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							018 No 2			
				25 CANADIAN FORCES SUPPLY DEPOT (CFSD)						

1. GENERAL NOTES

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1.1 All modifications to be performed for this project (refurbishment of conveyor no 1 and no 2) are to be performed by contractors that have the skills, permits and for all the tasks specified within this document and any other task that may be required to complete the scope of work.

1.2 The contractor shall submit fabrication, electrical, control and installation drawings to the National Defense for approbation before the start of fabrication. All dra

1.3 Summary of the scope of work : 1- Shorten conveyor no 1 and 2, 2- Install new conveyor sections with weighing system, 3- Automation of conveyor no 2, 4- I

- 2. <u>CONVEYOR WEIGHIN SYSTEM, LOCATED AT CONVEYOR ENTRANCE OF CONVEYOR NO 1 AND 2</u> (2.X)
- 2.1 A new weighing conveyor section is to be added to both existing conveyor entrance, allowing to weigh the transport pallet postioned by the lift operator.
- 2.2 a) Both existing conveyors shall be shorten by approximately 45 feet on the pallet entrance end (See sections to be removed on page 2)

b) The liberated space will be used for the new conveyor part allowing the weighin.

- To remove the conveyor section, the driving shaft and associate bearings shaft be removed, the frame is to be cut to length, shaft and bearings are to be rep Structural elements are to be added as required to ensure adequate stiffness and strength of the modified section. The modified elements are to be primed a c)Identified handrail sections are to be removed as directed by the project manager (CFSD). See plan view on page 2.
- 2.3 The conveyor sections to be added are 60 inch long, model Hytrol DC63, three strand drag chain conveyor. Conveyor Speed shall match the existing conveyor Electric power is 575V, 3 ph., 60 hz. The height of the conveyor shall match the existing conveyor (approx. 24 in) and shall be adjustable at installation.
- 2.4 The new conveyor sections shall be anchored to the concrete floor
- 2.5 The new motors are to be connected to the existing electric panel (to be relocated). Two contactors provided by the contractor are to be added to control the m
- 2.6 a) The mechanical stoppers at the entrance and the lateral guides are to be repositioned in accordance with this drawing. b) The mechanical stoppers and guides at the exit of the conveyor are kept at the same position. c) The lateral presence sensors at the entrance are to be relocated. The ones at the exit remain unchanged. d) The lateral guides shall be relocated.
- 2.7 To weigh a pallet positioned by the lift truck operator on the new conveyor, 4 load cells (Anyload 563YHM4 or equivalent) are installed under each leg of the conveyor.
- 2.8 The loadcell will provide feedback to the controller. The total weight of the pallet is shown on the Ricelake 480 display panel, mounted on a post, easily visible

2.9 Should the weight of the pallet exceed 1080 lbs, a signal is sent to the PLC which will prevent the operation of the conveyor. To resume the operations, the over

2.10 Also, whenever the pallet weight exceeds 1080 lbs, a visual signal (amber) will inform the operator that the pallet is overweight. The visual signal can be mour

- 3. <u>ROLLER CHAIN GUIDE</u> (3.X)
- 3.1 To minimize chain wear and reduce noise level during operation, sliding guide plate UHMW (ref. McMaster-Carr 8672K32 or equivalent) shall be added to the

3.2 To secure the UHMW guides. use bolt and nuts or self-tapping screws.

4. ELECTRIC PANEL RELOCATION (4.X)

4.1 The electric panel is to be relocated on the opposite side of the conveyor no 1 and 2. The protection posts shall also be repositioned with the panel. This modif The exact final position will be validated during the works. The panel shall be as close as possible to the conveyor to ensure adequate pedestrian way (see plan vie

- 5. <u>CONVEYOR #2 AUTOMATION</u> (5.X)
- 5.1 Conveyor #2 is to be automated by the contractor with the same logic as conveyor #1. The movement of the pallet shall be initiated automatically when the lift Once the operator removes the pallet from the exit end and leaves the area, the conveyor operation can resume.
- 5.2 To detect the presence of a lift truck at the entrance end of the conveyor, a detector will be installed similarly to conveyor #1, that is on the side of the entrance
- 5.3 To detect the presence of a lift truck at the exit end of the conveyor, a detector will be installed similarly to conveyor #1, that is on the side of the exit stopper.
- 5.4 The above detectors are to be wired to the electric panel to provide feedback to the existing PLC (AllenBradley SLC500)
- 5.5 It is preferred to use the same detector as conveyor #1 (AllenBradley Photoswitch 42MRU-5000)
- 6. <u>DISPLAY PANEL AND BARCODE READER</u> (6.X)

6.1 The contractor shall equip both conveyors with a barcode reader and a large display panel to inform the operator, at the exit end of the conveyor, where to move

6.2 Four (4) laser barcode readers (ref. SICK CLV630 Long Range, Oscillating mirror) are to be installed on the conveyors (1 on each side of each conveyor) These readers will allow the control system to identify the barcode independently of the side of the barcode.

6.3 Final position of the barcode readers are to be confirmed at installation. The barcode readers are to be installed approximately 50 in from the end of the conve The barcode mounting bracket are to be the one proposed by the reader manufacturer (ref. SICK 2046822 or equivalent).

- 6.4 The barcode sticker position is to be confirmed during start-up of the equipement. The height of the barcode shall be adjustable.
- 6.5 Two display panels (ref. ABB CP610 or equivalent), that is one per conveyor, are needed and can be installed in between the exit end of the conveyors. Each The display shall show the first three letters of the localization where the pallet is to be moved. The letters shall be readable from a minimum distance of 12 fee
- 6.6 The programming and integration of the readers and display panels is the responsibility of the contractor. Communication with the PLC is required to ensure the

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onveyor section. Each load	d cell shall have a minimum capacity of	2000 lbs.						
from the operator position	. Each conveyor has its own weigh stati	on and display panel.						
erweight pallet shall be rer	moved from the conveyor.							
nted on the same post as t	he display panel. (Ref. Allen Bradley 85	55BS-S35SL5 or equivalent)						E
existing conveyors to isola	ate he chain from the structure to prever	nt steel to steel contact on the chain returr	n length. (see details shown on page 6)					
fication is to be performed ew on page 2).	by a master electrician to ensure compl	liance with applicable codes.						D
truck leaves the entrance	zone. The conveyor stops automatically	/ when a pallet reaches the exit end.			NON ONLY	and 2-		
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PHOTO No 1 SEE NOTE 5.2

PHOTO No 4 SEE NOTE 2.1 & 2.3

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PHOTO No 2 SEE NOTE 5.2

PHOTO No 3 SEE NOTE 5.5

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