



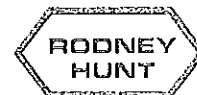
**TOWN OF STRATFORD
BID #2017-027**

**ADDENDUM #1
Issued 7/25/17**

Tide Gate Repairs at Ferry Creek Pump Station

Specifications and drawings for installing sluice gates are attached.

Michael Bonnar, Purchasing Agent



RODNEY HUNT COMPANY
Orange, Massachusetts

TESTING PROCEDURE FOR MANUALLY
OPERATED SLUICE AND SLIDE GATES

1. Check hoist, stem guide and gate attaching bolts for proper tightness.
2. Apply tension to stem and check stem guides for proper alignment. There must be a uniform clearance between the operating stem and all stem guides.
3. Check gate guide groove and clean any foreign matter. Also, remove foreign matter from top of disc - especially between disc and frame.
4. Remove locking plates from sluice gates and fully open gate. With the gate in full open position, check frame and disc seat facings and wedge facings for paint, concrete or other foreign matter. Clean threaded portion of stems and lubricate with a high grade grease. Operate with clean stem grease only.
5. Check stop bar on flush bottom gates for concrete splatter or other debris.
6. Sluice gate only - Fully close gate and check wedge attaching studs and lock nuts for proper tightness. If adjusting is required, see Page 12 - 13 of Instruction Manual 79-4 or 82-4. Adjust stem stop collar to within 1/16" of the top of the hoist operating nut and lock in place.



MAINTENANCE INSTRUCTIONS

GATES

No periodic maintenance is required for sluice or slide gates. However, gates should be operated periodically (at least every three months). Slide gates should be checked at regular intervals (at least every six months) for signs of corrosive attack.

WARNING - Non-Rising Stem Gates

Non-rising stem gates generally require a special maintenance program. If the level of the water or sewerage rises above the top of the opening, the threads on the stem may become coated with grit. Under these conditions, frequent use of the gate will wear the threads in the thrust nut creating a potentially dangerous situation since an excessively worn thrust nut may not support the weight of the gate, causing it to fall. Therefore, the following maintenance procedure must be followed:

- A. The stem and thrust nut must be clean and greased at all times.
- B. If the gate is cycled on the average of once a week, the thrust nut should be removed every year and inspected for wear. (More frequent inspection is required after the first signs of wear or if the frequency of operation is greater or the conditions are very severe.)
- C. Replace the thrust nut as soon as excessive wear is evident.

MANUAL OPEPATORS

At least once a year, all grease fittings on manual floor stands should be lubricated with a small amount of heavy duty grease which will not harden in cold weather nor become liquid in warm weather. The following lubricant is recommended:

Mobilgrease Special

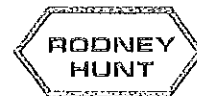
ELECTRIC AND HYDRAULIC OPERATORS

Periodic maintenance schedules should be set-up in accordance with the equipment supplied and outlined in the manufacturer's instruction manual.

OPERATING STEMS

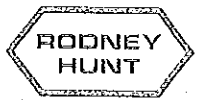
It is critical that operating stems be periodically cleaned and greased. Even though some environmental conditions are harsher than others and the use of pipe covers will protect stems, they still need to be cleaned and greased at least once every six months, more often if the grease becomes dirty. The following lubricants are recommended:

Shell Alvania #2EP
Tycol Azepro II
Mobilox Grease #2EP
Valvoline Val-Lith #2EP



MAINTENANCE & LUBRICATION SCHEDULE
FOR
SLUICE GATE EQUIPMENT & SLIDE GATES

<u>DESCRIPTION</u>	<u>PROCEDURE</u>	<u>FREQUENCY</u>	<u>RECOMMENDED LUBE</u>
Sluice Gate	Operate gate (refer to Instruction Manual WCE 79-4 or 82-4)	3 Months	None
Slide Gate	Operate gate and check for wear or any corrosive attack.	3 Months	None
Operating Stem	Inspect for wear and corrosion around threads. Clean and re-grease. Keep threads greased at all times.	6 Months	Shell Alvania #2EP Tycol Azebro II Mobilox Grease #2EP Valvoline Val-Lith #2EP Shell Oil Co. Tidewater Oil Co. Mobil Oil Co. Ashland Oil & Refining Co.
Manual Operators	Lubricate through grease fittings on the top and/or sides of gear case.	6 Months - 1 Year	Shell Alvania #2EP Tycol Azebro II Mobilox Grease #2EP Valvoline Val-Lith #2EP Shell Oil Co. Tidewater Oil Co. Mobil Oil Co. Ashland Oil & Refining Co.
Flap Valves	Lubricate through grease fittings located on hinge arms.	3 - 6 Months	Any heavy-duty waterproof lubricant.



