

UNITED STATES OF AMERICA  
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

SECRETARY OF LABOR,	)	
	)	
Complainant	)	
	)	
v.	)	Docket No. 08-1104
	)	
IMPERIAL SUGAR COMPANY;	)	
IMPERIAL-SAVANNAH, L.P.	)	
	)	
Respondents.	)	
<hr/>		

**RESPONDENTS' MOTION FOR PARTIAL SUMMARY JUDGMENT**

Pursuant to 29 C.F.R. § 2200.2(b), Federal Rule of Civil Procedure 56, and other applicable law, Respondents Imperial Sugar Company and Imperial-Savannah, L.P. respectfully move for partial summary judgment. Specifically, Respondents seek summary judgment on the following Citations and Notifications of Penalty underlying Complainant's Complaint: Item 5(b) of Citation 1 and Item 2(a) of Citation 2. There are no genuine factual issues regarding these citation items and Respondents are entitled to judgment as a matter of law. Respondents rely on the accompanying memorandum of law and all evidence of record in support of their Motion.

Pursuant to 29 C.F.R. § 2200.40(a), counsel for Respondents attempted to confer with Complainant's counsel regarding this Motion. As of the time of this filing, Complainant's counsel has not responded to Respondents' counsel's January 26, 2009 message regarding conferral, and Respondent thus presumes that Complainant opposes this Motion.

Respectfully submitted this 27<sup>th</sup> day of January 2009.

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UNITED STATES OF AMERICA  
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

SECRETARY OF LABOR, )  
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 Complainant )  
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 IMPERIAL SUGAR COMPANY; )  
 IMPERIAL-SAVANNAH, L.P. )  
 )  
 Respondents. )  
 \_\_\_\_\_ )

**CERTIFICATE OF SERVICE**

I certify that all parties have consented that all papers required to be served in this action may be served and filed electronically. I further certify that a copy of RESPONDENTS' MOTION FOR PARTIAL SUMMARY JUDGMENT and MEMORANDUM IN SUPPORT were electronically served on January 27, 2009 on the following counsel for Complainant:

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*Secretary of Labor v. Imperial Sugar Company and Imperial-Savannah, L.P.*

OSHRC Docket No. 08-1104

Respondents' Motion for Partial Summary Judgment

Administrative Law Judge Covette Rooney

Attachment 1

Declaration of Dwayne Zeigler

Filed Electronically on January 27, 2009

## DECLARATION OF DWAYNE ZEIGLER

I, Dwayne Zeigler, pursuant to 28 U.S.C. § 1746, hereby affirm that I am over 18 years of age and am competent to make the following Declaration.

1. The facts contained in this Declaration are based upon my personal knowledge, information and belief. The facts set forth in this Declaration are true and correct to the best of knowledge. I am giving this Declaration freely and voluntarily.

2. I am currently employed by Imperial-Savannah, L.P. ("Imperial") at its Port Wentworth, Georgia plant as Senior Manager Construction Engineering.

3. On February 7, 2008, my position was the company's Production Planner. As Production Planner, I was responsible for employees and managers who had responsibility over many aspects of the facility including maintenance of equipment/machinery at the Port Wentworth facility.

4. Attached as **Exhibit A** is a list of the bucket elevator components that existed in the packing house of the Port Wentworth facility as of February 7, 2008. This document is an authentic report generated in the ordinary course of business from the company's maintenance database. **Exhibit A** is the most objective and comprehensive list of equipment specifications that we have for the bucket elevators in the packing house prior to the explosion.

5. As an example, the small package elevator listed as equipment ELEGP301 lists a belt speed of 350 feet per minute ("FPM"). Maintaining a proper belt speed of no more than 300-350 FPM for *all* bucket elevators was absolutely essential to our packing house operations. Granulated sugar simply did not move properly within the bucket elevator system at speeds significantly higher than 350 FPM.

6. Packing house elevators did not operate at speeds at or in excess of 500 FPM. This

high rate of speed would simply not be appropriate for transporting sugar through our system as it was designated and operated prior to February 7, 2008.


7. To my knowledge, none of the bucket elevators listed on **Exhibit A** were designed, installed or intended to operate at linear belt speeds at or above 500 FPM.

8. Attached as **Exhibit B** is a Universal Industries Model C3 Bucket Elevator design specification bulletin located in the company's files and kept in the ordinary course of business. The Model C3 bucket elevator is generally representative of the type of small bucket elevators installed and maintained in the packing house. The specification belt speeds listed for three versions of this elevator are well below 500 FPM.

9. Attached as **Exhibits C-F** are historical belt speed calculations, handwritten notes, correspondence, and design specifications for four separate bucket elevators contained in the packing house prior to February 7, 2007. It is my understanding that all of the handwritten notes and calculations were made at or near the dates listed on the documents. All of these documents were kept and maintained in the ordinary course of our business as records of the company and are true and authentic to the best of my knowledge. The contemporaneous belt speed calculations for all 4 bucket elevators (covering 4 decades respectively) are all below 500 FPM.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 22 day of January 2009.

  
\_\_\_\_\_  
Dwayne Zelgler

# **EXHIBIT A**

<b>Process</b>	ELEF402	4TH FLOOR PRODUCTION ELEV	GEARBOX	TYPE	CHHJS-6185Y-17
	ELEF402	4TH FLOOR PRODUCTION ELEV	GEARBOX	HP	RATED 52.3 AT 1750 RPM
	ELEF402	4TH FLOOR PRODUCTION ELEV	GEARBOX	INRPM	1750 @INPUT RATED HP = 52.3
	ELEF402	4TH FLOOR PRODUCTION ELEV	GEARBOX	OURPM	100
	ELEF402	4TH FLOOR PRODUCTION ELEV	GEARBOX	RATIO	17
	ELEF402	4TH FLOOR PRODUCTION ELEV	MOTOR	HP	25
	ELEF402	4TH FLOOR PRODUCTION ELEV	MOTOR	RPM	1765
	ELEF402	4TH FLOOR PRODUCTION ELEV	SPROCKET	TEETH	DRIVE=24HT
<b>Bulk Sugar</b> elegp401 located on 1st floor of packing house	ELEGP101	ELEVATOR BULK SUGAR (PH)	GEARBOX	HP	52.3
	ELEGP101	ELEVATOR BULK SUGAR (PH)	GEARBOX	INRPM	1800
	ELEGP101	ELEVATOR BULK SUGAR (PH)	GEARBOX	OURPM	100
	ELEGP101	ELEVATOR BULK SUGAR (PH)	GEARBOX	RATIO	17
	ELEGP101	ELEVATOR BULK SUGAR (PH)	MOTOR(M)	HP	20
	ELEGP101	ELEVATOR BULK SUGAR (PH)	MOTOR(M)	RPM	1800
	ELEGP101	ELEVATOR BULK SUGAR (PH)	SPROCKET	TEETH	RC60HT
	ELEGP101	ELEVATOR BULK SUGAR (PH)	SPROCKET	RC	60
<b>Bulk Sugar</b>	ELEGP102	ELEVATOR BULK SUGAR NORTH	GEARBOX	HP	15
	ELEGP102	ELEVATOR BULK SUGAR NORTH	GEARBOX	OURPM	100
	ELEGP102	ELEVATOR BULK SUGAR NORTH	GEARBOX	RATIO	17.09
	ELEGP102	ELEVATOR BULK SUGAR NORTH	MOTOR	HP	15
	ELEGP102	ELEVATOR BULK SUGAR NORTH	MOTOR	RPM	1760
<b>Packaging</b>	ELEGP103	OLD SILO ELEVATOR (EAST)	BELT, CONV	TYPE	SCANDURA DURA-LITE 5000
	ELEGP103	OLD SILO ELEVATOR (EAST)	BELT, CONV	SIZE	18" WIDE X 275' LONG
	ELEGP103	OLD SILO ELEVATOR (EAST)	GEARBOX	HP	40
	ELEGP103	OLD SILO ELEVATOR (EAST)	GEARBOX	INRPM	1800
	ELEGP103	OLD SILO ELEVATOR (EAST)	GEARBOX	OURPM	116.13
	ELEGP103	OLD SILO ELEVATOR (EAST)	GEARBOX	RATIO	15.5.1
	ELEGP103	OLD SILO ELEVATOR (EAST)	MOTOR	HP	30
	ELEGP103	OLD SILO ELEVATOR (EAST)	MOTOR	RPM	1800
	ELEGP103	OLD SILO ELEVATOR (EAST)	SPROCKET	TEETH	DRIVE=19HT DRIVEN=50HT
	ELEGP103	OLD SILO ELEVATOR (EAST)	SPROCKET	RC	140-2 140-2 C-HUB
<b>Bulk Sugar</b>	ELEGP104	ELEVATOR BULK SUGAR SOUTH	GEARBOX	HP	15
	ELEGP104	ELEVATOR BULK SUGAR SOUTH	GEARBOX	RATIO	01800 (18:1)
	ELEGP104	ELEVATOR BULK SUGAR SOUTH	MOTOR	HP	15
	ELEGP104	ELEVATOR BULK SUGAR SOUTH	MOTOR	RPM	1800
	ELEGP104	ELEVATOR BULK SUGAR SOUTH	SPROCKET	TEETH	DRIVE=60HT DRIVEN=26HT
	ELEGP104	ELEVATOR BULK SUGAR SOUTH	SPROCKET	RC	RC120 RC120
<b>Packaging</b>	ELEGP105	ELEVATOR - BOSCH	GEARBOX	HP	32.5
	ELEGP105	ELEVATOR - BOSCH	GEARBOX	OURPM	100
	ELEGP105	ELEVATOR - BOSCH	GEARBOX	RATIO	17.1



ELEGP105	ELEVATOR - BOSCH	MOTOR	HP	15
ELEGP105	ELEVATOR - BOSCH	MOTOR	RPM	1750
ELEGP105	ELEVATOR - BOSCH	SPROCKET	TEETH	DRIVE=18HT      DRIVEN
ELEGP105	ELEVATOR - BOSCH	SPROCKET	RC	120-2B      120-2

**Packaging**

ELEGP108	NEW SILO ELEVATOR WEST	BELT	MFGR	SCANDURA
ELEGP108	NEW SILO ELEVATOR WEST	BELT	MODEL	SC 5000,CBS PVC,
ELEGP108	NEW SILO ELEVATOR WEST	BELT	QUANT	330 FOOT
ELEGP108	NEW SILO ELEVATOR WEST	BELT	SIZE	36"
ELEGP108	NEW SILO ELEVATOR WEST	BUCKET	QUANT	543
ELEGP108	NEW SILO ELEVATOR WEST	BUCKET	SIZE	16"WIDE, 7"PROJECTION
ELEGP108	NEW SILO ELEVATOR WEST	GEARBOX	HP	MOTOR HP RATING 130.5
ELEGP108	NEW SILO ELEVATOR WEST	GEARBOX	OURRPM	45
ELEGP108	NEW SILO ELEVATOR WEST	GEARBOX	RATIO	38.4
ELEGP108	NEW SILO ELEVATOR WEST	MOTOR	HP	60
ELEGP108	NEW SILO ELEVATOR WEST	MOTOR	RPM	1760
ELEGP108	NEW SILO ELEVATOR WEST	PULLEY	SER	(HEAD PULLEY)
ELEGP108	NEW SILO ELEVATOR WEST	PULLEY	DIA	30" DIA. X 38" CROWNED FACE
ELEGP108	NEW SILO ELEVATOR WEST	PULLEY	INFO	TAIL PULLEY = 24"DIA.X38"C.F.
ELEGP108	NEW SILO ELEVATOR WEST	SPROCKET	TEETH	MOTOR-25, GEARBOX 30
ELEGP108	NEW SILO ELEVATOR WEST	SPROCKET	RC	240

**Packaging**

ELEGP301	ELEVATOR SMALL PACKAGE	BELT, CONV	TYPE	SCANDURA DURA-LITE 5000
ELEGP301	ELEVATOR SMALL PACKAGE	BELT, CONV	SIZE	18" X 70' SSR 01-03109
ELEGP301	ELEVATOR SMALL PACKAGE	GEARBOX	HP	15
ELEGP301	ELEVATOR SMALL PACKAGE	GEARBOX	INRPM	1750
ELEGP301	ELEVATOR SMALL PACKAGE	GEARBOX	OURRPM	102.94
ELEGP301	ELEVATOR SMALL PACKAGE	GEARBOX	RATIO	17:1
ELEGP301	ELEVATOR SMALL PACKAGE	MACH. INFO	INFO	CURRENT BELT SPEED = 350 FPM
ELEGP301	ELEVATOR SMALL PACKAGE	MACH. INFO	INFO	RATING IS 200 TPH @ 300 FPM,
ELEGP301	ELEVATOR SMALL PACKAGE	MACH. INFO	INFO	55 LB/CF
ELEGP301	ELEVATOR SMALL PACKAGE	MOTOR	HP	15
ELEGP301	ELEVATOR SMALL PACKAGE	MOTOR	RPM	1755
ELEGP301	ELEVATOR SMALL PACKAGE	PULLEY	MFGR	HEAD                  TAIL
ELEGP301	ELEVATOR SMALL PACKAGE	PULLEY	MATER	C.I.                  C.I.
ELEGP301	ELEVATOR SMALL PACKAGE	PULLEY	MODEL	CROWNED                  CROWNED
ELEGP301	ELEVATOR SMALL PACKAGE	PULLEY	TYPE	24"FACE                  24"FACE
ELEGP301	ELEVATOR SMALL PACKAGE	PULLEY	DIA	30"                  24"
ELEGP301	ELEVATOR SMALL PACKAGE	SPROCKET	TEETH	23HT=DRIVE      60=DRIVEN
ELEGP301	ELEVATOR SMALL PACKAGE	SPROCKET	RC	120                  120

