALL SOCKET WITH PLUG IP-67
12		DISTRIBUTION BOARD (DB.) IP-65

GENERAL NOTES:

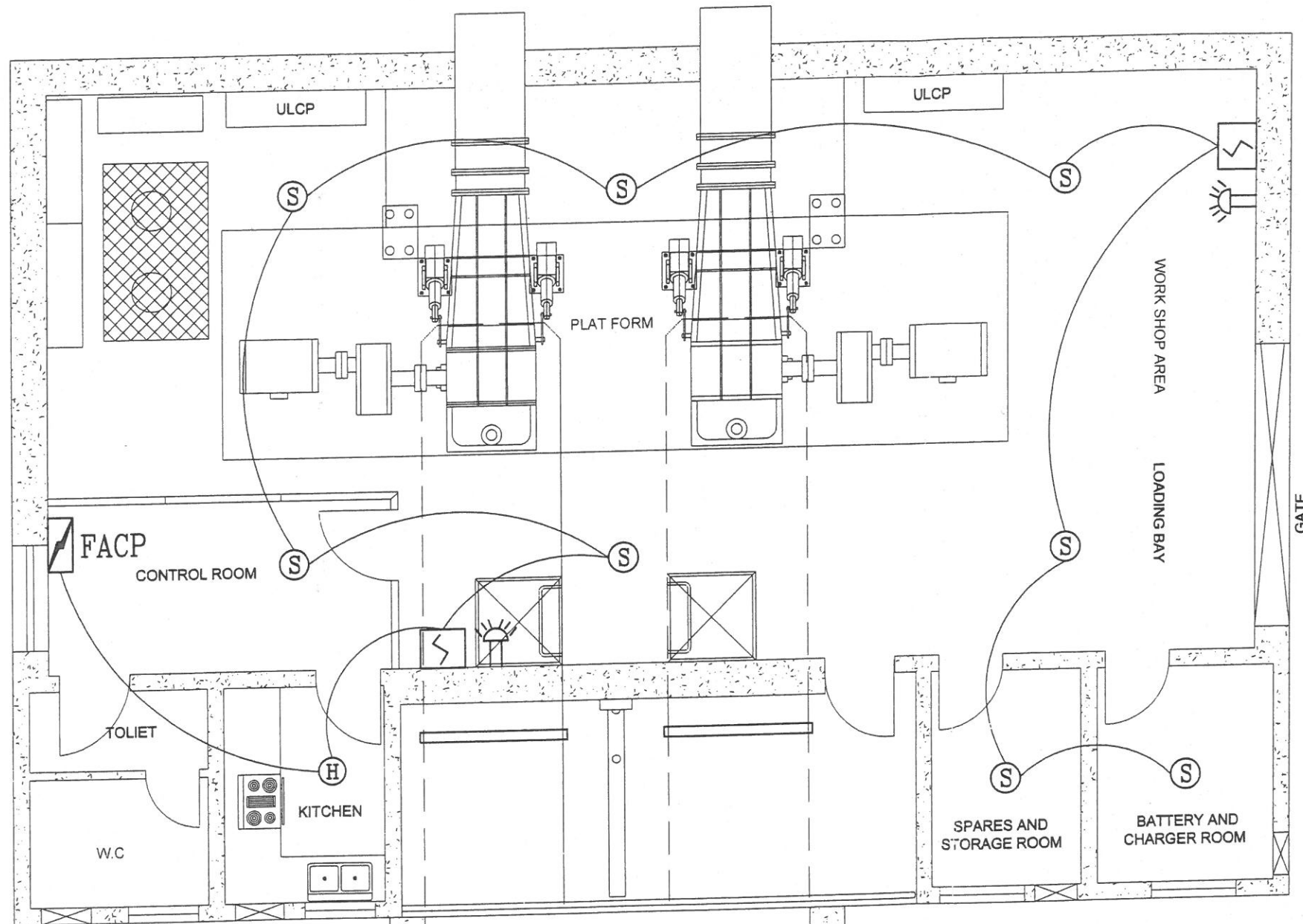
ELECTRICAL WORKS

- ALL ELECTRICAL WORKS PERTAINING TO WIRING OR ELECTRICAL SYSTEM SHALL STRICTLY CONFORM TO I.E.E LATEST EDITION OF RULES AND REGULATIONS. ALL LIGHT/FAN POINTS SHALL BE WIRED WITH 2X1.5mm²+1X2.5mm² AS CPC.
- ELECTRIC WIRING**
ALL WIRING SHALL BE DONE IN M.S CONDUITS TO BE INSTALLED ON THE SURFACE OF THE WALLS, SLABS, COLUMNS AND FLOOR AS SHOWN ON DRAWINGS.
- ALL POWER SOCKET WIRING SHALL BE WIRED WITH 2X6mm²+1X4mm² (CPC).
- ALL CIRCUITS FROM DB TO SWITCH BOARD SHALL BE WIRED WITH 2X2.5mm²+1X2.5mm² AS CPC.
- ALL M.S CONDUITS SHALL BE OF 3/4" OR 1" DIA (DEPENDING UPON NUMBER OF WIRES) FROM SWITCH BOARD TO LIGHT POINTS AND 1" DIA FROM DBS TO SWITCH BOARDS AND POWER SOCKETS OF AS SHOWN ON DRG.
- NO LUBRICATION EXCEPT AS RECOMMENDED BY MANUFACTURER SHALL BE USED FOR PULLING OF WIRES IN M.S CONDUITS. NO. OIL OF ANY KIND SHALL BE USED.
- COLOR CODING FOR WIRING SHALL BE AS FOLLOWS:
RED, YELLOW AND BLUE FOR PHASES, BLACK FOR NEUTRAL AND GREEN/YELLOW FOR CPC.
- ALL LIGHT POINT AND POWER SOCKETS SHALL BE PROPERLY CONNECTED WITH ECC OF COLOR GREEN/YELLOW.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL ELECTRICAL WORKS TO THE ENGINEER BEFORE INSTALLATION.
- INDUSTRIAL SOCKET WIRING SHALL BE WIRED WITH 4x1C 16mm+1X16mm (CPC)

CAPACITY OF CONDUITS (For Single Core Cables)

Wire Size	1.5 mm ²	2.5 mm ²	4.0 mm ²	6.0 mm ²	10 mm ²	16 mm ²
20mm dia	10	8	5	4	2	2
25mm dia	17	13	9	7	4	3
40mm dia	30	21	16	10	8	6