OPERATION AND MAINTENANCE
OF
FLAP VALVE EQUIPMENT

INSTALLATION

To prevent damage in transit, Rodney Hunt Flap Valves are shipped with the cover locked to the body by two hex-head bolts which should remain in place until installation is completed. To install, lift the flap valve by the upper hinge posts. When it is to be attached to pipe or wall thimble, place a gasket between the valve and the flange. When it is to be attached to concrete with anchor bolts, the valve should not be bolted tightly to the concrete. The flange should be shimmed away from the concrete and approximately one inch of grout placed between the flange of the valve and the concrete wall. After installation, the two locking bolts should be removed. If adjustment of the upper hinge post is necessary to increase or decrease the sensitivity, the locking bolts must be replaced, the upper hinge pins removed and the hinge post turned in or out of the frame casting. Both hinge posts should be adjusted identically. Remove the locking bolts only after hinge pins are replaced and secured with cotter pins and washers.

MAINTENANCE

Maintenance of the valve consists of periodic lubrication through the fittings provided on the valve. Any heavy-duty water proof lubricant may be used.



DRAWING LIST

Instructions for Cross Referencing Engineering Drawings

33334-2 1 of 2 Specification Sheet
33334-2 2 of 2 Specification Sheet

Item 1

E-29130	Installation:	168" x 84" Sluice Gate
C-17617	Assembly:	168" x 84" Sluice Gate
E-29129	Detail:	168" x 84" Wall Thimble
D-30537	Sub-Assy:	Cylinder Support Base
E-29158	Inst/Detail:	Limit Switch
E-29157	Sub-Assy:	Limit Switch Mounting Plate

Item 2

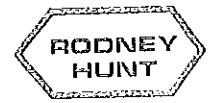
See Hydraulic Section Hydraulic Power Package
In This Manual

Item 3

E-29132	Installation:	60" Dia. Flap Valve
C-12501	Assembly:	60" Dia. Flap Valve
E-29131	Detail:	60" Dia. Wall Thimble
E-29159	Detail:	60" Dia. Flange Pipe Section

Item 4

E-29133	Installation:	6" Dia. Flap Valve
C-4902	Assembly:	6" Dia. Flap Valve



INSTRUCTIONS FOR CROSS REFERENCING ENGINEERING DRAWINGS

ENGINEERING DRAWINGS

The Rodney Hunt Company uses the following system of preparing drawings for our customers. For each order we prepare an installation drawing incorporating as many features as possible of the structure in which the gates and other appurtenances are to be installed. The installation drawing is the key to further cross-referencing of Rodney Hunt drawings. Assembly and detail drawing numbers for the gates, wall thimble, hoist, stem guide, anchor bolts, and all other equipment are indicated on the installation drawing.

The installation drawing coordinates the correct equipment to the particular location installation. It indicates layout information for locating attaching hardware for the gate, hoist, stem guides, and all other equipment.

Many of the assembly and detail drawings are tabulated to include variations in drilling, material or size. The specific drawing number for each piece of equipment is indicated on the installation drawing.

Since all applicable drawings were submitted for approval and/or distribution, only equipment drawings which specifically apply to maintenance and services are included in this manual.

RODNEY HUNT COMPANY
 SLUICE GATE MATERIAL SPECIFICATIONS
 C H NICKERSON CO INC 06/01/83 SPEC SHEET #1 OF 2

13334-2 COMB #2 PROJ. ENGR. PGV

PAINT: GATES CLEAN: SSSP SP6
 THIMBLES > PRIMER: -NONE-
 STEM GUIDES / FINISH: KOPPERS BIT TANK SOLUTION 1 COAT 1.5 MIL THK.
 HOIST CLEAN: SSSP SP6
 PIPE COVERS > PRIMER: KOPPERS PUG PRIMER 1 COAT 1.5 MIL THK.
 / FINISH: KOPPERS GLAMORTEX 501-306 2 COATS 1.5 MIL THK EA.

FRAME	. CI	ASTM A126 CLB W/2%NI
DISC	. CI	ASTM A126 CLB W/2%NI
GUIDES	. CI	ASTM A126 CLB W/2%NI
STUDS	BRZ	ASTM B98 AL655
HEX NUT	BRZ	ASTM B98 AL655
TOP WEDGE	BRZ	ASTM B584 AL872
TOP SEAT	BRZ	ASTM B98 AL655
FASTENERS	BRZ	ASTM B98 AL655
SIDE WEDGE	BRZ	ASTM B584 AL872
FASTENERS	BRZ	ASTM B98 AL655
BOTTOM WEDGE	BRZ	ASTM B584 AL872
BOTTOM SEAT	BRZ	ASTM B98 AL655
FASTENERS	BRZ	ASTM B98 AL655
SEAT FACING	. BRZ	ASTM B98 AL655
SEAL	SEAL	NEOPRENE D2000
YOKE	. ST	ASTM A36
STOP COLLAR	. CI	ASTM A126 CL B
THRUST NUT	BRZ	ASTM B584 AL872
WALL THIMBLE	. CI	ASTM A126 CLB W/2%NI
W T STUD	BRZ	ASTM B98 AL655
W T NUT	BRZ	ASTM B98 AL655
ANCHOR BOLT	. SS	ASTM A276 316 COND A
ANCHOR NUT	. SS	ASTM A276 316 COND A
STAND NUT	BRZ	ASTM B584 AL865
STEM-THREAD	. SS	ASTM A276 316 COND A
STEM-PLAIN	. SS	ASTM A276 316 COND A
GASKET	GASK	BUTYL RUBBER MASTIC

REMARKS:

ALL EXPOSED, MACHINED FERROUS SURFACES THAT ARE UNPAINTED SHALL BE COATED WITH PROTECTIVE GREASE.

