

Victoria Gold Eagle Gold - Fines Screening Bypass of Tertiary Crushing H363617 Engineering Report Mechanical Engineering Scoping Study

Report

Scoping Study

H363617-TSO-0006-240-066-0001

2021-08-12	Α	Client Review	M. Haapalainen	PP N. Wallace	B. Rustad	Not Required
DATE YYYY-MM-DD	REV.	STATUS	PREPARED BY	CHECKED BY	APPROVED BY	APPROVED BY
				Discipline Lead	Functional Manager	Client

H363617-TSO-0006-240-066-0001, Rev. A,





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Executive Summary

Eagle Gold has experienced a higher percentage of fines, during early operations, than was expected. The ROM particle size distribution (PSD) is different to what was designed for. As such, the secondary/tertiary finer fraction of material is higher than expected. It has been proposed to install a scalping screen to by-pass fines subsequent to the tertiary crushing circuit and transfer fines directly to the heap leach.

This Scoping Study focusses on by-passing of fines by incorporation of a new intermediate scalping screen. The ultimate aim is to improve the overall efficiency of the Eagle Gold Mine processing and material handling facility, by eliminating unnecessary recycling of fines that are suitable to be transported directly to the heap leach. This study has developed a conceptual design to identify the required equipment and modification to the existing layout and developed an Order-of-Magnitude (OoM) CAPEX/OPEX estimate and timeline to execute the next phase of engineering.

This report does not analyse the impact on gold recovery or leach operation for a P50 of 8.5 mm.

Table ES-1 lists new and modified equipment encompassed within the new fines screening facility.

Table ES-1: Equipment List for the Fines Screening Facility

	Description	Equipment No.	Size (mm)	Capacity (tph)	Comment
1	Conveyor, Tertiary Crushing Feed #1 (existing)	3320-CV-016	1829 x 42906	5648	Extended
2	Head Chute	3320-CH-060			New
3	Conveyor, Tertiary Crushing Stockpile Feed (existing)	3330-CV-019	1829 x 64865	5648	Extended
4	Conveyor, Fines screening Bypass	3330-CV-023	1828 x 15375	5648	New
5	Head Chute	3320-CH-061			New
6	Conveyor, Fines Screening Undersize #1	3330-CV-024	1219 x 35920	1541	New
7	Head Chute	3320-CH-062			New
8	Conveyor, Fines Screening Undersize #2	3330-CV-025	1219 x 38750	1541	New
9	Head Chute	3320-CH-063			New
10	Conveyor, Fines Screening Oversize	3330-CV-026	1219 x 19650	2895	New
11	Head Chute	3320-CH-064			New
12	Conveyor, Fines Screening Undersize Bypass	3330-CV-027	1219 x 88200	1541	New
13	Head Chute	3320-CH-065			New
14	Fines Scalping Screen	3340-SC-005	9080 x 5484 x 6855		New





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	Description	Equipment No.	Size (mm)	Capacity (tph)	Comment
15	Feed Chute	3340-CH-066	1660 x 3800 x 2250		New
16	Undersize Chute	3340-CH-067	8705 x 4300 x 8520		New
17	Oversize Chute	3340-CH-068	3000 x 4350 x 6500		New
18	Dust Collector & Fan	3340-DC-004		6,000 cfm	New
19	Dustmaster mixer system	3340-MX-002	1750 x 2870 x 1170	20	New





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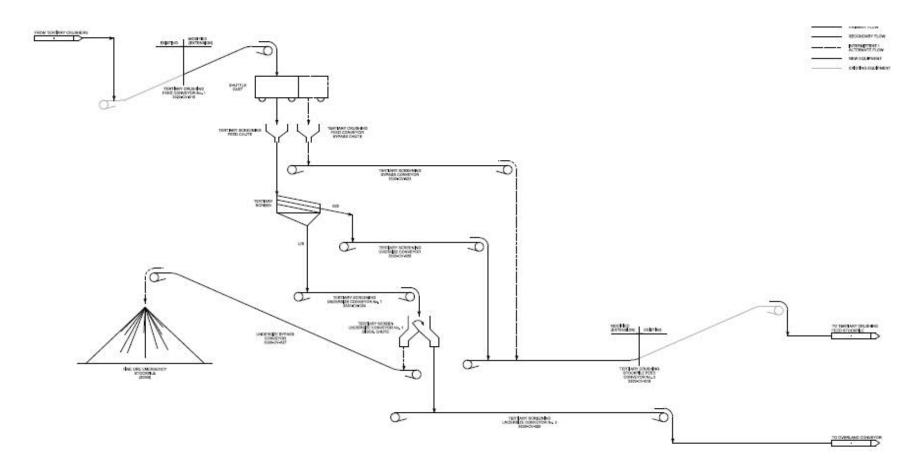


Figure ES-1: Fines Screening Flow Sheet



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Bruno simulations were performed on several scenarios, including with agglomeration. The final selected version is reflected in the above flow sheet and validating the concept.

Agglomeration, while conceptually viable, was eliminated from further analysis due to the requirements for drying the pellets during winter operation and the logistical and cost challenges for supplying the amount of binder required.

The Bruno simulation for the selected circuit design is illustrated in Figure ES-2.

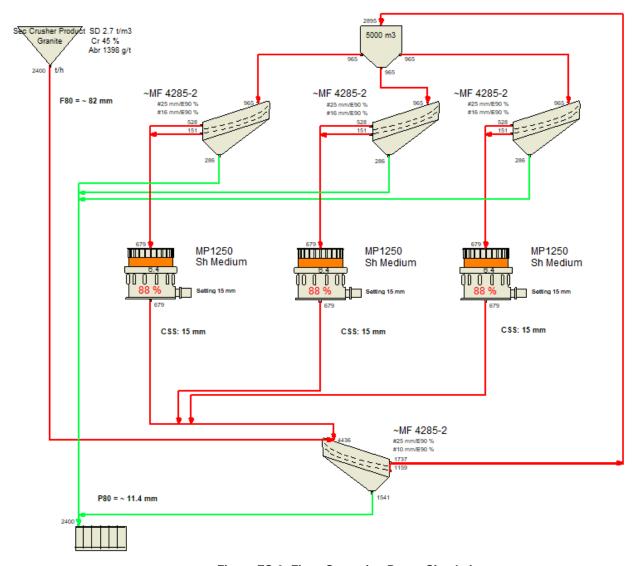


Figure ES-2: Fines Screening Bruno Simulation

CAPEX Order of Magnitude costs were calculated based on the above flow sheet and equipment list and are summarized in Table ES-2.





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Table ES-2: CAPEX for the Fines Screening Facility

Capex Cost Estimate - Summary	
Tonne per Year	14,192,640
Description	CAPEX CAD (m)
Screen	2.14
Conveyors	2.92
Screening Facility including OH Crane & Dust collection	5.85
TOTAL FINES SCREENING COST	10.91
CAPITAL SPARES (5%)	0.05
SUB TOTAL (DIRECT COSTS)	10.96
CONSTRUCTION INDIRECTS (15%)	1.64
ENGINEERING AND CONSTRUCTION (18%)	\$1.97
CONTINGENCY (25%)	\$2.74
TOTAL ESTIMATED CAPITAL COST (CDN\$)	\$17.32

OPEX Order of Magnitude costs were calculated based on the above flow sheet and equipment list and are summarized in Table ES-3.

Table ES-3: OPEX for the Fines Screening Facility

Operating Cost Estimate - Summary	
Tonne per Year	14,192,640
Description	OPEXCAD
Fixed Labour	\$281,590
Variable labour	\$ 0
Maintenance materials	\$37,868
Electrical power costs	\$81,182
Other Utilities (water, sewer, gas)	\$100,000
Indirect Overheads (40% of fixed labour)	\$120,000
Total Fines Screening Operating Costs	\$620,640
Operating Cost per tonne	\$0.04



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1. Introduction

Victoria Gold has recently completed construction and commissioning of its Eagle Gold Mine and the secondary/tertiary particle size distribution (PSD) is higher than was expected and designed for. As such, the finer fraction of material is higher than expected.

Hatch has been engaged to perform a study to evaluate the viability and CAPEX/OPEX for the installation of a scalping screen to scalp fines from the secondary/tertiary screen undersize conveyor and transfer fines directly to the heap leach feed overland conveyor.

This study is based on the particle size distribution data provided by Victoria Gold and shown in Figure 1-1 and clarified in the commentary below.

Please see the Particle size distributions attached for the CV19 samples collected

The first sample was a 1ft belt cut on CV19 with only secondary crusher product on the belt. The sample mass was 62 kg.

The second sample was a 1 ft belt cut on CV19 also but with Tertiary 2 and 3 running as well as secondary product. This sample mass was 115 kg.

The <1 Inch material in each sample was split and sieved 4 times per sample.

The particle size of the >1 inch rocks from each sample was calculated from the WipFrag software since we do not have equipment to split and test that coarse of rock. The over and undersize distributions were added together to generate the distributions.