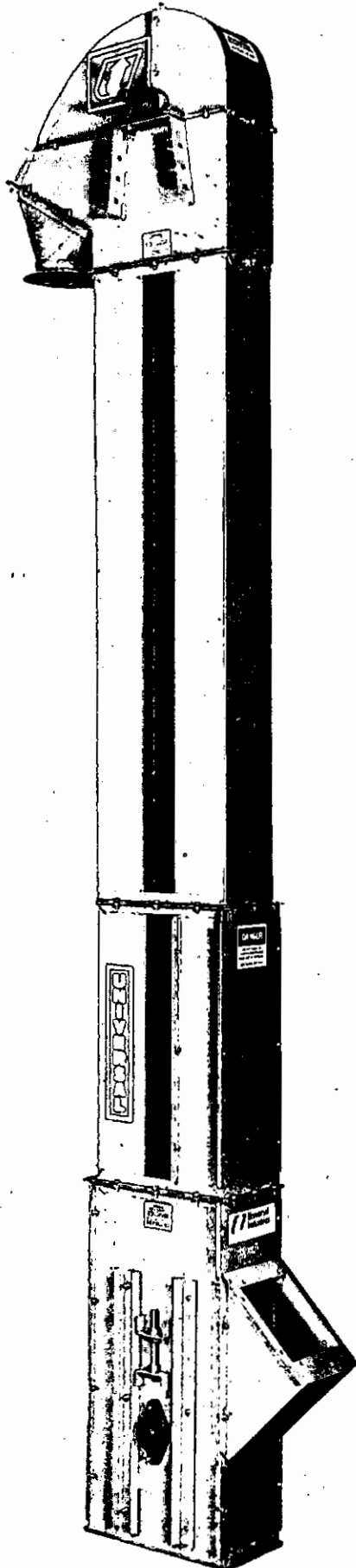
**Packaging**

ELEGP302	ELEVATOR #1 EAST 3RD FLR.	BELT, CONV	SIZE	10" WIDE X 100' LONG
ELEGP302	ELEVATOR #1 EAST 3RD FLR.	BUCKET	QUANT	97, 12" BUCKET CENTERS
ELEGP302	ELEVATOR #1 EAST 3RD FLR.	GEARBOX	HP	5
ELEGP302	ELEVATOR #1 EAST 3RD FLR.	GEARBOX	INRPM	1730
ELEGP302	ELEVATOR #1 EAST 3RD FLR.	GEARBOX	OURRPM	100

	ELEGP302	ELEVATOR #1 EAST 3RD FLR.	GEARBOX	RATIO	17.5
	ELEGP302	ELEVATOR #1 EAST 3RD FLR.	MOTOR(M)	HP	5
	ELEGP302	ELEVATOR #1 EAST 3RD FLR.	MOTOR(M)	RPM	1730
<b>Packaging</b>	ELEGP303	ELEVATOR #5 WEST 3RD FLR.	PULLEY	MFGR	HEAD PULLEY
	ELEGP303	ELEVATOR #5 WEST 3RD FLR.	PULLEY	BORE	1-15/16"
	ELEGP303	ELEVATOR #5 WEST 3RD FLR.	PULLEY	DIA	20" DIA. X 14" FACE
	ELEGP303	ELEVATOR #5 WEST 3RD FLR.	SPROCKET	TEETH	DRIVE=24HT DRIVEN=54HT
	ELEGP303	ELEVATOR #5 WEST 3RD FLR.	SPROCKET	RC	RC80 RC80
<b>Packaging</b>	ELEGP304	GRAN. FRUITED SUGAR ELEV.	BUCKET	QUANT	77
	ELEGP304	GRAN. FRUITED SUGAR ELEV.	BUCKET	SIZE	6" WIDE X 4.5" HIGH X 12" OC
	ELEGP304	GRAN. FRUITED SUGAR ELEV.	GEARBOX	RATIO	17:1
	ELEGP304	GRAN. FRUITED SUGAR ELEV.	MOTOR	HP	1.5
	ELEGP304	GRAN. FRUITED SUGAR ELEV.	SPROCKET	TEETH	DRIVE=20HT DRIVEN=48HT
	ELEGP304	GRAN. FRUITED SUGAR ELEV.	SPROCKET	RC	60 60
<b>Packaging</b>	ELEGP401	ELEVATOR RETURN SUGAR	BELT, CONV	TYPE	SCANDURA DURA LITE 5000
	ELEGP401	ELEVATOR RETURN SUGAR	BELT, CONV	SIZE	18" X 225" CONVEYOR BELT
	ELEGP401	ELEVATOR RETURN SUGAR	BELT, CONV	INFO	292 BUCKETS
	ELEGP401	ELEVATOR RETURN SUGAR	GEARBOX	HP	25
	ELEGP401	ELEVATOR RETURN SUGAR	GEARBOX	INRPM	1800
	ELEGP401	ELEVATOR RETURN SUGAR	GEARBOX	OURPM	100
	ELEGP401	ELEVATOR RETURN SUGAR	GEARBOX	RATIO	17:1
	ELEGP401	ELEVATOR RETURN SUGAR	MOTOR	HP	25
	ELEGP401	ELEVATOR RETURN SUGAR	MOTOR	RPM	1800
	ELEGP401	ELEVATOR RETURN SUGAR	SPROCKET	TEETH	DRIVE=24HT DRIVEN=54HT
	ELEGP401	ELEVATOR RETURN SUGAR	SPROCKET	RC	140-2 140-2
<b>Packaging</b>	ELEGP402	P.S. GRANULATED SUPPLY	BELT, CONV	SIZE	12" X 60' LONG
	ELEGP402	P.S. GRANULATED SUPPLY	BELT, CONV	BOLT	3-BOLT 3/8" X 1-1/2" ON 4-1/8"
	ELEGP402	P.S. GRANULATED SUPPLY	BELT, CONV	YEAR	BOLT CENTERS.
	ELEGP402	P.S. GRANULATED SUPPLY	BUCKET	QUANT	56 ON 12" BUCKET CENTERS
	ELEGP402	P.S. GRANULATED SUPPLY	PULLEY	MFGR	HEAD=20"DIA.X14"CF=SSI 925382
	ELEGP402	P.S. GRANULATED SUPPLY	PULLEY	SER	TAIL=18"DIA.X14"FACE
	ELEGP402	P.S. GRANULATED SUPPLY	SPROCKET	TEETH	45HT(PS15811) 25HT
	ELEGP402	P.S. GRANULATED SUPPLY	SPROCKET	RC	80 80
<b>Packaging</b>	ELEGP404	2# POLY POWDER ELEVATOR	BELT, CONV	TYPE	WHITE PVC 150# CBS
	ELEGP404	2# POLY POWDER ELEVATOR	BELT, CONV	SIZE	6-1/2" WIDE X 21' LONG
	ELEGP404	2# POLY POWDER ELEVATOR	GEARBOX	HP	1.04
	ELEGP404	2# POLY POWDER ELEVATOR	GEARBOX	RATIO	15:1
	ELEGP404	2# POLY POWDER ELEVATOR	MOTOR	HP	1.5
	ELEGP404	2# POLY POWDER ELEVATOR	MOTOR	RPM	1800
	ELEGP404	2# POLY POWDER ELEVATOR	PULLEY	MFGR	(HEAD PULLEY) TAIL PULLEY

ELEGP404	2# POLY POWDER ELEVATOR	PULLEY	MODEL	7" FACE WIDTH	7" FACE WIDTH
ELEGP404	2# POLY POWDER ELEVATOR	PULLEY	DIA	5"	5"

# **EXHIBIT B**



MODEL

**C3**

# BUCKET ELEVATOR

## THE UNIVERSAL MODEL C3 FEATURES:

- Capacities of 220, 630 and 875 C.F.H.
- Quick assembly, for any installation
- The design to handle almost any bulk material
- Discharge heights from 10' to 60'
- A complete line of the most popular accessories
- As a standard unit, delivery time that is not extended

*Contact your Universal Dealer or our Sales Department  
for complete details and pricing.*

## SPECIFICATIONS

MODEL	C3-175	C3-500	C3-700
Capacity Free Flowing Material @ 75% Bucket Filling	220 CFH	630 CFH	875 CFH
TPH @ 50 lbs. Ft. <sup>3</sup>	5 TPH	15 TPH	21 TPH
Belt Speed FPM	195	270	335
Headshaft RPM	95	200	245
Bucket Spacing	4 1/4"	4 1/4"	4 1/4"
Construction	Available in carbon steel (blue enamel), galvanized steel, and stainless steel (304).		
Head Pulley	5 1/4" diameter crown face, vulcanized rubber lagging		
Boot Pulley	self-cleaning style		
Buckets	6"x4" plastic		
Belting	P.V.C.		
Head Casing	12 gauge		
Boot Casing	12 gauge		
Legging	16 gauge		
Spout Hopper	12 gauge		
Bearings	Grease sealed, self-aligning ball bearings		
Drive Package	Optional		
Motor	Optional		

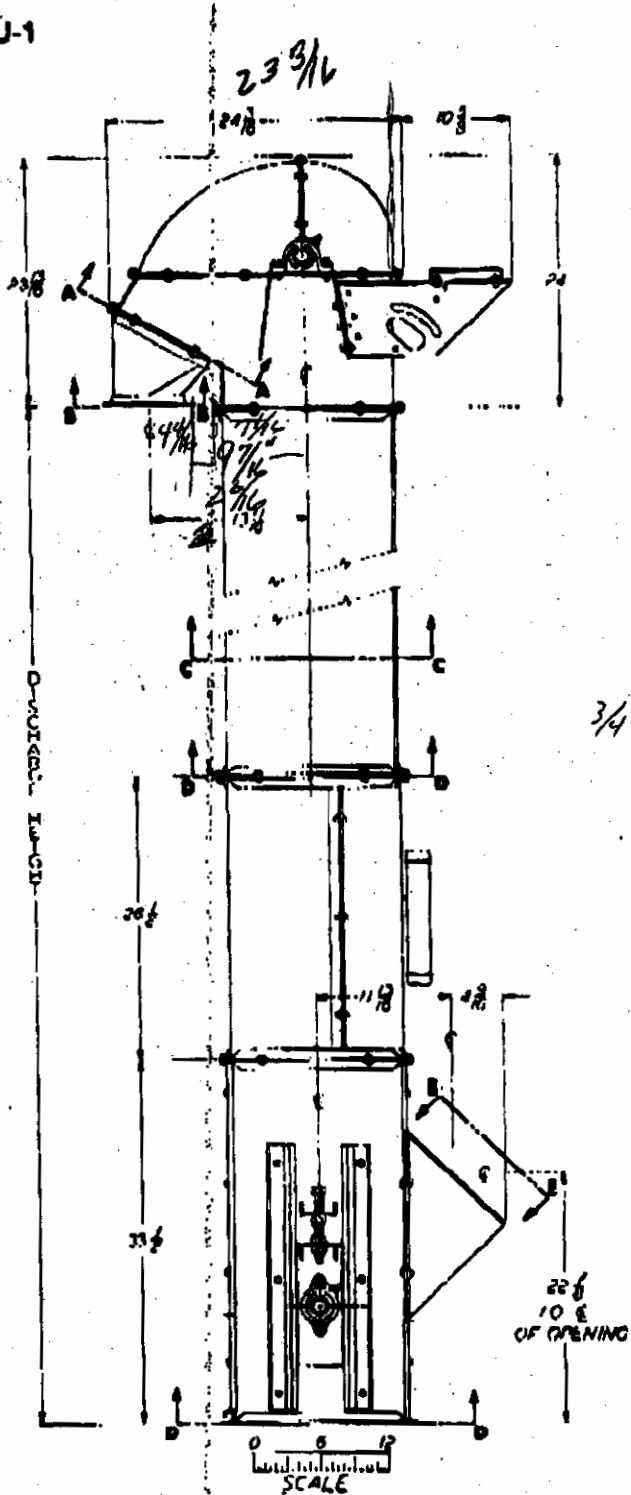
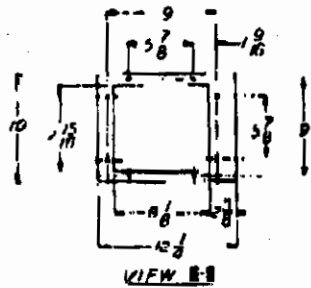
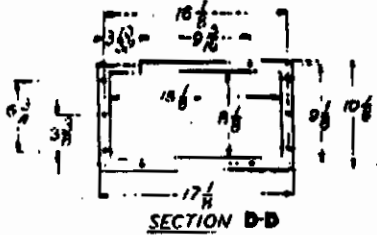
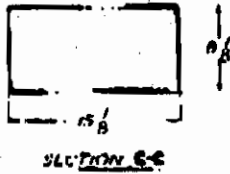
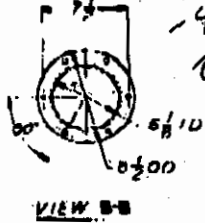
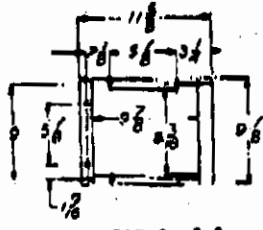
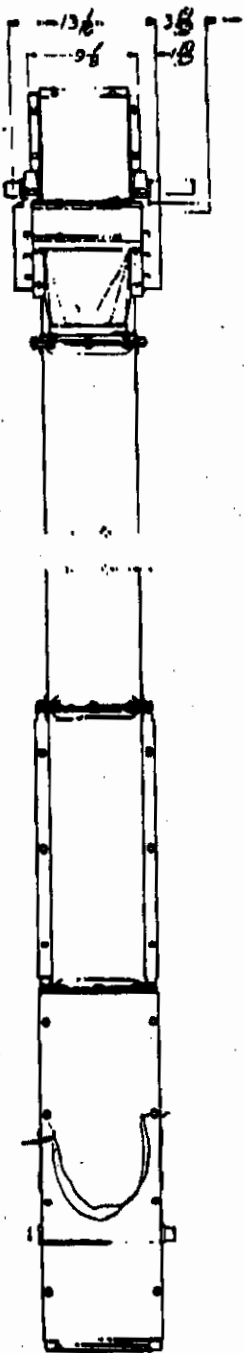
**We get the job done!**

**Universal  
Industries**

Division of Universal International, Inc.