W
W
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P

R. O. D. N. E. Y. H. U. N. T. C. O. M. P. A. N. Y.

S L U I C E G A T E M A T E R I A L S P E C I F I C A T I O N S

S P E C S H E E T # 2 O F 2

C H N I C K E R S O N C O 06/01/83 P R O J . E N G R . P G V

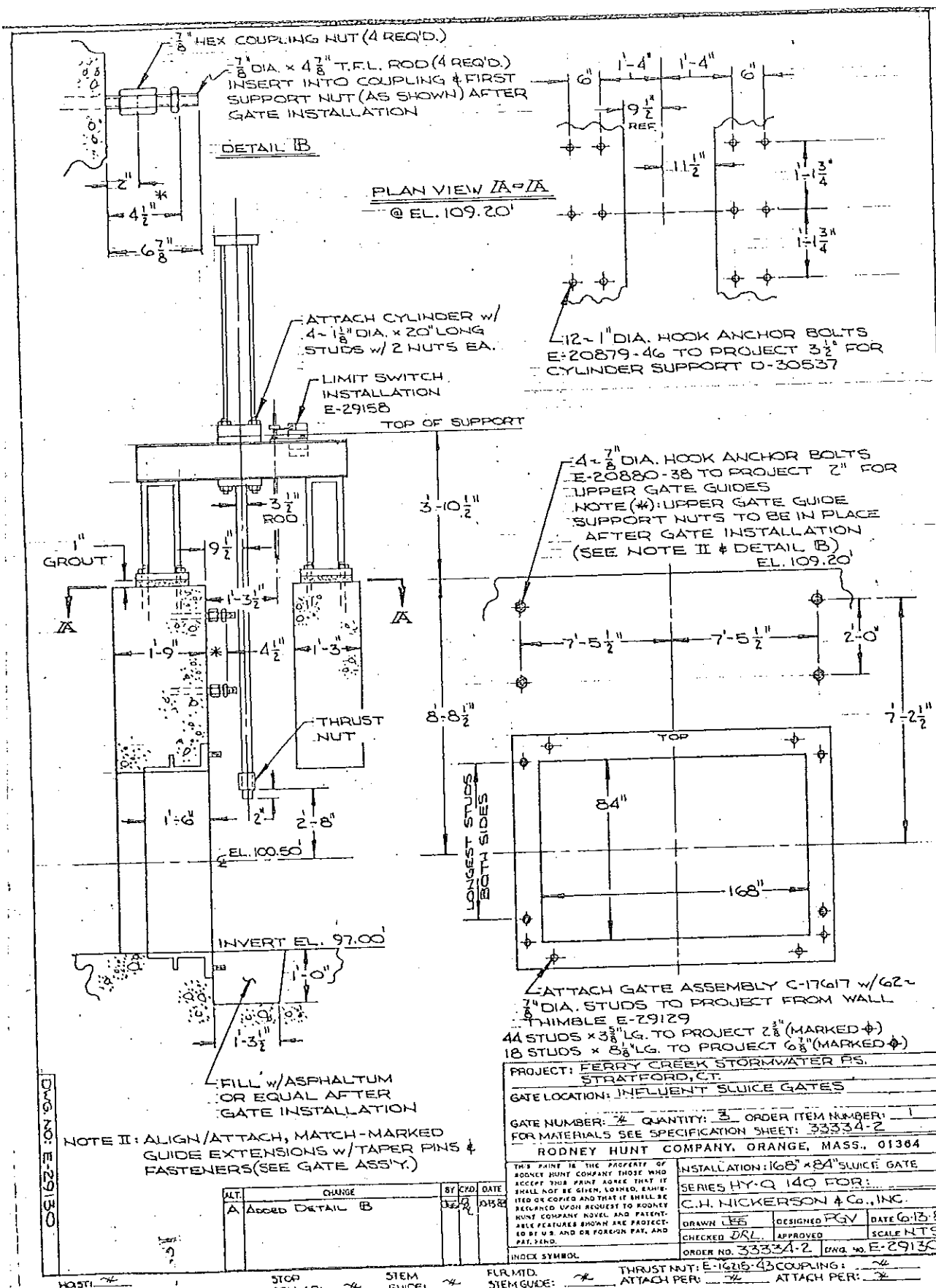
33334-2

COMB #1

PAINT:	GATES	CLEAN:	SSPC SP6		
	THIMBLES >	PRIMER:	-NONE-		
	STEM GUIDES /	FINISH:	KOPPERS BIT TANK SOLUTION	1 COAT	1.5 MIL THK.
	HOIST	CLEAN:	SSPC SP6		
	PIPE COVERS >	PRIMER:	KOPPERS PUG PRIMER	1 COAT	1.5 MIL THK.
