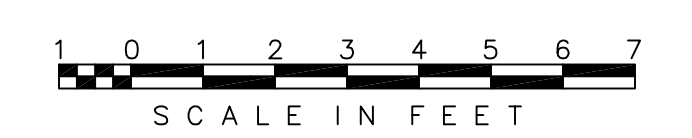


MATCHLINE, FOR CONT. SEE DWG. M-125

MATCHLINE, FOR CONT. SEE DWG. M-127

DRAWING LIMITS

ELEVATION 31.00



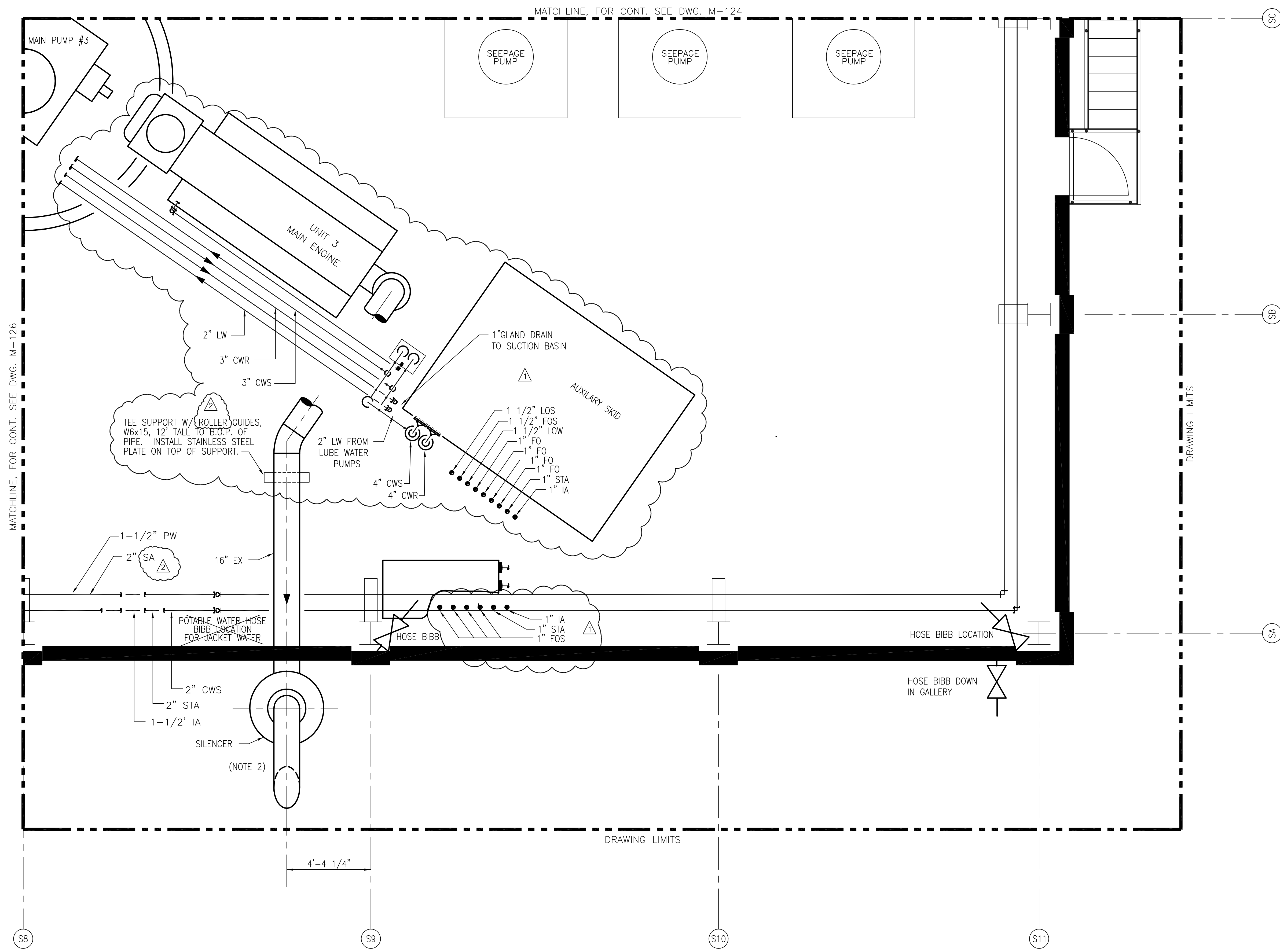
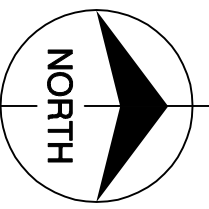
- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO TERMINATE DIESEL ENGINE EXHAUST PIPE 13'-6" ABOVE BUILDING PARAPET.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

Scale For Microfitting  
Inches  
Scale For Millimeters

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<p><b>Burns &amp; McDonnell</b> SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO 64114 Certification: EB0000253 BAG</p>	<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STATION G-370 ELEVATION 31.00 ENLARGED PIPING PLAN</p>	<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>	<p>RODNEY J. GANNUCH, P.E. FLA. C.E. REG. NO. 53545</p>																									
	<p>CONTRACT NO. C-E304 DWG. NO. M-126</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> <th>REVISED PER ADDENDUM NO.</th> </tr> <tr> <td>1</td> <td>5/10/01</td> <td>CHKO</td> <td>5/10/01</td> <td>REVISED PER ADDENDUM NO. 1</td> </tr> <tr> <td>2</td> <td>6/1/01</td> <td>MSS</td> <td>6/1/01</td> <td>REVISED PER ADDENDUM NO. 4</td> </tr> <tr> <td>3</td> <td>9/9/01</td> <td>MSS</td> <td>9/9/01</td> <td>REVISED PER ADDENDUM NO. 4</td> </tr> <tr> <td>4</td> <td>7/15/04</td> <td>EJM</td> <td>7/15/04</td> <td>REVISED NOTE NO.2</td> </tr> </table>	NO.	DATE	CHKD	DATE	REVISED PER ADDENDUM NO.	1	5/10/01	CHKO	5/10/01	REVISED PER ADDENDUM NO. 1	2	6/1/01	MSS	6/1/01	REVISED PER ADDENDUM NO. 4	3	9/9/01	MSS	9/9/01	REVISED PER ADDENDUM NO. 4	4	7/15/04	EJM	7/15/04	REVISED NOTE NO.2	<p>ENGINEERS - ARCHITECTS - CONSULTANTS METABOLIC LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>
NO.	DATE	CHKD	DATE	REVISED PER ADDENDUM NO.																								
1	5/10/01	CHKO	5/10/01	REVISED PER ADDENDUM NO. 1																								
2	6/1/01	MSS	6/1/01	REVISED PER ADDENDUM NO. 4																								
3	9/9/01	MSS	9/9/01	REVISED PER ADDENDUM NO. 4																								
4	7/15/04	EJM	7/15/04	REVISED NOTE NO.2																								

"RCORD DRAWINGS"



MATCHLINE, FOR CONT. SEE DWG. M-126

MATCHLINE, FOR CONT. SEE DWG. M-124

S8

S9

S10

S11

SC

SB

SA

- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO TERMINATE DIESEL ENGINE EXHAUST PIPE 13'-6" ABOVE BUILDING PARAPET.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

ELEVATION 31.00



Scale For Microfilming  
Inches  
Millimeters

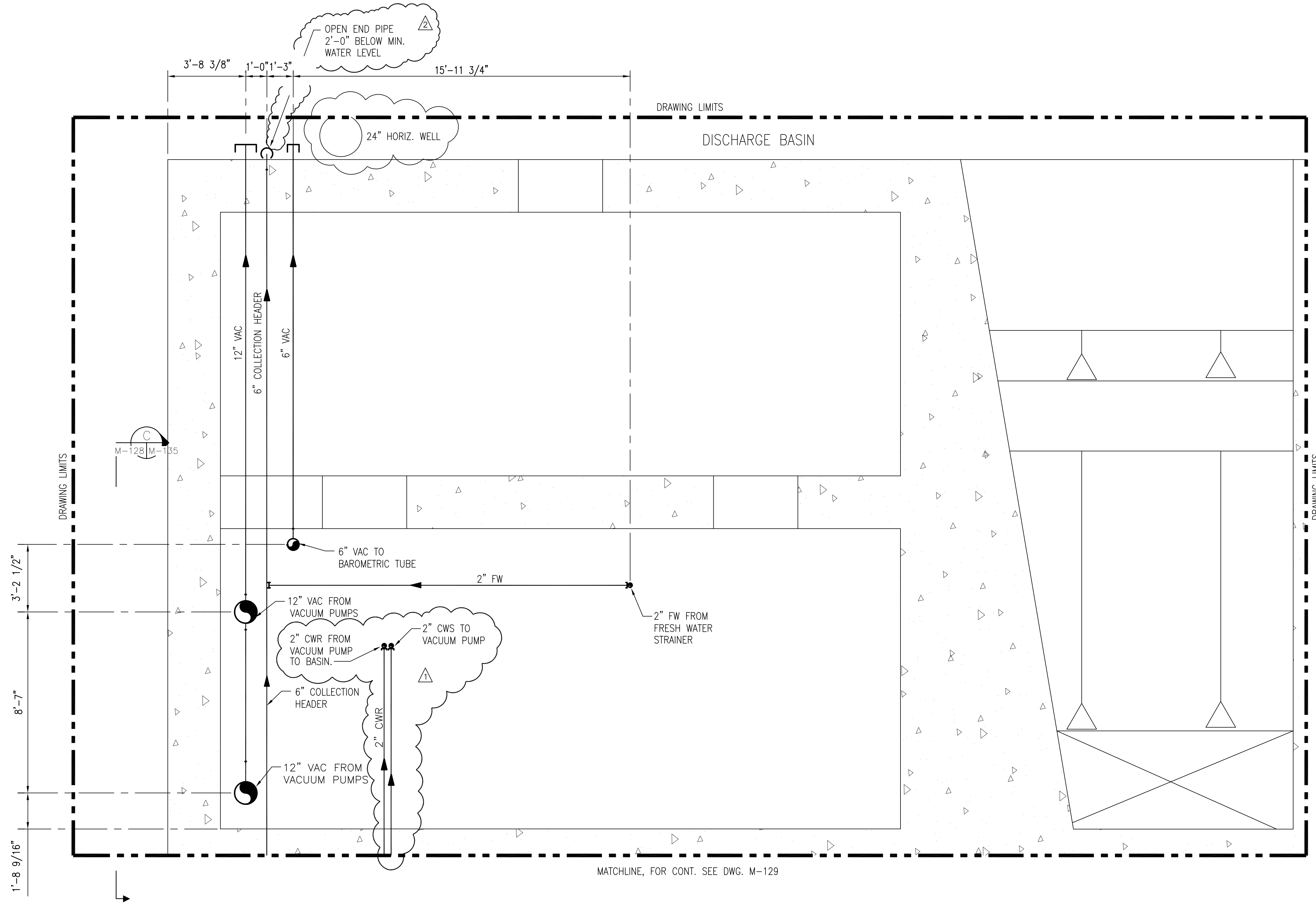
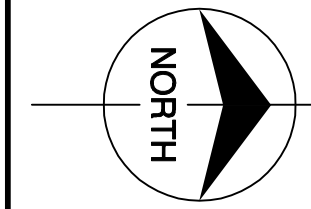
COPYRIGHT ©2001 BY BURNS & MCDONNELL ENGINEERING COMPANY, INC.

<p><b>Burns &amp; McDonnell</b> SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMCJ 24930</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 374 PUMP STATIONS G-370 &amp; G-372 PUMP STATION G-370 ELEVATION 31.00 ENLARGED PIPING PLAN</p>		<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>	
<p>ENGINEERS - ARCHITECTS - CONSULTANTS Brown Cunningham Gannuch 2701 WINDYWAY, SUITE 70006 METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>	<p>DATE: 5/10/01</p>	<p>NO. DWN: CHKO</p>	<p>DATE: 6/1/01</p>	<p>REVISIONS</p>	<p>NO. 4</p>
<p>DESIGN: MSS</p>	<p>DATE: 9/9/01</p>	<p>NO. 1</p>	<p>DATE: 7/15/04</p>	<p>REVISIONS</p>	<p>NO. 2</p>
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<p>CHKD: MSS</p>	<p>DATE: 6/1/01</p>	<p>NO. 1</p>	<p>DATE: 7/15/04</p>	<p>REVISIONS</p>	<p>NO. 2</p>

"RECORD DRAWINGS"

CONTRACT NO.  
C-E304  
DWG. NO.  
M-127

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



Scale For Microfilming  
Inches  
Millimeters

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NOTES:  
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

ELEVATION 16.33  
1 0 1 2 3 4 5 6 7  
SCALE IN FEET

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
STORMWATER TREATMENT AREA NO. 3/4  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-370  
ELEVATION 16.33  
ENLARGED PIPING PLAN

**Burns & McDonnell**  
SINCE 1938  
9400 WARD PARKWAY  
KANSAS CITY, MO. 64114  
Certification: EB0000253  
BAGC 24930

**Brown Cunningham Gannuch**  
ENGINEERS ARCHITECTS CONSULTANTS  
2707 WILSON ST.  
METairie, LOUISIANA 70006  
(504) 454-3886  
License No. EB00008095

DRAWN GPW MSS  
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DESIGN MSS  
CHKD RIG  
DATE 5/10/2001

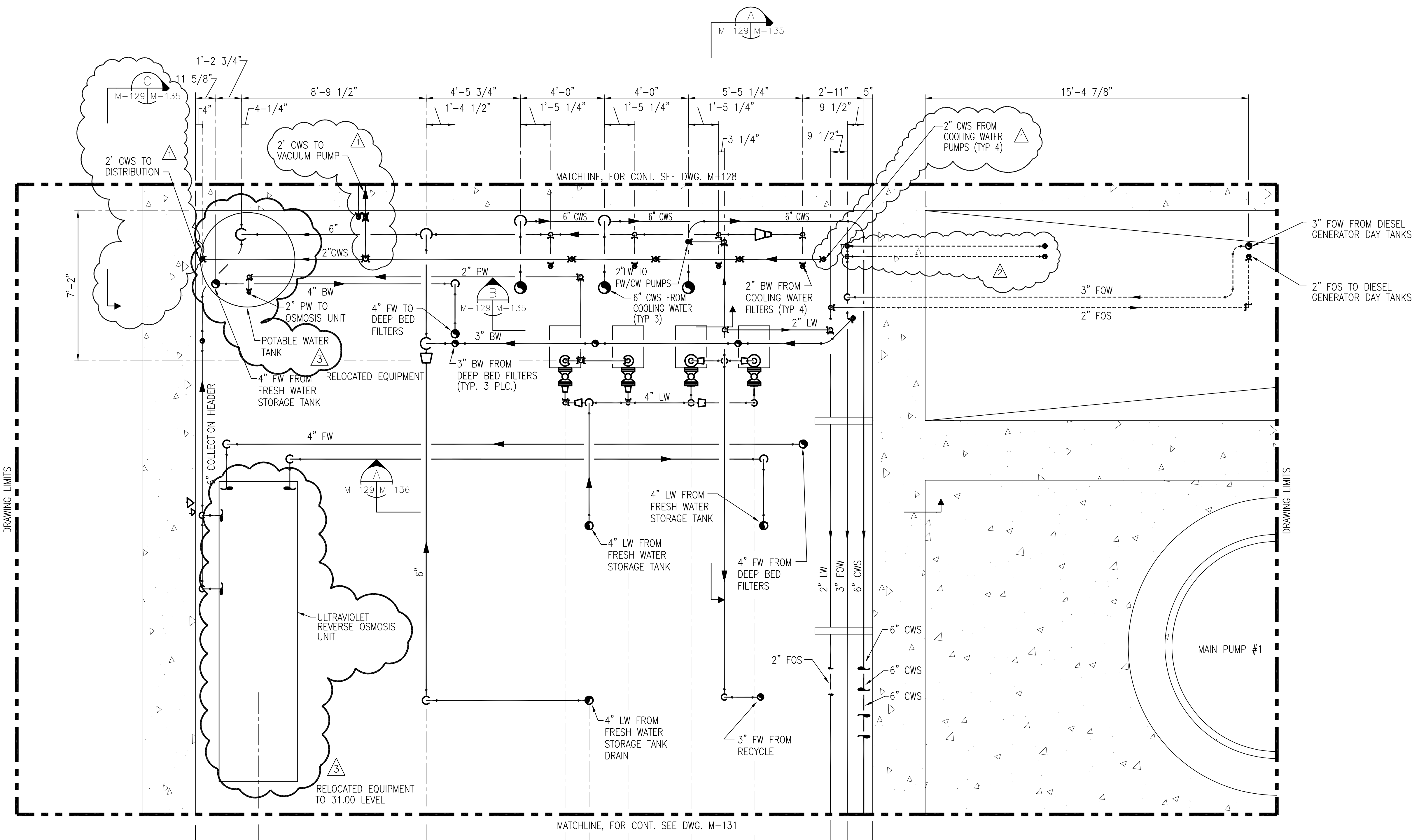
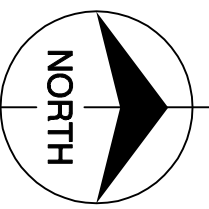
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REVISED PER ADDENDUM NO. 4  
9/9/01  
REVISED PER ADDENDUM NO. 1  
6/1/01

REVISIONS

"RECORD DRAWINGS"

CONTRACT NO. C-E304  
DWG. NO. M-128



NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR VALVE TAG LOCATIONS REFER TO DWG. M-145.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

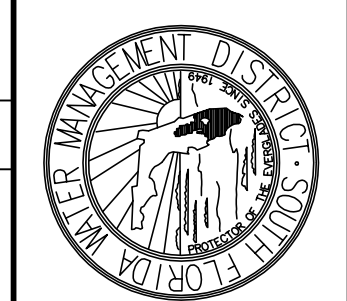
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SCALE IN FEET

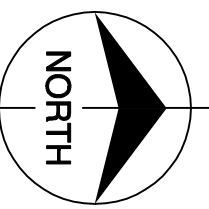
<p>9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 EMCD</p>		<p>ENGINEERS, ARCHITECTS, CONSULTANTS 2701 KUCIANA ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>	
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>	<p>PUMP STATION G-370 ELEVATION 16.33 ENLARGE PIPING PLAN</p>	<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</p>	<p>EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>
<p>DRAWN CHKD DESIGN CHKD DATE</p>	<p>GPW MSS MSS RIG MSS</p>	<p>USB EJM MSS MSS MSS</p>	<p>REVISIONS NO. DATE 7-15-04 REVISED PER ADDENDUM NO. 4 9/9/01 REVISED PER ADDENDUM NO. 1 6/1/01 REVISED PER ADDENDUM NO. 1 5/10/2001</p>

"RECORD DRAWINGS"

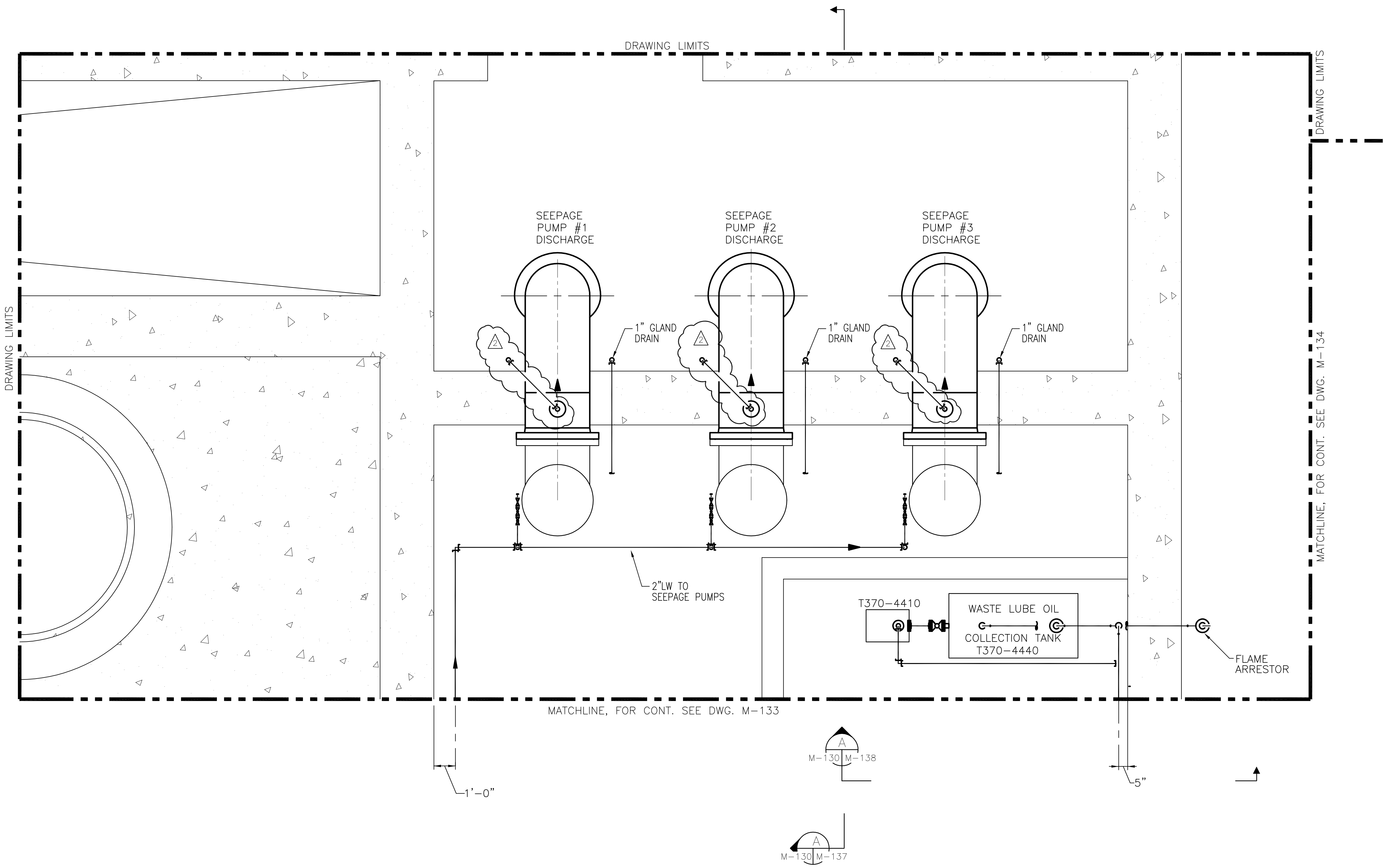
CONTRACT NO.  
C-E304  
DWG. NO.  
M-129

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545





Scale For Microfilming  
Inches  
Millimeters



NOTES:  
 1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

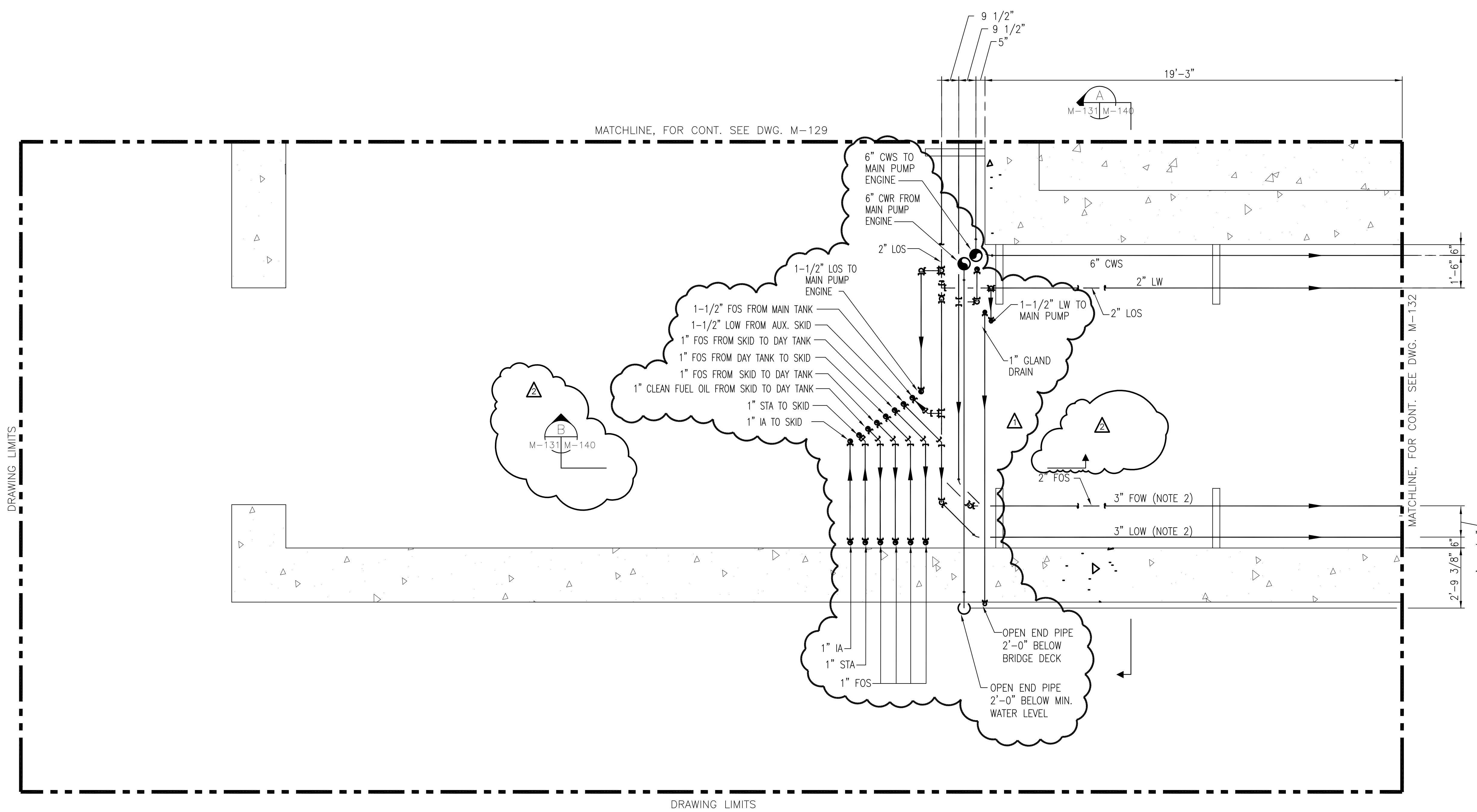
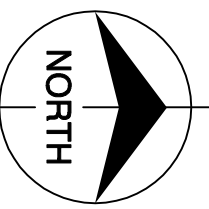
ELEVATION 16.33

0 1 2 3 4 5 6 7

SCALE IN FEET

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<p><b>Brown Cunningham Gannuch</b>          ENGINEERS • ARCHITECTS • CONSULTANTS          2701 KINGSWAY ST.          METairie, LOUISIANA 70006          (504) 454-3866          License No. EB00008095</p>		DRAWN CHKD DESIGN CHKD DATE 5/10/01	GPW MSS RUG MSS CHKD DATE 9/9/01	REVISED PER ADDENDUM NO. 4 CHKD DATE
<p><b>Buttis &amp; McDonnell</b>          SINCE 1888          9400 WARD PARKWAY          KANSAS CITY, MO. 64114          Certification: EB0000253          BNCB 24930</p>		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 374 PUMP STATIONS G-370 & G-372 PUMP STATION G-370 ELEVATION 16.33 ENLARGED PIPING PLAN		
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		RODNEY J. GANNUCH, P.E. FLA. C.E. REG. NO. 53545		
CONTRACT NO. C-E304 DWG. NO. M-130		"RECORD DRAWINGS"		



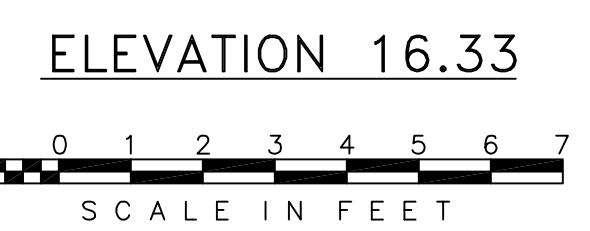
MATCHLINE, FOR CONT. SEE DWG. M-129

MATCHLINE, FOR CONT. SEE DWG. M-132

DRAWING LIMITS

DRAWING LIMITS

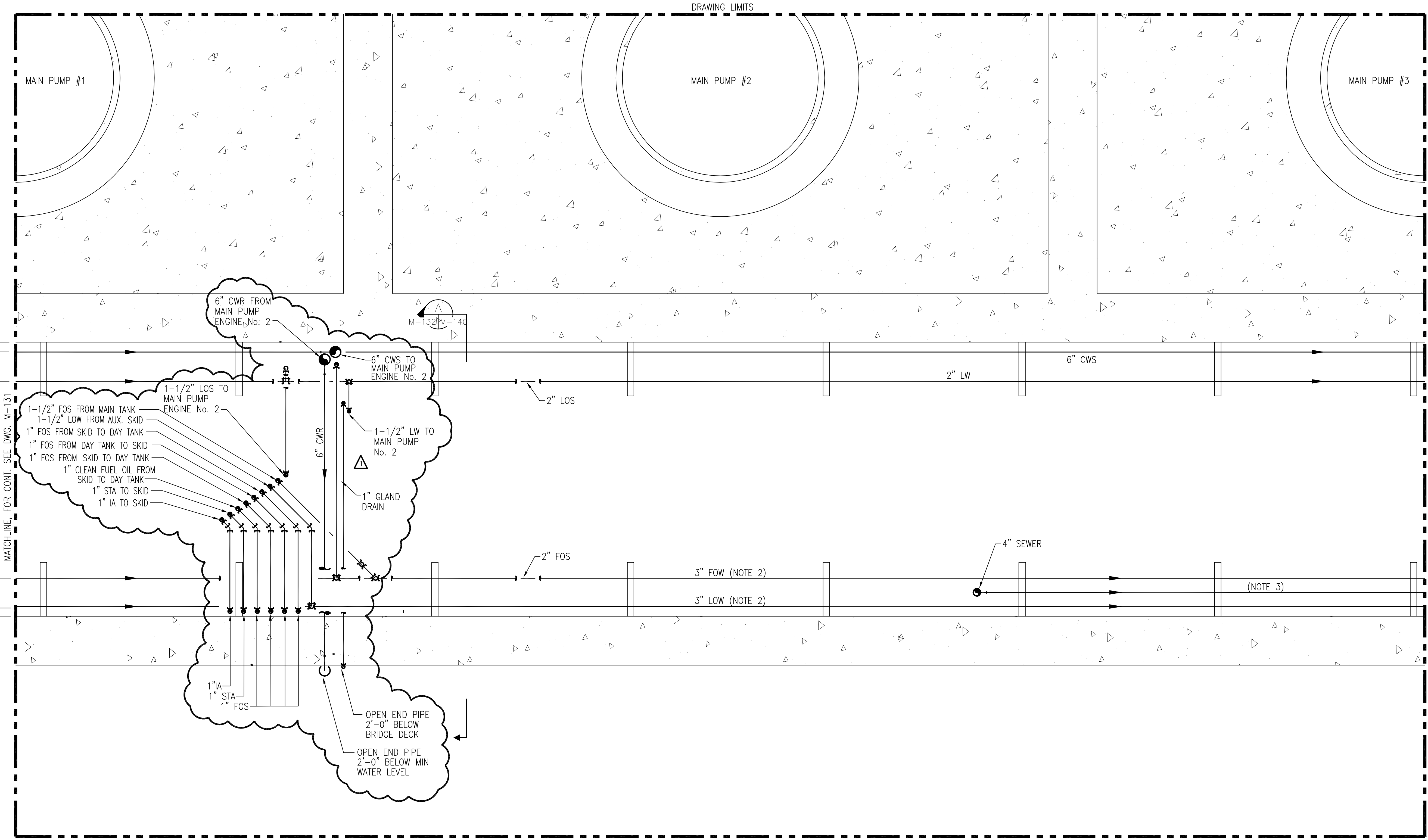
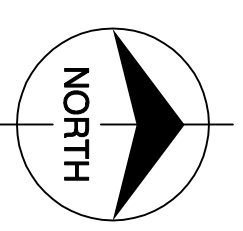
- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO SLOPE ALL WASTE PIPING 1/16" PER FOOT & SUPPORT PIPING AS REQUIRED.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.



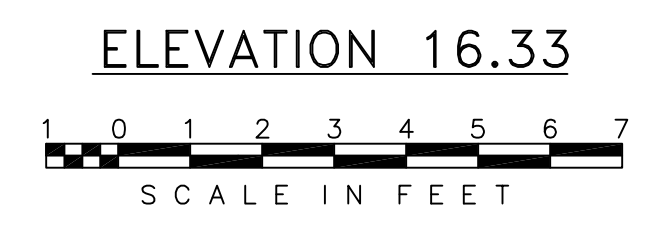
Scale For Microfilming  
Inches  
Millimeters

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<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGSIA ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p>NO. 5/10/01</p> <p>DATE</p>	<p>NO. 6/1/01</p> <p>DATE</p>	<p>REVISED PER ADDENDUM NO. 1</p>	<p>REVISED PER ADDENDUM NO. 4</p>
<p>GPW</p> <p>CHKD</p>	<p>MSS</p> <p>DESIGN</p>	<p>MSS</p> <p>CHKD</p>	<p>R/G</p> <p>CHKD</p>	<p>MSS</p> <p>CHKD</p>	<p>NO. 8/17/01</p> <p>DATE</p>
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<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>					
<p>PUMP STATION G-370 ELEVATION 16.33 ENLARGED PIPING PLAN</p>					
<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</p>					
<p>EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>					
<p>RODNEY J. GANNUCH, P.E. FLA. C.E. REG. NO. 53545</p>					
<p>CONTRACT NO. C-E304 DWG. NO. M-131</p>					
<p>"RECORD DRAWINGS"</p>					



- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO SLOPE ALL WASTE PIPING 1/16" PER FOOT & SUPPORT PIPING AS REQUIRED.
  3. CONTRACTOR TO SLOPE SEWER PIPE 1/8" PER FOOT & SUPPORT PIPING AS REQUIRED.
  4. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.



"RECORD DRAWINGS"

Scale For Microfilming

Inches

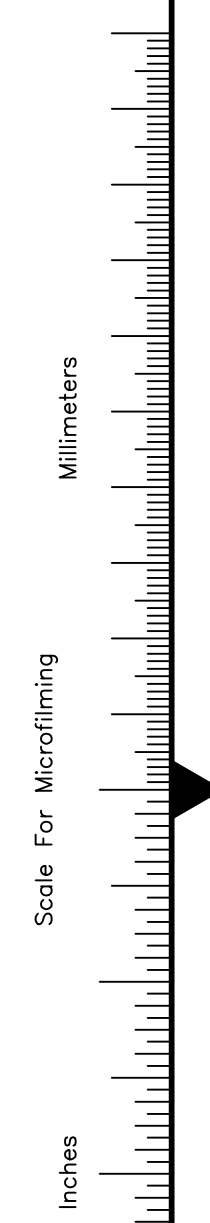
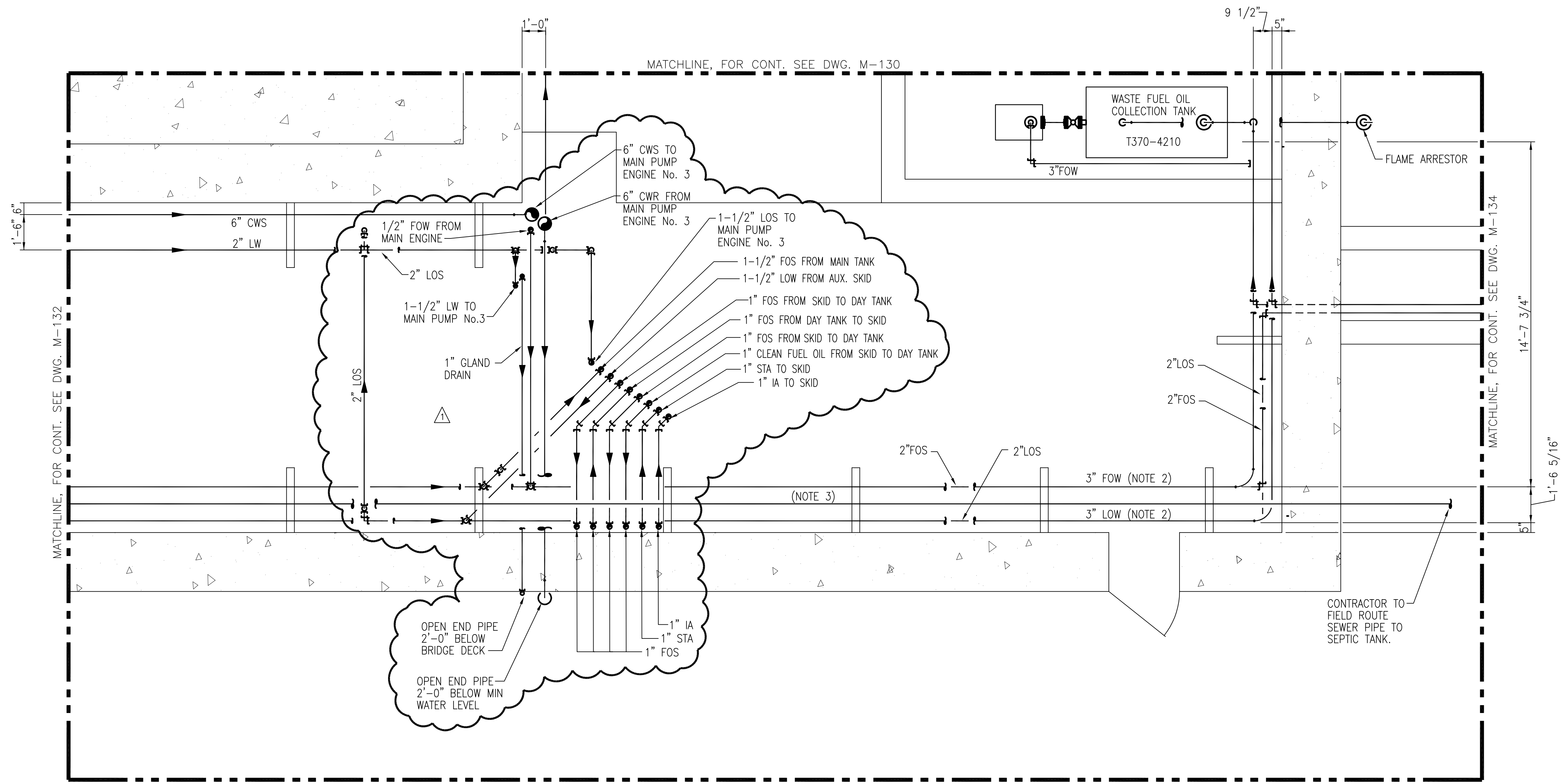
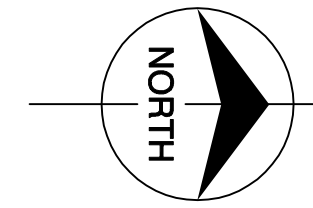
Millimeters

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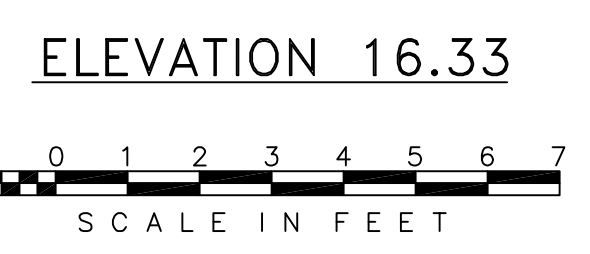
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<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>	<p>PUMP STATION G-370 ELEVATION 16.33 ENLARGED PIPING PLAN</p>	<p>CONTRACT NO. C-E304 DWG. NO. M-132</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>6/1/01</td> <td>MSS</td> <td>REVISED PER ADDENDUM NO. 1</td> </tr> <tr> <td>2</td> <td></td> <td>DWN</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>CHKD</td> <td></td> </tr> </table>	NO.	DATE	CHKD	DATE	1	6/1/01	MSS	REVISED PER ADDENDUM NO. 1	2		DWN		3		CHKD	
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2		DWN																	
3		CHKD																	

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545





- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO SLOPE ALL WASTE PIPING 1/16" PER FOOT & SUPPORT PIPING AS REQUIRED.
  3. CONTRACTOR TO SLOPE SEWER PIPE 1/8" PER FOOT & SUPPORT PIPING AS REQUIRED.
  4. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

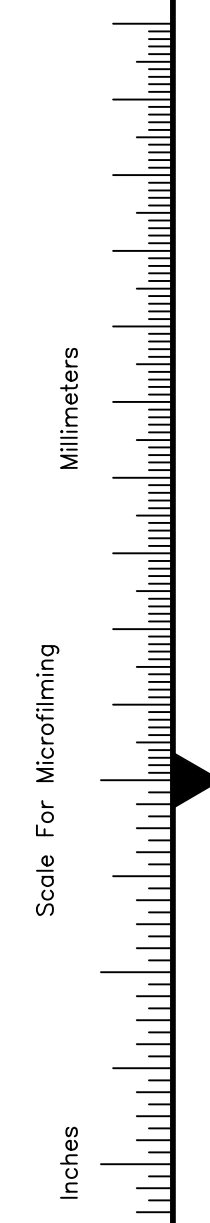
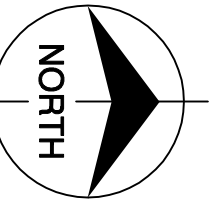


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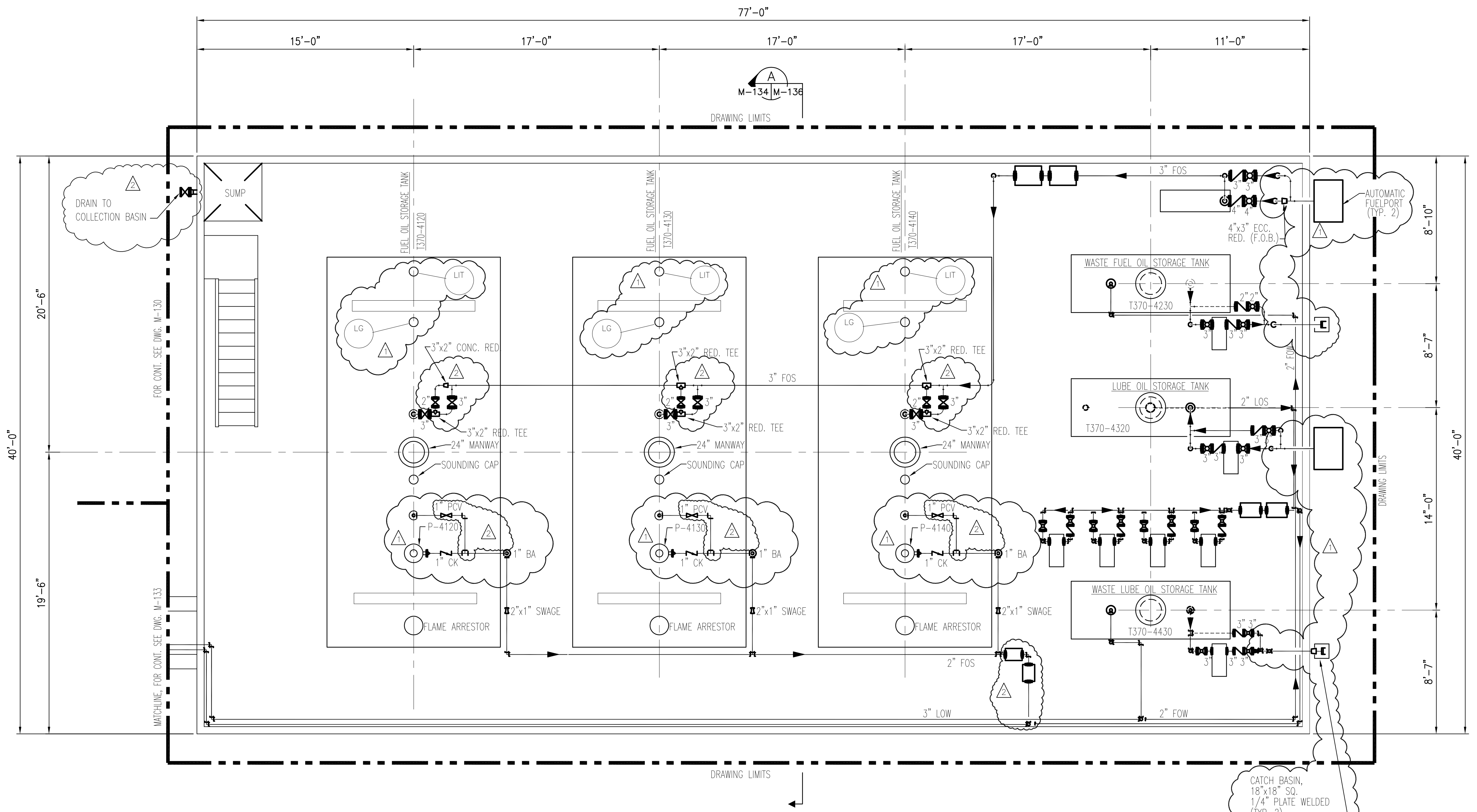
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 <b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB0006085							
 <b>Burns &amp; McDonnell</b> SINCE 1838 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMEC							
<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 3/4</b> <b>PUMP STATIONS G-370 &amp; G-372</b> <b>PUMP STATION G-370</b> <b>ELEVATION 16.33</b> <b>ENLARGED PIPING PLAN</b>							
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406							
CONTRACT NO. C-E304 DWG. NO. <b>M-133</b>							

**"RECORD DRAWINGS"**





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- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR VALVE TAG LOCATIONS REFER TO DWG. M-146.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.



"RECORD DRAWINGS"

Rodney J. Gonnuch, P.E.  
FLA. C.E. REG. NO. 53545



CONTRACT NO.  
C-E304  
DWG. NO.  
M-134

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
STORMWATER TREATMENT AREA NO. 3/4  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-370  
ELEVATION 16.33  
ENLARGED PIPING PLAN



9400 WARD PARKWAY  
KANSAS CITY, MO. 64114  
Certification  
EBC0000253  
Blchd 24930

**Brown Cunningham Gonnuch**  
ENGINEERS • ARCHITECTS • CONSULTANTS  
2701 KINGSMAN ST.  
METairie, LOUISIANA 70006  
(504) 454-3866  
License No. EB00060895

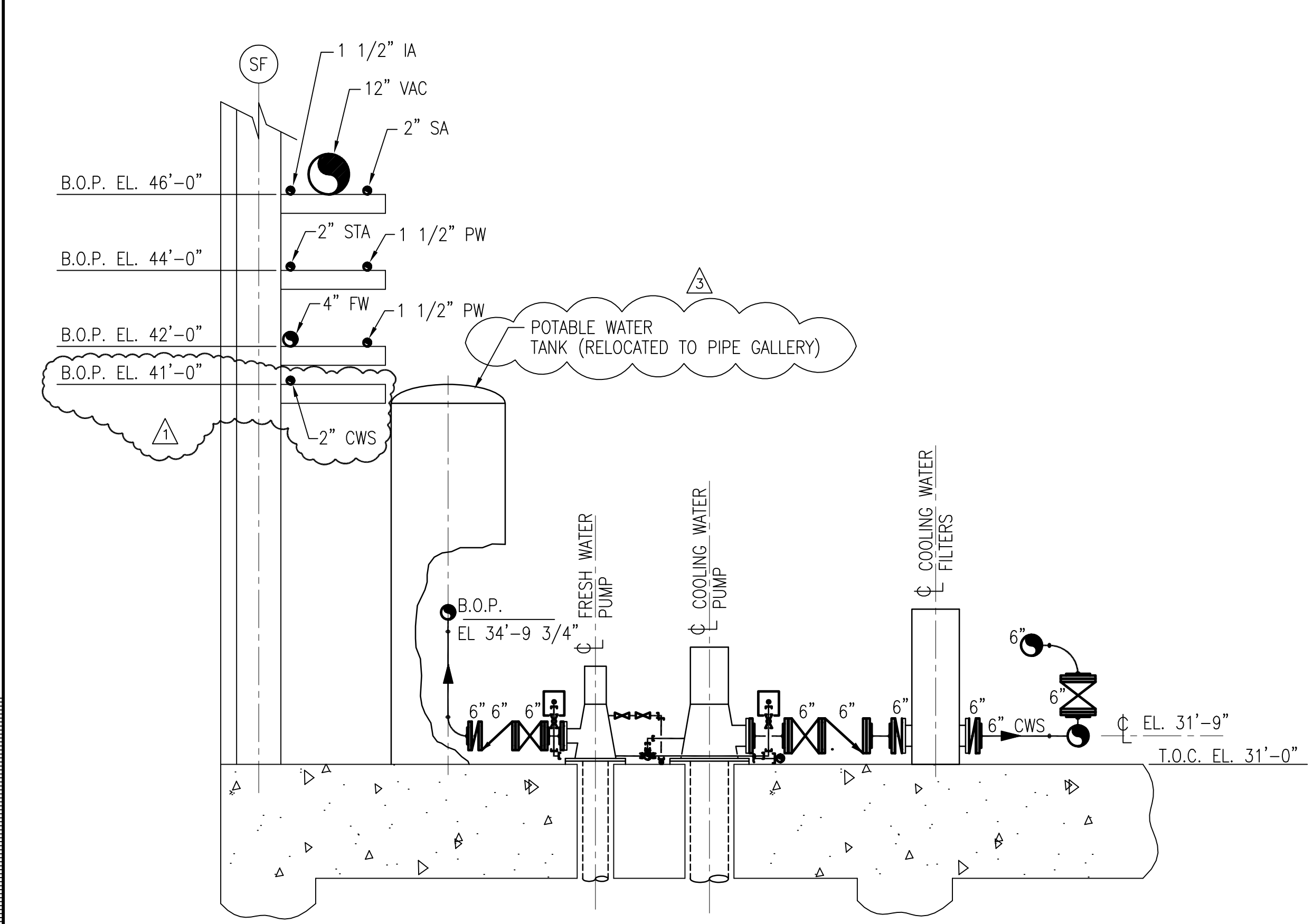
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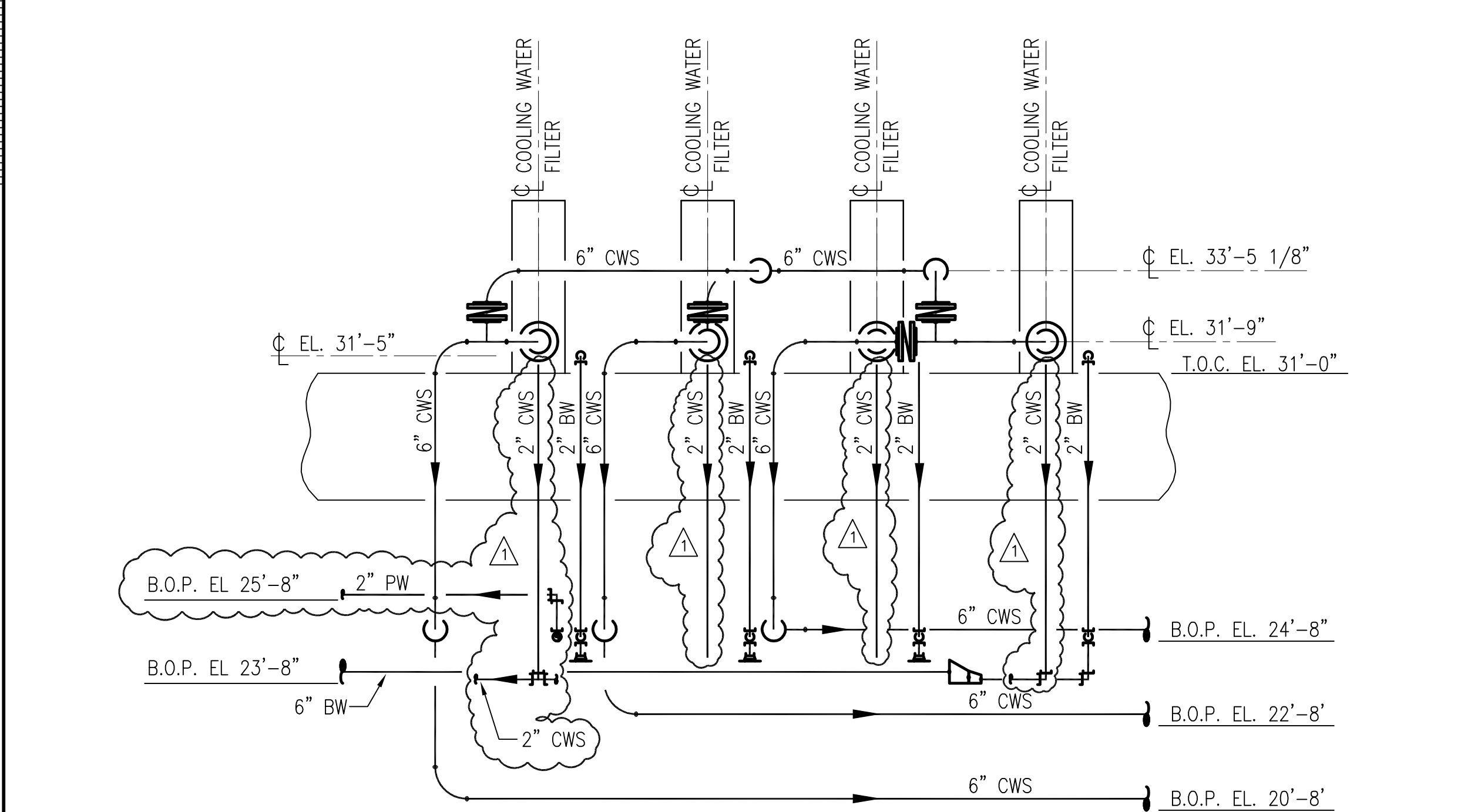
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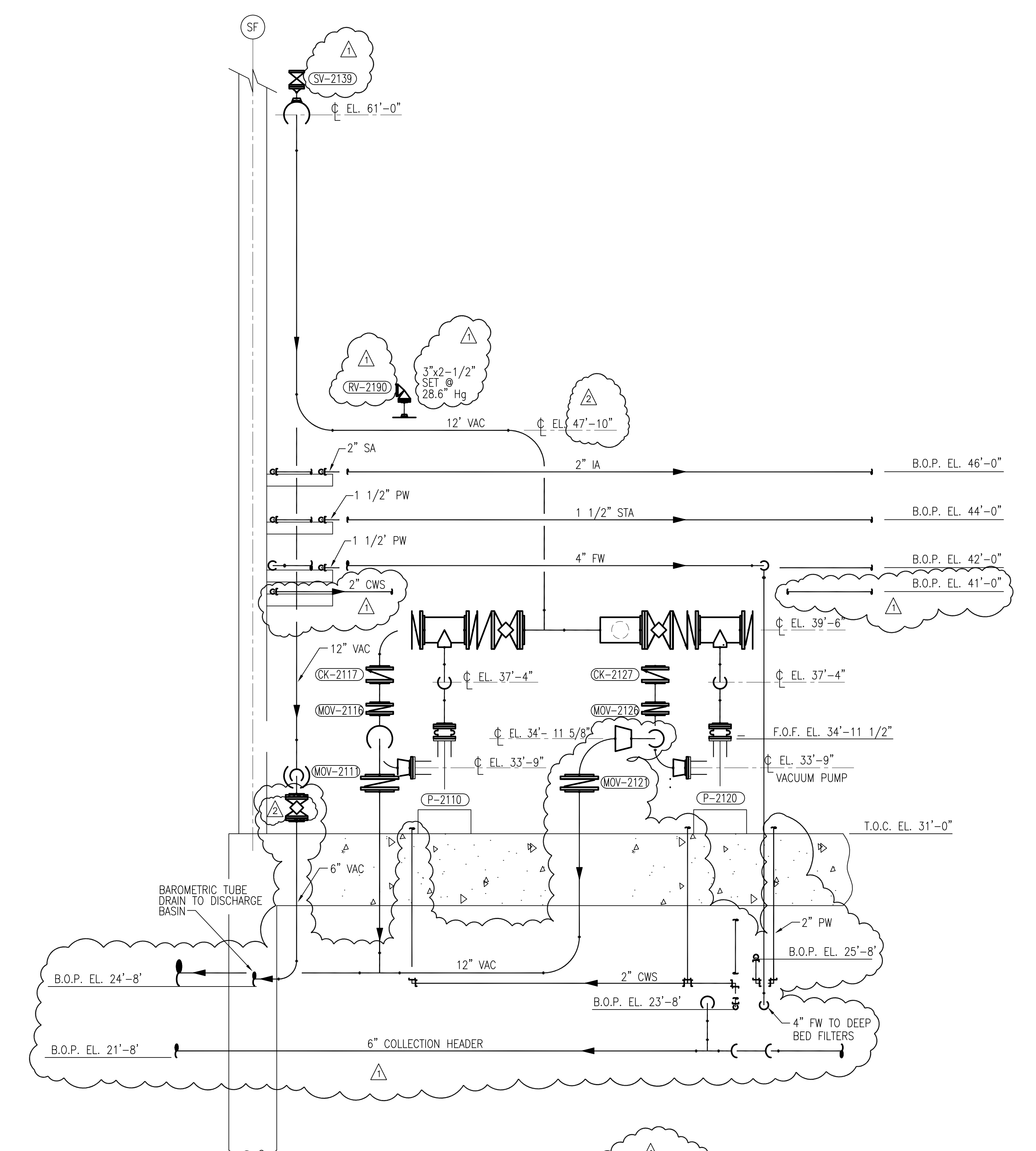
Scale For Microfilming  
Inches  
Millimeters



**SECTION A**  
M-122/M-129 M-135  
SCALE IN FEET



**SECTION B**  
M-122/M-129 M-135  
SCALE IN FEET



**SECTION C**  
M-122/M-128/M-129 M-135  
SCALE IN FEET

NOTES:  
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

<b>BROWN CUNNINGHAM GANNUCH</b> ENGINEERS, ARCHITECTS, CONSULTANTS 2701 KUSKAWA ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095		DRAWN: GPW CHECKED: MSS DESIGN: MSS R/C/G: R/JG DATE: 5/10/01	REVISIONS NO.   DATE   CHKD   DATE
1	11/03/04	EJM	REVISED PER RECORD DRAWINGS
2	9/9/01	MSS	REVISED PER ADDENDUM NO. 4
3	6/1/01	MSS	REVISED PER ADDENDUM NO. 1

<b>BLITTS &amp; MCDONNELL</b> SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 B.M.C.D. 24930	<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406
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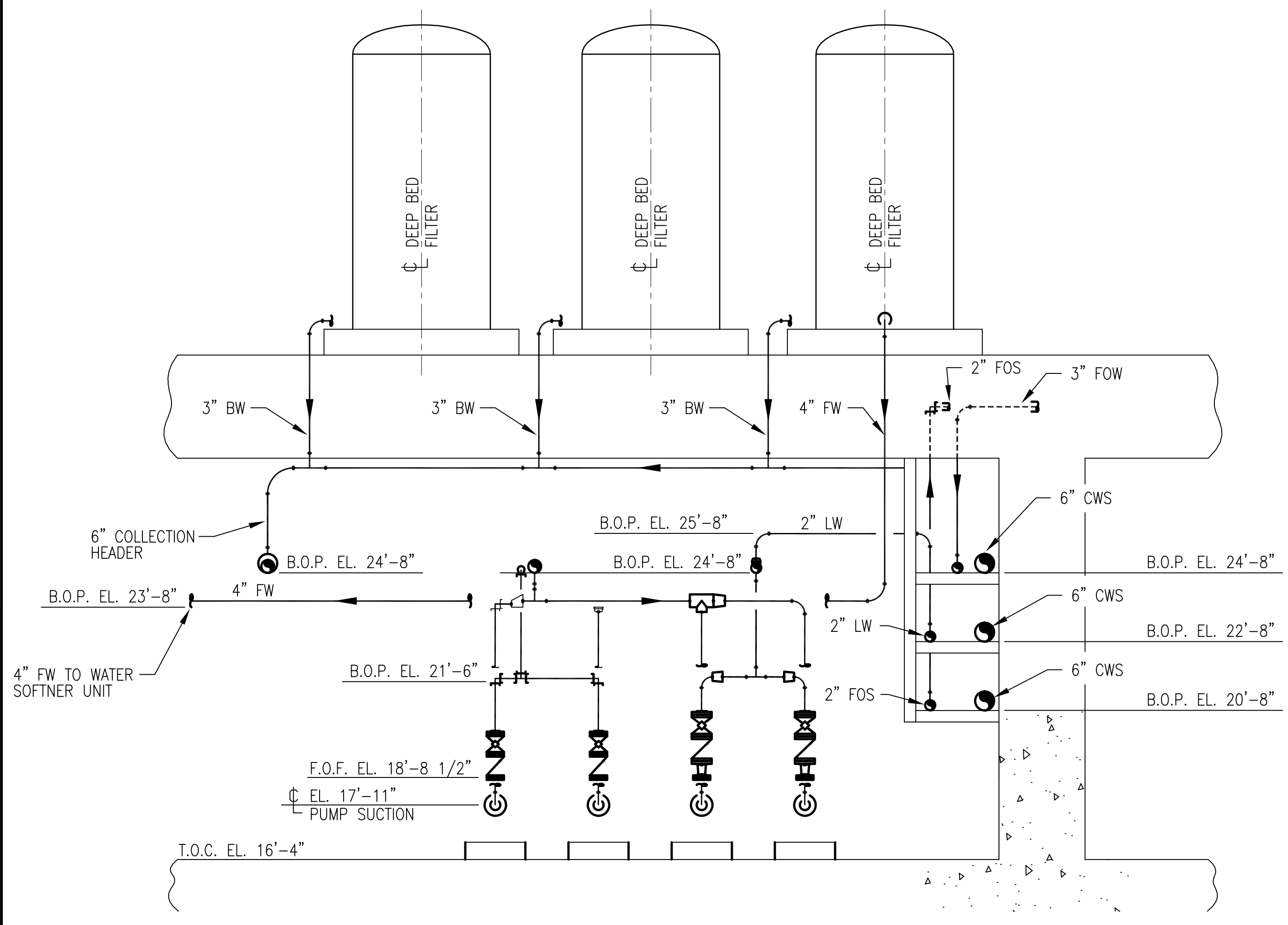
  

<b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-370 SECTIONS AND DETAILS	CONTRACT NO. C-E304 DWG. NO. M-135
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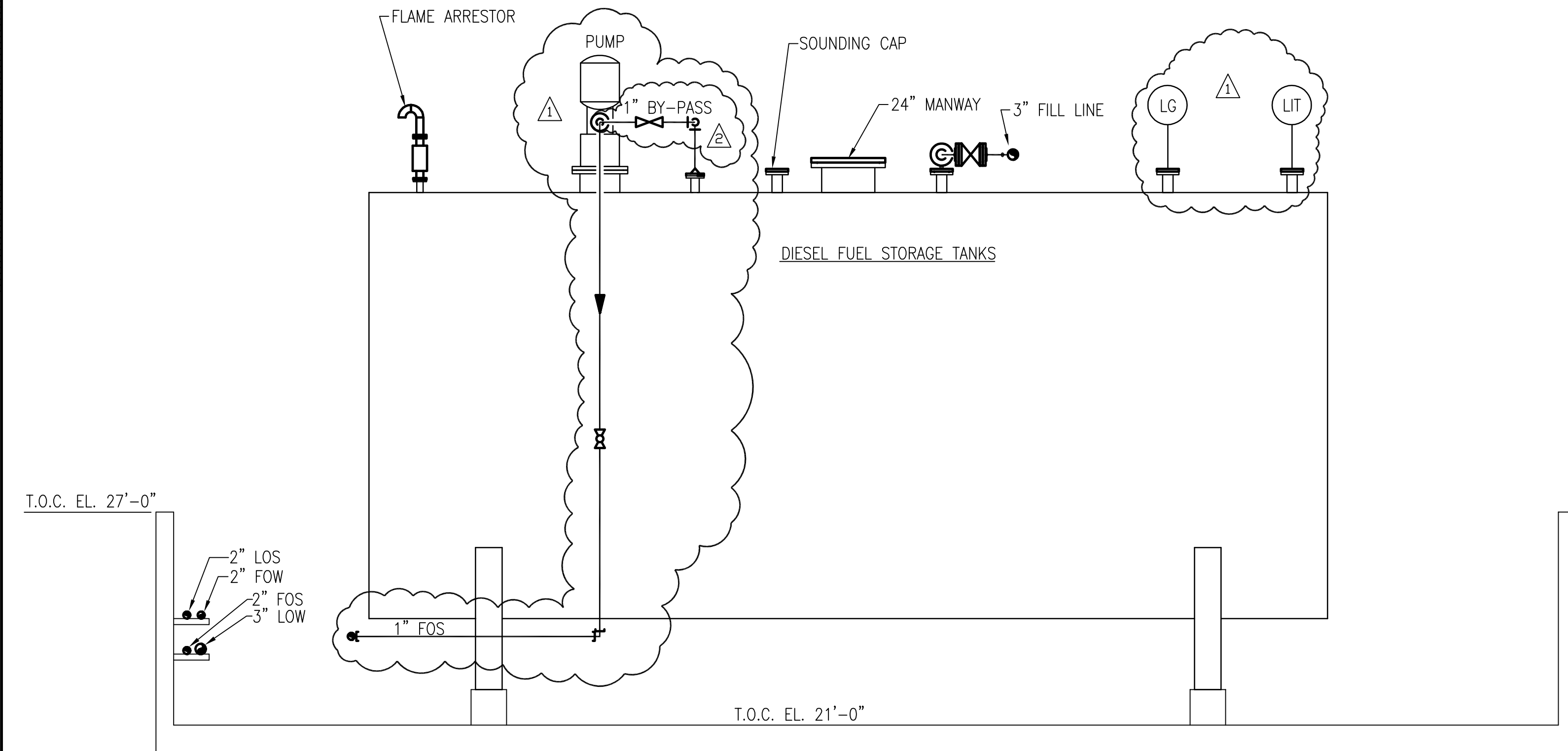
"RECORD DRAWINGS"

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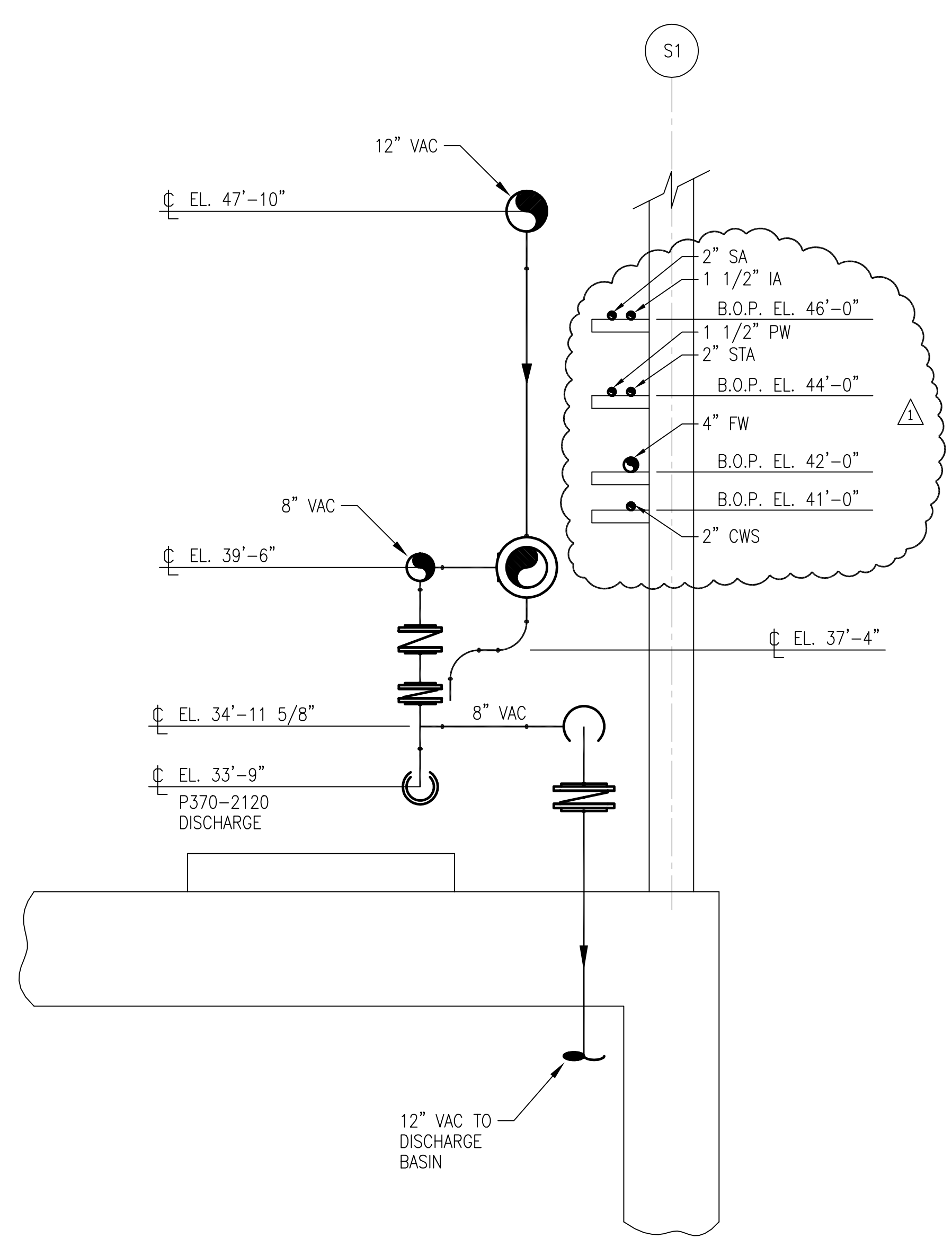
Scale For Microfilming  
Inches  
Millimeters



**SECTION A**  
M-122 / M-129 M-136  
SCALE IN FEET



**SECTION B**  
M-134 M-136  
SCALE IN FEET



**SECTION C**  
M-122 M-136  
SCALE IN FEET

NOTES:  
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Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
STORMWATER TREATMENT AREA NO. 3/4  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-370  
SECTIONS AND DETAILS

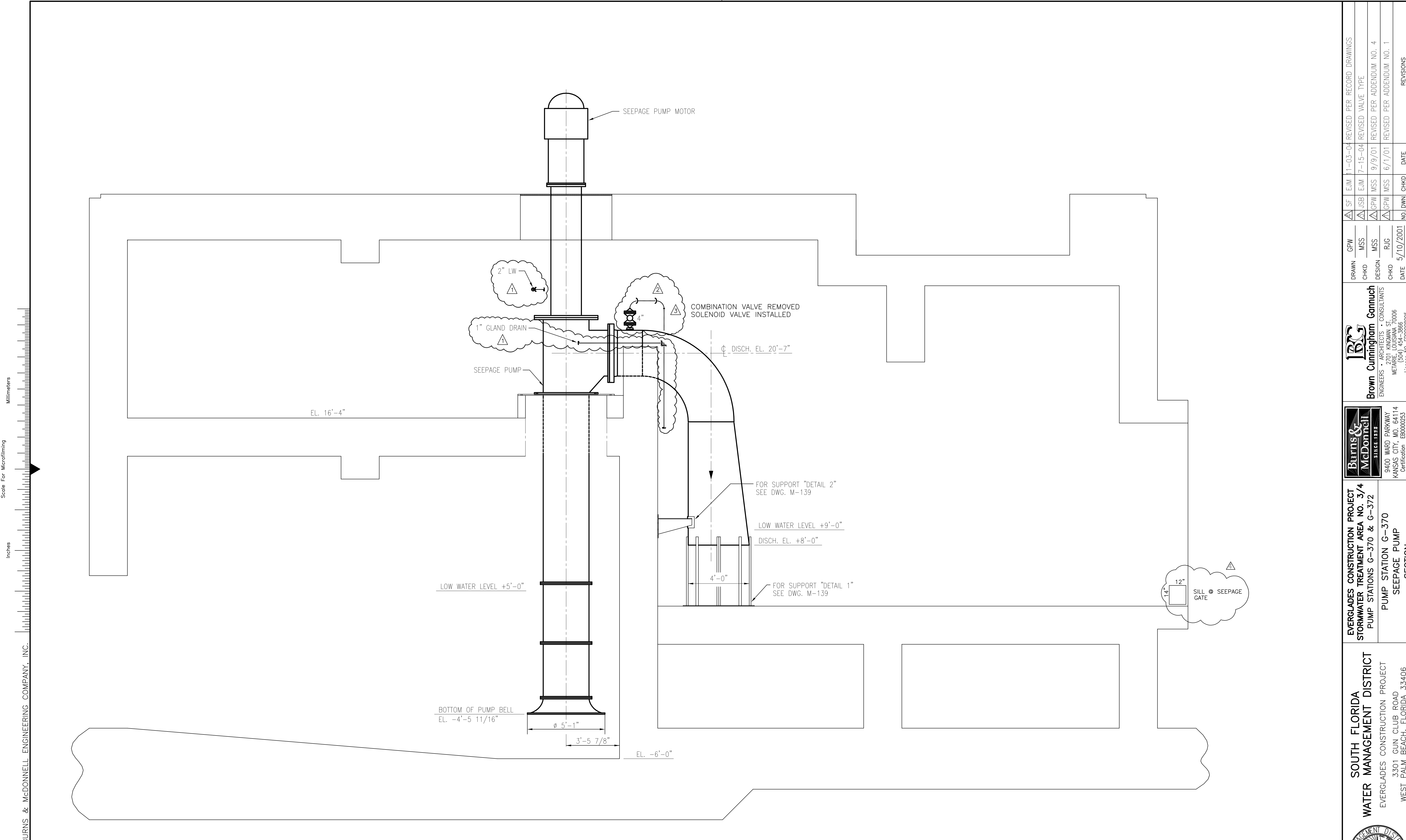
**Burns & McDonnell**  
SINCE 1938  
9400 WARD PARKWAY  
KANSAS CITY, MO 64114  
Certification: EB0000253  
EIMCd 24930

**Brown Cunningham Gannuch**  
ENGINEERS • ARCHITECTS • CONSULTANTS  
2701 KINGSWAY ST.  
METairie, LOUISIANA 70006  
(504) 454-3866  
License No. EB00008095

NO.	DATE	CHKD	DATE	REVISIONS
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CONTRACT NO.  
C-E304  
DWG. NO.  
**M-136**

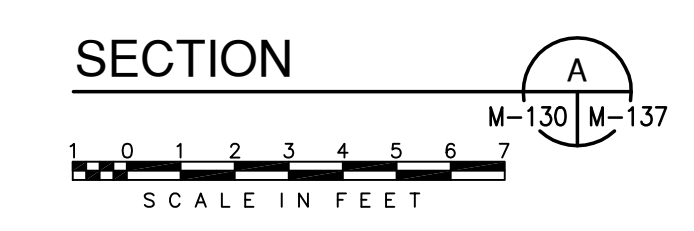
**"RECORD DRAWINGS"**



Scale For Microfilming  
Inches  
Millimeters

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NOTES:  
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Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
STORMWATER TREATMENT AREA NO. 374  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-370  
SEEPAGE PUMP SECTION

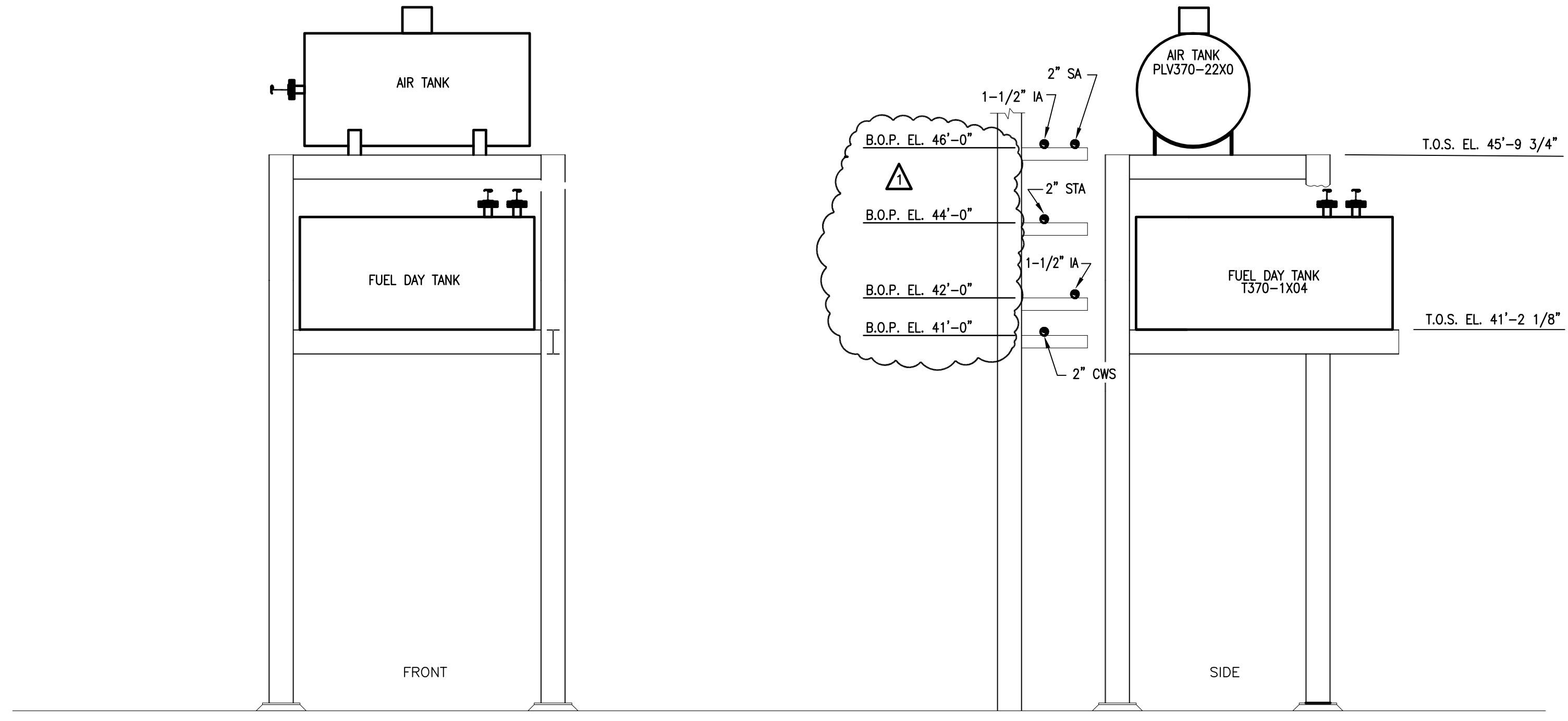
**Burns & McDonnell**  
SINCE 1888  
9400 WARD PARKWAY  
KANSAS CITY, MO. 64114  
Certification EB0000253  
BMCd 24930

**Brown Cunningham Gannuch**  
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2701 KINGMAN ST.  
METairie, LOUISIANA 70006  
(504) 454-3866  
License No. EB00008095

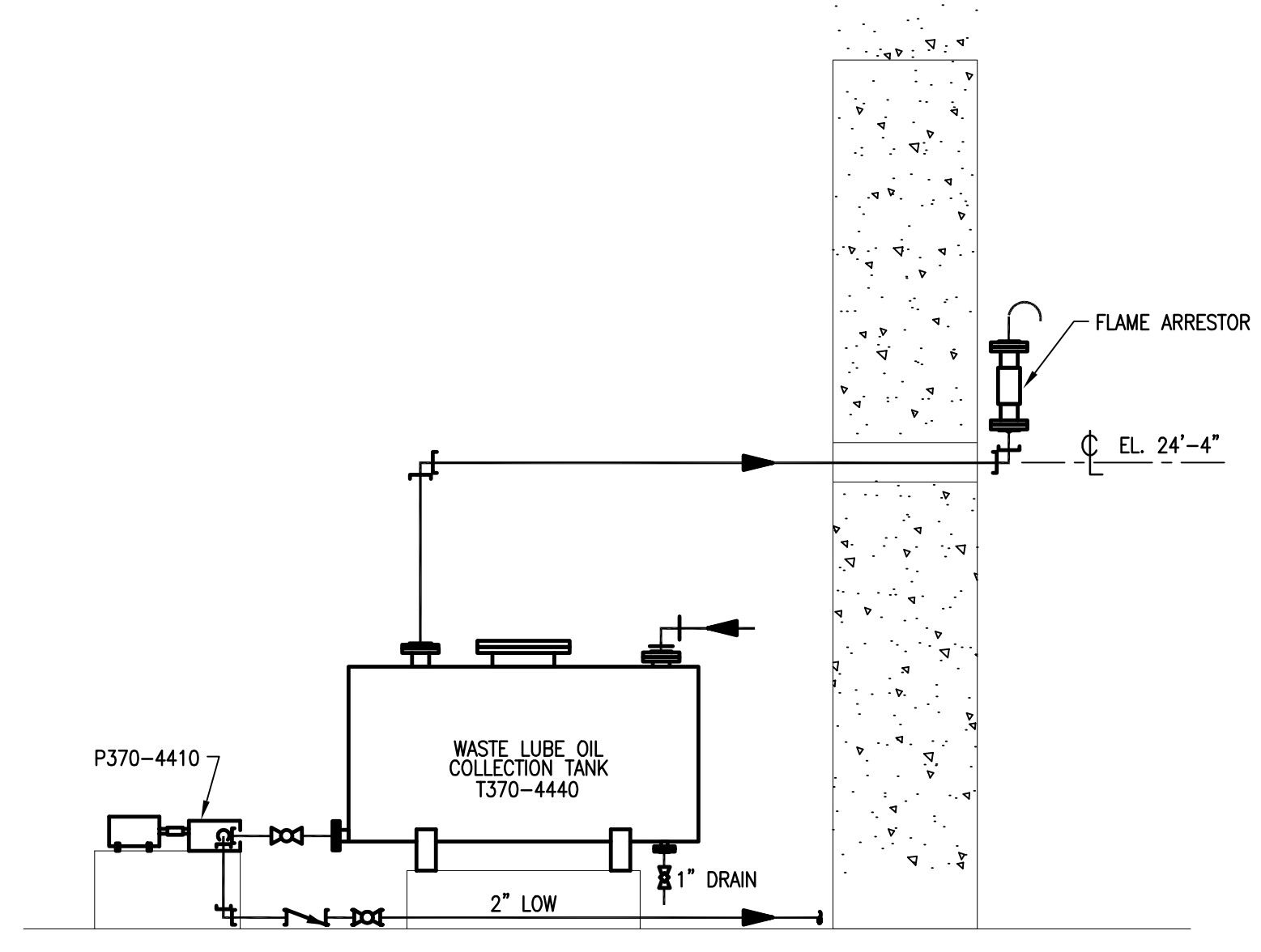
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CONTRACT NO.  
C-E304  
DWG. NO.  
**M-137**

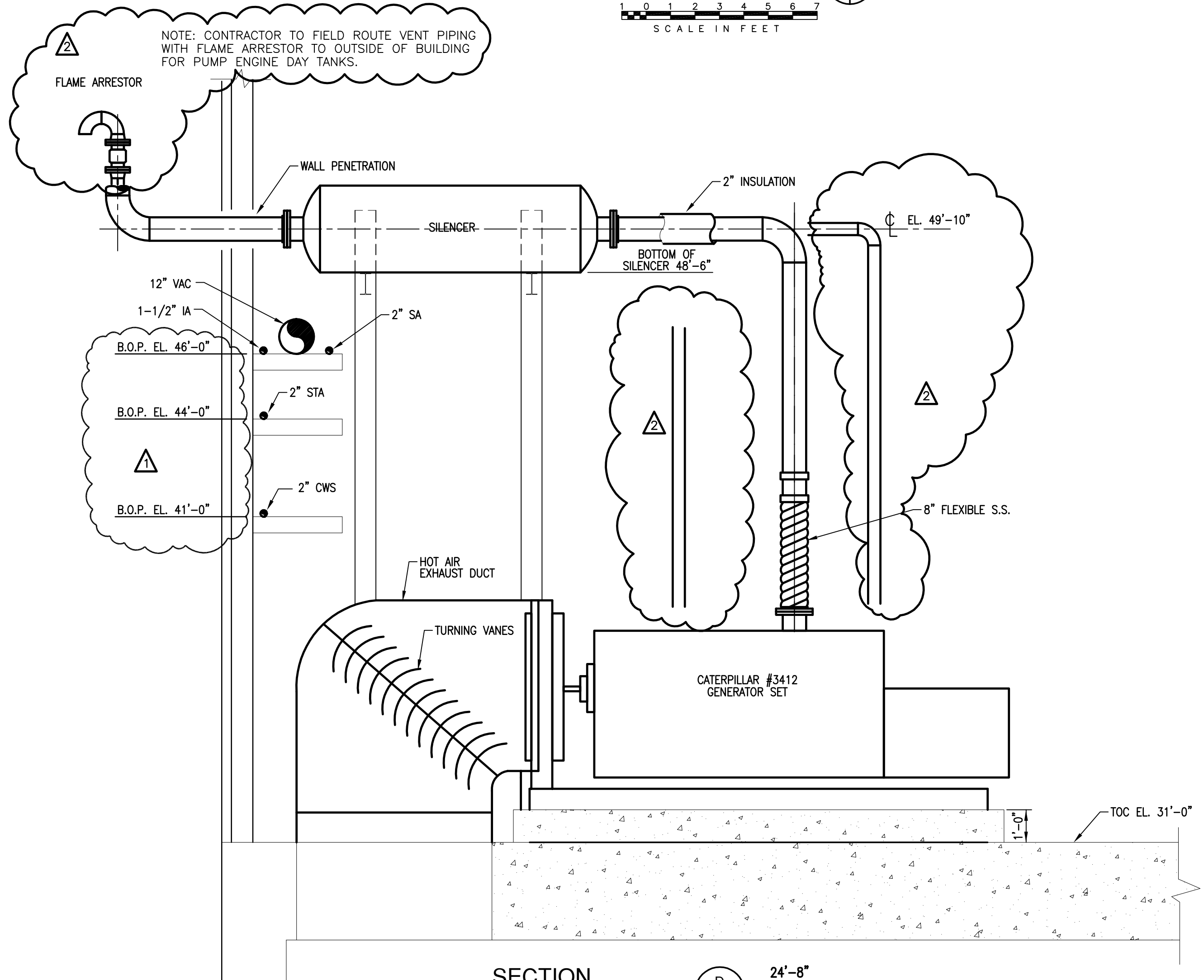
**"RECORD DRAWINGS"**



SECTION A  
M-125 M-138  
SCALE IN FEET



SECTION A  
M-130 M-138  
SCALE IN FEET



SECTION D  
M-122 M-138  
SCALE IN FEET

NOTES:  
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Rodney J. Gonnuch, P.E.  
FLA. C.E. REG. NO. 53545



CONTRACT NO.  
C-E304  
DWG. NO.  
M-138

EVERGLADES CONSTRUCTION PROJECT  
STORMWATER TREATMENT AREA NO. 3/4  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-370  
SECTIONS AND DETAILS

SOUTH FLORIDA  
WATER MANAGEMENT DISTRICT  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

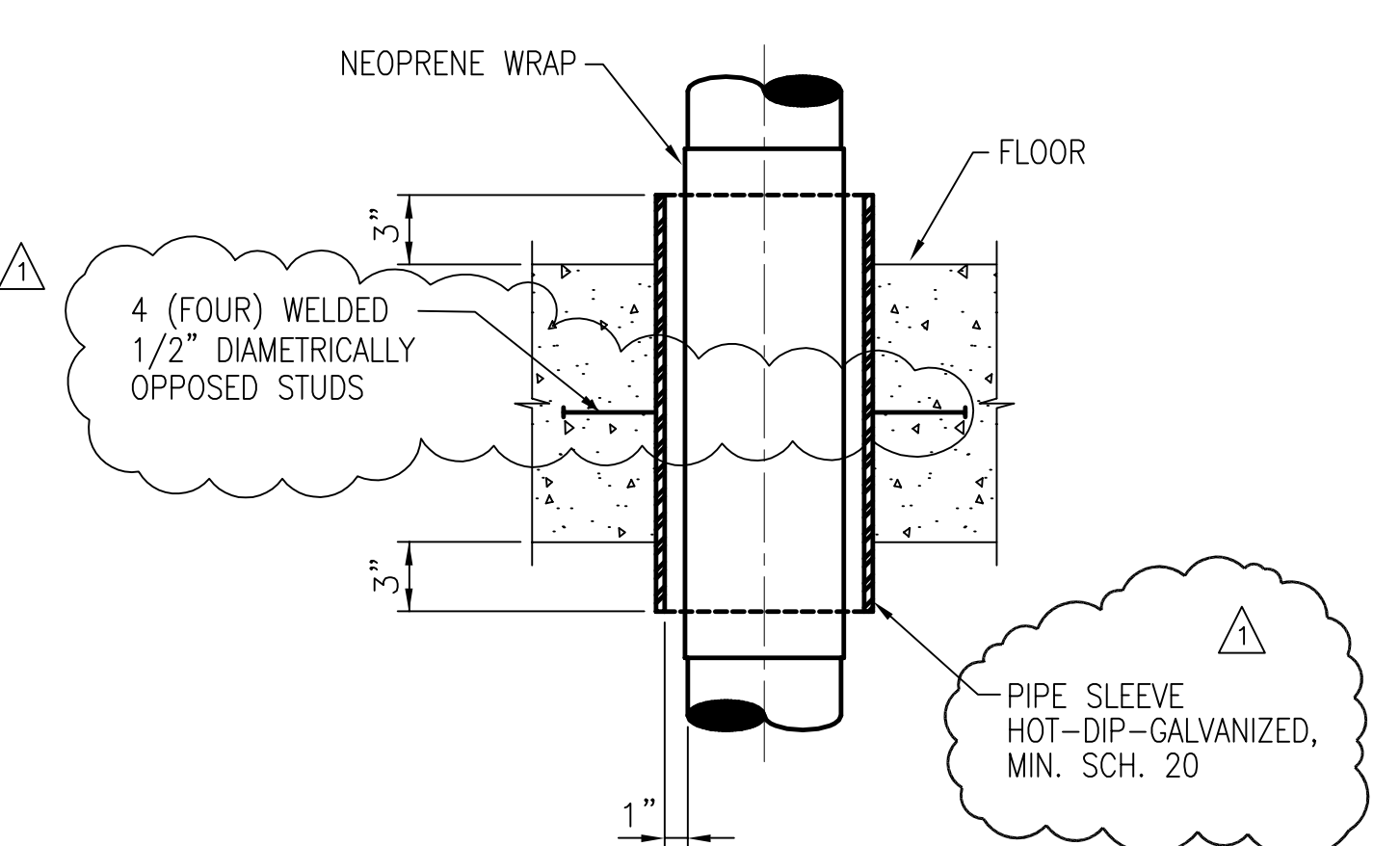
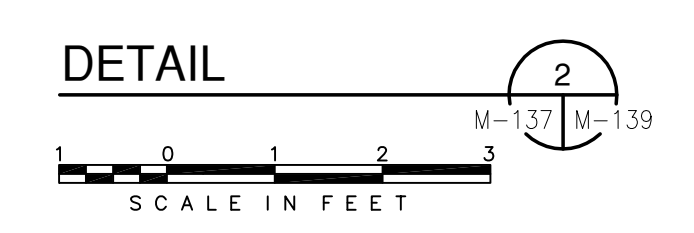
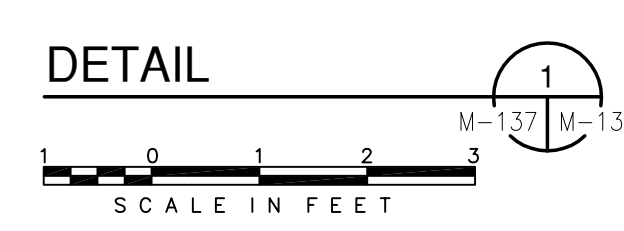
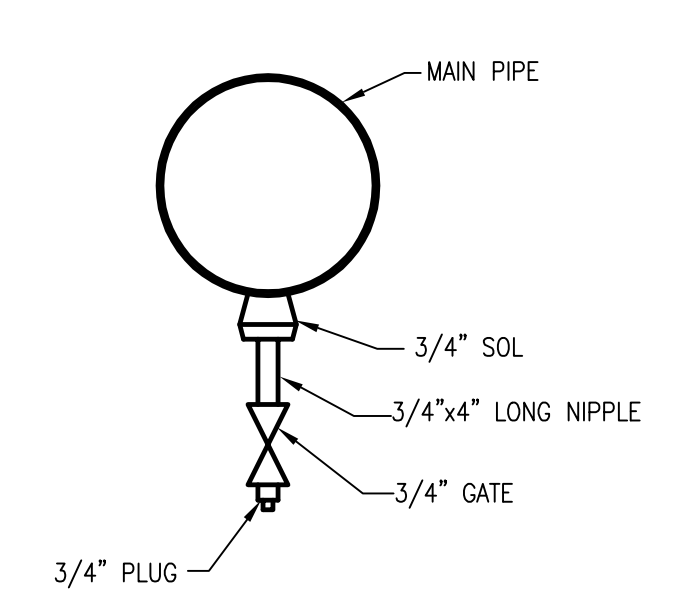
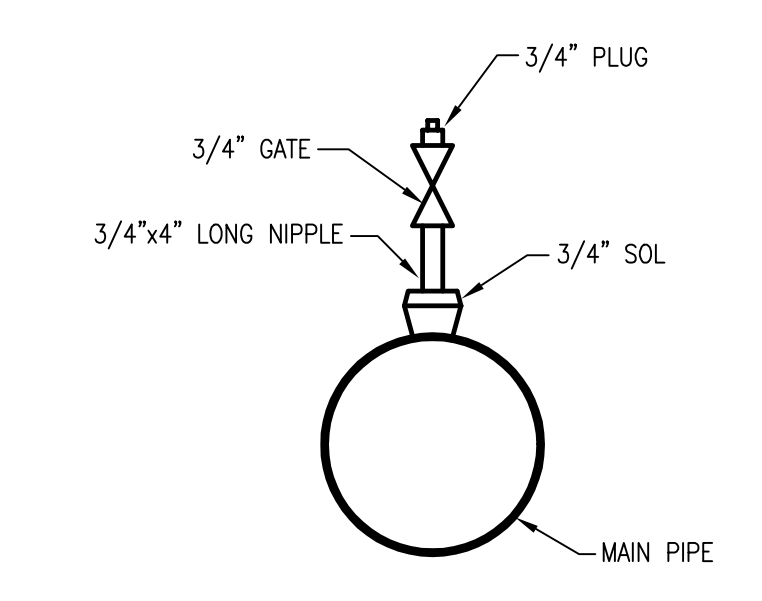
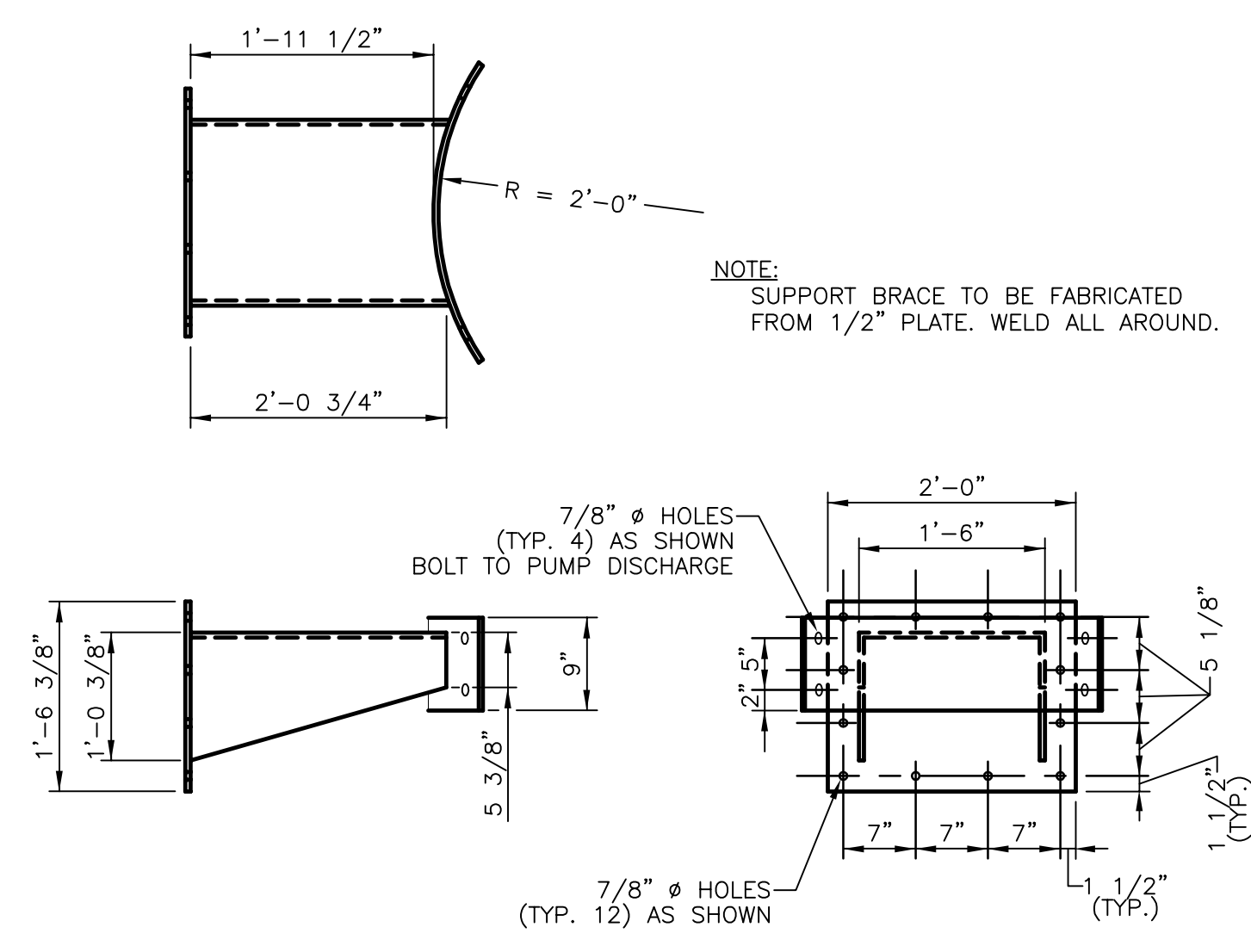
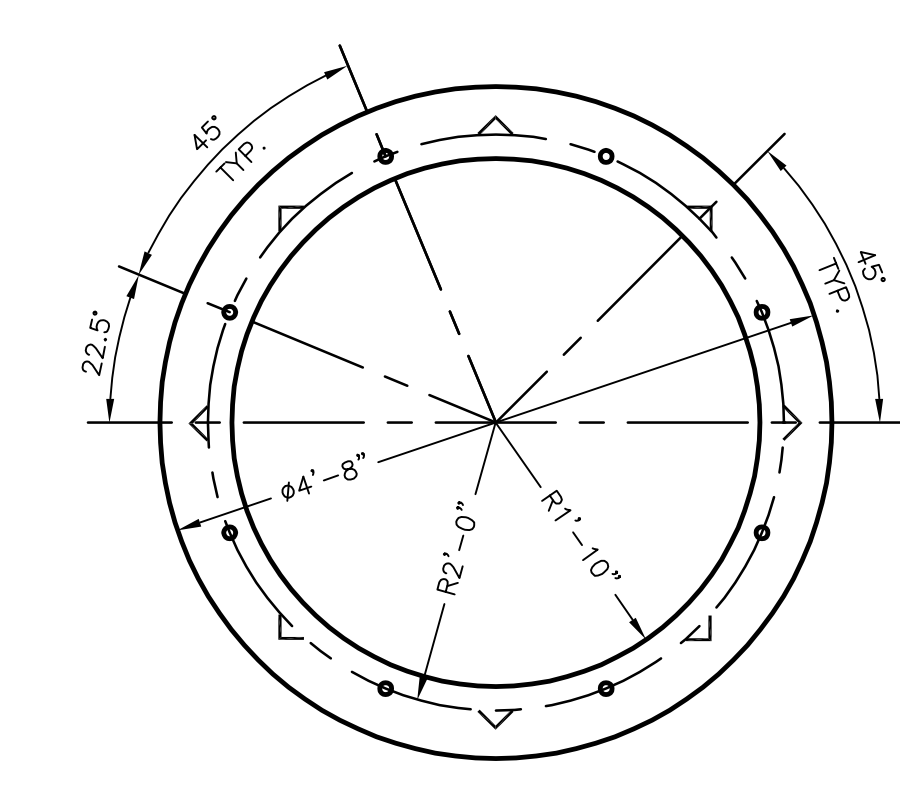
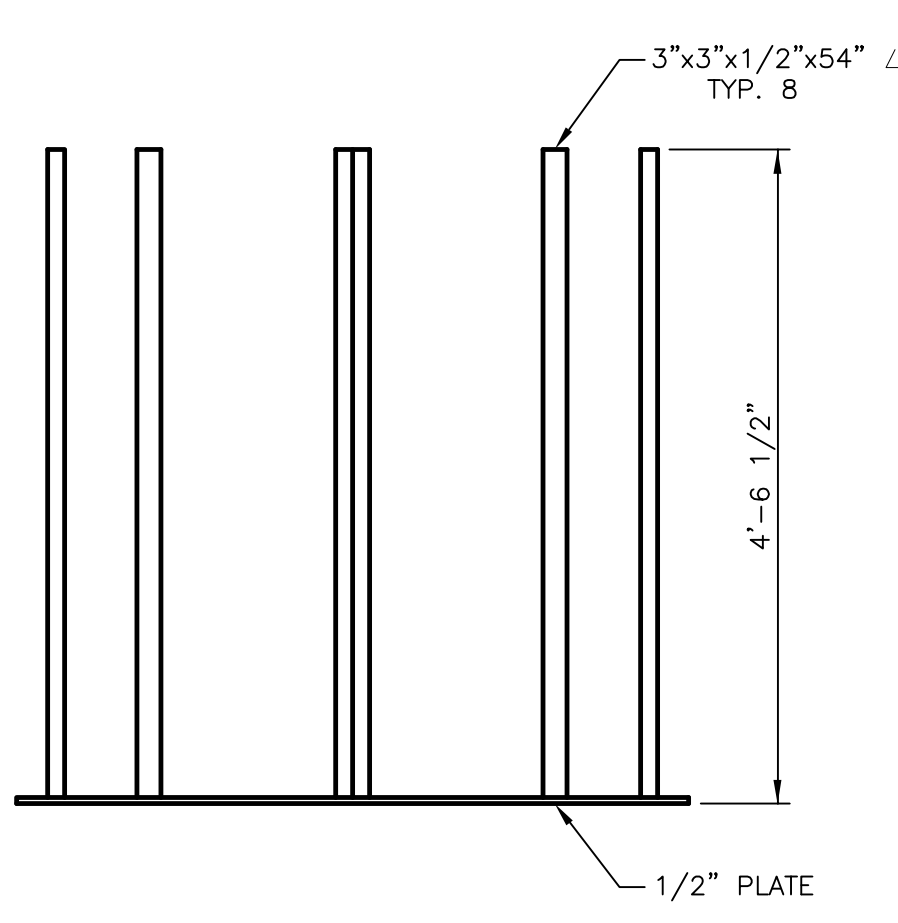
**Burns & McDonnell**  
SINCE 1923  
9400 WARD PARKWAY  
KANSAS CITY, MO. 64114  
Certification EB0000253  
Bldg. 24930

**Brown Cunningham Gonnuch**  
ENGINEERS • ARCHITECTS • CONSULTANTS  
2701 KINGMAN ST.  
METairie, LOUISIANA 70006  
(504) 454-3866  
License No. EB00008095

NO.	DATE	CHKD	DATE
Δ	8/17/01	REB	REVISED PER ADDENDUM NO. 4
Δ	6/17/01	GPW	REVISED PER ADDENDUM NO. 1
		NO. DWN	CHKD

NO.	DATE	CHKD	DATE

"RECORD DRAWINGS"



PIPE PENETRATION SCHEDULE				
	PIPE SIZE	SLEEVE SIZE	PIPE SIZE	SLEEVE SIZE
A	3/4"	2"	E	3"
B	1"	2"	F	4"
C	1 1/2"	3"	G	6"
D	2"	3"	H	12"

PIPE PENETRATION  
DETAIL  
N.T.S.

