

STRUCTURAL GENERAL NOTES

1. COORDINATION

- 1. ALL WORK SHALL CONFORM TO MINIMUM STANDARDS OF UNIFORM BUILDING CODE-97 AND ACI-318-08
- 2. DESIGN LOADS ARE IN ACCORDANCE WITH UBC 97 AND ASCE-7
- 3. EVERY REASONABLE EFFORTS HAS BEEN MADE TO BOUND STRUCTURAL SPECIFICATIONS. SHOULD THERE BE ANY DESCREPANCIES, THE CONTRACTOR SHALL REQUEST A CLARIFICATION IN WRITING FROM THE ENGINEER
- 4. ALL STRUCTURAL DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER RELEVANT DRAWINGS.
- 5. STRUCTURAL DRAWINGS WILL GOVERN THE SIZE & LOCATION OF THE STRUCTURAL COMPONENTS OVER OTHER DRAWINGS

2. GENERAL

- 1. THE CONTRACTOR SHALL REVIEW DRAWINGS AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND, STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.
- 2. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN STRENGTH.
- 3. THE CONTRACTOR SHALL COORDINATE ARCHITECTURAL & OTHER MECHANICAL, AND ELECTRICAL DRAWINGS FOR ANCHORED.EMBEDDED AND SUPPORTED ITEMS WHICH AFFECT THE STRUCTURAL DRAWINGS AND NOTIFY THE EGINEER OF ANY DISCREPANCY.
- 4. ALL SECTIONS AND DETAILS WILL BE AS PER DETAILS GIVEN ON RESPECTIVE DRAWINGS. IN CASE OF ANY PROBLEM IN UNDERSTANDING OF DETAILS CONTRACTOR SHOULD IMMEDIATELY REFER TO THE ENGINEER.
- 5. ANY CONFLICTS BETWEEN THE SPECIFICATIONS AND DESIGN DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR BEFORE GOING FOR PURCHASE OF MATERIAL WILL ENSURE THAT THE SPECIFICATIONS HAVE BEEN UNDERSTOOD AND COMPARED WITH DRAWINGS. ANY DISCREPANCY WILL BE REPORTED TO ENGINEER BEFORE ACTUALLY GOING FOR PURCHASE

4. REINFORCED CONCRETE

- 1. CONCRETE WORK SHALL CONFORM TO ACI 301 SPECIFCATION FOR STRUCTURAL CONCRTE FOR BUILDING (LATEST EDITION).
- 2. STRUCTURAL DESIGN IS BASED ON THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OF AMERICAN CONCRETE INSTITUTS (ACI 318-05).
- 3. NO CONCRETING SHALL BE CARRIED OUT UNTIL PERMISSION IS GIVEN IN WRITING.
- 4. CONCRETE SHALL HAVE A MINIMUM CYLINDRICAL COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

RCC (1 : 1.5 : 3)	COLUMNS, LIFT WALLS, BEAMS & WATER RETAINING STRUCTURES	4500 (f'c)
RCC (1 : 2 : 4)	SLABS, AND REMAINING MEMBERS	3000 (f'c)
PCC (1 : 4 : 8)	WHERE SPECIFIED UNDER STRUCTURES	1000 (f'c)

- SPECIAL PROVISION: APPROPRIATE TYPE OF PLASTICIZER, AS APPROVED BY SITE ENGINEER, CAN BE USED UP TO A QUANTITY OF 2% BY WEIGHT OF CEMENT
- 5. THE RATIOS MENTIONED ARE THE QUANTITIES SUFFICIENT FOR ACQUIRING REQUIRED STRENGTH. HOWEVER, THE ACTUAL QUANTITIES WILL BE FINALIZED THROUGH MIX DESIGN, WHICH WILL BE CARRIED OUT AT CONTRACTORS COST. THE RESULTS WILL BE PRESENTED TO THE ENGINEER AT SITE WHO WILL COLLECT SAMPLES AND GET THE STRENGTH CONFIRMATION FROM HIS SOURCE AT CONTRACTORS COST.
- 6. ALL DESIGN DETAIL, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT ACI, ASTM, UBC CODES AND STANDARDS.
- 7. ALL NON LOAD BEARING MASONARY WALLS SHALL BE PLACED AFTER THE REMOVAL OF FORM WORK.
- 8. ALL SLABS WILL BE CAST MONOLITHIC WITH THEIR BEAMS AND OVER HANGS. HOWEVER, PARAPET WALLS AND ALL NON STRUCTURAL MEMBERS CAN BE CAST SUBSEQUENTLY. IN SUCH CASE STRENGTH GAIN OF PRIMARY COMPONENTS WILL BE ASCERTAINED.

5. REINFORCEMENT

- 1. REINFORCEMENT STEEL SHALL BE OF LOW ALLOY STEEL AS PER ASTM A615 HAVING MINIMUM YIELD STRENGTH OF 60,000 PSI. HOWEVER STIRRUPS CAN BE OF 40,000 PSI YIELD STRENGTH. FABRICATED STEEL BEAMS SHALL BE OF 36 KSI
- 2. TOP REINFORCEMENT BARS OF BEAMS TO BE CURTAILED AS SHOWN/REQUIRED.
- 3. ALL LAPS OF THE REINFORCEMENT SHOULD BE PROVIDED OUTSIDE HINGE ZONE
- 4. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND HELD FIRMLY IN PLACE BEFORE & DURING THE PLACEMENT OF CONCRETE, BY MEANS OF WIRES AND SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
- 5. MAINTAIN MINIMUM CONCRETE COVERAGE FOR REINFORCING STEEL AS FOLLOWS UNLESS OTHERWISE NOTED IN DRAWING.

CLASS-C SLABS & FOOTINGS	
COLUMNS	= 1.5 inch
BEAMS	= 1.5 inch
SLABS	= 3/4 inch
WALLS FRONT FACE	= 1 inch
WALLS EARTH FACE	= 2 inch

6. SHUTTERING/ FORM WORK

- 1. SHUTTERING FOR ALL PROJECTIONS SHALL BE INSTALLED AND REMOVED ALONG WITH SLAB. THE TYPE OF SHUTTERING WILL ALSO BE SAME AS FOR MAIN SLAB
- 2. LOAD BEARING MASONARY WALLS SHALL BE BUILT BEFORE PLACING OF FORM WORK FOR SLAB / ROOF SLAB.

7. CONCRETE CONSTRUCTION

- 1. ALL STRUCTURE SURFACES, AGAINST WHICH EARTH IS TO FILLED MAY BE COATED WITH TWO COATS OF HOT BITUMEN OF 10/20 GRADE AT THE RATE OF OF 0.4 lbs /Sft /coat. OTHER TREATMENTS AS PER DRAWINGS AND INSTRUCTION OF THE SITE ENGINEER SHALL ALSO BE EMPLOYED
- 2. BEFORE CASTING OF ANY STRUCTURAL MEMBER. THE CONTRACTOR SHALL ENSURE THAT ALL EMBEDDED ITEM FOR ELECTRICAL, MECHANICAL, HVAC, PLUMBING STRUCTURAL STEEL AND OTHER WORKS ARE PROPERLY LOCATED AND FIRMLY SECURED IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO GET ALL EMBEDDED ITEMS CHECKED BY SITE ENGINEER BEFORE CASTING.

8. PARTITION WALLS

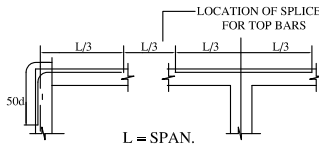
- 1. THE PARTITION WALLS WILL CONSTRUCTED AS PER DRAWINGS. THE PARTITION WALLS WILL CONTAIN REINFORCEMENT WHERE SPECIFIED.

9. LOAD BEARING WALLS

- 1.GENERALLY THE STRUCTURE HAS BEEN DESIGNED AS FRAME STRUCTURE. BUT WHERE LOAD BEARING WALLS HAVE BEEN SPECIFIED THESE WILL BE INSTALLED BEFORE THE INSTALLATION OF SHUTTERING. THE SPECIFICATION OF BEARING WALLS WILL BE STRICTLY FOLLOW.

10. LAP SPLICE

- 1. SCHEDULE "I" APPLIES FOR THE FOLLOWING TYPES OF BARS,
 - BOTTOM HORIZONTAL BARS OF BEAMS AND WALLS.
 - TOP HORIZONTAL BARS OF SLABS 14" OR LESS IN DEPTH.
 - VERTICAL BARS.
- 2. SCHEDULE "II" APPLIES FOR THE FOLLOWING TYPES OF BARS,
 - TOP HORIZONTAL BARS OF BEAMS.
 - TOP HORIZONTAL BARS OF SLABS GREATER THAN 14" DEEP.
 - ALL HORIZONTAL WALL REINFORCEMENT (EXCEPT BOTTOM BARS).
- 3. ALL LAP SPLICES SHALL BE WIRED IN CONTACT.
- 4. ALL LAP SPLICES SHALL BE CLASS B" U.N.O. IN CONTACT.
- 5. ALL SPLICES OF WALL AND SLAB REINFORCEMENT SHALL BE STAGGERED AS NORMAL PRACTICE.
- 6. THE LAP SPLICE LENGH FOR BIGGER BAR BE USED WHEN SPLICING TWO DIFFERENT SIZE BARS.
- ADJUSTMENT (S) TO GIVEN LAP LENGTHS.
- 7. LAP LENGTHS GIVEN ARE FOR A CONCRETE COMPRESSIVE STRENGTH, f'c, OF 3000 PSI & 3750 PSI NOTIFY ENGINEER FOR OTHER STRENGTHS
- 8. IF REINFORCING IS SPECIFIED AS EPOXY COATED INCREASE LENGTHS BY 50%
- 9. IF LIGHTWEIGHT AGGREGATE IS SPECIFIED, INCREASE LENGTHS BY 30%
- 10. LAP LENGTHS SCHEDULE ASSUMES:
 - A. CLEAR COVER IS GREATER THAN BAR DIAMETER.
 - B. CLEAR SPACING BETWEEN BAR IS GREATER THAN 2 BAR DIAMETERS.
 - C.TRANSVERSE REINFORCEMENT INDEX, K_{tr},IS ZERO.
- IF EITHER CONDITION A OR B IS NOT MET, FOR A GIVEN BAR, INCREASE THE SCHEDULED LAP LENGTH BY 50%
- 11. LAP LENGTH SCHEDULED ARE FOR Gr 60 REINFORCEMENT (f_y = 60 k.s.i.).
 - (A) FOR BOTTOM BARS. LOCATE SPLICES OVER SUPPORTS UNO.
 - (B) TOP BARS, LOCATE SPLICES AT MID-SPAN. OR WITHIN CENTER



- 12. ALL REINFORCING BARS TO BE FABRICATED AS PER THE BENDING SCHEDULES PREPARED BY THE CONTRACTOR AND CHECKED BY ENGINEER.
- 13. THE ADDITIONAL QUANTITY OF STEEL AT LOCATION OF LAP SHALL NOT BE CONSIDERED SEPARATE FOR PAYMENT.
- 14. IN CASE MINIMUM REQUIREMENT OF LAP IS NOT MET THE FIXED STEEL WILL BE REPLACED BY CORRECTED LENGTH AND SIZE AT THE COST OF CONTRACTOR.

NOTE:

THE DESIGN PRESENTED HERE IS BASED ON THE SOIL REPORT AND DATA PROVIDED BY CLIENT. THE ACCURACY OF WHICH IS ENTIRE RESPONSIBILITY OF CLIENT.

EARTHQUAKE ZONE AS PER BUILDING CODE OF PAKISTAN 3

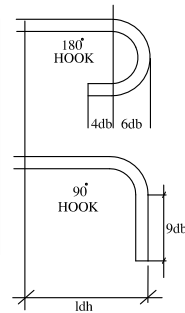
SPLICE					LENGTHS				
SCHEDULE I - BOTTOM BARS					SCHEDULE II - TOP BARS				
f' c	3000 p.s.i	4500 p.s.i			f' c	3000 p.s.i	4500 p.s.i		
BAR SIZE	CLASS A	CLASS B	CLASS A	CLASS B	BAR SIZE	CLASS A	CLASS B	CLASS A	CLASS B
#3	17"	22"	15"	20"	#3	22"	28"	20"	25"
#4	22"	29"	20"	26"	#4	29"	37"	26"	34"
#5	28"	36"	25"	32"	#5	36"	47"	32"	42"
#6	33"	43"	30"	39"	#6	43"	56"	39"	50"
#7	48"	63"	43"	56"	#7	63"	81"	56"	73"
#8	55"	72"	49"	64"	#8	72"	93"	64"	83"
#9	62"	81"	56"	72"	#9	81"	105"	72"	94"
#10	70"	91"	62"	80"	#10	91"	118"	80"	104"
#11	78"	101"	68"	88"	#11	101"	131"	88"	114"

SCHEDULE III - DEVELOPMENT LENGTH

BAR DIA	F' c	3000 PSI		4500 PSI	
		BOTTOM BARS	TOP BARS	BOTTOM BARS	TOP BARS
3	-	17	22	15	20
4	-	22	29	20	26
5	-	28	36	25	32
6	-	33	43	30	39
7	-	48	63	43	56
8	-	55	72	49	64
9	-	62	81	56	72
10	-	69	90	62	80
11	-	76	98	68	88

BAR DIA	HOOKS					
	180°			90°		
	ldh	round	extn	ldh*	ldh	extn
3	6.75	2.25	2.5	5.75	5.75	4.5
4	8.75	3	2.5	7.75	7.75	6
5	11	3.75	2.5	9.75	9.75	7.5
6	13.25	4.5	3	11.5	11.5	9
7	15.5	5.25	3.5	13.5	13.5	10.5
8	17.5	6	4	15.5	15.5	12
9	19.75	6.75	4.5	17.25	17.25	13.5

ldh* = when cover is not less then 2.5 inches



GENERAL NOTES

INSTRUCTIONS TO CONTRACTOR

NOTES:

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CLIENT NAME



MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT



MEP CONSULTANT

Project Name

Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

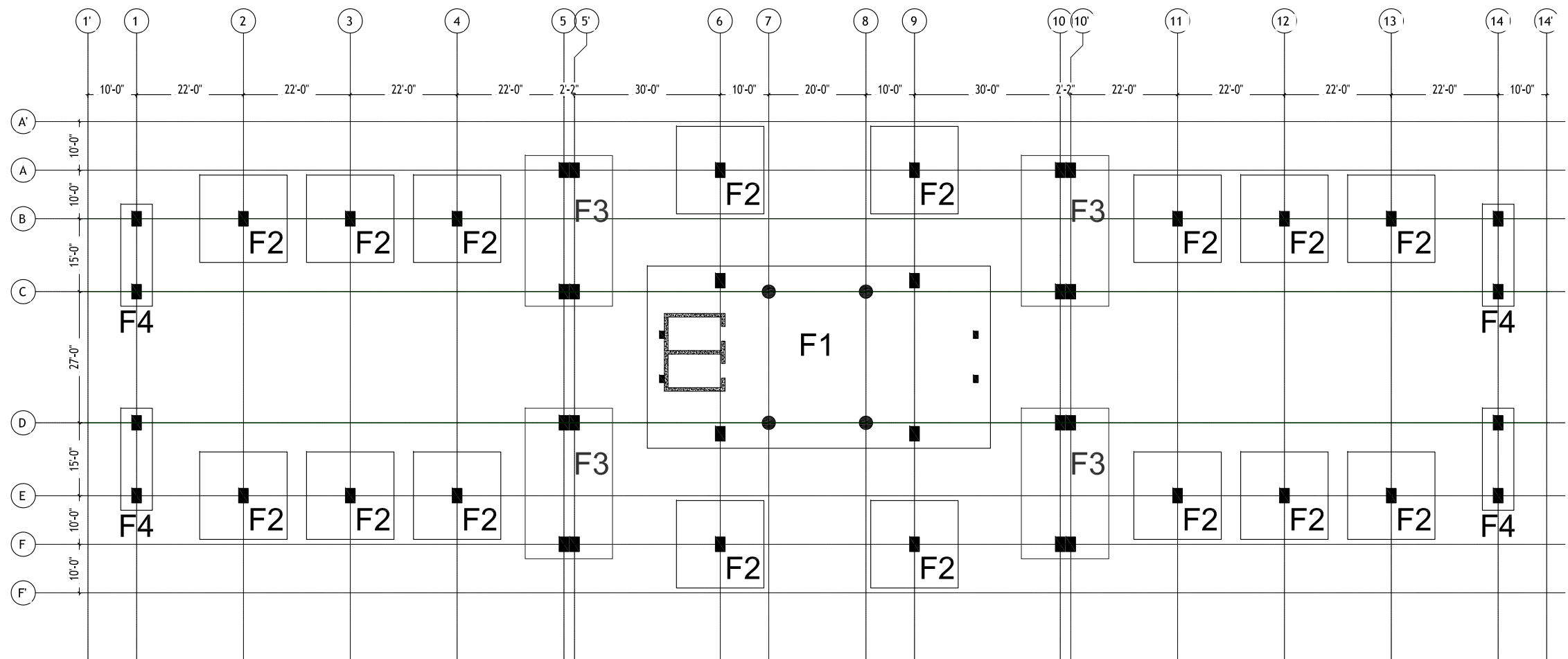
Detailed Structural Design Drawings

Sheet Name

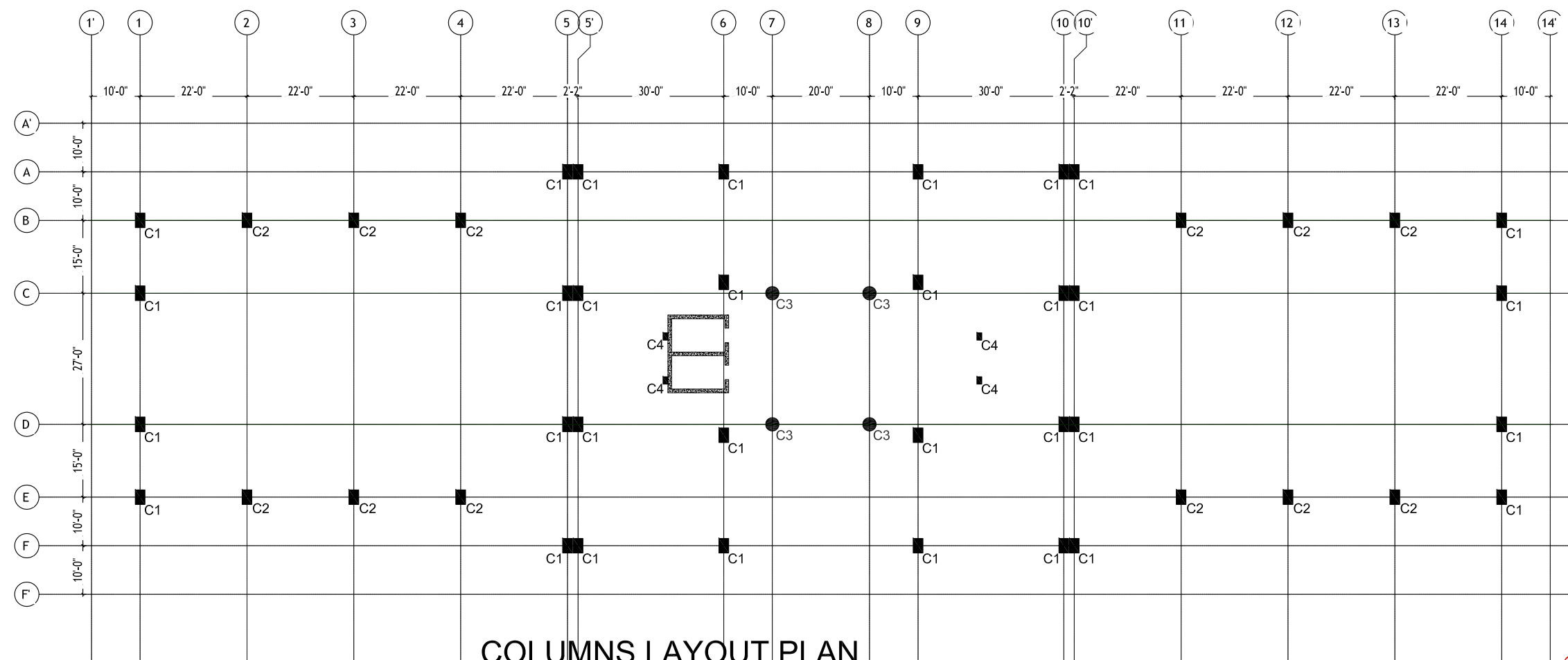
GENERAL NOTES

Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-01

ISSUE FOR TENDER



FOUNDATIONS & PILES LAYOUT PLAN



COLUMNS LAYOUT PLAN

ISSUE FOR TENDER

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CLIENT NAME



MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT

AR ENGINEERS
Architects, Structural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.
Office # 4, 2nd Floor, Sultana Arcade Firdous Market, Gulberg-III, Lahore.
Ph: 042-35831906 03008813921, E-mail: arengineers78@gmail.com

MEP CONSULTANT

Project Name

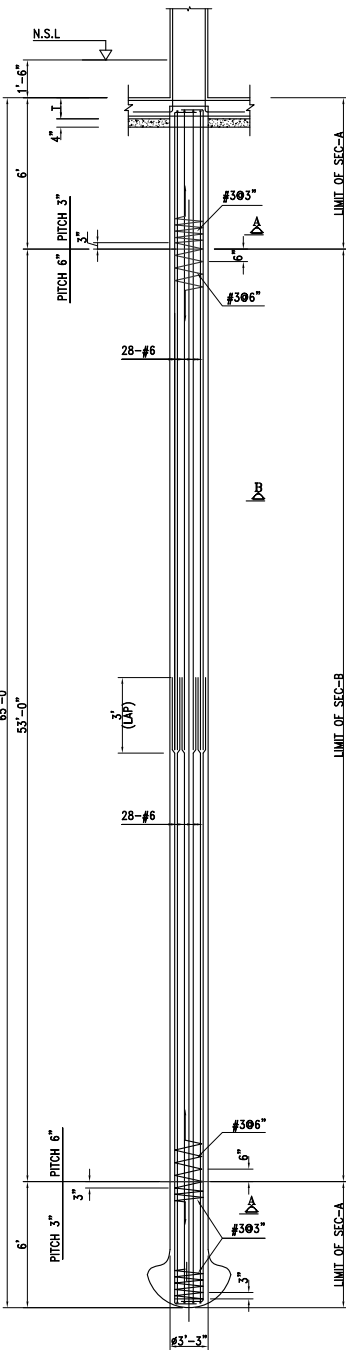
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

Detailed Structural Design Drawings

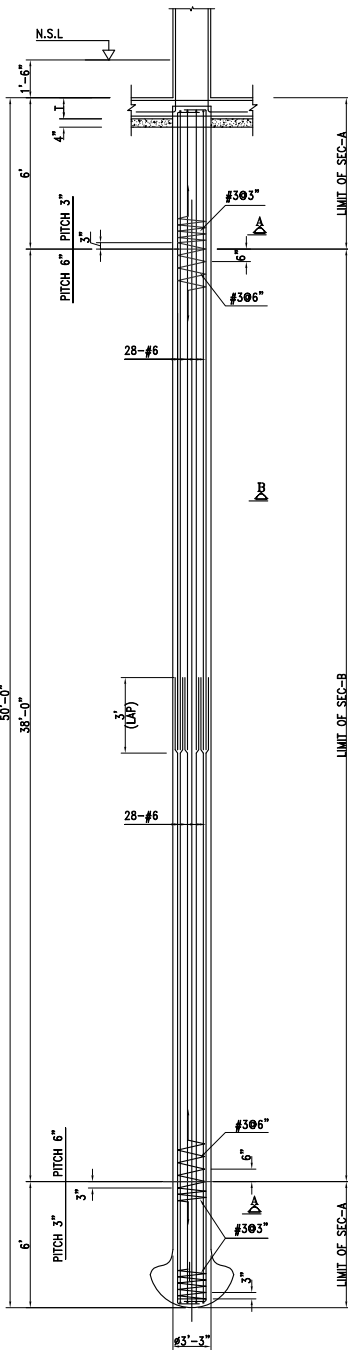
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PILES, FOUNDATIONS, COLUMNS LAYOUT PLAN

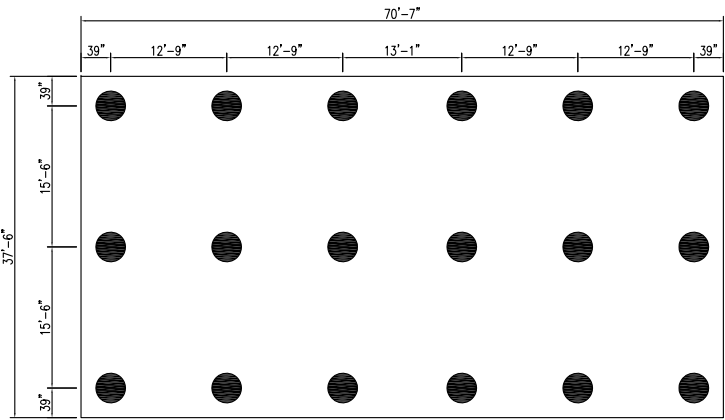
Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-02



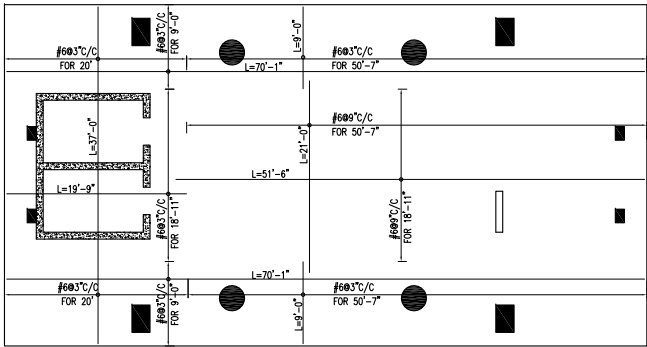
TYP SEC OF PILE
FOUNDATION F1



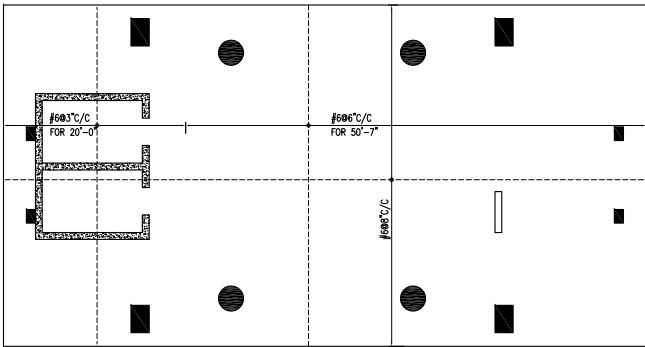
TYP SEC OF PILE
FOUNDATION F2, F3, F4



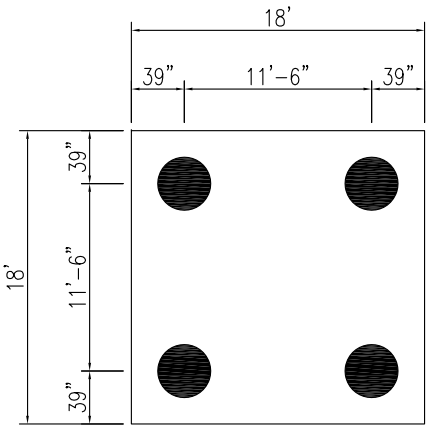
FOUNDATION F1 PILES LAYOUT PLAN
SLAB THICKNESS = 33"



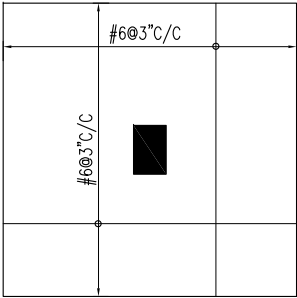
FOUNDATION F1 BOTTOM
REINFORCEMENT PLAN
SLAB THICKNESS = 33"



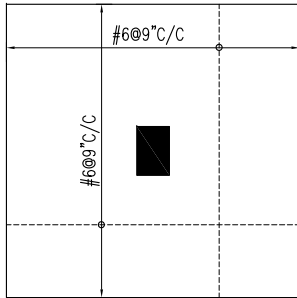
FOUNDATION F1 TOP
REINFORCEMENT PLAN
SLAB THICKNESS = 33"



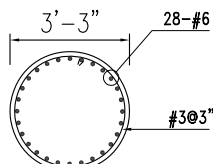
FOUNDATION F2 PILES LAYOUT PLAN
SLAB THICKNESS = 27"



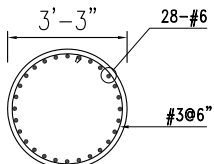
FOUNDATION F2 BOTTOM
REINFORCEMENT PLAN
SLAB THICKNESS = 27"



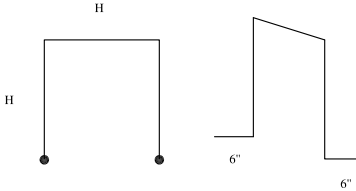
FOUNDATION F2 TOP
REINFORCEMENT PLAN
SLAB THICKNESS = 27"



SECTION A-A



SECTION B-B



IN ORDER TO SUPPORT NEGATIVE REINFORCEMENT MESH,
PROVIDE TIES USING #4 BARS AT 2' SPACING.