	/	FINISH:	KOPPERS GLAMORTEX 501-306	2 COATS	1.5 MIL THK. EA.
	WALL THIMBLE	CI	ASTM A126 CL B		
	W T STUD	BRZ	ASTM B98 AL655		
	W T NUT	BRZ	ASTM B98 AL655		
	GASKET	GASK	BUTYL RUBBER MASTIC		
	FLAP VALVES -				
	F V BODY	CI	ASTM A126 CL B		
	F V COVER	CI	ASTM A126 CL B		
	HINGE ARM	BRZ	ASTM B584 AL865		
	HINGE PIN	BRZ	ASTM B98 AL655		
	SEAT FAC BOD	SEAL	NEOPRENE D2000		
	REMARKS:				

ALL EXPOSED, MACHINED FERROUS SURFACES THAT ARE UNPAINTED SHALL BE COATED WITH PROTECTIVE GREASE.

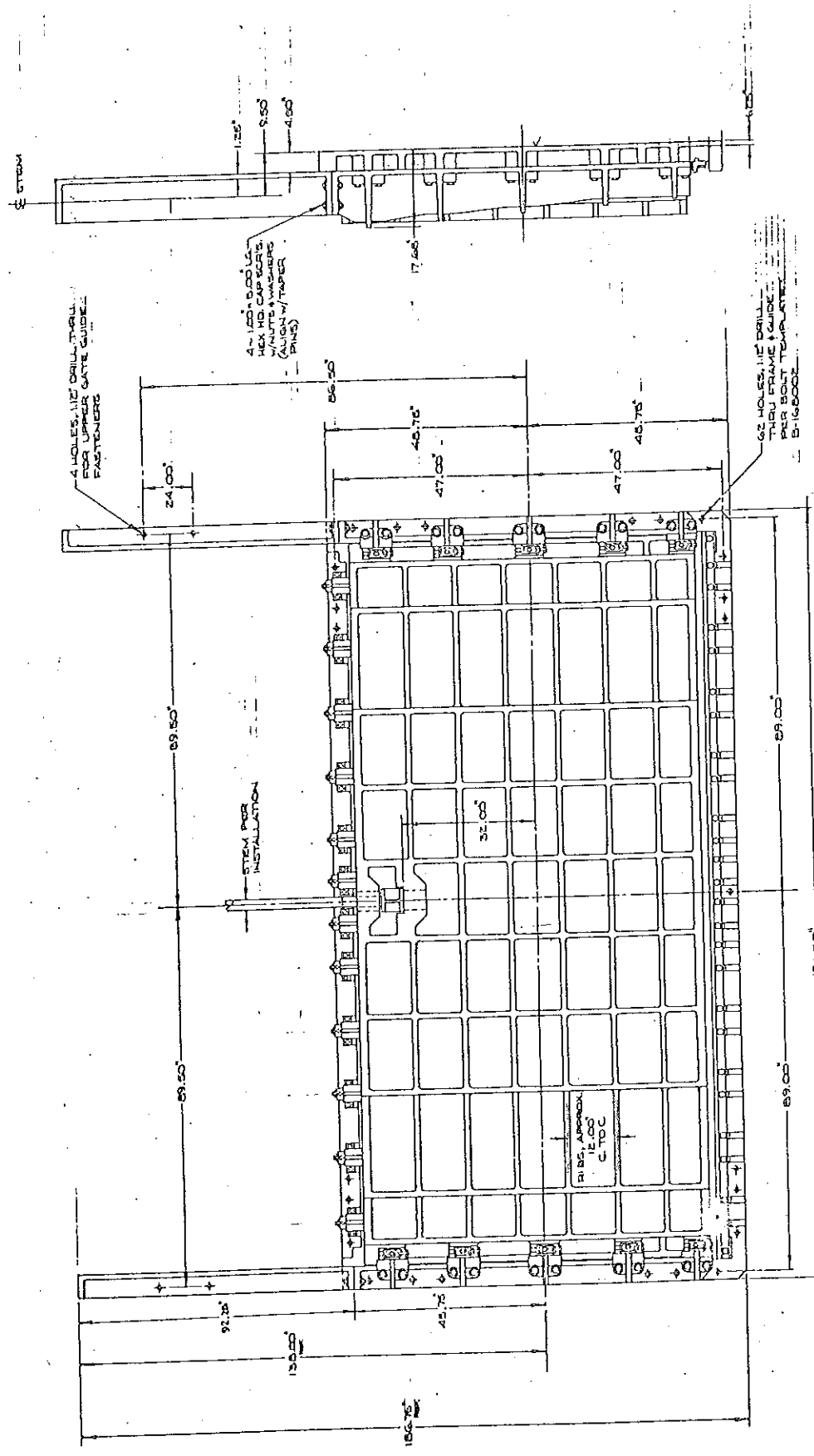
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A
R