Bulletin C3 81

MODEL U-1

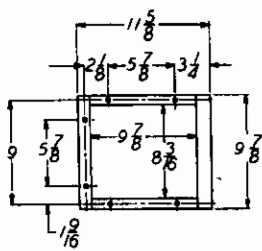
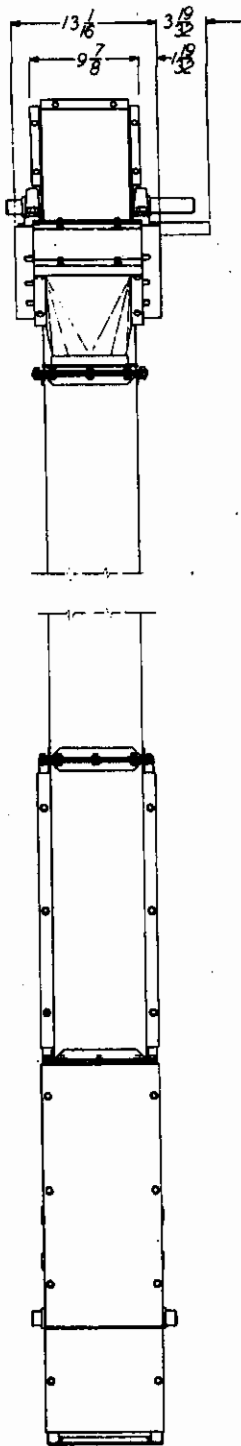


NOTE: "Unit application, location and specifications determine the type, quantity and/or placement of electrical, electrical safety or other safety controls required. Whether these controls are supplied by Universal Industries or another supplier, all OSHA safety and health standards, the National Electric Code and local codes must be met and followed."

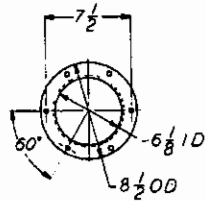


(Prices and specifications subject to change without notice.)

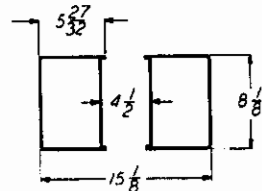
MODEL C-3



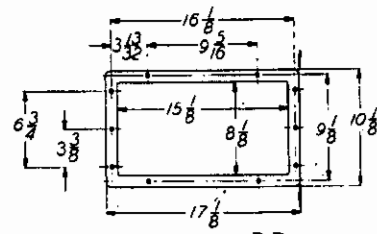
SECTION A-A



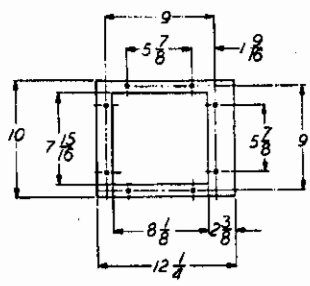
VIEW B-B



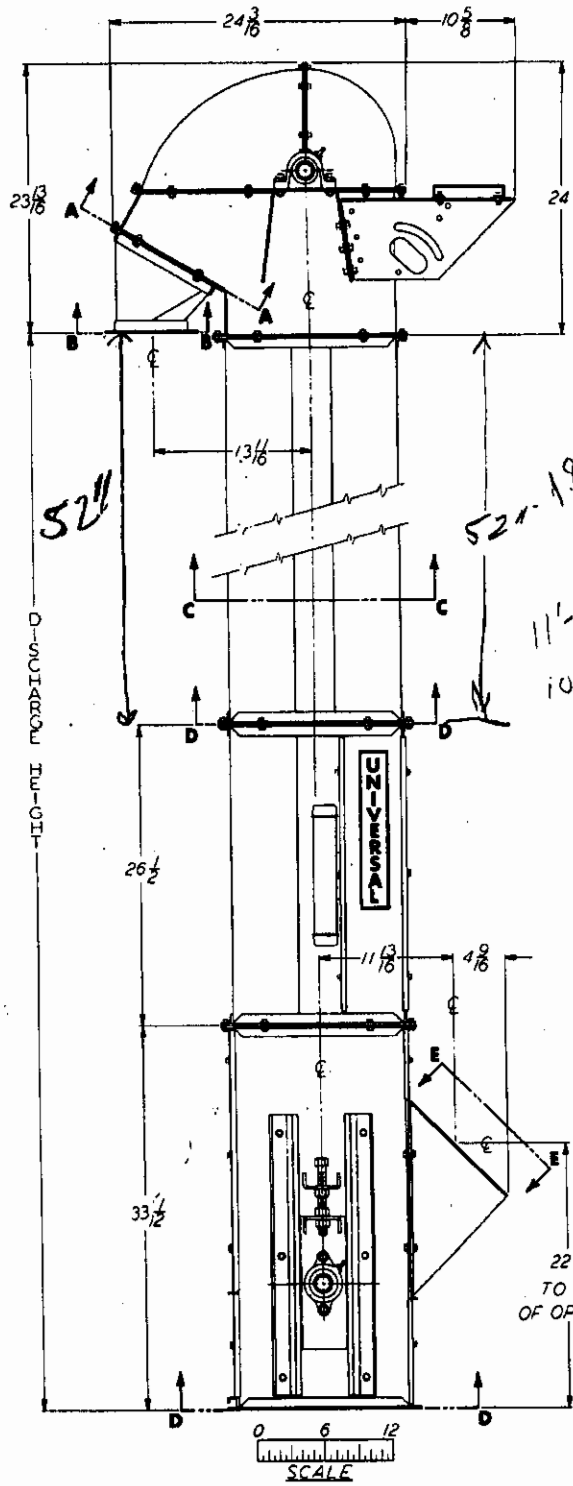
SECTION C-C



SECTION D-D



VIEW E-E



NOTE: "Unit application, location and specifications determine the type, quantity and/or placement of electrical, electrical safety or other safety controls required. Whether these controls are supplied by Universal Industries or another supplier, all OSHA safety and health standards, the National Electric Code and local codes must be met and followed."

3

93-3  
-8  
92-7



Division of Universal International, Inc.  
5800 Nordic Drive • P.O. Box 308 • Cedar Falls, IA 50613-0308  
Phone 800-553-4446 • FAX 319-277-2318

(Prices and specifications subject to change without notice.)

# **EXHIBIT C**



BOSCH ELEV SPEED CHANGE

9/16/94

1725 RPM OUTPUT MOTOR

17:1 RATIO GEARBOX

30" DIA. HEAD PULLEY w/ 1/2" LAG/UG = 31" TOTAL DIA.

$C = \pi D = \pi 31" = 97.39 \text{ FT/REV} = 8.12 \text{ FT/REV}$

HEAD PULLEY RPM = 30.4 RPM → MOST EFFICIENT

$30.4 \text{ REV/MIN} \times 8.12 \text{ FT/REV} = 246.85 \text{ FT/MIN.}$

GEARBOX OUTPUT RPM =  $\frac{1725}{17} = 101.47$

HEAD PULLEY SPROCKET → 60T HIZOC60D 3.9375" B/1.00 KEY  
GEARBOX MOTOR SPROCKET =  $60(.304) = 18.24$  18 TOOTH

HIZOB18D → NEW ~~GEARBOX~~ GEARBOX SPROCKET

6/2/95 PA

TORQUE CALCULATION FOR BAND BRAKE ON BOSCH ELEV.

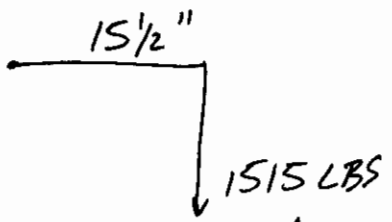
85' ELEVATOR, 12" c/c BUCKETS, 560 IN<sup>3</sup>/BUCKET, 31" HEAD PULLEY

$\frac{560 \text{ IN}^3/\text{BKT}}{1728 \text{ IN}^3/\text{FT}^3} (55 \text{ LB}/\text{FT}^3) = 17.28 \text{ LB}/\text{BKT}$

12" c/c BUCKETS = 85 BUCKETS

$85 (17.28 \text{ LB}/\text{BKT}) = 1515 \text{ LBS}$

31" HEAD PULLEY



$(15.5)(1515) = \boxed{23,482.5 \text{ IN-LBS}}$

BAND BRAKE IS RATED FOR 38,000 IN-LBS

REQUISITION  
SAVANNAH SUGAR REFINERY

VENDOR MONTAGUE INDUSTRIAL, INC. DATE 10/8/90  
 ADDRESS \_\_\_\_\_ CONFIRMATION \_\_\_\_\_  
 CITY/STATE/ZIP \_\_\_\_\_ ORDER NO. 08 50984  
 CONTACT NAME JEFF WARTEN CENTER PPA-CAP DELIVERY DATE REQ. \_\_\_\_\_  
 PHONE # 912-964-1927 STATION 89  
 JOB: 675 NOTIFICATION ON ARRIVAL: SH  
 REQUISITION APPROVED BY JW/WSH USE/PPA DESCRIPTION ASSERT JOB SUGAR ELEVATOR PARTS

NOTE: TO HAVE AN ITEM STOCKED, CIRCLE ITEM NUMBER AND GIVE REORDER POINT AND QUANTITY IN REORDER COLUMN.

ITEM NO.	QUANTITY REQ. AMOUNT	UNIT	SSR NO.	DESCRIPTION OF ITEM	REORDER QTY/AT	UNIT PRICE
A	1	EA		JEFFREY DIFFERENTIAL HOLDBACK BAND BRAKE TYPE, DIA 18 INCH, MAX TORQUE 38,000 IN/LBS, BORE 3 15/16", CAT. NO. 290452, BRAKE TO INCLUDE DUST PROOF ENCLOSURE COVERING		\$1,776.00/E
B	1	EA		30" DIA. x 20" LONG CROWNFACE PULLEY (HEAD) WITH 3/8" HERRINGBONE LAGGING WITH 3 15/16" BUSHED BORE		\$560.00/EA
C	1	EA		20" DIA x 20" LONG FLAT FACE PULLEY (TAIL) WITH 2 7/16" BUSHED BORE		\$181.00/EA

DESIGNATE STORAGE LOCATION FOR NON-STORES ITEMS

TIMBERLAID (SOM) 205-867-6166

*Handwritten signature*

24 IN. LINDER



**MONTAGUE INDUSTRIAL, INC.**  
 2111 WEST BAY STREET, P.O. BOX 1785  
 SAVANNAH, GA 31405  
 (912) 964-1927 FAX (912) 964-3087

# Holdbacks

## Differential Holdback - Band Brake Type

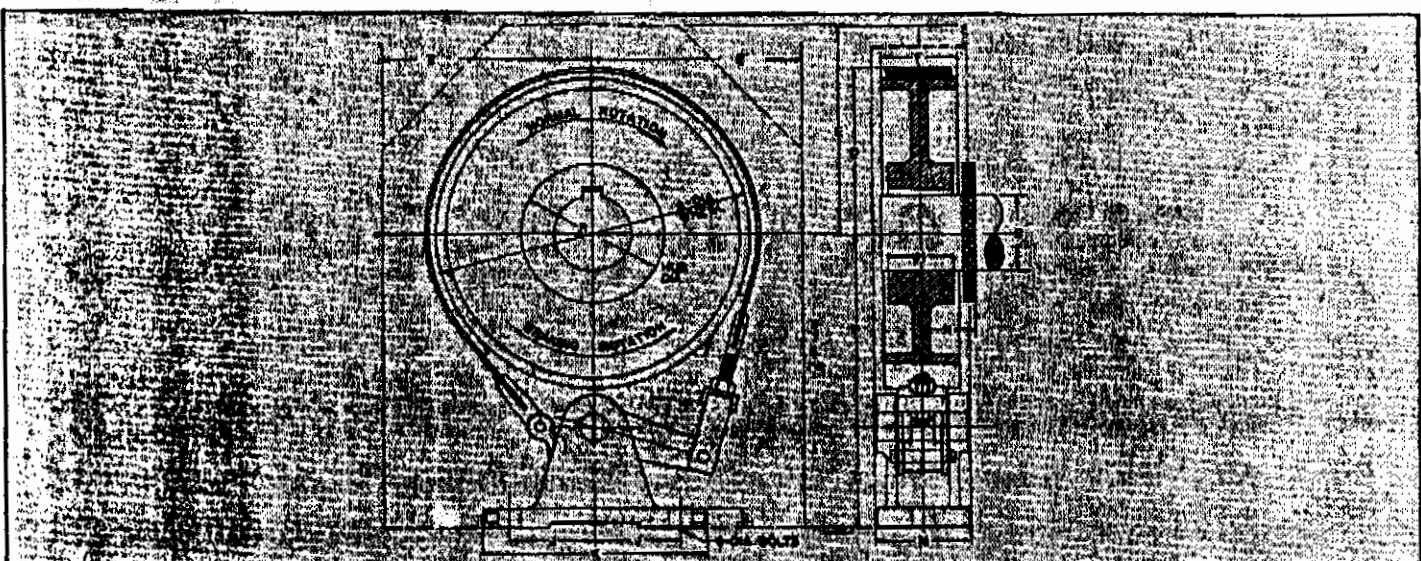
This differential holdback is a rugged, foolproof, silent mechanism designed to prevent the reversal of an elevator or conveyor having an unbalanced load, due to the weight of material on the ascending side. The slightest reverse motion of the shaft on which it is mounted will cause the holdback to function quickly, with a cushioning effect. It should be mounted on the headshaft.

