

Appendix-B.

**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES, MASTER OF ART IN PROJECT
MANAGEMENT**

Delay Factors with their Groups and Coding

Delay factors	Frequency	
	1 2 3 4 5	
➤ Materials Related factors		MRF
1. Shortage of required materials	○ ○ ○ ○ ○	MRF1
2. Delay in materials delivery	○ ○ ○ ○ ○	MRF2
3. Changes in materials prices	○ ○ ○ ○ ○	MRF3
4. Changes in materials specifications	○ ○ ○ ○ ○	MRF4
➤ Equipment Related factors		ERF
5. Shortage of required equipment	○ ○ ○ ○ ○	ERF1
6. Failure of equipment	○ ○ ○ ○ ○	ERF2
7. Shortage of supporting and shoring installations materials	○ ○ ○ ○ ○	ERF3
8. Inadequate equipment used for the works	○ ○ ○ ○ ○	ERF4
➤ Manpower Related factors		MPRF
9. Shortage of manpower (skilled, semi-skilled, unskilled labor)	○ ○ ○ ○ ○	MPRF1
10. Low skill of manpower	○ ○ ○ ○ ○	MPRF2
➤ Project Management Related factors		PMRF
11. Lack of motivation among contractor's members	○ ○ ○ ○ ○	PMRF1
12. Shortage of contractor's administrative personnel	○ ○ ○ ○ ○	PMRF2
13. Shortage of technical professionals in the contractor's organization	○ ○ ○ ○ ○	PMRF3
14. Poor communications by the contractor with the parties involved in the project	○ ○ ○ ○ ○	PMRF4
15. Contractor's poor coordination with the parties involved in the project	○ ○ ○ ○ ○	PMRF5
16. Slow preparation of changed orders requested by the contractor	○ ○ ○ ○ ○	PMRF6
17. Ineffective contractor head office involvement in the project	○ ○ ○ ○ ○	PMRF7
18. Delays in mobilization	○ ○ ○ ○ ○	PMRF8
19. Poor controlling of subcontractors by contractor	○ ○ ○ ○ ○	PMRF9

20. Loose safety rules and regulations within the contractor's organization	○ ○ ○ ○ ○	PMRF10
21. Ineffective planning and scheduling of the project by the contractor	○ ○ ○ ○ ○	PMRF11
22. Delays to field survey by the contractor	○ ○ ○ ○ ○	PMRF12
23. Ineffective control of project progress by the contractor	○ ○ ○ ○ ○	PMRF13
24. Inefficient quality control by the contractor	○ ○ ○ ○ ○	PMRF14
25. Poor communication and coordination by contractor with other parties	○ ○ ○ ○ ○	PMRF15
26. Delays in sub-contractors work	○ ○ ○ ○ ○	PMRF16
27. Problems between the contractor and his subcontractors with regard to payments	○ ○ ○ ○ ○	PMRF17
28. Poor qualification of the contractor's technical staff	○ ○ ○ ○ ○	PMRF18
29. Poor site management and supervision by contractor	○ ○ ○ ○ ○	PMRF19
30. Rework due to errors activities during construction	○ ○ ○ ○ ○	PMRF20
➤ Owner Related factors		ORF
31. Lack of experience of owner in construction	○ ○ ○ ○ ○	ORF1
32. Improper project feasibility study	○ ○ ○ ○ ○	ORF2
33. Lack of working knowledge	○ ○ ○ ○ ○	ORF3
34. Slowness in making decisions	○ ○ ○ ○ ○	ORF4
35. Lack of coordination with contractors	○ ○ ○ ○ ○	ORF5
36. Contract modifications (replacement and addition of new work to the project and change in specifications)	○ ○ ○ ○ ○	ORF6
37. Financial problems (delayed payments, financial difficulties, and economic problems)	○ ○ ○ ○ ○	ORF7
38. Delay in furnishing and delivering the site to the contractor by the owner	○ ○ ○ ○ ○	ORF8
39. Unrealistic contract duration	○ ○ ○ ○ ○	ORF9
40. Slow decision making by the owner organization	○ ○ ○ ○ ○	ORF10
41. Interference by the owner in the construction operations	○ ○ ○ ○ ○	ORF11
42. Delay in progress payments by the owner	○ ○ ○ ○ ○	ORF12
➤ Consultant Related factors		CRF
43. Poor qualification of consultant engineer's staff assigned to the project	○ ○ ○ ○ ○	CRF1
44. Delay in the preparation of drawings	○ ○ ○ ○ ○	CRF2
45. Delay in the approval of contractor submissions by the consultant	○ ○ ○ ○ ○	CRF3

46. Poor design and delays in design	○ ○ ○ ○ ○	CRF4
47. Slow response and poor inspection	○ ○ ○ ○ ○	CRF5
48. Absence of consultant's site staff	○ ○ ○ ○ ○	CRF6
49. Delayed and slow supervision in making decisions	○ ○ ○ ○ ○	CRF7
50. Incomplete documents	○ ○ ○ ○ ○	CRF8
51. Slowness in giving instruction	○ ○ ○ ○ ○	CRF9
52. Poor communication between the consultant engineer and other parties	○ ○ ○ ○ ○	CRF10
➤ External Factors		EXF
53. Severe weather conditions on the job site	○ ○ ○ ○ ○	EXF1
54. Lack of equipment and tools on the market	○ ○ ○ ○ ○	EXF2
55. Right of way (RoW) problems	○ ○ ○ ○ ○	EXF3
56. Unstable laws and regulation	○ ○ ○ ○ ○	EXF4

Comments:

Thank you very much; your response is highly appreciated.

Please send your response to:

or e-mail it to. : kirubelgt@gmail.com