DWG. NO: E-2915B

HASTI

FRAME	E-715-13-01
BASE	E-715-13-01
GUIDE	E-715-13-01
GUIDE EXT.	E-23-10-01
TOP WEDGE	E-23-10-01
SIDE WEDGE	E-23-10-01
STOP BAR	E-23-10-01
STOP BAR	E-23-10-01
STOP BAR	E-23-10-01
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STOP BAR	E-23-10-01



13.36

RODNEY HUNT COMPANY, GRANDE MASS. 01364

ASSEMBLY 168 52 SLUICE GAT

SERIES HY-0 140

DRAWN BY: [blank]

DATE: 6.10.67

SCALE: 1/8" = 1'-0"

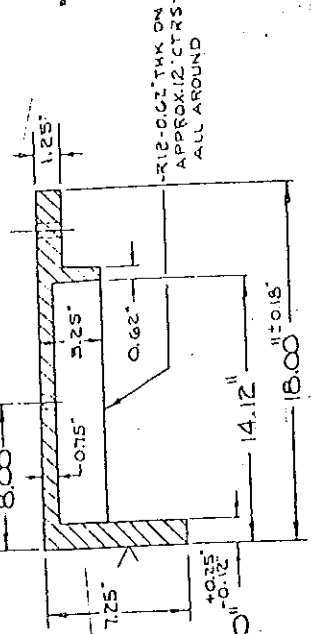
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INDEX NO: C-1759.7

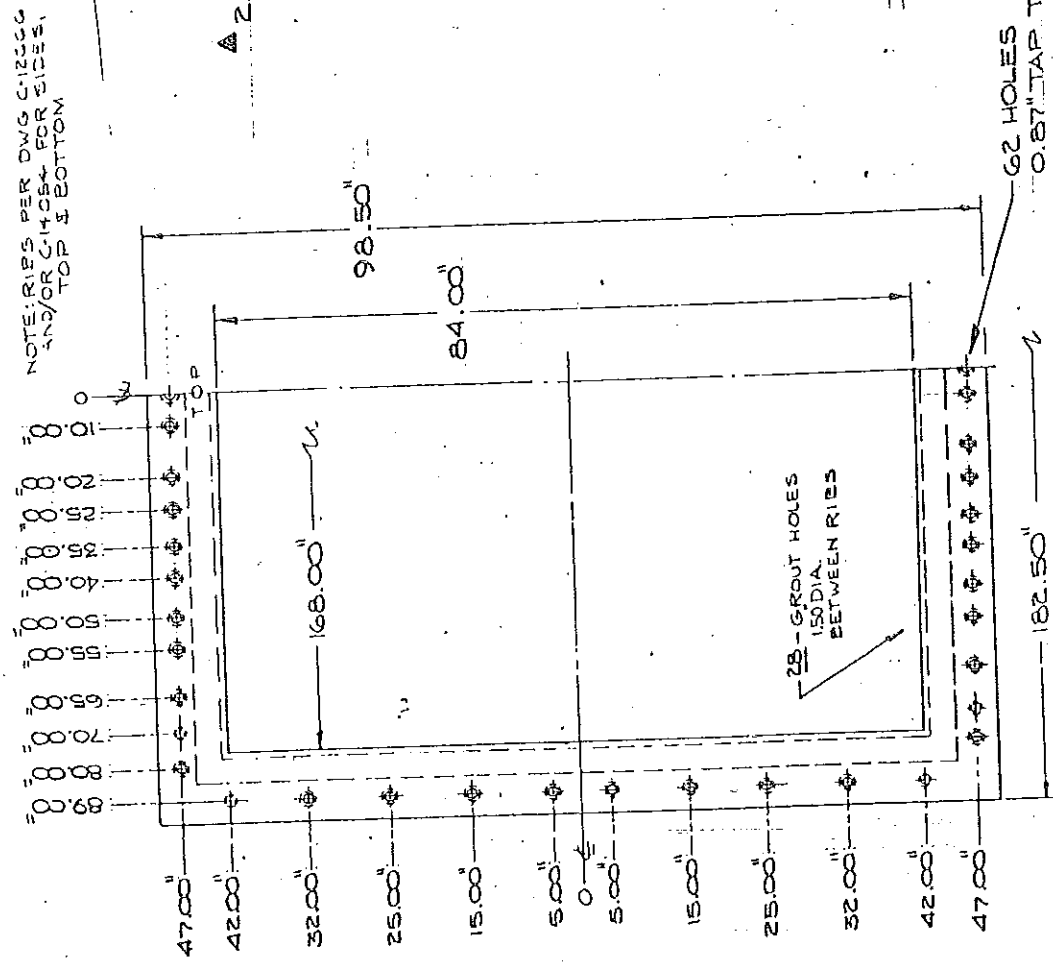
BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE
CHANGE		CHANGE		CHANGE		CHANGE		CHANGE	