A protective housing is advisable where conditions are extremely dusty or where the holdback is exposed

to weather. The housing is normally furnished with an opening on one side only. It is reversible and can be mounted on either side of the conveyor.

When ordering, specify diameter of holdback, bore and keyseat. Mount with base in horizontal position as shown. Do not mount with base inclined, vertical or at top.

**NOTE:** Brawton Iron Works, Inc. will not knowingly sell or recommend a holdback for use on a ski lift or other conveyance that transports people.



Dia. A	Max. Torque in Lbs.	Catalog Numbers of Holdback complete							
		Bore A	Catalog No.	Bore B	Catalog No.	Bore C	Catalog No.	Bore D	Catalog No.
8 1/2	4,800	1 1/4 2 1/4	303043 290496	1 1/4 2 1/4	310855 290427	1 1/4 2 1/4	290425 315939	1 1/4	290426
12	14,400	1 1/2 3 1/4	290416 290419	2 1/4	290418	2 1/4	290417	3 1/4	290418
18	38,000	1 1/2 3 1/4	290449 290452	2 1/4 4 1/4	290450 290453	3 1/4 4 1/4	290451 308649	3 1/4 4 1/4	302691 290454
24	102,000	3 1/4 5 1/4	290471 290475	3 1/4	290472	4 1/4	290473	4 1/4	290474
30	170,000	4 1/4 6 1/4	290485 290489	4 1/4	290486	5 1/4	290487	5 1/4	290488

Dia. A	Weight in Lbs.		Dimensions in inches														
	Holdback	Housing	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
8 1/2	48	12	3	4 1/4	6	2 1/4	3/4	1 1/4	2 1/4	6 1/2	1/2	2 1/4	1 1/4	5 1/4	4		
12	78	15	3 3/4	6 3/4	8	2 3/4	3/4	2 1/4	3 1/4	8 1/2	3/4	3 3/4	2 1/4	7 1/2	6 1/4		
18	160	30	5 1/4	9 1/4	11	3 1/4	1	3 1/4	3 3/4	10	3/4	4 3/4	2 1/4	10 1/2	8 1/4		
24	285	52	6 3/4	12 1/4	14	4 1/4	1 1/4	4 1/4	4 3/4	12 1/4	1	5 3/4	3 1/4	14 1/2	10		
30	590	65	7 3/4	15 1/4	17 1/4	5 1/4	1 1/2	5 1/4	6 1/4	16	1	7 1/4	3 1/4	19	11		

See next page for way of selecting the proper size holdback.

Specifications subject to change without notice.

# **EXHIBIT D**

SSR  
Elevators S. Pkg. Elevator JJ-27-01

**GENERAL NOTES**  
 REK GALVANIZED 8D CENTRIFUGAL DISCHARGE BUCKET ELEVATOR TO HANDLE REFINED WHITE SUGAR  
 INITIAL WEIGHT 55#/CMT.  
 CAPACITY 200 TONS PER HR.  
 ELEVATOR CONSISTS OF 18 X 8 X 8 1/2 TYLE A MALLEABLE IRON BUCKETS ELECTRO GALVANIZED & PUNCHING FOR MOUNTING ON BELT-SO RECD  
 BELT 38" WIDE, 6 PLY, 52R BAYON DUCK FURNISHED BY CUSTOMER.  
 5 1/2" ELECTRO-GALVANIZED VERNAYN #1 HEAD ATTACHMENT BOLTS WITH ONE SQUARE NUT 3/8 DIA. 5 1/2" LONG & WASHERS  
 CABINS 48X55 1/2 TO BE HOT DIPPED GALVANIZED AFTER FABRICATION AND TO BE MADE DUST TIGHT WITH FELT BETWEEN ALL BOLTED CONNECTIONS. ALL BOLTS TO BE ELECTRO GALVANIZED  
 FURNISHED BY CUST. 20 HP MOTOR AND REDUCER AT 100 RPM AND SUPPORT FOR SAME  
 ALL ELECTRICAL WIRING, CONTROLS, CONDUITS AND ACCESSORIES  
 ELEVATOR BEING AS DESCRIBED ABOVE WITH BONCHED AND CEMENTED HOLES FOR BUCKET ATTACHMENT, ELEVATOR FOUNDATION, ANCHOR BOLTS SET IN PLACE  
 BOOT LOADING HOPPER  
 ACCESS TO HEAD MACHINERY  
 ERECTION  
 ALL OTHER MATERIALS AND LABOR NECESSARY TO COMPLETE INSTALLATION

30 DIA. 42 CF. CAST IRON ELEVATOR PULLEY  
 3 1/2" # 8X SHAFER STD. DUTY ROLLER BESS PILLOW BLOCKS  
 20 HP MOTOR AND REDUCER AT 100 RPM AND SUPPORT FURNISHED BY CUSTOMER.

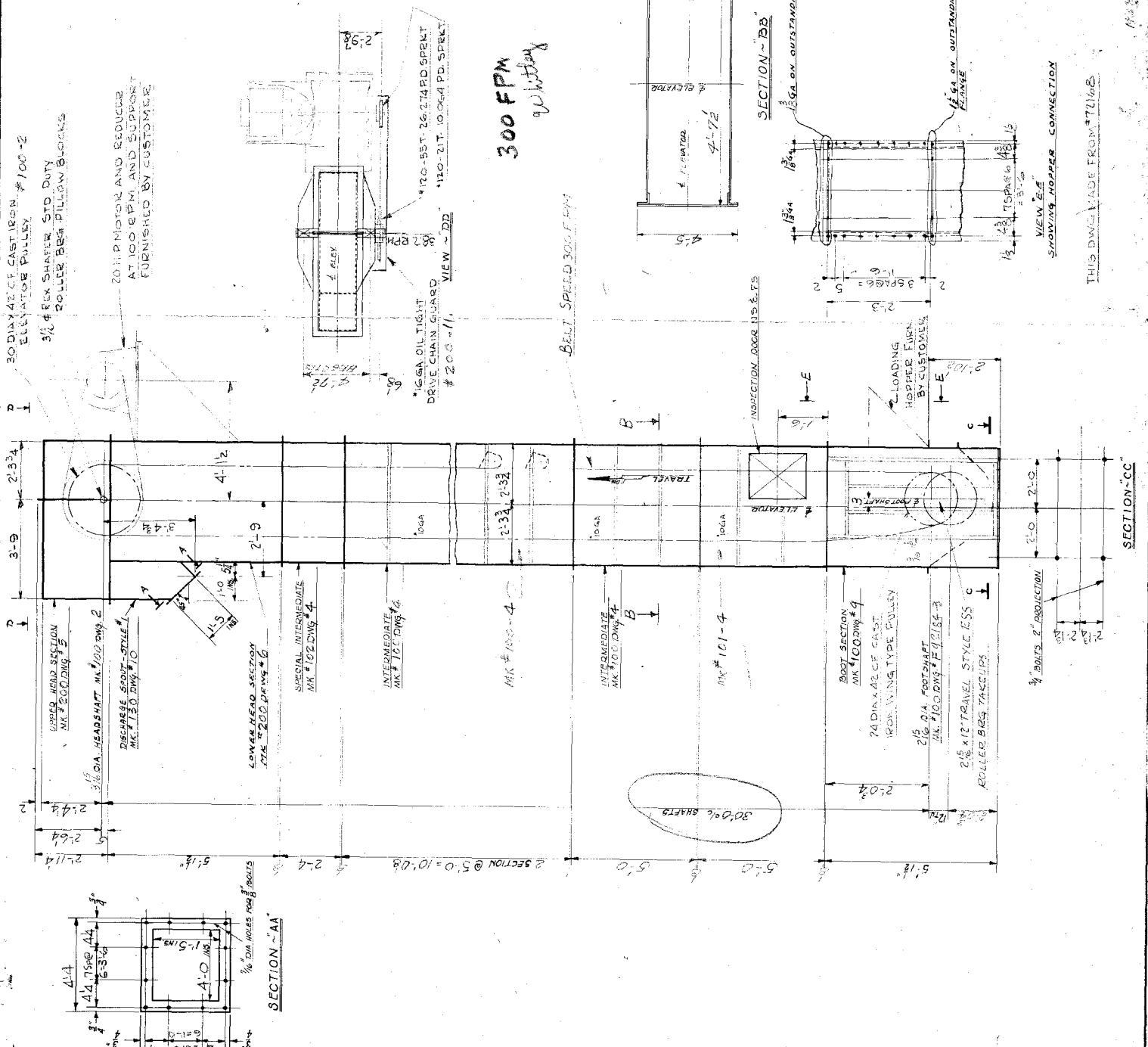
300 FPM  
 300 FPM  
 BELT SPEED 300 FPM

NEW SMALL PACKAGE ELEVATOR

CERTIFIED FOR CONSTRUCTION  
 FOR *Casey*  
 YOUR OR. # 31281  
 OUR ORD. # 32184 BY E.H.O.  
 CHAIN BELT COMPANY  
 MILWAUKEE, WISCONSIN

NOTE: CASING TO BE MADE FOR DUST TIGHT CONSTRUCTION  
 PAINT NOTE: ALL SURFACES TO BE SELECTED TO RECEIVE ONE COAT OF STANDARD SWACK PAINT UNLESS OTHERWISE NOTED  
 ALL HOLES 3/8 DIA. FOR 1/2 RIVETS OR BOLTS SPACED UNLESS OTHERWISE NOTED  
 ALL ROSE DISTANCES AND ALL CURVES THICK UNLESS OTHERWISE NOTED  
 ALL SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT BEFORE SHIPMENT  
 ALL MATERIAL TO RECEIVE COAT OF PAINT BEFORE SHIPMENT

REVISION	GENERAL DRAWING NO. <i>32184</i>
CHAIN BELT COMPANY MILWAUKEE, WIS., U.S.A.	CUSTOMER'S 2235-C
TITLE: GENERAL ARRANGEMENT OF REV. VERTICAL CENTRIFUGAL DISCHARGE BUCKET ELEVATOR	ORDER NO. F-32184 ESTIMATE NO. 31281
CUSTOMER: FLEMING & MOORE SUPPLY CO.	DRAWN BY: J.H.T. & H.O. TRACED BY: E.H.O.
INSTALLED AT: SAVANNAH, GEORGIA	CHECKED BY: E.H.O.
ENGINEERS	DATE: 7-9-54
DRAWING NO. F-32184-1	



THIS DRAWING MADE FROM 7/12/54  
 VIEW E-E  
 SHAVING HOPPER CONNECTION

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NUMBER F-92124-1

**GENERAL NOTES**

REX GALVANIZED 8D CENTRIFUGAL DISCHARGE BUCKET ELEVATOR TO HANDLE: BROWN WHITE SUGAR

MATERIAL WEIGHT 55# / COAT

CAPACITY 200 TONS PER HR.

