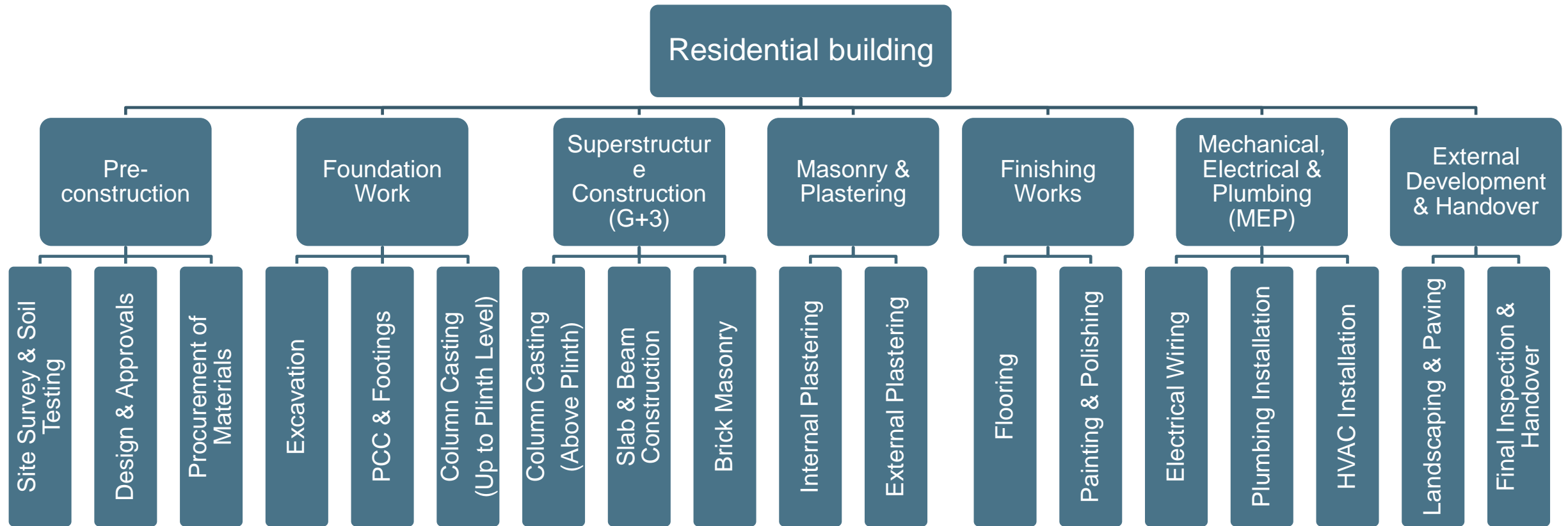

CONSTRUCTION PROJECT

Construction Of 3 Floor Residential Building

Samyuktha K

102201003

WORK BREAKDOWN STRUCTURE



ACTIVITIES

1. Conduct Site Survey
2. Obtain Permits & Approvals
3. Site Clearance & Levelling
4. Marking & Excavation
5. Lay PCC Bed
6. Footing Reinforcement & Formwork
7. Concrete Pouring for Footings
8. Column Starter & Curing
9. Ground Floor Columns & Beams
10. Ground Floor Slab
11. First Floor Columns & Beams
12. First Floor Slab
13. Second Floor Columns & Beams
14. Second Floor Slab
15. Third Floor Columns & Beams
16. Third Floor Slab
17. Roof Slab & Waterproofing
18. External & Internal Block Work
19. Lintel & Chajja Casting
20. Internal Plastering
21. External Plastering
22. Flooring & Tiling
23. Painting & Wall Finishes
24. Doors & Windows Installation
25. False Ceiling & Interiors
26. Electrical Wiring & Fixtures
27. Plumbing & Sanitary Installations
28. Fire Fighting & HVAC Installations
29. Compound Wall & Landscaping
30. Drainage & Paving Works
31. Final Inspection & Handover