NOTES:  
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

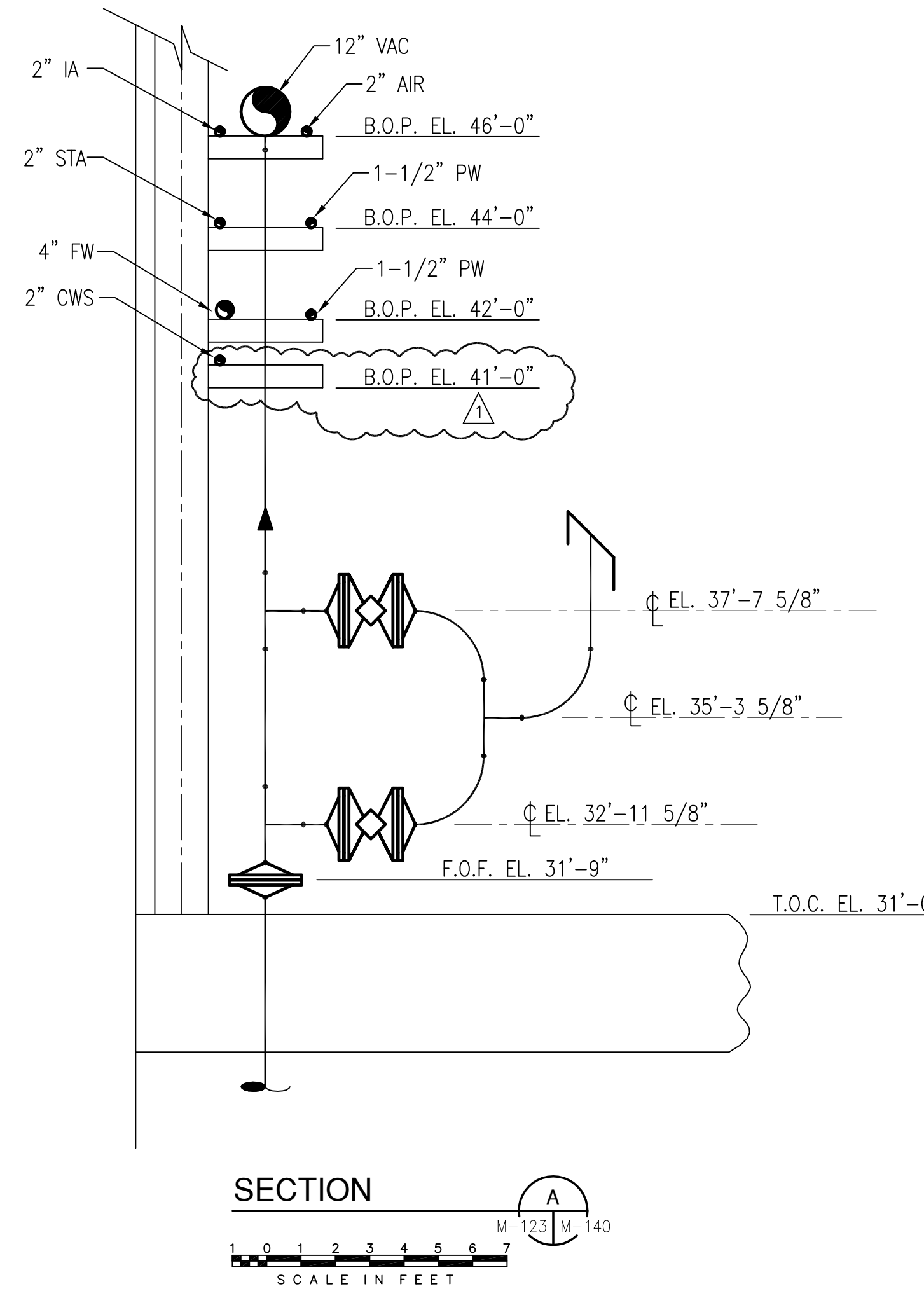
<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KUDZMAN ST. METairie, LOUISIANA 70006 (504) 454-3666 License No. EB00000995</p>		<p><b>Blitts &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMcD 24930</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>		<p>PUMP STA. G-370 SECTIONS AND DETAILS</p>		<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>			
DRAWN	CPW	DESIGN	MSS	DATE	5/10/01	NO. DWN	CHKD	DATE	9/9/01	REVISED PER ADDENDUM NO. 4	REVISIONS
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"RECORD DRAWINGS"

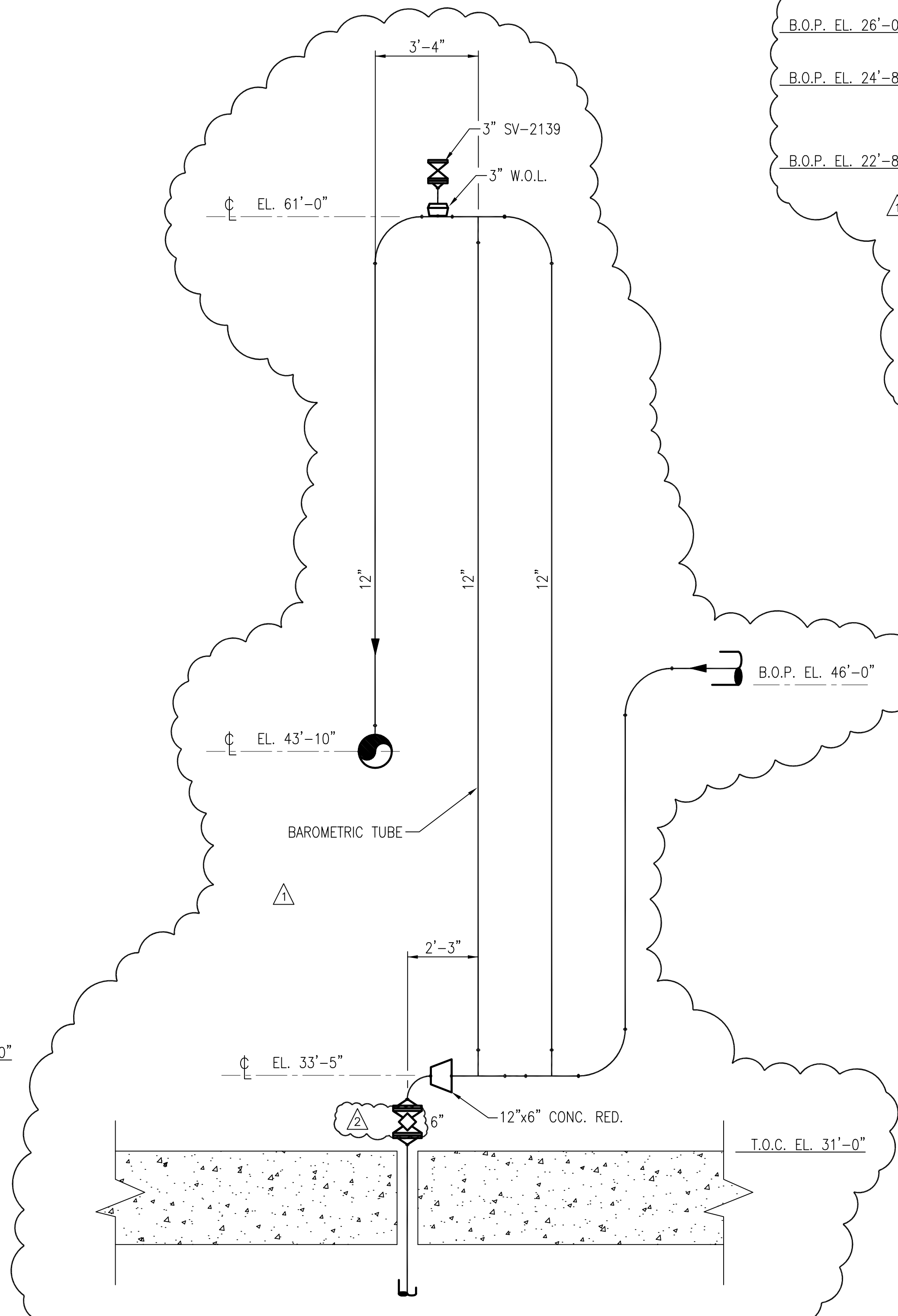
CONTRACT NO.  
C-E304  
DWG. NO.  
M-139

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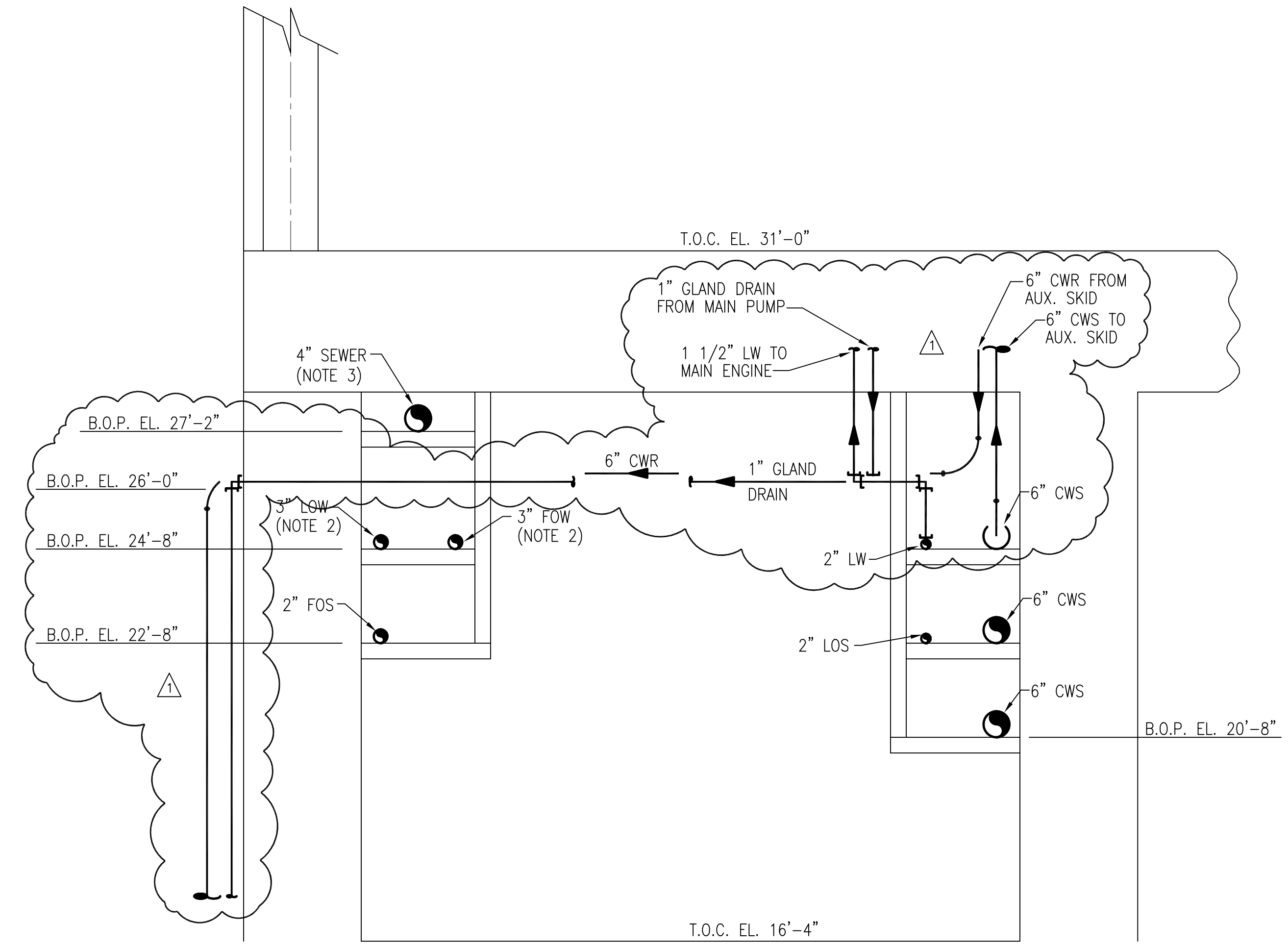
Scale For Microfilming  
Inches  
Millimeters



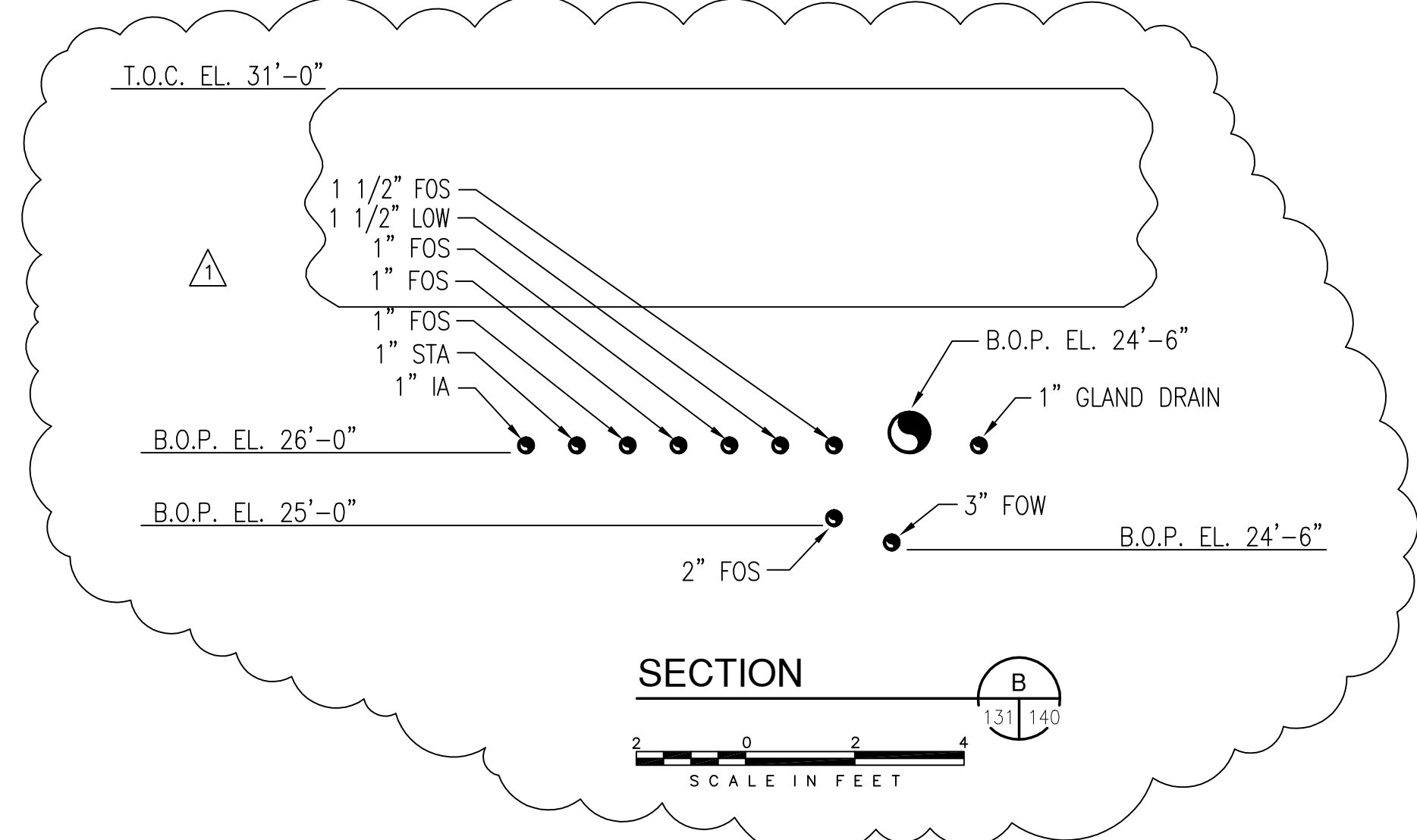
**SECTION A**  
SCALE IN FEET  
M-123 M-140



**DETAIL A**  
SCALE IN FEET  
M-122 M-140



**SECTION A**  
SCALE IN FEET  
131 140



**SECTION B**  
SCALE IN FEET  
131 140

- NOTES:**
- CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  - CONTRACTOR TO SLOPE OIL WASTE PIPING 1/16" PER FOOT & SUPPORT PIPING AS REQUIRED.
  - CONTRACTOR TO SLOPE 4" SEWER PIPE 1/8" PER FOOT & SUPPORT PIPING AS REQUIRED.

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

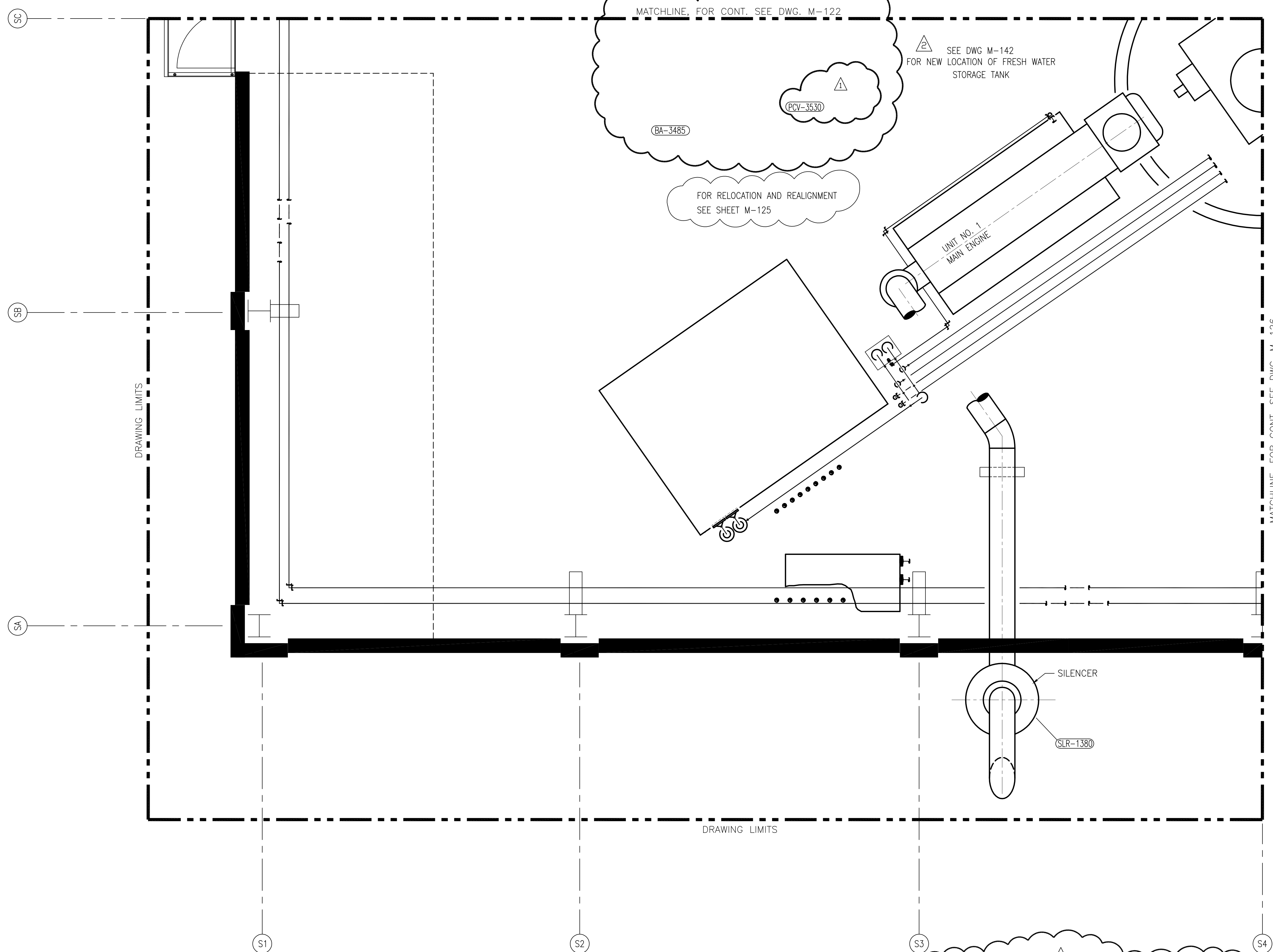
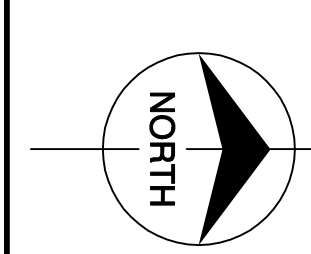
<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 WINGMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p><b>Burntis &amp; McDonnell</b> SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 Bldg 24930</p>																																																																					
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>	<p>PUMP STATION G-370 PIPING SECTIONS AND DETAILS</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>5/10/01</td> <td>GPW</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>MSS</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>R/JG</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>MSS</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>GPW</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>MSS</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>GPW</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>MSS</td> <td></td> </tr> <tr> <td>9</td> <td></td> <td>GPW</td> <td></td> </tr> <tr> <td>10</td> <td></td> <td>MSS</td> <td></td> </tr> <tr> <td>11</td> <td></td> <td>GPW</td> <td></td> </tr> <tr> <td>12</td> <td></td> <td>MSS</td> <td></td> </tr> <tr> <td>13</td> <td></td> <td>GPW</td> <td></td> </tr> <tr> <td>14</td> <td></td> <td>MSS</td> <td></td> </tr> <tr> <td>15</td> <td></td> <td>GPW</td> <td></td> </tr> <tr> <td>16</td> <td></td> <td>MSS</td> <td></td> </tr> </table>	NO.	DATE	CHKD	DATE	1	5/10/01	GPW		2		MSS		3		R/JG		4		MSS		5		GPW		6		MSS		7		GPW		8		MSS		9		GPW		10		MSS		11		GPW		12		MSS		13		GPW		14		MSS		15		GPW		16		MSS		<p>CONTRACT NO. C-E304 DWG. NO. M-140</p>
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**"RECORD DRAWINGS"**



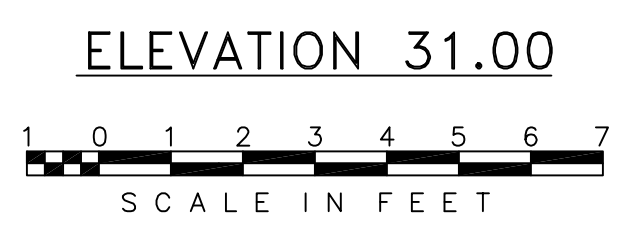






Scale For Microfilming  
Inches  
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NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

MATCHLINE, FOR CONT. SEE DWG. M-126

DRAWING LIMITS

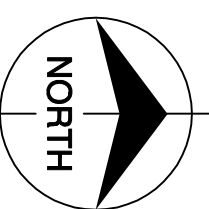
DRAWING LIMITS

<p><b>Burns &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BAGC 24930</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 374 PUMP STATIONS G-370 &amp; G-372</p>		<p>PUMP STATION G-370 ELEVATION 31.00 VALVE TAG LOCATION PLAN</p>		<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>CHGD</th> </tr> <tr> <td>1</td> <td>5/10/01</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td></td> <td></td> </tr> <tr> <td>11</td> <td></td> <td></td> <td></td> </tr> <tr> <td>12</td> <td></td> <td></td> <td></td> </tr> <tr> <td>13</td> <td></td> <td></td> <td></td> </tr> <tr> <td>14</td> <td></td> <td></td> <td></td> </tr> <tr> <td>15</td> <td></td> <td></td> <td></td> </tr> <tr> <td>16</td> <td></td> <td></td> <td></td> </tr> </table>		NO.	DATE	CHKD	CHGD	1	5/10/01			2				3				4				5				6				7				8				9				10				11				12				13				14				15				16			
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<p>ENGINEERS ARCHITECTS CONSULTANTS Brown Cunningham Gannuch 2701 WINGMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p>DESIGN MSS RIG</p>		<p>REVISIONS REVISED PER ADDENDUM NO. 1 6/1/01</p>		<p>DATE 5/10/01</p>		<p>NO. DATE</p>																																																																					
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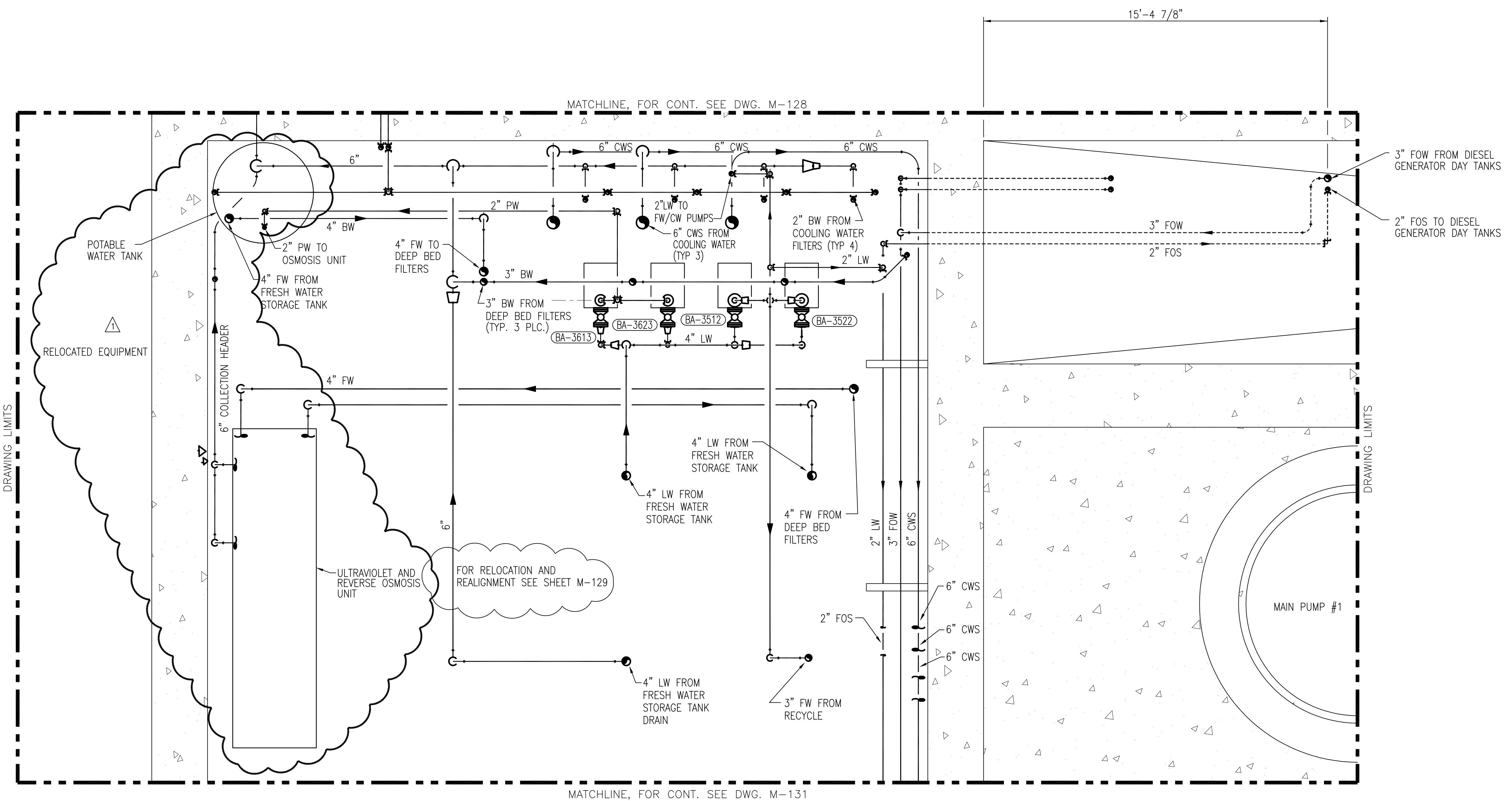
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FLA. C.E. REG. NO. 53545





Scale For Microfilming  
Inches  
Millimeters

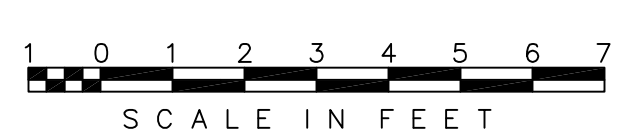


MATCHLINE, FOR CONT. SEE DWG. M-128

MATCHLINE, FOR CONT. SEE DWG. M-131

NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

ELEVATION 16.33

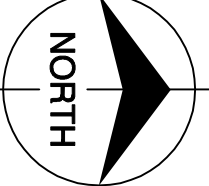


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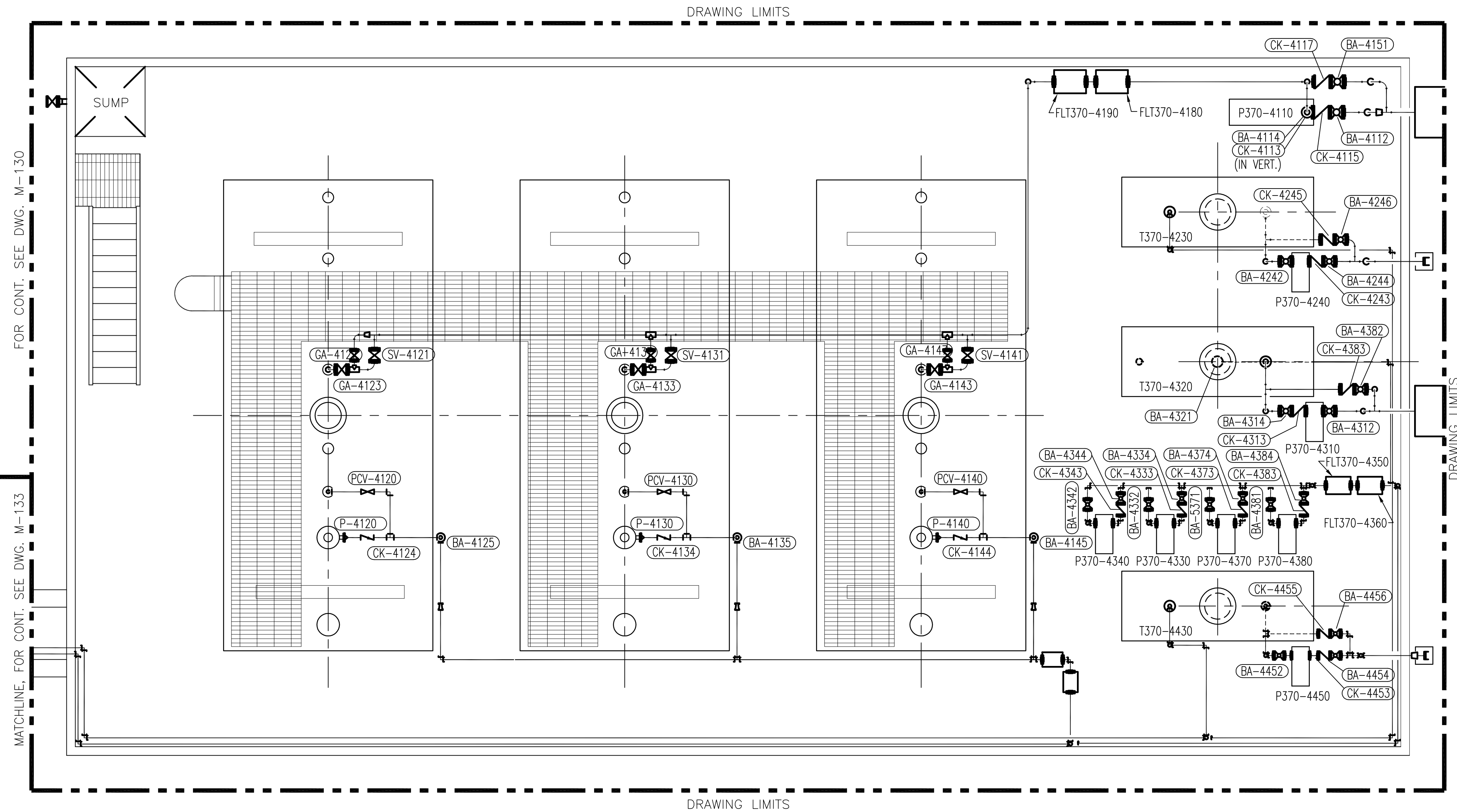
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<p><b>BURNS &amp; MCDONNELL</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 B/C/D 24930</p>	<p><b>Brown Cunningham Gannuch</b> ENGINEERS, ARCHITECTS, CONSULTANTS 2701 KUCIAMA ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008995</p>	<p>CPW</p>	<p>MSS</p>	<p>R/G</p>	<p>DATE</p>	<p>NO.</p>	<p>CHKD</p>	<p>DATE</p>	<p>REVISIONS</p>
		<p>DESIGN</p>	<p>CHKD</p>	<p>DATE</p>	<p>NO.</p>	<p>CHKD</p>	<p>DATE</p>	<p>REVISIONS</p>	
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>									
<p>PUMP STATION G-370 ELEVATION 16.33 VALVE TAG LOCATION PLAN</p>									
<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>									
<p>CONTRACT NO. C-E304 DWG. NO. M-145</p>									

"RECORD DRAWINGS"

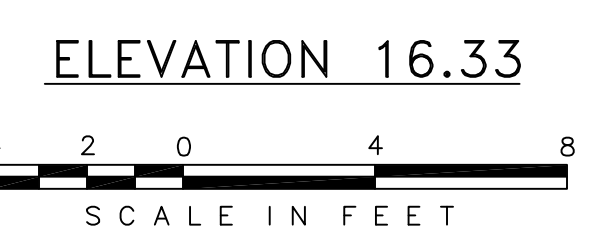


Scale For Microfilming  
Inches  
Millimeters

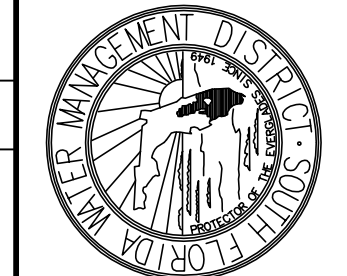


FOR CONT. SEE DWG. M-130

MATCHLINE, FOR CONT. SEE DWG. M-133



Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
 STORMWATER TREATMENT AREA NO. 3/4  
 PUMP STATIONS G-370 & G-372  
 PUMP STATION G-370  
 ELEVATION 16.33  
 VALVE LOCATION PLAN

**BURNS & McDONNELL**  
 SINCE 1938  
 9400 WARD PARKWAY  
 KANSAS CITY, MO. 64114  
 Certification: EB0000253  
 BMD 24930

**Brown Cunningham Gannuch**  
 ARCHITECTS CONSULTANTS  
 ENGINEERS  
 218 METABOLIC ST.  
 METABOLIC, LOUISIANA 70006  
 (504) 454-3866  
 License No. EB0006895

DRAWN	CHKD	DESIGN	DATE
GPW	MSS	MSS	5/10/01

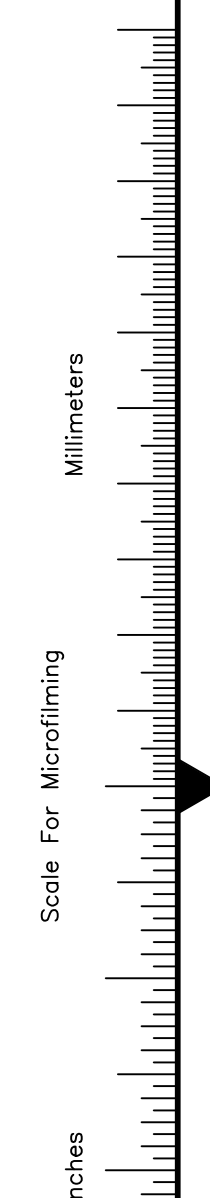
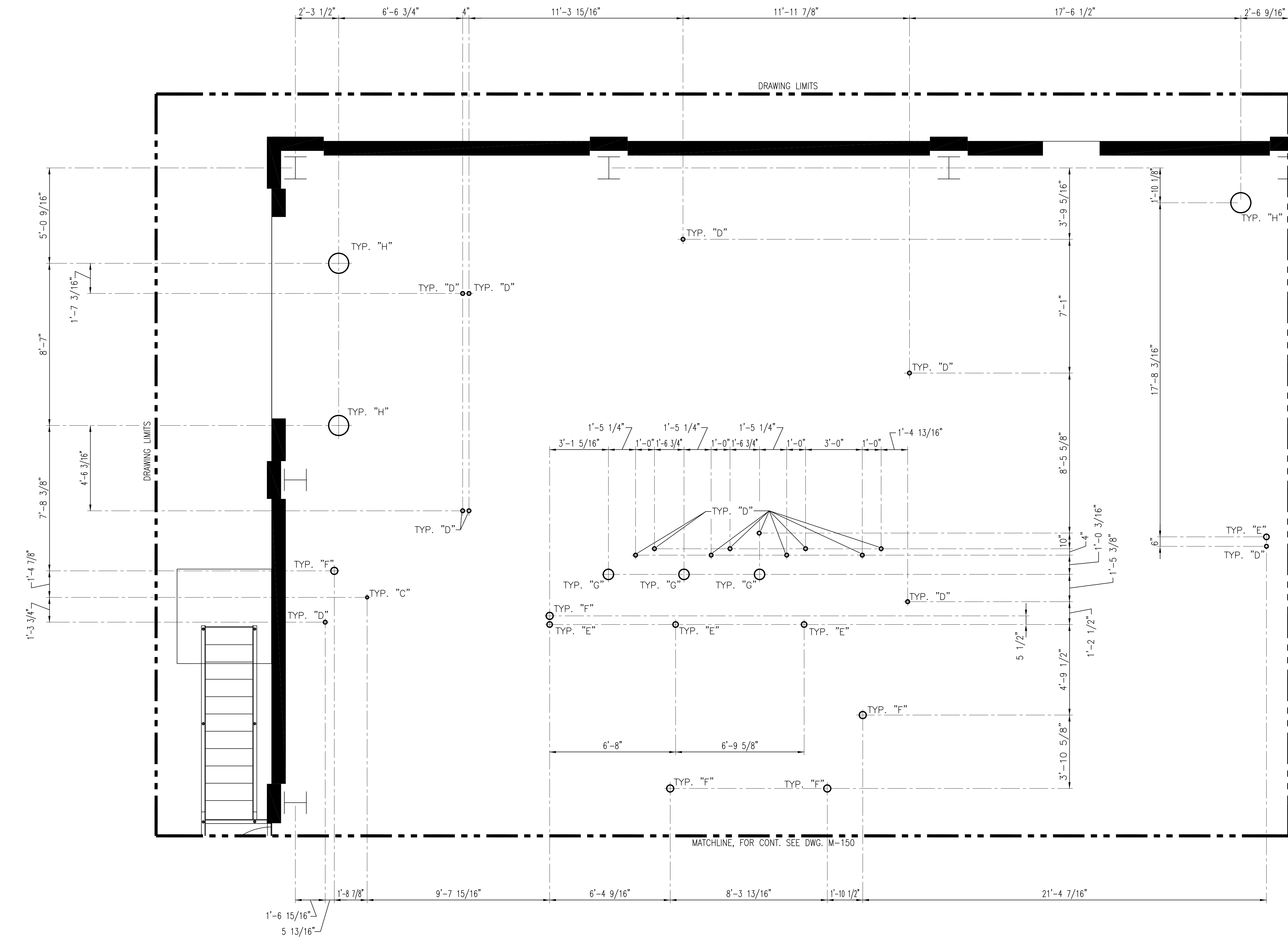
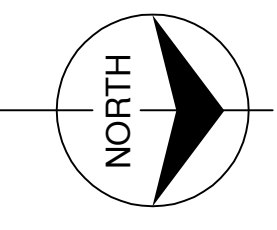
NO.	DWN	CHKD	DATE

REVISIONS

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"RECORD DRAWINGS"

CONTRACT NO.  
C-E304  
DWG. NO.  
M-146



- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-139.

ELEVATION 31.00

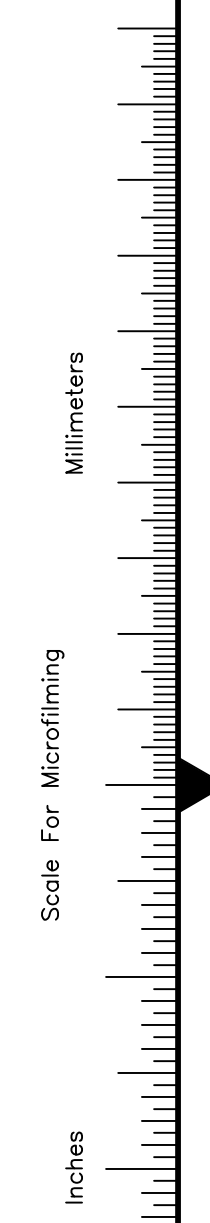
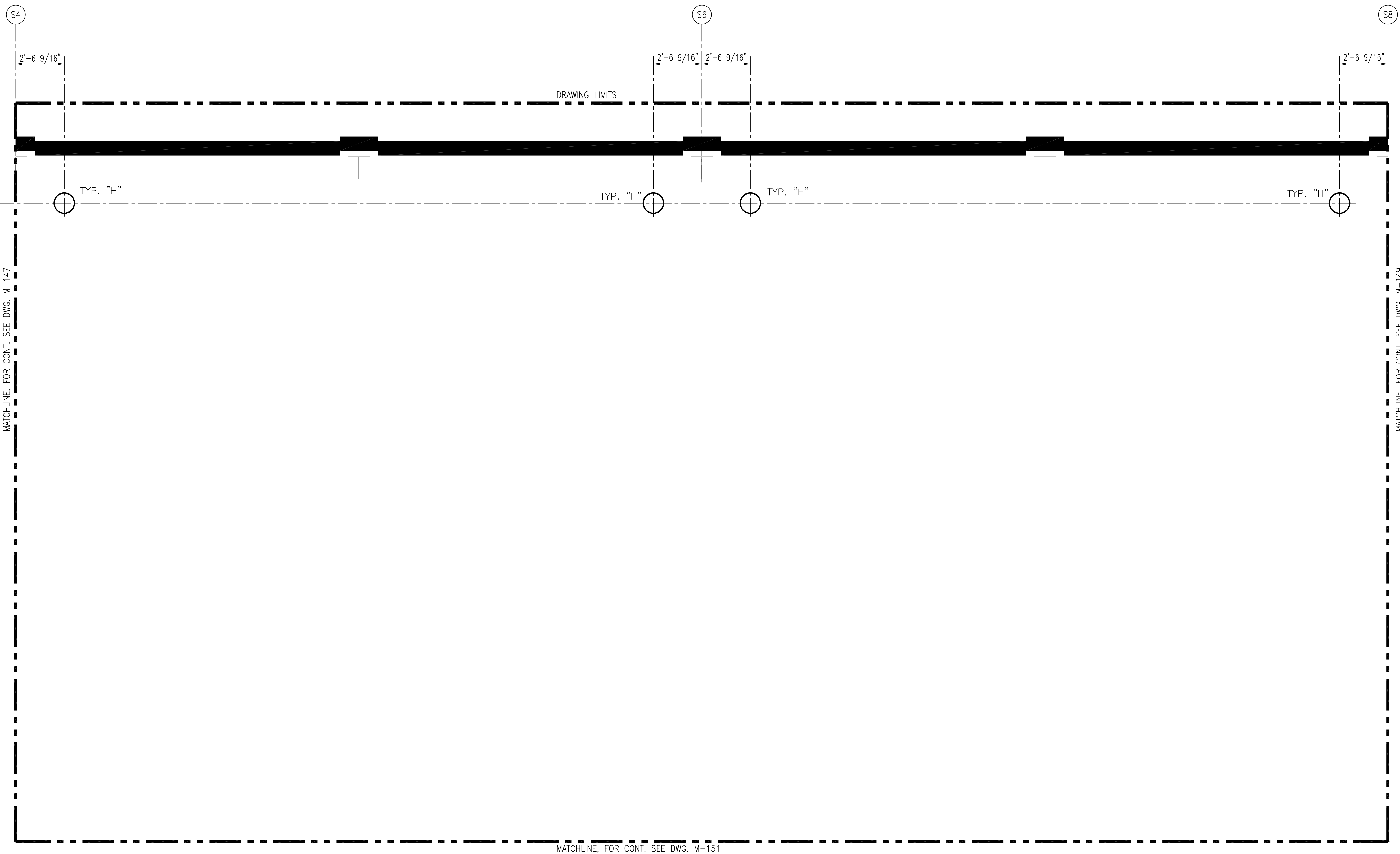
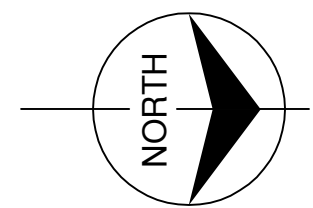


MATCHLINE, FOR CONT. SEE M-148

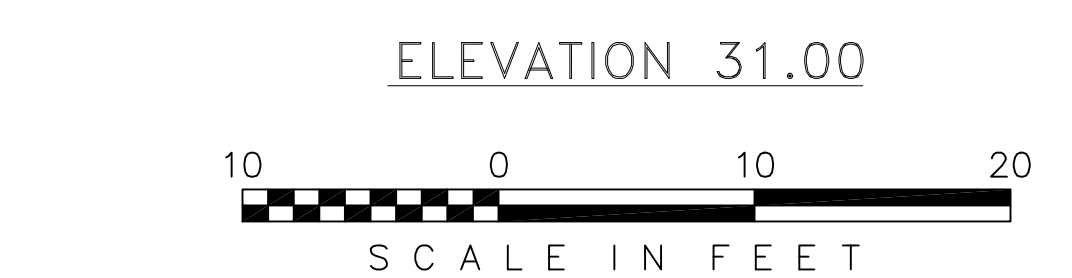
MATCHLINE, FOR CONT. SEE DWG. M-150

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		<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 3/4</b> <b>PUMP STATIONS G-370 &amp; G-372</b>		<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	
<b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095		PUMP STATION G-370 ELEVATION 31.00 PIPING PENETRATION PLAN		CONTRACT NO. C-E304 DWG. NO. <b>M-147</b>	
DRAWN CHKD DESIGN CHKD DATE	GPW MSS MSS RIG CHD DATE	6/1/01 6/1/01 6/1/01 6/1/01 6/1/01	NO. DWN CHKD DATE	ADDED DWG. PER ADDENDUM NO. 1 6/1/01	REVISIONS



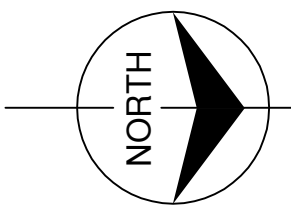
- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-139.



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 <p><b>Burns &amp; McDonnell</b> SINCE 1838 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMCB</p>		<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>	
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>	<p>PUMP STATION G-370 ELEVATION 31.00 PIPING PENETRATION PLAN</p>	<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</p>	<p>EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>
<p>RODNEY J. GANNUCH, P.E. FLA. C.E. REG. NO. 53545</p>		<p>CONTRACT NO. C-E304 DWG. NO. <b>M-148</b></p>	
<p>DRAWN CHKD DESIGN CHKD</p>	<p>GPW MSS MSS RIG</p>	<p>DATE 6/1/01</p>	<p>NO.   DWN   CHKD   DATE</p>
<p>ADDED DWG. PER ADDENDUM NO. 1 6/1/01</p>		<p>REVISIONS</p>	

"RECORD DRAWINGS"



38

2'-6 9/16"

1'-10 1/8"

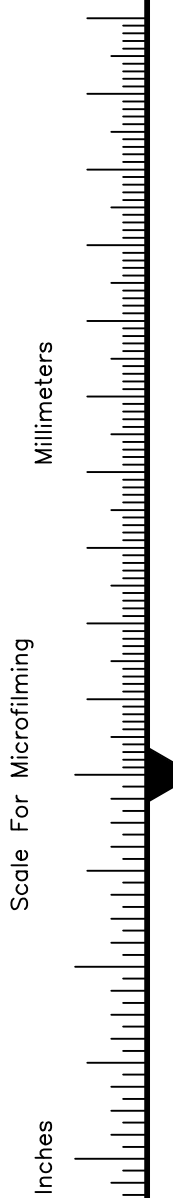
TYP. "H"

DRAWING LIMITS

MATCHLINE, FOR CONT. SEE DWG. M-148

DRAWING LIMITS

MATCHLINE, FOR CONT. SEE DWG. M-152



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- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-139.



"RECORD DRAWINGS"

Rodney J. Gannuch, P.E.  
 FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

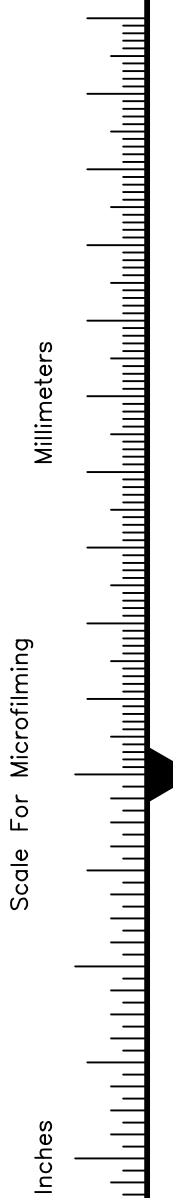
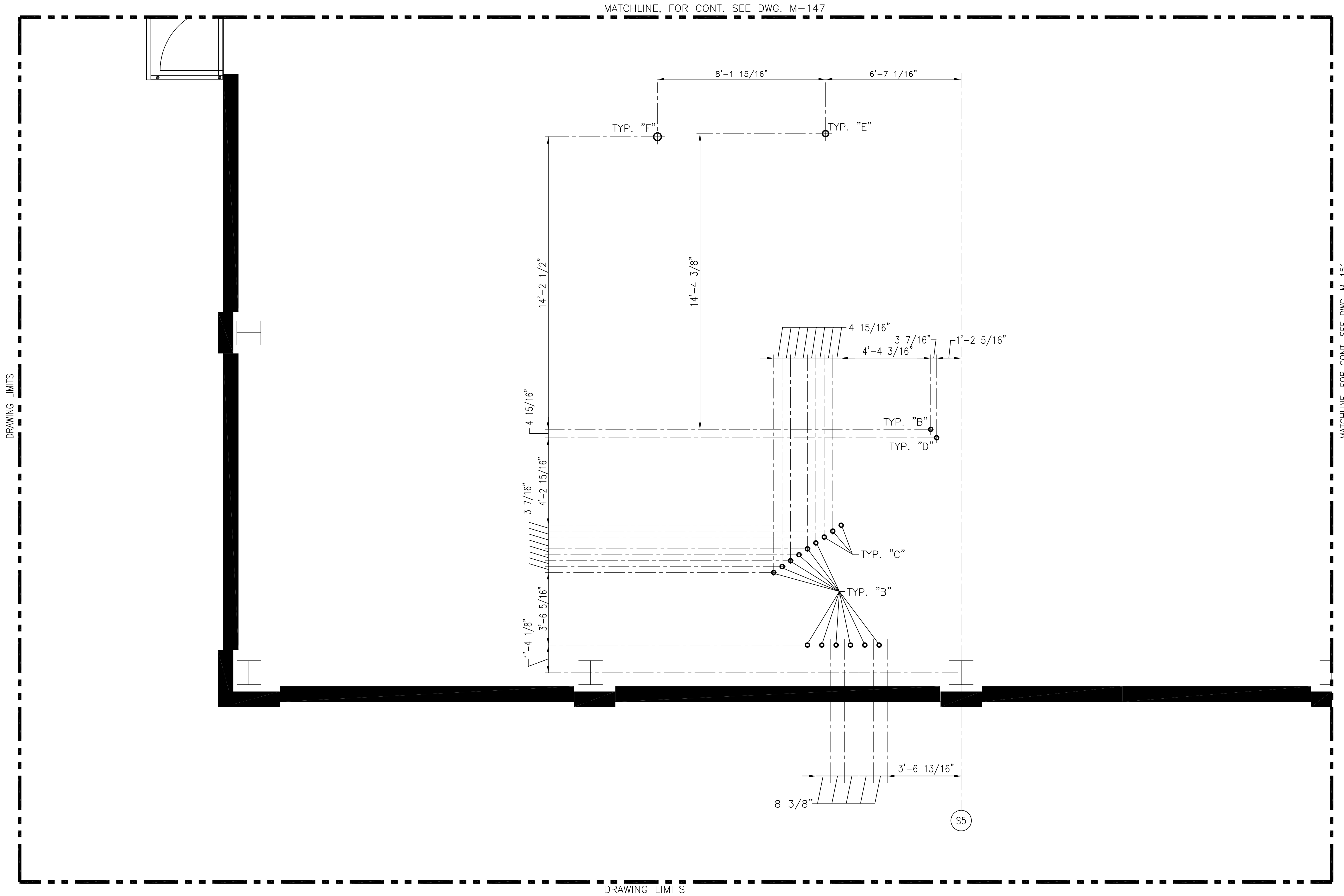
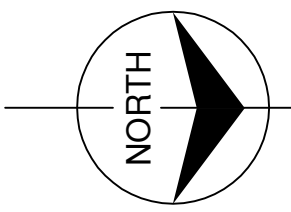
**EVERGLADES CONSTRUCTION PROJECT**  
 STORMWATER TREATMENT AREA NO. 3/4  
 PUMP STATIONS G-370 & G-372  
 PUMP STATION G-370  
 ELEVATION 31.00  
 PIPING PENETRATION PLAN

**Burns & McDonnell**  
 SINCE 1933  
 9400 WARD PARKWAY  
 KANSAS CITY, MO. 64114  
 Certification: EB0000263  
 BM30 24930

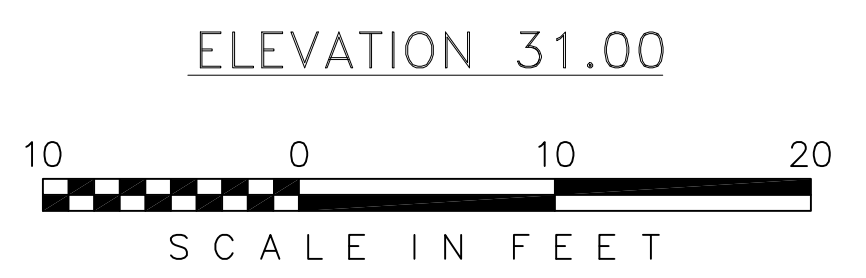
**Brown Cunningham Gannuch**  
 ENGINEERS - ARCHITECTS - CONSULTANTS  
 1001 PINE BLVD.  
 METairie, LOUISIANA 70006  
 License No. EB00008095

NO.	DATE	CHKD	DATE	REVISIONS
1	6/1/01	GPW	MSS	ADDED DWG. PER ADDENDUM NO. 1
2				
3				
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16				



CONTRACT NO.  
 C-E304  
 DWG. NO.  
**M-149**



- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-139.



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 9400 WARD PARKWAY KANSAS CITY, MO 64114 Certification: EB0000263 BMGD 24930		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372  PUMP STATION G-370 ELEVATION 31.00 PIPING PENETRATION PLAN		SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		 CONTRACT NO. C-E304 DWG. NO. <b>M-150</b>	
DRAWN CHKD DESIGN CHKD DATE	GPW MSS MSS RJJ CHKD DATE	6/1/01 6/1/01 6/1/01 6/1/01 6/1/01	6/1/01 6/1/01 6/1/01 6/1/01 6/1/01	NO NO NO NO NO	DWN CHKD CHKD CHKD CHKD	DATE DATE DATE DATE DATE	REVISIONS

"RECORD DRAWINGS"

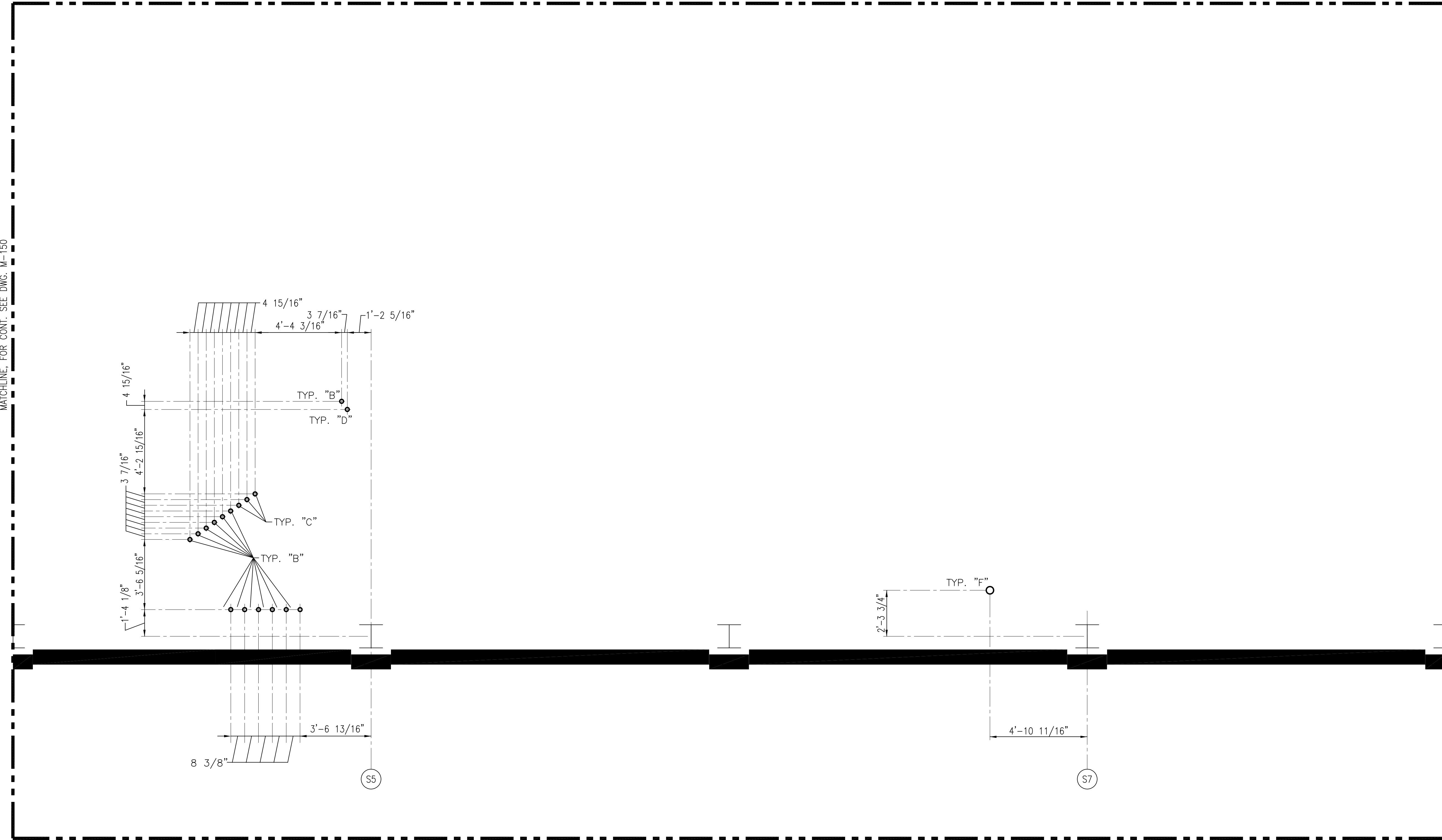
Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



MATCHLINE, FOR CONT. SEE DWG. M-148

MATCHLINE, FOR CONT. SEE DWG. M-150

MATCHLINE, FOR CONT. SEE DWG. M-152



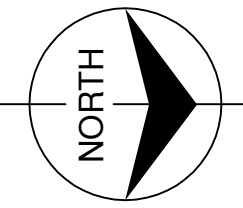
DRAWING LIMITS

- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-139.

ELEVATION 31.00



"RECORD DRAWINGS"



Scale For Microfilming  
Inches  
Millimeters

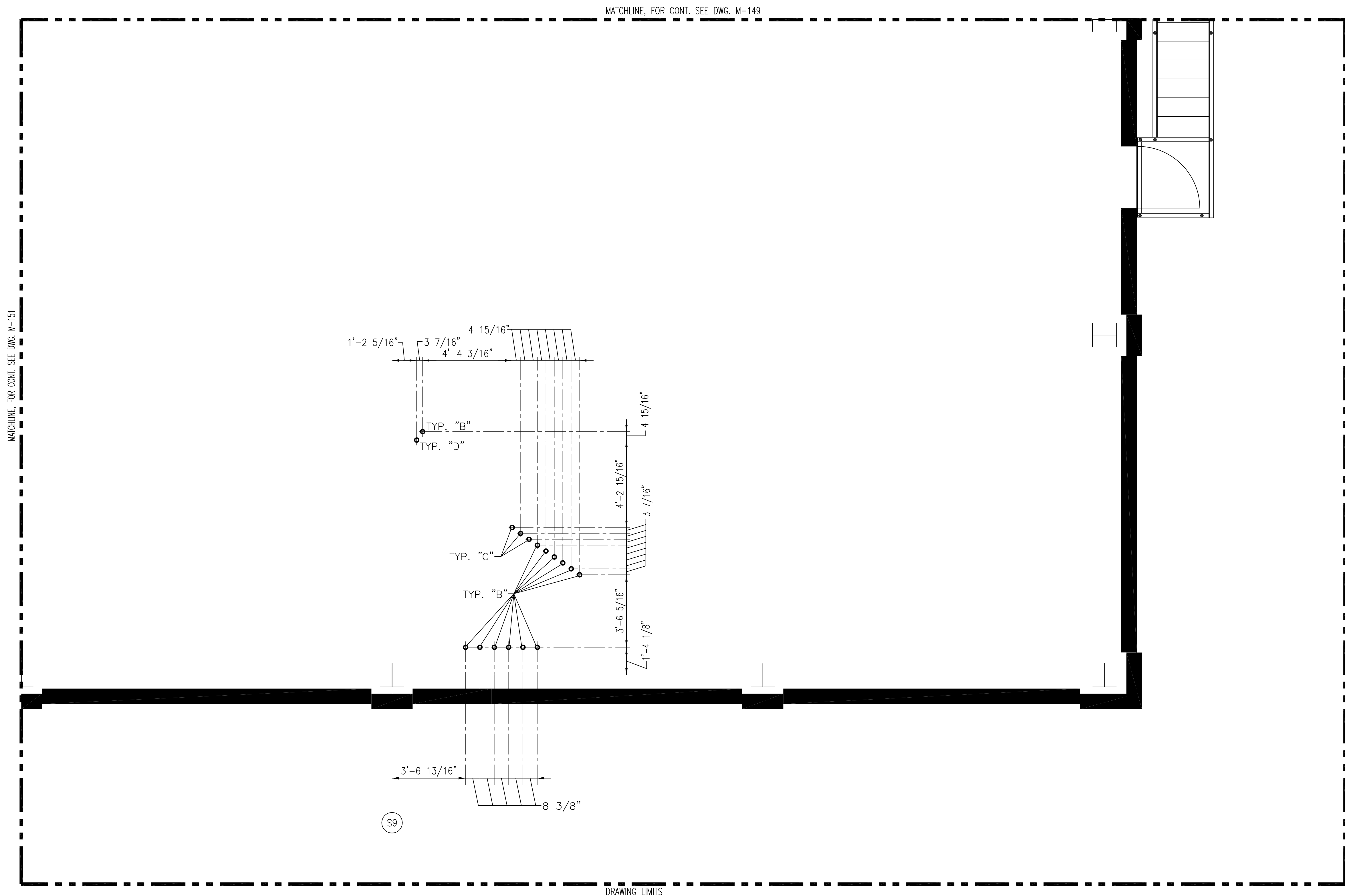
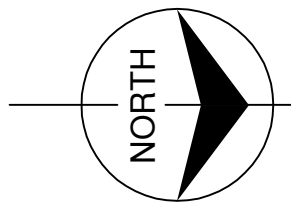
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\\SERVER\CAD-PROJ\CURRENT\80000\80698\MECHANICAL\PIPE-DWGS\G-370\M-151.DWG Last edited: 05/29/01

<p><b>Burns &amp; McDonnell</b> SINCE 1928 9400 WARD PARKWAY KANSAS CITY, MO 64114 Certification EB0000253 BMG</p>		<p><b>Brown Cunningham Gannuch</b> ENGINEERS - ARCHITECTS - CONSULTANTS METABOLIC LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p>NO.   DWN   CHKD   DATE</p>
<p>DRAWN CHKD</p>	<p>MSS MSS</p>	<p>DESIGN CHKD</p>	<p>DATE 6/1/01</p>	<p>REVISIONS</p>
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>		<p>PUMP STATION G-370 ELEVATION 31.00 PIPING PENETRATION PLAN</p>		<p>ADDED DWG. PER APPENDIX NO. 1 6/1/01</p>
<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>CONTRACT NO. C-E304 DWG. NO. M-151</p>		<p>DATE 6/1/01</p>

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545







- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-139.



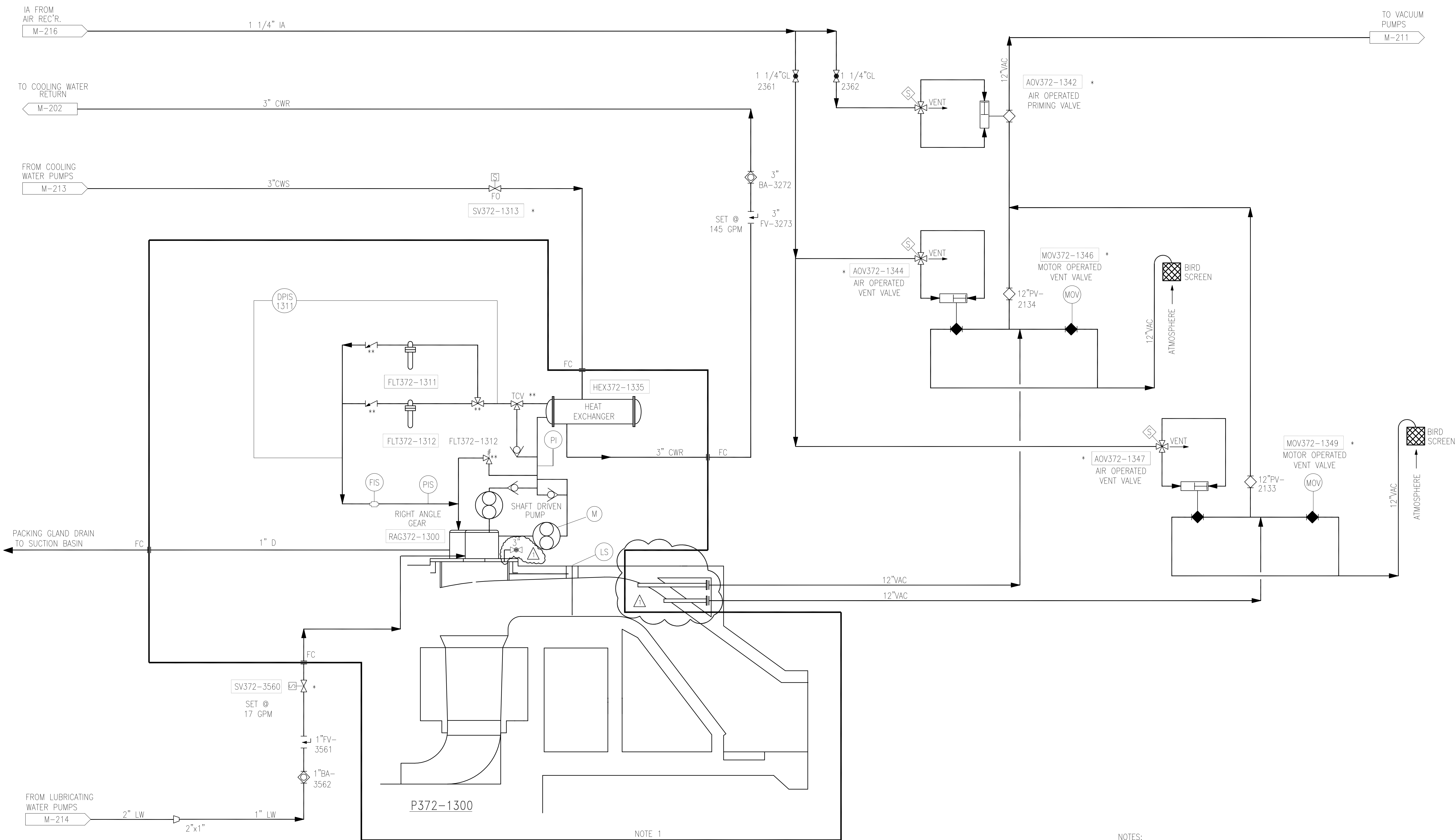
Scale For Microfilming  
Inches  
Millimeters

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 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certified Professional Engineer License No. 24930		 ENGINEERS • ARCHITECTS • CONSULTANTS METABOLITE BUILDING (504) 454-3866 License No. EB00008095		DRAWN GPW MSS	CHKD MSS	DESIGN MSS	CHKD RJC	DATE 6/1/01	NO. DWN 1	CHKD MSS	DATE 6/1/01	ADDED DWG. PER APPENDUM NO. 1	REVISIONS
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406													
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-370 ELEVATION 31.00 PIPING PENETRATION PLAN													
CONTRACT NO. C-E304 DWG. NO. <b>M-152</b>													
Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545													

"RECORD DRAWINGS"

P.372-1300  
DRAINAGE PUMP



- NOTES:
1. OWNER FURNISHED EQUIPMENT.
  2. FC → CONTRACTOR FIELD PIPING CONNECTION POINT.
  3. CONTRACTOR TO COORDINATE ALL MECHANICAL DWGS. WITH ELECTRICAL & INSTRUMENTATION DWGS. AS REQUIRED.
- \* CONTROLLED BY ENGINE  
 \*\* VALVE INFORMATION PROVIDED BY VENDOR.

Rodney J. Gannuch, P.E.  
 FLA. C.E. REG. NO. 53545

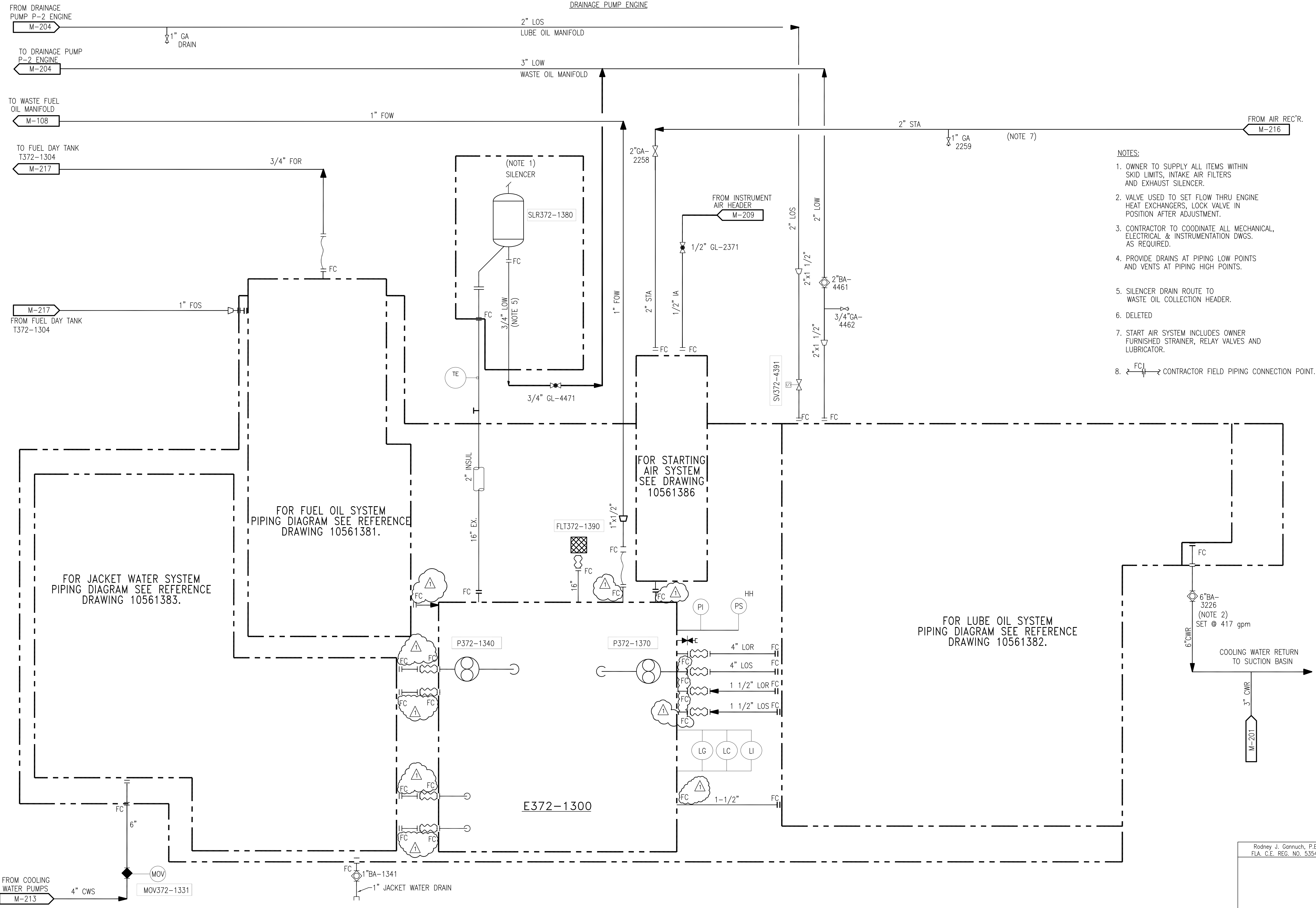
<p><b>Burns &amp; McDonnell</b>        SINCE 1888        ENGINEERS - ARCHITECTS - CONSULTANTS        9400 WARD PARKWAY        KANSAS CITY, MO. 64114        Certification: EB0000253        Bldg License No. 24930</p>		<p><b>Brown Cunningham Gannuch</b>        ENGINEERS - ARCHITECTS - CONSULTANTS        2701 LOUISIANA ST.        METairie, LOUISIANA 70006        (504) 454-3866        License No. EB00008095</p>													
<p>EVERGLADES CONSTRUCTION PROJECT        STORMWATER TREATMENT AREA NO. 3/4        PUMP STATIONS G-370 &amp; G-372</p>	<p>PUMP STA. G-372        P-1, 925 C.F.S. PUMP        PIPING DIAGRAM</p>	<p>SOUTH FLORIDA        WATER MANAGEMENT DISTRICT        EVERGLADES CONSTRUCTION PROJECT        3301 GUN CLUB ROAD        WEST PALM BEACH, FLORIDA 33406</p>	<p>CONTRACT NO.        C-E304        DWG. NO.        M-201</p>												
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NO.	DATE	CHKD.	DATE												
1	11/2000														
2	9/9/01														

Scale For Microminim  
 Millimeters  
 Inches

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"RECORD DRAWINGS"

E372-1300  
DRAINAGE PUMP ENGINE



- NOTES:
- OWNER TO SUPPLY ALL ITEMS WITHIN SKID LIMITS, INTAKE AIR FILTERS AND EXHAUST SILENCER.
  - VALVE USED TO SET FLOW THRU ENGINE HEAT EXCHANGERS, LOCK VALVE IN POSITION AFTER ADJUSTMENT.
  - CONTRACTOR TO COORDINATE ALL MECHANICAL, ELECTRICAL & INSTRUMENTATION DWGS. AS REQUIRED.
  - PROVIDE DRAINS AT PIPING LOW POINTS AND VENTS AT PIPING HIGH POINTS.
  - SILENCER DRAIN ROUTE TO WASTE OIL COLLECTION HEADER.
  - DELETED
  - START AIR SYSTEM INCLUDES OWNER FURNISHED STRAINER, RELAY VALVES AND LUBRICATOR.
  - FC → CONTRACTOR FIELD PIPING CONNECTION POINT.

Scale For Microfilming  
Inches  
Millimeters

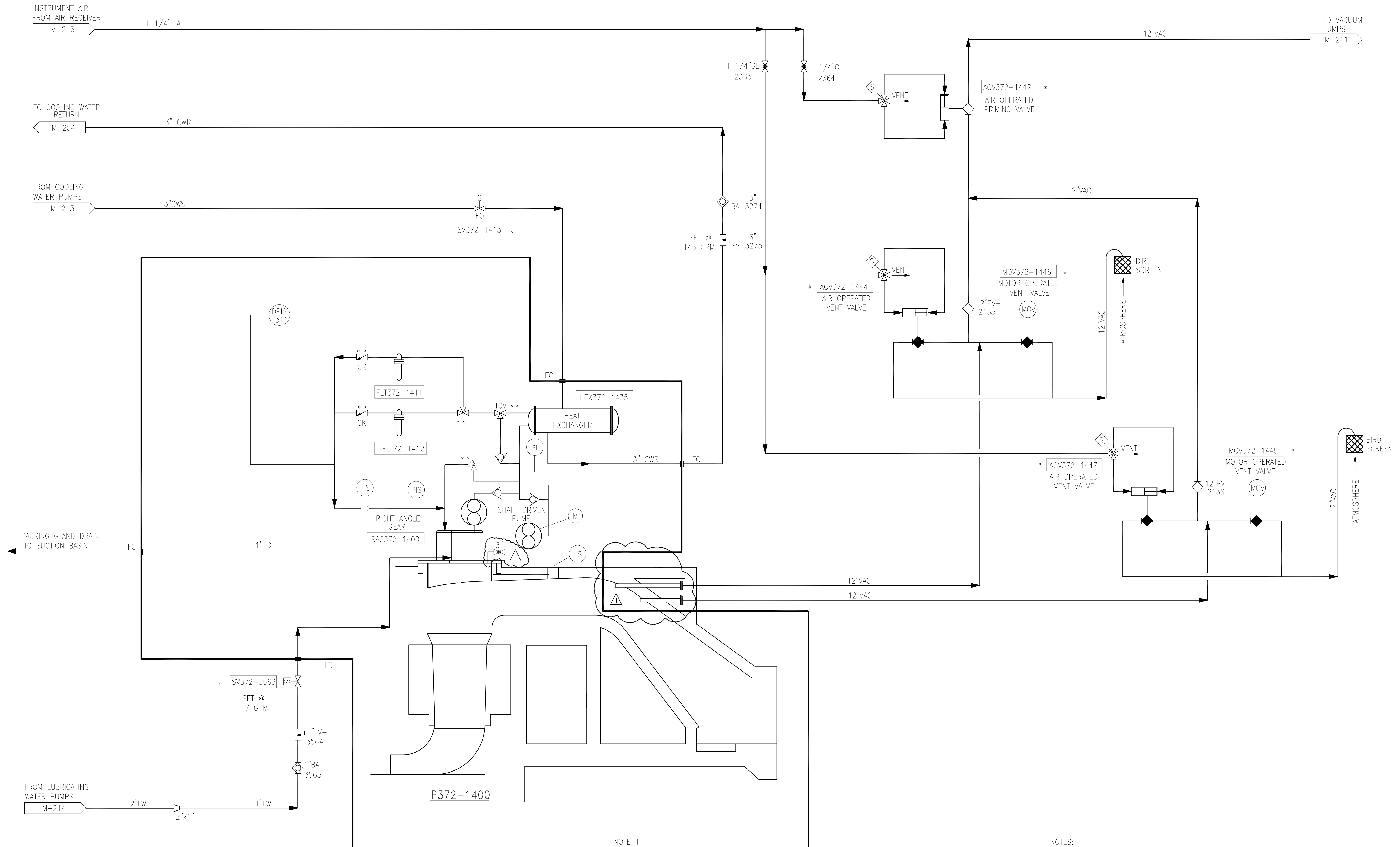
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<p><b>Burns &amp; McDonnell</b> SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO 64114 Certification: EB0000263 BMG 24930</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STA. G-372 P-1, 925 C.F.S. PUMP PIPING DIAGRAM</p>		<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>															
<p>CONTRACT NO. C-E304 DWG. NO. M-202</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>9/9/01</td> <td>MSS</td> <td>9/9/01</td> </tr> <tr> <td>2</td> <td></td> <td>CHKD</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>CHKD</td> <td></td> </tr> </table>	NO.	DATE	CHKD	DATE	1	9/9/01	MSS	9/9/01	2		CHKD		3		CHKD		<p>C.A.S. EJM J.I.B. R/G</p>	<p>11/2000</p>
NO.	DATE	CHKD	DATE																
1	9/9/01	MSS	9/9/01																
2		CHKD																	
3		CHKD																	

"RECORD DAWINGS"

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

P372-1400  
DRAINAGE PUMP



NOTE 1

- NOTES:
- OWNER FURNISHED EQUIPMENT.
  - CONTRACTOR FIELD PIPING CONNECTION POINT.
  - CONTRACTOR TO COORDINATE ALL MECHANICAL DWGS. WITH ELECTRICAL & INSTRUMENTATION DWGS. AS REQUIRED.
- \* CONTROLLED BY ENGINE LOGIC  
\*\* VALVE INFORMATION PROVIDED BY VENDOR.

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

<b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGMAN ST. METairie, LOUISIANA 70006 License No. EB0008095		C.A.S. CHKO DESIGN DATE 11/2000	E.I.M. J.L.B. R.J.G. DATE 11/2000	REVISIONS NO.   DATE 1   9/9/01 2   3   4
<b>Burns &amp; McDonnell</b> SINGLE LINE 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 BMCD 24930		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STA. G-372 P-2, 925 C.F.S. PUMP PIPING DIAGRAM		
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		CONTRACT NO. C-E304 DWG. NO. M-203		

'RECORD DRAWINGS'

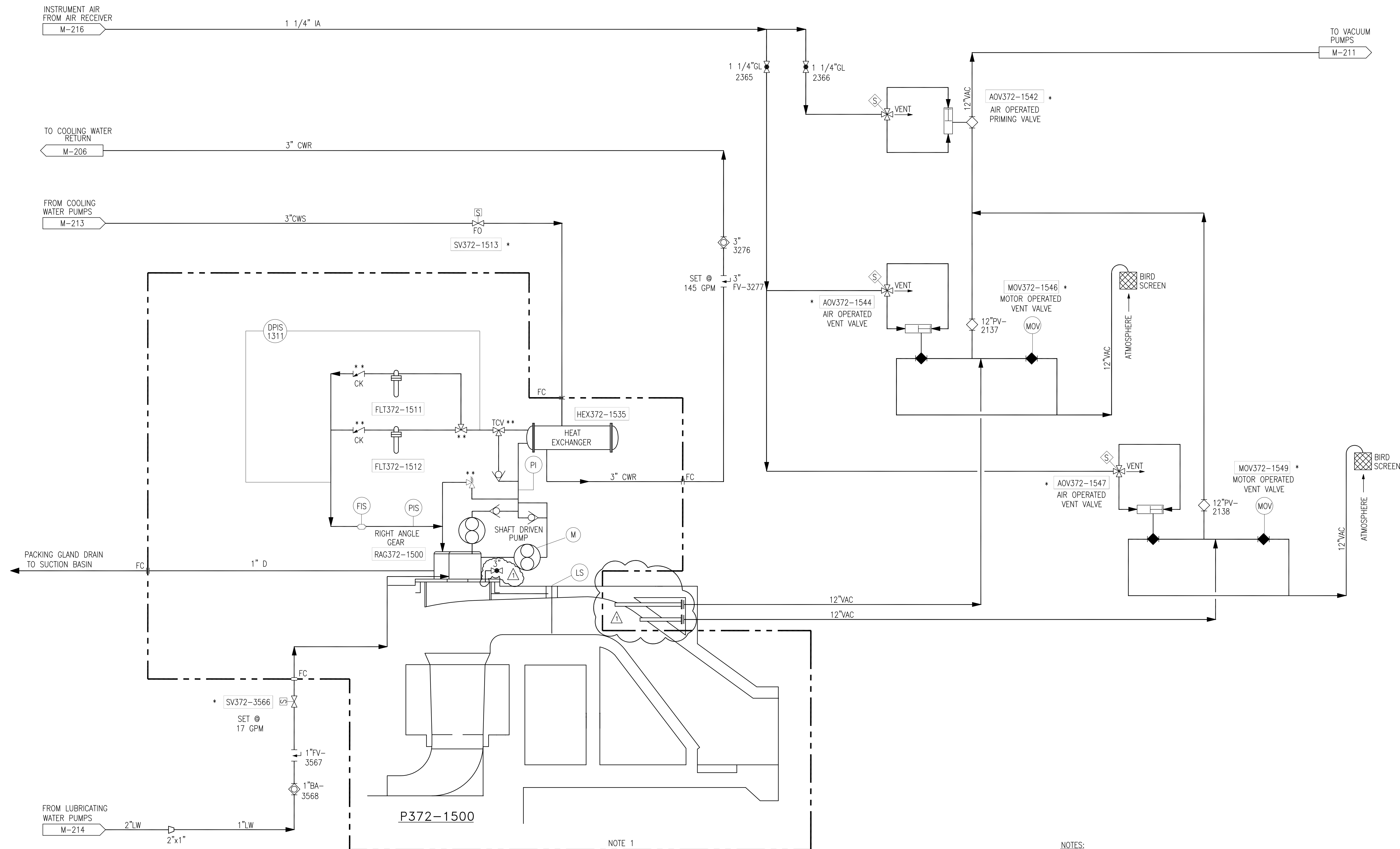
P-2 PUMP ENGINE

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Scale For Microfilming  
Inches  
Millimeters



P372-1500  
DRAINAGE PUMP



NOTE 1

- NOTES:**
- OWNER FURNISHED EQUIPMENT.
  - FCP → CONTRACTOR FIELD PIPING CONNECTION POINT.
  - CONTRACTOR TO COORDINATE ALL MECHANICAL DWGS. WITH ELECTRICAL & INSTRUMENTATION DWGS. AS REQUIRED.
- \* CONTROLLED BY ENGINE LOGIC  
 \*\* VALVE INFORMATION PROVIDED BY VENDOR.