REV.	DATE	DESCRIPTION	DRN.	CHKD.
DRAWN BY:		CONSULTANTS: ASSOCIATED CONSULTING ENGINEER ACE-LTD. Architectural & Town Planning Services, Division GROUND FLOOR, 38-CIVIC CENTRAL-BLOCK, MODEL TOWN EXTENSION LABOR.		
CHECKED BY:		CLIENT: UNIVERSITY OF DIR SHERINGAL DIR UPPER		
ENGINEER:		PROJECT: MASTER PLANNING ARCHITECTURAL, ENGINEERING DESIGN & CONSTRUCTION SUPERVISION OF UNIVERSITY OF DIR SHERINGAL		
APPROVED BY:		DESCRIPTION: POWER HOUSE ELECTRICAL LAYOUT PLAN		
TYPE:		SCALE: N.T.S.	JOB NO. 8073	DRG NO. SBBU-PWH-EE-01
DATE:		JANUARY 2021		



PLAN

LEGEND

SR.NO.	SYMBOLS	DESCRIPTION
1	Ⓢ	CONVENTIONAL SMOKE DETECTOR
2	Ⓜ	CONVENTIONAL HEAT DETECTOR
3	☼	CONVENTIONAL FIRE ALARM BELL (FAB)
4	Ⓛ	CONVENTIONAL MANUAL CALL POINT (MCP)
5	Ⓛ	CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP) 2-ZONE

GENERAL NOTES:

FIRE ALARM SYSTEM
 1.5MMSQ 2-CORE FIRE RETARDANT CABLE WIRED FROM FACP TO SMOKE/HEAT DETECTORS AND MANUAL CALL POINT ETC. SHALL BE INSTALLED

REV.	DATE	DESCRIPTION	DRN.	CHKD.
DRAWN BY: CONSULTANTS: ASSOCIATED CONSULTING ENGINEER ACE-LTD. Architectural & Town Planning Services, Division GROUND FLOOR, 36-CIVIC CENTER, M-BLOCK, MODEL TOWN EXTENSION LAHORE				
AHSAN ALI				
CHECKED BY: CLIENT: UNIVERSITY OF DIR SHERINGAL DIR UPPER				
PROJECT: MASTER PLANNING ARCHITECTURAL ENGINEERING DESIGN & CONSTRUCTION SUPERVISION OF UNIVERSITY OF DIR SHERINGAL				
ENGINEER: DESCRIPTION: POWER HOUSE FIRE ALARM SYSTEM LAYOUT PLAN				
APPROVED BY: TYPE: EE		SCALE: N.T.S.	JOB NO. 8073	DRG NO. SBBU-PWH-EE-02
AK ABD		DATE: JANUARY 2021		