

Winnipeg							Class of Estimate	
Investment Title	Organic Waste Processing Facility			Estimate Date				
Description	Processing facility to manage organic waste collected in the			Business Case ID				
Table 1 - Classification of Estimate ¹								
Characteristic	Class 5	Class 4	Class 3	Class 2	Class 1			
1 Project Definition/Design % Complete	~1%*	~10%*	~30%*	~60%*	~99%*			
2 End Usage - typical purpose of estimate	Concept	Feasibility	Budget Authorization	Detailed Design*	Tender Documents*			
3 Methodology - typical estimating method	parametric models, judgment, or analogy	parametric models, assembly driven models	semi-detailed unit costs with assembly level line items	detailed unit cost with forced detailed take-off	detailed unit cost with forced detailed take-off			
	<i>Buildings and General Construction:</i>	SF or m2 factoring						
	<i>Process:</i>	capacity factored	equipment factored					
	<i>Pipeline, Transportation:</i>	cost/length factors	cost/length factored					
4 Accuracy of Cost Estimate*	High: +100% Low: -50%	High: +50%* Low: -30%	High: +30% Low: -20%	High: +20% Low: -15%*	High: +15%* Low: -10%*			
¹ Based on using the AACE International Recommended Practice(s): 17R-97, 18R-97, 56R-08, 97R-18, 98R-18.								
* City of Winnipeg Customization								
Table 2 - Estimate Input Checklist and Maturity Matrix ²								
The following table is a checklist of general project data and design deliverables found in common practise in the specific industry selected.								
Select the Investment Industry from the drop down list below: ²					Assess Overall Class Estimate:			
Process Industry					Class 4			
Based on AACE 18R-97 Recommended Practice Cost Estimate Classification System – as applied in engineering, procurement, and construction for the Process Industries (rev. March 2019)								
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Basis of Estimate Author's Legend:								
n/a: Not applicable. The deliverable does not apply to the project.								
Basis of Estimate Author's determination of highlighted selection (fill shading in green) the deliverables status characteristics in Table 2 (Class 5 to Class 1 or n/a)								
General Project Data Deliverables Legend:								
Not Required (NR): May not be required for all estimates of the specified class, but specific project estimates may require at least preliminary development.								
Preliminary (P): Project definition has begun and progressed to at least an intermediate level of completion. Review and approvals for its current status has occurred.								
Defined (D): Project definition is advanced and reviews have been conducted. Development may be near completion with the exception of final approvals.								
Design Deliverables Legend:								
Not Required (NR): Deliverable may not be required for all estimates of the specified class, but specific project estimates may require at least preliminary development.								
Started (S): Work on the deliverable has begun. Development is typically limited to sketches, rough outlines, or similar levels of early completion.								
Preliminary (P): Work on the deliverable is advanced. Interim, cross functional reviews have usually been conducted. Development may be near completion except for final reviews and approvals.								
S/P: Between started and preliminary status.								
Complete (C): The deliverable has been reviewed and approved as appropriate.								
Key Deliverable Target Status:	Class 5	Class 4	Class 3	Class 2	Class 1	Not Applicable	Comments:	
- Block flow diagram agreed by stakeholders. - List of key design basis assumptions.	- Process flow diagrams (PFD's) issued for design.	- Piping and instrumentation diagrams (P&IDs) issued for design.	- All specifications and datasheets complete including for instrumentation.	- All deliverables in the maturity matrix complete.	Shade 'n/a' cell green if specific deliverable is not applicable to project.	Add relevant details to support the rationale for selecting the deliverable maturity level. Also indicate the location of specific document or drawing related to the deliverable, in order to validate maturity level.		
General Project Data Deliverables:								
1 Project Scope Description	Preliminary	Preliminary	Defined	Defined	Defined	n/a		
2 Plant Production/Facility Capacity	Preliminary	Preliminary	Defined	Defined	Defined	n/a		
3 Plant Location	Preliminary	Preliminary	Defined	Defined	Defined	n/a		
4 Soils & Hydrology	Not Required	Preliminary	Defined	Defined	Defined	n/a		
5 Integrated Project Plan	Not Required	Preliminary	Defined	Defined	Defined	n/a		
6 Project Master Schedule	Not Required	Preliminary	Defined	Defined	Defined	n/a		
7 Escalation Strategy	Not Required	Preliminary	Defined	Defined	Defined	n/a		
8 Work Breakdown Structure	Not Required	Preliminary	Defined	Defined	Defined	n/a		
9 Project Code of Accounts	Not Required	Preliminary	Defined	Defined	Defined	n/a		
10 Procurement/Contracting Strategy	Not Required	Preliminary	Defined	Defined	Defined	n/a		
11 Stakeholder Management Plan*	Not Required	Preliminary	Defined	Defined	Defined	n/a		
Design Deliverables:	Class 5	Class 4	Class 3	Class 2	Class 1	Not Applicable	Comments:	
12 Block Flow Diagrams	S/P	P/C	C	C	C	n/a		
13 Plot Plans	NR	S/P	C	C	C	n/a		
14 Process Flow Diagrams (PFDs)	NR	P/C	C	C	C	n/a		
15 Utility Flow Diagrams (UFDs)	NR	S/P	C	C	C	n/a		
16 Piping & Instrument Diagrams (P&IDs)	NR	S/P	C	C	C	n/a		
17 Heat & Material Balances	NR	P/C	C	C	C	n/a		
18 Process Equipment List	NR	S/P	C	C	C	n/a		
19 Utility Equipment List	NR	S/P	C	C	C	n/a		
20 Electrical One-Line Drawings	NR	S/P	C	C	C	n/a		
21 Design Specifications & Datasheets	NR	S/P	C	C	C	n/a		
22 General Equipment Arrangement Drawings	NR	S	C	C	C	n/a		
23 Spare Parts Listings	NR	NR	P	P	C	n/a		
24 Mechanical Discipline Drawings	NR	NR	S/P	P/C	C	n/a		
25 Electrical Discipline Drawings	NR	NR	S/P	P/C	C	n/a		
26 Instrumentation/Control System Discipline Drawings	NR	NR	S/P	P/C	C	n/a		
27 Civil/Structural/Site Discipline Drawings	NR	NR	S/P	P/C	C	n/a		
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