NOTES

NOTE: RIBS PER DWG C-12564 AND/OR C-14084 FOR SIDES, TOP & BOTTOM



TYP. SECTION EXCEPT GROUT HOLES ON BOTTOM ONLY



PATTERN NO. Z-D181-00

A SPECIAL

13,300	RODNEY HUNT COMPANY, ORANGE, MASS. 01364
DETAIL: 168" X 84" WALL	THIMBLE - F-SECTION
X 18" DEEP	DESIGNED BY DATE 6-7-83
DRAWN JSS	CHECKED DRG APPROVED
SCALE NTS	DWG. NO. E-29129

BY	DATE	CHANGE	BY	DATE	CHANGE

TEMPLATE NO. B-168002

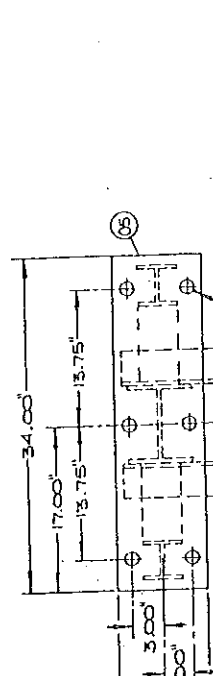
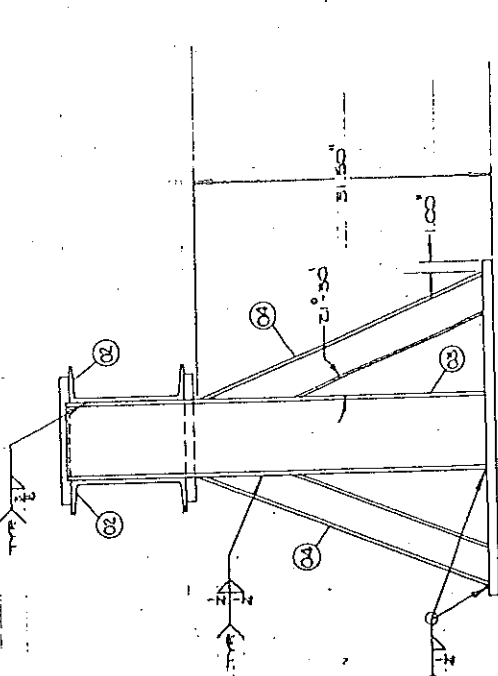
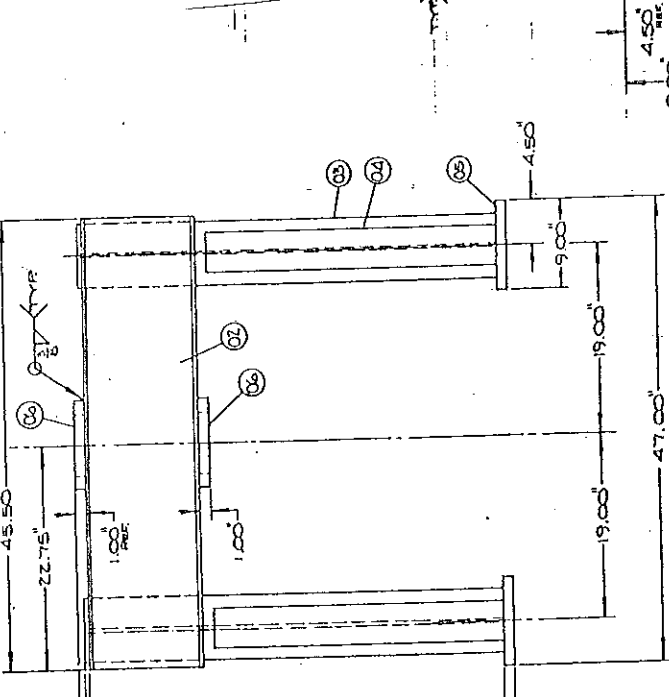
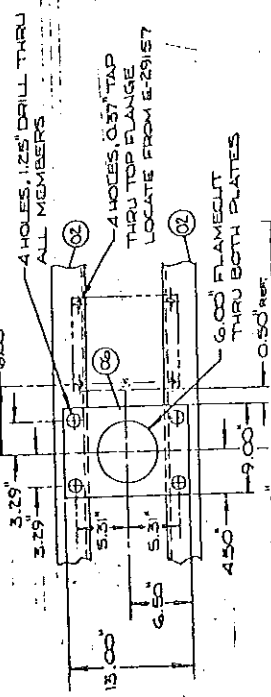
SYMMETRICAL ABOUT C/S

62 HOLES 0.87" TAP THRU

28 - GROUT HOLES 150 DIA. BETWEEN RIBS

NOTES

- (02) CHANNEL MC 12 x 30.9 x 45.50" / A36 STL ~ 2 REQ'D.
- (03) WB x 24" x 44.00" / A36 STL ~ 2 REQ'D.
- (04) W4 x 15 7/8" x 32.75" / A36 STL ~ 4 REQ'D.
- (05) PLATE 1.00" x 9.00" x 34.00" / A36 STL ~ 2 REQ'D.
- (06) PLATE 1.00" x 9.00" x 13.00" / A36 STL ~ 2 REQ'D (FLAMECUT)