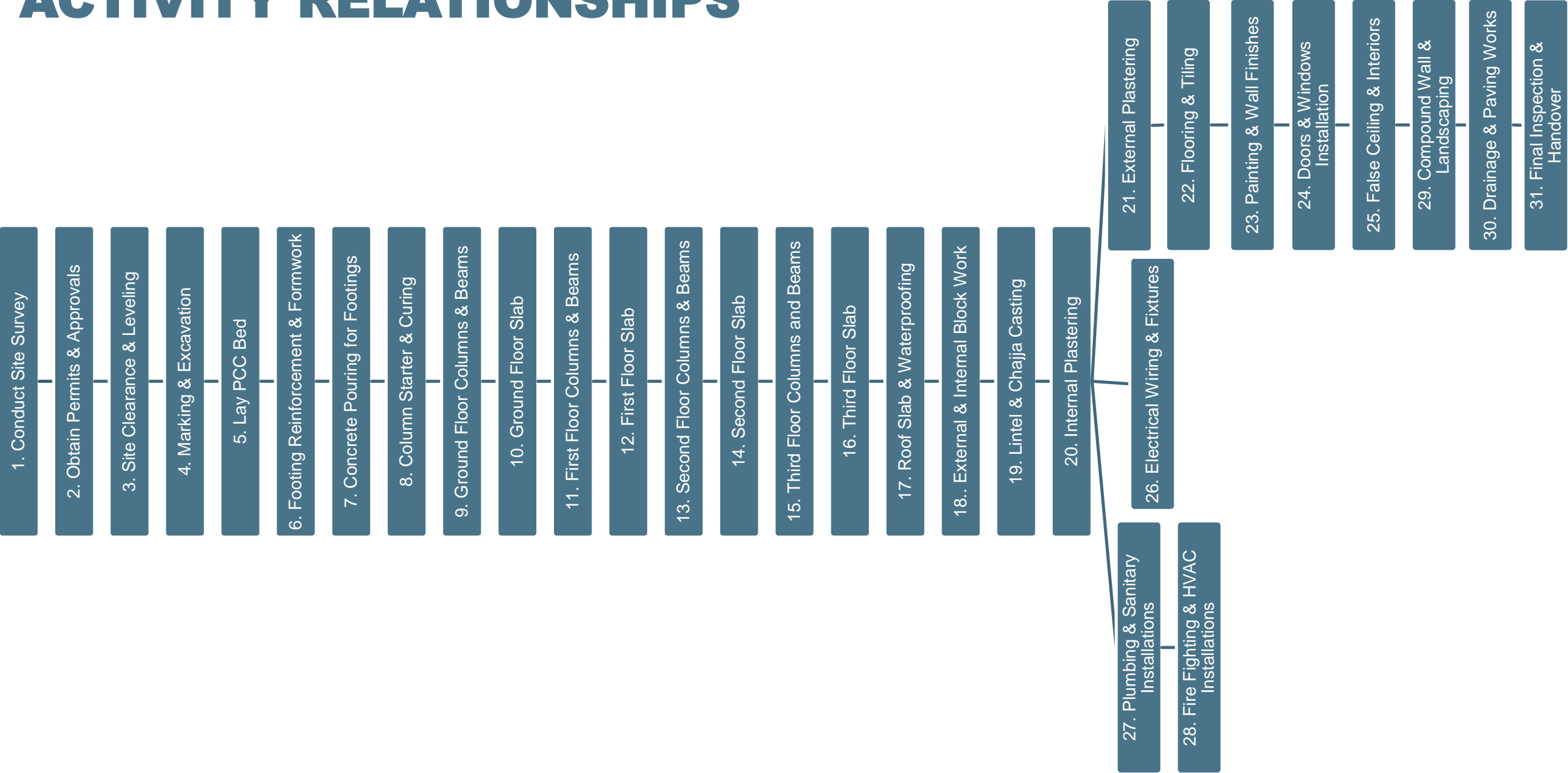
ACTIVITY SCHEDULE

No.	Activity	Start Date	End Date	Resources (unit/day)	Planned Duration (Days)	Planned Cost (Rs.)
1	Conduct Site Survey	1 April 2025	4 April 2025	2	3	₹ 50,000
2	Obtain Permits & Approvals	4 April 2025	14 April 2025	1	10	₹ 1,00,000
3	Site Clearance & Levelling	14 April 2025	19 April 2025	4	5	₹ 75,000
4	Marking & Excavation	19 April 2025	23 April 2025	5	4	₹ 1,20,000
5	Lay PCC Bed	23 April 2025	25 April 2025	3	2	₹ 60,000
6	Footing Reinforcement & Formwork	25 April 2025	29 April 2025	6	4	₹ 1,50,000
7	Concrete Pouring for Footings	29 April 2025	1 May 2025	5	2	₹ 90,000
8	Column Starter & Curing	1 May 2025	8 May 2025	3	7	₹ 1,20,000
9	Ground Floor Columns & Beams	8 May 2025	13 May 2025	6	5	₹ 2,50,000
10	Ground Floor Slab	13 May 2025	20 May 2025	8	7	₹ 3,00,000
11	First Floor Columns & Beams	20 May 2025	25 May 2025	6	5	₹ 3,50,000
12	First Floor Slab	25 May 2025	1 June 2025	8	7	₹ 3,75,000
13	Second Floor Columns & Beams	1 June 2025	6 June 2025	6	5	₹ 3,75,000
14	Second Floor Slab	6 June 2025	13 June 2025	8	7	₹ 4,50,000
15	Third Floor Columns & Beams	13 June 2025	18 June 2025	6	5	₹ 4,70,000
16	Third Floor Slab	18 June 2025	25 June 2025	8	7	₹ 4,90,000



No.	Activity	Start Date	End Date	Resources (unit/day)	Planned Duration (Days)	Planned Cost (Rs.)
17	Roof Slab & Waterproofing	25 June 2025	30 June 2025	7	5	₹ 5,10,000
18	External & Internal Block Work	30 June 2025	10 July 2025	5	10	₹ 3,00,000
19	Lintel & Chajja Casting	10 July 2025	13 July 2025	3	3	₹ 1,00,000
20	Internal Plastering	13 July 2025	23 July 2025	4	10	₹ 2,50,000
21	External Plastering	23 July 2025	30 July 2025	4	7	₹ 2,00,000
22	Flooring & Tiling	30 July 2025	6 August 2025	5	7	₹ 2,20,000
23	Painting & Wall Finishes	6 August 2025	11 August 2025	4	5	₹ 1,50,000
24	Doors & Windows Installation	11 August 2025	16 August 2025	4	5	₹ 1,80,000
25	False Ceiling & Interiors	16 August 2025	23 August 2025	5	7	₹ 1,60,000
26	Electrical Wiring & Fixtures	23 July 2025	2 August 2025	3	10	₹ 1,40,000
27	Plumbing & Sanitary Installations	23 July 2025	30 July 2025	3	7	₹ 1,30,000
28	Fire Fighting & HVAC Installations	30 July 2025	4 August 2025	4	5	₹ 1,20,000
29	Compound Wall & Landscaping	23 August 2025	30 August 2025	4	7	₹ 1,10,000
30	Drainage & Paving Works	30 August 2025	4 September 2025	4	5	₹ 1,50,000
31	Final Inspection & Handover	4 September 2025	7 September 2025	2	3	₹ 1,00,000

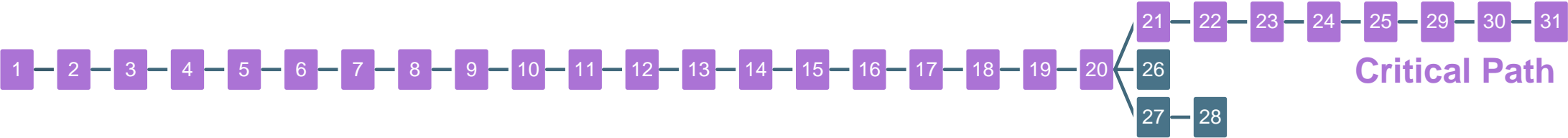
ACTIVITY RELATIONSHIPS



CRITICAL PATH ANALYSIS

Float calculations

Activity No.	Activity	Duration (Days)	ES	EF	LS	LF	Total Float	Free Float	Independent Float	On Critical Path
1	Conduct Site Survey	3	0	3	0	3	0	0	0	✓ Yes
2	Obtain Permits & Approvals	10	3	13	3	13	0	0	0	✓ Yes
3	Site Clearance & Leveling	5	13	18	13	18	0	0	0	✓ Yes
4	Marking & Excavation	4	18	22	18	22	0	0	0	✓ Yes
5	Lay PCC Bed	2	22	24	22	24	0	0	0	✓ Yes
6	Footing Reinforcement & Formwork	4	24	28	24	28	0	0	0	✓ Yes
7	Concrete Pouring for Footings	2	28	30	28	30	0	0	0	✓ Yes
8	Column Starter & Curing	7	30	37	30	37	0	0	0	✓ Yes
9	Ground Floor Columns & Beams	5	37	42	37	42	0	0	0	✓ Yes
10	Ground Floor Slab	7	42	49	42	49	0	0	0	✓ Yes
11	First Floor Columns & Beams	5	49	54	49	54	0	0	0	✓ Yes
12	First Floor Slab	7	54	61	54	61	0	0	0	✓ Yes
13	Second Floor Columns & Beams	5	61	66	61	66	0	0	0	✓ Yes
14	Second Floor Slab	7	66	73	66	73	0	0	0	✓ Yes
15	Third Floor Columns & Beams	5	73	78	73	78	0	0	0	✓ Yes
16	Third Floor Slab	7	78	85	78	85	0	0	0	✓ Yes
17	Roof Slab & Waterproofing	5	85	90	85	90	0	0	0	✓ Yes
18	External & Internal Block Work	10	90	100	90	100	0	0	0	✓ Yes
19	Lintel & Chajja Casting	3	100	103	100	103	0	0	0	✓ Yes
20	Internal Plastering	10	103	113	103	113	0	0	0	✓ Yes
21	External Plastering	7	113	120	113	120	0	0	0	✓ Yes
22	Flooring & Tiling	7	120	127	120	127	0	0	0	✓ Yes
23	Painting & Wall Finishes	5	127	132	127	132	0	0	0	✓ Yes
24	Doors & Windows Installation	5	132	137	132	137	0	0	0	✓ Yes
25	False Ceiling & Interiors	7	137	144	137	144	0	0	0	✓ Yes
26	Electrical Wiring & Fixtures	10	113	123	149	159	36	0	0	✗ No
27	Plumbing & Sanitary Installations	7	113	120	147	154	34	0	0	✗ No
28	Fire Fighting & HVAC Installations	5	120	125	154	159	34	0	0	✗ No
29	Compound Wall & Landscaping	7	144	151	144	151	0	0	0	✓ Yes
30	Drainage & Paving Works	5	151	156	151	156	0	0	0	✓ Yes
31	Final Inspection & Handover	3	156	159	156	159	0	0	0	✓ Yes



UPDATE 1

20th June (80 days)

Delay - 13 day delay in delivery of materials for Second floor (i.e. Activity 13 – Second Floor Columns & Beams delayed).