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

P-3 PUMP ENGINE

"RECORD DRAWINGS"

Scale For Microfilming  
Millimeters  
Inches

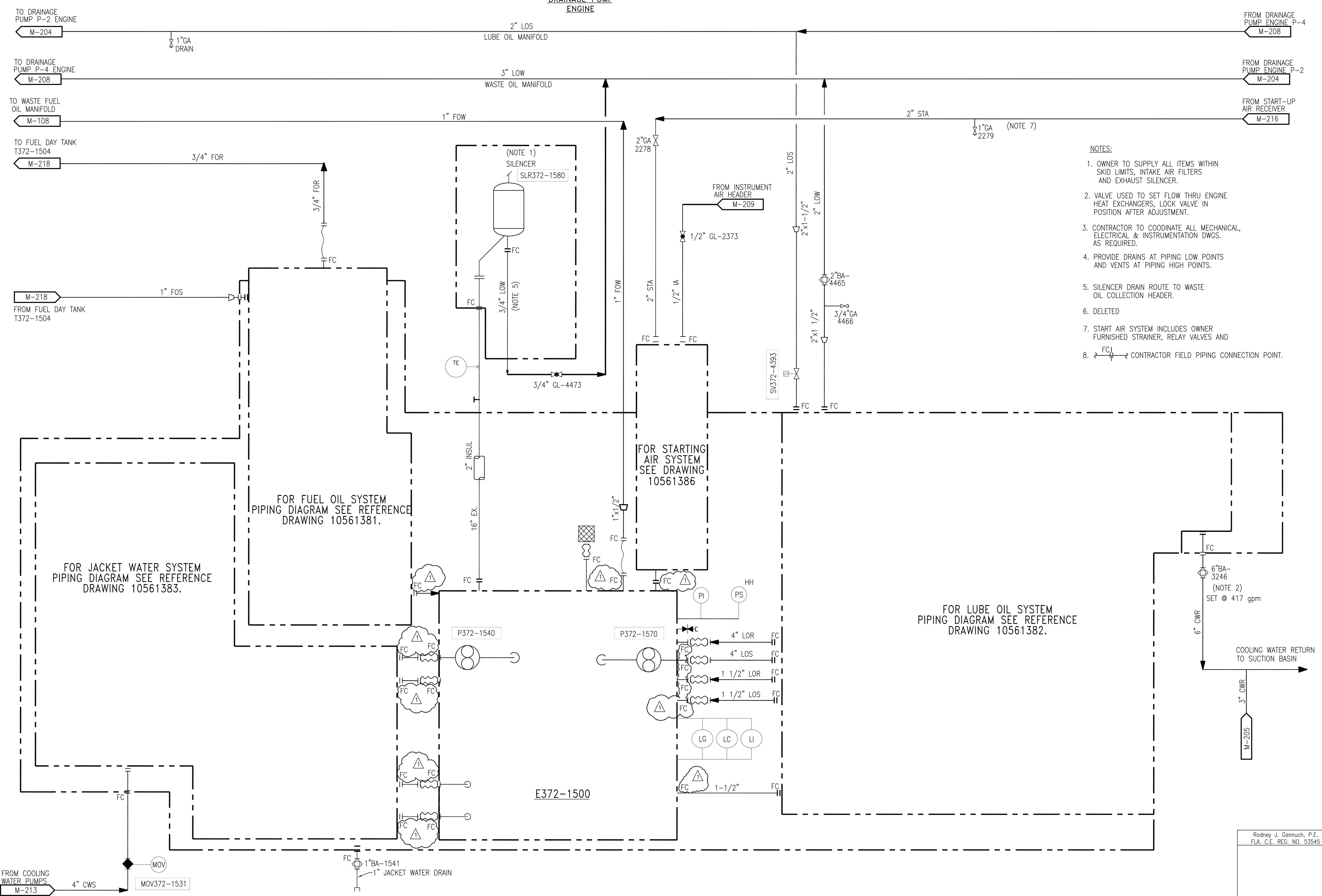
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<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINSMAN ST., 70006 MEMPHIS, TN 38117 License No. EB0008095</p>		<p>NO. DWG CHKD DATE</p>
<p>NO. DATE CHKD DATE</p>	<p>NO. DATE CHKD DATE</p>	<p>NO. DATE CHKD DATE</p>
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STA. G-372 P-3, 925 C.F.S. PUMP PIPING DIAGRAM</p>		<p>REVISIONS</p>
<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>CONTRACT NO. C-E304 DWG. NO. M-205</p>

E372-1500  
DRAINAGE PUMP  
ENGINE

E372-1500

P-3 PUMP-ENGINE



- NOTES:
1. OWNER TO SUPPLY ALL ITEMS WITHIN SKID LIMITS, INTAKE AIR FILTERS AND EXHAUST SILENCER.
  2. VALVE USED TO SET FLOW THRU ENGINE HEAT EXCHANGERS, LOCK VALVE IN POSITION AFTER ADJUSTMENT.
  3. CONTRACTOR TO COORDINATE ALL MECHANICAL, ELECTRICAL & INSTRUMENTATION DWGS. AS REQUIRED.
  4. PROVIDE DRAINS AT PIPING LOW POINTS AND VENTS AT PIPING HIGH POINTS.
  5. SILENCER DRAIN ROUTE TO WASTE OIL COLLECTION HEADER.
  6. DELETED
  7. START AIR SYSTEM INCLUDES OWNER FURNISHED STRAINER, RELAY VALVES AND
  8. CONTRACTOR FIELD PIPING CONNECTION POINT.

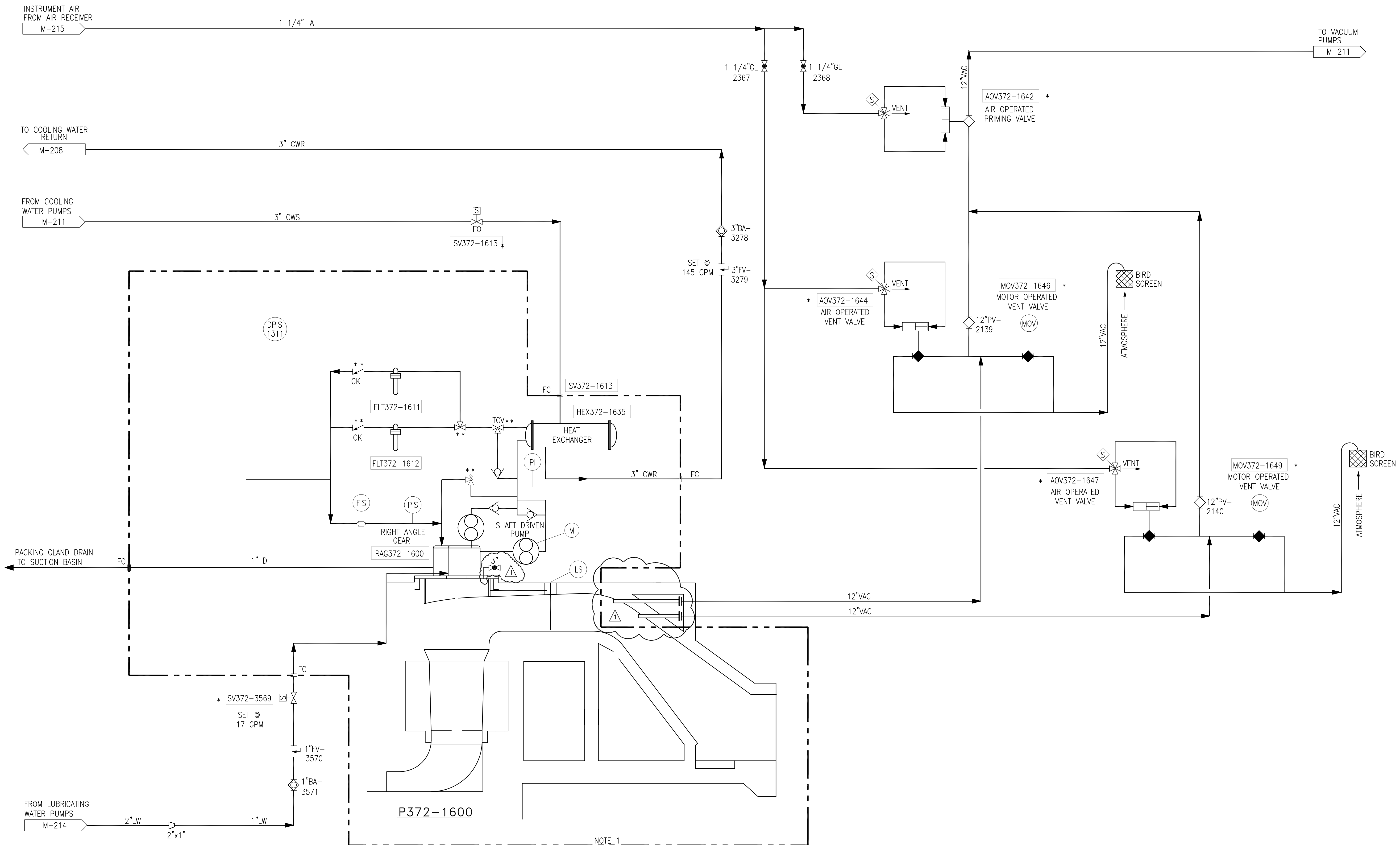
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 Scale For Microfilming  
 Millimeters  
 Inches

 <b>Brown Cunniff Gannuch</b> ENGINEERS - ARCHITECTS - CONSULTANTS METABOLIT CONSULTING, INC. 5041 454-3866 License No. EB00008095	
 <b>Burns &amp; McDonnell</b> SINCE 1888 6400 WARD PARKWAY KANSAS CITY, MO. 64114 Certified in ISO 9002:23 BMAP 24830	
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STA. G-372 P-3, 925 C.F.S. PUMP PIPING DIAGRAM	
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	
Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545	
CONTRACT NO. C-E304 DWG. NO. <b>M-206</b>	

"RECORD DRAWINGS"



**P372-1600  
DRAINAGE PUMP**



NOTE 1

- NOTES:**
- OWNER FURNISHED EQUIPMENT.
  - FC → CONTRACTOR FIELD PIPING CONNECTION POINT.
  - CONTRACTOR TO COORDINATE ALL MECHANICAL, INSTRUMENTATION AND ELECTRICAL DWGS. AS REQUIRED.
- \* CONTROLLED BY ENGINE LOGIC  
 \*\* VALVE INFORMATION PROVIDED BY VENDOR.

**P-4 PUMP ENGINE**

**"RECORD DRAWINGS"**

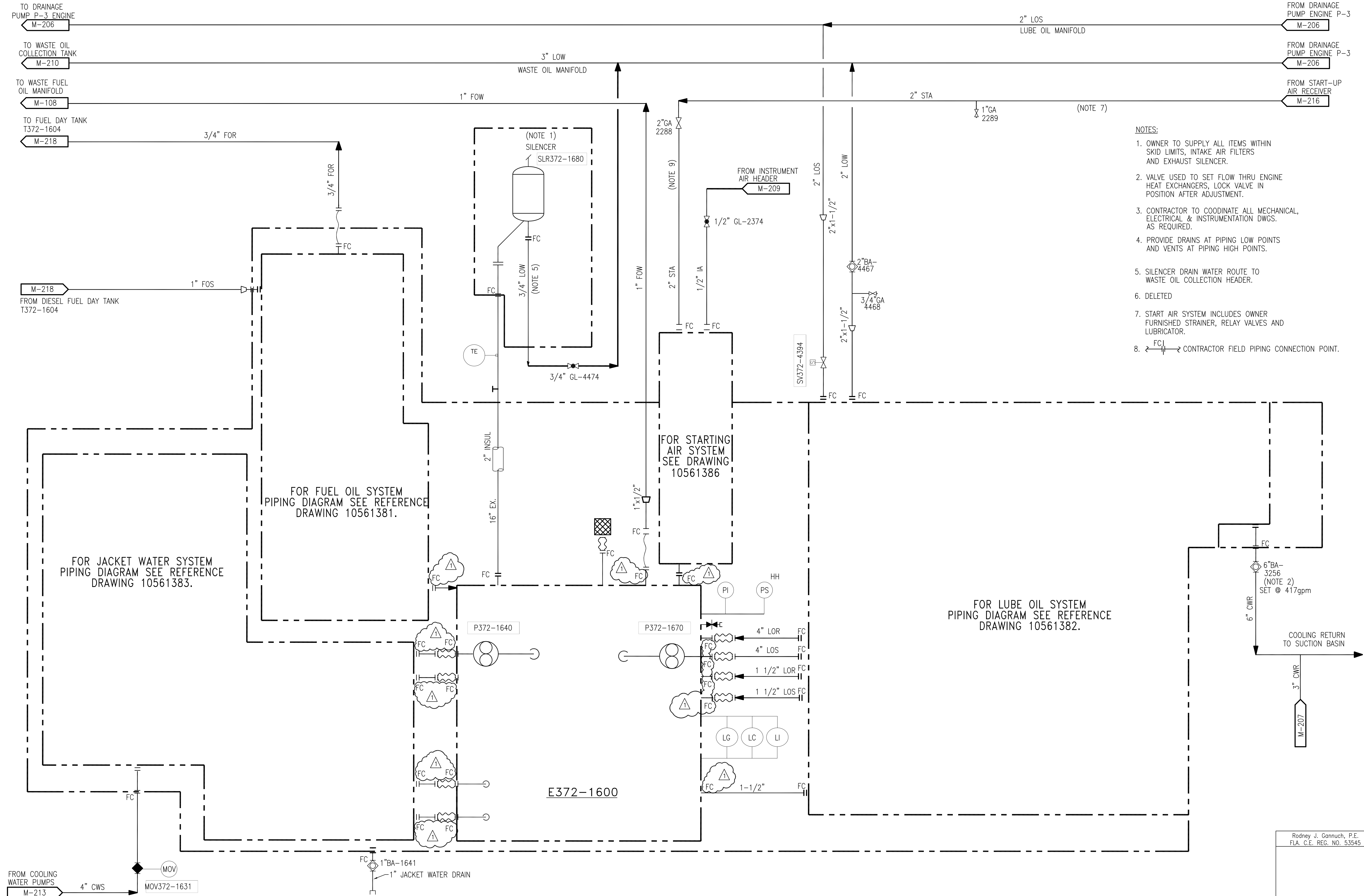
Scale For Microfilming  
Inches  
Millimeters

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<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>11/2000</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> </table>	NO.	DATE	CHKD	DATE	1	11/2000			2				3				4			
NO.	DATE	CHKD	DATE																			
1	11/2000																					
2																						
3																						
4																						
<p><b>Burns &amp; McDonnell</b> SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO 64114 Certified Bid # 24930</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STA. G-372 P-4, 925 C.F.S. PUMP PIPING DIAGRAM</p>																				
<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>CONTRACT NO. C-E304 DWG. NO. M-207</p>																				

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

E372-1600  
DRAINAGE PUMP  
ENGINE



- NOTES:
1. OWNER TO SUPPLY ALL ITEMS WITHIN SKID LIMITS, INTAKE AIR FILTERS AND EXHAUST SILENCER.
  2. VALVE USED TO SET FLOW THRU ENGINE HEAT EXCHANGERS, LOCK VALVE IN POSITION AFTER ADJUSTMENT.
  3. CONTRACTOR TO COORDINATE ALL MECHANICAL, ELECTRICAL & INSTRUMENTATION DWGS. AS REQUIRED.
  4. PROVIDE DRAINS AT PIPING LOW POINTS AND VENTS AT PIPING HIGH POINTS.
  5. SILENCER DRAIN WATER ROUTE TO WASTE OIL COLLECTION HEADER.
  6. DELETED
  7. START AIR SYSTEM INCLUDES OWNER FURNISHED STRAINER, RELAY VALVES AND LUBRICATOR.
  8. CONTRACTOR FIELD PIPING CONNECTION POINT.

Scale For Microfilming  
Inches  
Millimeters

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 ARCHITECTS & CONSULTANTS ENGINEERS 2180 METairie LOUISIANA 70006 (504) 454-3866 License No. EB00008095		C.A.S. EJM J.I.B. RUG MSS GPM DWN NO. DATE 11/2000	REVISIONS NO. DATE 4 9/9/01 REVISED PER ADDENDUM NO. 4
 SINCE 1838 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMO 24930		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STA. G-372 P-4, 925 C.F.S. PUMP PIPING DIAGRAM	
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		CONTRACT NO. C-E304 DWG. NO. M-208	

"RECORD DRAWINGS"

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

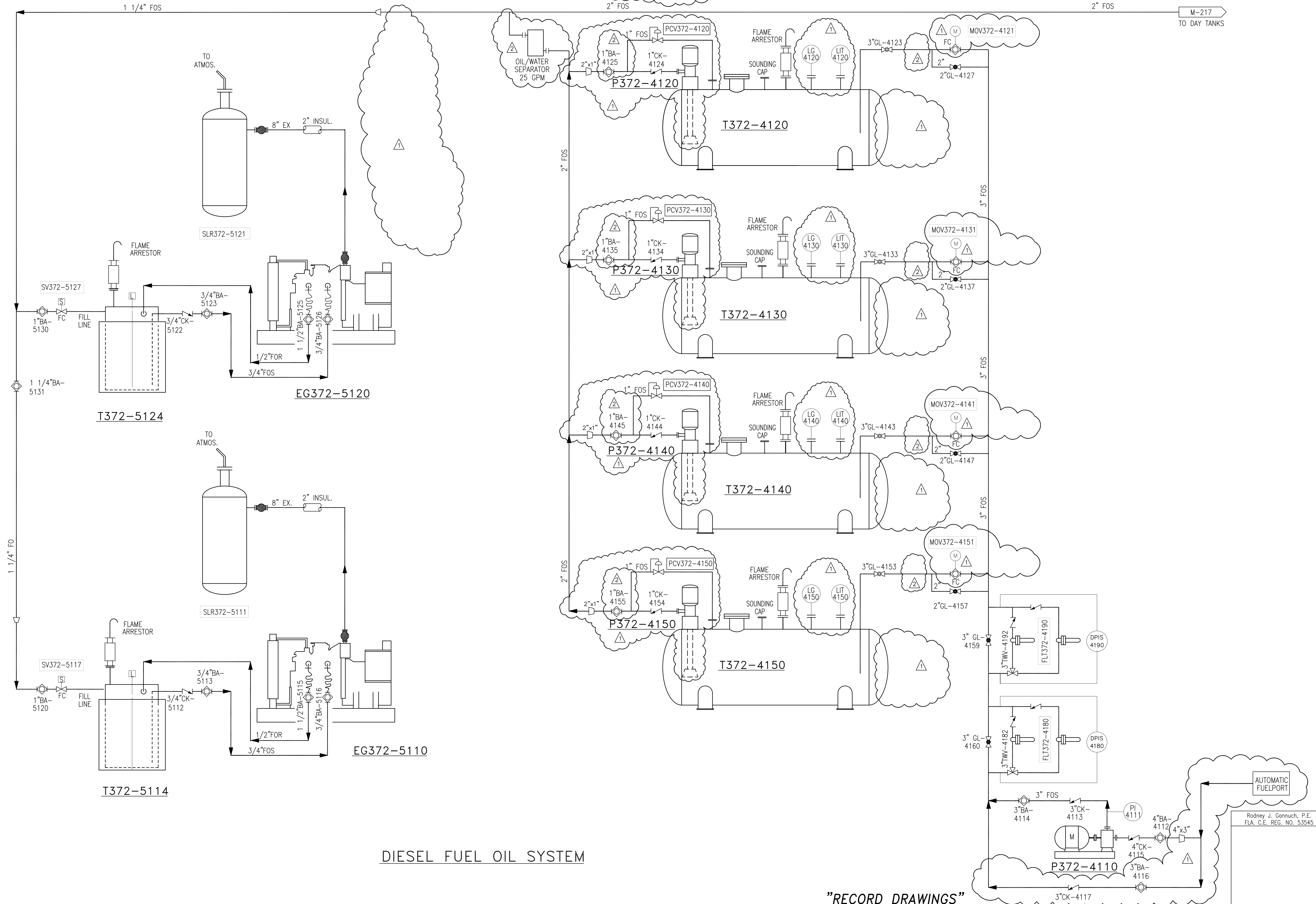
T372-5114 / 5124  
DIESEL DAY TANKS

P372-5110/5120  
DIESEL GENERATORS  
POWER: 750KW

P372-4120/4130/4140/4150  
FUEL OIL TRANSFER  
PUMPS  
GPM: 15

T372-4120/4130/4140/4150  
FUEL STORAGE TANKS  
SIZE: 12'Ø x 27' L  
GALLONS: 22,840

P372-4110  
FUEL OIL RECEIVING  
PUMP  
GPM: 200



DIESEL FUEL OIL SYSTEM

"RECORD DRAWINGS"

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

<b>Burns &amp; McDonnell</b> <small>ARCHITECTS &amp; ENGINEERS</small> <small>2010 WARD PARKWAY KANSAS CITY, MO 64114 CERTIFICATE NO. EQ000253 EMBD 24930</small>		<b>Brown Cunningham Gannuch</b> <small>CONSULTANTS</small> <small>ARCHITECTS &amp; ENGINEERS</small> <small>2010 WARD PARKWAY KANSAS CITY, MO 64114 CERTIFICATE NO. EQ000253 EMBD 24930</small>		DRAWN: MSS CHKD: EJM DESIGN: J.L.B. CHKD: R.J.G. DATE: 5/10/01	REVISED PER ADDENDUM NO. 4 9/9/01 REVISED PER ADDENDUM NO. 1 6/1/01 NO. DWN CHKD DATE
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406					
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STA. G-372 DIESEL FUEL OIL SUPPLY PIPING DIAGRAM					
CONTRACT NO. C-E304 DWG. NO. M-209					

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Scale For Microfilming  
Inches  
Millimeters

T372-5114/24  
DIESEL GENERATOR DAY TANKS

P372-5110/20  
DIESEL GENERATORS  
POWER: 750KW

T372-4210  
WASTE FUEL OIL  
COLLECTION TANK  
SIZE: 3'Ø x 6' L  
GALLONS: 300

P372-4220  
WASTE FUEL OIL  
TRANSFER PUMP  
GPM: 25

T372-4440  
WASTE LUBE OIL  
COLLECTION TANK  
SIZE: 3'Ø x 6' L  
GALLONS: 300

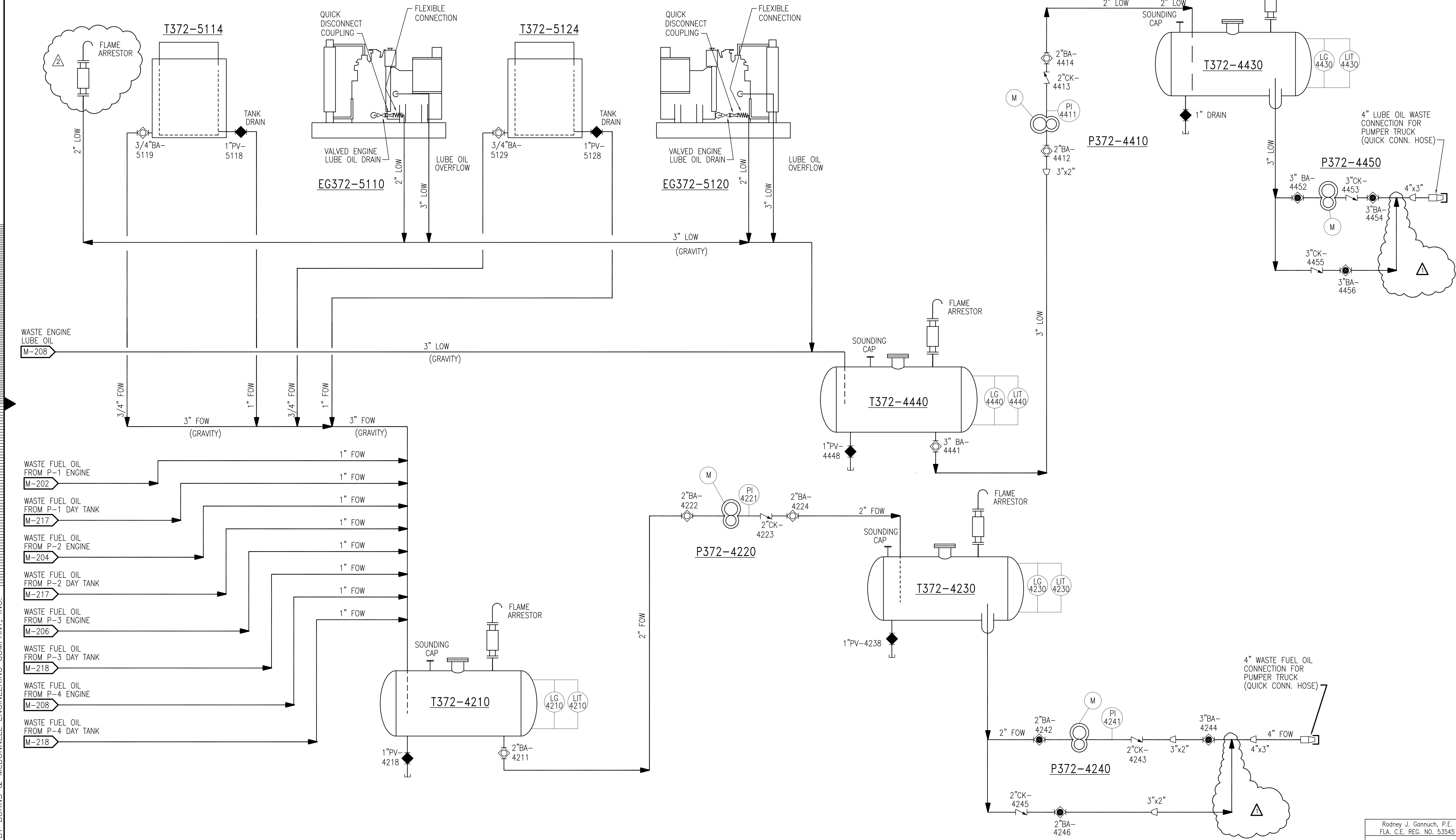
T372-4230  
WASTE FUEL OIL  
STORAGE TANK  
SIZE: 4'Ø x 11' L  
GALLONS: 1000

P372-4410  
WASTE LUBE OIL  
TRANSFER PUMP  
GPM: 25

T372-4430  
WASTE LUBE OIL  
STORAGE TANK  
SIZE: 4'Ø x 11' L  
GALLONS: 1000

P372-4450  
WASTE LUBE OIL  
PUMP  
GPM: 50

P372-4240  
WASTE FUEL OIL  
PUMP  
GPM: 50



WASTE FUEL OIL & WASTE ENGINE OIL SYSTEMS

Scale For Microfilming  
Millimeters  
Inches

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REVISIONS	NO.	DATE	BY	CHKD
1	6/1/01			
2	9/9/01			
3	11/2000			

C.A.S.	J.L.B.	R.J.C.	R.J.C.	11/2000
DESIGN	CHKD	DATE		

**Brown Cunningham Gannuch**  
ENGINEERS • ARCHITECTS • CONSULTANTS  
7070 KINSMAN ST., SUITE 200  
MEMPHIS, TN 38114  
License No. EB00008095

**Burns & McDonnell**  
3115 E 133rd St  
9400 WARD PARKWAY  
KANSAS CITY, MO 64114  
Certification EB0000253  
BEC 2930

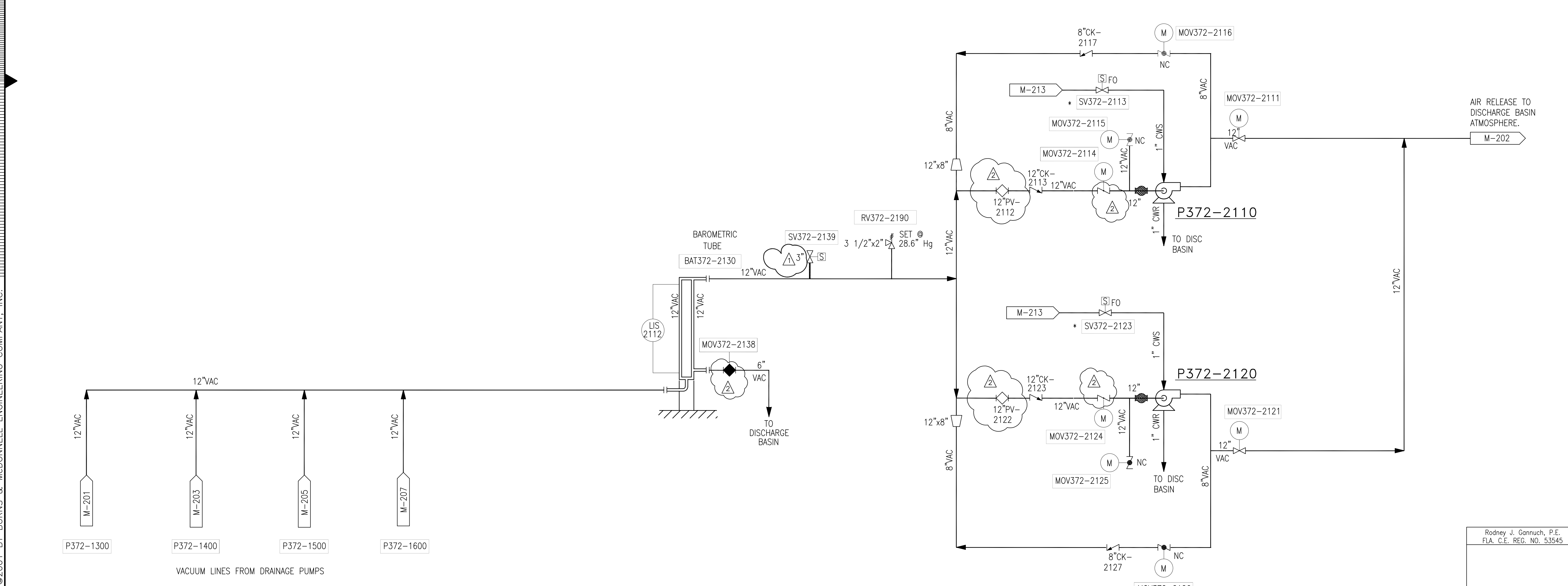
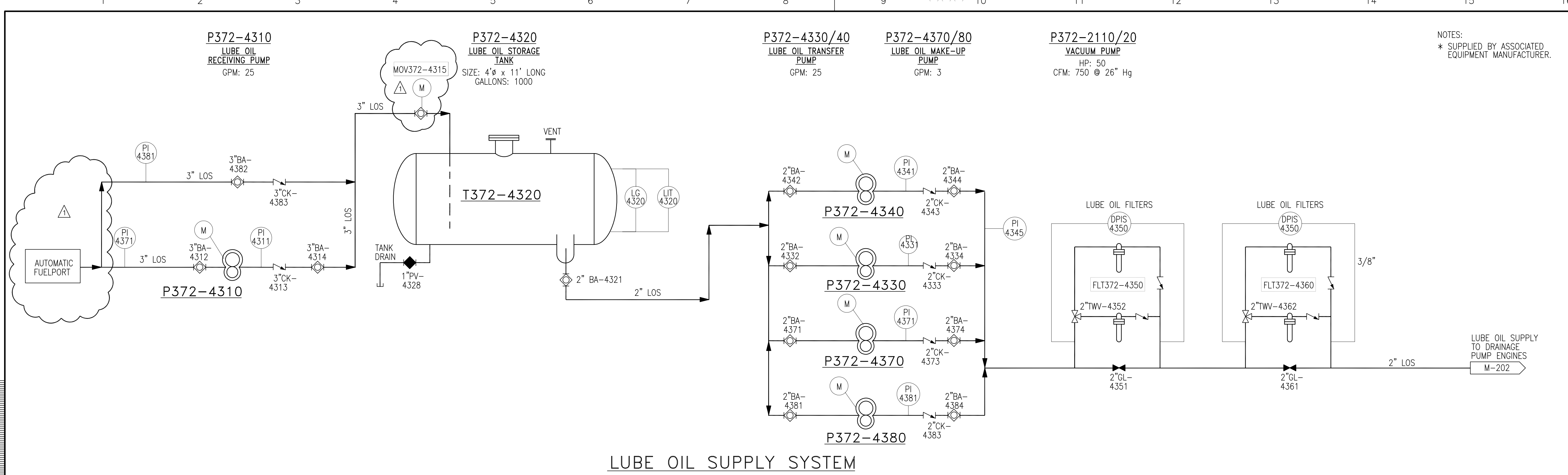
**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3501 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

CONTRACT NO. C-E304  
DWG. NO. M-210

"RECORD DRAWINGS"

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



NOTES:  
\* SUPPLIED BY ASSOCIATED EQUIPMENT MANUFACTURER.

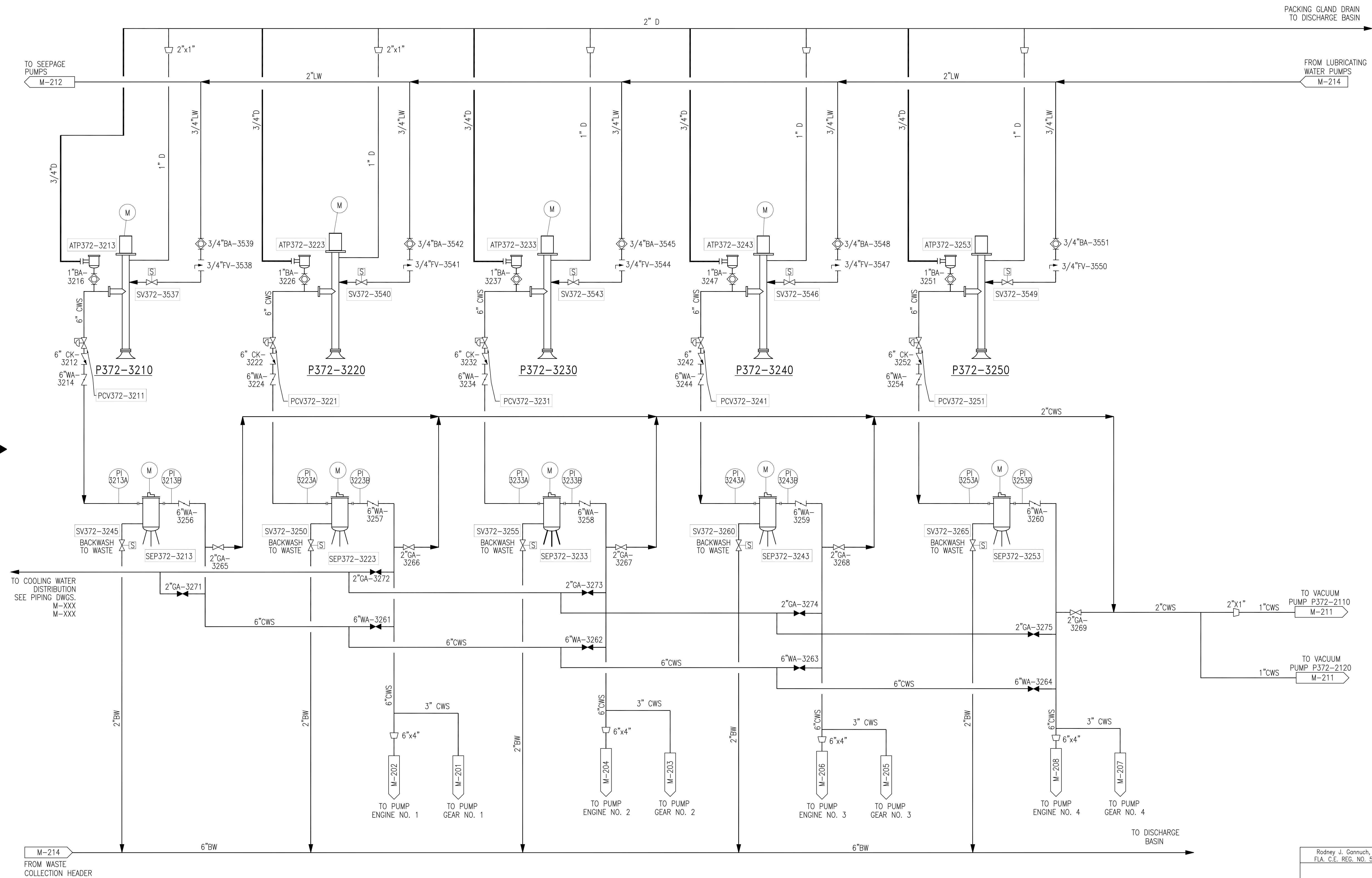
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 Millimeters  
 Inches  
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<b>Burns &amp; McDonnell</b> <small>SINCE 1938</small> 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 Bld		<b>Brown Cunningham Gannuch</b> <small>ENGINEERS - ARCHITECTS - CONSULTANTS</small> 2701 KINGMAN ST. METAIRIE, LOUISIANA 70006 (504) 454-3866 License No. EB00008095	
DRAWN CHKD C.A.S. E.J.M.	DESIGN R.J.G. J.I.B.	DATE 11/2000	REVISIONS NO. DATE CHKD
<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 3/4</b> <b>PUMP STATIONS G-370 &amp; G-372</b>		<b>PUMP STA. G-372</b> <b>VACUUM PRIMING &amp; LUBE OIL PIPING DIAGRAM</b>	
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545	
CONTRACT NO. C-E304 DWG. NO. M-211		DATE 6/1/01 REVISIONS 9/9/01 REVISED PER ADDENDUM NO. 3 6/1/01 REVISED PER ADDENDUM NO. 1	

"RECORD DRAWINGS"



**P372-3210/20/30/40 & 50**  
**COOLING WATER PUMPS**  
 GPM: 600



**COOLING WATER SYSTEM**

Scale For Microfilming  
Inches  
Millimeters

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F:\CURRENT\80000\80698\MECHANICAL\PIPE-DIAGRAMS\G-372\M213.DWG Last edited: 05/08/01

<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 3/4</b> <b>PUMP STATIONS G-370 &amp; G-372</b> <b>PUMP STA. G-372</b> <b>COOLING WATER</b> <b>PIPING DIAGRAM</b>		<b>BURNS &amp; MCDONNELL</b> <small>3 SINCE 1938</small> ENGINEERS • ARCHITECTS • CONSULTANTS METROPOLITAN AVENUE, SUITE 200 MIAMI, FLORIDA 33136 (305) 454-8866 License No. EB00008095	C.A.S. EJM J.L.B. R.J.C. 11/2000 NO. DWG CHKD DATE	REVISIONS DATE CHKD
<b>SOUTH FLORIDA</b> <b>WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545		
CONTRACT NO. C-E304 DWG. NO. <b>M-213</b>		<b>"RECORD DRAWINGS"</b>		



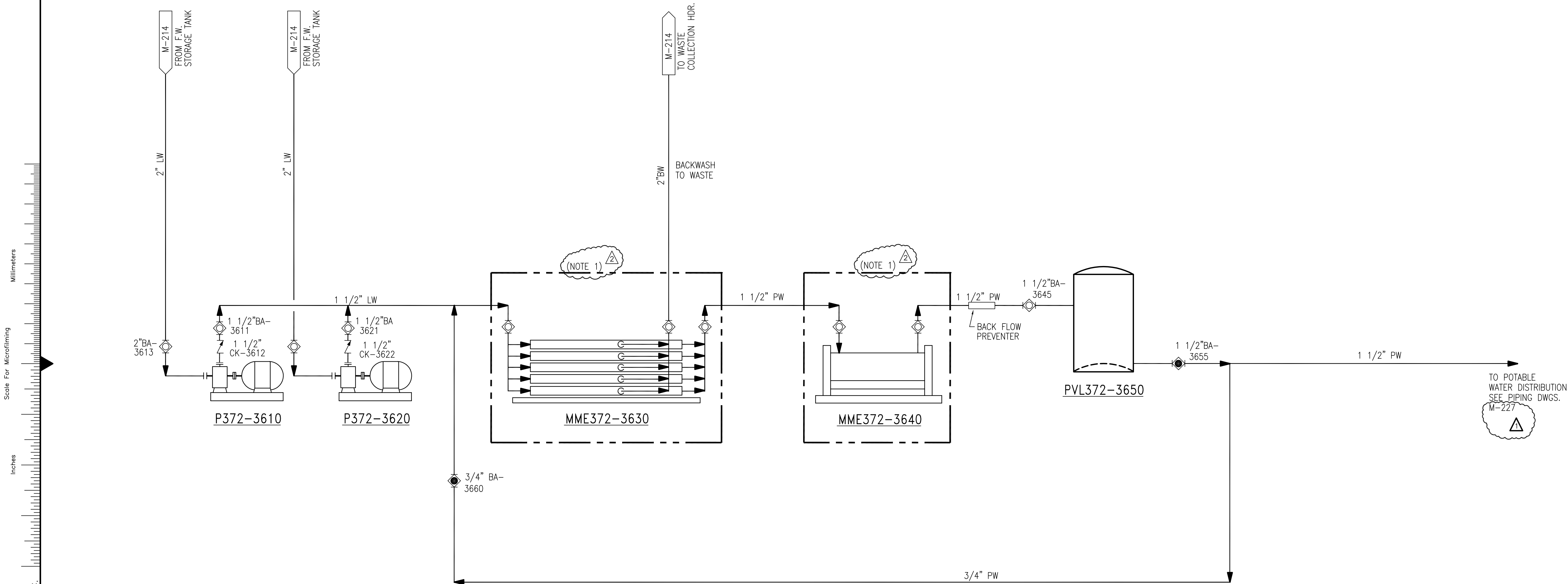


P372-3610/20  
POTABLE WATER PUMPS  
GPM: 20

MME372-3630  
REVERSE OSMOSIS  
UNIT  
GPM: 20

MME372-3640  
ULTRAVIOLET UNIT  
GPM: 20

PVL372-3650  
POTABLE WATER  
HYDROPNEUMATIC TANK  
CAPACITY=450 GAL. MINIMUM



POTABLE WATER SYSTEM

NOTES:  
1. EQUIPMENT INSIDE DOTTED LINES IS "PACKAGED EQUIPMENT" AND IS SUPPLIED BY CONTRACTOR.

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

<p><b>Burns &amp; McDonnell</b> SINCE 1888</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STA. G-372 POTABLE WATER PIPING DIAGRAM</p>	
<p>6400 WARD PARKWAY KANSAS CITY, MO. 64114 Certified Professional Engineer BA09-24830</p>		<p><b>Brown Cunningham Gannuch</b> ENGINEERS - ARCHITECTS - CONSULTANTS METABOLIC CONSULTING, INC. 504-454-3866 License No. EB000008095</p>	
<p>DRAWN CHKD DESIGN</p>	<p>C.A.S. EJM J.I.B.</p>	<p>NO. DWN CHKD</p>	<p>REVISIONS</p>
<p>DATE 11/2000</p>	<p>DATE 9/9/01 6/1/01</p>	<p>DATE 9/9/01 6/1/01</p>	<p>DATE 9/9/01 6/1/01</p>
<p>REVISIONS</p>	<p>REVISIONS</p>	<p>REVISIONS</p>	<p>REVISIONS</p>

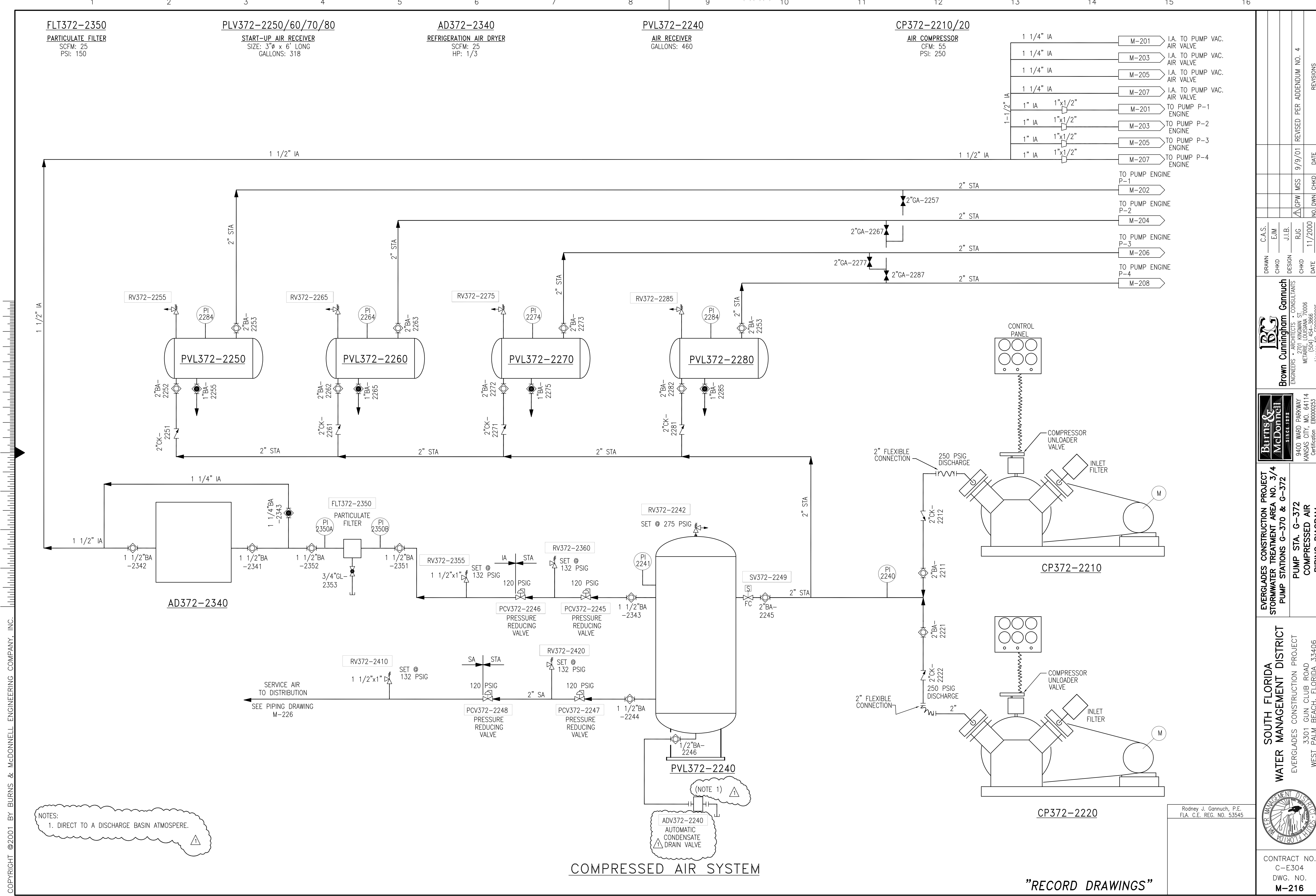
**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

CONTRACT NO.  
C-E304  
DWG. NO.  
M-215

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Scale For Microfilming  
Inches  
Millimeters



COMPRESSED AIR SYSTEM

"RECORD DRAWINGS"

NOTES:  
1. DIRECT TO A DISCHARGE BASIN ATMOSPHERE.

(NOTE 1)  
ADV372-2240  
AUTOMATIC  
CONDENSATE  
DRAIN VALVE

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

		<b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095	
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	PUMP STA. G-372 COMPRESSED AIR PIPING DIAGRAM	REVISIONS NO. DATE 11/2000 MSS 9/9/01 REVISED PER ADDENDUM NO. 4

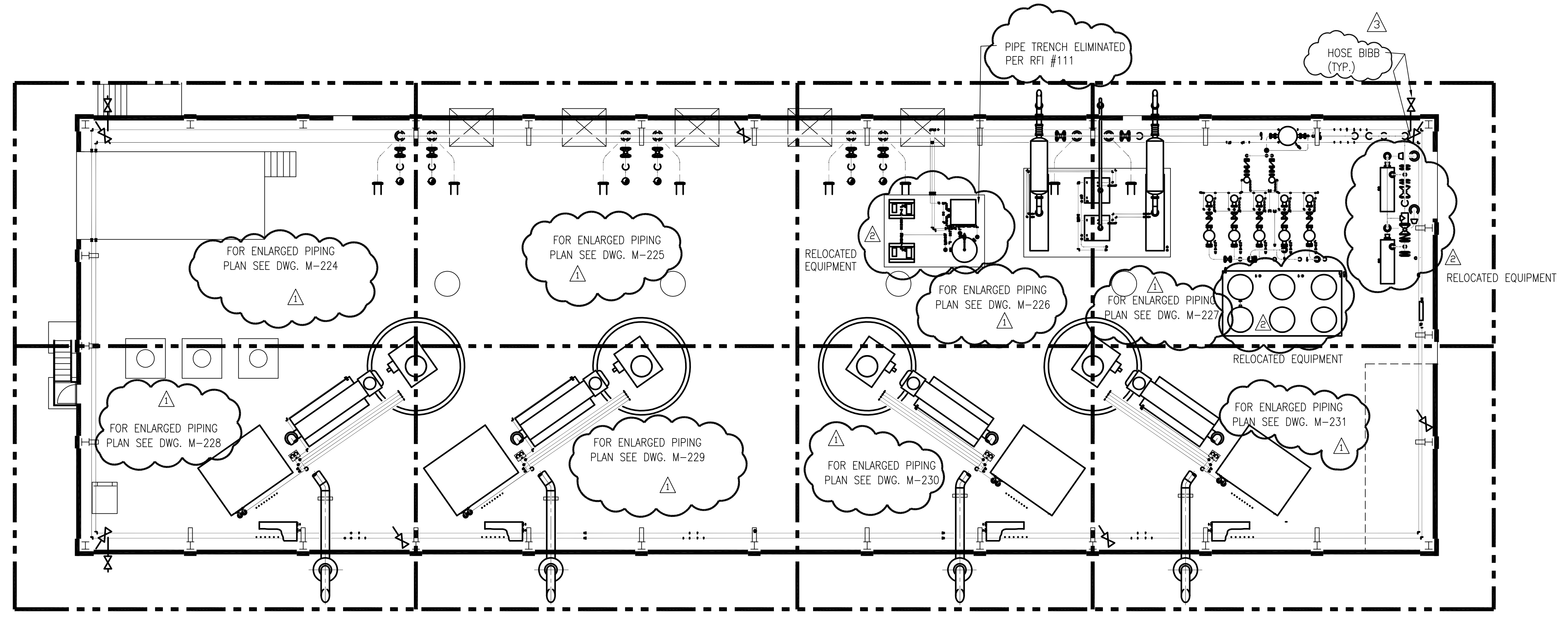
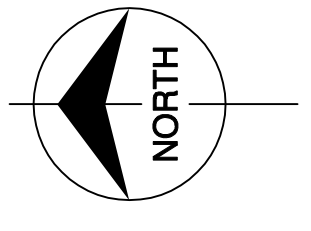
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Scale For Microfilming  
Inches  
Millimeters



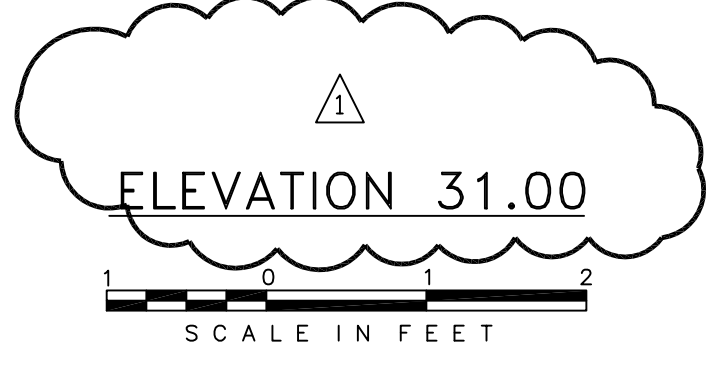


Scale For Microfilming  
Inches  
Millimeters



NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

NOTES:  
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.



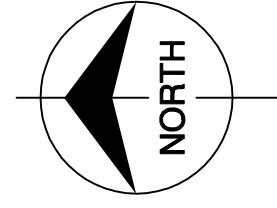
<b>Burns &amp; McDonnell</b> <small>ENGINEERS, ARCHITECTS &amp; CONSULTANTS</small> 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMJC 24930	<b>Brown Cunningham Gannuch</b> <small>ENGINEERS, ARCHITECTS &amp; CONSULTANTS</small> 2701 WINDMAN ST. METAIRIE, LOUISIANA 70006 License No. EB00008095	DRAWN CHKD DATE	5/10/01
		DESIGN CHKD DATE	6/1/01
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 374 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 31.00 PIPING KEY PLAN	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	SF USB JWB MSS GFW NO.	11-03-04 7-15-04 6/1/01
		REVISED AS PER RECORD PLANS REVISED EQUIPMENT LOCATIONS REVISED PER ADDENDUM NO. 1	REVISIONS DATE

"RECORD DRAWINGS"

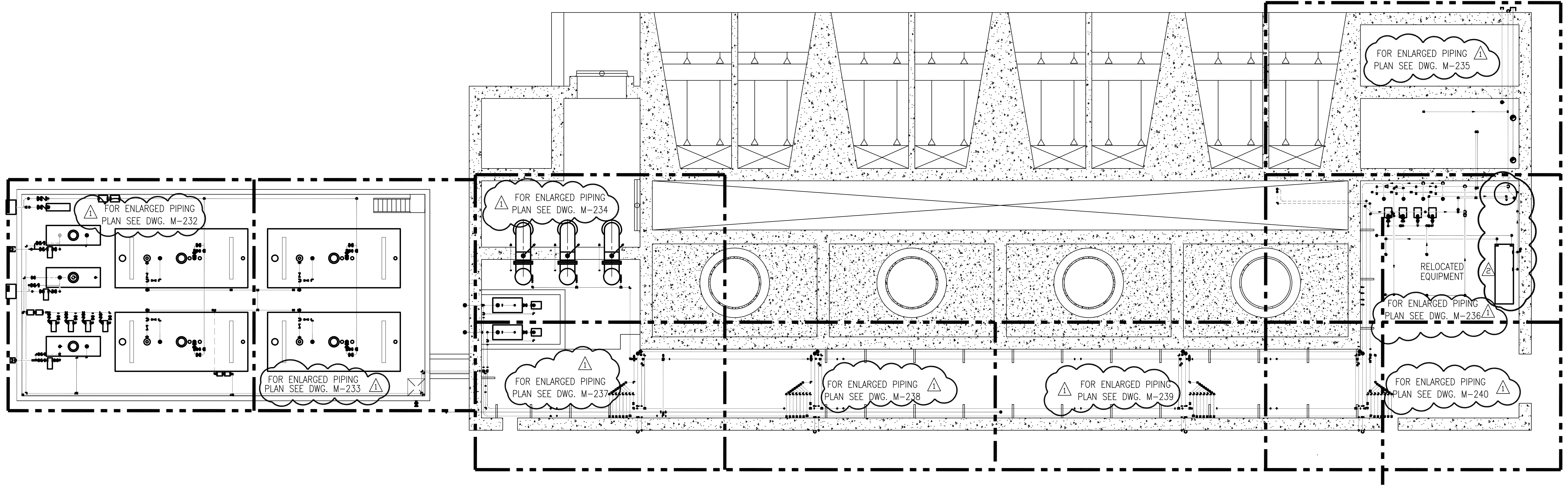
Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



CONTRACT NO.  
C-E304  
DWG. NO.  
M-219

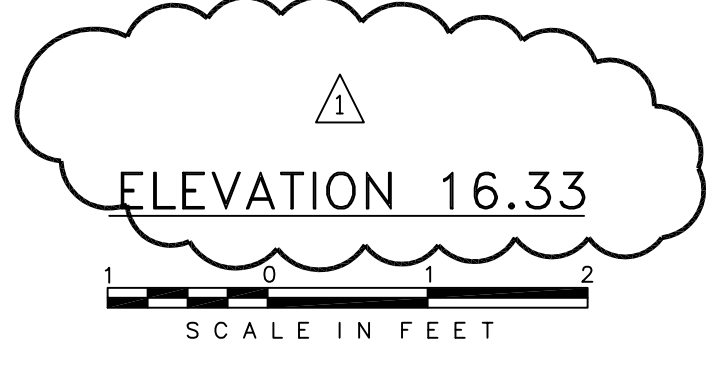


Scale For Microfilming  
Inches  
Scale For Millimeters



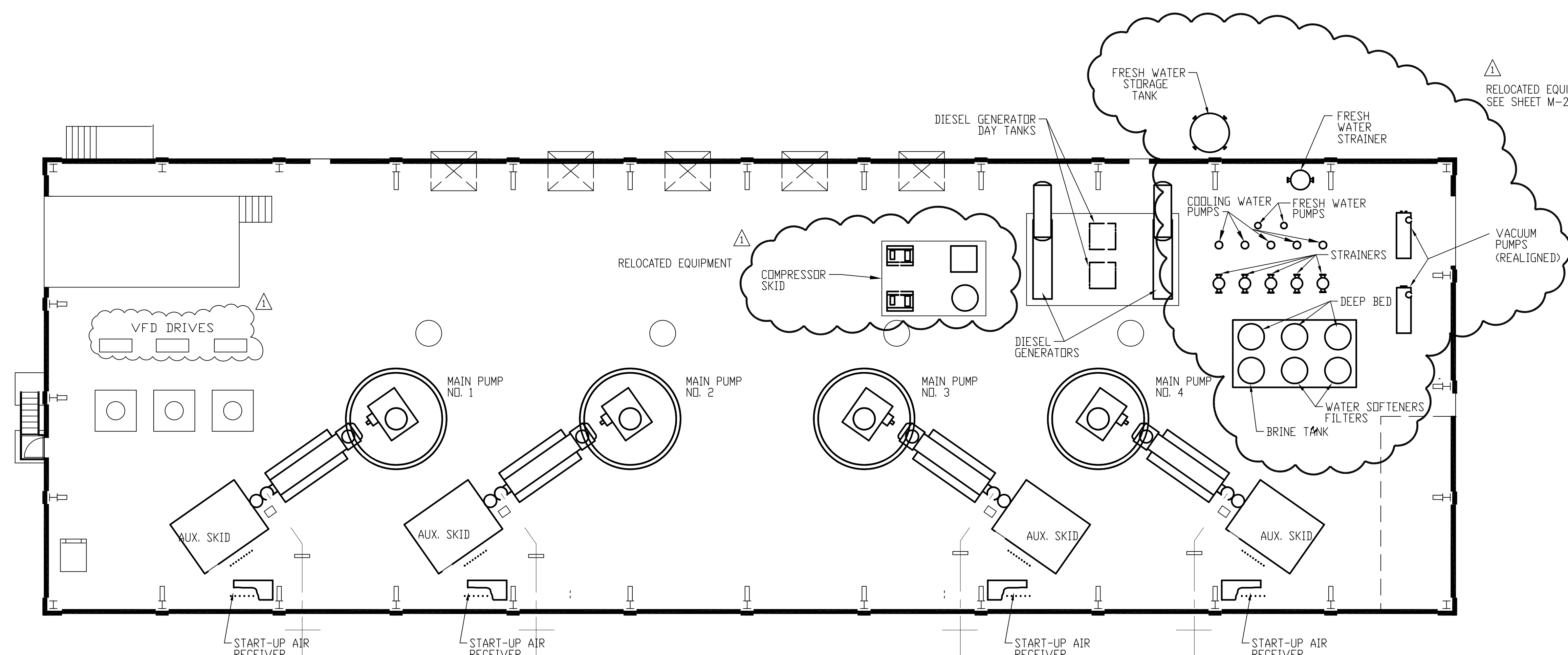
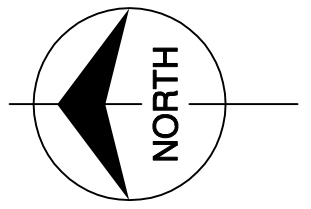
NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

NOTES:  
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.



DRAWN CHKD DESIGN DATE	MSS MSS RAG DATE	EJM MSS MSS DATE	7-15-04	REVISED EQUIPMENT LOCATIONS
			6/1/01	REVISED PER ADDENDUM NO. 1
NO. DWG	CHKD	DATE	5/10/01	REVISIONS
<b>Brown Cunningham Gannuch</b> ENGINEERS, ARCHITECTS & CONSULTANTS 2701 WINDMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095				
<b>Burntis &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 BMJD 24930				
<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 374</b> <b>PUMP STATIONS G-370 &amp; G-372</b> <b>PUMP STATION G-372</b> <b>ELEVATION 16.33</b> <b>PIPING KEY PLAN</b>				
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406				
CONTRACT NO. C-E304 DWG. NO. M-220				
<b>"RECORD DRAWINGS"</b>				

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NOTE:  
 1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

ELEVATION 31.00



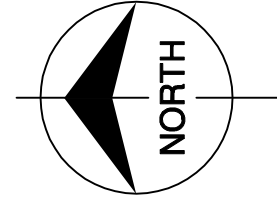
NOTES:  
 1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

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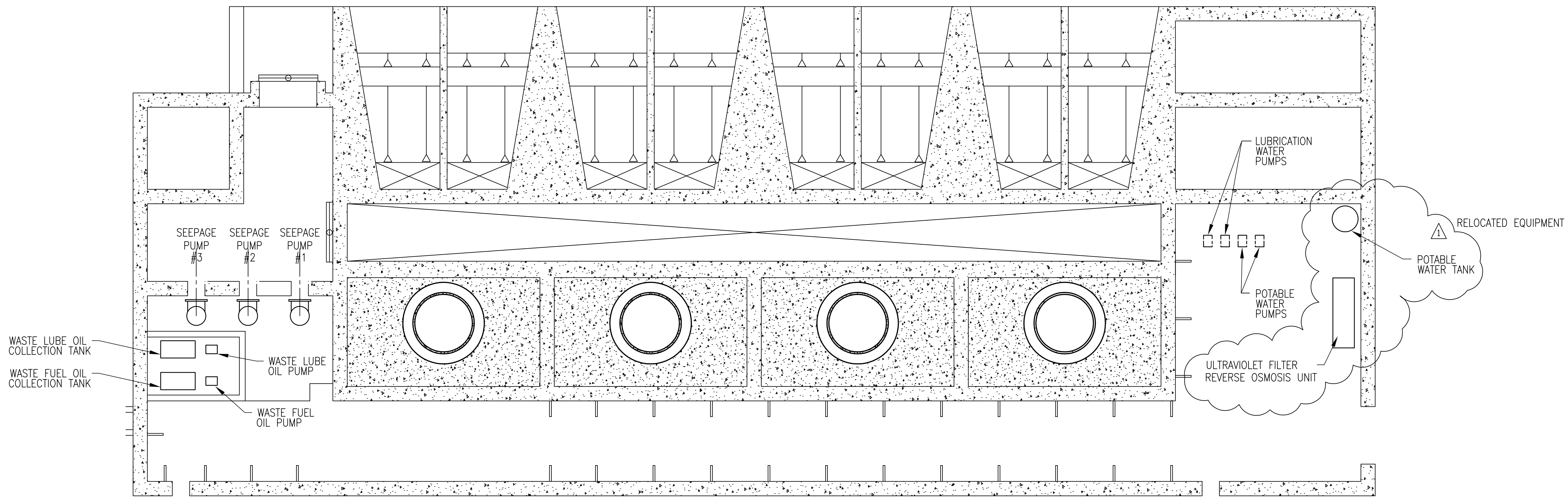
Scale For Microfilming  
Inches  
Millimeters

		<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 374</b> <b>PUMP STATIONS G-370 &amp; G-372</b>		<b>PUMP STATION G-372</b> <b>ELEVATION 31.00</b> <b>EQUIPMENT ARRANGEMENT PLAN</b>	
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		ENGINEERS, ARCHITECTS & CONSULTANTS <b>Brown Cunningham Gannuch</b> 2701 WILSON ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095		DRAWN: GPW CHECKED: MSS DESIGN: MSS RIG: RIG CHECKED: CHKD DATE: 5/10/01	
Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545		CONTRACT NO. C-E304 DWG. NO. <b>M-221</b>		REVISIONS NO.   DATE   CHKD   DATE 1   7-15-04   EJM   REVISED EQUIPMENT LOCATIONS 2   7-15-04   USB   3   7-15-04   DJM   4   7-15-04   DJM	

"RECORD DRAWINGS"



Scale For Microfilming  
Inches  
Millimeters





NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

ELEVATION 16.33



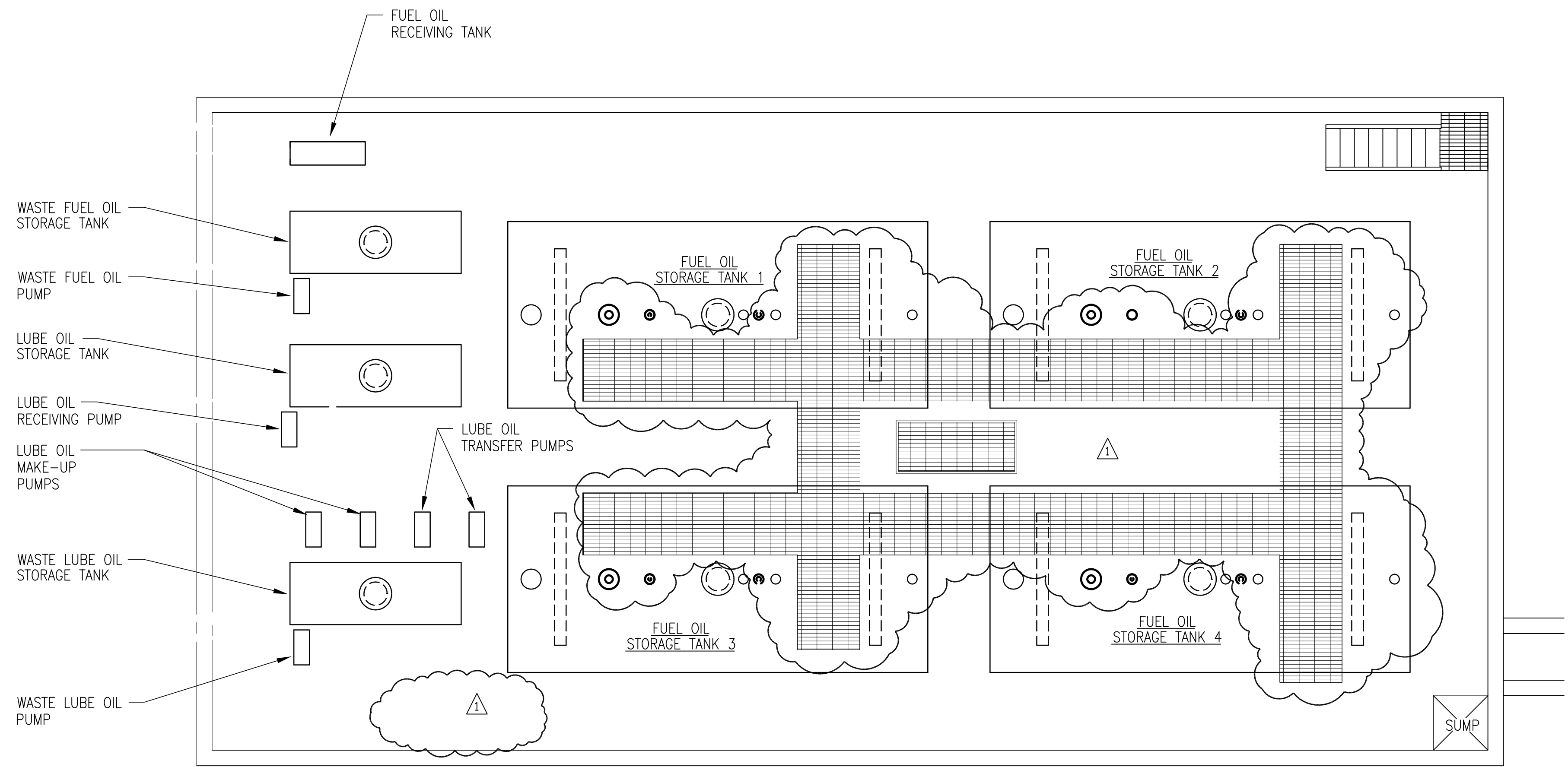
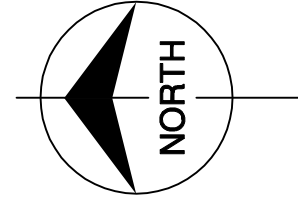
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 <b>Burns &amp; McDonnell</b> <small>EST. 1938</small> 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMCD 24930	<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 374</b> <b>PUMP STATIONS G-370 &amp; G-372</b>  <b>PUMP STATION G-372</b> <b>ELEVATION 16.33</b> <b>EQUIPMENT ARRANGEMENT PLAN</b>	DRAWN MSS	CHECKED MSS	DESIGN RIG	CHECKED RIG	DATE 5/10/01	NO.	DWN	CHKD	DATE	REVISIONS
		GPW	MSS	MSS	RIG	CHKD	DATE	NO.	DWN	CHKD	DATE
<b>Brown Cunningham Gannuch</b> <small>ENGINEERS, ARCHITECTS &amp; CONSULTANTS</small> 2701 WINDMAN ST. METABRE, LOUISIANA 70006 (504) 454-3866 License No. EB00008095	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	RODNEY J. GANNUCH, P.E. FLA. C.E. REG. NO. 53545		CONTRACT NO. C-E304 DWG. NO. M-222	RELOCATED EQUIPMENT POTABLE WATER TANK POTABLE WATER PUMPS ULTRAVIOLET FILTER REVERSE OSMOSIS UNIT LUBRICATION WATER PUMPS WASTE LUBE OIL PUMP WASTE FUEL OIL PUMP WASTE LUBE OIL COLLECTION TANK WASTE FUEL OIL COLLECTION TANK SEEPAGE PUMP #3 SEEPAGE PUMP #2 SEEPAGE PUMP #1						

"RECORD DRAWINGS"

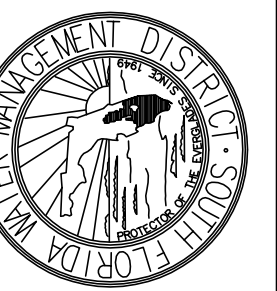




NOTES:  
 1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

ELEVATION 16.33

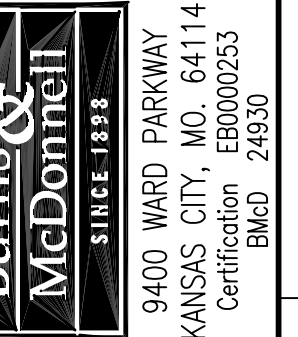
Rodney J. Gannuch, P.E.  
 FLA. C.E. REG. NO. 53545



CONTRACT NO.  
 C-E304  
 DWG. NO.  
 M-223

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
**STORMWATER TREATMENT AREA NO. 374**  
**PUMP STATIONS G-370 & G-372**  
**PUMP STATION G-372**  
**ELEVATION 16.33**  
**EQUIPMENT ARRANGEMENT PLAN**



**Brown Cunningham Gannuch**  
 ENGINEERS, ARCHITECTS & CONSULTANTS  
 2701 WINDYWAY ST.  
 METABIE, LOUISIANA 70006  
 (504) 454-3866  
 License No. EB00008095

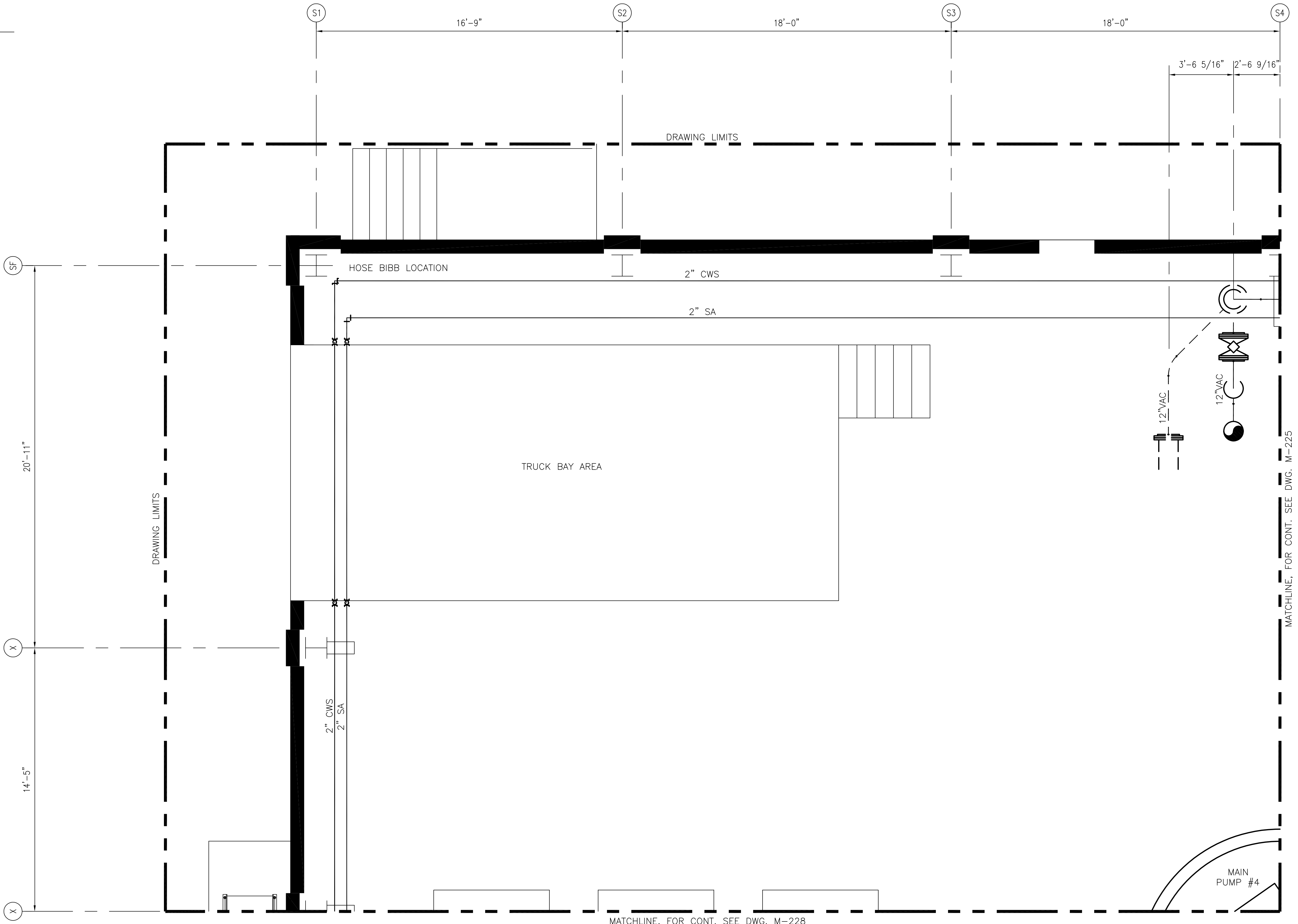
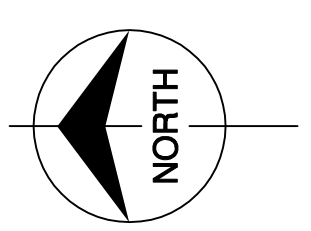
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Scale For Microfilming  
 Inches  
 Millimeters



SF  
20'-11"  
X  
14'-5"  
X

S1 16'-9" S2 18'-0" S3 18'-0" S4  
3'-6 5/16" 2'-6 9/16"

DRAWING LIMITS

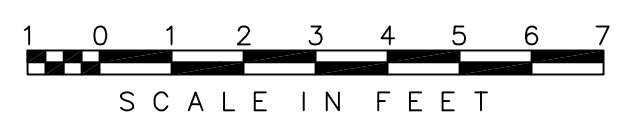
DRAWING LIMITS

MATCHLINE, FOR CONT. SEE DWG. M-225

MATCHLINE, FOR CONT. SEE DWG. M-228

NOTES:  
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

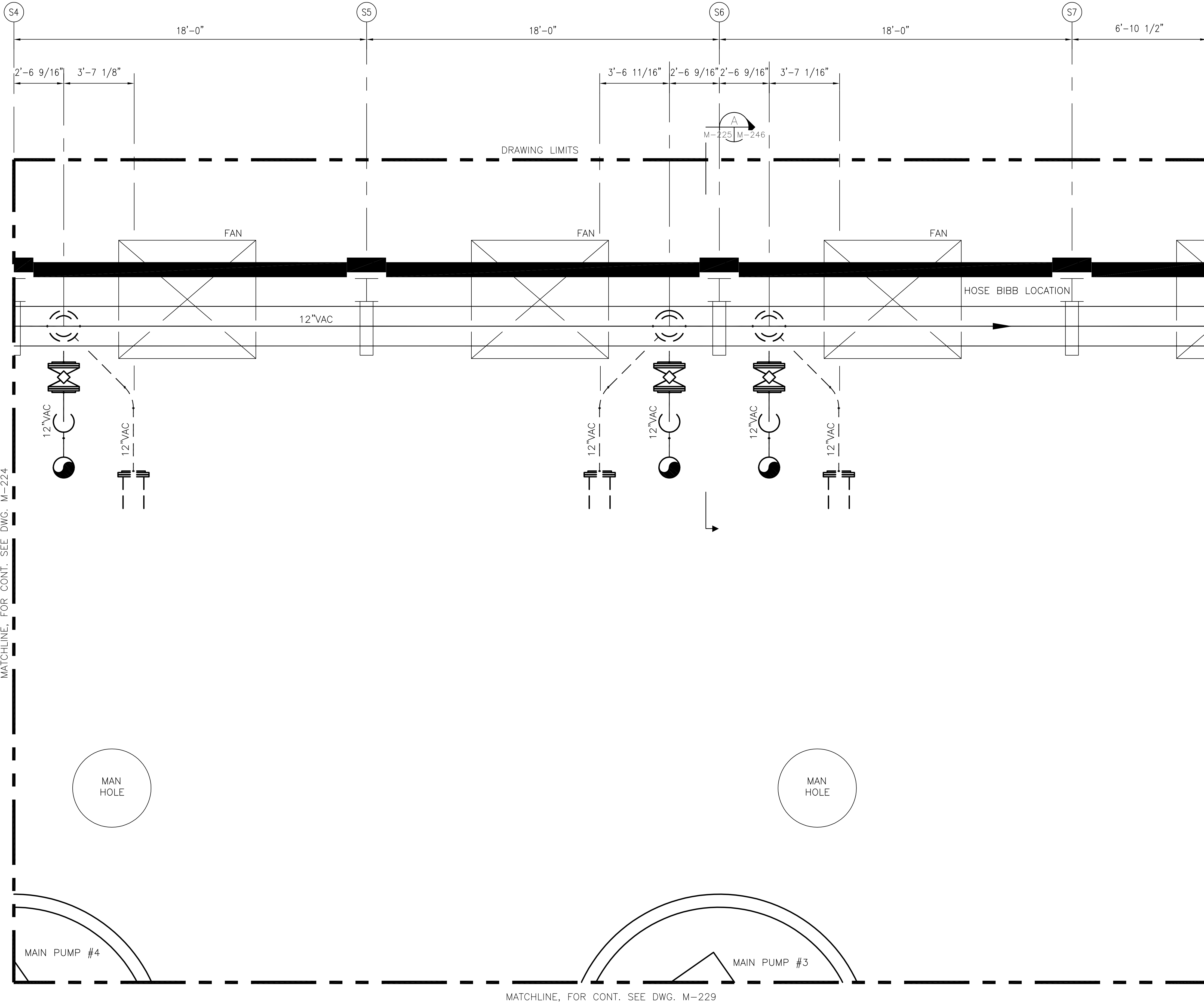
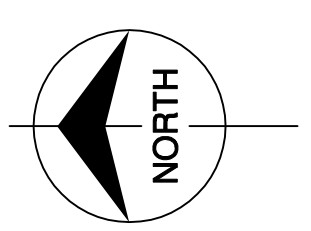
ELEVATION 31.00



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<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 WINDYAN ST. METABRE, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		DRAWN MSS CHKD MSS DESIGN RIG CHKD DATE 5/10/01	NO.   DWN   CHKD   DATE
<p><b>Burntis &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 BMCJ 24930</p>		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 374 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 31.00 ENLARGED PIPING PLAN	
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		RODNEY J. GANNUCH, P.E. FLA. C.E. REG. NO. 53545	
CONTRACT NO. C-E304 DWG. NO. M-224		REVISIONS	



NOTES:  
 1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

ELEVATION 31.00

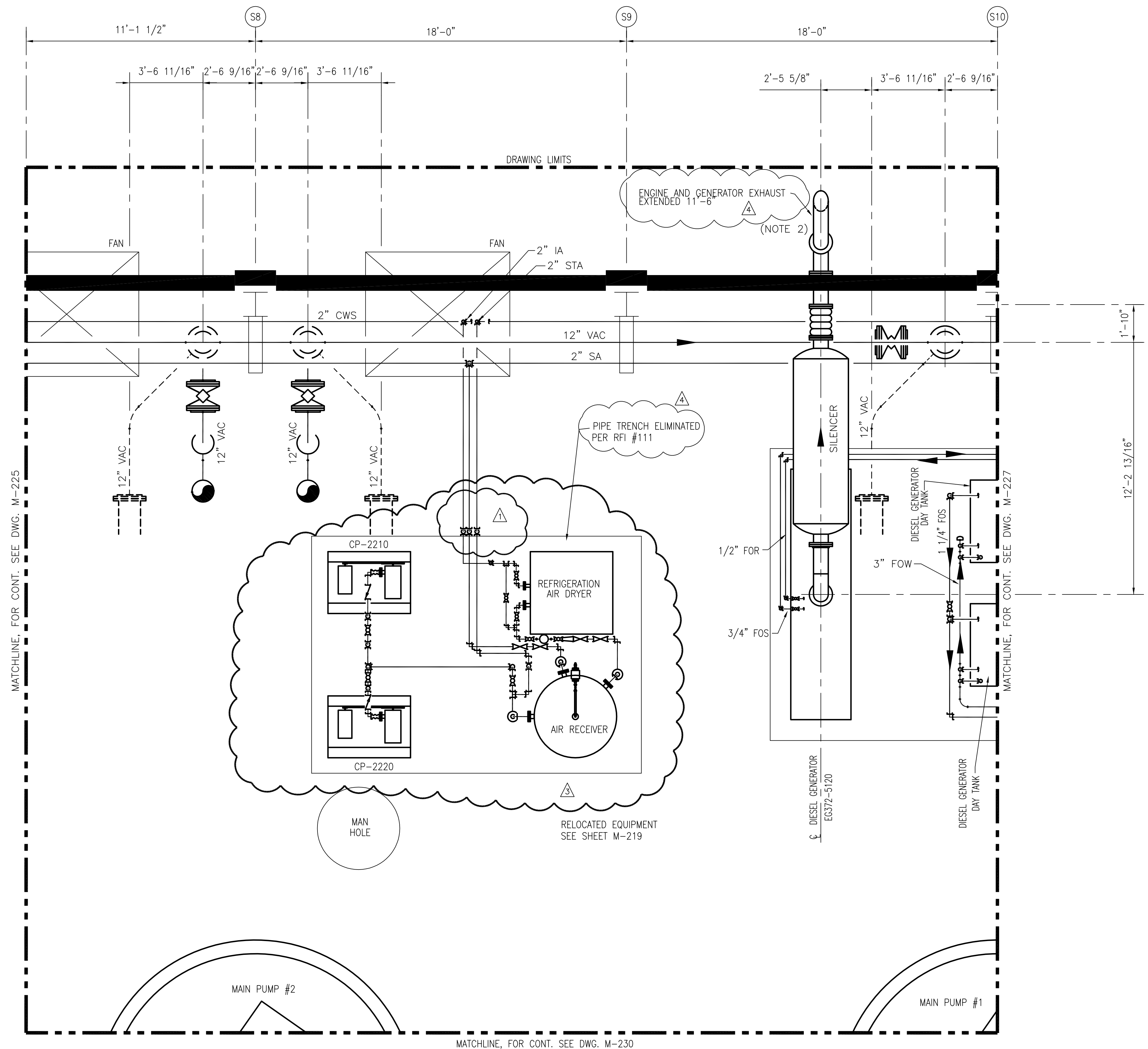
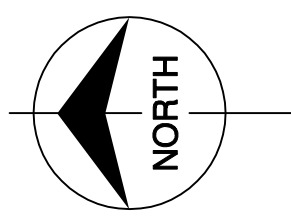
SCALE IN FEET

Scale For Microfilming  
 Inches  
 Millimeters

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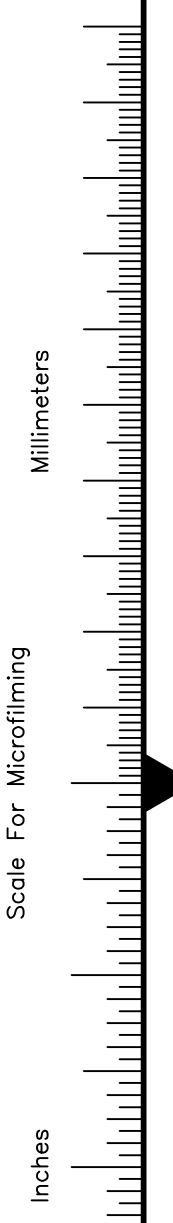
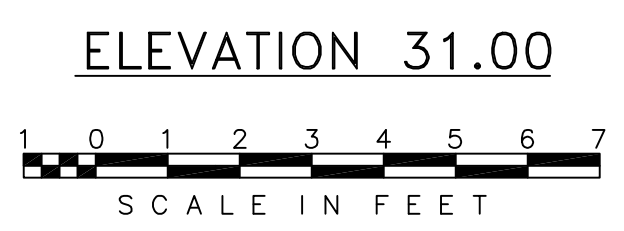
 <b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 WINDYAN ST. METABRE, LOUISIANA 70006 (504) 454-3866 License No. EB00008095			
DRAWN MSS CHKD MSS	DESIGN RIG CHKD MSS	DATE 5/10/01	NO. DWG CHKD DATE
<b>Buttis &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 BMCD 24930		<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 374</b> <b>PUMP STATIONS G-370 &amp; G-372</b> <b>PUMP STATION G-372</b> <b>ELEVATION 31.00</b> <b>ENLARGED PIPING PLAN</b>	
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		SOUTH FLORIDA WATER MANAGEMENT DISTRICT 	
Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545		CONTRACT NO. C-E304 DWG. NO. <b>M-225</b>	

"RECORD DRAWINGS"



- NOTES:
- CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  - CONTRACTOR TO TERMINATE DIESEL GENERATOR EXHAUST PIPE 15 FT. ABOVE BUILDING PARAPET.
  - FOR VALVE TAG LOCATIONS REFER TO DWG. M-247.
  - CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

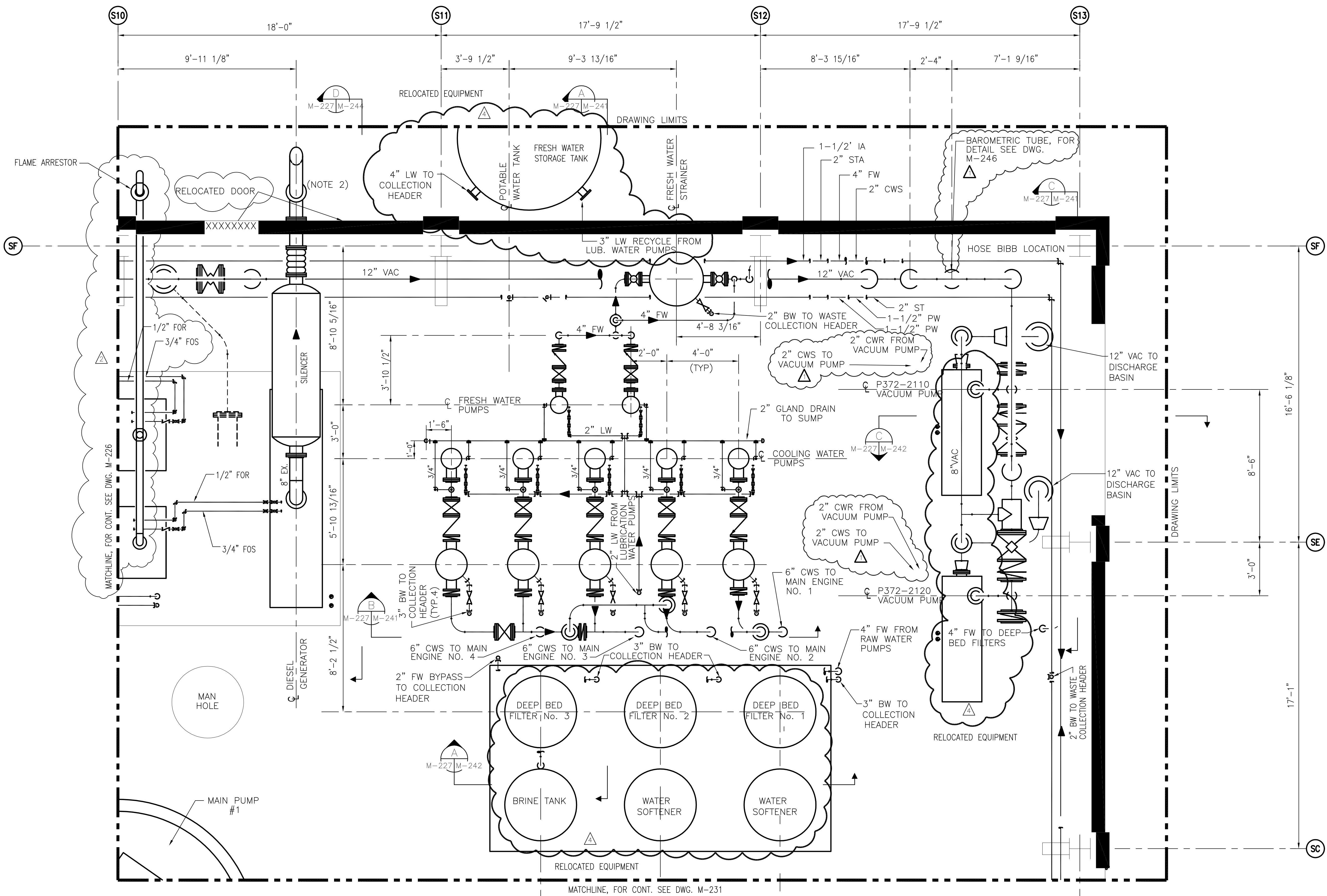
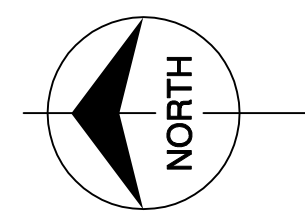


MATCHLINE, FOR CONT. SEE DWG. M-225

MATCHLINE, FOR CONT. SEE DWG. M-230

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<p><b>Burntis &amp; McDonnell</b> ENGINEERS, ARCHITECTS &amp; CONSULTANTS 2701 WINDYAN ST. METABRE, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p>1-03-04 REVISED PER RECORD DRAWINGS</p> <p>7-15-04 REVISED EQUIPMENT LOCATIONS</p> <p>7/15/04 REVISED NOTE NO.2</p> <p>6/1/01 REVISED PER ADDENDUM NO. 1</p>	
<p>GPW</p> <p>MSS</p> <p>MSS</p> <p>MSS</p> <p>RIG</p> <p>NO. DWN</p>	<p>CHKD</p> <p>DESIGN</p> <p>CHKD</p> <p>DATE</p>	<p>EJM</p> <p>EJM</p> <p>EJM</p> <p>MSS</p> <p>CHKD</p>	<p>DATE</p> <p>CHKO</p> <p>REVISIONS</p>
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>		<p>PUMP STATION G-372 ELEVATION 31.00 ENLARGED PIPING PLAN</p>	
<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</p> <p>EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545</p>	
<p>CONTRACT NO. C-E304 DWG. NO. M-226</p>		<p>"RECORD DRAWINGS"</p>	



- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO TERMINATE DIESEL GENERATOR EXHAUST PIPE 15 FT. ABOVE BUILDING PARAPET.
  3. FOR VALVE TAG LOCATIONS REFER TO DWG. M-248.
  4. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

ELEVATION 31.00

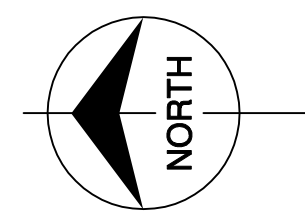
SCALE IN FEET

NOTE:  
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<p><b>Burns &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMCJ 24930</p>		<p><b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>		<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>																																																																							
<p>ENGINEERS, ARCHITECTS &amp; CONSULTANTS Brown Cunningham Gannuch 2701 LOUISIANA ST. METABOL, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>	<p>REVISIONS</p> <table border="1"> <tr><th>NO.</th><th>DATE</th><th>CHKD</th><th>DATE</th></tr> <tr><td>7-15-04</td><td></td><td></td><td></td></tr> <tr><td>7-15-04</td><td></td><td></td><td></td></tr> <tr><td>7/15/04</td><td></td><td></td><td></td></tr> <tr><td>8/17/01</td><td></td><td></td><td></td></tr> <tr><td>6/1/01</td><td></td><td></td><td></td></tr> </table>	NO.	DATE	CHKD	DATE	7-15-04				7-15-04				7/15/04				8/17/01				6/1/01				<p>REVISIONS</p> <table border="1"> <tr><th>NO.</th><th>DATE</th><th>CHKD</th><th>DATE</th></tr> <tr><td>7-15-04</td><td></td><td></td><td></td></tr> <tr><td>7-15-04</td><td></td><td></td><td></td></tr> <tr><td>7/15/04</td><td></td><td></td><td></td></tr> <tr><td>8/17/01</td><td></td><td></td><td></td></tr> <tr><td>6/1/01</td><td></td><td></td><td></td></tr> </table>	NO.	DATE	CHKD	DATE	7-15-04				7-15-04				7/15/04				8/17/01				6/1/01				<p>REVISED EQUIPMENT LOCATIONS</p> <table border="1"> <tr><th>NO.</th><th>DATE</th><th>CHKD</th><th>DATE</th></tr> <tr><td>7-15-04</td><td></td><td></td><td></td></tr> <tr><td>7-15-04</td><td></td><td></td><td></td></tr> <tr><td>7/15/04</td><td></td><td></td><td></td></tr> <tr><td>8/17/01</td><td></td><td></td><td></td></tr> <tr><td>6/1/01</td><td></td><td></td><td></td></tr> </table>	NO.	DATE	CHKD	DATE	7-15-04				7-15-04				7/15/04				8/17/01				6/1/01			
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"RECORD DRAWINGS"

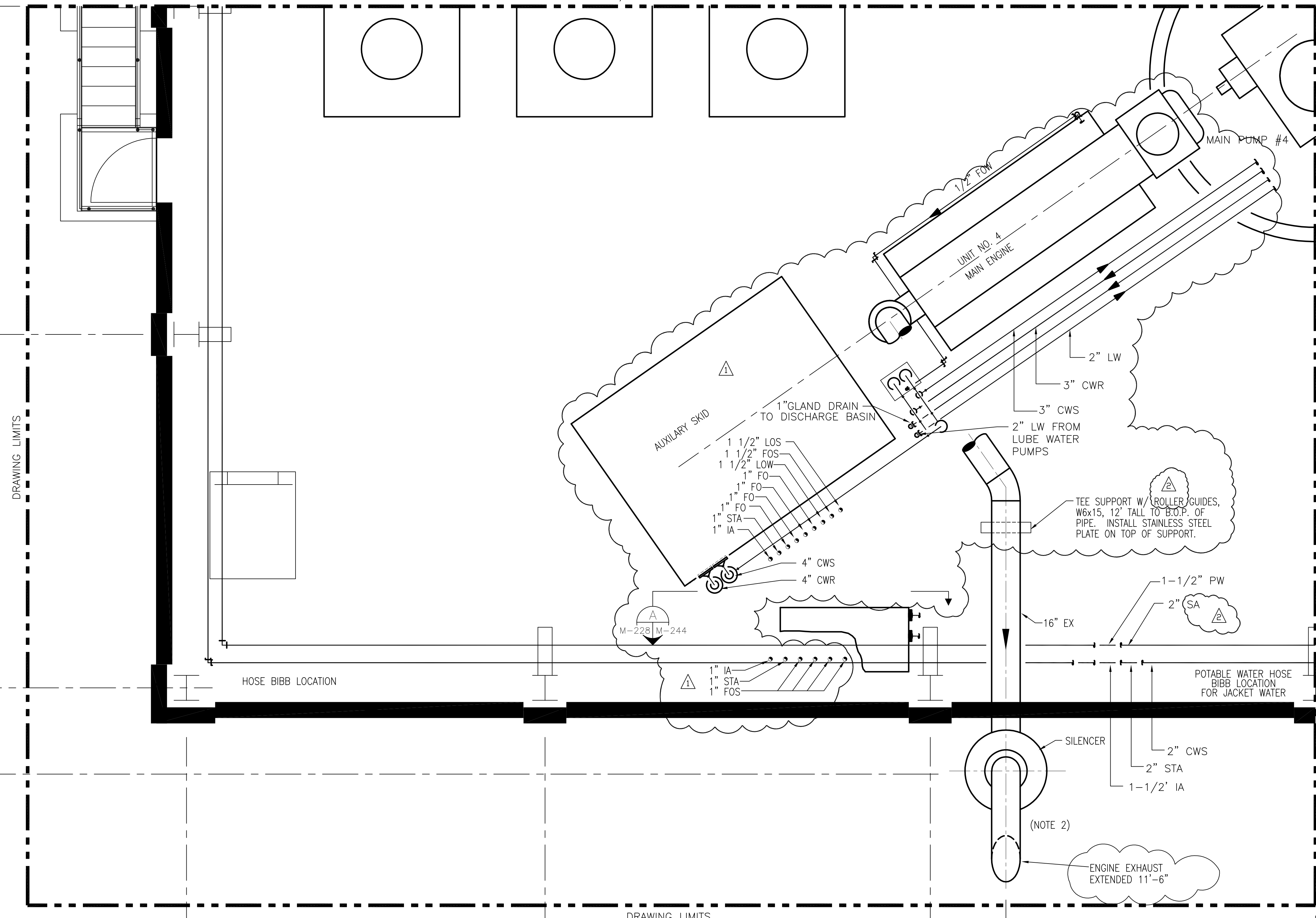
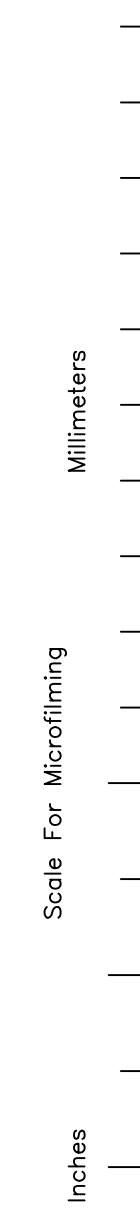