Hatch used these distributions and the throughputs at the time of sampling to determine the size distributions from the Tertiary crushers and calculate recirculating loads in the circuit and select the most suitable screen and conveyors.





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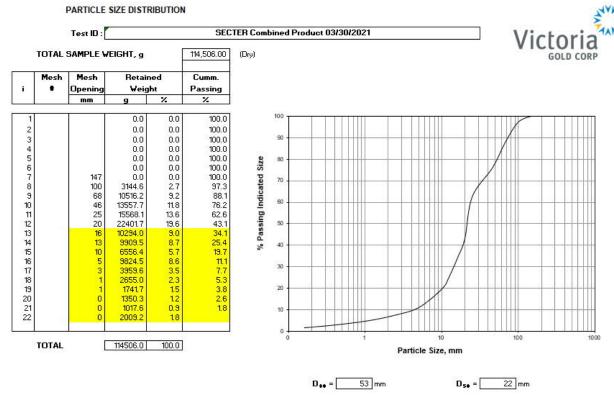


Figure 1-1: Particle Size Distribution Data provided by Victoria Gold



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2. **Fines Screening Conceptual Layout Development**

2.1 **Layout Development**

The desirability of incorporating the scalping of fines after the secondary/tertiary screen circuit was identified in the previous Technical Limits Review performed by Hatch which also looked at potential locations for this facility. The chosen location and layout allows for the construction of the screening facility without interrupting the operations. This layout only requires tie-in to tertiary crushing feed conveyor 3320-CV-016 and tertiary crushing stockpile feed conveyor 3330-CV-019. These conveyors are both extended. Tie-in for 3320-CV-016 is at the head pulley and drive, which is relocated to the screening facility. The tail pulley of CV-019 is relocated to the new tail position. Sections of new belting will be spliced in to complete the tie-in. It is anticipated that a 2 week shut down will be required to make this tie-in.

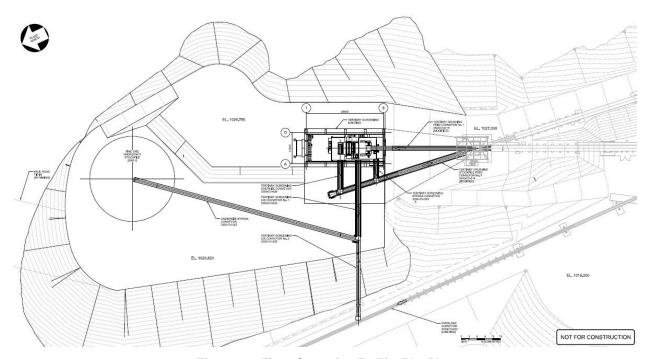


Figure 2-1: Fines Screening Facility Plot Plan

The facility is illustrated in the 3D image in Figure 2-2.





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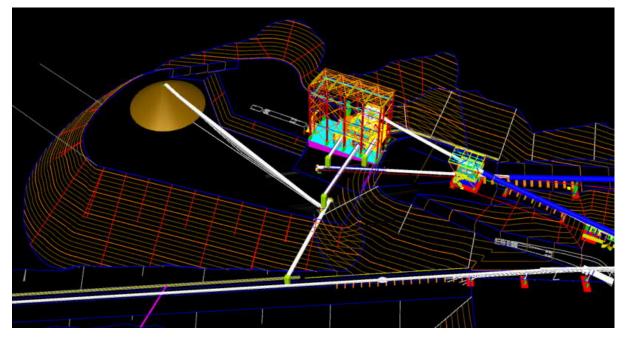


Figure 2-2: Fines Screening Facility 3D Image

2.2 Screening Facility Design

The selected layout and equipment selection is based on the Bruno simulation and to align with existing plant equipment, as they maybe suitable and for rationalization of spares. The screen selected is a Mesto MF-4285-2 double deck multi-slope (banana) screen, identical to the current tertiary screens. Similarly the conveyor components, idlers, belting and drives were selected to duplicate the current conveyors. The drives for the new conveyors associated with the screening facility of necessity are unique.



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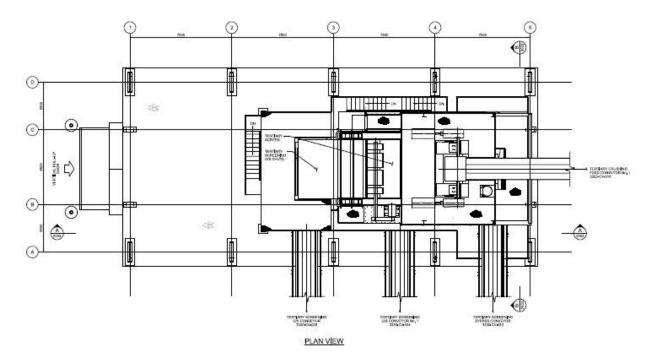
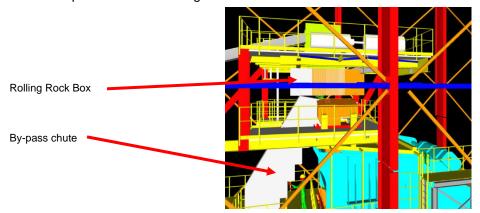


Figure 2-3: Fines Screening Plan at Feed to Screen

To facilitate maintenance of the screen, deck replacements etc., the feed conveyor head chute incorporates a bypass capability utilizing a rolling rock box to direct material to either the screen or the bypass chute to allow material to be sent directly to the fine ore stockpile as per the current arrangement.

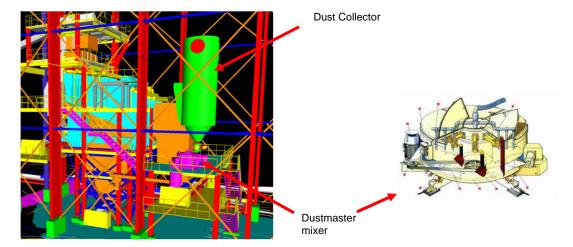


A 6,000 cfm dust collector with attendant fan & ducting provides dust collection from the various transfer points and chutes. Dust from the collector hopper is discharged into a Dustmaster mixer system which agglomerates the dust prior to discharging onto the fines transfer conveyor and thence out to the leach pad. This system was chosen to preclude the loss of the dust due to wind as may occur with dry fines in the subsequent conveyor transfer points.





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A 10/25 tonne overhead crane is provided to allow for screen maintenance. This crane will also serve the head end drive components for conveyor 3320-CV-016 as well as for chute liner replacement.

2.3 Process Flow Description

The fines scalping screen receives the secondary screen undersize and secondary crusher product plus the tertiary crusher product at 4,436 tph via the extended conveyor 3320-CV-016. The fines scalping double deck screen has a final cut size of 10mm and a calculated P80 of 12mm. The screen oversize of 2,895 tph reports to the transfer conveyor 3330-CV-026 which discharges onto the extended tail of the existing conveyor 3330-CV-019 for transport to the existing fine ore stockpile. For bypassing the screen the rolling rock box directs material onto bypass conveyor 3330-CV-023 which transfers onto conveyor 3330-CV-019. Fines scalping Screen undersize of 1,541 tph reports to the undersize conveyor number 1, 3330-CV-024. The material is transferred either to undersize transfer conveyor number 2, 3330-CV-025 and thence to the leach pad feed overland conveyor 3330-CV-022, or to the undersize bypass conveyor 3330-CV-027 and onto the 5,000 tonne fine ore emergency stockpile. The existing tertiary screen undersize of 858 tph also reports to the overland conveyor via conveyor 3330-CV-017. Total overland conveyor throughput of 2,400 tph reports to the leach pad. The overland conveyor will not need any power increase as the calculated throughput from the Overland Conveyor Company dynamic analysis indicates the current capacity is 2579 t/h.

The flow sheet of fines screening is presented in Appendix D.

Equipment sizes, throughput rates and installed and operating power are listed in Table 2-1.





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Table 2-1: Equipment Design Rate and Loading

Equipment # Description		Through	put (t/h)	Power (hp)		
Equipment #	Description	Nominal	Design	Installed	Operating	
3320-CV-016	Tertiary Crushing Feed Conveyor (1829 belt width)	4707	5648	900	430	
3320-CV-019	Tertiary Stockpile Feed Conveyor (1829 belt width)	4707	5648	900	445	
3340-SC-005	Tertiary Fines Scalping Screen (4200 x 8500 2 deck)	4472	4436	150	N/A	
3330-CV-023	Tertiary Screening By-pass conveyor (1829 belt width)	4436	5648	90	61	
3330-CV-024	Tertiary Screening Undersize Conveyor 1 (1219 belt width)	1541	1925	30	13	
3330-CV-025	Tertiary Screening Undersize Conveyor 2 (1219 belt width)	1541	1925	55	40	
3330-CV-026	Tertiary Screening Oversize Conveyor 2 (1219 belt width)	2895	3320	55	30	
3330-CV-027	Tertiary Screening Undersize Bypass Conveyor 1 (1219 belt width)	1541	1925	110	91	



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3. Capital Cost Estimate

3.1 Basis of Estimate

- Inclusions:
 - Direct cost estimate for equipment and bulks + 15% growth.
 - Indirect: 15% of direct costs
 - EPCM, Construction indirects, Spares, Commissioning, Freight
 - Contingency: 25% of direct & indirect costs.
- Exclusions:
 - Site works and site services.
 - Piping work.
 - Taxes and Insurance.
 - Future cost escalation.
 - Project Benchmarking
 - Victoria Gold Truck shop.