	Activity	Planned Duration (Days)	Actual Duration (days)	Planned Cost (Rs.)	Actual Cost (Rs.)	Planned Completion (%)	Actual Completion (%)	BCWS (man-hours)	BCWS (cost)	BCWP (man-hours)	BCWP (cost)	ACWP (man-hours)	ACWP (cost)
1	Conduct Site Survey	3	3	₹ 50,000	₹ 60,000	100%	100%	3	₹ 50,000	3	₹ 50,000	3	₹ 60,000
2	Obtain Permits & Approvals	10	10	₹ 1,00,000	₹ 1,10,000	100%	100%	10	₹ 1,00,000	10	₹ 1,00,000	10	₹ 1,10,000
3	Site Clearance & Leveling	5	5	₹ 75,000	₹ 80,000	100%	100%	5	₹ 75,000	5	₹ 75,000	5	₹ 80,000
4	Marking & Excavation	4	4	₹ 1,20,000	₹ 1,30,000	100%	100%	4	₹ 1,20,000	4	₹ 1,20,000	4	₹ 1,30,000
5	Lay PCC Bed	2	2	₹ 60,000	₹ 65,000	100%	100%	2	₹ 60,000	2	₹ 60,000	2	₹ 65,000
6	Footing Reinforcement & Formwork	4	4	₹ 1,50,000	₹ 1,55,000	100%	100%	4	₹ 1,50,000	4	₹ 1,50,000	4	₹ 1,55,000
7	Concrete Pouring for Footings	2	2	₹ 90,000	₹ 95,000	100%	100%	2	₹ 90,000	2	₹ 90,000	2	₹ 95,000
8	Column Starter & Curing	7	7	₹ 1,20,000	₹ 1,30,000	100%	100%	7	₹ 1,20,000	7	₹ 1,20,000	7	₹ 1,30,000
9	Ground Floor Columns & Beams	5	5	₹ 2,50,000	₹ 2,60,000	100%	100%	5	₹ 2,50,000	5	₹ 2,50,000	5	₹ 2,60,000
10	Ground Floor Slab	7	7	₹ 3,00,000	₹ 3,25,000	100%	100%	7	₹ 3,00,000	7	₹ 3,00,000	7	₹ 3,25,000
11	First Floor Columns & Beams	5	5	₹ 3,50,000	₹ 3,60,000	100%	100%	5	₹ 3,50,000	5	₹ 3,50,000	5	₹ 3,60,000
12	First Floor Slab	7	7	₹ 3,75,000	₹ 3,90,000	100%	100%	7	₹ 3,75,000	7	₹ 3,75,000	7	₹ 3,90,000
13	Second Floor Columns & Beams	5	5	₹ 3,75,000	₹ 4,00,000	100%	100%	5	₹ 3,75,000	5	₹ 3,75,000	5	₹ 4,00,000
14	Second Floor Slab	7	7	₹ 4,50,000	₹ 4,75,000	100%	14.3%	7	₹ 4,50,000	1.001	₹ 64,350	1.001	₹ 67,925
15	Third Floor Columns & Beams	5	5	₹ 4,70,000	₹ 4,90,000	100%	0%	5	₹ 4,70,000	0	₹ 0	0	₹ 0
16	Third Floor Slab	7	7	₹ 4,90,000	₹ 5,00,000	100%	0%	7	₹ 4,90,000	0	₹ 0	0	₹ 0
				₹ 38,25,000	₹ 40,25,000			85	₹ 38,25,000	67.001	₹ 24,79,350	67.001	₹ 26,27,925

Updated schedule

13 day delay
New start and
end dates

no.	Activity	Start Date	End Date	New Start Date	New End Date	Duration (Days)
1	Conduct Site Survey	1 April 2025	4 April 2025	1 April 2025	4 April 2025	3
2	Obtain Permits & Approvals	4 April 2025	14 April 2025	4 April 2025	14 April 2025	10
3	Site Clearance & Leveling	14 April 2025	19 April 2025	14 April 2025	19 April 2025	5
4	Marking & Excavation	19 April 2025	23 April 2025	19 April 2025	23 April 2025	4
5	Lay PCC Bed	23 April 2025	25 April 2025	23 April 2025	25 April 2025	2
6	Footing Reinforcement & Formwork	25 April 2025	29 April 2025	25 April 2025	29 April 2025	4
7	Concrete Pouring for Footings	29 April 2025	1 May 2025	29 April 2025	1 May 2025	2
8	Column Starter & Curing	1 May 2025	8 May 2025	1 May 2025	8 May 2025	7
9	Ground Floor Columns & Beams	8 May 2025	13 May 2025	8 May 2025	13 May 2025	5
10	Ground Floor Slab	13 May 2025	20 May 2025	13 May 2025	20 May 2025	7
11	First Floor Columns & Beams	20 May 2025	25 May 2025	20 May 2025	25 May 2025	5
12	First Floor Slab	25 May 2025	1 June 2025	25 May 2025	1 June 2025	7
13	Second Floor Columns & Beams	1 June 2025	6 June 2025	14 June 2025	19 June 2025	5
14	Second Floor Slab	6 June 2025	13 June 2025	19 June 2025	26 June 2025	7
15	Third Floor Columns & Beams	13 June 2025	18 June 2025	26 June 2025	1 July 2025	5
16	Third Floor Slab	18 June 2025	25 June 2025	1 July 2025	8 July 2025	7
17	Roof Slab & Waterproofing	25 June 2025	30 June 2025	8 July 2025	13 July 2025	5
18	External & Internal Block Work	30 June 2025	10 July 2025	13 July 2025	23 July 2025	10
19	Lintel & Chajja Casting	10 July 2025	13 July 2025	23 July 2025	26 July 2025	3
20	Internal Plastering	13 July 2025	23 July 2025	26 July 2025	5 August 2025	10
21	External Plastering	23 July 2025	30 July 2025	5 August 2025	12 August 2025	7
22	Flooring & Tiling	30 July 2025	6 August 2025	12 August 2025	19 August 2025	7
23	Painting & Wall Finishes	6 August 2025	11 August 2025	19 August 2025	24 August 2025	5
24	Doors & Windows Installation	11 August 2025	16 August 2025	24 August 2025	29 August 2025	5
25	False Ceiling & Interiors	16 August 2025	23 August 2025	29 August 2025	5 September 2025	7
26	Electrical Wiring & Fixtures	23 July 2025	2 August 2025	5 August 2025	15 August 2025	10
27	Plumbing & Sanitary Installations	23 July 2025	30 July 2025	5 August 2025	12 August 2025	7
28	Fire Fighting & HVAC Installations	30 July 2025	4 August 2025	12 August 2025	17 August 2025	5
29	Compound Wall & Landscaping	23 August 2025	30 August 2025	5 September 2025	12 September 2025	7
30	Drainage & Paving Works	30 August 2025	4 September 2025	12 September 2025	17 September 2025	5
31	Final Inspection & Handover	4 September 2025	7 September 2025	17 September 2025	20 September 2025	3

New end date (extended by 13 days)

UPDATE 1 EARNED VALUE ANALYSIS

- 50% planned complete, 42% actual complete

Property	Value	Remark
BAC	₹ 66,45,000	
BCWS (PV)	₹ 38,25,000	
BCWP (EV)	₹ 24,79,350	
ACWP (AC)	₹ 26,27,925	
SV (EV-PV)	-₹ 13,45,650	behind schedule
CV (EV-AC)	-₹ 1,48,575	over budget (approx \$1.5 lakh cost overrun)
SPI (EV/PV)	0.65	behind schedule
CPI (EV/AC)	0.94	over budget