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SB

SA

MATCHLINE, FOR CONT. SEE DWG. M-224



DRAWING LIMITS

DRAWING LIMITS

MATCHLINE, FOR CONT. SEE DWG. M-229

- NOTES:
- CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  - CONTRACTOR TO TERMINATE DIESEL ENGINE EXHAUST PIPE 13'-6" ABOVE BUILDING PARAPET.
  - CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

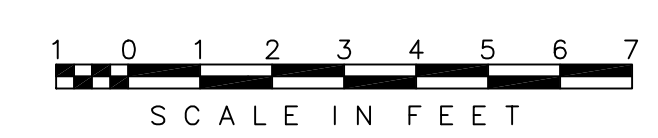
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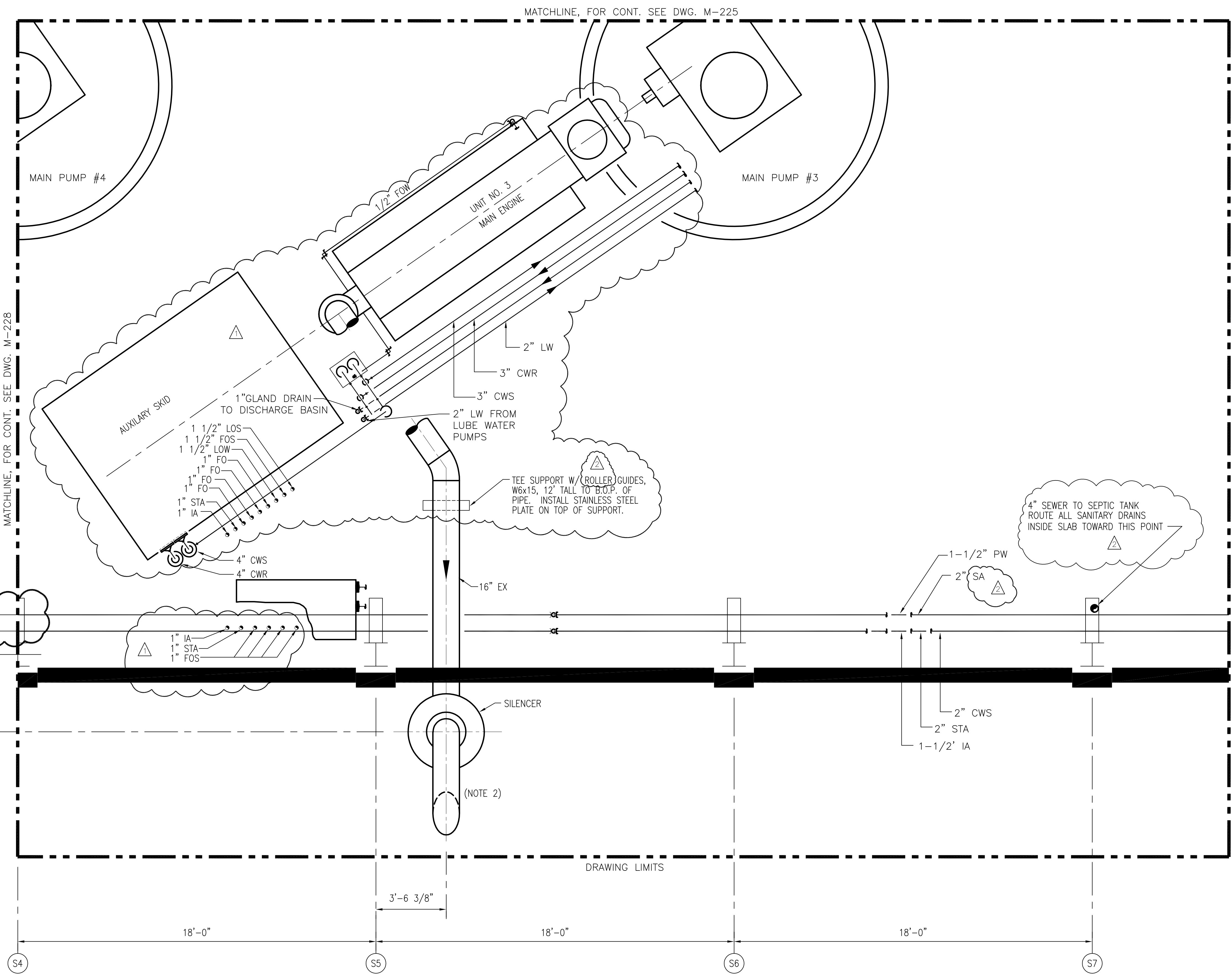
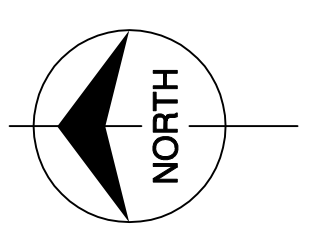
ELEVATION 31.00



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<p><b>Brown Cunningham Gannuch</b> ENGINEERS, ARCHITECTS &amp; CONSULTANTS 2701 WINDMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p><b>Burntis &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 BMCJ 24930</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>		<p>PUMP STATION G-372 ELEVATION 31.00 ENLARGED PIPING PLAN</p>		<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</p> <p>EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545</p>		<p>CONTRACT NO. C-E304 DWG. NO. M-228</p>		<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>5/7/01</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>6/1/01</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>9/9/01</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>7/15/04</td> <td></td> <td></td> </tr> </table>		NO.	DATE	CHKD	DATE	1	5/7/01			2	6/1/01			3	9/9/01			4	7/15/04		
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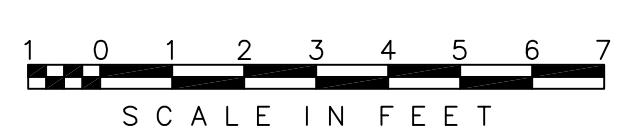


Scale For Microfilming  
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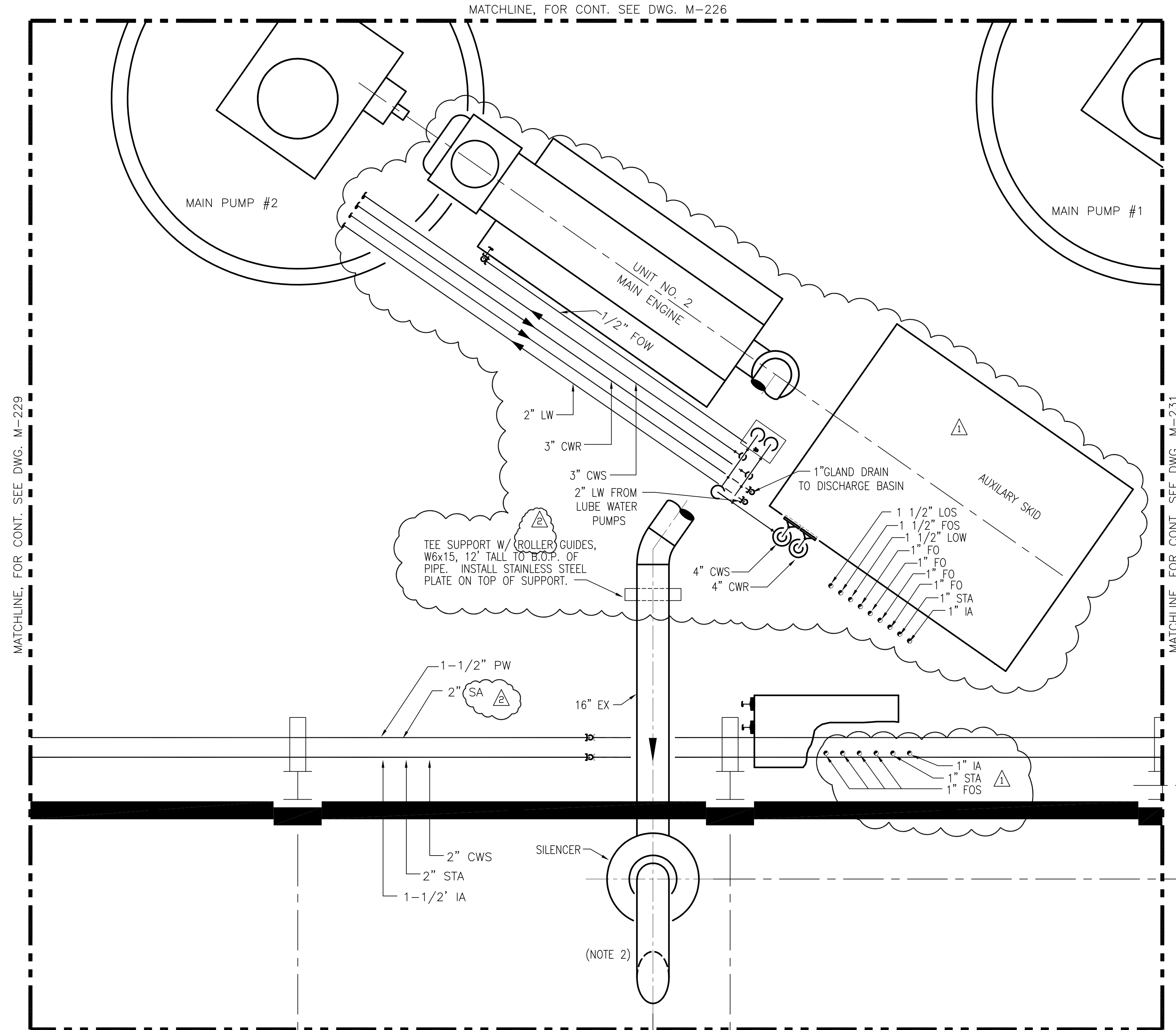
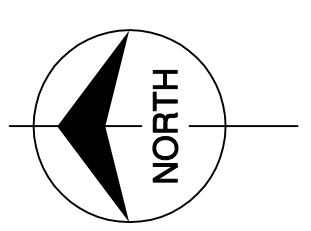
- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO TERMINATE DIESEL ENGINE EXHAUST PIPE 13'-6" ABOVE BUILDING PARAPET.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

ELEVATION 31.00



"RECORD DRAWINGS"

<p>ENGINEERS, ARCHITECTS &amp; CONSULTANTS 2701 WINDYBANK ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p>ENGINEERS, ARCHITECTS &amp; CONSULTANTS 701 WINDYBANK ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p>NO. DWG. CHKD. DATE</p> <p>5/10/01</p>	<p>NO. DWG. CHKD. DATE</p> <p>6/1/01</p>	<p>NO. DWG. CHKD. DATE</p> <p>9/9/01</p>	<p>NO. DWG. CHKD. DATE</p> <p>7/15/04</p>	<p>REVISIONS</p>
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<p>GPW MSS</p>	<p>MSS RIG</p>	<p>MSS RIG</p>	<p>MSS RIG</p>	<p>MSS RIG</p>	<p>MSS RIG</p>	<p>MSS RIG</p>	<p>MSS RIG</p>	<p>MSS RIG</p>
<p>SF EJM</p>	<p>CPW MSS</p>	<p>CPW MSS</p>	<p>CPW MSS</p>	<p>CPW MSS</p>	<p>CPW MSS</p>	<p>CPW MSS</p>	<p>CPW MSS</p>	<p>CPW MSS</p>
<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STATION G-372 ELEVATION 31.00 ENLARGED PIPING PLAN</p>								
<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>								
<p>CONTRACT NO. C-E304 DWG. NO. M-229</p>								
<p>Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545</p>								



MATCHLINE, FOR CONT. SEE DWG. M-229

MATCHLINE, FOR CONT. SEE DWG. M-231

DRAWING LIMITS

ELEVATION 31.00



- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO TERMINATE DIESEL ENGINE EXHAUST PIPE 13'-6" ABOVE BUILDING PARAPET.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

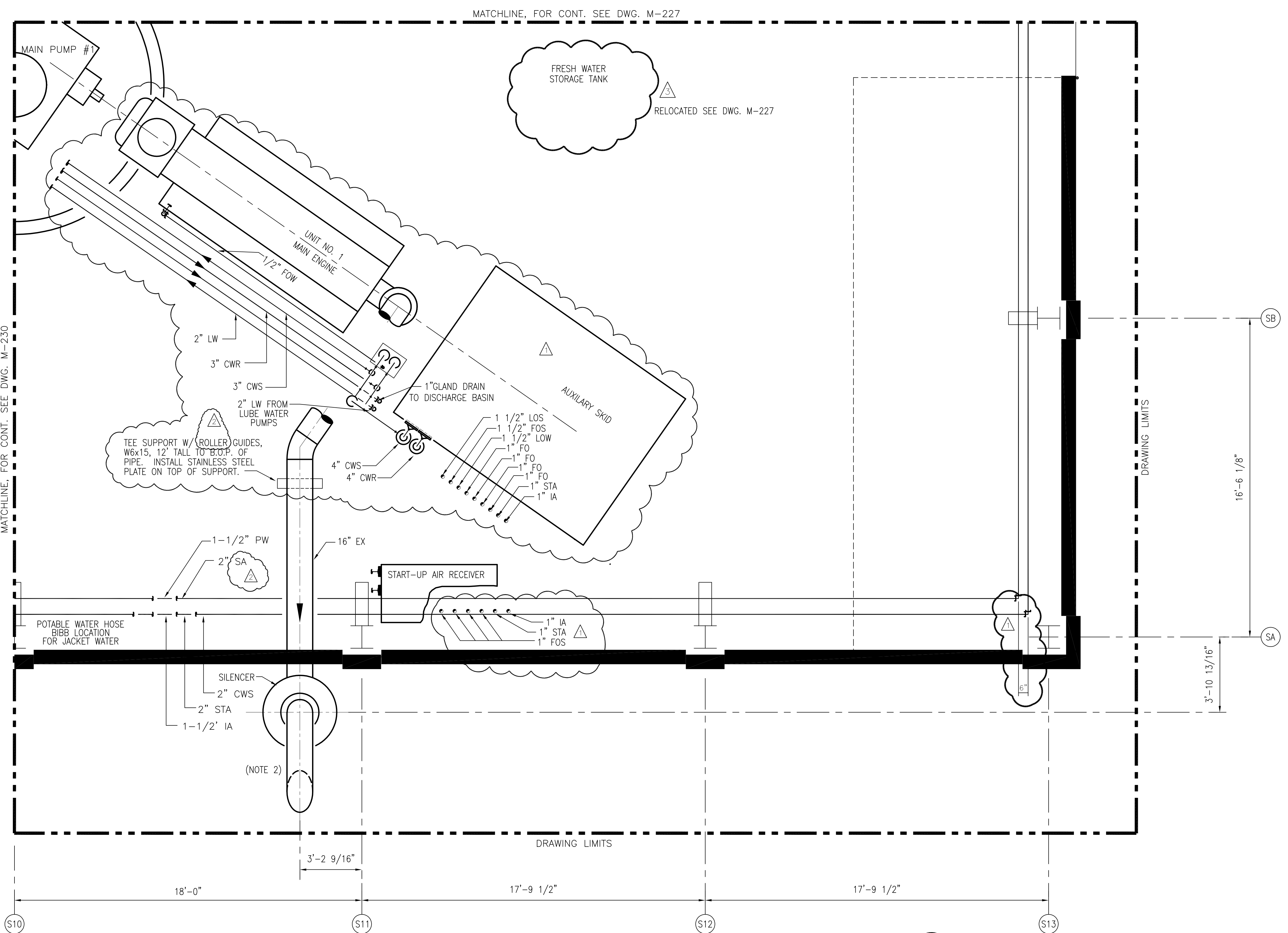
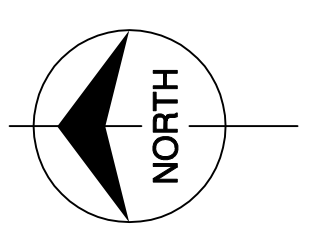
Scale For Microfilming  
Inches  
Millimeters

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<p><b>Brown Cunningham Gannuch</b> ENGINEERS, ARCHITECTS &amp; CONSULTANTS 2701 WINDYAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		<p><b>Burntis &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 EMCJ 24930</p>		<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STATION G-372 ELEVATION 31.00 ENLARGED PIPING PLAN</p>		<p>SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545</p>		<p>CONTRACT NO. C-E304 DWG. NO. M-230</p>		<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> <th>REVISED PER ADDENDUM NO.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5/10/01</td> <td>CPW</td> <td></td> <td>REVISED PER ADDENDUM NO. 1</td> </tr> <tr> <td>2</td> <td></td> <td>NO. DWN</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>MSS</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>RIG</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>MSS</td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>CPW</td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>MSS</td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>SF</td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td>EJM</td> <td></td> <td></td> </tr> <tr> <td>10</td> <td>7/15/04</td> <td></td> <td></td> <td>REVISED NOTE NO.2</td> </tr> </tbody> </table>		NO.	DATE	CHKD	DATE	REVISED PER ADDENDUM NO.	1	5/10/01	CPW		REVISED PER ADDENDUM NO. 1	2		NO. DWN			3		MSS			4		RIG			5		MSS			6		CPW			7		MSS			8		SF			9		EJM			10	7/15/04			REVISED NOTE NO.2
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'RECORD DRAWINGS'

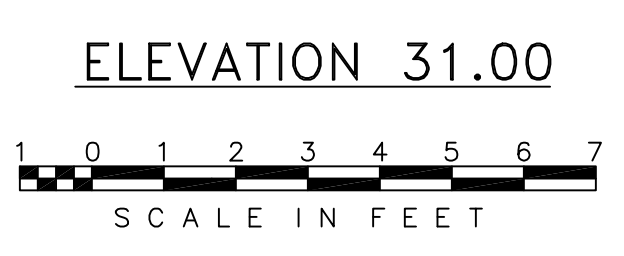




- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. CONTRACTOR TO TERMINATE DIESEL ENGINE EXHAUST PIPE 13'-6" ABOVE BUILDING PARAPET.
  3. FOR VALVE TAG LOCATIONS REFER TO DWG. M-249.
  4. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

NOTE:

1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN



Scale For Microfilming  
Inches  
Millimeters

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<p><b>Burns &amp; McDonnell</b> SINCE 1938 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMCJ 24930</p>	<p>EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>		<p>REVISIONS</p>	
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CONTRACT NO.  
C-E304  
DWG. NO.  
M-231

"RECORD DRAWINGS"

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



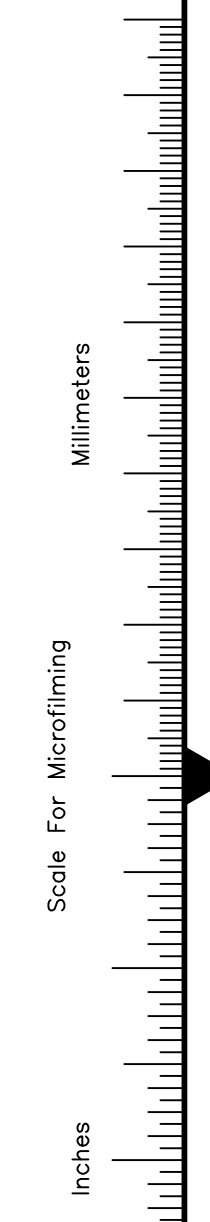
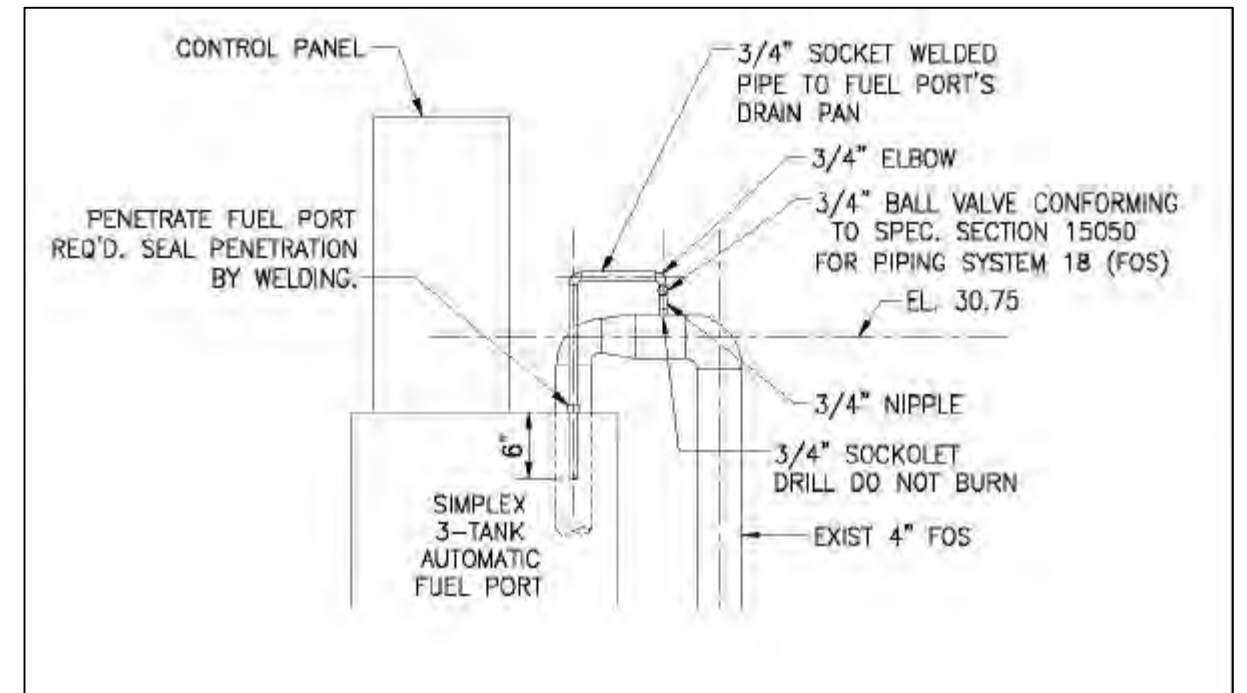
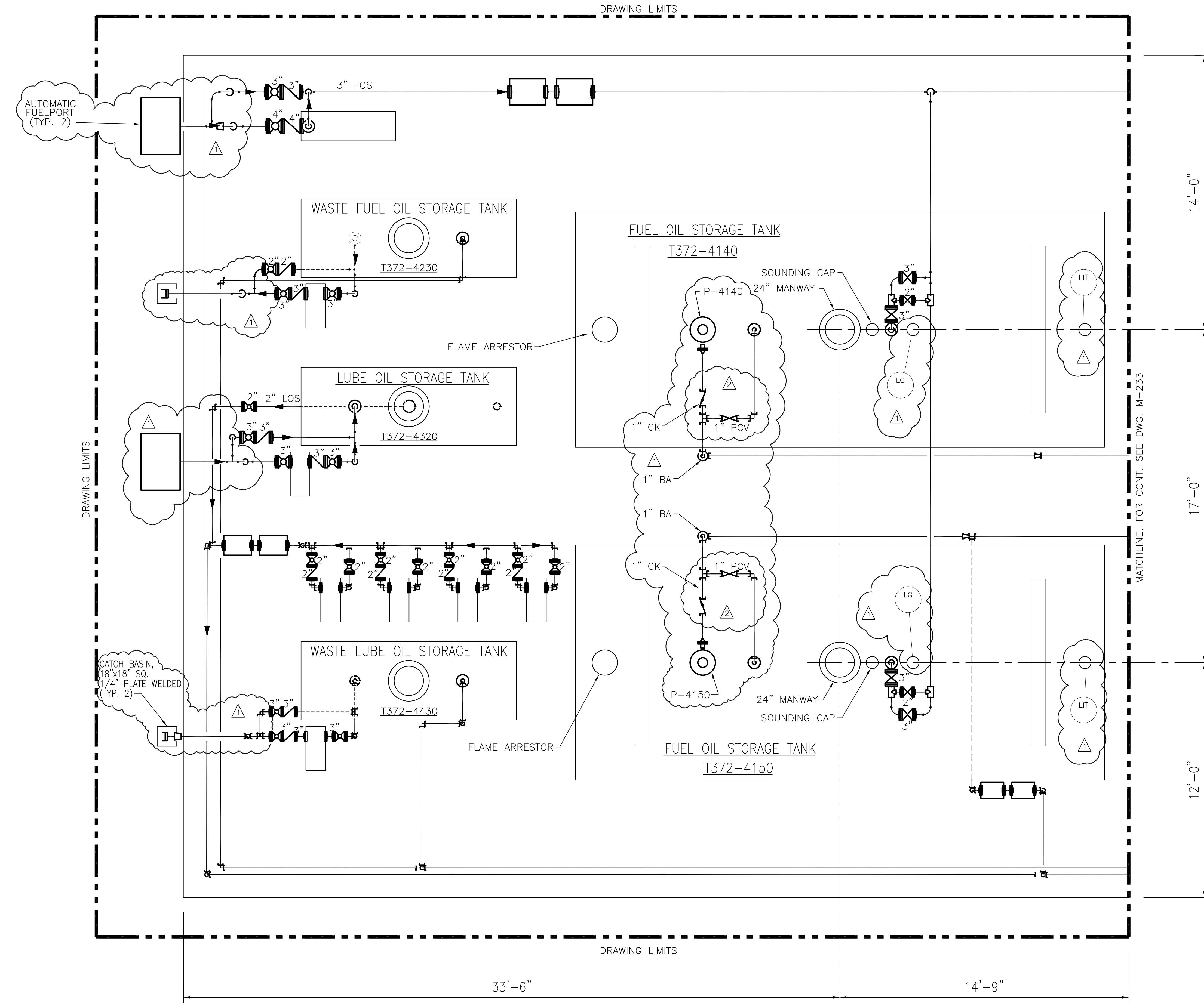
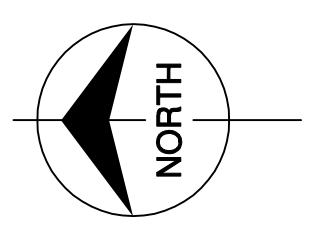
**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

EVERGLADES CONSTRUCTION PROJECT  
STORMWATER TREATMENT AREA NO. 3/4  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-372  
ELEVATION 31.00  
ENLARGED PIPING PLAN

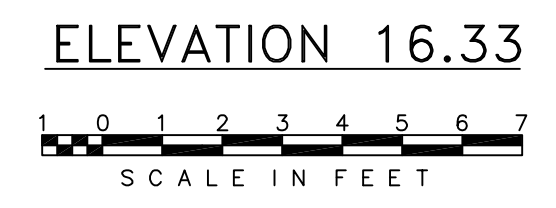
**Burns & McDonnell**  
SINCE 1938  
9400 WARD PARKWAY  
KANSAS CITY, MO. 64114  
Certification: EB0000253  
BMCJ 24930

**Brown Cunningham Gannuch**  
ENGINEERS, ARCHITECTS & CONSULTANTS  
2701 WINDMAN ST.  
METairie, LOUISIANA 70006  
(504) 454-3866  
License No. EB00008095

NO.	DATE	CHKD	DATE	REVISIONS
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3	9/9/01	MSS		REVISED PER ADDENDUM NO. 4
4	7/15/04	EJM		REVISED NOTE NO.2-RELOCATED EQUIPMENT



- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR VALVE TAG LOCATIONS REFER TO M-250.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

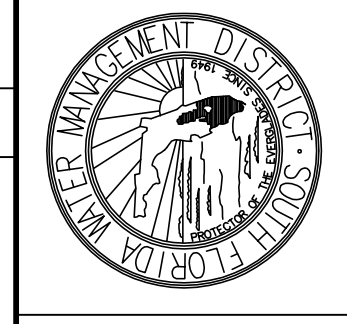


MATCHLINE, FOR CONT. SEE DWG. M-233

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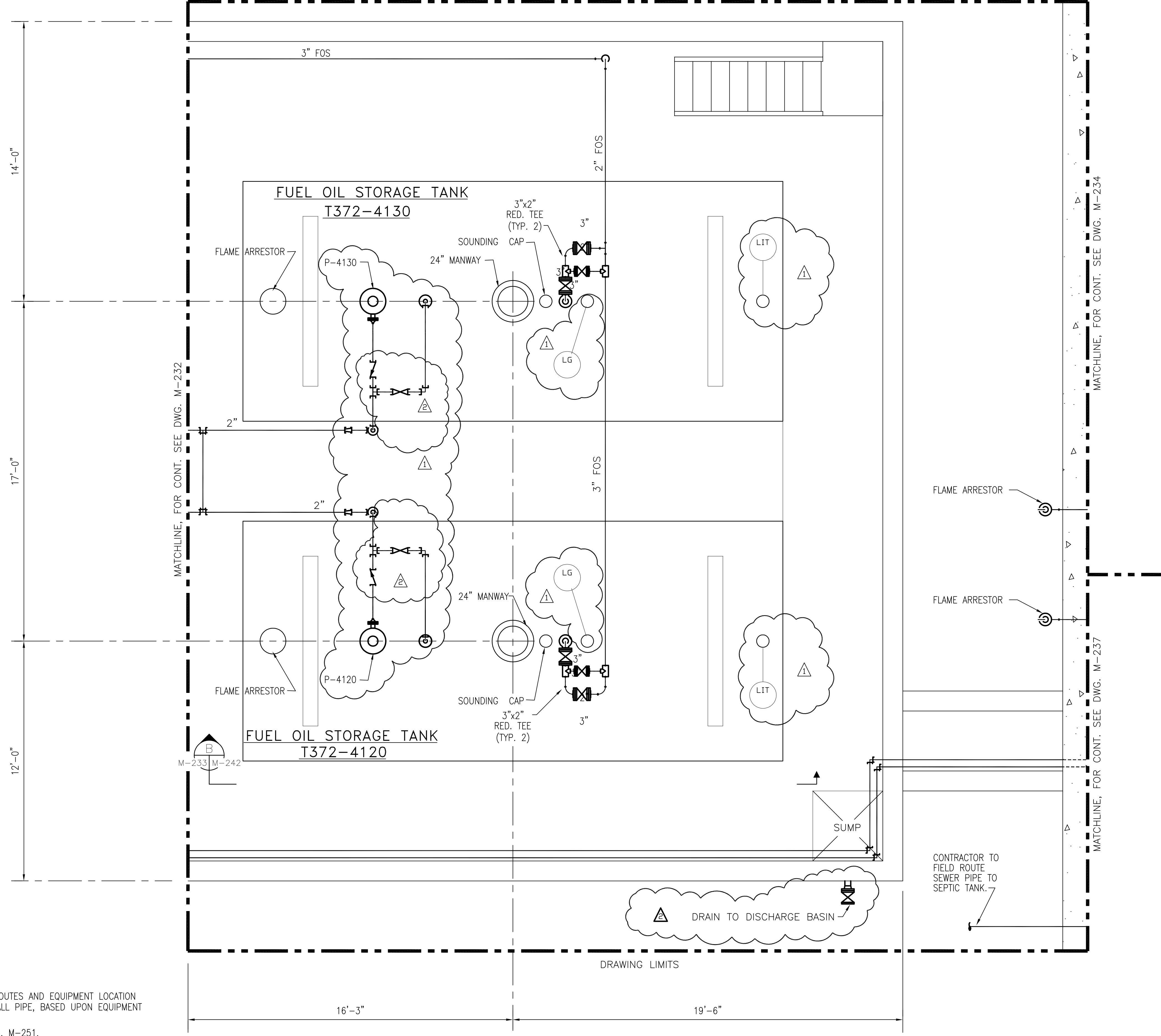
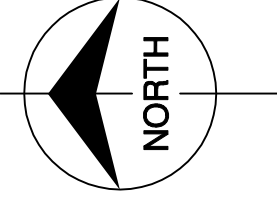
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Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



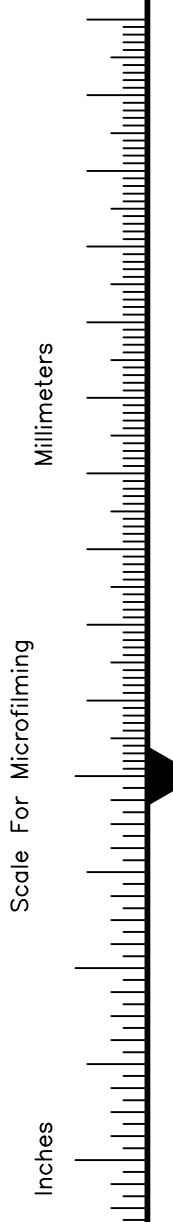
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  2. FOR VALVE TAG LOCATIONS REFER TO DWG. M-251.
  3. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

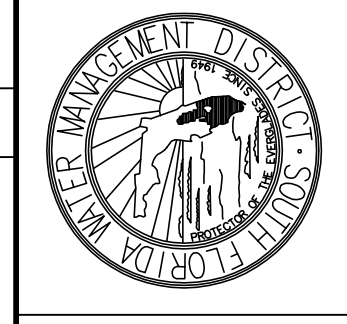
ELEVATION 16.33



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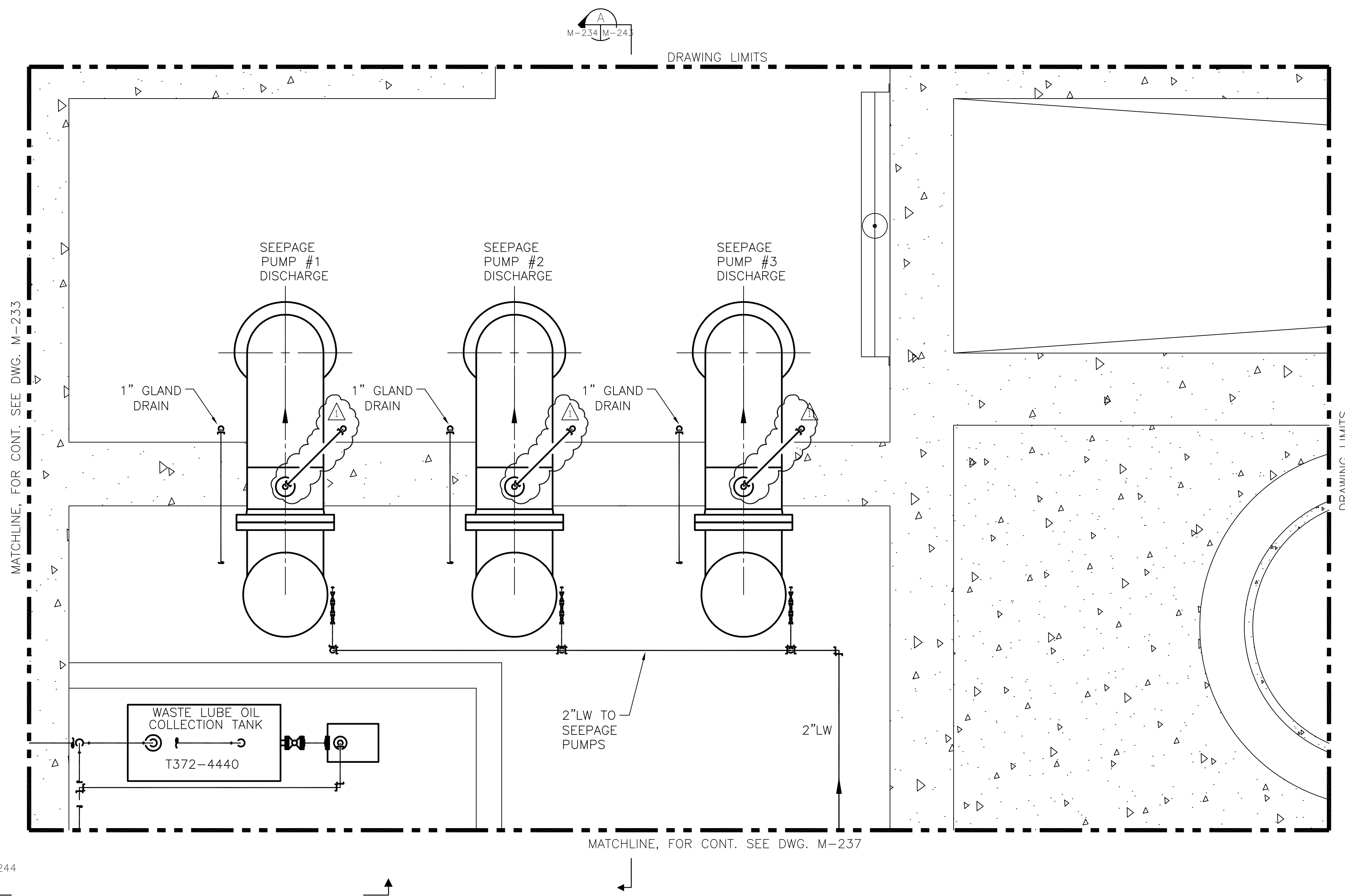
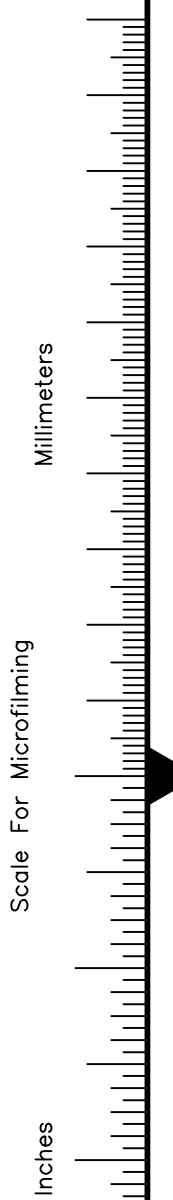
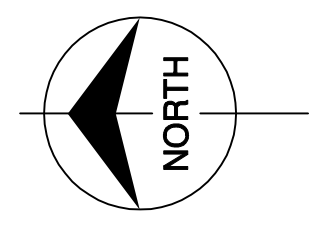
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<p>DRAWN CHKD DESIGN</p>	<p>GPW MSS MSS RUG</p>	<p>NO. DWN CHKD</p>	<p>DATE</p>	<p>REVISIONS</p>	<p>DATE</p>
<p>5/10/01</p>	<p>8/17/01 6/1/01</p>	<p>REVISED PER ADDENDUM NO. 4 REVISED PER ADDENDUM NO. 1</p>	<p>NO. DWN CHKD</p>	<p>DATE</p>	<p>REVISIONS</p>

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

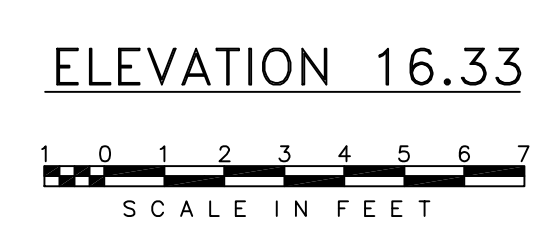


CONTRACT NO.  
C-E304  
DWG. NO.  
M-233

"RECORD DRAWINGS"



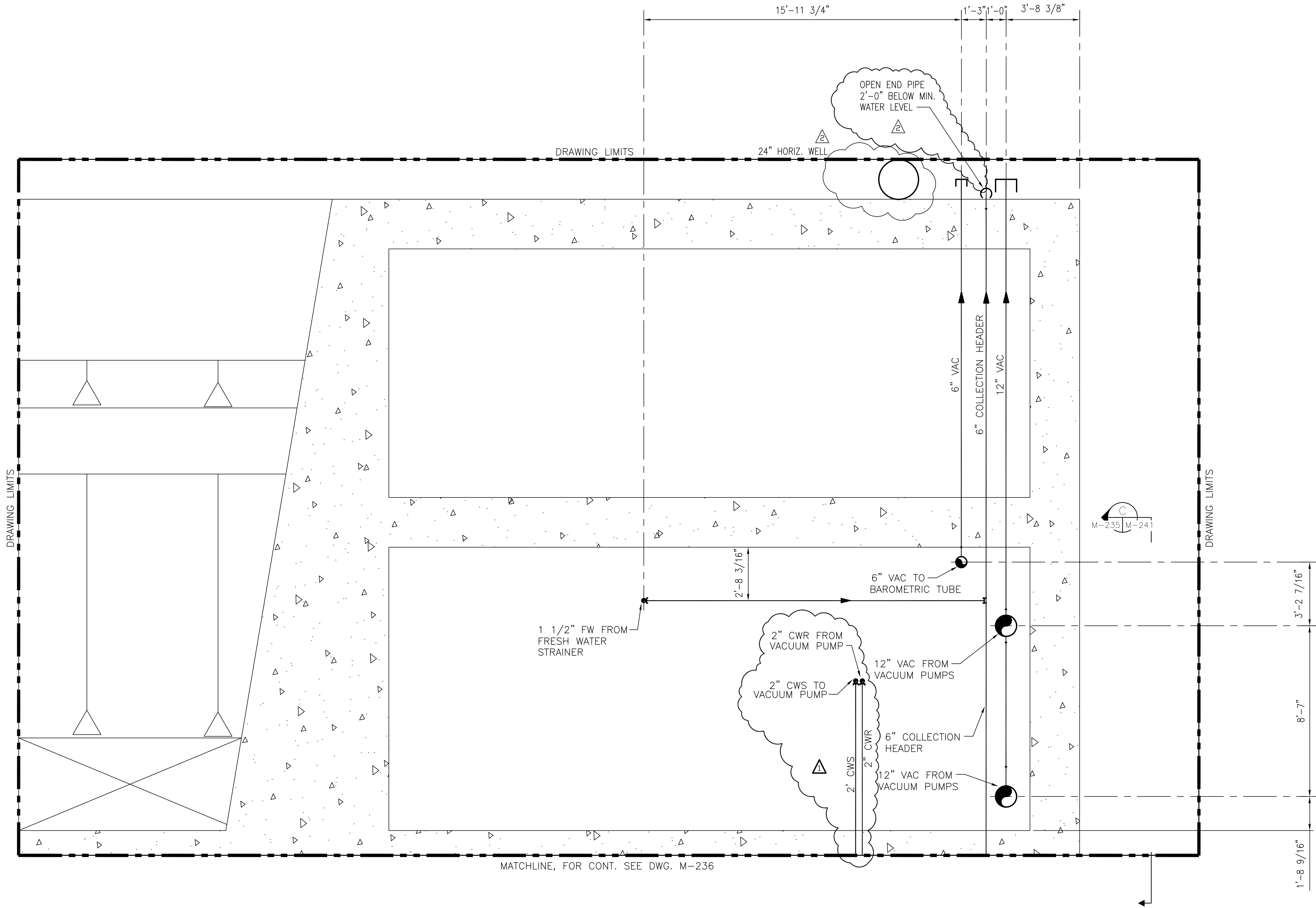
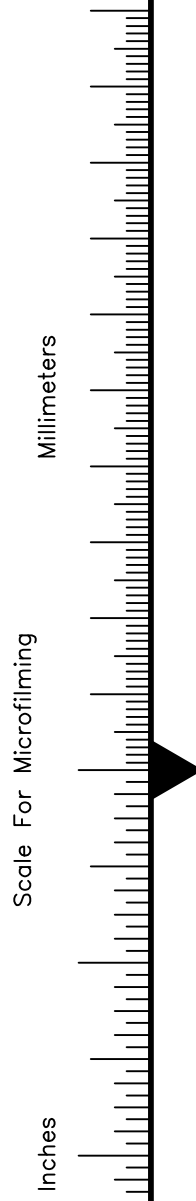
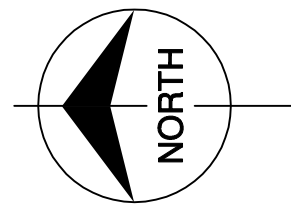
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<p><b>Burns &amp; McDonnell</b>  <small>ARCHITECTS - CONSULTANTS</small>  <small>ENGINEERS</small>  <small>2717 W. WARD PARKWAY</small>  <small>KANSAS CITY, MO. 64114</small>  <small>Certification: EB000253</small>  <small>BMGD 24930</small></p>	<p><b>Brown Cunningham Gannuch</b>  <small>ARCHITECTS - CONSULTANTS</small>  <small>ENGINEERS</small>  <small>2717 W. WARD PARKWAY</small>  <small>KANSAS CITY, MO. 64114</small>  <small>(504) 654-3866</small>  <small>License NO. EB00008095</small></p>	<table border="1"> <tr><td>GPW</td><td>CHKD</td><td>DESIGN</td><td>CHKD</td><td>DATE</td></tr> <tr><td>MSS</td><td>MSS</td><td>RUG</td><td>5/10/01</td><td></td></tr> </table>	GPW	CHKD	DESIGN	CHKD	DATE	MSS	MSS	RUG	5/10/01		<table border="1"> <tr><td>GPW</td><td>CHKD</td><td>DATE</td></tr> <tr><td>MSS</td><td>MSS</td><td>9/9/01</td></tr> <tr><td>RUG</td><td>5/10/01</td><td></td></tr> </table>	GPW	CHKD	DATE	MSS	MSS	9/9/01	RUG	5/10/01		<table border="1"> <tr><td>NO.</td><td>DWN</td><td>CHKD</td><td>DATE</td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> </table>	NO.	DWN	CHKD	DATE	4				<table border="1"> <tr><td>REVISED PER ADDENDUM NO. 4</td><td>REVISIONS</td></tr> </table>	REVISED PER ADDENDUM NO. 4	REVISIONS
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<p><b>EVERGLADES CONSTRUCTION PROJECT</b>  <b>STORMWATER TREATMENT AREA NO. 3/4</b>  <b>PUMP STATIONS G-370 &amp; G-372</b></p>	<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b>  <small>EVERGLADES CONSTRUCTION PROJECT</small>  <small>3301 GUN CLUB ROAD</small>  <small>WEST PALM BEACH, FLORIDA 33406</small></p>	<p><b>PUMP STATION G-372</b>  <b>ELEVATION 16.33</b>  <b>ENLARGED PIPING PLAN</b></p>	<p>CONTRACT NO. C-E304          DWG. NO. M-234</p>	<p>RODNEY J. GANNUCH, P.E.  <small>FLA. C.E. REG. NO. 53545</small></p>																														

"RECORD DRAWINGS"



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  - CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.

ELEVATION 16.33



Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
**STORMWATER TREATMENT AREA NO. 3/4**  
**PUMP STATIONS G-370 & G-372**  
**PUMP STATION G-372**  
**ELEVATION 16.33**  
**ENLARGED PIPING PLAN**



9400 WARD PARKWAY  
 KANSAS CITY, MO 64114  
 Central Office  
 Brd. 24930

**Brown Cunningham Gannuch**  
 ENGINEERS • ARCHITECTS • CONSULTANTS  
 METairie, LOUISIANA 70006  
 (504) 454-3866  
 License No. EB00008095

DRAWN	GPW	CHKD	DESIGN	CHKD	DATE
MSS	MSS	RJC	MSS	MSS	5/10/01

NO.	DWN	CHKD	DATE
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2	GPW	MSS	9/9/01
3	EJM	CHKD	7/15/04

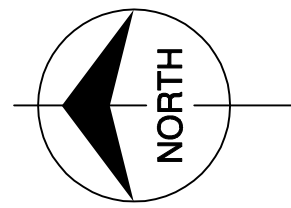
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CONTRACT NO.  
C-E304  
DWG. NO.  
**M-235**

"RECORD DRAWINGS"

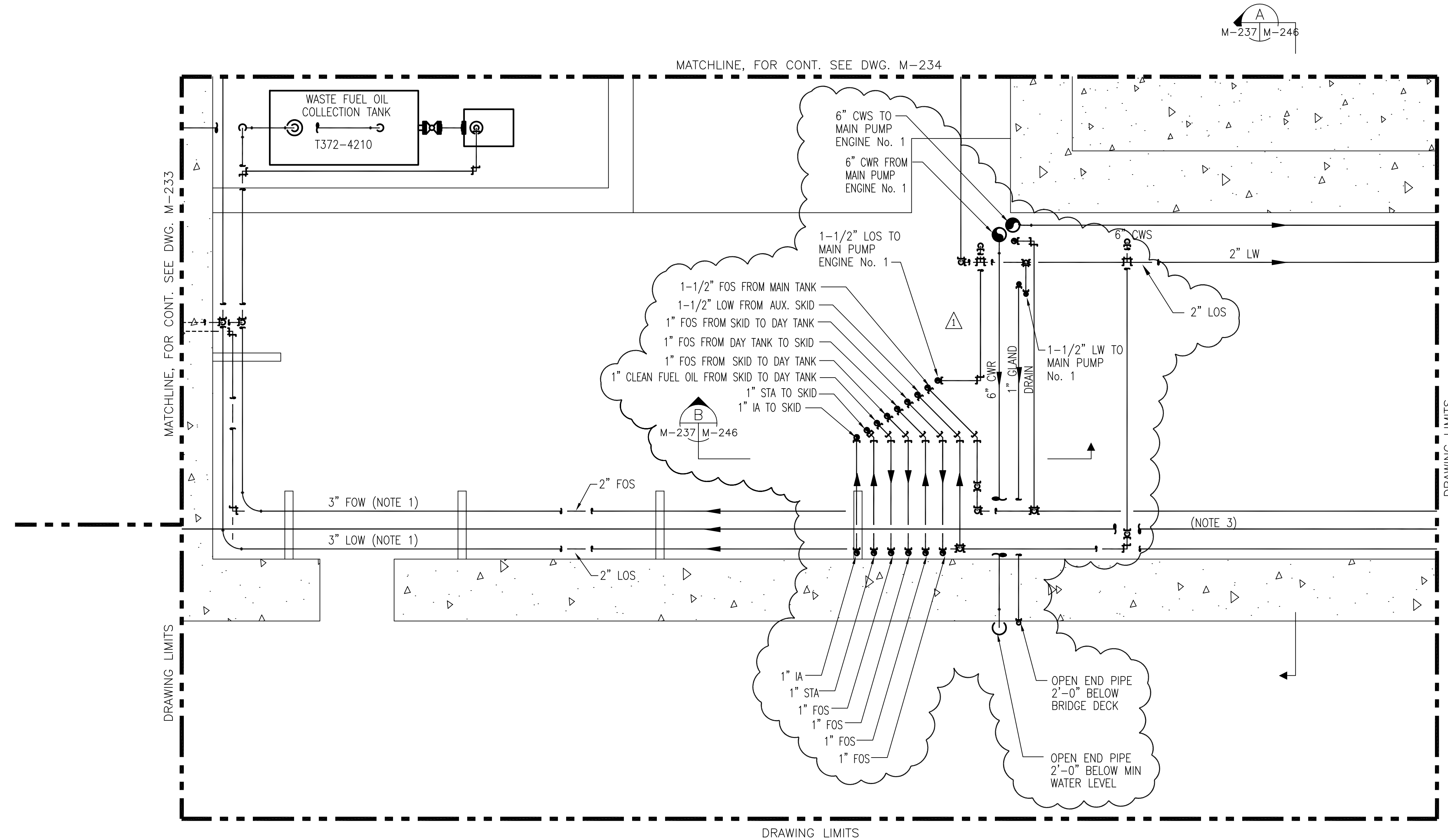
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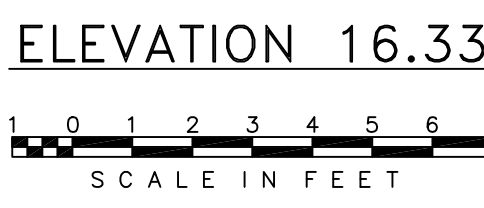


Scale For Microfilming  
Inches  
Millimeters

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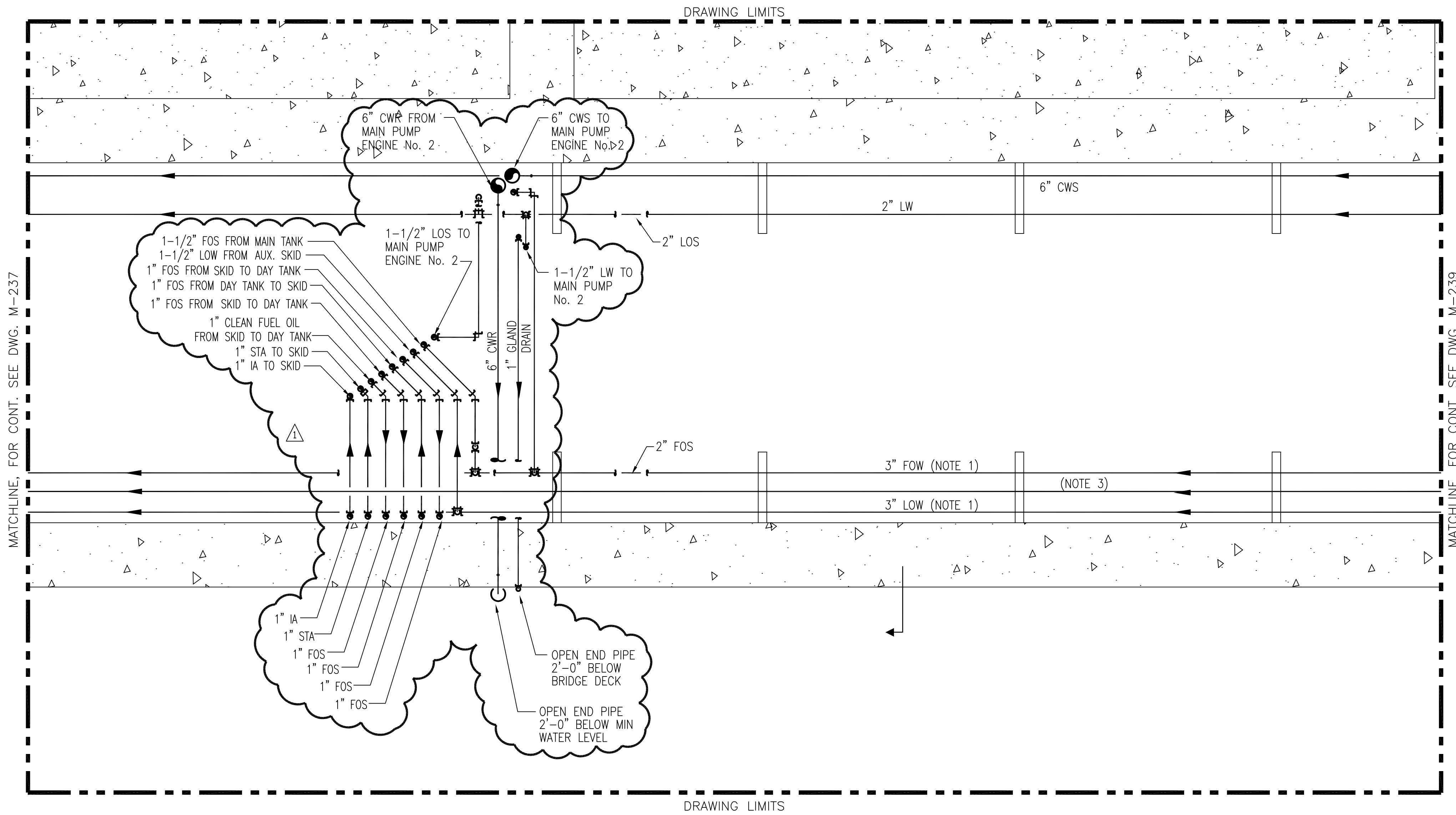
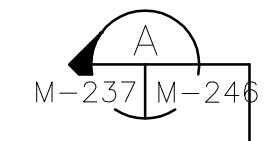
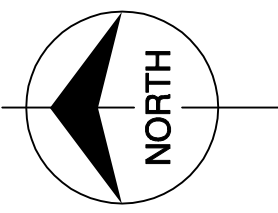


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  3. CONTRACTOR TO SLOPE SEWER PIPE 1/8" PER FOOT & SUPPORT PIPING AS REQUIRED.
  4. CONTRACTOR TO FIELD SUPPORT PIPING AS REQUIRED.



9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB000263 BMGD 24930	ARCHITECTS - CONSULTANTS ENGINEERS 217 MARIE, LOUISIANA 70006 (504) 654-3666 License NO. EB00009095	EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 16.33 ENLARGED PIPING PLAN	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	CONTRACT NO. C-E304 DWG. NO. M-237	DATE 5/10/01	REVISIONS

"RECORD DRAWINGS"



MATCHLINE, FOR CONT. SEE DWG. M-237

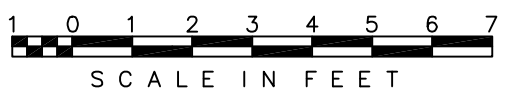
MATCHLINE, FOR CONT. SEE DWG. M-239

DRAWING LIMITS

DRAWING LIMITS


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ELEVATION 16.33



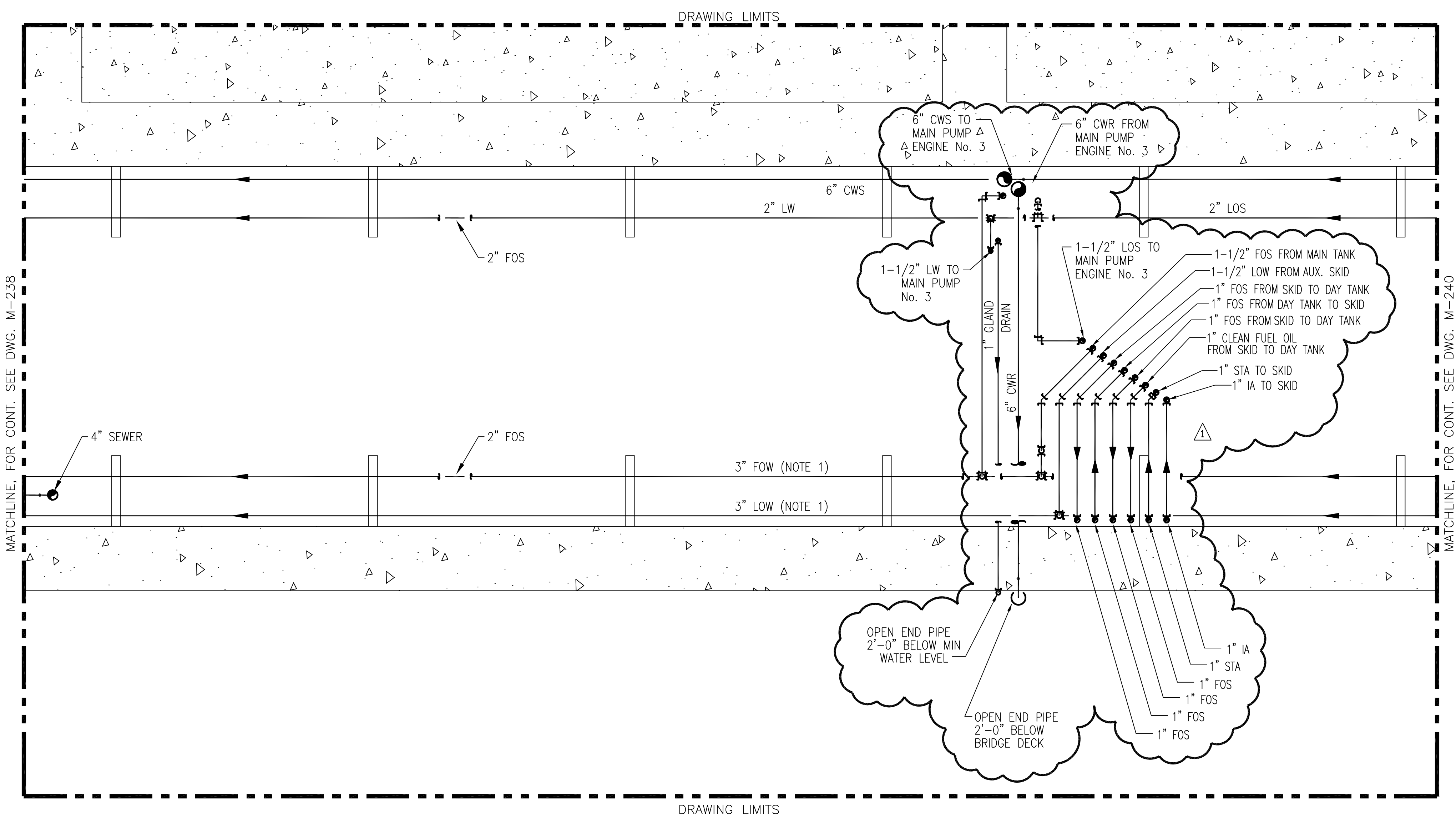
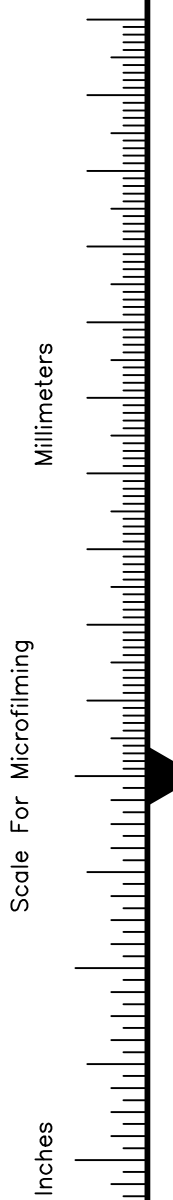
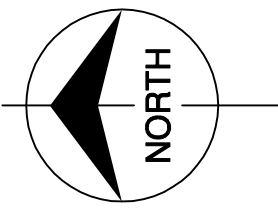
Scale For Microfilming  
Inches  
Millimeters

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 <b>Burns &amp; McDonnell</b> SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB000253 BMGD 24930	<b>Brown Cunningham Gannuch</b> ARCHITECTS - CONSULTANTS ENGINEERS 217 METABIE, LOUISIANA 70006 (504) 654-3866 License No. EB00009095	DRAWN: GPW CHECKED: MSS DESIGN: MSS CHECKED: RUG DATE: 5/10/01	NO. DWN: CHKO DATE: 6/1/01 REVISED PER ADDENDUM NO. 1	REVISIONS
	<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	<b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 16.33 ENLARGED PIPING PLAN	CONTRACT NO. C-E304 DWG. NO. M-238	RODNEY J. GANNUCH, P.E. FLA. C.E. REG. NO. 53545

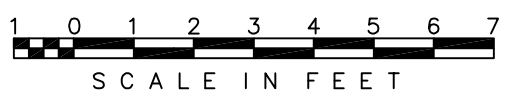
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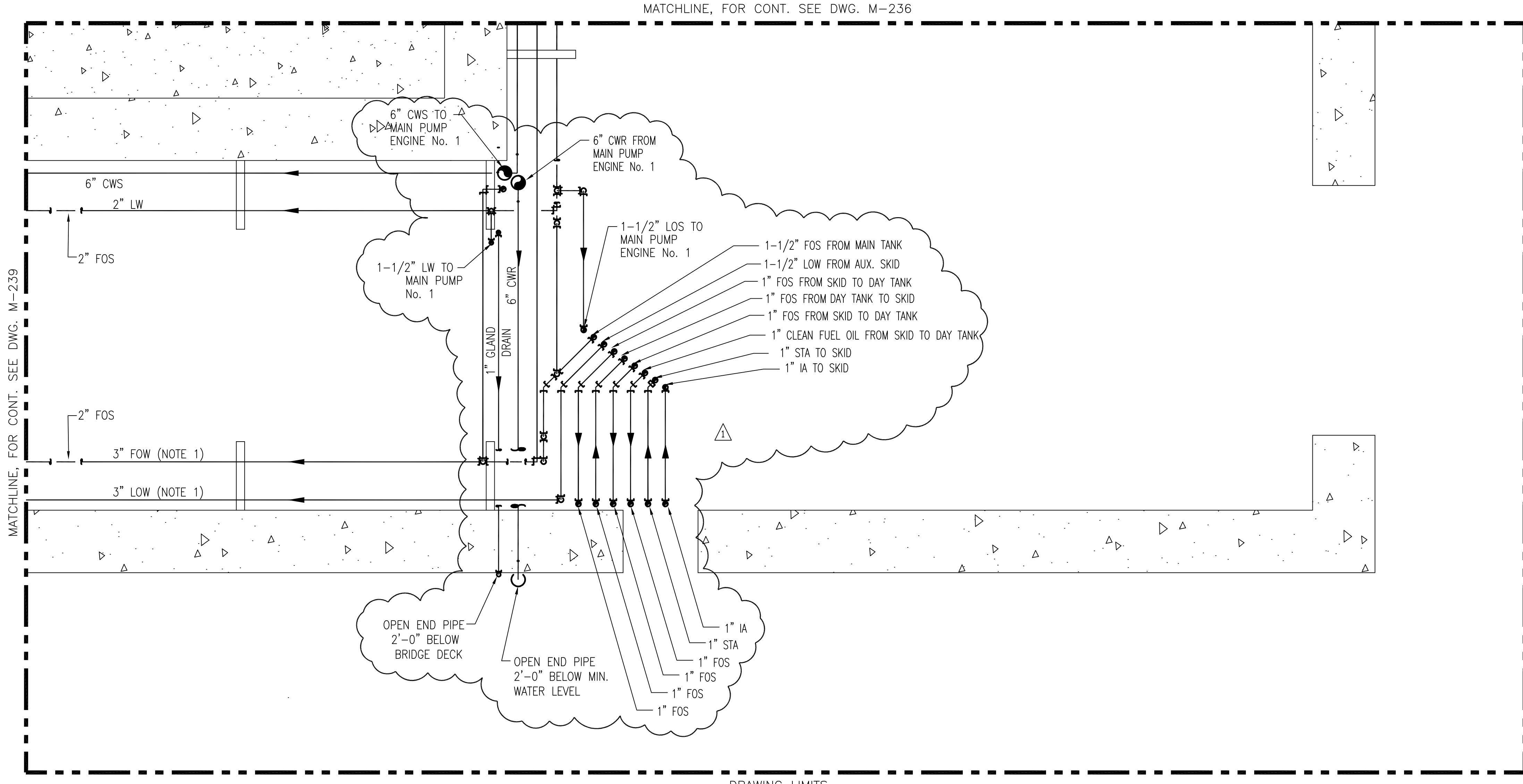
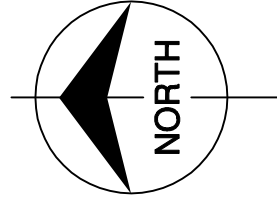
ELEVATION 16.33



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	ARCHITECTS CONSULTANTS <b>Burns &amp; McDonnell</b> ENGINEERS 217 METairie, LOUISIANA 70006 (504) 554-3866 License No. EB00009095	EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 16.33 ENLARGED PIPING PLAN	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	CONTRACT NO. C-E304 DWG. NO. <b>M-239</b>	REVISIONS NO. DATE 1 5/10/01 2 6/1/01 3 6/1/01 4 6/1/01
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**"RECORD DRAWINGS"**



MATCHLINE, FOR CONT. SEE DWG. M-239

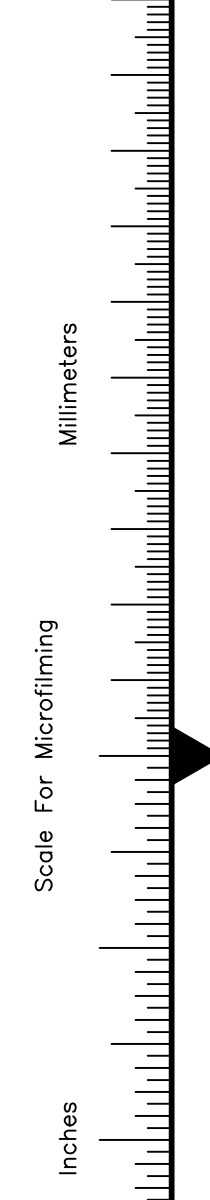
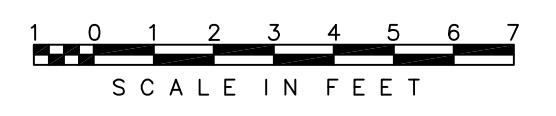
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DRAWING LIMITS

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ELEVATION 16.33

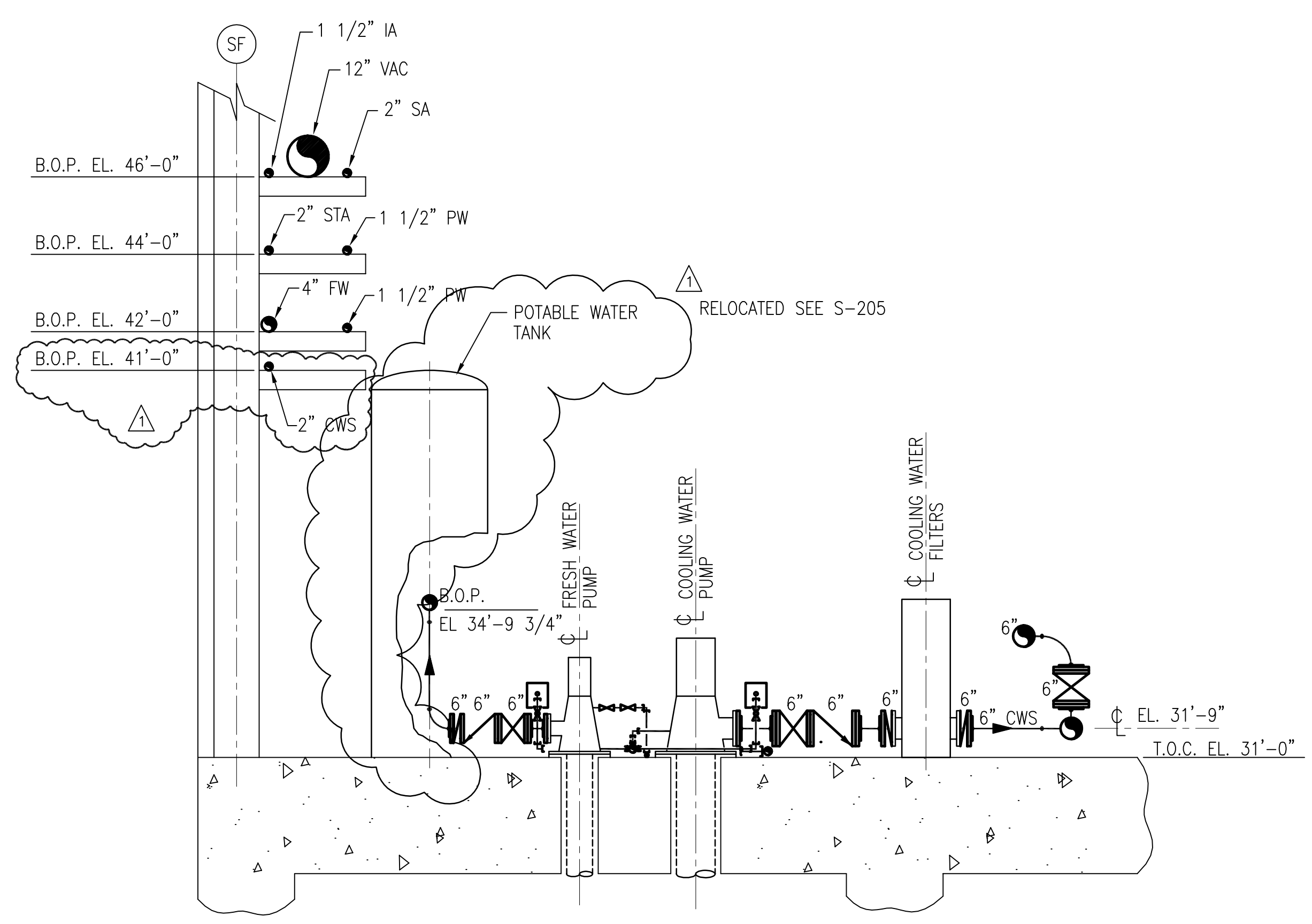


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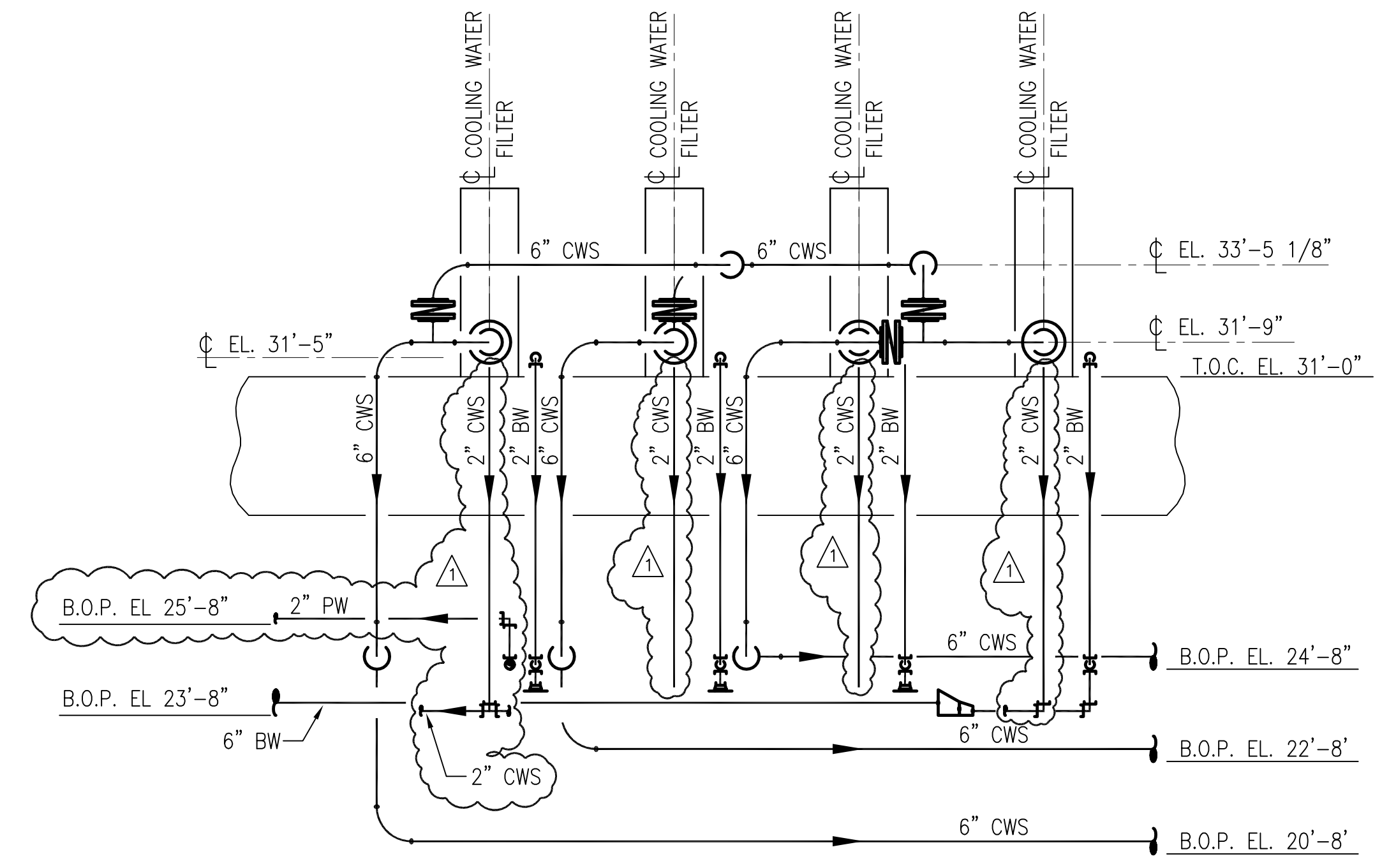
<p><b>BURNS &amp; MCDONNELL</b> SINCE 1833 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification EB0000253 BMcD</p>	<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGSMAN ST. METairie, LOUISIANA 70006 (504) 494-3866 License No. EB0008895</p>	<p><b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>	<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>	<p><b>PUMP STATION G-372</b> ELEVATION 16.33 ENLARGED PIPING PLAN</p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> <th>REVISED PER ADDENDUM NO.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5/10/01</td> <td>RJG</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>6/17/01</td> <td>MSS</td> <td></td> <td></td> </tr> </tbody> </table>	NO.	DATE	CHKD	DATE	REVISED PER ADDENDUM NO.	1	5/10/01	RJG			2	6/17/01	MSS		
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Rodney J. Gannuch, P.E.  
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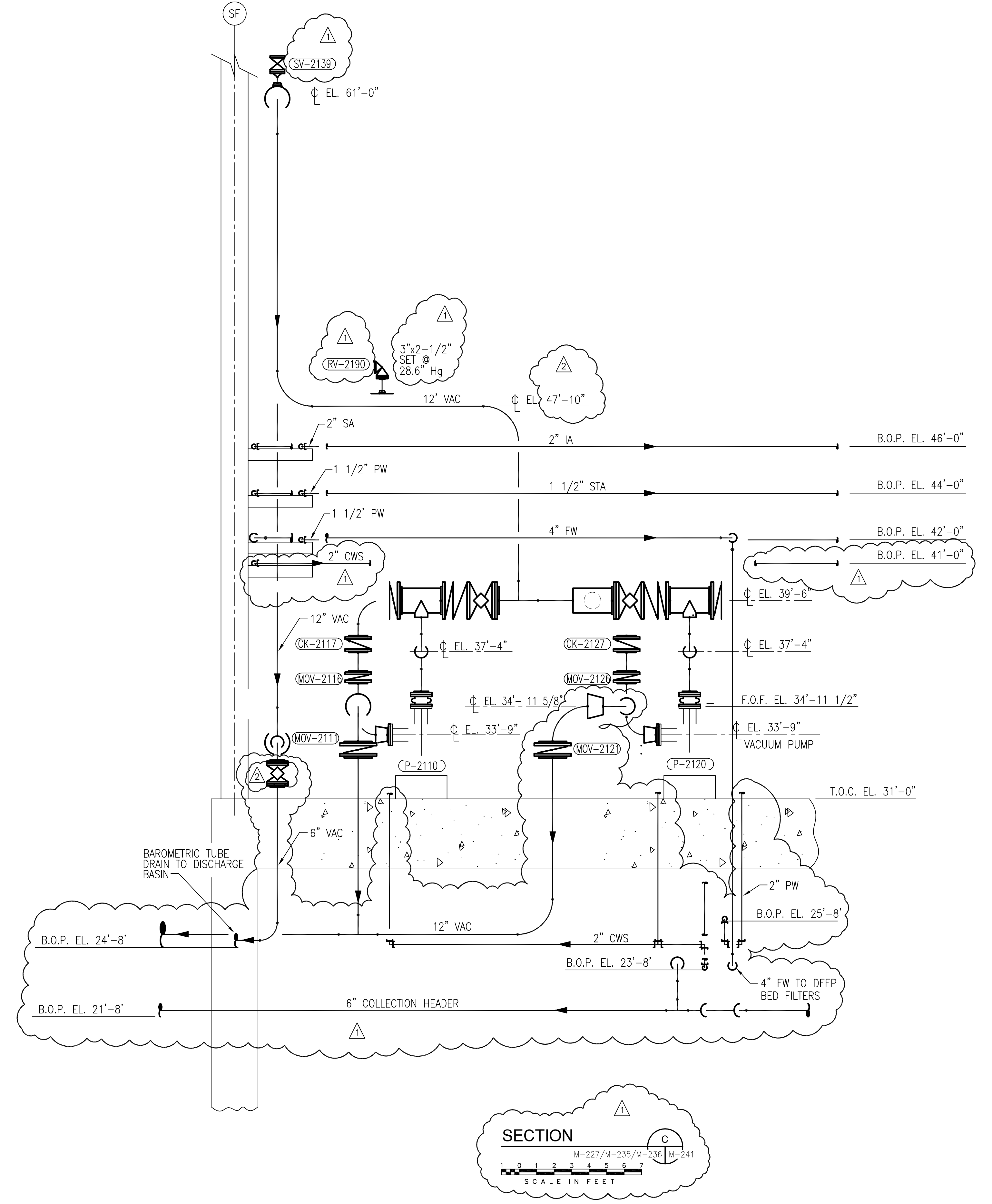




**SECTION A**  
M-227/M-236 M-241  
SCALE IN FEET




**SECTION B**  
M-227/M-236 M-241  
SCALE IN FEET

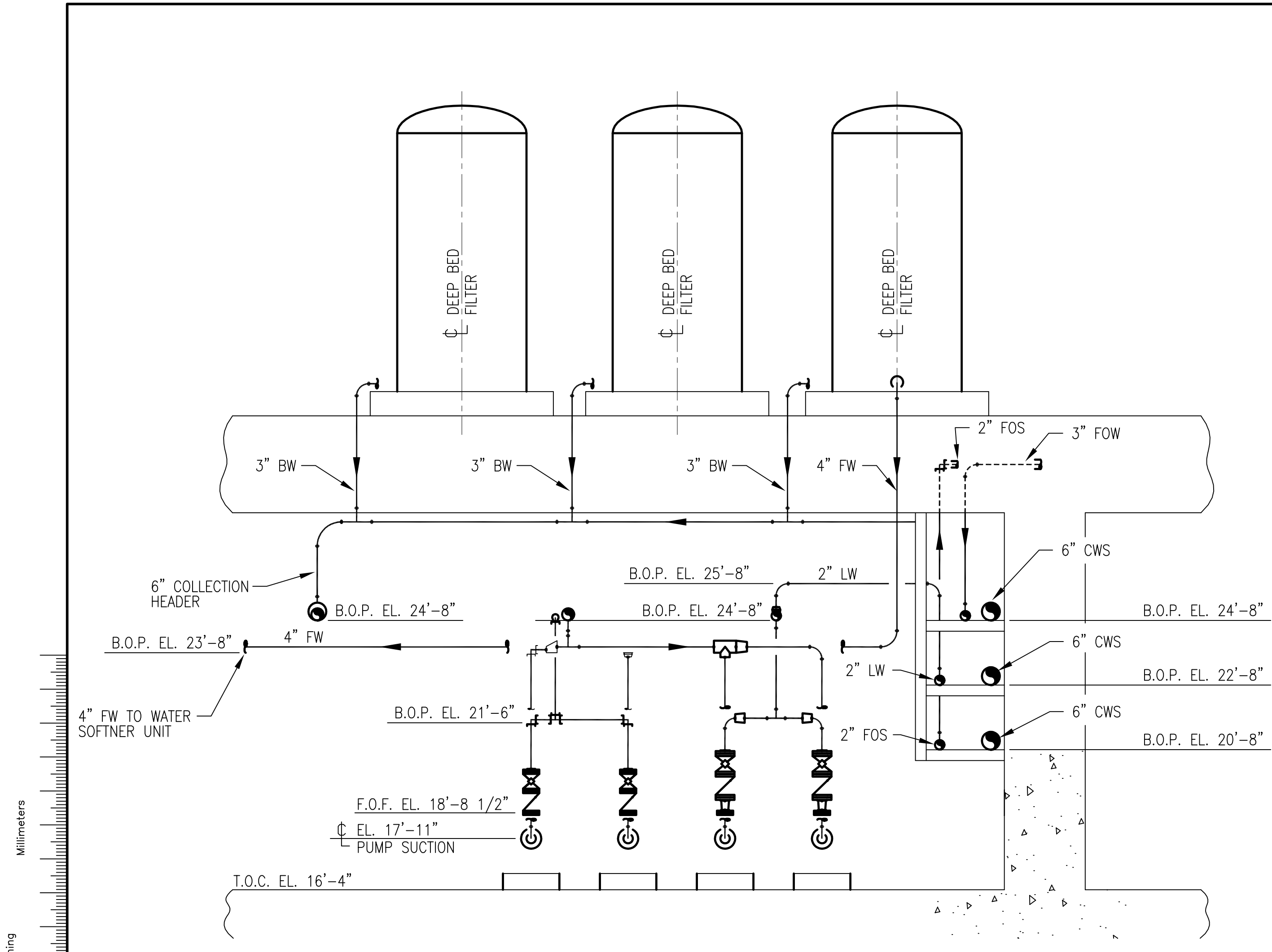


**SECTION C**  
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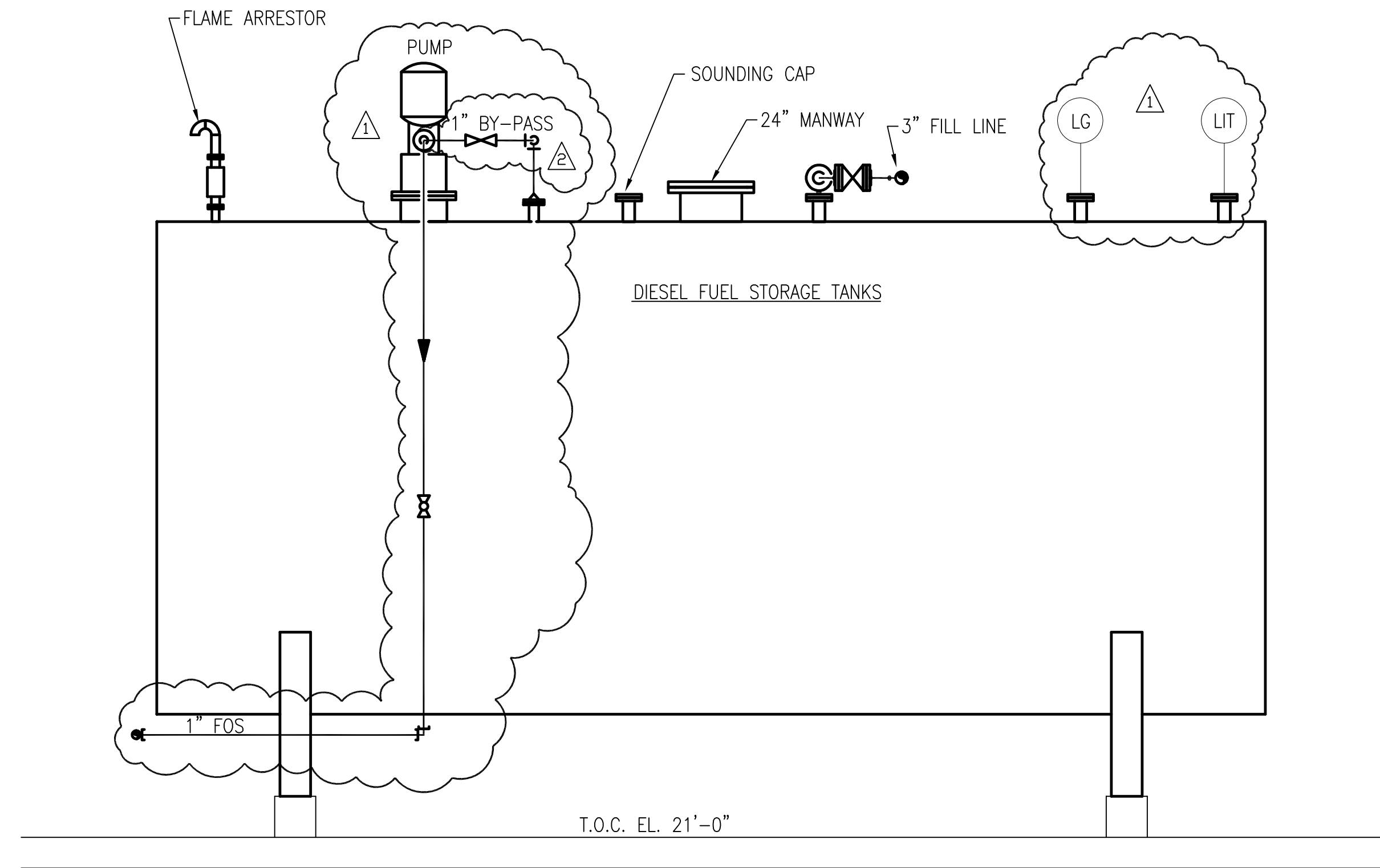
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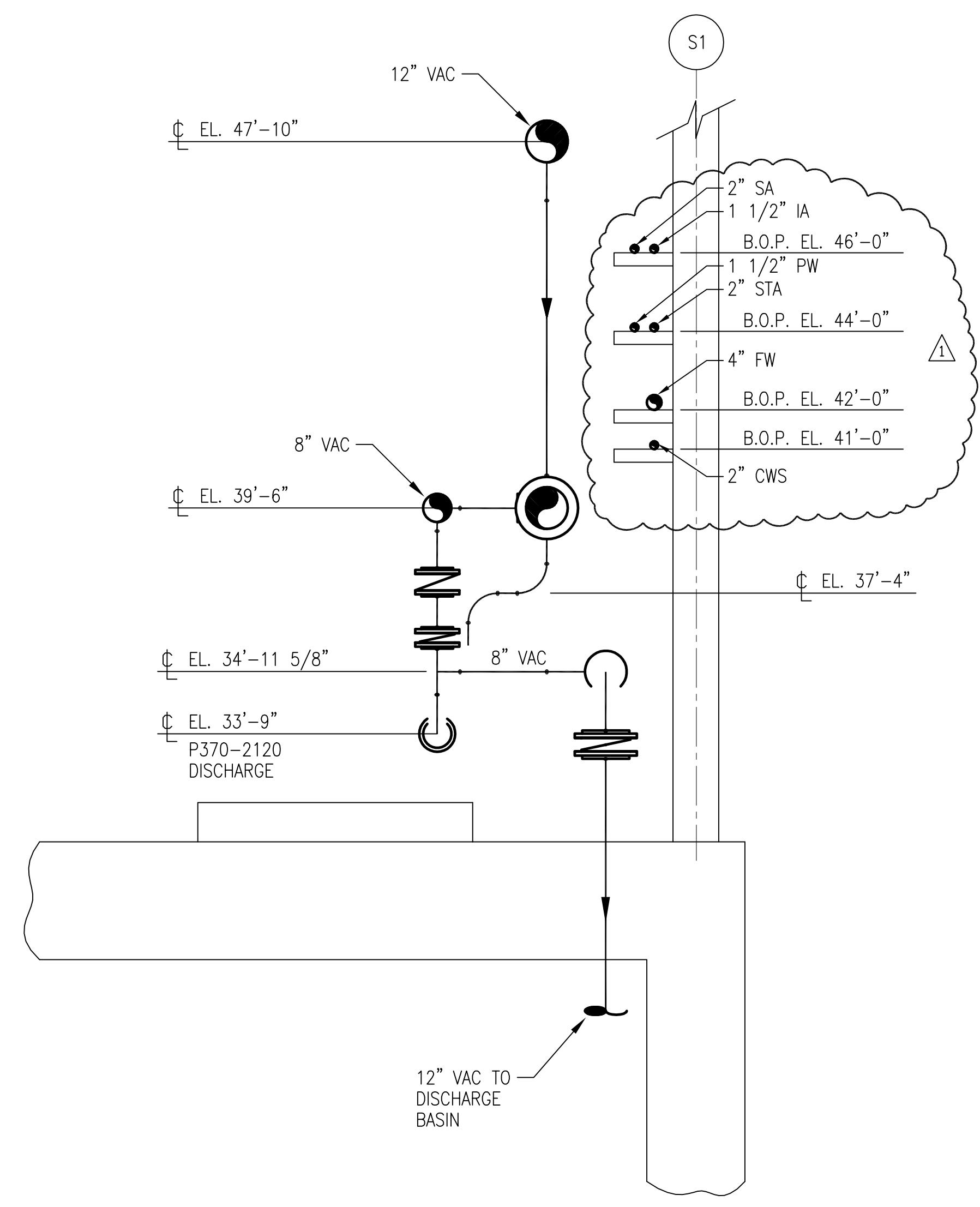
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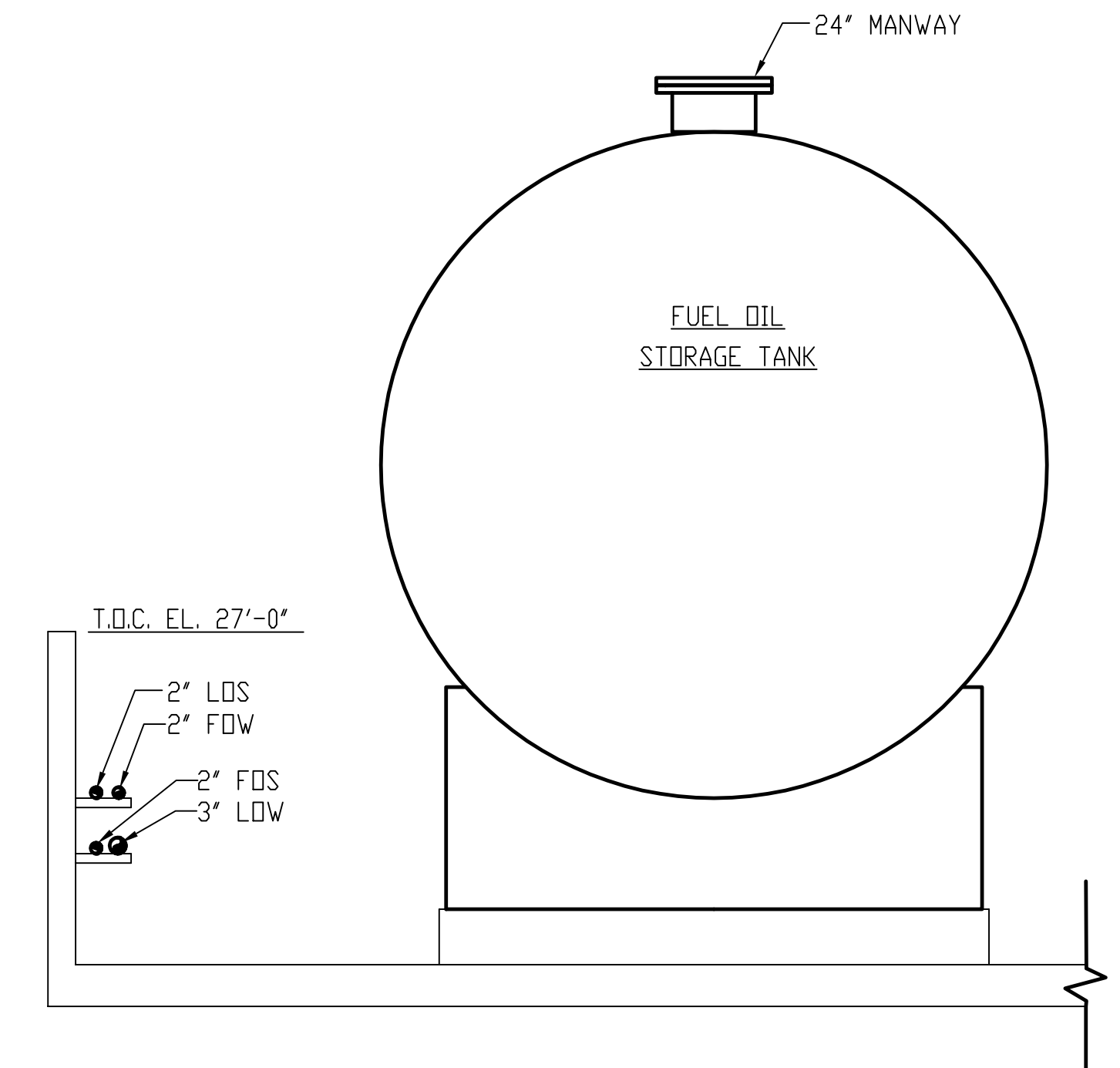
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M-227 / M-242  
SCALE IN FEET



**SECTION B**  
M-233 / M-242  
SCALE IN FEET



**SECTION C**  
M-227 / M-242  
SCALE IN FEET



**SECTION B**  
M-233 / M-242  
SCALE IN FEET

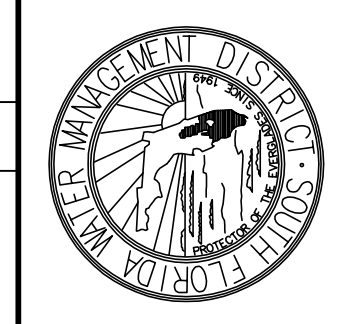
Scale For Microfilming  
Inches  
Millimeters

**NOTES:**  
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

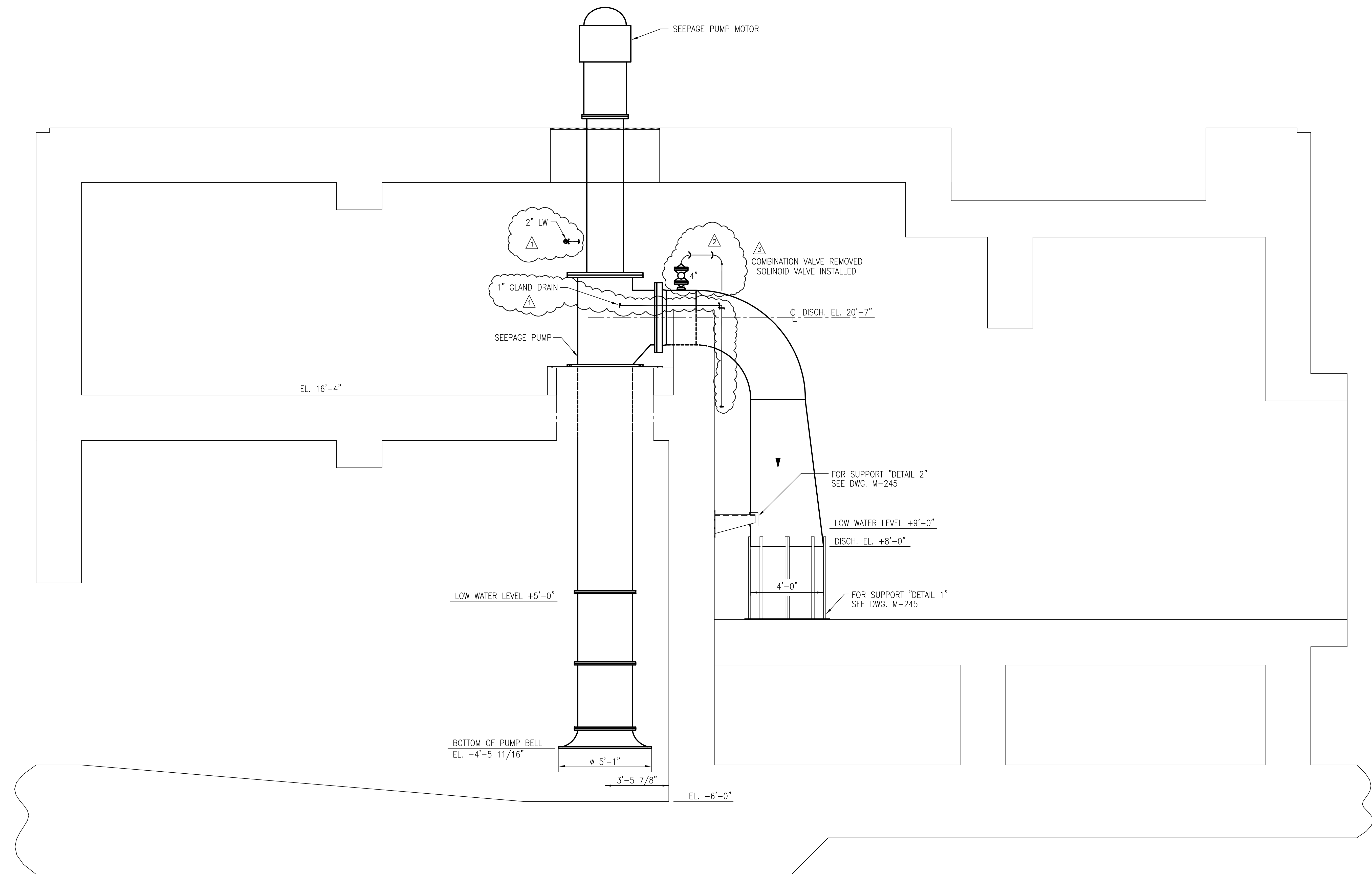
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 SINCE 1888 9400 WARD PARKWAY KANSAS CITY, MO 64114 Certification: E00000253 BMG 24830		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 SECTIONS AND DETAILS	
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		CONTRACT NO. C-E304 DWG. NO. M-242	

"RECORD DRAWINGS"

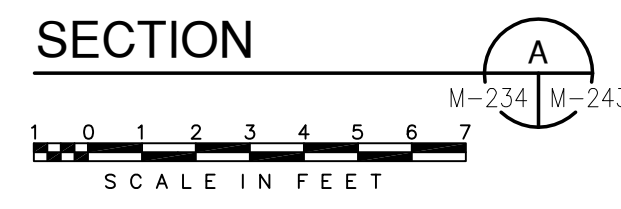
Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



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NOTES:  
 1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.