ELEVATOR CONSISTS OF 18 X 8 X 8 STYLE A MALLEABLE IRON BUCKETS ELECTRO GALVANIZED & PUNCHED FOR MOUNTING ON BELT SPOKE

BELT 38" WIDE, 6 PL. 522 RAYON DUNE FURNISHED BY CUSTOMER. BELT LENGTH = 701"

20 HP MOTOR AND REDUCER AT 100 RPM AND SUPPORT FURNISHED BY CUSTOMER

30 DIA. 42 CF CAST IRON ELEVATOR PULLEY #100-2

3/8" X 8 X 8 SHAFTER STD DUTY

ROLLER BRG PILLOW BLOCKS

3/8" DIA. HEAD SHAFT MK #100-DWG-2

DISCHARGE SPURT STYLE #1 MK #100-DWG-10

LOWER HEAD SECTION MK #100-DWG-6

SPECIAL INTERMEDIATE MK #100-DWG-4

INTERMEDIATE MK #100-DWG-4

MK #100-4

INTERMEDIATE MK #100-DWG-4

MK #101-4

BOOT SECTION MK #100-DWG-9

24 DIA. 42 CF CAST IRON WING TYPE PULLEY

2 1/8" DIA. FOOTSHAFT MK #100-DWG-F9-184-B

2 1/8" X 12" TRAVEL STYLE E55 C ROLLER BRG. TRACINGS

3/4" BOLTS 2" PRODUCTION

5/8" ELECTRO-GALVANIZED NORMAN #1 HEAD ATTACHMENT BOLTS WITH ONE SQUARE NUT

3/8" DIA. 5/8" TH. PULLEY WASHERS

CASING 48X55 1/2 TO BE HOT DIPPED GALVANIZED AFTER FABRICATION AND TO BE MADE TIGHT WITH FELT BETWEEN ALL BOLTED CONNECTIONS. ALL BOLTS TO BE ELECTRO GALVANIZED

FURNISHED BY CUST. 20HP MOTOR AND REDUCER AT 100 RPM AND SUPPORT FOR SAME

ALL ELECTRICAL WIRING, CONTROLS, CONDUITS AND ACCESSORIES

ELEVATOR BELTING AS DESCRIBED ABOVE WITH ENAMELED AND CEMENTED HOLES FOR BUCKET ATTACHMENT, ELEVATOR FOUNDATION, ANCHOR BOLTS SET IN PLACE AND SPROUTING.

BOOT LOADING HOPLER

ACCESS TO HEAD MACHINERY

ERECTOR.

ALL OTHER MATERIALS AND LABOR NECESSARY TO COMPLETE INSTALLATION

**NEW SMALL PACKAGE ELEVATOR**

CERTIFIED FOR CONSTRUCTION

FOR *Flamingo & Moore Supply Co.*

YOUR ORDER 31271 DATE 1/24

OUR ORD. F92124 BY *ELC*

CHAIN BELT COMPANY  
P. LWAKE, WISCONSIN

EQ. NO. GP-5-E

NOTE: CASING TO BE MADE FOR TIGHT CONSTRUCTION

PAINT NOTE: ALL STRUCTURAL STEEL TO RECEIVE ONE COAT OF STANDARD BLACK PAINT

UNLESS OTHERWISE NOTED ALL HOLES 3/8" DIA. FOR 1/2" RIVETS OR BOLTS SPACED AND ALL GUSSET THICK UNLESS OTHERWISE NOTED

ALL SURFACE IN CONTACT TO RECEIVE ONE COAT OF PAINT BEFORE RIVETING

ALL MATERIAL TO RECEIVE ONE COAT OF PAINT BEFORE SHIPMENT

GENERAL DRAWING NO. UNIT

CHAIN BELT COMPANY  
MILWAUKEE, WIS. U. S. A.

TITLE: GENERAL ARRANGEMENT OF REX VERTICAL CENTRIFUGAL DISCHARGE BUCKET ELEVATOR

CUSTOMER: FLAMINGO & MOORE SUPPLY CO.  
INSTALLED AT: SAVANNAH, GEORGIA

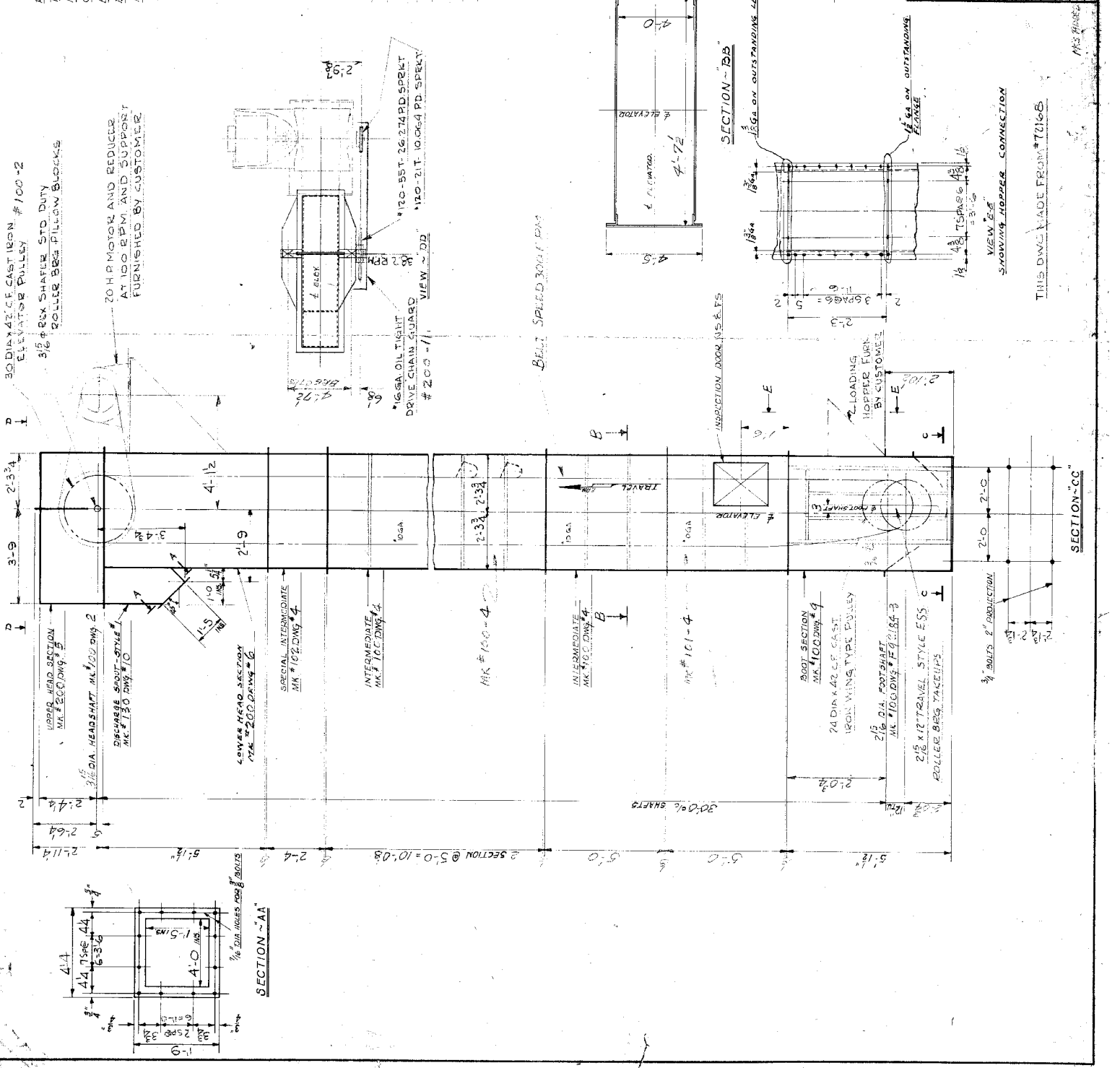
ENGINEER:

ORDER NO. F-92124 ESTIMATE NO. 31281 CUSTOMER'S 2235-C

DRAWN BY: AJT & EHO. CHECKED BY: EHO.

IN CHARGE: EHO. APPROVED BY: \_\_\_\_\_

SCALE: 2 1/4" = 1'-0" DATE: 1/24/54 DRAWING NO. F-92124-1



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GENERAL NOTES

REX GALVANIZED 8D CENTRIFUGAL DISCHARGE BUCKET ELEVATOR TO HANDLE REFINED WHITE SUGAR

MATERIAL WEIGHT 55 #/CU.FT.

CAPACITY 200 TONS PER HR.

ELEVATOR CONSISTS OF 18 X 8 X 8 STYLE A MALLEABLE IRON BUCKETS ELECTRO GALVANIZED & PUNCHED FOR MOUNTING ON BELT SPOKES.

BELT 38" WIDE, 6 PLY, 52 EMBAYN DECK FURNISHED BY CUSTOMER. BELT LENGTH = 70'-1"

5 1/2" ELECTRO GALVANIZED NORWAY #1 HEAD ATTACHMENT BOLTS WITH ONE SQUARE NUT

5/8" DIA X 5/8" TH. WASHERS

CASINGS 48 X 55 1/2 TO BE HOT DIPPED GALVANIZED AFTER FABRICATION AND TO BE MADE JUST TIGHT WITH FELT BETWEEN ALL BOLTED CONNECTIONS. ALL BOLTS TO BE ELECTRO GALVANIZED

FURNISHED BY CUST. 20HP MOTOR AND REDUCER AT 100 RPM AND SUPPORT FOR SAME

ALL ELECTRICAL WIRING, CONTROLS, CONDUITS AND ACCESSORIES

ELEVATOR BELTING AS DESCRIBED ABOVE WITH PUNCHED AND CEMENTED HOLES FOR BUCKET ATTACHMENT, ELEVATOR FOUNDATION, ANCHOR BOLTS SET IN PLACE AND GROUTING.

BOOT LOADING HOPPER

ACCESS TO HEAD MACHINERY

ERECTION.

ALL OTHER MATERIALS AND LABOR NECESSARY TO COMPLETE THIS ELEVATOR

NEW SMALL PACKAGE ELEVATOR

CERTIFIED FOR CONSTRUCTION FOR *Electric*

*Planning of this project by*

YOUR ORDER # 31281 DATE 1/24

OUR ORD. # 21124 BY *ELC*

CHAIN BELT COMPANY MILWAUKEE, WISCONSIN

NOTE: CASING TO BE MADE FOR DUST TIGHT CONSTRUCTION

PRINT NOTES:

BELT STRUCTURE - SEE TO RECEIVE ONE COAT OF SPANDEX BACK

ALL HOLES 3/4" DIA FOR 1/2" RIVETS OR BOLTS SPACED UNLESS OTHERWISE NOTED

ALL EDGE DISTANCES AND ALL CURVES THICK UNLESS OTHERWISE NOTED

ALL SURFACES IN CONTACT TO RECEIVE ONE COAT OF PAINT BEFORE RIVETING

ALL MATERIAL TO RECEIVE COAT OF PAINT BEFORE SHIPMENT

GENERAL DRAWING NO. \_\_\_\_\_ UNIT \_\_\_\_\_

CHAIN BELT COMPANY MILWAUKEE, WIS. U.S.A.

TITLE GENERAL ARRANGEMENT OF REX VERTICAL CENTRIFUGAL DISCHARGE BUCKET ELEVATOR

CUSTOMER FLEMING & MOORE SUPPLY CO. INSTALLED AT SAVANNAH, GEORGIA

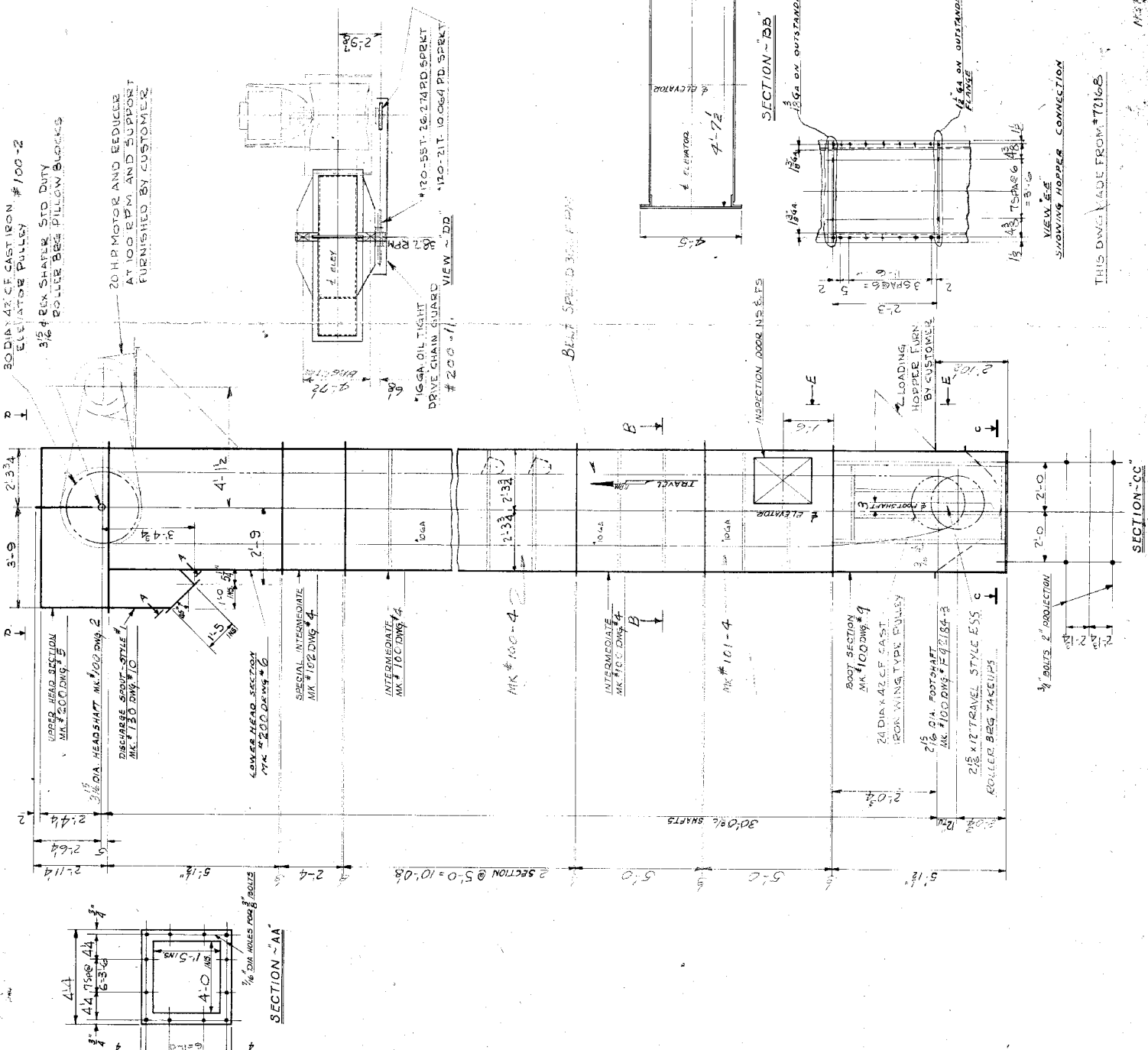
ENGINEER \_\_\_\_\_

ORDER NO. F-20184 ESTIMATE NO. 31281 CUSTOMER'S ORDER NO. 2235-C

DRAWN BY J.A.T. & H.O. CHECKED BY E.H.O.