UPDATE 1 CRITICAL PATH ANALYSIS

Activity No.	Activity	Duration (Days)	ES	EF	LS	LF	Total Float	Free Float	Independent Float	On Critical Path
1	Conduct Site Survey	3	0	3	13	16	13	0	0	✓ Yes
2	Obtain Permits & Approvals	10	3	13	16	26	13	0	0	✓ Yes
3	Site Clearance & Leveling	5	13	18	26	31	13	0	0	✓ Yes
4	Marking & Excavation	4	18	22	31	35	13	0	0	✓ Yes
5	Lay PCC Bed	2	22	24	35	37	13	0	0	✓ Yes
6	Footing Reinforcement & Formwork	4	24	28	37	41	13	0	0	✓ Yes
7	Concrete Pouring for Footings	2	28	30	41	43	13	0	0	✓ Yes
8	Column Starter & Curing	7	30	37	43	50	13	0	0	✓ Yes
9	Ground Floor Columns & Beams	5	37	42	50	55	13	0	0	✓ Yes
10	Ground Floor Slab	7	42	49	55	62	13	0	0	✓ Yes
11	First Floor Columns & Beams	5	49	54	62	67	13	0	0	✓ Yes
12	First Floor Slab	7	54	61	67	74	13	13	0	✓ Yes
13	Second Floor Columns & Beams	5	74	79	74	79	0	0	0	✓ Yes
14	Second Floor Slab	7	79	86	79	86	0	0	0	✓ Yes
15	Third Floor Columns & Beams	5	86	91	86	91	0	0	0	✓ Yes
16	Third Floor Slab	7	91	98	91	98	0	0	0	✓ Yes
17	Roof Slab & Waterproofing	5	98	103	98	103	0	0	0	✓ Yes
18	External & Internal Block Work	10	103	113	103	113	0	0	0	✓ Yes
19	Lintel & Chajja Casting	3	113	116	113	116	0	0	0	✓ Yes
20	Internal Plastering	10	116	126	116	126	0	0	0	✓ Yes
21	External Plastering	7	126	133	126	133	0	0	0	✓ Yes
22	Flooring & Tiling	7	133	140	133	140	0	0	0	✓ Yes
23	Painting & Wall Finishes	5	140	145	140	145	0	0	0	✓ Yes
24	Doors & Windows Installation	5	145	150	145	150	0	0	0	✓ Yes
25	False Ceiling & Interiors	7	150	157	150	157	0	0	0	✓ Yes
29	Compound Wall & Landscaping	7	157	164	157	164	0	0	0	✓ Yes
30	Drainage & Paving Works	5	164	169	164	169	0	0	0	✓ Yes
31	Final Inspection & Handover	3	169	172	169	172	0	0	0	✓ Yes
26	Electrical Wiring & Fixtures	10	126	136	162	172	36	0	0	✗ No
27	Plumbing & Sanitary Installations	7	126	133	160	167	34	0	0	✗ No
28	Fire Fighting & HVAC Installations	5	133	138	167	172	34	0	0	✗ No

13 day delay

end

FIX – CRASHING ACTIVITIES

Activity No.	Activity	normal duration	crash duration	initial end date	final end date	remarks
18	External & Internal Block Work	10	7	23-Jul	20-Jul	crashed by 3 days
20	Internal Plastering	10	7	05-Aug	30-Jul	crashed by 3 days
21	External Plastering	7	5	11-Aug	04-Aug	crashed by 5 days
22	Flooring & Tiling	7	5	18-Aug	09-Aug	crashed by 5 days
25	False Ceiling & Interiors	7	5	05-Sep	24-Aug	crashed by 5 days
29	Compound Wall & Landscaping	7	6	12-Sep	30-Aug	crashed by 1 day

Fixed Schedule

- Fixed the schedule to end at original end date

Crashed activities

No.	Activity	Delayed Start Date	Delayed End Date	New Duration	New Start Date	New End Date
1	Conduct Site Survey	1 April 2025	4 April 2025	3	01 April 2025	4 April 2025
2	Obtain Permits & Approvals	4 April 2025	14 April 2025	10	04 April 2025	14 April 2025
3	Site Clearance & Leveling	14 April 2025	19 April 2025	5	14 April 2025	19 April 2025
4	Marking & Excavation	19 April 2025	23 April 2025	4	19 April 2025	23 April 2025
5	Lay PCC Bed	23 April 2025	25 April 2025	2	23 April 2025	25 April 2025
6	Footing Reinforcement & Formwork	25 April 2025	29 April 2025	4	25 April 2025	29 April 2025
7	Concrete Pouring for Footings	29 April 2025	1 May 2025	2	29 April 2025	1 May 2025
8	Column Starter & Curing	1 May 2025	8 May 2025	7	01 May 2025	8 May 2025
9	Ground Floor Columns & Beams	8 May 2025	13 May 2025	5	08 May 2025	13 May 2025
10	Ground Floor Slab	13 May 2025	20 May 2025	7	13 May 2025	20 May 2025
11	First Floor Columns & Beams	20 May 2025	25 May 2025	5	20 May 2025	25 May 2025
12	First Floor Slab	25 May 2025	1 June 2025	7	25 May 2025	1 June 2025
13	Second Floor Columns & Beams	14 June 2025	19 June 2025	5	14 June 2025	19 June 2025
14	Second Floor Slab	19 June 2025	26 June 2025	7	19 June 2025	26 June 2025
15	Third Floor Columns & Beams	26 June 2025	1 July 2025	5	26 June 2025	1 July 2025
16	Third Floor Slab	1 July 2025	8 July 2025	7	01 July 2025	8 July 2025
17	Roof Slab & Waterproofing	8 July 2025	13 July 2025	5	08 July 2025	13 July 2025
18	External & Internal Block Work	13 July 2025	23 July 2025	7	13 July 2025	20 July 2025
19	Lintel & Chajja Casting	23 July 2025	26 July 2025	3	20 July 2025	23 July 2025
20	Internal Plastering	26 July 2025	5 August 2025	7	23 July 2025	30 July 2025
21	External Plastering	5 August 2025	12 August 2025	5	30 July 2025	04 August 2025
22	Flooring & Tiling	12 August 2025	19 August 2025	5	04 August 2025	09 August 2025
23	Painting & Wall Finishes	19 August 2025	24 August 2025	5	09 August 2025	14 August 2025
24	Doors & Windows Installation	24 August 2025	29 August 2025	5	14 August 2025	19 August 2025
25	False Ceiling & Interiors	29 August 2025	5 September 2025	5	19 August 2025	24 August 2025
26	Electrical Wiring & Fixtures	5 August 2025	15 August 2025	10	05 August 2025	15 August 2025
27	Plumbing & Sanitary Installations	5 August 2025	12 August 2025	7	05 August 2025	12 August 2025
28	Fire Fighting & HVAC Installations	12 August 2025	17 August 2025	5	12 January 1900	17 January 1900
29	Compound Wall & Landscaping	5 September 2025	12 September 2025	6	24 August 2025	30 August 2025
30	Drainage & Paving Works	12 September 2025	17 September 2025	5	30 August 2025	04 September 2025
31	Final Inspection & Handover	17 September 2025	20 September 2025	3	04 September 2025	07 September 2025

UPDATE 2

23th August (146 days)