ISSUE FOR TENDER

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CLIENT NAME



MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT



MEP CONSULTANT

Project Name

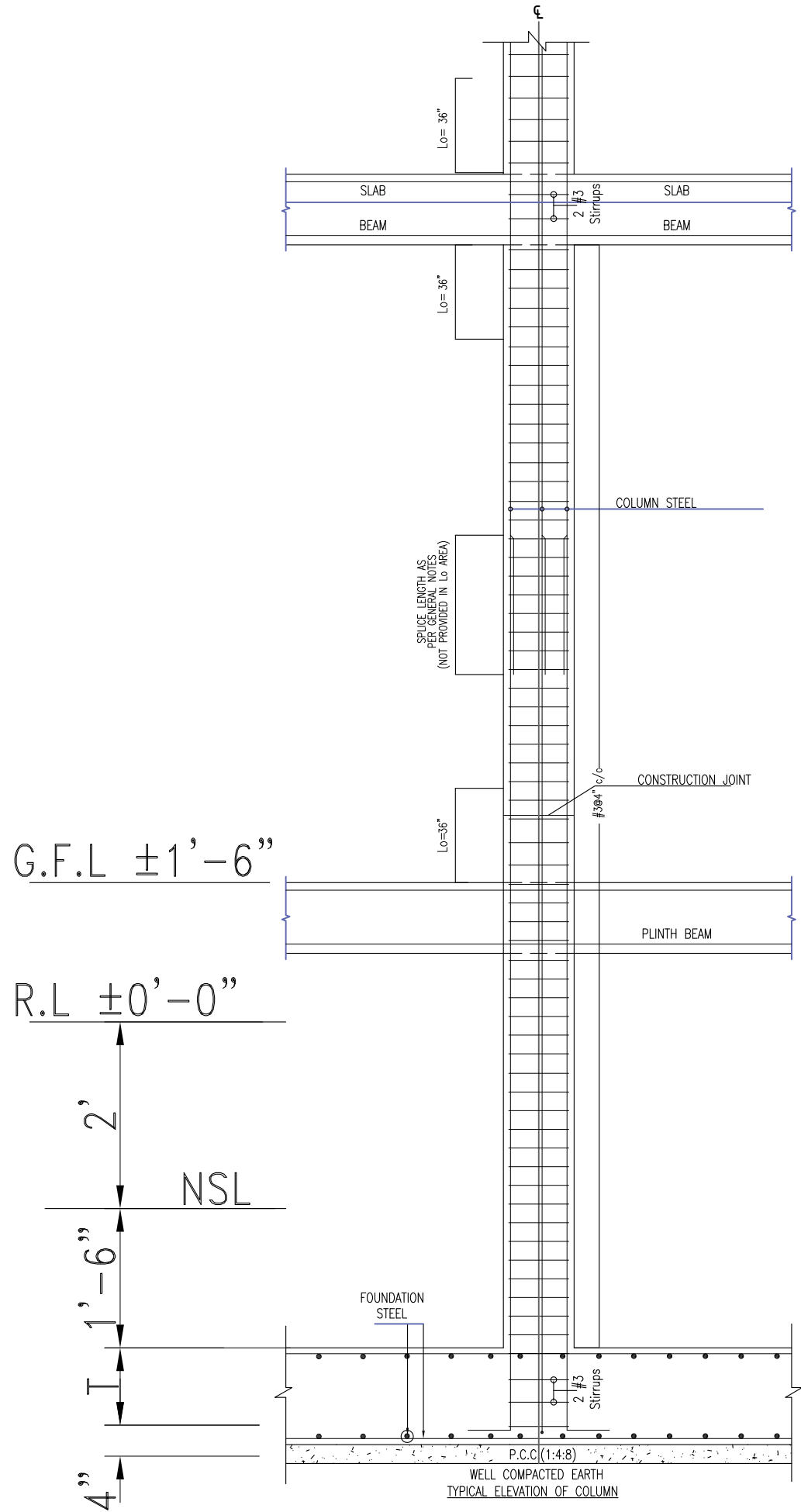
Consultancy Services for
New Air Traffic Control Tower
(ATCT), Fire Station and Allied
Facilities at Skardu
International Airport

Detailed Structural Design Drawings

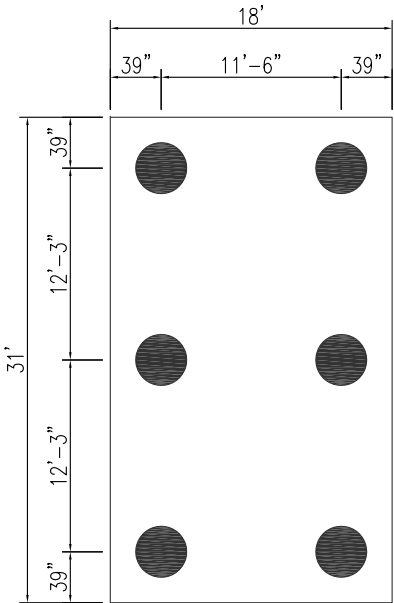
Sheet Name

PILES, FOUNDATIONS, DETAIL

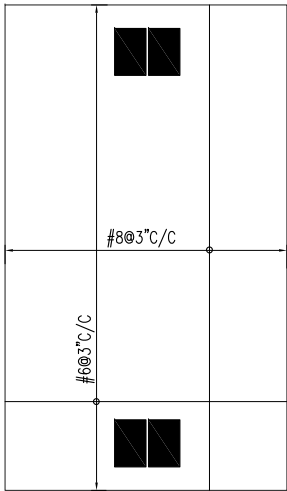
Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-03



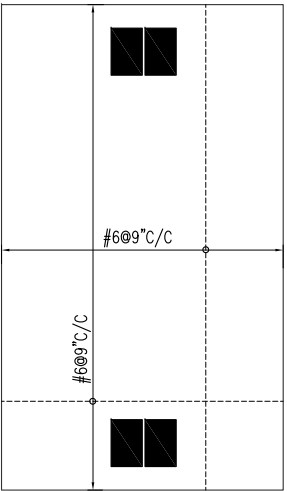
SCHEDULE OF COLUMNS				
FLOOR'S	COL. 1	COL. 2	COL. 3	COL. 4
UP TO G.F SLAB				



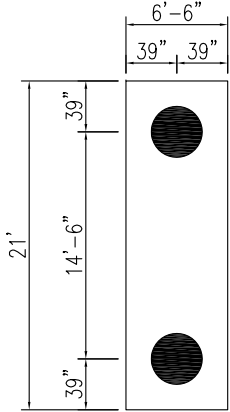
FOUNDATION F3 PILES LAYOUT PLAN
SLAB THICKNESS = 27"



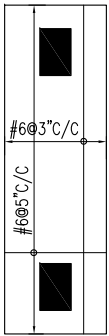
FOUNDATION F3 BOTTOM REINFORCEMENT PLAN
SLAB THICKNESS = 27"



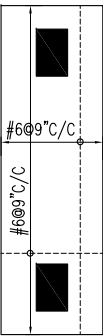
FOUNDATION F3 TOP REINFORCEMENT PLAN
SLAB THICKNESS = 27"



FOUNDATION F4 PILES LAYOUT PLAN
SLAB THICKNESS = 18"



FOUNDATION F4 BOTTOM REINFORCEMENT PLAN
SLAB THICKNESS = 21"



FOUNDATION F4 TOP REINFORCEMENT PLAN
SLAB THICKNESS = 21"