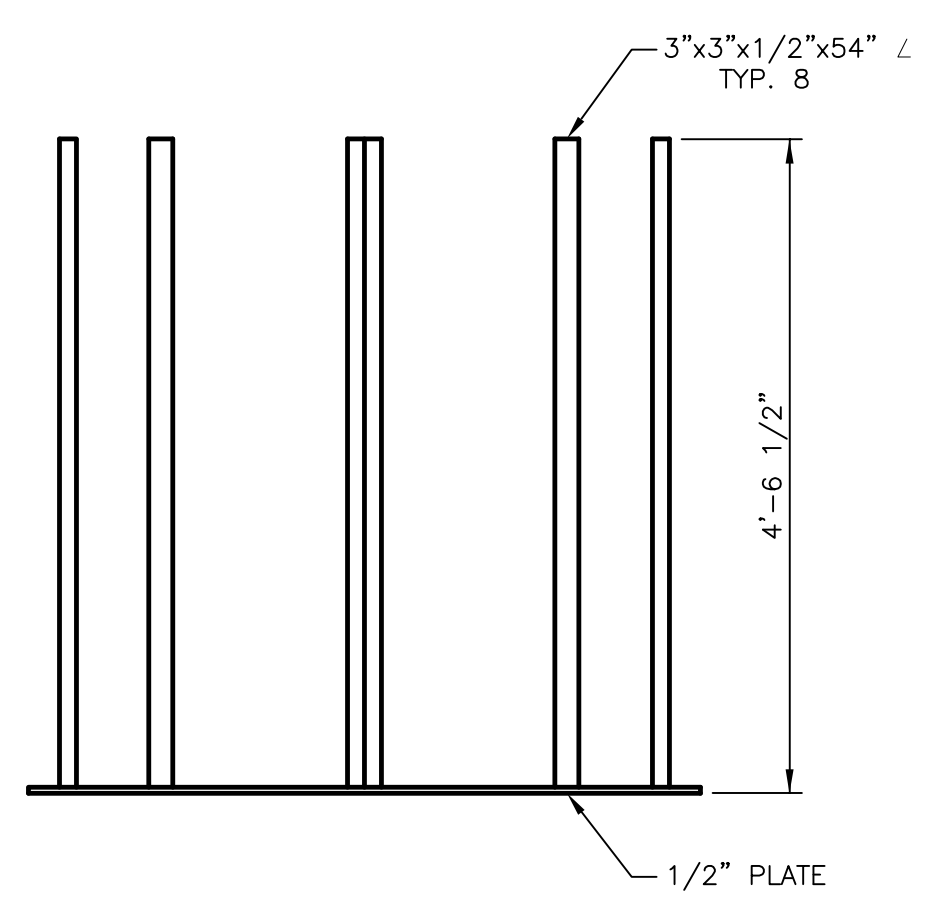
<b>Burns &amp; McDonnell</b> <small>SINCE 1938</small> 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMEC 24830		<b>Brown Cunningham Gannuch</b> <small>ENGINEERS • ARCHITECTS • CONSULTANTS</small> 2701 KINGMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095	
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372	PUMP STATION G-372 SEEPAGE PUMP SECTION		
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545		
CONTRACT NO. C-E304 DWG. NO. <b>M-243</b>	DRAWN CHKD DESIGN CHKD DATE	GPW MSS MSS RJJ 5/10/2001	REVISED VALVE TYPE REVISED PER ADDENDUM NO. 4 REVISED PER ADDENDUM NO. 1 REVISIONS

"RECORD DRAWINGS"

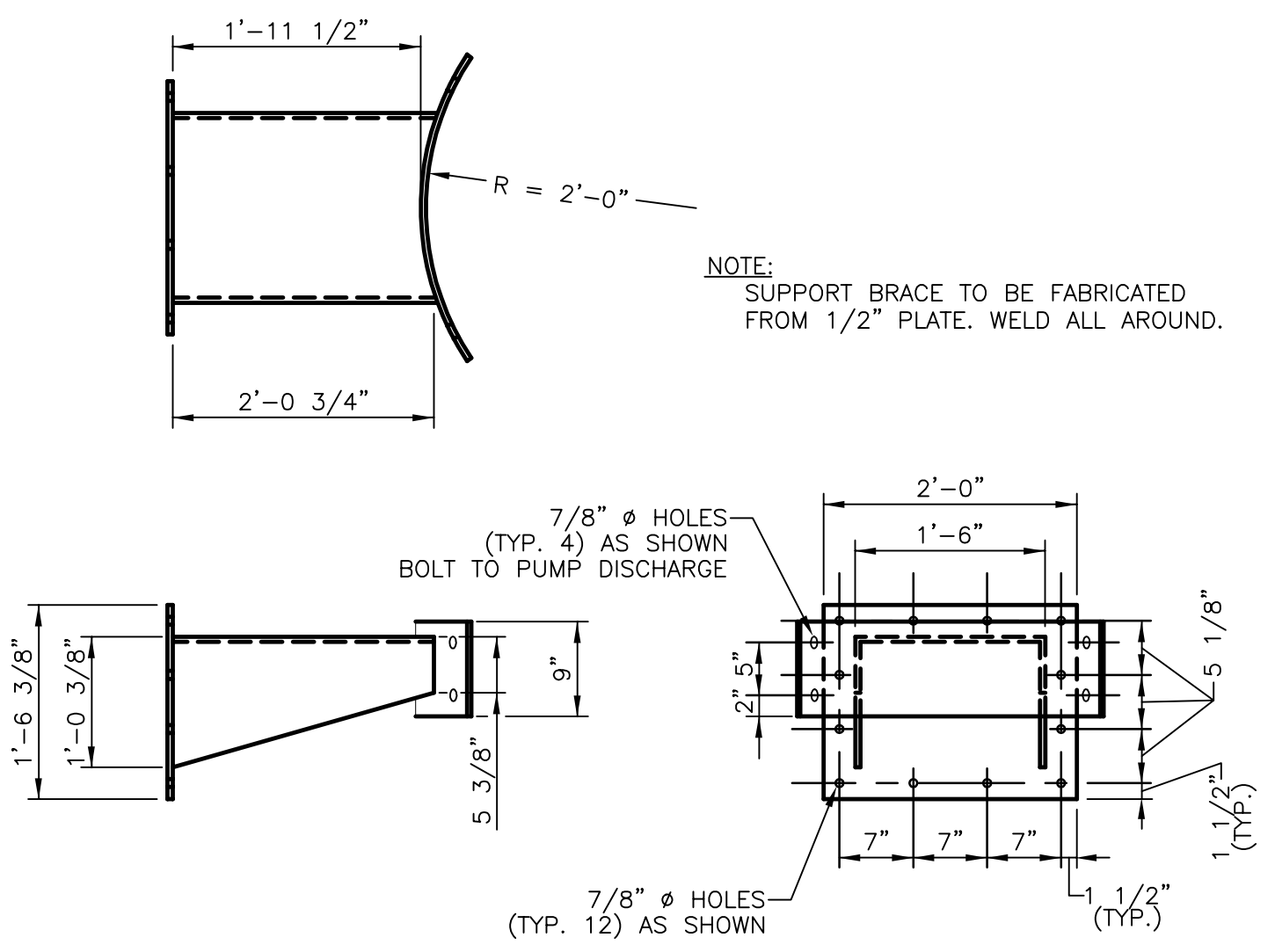
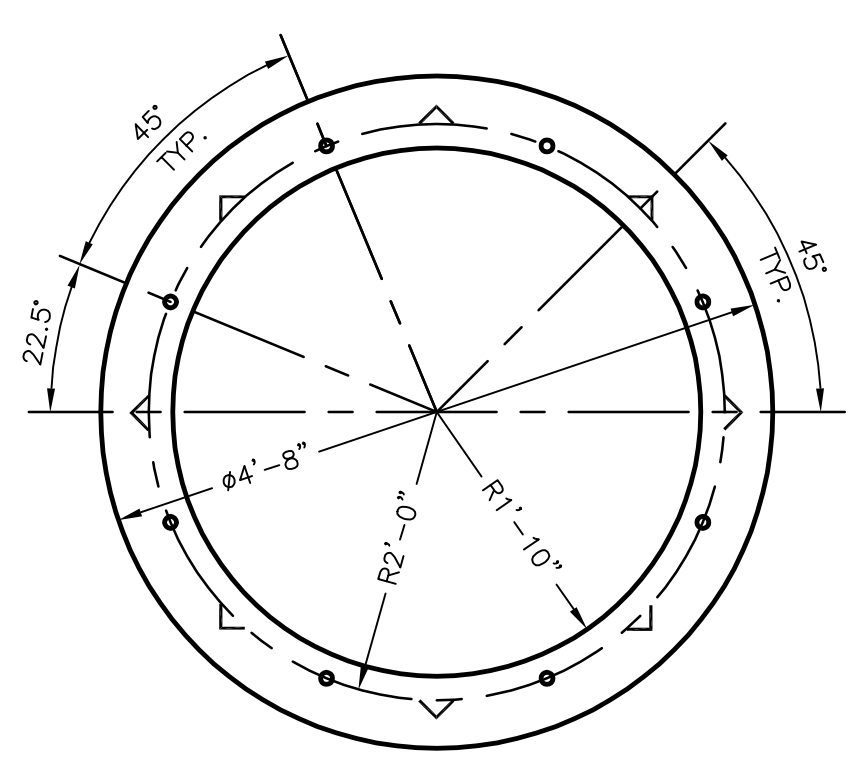


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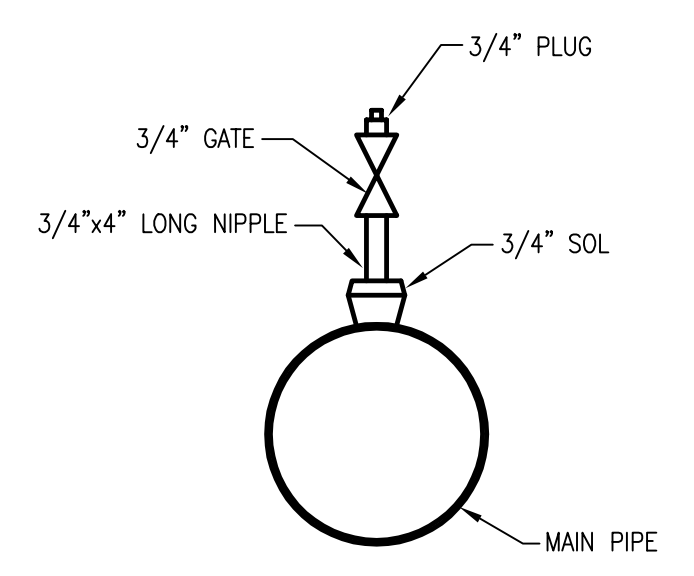
Scale For Microfitting  
Inches  
Scale For Macrofitting  
Millimeters



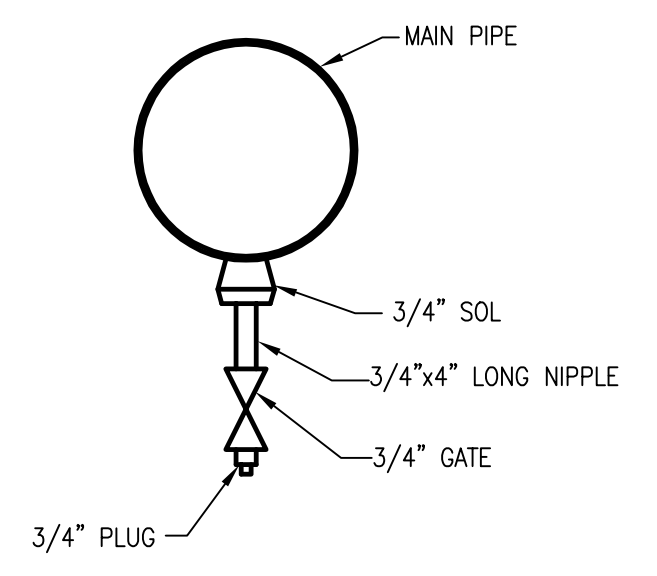
**DETAIL 1**  
SCALE IN FEET



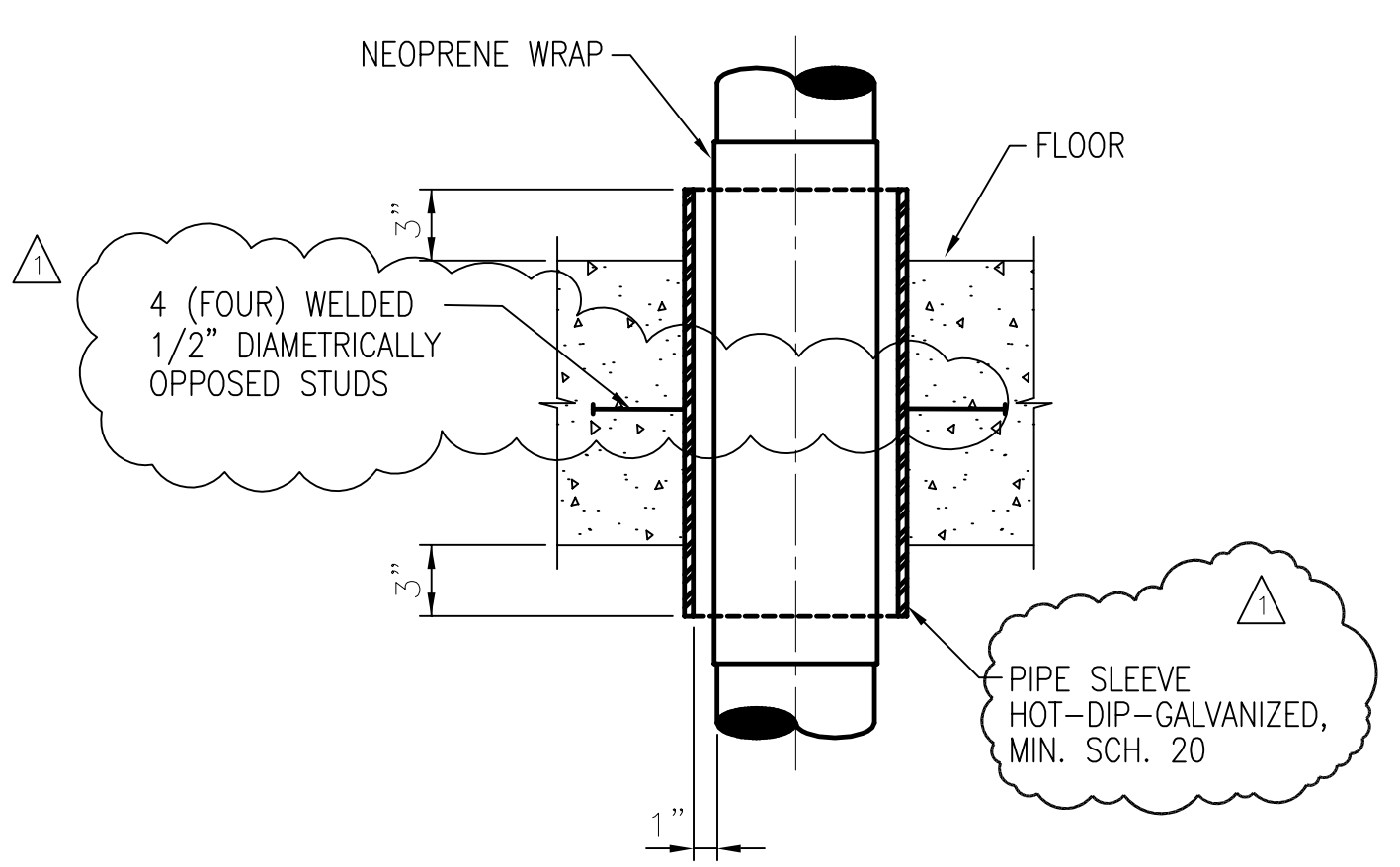
**DETAIL 2**  
SCALE IN FEET



**TYPICAL VENT DETAIL**  
N.T.S.



**TYPICAL DRAIN DETAIL**  
N.T.S.



**PIPE PENETRATION DETAIL**  
N.T.S.

PIPE PENETRATION SCHEDULE				
	PIPE SIZE	SLEEVE SIZE	PIPE SIZE	SLEEVE SIZE
A	3/4"	2"	E	3"
B	1"	2"	F	4"
C	1 1/2"	3"	G	6"
D	2"	3"	H	12"

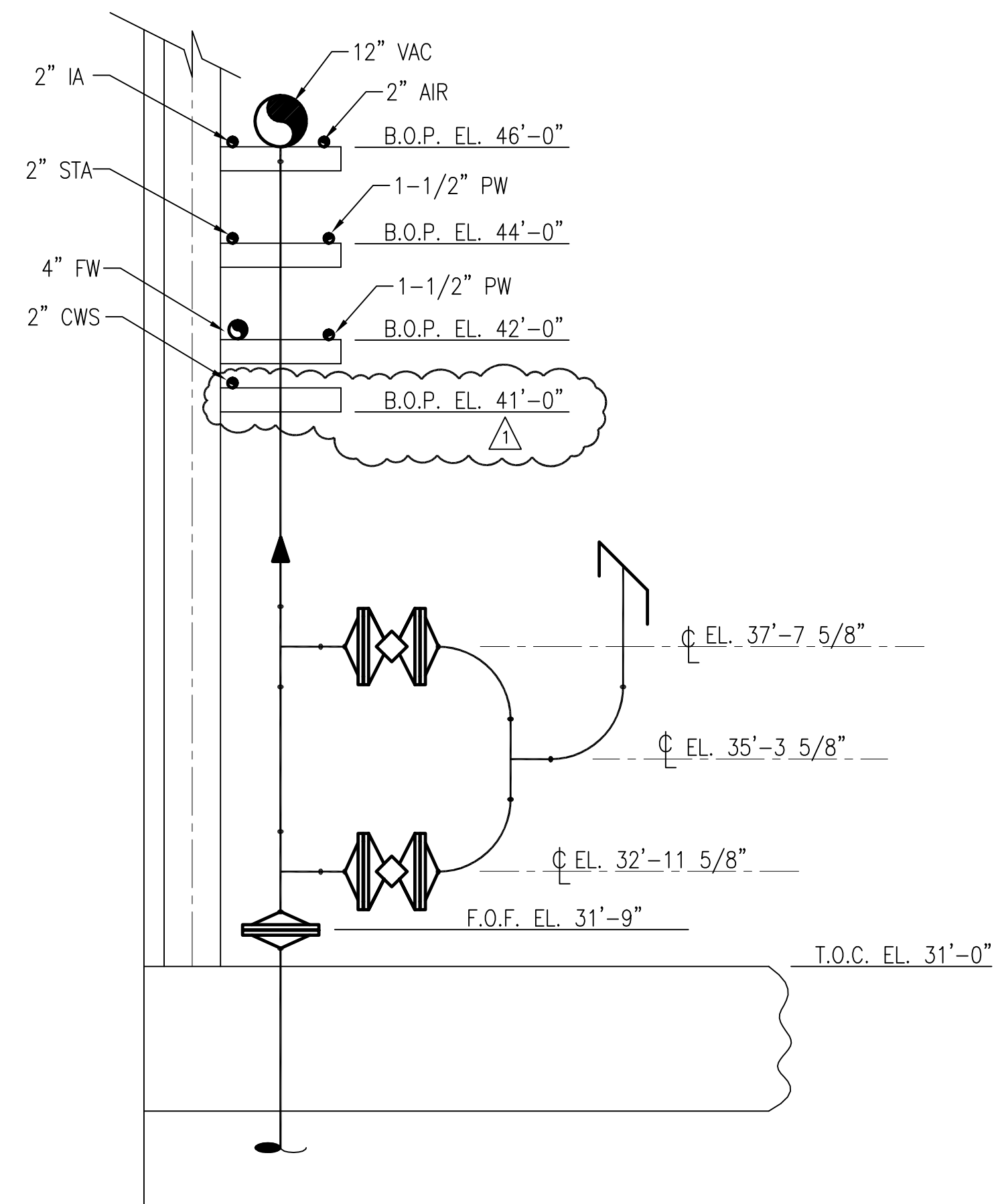
	<b>BURNS &amp; McDONNELL</b> <small>ENGINEERS • ARCHITECTS • CONSULTANTS</small> 2701 KANSAS ST. METAI (504) 454-3866 License No. EB00008095	<b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STA. G-372 SECTIONS AND DETAILS	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	CONTRACT NO. C-E304 DWG. NO. <b>M-245</b>	REVISIONS NO. DATE 1 9/9/01 2 5/10/01
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NOTES:  
 1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.

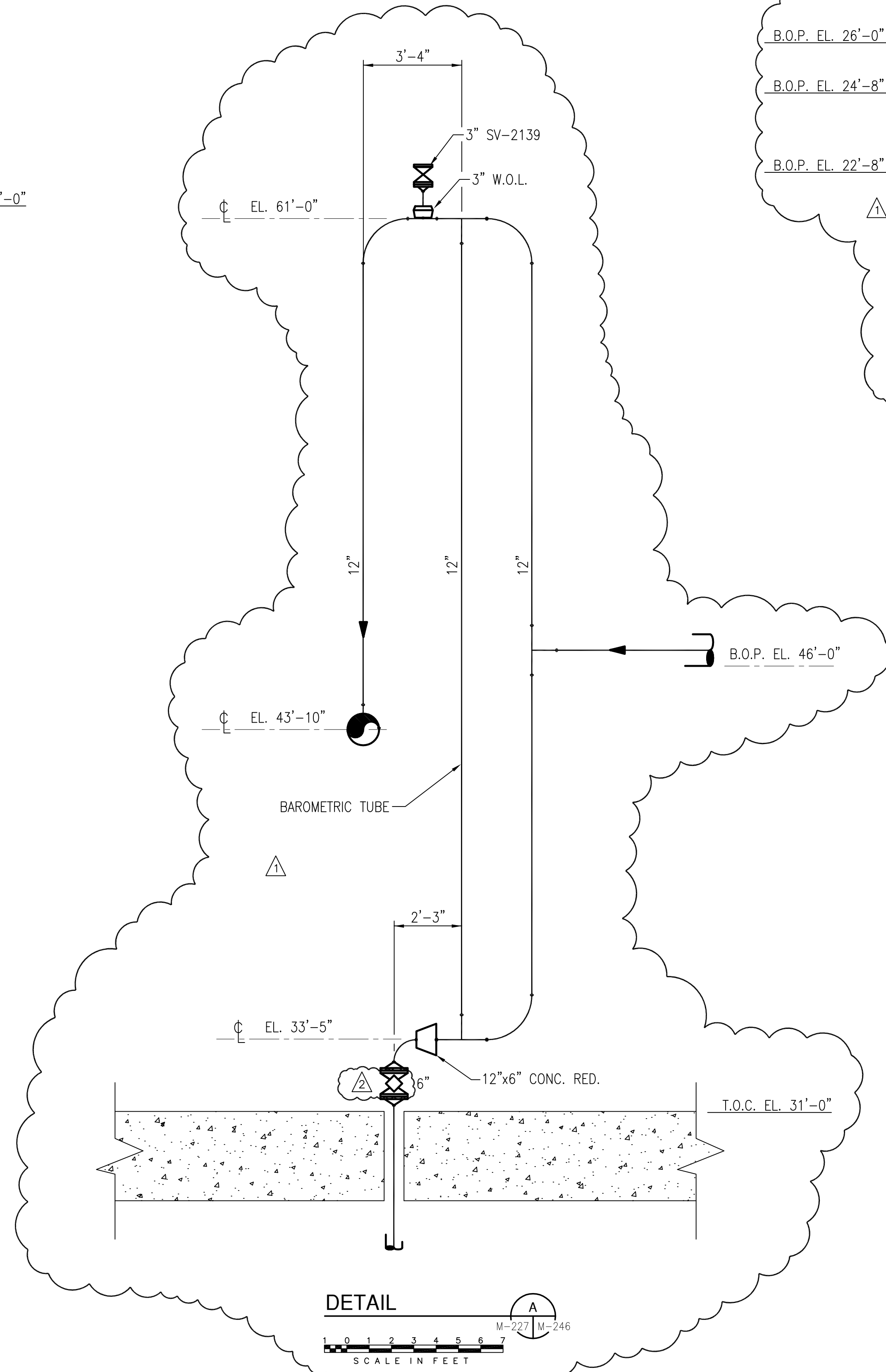
Rodney J. Gannuch, P.E.  
 FLA. C.E. REG. NO. 53545

**"RECORD DRAWINGS"**

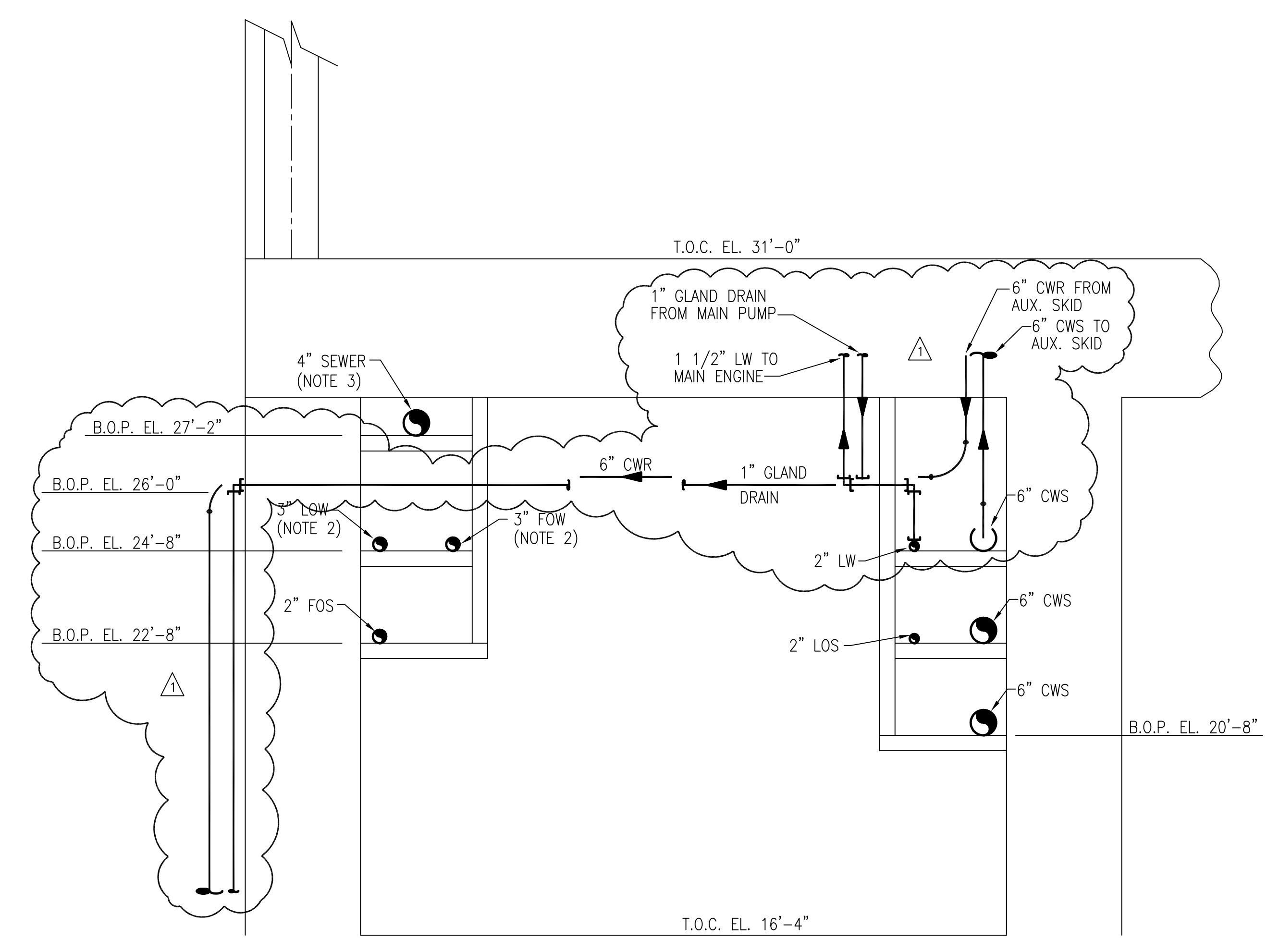
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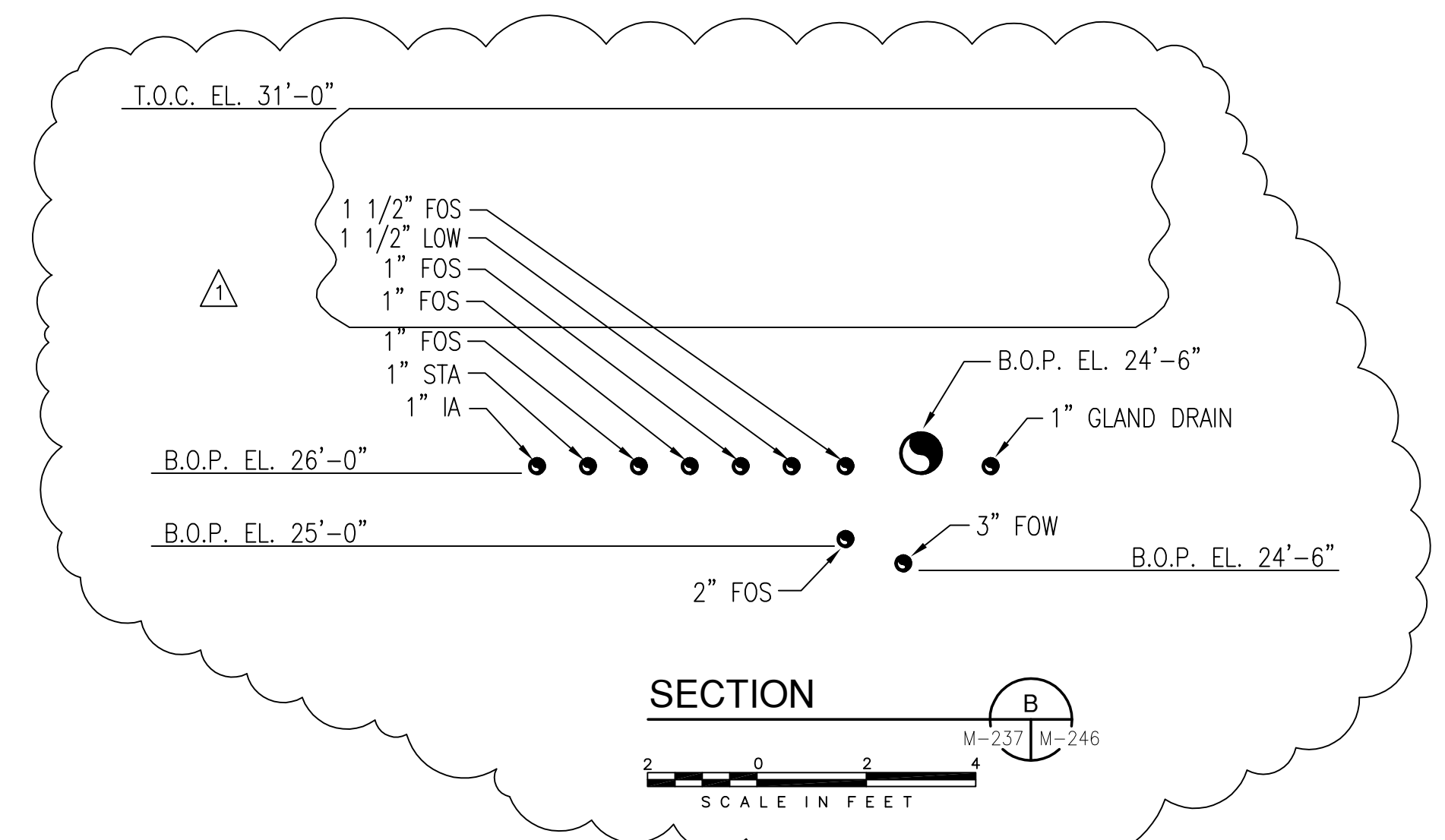
**SECTION A**  
SCALE IN FEET



**DETAIL A**  
SCALE IN FEET



**SECTION B**  
SCALE IN FEET



**SECTION C**  
SCALE IN FEET

- NOTES:
- CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  - CONTRACTOR TO SLOPE OIL WASTE PIPING 1/16" PER FOOT & SUPPORT PIPING AS REQUIRED.
  - CONTRACTOR TO SLOPE 4" SEWER PIPE 1/8" PER FOOT & SUPPORT PIPING AS REQUIRED.

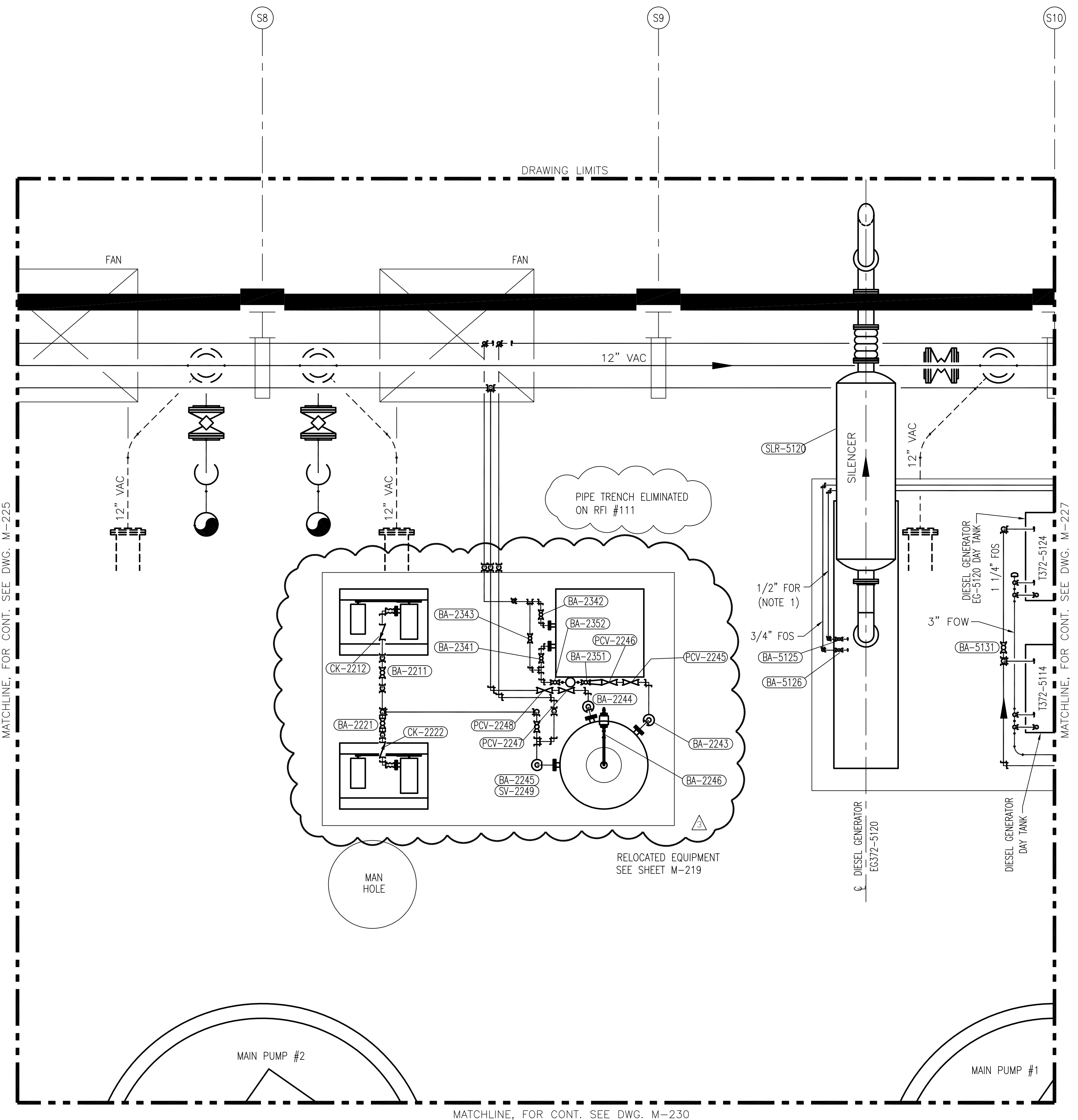
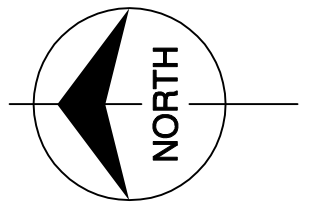
Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

		<b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KANSAS STREET MOBILE, AL 36688 License No. EB00008095	
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 PIPING SECTIONS AND DETAILS	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	DRAWN: GPW CHKD: MSS DESIGN: MSS CHKD: RJC DATE: 5/10/01	REVISED PER ADDENDUM NO. 3 9/9/01 REVISED PER ADDENDUM NO. 1 6/1/01 NO. DWN CHKO DATE

"RECORD DRAWINGS"

CONTRACT NO. C-E304  
 DWG. NO. M-246

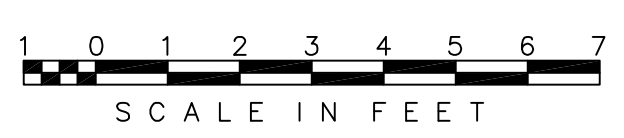




MATCHLINE, FOR CONT. SEE DWG. M-225

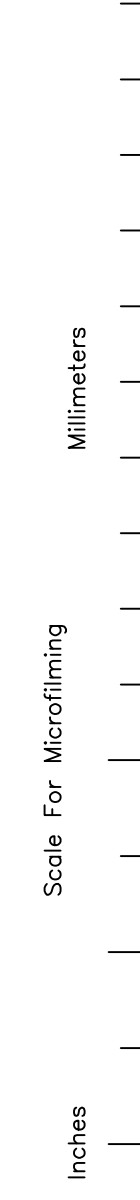
MATCHLINE, FOR CONT. SEE DWG. M-230

ELEVATION 31.00



NOTE:  
 1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

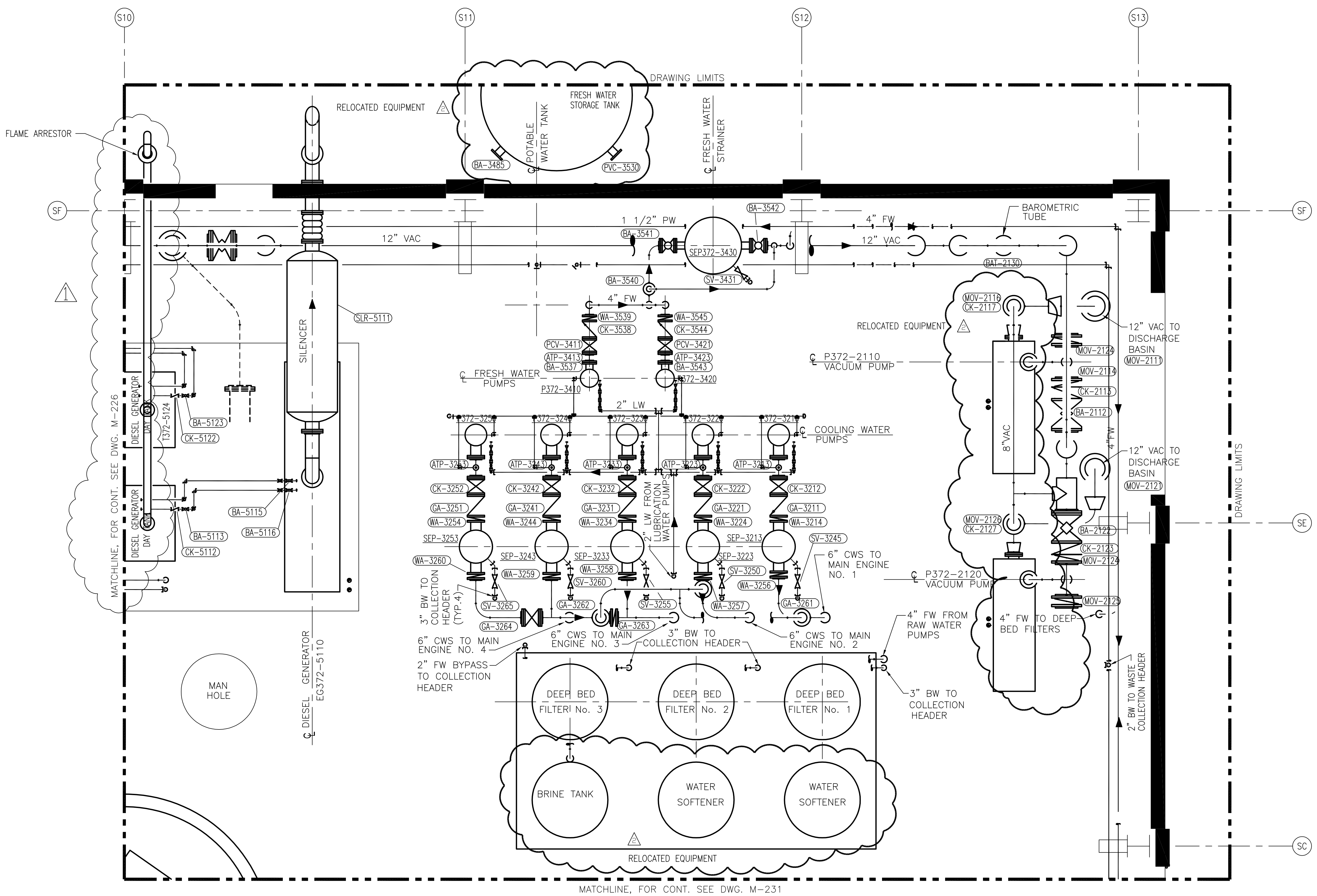
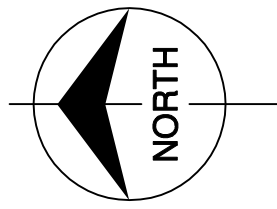
NOTES:  
 1. CONTRACTOR TO INSTALL FUEL OIL SUPPLY/RETURN IN CONCRETE.



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<p><b>Burns &amp; McDonnell</b>  <small>EST. 1938</small></p>		<p><b>EVERGLADES CONSTRUCTION PROJECT</b>  <b>STORMWATER TREATMENT AREA NO. 3/4</b>  <b>PUMP STATIONS G-370 &amp; G-372</b></p>		<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b>        EVERGLADES CONSTRUCTION PROJECT        3301 GUN CLUB ROAD        WEST PALM BEACH, FLORIDA 33406</p>	
<p>9400 WARD PARKWAY        KANSAS CITY, MO. 64114        Certification: EB0000253        BM3 24930</p>		<p><b>Brown Cunningham Gannuch</b>        ENGINEERS, ARCHITECTS &amp; CONSULTANTS        2701 WINDYBARK ST.        METairie, LOUISIANA 70006        (504) 454-3866        License No. EB00008095</p>		<p>CONTRACT NO.        C-E304        DWG. NO.  <b>M-247</b></p>	
<p>DRAWN        CHKD        MSS</p>	<p>DESIGN        CHKD        MSS</p>	<p>DATE        5/10/01</p>	<p>NO.        DWN</p>	<p>CHKD        EJM</p>	<p>DATE        7-15-04</p>
<p>REVISIONS</p>		<p>REVISED EQUIPMENT LOCATIONS</p>			

"RECORD DRAWINGS"

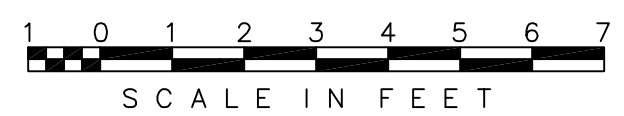


Scale For Microfilming  
Inches  
Millimeters

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MATCHLINE, FOR CONT. SEE DWG. M-231

ELEVATION 31.00



NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545



CONTRACT NO.  
C-E304  
DWG. NO.  
M-248

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

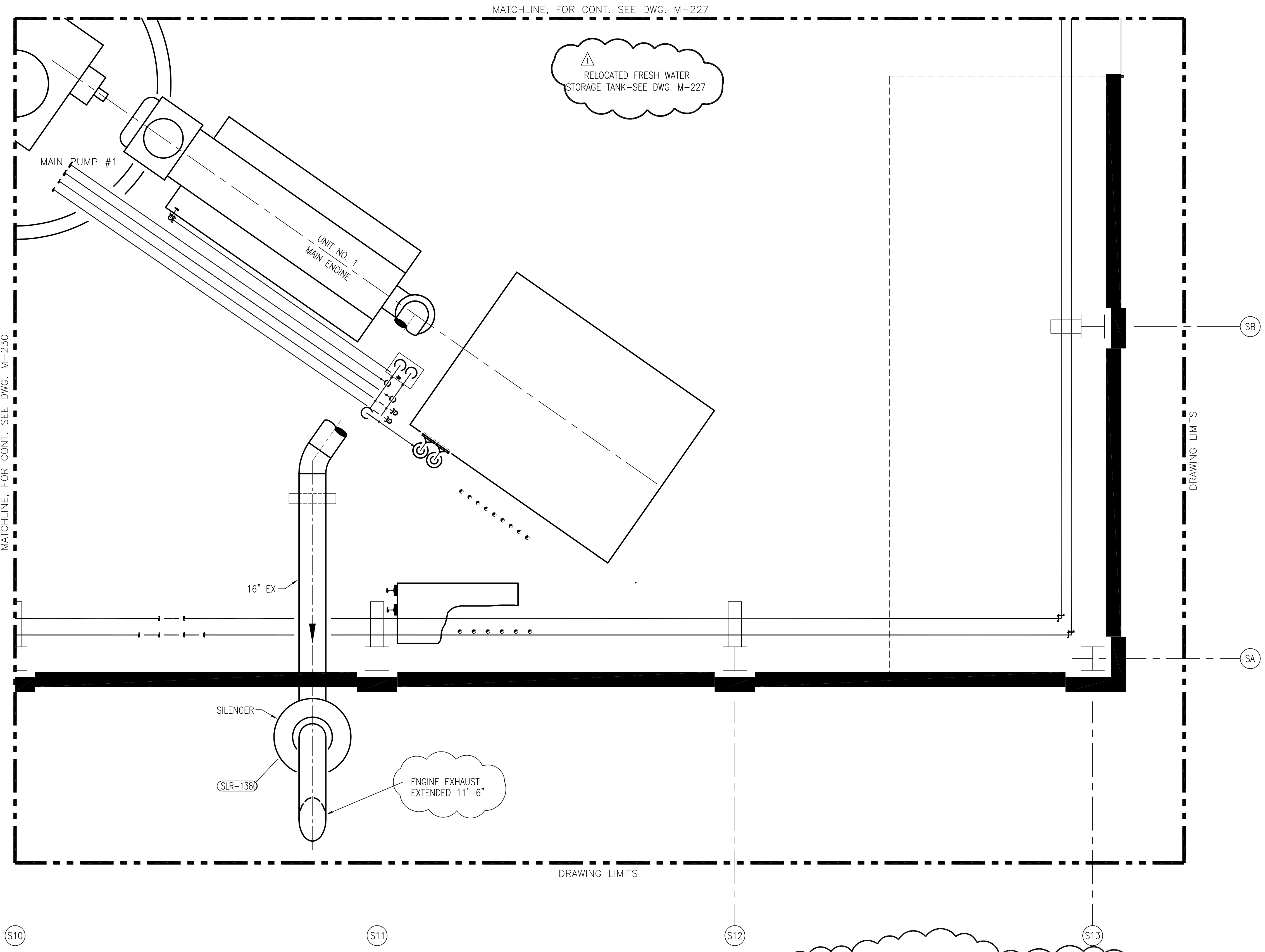
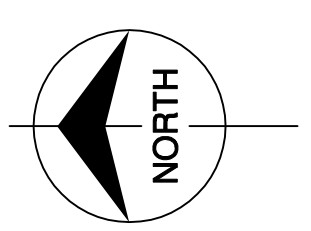
**EVERGLADES CONSTRUCTION PROJECT**  
STORMWATER TREATMENT AREA NO. 3/4  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-372  
ELEVATION 31.00  
VALVE TAG LOCATION PLAN

**Burntis & McDonnell**  
SINCE 1938  
9400 WARD PARKWAY  
KANSAS CITY, MO. 64114  
Certification EB0000253  
BMCJ 24930

**Brown Cunningham Gannuch**  
ENGINEERS, ARCHITECTS & CONSULTANTS  
2701 WINDMAN ST.  
METairie, LOUISIANA 70006  
(504) 454-3866  
License No. EB00008095

NO.	DATE	CHKD	REVISIONS
1	5/10/01	CHKO	DATE
2			
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16			

"RECORD DRAWINGS"



MATCHLINE, FOR CONT. SEE DWG. M-227

RELOCATED FRESH WATER STORAGE TANK-SEE DWG. M-227

MATCHLINE, FOR CONT. SEE DWG. M-230

SILENCER

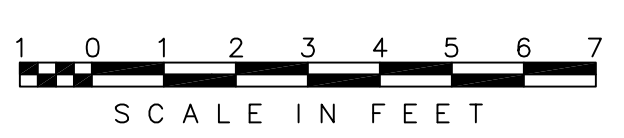
SLR-1380

ENGINE EXHAUST EXTENDED 11'-6"

DRAWING LIMITS

DRAWING LIMITS

ELEVATION 31.00



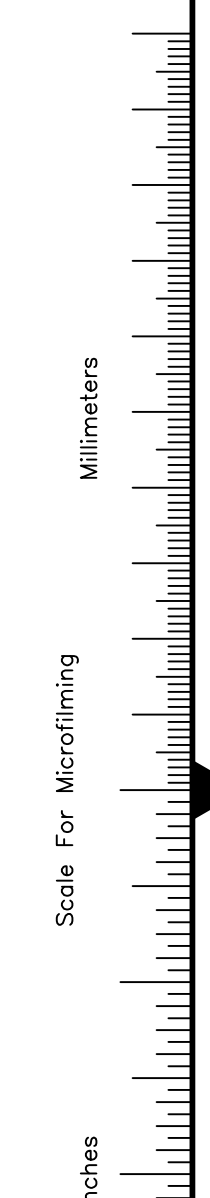
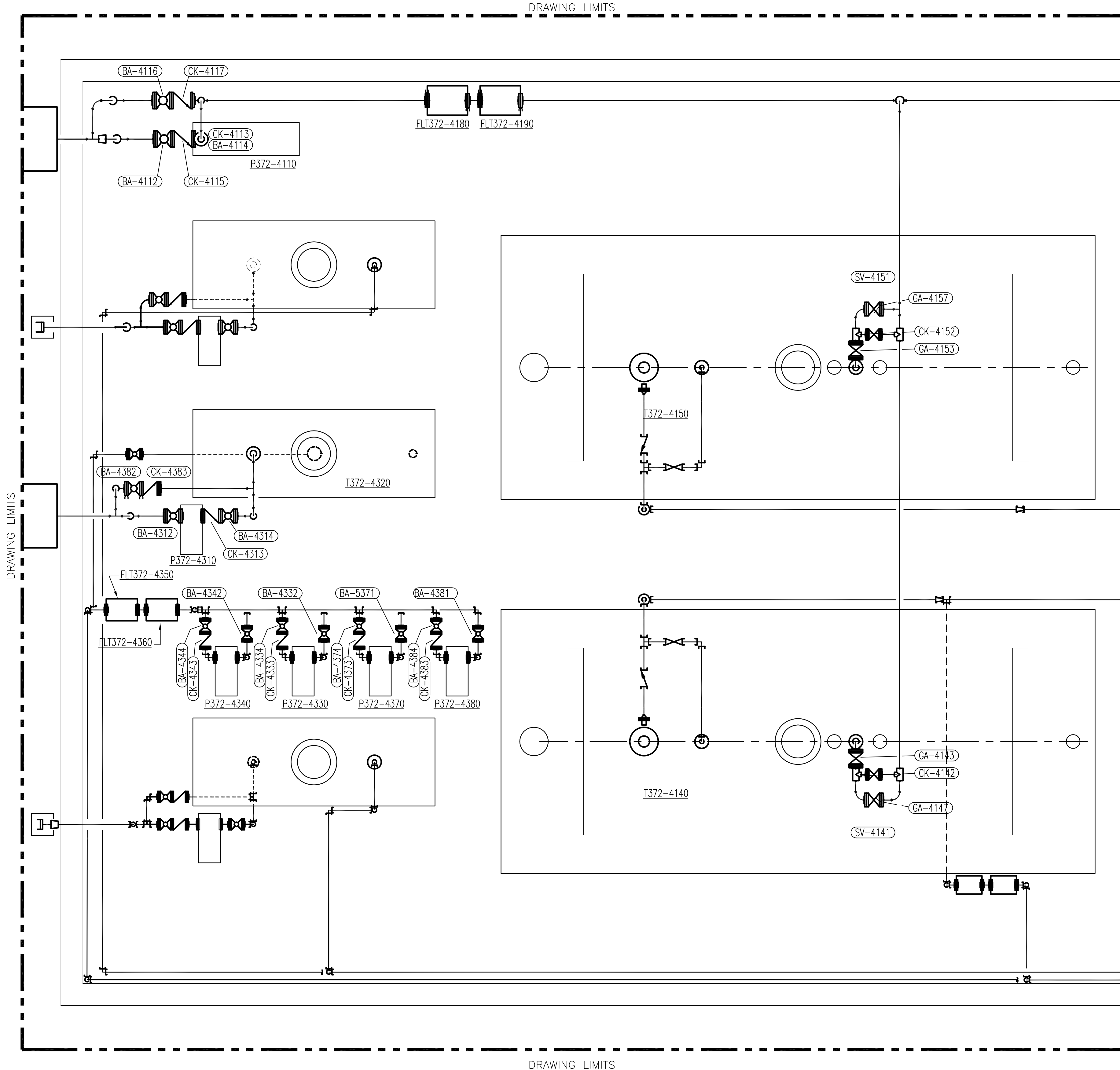
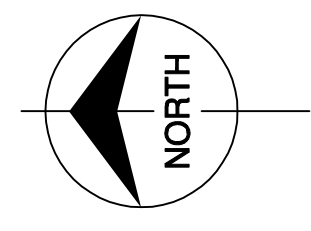
NOTE:  
 1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

Scale For Microfilming  
 Inches  
 Scale For Microfilming  
 Millimeters

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<p><b>Burns &amp; McDonnell</b>  <small>EST. 1938</small>        9400 WARD PARKWAY        KANSAS CITY, MO. 64114        Certification: EB0000253        BMCD 24930</p>		<p><b>Brown Cunningham Gannuch</b>  <small>ENGINEERS, ARCHITECTS &amp; CONSULTANTS</small>        2701 WINDMAN ST.        METairie, LOUISIANA 70006        (504) 454-3866        License No. EB00008095</p>	
DRAWN CHKD DESIGN CHKD DATE	GPW MSS MSS RIG DATE	NO. DWG CHKD DATE	REVISIONS NO. DATE 1 7-15-04 EJM 2 7-15-04 3 7-15-04 4 7-15-04 5 7-15-04 6 7-15-04 7 7-15-04 8 7-15-04 9 7-15-04 10 7-15-04 11 7-15-04 12 7-15-04 13 7-15-04 14 7-15-04 15 7-15-04 16 7-15-04
<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b>          EVERGLADES CONSTRUCTION PROJECT          3301 GUN CLUB ROAD          WEST PALM BEACH, FLORIDA 33406</p>		<p><b>EVERGLADES CONSTRUCTION PROJECT</b>          STORMWATER TREATMENT AREA NO. 374          PUMP STATIONS G-370 &amp; G-372          PUMP STATION G-372          ELEVATION 31.00          VALVE TAG LOCATION PLAN</p>	
<p>CONTRACT NO.          C-E304          DWG. NO.  <b>M-249</b></p>		<p>Rodney J. Gannuch, P.E.          FLA. C.E. REG. NO. 53545</p>	

"RECORD DRAWINGS"



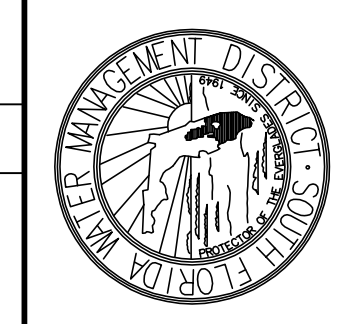
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 SCALE IN FEET

MATCHLINE, FOR CONT. SEE DWG. M-233

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F:\CURRENT\80000\80699\MECHANICAL\PIPE-DWGS\G-372\M-250.DWG Last edited: 05/08/01

Rodney J. Cannuch, P.E.  
 FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
 STORMWATER TREATMENT AREA NO. 3/4  
 PUMP STATIONS G-370 & G-372  
 PUMP STATION G-372  
 ELEVATION 16.33  
 VALVE TAG LOCATION PLAN



9400 WARD PARKWAY  
 KANSAS CITY, MO. 64114  
 Certification: 280000253  
 ENG. 29320

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 2701 KANSAS STREET  
 METairie, LA 70006  
 License No. EB00008095

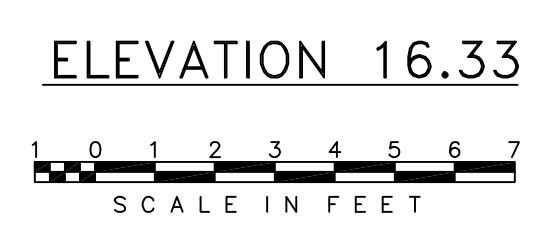
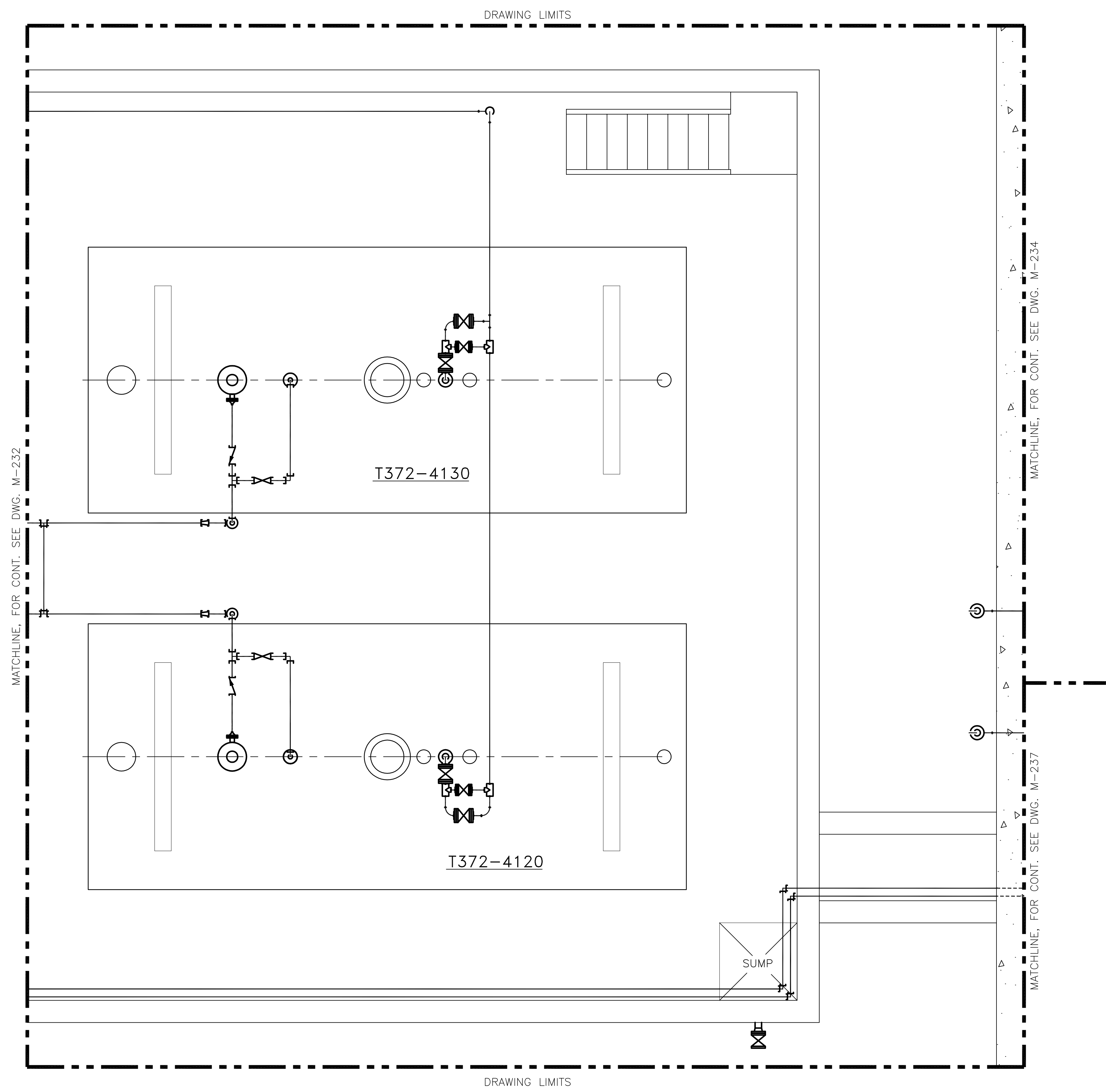
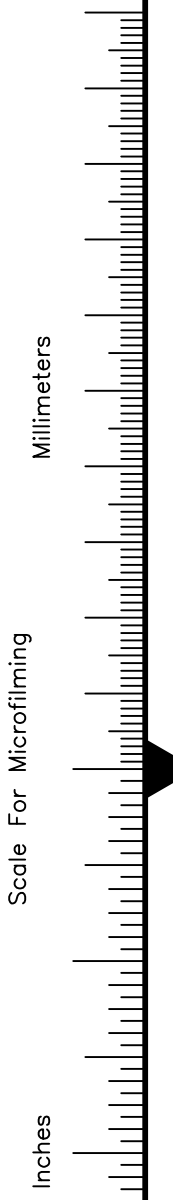
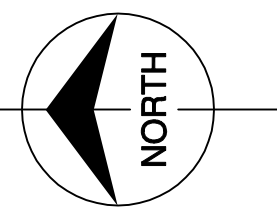
DRAWN	GPW
CHKD	MSS
DESIGN	MSS
CHKD	RJG
DATE	5/10/01

NO.	DWN	CHKD	DATE

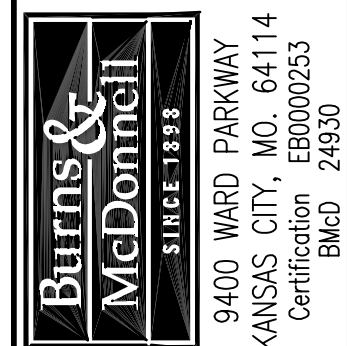
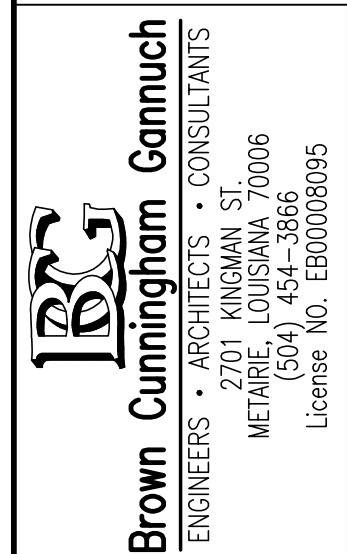
REVISIONS

"RECORD DRAWINGS"

CONTRACT NO. C-E304  
 DWG. NO. M-250



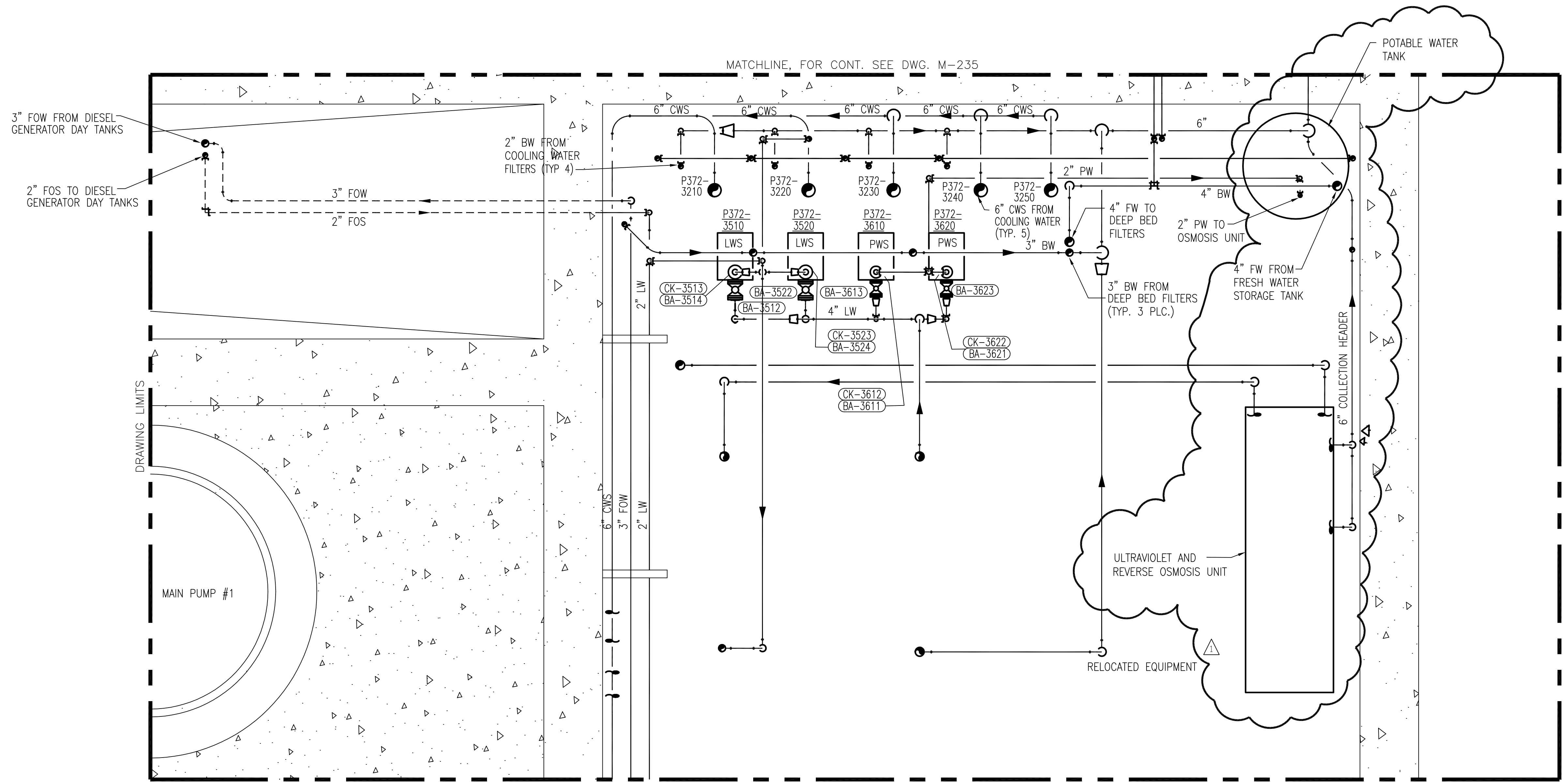
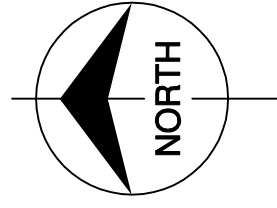
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 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 B/C/D 24930		 ENGINEERS - ARCHITECTS - CONSULTANTS 2701 WILSON ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095		DRAWN _____ CHKO _____ DESIGN _____ CHKO _____ DATE 5/10/01	GPW _____ MSS _____ MSS _____ R/JG _____ CHKO _____ DATE 5/10/01	NO. DWN _____ CHKO _____ DATE _____	REVISIONS
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		<b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 16.33 VALVE TAG LOCATION PLAN					

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

"RECORD DRAWINGS"

CONTRACT NO. C-E304  
DWG. NO. M-251



MATCHLINE, FOR CONT. SEE DWG. M-235

MATCHLINE, FOR CONT. SEE DWG. M-240

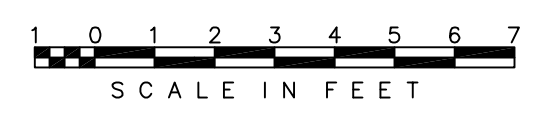
DRAWING LIMITS

DRAWING LIMITS

MAIN PUMP #1

NOTE:  
 1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

ELEVATION 16.33



Scale For Microfilming  
 Inches  
 Millimeters

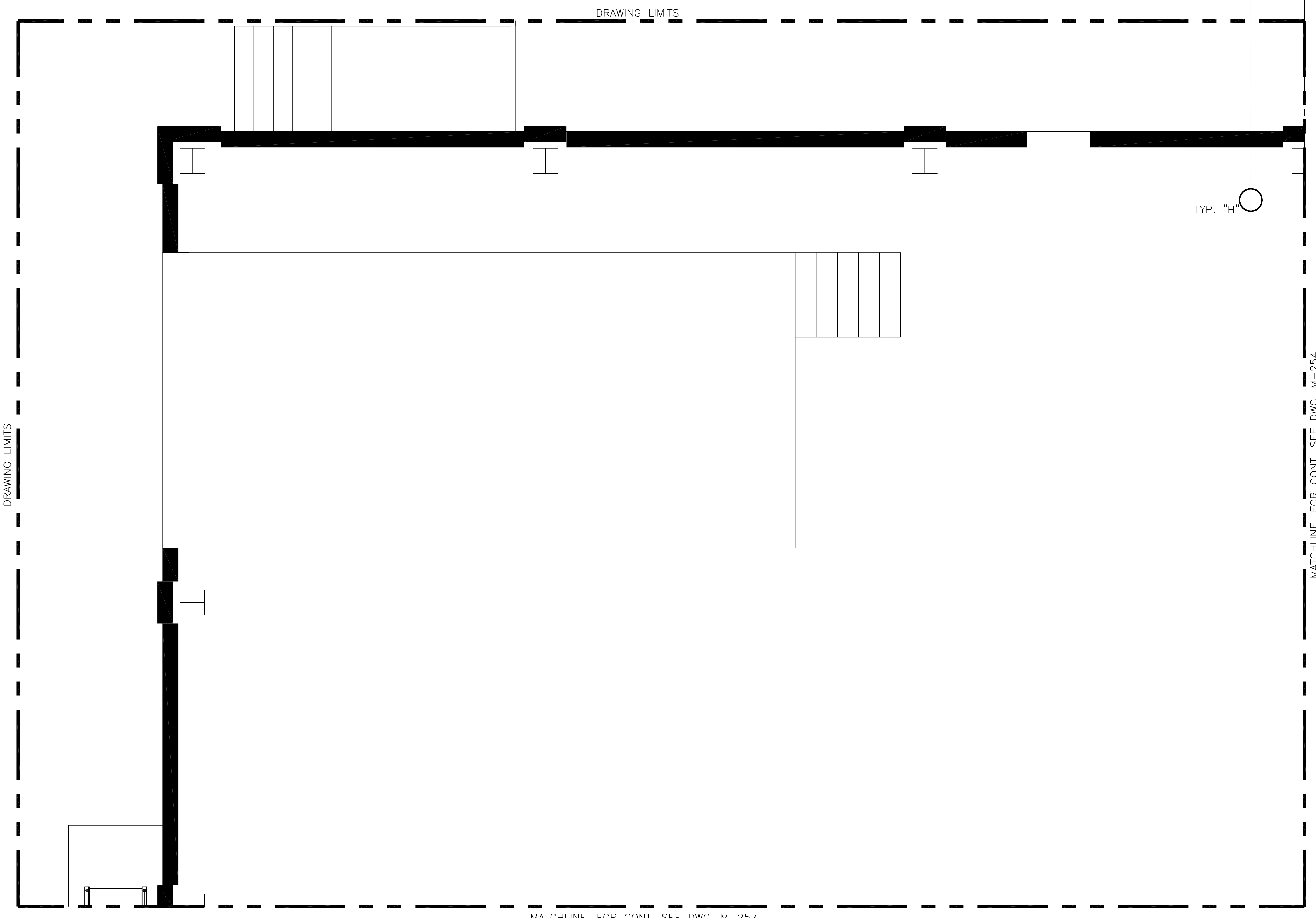
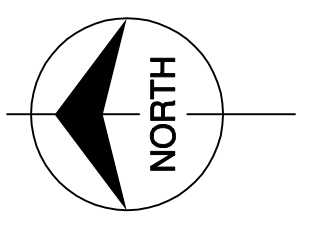
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<b>Burns &amp; McDonnell</b> <small>3118 SINCE 1918</small> 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BNCJ 24930		<b>Brown Cunningham Gannuch</b> <small>ENGINEERS • ARCHITECTS • CONSULTANTS</small> 2701 KINGMAN ST. METairie, LOUISIANA 70006 License No. EB00008095	
EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372	PUMP STATION G-372 ELEVATION 16.33 VALVE TAG LOCATION PLAN	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	CONTRACT NO. C-E304 DWG. NO. M-252
DRAWN: GPW CHECKED: MSS DESIGN: MSS R/JG DATE: 5/10/01	NO. DWN: CHKD DATE:	REVISIONS NO. DATE 1 7-15-04 EJM 2 7-15-04 JSB 3 7-15-04 JSB	REVISIONS NO. DATE 1 7-15-04 EJM 2 7-15-04 JSB 3 7-15-04 JSB

"RECORD DRAWINGS"

Rodney J. Gannuch, P.E.  
 FLA. C.E. REG. NO. 53545





Scale For Microfilming  
Inches  
Millimeters

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- NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  2. FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-245.

ELEVATION 31.00

SCALE IN FEET

Rodney J. Cannuch, P.E.  
FLA. C.E. REG. NO. 53545



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
EVERGLADES CONSTRUCTION PROJECT  
3301 GUN CLUB ROAD  
WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
STORMWATER TREATMENT AREA NO. 3/4  
PUMP STATIONS G-370 & G-372  
PUMP STATION G-372  
ELEVATION 31.00  
PIPING PENETRATION PLAN

**Burns & McDonnell**  
SINCE 1888  
9400 WARD PARKWAY  
KANSAS CITY, MO. 64114  
Certification EB0000253  
BMO 24830

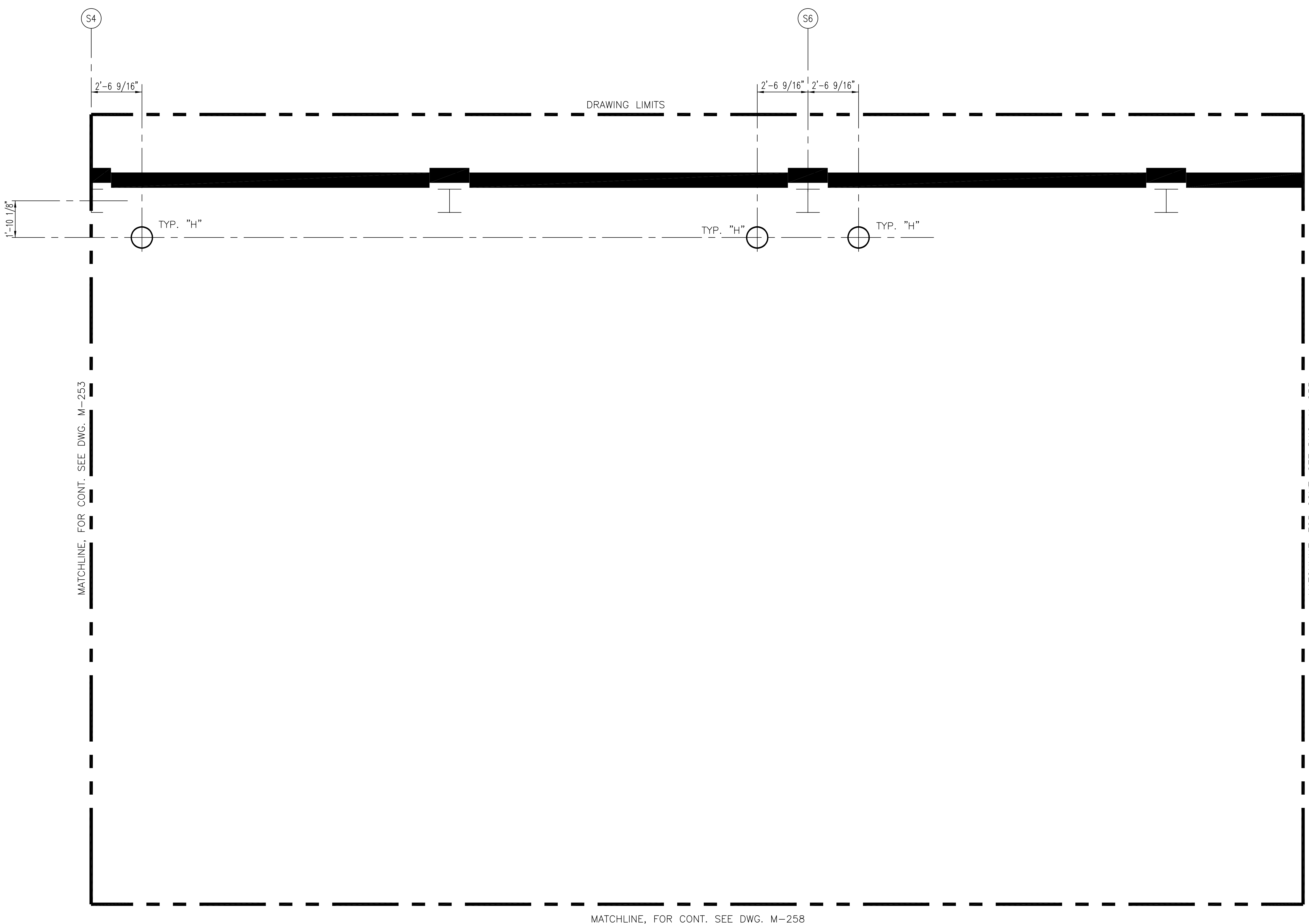
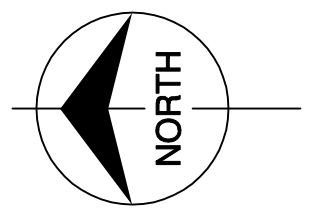
**Brown Cunningham Gannuch**  
ENGINEERS • ARCHITECTS • CONSULTANTS  
2701 KINGMAN ST.  
METairie, LOUISIANA 70006  
(504) 454-3866  
License No. EB00006095

DRAWN	GPW	6/1/01
CHKD	MSS	
DESIGN	MSS	
CHKD	RJC	
DATE	6/1/01	

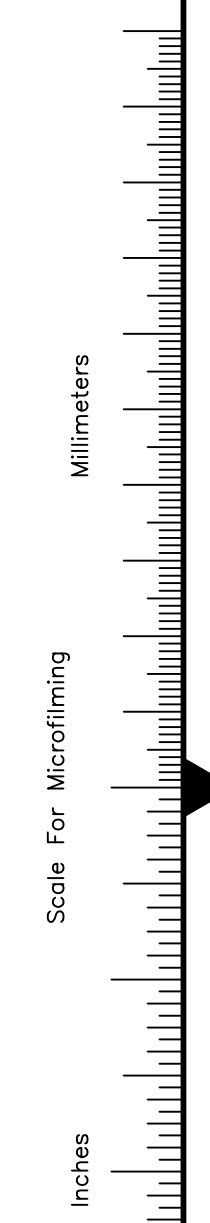
NO.	DWG.	CHKD.	DATE	REVISIONS
1	GPW	MSS	6/1/01	ADDED DWG. PER ADDENDUM NO. 1

"RECORD DRAWINGS"



CONTRACT NO. C-E304  
DWG. NO. M-253



- NOTES:
- CONTRACTOR TO FIELD VERIFY ALL PIPE ROUTES AND EQUIPMENT LOCATION CONNECTIONS PRIOR TO FABRICATION OF ALL PIPE, BASED UPON EQUIPMENT PROCURED.
  - FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-245.



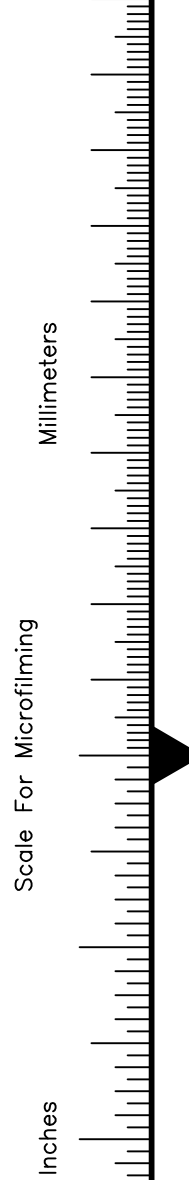
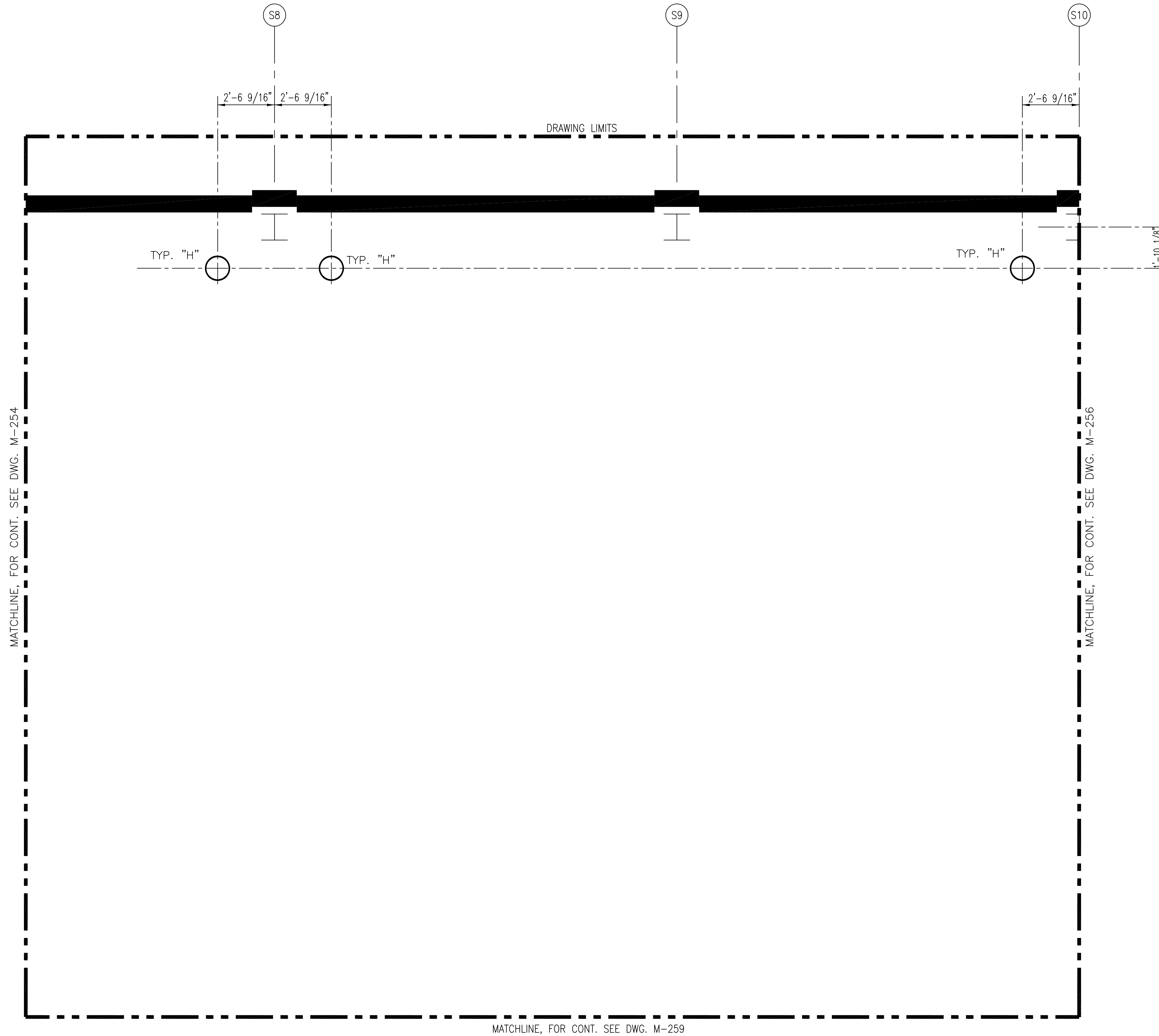
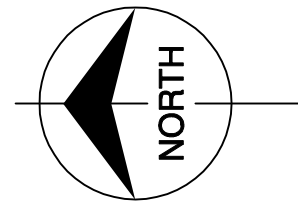
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 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EP0000253 BNCB 24930		 ENGINEERS ARCHITECTS CONSULTANTS 2701 W. WILSON BLVD. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095		DRAWN GPW CHKD MSS DESIGN MSS CHKD RIG DATE 6/1/01	NO. DWN CHKD DATE	ADDED DWG. PER ADDENDUM NO. 1 6-01-01	REVISIONS		
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406				EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 31.00 PIPING PENETRATION PLAN				CONTRACT NO. C-E304 DWG. NO. <b>M-254</b>	

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 FLA. C.E. REG. NO. 53545

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ELEVATION 31.00



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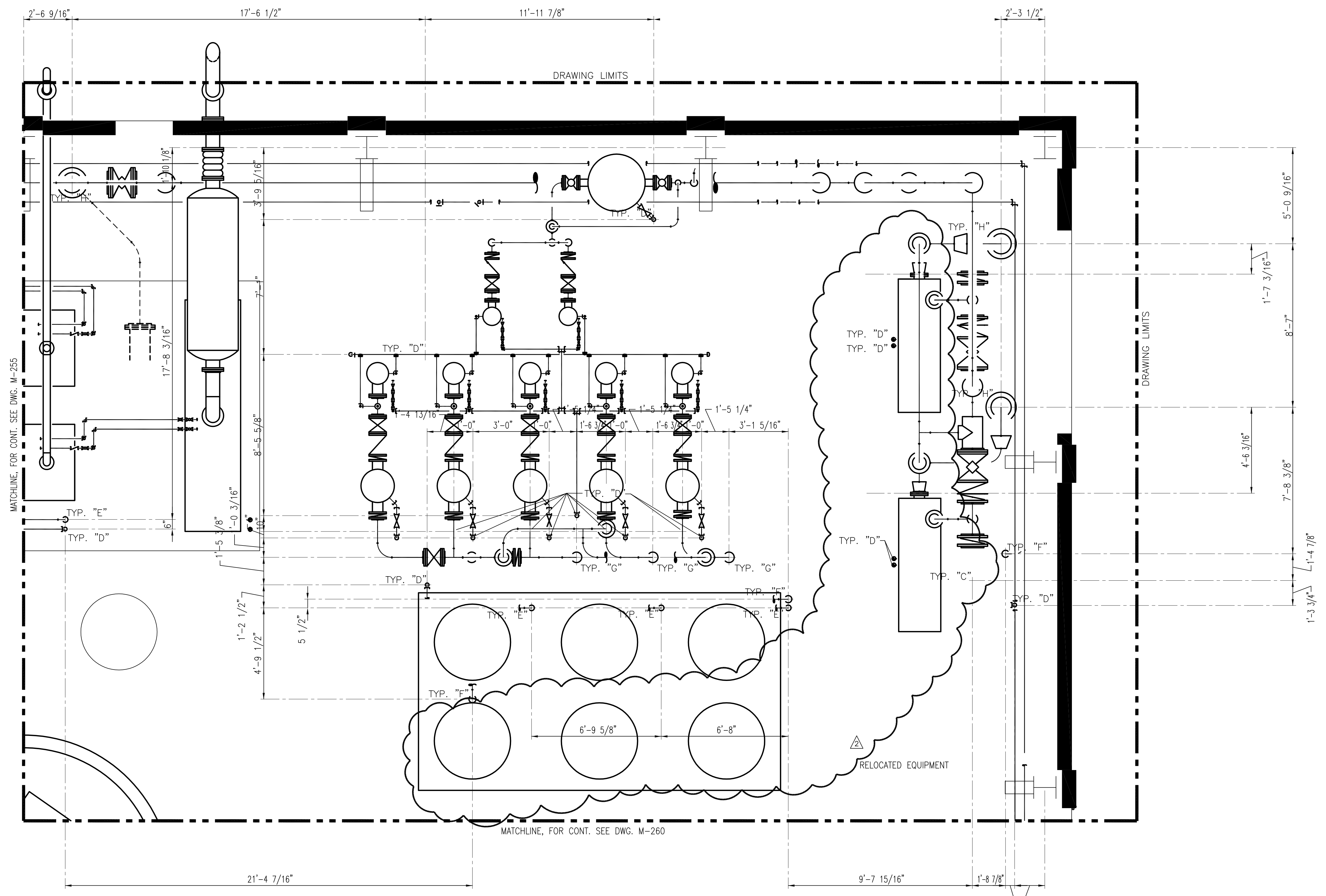
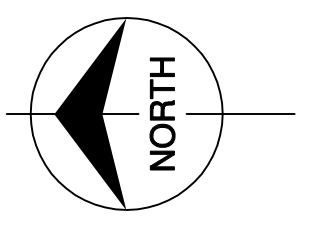
**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
 STORMWATER TREATMENT AREA NO. 3/4  
 PUMP STATIONS G-370 & G-372  
 PUMP STATION G-372  
 ELEVATION 31.00  
 PIPING PENETRATION PLAN

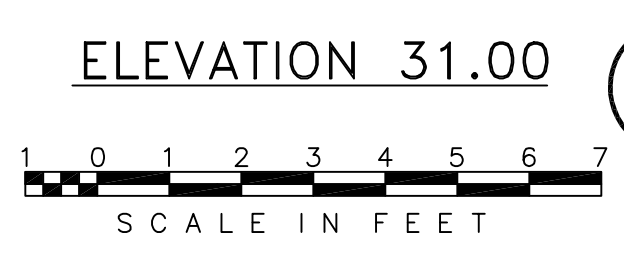
**Burns & McDonnell**  
 SINCE 1938  
 9400 WARD PARKWAY  
 KANSAS CITY, MO. 64114  
 Certification EB0000253  
 BKGD. 24930

**Brown Cunningham Gannuch**  
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 METairie, LOUISIANA 70006  
 (504) 494-3866  
 License No. EB00008095

GPW	GPW
MSS	MSS
RUG	RUG
DATE	DATE
6/1/01	6/1/01
CHKD	CHKD
NO. DWN	NO. DWN
ADDED DWG. PER ADDENDUM NO. 1	ADDED DWG. PER ADDENDUM NO. 1
REVISIONS	REVISIONS



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  - FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-245.