No.	Activity	Planned Duration (Days)	Actual Duration (days)	Planned Cost (Rs.)	Actual Cost (Rs.)	Planned Completion (%)	Actual Completion (%)	BCWS (man-hours)	BCWS (cost)	BCWP (man-hours)	BCWP (cost)	ACWP (man-hours)	ACWP (cost)
1	Conduct Site Survey	3	3	₹ 50,000	₹ 60,000	100%	100%	3	₹ 50,000	3	₹ 50,000	3	₹ 60,000
2	Obtain Permits & Approvals	10	10	₹ 1,00,000	₹ 1,10,000	100%	100%	10	₹ 1,00,000	10	₹ 1,00,000	10	₹ 1,10,000
3	Site Clearance & Leveling	5	5	₹ 75,000	₹ 80,000	100%	100%	5	₹ 75,000	5	₹ 75,000	5	₹ 80,000
4	Marking & Excavation	4	4	₹ 1,20,000	₹ 1,30,000	100%	100%	4	₹ 1,20,000	4	₹ 1,20,000	4	₹ 1,30,000
5	Lay PCC Bed	2	2	₹ 60,000	₹ 65,000	100%	100%	2	₹ 60,000	2	₹ 60,000	2	₹ 65,000
6	Footing Reinforcement & Formwork	4	4	₹ 1,50,000	₹ 1,55,000	100%	100%	4	₹ 1,50,000	4	₹ 1,50,000	4	₹ 1,55,000
7	Concrete Pouring for Footings	2	2	₹ 90,000	₹ 95,000	100%	100%	2	₹ 90,000	2	₹ 90,000	2	₹ 95,000
8	Column Starter & Curing	7	7	₹ 1,20,000	₹ 1,30,000	100%	100%	7	₹ 1,20,000	7	₹ 1,20,000	7	₹ 1,30,000
9	Ground Floor Columns & Beams	5	5	₹ 2,50,000	₹ 2,60,000	100%	100%	5	₹ 2,50,000	5	₹ 2,50,000	5	₹ 2,60,000
10	Ground Floor Slab	7	7	₹ 3,00,000	₹ 3,25,000	100%	100%	7	₹ 3,00,000	7	₹ 3,00,000	7	₹ 3,25,000
11	First Floor Columns & Beams	5	5	₹ 3,50,000	₹ 3,60,000	100%	100%	5	₹ 3,50,000	5	₹ 3,50,000	5	₹ 3,60,000
12	First Floor Slab	7	7	₹ 3,75,000	₹ 3,90,000	100%	100%	7	₹ 3,75,000	7	₹ 3,75,000	7	₹ 3,90,000
13	Second Floor Columns & Beams	5	5	₹ 3,75,000	₹ 4,00,000	100%	100%	5	₹ 3,75,000	5	₹ 3,75,000	5	₹ 4,00,000
14	Second Floor Slab	7	7	₹ 4,50,000	₹ 4,75,000	100%	100%	7	₹ 4,50,000	7	₹ 4,50,000	7	₹ 4,75,000
15	Third Floor Columns & Beams	5	5	₹ 4,70,000	₹ 4,90,000	100%	100%	5	₹ 4,70,000	5	₹ 4,70,000	5	₹ 4,90,000
16	Third Floor Slab	7	7	₹ 4,90,000	₹ 5,00,000	100%	100%	7	₹ 4,90,000	7	₹ 4,90,000	7	₹ 5,00,000
17	Roof Slab & Waterproofing	5	5	₹ 5,10,000	₹ 4,75,000	100%	100%	5	₹ 5,10,000	5	₹ 5,10,000	5	₹ 4,75,000
18	External & Internal Block Work	10	7	₹ 3,00,000	₹ 2,50,000	100%	100%	10	₹ 3,00,000	10	₹ 3,00,000	7	₹ 2,50,000
19	Lintel & Chajja Casting	3	3	₹ 1,00,000	₹ 90,000	100%	100%	3	₹ 1,00,000	3	₹ 1,00,000	3	₹ 90,000
20	Internal Plastering	10	7	₹ 2,50,000	₹ 2,25,000	100%	100%	10	₹ 2,50,000	10	₹ 2,50,000	7	₹ 2,25,000
21	External Plastering	7	5	₹ 2,00,000	₹ 1,50,000	100%	100%	7	₹ 2,00,000	7	₹ 2,00,000	5	₹ 1,50,000
22	Flooring & Tiling	7	5	₹ 2,20,000	₹ 2,10,000	100%	100%	7	₹ 2,20,000	7	₹ 2,20,000	5	₹ 2,10,000
23	Painting & Wall Finishes	5	5	₹ 1,50,000	₹ 1,60,000	100%	100%	5	₹ 1,50,000	5	₹ 1,50,000	5	₹ 1,60,000
24	Doors & Windows Installation	5	5	₹ 1,80,000	₹ 1,75,000	0%	100%	0	₹ 0	5	₹ 1,80,000	5	₹ 1,75,000
25	False Ceiling & Interiors	7	5	₹ 1,60,000	₹ 1,50,000	0%	100%	0	₹ 0	7	₹ 1,60,000	5	₹ 1,50,000
26	Electrical Wiring & Fixtures	10	10	₹ 1,40,000	₹ 1,20,000	100%	100%	10	₹ 1,40,000	10	₹ 1,40,000	10	₹ 1,20,000
27	Plumbing & Sanitary Installations	7	7	₹ 1,30,000	₹ 1,25,000	100%	100%	7	₹ 1,30,000	7	₹ 1,30,000	7	₹ 1,25,000
28	Fire Fighting & HVAC Installations	5	5	₹ 1,20,000	₹ 1,00,000	100%	100%	5	₹ 1,20,000	5	₹ 1,20,000	5	₹ 1,00,000
								154	₹ 59,45,000	166	₹ 62,85,000	154	₹ 62,55,000

UPDATE 2 EARNED VALUE ANALYSIS

- 91.7% planned, 85% actual

Property	Value	Remark
BAC	₹ 66,45,000	
BCWS (PV)	₹ 59,45,000	
BCWP (EV)	₹ 62,85,000	
ACWP (AC)	₹ 62,55,000	
SV (EV-PV)	₹ 3,40,000	Ahead of schedule
CV (EV-AC)	₹ 30,000	Under budget (cost underrun)
SPI (EV/PV)	1.06	Ahead of schedule
CPI (EV/AC)	1.005	Under budget