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CLIENT NAME


MAIN CONSULTANT


JV MEMBERS


STRUCTURAL CONSULTANT

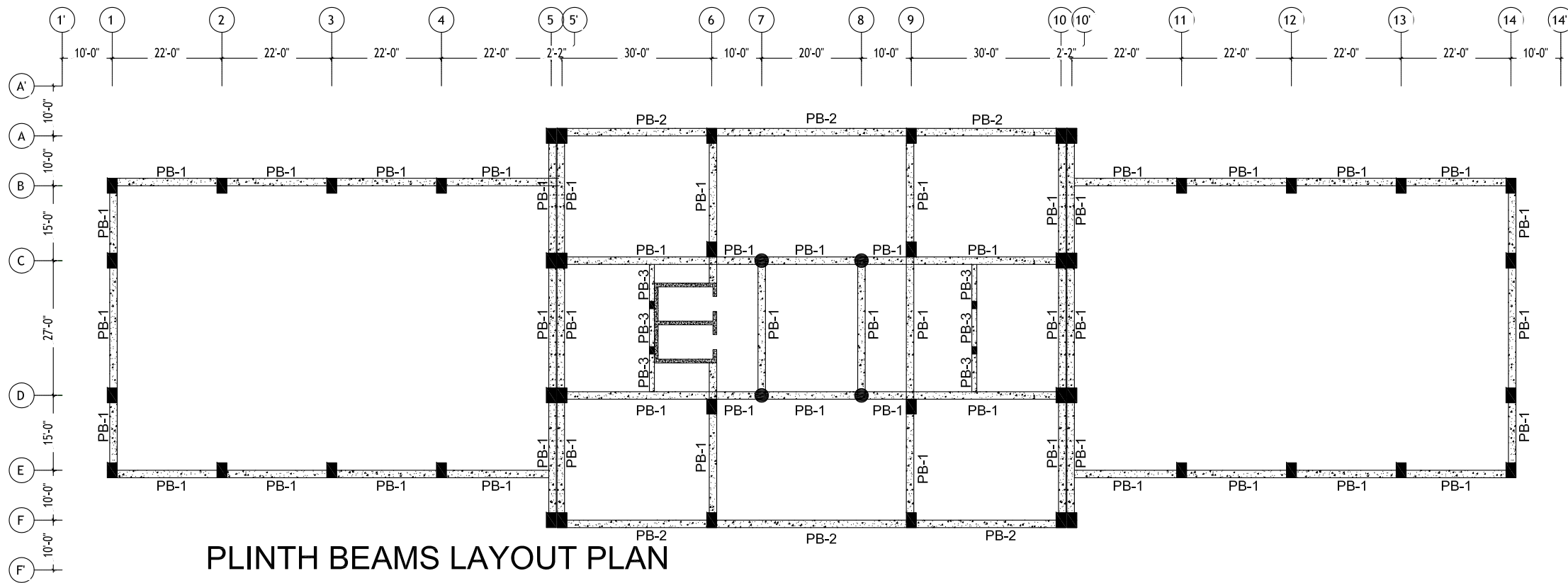

MEP CONSULTANT

Project Name
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

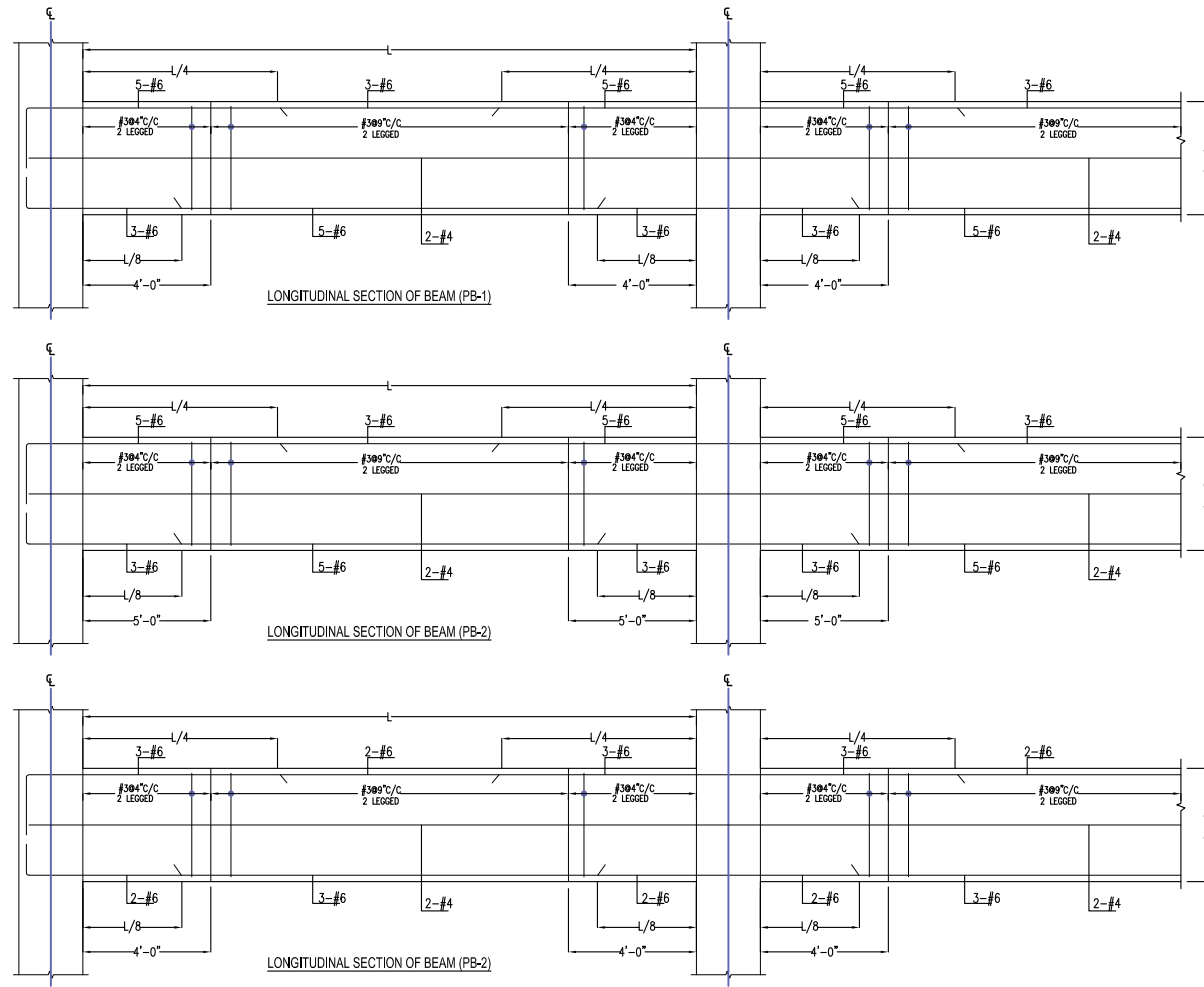
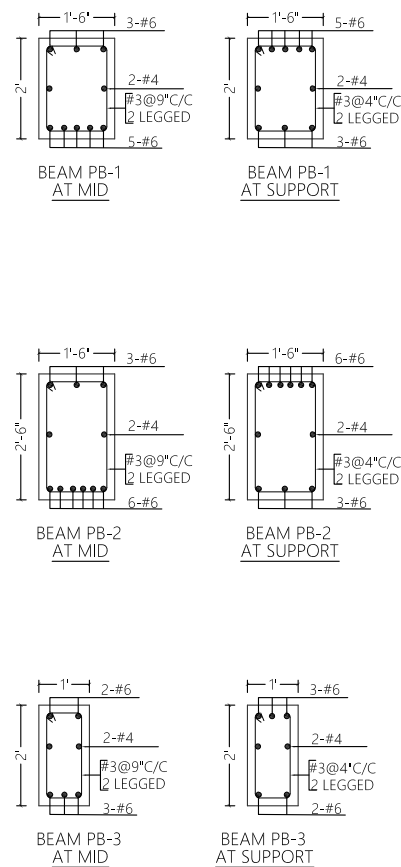
Detailed Structural Design Drawings

Sheet Name
COLUMNS & FOUND. DETAIL

Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-04



PLINTH BEAMS LAYOUT PLAN



ISSUE FOR TENDER

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CLIENT NAME



MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT



MEP CONSULTANT

Project Name

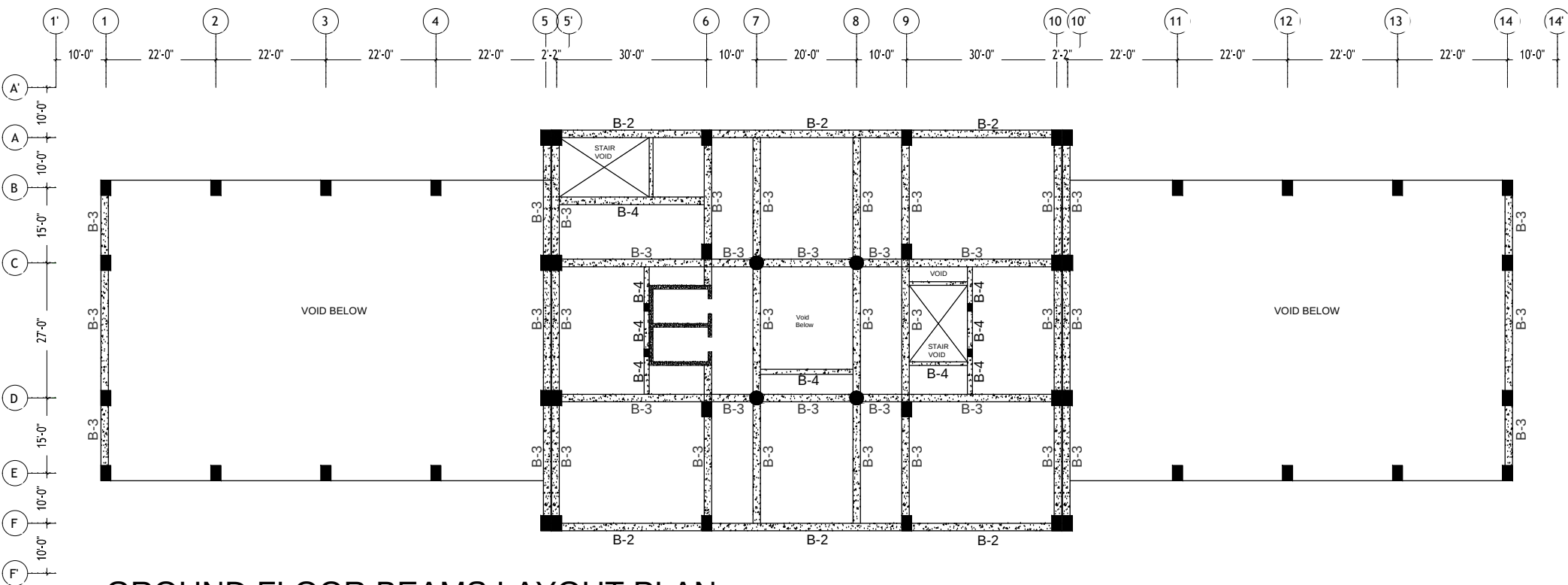
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

Detailed Structural Design Drawings

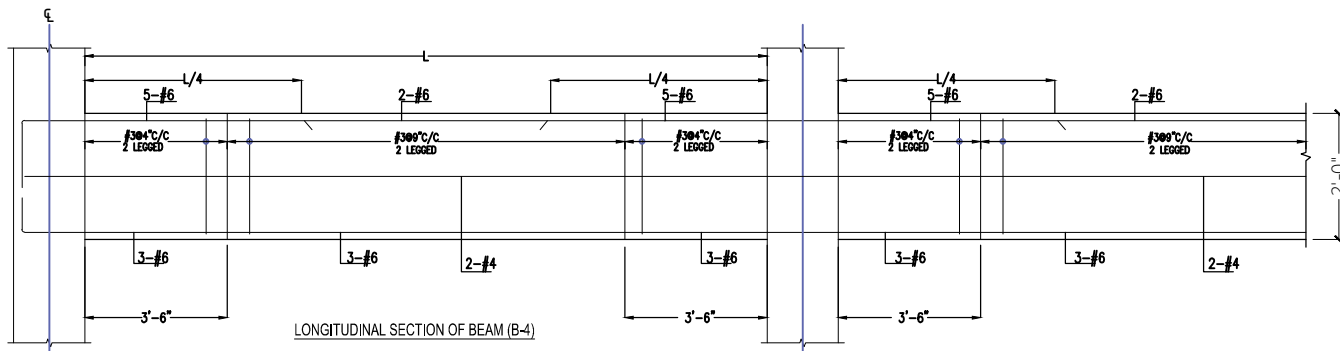
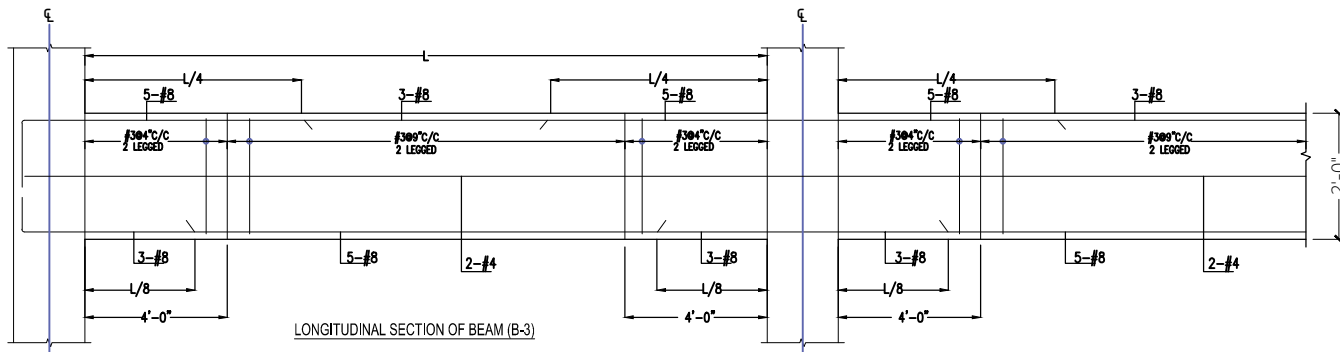
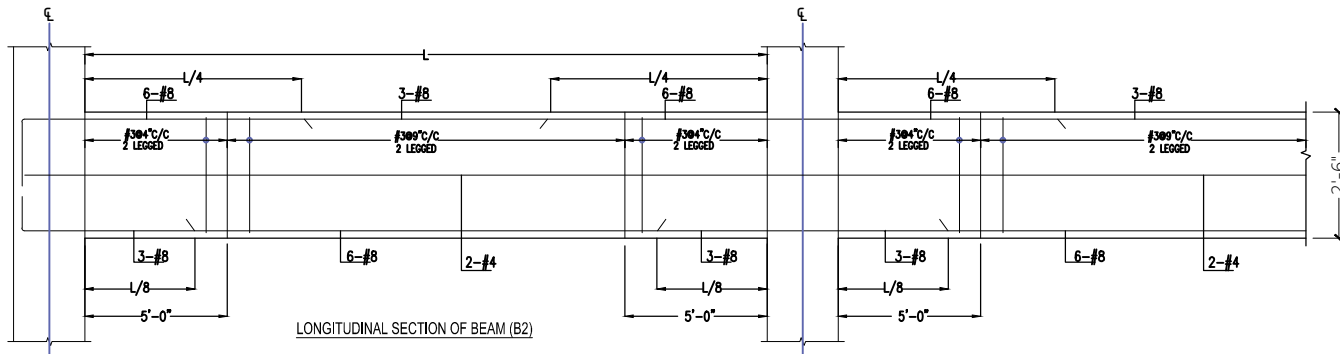
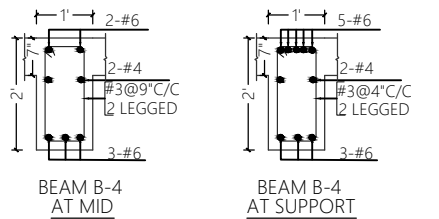
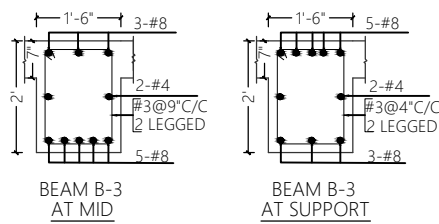
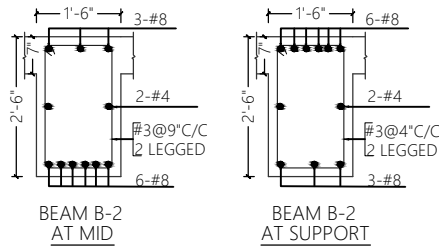
Sheet Name

PLINTH BEAMS DETAIL

Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-05



GROUND FLOOR BEAMS LAYOUT PLAN



ISSUE FOR TENDER

NOTE:
-THE BARS WILL CONTINUE IN CONTINUOUS BEAMS
AS PER REQUIREMENT OF STEEL OR CUT AT DEVELOPMENT LENGTH
-FIRST RING IS PLACED AT 2" FROM THE FACE OF THE SUPPORT
-CLEAR COVER OF 1.5" IS PROVIDED. AT INTERSECTIONS, STEEL OF BEAMS
IN SHORTER DIRECTION IS REDUCED TO PASS THROUGH INTERSECTION
-PROVIDE 4" STIRRUPS UP TO A DISTANCE EQUAL TO TWICE THE
MEMBER'S DEPTH ON BOTH SIDES OF BEAM TO BEAM INTERSECTION
-BEAM'S POSITIONS MAY BE ADJUSTED AS PER ARCHITECTURAL
REQUIREMENT WITHOUT CHANGING BEAM COLUMN FRAME
-THE BARS WILL BEND IN COLUMNS IF THE BEAM IS DISCONTINUED

NOTES:

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CLIENT NAME



MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT



MEP CONSULTANT

Project Name

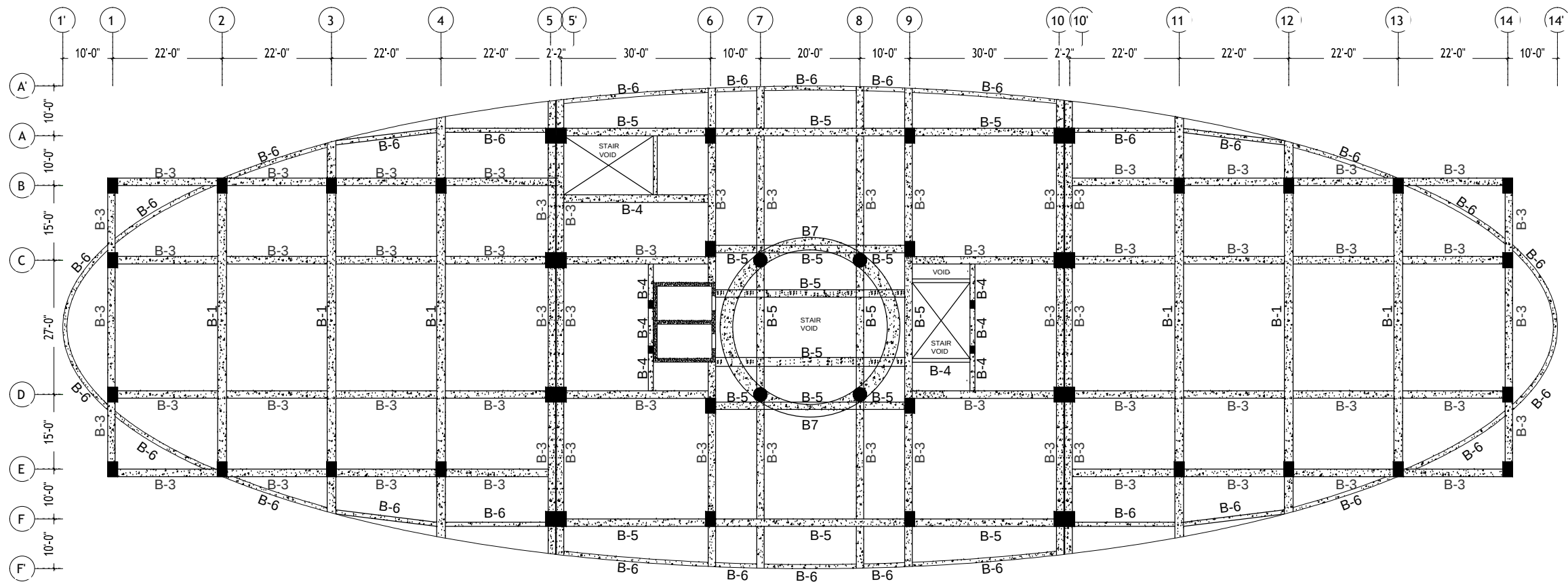
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

Detailed Structural Design Drawings

Sheet Name

GROUND BEAMS DETAIL

Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-06



MEZZANINE FLOOR BEAMS LAYOUT PLAN

NOTES:

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MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT



MEP CONSULTANT

Project Name

Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

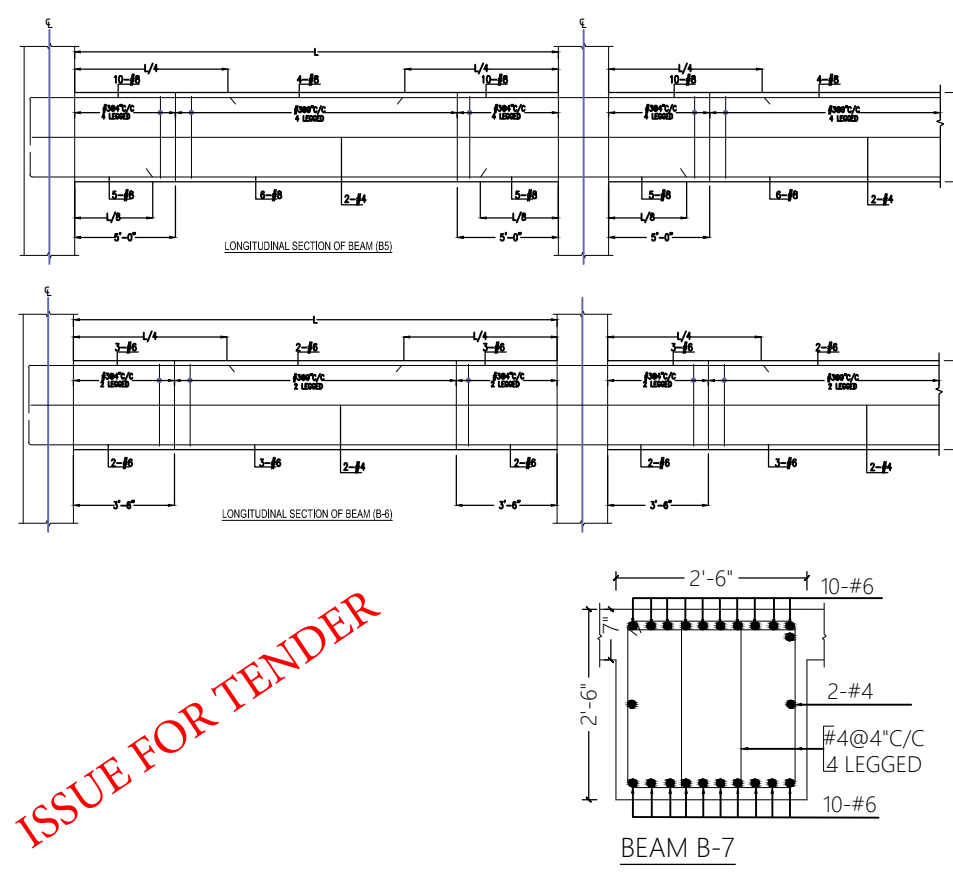
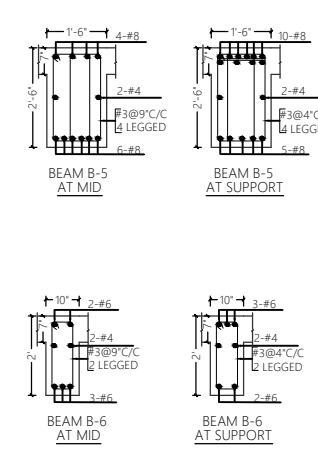
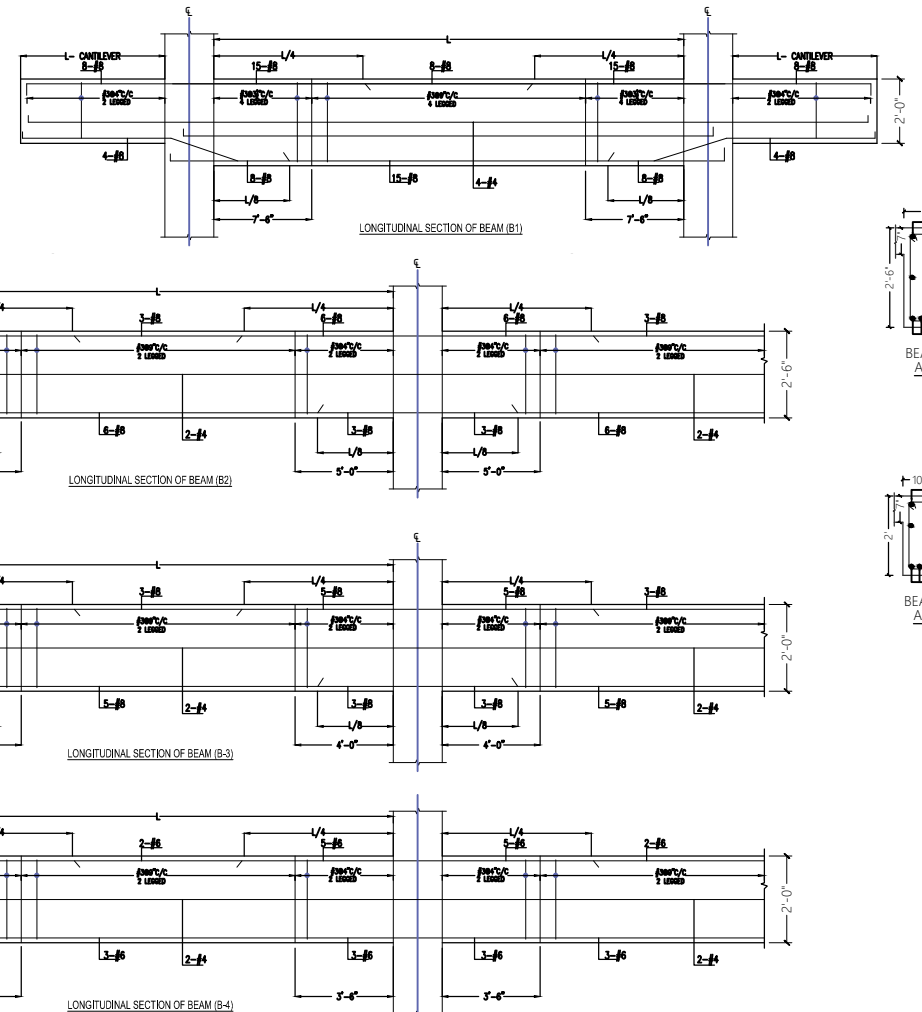
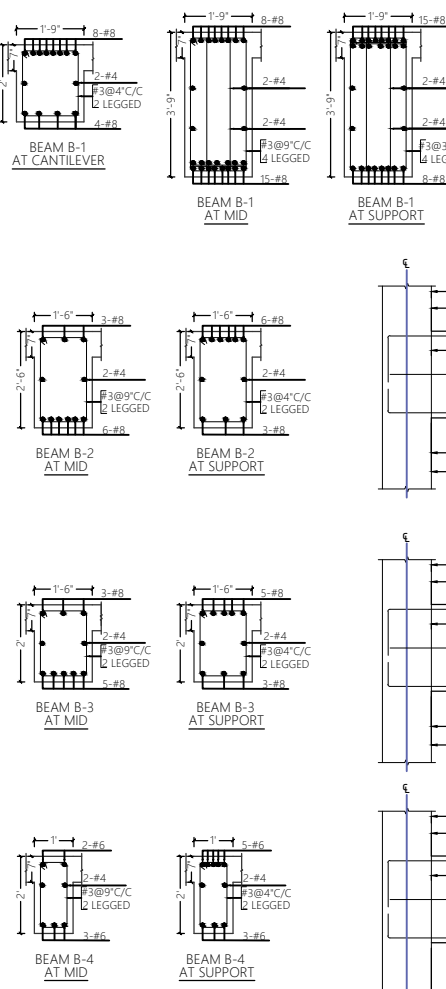
Detailed Structural Design Drawings

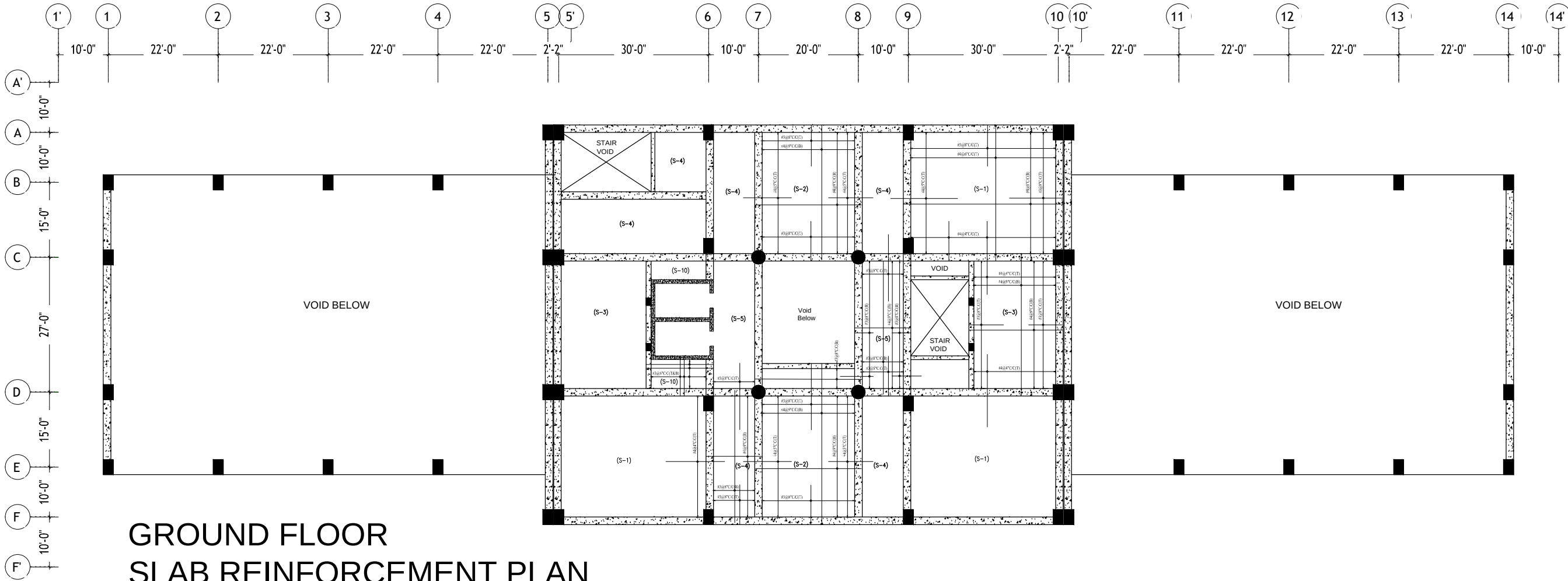
Sheet Name

MEZZANINE BEAMS DETAIL

Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-07

ISSUE FOR TENDER





GROUND FLOOR
SLAB REINFORCEMENT PLAN
THICKNESS 7"

- NOTE:
- PROVIDE #3 @ 10" C/C DISTRIBUTION STEEL WITH TOP (NEGATIVE) REINFORCEMENT OF ALL SLABS
 - PROVIDE 3#6 BARS WITH BOTTOM REINFORCEMENT UNDER THE WALLS IF CONSTRUCTED DIRECTLY ON SLAB
 - ALT BOTTOM STEEL IS CURTAILED AT L/8 AND TOP STEEL IS CUT AT L/3 OF THE SPAN
 - CONSIDER CONTINUOUS AND DIS-CONTINUOUS EDGES WHILE LAYING TOP STEEL BARS
 - FOR DIS-CONTINUOUS EDGE, BEND THE END OF BARS WITHIN SLAB THICKNESS
 - FOR POSITIVE REINFORCEMENT, PLACE BARS ALONG LONGER SPAN ON TOP OF BARS PLACED ALONG SHORTER SPAN
 - BEAMS POSITIONS MAY BE ADJUSTED AS PER ARCHITECTURAL REQUIREMENT WITHOUT CHANGING BEAM COLUMN FRAME