6 HOLES, 1.125" DRILL THRU TYP OF 2 PLATES

RODNEY HUNT COMPANY, ORANGE, MASS. 01384

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INDEX SYMBOL IBM

ORDER NO. 2232-2-2 DWG. NO. D-30537

DESIGNED BY: JES. APPROVED: [Signature]

DATE: 6-13-58

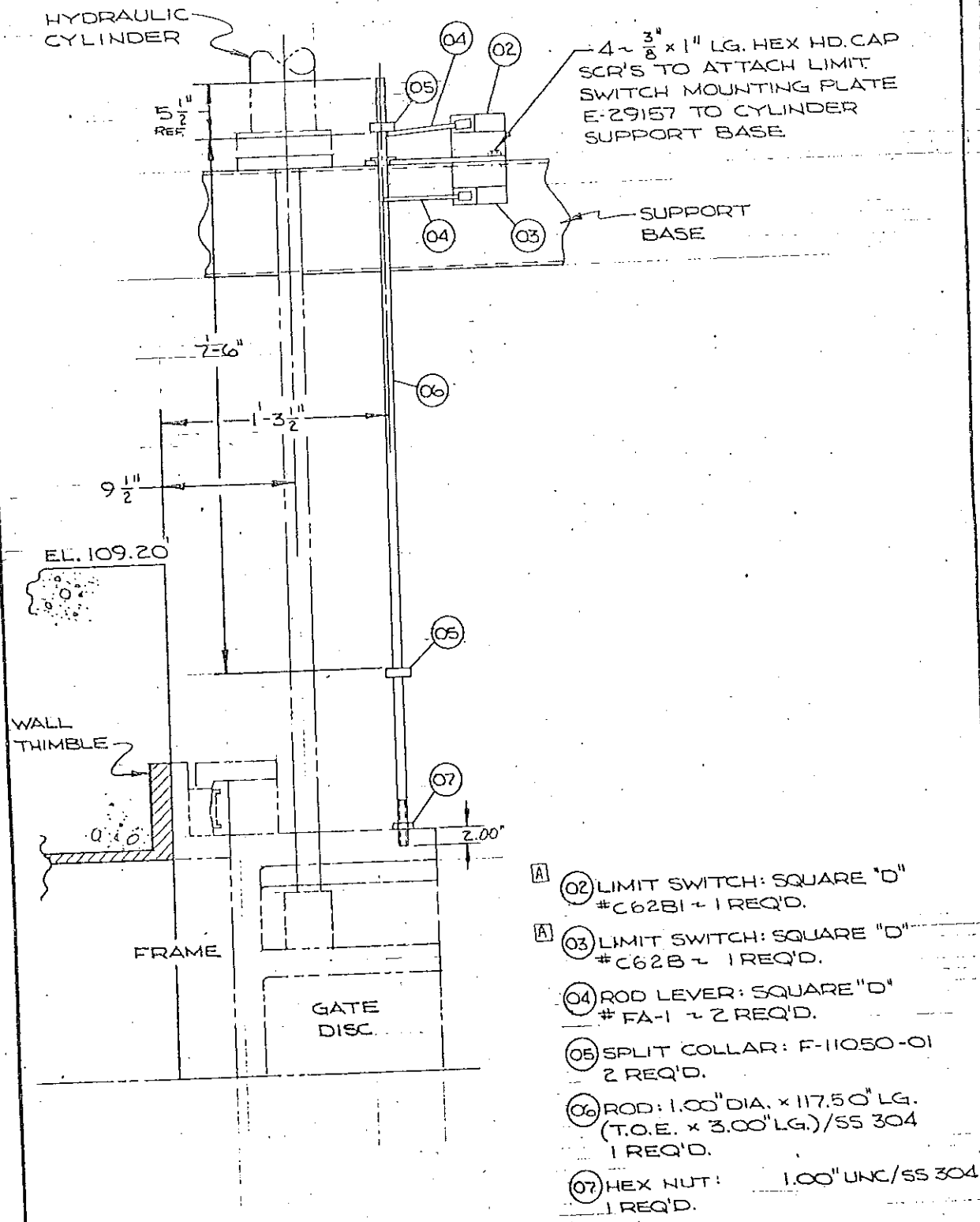
SCALE: 1/4" = 1'-0"

BASE

SUB-ASSY: CYLINDER SUPPORT

NO.	CHANGE	BY	DATE	ALT.	CHANGE	BY	DATE	ALT.	CHANGE	BY	DATE	ALT.

