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MARK A. MORTON, P.E.
JASON D. MEYER, P.E.

November 23, 2012

Mr. Wes Weaver, President
Weaver Construction Management, Inc.
3679 South Huron Street, Suite 404
Englewood, CO 80110

Via Email to: wes@weavercm.com
No Hard Copy to Follow

Re: Harold D. Thompson Regional Water Reclamation Facility (HDTRWRF)
Lower Fountain Metropolitan Sewage Disposal District (LFMSDD)

Dear Wes:

Reference is made to your shop submittal identified as follows:

Submittal No.:	11160-001B
Date of Submittal:	October 31, 2012
Supplemental Information:	November 20, 2012
Title:	Aeration Basin Mixers and Hoist
Specification Section:	11160
Manufacturers:	Grundfos; International Protective Coatings; Halliday Products, Inc.

The referenced submittal has been stamped "***No Exception Taken***" and "***Revise and Resubmit***".
Our comments are as follows:

1. This submittal has amended the long-term storage recommendation for those mixers that will not be placed immediately into service. It is imperative that the Owner and operators read and familiarize themselves with the storage recommendations and requirements described in Item 1.b. of the Grundfos response letter included in this submittal.
2. Regarding the vertical placement of the mixers above the aeration system equipment, all parties have acknowledged that WCMI will be responsible for coordinating with the equipment suppliers in order to determine the optimal vertical location. No response to this issue has been provided in this submittal. We request WCMI pursue contact with equipment suppliers in order to resolve this issue.
3. In an effort to quickly resolve other issues that remain with this submittal, I contacted John Jacob with WCMI via telephone and email. My email correspondence to John, dated November 6, 2012, included four comments requesting specific information. It also included two attachments to further clarify the mixer mast issues. This email and its attachments have been included at the end of this letter.

Following my telephone conversation with Grundfos representatives on November 16, 2012 regarding the mixer mast issues, John Jacob provided supplemental information to this

Submittal No. 11160-001B via email on November 20, 2012. The following items address the responses and data included in the supplemental information.

- a. Comment No. 1 regarding the NEMA rating of individual control panel components: **No Exception Taken**
- b. Comment No. 2 regarding the control panel contact requirements: No exception is taken to the wiring diagram revisions including with the supplemental information. However, two items require correction on the submitted exterior control panel drawing.
 - 1) Revise the equipment identification plates to have two lines of text. The first line shall read "AERATION BASIN" and the second line shall read "MIXER ABM-X", as was requested in review comment No. 4.d. for Shop Submittal No. 11160-001 and acknowledged by the supplier's response in Shop Submittal No. 11160-001A.
 - 2) Revise the mixer run indicating light from red to green, as indicated in the submitted Bill of Materials.
- c. Comment No. 3 regarding the mixers and their corresponding mast fabrication details: **REVISE AND RESUBMIT**
 - 1) The submitted mixer mast assembly drawings (3 total) and bracket extension drawings (2 total) still require revision. The mixer mast assembly drawings correctly grouped mixer tag numbers with their corresponding tank depths. However, the bracket extension requirements for specific mixer tag numbers are still incorrect. We again ask that you reference the handwritten notes and color coding given on the two attachment files of the November 6, 2012 email to John Jacob and revise the mixer mast assembly drawings. To further clarify these requirements, here is another detailed description of the five mixer mast assembly drawings that are required for this application.
 - Mixer tag numbers: ABM-1, 2, 5, 6, 9
Actual tank depth: 320 inches
Quantity of mast assemblies: 5
Extension distance required: 30 inches
 - Mixer tag numbers: ABM-10
Actual tank depth: 320 inches
Quantity of mast assemblies: 1
Extension distance required: None required
 - Mixer tag numbers: ABM-4, 8
Actual tank depth: 324 inches
Quantity of mast assemblies: 2
Extension distance required: 30 inches

Mr. Wes Weaver
November 23, 2012
Page 3

- Mixer tag numbers: ABM-12
Actual tank depth: 324 inches
Quantity of mast assemblies: 1
Extension distance required: None required
 - Mixer tag numbers: ABM-3, 7, 11
Actual tank depth: 325 inches
Quantity of mast assemblies: 3
Extension distance required: 30 inches
- 2) Revise bracket extension drawings to indicate a total of 10 upper bracket extensions required and a total of 20 intermediate bracket extensions required. Mixer tag numbers requiring extension brackets: ABM-1, 2, 3, 4, 5, 6, 7, 8, 9, 11.
- d. Comment No. 4 regarding vertical location of upper mast bracket and associated anchor bolts: **No Exception Taken**
4. We are also attaching select pages of the supplemental information to this letter. There were numerous pages included in the supplemental information. However, we are only attaching those pages that are pertinent to the remaining issues.

Please call if you should have any questions.

Sincerely,



Mark A. Morton, P.E.