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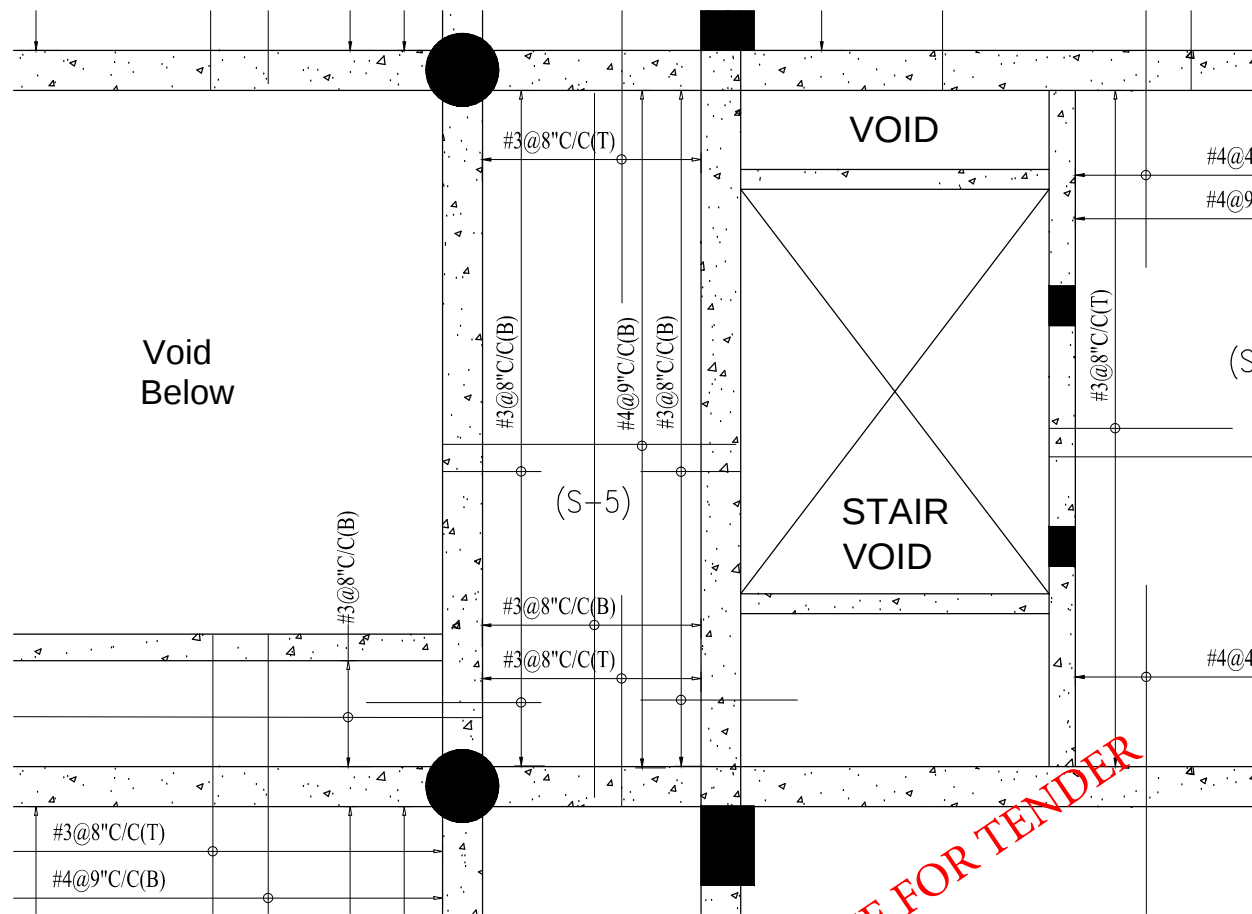
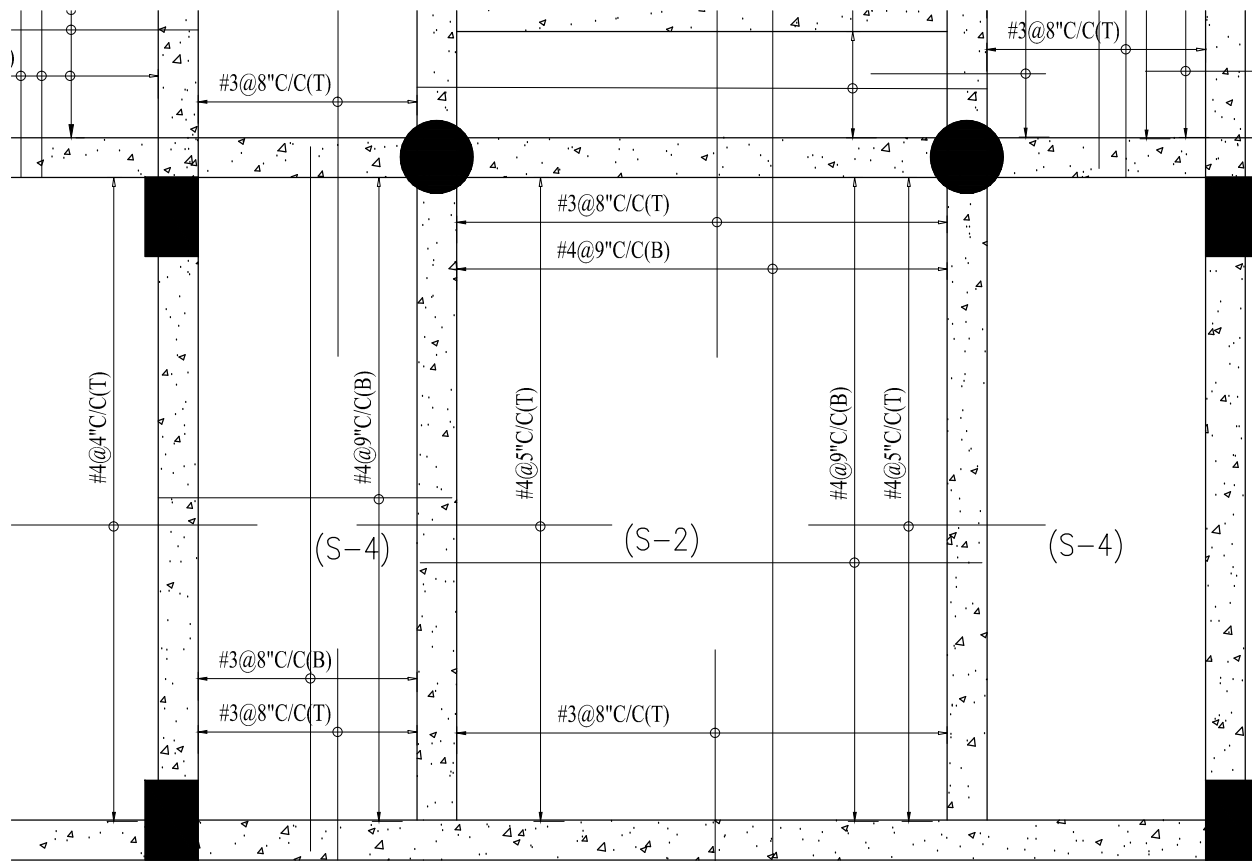
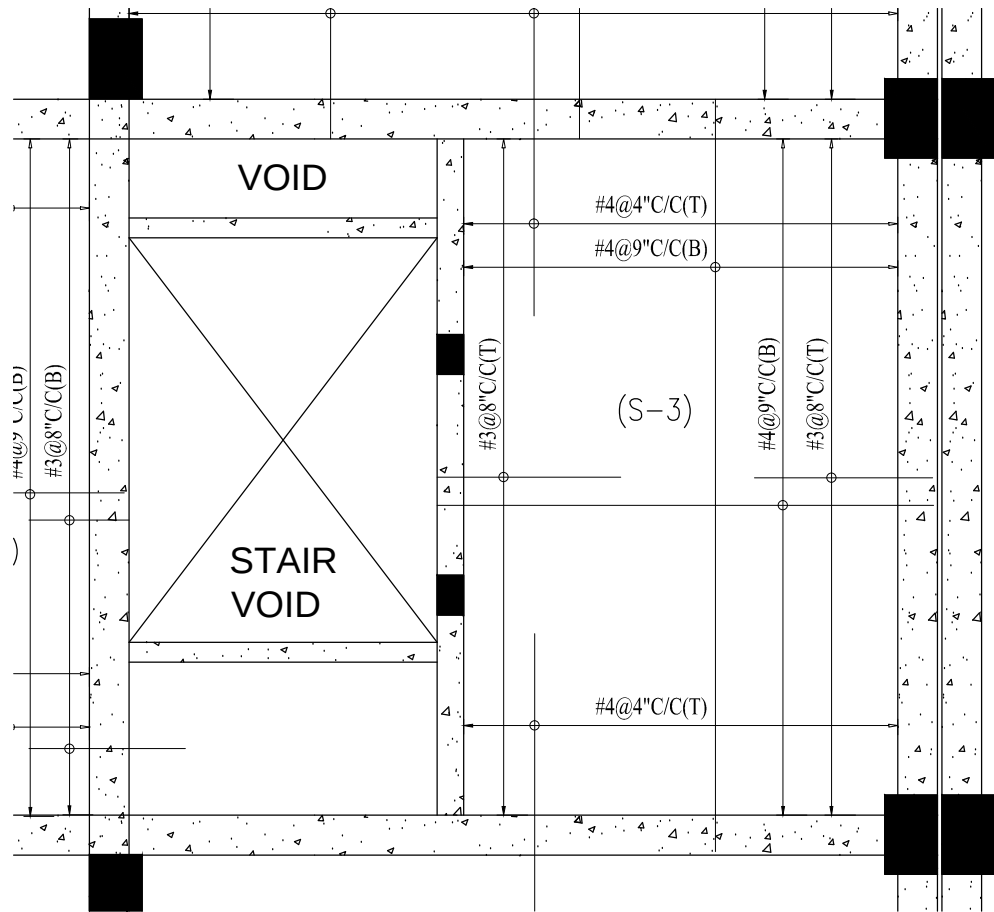
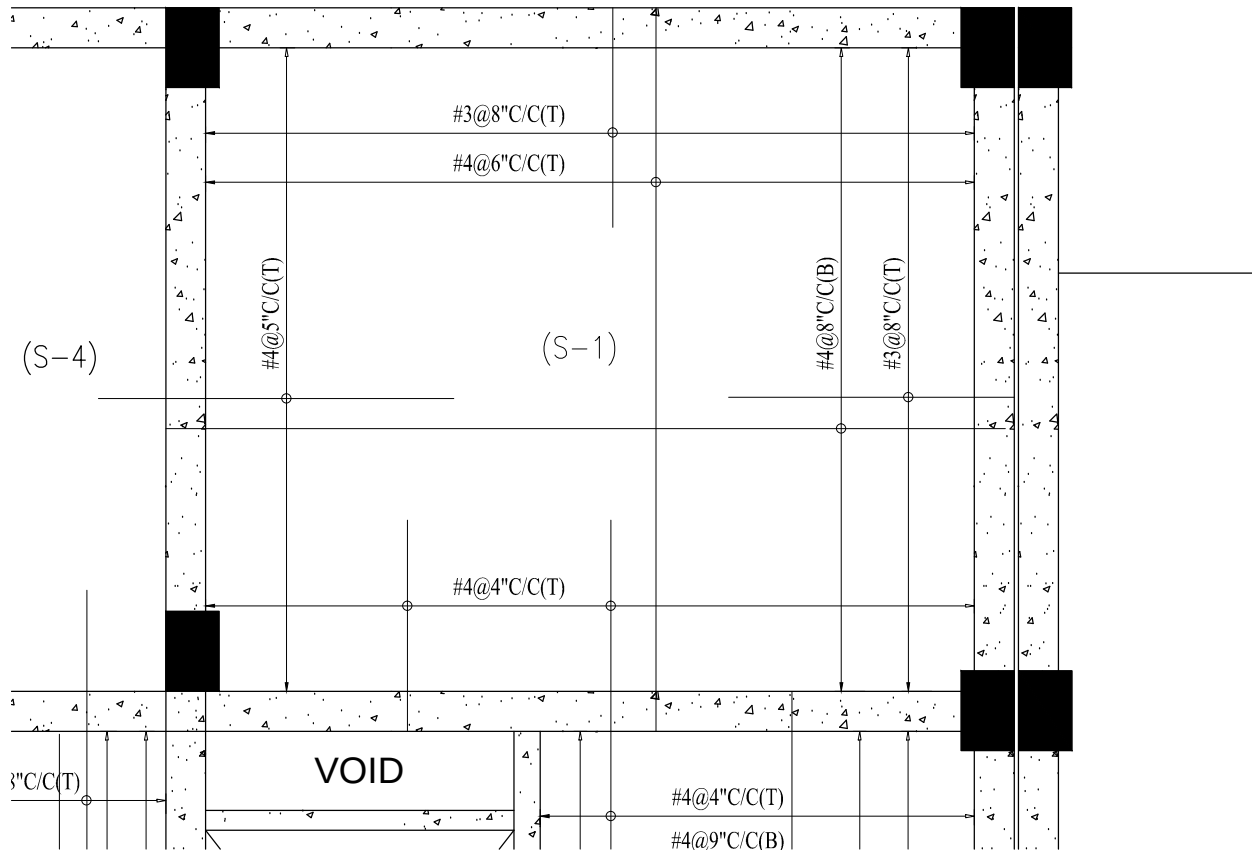
JV MEMBERS




STRUCTURAL CONSULTANT



MEP CONSULTANT	
Project Name	
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
Detailed Structural Design Drawings	
Sheet Name	
GROUND FLOOR SLAB DETAIL	
Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (CIVIL/59178)
Checked by	Engr M. Aamir (CIVIL/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-08



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MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT



MEP CONSULTANT

Project Name

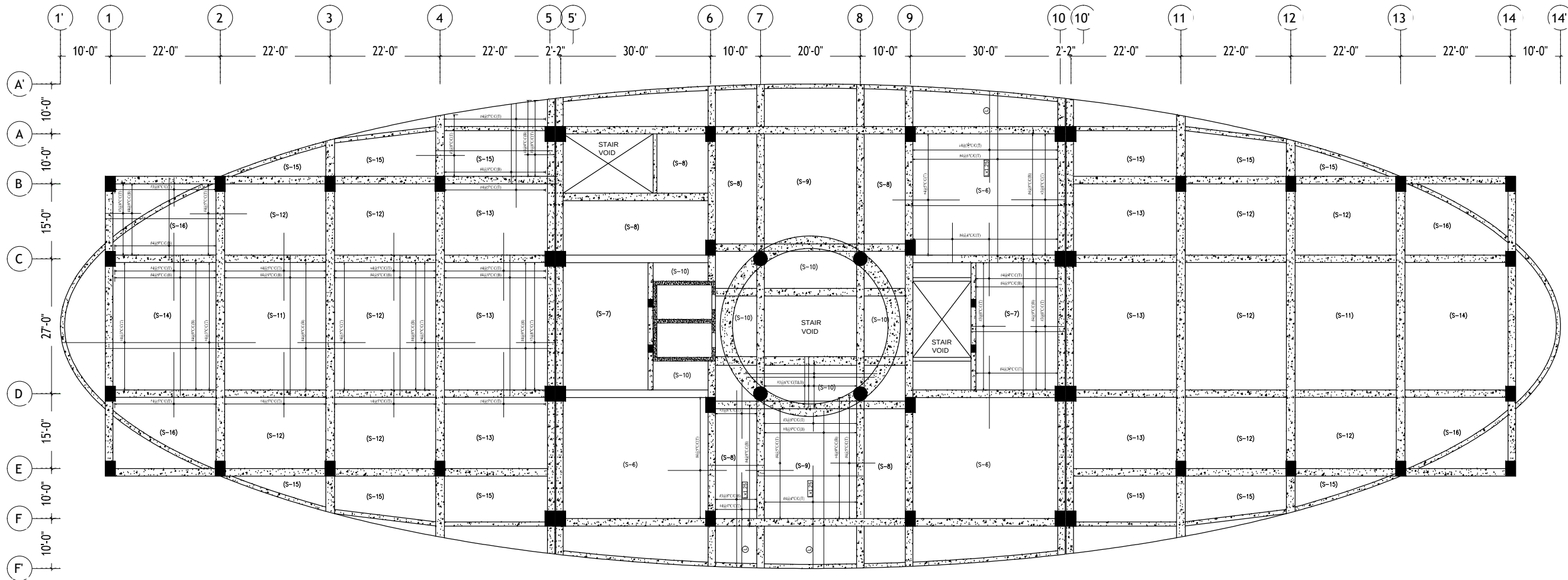
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

Detailed Structural Design Drawings

Sheet Name

GROUND FLOOR SLAB DETAIL

Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-09



MEZZANINE FLOOR SLAB
REINFORCEMENT PLAN
THICKNESS 7"

NOTE:

- PROVIDE #3 @ 10" C/C DISTRIBUTION STEEL WITH TOP (NEGATIVE) REINFORCEMENT OF ALL SLABS
- PROVIDE 3#6 BARS WITH BOTTOM REINFORCEMENT UNDER THE WALLS IF CONSTRUCTED DIRECTLY ON SLAB
- ALT BOTTOM STEEL IS CURTAILED AT L/8 AND TOP STEEL IS CUT AT L/3 OF THE SPAN
- CONSIDER CONTINUOUS AND DIS-CONTINUOUS EDGES WHILE LAYING TOP STEEL BARS
- FOR DIS-CONTINUOUS EDGE, BEND THE END OF BARS WITHIN SLAB THICKNESS
- FOR POSITIVE REINFORCEMENT, PLACE BARS ALONG LONGER SPAN ON TOP OF BARS PLACED ALONG SHORTER SPAN
- BEAMS POSITIONS MAY BE ADJUSTED AS PER ARCHITECTURAL REQUIREMENT WITHOUT CHANGING BEAM COLUMN FRAME

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MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT



MEP CONSULTANT

Project Name

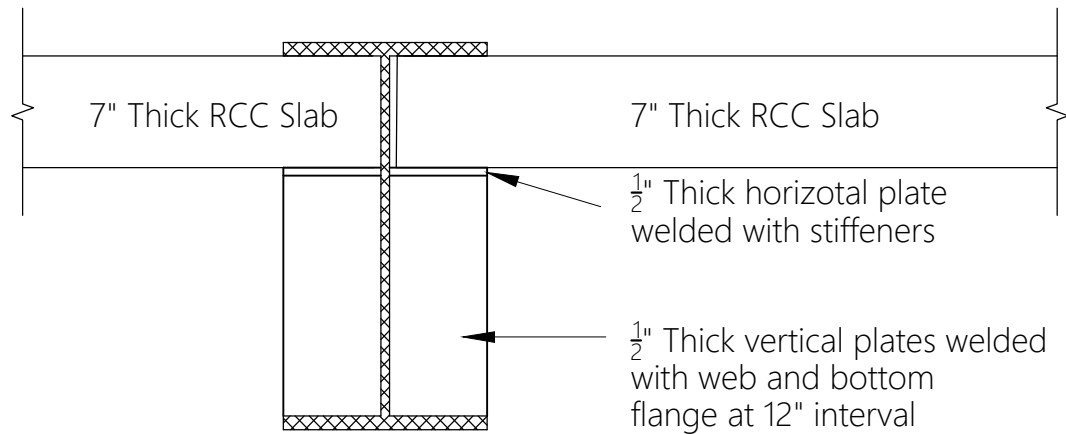
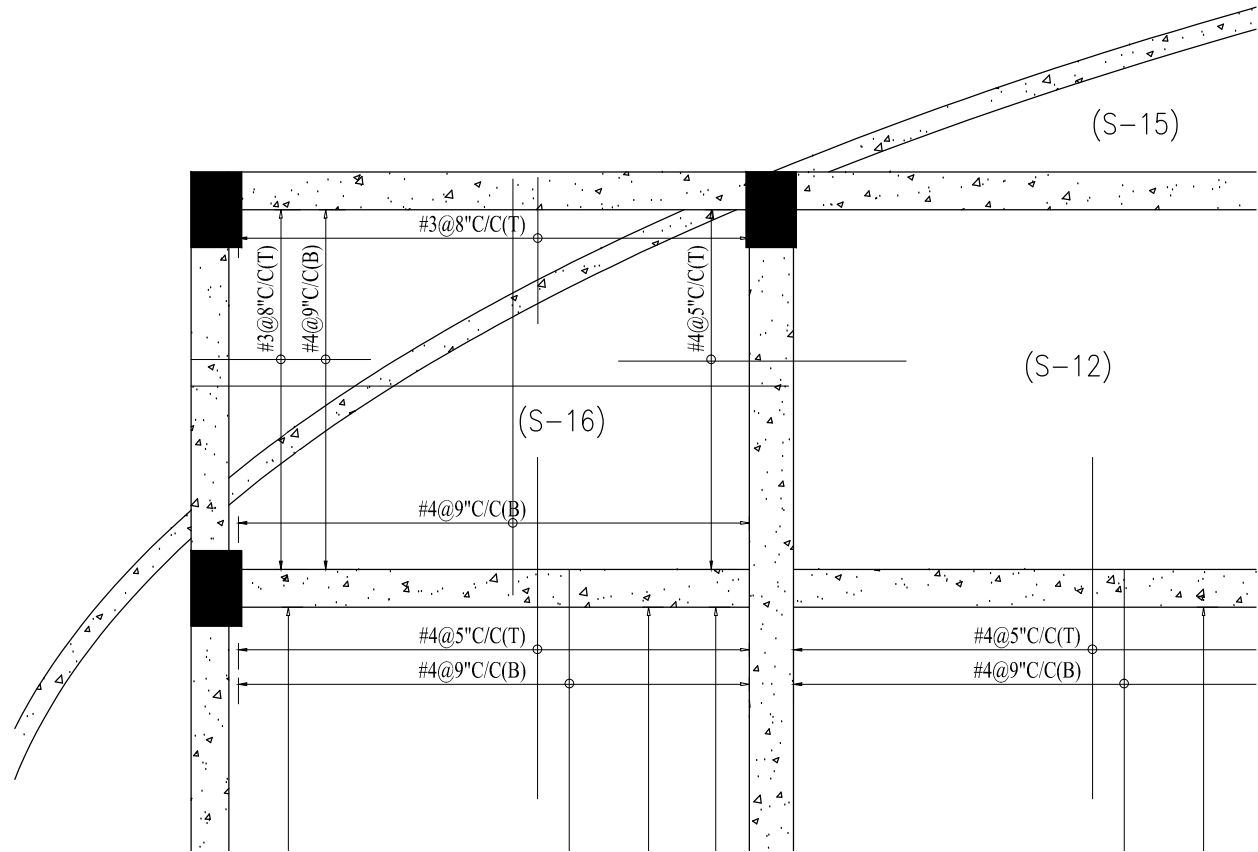
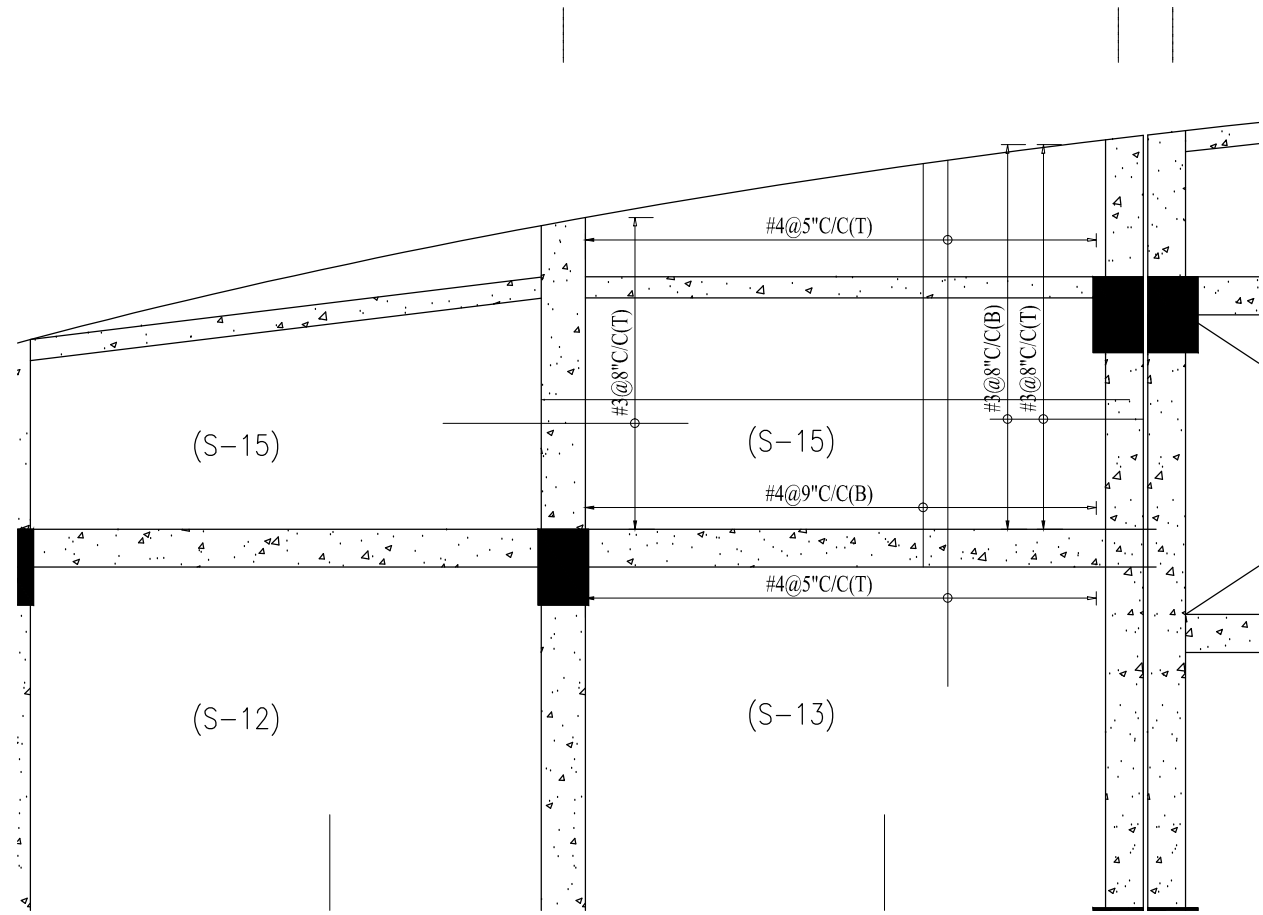
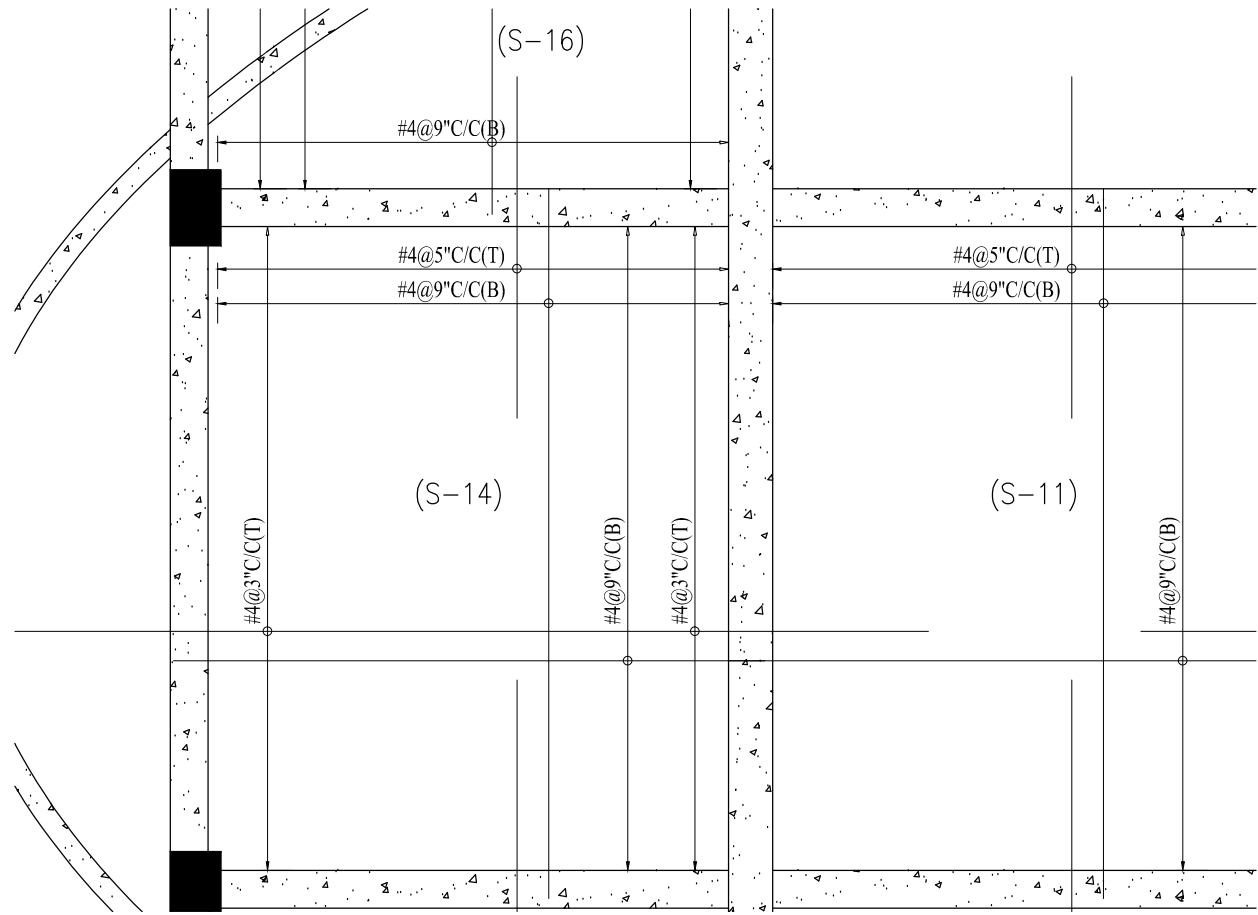
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