3.2 Estimate Details

Itemized pricing is based on the following;

- The screen is identical to the current tertiary screens being a double deck Metso MF 4285-2 and for which budget pricing was solicited from Metso.
- Conveyor costs were estimated using an in-house Hatch conveyor estimating program
 that is driven by data base costs for individual components. Drive sizes (horsepower) and
 component selection is derived from conveyor calculations performed in Sidewinder
 software.
- Structural steel quantities were generated by the tool available in the 3D modeling software utilized to generate the models and provides an MTO listing steel in 4 classes; light, medium, heavy & extra heavy for which current truck shop construction unit rates are used.
- 4. Civil earth works quantities are estimated from a 3D civil model and for which unit rates applied for current the truck shop construction are used.





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4. Conclusion and Way Forward

Installing a fines scalping screen between the secondary crusher and screen and the tertiary crusher product conveyor and the fine ore stockpile feed conveyor will result in a potential increase in throughput of the secondary/tertiary crushing and screening system to 2,400 tph and the resultant feed to the leach pad. There are no Technical Limits to prevent the system from achieving the design throughput.

The conceptual layout as developed, allows for the construction of the fines scalping facility complete with all new conveyors, without interruption of the current operation. Conceptually conveyors 3320-CV-016 & 3330-CV-019 can have the required extensions constructed without affecting the operation. These conveyors would have their head pulley & drive and the tail pulley, respectively, moved during final tie-in and immediately prior to the system commissioning. The screening facility equipment can all be pre-commissioned prior to tie-in minimizing the impact to operations.

It is recommended to proceed with detail engineering and procurement of equipment to enable construction starting Q2 of 2022.



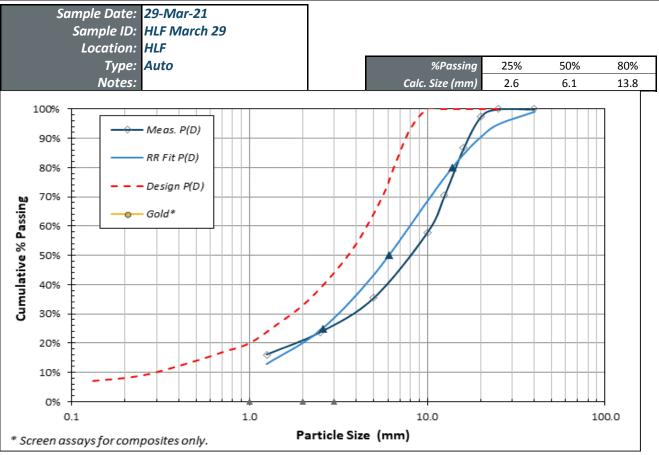
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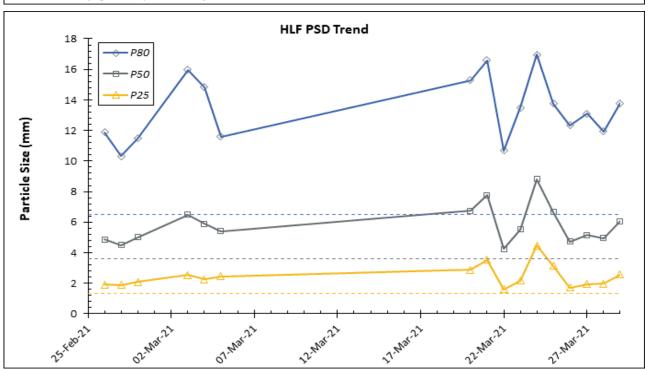
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Appendix A Particle Size Distribution Data

Provided by Victoria Gold

Victoria Gold Eagle Mine HLF PSD Report





Victoria GOLD CORP CV19 Belt Cuts PARTICLE SIZE DISTRIBUTION Project SECTER Combined Product 03/30/2021 Sample ID: Date / Time: 31-Mar-21 Test ID: SECTER Combined Product 03/30/2021 Operator : Secondary Product @ 1400tph TOTAL SAMPLE WEIGHT, g 114,506.00 Notes: (Dry) Tertiary 2 Feed @ 1659 tph Tertiary 3 Feed @ 925 tph Mesh Mesh Retained Cumm. Tert 2 to CV17 @ 454 tph Weight Opening Passing %____ % Tert 3 to CV17 @ 435 tph mm CV17 total 889 tph 0.0 0.0 100.0 CV19 total 3095 tph 0.0 0.0 100.0 0.0 0.0 100.0 0.0 0.0 100.0 0.0 0.0 100.0 80 0.0 100.0 0.0 147 0.0 0.0 100.0 % Passing Indicated 70 100 3144.6 2.7 97.3 68 10516.2 9.2 88.1 60 10 46 13557.7 76.2 11.8 11 25 13.6 62.6 15568.1 43.1 34.1 25.4 19.7 12 13 20 22401.7 19.6 50 10294.0 9.0 14 13 8.7 9909.5 40 15 6556.4 5.7 8.6 3.5 2.3 1.5 1.2 16 9824.5 11.1 30 17 3959.6 18 5.3 3.8 2655.0 20 19 1741.7 20 1350.3 2.6 21 1017.6 0.9 22 2009.2 114506.0 100.0 TOTAL Particle Size, mm D₈₀ = 53 mm D₅₀ = 22 mm Notes:

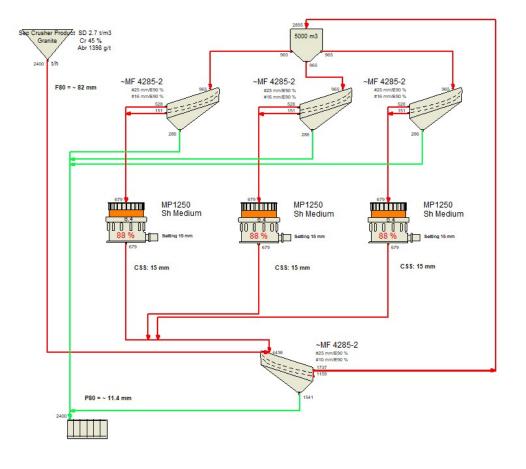


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Appendix B Bruno Simulation

Bruno Simulation – Fines Scalping A Scenario 2



- Throughput increased to 2,400 t/h
- Addition of fines scalping screen with a cut size of 10 mm.
 - P80 of approx. 12 mm.
- Single screen unit (MF 4285-2) may be required to sustain the additional Circ. Load.
- The tonnage sent to the tertiary screens would be reduced in comparison to the base case.
- Tertiary Crushing Op. Conditions:
 - Tertiary Crusher CSS: 15 mm
 - Screen Top Deck Aperture: 25 mm
 - Screen Bottom Deck Aperture: 16 mm