IN CHARGE J.E.H.O. APPROVED BY \_\_\_\_\_

SCALE 2 1/2" = 1'-0" DATE 1/9-54 DRAWING NO. F-92126-1



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M.S. RUMBLE

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NUMBER 1-4-1924-1

**GENERAL NOTES**

REX GALVANIZED 8D CENTRIFUGAL DISCHARGE BUCKET ELEVATOR TO HANDLE REFINED WHITE SUGAR

MATERIAL WEIGHT 55 # / CU.FT.

CAPACITY 200 TONS PER HR.

ELEVATOR CONSISTS OF 18 X 6 X 8 STYLE A MALLEABLE IRON BUCKETS ELECTRIC GEAR DRIVEN BY 20HP MOTOR AND REDUCER MOUNTING ON BELT GORED L.

BELT 38" WIDE 6 PLY 5/8" REX BELT GORE FINISHED BY CUSTOMER. BELT LENGTH = 70'-1"

30" DIA. HEADSHEET MK # DNG #

DISCHARGE SPOUT - STYLE # DNG #

LOWER HEAD SECTION MK # DNG #

SPECIAL INTERMEDIATE MK # DNG #

INTERMEDIATE MK # DNG #

INTERMEDIATE MK # DNG #

ROOT SECTION MK # DNG #

24" DIA. X 42" CF. CAST IRON WINGS TYPE DWALY

2 1/2" DIA. FOOT SHAFT MK # DNG #

2 1/2" X 12" TRAVEL STYLE ESS C ROLLER BEG. PLUGS

3/4" BOLTS 2" PROJECTION

30" DIA. X 42" CF. CAST IRON WINGS TYPE DWALY

2 1/2" DIA. FOOT SHAFT MK # DNG #

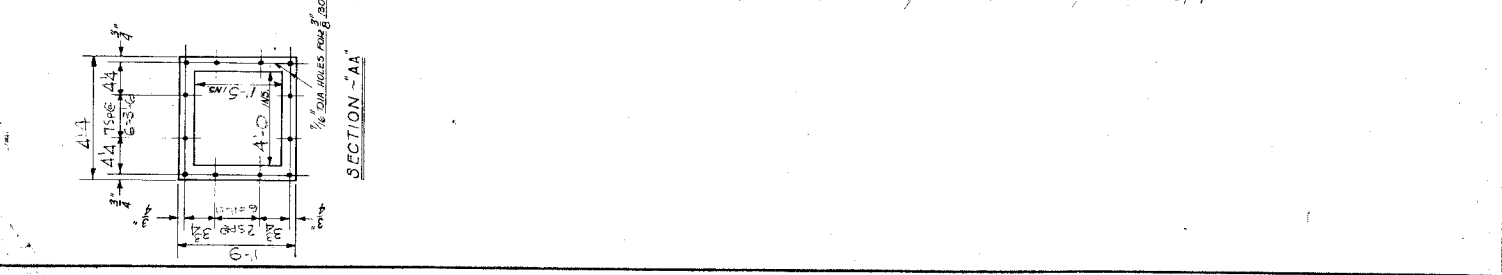
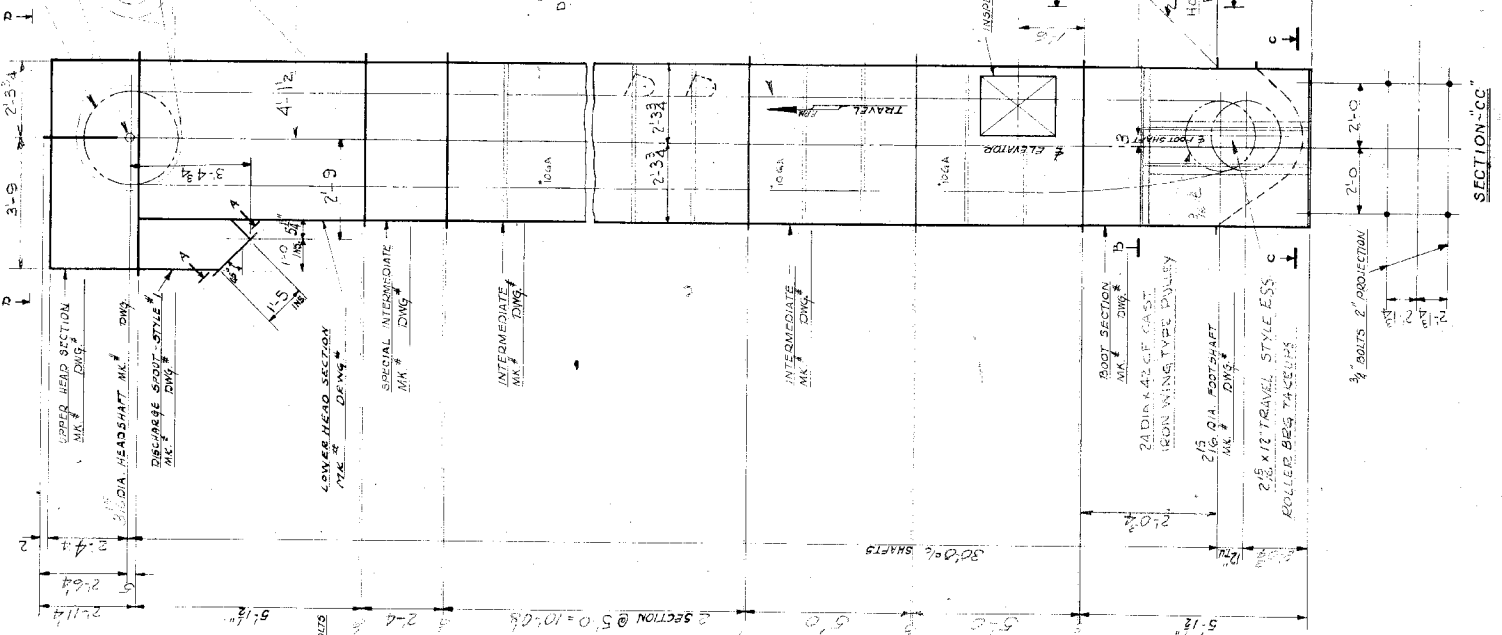
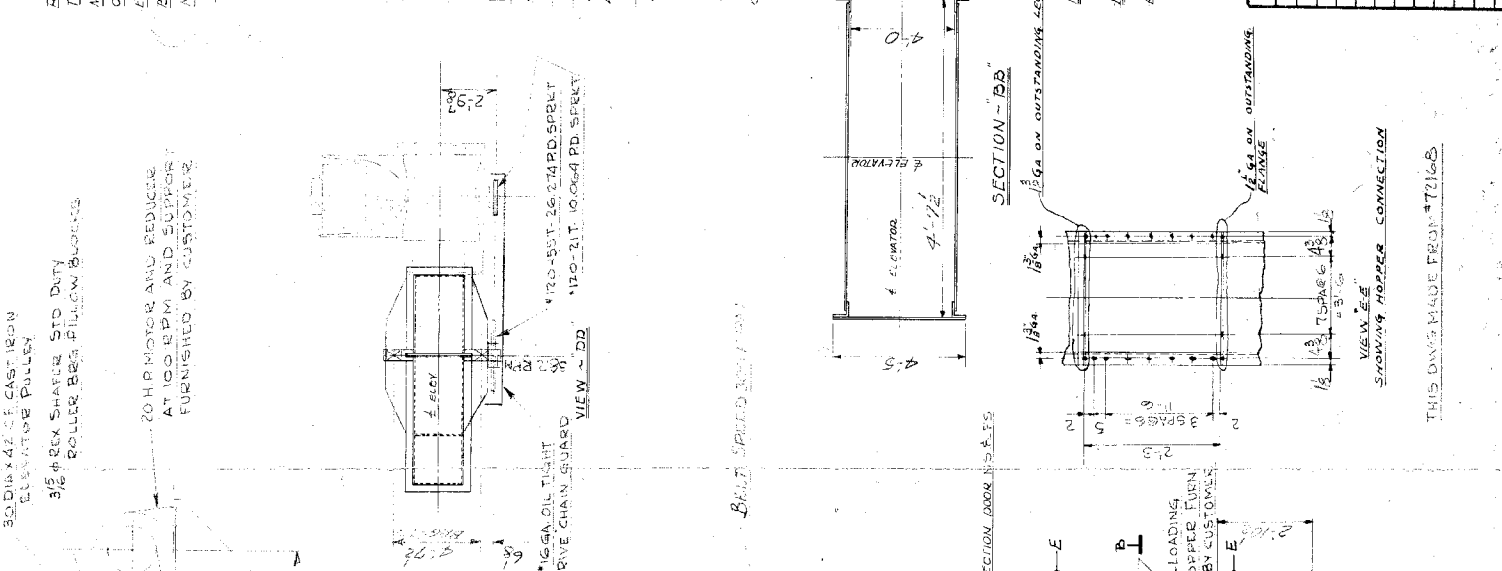
2 1/2" X 12" TRAVEL STYLE ESS C ROLLER BEG. PLUGS

3/4" BOLTS 2" PROJECTION

SECTION-AA

SECTION-BB

SECTION-CC



30" DIA. X 42" CF. CAST IRON WINGS TYPE DWALY

2 1/2" DIA. FOOT SHAFT MK # DNG #

2 1/2" X 12" TRAVEL STYLE ESS C ROLLER BEG. PLUGS

3/4" BOLTS 2" PROJECTION

THIS DRAWING MADE FROM 7216B

FOR CUSTOMERS APPROVAL.

This drawing was made in conformance with information furnished to us.

Extreme CHANGES in design or DELAY in approval of this drawing will affect our ability to make delivery as scheduled.

Please return our plans with your approval or comments noted thereon, no later than 11-18-54

to:

CHAIN BELT COMPANY

GENERAL PROCESS EQUIPMENT DIVISION

P. O. BOX 2022

MILWAUKEE 1, WISCONSIN

Approved for Construction

Nov 22 1954

NOTE: CASING TO BE MADE FOR DUST TIGHT CONSTRUCTION

PAINT NOTES: ALL STRUCTURAL STEEL TO RECEIVE ONE COAT OF STANDARD BLACK PAINT.

ALL BOLTS 3/4" DIA FOR 2 INCHES OF BOLTS SPACED UNLESS OTHERWISE NOTED

AND ALL BOLTS 3/4" UNLESS OTHERWISE NOTED

ALL BUSHINGS TO BE FITTED TO RECEIVING PART OF ALL MATERIAL TO BE USED

PAINT BEFORE SHIPMENT

GENERAL DRAWING NO. UNIT

CHAIN BELT COMPANY

MILWAUKEE, WIS. U. S. A.

TITLE GENERAL ARRANGEMENT OF REX VERTICAL CENTRIFUGAL DISCHARGE BUCKET ELEVATOR

CUSTOMER FLEMING & MOORE SUPPLY CO.

INSTALLED AT SAVANNAH GEORGIA

ENGINEERS

ORDER NO. F-92184 ESTIMATE NO. 31281 CUSTOMERS 2235-C

DRAWN BY AJE:EGH TRACED BY

IN CHARGE J.E.H.O. APPROVED BY F.H.D.

SOLE 4-11-0 DATE 11-9-54 DRAWING NO. F-92184-1

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return upon demand.