Detailed Structural Design Drawings

Sheet Name

MEZZANINE FLOOR SLAB DETAIL

Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-10



Detail showing W 24x117 supporting RCC slab

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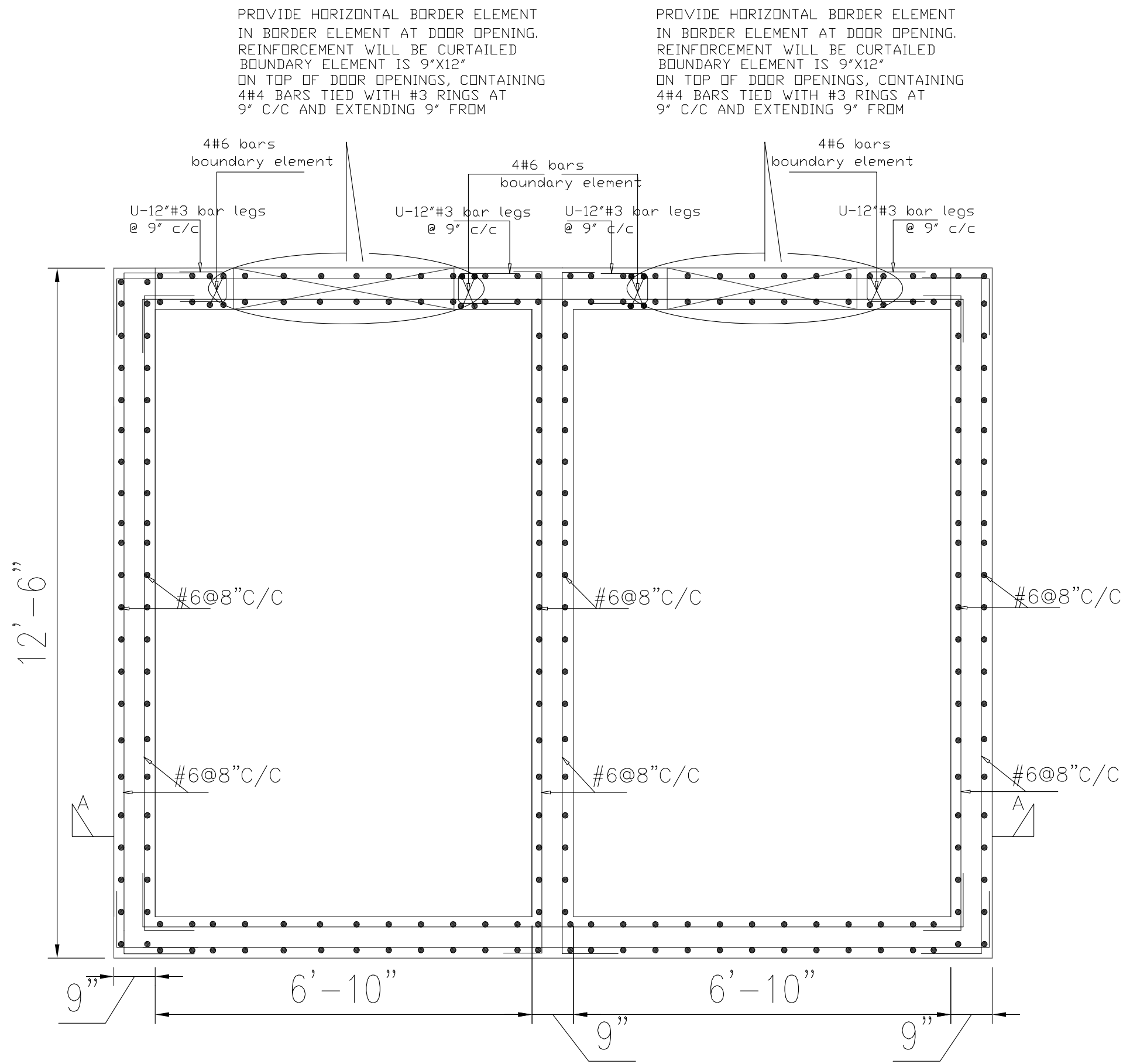
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

Detailed Structural Design Drawings

Sheet Name

MEZZANINE FLOOR SLAB DETAIL

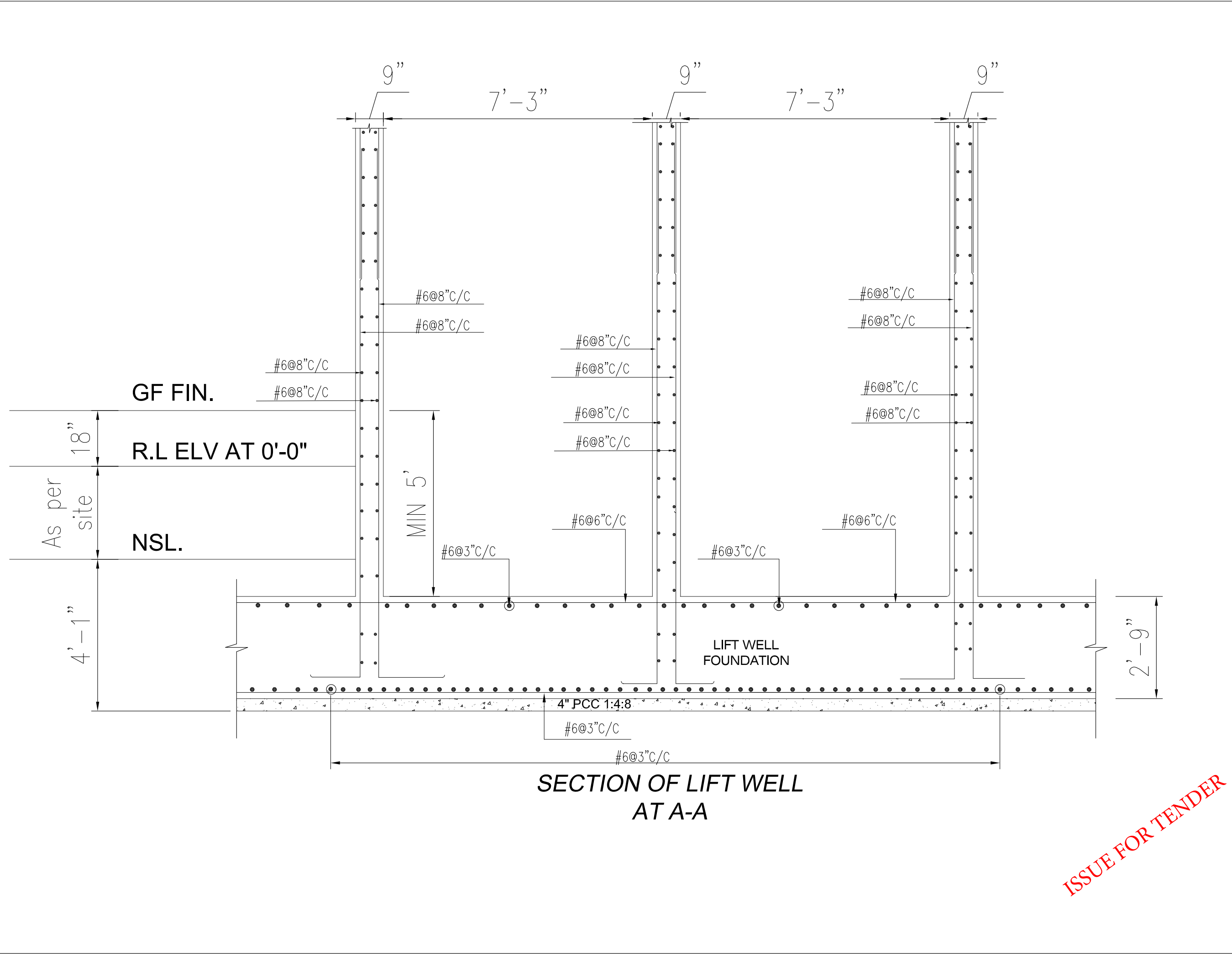
Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-12



LIFT WELL REINFORCEMENT PLAN

ISSUE FOR TENDER

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CLIENT NAME	
	
MAIN CONSULTANT	
	
JV MEMBERS	
 	
STRUCTURAL CONSULTANT	
 Architects, Structural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution. Office # 4, 2nd Floor,Sultana Arcade Firdous Market, Gulberg-III, Lahore. Ph: 042-35831906 03008813921, E-mail: arengineers78@gmail.com	
MEP CONSULTANT	
Project Name	
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
Detailed Structural Design Drawings	
Sheet Name	
LIFT WELL REINFORCEMENT DETAIL	
Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-13



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CLIENT NAME	
MAIN CONSULTANT	
JV MEMBERS	
STRUCTURAL CONSULTANT	
MEP CONSULTANT	
Project Name	
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
Detailed Structural Design Drawings	
Sheet Name	
LIFT WELL REINFORCEMENT DETAIL	
Date	April, 2026
Scale	NTS
Drawn by	Engr. ABDULLAH JAVAID (Civil/59178)
Checked by	Engr M. Aamir (Civil/10584)
Approved by	Engr. Dr M- Rizwan
Drawing No.	S-14

GENERAL NOTES:		MAIN CONSULTANT JV MEMBERS STRUCTURAL CONSULTANT	REV	DRAWN BY	CHECKED BY	SUBMITTED DATE
1. ALL DIMENSIONS, SPACING ARE IN MM & UNLESS OTHERWISE SPECIFIED.			0	HUZIAFA.K		15-01-2026
LIST OF DRAWINGS			ISSUED FOR APPROVAL SENT ON IN ORDER TO SCHEDULE THIS PROJECT IN THE MOST EFFICIENT MANNER, RETURN THESE DOCUMENTS, MARKED WITH YOUR COMMENTS, WITHIN ONE WEEKS FROM THE ABOVE MENTIONED DATE ANY CHANGES MADE AFTER APPROVAL OF THESE DRAWINGS MAY DELAY 1. ☐ APPROVED NO CHANGES. PROCEED WITH CONSTRUCTION. 2. ☐ APPROVED AS NOTED EXECUTION MAY PROCEED ON THE BASIS OF CORRECTIONS INDICATED. 3. ☐ NOT APPROVED, RE-SUBMIT FOR APPROVAL. 4. ☐ THESE DRAWINGS ARE NOT FOR CONSTRUCTION. REVIEWED BY NAME SIGNATURE DATE			
S-1	ISO VIEW PLAN		BUILDING COVERED AREA STATEMENT			
S-2	BASE PLATE LAYOUT PLAN					
S-3	SPACE FRAMING LAYOUT PLAN					
S-4	ROOF SHEETING PLAN					
S-5	LONGITUDINAL SECTION					
S-6	LONGITUDINAL SECTION DETAILS					
S-7	CROSS SECTION DETAILS					
S-8	SIDE ELEVATION					
S-9	SPACE FRAME TYP. CONNECTION DETAILS					
S-10	ROOF SHEETING DETAILS					
		BUILDING LOADS & DESIGN CODES: 1. BUILDING CODE 2. DESIGN LIVE LOAD 3. DEAD LOAD (KN/m²) 4. CO-LATERAL LOAD 5. WIND SPEED (km/h) 6. SNOW LOAD 7. SEISMIC ZONE 8. CLOSURE 9. EXPOSURE AISC-LRFD 0.570 KN/m² SELF WEIGHT 0.1 KN/m² 160 N/A 2B ENCLOSED C ISSUE FOR TENDER				
DESIGN DRAWINGS						
STRUCTURE TYPE:		PROJECT:		CLIENT:		
SPACE FRAME STRUCTURE		SPACE FRAME STRUCTURE ATCT				
		LOCATION: SKARDU , PAKISTAN				