NOTE:  
1. PIPING, FITTINGS AND VALVES ROUTED TO ACCOMMODATE THE RELOCATED EQUIPMENT LOCATIONS ARE NOT SHOWN

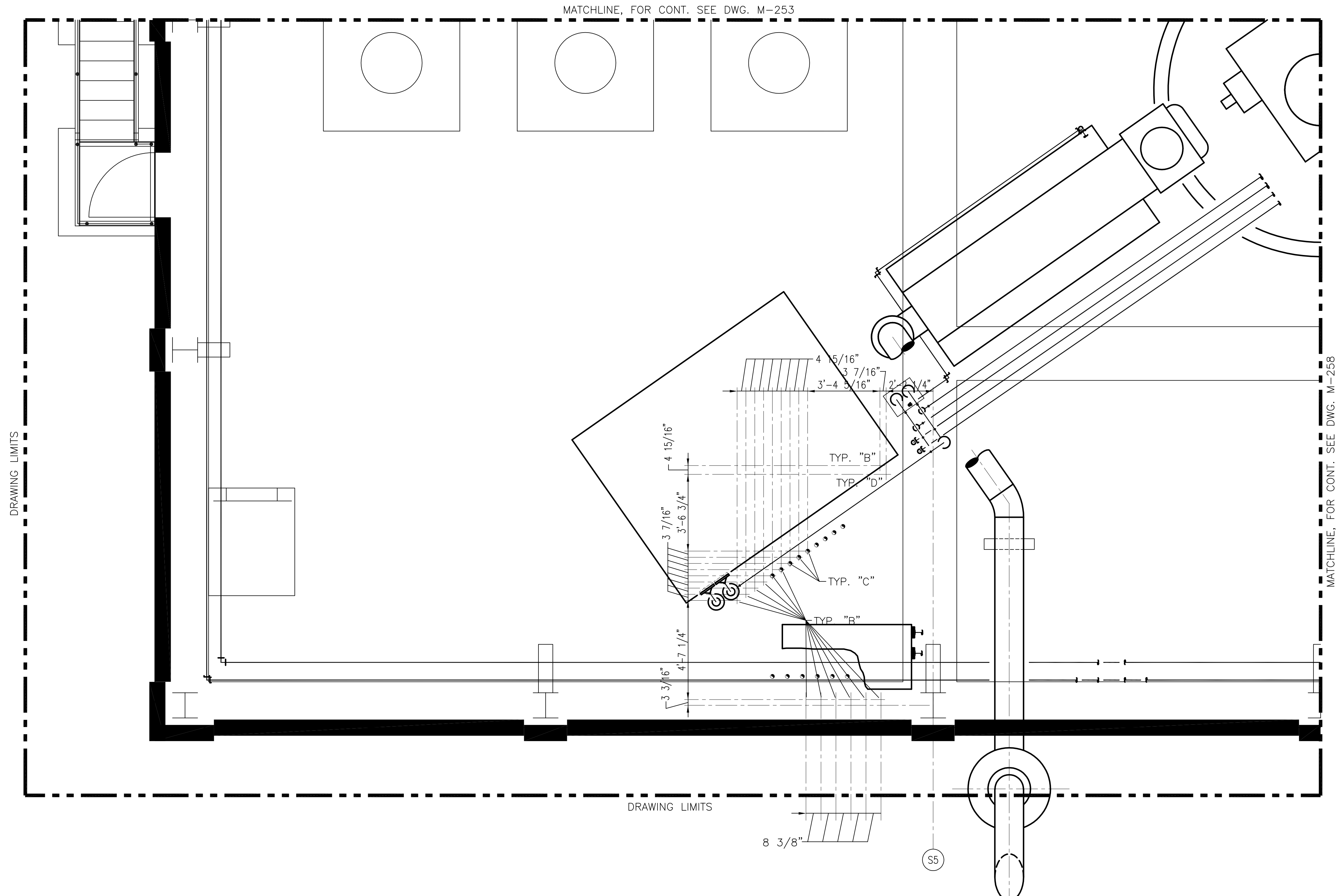
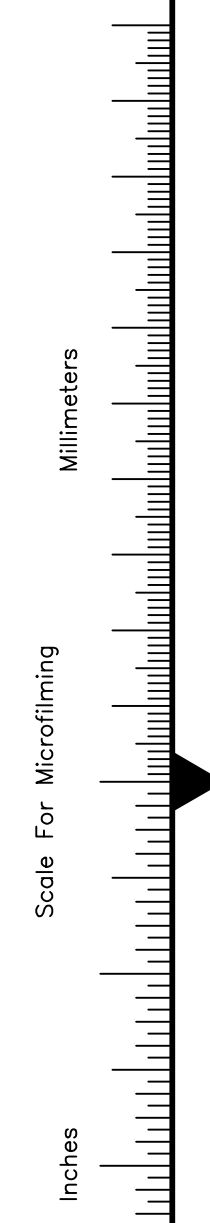
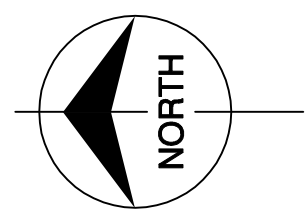
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Scale For Microfilming  
Inches  
Millimeters

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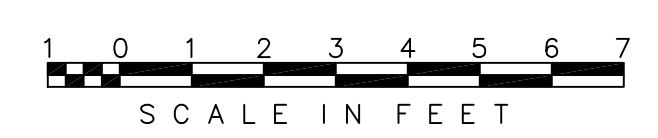
<p><b>Burns &amp; McDonnell</b> SINCE 1898 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMcD 24930</p>	<p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KIRKMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00006935</p>	<p>DRAWN: GPW CHKD: MSS DESIGN: RAG DATE: 6/1/01</p>	<p>NO. DWN CHKD: MSS DATE: 6/1/01</p>	<p>NO. DWN CHKD: MSS DATE: 6/1/01</p>
		<p>REVISIONS</p>	<p>REVISIONS</p>	<p>REVISIONS</p>
<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p><b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372 PUMP STATION G-372 ELEVATION 31.00 PIPING PENETRATION PLAN</p>		<p>CONTRACT NO. C-E304 DWG. NO. M-256</p>

"RECORD DRAWINGS"



DRAWING LIMITS


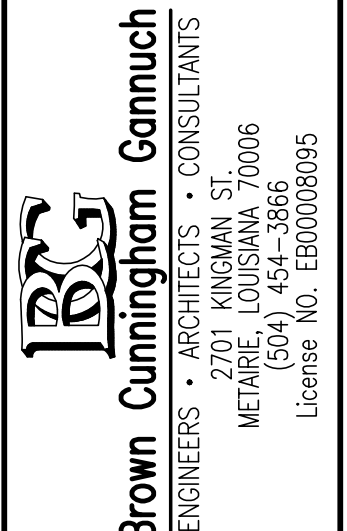
ELEVATION 31.00



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  - FOR PIPE PENETRATION SCHEDULE AND DETAIL REFER TO DWG. M-245.

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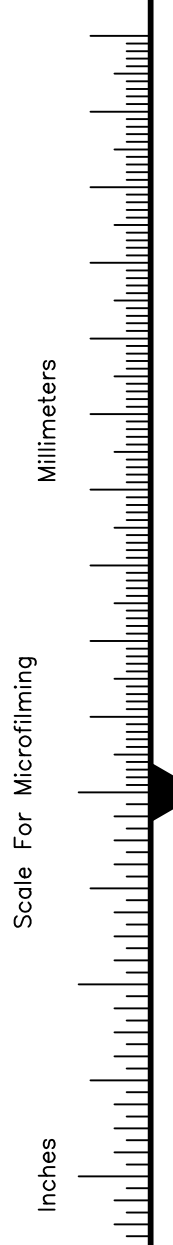
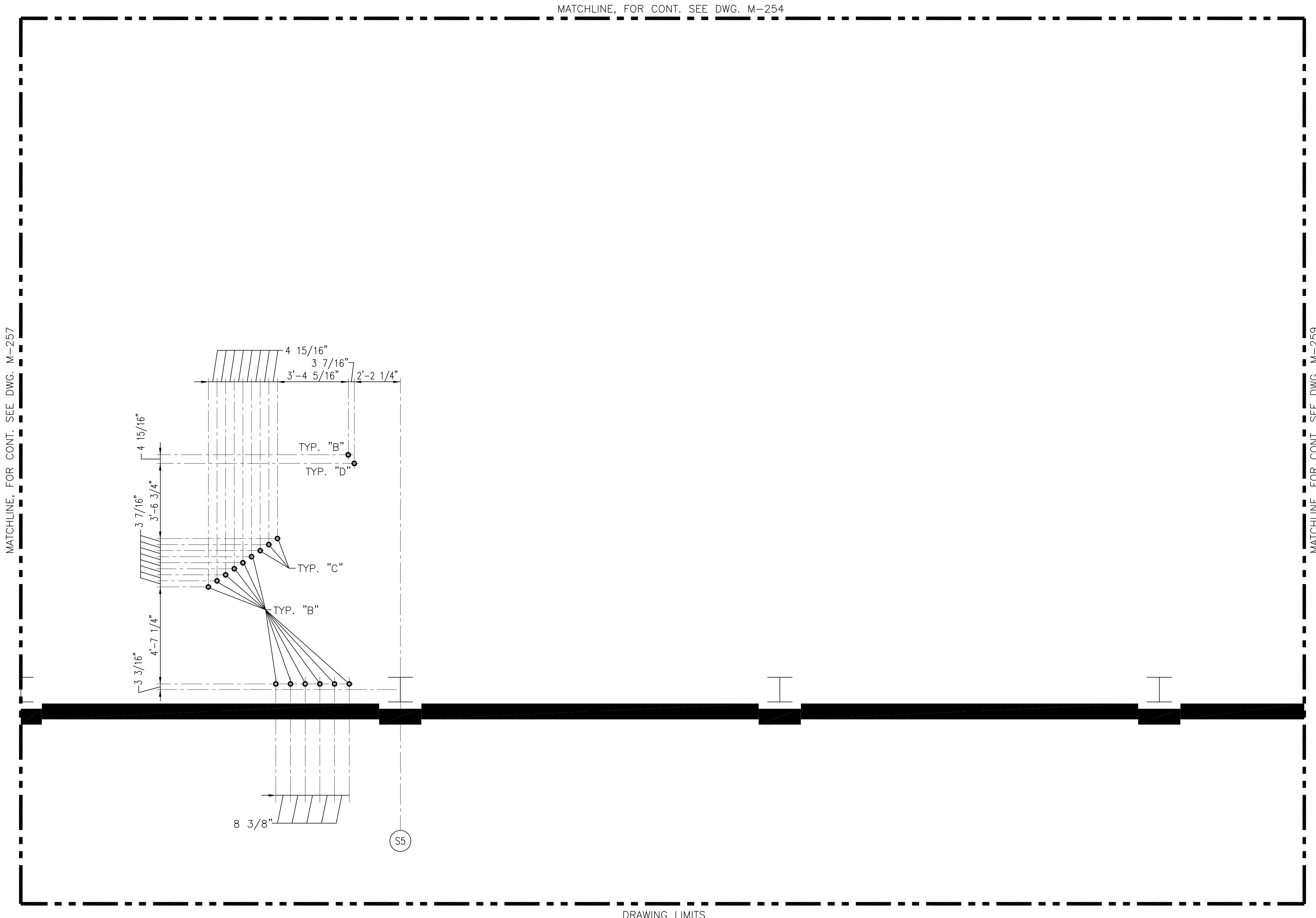
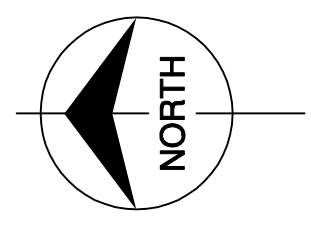
\\SERVER\CAD-PROJ\CURRENT\80000\80698\MECHANICAL\PIPE-DWGS\G-372\M-257.DWG Last edited: 05/29/01

 <p><b>Burns &amp; McDonnell</b> SINCE 1833 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMcB</p>		 <p><b>Brown Cunningham Gannuch</b> ENGINEERS • ARCHITECTS • CONSULTANTS 2701 KINGSMAN ST. METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00068095</p>		<p>GFWM MSS MSS R/JG R/JG DATE 6/17/01</p>	<p>NO. DWN CHKD DATE 6/17/01</p>	<p>ADDED DWG. PER ADDENDUM NO. 1 MSS CHKD DATE 6/17/01</p>	<p>REVISIONS</p>
<p><b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 3/4</b> <b>PUMP STATIONS G-370 &amp; G-372</b></p>		<p><b>PUMP STATION G-372</b> <b>ELEVATION 31.00</b> <b>PIPING PENETRATION PLAN</b></p>		<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>		<p>CONTRACT NO. C-E304 DWG. NO. M-257</p>	

Rodney J. Gannuch, P.E.  
FLA. C.E. REG. NO. 53545

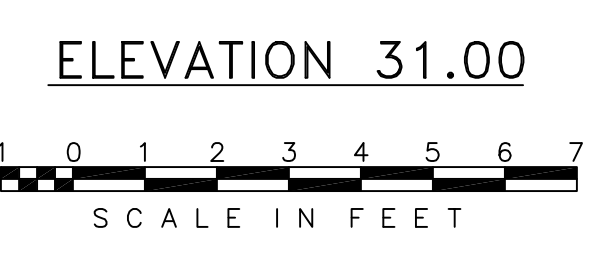


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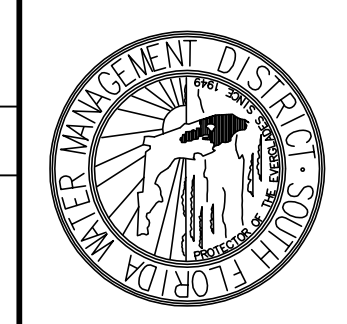
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**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

**EVERGLADES CONSTRUCTION PROJECT**  
**STORMWATER TREATMENT AREA NO. 3/4**  
**PUMP STATIONS G-370 & G-372**  
**PUMP STATION G-372**  
**ELEVATION 31.00**  
**PIPING PENETRATION PLAN**

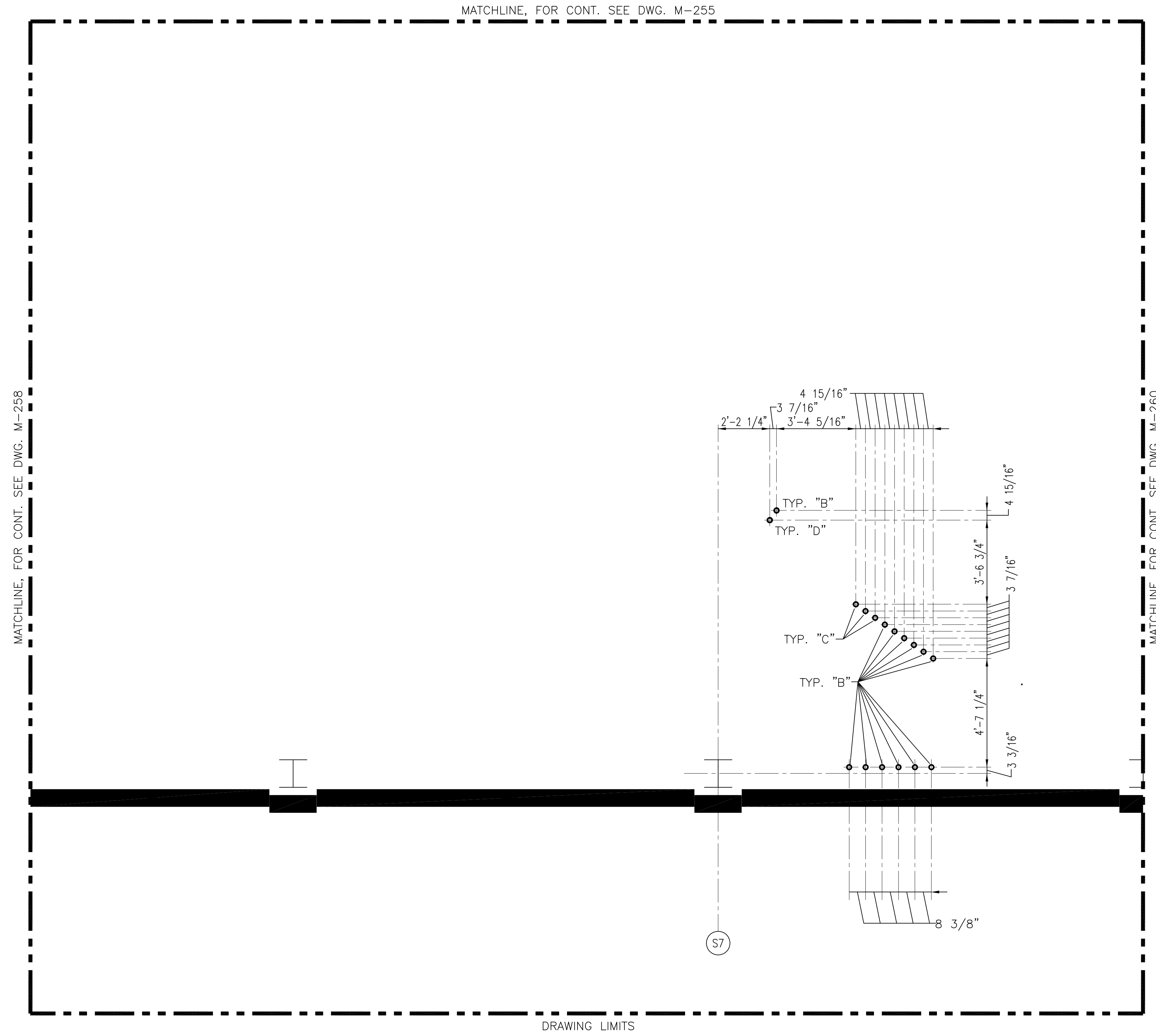
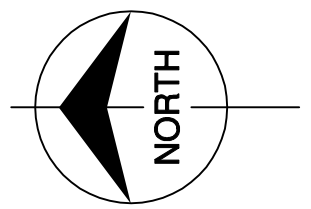
**BURNS & MCDONNELL**  
 SINCE 1938  
 9400 WARD PARKWAY  
 KANSAS CITY, MO. 64114  
 Certified Professional Engineer  
 REG. NO. 24930

**Brown Cunningham Gannuch**  
 ENGINEERS • ARCHITECTS • CONSULTANTS  
 METairie, LOUISIANA 70006  
 (504) 454-3866  
 License No. EB00006095

DRAWN	GPW
CHKD	MSS
DESIGN	MSS
CHKD	R/G
DATE	6/1/01

NO.	DWN	CHKD	DATE
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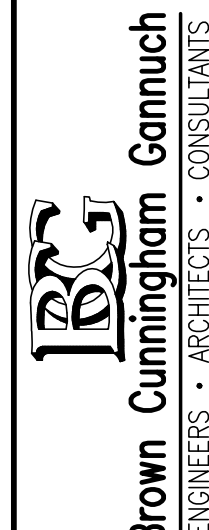
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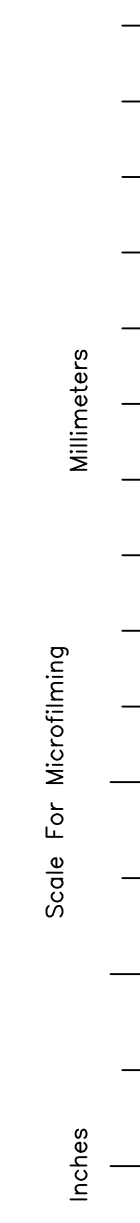
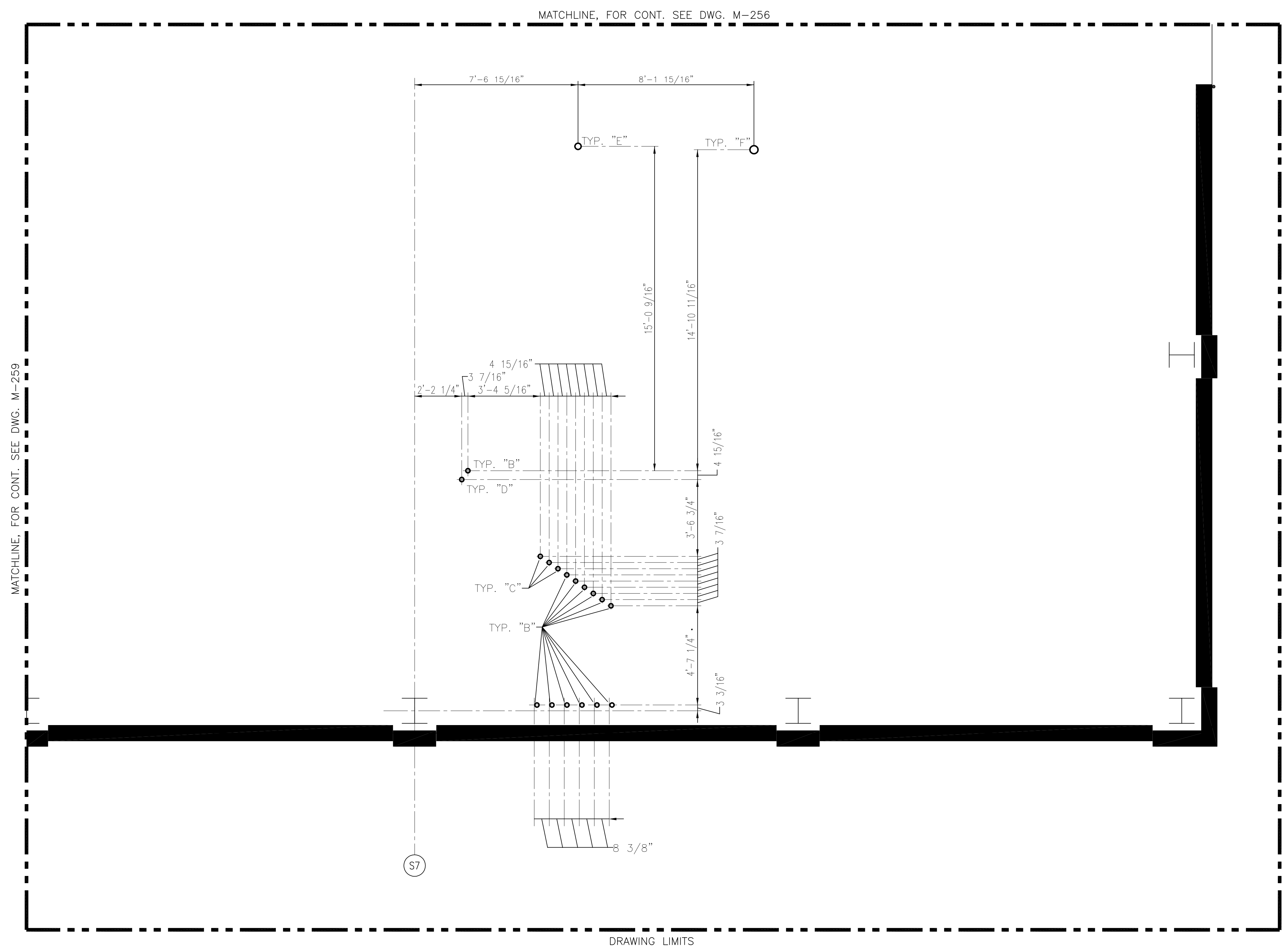
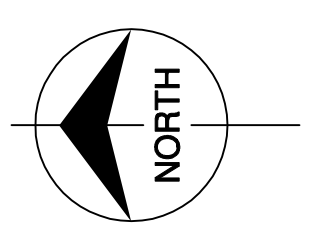
- NOTES:
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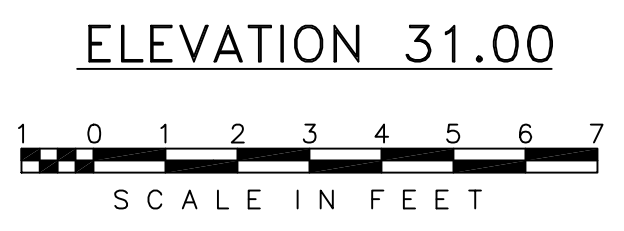
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 <p>9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: ER0000253 BMC0, 24930</p>		 <p>ENGINEERS - ARCHITECTS - CONSULTANTS 2701 WICUSANA, SUITE 70006 METairie, LOUISIANA 70006 (504) 454-3866 License No. EB00008095</p>		DRAWN CHKD DESIGN CHKD DATE	GPW MSS MSS RIG 6/1/01	NO. DWN CHKD DATE	ADDED DWG. PER ADDENDUM NO. 1 6/1/01	REVISIONS
<b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 3/4</b> <b>PUMP STATIONS G-370 &amp; G-372</b> <b>PUMP STATION G-372</b> <b>ELEVATION 31.00</b> <b>PIPING PENETRATION PLAN</b>						
Rodney J. Gannuch, P.E. FLA. C.E. REG. NO. 53545								
CONTRACT NO. C-E304 DWG. NO. <b>M-259</b>								


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 9400 WARD PARKWAY KANSAS CITY, MO. 64114 Certification: EB0000253 BMG 24930	EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 31.00 PIPING PENETRATION PLAN	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	DRAWN CHKD DESIGN CHKD DATE	GPW MSS MSS RIG DATE	NO. DWN CHKD DATE	ADDED DWG. PER ADDENDUM NO. 1 6/1/01 MSS CHKD	REVISIONS
			Brown Cunningham Gannuch ENGINEERS ARCHITECTS CONSULTANTS 7701 LINGUAN ST. METairie, LOUISIANA 70006 License No. EB00008095	EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 PUMP STATION G-372 ELEVATION 31.00 PIPING PENETRATION PLAN	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	DRAWN CHKD DESIGN CHKD DATE	GPW MSS MSS RIG DATE

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 FLA. C.E. REG. NO. 53545



CONTRACT NO.  
 C-E304  
 DWG. NO.  
 M-260

"RECORD DRAWINGS"

10561380

VALVE SYMBOLS:

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- 3-WAY VALVE
- ANGLE VALVE
- ROTARY VALVE
- BUTTERFLY VALVE
- BUTTERFLY VALVE (THROTTLE TYPE)
- SELF-POWERED THERMOSTATIC VALVE
- SELF-POWERED THERMOSTATIC VALVE, MANUAL OVERRIDE
- CHECK VALVE (LIFT CHECK)
- CHECK VALVE (LIFT CHECK, SPRING LOADED)
- CHECK VALVE (SWING CHECK)
- CHECK VALVE (DUAL PLATE CHECK)

ACTUATOR SYMBOLS:

- PNEUMATICS ACTUATOR
- SPRING-OPPOSED SINGLE-ACTING ACTUATOR
- VALVE ACTUATOR W/ATTACHED ELECTRO-PNEUMATIC CONVERTER
- SOLENOID
- HAND ACTUATOR OR HANDWHEEL
- PRESSURE RELIEF OR SAFETY VALVE
- ELECTROHYDRAULIC
- ELECTRIC MOTOR
- AIR MOTOR
- FLOW METER

OTHER SYMBOLS:

- VENT (OPEN)
- CONCENTRIC PIPE SIZE REDUCER (OR INCREASER)
- ECCENTRIC PIPE SIZE REDUCER (OR INCREASER)
- STRAINER "Y" TYPE
- FLANGED JOINT
- FLEXIBLE PIPE CONNECTOR
- ROTARY PUMP
- CENTRIFUGAL PUMP
- PRESSURE REDUCING REGULATOR, SELF CONTAINED
- PRESSURE RELIEF OR SAFETY VALVE, GENERAL SYMBOL
- RESTRICTION ORIFICE
- FLOW STRAIGHTENING VANE
- PRESSURE INDICATOR DIRECT CONNECTION
- TEMPERATURE INDICATOR
- TEMPERATURE ELEMENT W/WELL
- LEVEL INDICATOR W/TWO CONNECTIONS
- GAGE GLASS, EXTERNALLY CONNECTED
- FLOW SIGHT GLASS

- (ENG. MTD.) ENGINE MOUNTED
- (N. C.) NORMALLY CLOSED
- (N. O.) NORMALLY OPEN
- (C. A.) CONTROL AIR

GENERAL INSTRUMENT & FUNCTION SYMBOLS

	ENGINE CONTROL PANEL NORMALLY ACCESSIBLE	ENGINE CONTROL PANEL NORMALLY INACCESSIBLE	CONTROL INTERFACE BOX NORMALLY ACCESSIBLE	CONTROL INTERFACE BOX NORMALLY INACCESSIBLE	FIELD MOUNTED
DISCRETE INSTRUMENTS					
SHARED DISPLAY, SHARED CONTROL					
COMPUTER FUNCTION					
PROGRAMMABLE LOGIC CONTROL					

INSTRUMENT LINE SYMBOLS:

- ON ENGINE / AUXILIARY SKID PIPING PROVIDED BY: FMED
- CUSTOMER PROVIDED PIPING. CONTRACTOR
- PNEUMATIC SIGNAL CONTRACTOR
- ELECTRICAL SIGNAL CONTRACTOR
- PNEUMATIC BINARY SIGNAL CONTRACTOR
- ELECTRICAL BINARY SIGNAL CONTRACTOR
- EQUIPMENT OUTLINE

REFERENCES

TITLE	DRAWING NUMBER
PIPING SCHEMATICS INDEX, SYMBOLS AND GENERAL NOTES	10561380
SCHEMATIC DIAGRAM-FUEL OIL SYSTEM	10561381
SCHEMATIC DIAGRAM-LUBE OIL SYSTEM	10561382
SCHEMATIC DIAGRAM-JACKET WATER SYSTEM	10561383
SCHEMATIC DIAGRAM-RAW WATER COOLING SYSTEM	10561384
SCHEMATIC DIAGRAM-COMBUSTION AIR & EXHAUST SYSTEM	10561385
SCHEMATIC DIAGRAM-STARTING AIR SYSTEM	10561386
FLUSHING PROCEDURE	P12614730
SETTING PLAN	8 CYL: 10561398 9 CYL: 10561399

BELOW SYMBOLS NOT PER ANSI/ISA-S5.1-1984(R 1992)

- HAND PUMP
- VENTURI PUMP
- FLAME ARRESTOR

FOR REFERENCE ONLY

FLOWSERVE/SFWMD  
STA G-370 & G-372  
S. O. #206773

SYMBOLS PER ANSI/ISA-S5.1-1984 (R 1992)

REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	TITLE	REL. NO.	DATE	SCALE	SCALE
1	E101863	07/2001	NO CHANGES THIS SHEET	RRE	PIPING SCHEMATICS INDEX, SYMBOLS AND GENERAL NOTES				
0	E101474	03/27/2001	INITIAL RELEASE	RRE					
TOLERANCES (UNLESS OTHERWISE SPECIFIED):					FRACATIONAL MACHINING ± 1/64				
					TODD DESIGN ± .002				
					FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060				
					DECIMAL MACHINING TOLERANCES				
					0.1 ± .040 0.0 ± .030 0.00 ± .010				
					SHEET SIZE D				
					Dwg. No. 10561380				
					SHEET 1 OF 4				

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10561380

INSTALLATION INSTRUCTIONS & GENERAL NOTES:

1. ALL SCHEMATICS ARE DIAGRAMMATIC. LOCATE EQUIPMENT TO SUIT THE INSTALLATION. AND AS REQUIRED BY INDIVIDUAL SYSTEM SCHEMATICS.
2. LOCATE VENTS IN HIGH POINTS OF SYSTEMS AS REQUIRED.
3. LOCATE DRAINS IN LOW POINTS AS REQUIRED.
4. ALL SWING CHECK VALVES ARE TO BE INSTALLED IN THE HORIZONTAL POSITION.
5. SINGLE PASS HEAT EXCHANGERS TO BE PIPED FOR COUNTER FLOW.
6. ALL PIPING TO BE SCHEDULE 40, ASTM A106 GR. B OR A53, WITH 150 LB. FITTINGS UNLESS OTHERWISE NOTED.
7. ITEM BULLETS, 101 312 1201 ETC., INDICATE AUXILIARY EQUIPMENT FURNISHED BY FMED. ALL OTHER EQUIPMENT TO BE PROVIDED BY OTHERS.
8. ALL VALVES, RELIEF VALVES, PIPING, FITTINGS, AND PIPELINE STRAINERS FURNISHED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE INDICATED.
9. ADEQUATE PIPE SUPPORTS, ANCHORS AND EXPANSION JOINTS SHALL BE INSTALLED TO PREVENT EXCESSIVE FORCE ON THE EQUIPMENT CONNECTIONS DUE TO DEAD LOAD, VIBRATION, AND THERMAL EXPANSION.
10. INSTALLATION OF AUXILLARY EQUIPMENT MUST BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
11. ALL FLANGED ENGINE CONNECTIONS HAVE COMPANION FLANGES AND BOLTING ASSEMBLY FURNISHED WITH THE ENGINE.
12. CONNECTIONS TO PIPES FOR ALL INSTRUMENTATION, ALARMS AND SENSING POINTS SHALL BE AS CLOSE AS POSSIBLE TO THE SYSTEM FUNCTION BEING MONITORED UNLESS OTHERWISE INDICATED.
13. INSTRUMENTATION LINES AND CAPILLARY TUBING SHALL BE RUN AS STRAIGHT AND AS DIRECT AS POSSIBLE WITH THE MINIMUM OF POCKETS OR BENDS, IN SUCH A MANNER SO AS TO AVOID OPERATIONAL OR MAINTENANCE AREAS AND ARE TO BE NEATLY CLAMPED, CLIPPED OR CARRIED IN TRAYS. WHEN GAUGE LINE BENDS ARE REQUIRED, THE BEND RADIUS SHALL NOT BE LESS THAN 75MM (3"), OTHERWISE ELBOWS SHALL BE INSTALLED. FME RECOMMENDS THAT ALL INSTRUMENT CONNECTIONS TO THE ENGINE, TUBING OR CAPILLARY, BE PROVIDED WITH FLEXIBILITY VIA FLEXIBLE CONNECTORS OR CONTAIN (ONE) 360 DEG., 150MM (6") MINIMUM DIAMETER LOOP.
14. VENT LINES ARE TO BE STRAIGHT PIPE RUNS WITH NO POCKETS. FLEXIBLE CONNECTIONS SHOWN IN VENT LINES ARE TO BE AERDQUIP HOSE OR EQUAL.
15. ALL FLEXIBLE CONNECTIONS TO BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR A LINING MATERIAL RESISTANT TO PETROLEUM PRODUCTS AND FOR SERVICE INTENDED. FLEXIBLE CONNECTION WITH ETHYLENE PROPYLENE (EPT, EPDM) OR NEOPRENE LINING ARE PROHIBITED.
16. ALL BUTTERFLY & CHECK VALVES TO BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR MATERIALS RESISTANT TO PETROLEUM PRODUCTS AND FOR SERVICE INTENDED. VALVES WITH ETHYLENE PROPYLENE (EPT, EPDM) OR NEOPRENE SEAT MATERIAL ARE PROHIBITED. VALVES SHOULD BE INSPECTED PERIODICALLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND SEATS REPLACED AS REQUIRED.
17. RUBBER PIPELINE CONNECTORS, GARLOCK ETC. MUST CONNECT TO WELD NECK FLANGES - SLIP ON FLANGES ARE PROHIBITED FOR THESE CONNECTORS.
18. FILL ALL TEMPERATURE SWITCH AND GAUGE SENSING ELEMENT WELLS WITH SILICONE GREASE (FME P/N 11915996) BEFORE ASSEMBLY TO INSURE MAXIMUM HEAT TRANSFER TO THE SENSING ELEMENT.
19. ALL PIPING SHALL BE CLEANED/FLUSHED OF ALL DIRT, RUST, GREASE, MILL SCALE, WELD BERRIES, ETC. BY THE INSTALLING CONTRACTOR AFTER FABRICATION AND PRIOR TO INITIAL ENGINE START-UP. PIPING SHALL BE FLUSHED WITH THE SERVICE FLUID AT NO LESS THAN THE DESIGN OPERATING FLOW RATE, THROUGH A TEMPORARY FILTER MEDIA, UNTIL NO PARTICULATE MATTER CAN BE OBSERVED IN THE TEMPORARY FILTER MEDIA. UNPROTECTED PIPING BETWEEN FINAL FILTERS AND ENGINE CONNECTIONS SHALL BE REMOVED AND INSPECTED BY FME SERVICE PERSONNEL PRIOR TO INITIAL ENGINE START-UP.
20. ALL PIPING TO BE INSPECTED FOR LEAKS, VIBRATION, THERMAL EXPANSION AND OTHER INSTALLATION DEFECTS AFTER INITIAL STARTUP AND DURING OPERATION AT FULL LOAD.
21. ENGINE IS COOLED VIA THE JACKET WATER SYSTEM BY CIRCULATING CLEAN TREATED WATER THROUGH ALL PASSAGES. THIS WATER CIRCULATES IN A CLOSED SYSTEM; THE SAME WATER USED REPEATEDLY, BEING PIPED OUT OF THE ENGINE, COOLED, AND THEN RETURNED. IT IS EXTREMELY IMPORTANT THAT THE COOLING WATER IN EVERY INSTALLATION BE PROPERLY TREATED TO MINIMIZE DAMAGE DUE TO CORROSION AND SCALE. ALL MAKE-UP WATER MUST BE TREATED TO MAINTAIN A PH FACTOR OF 8.5 - 9.5 TO CONTROL CORROSION AND AN ALLOWABLE WATER HARDNESS OF 3 GRAINS PER GALLON OR 50 PPM. MAXIMUM TO MINIMIZE SCALE FORMATION.
22. BACKING RINGS SHOULD NOT BE USED IN WELDED PIPE UNLESS THEY ARE "DIGESTABLE INSERT" TYPE.
23. BOLD TYPE LETTERS (A) REFER TO ENGINE CONNECTIONS ON SETTING PLAN.
24. FIELD INSTALLED PIPING SHALL BE INSTALLED TO PROVIDE UNRESTRICTED ACCESS TO THE FUEL INJECTION COMPARTMENTS, CRANKCASE INSPECTION COVERS, VERTICAL DRIVE COVERS, GOVERNOR, ETC.
25. ALL INTERCONNECT WIRING IS TO BE PROVIDED BY THE CONTRACTOR.
26. ALL THERMOWELLS REQUIRE A MINIMUM OF 6 INCHES FOR CLEARANCE.
27. SHIP LOOSE ITEMS TO BE INSTALLED BY CONTRACTOR.

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STA G-370 & G-372  
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TITLE		REL. NO. E101474		03/27/01		ASSY. DR. LD.	
PIPING SCHEMATICS INDEX, SYMBOLS AND GENERAL NOTES		DR. BY EHRENREICH		12/07/00		SCALE NONE	
TOLERANCES (UNLESS OTHERWISE SPECIFIED):		CHK'D BY		HEAT TR.		MATERIAL	
FRACTIONAL MACHINING ± 1/64		CAST.		MACH.		ENGR.	
TODL DESIGN ± .002		WELD.		ART SARGENT			
FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060		REV. NO.		CHG. NO.		SHEET	
DECIMAL MACHINING TOLERANCES		0 ± .040		0.0 ± .030		0.00 ± .010	
SHEET SIZE D		10561380		SHEET 2		OF 4	



10561380

ELECTRICAL CODES & SET POINTS

DESCRIPTION	RANGE	ALARM	SHUTDOWN	ELECTRICAL	LOCATION
AIR RECEIVER PRESSURE	0-25 PSI			ARP	CIB
ENGINE GOVERNOR ACTUATOR				ENGA	ENG
ENGINE SPEED PICKUP 1				ENMP1	ENG
ENGINE SPEED PICKUP 2				ENMP2	ENG
ENGINE SPEED PICKUP 3				ENMP3	ENG
ENGINE PRESSURE HIGH SHUTDOWN (CRANKCASE PRESSURE HIGH SHUTDOWN)			HI=1.5' WC	ENPHS	CIB
ENGINE SPEED HIGH SHUTDOWN (ENGINE OVERSPEED SHUTDOWN)				ENSHS	ENG
ENGINE SHUTDOWN SOLENOID 1				ENSS1	CIB
ENGINE SHUTDOWN SOLENOID 2				ENSS2	ENG
ENGINE VIBRATION				ENV	ENG

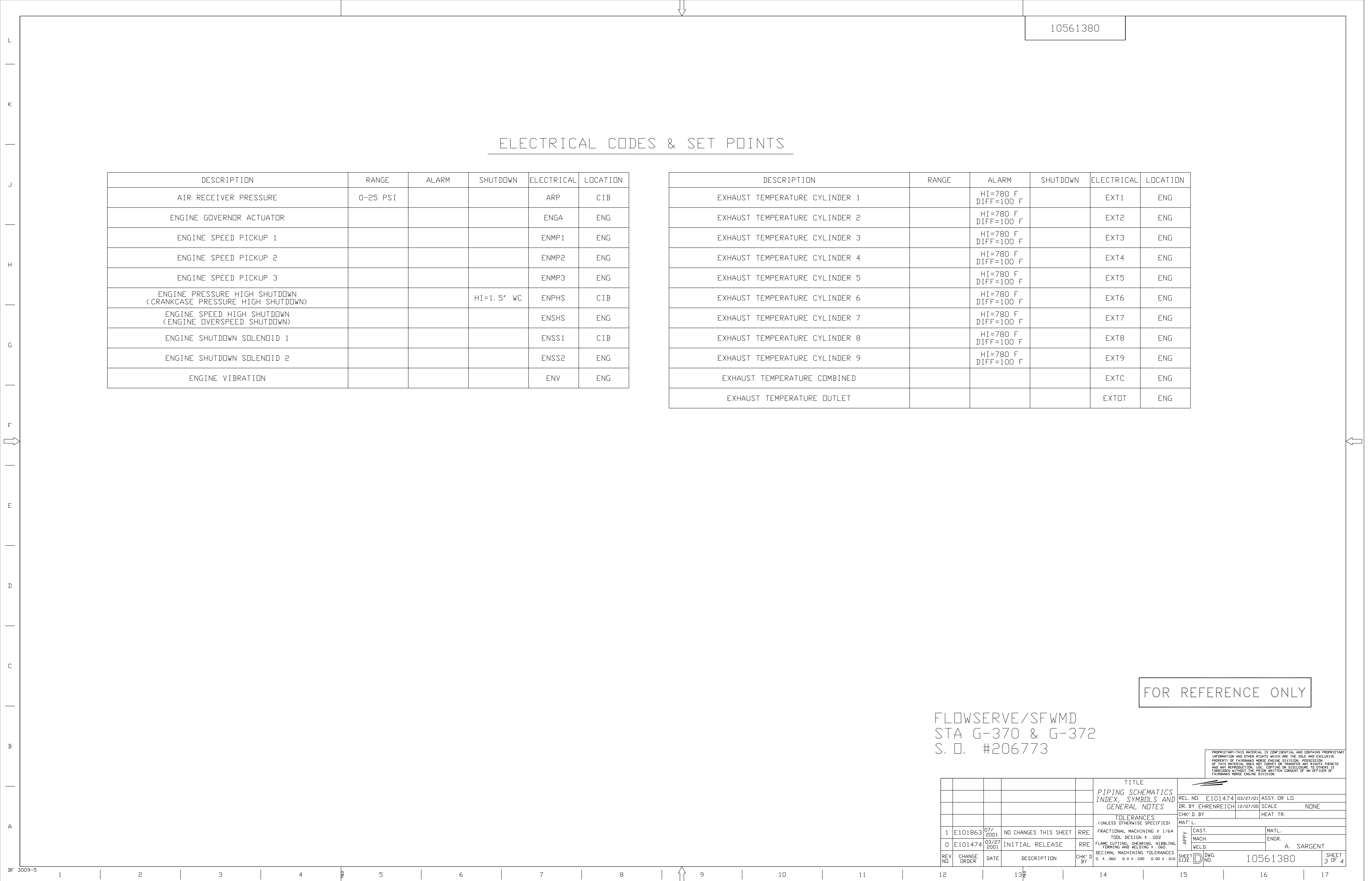
DESCRIPTION	RANGE	ALARM	SHUTDOWN	ELECTRICAL	LOCATION
EXHAUST TEMPERATURE CYLINDER 1		HI=780 F DIFF=100 F		EXT1	ENG
EXHAUST TEMPERATURE CYLINDER 2		HI=780 F DIFF=100 F		EXT2	ENG
EXHAUST TEMPERATURE CYLINDER 3		HI=780 F DIFF=100 F		EXT3	ENG
EXHAUST TEMPERATURE CYLINDER 4		HI=780 F DIFF=100 F		EXT4	ENG
EXHAUST TEMPERATURE CYLINDER 5		HI=780 F DIFF=100 F		EXT5	ENG
EXHAUST TEMPERATURE CYLINDER 6		HI=780 F DIFF=100 F		EXT6	ENG
EXHAUST TEMPERATURE CYLINDER 7		HI=780 F DIFF=100 F		EXT7	ENG
EXHAUST TEMPERATURE CYLINDER 8		HI=780 F DIFF=100 F		EXT8	ENG
EXHAUST TEMPERATURE CYLINDER 9		HI=780 F DIFF=100 F		EXT9	ENG
EXHAUST TEMPERATURE COMBINED				EXTC	ENG
EXHAUST TEMPERATURE OUTLET				EXTOT	ENG

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TITLE		REL. NO.		DR. BY		SCALE		HEAT TR.	
PIPING SCHEMATICS INDEX, SYMBOLS AND GENERAL NOTES		E101474		EHRENREICH		NONE			
TOLERANCES (UNLESS OTHERWISE SPECIFIED):		FRAC. MACHINING ± 1/64		MACH.		ENGR.		A. SARGENT	
TOOL DESIGN ± .002		FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060		WELD.					
DECIMAL MACHINING TOLERANCES		0. ± .040 0.0 ± .030 0.00 ± .010		SHEET SIZE		D		DWG. NO. 10561380	
REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	SHEET 3 OF 4				
1	E101863	07/2001	NO CHANGES THIS SHEET	RRE					
0	E101474	03/27/2001	INITIAL RELEASE	RRE					



10561380

ELECTRICAL CODES & SET POINTS

DESCRIPTION	RANGE	ALARM	SHUTDOWN	ELECTRICAL	LOCATION
FUEL OIL CONTROL VALVE (FUEL OIL FILL VALVE)				FDCV	SYS
FUEL OIL FLOW				FDF	SYS
FUEL OIL LEVEL CONTROL HIGH				FOLCH1 FOLCH2	SYS ①
FUEL OIL LEVEL CONTROL LOW				FOLCL1 FOLCL2	SYS ②
FUEL OIL LEVEL HIGH ALARM		X		FOLHA	SYS
FUEL OIL LEVEL LOW ALARM		X		FOLLA	SYS
FUEL OIL PRESSURE	0-100 PSI	LO=10 PSI		FOP	CIB
FUEL OIL RUPTURE BASIN LEVEL HIGH ALARM (RUPTURE BASIN LEVEL HIGH ALARM)		X		FORLHA1 FORLHA2	SYS ③
FUEL OIL RETURN PUMP MOTOR				FORPM	SYS ④
FUEL OIL LEVEL SHUTDOWN			X	FOLLS	SYS ⑤
FUEL OIL LEVEL				FOL	SYS ⑥
FUEL OIL TEMPERATURE-RETURN TO DAY TANK				FOTR	SYS
JACKET WATER HEATER				JWH	SYS
JACKET WATER LEVEL LOW ALARM				JWLLA	SYS
JACKET WATER PRESSURE	0-100 PSI	LO=35 PSI		JWP	CIB
JACKET WATER PUMP				JWPM	SYS
JACKET WATER PRESSURE LOW SHUTDOWN			LO=25 PSI	JWPLS	CIB
JACKET WATER TEMPERATURE		HI=170 F		JWT	ENG
JACKET WATER TEMPERATURE HIGH SHUTDOWN			HI=175 F	JWTHS	SYS
JACKET WATER TEMPERATURE TO ENGINE				JWTTE	SYS

DESCRIPTION	RANGE	ALARM	SHUTDOWN	ELECTRICAL	LOCATION
LUBE OIL DIFFERENTIAL PRESSURE HIGH ALARM		HI=10 PSI		LODPHA	ENG
LUBE OIL DIFFERENTIAL PRESSURE HIGH SHUTDOWN			HI=15 PSI	LODPHS	ENG
LUBE OIL HEATER				LOH	SYS
LUBE OIL LEVEL HIGH SHUTDOWN				LOLHS	ENG
LUBE OIL LEVEL LOW SHUTDOWN				LOLLS	ENG
LUBE OIL PRESSURE	0-100 PSI	LO=25 PSI		LDP	CIB
LUBE OIL PRESSURE LOW SHUTDOWN			LO=20 PSI	LOPLS	CIB
LUBE OIL PUMP MOTOR				LOPM	SYS
LUBE OIL PRELUBE PUMP MOTOR				LOPPM	SYS
LUBE OIL TEMPERATURE		HI=190 F LO=120 F		LOT	ENG
LUBE OIL TEMPERATURE HIGH SHUTDOWN			HI=195 F	LOTHS	SYS
LUBE OIL TEMPERATURE TO ENGINE				LOTTE	SYS
LUBE OIL TEMPERATURE TO HEAT EXCHANGER				LOTTHE	SYS
RAW WATER TEMPERATURE				RWT	SYS
STARTING AIR CONTROL PRESSURE LOW SHUTDOWN (CONTROL AIR PRESSURE LOW SHUTDOWN)			LO=60 PSI	SACPLS	CIB
STARTING AIR PRESSURE LOW ALARM		LO=180 PSI		SAPLA	CIB
STARTING AIR SOLENOID				SAS	CIB

?LOCATION LEGEND?

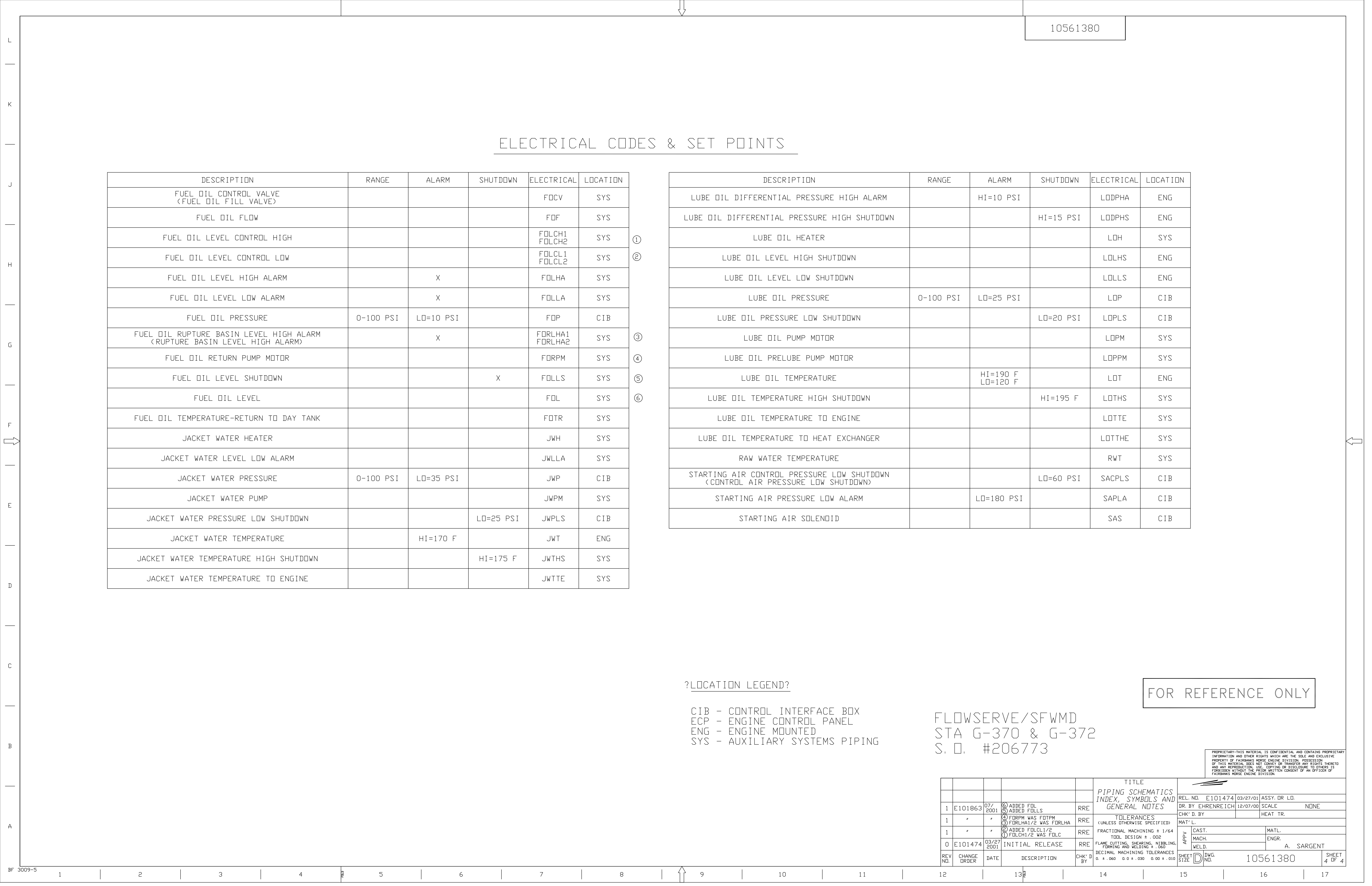
CIB - CONTROL INTERFACE BOX  
 ECP - ENGINE CONTROL PANEL  
 ENG - ENGINE MOUNTED  
 SYS - AUXILIARY SYSTEMS PIPING

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 S. O. #206773

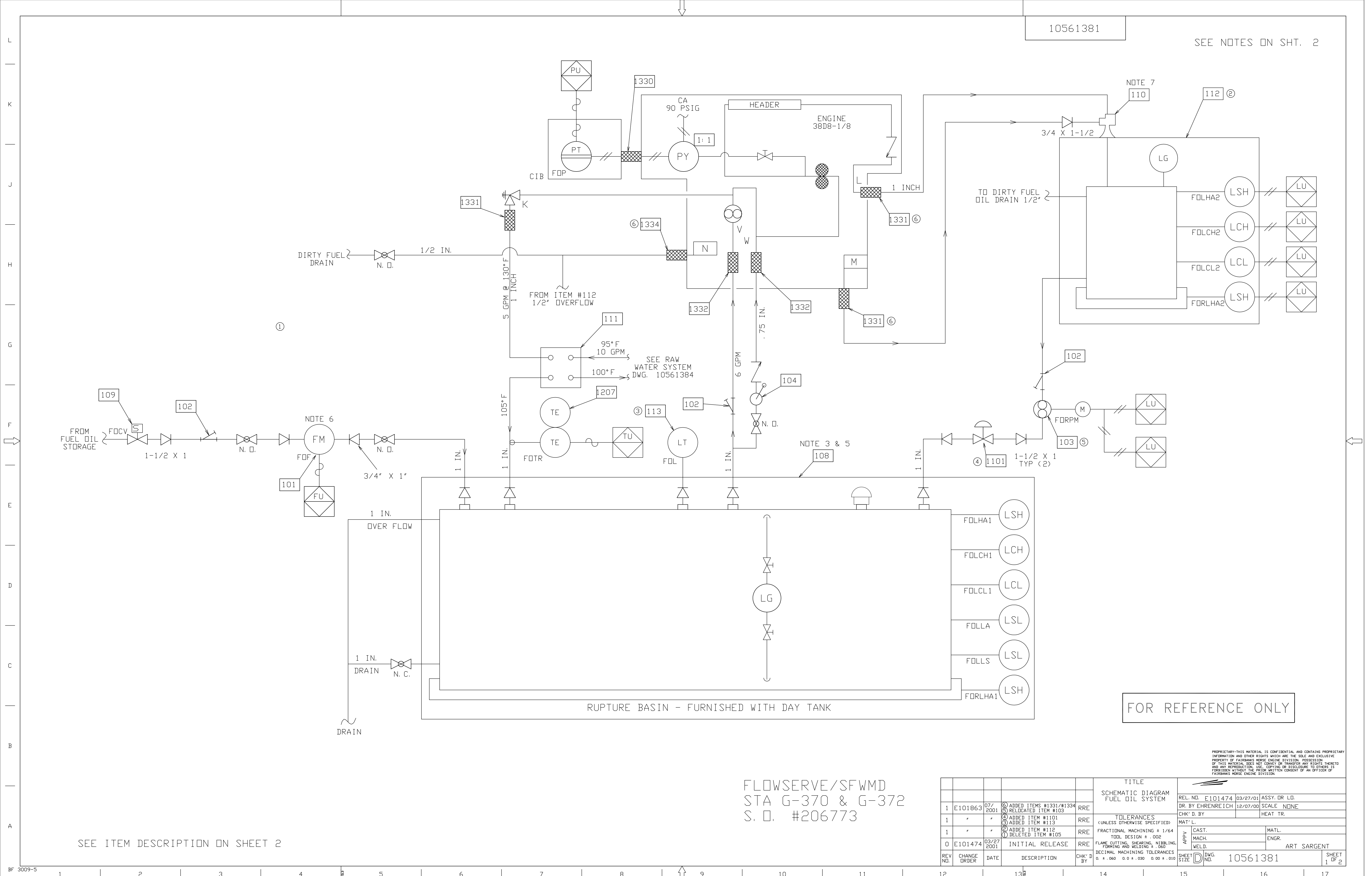
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REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	TITLE	REL. NO.	DATE	SCALE	ASSY. OR L.O.
1	E101863	07/2001	⑥ ADDED FOL ⑤ ADDED FOLLS	RRE	PIPING SCHEMATICS INDEX, SYMBOLS AND GENERAL NOTES	E101474	03/27/01	NONE	ASSY. OR L.O.
1	"	"	④ FORPM WAS FOTPM ③ FORLHA1/2 WAS FORLHA	RRE	TOLERANCES (UNLESS OTHERWISE SPECIFIED):				
1	"	"	② ADDED FOLCL1/2 ① FOLCH1/2 WAS FOLC	RRE	FRACTIONAL MACHINING ± 1/64 TODL DESIGN ± .002				
0	E101474	03/27/2001	INITIAL RELEASE	RRE	FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060 DECIMAL MACHINING TOLERANCES				



10561381

SEE NOTES ON SHT. 2



L  
K  
J  
H  
G  
F  
E  
D  
C  
B  
A

FROM FUEL OIL STORAGE  
FDCV 5  
1-1/2 X 1

NOTE 6  
FM  
FOF  
FU  
101

DIRTY FUEL DRAIN  
N. D.  
1/2 IN.  
5 GPM @ 130°F  
1 INCH  
FROM ITEM #112  
1/2" OVERFLOW

95°F  
10 GPM  
100°F  
SEE RAW WATER SYSTEM  
DWG. 10561384

NOTE 3 & 5  
108

TO DIRTY FUEL OIL DRAIN 1/2"

RUPTURE BASIN - FURNISHED WITH DAY TANK

1 IN. OVER FLOW  
1 IN. DRAIN N. C.

1 IN.  
1 IN.  
1 IN.  
1 IN.  
1 IN.

LG

FOLHA1 LSH  
FOLCH1 LCH  
FOLCL1 LCL  
FOLLA LSL  
FOLLS LSL  
FORLHA1 LSH

NOTE 7  
110  
112 @

3/4 X 1-1/2

1 INCH

1331 @

1331 @

1331 @

1331 @

LG

FOLHA2 LSH  
FOLCH2 LCH  
FOLCL2 LCL  
FORLHA2 LSH

102  
103 @  
1-1/2 X 1 TYP (2)

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FLOWERVE/SFWM  
STA G-370 & G-372  
S. O. #206773

REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	TITLE	REL. NO.	DATE	SCALE	SCALE
1	E101863	07/2001	ADDED ITEMS #1331/#1334 RELOCATED ITEM #103	RRE	SCHEMATIC DIAGRAM FUEL OIL SYSTEM	E101474	03/27/01	ASSY. DR. LD.	NONE
1			ADDED ITEM #1101 ADDED ITEM #113	RRE					
1			ADDED ITEM #112 DELETED ITEM #105	RRE	TOLERANCES (UNLESS OTHERWISE SPECIFIED): FRACTIONAL MACHINING ± 1/64 TODD DESIGN ± .002				
0	E101474	03/27/2001	INITIAL RELEASE	RRE	FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060 DECIMAL MACHINING TOLERANCES 0. ± .040 0.0 ± .030 0.00 ± .010				
					ART SARGENT				
					DWG. NO. 10561381				
					SHEET 1 OF 2				

SEE ITEM DESCRIPTION ON SHEET 2

10561381

ITEM NO.	DESCRIPTION	RANGE/CAPACITY	FMED PART NUMBER	LOCATION
101	METER, FUEL OIL	1-30 GPM	16111696	AUX. SKID
102	STRAINER, FUEL OIL	1" NPT	16111666	AUX. SKID
103	PUMP, FUEL OIL TRANSFER, 460V, 1.5 HP	15 GPM @ 50 PSI	12999070	AUX. SKID
104	PUMP, FUEL OIL PRIMING, HAND OPERATED	3/4" NPT	11900045	AUX. SKID
108	TANK, DAY, FUEL OIL, 24 VDC	550 GAL.	12999065	LOOSE
109	SOLENOID VALVE, 24 VDC	1-1/2"	12998793	AUX. SKID
110	PUMP, VENTURI		12998996	AUX. SKID
111	HEAT EXCHANGER, FUEL OIL		12999069	AUX. SKID
112	TANK, FUEL OIL RETURN	75 GAL.	12999125	AUX. SKID
113	TRANSMITTER, LEVEL, 24 VDC	3/4" NPT	12998955	LOOSE
1101	VALVE, 2-WAY PILOT OPERATED, N.C.	1-1/2" NPT	12999025	AUX. SKID
1207	RTD W/WELL, DUAL ELEMENT		16113529	AUX. SKID
1330	HOSE, FLEX	3/8" NPT X 20'	12999087	AUX. SKID
1331	HOSE, FLEX	1" NPT X 20'	12999092	AUX. SKID
1332	HOSE, FLEX	3/4" NPT X 20'	12999091	AUX. SKID

?NOTES: ?

1. PIPING MUST BE ASTM B106 SCHEDULE 80 BLACK STEEL WITH 300 LB. FITTINGS.
2. NO POINT IN THE GRAVITY RETURN LINE TO BE HIGHER THAN 24" ABOVE CENTERLINE OF LOWER CRANKSHAFT.
- ④ 3. TOP OF TANK (ITEM 112) TO BE NO HIGHER THAN BOTTOM OF FUEL INJECTION COMPARTMENT (APPROX. 29 INCHES ABOVE FUEL PUMP SUCTION).
4. DO NOT MANIFOLD PRESSURE RETURN LINES; RUN SEPERATELY
- ⑤ 5. ALL DAY TANK [108] CONTROLS WILL BE CONTROLLED BY CUSTOMER.
6. MINIMUM 18" OF 3/4" PIPE ON BOTH INLET & OUTLET OF METER
7. ITEM 110 TO BE MOUNTED ON FUEL OIL RETURN TANK (ITEM 112) TO MINIMIZE BACK PRESSURE.
- ⑥ 8. FUEL OIL RETURN TANK (ITEM 112) OVERFLOW IS TO BE ROUTED TO THE DIRTY FUEL OIL LINE.

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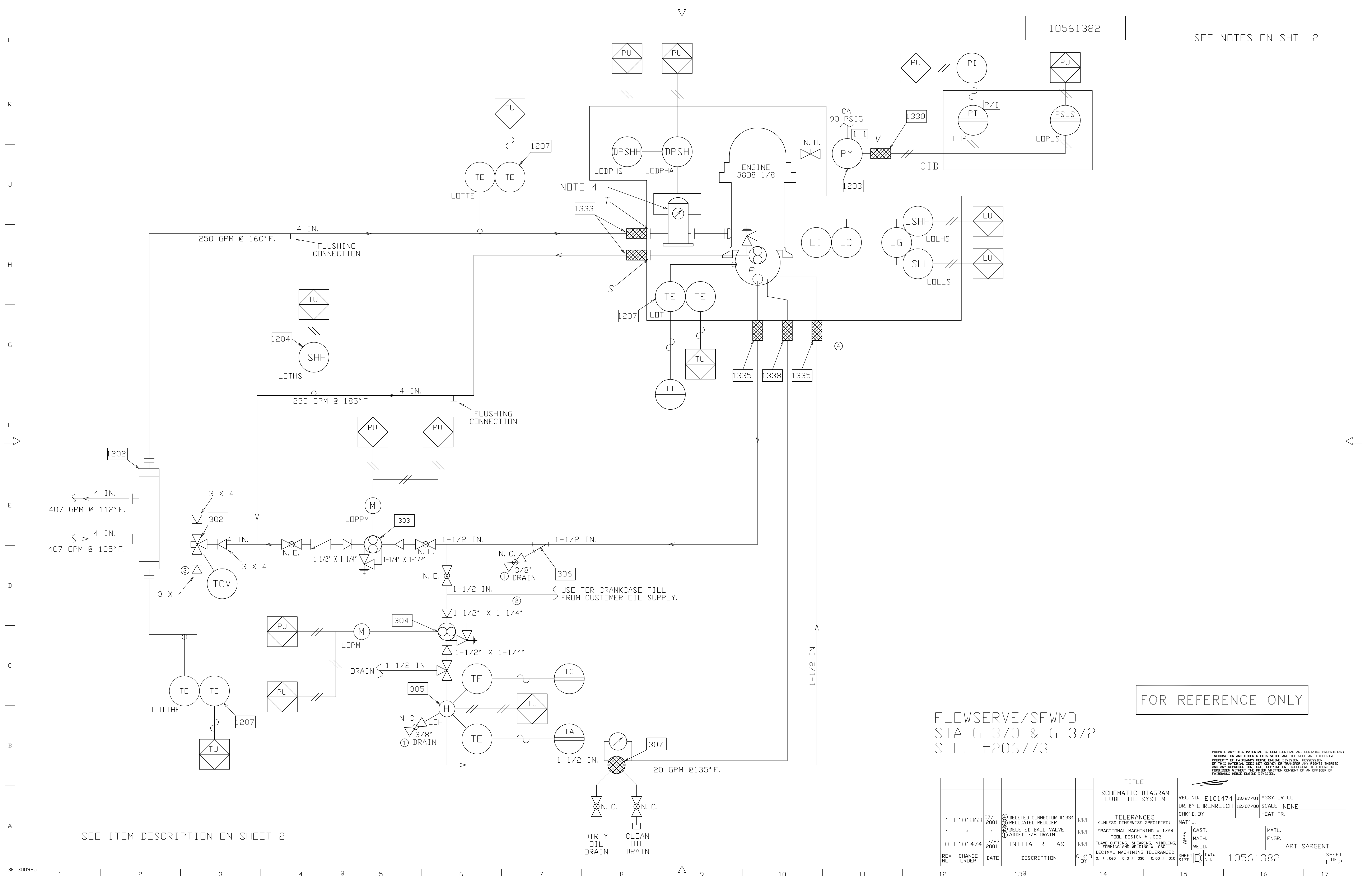
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REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	TITLE	REL. NO.	DR. BY	SCALE	ASSY. DR. L.D.
1	E101863	07/2001	⑥ ADDED NOTE #8 ⑤ REWROTE NOTE #5	RRE	SCHMATIC DIAGRAM FUEL OIL SYSTEM	E101474	03/27/01	ASSY. DR. L.D.	
1	"	"	④ REWROTE NOTE #3 ③ ADDED #112, #113, #1101	RRE	TOLERANCES (UNLESS OTHERWISE SPECIFIED):		CHK'D BY	HEAT TR.	
1	"	"	② DELETED ITEM #105 ① 16111696 WAS 12998542	RRE	FRACTIONAL MACHINING ± 1/64 TODD DESIGN ± .002		MAT'L.		
0	E101474	03/27/2001	INITIAL RELEASE	RRE	FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060 DECIMAL MACHINING TOLERANCES		ENGR.	ART SARGENT	

10561382

SEE NOTES ON SHT. 2



SEE ITEM DESCRIPTION ON SHEET 2

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REV. NO.		CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	ENGR.	DATE	SCALE	TITLE	REL. NO.	DR. BY	DATE	SCALE
1	E101863	07/2001		DELETED CONNECTOR #1334 RELOCATED REDUCER	RRE				TOLERANCES (UNLESS OTHERWISE SPECIFIED): FRACTIONAL MACHINING ± 1/64 TODD DESIGN ± .002	E101474	03/27/01	ASSY. DR. LD.	NONE
1				DELETED BALL VALVE ADDED 3/8" DRAIN	RRE				FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060 DECIMAL MACHINING TOLERANCES 0. ± .040 0.0 ± .030 0.00 ± .010	E101474	03/27/2001	INITIAL RELEASE	RRE
0	E101474	03/27/2001		INITIAL RELEASE	RRE								
										CHK'D BY	ART SARGENT		
										ENGR.			
										MAT'L.			
										MACH.			
										WELD.			
										DRG. NO.	10561382		
										SHEET	1	OF 2	

10561382

ITEM NO.	DESCRIPTION	RANGE/CAPACITY	FMED PART NUMBER	LOCATION
302	VALVE, THERMOSTATIC, 3" ANSI	175°F	16109496	AUX. SKID
303	PUMP, PRE-LUBE, 460V, 3 HP W/BUILT-IN RELIEF VALVE	30 GPM @ 50 PSI	12999072	AUX. SKID
304	PUMP, LUBE OIL CIRCULATION, 460V, 5 HP W/BUILT-IN RELIEF VALVE	20 GPM @ 75 PSI	12999071	AUX. SKID
305	HEATER, LUBE OIL - 1-1/2" NPT(F), 460V	7.5 KW	12999097	AUX. SKID
306	WYE STRAINER, LUBE OIL	1-1/2" NPT (F)	11914769	AUX. SKID
307	FILTER, LUBE OIL BYPASS	1-1/2" NPT	12998479	AUX. SKID
1202	HEAT EXCHANGER, LUBE OIL	4" ANSI	12999063	AUX. SKID
1204	SWITCH, L. O. TEMPERATURE	90-220°F	12998123	AUX. SKID
1207	RTD W/WELL, DUAL ELEMENT	3/4" NPT	16113529	AUX. SKID
1330	HOSE, FLEX	3/8" NPT X 20'	12999087	AUX. SKID
1333	HOSE, FLEX	4" ANSI X 15'	12999094	AUX. SKID
1335	HOSE, FLEX	1-1/2" NPT X 20'	12999093	AUX. SKID
1338	HOSE, FLEX	3/8" NPT X 25'	12999088	AUX. SKID

?NOTES: ?

1. PIPING TO BE ASTM A53 SCHEDULE 40.
2. AFTER WELDING, ALL SYSTEM PIPING TO BE CLEANED TO REMOVE WELD BERRIES, SCALE, RUST, DIRT, ETC. BEFORE INSTALLATION. FINAL FLUSHING OF SYSTEM TO BE IN ACCORDANCE WITH FMED DWG. P12614730 ON COMPLETION OF FLUSH, CLEANLINESS OF FILTER ELEMENTS TO BE WITNESSED BY FMED SERVICE PERSONNEL PRIOR TO FLUSHING THROUGH THE ENGINE LUBE OIL HEADERS. CARE MUST BE TAKEN TO ASSURE ALL PIPING AND COMPONENTS ARE CLEAN AND ASSEMBLED/INSTALLED CORRECTLY.
3. ALL TEMPERATURES SHOWN ARE BASED ON 100% LOAD.
4. CAUTION: THE LUBE OIL STRAINER AND FILTER ELEMENTS ARE NORMALLY SHIPPED LOOSE. OPEN STRAINER AND FILTER, INSPECT FOR ANY DIRT OR FOREIGN PARTICLES AND CLEAN IF NECESSARY. AND THEN CAREFULLY INSERT THE BASKETS AND CART-RIDGES AND REPLACE COVER.
5. STRAINER MOUNTS ON THE SUBBASE, IT WILL BE SHIPPED LOOSE AND BOLTED ON IN THE FIELD

Ⓢ

①

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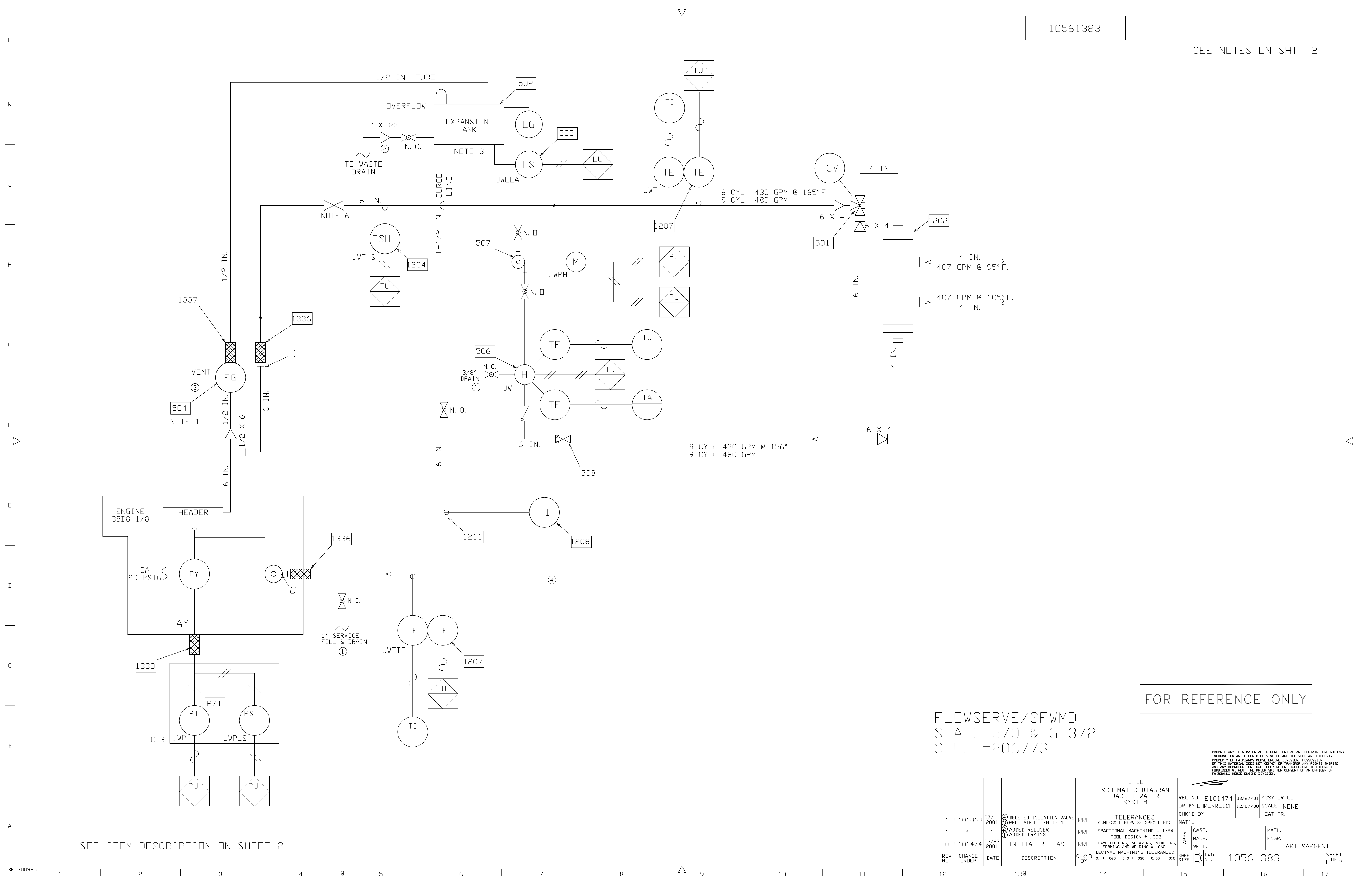
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REV. NO.		CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	TITLE		REL. NO. E101474 03/27/01 ASSY. DR. LD.	
1		E101863	07/2001	Ⓢ DELETED ITEM #1334 ① DELETED NOTE #6	RRE	SCHEMATIC DIAGRAM LUBE OIL SYSTEM		DR. BY EHRENREICH 12/07/00 SCALE NONE	
0		E101474	03/27/2001	INITIAL RELEASE	RRE	TOLERANCES (UNLESS OTHERWISE SPECIFIED):		CHK'D BY HEAT TR.	
						FRACTIONAL MACHINING ± 1/64 TODL DESIGN ± .002		MATERIAL	
						FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060		MACH. ENGR.	
						DECIMAL MACHINING TOLERANCES 0.1 ± .040 0.0 ± .030 0.00 ± .010		WELD. ART SARGENT	
SHEET SIZE		D		DWG. NO.		10561382		SHEET 2 OF 2	

10561383

SEE NOTES ON SHT. 2



FOR REFERENCE ONLY

FLOWERVE/SFWMD  
 STA G-370 & G-372  
 S. O. #206773

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REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	ENG. NO.	SHEET SIZE	1 OF 2
1	E101863	07/2001	DELETED ISOLATION VALVE RELOCATED ITEM #504	RRE			
1			ADDED REDUCER ADDED DRAINS	RRE			
0	E101474	03/27/2001	INITIAL RELEASE	RRE			

TITLE SCHEMATIC DIAGRAM JACKET WATER SYSTEM		REL. NO. E101474	03/27/01	ASSY. DR. LD.
DR. BY EHRENREICH		12/07/00	SCALE NONE	
CHK'D BY		HEAT TR.		
MATERIAL		MATERIAL		
CAST.		MACH.		
WELD.		ENGR.		
ART SARGENT				
SHEET NO. 10561383		SHEET 1 OF 2		

SEE ITEM DESCRIPTION ON SHEET 2

10561383

ITEM NO.	DESCRIPTION	RANGE/CAPACITY	FMED PART NUMBER	LOCATION
501	VALVE, THERMOSTATIC CONTROL	4" ANSI	11901204	AUX. SKID
502	TANK, JACKET WATER EXPANSION	75 GAL	12998654	AUX. SKID
504	INDICATOR, JACKET WATER FLOW	1" NPT(F)	16108829	LOOSE
505	LEVEL, SWITCH		12998244	AUX. SKID
506	HEATER, KEEP WARM, 460V	9 KW	12999096	AUX. SKID
507	PUMP, KEEP WARM, 460V, 3 HP	40 GPM/25 TDH	12999073	AUX. SKID
508	VALVE, DUD CHECK	6" ANSI	11913982	AUX. SKID
1202	HEAT EXCHANGER, J. W.	4" ANSI	12999063	AUX. SKID
1204	SWITCH, JACKET WATER TEMPERATURE HI	90-220°F	12998123	AUX. SKID
1207	RTD, W/WELL, DUAL ELEMENT	3/4" NPT	16113529	AUX. SKID
1208	TEMPERATURE GAUGE, 1/2" NPT	0-250°F	16113440	AUX. SKID
1211	THERMOWELL	3/4" NPT	16706679	AUX. SKID
1330	HOSE, FLEX	3/8" NPT X 20'	12999087	AUX. SKID
1336	HOSE, FLEX	6" ANSI X 12'	12999095	AUX. SKID
1337	HOSE, FLEX	1/2" NPT X 25'	12999089	AUX. SKID

?NOTES: ?

- AFTER START-UP AND DURING CONTINUOUS NORMAL OPERATION, INDICATOR SHOULD BE CLEAR WITH NO STEADY STREAM OF AIR BUBBLES.
- ALL TEMPERATURES SHOWN ARE AT 100% LOAD
- EXPANSION TANK SHOULD BE THE HIGHEST COMPONENT IN JACKET WATER SYSTEM. BUT NOT LESS THAN 8' ABOVE THE JACKET WATER PUMP SUCTION FLANGE.
- JACKET WATER MUST BE TREATED TO ACHIEVE A PH FACTOR OF 8.5 - 9.5 TO CONTROL CORROSION AND AN ALLOWABLE HARDNESS OF 3 GRAINS PER 50 GALLONS OR 50 PPM MAXIMUM TO MINIMIZE SCALE FORMATION.
- PIPING TO BE ASTM A53 GRADE 3 SCHEDULE 40 NON-GALVANIZED.
- FIELD ADJUST GATE VALVE TO ACHIEVE AN ENGINE JACKET WATER INLET/OUTLET TEMPERATURE DIFFERENTIAL OF 7-9°F. LOCK IN POSITION.

FOR REFERENCE ONLY

FLOWSERVE/SFWMD  
STA G-370 & G-372  
S. O. #206773

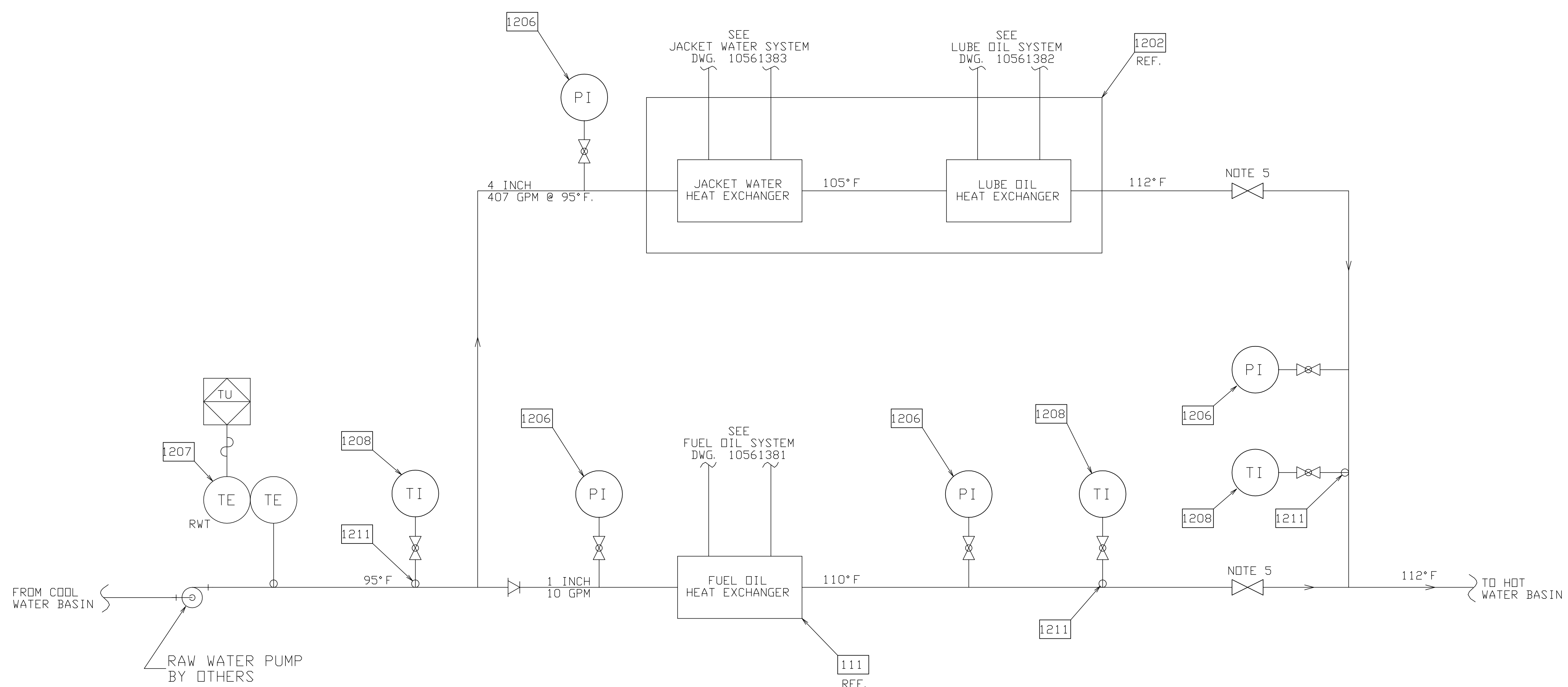
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TITLE SCHEMATIC DIAGRAM JACKET WATER SYSTEM				REL. NO. E101474 03/27/01 ASSY. DR. LD.	
DR. BY EHRENREICH 12/07/00 SCALE NONE				CHK'D BY HEAT TR.	
TOLERANCES (UNLESS OTHERWISE SPECIFIED):				MATERIAL	
FRACTIONAL MACHINING ± 1/64				CAST.	
TODD DESIGN ± .002				MACH.	
FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060				WELD.	
DECIMAL MACHINING TOLERANCES				ART SARGENT	
0. ± .040 0.0 ± .030 0.00 ± .010				SHEET SIZE D	
REV. NO. CHANGE ORDER DATE DESCRIPTION CHK'D BY				Dwg. No. 10561383 SHEET 2 OF 2	



10561384

SEE NOTES ON SHT. 2



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SEE ITEM DESCRIPTION ON SHEET 2

TITLE				SCHEMATIC DIAGRAM		RAW WATER		COOLING SYSTEM		BFGoodrich ENGINE DIVISION	
REL. NO. E101474				03/27/2001		ASSY. DR. LD.		DR. BY EHRENREICH		12/07/00 SCALE NONE	
CHK'D BY				HEAT TR.		MACH.		ENGR.		ART SARGENT	
TOLERANCES (UNLESS OTHERWISE SPECIFIED):				FRACTIONAL MACHINING ± 1/64		TODD DESIGN ± .002		FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060		DECIMAL MACHINING TOLERANCES	
REV. NO.				CHANGE ORDER		DATE		DESCRIPTION		CHK'D BY	
0				E101474		03/27/2001		INITIAL RELEASE		RRE	
SHEET SIZE				D		DWG. NO.		10561384		SHEET 1 OF 2	

10561384

ITEM NO.	DESCRIPTION	RANGE/CAPACITY	FMED PART NUMBER	LOCATION
1206	PRESSURE GAUGE, 1/2" NPT	0-35 PSI	12998631	AUX. SKID
1207	RTD W/WELL, DUAL ELEMENT	3/4" NPT	16113529	AUX. SKID
1208	TEMPERATURE GAUGE, 1/2" NPT	0-250°F	16113440	AUX. SKID
1211	THERMO WELL	3/4" NPT	16706679	AUX. SKID

?NOTES: ?

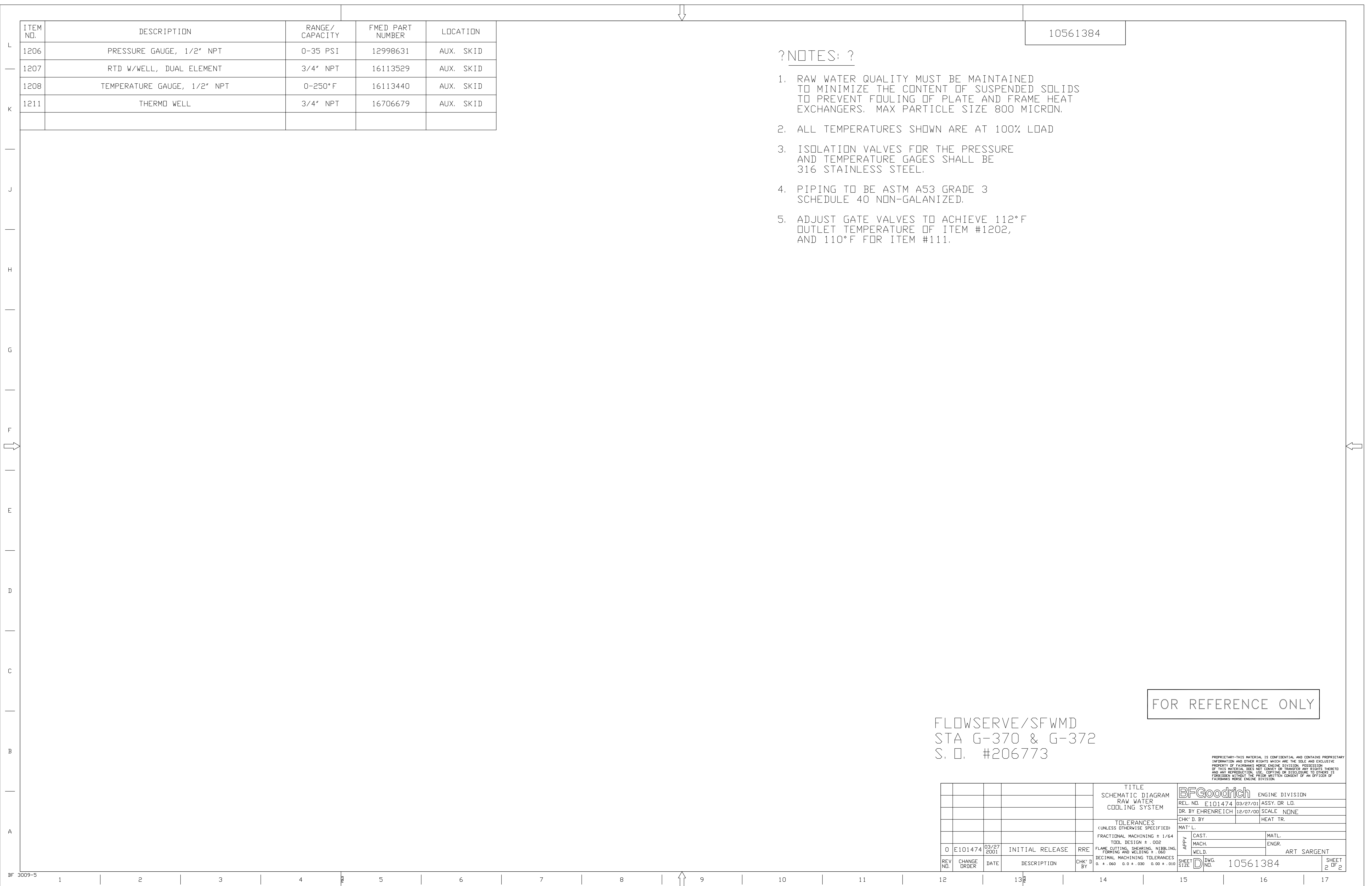
1. RAW WATER QUALITY MUST BE MAINTAINED TO MINIMIZE THE CONTENT OF SUSPENDED SOLIDS TO PREVENT FOULING OF PLATE AND FRAME HEAT EXCHANGERS. MAX PARTICLE SIZE 800 MICRON.
2. ALL TEMPERATURES SHOWN ARE AT 100% LOAD
3. ISOLATION VALVES FOR THE PRESSURE AND TEMPERATURE GAGES SHALL BE 316 STAINLESS STEEL.
4. PIPING TO BE ASTM A53 GRADE 3 SCHEDULE 40 NON-GALVANIZED.
5. ADJUST GATE VALVES TO ACHIEVE 112°F OUTLET TEMPERATURE OF ITEM #1202, AND 110°F FOR ITEM #111.

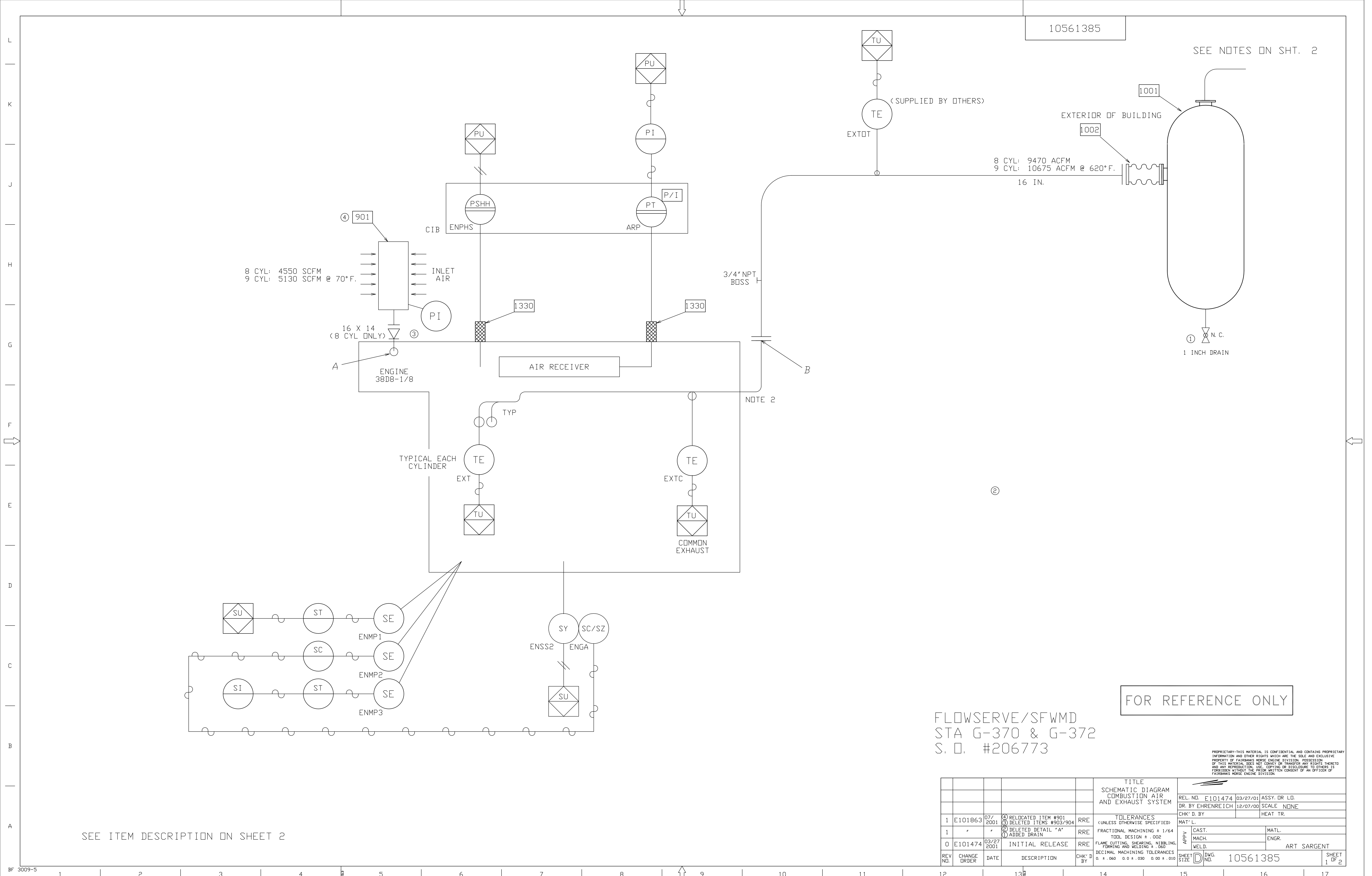
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TITLE		Schematic Diagram		ENGINE DIVISION	
RAW WATER COOLING SYSTEM		REL. NO. E101474		03/27/01 ASSY. OR L.D.	
DR. BY EHRENREICH		12/07/00		SCALE NONE	
CHK'D BY		HEAT TR.		MATERIAL	
TOLERANCES (UNLESS OTHERWISE SPECIFIED):		FRACTIONAL MACHINING ± 1/64		MACH. ENGR.	
TOOL DESIGN ± .002		FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060		WELD. ART SARGENT	
DECIMAL MACHINING TOLERANCES		0. ± .040 0.0 ± .030 0.00 ± .010		SHEET SIZE D	
REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	ENG. NO. 10561384
0	E101474	03/27/2001	INITIAL RELEASE	RRE	





10561385

SEE NOTES ON SHT. 2

8 CYL: 4550 SCFM  
9 CYL: 5130 SCFM @ 70°F.

8 CYL: 9470 ACFM  
9 CYL: 10675 ACFM @ 620°F.  
16 IN.

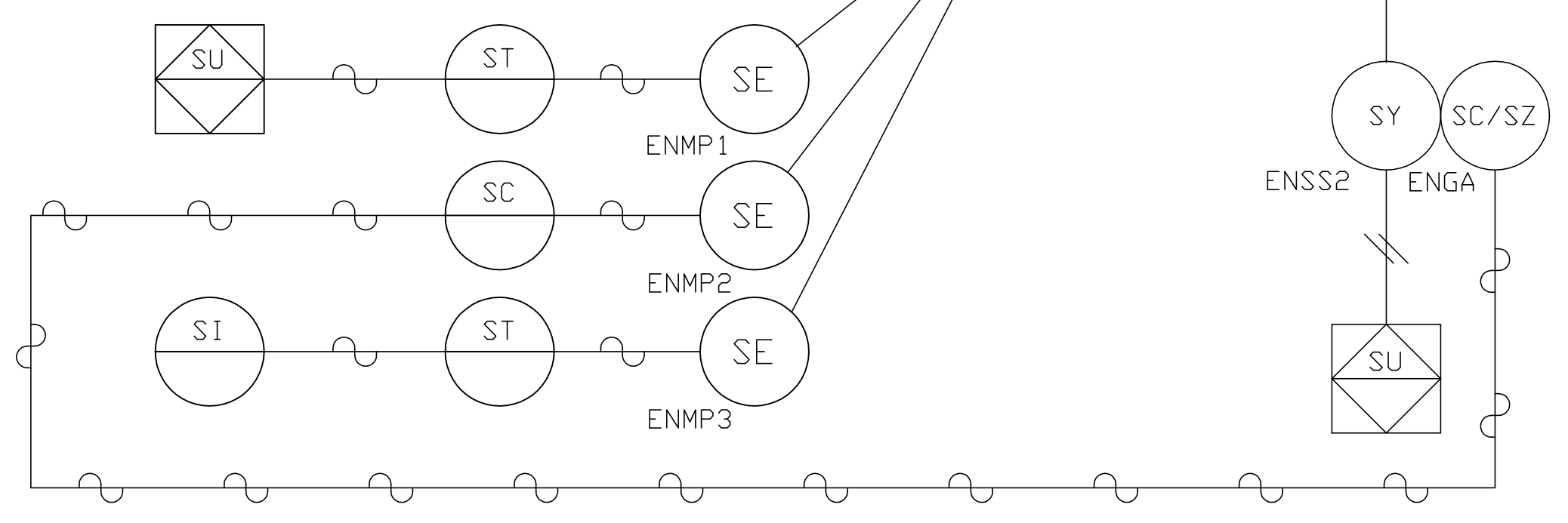
1 INCH DRAIN

AIR RECEIVER

ENGINE 38DB-1/8

TYPICAL EACH CYLINDER

COMMON EXHAUST



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REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	TITLE	REL. NO.	DATE	SCALE
1	E101863	07/2001	RELOCATED ITEM #901 DELETED ITEMS #903/904	RRE	SCHMATIC DIAGRAM COMBUSTION AIR AND EXHAUST SYSTEM	E101474	03/27/01	ASSY. DR. LD.
1			DELETED DETAIL 'A' ADDED DRAIN	RRE				SCALE NONE
0	E101474	03/27/2001	INITIAL RELEASE	RRE				SCALE NONE
					TOLERANCES (UNLESS OTHERWISE SPECIFIED): FRACTIONAL MACHINING ± 1/64 TOOL DESIGN ± .002 FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060 DECIMAL MACHINING TOLERANCES 0. ± .040 0.0 ± .030 0.00 ± .010			
					CHECKED BY: ART SARGENT DRAWING NO. 10561385 SHEET 1 OF 2			

SEE ITEM DESCRIPTION ON SHEET 2

10561385

ITEM NO.	DESCRIPTION	RANGE/CAPACITY	FMED PART NUMBER	LOCATION
901	FILTER, AIR INTAKE	16 ANSI	12999064	LOOSE
1001	SILENCER, EXHAUST	18 ANSI	12999078	LOOSE
1002	JOINT, EXHAUST EXPANSION	16 X 18 ANSI	12999062	LOOSE
1330	HOSE, FLEX	3/8" NPT X 20'	12999087	AUX. SKID

?NOTES: ?