NUMBER

### GENERAL NOTES

REX BELT COMPANY B-D CENTRIFUGAL DISCHARGE BUCKET ELEVATOR  
 TO HANDLE REMOVED WHITE SUGAR  
 MATERIAL WEIGHT 55# / 100 LB.  
 CAPACITY 200 TONS PER HR.  
 ELEVATOR CONSISTS OF 15 X 8 1/2 STYLE A MALLEABLE IRON  
 BUCKETS ELECTRIC GALVANIZED & PAINTED IN  
 MOUNTING ON BELL SPOKES  
 BELT 3" WIDE, 6 PLY SIZ BIR BEING DONE FURNISHED  
 BY CUSTOMER. BELT LENGTH 70'-1"

320, 56 & 11/2, ELECTRIC GALVANIZED NORMALLY 7" HEAD  
 ATTACHMENT BOLTS WITH BLUE SQUARES MUST  
 BE 3/8" DIA. & 1/2" TH. LEAVING SQUARES  
 SQUARE 18 X 5/8 TO BE IN DISCHARGE BUCKETS AFTER  
 FABRICATING AND TO BE MADE WITH 7/8" WITH FELT  
 BETWEEN ALL BELL SQUARES 18 X 5/8, ALL BOLTS  
 TO BE ELECTRIC GALVANIZED

FURNISHED BY C.B. ZOHN COMPANY AND BIDDY CASE  
 AT 100 RPM AND SUPPORT FOR 5'-0"  
 ALL ELECTRICAL WIRING CONTROL BY MOTOR STARTER  
 ALL COPPER  
 ALL METAL BEARING AS INDICATED ABOVE WITH UNLUBED  
 AND CARBON'S HOLLER FOR BUCKET ATTACHMENT.  
 ELEVATOR FOUNDATION ANCHOR BOLTS SET IN PLACE  
 BOSS LAGS IN HOPPER  
 ACCESS TO HOOP MACHINE  
 ERECTION

### FOR CUSTOMER'S APPROVAL

This drawing was made in conformance with information  
 furnished to us.  
 Extensive CHANGES in design or DELAY in approval of  
 this drawing will affect our ability to make delivery as  
 scheduled.  
 Please return our print with your approval or comments  
 noted thereon, no later than 11-18-54.

CHAIN BELT COMPANY  
 GENERAL MANAGER  
 P. O. BOX 2022  
 MILWAUKEE 1, WISCONSIN

Approved for Construction  
 J. H. HOFFER  
 11-27-54  
 WJB

**NOTE:**  
 CASING TO BE MADE FOR DUST TIGHT CONSTRUCTION

**PAINT NOTE:**  
 ALL STRUCTURAL STEEL TO RECEIVE ONE COAT OF STANDARD GRACK  
 PAINT

ALL HOLES 2" DIA. FOR  
 ALL HOLES 3/4" DIA. FOR  
 ALL SURFACES IN CONTACT TO RECEIVE ONE COAT OF  
 ALL MATERIAL TO RECEIVE

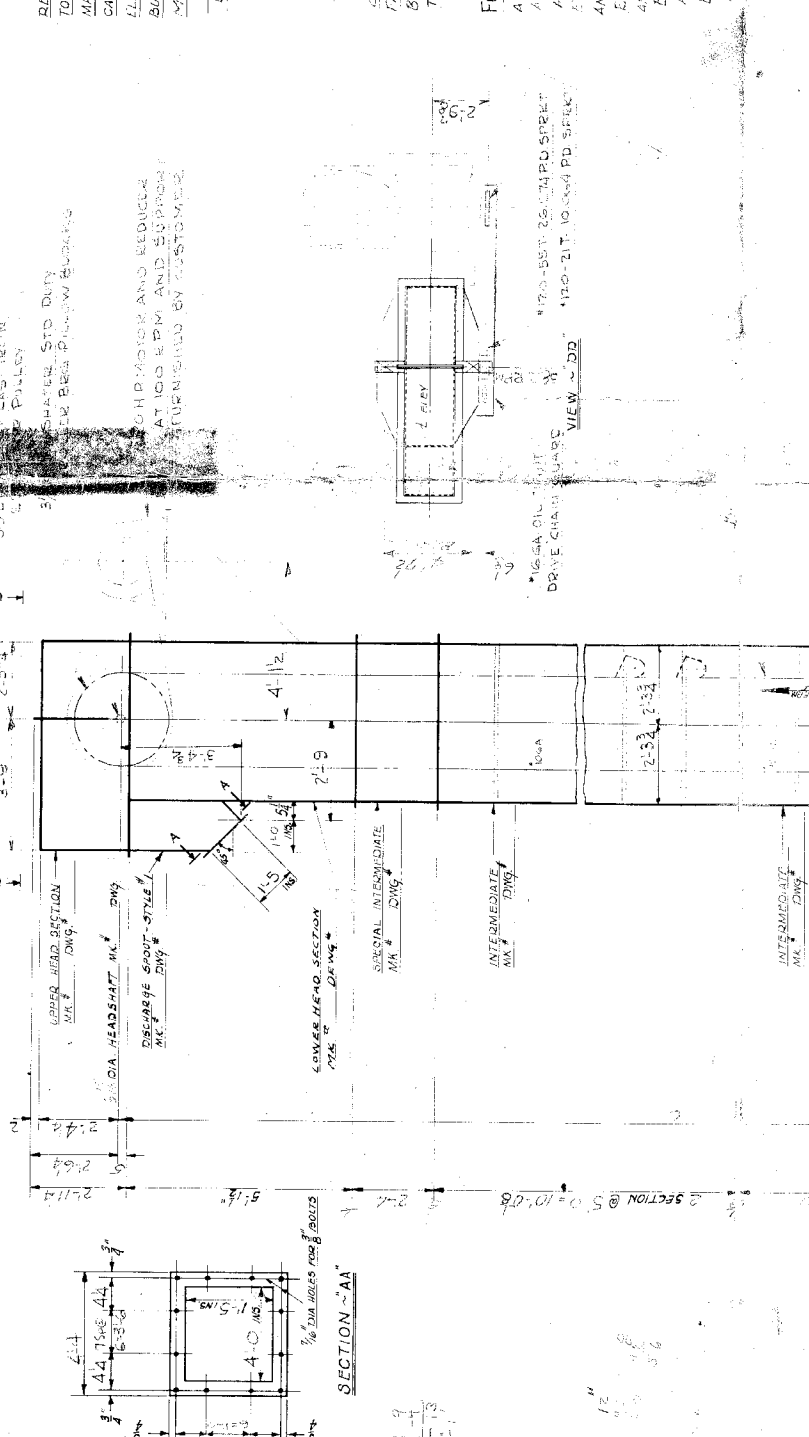
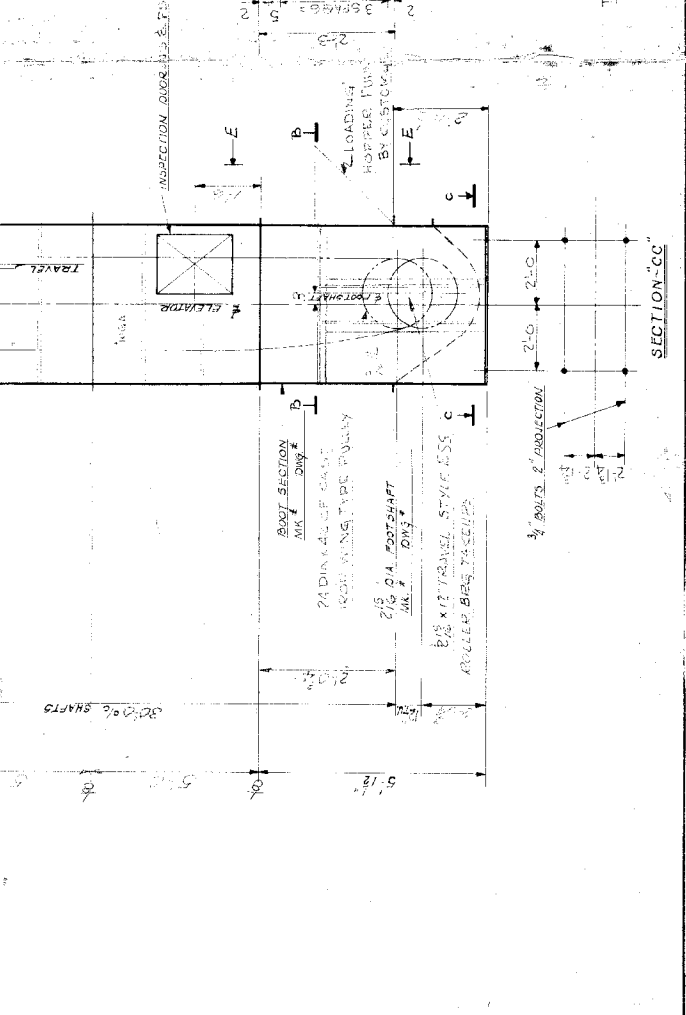
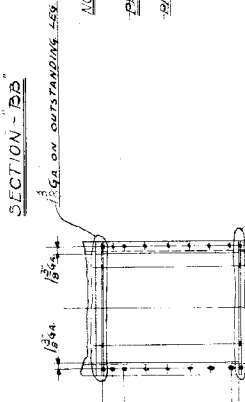
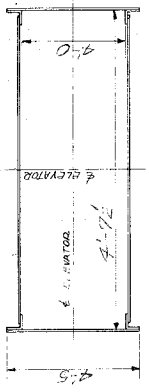
UNLESS OTHERWISE NOTED  
 THICK  
 PAINT BEFORE RIVETING  
 COAT OF  
 PAINT BEFORE SHIPMENT

GENERAL DRAWING NO. UNIT

**CHAIN BELT COMPANY**  
 MILWAUKEE, WIS. U. S. A.  
 TITLE GENERAL ARRANGEMENT OF REX VERTICAL  
 CENTRIFUGAL DISCHARGE BUCKET ELEVATOR  
 CUSTOMER FLEUNG & MOORE SUPPLY CO.  
 INSTALLED AT SAVANNAH, GEORGIA

ENGINEERS  
 ORDER NO. F-92194 ESTIMATE NO. 31281 CUSTOMER'S 2255-C  
 DRAWN BY LAJI A. HOOPER CHECKED BY J. H. HOFFER  
 IN CHARGE J. E. HO APPROVED BY J. H. HOFFER  
 SCALE 1/4"=1'-0" DATE 11-9-54 DRAWING NO. F-92194-1

### NEW SMALL PACKAGE ELEVATOR



CAST IRON  
 PULLEY  
 SHAFER STD DUTY  
 PER BIR BELT  
 GHP MOTOR AND REDUCER  
 AT 100 RPM AND SUPPORT  
 TURNISHED BY CUSTOMER

REVISED

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# FLEMING & MOORE SUPPLY CO.

*Industrial Supplies*

TELEPHONE 4-5191

CAROLAN AVENUE

SAVANNAH, GEORGIA

October 28, 1954

Savannah Sugar Refining Corp.  
P. O. Box 339  
Savannah, Ga.

Att: Mr. Walter F. Oetgen, Jr., Chief Engineer

Gentlemen:

We take pleasure in complying with your request of Mr. Fleming for quotation on elevator and conveying equipment and offer the following:

Item 1. UNIT - ONE REX BELT ELEVATOR

Speed - 300 FPM

Capacity - 200 TPH

Centers - 30'0" vertical

To Handle - Refined white sugar @55#/cu. ft.

Power - 20 HP gearmotor at ~~150~~ RPM furnished by you.

90 - 18" x 8" x 8-1/2" REX style "A", electro-galvanized malleable iron buckets, punched for attachment.

630 - 5/16" dia. x 1" long electro-galvanized Norway #1 head attachment bolts with one square nut and one leather washer each.

1 - Footshaft assembly consisting of:

- 1 - CFS shaft, 2-15/16" dia. x 5'0" long, plain.
- 1 - 24" dia. x 42" crown face cast iron wing type pulley. Bore and setscrew.
- 2 - 2-15/16" dia. x 12" travel REX Shafer, style "ESS", standard duty roller bearing takeups.

1 - Headshaft assembly consisting of:

- 1 - CFS shaft, 3-15/16" dia. x 5'9" long, with two keyseats and two fitted keys.

100 RPM  
Auto Belt →

- 1 - 30" dia. x 42" crown face cast iron elevator pulley. Bore and keyseat.
  - 2 - 3-15/16" dia. REX Shafer standard duty roller bearing pillow blocks.
  - 1 - #120 - 70T - 33.434" P. D. REX cast iron cut tooth roller chain drive sprocket. Bore and keyseat.
- 15 - Lineal feet of #120 REX roller drive chain.
- 1 - #120 - 18T - 8.638" P. D. REX steel cut tooth roller chain drive sprocket. Bore and keyseat.
  - 1 - #16 ga. steel oil-tight drive chain guard.
  - 1 - Dust-tight hot dip galvanized steel elevator casing, 48" x 55-1/2" inside x 30'0" vertical centers, consisting of:

Boot section of structural steel corner and flange angles, 31/6" steel side plate, curved boot plate, and two large cleanout doors.

Intermediate casing made up in sections of structural steel corner and flange angles and #10 ga. steel plate, with two inspection doors in one section. Sections will be made up in approximate 5'0" lengths.