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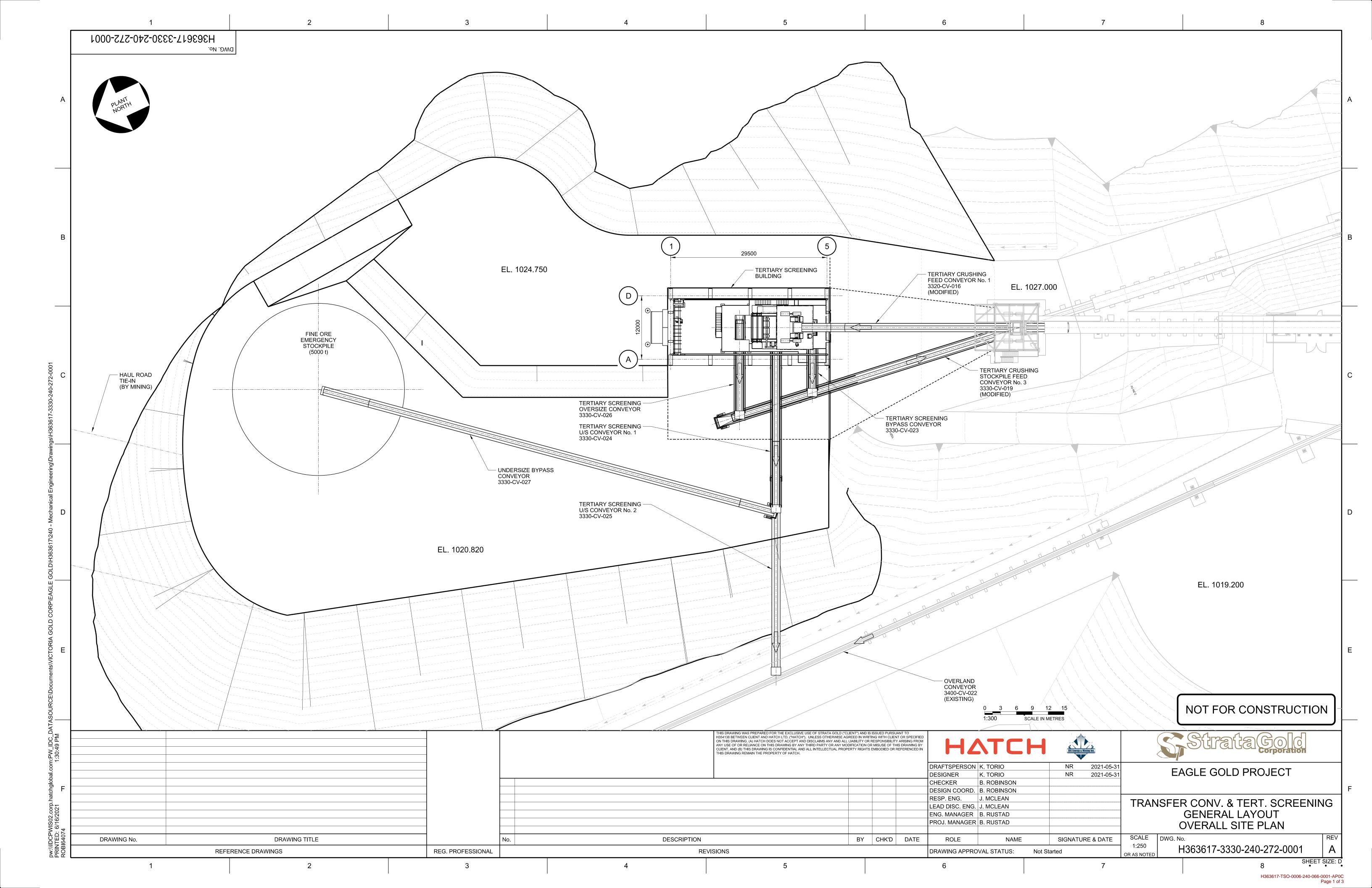


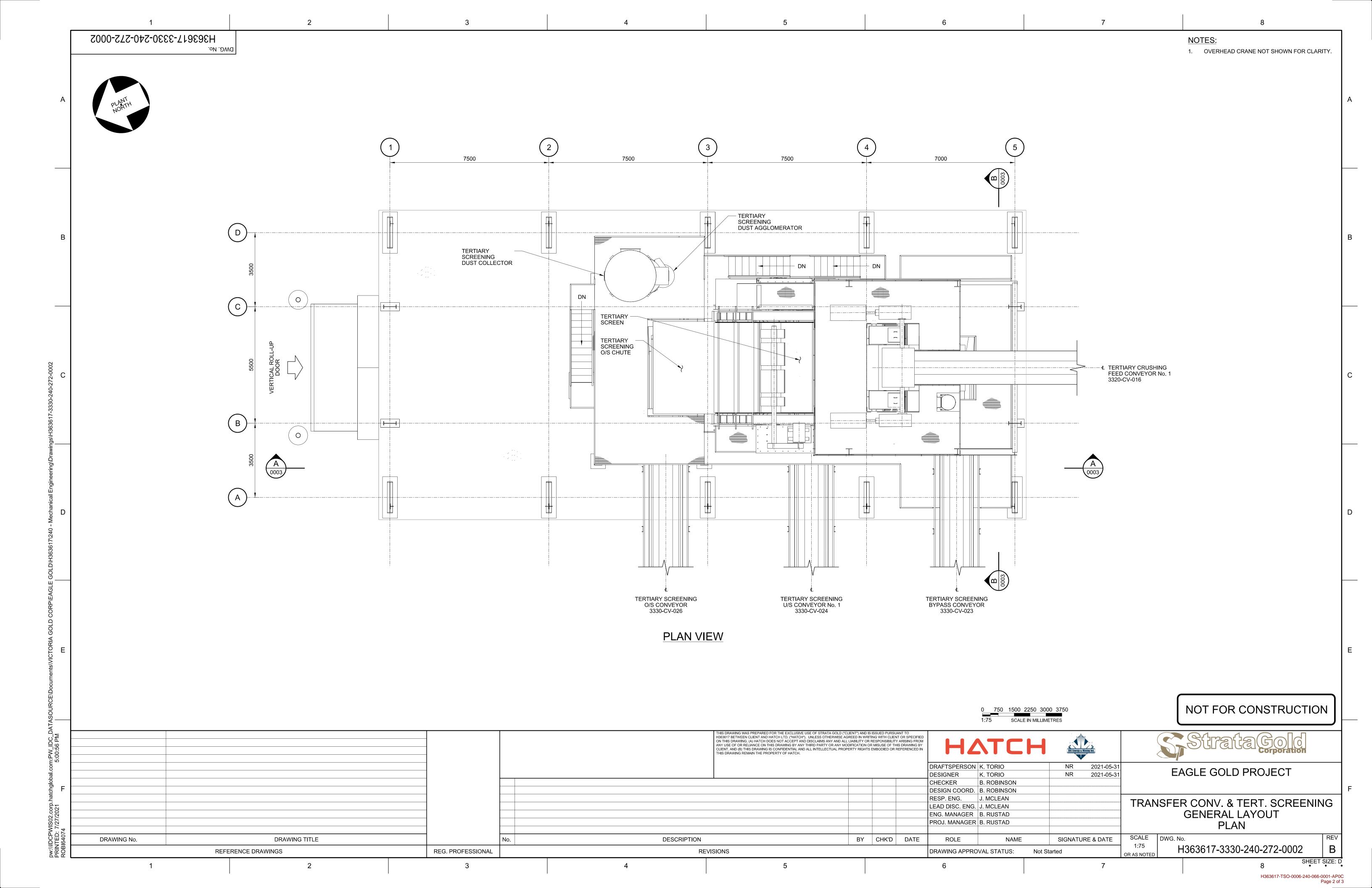


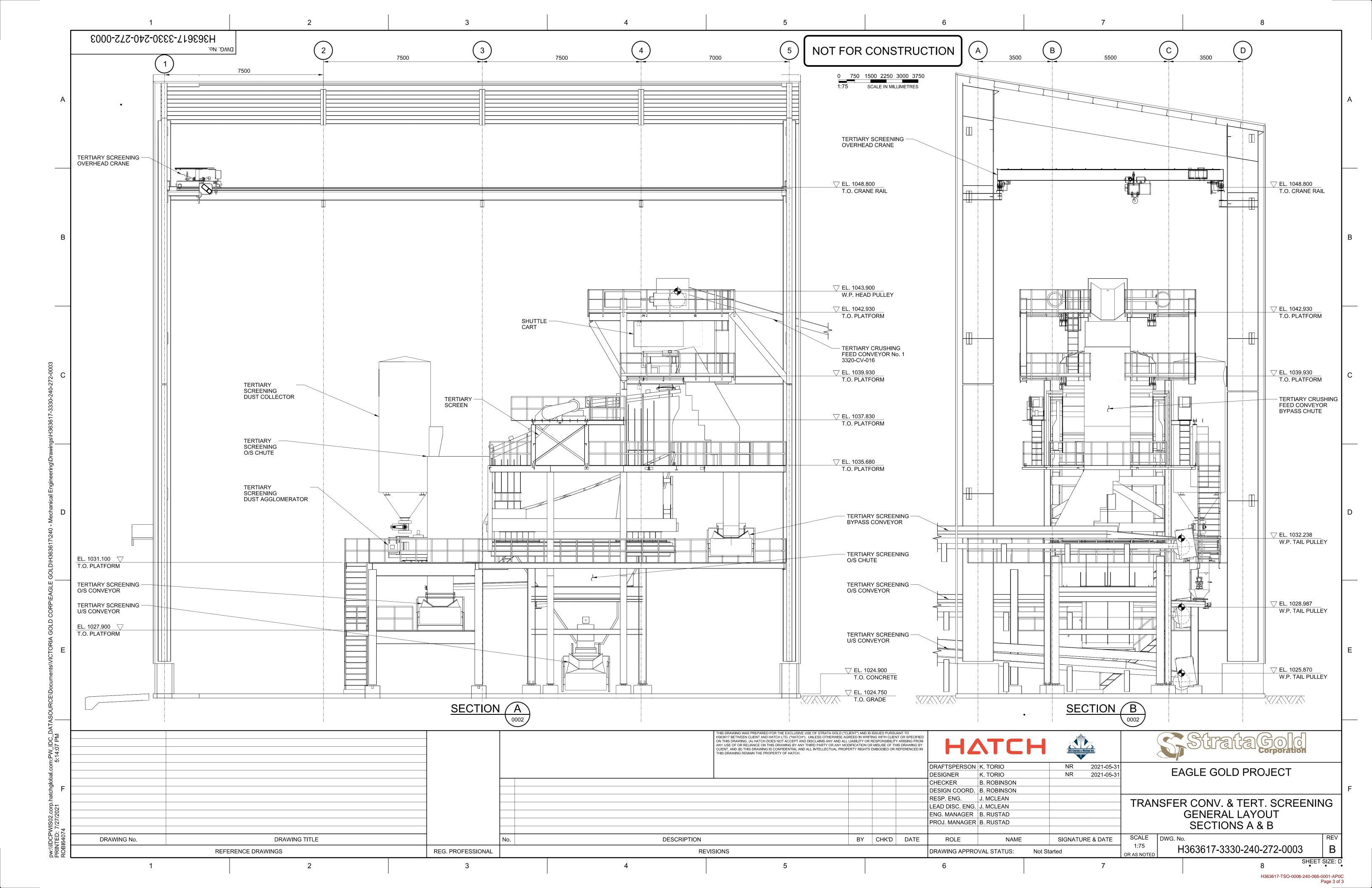
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Appendix C Screening Facility Layout Drawings