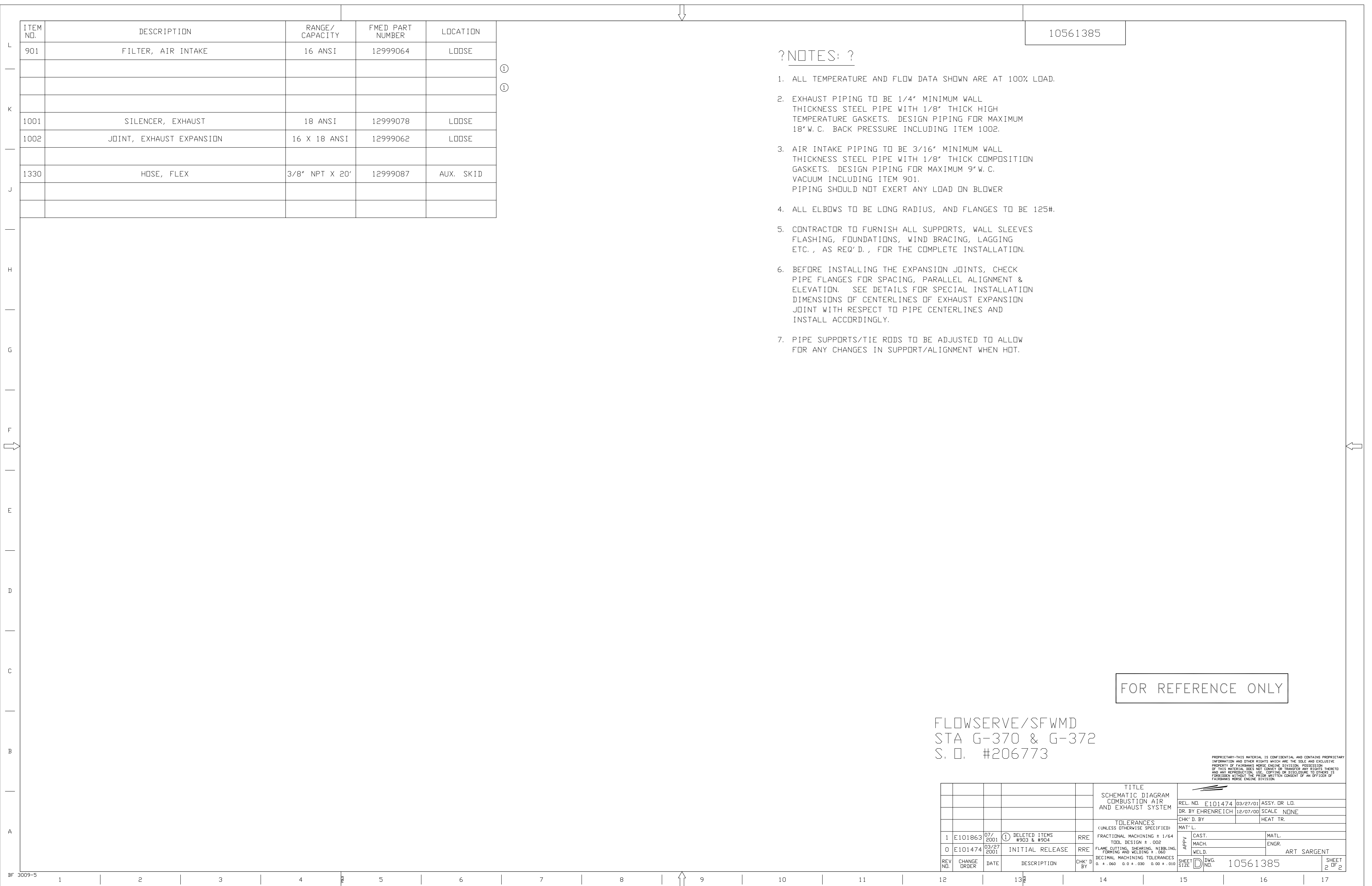
1. ALL TEMPERATURE AND FLOW DATA SHOWN ARE AT 100% LOAD.
2. EXHAUST PIPING TO BE 1/4" MINIMUM WALL THICKNESS STEEL PIPE WITH 1/8" THICK HIGH TEMPERATURE GASKETS. DESIGN PIPING FOR MAXIMUM 18"W.C. BACK PRESSURE INCLUDING ITEM 1002.
3. AIR INTAKE PIPING TO BE 3/16" MINIMUM WALL THICKNESS STEEL PIPE WITH 1/8" THICK COMPOSITION GASKETS. DESIGN PIPING FOR MAXIMUM 9"W.C. VACUUM INCLUDING ITEM 901. PIPING SHOULD NOT EXERT ANY LOAD ON BLOWER
4. ALL ELBOWS TO BE LONG RADIUS, AND FLANGES TO BE 125#.
5. CONTRACTOR TO FURNISH ALL SUPPORTS, WALL SLEEVES FLASHING, FOUNDATIONS, WIND BRACING, LAGGING ETC., AS REQ'D., FOR THE COMPLETE INSTALLATION.
6. BEFORE INSTALLING THE EXPANSION JOINTS, CHECK PIPE FLANGES FOR SPACING, PARALLEL ALIGNMENT & ELEVATION. SEE DETAILS FOR SPECIAL INSTALLATION DIMENSIONS OF CENTERLINES OF EXHAUST EXPANSION JOINT WITH RESPECT TO PIPE CENTERLINES AND INSTALL ACCORDINGLY.
7. PIPE SUPPORTS/TIE RODS TO BE ADJUSTED TO ALLOW FOR ANY CHANGES IN SUPPORT/ALIGNMENT WHEN HOT.

FOR REFERENCE ONLY

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STA G-370 & G-372  
S. O. #206773

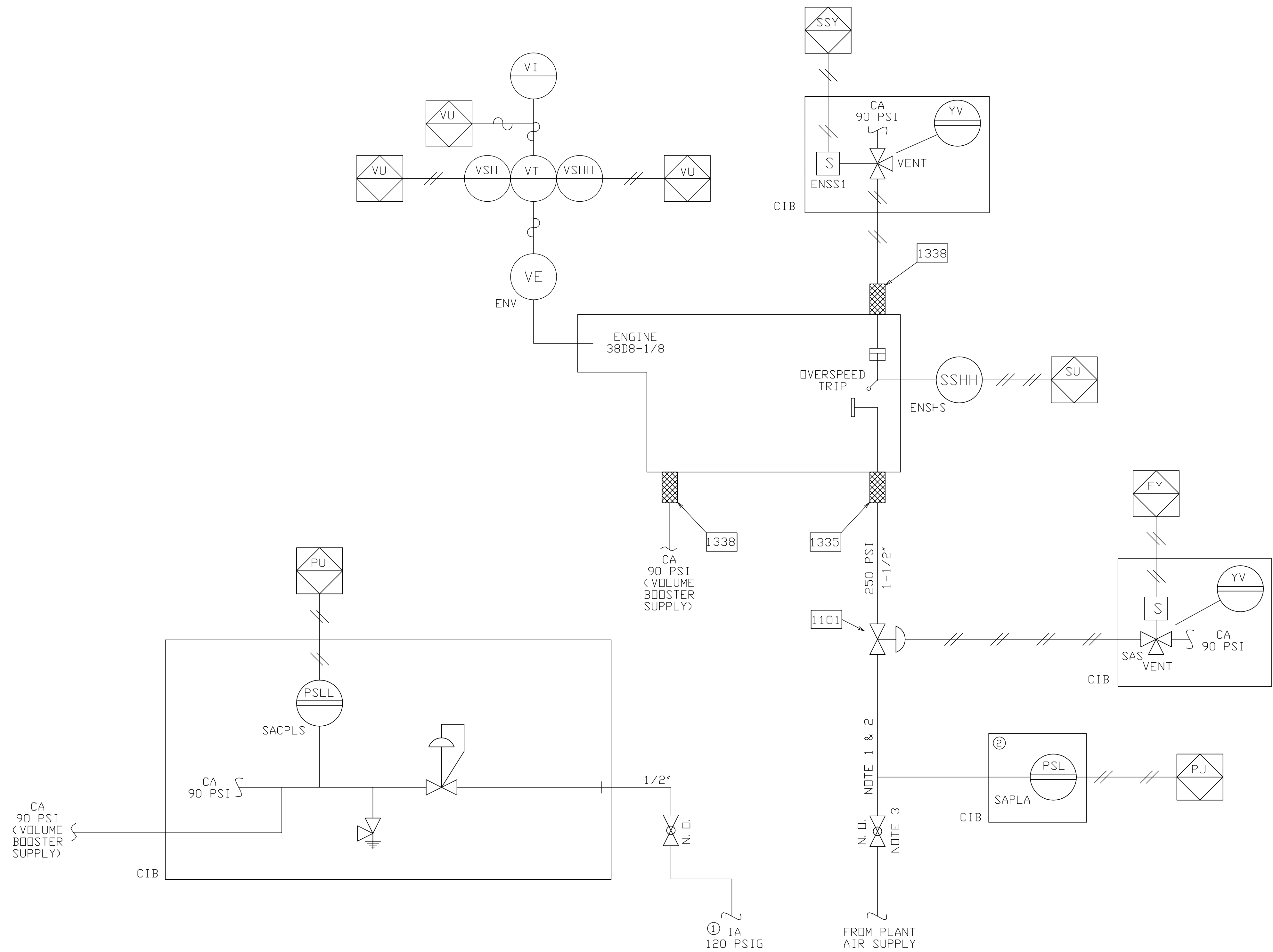
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TITLE		SCHEMATIC DIAGRAM COMBUSTION AIR AND EXHAUST SYSTEM		REL. NO. E101474	03/27/01	ASSY. DR. LD.
DR. BY EHRENREICH		12/07/00		SCALE NONE		
CHK'D BY		HEAT TR.		MATERIAL		
TOLERANCES (UNLESS OTHERWISE SPECIFIED)		FRACTIONAL MACHINING ± 1/64		MACH. ENGR.		
TOOL DESIGN ± .002		FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060		WELD. ART SARGENT		
DECIMAL MACHINING TOLERANCES		0. ± .040 0.0 ± .030 0.00 ± .010		SHEET 2 OF 2		
REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	Dwg. No. 10561385	
1	E101863	07/2001	DELETED ITEMS #903 & #904	RRE		
0	E101474	03/27/2001	INITIAL RELEASE	RRE		



10561386

SEE NOTES ON SHT. 2



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REV. NO.		CHANGE ORDER	DATE	DESCRIPTION	CHK' D BY	ENG. NO.	SHEET SIZE	
1	E101863	07/2001		RELOCATED 'SAPLA' ADDED 'IA 120 PSIG'	RRE		10561386	
0	E101474	03/27/2001		INITIAL RELEASE	RRE		10561386	

TITLE			
SCHEMATIC DIAGRAM STARTING AIR SYSTEM			
REL. NO.	E101474	03/27/01	ASSY. DR. LD.
DR. BY	EHRENREICH	12/07/00	SCALE NONE
CHK' D. BY			HEAT TR.
TOLERANCES (UNLESS OTHERWISE SPECIFIED):			
FRACTIONAL MACHINING	± 1/64	TODD DESIGN	± .002
FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING	± .060	DECIMAL MACHINING TOLERANCES	0. ± .040 0.0 ± .030 0.00 ± .010

SEE ITEM DESCRIPTION ON SHEET 2

10561386

ITEM NO.	DESCRIPTION	RANGE/CAPACITY	FMED PART NUMBER	LOCATION
1101	VALVE, 2-WAY, PILOT OPERATED, N. C.	1-1/2" NPT	12999025	AUX. SKID
1335	HOSE, FLEX	1-1/2" NPT X 20'	12999093	AUX. SKID
1338	HOSE, FLEX	3/8" NPT X 25'	12999088	AUX. SKID

?NOTES: ?

1. HIGH PRESSURE (250 PSI) PIPING MUST BE SCHEDULE 80 BLACK STEEL PIPE WITH 300 LB. FITTINGS.
2. PIPING SHOULD SLOPE TOWARD AIR TANKS TO PERMIT DRAINAGE WITH NO TRAPS IN LINE. CLEAN PIPING BY BLOWING DOWN PRIOR TO CONNECTION TO COMPONENTS AND ENGINE.
3. ?CAUTION? THIS VALVE MUST BE CLOSED WHEN PERFORMING ANY ENGINE RELATED MAINTENANCE.

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TITLE		SCHEMATIC DIAGRAM STARTING AIR SYSTEM		REL. NO. E101474	03/27/01	ASSY. DR. LD.
DR. BY EHRENREICH		12/07/00		SCALE NONE		
CHK'D BY		HEAT TR.		MATERIAL		
TOLERANCES (UNLESS OTHERWISE SPECIFIED)		FRACTIONAL MACHINING ± 1/64		MACH. ENGR.		
TODL DESIGN ± .002		FLAME CUTTING, SHEARING, NIBBLING, FORMING AND WELDING ± .060		WELD. ART SARGENT		
DECIMAL MACHINING TOLERANCES		0. ± .040 0.0 ± .030 0.00 ± .010		SHEET SIZE D		
REV. NO.	CHANGE ORDER	DATE	DESCRIPTION	CHK'D BY	Dwg. No. 10561386	
1	E101863	07/2001	①12999025 WAS 11915542	RRE	SHEET 2 OF 2	
0	E101474	03/27/2001	INITIAL RELEASE	RRE		



APPROXIMATE WEIGHTS

PUMP WEIGHT (DRY):	100,100 LBS.
SOLEPLATE WEIGHT:	2,500 LBS.
WATER WEIGHT (ABOVE L.W.L.):	199,000 LBS.
GEAR WEIGHT	27,500 LBS.
<b>TOTAL FLOOR WEIGHT:</b>	<b>330,000 LBS.</b>

22 FT. DISMANTLING HEIGHT  
 REQ'D. TO REMOVE PUMP IN  
 SECTIONS—LESS GEAR.

SEE DETAIL 'E'  
 SHEET 3

LIFTING PROVISIONS  
 (4 LUGS EQUALLY  
 SPACED AROUND  
 CIRCUMFERENCE)

TOP FLOOR ELEVATION +31.0'

Ø170.00  
 FLOOR OPENING

158.00  
 131.36  
 END OF DISCHARGE HEAD

108.00  
 NOSE OF SPLITTER WALL

Ø30.00 MANWAY  
 (NOT PROVIDED BY  
 FLOWSERVE)

DISCHARGE SILL +20'

ELEVATION +16.23' (194.76")

SEE DETAIL 'B'  
 SHEET 3

Ø168.00  
 FLOOR OPENING

SEE DETAIL 'D'  
 SHEET 3

Ø IMPELLER +4.64' (55.68")

+1.47' (17.64") ELEVATION  
 BOTTOM OF TRUNCATED CONE

ELEVATION -8.50' (102.00")

12.00 AWWA CLASS 'B' FLANGED  
 CONN. VACUUM PRIMING (NOT PROVIDED BY FLOWSERVE).  
 SEE PLAN VIEW OF DISCH. CONDUIT.

DISCHARGE POOL LEVEL  
 @ MAX HIGH WATER  
 +19.0' (228.00") ELEV.

DISCHARGE POOL LEVEL  
 @ RATED & DESIGN CONDITIONS  
 +17.0' (204.00") ELEV.

INTAKE LEVEL @ MAX HIGH  
 WATER LEVEL +14.0' (168.00") ELEV.

INTAKE LEVEL @ DESIGN FLOW  
 CONDITION +10.0' (120.00") ELEV.

INTAKE LEVEL @ RATED & START UP  
 CONDITION +8.0' (96.00") ELEV.

INTAKE LEVEL @ MAX SCREEN  
 LOSS +5.0' (60.00") ELEV.

LIFTING PROVISION  
 (INTERNAL RIBS)

LIFTING PROVISION

SEE SHEET 2 FOR PLAN  
 VIEW OF INTAKE TUNNEL

+3.99' (47.86") ELEVATION  
 TOP OF EMBEDDED RING

R2.25

99.50

FLOW →

55.31

372.50

164.00

660.00  
 (55.00')

SECT. 1—SEE SHT. 2  
 SECT. 2—SEE SHT. 2

SECT. 3—SEE SHT. 2  
 SECT. 4—SEE SHT. 2

SECT. 5—SEE SHT. 2  
 SECT. 6—SEE SHT. 2

32.00

ELEV.  
 +8.00' (96.00")

144.00  
 (12.00')

-4.00' (-48.00")  
 ELEV.

97.00

35.00

177.00

332.00

▲ SURFACES SHOWN BY PHANTOM LINES  
 ARE CONCRETE FOUNDATION, CONCRETE INLET AND DISCHARGE CONDUITS.

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP
C	PF	REC	REC	B	SL	PF	REC	A	SL	REC	REC
DATE	DATE	13JY01	DATE	27JE01	DATE	29MR01					
		CORRECTED C OF LAST CYL TO EDGE OF SUBBASE DIM. (SHEET 4) 26.00 WAS 25.88 (SHEET 3)		REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000		INITIAL ISSUE					

GEAR MFG.	SERVICE	CUSTOMER	DRD. NO.
PHIL. GEAR CORP.	DRAINAGE PUMP	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	S-1613
TYPE 1.8 MVBX-2PD	LIQUID FRESH WATER	DRD. NO. RFB NO. C-E305	ITEM NO.
FRAME	ROTATION CCW (H.I.)	ITEM NO.	DATE 29MR01
HP.	BEARINGS	ECP PUMPING STATION EQUIPMENT FOR STORMWATER TREATMENT AREA 3 AND STORMWATER TREATMENT AREA 4	DRAWN S.L.
RPM 720 INPUT 118 OUTPUT			CHECKED REC
DWG NO.			CERTIFIED REC

REFERENCE NOTES  
 SEE SHEET 2 FOR GENERAL NOTES

**FLOWSERVE**

ENGINEERING DEPARTMENT  
 PHILLIPSBURG, NJ 08865

GENERAL ARRANGEMENT

PUMP SIZE  
 925 CFS—STATION 372 (127APS)

SIZE CODE ITEM NO. DWG. NO.  
 F 88032 127APS86X5

REV. C

THIRD ANGLE PROJECTION SCALE NONE 127APS86X5 SHEET 1 OF 5

INSTALLATION REQUIREMENTS AND DETAILS

REFER TO IDP CROSS SECTIONAL DRAWING 127APS500X5 FOR COMPONENT PART NUMBERS.

- The pump design incorporates four components that must be permanently embedded in concrete. Those components are:
  - Part #498 (Support Ring)
  - Part #103 (Guide Ring)
  - Part #471 (Sole Plate)
  - Part #361 (Discharge Head)

The above embedments will be shipped to the site prior to the shipment of the main pump components.

- The main pump components will be shipped in multiple pieces and will require field assembly due to the size of the components. At the present time it is anticipated that the pump will be shipped with an assembled pump element that will weigh about 55,000 lbs. The pump element consists of the following major components:
  - Part #89 (Shroud)
  - Part #1 (Casing)
  - Part #10A (Pump End Shaft)
  - Part #3 (Impeller)

All other of the pump components will be shipped as loose pieces.

- The pump Discharge Head (Part #361) will be shipped in two segments which require field assembly and welding by the General Contractor.
- It will be necessary to install, align, and grout Part #498 (Support Ring) at the elevation as shown on IDP drawing 127APS86X5. Part #103 (Guide Ring) must also be installed, aligned, and grouted as shown on the referenced drawing.

Part #498 must be installed flat within 0.001" per foot of diameter. This is shown in Figure "D" on IDP drawing 127APS86X5. Since the 115.130" diam. bore forms the seal with the pump, this surface must be protected during the installation process. The 115.130" diameter must be held round within 0.020" during the complete installation process.

The concentricity, roundness, and flatness of this component must be checked prior to and after grouting to assure that the above requirements are achieved.

Part #103 must be installed concentric with Part #498 within 0.040" and the bore diameter of 167.000" must be held round during the installation process within 0.030". This is shown in Detail "B" on FlowsERVE drawing 127APS86X5.

The concentricity and roundness of this component must be checked prior to and after grouting to assure that the above requirements are achieved.

- At the floor elevation there are (32)1.5" diameter anchor bolts supplied by FlowsERVE that are equally spaced on a 180" diameter bolt circle. The soleplate is to be used as a template to set the anchor bolts. This is shown in Detail "E" on FlowsERVE drawing 127APS86X5.

The bolt circle of the Soleplate (Part #471) must be installed concentric with the 115.125" bore of Support Ring (Part #498) within 0.125".

- The Discharge Head is not mechanically connected to the Guide Ring (Part #103) as shown in Detail "B" on FlowsERVE drawing 127APS86X5.

- The following process is used to install the main pump components:
  - Install pump element by lifting the assembly by the upper end of Pump End Shaft (Part #10A). This assembly will be lowered down through the Discharge Head, Guide Ring, and will be allowed to rest on the bottom of the Support Ring (Part #498).

b. Install the Upper Shaft (Part #10B) and the Shaft Coupling (Part #'s164,252C,&252D). The fit between the shafting and the shaft coupling is a precision fit.

c. Install the Pump Support (Part #176) and Discharge Head Liner (Part #421) as an assembly over the top of the assembled shafting. The Pump Support is then placed on top of the Soleplate (Part #471).

d. Install the Inner Column (Part #424) over the shafting onto the top of the Casing (Part #1). It is necessary to attach fasteners that are located on the upper portion of the casing (Part #178B) which is below the large support plate from the inside of the pump. In order to accomplish this, it is necessary to temporarily lift the pump element/rotor assembly.

e. Align the rotor with the inner column alignment fit.

f. Install the Stuffing Box Extension (Part #264), Packing (Part #64), Split Gland (Part #16), Drive Coupling (Part #33) and other small associated components on the upper end of the pump.

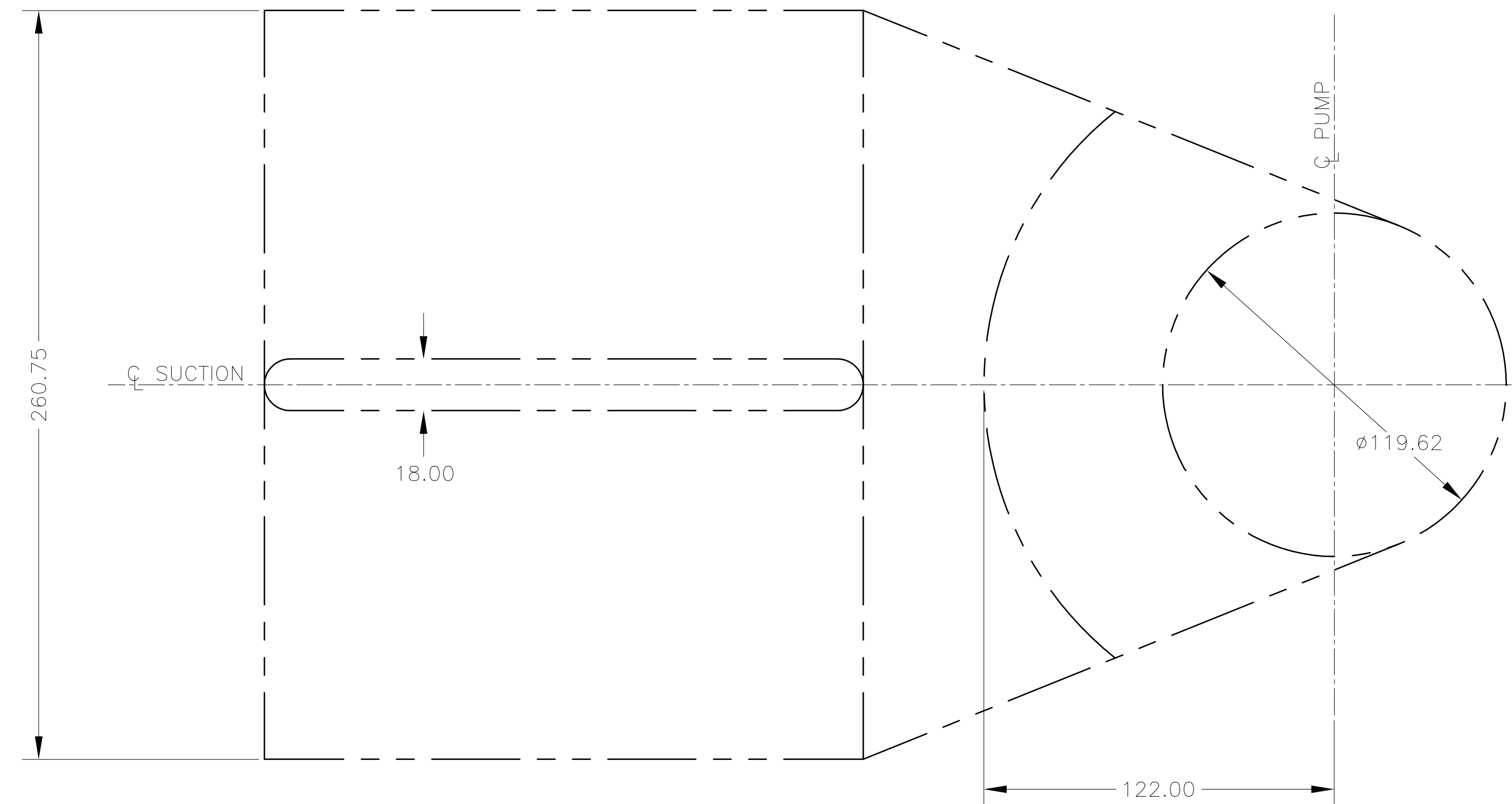
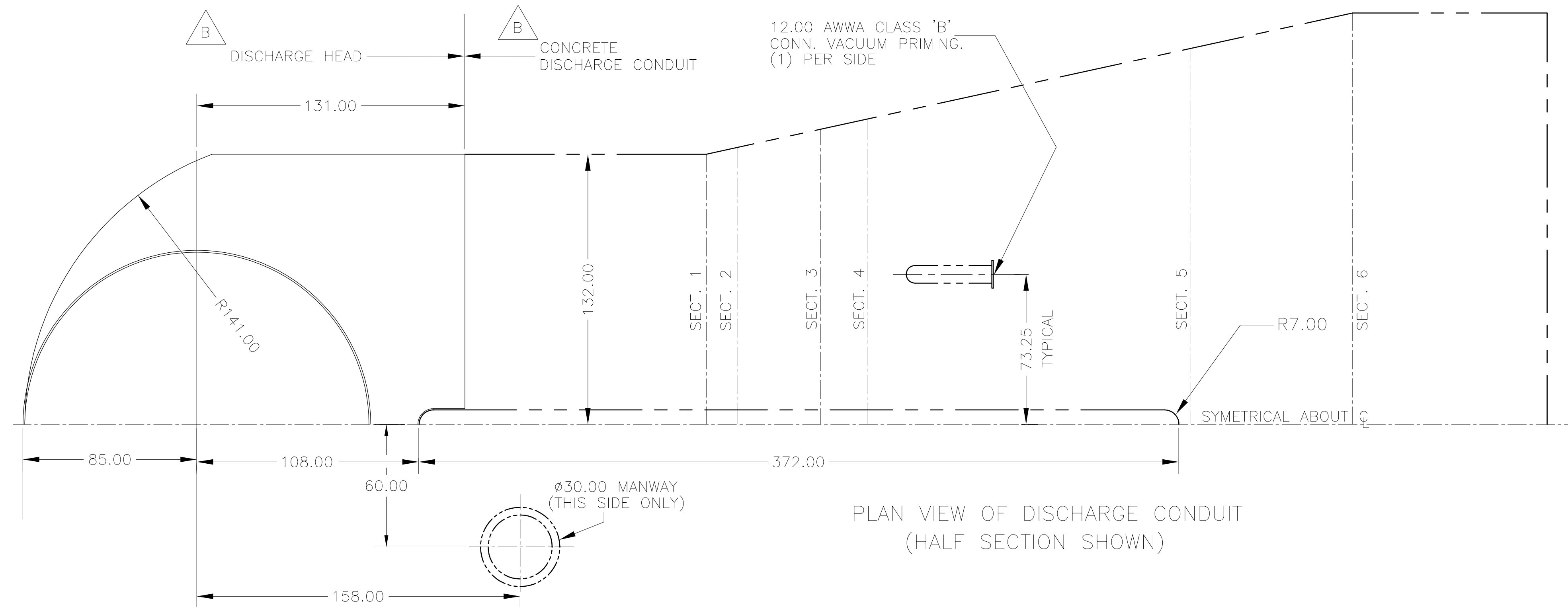
g. Install the Gear Support (Part #172)

- The anchor bolts are then tightened and the gear is placed on the Gear Support.

- The gear must be moved around on the pump gear pedestal until the low speed gear shaft is concentric with the pump shaft within 0.001" as shown by sweeping the pump shaft with a dial indicator attached to the gear shaft. Once this is completed, the gear is then bolted solid to the pump and the feet are then field drilled and doweled.

- The Pump Half Coupling Hub (Part #33) and the gear low speed shaft coupling hub (Part #34) are connected.

- The high speed gear shaft is then aligned to the drive shaft and engine.



PLAN VIEW OF CONCRETE INTAKE TUNNEL AT BOTTOM OF TRUNCATED CONE

**GENERAL NOTES**

THIS DRAWING IS NOT TO SCALE. WORK FROM DIMENSIONS SHOWN. READ INSTRUCTION BOOK BEFORE STARTING EQUIPMENT.

FOR GEAR INSTRUCTIONS, REFER TO LATEST GEAR OUTLINE DRAWINGS AND GEAR PROCEDURES.

**TOLERANCES:**

- ALLOW PLUS OR MINUS .25" FOR VARIATION OF FOUNDATION BOLT HOLES. SOLEPLATE IS TO BE USED AS A TEMPLATE TO LOCATE ANCHOR BOLTS.
- ALLOW PLUS OR MINUS .38" FOR ALL NOZZLE AND PIPING CONNECTION LOCATIONS.
- PLUS OR MINUS 1% FOR ALL NOMINAL LINEAR DIMENSIONS.
- PLUS OR MINUS 2 DEGREES FOR ALL NOMINAL ANGLES.

ALL HOLES IN FLANGES STRADDLE CENTERLINE UNLESS OTHERWISE INDICATED.

PIPING AND FITTINGS NOT SHOWN ARE TO BE FURNISHED BY CUSTOMER. DO NOT CONNECT TO PIPE TAPS UNLESS SPECIFIED ON DRAWING.

**B** SURFACES SHOWN BY PHANTOM LINES ARE CONCRETE FOUNDATION, CONCRETE INLET AND DISCHARGE CONDUITS.

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP
DATE				DATE				DATE				DATE			
				13JY01				27JE01				29MR01			
				CORRECTED C OF LAST CYL TO EDGE OF SUBBASE DIM. (SHEET 4) 26.00 WAS 25.88 (SHEET 3)				REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000				INITIAL ISSUE			

GEAR MFG.	SERVICE	CUSTOMER	DRN. NO.
PHIL. GEAR CORP.	DRAINAGE PUMP	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	S-1613
TYPE: 1.8 MVBX-2PD	LIQUID: FRESH WATER	DRN. NO. RFB NO. C-E305	ITEM NO.
FRAME	ROTATION: CCW (H.I.)	ITEM NO.	DATE: 29MR01
H.P.	BEARINGS	ITEM NO.	DRAWN: S.L.
R.P.M. 720 INPUT 118 OUTPUT		ITEM NO.	CHECKED: REC
DWG. NO.		ITEM NO.	CERTIFIED: REC

DRN. NO.	ITEM NO.	DATE	DRAWN	CHECKED	CERTIFIED
S-1613		29MR01	S.L.	REC	REC

**REFERENCE NOTES**

**FLOWSERVE** ENGINEERING DEPARTMENT PHILLIPSBURG, NJ 08865

**GENERAL ARRANGEMENT**

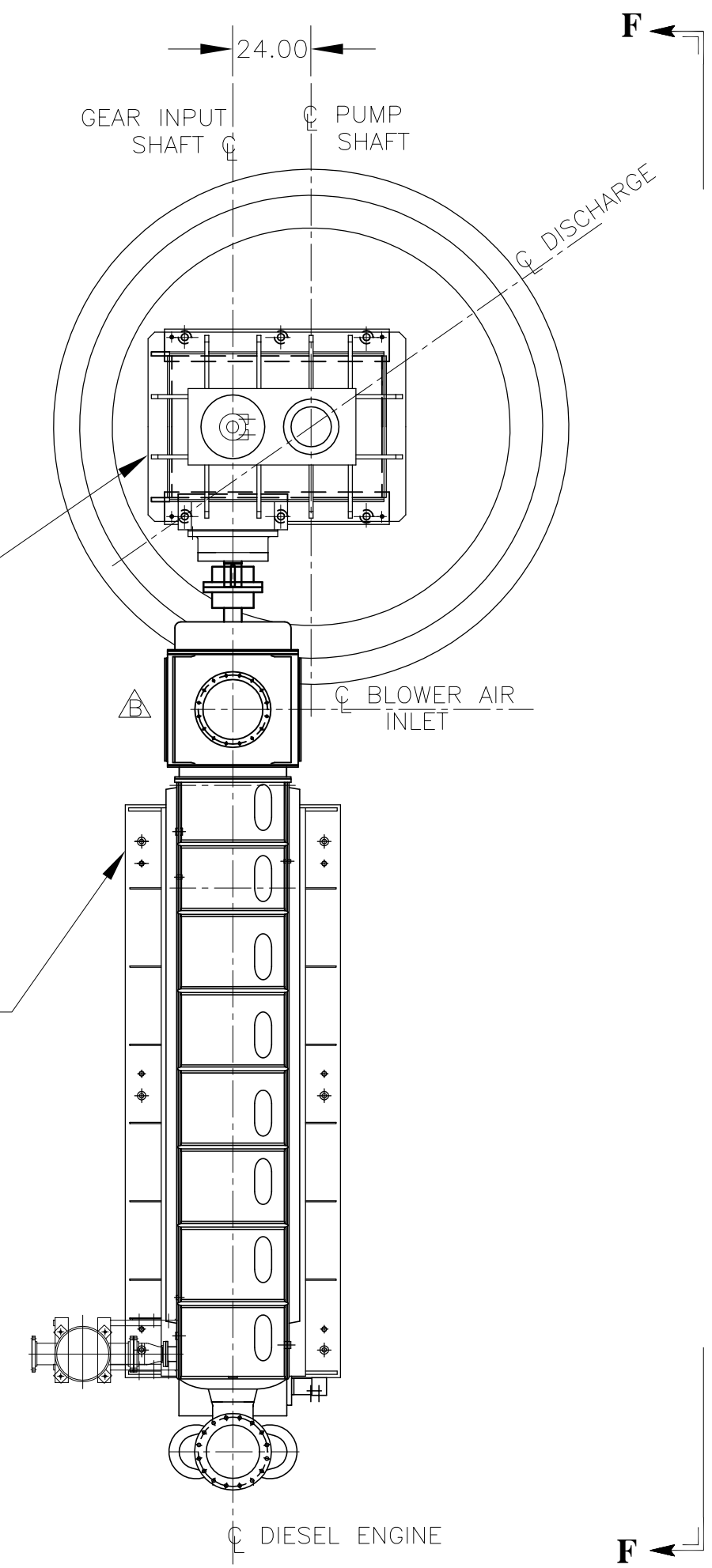
PUMP SIZE: 925 CFS-STATION 372 (127APS)

SIZE: F 88032 CODE IDENT. NO. DWG. NO. 127APS86X5 REV. C

THIRD ANGLE PROJECTION SCALE: NONE SHEET 2 OF 5

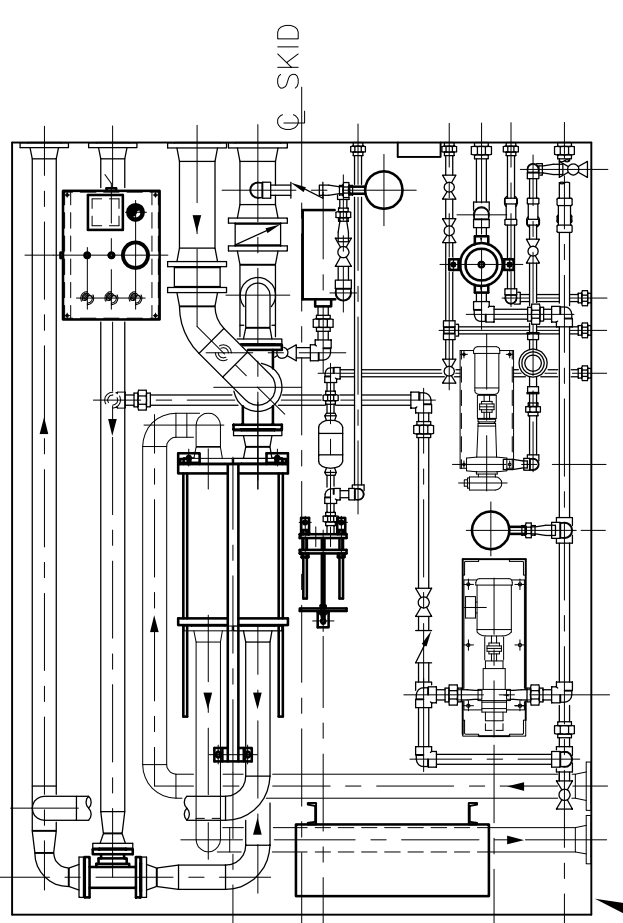




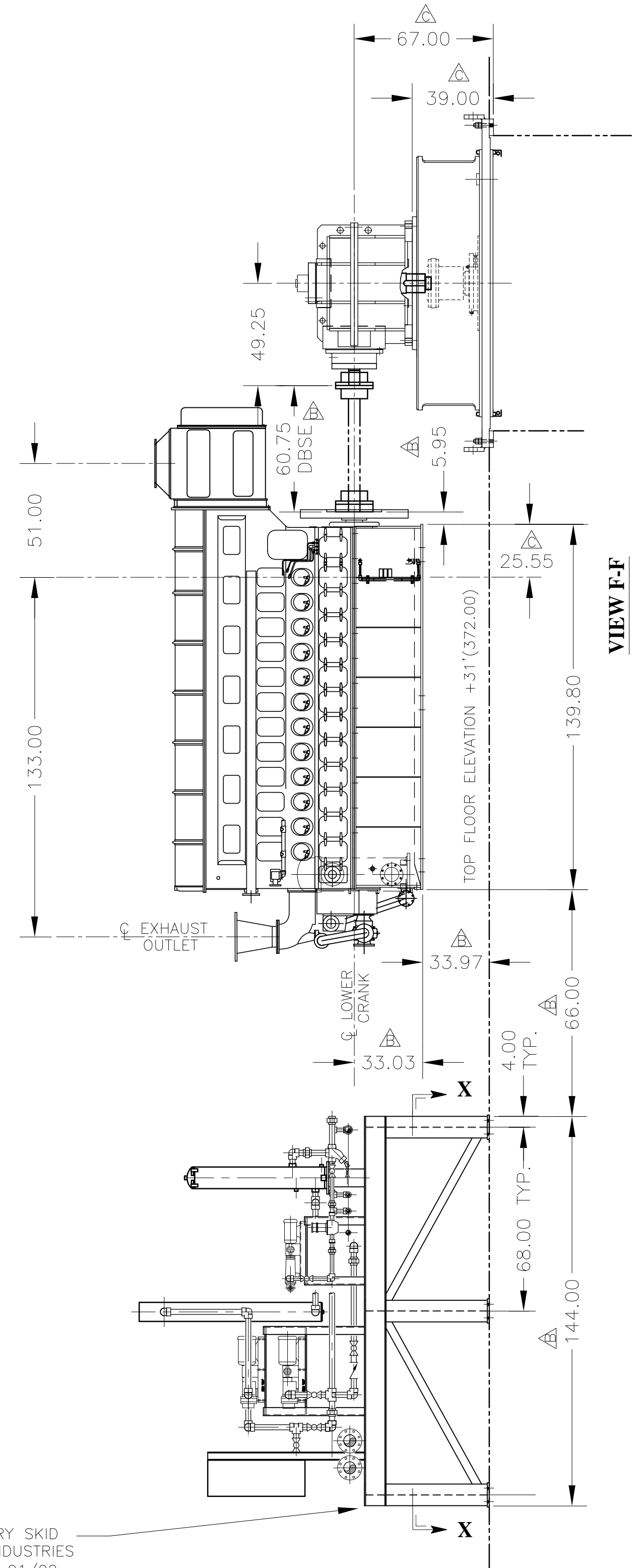


PHILADELPHIA GEAR MODEL  
 1.9MVBX DWG. #03152-0551 (RH)  
 #03152-0553 (LH)

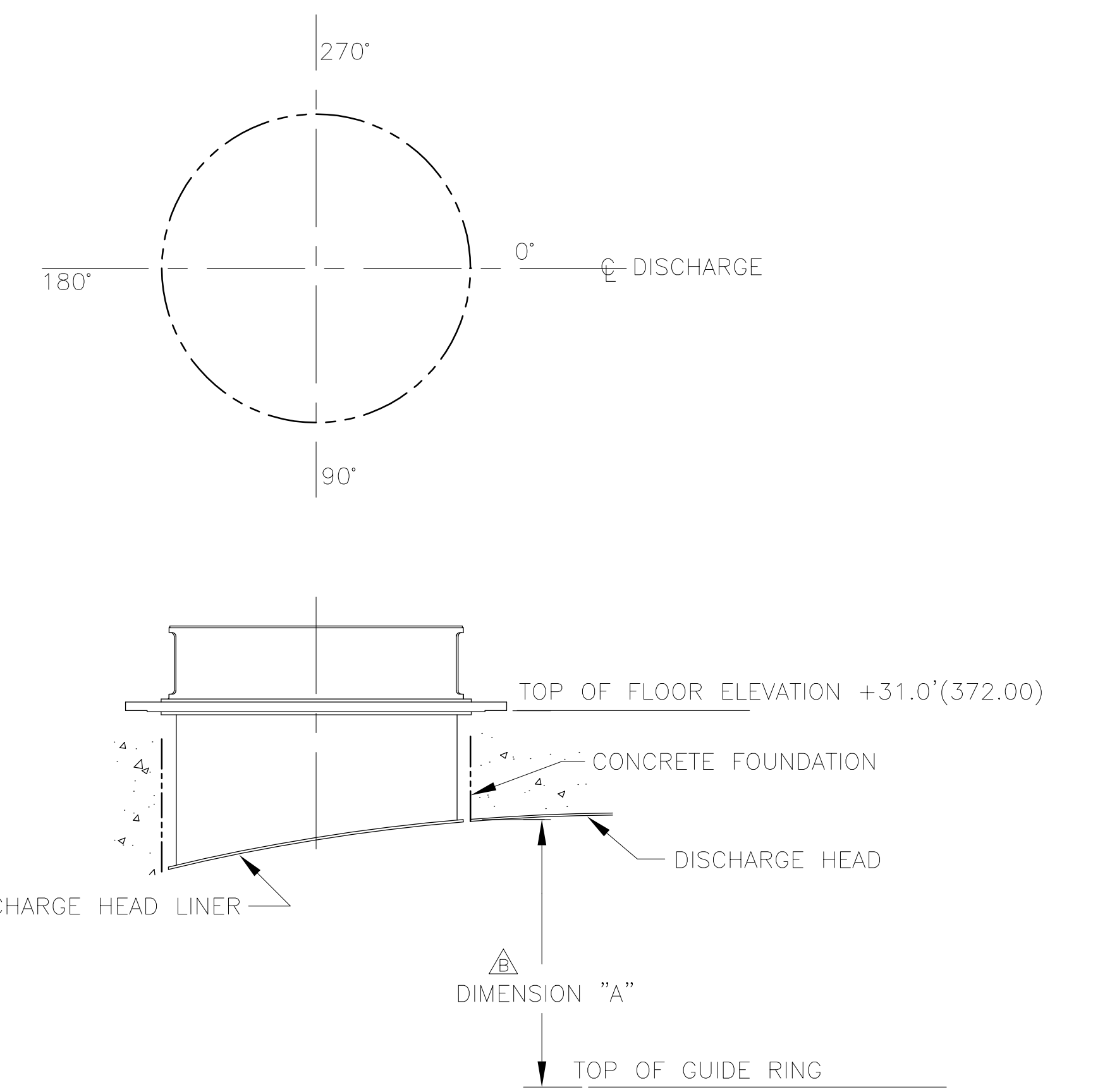
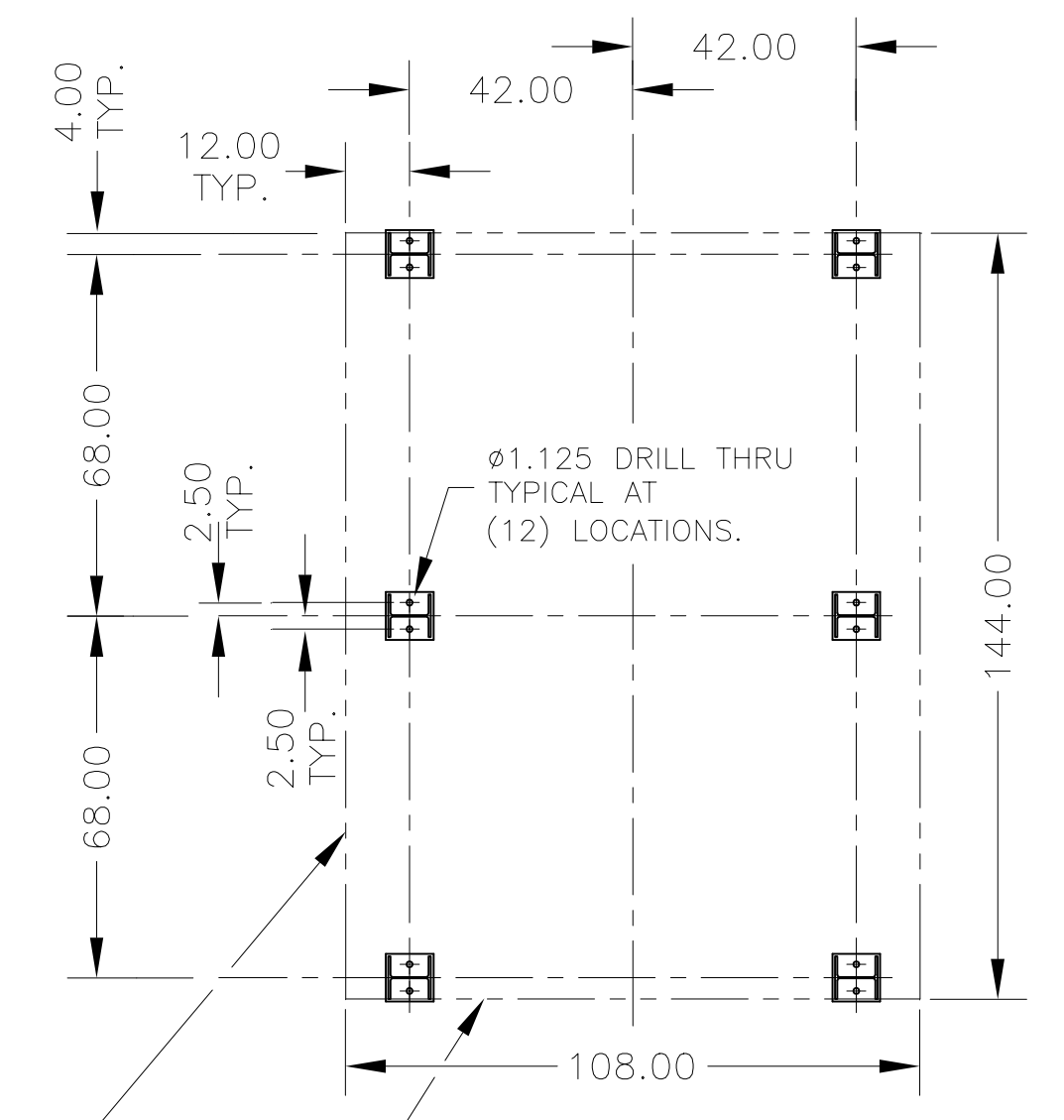
FAIRBANKS MORSE 9 CYL  
 DIESEL DWG. # 10561399



ENGINE AUXILIARY SKID  
 PER SPITZER INDUSTRIES  
 DWG. 856-200-01/02



SKID BOUNDARY  
 VIEW X-X  
 FOOTPRINT OF AUXILIARY SKID



VIEW SHOWING DISTANCE FROM THE TOP OF THE GUIDE RING  
 TO THE CONCRETE EDGE AROUND THE PERIPHERY OF THE PUMP  
 DISCHARGE HEAD.

ANGLE	DIMENSION "A"	ANGLE	DIMENSION "A"
0	130.60	180	101.07
15	130.27	195	101.75
30	129.27	210	103.70
45	127.57	225	106.70
60	125.16	240	110.41
75	122.07	255	114.44
90	118.43	270	118.43
105	114.44	285	122.07
120	110.41	300	125.16
135	106.70	315	127.57
150	103.70	330	129.27
165	101.75	345	130.27

REFERENCE NOTES  
 SEE SHEET 2 FOR GENERAL NOTES

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
	13JY01	27JE01	29MR01																
	CORRECTED C OF LAST CYL. TO EDGE OF SUBBASE DIM. (SHEET 4) 26.00 WAS 25.88 (SHEET 3)	REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000	INITIAL ISSUE																

PHIL. GEAR CORP. SERVICE DRAINAGE PUMP CUSTOMER SOUTH FLORIDA WATER MANAGEMENT DISTRICT DRD. NO. S-1613

TYPE 1.8 MVBX-2PD LIQUID FRESH WATER DRD. NO. RFB NO. C-E305 ITEM NO.

FRANK ROTATION CCW (H.I.) ITEM NO.

HP. BEARINGS ECP PUMPING STATION EQUIPMENT FOR STORMWATER TREATMENT AREA 3 AND STORMWATER TREATMENT AREA 4

R.P.M. 720 INPUT 118 OUTPUT

DWG. NO. 88032

DATE 29MR01 DRAWN S.L. CHECKED REC. CERTIFIED REC.

SCALE NONE 127APS86X5 SHEET 4 OF 5

ENGINEERING DEPARTMENT PHILLIPSBURG, NJ 08865

GENERAL ARRANGEMENT

PUMP SIZE 925 CFS-STATION 372 (127APS)

SIZE CODE IDENT. NO. DWG. NO. 127APS86X5

THIRD ANGLE PROJECTION



APPROXIMATE WEIGHTS

PUMP WEIGHT (DRY):	100,100 LBS.
SOLEPLATE WEIGHT:	2,500 LBS.
WATER WEIGHT (ABOVE L.W.L.):	199,000 LBS.
GEAR WEIGHT	27,500 LBS.
<b>TOTAL FLOOR WEIGHT:</b>	<b>330,000 LBS</b>

22 FT. DISMANTLING HEIGHT  
 REQ'D. TO REMOVE PUMP IN  
 SECTIONS—LESS GEAR.

SEE DETAIL 'E'  
 SHEET 3

LIFTING PROVISIONS  
 (4 LUGS EQUALLY  
 SPACED AROUND  
 CIRCUMFERENCE)

TOP FLOOR ELEVATION +31.0'

12.00 AWWA CLASS 'B' FLANGED  
 CONN. VACUUM PRIMING (NOT PROVIDED BY FLOWSERVE).  
 SEE PLAN VIEW OF DISCH. CONDUIT.

DISCHARGE POOL LEVEL  
 @ MAX HIGH WATER  
 +19.0' (228.00") ELEV.

DISCHARGE POOL LEVEL  
 @ RATED & DESIGN CONDITIONS  
 +17.0' (204.00") ELEV.

INTAKE LEVEL @ MAX HIGH  
 WATER LEVEL +14.0' (168.00") ELEV.

INTAKE LEVEL @ DESIGN FLOW  
 CONDITION +10.0' (120.00") ELEV.

INTAKE LEVEL @ RATED & START UP  
 CONDITION +8.0' (96.00") ELEV.

INTAKE LEVEL @ MAX SCREEN  
 LOSS +5.0' (60.00") ELEV.

LIFTING PROVISION  
 (INTERNAL RIBS)

LIFTING PROVISION

SEE SHEET 2 FOR PLAN  
 VIEW OF INTAKE TUNNEL

+3.99' (47.86") ELEVATION  
 TOP OF EMBEDDED RING

ELEVATION +16.23' (194.76")

SEE DETAIL 'B'  
 SHEET 3

Ø168.00 FLOOR OPENING

Ø170.00 FLOOR OPENING

END OF DISCHARGE HEAD

NOSE OF SPLITTER WALL

DISCHARGE SILL +20'

Ø30.00 MANWAY  
 (NOT PROVIDED BY  
 FLOWSERVE)

R44.75 INSIDE

ELEVATION +4.64' (55.68")

+1.47' (17.64") ELEVATION  
 BOTTOM OF TRUNCATED CONE

ELEVATION -8.50' (102.00")

▲ SURFACES SHOWN BY PHANTOM LINES  
 ARE CONCRETE FOUNDATION, CONCRETE INLET AND DISCHARGE CONDUITS.

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP
D	PF	REC	REC	C	PF	REC	REC	B	SL	PF	REC	A	SL	REC	REC
DATE	19JY01	DATE	13JY01	DATE	02JY01	DATE	29MR01								
CORRECTED QUANTITY OF UNITS SHOWN IN VIEW "A-A" (SHEET 5)		CORRECTED Q OF LAST CYL TO EDGE OF SUBBASE DIM. (SHEET 4) 26.00 WAS 25.88(SHEET 3)		REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000		INITIAL ISSUE									

GEAR MFG.	SERVICE	CUSTOMER	DRD. NO.
PHIL. GEAR CORP.	DRAINAGE PUMP	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	S-1612
TYPE 1.9 MVBX-2PD	LIQUID FRESH WATER	RFB NO. C-E305	ITEM NO.
FRAME	ROTATION CCW (H.I.)		DATE 29MR01
HP.	BEARINGS	ECP PUMPING STATION EQUIPMENT FOR STORMWATER TREATMENT AREA 3 AND STORMWATER TREATMENT AREA 4	BRAWN S.L.
RPM 720 INPUT 112 OUTPUT			CHECKED REC
DWG NO.			CERTIFIED REC

REFERENCE NOTES  
 SEE SHEET 2 FOR GENERAL NOTES

**FLOWSERVE**

ENGINEERING DEPARTMENT  
 PHILLIPSBURG, NJ 08865

GENERAL ARRANGEMENT

PUMP SIZE: 925 CFS-STATION 370 (127APS)

SIZE CODE ITEM NO DWG NO.: F 88032 127APS86X6

SCALE: NONE 127APS86X6 SHEET 1 OF 5

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WARNING: THE EXPORT OR REEXPORT OF THIS DRAWING OR A PRODUCT PRODUCED BY THIS DRAWING IS SUBJECT TO U.S. EXPORT ADMINISTRATION REGULATIONS AND OTHER APPLICABLE GOVERNMENTAL RESTRICTIONS OR REGULATIONS.

INSTALLATION REQUIREMENTS AND DETAILS

REFER TO IDP CROSS SECTIONAL DRAWING 127APS500X5 FOR COMPONENT PART NUMBERS.

- The pump design incorporates four components that must be permanently embedded in concrete. Those components are:
  - Part #498 (Support Ring)
  - Part #103 (Guide Ring)
  - Part #471 (Sole Plate)
  - Part #361 (Discharge Head)

The above embedments will be shipped to the site prior to the shipment of the main pump components.

- The main pump components will be shipped in multiple pieces and will require field assembly due to the size of the components. At the present time it is anticipated that the pump will be shipped with an assembled pump element that will weigh about 55,000 lbs. The pump element consists of the following major components:
  - Part #89 (Shroud)
  - Part #1 (Casing)
  - Part #10A (Pump End Shaft)
  - Part #3 (Impeller)

All other of the pump components will be shipped as loose pieces.

- The pump Discharge Head (Part #361) will be shipped in two segments which require field assembly and welding by the General Contractor.
- It will be necessary to install, align, and grout Part #498 (Support Ring) at the elevation as shown on IDP drawing 127APS86X5. Part #103 (Guide Ring) must also be installed, aligned, and grouted as shown on the referenced drawing.

Part #498 must be installed flat within 0.001" per foot of diameter. This is shown in Figure "D" on IDP drawing 127APS86X5. Since the 115.130" diam. bore forms the seal with the pump, this surface must be protected during the installation process. The 115.130" diameter must be held round within 0.020" during the complete installation process.

The concentricity, roundness, and flatness of this component must be checked prior to and after grouting to assure that the above requirements are achieved.

Part #103 must be installed concentric with Part #498 within 0.040" and the bore diameter of 167.000" must be held round during the installation process within 0.030". This is shown in Detail "B" on Flowserve drawing 127APS86X5.

The concentricity and roundness of this component must be checked prior to and after grouting to assure that the above requirements are achieved.

- At the floor elevation there are (32) 1.5" diameter anchor bolts supplied by Flowserve that are equally spaced on a 180" diameter bolt circle. The soleplate is to be used as a template to set the anchor bolts. This is shown in Detail "E" on Flowserve drawing 127APS86X5.

The bolt circle of the Soleplate (Part #471) must be installed concentric with the 115.125" bore of Support Ring (Part #498) within 0.125".

- The Discharge Head is not mechanically connected to the Guide Ring (Part #103) as shown in Detail "B" on Flowserve drawing 127APS86X5.

- The following process is used to install the main pump components:
  - Install pump element by lifting the assembly by the upper end of Pump End Shaft (Part #10A). This assembly will be lowered down through the Discharge Head, Guide Ring, and will be allowed to rest on the bottom of the Support Ring (Part #498).

b. Install the Upper Shaft (Part #10B) and the Shaft Coupling (Part #'s 164, 252C, & 252D). The fit between the shafting and the shaft coupling is a precision fit.

c. Install the Pump Support (Part #176) and Discharge Head Liner (Part #421) as an assembly over the top of the assembled shafting. The Pump Support is then placed on top of the Soleplate (Part #471).

d. Install the Inner Column (Part #424) over the shafting onto the top of the Casing (Part #1). It is necessary to attach fasteners that are located on the upper portion of the casing (Part #178B) which is below the large support plate from the inside of the pump. In order to accomplish this, it is necessary to temporarily lift the pump element/rotor assembly.

e. Align the rotor with the inner column alignment fit.

f. Install the Stuffing Box Extension (Part #264), Packing (Part #64), Split Gland (Part #16), Drive Coupling (Part #33) and other small associated components on the upper end of the pump.

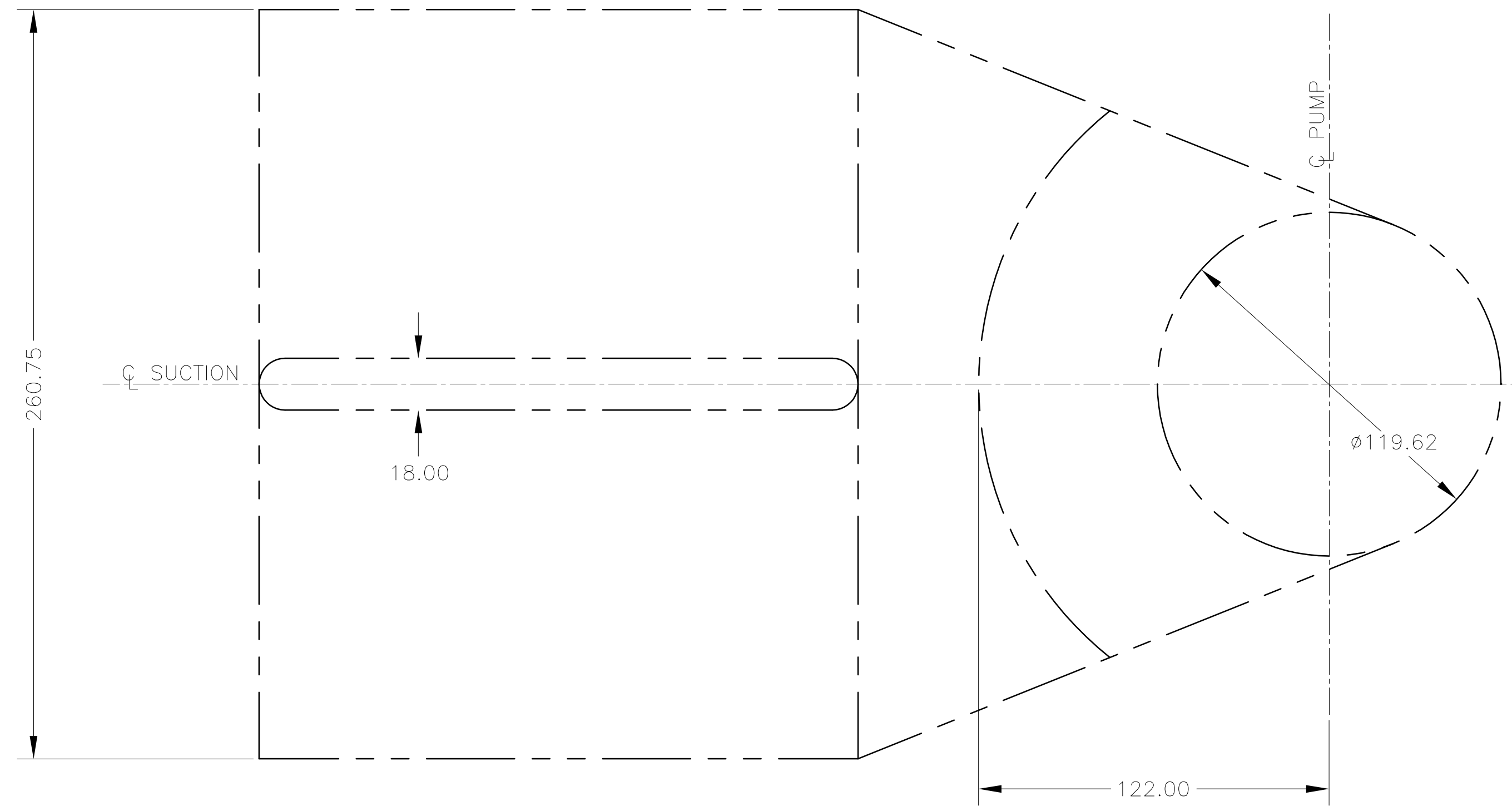
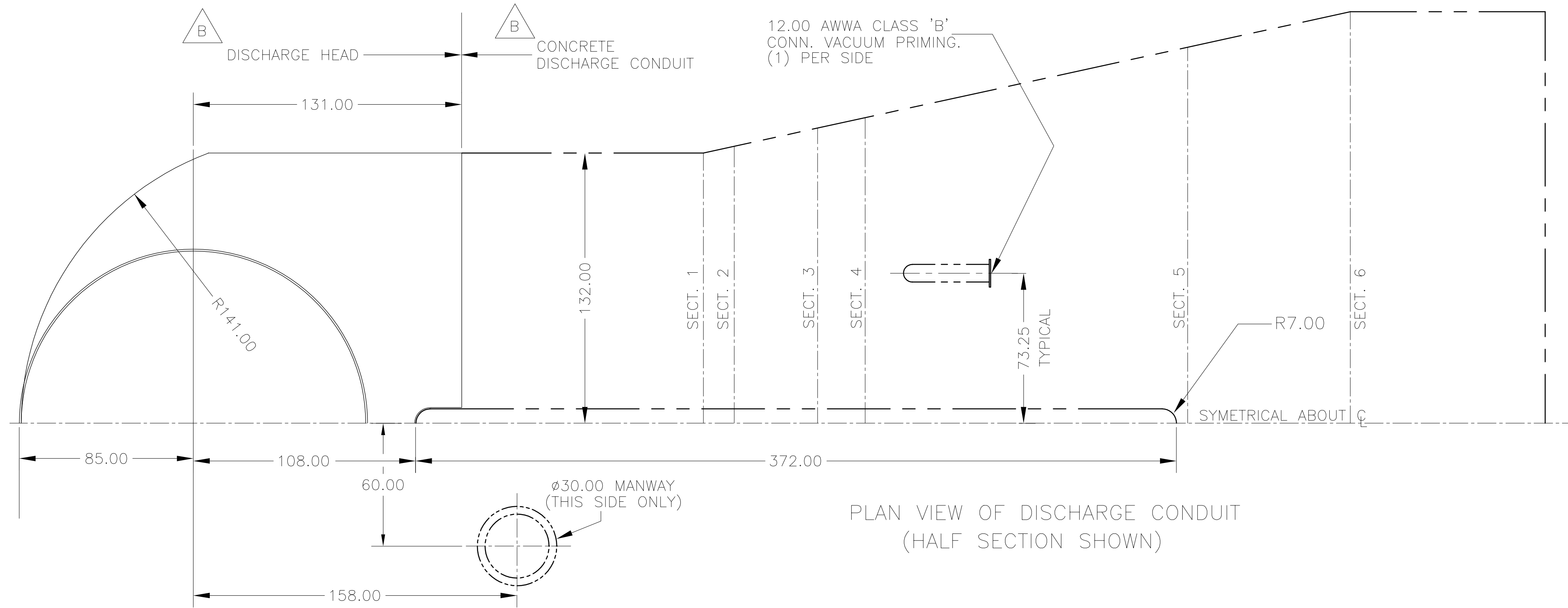
g. Install the Gear Support (Part #172)

- The anchor bolts are then tightened and the gear is placed on the Gear Support.

- The gear must be moved around on the pump gear pedestal until the low speed gear shaft is concentric with the pump shaft within 0.001" as shown by sweeping the pump shaft with a dial indicator attached to the gear shaft. Once this is completed, the gear is then bolted solid to the pump and the feet are then field drilled and doweled.

- The Pump Half Coupling Hub (Part #33) and the gear low speed shaft coupling hub (Part #34) are connected.

- The high speed gear shaft is then aligned to the drive shaft and engine.



PLAN VIEW OF CONCRETE INTAKE TUNNEL AT BOTTOM OF TRUNCATED CONE

- GENERAL NOTES**
- THIS DRAWING IS NOT TO SCALE. WORK FROM DIMENSIONS SHOWN. READ INSTRUCTION BOOK BEFORE STARTING EQUIPMENT. FOR GEAR INSTRUCTIONS, REFER TO LATEST GEAR OUTLINE DRAWINGS AND GEAR PROCEDURES.
- TOLERANCES:**
- ALLOW PLUS OR MINUS .25" FOR VARIATION OF FOUNDATION BOLT HOLES. SOLEPLATE IS TO BE USED AS A TEMPLATE TO LOCATE ANCHOR BOLTS.
  - ALLOW PLUS OR MINUS .38" FOR ALL NOZZLE AND PIPING CONNECTION LOCATIONS.
  - PLUS OR MINUS 1% FOR ALL NOMINAL LINEAR DIMENSIONS.
  - PLUS OR MINUS 2 DEGREES FOR ALL NOMINAL ANGLES.
- ALL HOLES IN FLANGES STRADDLE CENTERLINE UNLESS OTHERWISE INDICATED.
- PIPING AND FITTINGS NOT SHOWN ARE TO BE FURNISHED BY CUSTOMER. DO NOT CONNECT TO PIPE TAPS UNLESS SPECIFIED ON DRAWING.

△ SURFACES SHOWN BY PHANTOM LINES ARE CONCRETE FOUNDATION, CONCRETE INLET AND DISCHARGE CONDUITS.

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP		
D	PF	REC	REC	C	PF	REC	REC	B	SL	PF	REC	A	SL	REC	REC	A	SL	REC	REC		
DATE	19JY01	DATE	13JY01	DATE	02JY01	DATE	29MR01														
CORRECTED QUANTITY OF UNITS SHOWN IN VIEW "A-A" (SHEET 5)				CORRECTED C OF LAST CYL TO EDGE OF SUBBASE DIM. (SHEET 4)				REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000	INITIAL ISSUE												
GEAR MFG. PHIL. GEAR CORP. SERVICE DRAINAGE PUMP CUSTOMER SOUTH FLORIDA WATER MANAGEMENT DISTRICT ORG. NO. S-1612																					
TYPE 1.9 MVBX-2PD LIQUID FRESH WATER ORG. NO. RFB NO. C-E305																					
FRAME RETENTION CCW (H.I.) ITEM NO.																					
HP. BEARINGS ECP PUMPING STATION EQUIPMENT FOR STORMWATER TREATMENT AREA 3 AND STORMWATER TREATMENT AREA 4																					
RPM 720 INPUT 112 OUTPUT																					
DWG. NO.																					
DRAWN S.L. DATE 29MR01																					
CHECKED REC																					
CERTIFIED REC																					
THIRD ANGLE PROJECTION																					
SCALE NONE																					
SHEET 2 OF 5																					

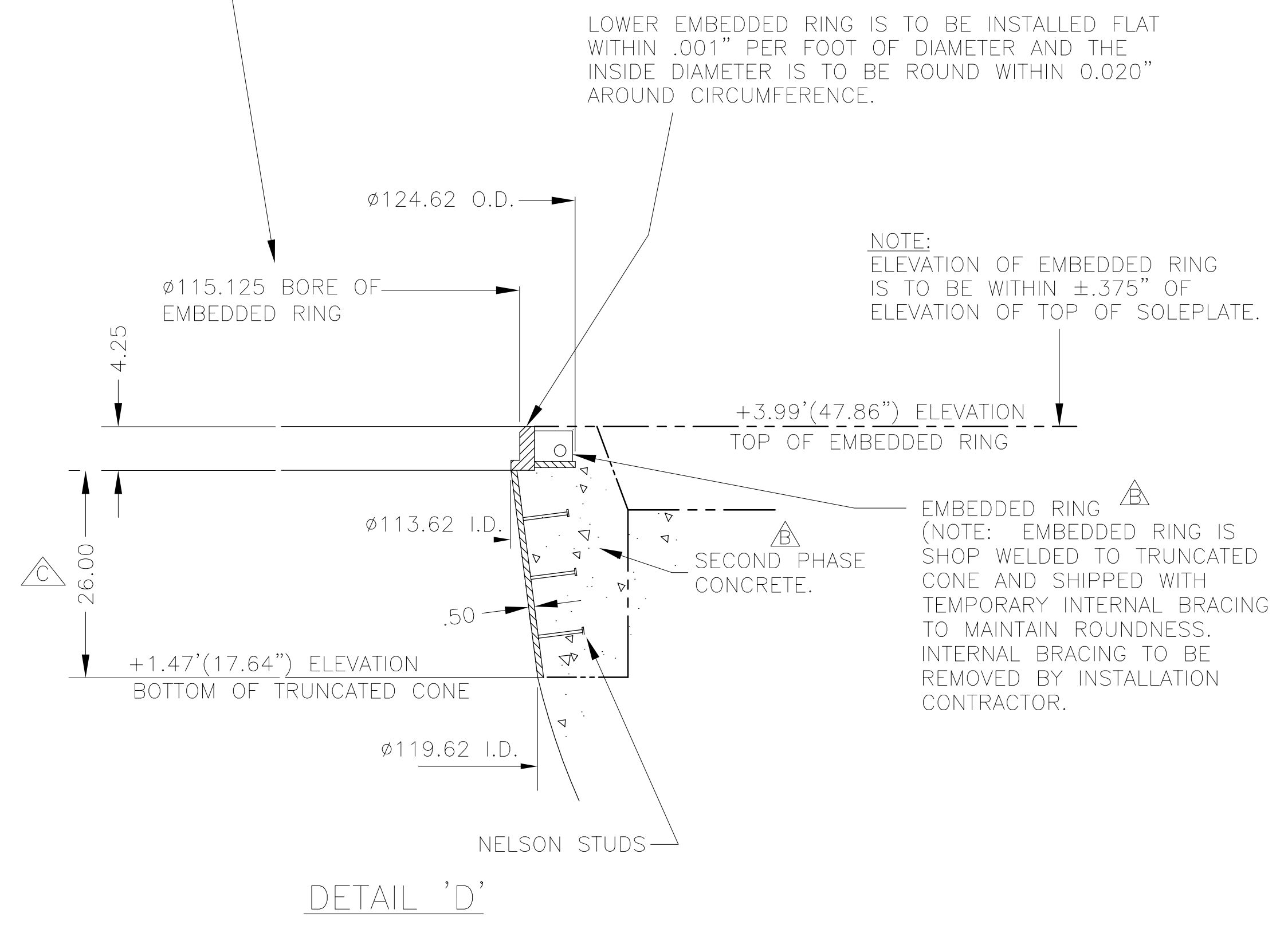
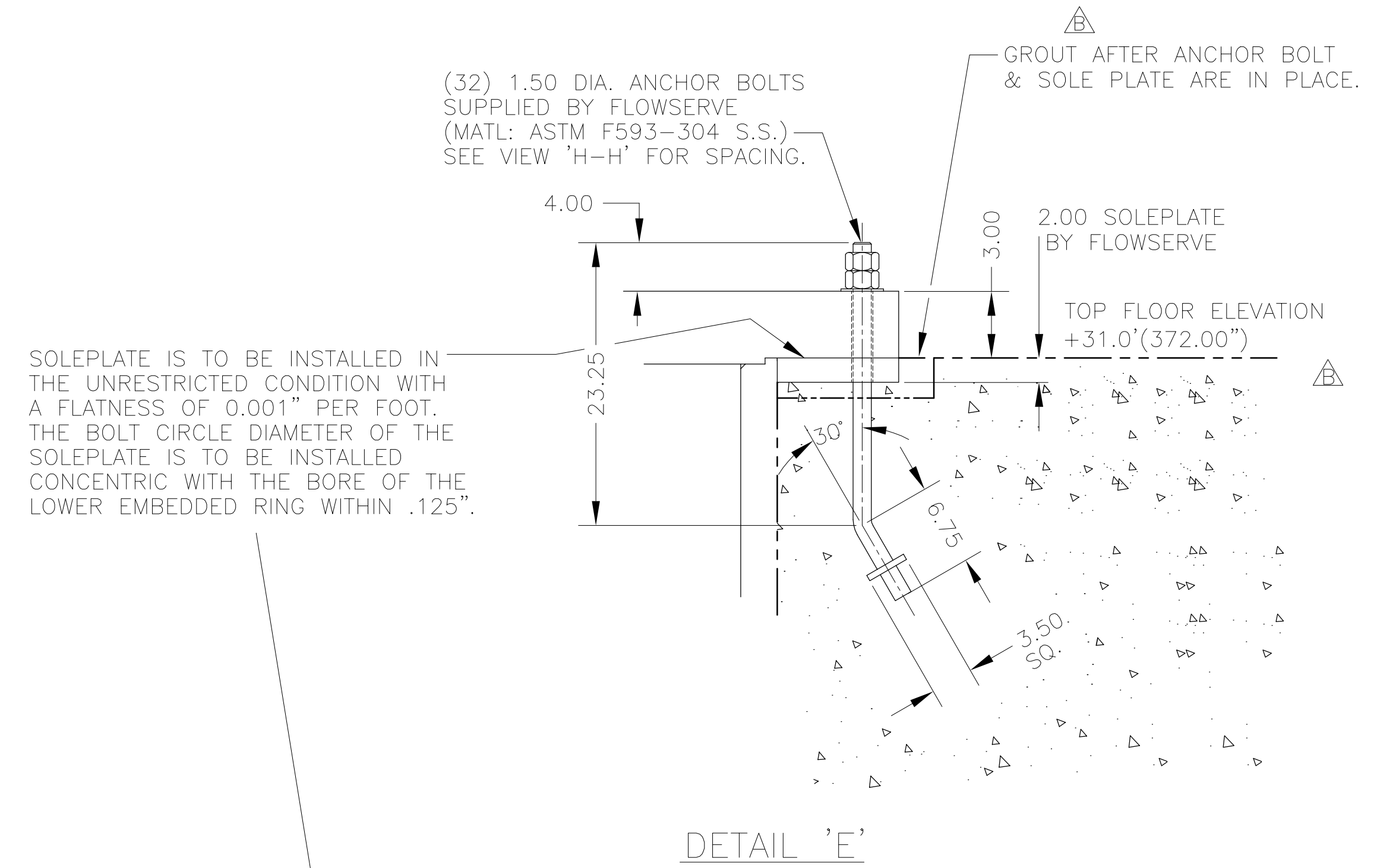
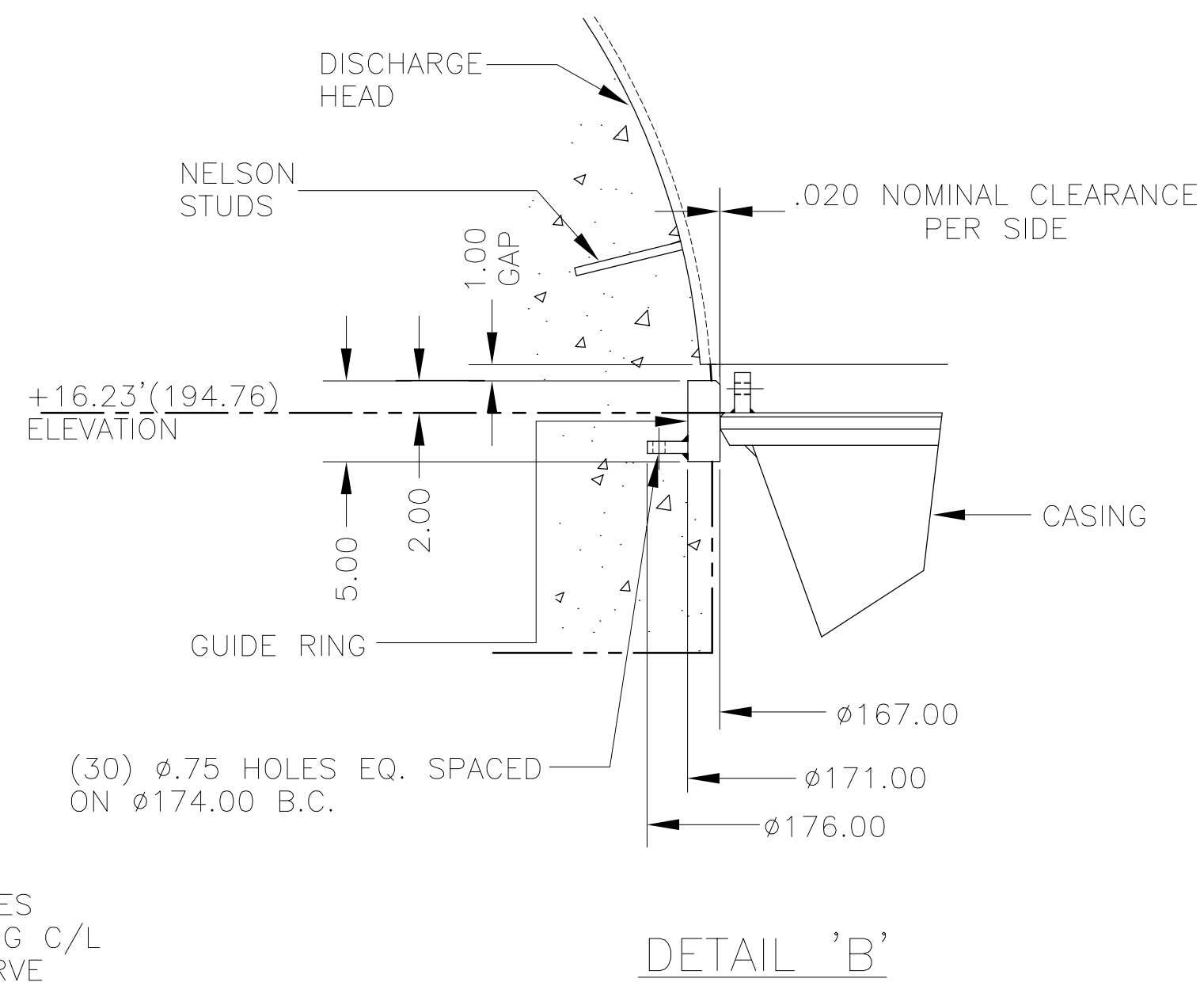
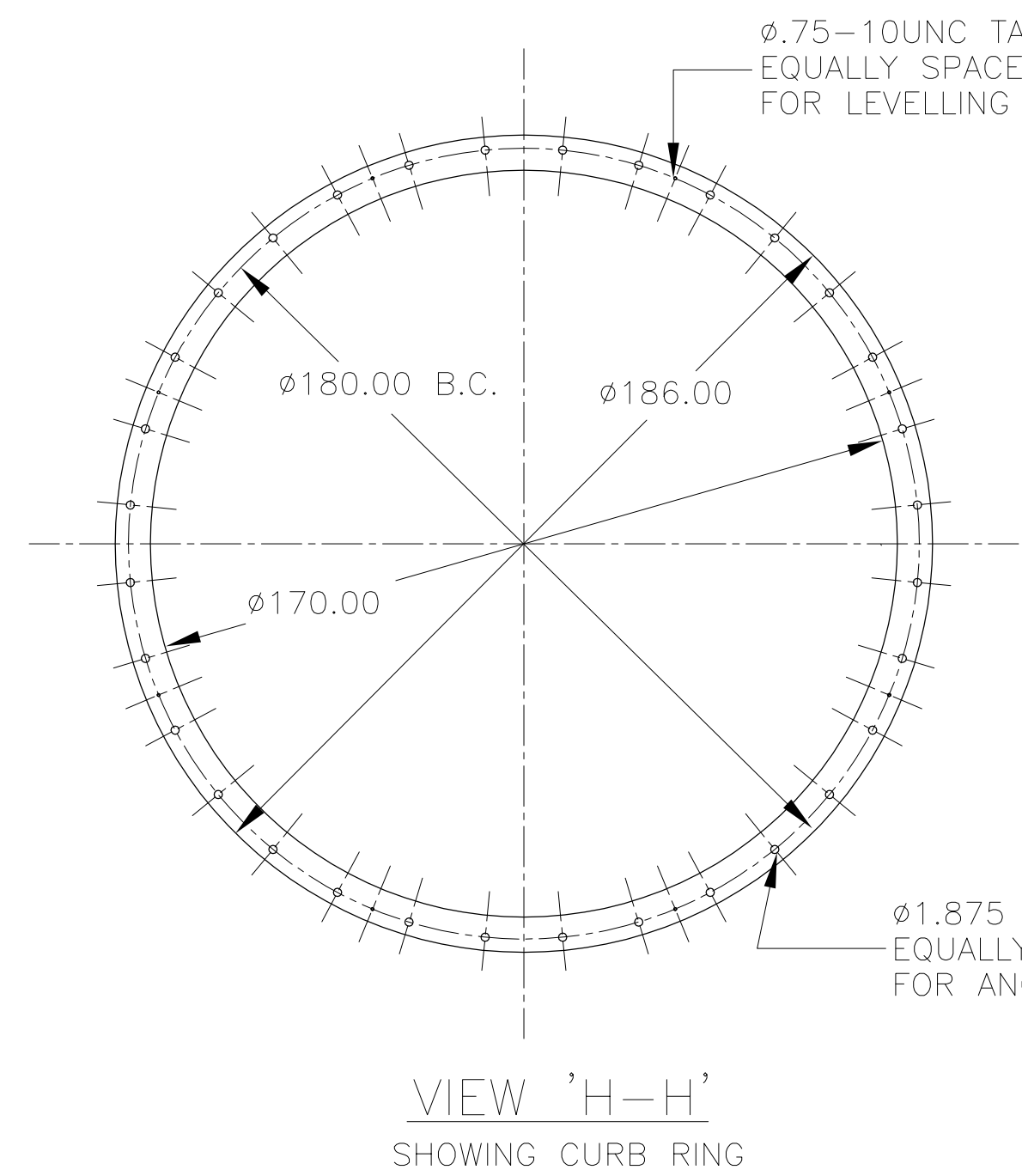
REFERENCE NOTES

**FLOWSERVE** ENGINEERING DEPARTMENT PHILLIPSBURG, NJ 08865

**GENERAL ARRANGEMENT**

925 CFS-STATION 370 (127APS)

SIZE CODE IDENT. NO. DWG. NO. REV. F 88032 127APS86X6 D



MATERIALS & DETAILS OF CONSTRUCTION

COMPONENT	MATERIAL	DETAIL OF CONSTRUCTION
Diffusor	ASTM A-36	Fabricated carbon steel with thermal stress relieving
Impeller	ASTM A-351, Gr CF3M	Single piece sand casting supplied in the solution annealed condition
Shaft-pump end	ASTM A-276, Type 410	Solid, fully machined barstock
Shaft-upper	ASTM A-276, Type 410	Solid, fully machined barstock
Key-impeller	AISI Type 410	Machined keystock
Key-shaft coupling	AISI Type 410	Machined keystock
Key-journal sleeves	AISI Type 410	Machined keystock
Key-drive coupling	Carbon steel	Machined keystock
Gland	ASTM A-36	Fabricated carbon steel
Packing	Braided cotton yarn impregnated with mineral oil	---
Journal sleeve	ASTM A-276, Type 420	Fully machined, thermally hardened
Bearing	Thordon SXL	Metal backed, Thordon
Shaft coupling	ASTM A-276, Type 420	Fully machined
Fasteners-submerged	ASTM A-593, Gr 304	---
Fasteners-nonsubmerged	ASTM A-307, Gr B	---
Anchor bolting	ASTM A-593, Gr 304	---
Drive Coupling	AISI 1045	Precision machined component
Gear support	ASTM A-36	Fabricated carbon steel with thermal stress relieving
Stuffing box extension	ASTM A-36	Fabricated carbon steel with thermal stress relieving
Discharge head	ASTM A-36	Fabricated carbon steel
Inner column	ASTM A-36	Fabricated carbon steel with thermal stress relieving
Mounting plate	ASTM A-36	Machined plate
Discharge head liner	ASTM A-36	Fabricated carbon steel with thermal stress relieving
Impeller housing	ASTM A-240, Ty 316L	Fabricated austenitic stainless steel
Embedded ring	ASTM A-240, Ty 316L	Fabricated austenitic stainless steel
Guide ring	ASTM A-36	Fabricated carbon steel
Soleplate	ASTM A-36	Fabricated carbon steel
"O" Rings	Buna "N"	---
Intake cone	ASTM A-36	Fabricated carbon steel shop welded to embedded ring.

△ SURFACES SHOWN BY PHANTOM LINES ARE CONCRETE FOUNDATION.