Head section made up of structural steel corner and flange angles, and #10 ga. steel plate, with split hood of #10 ga. steel plate, and style #1 stub discharge spout of #10 ga. steel plate with 3/16" steel bottom plate.

Above for - \$6,586.74

FOB: Milwaukee, Wisconsin.

Terms: Net 10th prox.

Shipment: 8 weeks.

- Item 2.
- 4 - 16" R.H. Standard Helicoid Screw Conveyors 11'9" long, mounted on 3-1/2" standard pipe bushed for 3" couplings. Hot Dipped Galvanized.
  - 5 - 16" Angle Type conveyor boxes 10'0" long made of #10 gauge steel with Nu-Weld steel flanges. With feet and a #14 gauge Tite-Seal cover. Hot Dipped Galvanized.

1395.50

1134.25

831.50

231.75

321.25

1196.75

5111.00

6586.74

\$ 11,697.74

\$ 9906.93

- 1 - 16" x 3" O. P. Anti-friction ball bearing box end with feet and with seal plate. End Plate, hot dipped galvanized.
- 1 - 3" x 7" Projection tail end (12" Overall)
- 1 - 16" Chevron Timken roller bearing end thrust box end with feet, complete with a 3" x 6" Projection drive shaft with keyseat. End plate, Hot Dipped Galvanized.
- 3 - 16" x 3" Style #26B hangers with W.I. Bearings, Hot Dipped Galvanized.
- 3 - 3" Case Hardened Conveyor couplings.
- 24 - 3/4" x 5" Udylited Tem U Lac coupling bolts

Above for

*\$1449.03*  
~~\$1,395.50~~ *low*

- Item 3.
- 3 - 16" R.H. Standard Helicoid Screw Conveyors 11'9" long mounted on 3-1/2" standard pipe bushed for 3" couplings. Hot Dipped Galvanized.
  - 4 - 16" Angle Type Conveyor Boxes 10'0" long, made of #10 gauge steel with Nu-Weld steel flanges with feet and a #14 gauge Tite-Seal cover. Hot dipped galvanized.
  - 1 - 16" x 3" O. P. Anti-friction ball bearing box end with feet and with seal plate. End plate Hot Dipped Galvanized.
  - 1 - 3" x 7" Projection tail end (12" Overall)
  - 1 - 16" Chevron Timken roller bearing end thrust box end with feet, complete with a 3" x 6" proj. driveshaft with keyseat. End Plate Hot Dipped Galvanized.
  - 2 - 16" x 3" Style #26B hangers with W.I. Bearings Hot Dipped Galvanized.
  - 2 - 3" Case hardened conveyor couplings.
  - 12 - 3/4" x 5" Udylited Tem U Lac coupling bolts.

Above for

*\$1175.46*  
~~\$1,134.25~~ *low*

- Item 4. 5 - 9" R.H. XX Helicoid Screw Conveyors 9'10" long mounted on 2-1/2" standard pipe bushed for 2" cplgs. Hot Dipped Galvanized.
- 5 - 9" Angle type conveyor boxes 10'0" long, made of #10 gauge steel with Nu-Weld steel flanges with feet and a #14 gauge Tite-Seal cover. Hot Dipped Galvanized.
- 1 - 9" x 2" O. P. Anti-friction ball bearing box end with feet and with seal plates. End plate Hot Dipped Galvanized.
- 1 - 2" x 5-3/4" Projection tail end (10-1/2" overall).
- 1 - 9" Chevron Timken roller bearing end thrust box end with feet, complete with a 2" x 5" proj. drive shaft with K/S End Plate, hot dipped galvanized.
- 4 - 9" x 2" Style #26B hangers with W.I. Bearings Hot Dipped Galvanized.
- 4 - 2" Case hardened conveyor couplings.
- 20 - 5/8 x 3-5/8" Udylited Tem U Lac coupling bolts.

883-03

Above for - \$831.50 low

- Item 5. 10 - 17" x 17" #12 gauge welded steel stub discharge spouts with flange, no slide. Hot Dipped Galv. To be shipped loose.
- 5 - 10" x 10" #14 gauge welded steel discharge spouts ditto

Above for - \$231.75 low

- Item 6. ~~16" R.H. Standard Helicoid Screw Conveyors 11'9" long mounted on 3-1/2" standard pipe bushed for 3" cplgs. Hot Dipped Galvanized.~~
- 2 - 16" x 3" Style #26B hangers with W.I. brgs. Hot Dipped Galvanized.
- 2 - 3" Case hardened Conveyor couplings.

ROBOW

?  
3" ribbon  
Ordered -

\$466.50

Above for - (\$321.25) high

- Item 7. 10 - 6" R.H. XX Helicoid Screw Conveyors 9'10" long mounted on 2" standard pipe bushed for 1-1/2" cplgs. Hot Dipped Galvanized.
- 10 - 6" Angle type conveyor boxes 10'0" long made of #10 gauge steel with Nu-Weld steel flanges with feet and a #16 gauge Tite-Seal cover. Hot dipped galvanized.
- 1 - 6" x 1-1/2" O. P. Anti-friction ball bearing box end with feet and with seal plate. End plate hot dipped galvanized.
- 1 - 1-1/2" x 4-3/4" Projection tail end (9-1/2" Overall)
- 1 - 6" Chevron Timken roller bearing end thrust box end with feet, complete with a 1-1/2" x 5" projection drive shaft with K. S. End Plate Hot Dipped Galvanized.
- 9 - 1-1/2" Case hardened conveyor couplings.
- 40 - 1/2" x 3" Udylited Tem U Lac coupling bolts.

Above for - ~~\$1,196.75~~ *low*

FOB: Hammond, Ind., full freight allowed to Savannah, Ga.  
 Terms: 2% 10th prox., net 30 days.  
 Shipment: 4 to 6 weeks.

Prices quoted above for screw conveyors, troughs and fittings do not include assembling the conveyors as units.

The opportunity to quote on this equipment is greatly appreciated and we assure you if favored, your order will have our prompt and careful attention.

Very truly yours,

FLEMING & MOORE SUPPLY CO.

*E. E. Thames*  
 E. E. Thames, Sales Manager

EET:e

cc: Mr. W. E. Sickel, Purchasing Agent

10-31-75

# SMALL PACKAGE ELEVATOR

CHANGE IN BELT WIDTH -

36" to 18" wide

BELT - 18" WIDE 75'-0" LONG

BUCKETS - 16 X 8 ON 9" CC

BELT SPEED - 345.6 FPM

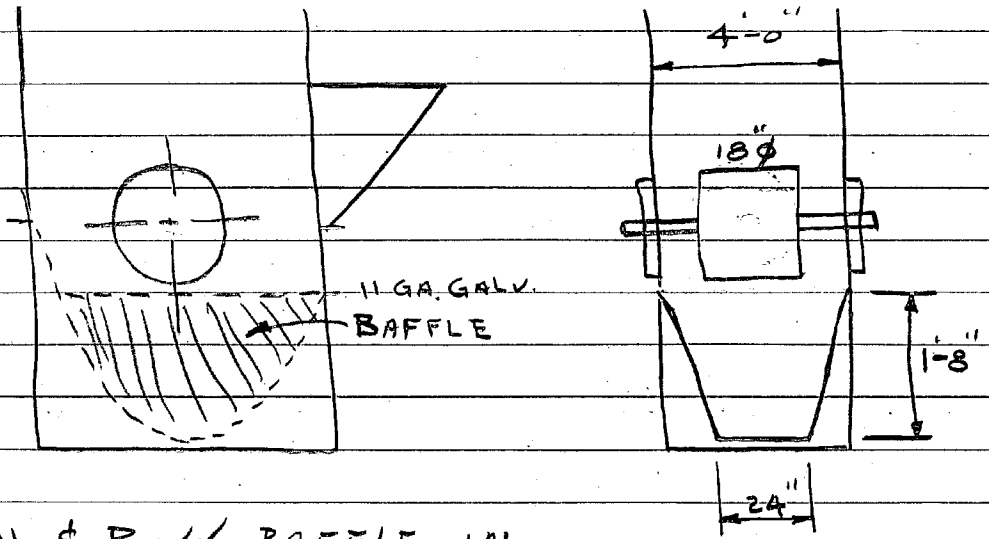
MOTOR - 15 HP GEARMOTOR @ 100 RPM

HEAD PULLEY - 30"  $\phi$  @ 44 RPM

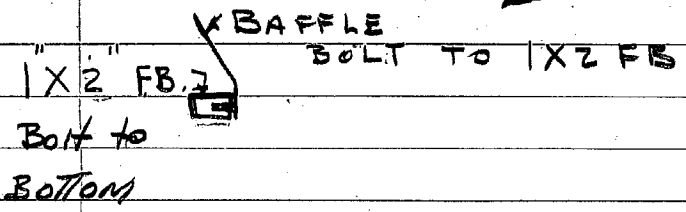
HEAD SHAFT - 3  $\frac{15}{16}$ "  $\phi$

HEAD SHAFT SPROCKET - 55T RC 120 - 3  $\frac{15}{16}$ "  $\phi$

GEARMOTOR " - 24T RC 120 - 2  $\frac{1}{8}$ "  $\phi$



DRILL & BOLT BAFFLE IN BOTTOM OF BOOT USING -



# **EXHIBIT E**



SSR  
Powdered Sugar Elevator JH-32-01

POWDER SUGAR ELEVATOR:

1/11/88

@ 44 RPM 16" O.C.  $C = \pi D = \pi \frac{16}{12} = 4.71 \text{ FT.}$

$\text{FPM} = 44(4.71) = 207.24 \text{ FPM} \div \left(\frac{16}{12}\right) = 155.44 \text{ BUCKET/MIN}$   
 $(155.44 \text{ BUCKET/MIN}) \times (3 \text{ LB/BUCKET}) = 466.32 \text{ LB/MIN}$

@ 58 RPM 16" O.C.  $C = 4.71 \text{ FT}$

$\text{FPM} = 58(4.71) = 273.18 \text{ FPM} \div \left(\frac{16}{12}\right) = 204.89 \text{ BUCKET/MIN}$   
 $(204.89 \text{ BUCKET/MIN}) \times (3 \text{ LB/BUCKET}) = 614.67 \text{ LB/MIN}$

@ 58 RPM 12" O.C  $C = 4.71 \text{ FT.}$

$\text{FPM} = 58(4.71) = 273.18 \text{ FPM} \div \left(\frac{12}{12}\right) = 273.18 \text{ BUCKET/MIN}$   
 $(273.18 \text{ BUCKET/MIN}) \times (3 \text{ LB/BUCKET}) = 819.54$

SUGAR LOAD

(2ND FLR)	100LB :	3 @ 100 LB/MIN	=	300 LB/MIN
(3RD FLR)	12/2 :	1 @ 60 LB/MIN	=	60 LB/MIN
	2A/1 :	2 @ 50 LB/MIN	=	<u>100 LB/MIN</u>
				460 LB/MIN

# **EXHIBIT F**

SSR  
Special Sugar Elevator Sweco JO-20-01

# SCALPING ELEVATOR DRIVE

PRESENT DRIVE 5HP WEST- 100 RPM.

MOTOR 24T RC-80 2 1/8" BORE

ELEVATOR 60T RC-80 1 5/16" "

HEAD SHAFT PULLEY 20"

220 FPM

40 RPM

BUCKET CAPACITY -

10X8X7 TYPE SC .19ft<sup>3</sup> BUCKETS

40'0" CENTERS

16" CENTER BUCKETS.

.19ft <sup>3</sup>	41.8 ft <sup>3</sup> /min
$\begin{array}{r} 220 \\ 380 \\ \hline 38 \end{array}$	$\begin{array}{r} 50 \\ 20900 \#/\text{min} \\ 40 \\ \hline 2/83600 \\ 41.8 \text{ T.P.H.} \end{array}$
41.8 ft <sup>3</sup> /min	

## NEW DRIVE

MOTOR 30T RC-80 2 1/8" BORE

ELEVATOR 60T RC-80 1 5/16" "

260 FPM

50 RPM

.19ft <sup>3</sup>	49.4 ft <sup>3</sup> /min
$\begin{array}{r} 260 \\ 1140 \\ 38 \\ \hline 49.40 \end{array}$	$\begin{array}{r} 50 \#/\text{ft}^3 \\ 24700 \#/\text{min} \\ 40 \\ \hline 2/98800 \\ 49.4 \text{ T.P.H.} \end{array}$
49.4 ft <sup>3</sup> /min	

Had to Order One!

CHANGED 5HP GEAR MOTOR TO 7 1/2 HP.

this change will affect aug 19, 1952

Shasta 2015 x 2 x TPH

2 h.p.

500



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return upon demand.



SWECO SYSTEM AMPERAGES

ITEM #	EMPTY	FULL	HEATERS
1	2.6	3.2	5.91
2	4.4	4.8	10.5
3	4.0	4.4	8.68
4	2.2	2.4	3.38
5	2.3	5.2	5.38
6	4.0	4.6	8.68
7	3.6	5.2	10.5
8	—	2.6	5.38
#1 SWECO	2.4	2.7	3.7
#2 "	"	2.5	"
#3 "	"	"	"
#4 "	"	"	"
#5 "	"	"	"

READINGS TAKEN 5/3/74

JBT