UPDATE 2 CRITICAL PATH ANALYSIS

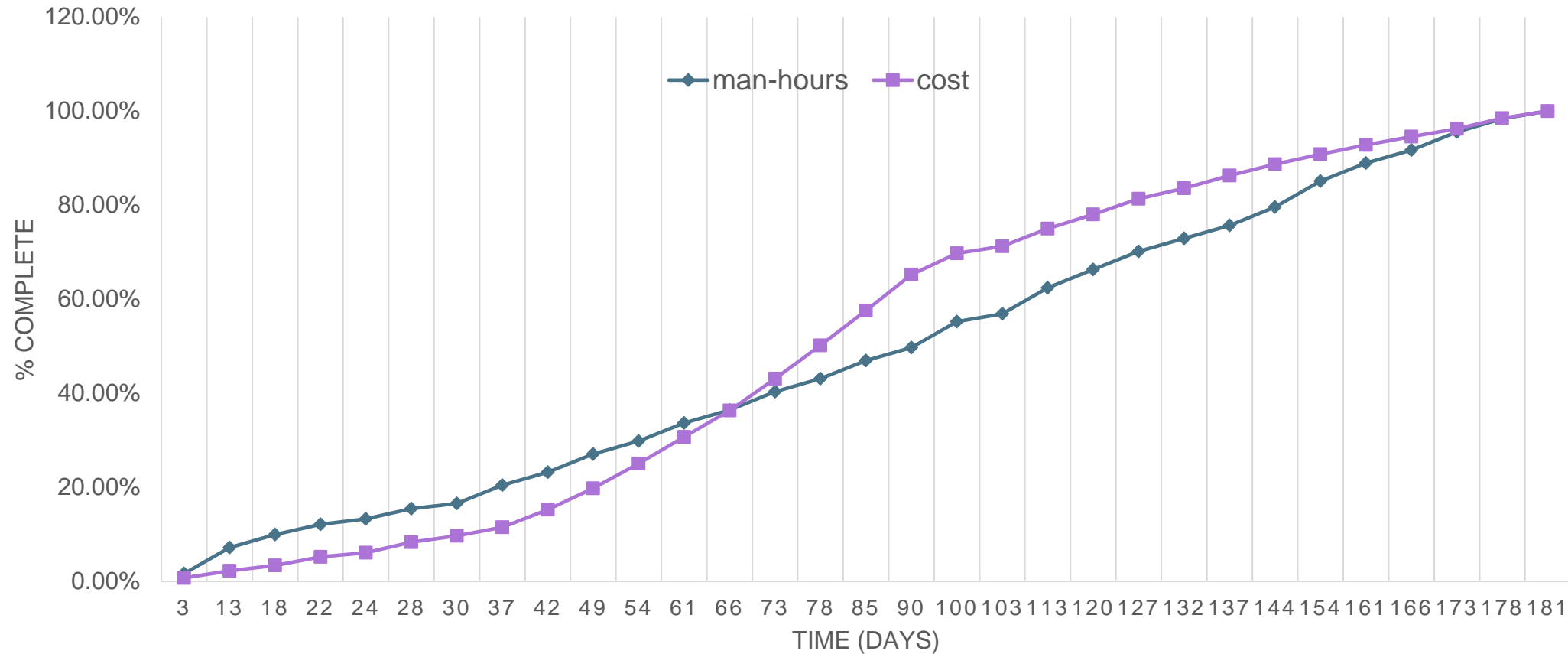
After crashing activities

Activity No.	Activity	Duration (Days)	ES	EF	LS	LF	Total Float	Free Float	Independent Float	On Critical Path
1	Conduct Site Survey	3	0	3	13	16	13	0	0	✓ Yes
2	Obtain Permits & Approvals	10	3	13	16	26	13	0	0	✓ Yes
3	Site Clearance & Leveling	5	13	18	26	31	13	0	0	✓ Yes
4	Marking & Excavation	4	18	22	31	35	13	0	0	✓ Yes
5	Lay PCC Bed	2	22	24	35	37	13	0	0	✓ Yes
6	Footing Reinforcement & Formwork	4	24	28	37	41	13	0	0	✓ Yes
7	Concrete Pouring for Footings	2	28	30	41	43	13	0	0	✓ Yes
8	Column Starter & Curing	7	30	37	43	50	13	0	0	✓ Yes
9	Ground Floor Columns & Beams	5	37	42	50	55	13	0	0	✓ Yes
10	Ground Floor Slab	7	42	49	55	62	13	0	0	✓ Yes
11	First Floor Columns & Beams	5	49	54	62	67	13	0	0	✓ Yes
12	First Floor Slab	7	54	61	67	74	13	13	0	✓ Yes
13	Second Floor Columns & Beams	5	74	79	74	79	0	0	0	✓ Yes
14	Second Floor Slab	7	79	86	79	86	0	0	0	✓ Yes
15	Third Floor Columns & Beams	5	86	91	86	91	0	0	0	✓ Yes
16	Third Floor Slab	7	91	98	91	98	0	0	0	✓ Yes
17	Roof Slab & Waterproofing	5	98	103	98	103	0	0	0	✓ Yes
18	External & Internal Block Work	7	103	110	103	110	0	0	0	✓ Yes
19	Lintel & Chajja Casting	3	110	113	110	113	0	0	0	✓ Yes
20	Internal Plastering	7	113	120	113	120	0	0	0	✓ Yes
21	External Plastering	5	120	125	120	125	0	0	0	✓ Yes
22	Flooring & Tiling	5	125	130	125	130	0	0	0	✓ Yes
23	Painting & Wall Finishes	5	130	135	130	135	0	0	0	✓ Yes
24	Doors & Windows Installation	5	135	140	135	140	0	0	0	✓ Yes
25	False Ceiling & Interiors	5	140	145	140	145	0	0	0	✓ Yes
29	Compound Wall & Landscaping	6	145	151	145	151	0	0	0	✓ Yes
30	Drainage & Paving Works	5	151	156	151	156	0	0	0	✓ Yes
31	Final Inspection & Handover	3	156	159	156	159	0	0	0	✓ Yes
26	Electrical Wiring & Fixtures	10	120	130	149	159	29	0	0	✗ No
27	Plumbing & Sanitary Installations	7	120	127	147	154	27	0	0	✗ No
28	Fire Fighting & HVAC Installations	5	127	132	154	159	27	0	0	✗ No

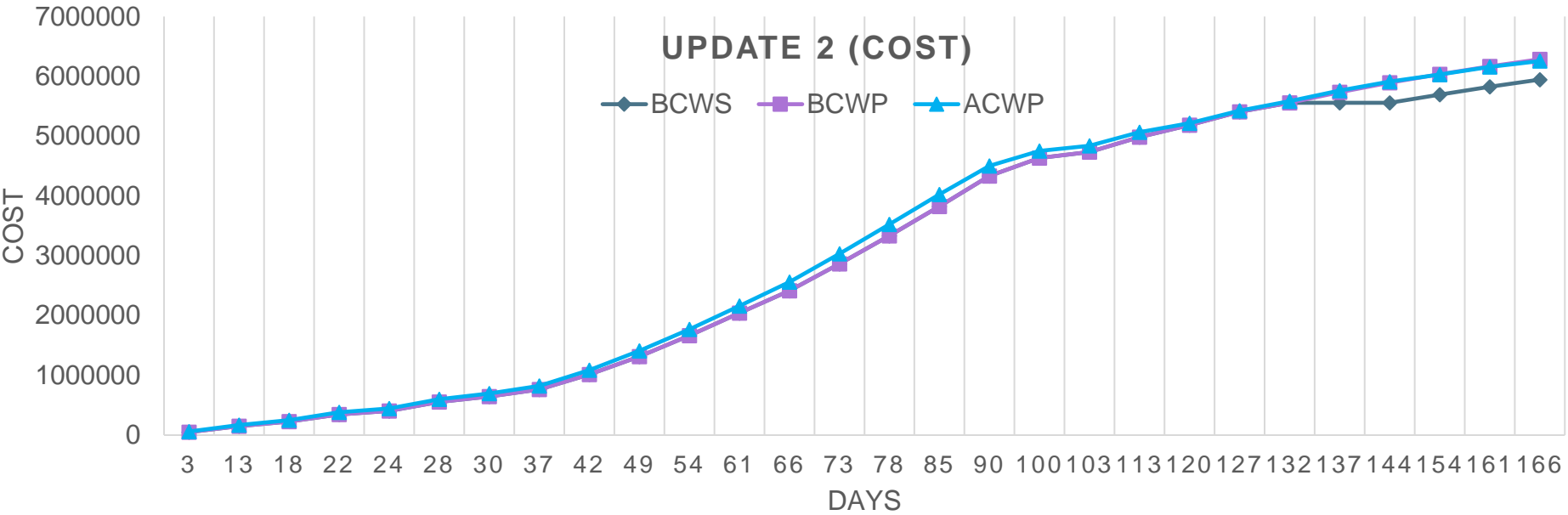
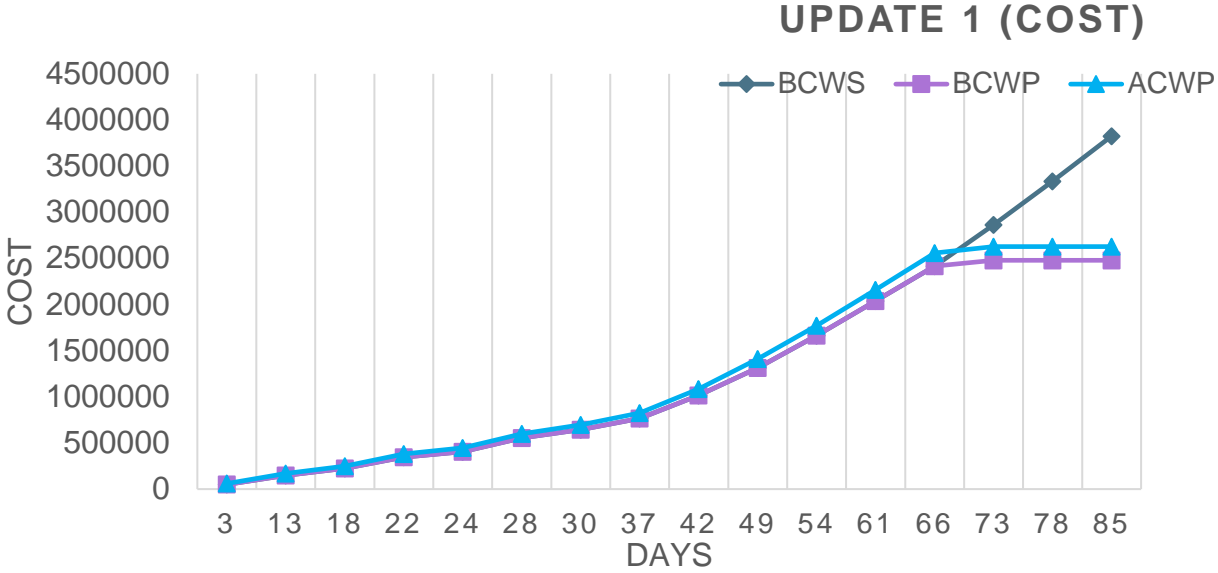
end