REFERENCE NOTES

SEE SHEET 2 FOR GENERAL NOTES

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP
D	PF	REC	REC	C	PF	REC	REC	B	SL	PF	REC	A	SL	PF	REC
DATE	19JY01	DATE	13JY01	DATE	02JY01	DATE	29MR01								
CORRECTED QUANTITY OF UNITS SHOWN IN VIEW "A-A" (SHEET 5)		CORRECTED Q OF LAST CYL TO EDGE OF SUBBASE DIM. (SHEET 4) 26.00 WAS 25.88 (SHEET 3)		REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000		INITIAL ISSUE									

PHIL. GEAR CORP.	DRAINAGE PUMP	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	S-1612
TYPE 1.9 MVBX-2PD	LIQUID FRESH WATER	RFB NO. C-E305	ITEM NO.
FRAME	ROTATION CCW (H.I.)		DATE 29MR01
HP.	BEARINGS	ECP PUMPING STATION EQUIPMENT FOR STORMWATER TREATMENT AREA 3 AND STORMWATER TREATMENT AREA 4	DRAWN S.L.
R.P.M. 720 INPUT 112 OUTPUT			CHECKED REC
DWG. NO.			CERTIFIED REC

**FLOWERVE** ENGINEERING DEPARTMENT PHILLIPSBURG, NJ 08865

GENERAL ARRANGEMENT

925 CFS-STATION 370 (127APS)

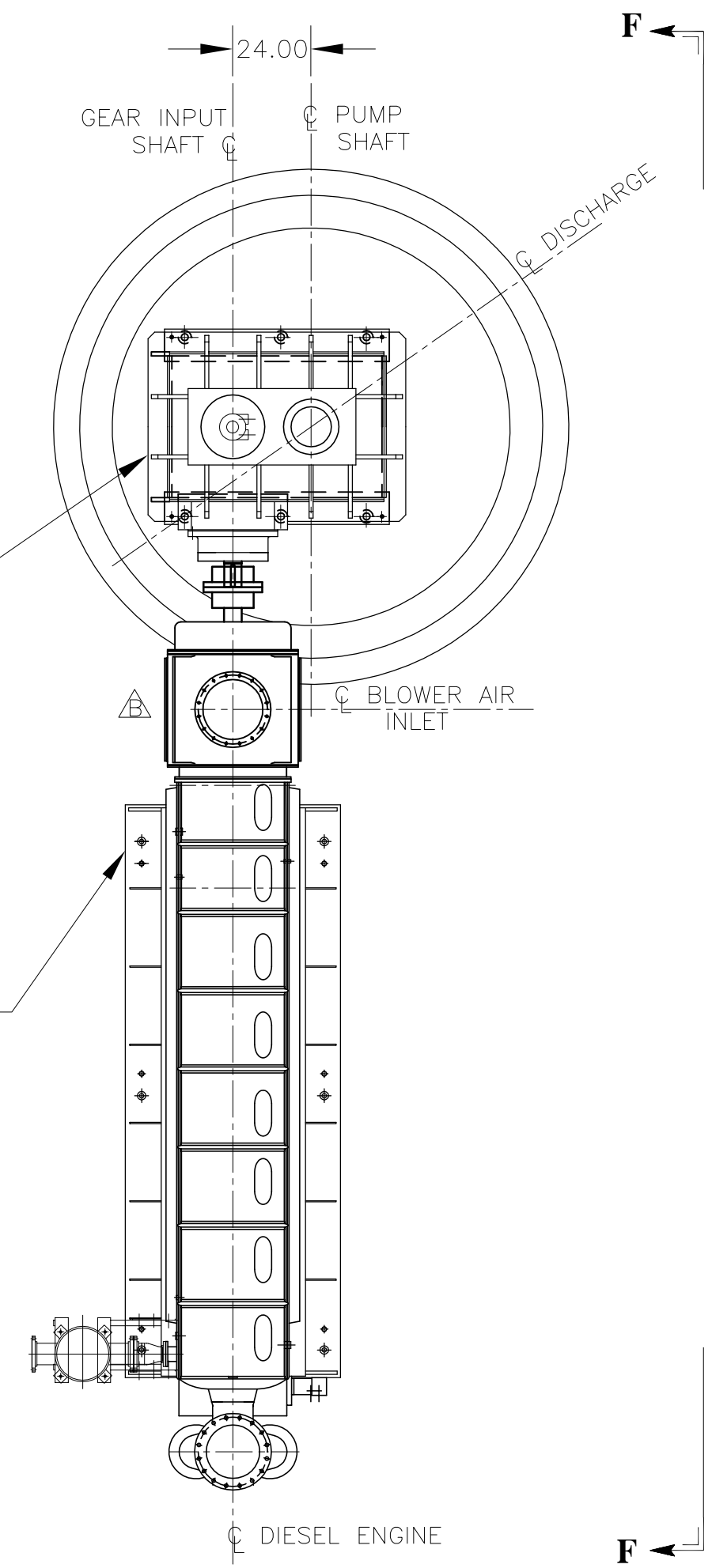
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F 88032 127APS86X6

THIRD ANGLE PROJECTION SCALE NONE 127APS86X6 SHEET 3 OF 5

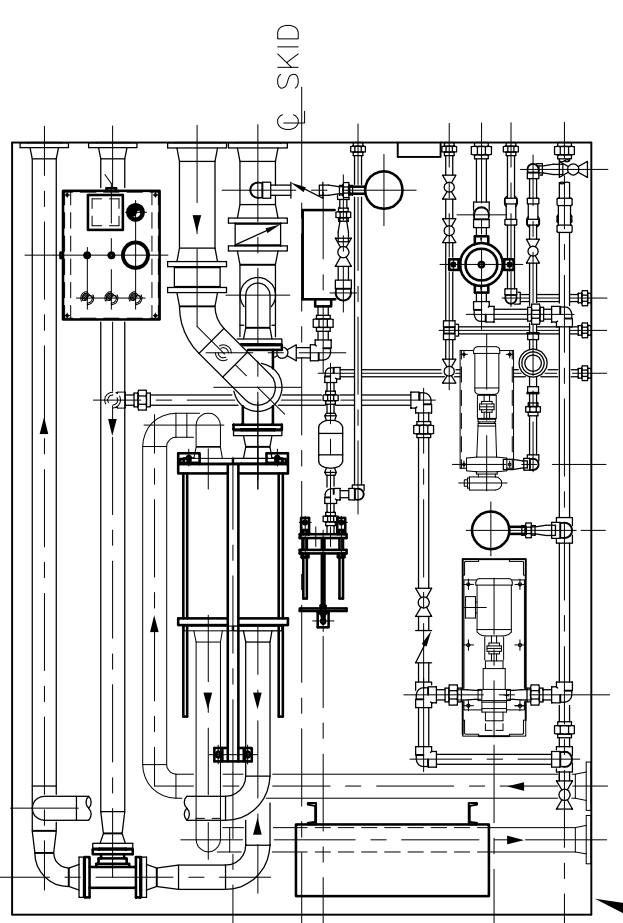
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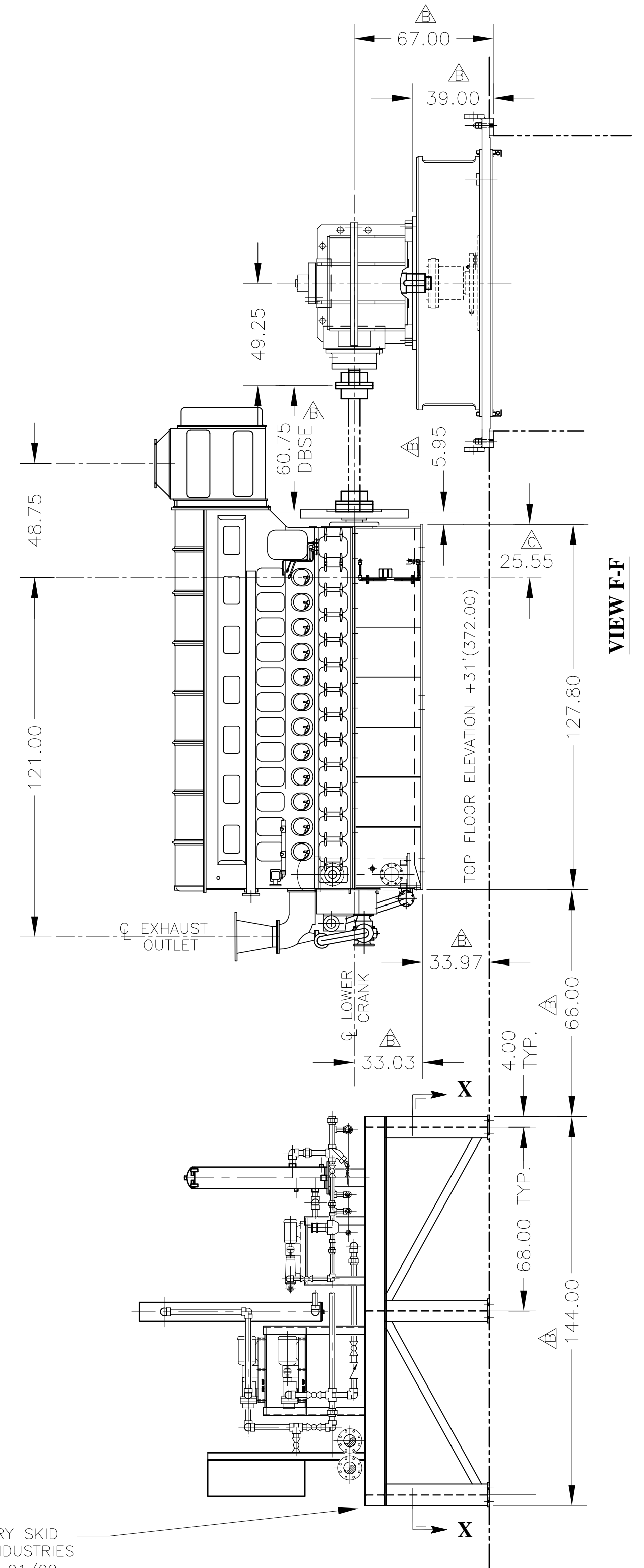


PHILADELPHIA GEAR MODEL  
 1.9MVBX DWG. #03152-0551 (RH)  
 #03152-0553 (LH)

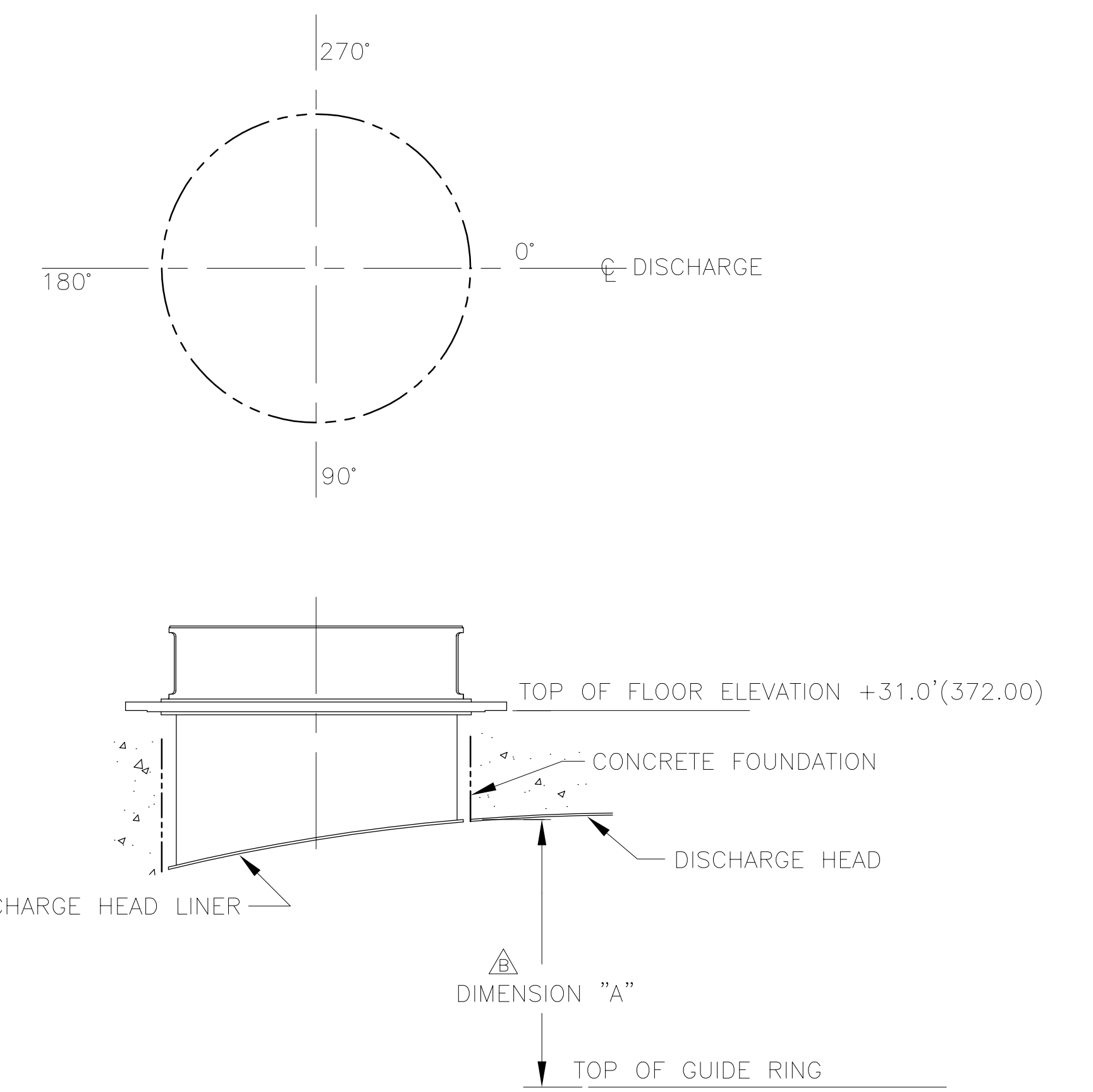
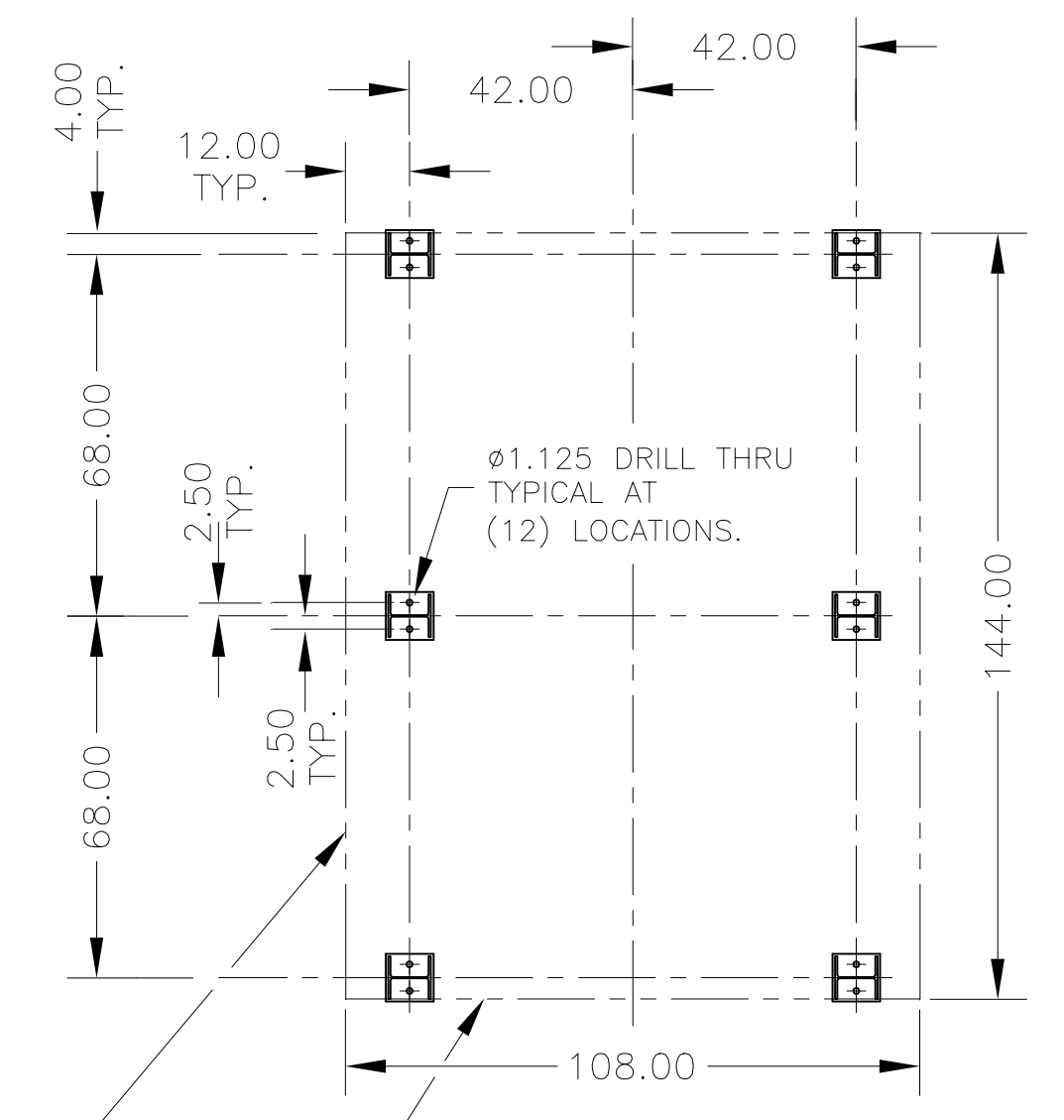
FAIRBANKS MORSE 9 CYL  
 DIESEL DWG. # 10561398



ENGINE AUXILIARY SKID  
 PER SPITZER INDUSTRIES  
 DWG. 856-200-01/02



SKID BOUNDARY  
 VIEW X-X  
 FOOTPRINT OF AUXILIARY SKID



VIEW SHOWING DISTANCE FROM THE TOP OF THE GUIDE RING TO THE CONCRETE EDGE AROUND THE PERIPHERY OF THE PUMP DISCHARGE HEAD.

ANGLE	DIMENSION "A"	ANGLE	DIMENSION "A"
0	130.60	180	101.07
15	130.27	195	101.75
30	129.27	210	103.70
45	127.57	225	106.70
60	125.16	240	110.41
75	122.07	255	114.44
90	118.43	270	118.43
105	114.44	285	122.07
120	110.41	300	125.16
135	106.70	315	127.57
150	103.70	330	129.27
165	101.75	345	130.27

REFERENCE NOTES  
 SEE SHEET 2 FOR GENERAL NOTES

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP
D	PF	REC	REC	C	PF	REC	REC	B	SL	PF	REC	A	SL	PF	REC
DATE	19JY01	DATE	13JY01	DATE	02JY01	DATE	29MR01	INITIAL ISSUE							
CORRECTED QUANTITY OF UNITS SHOWN IN VIEW "A-A" (SHEET 5)		CORRECTED Q OF LAST CYL TO EDGE OF SUBBASE DIM. (SHEET 4) 26.00 WAS 25.88 (SHEET 3)		REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000											

GEAR MFG.	SERVICE	CUSTOMER	DRD. NO.
PHIL. GEAR CORP.	DRAINAGE PUMP	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	S-1612
TYPE 1.9 MVBX-2PD	LIQUID FRESH WATER	DRD. NO. RFB NO. C-E305	ITEM NO.
FRANK	ROTATION Ccw (H.L.)	ITEM NO.	DATE 29MR01
HP.	BEARINGS	ECP PUMPING STATION EQUIPMENT FOR STORMWATER TREATMENT AREA 3 AND STORMWATER TREATMENT AREA 4	DRAWN S.L.
R.P.M. 720 INPUT 112 OUTPUT			CHECKED REC
DWG. NO.			CERTIFIED REC

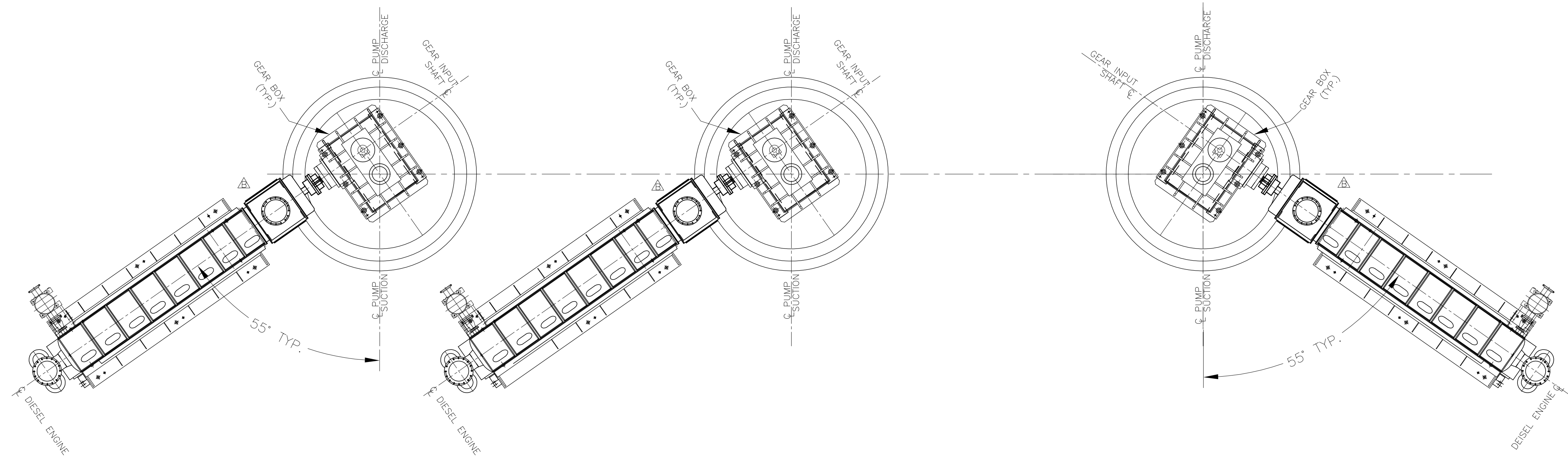
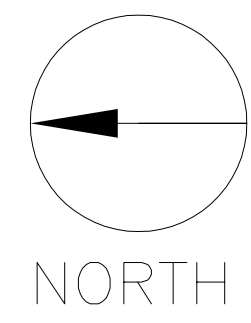
**FLOWSERVE** ENGINEERING DEPARTMENT  
 PHILLIPSBURG, NJ 08865

GENERAL ARRANGEMENT

925 CFS-STATION 370 (127APS)

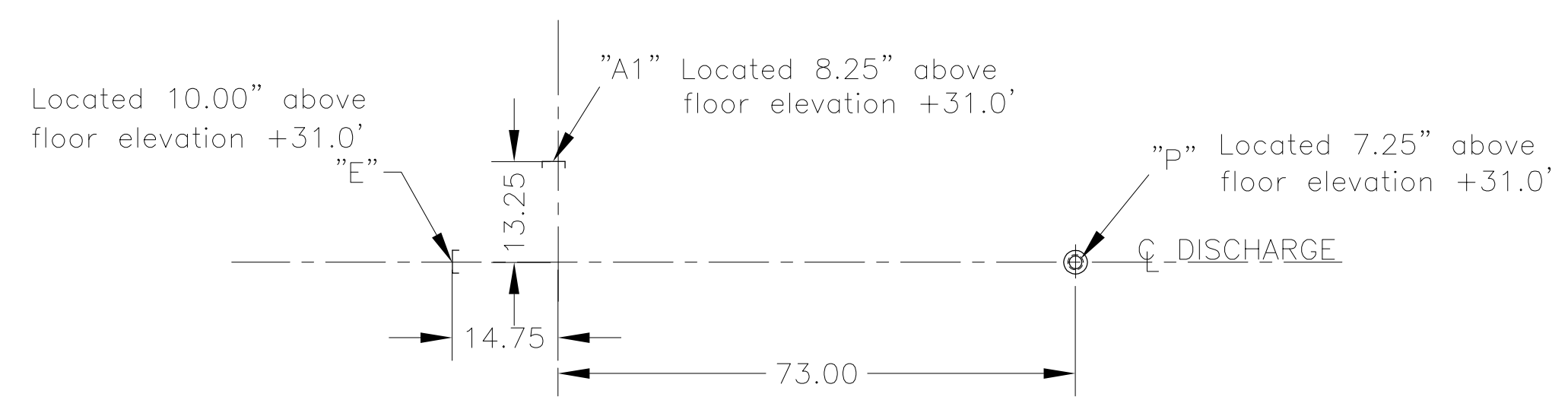
SIZE F 88032 DWG. NO. 127APS86X6 REV. D

THIRD ANGLE PROJECTION SCALE NONE 127APS86X6 SHEET 4 OF 5



VIEW "A-A"

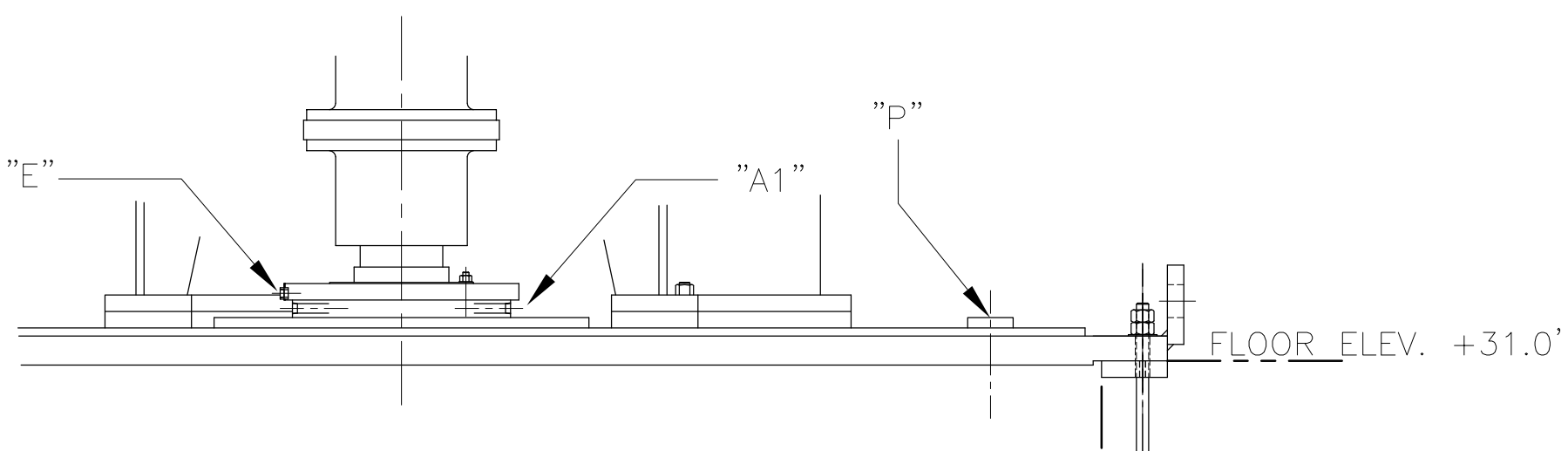
REFERENCE SHEET NO. 1



**CUSTOMER'S PIPE CONNECTIONS**

ALL PIPE CONNECTIONS ARE NATIONAL PIPE TAPERED PIPE THREADS.

- (A1) 1.00 NPT- LUBRICATION WATER INJECTION-CUSTOMER TO INJECT 5-17 USGPM OF CLEAN WATER AT 10-15 PSI BEFORE STARTING, DURING NORMAL OPERATION, AND DURING SHUTDOWN OF PUMP. FLOWSERVE TO PROVIDE A 1.00" SOLENOID VALVE (NORMALLY CLOSED) AND A SIGHT-FLOW INDICATOR. PIPING TO BE DONE BY CUSTOMER.
- (E) .75 NPT- GLAND LEAKAGE DRAIN-S.B.E. CATCH BASIN CUSTOMER TO PROVIDE PIPING TO REMOVE LEAKAGE FROM STUFFING BOX PACKING TO INTAKE OF DRAINAGE PUMP.
- (P) 3.00 NPT- COLUMN VENT - PLUGGED FOR SHIPMENT/ STORAGE ONLY. CUSTOMER TO PIPE TO THIS VENT. CLOSE VALVE AFTER STARTING PUMP AND VENTING PUMP CAVITY.



VIEW 'G-G' REFERENCE SHEET NO. 1

SHOWING ANGULAR LOCATION OF CUSTOMER PIPE CONNECTIONS

**REFERENCE NOTES**

SEE SHEET 2 FOR GENERAL NOTES

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	
D	PF	REC	REC	C	PF	REC	REC	B	SL	PF	REC	A	SL	REC	REC	
DATE	19JY01	DATE	13JY01	DATE	02JY01	DATE	29MR01	INITIAL ISSUE								
CORRECTED QUANTITY OF UNITS SHOWN IN VIEW "A-A" (SHEET 5)				CORRECTED Q OF LAST CYL TO EDGE OF SUBBASE DIM. (SHEET 4) 26.00 WAS 25.88 (SHEET 3)				REVISED PER CUSTOMER COMMENTS. SUB. 015 ITEM 001 REV. 000								

GEAR MFG.	PHIL. GEAR CORP.	SERVICE	DRAINAGE PUMP	CUSTOMER	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	DRD. NO.	S-1612
TYPE	1.9 MVBX-2PD	LIQUID	FRESH WATER	DRD. NO.	RFB NO. C-E305	ITEM NO.	
ROTATION	CCW (H.I.)	ITEM NO.	S-1612	DATE	29MR01	DRAWN	SL
BEARINGS		ECP PUMPING STATION EQUIPMENT FOR STORMWATER TREATMENT AREA 3 AND STORMWATER TREATMENT AREA 4		CHECKED	REC	CERTIFIED	REC

**FLOWSERVE** ENGINEERING DEPARTMENT PHILLIPSBURG, NJ 08865

**GENERAL ARRANGEMENT**

PUMP SIZE: 925 CFS-STATION 370 (127APS)

SIZE: F 88032 CODE IDENT. NO.: 127APS86X6 REV. D

THIRD ANGLE PROJECTION SCALE: NONE 127APS86X6 SHEET 5 OF 5





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FIND NO.	DESCRIPTION
1	CASING
3	IMPELLER
8	SLEEVE - SHAFT
10A	SHAFT - PUMP END
10B	SHAFT - UPPER
11	KEY - IMPELLER
12A	KEY - SHAFT COUPLING - PUMP SHAFT
12B	KEY - SHAFT COUPLING - UPPER SHAFT
12C	KEY - PUMP HALF CPLG.
15	SUCTION CONE
16	GLAND
29S	PIN - CPLG ADJ. NUT
29N	PIN - GUIDE CONE TO IMP.
33	COUPLING - PUMP HALF
34	COUPLING - GEAR HALF
64	PACKING - STUFF. BOX EXTN.
69	SHAFT ADJUSTING NUT
89	SHROUD
96	CATCH BASIN (STUFF. BOX EXTN.)
103	GUIDE RING
109	RETAINING RING
118L	CAPSCREW SOCKET HD - GLAND ASSEMBLY
127	NUT - SHAFT SLEEVE
131	GUARD - COUPLING
135C	JOURNAL SLEEVE - STUFF. BOX EXTN.
135D	JOURNAL SLEEVE - LOWER CASING
135F	JOURNAL SLEEVE - UPPER CASING
138A	BEARING - LOWER CASING
138B	BEARING - UPPER CASING
138C	BEARING - STUFF. BOX EXTN.
164	SHAFT COUPLING
172A	GEAR SUPPORT
172B	GEAR SUPPORT
176	PUMP SUPPORT
177B	CAPSCREW - GUIDE CONE TO IMPELLER
177C	CAPSCREW - INNER COL. TO PUMP SUPPORT
177G	CAPSCREW - CASING TO SHROUD
177L	CAPSCREW - COUPLING
177S	CAPSCREW - DISCH. HD. TO GEAR SUPPORT
177V	CAPSCREW - GEAR MTG. FLANGE TO GEAR SUPPORT
177W	CAPSCREW - LOCKCOLLAR TO RETNG. RING
177Z	CAPSCREW - LOCK COLLAR TO IMPELLER
178A	STUD - DISCH. HD. LINER TO PUMP SUPPORT
178B	STUD - CASING TO INNER COLUMN
178D	STUD - GLAND
178H	STUD - STUFFING BOX EXT. TO PUMP SUPPORT

FIND NO.	DESCRIPTION
241B	WASHER - SPLIT RING TO SHAFT CPLG
246D	WASHER - GLAND STUDS
246V	WASHER - LOCK COLLAR TO IMPELLER
247	TAPER DOWEL PIN - GEAR
252C	SPLIT RING - SHAFT COUPLING
252D	SPLIT RING - SHAFT COUPLING - INNER
259F	SET SCREW - SHAFT SLEEVE NUT
259K	SET SCREW - CASING TO GUIDE RING
259Y	SET SCREW - JOURNAL SLV., UPPER CAS.
259Z	SET SCREW - JOURNAL SLV., LOWER CAS.
264	STUFFING BOX EXTENSION
291D	KEY - JOURNAL SLV., LOWER CASING
291E	KEY - JOURNAL SLV., UPPER CASING
291F	KEY - JOURNAL SLV., STUFF. BOX EXTN.
291G	KEY - SHAFT SLEEVE
298	WASHER - PACKING
312A	LOCK COLLAR (IMP.)
312B	LOCK COLLAR
361	DISCHARGE HEAD
366	GUIDE CONE - IMPELLER
417	PIPE PLUG
421	DISCHARGE HEAD LINER
424	INNER COLUMN
456A	O-RING - SHROUD TO SUPPORT RING
456E	O-RING - STUFF. BOX EXT. TO INNER COLUMN
456G	O-RING - SHAFT SLEEVE NUT TO UPPER SHAFT
456K	O-RING - INNER COLUMN TO PUMP SUPPORT
456R	O-RING - SOLEPLATE TO PUMP SUPPORT
456S	O-RING - SOLEPLATE TO PUMP SUPPORT
471	SOLE PLATE
496	ALIGNMENT FIXTURE
498	EMBEDDED SUPPORT RING
766B	HEX NUT - GLAND STUDS
766C	HEX NUT - STUFF. BOX EXTN. TO INNER COLUMN
766F	HEX NUT - GEAR DOWEL PINS
766G	HEX NUT - INNER COL. TO CASING
766J	HEX NUT - DISCH. HD. LINER TO PUMP SUPPORT
766L	JAM NUT - CATCH BASIN TO STUFF. BOX EXTN.
766V	JAM NUT - CASING TO GUIDE RING
766W	HEX NUT - CASING TO SHROUD
766Z	HEX NUT - COUPLING
813E	HEX HD CAP SCREW - SPLIT RING TO SHAFT CPLG

\* GASKET ELIMINATOR LOCTITE PRODUCT #515

REFERENCE NOTES

REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	REV	DRN	CKD	APP	
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE

**DUCTWORK SYSTEM SYMBOLS**

	SUPPLY AIR DUCT SECTION (UP/DOWN)
	RETURN, OUTDOOR, OR EXHAUST AIR DUCT SECTION (UP/DOWN)
	OUTDOOR AIR DUCT SECTION (UP/DOWN)
	EXHAUST AIR DUCT SECTION (UP/DOWN)
	RETURN, EXHAUST, OR TRANSFER AIR FLOW
	SUPPLY AIR FLOW
	MOTORIZED DAMPER
	MANUAL VOLUME DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	ACCESS DOOR
	FLEXIBLE DUCT CONNECTION
	ELBOW WITH TURNING VANES
	SUPPLY DIFFUSER
	RETURN, TRANSFER, OR EXHAUST GRILLE OR REGISTER
	ROUND CEILING DIFFUSER
	LINEAR DIFFUSER
	AIR DEVICE, TYPE & CAPACITY
	DIAMETER (ROUND DUCT)
	FLAT OVAL DUCT
	SQUARE TO ROUND TRANSITION
	NEW DUCTWORK OR EQUIPMENT
	ROOF CENTRIFUGAL FAN, EXHAUST
	ROOF CENTRIFUGAL FAN, SUPPLY
	ELECTRIC DUCT HEATER
	DOOR UNDERCUT

**CONTROL SYMBOLS**

	THERMOSTAT - 5'-0" A.F.F. MOUNTING HEIGHT
	HUMIDISTAT - 5'-0" A.F.F. MOUNTING HEIGHT
	TEMPERATURE SENSOR
	STATIC PRESSURE SENSOR
	DUCT SMOKE DETECTOR
	SENSOR WITH FREEZE PROTECTION (SHUTS DOWN AT 33 DEGREES F)
	FILTER WITH DIFFERENTIAL PRESSURE SWITCH
	DIFFERENTIAL PRESSURE SWITCH

**PIPING LEGEND**

	NEW PIPING
	PIPE UP (SINGLE LINE)
	PIPE DOWN (SINGLE LINE)
	PIPE UP (DOUBLE LINE)
	PIPE DOWN (DOUBLE LINE)
	TOP PIPE CONNECTION
	BOTTOM PIPE CONNECTION
	CONDENSER WATER RETURN
	CONDENSER WATER SUPPLY
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	HOT WATER SUPPLY
	HOT WATER RETURN
	REFRIGERANT PIPING
	CONDENSATE DRAIN FROM COOLING COIL
	DOMESTIC COLD WATER
	GAS PIPING
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	SANITARY SEWER
	STORM SEWER
	VENT
	FIRE MAIN
	WATER MAIN
	SPRINKLER PIPING
	DRAIN PIPING

**DUCTWORK AS SHOWN ON THE PLANS**

DESCRIPTION	DOUBLE LINE DRAWING	SINGLE LINE DRAWING	DETAILED CONSTRUCTION REQUIRED
DUCT TAKEOFF FROM LOW PRESSURE MAIN			
SPLIT TAKEOFF WITH RADIUS ELBOW (LOW PRESSURE DUCT ONLY)			
SPLIT TAKEOFF WITH SQUARE OR RECT. ELBOW (LOW PRESSURE DUCT ONLY)			
ELBOW AND SPLIT LOW PRESSURE DUCT ONLY			
ELBOW			
SQUARE OR RECTANGULAR RADIUS ELBOW			
UNEQUAL ELBOWS (LOW PRESSURE DUCT ONLY)			
DUCT TAKEOFF FROM RECTANGULAR LOW PRESSURE MAIN WITH SPIN-IN			
DUCT TAKEOFF FROM MEDIUM PRESSURE MAIN.			

- SUPPLY AIR DUCTWORK SHALL BE CONSTRUCTED TO MEET SMACNA STANDARDS FOR 2 INCH W.G. POSITIVE STATIC PRESSURE EXCEPT AS OTHERWISE NOTED.
- RETURN AIR AND EXHAUST AIR DUCTWORK TO BE CONSTRUCTED TO MEET SMACNA STANDARDS FOR 2 INCH W.G. NEGATIVE STATIC PRESSURE, EXCEPT AS NOTED OTHERWISE IN SPECIFICATIONS.
- FIRE DAMPERS AND COMBINATION SMOKE/FIRE DAMPERS TO BE PROVIDED TO MEET THE REQUIREMENTS OF NFPA 101 AND SMACNA STANDARDS. INSTALLATIONS TO INCLUDE BREAKAWAY CONNECTIONS AND ACCESS PANELS.

**HVAC GENERAL NOTES**

- ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS:
  - STANDARD MECHANICAL CODE
  - NFPA-90A: STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS.
  - SMACNA: HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
  - ANSI/ASME B31.9 - CODE FOR BUILDING SERVICE PIPING.
  - ANSI/ASHRAE 15: SAFETY CODE FOR MECHANICAL REFRIGERATION.
- SURFACES DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
- VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
- COORDINATE THE CUTTING AND PATCHING OF BUILDING COMPONENTS TO ACCOMMODATE THE INSTALLATION OF MECHANICAL EQUIPMENT AND MATERIALS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED AIR DEVICES.
- PROVIDE METAL TURNING VANES IN ALL SQUARE LOW PRESSURE ELBOWS. TRAILING EDGE EXTENTIONS SHALL BE USED WHERE UNEQUAL ELBOWS ARE SHOWN.

<p><b>GEE &amp; JENSON</b> Engineers - Architects - Planners, Inc. One Hesperia Circle West Palm Beach, Florida 33409 LB 0002934 AA C000656</p>	<p>REVISIONS</p>
<p><b>Burns &amp; McDonnell</b> SINCE 1838 9400 WARD PARKWAY KANSAS CITY, MO. 64114 License No. EB0000253</p>	<p>DATE</p>
<p><b>EVERGLADES CONSTRUCTION PROJECT</b> STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 &amp; G-372</p>	<p>NO. / DATE</p>
<p><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406</p>	<p>DATE</p>
<p><b>JEFFREY L. HOLTZ, P.E.</b> FL 40779</p>	<p>DATE</p>
<p>CONTRACT NO. C-E304 DWG. NO. HC-1</p>	<p>DATE</p>

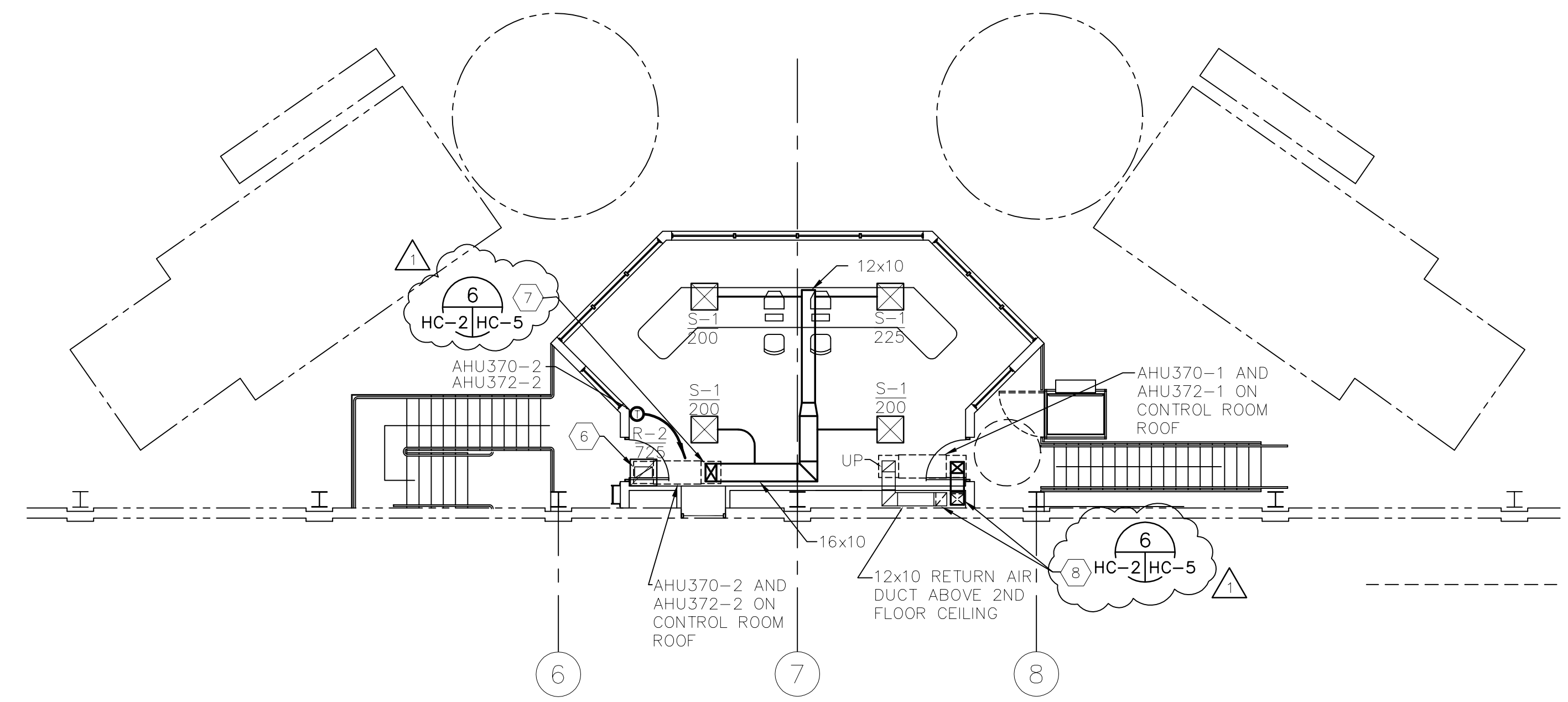
THE SYMBOLS, NOTES, AND ABBREVIATIONS SHOWN ON THIS SHEET ARE STANDARD AND MAY NOT NECESSARILY ALL APPEAR ON THIS PROJECT.

”RECORD DRAWINGS”

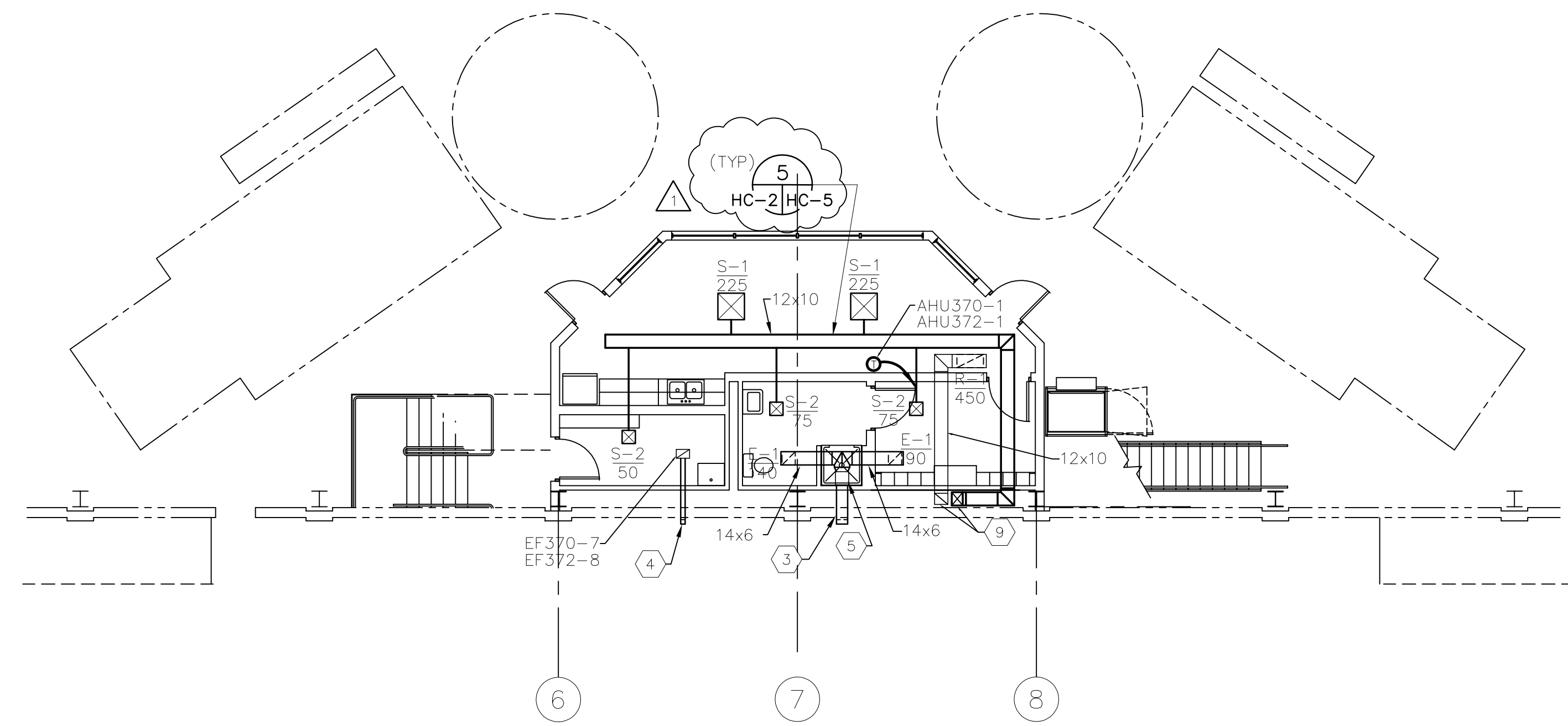
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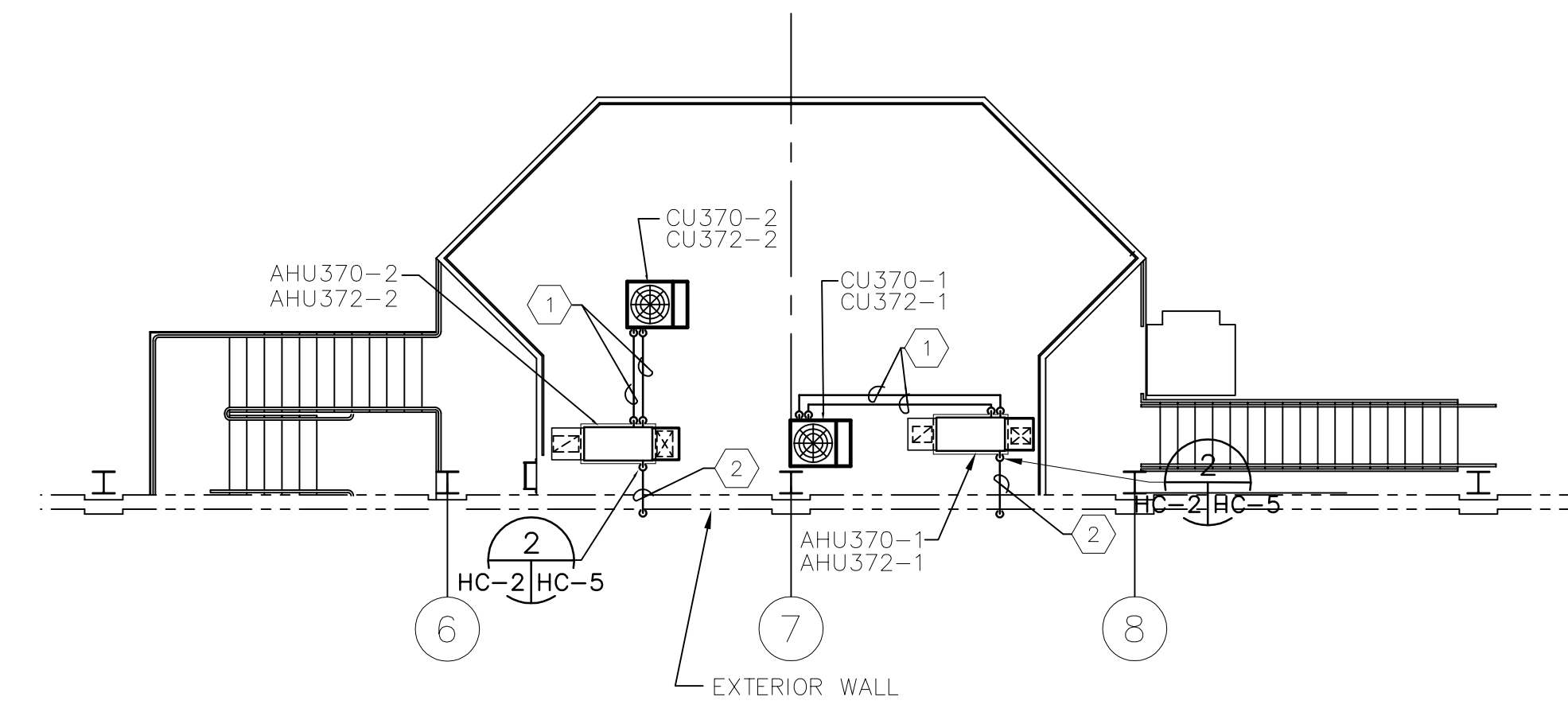
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**TYPICAL CONTROL ROOM SECOND FLOOR HVAC PLAN**  
 1/8" = 1'-0"



**TYPICAL CONTROL ROOM FIRST FLOOR HVAC PLAN**  
 1/8" = 1'-0"



**TYPICAL CONTROL ROOM ROOF HVAC PLAN**  
 1/8" = 1'-0"

**KEYED NOTES:**

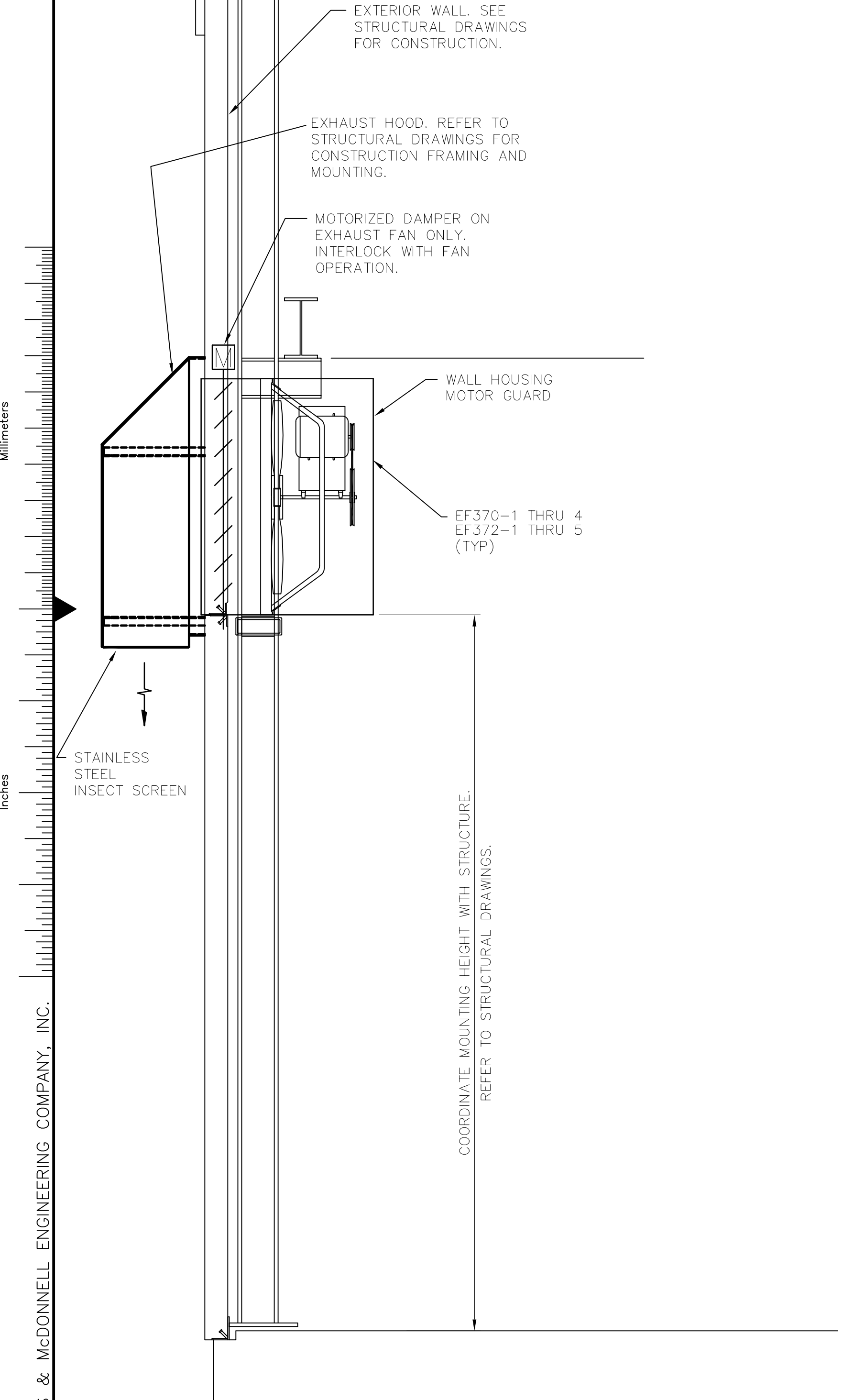
- 1 REFRIGERANT PIPING INSTALLED TIGHT TO ROOF FROM CONDENSING UNIT TO AIR HANDLING UNIT. SIZE PIPING AS RECOMMENDED BY MANUFACTURER.
- 2 1" CONDENSATE DRAIN FROM AIR HANDLING UNIT TO EXTERIOR OF PUMP STATION. INSTALL PIPING TIGHT TO ROOF AND EXTERIOR WALL. TERMINATE PIPING OVER SUCTION BASIN.
- 3 8x6 EXHAUST AIR DUCT. TERMINATE DUCT AT EXTERIOR WALL WITH MANUFACTURER'S SUPPLIED WALL CAP.
- 4 4"Ø EXHAUST AIR DUCT. TERMINATE DUCT AT EXTERIOR WALL WITH MANUFACTURER'S SUPPLIED WALL CAP.
- 5 EF370-6 AND EF372-7 INSTALLED ABOVE CEILING.
- 6 16x10 RETURN AIR DUCT UP TO AHU370-2 AND AHU372-2.
- 7 16x10 SUPPLY AIR DUCT DOWN TO AHU370-2 AND AHU372-2.
- 8 12x10 SUPPLY AND RETURN AIR DUCT IN DUCT CHASE DOWN TO FIRST FLOOR.
- 9 SUPPLY AND RETURN AIR DUCTS UP TO SECOND FLOOR.

JEFFREY L. HOLTZ, P.E.  
 FL 40779

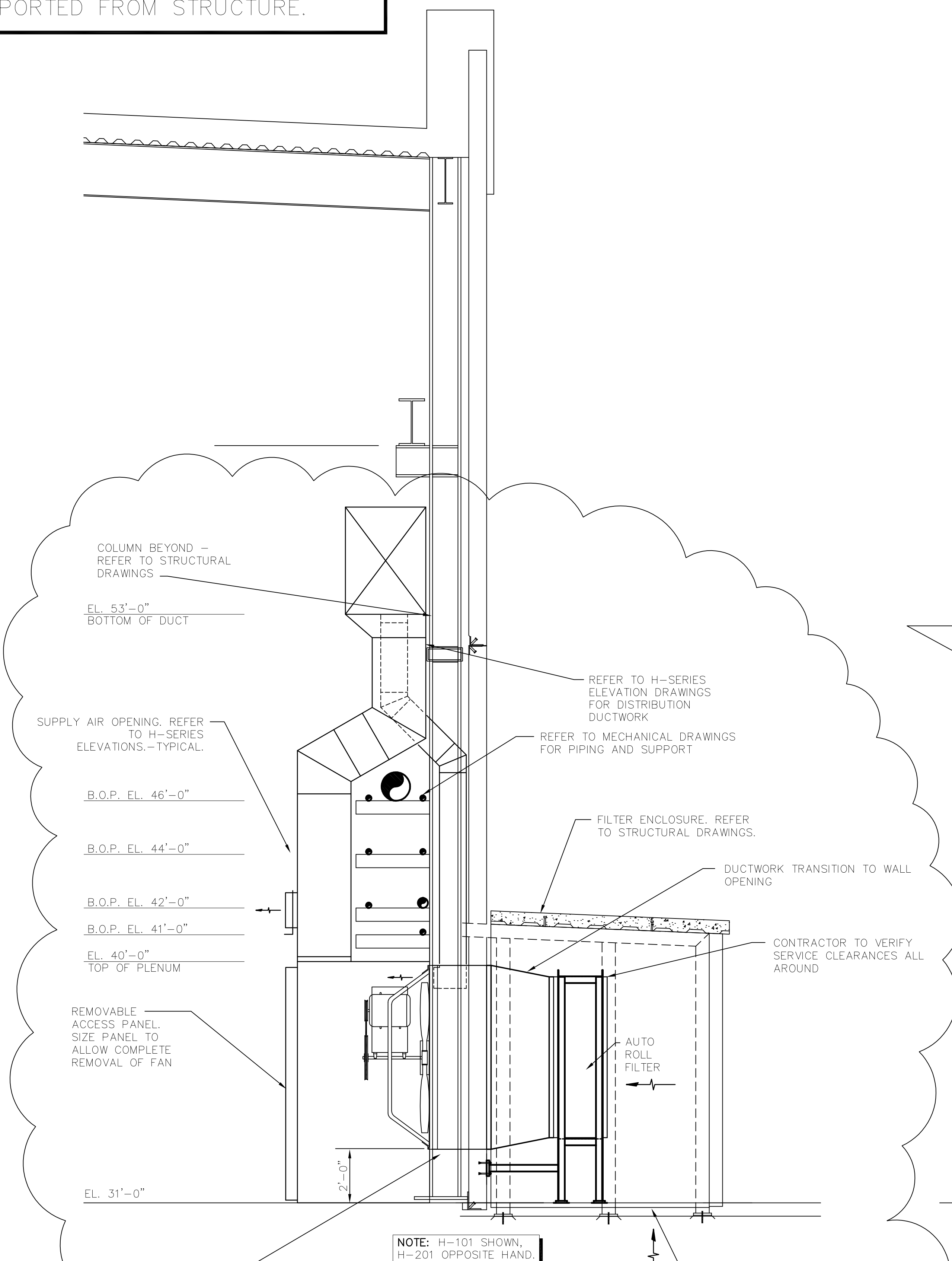
 <b>GEE &amp; JENSON</b> Engineers-Architects-Planners, Inc. <small>One Howard Circle          West Palm Beach          Florida 33409</small>	 <b>Burns &amp; McDonnell</b> <small>SINCE 1888</small> 9400 WARD PARKWAY KANSAS CITY, MO. 64114 License No. EB0000253	<b>EVERGLADES CONSTRUCTION PROJECT</b> <b>STORMWATER TREATMENT AREA NO. 3/4</b> <b>PUMP STATIONS G-370 &amp; G-372</b>  <b>CONTROL ROOM</b> <b>HVAC PLANS</b>	<b>SOUTH FLORIDA</b> <b>WATER MANAGEMENT DISTRICT</b> EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DATE</th> <th>CHKD</th> <th>DWN</th> </tr> <tr> <td>6-01-01</td> <td>6-01-01</td> <td></td> <td></td> </tr> </table>	NO.	DATE	CHKD	DWN	6-01-01	6-01-01		
NO.	DATE	CHKD	DWN									
6-01-01	6-01-01											
DRAWN: J. PARROTT CHKD: J. HOLTZ DESIGN: J. PARROTT CHKD: J. HOLTZ DATE: 5/10/01				REVISED PER ADDENDUM NO.1								

"RECORD DRAWINGS"

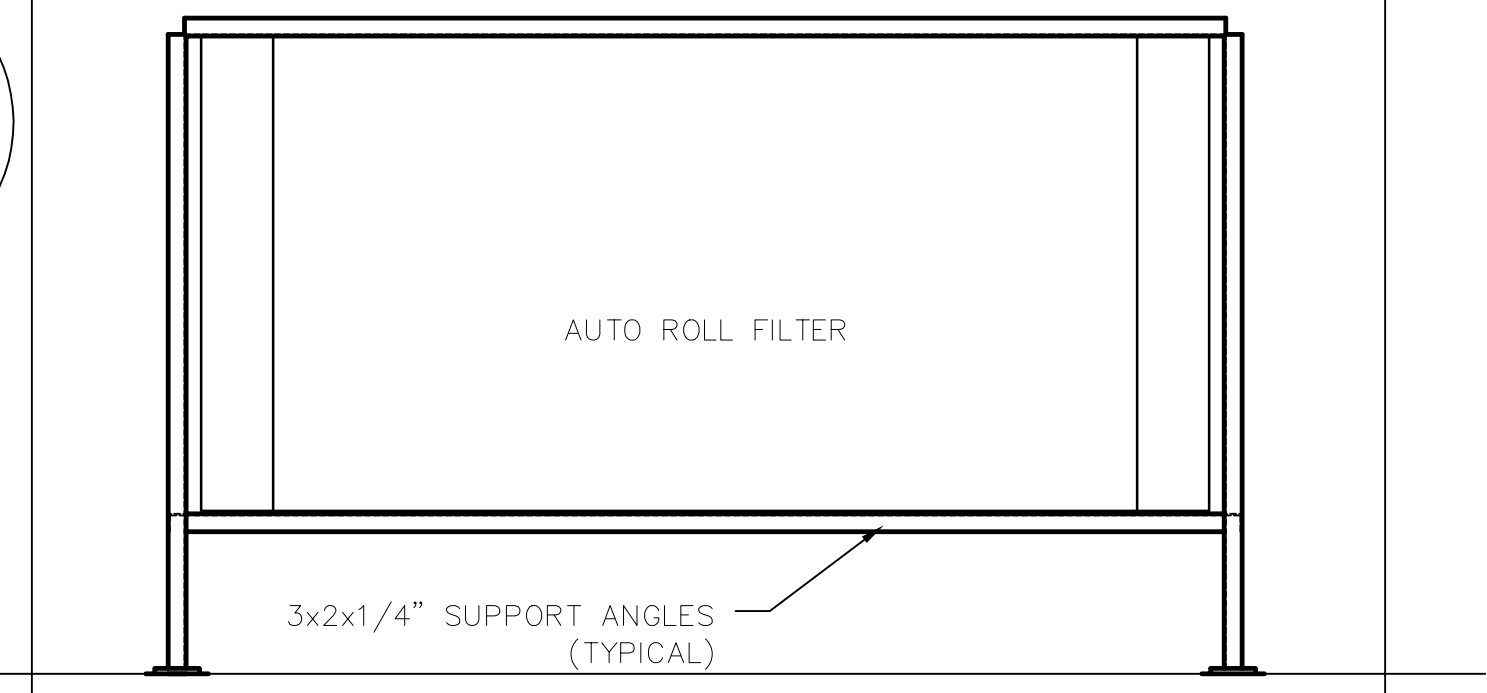
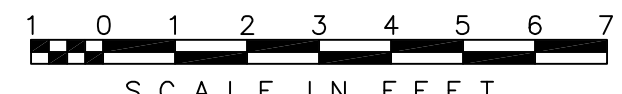
REFER TO STRUCTURAL DRAWINGS FOR WALL AND ROOF CONSTRUCTION, AND EQUIPMENT OPENING FRAMING AND MOUNTING DETAILS. WHERE DETAIL NOT SHOWN, MOUNT EQUIPMENT ACCORDING TO MANUFACTURER'S AND SMACNA REQUIREMENTS. ALL EQUIPMENT SHALL BE SUPPORTED FROM STRUCTURE.



**TYPICAL EXHAUST FAN SECTION**  
SCALE: 3/8" = 1'-0"  
H-101, H-201 HC-3



**TYPICAL SUPPLY FAN SECTION AND ELEVATION**  
SCALE: 3/8" = 1'-0"  
H-101, H-201 HC-3



FRONT VIEW

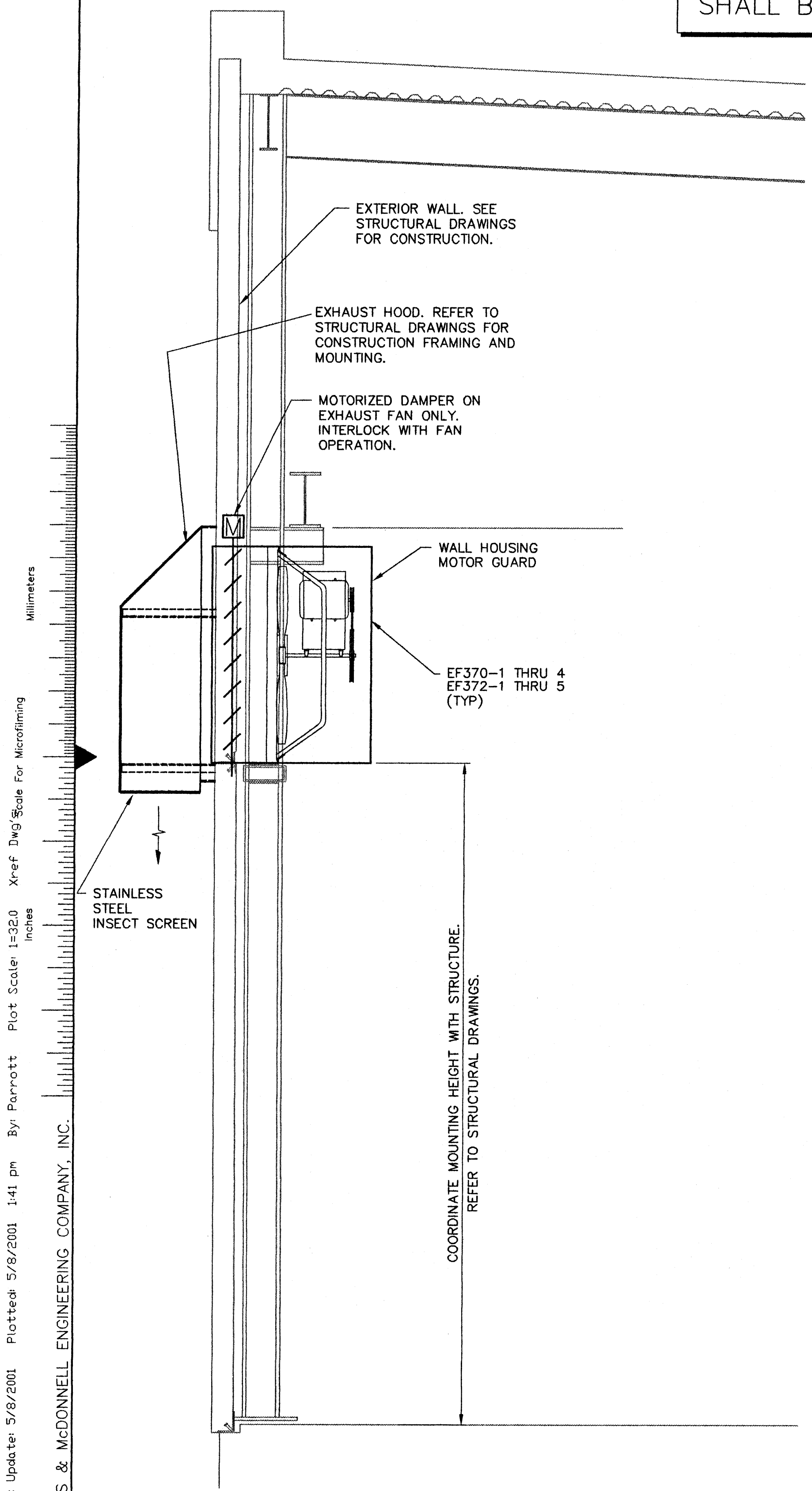
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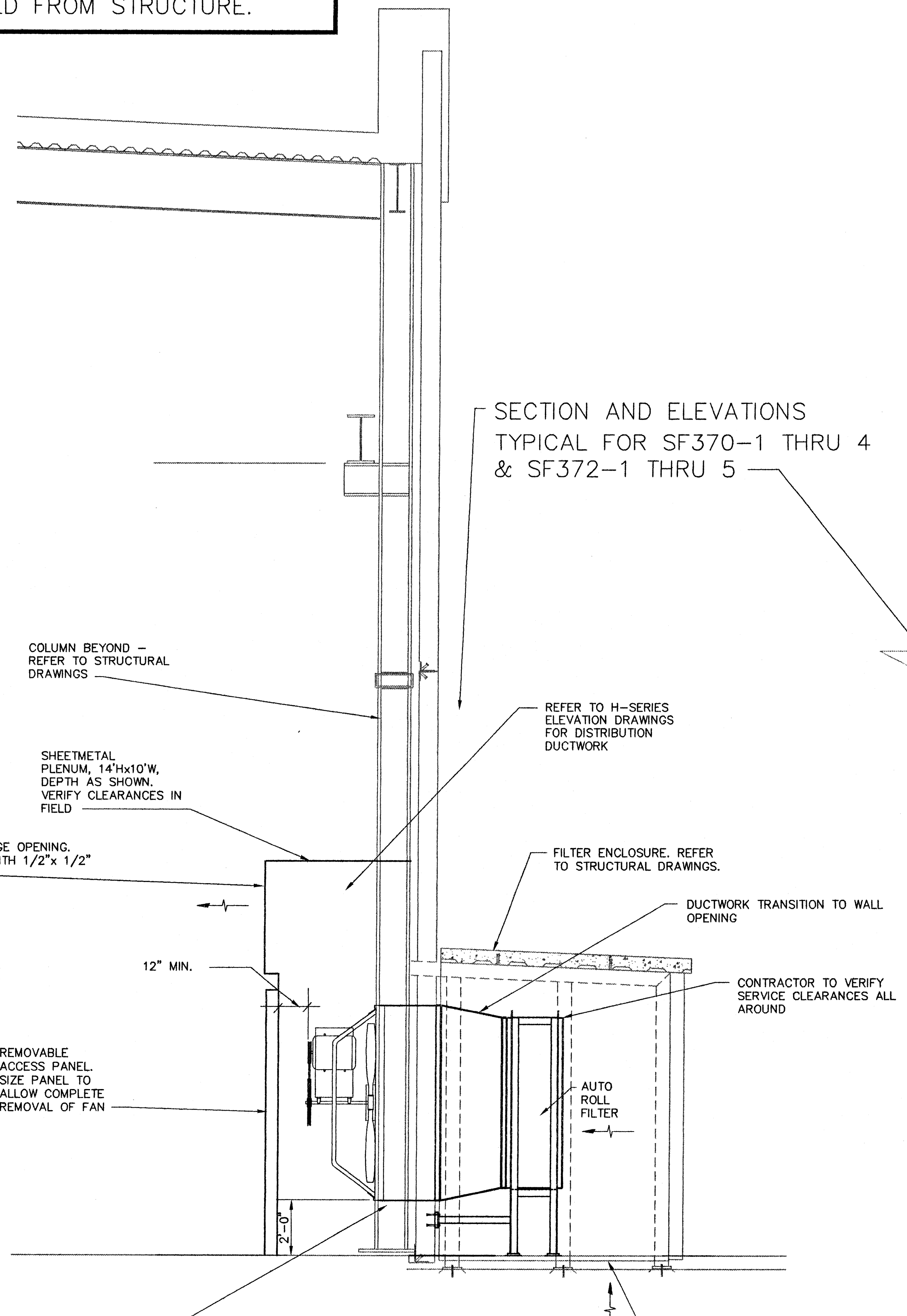
COPYRIGHT ©2001 BY BURNS & MCDONNELL ENGINEERING COMPANY, INC.

<b>GEE &amp; JENSON</b> Engineers, Inc. One Howard Circle West Palm Beach, Florida 33409 LB 0002934 AA C000656		DRAWN: J. PARROTT CHKD: J. HOLTZ DESIGN: J. PARROTT CHKD: J. HOLTZ DATE: 5/10/01	REVISIONS NO.   DATE   CHKD   DESCRIPTION 6-01-01   REVISED PER ADDENDUM NLI
<b>Blitts &amp; McDonnell</b> SINCE 1838 9400 WARD PARKWAY KANSAS CITY, MO. 64114 License No. EB0000253		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 BUILDING SECTIONS	
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406		JEFFREY L. HOLTZ, P.E. FL. 40779	
CONTRACT NO. C-E304 DWG. NO. HC-3			

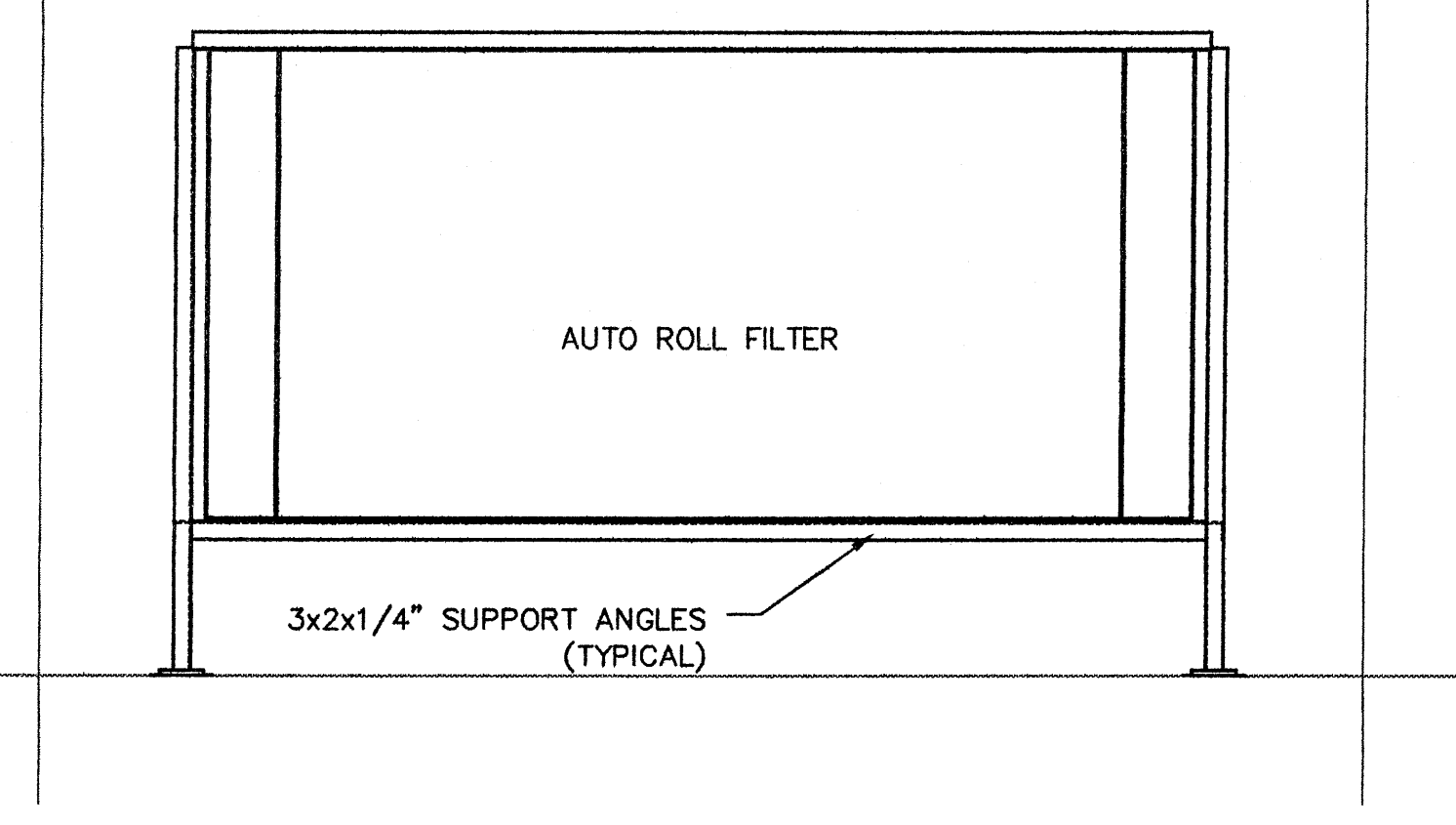
REFER TO STRUCTURAL DRAWINGS FOR WALL AND ROOF CONSTRUCTION, AND EQUIPMENT OPENING FRAMING AND MOUNTING DETAILS. WHERE DETAIL NOT SHOWN, MOUNT EQUIPMENT ACCORDING TO MANUFACTURER'S AND SMACNA REQUIREMENTS. ALL EQUIPMENT SHALL BE SUPPORTED FROM STRUCTURE.



**TYPICAL EXHAUST FAN SECTION**  
 SCALE: 3/8" = 1'-0"  
 H-101, H-201 HC-3  
 1  
 SCALE IN FEET



**TYPICAL SUPPLY FAN SECTION AND ELEVATION**  
 SCALE: 3/8" = 1'-0"  
 H-101, H-201 HC-3  
 2  
 SCALE IN FEET



FRONT VIEW

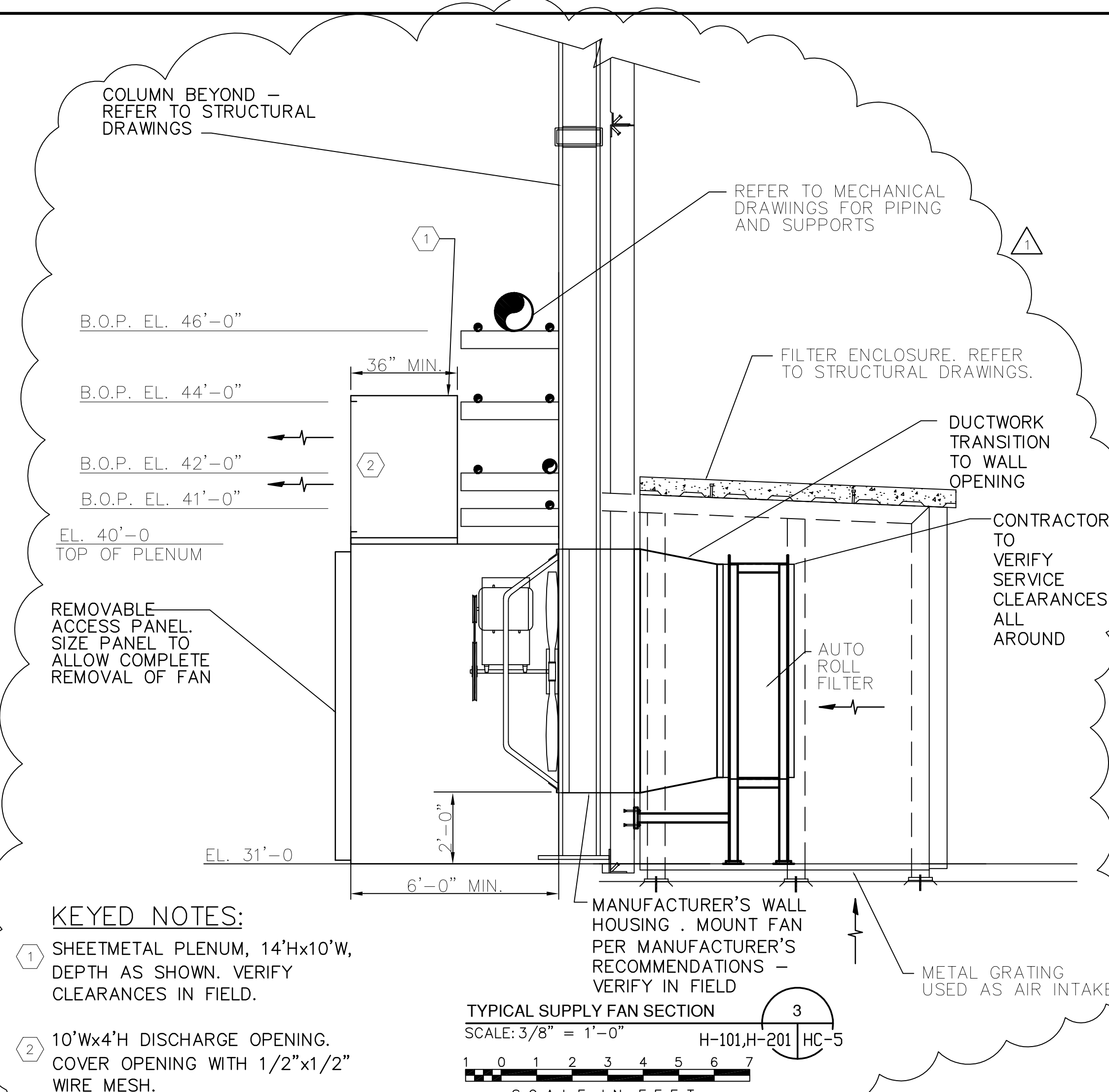
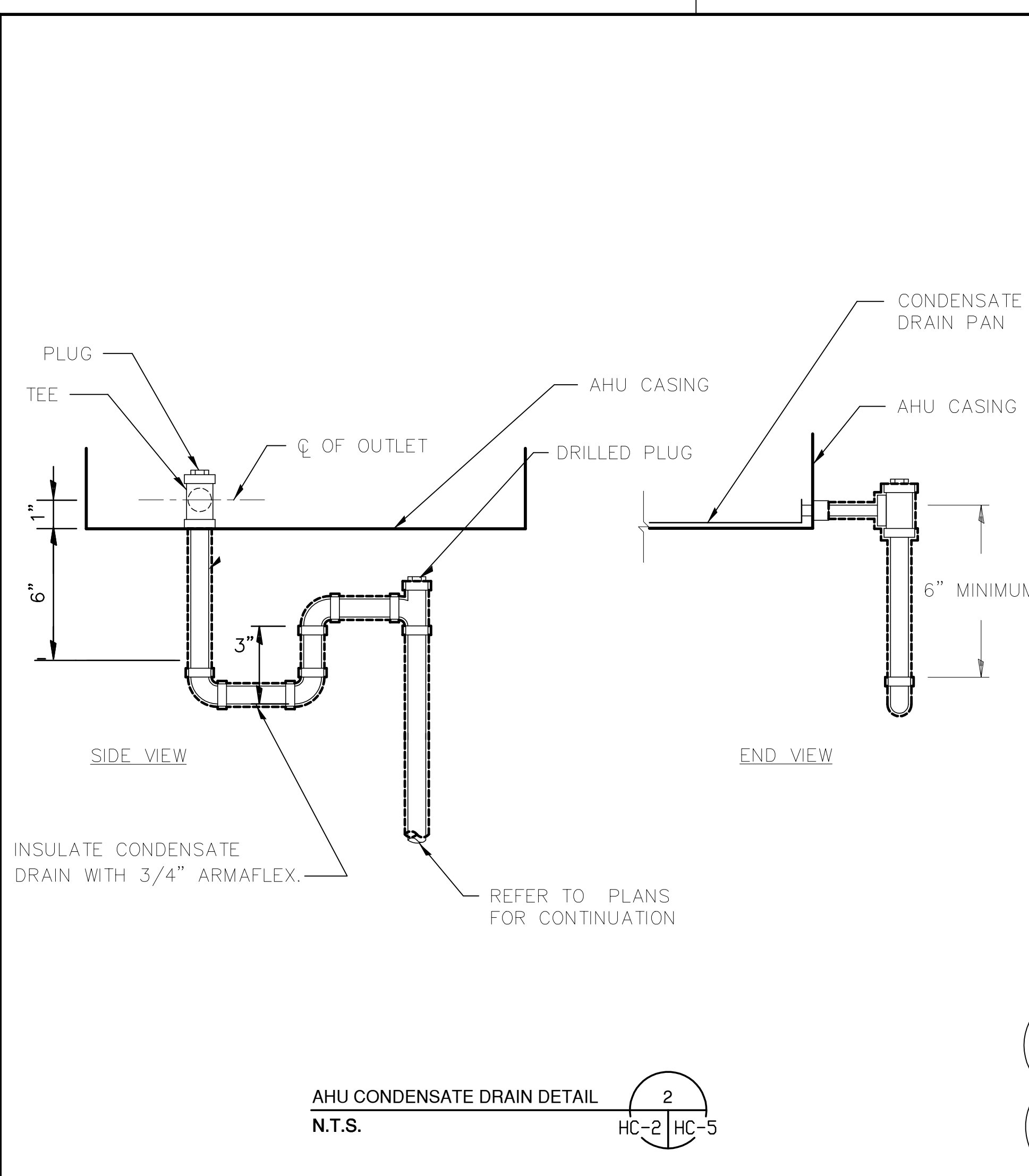
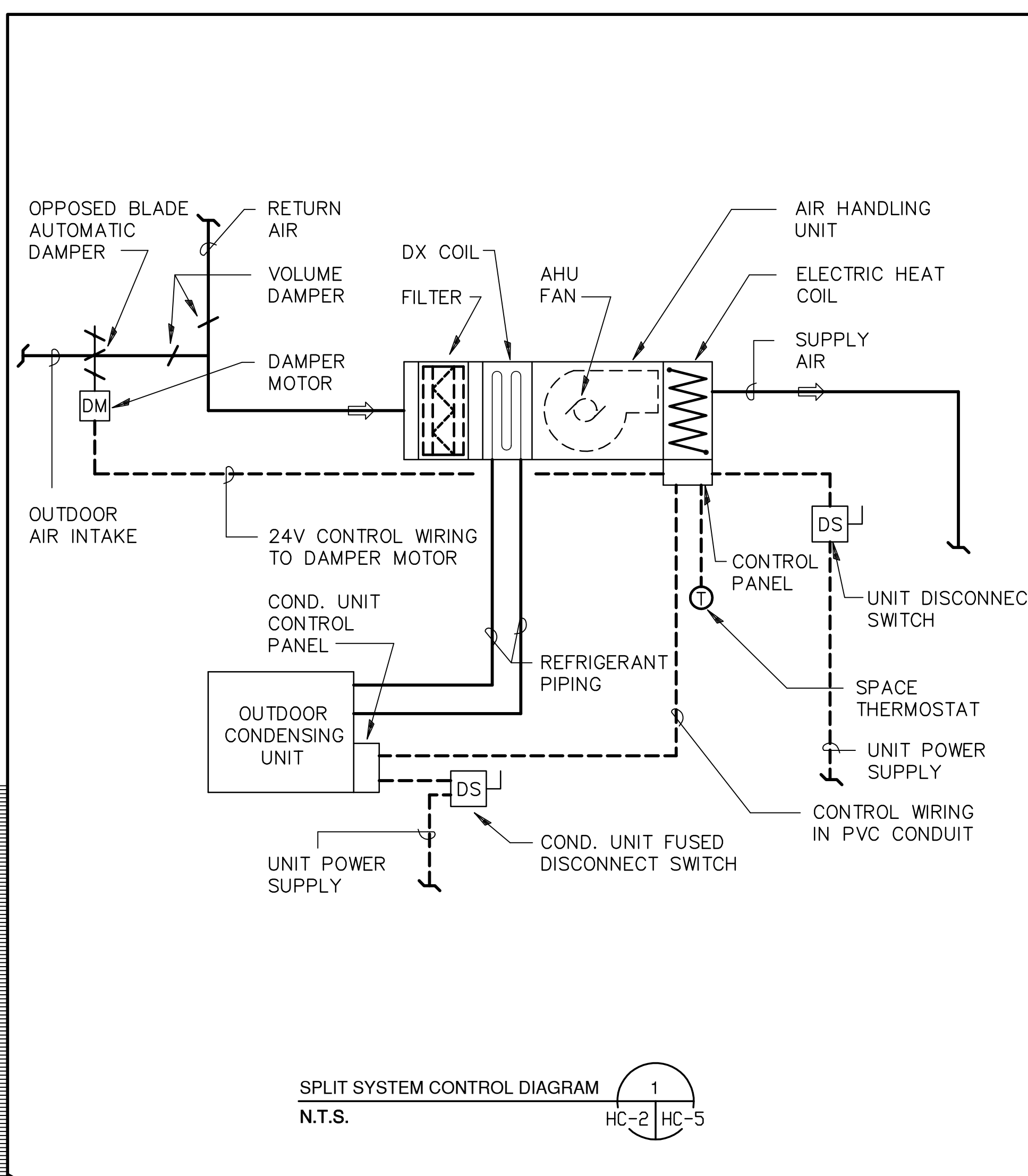
JEFFREY L. HOLTZ, P.E.  
 FL 40779

*Jeffrey L. Holtz*  
 5/10/2001

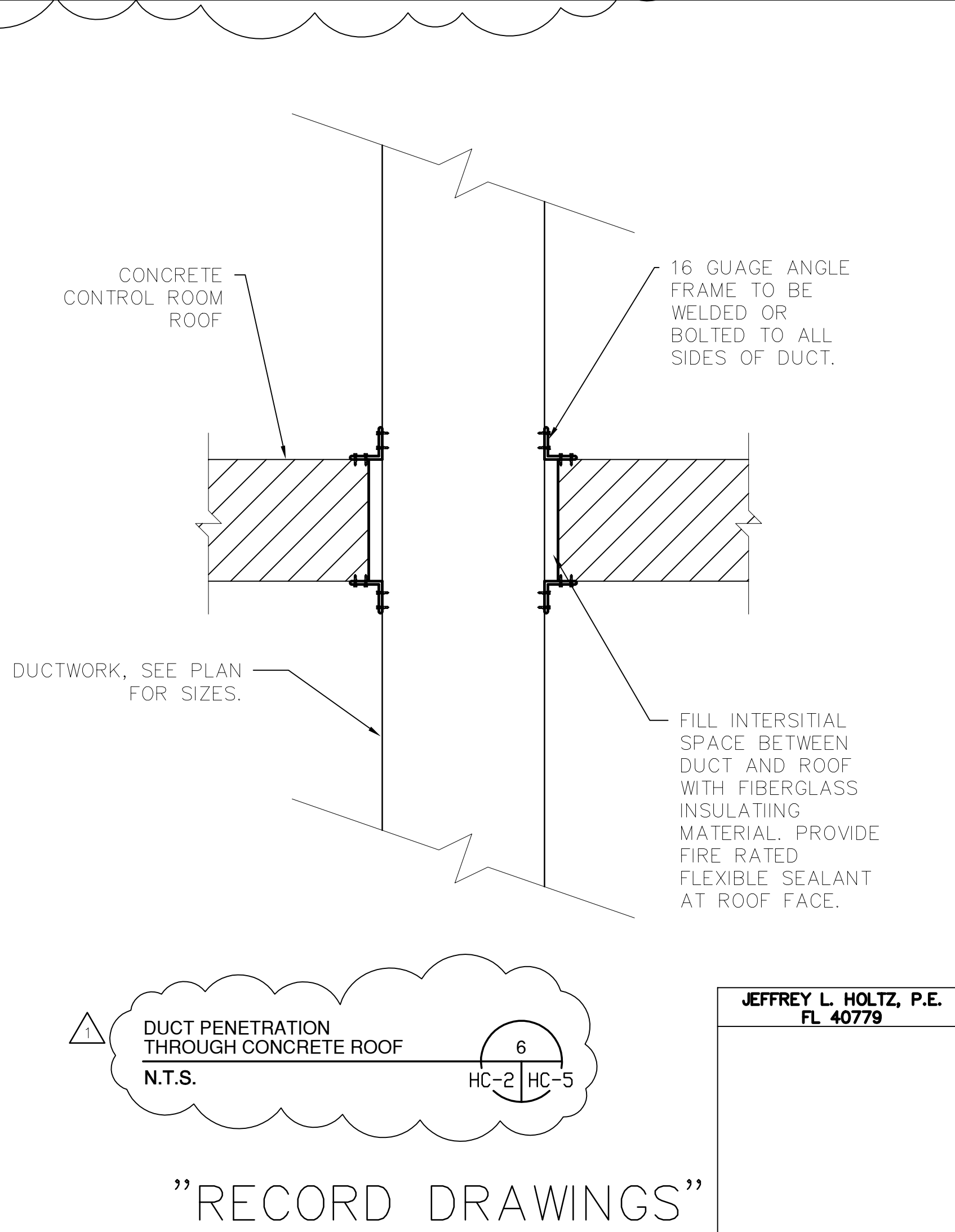
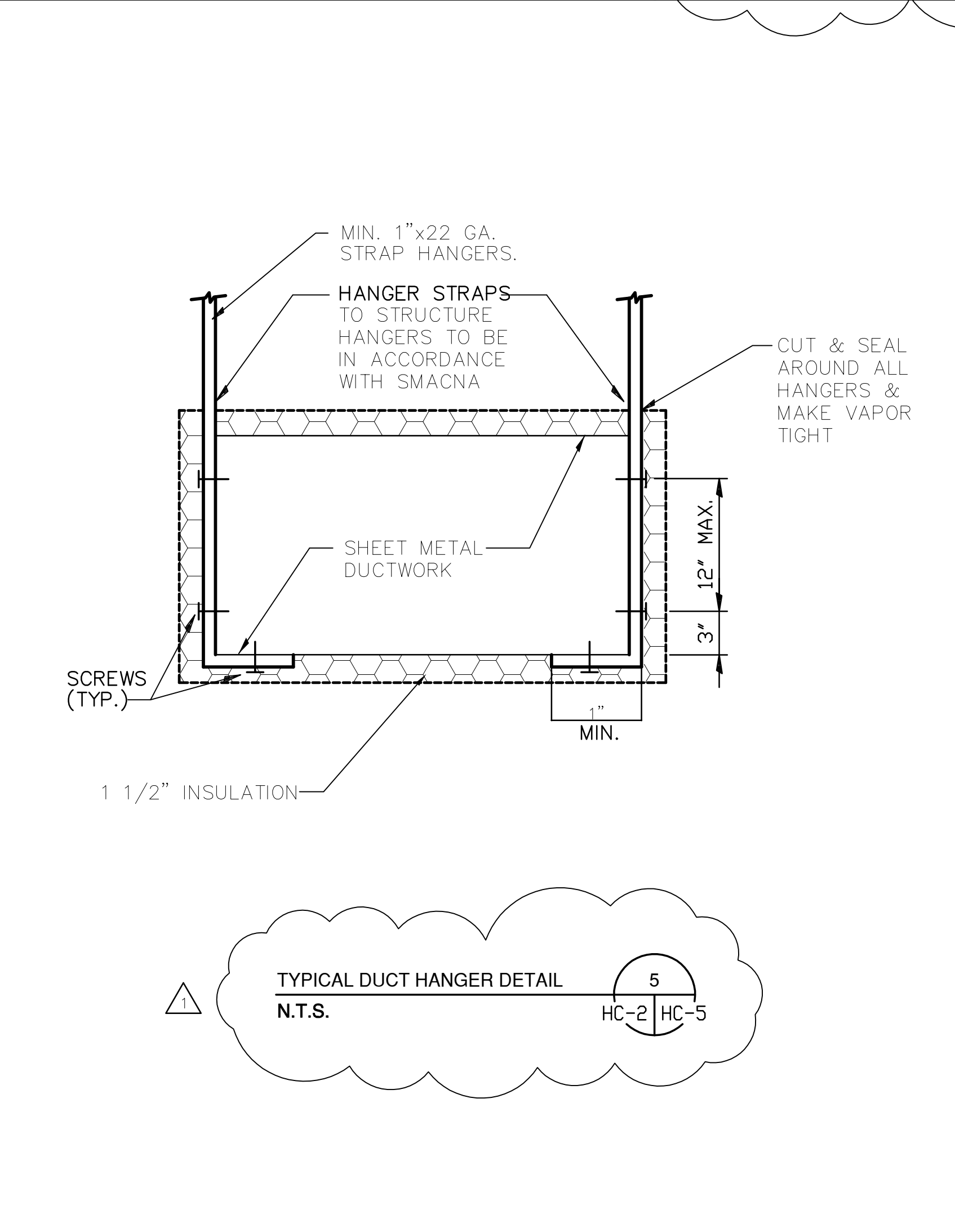
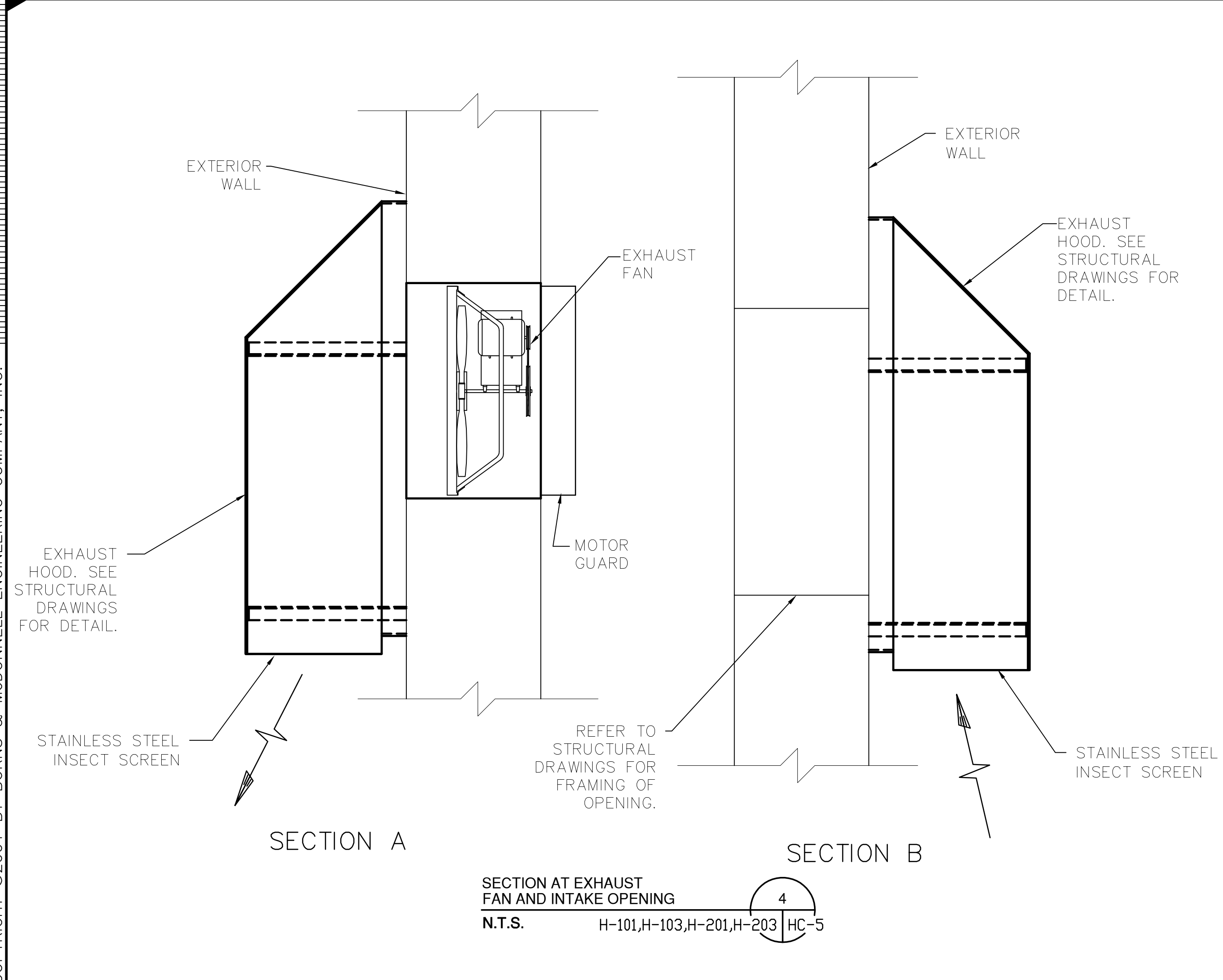
<b>GEE &amp; JENSON</b> Engineers, Architects, Planners, Inc. One Harvard Circle West Palm Beach, Florida 33409 LB 0502534 PA 0006568		DRAWN J. PARROTT CHKD [Signature] DESIGN J. PARROTT CHKD [Signature] DATE [Signature]	NO. DWN CHKD DATE	REVISIONS
<b>Burns &amp; McDonnell</b> SINCE 1898 9400 WARD PARKWAY KANSAS CITY, MO. 64114 License No. EB000253		EVERGLADES CONSTRUCTION PROJECT STORMWATER TREATMENT AREA NO. 3/4 PUMP STATIONS G-370 & G-372 <b>BUILDING SECTIONS</b>		
SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES CONSTRUCTION PROJECT 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406				
CONTRACT NO. C-E304 DWG. NO. HC-3				

J:\Mech\HC-3\SECTIONS.DWG Last Update: 5/8/2001 Plotted: 5/8/2001 1:41 pm By: Parrott Plot Scale: 1=320 Millimeters X-ref Dwg: Scale For Microfilming  
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- KEYED NOTES:**
- 1 SHEETMETAL PLENUM, 14'Hx10'W, DEPTH AS SHOWN. VERIFY CLEARANCES IN FIELD.
  - 2 10"Wx4'H DISCHARGE OPENING. COVER OPENING WITH 1/2"x1/2" WIRE MESH.



REVISIONS	DATE	CHKD	DATE
6-01-01	REVISED PER ADDENDUM NO.1	J. HOLTZ	
NO. DWN	CHKD	J. HOLTZ	5/10/01

**GEE & JENSON**  
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**Burns & McDonnell**  
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 9400 WARD PARKWAY  
 KANSAS CITY, MO. 64114  
 License No. EB0000253

**EVERGLADES CONSTRUCTION PROJECT**  
**STORMWATER TREATMENT AREA NO. 3/4**  
**PUMP STATIONS G-370 & G-372**

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 EVERGLADES CONSTRUCTION PROJECT  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FLORIDA 33406

**VENTILATION DETAILS**

**JEFFREY L. HOLTZ, P.E.**  
 FL 40779

CONTRACT NO. C-E304  
 DWG. NO. HC-5

V:\2015604\Mech\HC-5DETAILS.dwg  
 Last Update: 5/29/2001  
 Plotted: 8/10/2001 10:32 am  
 By: Parrott  
 Plot Scale: 1=96.0  
 Inches  
 Millimeters  
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