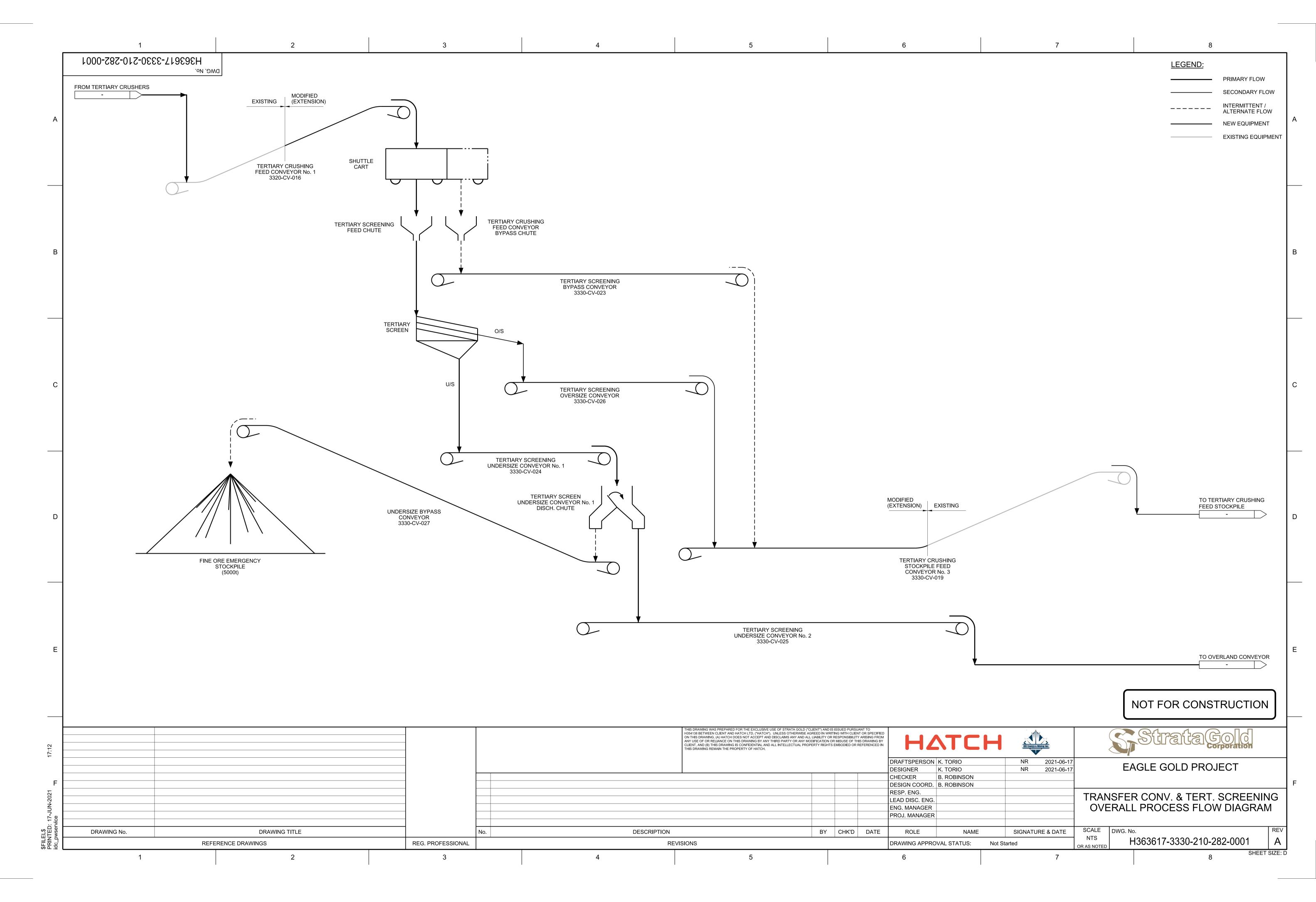




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Appendix D Process Flow Diagram and Updated Mass Balance





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Appendix E CAPEX / OPEX Details

PROJECT NAME: PROJECT NUMBER: DATE:

DESIGNER:

Capex Cost Estimate - Summary

Tonne per Year	14,192,640 CAPEX CAD
Description	(m)
Screen	2.14
Conveyors	2.92
Screening Facility including OH Crane & Dust collection	5.85
TOTAL FINES SCREENING COST	10.91
CAPITAL SPARES (5%)	0.05
SUB TOTAL (DIRECT COSTS)	10.96
CONSTRUCTION INDIRECTS (15%)	1.64
ENGINEERING AND CONSTRUCTION (18%)	\$1.97
CONTINGENCY (25%)	\$2.74
TOTAL ESTIMATED CAPITAL COST (CDN\$)	\$17.32

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8/3/2021

M. Haapalainen

Operating Cost Estimate - Summary

Tonne per Year	14,192,640
Description	OPEXCAD
Fixed Labour	\$281,590
Variable labour	\$0
Maintenance materials	\$37,868
Electrical power costs	\$81,182
Other Utilities (water, sewer, gas)	\$100,000
Indirect Overheads (40% of fixed labour)	\$120,000
Total Fines Screening Operating Costs	\$620,640
Operating Cost per tonne	\$0.04

PROJECT NAME: PROJECT NUMBER:

Eagle Gold Fines Screening Study H363617/240/0201

DATE:

8/3/2021

DESIGNER:

M. Haapalainen

ESTIMATE OF CAPITAL COST CONVEYOR NUMBER:

3320-CV-016

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
Civil/Structural							
Excavation and Grading (62m x 6m wide x 1m)	372	m ³	35	13,000	N/A	4,000	17,000
Mechanical							
72" BW existing conveyor head structure, extended	1	ea	349,592	350,000	4,000	70,000	424,000
Head pulley & drive moved							
additional belt spliced in							
Costing based on ENA BMH estimating							
spread sheet							
Fire Protection (Ansul LVS)	1	ea	5,250	5,000	N/A	INCL.	5,000
Electrical							·
Electrical and Controls	670	kW	250	168,000	N/A	INCL.	168,000
Lighting	62	m	250	16,000	N/A	INCL.	16,000
TOTAL CONVEYOR				539,000			613,000
CAPITAL SPARES (5%)							31,000
SUB TOTAL (DIRECT COSTS)							644,000
CONSTRUCTION INDIRECTS (15%)							97,000
ENGINEERING AND CONSTRUCTION (18%)							116,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							857,000

PROJECT NAME:
PROJECT NUMBER:
DATE:
DESIGNER:

Eagle Gold Fines Screening Study H363617/240/0201

8/3/2021

M. Haapalainen

ESTIMATE OF CAPITAL COST CONVEYOR NUMBER:

3330-CV-019

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
DESCRIPTION	QII	ONT	ONIT COST	WATERIAL	JOB GITE	INOTALLATION	TOTAL COST
Civil/Structural							
Excavation and Grading (65m x 6m wide x 1m)	390	m ³	35	14,000	N/A	4,000	18,000
Mechanical							
72" BW conveyor, tail extended ground mounted	1	ea	349,592	350,000	4,000	70,000	424,000
modules on concrete sleepers, pulley assembly							
moved & additional belt spliced in.							
Costing based on ENA BMH estimating							
spread sheet							
Fire Protection (Ansul LVS)	1	ea	5,250	5,000	N/A	INCL.	5,000
Electrical							
Electrical and Controls	670	kW	250	168,000	N/A	INCL.	168,000
Lighting	65	m	250	16,000	N/A	INCL.	16,000
TOTAL CONVEYOR				539,000			613,000
CAPITAL SPARES (5%)							31,000
SUB TOTAL (DIRECT COSTS)							644,000
CONSTRUCTION INDIRECTS (15%)							97,000
ENGINEERING AND CONSTRUCTION (18%)							116,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							857,000

PROJECT NAME:	Eagle Gold Fines Screening Study
PROJECT NUMBER:	H363617/240/0201
DATE:	8/3/2021

DATE:

DESIGNER: M. Haapalainen **ESTIMATE OF CAPITAL COST**

CONVEYOR NUMBER: 3330-CV-023

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
DESCRIPTION	QII	ONIT	UNIT COST	MATERIAL	JOB OILE	INGTALLATION	TOTAL COST
Civil/Structural							
Excavation and Grading (15m x 6m wide x 1m)	90	m ³	35	3,000	N/A	1,000	4,000
Mechanical Mechanical							
48" BW conveyor, elevated truss mounted	1	ea	235,637	236,000	2,000	35,000	273,000
90 kW drives, horizontal tail take-up			,	•	,		
Costing based on ENA BMH estimating							
spread sheet							
Fire Protection (Ansul LVS)	1	ea	5,250	5,000	N/A	INCL.	5,000
Electrical			,	,			,
Electrical and Controls	90	kW	250	23,000	N/A	INCL.	23,000
Lighting	15	m	250	4,000	N/A	INCL.	4,000
TOTAL CONVEYOR				268,000			305,000
CAPITAL SPARES (5%)							15,000
SUB TOTAL (DIRECT COSTS)							320,000
CONSTRUCTION INDIRECTS (15%)							48,000
ENGINEERING AND CONSTRUCTION (18%)							58,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							426,000

PROJECT NAME: Eagle Gold Fines Screening Study H363617/240/0201 **PROJECT NUMBER: DATE:** 8/3/2021

DESIGNER: M. Haapalainen

ESTIMATE OF CAPITAL COST 3330-CV-024 **CONVEYOR NUMBER:**

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
Civil/Structural							
Excavation and Grading (36m x 6m wide x 1m)	216	m ³	35	8,000	N/A	2,000	10,000
Mechanical							
48" BW conveyor, elevated truss mounted 30 kW drives, horizontal tail take-up	1	ea	248,766	249,000	2,000	50,000	301,000
Costing based on ENA BMH estimating spread sheet							
Fire Protection (Ansul LVS)	1	ea	5,250	5,000	N/A	INCL.	5,000
Electrical							
Electrical and Controls	30	kW	250	8,000	N/A	INCL.	8,000
Lighting	36	m	250	9,000	N/A	INCL.	9,000
TOTAL CONVEYOR				271,000			323,000
CAPITAL SPARES (5%)							16,000
SUB TOTAL (DIRECT COSTS)							339,000
CONSTRUCTION INDIRECTS (15%)							51,000
ENGINEERING AND CONSTRUCTION (18%)							61,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							451,000

PROJECT NAME:	Eagle Gold Fines Screening Study
PROJECT NUMBER:	H363617/240/0201
DATE.	0/2/2021

DATE: 8/3/2021

DESIGNER: M. Haapalainen

ESTIMATE OF CAPITAL COST CONVEYOR NUMBER: 3330-CV-025

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
		-					
Civil/Structural							
Excavation and Grading (39m x 6m wide x 1m)	234	m ³	35	8,000	N/A	2,000	10,000
Mechanical							
48" BW conveyor, elevated truss mounted	1	ea	224,474	224,000	2,000	45,000	271,000
55 kW drives, horizontal tail take-up	'	ca	221,171	221,000	2,000	10,000	27 1,000
Costing based on ENA BMH estimating							
spread sheet							
Fire Protection (Ansul LVS)	1	ea	5,250	5,000	N/A	INCL.	5,000
Electrical			,	,			,
Electrical and Controls	55	kW	250	14,000	N/A	INCL.	14,000
Lighting	39	m	250	10,000	N/A	INCL.	10,000
TOTAL CONVEYOR				253,000			300,000
CAPITAL SPARES (5%)							15,000
SUB TOTAL (DIRECT COSTS)							315,000
CONSTRUCTION INDIRECTS (15%)							47,000
ENGINEERING AND CONSTRUCTION (18%)							57,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							419,000

PROJECT NAME: PROJECT NUMBER:

Eagle Gold Fines Screening Study H363617/240/0201

DATE:

8/3/2021

DESIGNER:

M. Haapalainen

ESTIMATE OF CAPITAL COST CONVEYOR NUMBER:

3330-CV-026

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
DESCRIPTION	Q I I	ONT	01411 0031	MATERIAL	TOD CITE	INGTALLATION	TOTAL COST
Civil/Structural							
Excavation and Grading (20m x 6m wide x 1m)	120	m ³	35	4,000	N/A	1,000	5,000
Mechanical							
48" BW conveyor, elevated truss mounted	1	ea	184,649	185,000	2,000	37,000	224,000
55 kW drives, horizontal tail take-up							
Costing based on ENA BMH estimating							
spread sheet							
Fire Protection (Ansul LVS)	1	ea	5,250	5,000	N/A	INCL.	5,000
Electrical			,	,			,
Electrical and Controls	55	kW	250	14,000	N/A	INCL.	14,000
Lighting	20	m	250	5,000	N/A	INCL.	5,000
TOTAL CONVEYOR				209,000			248,000
CAPITAL SPARES (5%)							12,000
SUB TOTAL (DIRECT COSTS)							260,000
CONSTRUCTION INDIRECTS (15%)							39,000
ENGINEERING AND CONSTRUCTION (18%)							47,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							346,000

PROJECT NAME: PROJECT NUMBER:

Eagle Gold Fines Screening Study H363617/240/0201 8/3/2021

DATE: DESIGNER:

M. Haapalainen

ESTIMATE OF CAPITAL COST CONVEYOR NUMBER:

3330-CV-027

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
		21111					
Civil/Structural		,,					
Excavation and Grading (90m x 6m wide x 1m)	540	m ³	35	19,000	N/A	6,000	25,000
Mechanical							
48" BW conveyor, elevated truss mounted & 40m of	1	ea	380,588	381,000	4,000	76,000	461,000
Ground Modules, horizontal tail take-up			,	,	,		,
110 kW drives, horizontal tail take-up							
Costing based on ENA BMH estimating							
spread sheet							
Fire Protection (Ansul LVS)	1	ea	5,250	5,000	N/A	INCL.	5,000
Electrical			0,200	0,000	1071		0,000
Electrical and Controls	110	kW	250	28,000	N/A	INCL.	28,000
Lighting	90	m	250	23,000	N/A	INCL.	23,000
TOTAL CONVEYOR				437,000			517,000
CAPITAL SPARES (5%)							26,000
SUB TOTAL (DIRECT COSTS)							543,000
CONSTRUCTION INDIRECTS (15%)							81,000
ENGINEERING AND CONSTRUCTION (18%)							98,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							722,000

PROJECT NAME:
PROJECT NUMBER:
DATE:
DESIGNER:

Eagle Gold Fines Screening Study H363617/240/0201

8/3/2021

M. Haapalainen

ESTIMATE OF CAPITAL COST EQUIPMENT NUMBER:

3340-SC-005

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
Civil/Structural							
Foundation (90m x 6m wide x 1m)	540	m ³	35	19,000	N/A	6,000	25,000
Screen Metso MF4.2 x 8.5 9080 x 5484 x 6855	1	ea	1,089,814	1,090,000	11,000	218,000	1,319,000
Costing based on Metso Quotation, quoted in			882,167				
USD & converted to CAD exchange rate used =	1.2353824						
Feed Chute	6722	kg	12	81,000	N/A	INCL.	81,000
Undersize Chute	35517	kg	12	426,000	N/A	INCL.	426,000
Oversize Chute	23722	kg	12	285,000	N/A	INCL.	285,000
Electrical							
Electrical and Controls	110	kW	250	28,000	N/A	INCL.	28,000
Lighting	12	m	250	3,000	N/A	INCL.	3,000
TOTAL SCREEN				1,913,000			2,142,000
CAPITAL SPARES (5%)							107,000
OUR TOTAL (PIREOT COOTS)							0.040.000
SUB TOTAL (DIRECT COSTS) CONSTRUCTION INDIRECTS (15%)							2,249,000 337,000
ENGINEERING AND CONSTRUCTION (18%)							405,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							2,991,000

PROJECT	NAME:
PROJECT	NUMBER:

DATE: DESIGNER: 8/3/2021 M. Haapalainen

ESTIMATE OF CAPITAL COST FACILITY NUMBER:

3340-XX-00X

H363617/240/0201

Eagle Gold Fines Screening Study

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL MATERIAL	FREIGHT TO JOB SITE	ERECTION AND INSTALLATION	TOTAL COST
Civil/Structural							
Excavation, 32.5m x 152m x 4m	210	m ³	15	3,000	N/A	1,000	4,000
Structural fill, 29.5m x 12m x 4m	1,416	m ³	30	42,000	N/A	13,000	55,000
Screen Foundation (12m x 20m x 4m)	960	m ³	2,300	2,208,000	N/A	662,000	2,870,000
Buidling Foundations	354	m ³	2,300	814,000	N/A	244,000	1,058,000
Floor Slab	177	m ³	2,300	407,000	N/A	122,000	529,000
Building Steel			-				
 Light	4	t	8,030	31,000	-	6,000	37,000
Medium	27	t	7,480	199,000	2,000	40,000	241,000
Heavy	20	t	5,510	113,000	1,000	23,000	137,000
Extra Heavy	11	t	4,630	50,000	1,000	10,000	61,000
		1,416					
Cladding	2854	m ²	120	342,000	N/A	INCL.	342,000
Bag House & Fan (Donaldson Torit)	1	ea	158,100	158,000	N/A	INCL.	158,000
Ducting work	1	allowance	60,000	60,000	N/A	INCL.	60,000
10/25 tonne OH crane	1	ea	178,850	179,000	N/A	INCL.	179,000
Electrical		_					
Electrical and Controls	110	kW	250	28,000	N/A	INCL.	28,000
Lighting	354	m ²	250	89,000	N/A	INCL.	89,000
TOTAL BUILDING				4,723,000			5,848,000
CAPITAL SPARES (5%)							292,000
(2.0)							
SUB TOTAL (DIRECT COSTS)							6,140,000
CONSTRUCTION INDIRECTS (15%)							921,000
ENGINEERING AND CONSTRUCTION (18%)							1,105,000
CONTINGENCY (25%)							-
TOTAL ESTIMATED CAPITAL COST (CDN\$)							8,166,000
, , ,						H262647 T	SO-0006-240-066-

PROJECT NAME: Eagle Gold Fines Screening Study

PROJECT NUMBER: H363617/240/0201

DATE: 8/3/2021
DESIGNER: M. Haapalainen

OPERATING COST DETAIL SHEET

S S Fixed Labour S	Manager Superintendents Support Contract Service	0 0	2,080 2,080	0	\$	76.92	\$	
S S Fixed Labour S	Superintendents Support	0			\$	76.02	\$	
Fixed Labour	Support	0	2,080	_		10.32	Ψ	-
Fixed Labour	- ' '			0	\$	65.38	\$	-
Fixed Labour	Contract Service	^	2,080	0	\$	30.77	\$	_
		0	2,080	0	\$	30.77	\$	-
	Supervision	0	2,080	0	\$	65.38	\$	-
(Crusher Operator	0	2,080	0	\$	53.85	\$	-
	Conveyor Operater	0	2,080	0	\$	53.85	\$	_
	Stacking Operator	0	2,080	0	\$	53.85	\$	-
N	Maintenance	2	2,080	4,160	\$	67.69	\$	281,590
Total Fixed L	abour Costs						\$	281,590
15,206,400 T	onne per Year							
		Product Handled						
Variable O&N	/I Labour Costs	(MT)	Hours / Mt	total hours	Ra	te (\$/hr)		OPEX
Operations								
(Crusher to stacking	15.0	0	0	\$	53.85		\$0
	Conveying to stacking	15.0	0	0	\$	53.85		\$0
	Stacking	15.0	0	0	\$	53.85		\$0
1	1.5 x Shift Premium		at 35% of total ting time)	0	\$	53.85		\$0
	2.0 x Shift Premium		at 25% of total ting time)	0	\$53.85			\$0
Maintenance								
	5% of fixed labour	4.0	208	0	\$	60.00		\$0

^{* (1%}struct + 2%mech&elect + 1%mech&elect per 1000 hours)

Maintenance Materials & Contract Maint Costs	% of CAPEX	CAPEX (\$M)	total hours	OPEX
Fixed				
Structural	1.0%	\$0.11	n/a	\$ 1,096
Mechanical	5.5%	\$0.60	n/a	\$ 33,165
Electrical	1.5%	\$0.16	n/a	\$ 2,467
Variable (10% per 1000hrs)				
Mechanical	0.5%	\$0.55	416	\$ 1,140
Average Maintenance Materials	and Contra	ctor Costs per	Year	\$ 37,868

15,206,400 Tonne per Year

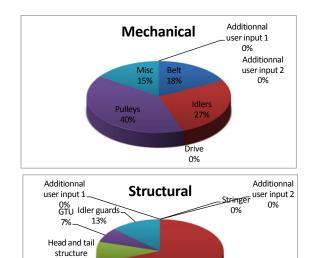
	Installed Power (kW)	Utilization (%)	Operating Hrs	rgy Cost kW-hr)	Total Costs	Electircal s (\$)
Loaded condition	272	70%	4,140	\$ 0.100	\$	78,816
Unloaded (empty belts)	100	20%	1,183	\$ 0.100	\$	2,365
Floatrical Power Costs					¢	81 182

Conveyor no: 16 Estimated by: M.Haapalainen Date: 06.07.21

Specification	Input
Belt Width (in)	72
Drive power (ea)	900
Qty drives	0
Steel cord belts (yes=1,n no=2)	2
Length of stand alone stringer (ft)	0
Length of truss (ft)	140
Qty of truss bents	1
Average height of truss bents	37
Length of opened gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Cladding footage (ft2)	0
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Length of tubular gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Total conveyor length (ft)	140

Global				
Contingency (%)				
Additionnal u			Drive	
input 1	Belt Additionnal yer	Idlers	0%	
	input 2	9%		
dditionnal user Additionnal user input 1 input 2	0%		Pulleys	Ž.
0% Adjustment			13%	
GTU 10%				
Idler guards	_			
5%	Additionnal us	i er Addition	malusar	Misc
	input 1	inpl		5% inger
	0%		- J.	0%
Head and tail — structure				

Components	Automated costs		Overrride	
Mechanicals	Cost	\$/ft	\$/ft or \$	
Belt	\$24,790	\$89		
Idlers	\$38,229	\$273		
Drive	\$0	-		
Pulleys	\$56,367	-		
Misc	\$21,864	-		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Mechanical	\$141,250	\$1,009		
Structural	Cost	\$/ft		
Stringer	\$0	\$161		
Truss	\$112,243	\$802		
Head and tail structure	\$17,500	-		
GTU	\$12,000			
Idler guards	\$21,000	\$150		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Structural	\$162,743	\$1,162		
Others	Cost	%		
Adjustment	\$45,599	15%		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Others	\$45,599	\$326		
Sub-Total	\$349,592	\$2,497	%	
Contingency (%)	\$87,398		25%	
TOTAL	\$436,991	\$ 3,121		



Truss 69%

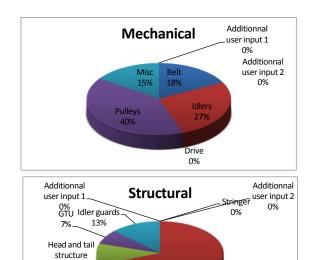
11%

Conveyor no: 19 Estimated by: M.Haapalainen Date: 06.07.21

Specification	Input
Belt Width (in)	72
Drive power (ea)	900
Qty drives	0
Steel cord belts (yes=1,n no=2)	2
Length of stand alone stringer (ft)	0
Length of truss (ft)	140
Qty of truss bents	1
Average height of truss bents	37
Length of opened gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Cladding footage (ft2)	0
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Length of tubular gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Total conveyor length (ft)	140

Global				
Contingency (%)				
Additionnal u			Drive	
input 1	Belt Additionnal yer	Idlers	0%	
	input 2	9%		
dditionnal user Additionnal user input 1 input 2	0%		Pulleys	Ž.
0% Adjustment			13%	
GTU 10%				
Idler guards	_			
5%	Additionnal us	i er Addition	malusar	Misc
	input 1	inpl		5% inger
	0%		- J.	0%
Head and tail — structure				

Components	Automated costs		Overrride	
Mechanicals	Cost	\$/ft	\$/ft or \$	
Belt	\$24,790	\$89		
Idlers	\$38,229	\$273		
Drive	\$0	-		
Pulleys	\$56,367	-		
Misc	\$21,864	-		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Mechanical	\$141,250	\$1,009		
Structural	Cost	\$/ft		
Stringer	\$0	\$161		
Truss	\$112,243	\$802		
Head and tail structure	\$17,500	-		
GTU	\$12,000			
Idler guards	\$21,000	\$150		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Structural	\$162,743	\$1,162		
Others	Cost	%		
Adjustment	\$45,599	15%		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Others	\$45,599	\$326		
Sub-Total	\$349,592	\$2,497	%	
Contingency (%)	\$87,398		25%	
TOTAL	\$436,991	\$ 3,121		



Truss

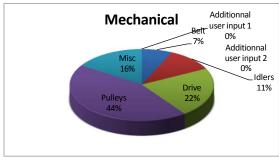
11%

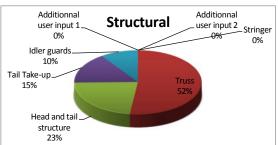
Conveyor no: 23 Estimated by: M.Haapalainen Date: 06.07.21

Specification	Input
Belt Width (in)	72
Drive power (ea)	120
Qty drives	1
Steel cord belts (yes=1,n no=2)	2
Length of stand alone stringer (ft)	0
Length of truss (ft)	50
Qty of truss bents	3
Average height of truss bents	12
Length of opened gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Cladding footage (ft2)	0
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Length of tubular gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Total conveyor length (ft)	50