EVA GRAPHS

% Complete wrt Man-hours And Cost

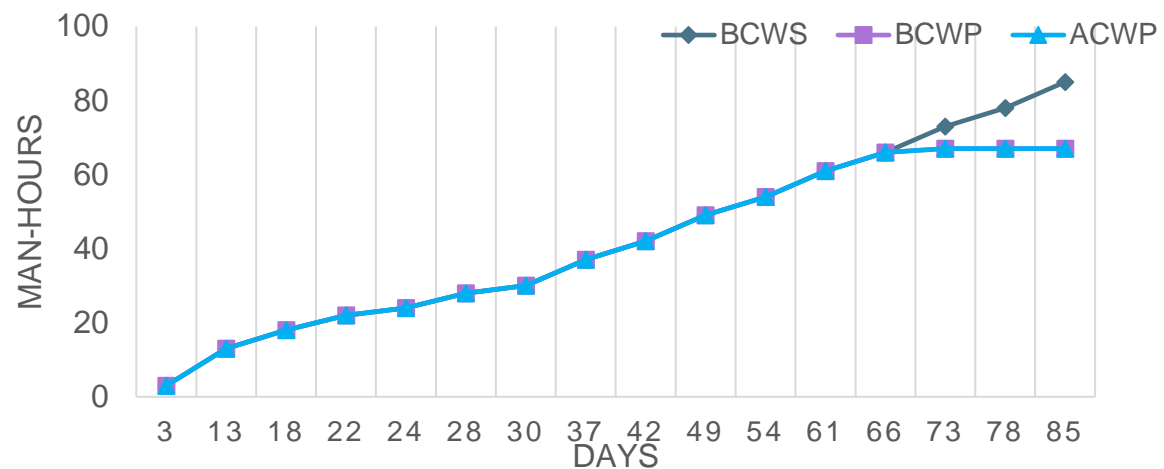


Cost vs Time Graphs

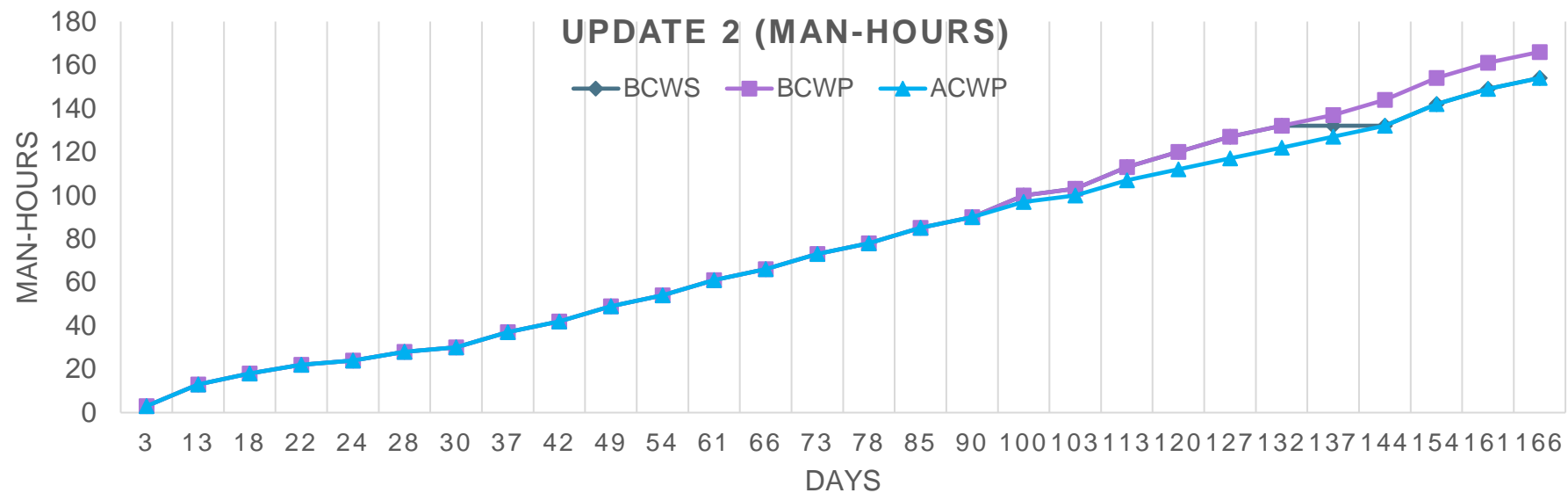


Man-Hours vs Time Graphs

UPDATE 1 (MAN-HOURS)



UPDATE 2 (MAN-HOURS)