WORK FROM DRAWING



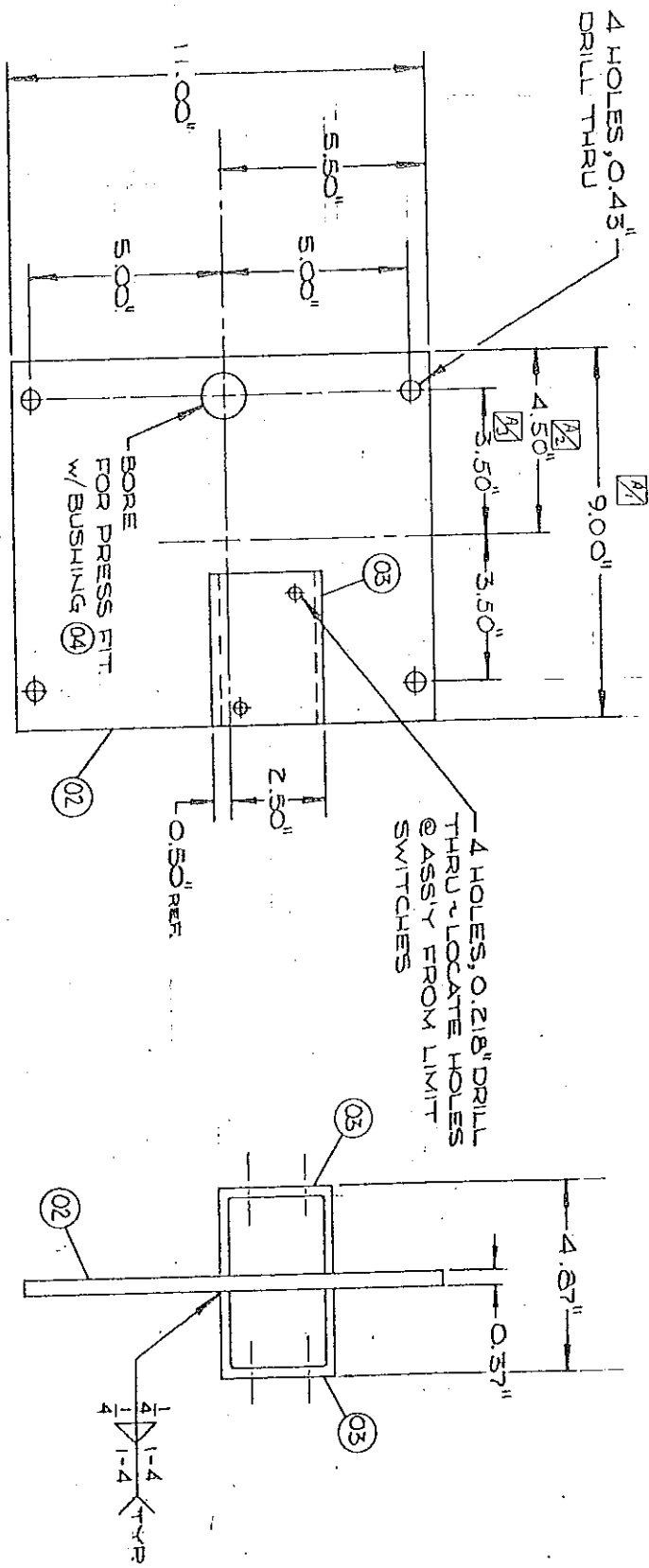
- A) 02 LIMIT SWITCH: SQUARE "D" #C62B1 ~ 1 REQ'D.
- A) 03 LIMIT SWITCH: SQUARE "D" #C62B ~ 1 REQ'D.
- 04 ROD LEVER: SQUARE "D" #FA-1 ~ 2 REQ'D.
- 05 SPLIT COLLAR: F-11050-01 2 REQ'D.
- 06 ROD: 1.00" DIA. x 117.50" LG. (T.O.E. x 3.00' LG.)/SS 304 1 REQ'D.
- 07 HEX NUT: 1.00" UNC/SS 304 1 REQ'D.

NOTE: LIMIT SWITCH FASTENERS DIA. & LENGTH TO BE DETERMINED @ ASS'Y IN SHOP

E-29158	REV. A PV 7-2883	RODNEY HUNT COMPANY, ORANGE, MASS., 01364		
	C62B1 WAS C54B1 C62B WAS C54B	LIMIT SWITCH INSTALLATION		
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		INDEX SYMBOL	DRAWN JES	DESIGNED PGV
	CHECKED DRL.	APPROVED	SCALE NTS	
	ORDER NO. 33334-2		DWG. NO. E-29158	

NOTES

1 2 3 4 5



- 02 PLATE: 0.37" x 9.00" x 11.00" / AL. 6061-T6 ~ 1 REQD.
- 03 EXTRUSION: F-8602A x 4.00" LG. / AL. 6061-T6 ~ 2 REQD.
- 04 BUSHING: CLIMAX METAL PRODUCTS # 16-ET-20 / NYLON ~ 1 REQD.

BRUHING 40-22 464583

ALT	CHANGE	BY	CHKD	DATE	ALT	CHANGE	BY	CHKD	DATE
A	1) 9.00" WAS 9.50"								
	2) 4.5" WAS 4.75"	PV		9/24/87					
	3) 3.5" WAS 3.75"								

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INDEX SYMBOL

DRAWN	DESIGNED	DATE
DES	PCV	6-17-83
CHECKED	APPROVED	SCALE
DRL		1:3
ORDER NO.	DWG. NO.	
3334-2	E-29157	

PLATE
SUBASSY: LIMIT SWITCH MOUNTING