Global			
Contingency (%) 20%_	Belt		
Additionna	3%	Idlers 5%	
input:		Jan .	
Additionnal user	inpu <mark>t 2</mark>	Drive 10%	
input 1 input 2 0% Adjystment	0%		
Tail Take-up 10%			illeys .9%
Idler guards		Misc	
3%	Truss 14%	7%	
	1470		
Head and taildelition	nal user Additionnal u	iser - Ctringer	
structure inpu		Stringer 0%	
6% 09	% 0%		

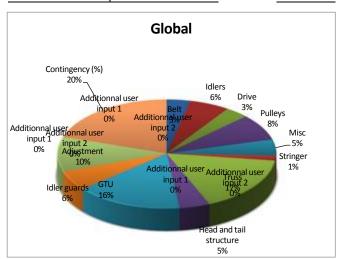
Components	Automated costs		Overrride	
Mechanicals	Cost	\$/ft	\$/ft or \$	
Belt	\$8,854	\$89		
Idlers	\$13,653	\$273		
Drive	\$28,530	-		
Pulleys	\$56,367	-		
Misc	\$20,411	-		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Mechanical	\$127,815	\$2,556		
Structural	Cost	\$/ft		
Stringer	\$0	\$161		
Truss	\$40,087	\$802		
Head and tail structure	\$17,500	-		
Tail Take-up	\$12,000			
Idler guards	\$7,500	\$150		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Structural	\$77,087	\$1,542		
Others	Cost	%		
Adjustment	\$30,735	15%		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Others	\$30,735	\$615		
Sub-Total	\$235,637	\$4,713	%	
Contingency (%)	\$58,909		25%	
TOTAL	\$294,547	\$ 5,891		



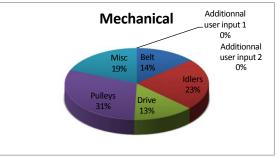


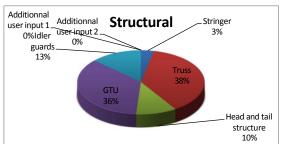
Conveyor no: 24 Estimated by: M.Haapalainen Date: 06.07.21

Specification	Input
Belt Width (in)	48
Drive power (ea)	50
Qty drives	1
Steel cord belts (yes=1,n no=2)	2
Length of stand alone stringer (ft)	40
Length of truss (ft)	80
Qty of truss bents	4
Average height of truss bents	20
Length of opened gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Cladding footage (ft2)	0
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Length of tubular gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Total conveyor length (ft)	120



Components	Automated costs		Overrride
Mechanicals	Cost	\$/ft	\$/ft or \$
Belt	\$10,830	\$45	
Idlers	\$18,670	\$156	
Drive	\$10,807	-	
Pulleys	\$24,430	-	
Misc	\$14,969	-	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Mechanical	\$79,706	\$664	
Structural	Cost	\$/ft	
Stringer	\$4,498	\$112	
Truss	\$51,438	\$643	
Head and tail structure	\$14,000	-	
GTU	\$48,675		
Idler guards	\$18,000	\$150	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Structural	\$136,611	\$1,138	
Others	Cost	%	
Adjustment	\$32,448	15%	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Others	\$32,448	\$270	
Sub-Total	\$248,766	\$2,073	%
Contingency (%)	\$62,191		25%
TOTAL	\$310,957	\$ 2,591	



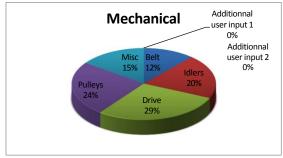


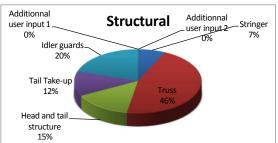
Conveyor no: 26 Estimated by: M.Haapalainen Date: 06.07.21

Specification	Input
Belt Width (in)	48
Drive power (ea)	100
Qty drives	1
Steel cord belts (yes=1,n no=2)	2
Length of stand alone stringer (ft)	60
Length of truss (ft)	68
Qty of truss bents	4
Average height of truss bents	12
Length of opened gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Cladding footage (ft2)	0
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Length of tubular gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Total conveyor length (ft)	128

Global		
Contingency (%) 20% Additionnal user input 1 0% Additionnal user input 2 0% Adjustment 10% Tail Take-up 4% Idler guards 7%	Additionnal user Additionnal user	
Head and tail	0% 0% 2%	
structure 5%		

Components	Automated costs		Overrride
Mechanicals	Cost	\$/ft	\$/ft or \$
Belt	\$11,552	\$45	
Idlers	\$19,915	\$156	
Drive	\$28,530	-	
Pulleys	\$24,430	-	
Misc	\$15,098	-	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Mechanical	\$99,525	\$778	
Structural	Cost	\$/ft	
Stringer	\$6,747	\$112	
Truss	\$43,723	\$643	
Head and tail structure	\$14,000	-	
Tail Take-up	\$12,000		
ldler guards	\$19,200	\$150	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Structural	\$95,670	\$747	
Others	Cost	%	
Adjustment	\$29,279	15%	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Others	\$29,279	\$229	
Sub-Total	\$224,474	\$1,754	%
Contingency (%)	\$56,119		25%
TOTAL	\$280,593	\$ 2,192	



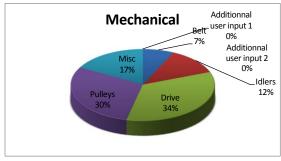


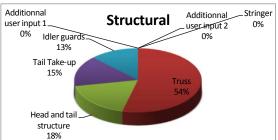
Conveyor no: 26 Estimated by: M.Haapalainen Date: 06.07.21

Specification	Input
Belt Width (in)	48
Drive power (ea)	100
Qty drives	1
Steel cord belts (yes=1,n no=2)	2
Length of stand alone stringer (ft)	0
Length of truss (ft)	65
Qty of truss bents	3
Average height of truss bents	12
Length of opened gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Cladding footage (ft2)	0
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Length of tubular gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Total conveyor length (ft)	65

Global		
Contingency (%) 20% Additionnal user input 1 O% Additionnal user input 1 input 2 O% Adjustment Tail Take-up 10% 5% Idler guards 4%	Additionnal user 12% 12% Pulleys 11% Truss 18% Additionnal user Additionnal user Additionnal user Additionnal user Chicago Conference Chicago Chi	
Head and tail structure 6%	0% 0% 5tringer 6% 0%	

Components	Components Automated costs		Automated costs Overrride	
Mechanicals	Cost	\$/ft	\$/ft or \$	
Belt	\$5,866	\$45		
Idlers	\$10,113	\$156		
Drive	\$28,530	-		
Pulleys	\$24,430	-		
Misc	\$14,081	-		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Mechanical	\$83,021	\$1,277		
Structural	Cost	\$/ft		
Stringer	\$0	\$112		
Truss	\$41,794	\$643		
Head and tail structure	\$14,000	-		
Tail Take-up	\$12,000			
Idler guards	\$9,750	\$150		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Structural	\$77,544	\$1,193		
Others	Cost	%		
Adjustment	\$24,085	15%		
Additionnal user input 1				
Additionnal user input 2				
Sub-total Others	\$24,085	\$371		
Sub-Total	\$184,649	\$2,841	%	
Contingency (%)	\$46,162		25%	
TOTAL	\$230,811	\$ 3,551		





Conveyor no: 27 Estimated by: M.Haapalainen Date: 06.07.21

Specification	Input
Belt Width (in)	48
Drive power (ea)	300
Qty drives	1
Steel cord belts (yes=1,n no=2)	2
Length of stand alone stringer (ft)	0
Length of truss (ft)	140
Qty of truss bents	6
Average height of truss bents	12
Length of opened gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Cladding footage (ft2)	0
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Length of tubular gallery (ft)	0
Add stringers in gallery (yes=1, no=2)	
Insulation footage (ft2)	0
Qty of gallery bents	0
Average height of truss bents	0
Total conveyor length (ft)	140

Global		
Contingency (%) 20% Additionnal user input 1 0% Additionnal user input 1 input 2 0% Adjiystment 10% GTU Idler guak@ 4% Head and te structure 3%	Additionnal user input 2 Drive 17% Truss Pulleys Additionnal user 5% input 1 input 2 0% 3% 0% 0%	

Components	Components Automated costs		Automated costs Overrride
Mechanicals	Cost	\$/ft	\$/ft or \$
Belt	\$12,635	\$45	
Idlers	\$21,782	\$156	
Drive	\$83,115	-	
Pulleys	\$24,430	-	
Misc	\$15,292	-	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Mechanical	\$157,254	\$1,123	
Structural	Cost	\$/ft	
Stringer	\$0	\$112	
Truss	\$90,017	\$643	
Head and tail structure	\$14,000	-	
GTU	\$48,675		
Idler guards	\$21,000	\$150	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Structural	\$173,692	\$1,241	
Others	Cost	%	
Adjustment	\$49,642	15%	
Additionnal user input 1			
Additionnal user input 2			
Sub-total Others	\$49,642	\$355	
Sub-Total	\$380,588	\$2,718	%
Contingency (%)	\$95,147		25%
TOTAL	\$475,734	\$ 3,398	