RESOURCES

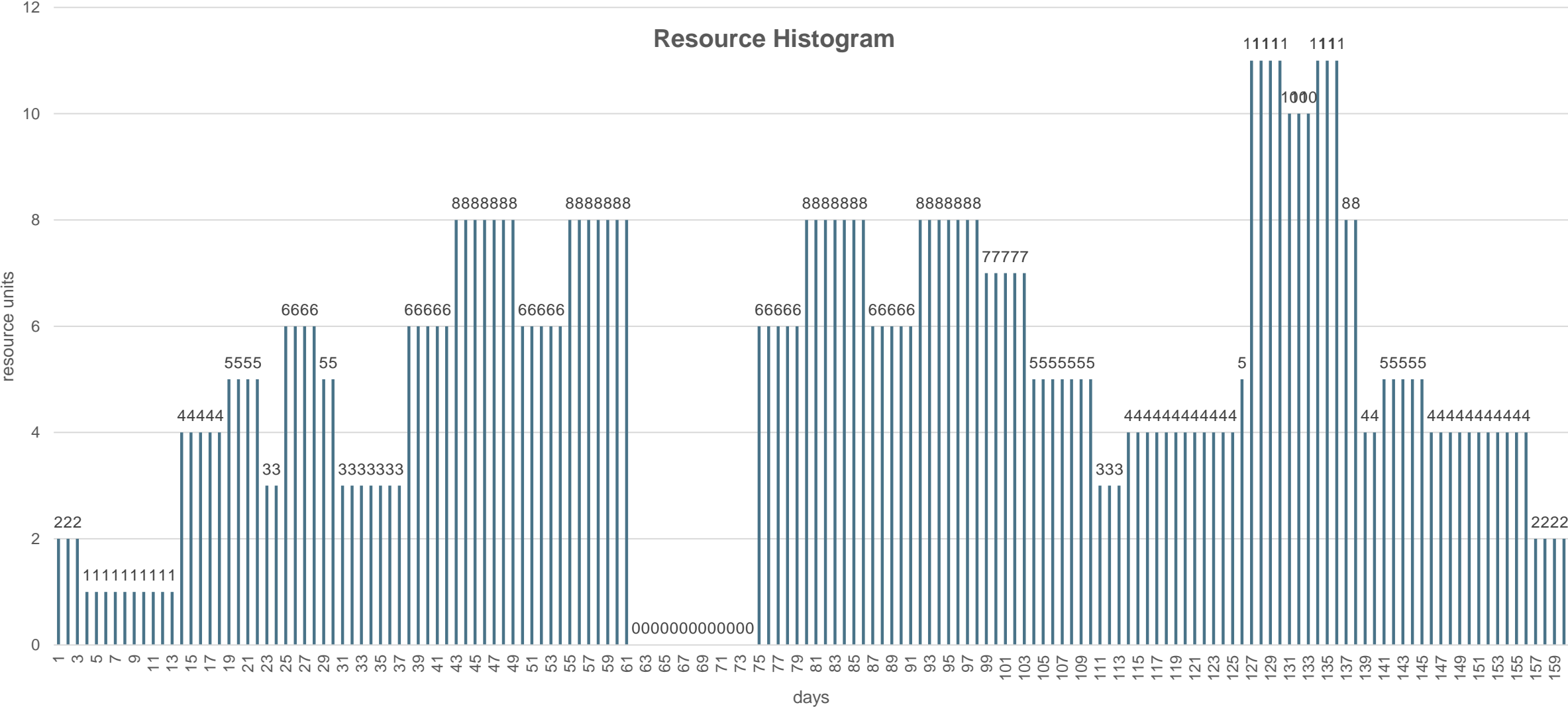
Activity	Responsible Team	Resources
Excavation	Civil Engineering Team	Excavators, Dumpers
Concrete Pouring	Structural Engineers	Concrete Mixers, Labor
Brick Masonry	Masons	Bricks, Cement, Sand
Electrical Wiring	Electrical Engineers	Cables, Switchboards
Plumbing	Plumbing Team	Pipes, Fittings
Flooring & Tiling	Interior Finishing Team	Tiles, Adhesives

- For simplicity we have assigned activities resources of the same unit in units/day

Activity no.	Activity	Resources (unit/day)
1	Conduct Site Survey	2
2	Obtain Permits & Approvals	1
3	Site Clearance & Leveling	4
4	Marking & Excavation	5
5	Lay PCC Bed	3
6	Footing Reinforcement & Formwork	6
7	Concrete Pouring for Footings	5
8	Column Starter & Curing	3
9	Ground Floor Columns & Beams	6
10	Ground Floor Slab	8
11	First Floor Columns & Beams	6
12	First Floor Slab	8
13	Second Floor Columns & Beams	6
14	Second Floor Slab	8
15	Third Floor Columns & Beams	6
16	Third Floor Slab	8
17	Roof Slab & Waterproofing	7
18	External & Internal Block Work	5
19	Lintel & Chajja Casting	3
20	Internal Plastering	4
21	External Plastering	4
22	Flooring & Tiling	5
23	Painting & Wall Finishes	4
24	Doors & Windows Installation	4
25	False Ceiling & Interiors	5
26	Electrical Wiring & Fixtures	3
27	Plumbing & Sanitary Installations	3
28	Fire Fighting & HVAC Installations	4
29	Compound Wall & Landscaping	4
30	Drainage & Paving Works	4
31	Final Inspection & Handover	2

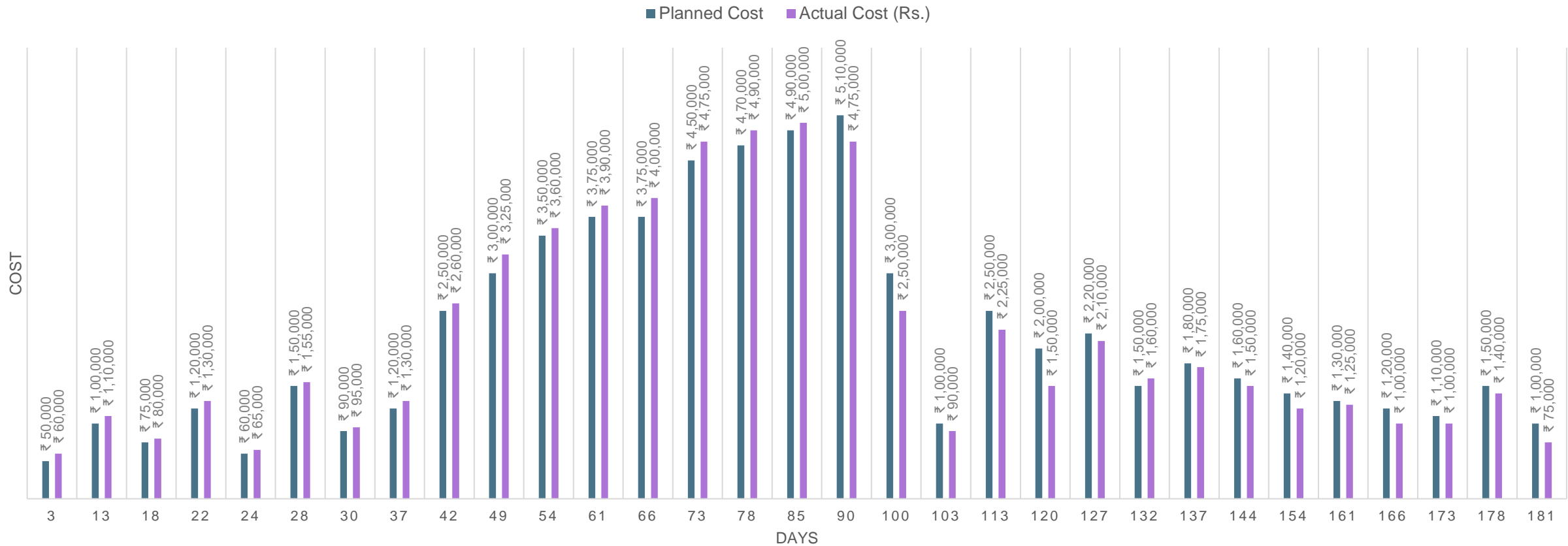
RESOURCE USE

(As per final schedule)



CASH FLOW ANALYSIS

PLANNED V/S ACTUAL COSTS



- 
- Link to [Excel Workbook](#) with project data and calculations

THANK YOU