MAM/kmw
Attachments

ec (letter with attachments):

Mr. Jim Heckman, Manager, LFMSDD, lfmanager@lfmsdd.org
Ms. Cindy Murray, Office Manager, Fountain Sanitation District, fsdistrict@fsd901.org
Mr. Jeff Burst, Project Supt., Weaver Construction Management, Inc., jeff@weavercm.com
Mr. John Jacob, Project Mgr., Weaver Construction Management, Inc., john@weavercm.com
Mr. Adam Roeder, Weaver Construction Management, Inc., aroeder@weavercm.com
Ms. Leslie Brown, Weaver Construction Management, Inc., leslie@weavercm.com

cc (letter with attachments): Mr. Jerry Miller, Resident Project Representative, GMS, Inc.

X-Original-To: mamorton@gmsengr.com
Delivered-To: mamorton@gmsengr.com
From: John Jacob <john@weavercm.com>
To: Mark Morton <mamorton@gmsengr.com>
CC: Leslie Brown <leslie@weavercm.com>
Subject: HDTWRF - Supplemental Information 11160-1.A ~~1.A~~ 001B
Thread-Topic: HDTWRF - Supplemental Information 11160-1.A ~~1.A~~ 001B
Thread-Index: Ac3HcVBdf6V6C+qFSgmXOQXGIBZvlQ==
Date: Tue, 20 Nov 2012 22:50:38 +0000
Accept-Language: en-US
X-MS-Has-Attach: yes
X-MS-TNEF-Correlator:
x-originating-ip: [66.110.179.170]
Mailarmory-Level:
Mailarmory-Category: clean (0)
Mailarmory-Filter-Date: Tue, 20 Nov 2012 15:51:27 -0700 (MST)
Mailarmory-Details:
U2FsdGVkX1/cEEECLJRJBrsUSlyXeqmhSZZxiYcHoKBuAyv9UuNiJ9dclFwn/atbUCqvEDorV8ISH
WzBssR/Q==

Mark,

Per our conversation today, I'm attaching supplemental information to submittal 11160-1.B for the mixer, mast and hoist submittal for you to incorporate into the submittal. The mast drawings have been included with Grundfos's response. There is a substantial amount of product data for the panels, but the products are identified at the top of the pages by a part number.

Let me know if you have any questions.

I'm requesting an expedited review, again, by 11/28/12.

Thank you,

John Jacob

Project Manager

WEAVER Construction MANAGEMENT, INC.

PH: 303.789.4111 FAX: 303.789.4310

ADDRESS: 3679 S. Huron Street, Suite 404, Englewood, CO 80110 WEAVERCM.COM

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11160-1A 1of 3Formal Response Resubmittal Comments1.pdf



11160-1A 2of3 Formal Response Resubmittal Comments2.pdf



11160-1.A 3of3.pdf

20 November 2012

Mark Morton
GMS, Inc.
611 n. Weber
Suite 300
Colorado Springs, CO 80903

C/O Boyer & Seeley
Craig Garrett

Re: **Response to Comments on November 6 Communication
Resubmittal 11160-001B**

Sir:

First let me say thank you for the phone conversation in clarification of your comments. This especially for your clarification of point #4 where I misunderstood your written comment.

The following responses are in the same numerical order as your comments.

Comment 1:

Our fault was in not clearly indicating that the rating for the components refers to all the different components in the manufacturers series. I've discussed this with our panel manufacturer and he was a little confused so he sent to me the complete listing of the components used, demonstrating the NEMA rating for all components utilized.

I know this is probably overkill but by including catalogue sheets on all components in question, full NEMA ratings are documented.

Comment 2:

I've discussed this issue again with our panel builder and he has supplied a revised drawing to specifically address your requirements. These drawings are attached.

GRUNDFOS CHICAGO
Tim Tressler
372 Charlton Lane
Tappahannock, VA 22560
Direct: (+1) 630-536-7288
E-mail: ttressler@Grundfos.com

Comment 3:

After a second resubmittal, I finally understand your comments concerning mixer locations. Thank you for taking the step of sending me the location numbers on the "Typical Mixer Detail".

As discussed during our phone conversation, this drawing was the only document I was working from other than the plan view of the installation. From the mixer detail we had assumed there were ten (10) mixers labeled as "West Mixers" and one (1) at each of the "East Mixers" locations.

I've reconciled the mixer mast drawings per your comments and will now show & supply six (6) mixers for West locations 1, 2, 5, 6, 9, & 10, three (3) for East Mixers locations 4, 8, & 12; and three (3) for East Mixer locations 3, 7, & 11. These locations are listed on the attached mixer mast submittal details.

Comment 4:

I have worked with our mixer mast fabricator discussing the placement of the anchor bolts in relation to the top of the wall. In accordance with our phone conversation, this bolt hole should be 4.5 times the diameter of the hole used for mounting the anchor bolts.

The piece that actually mounts to the wall shows $\frac{3}{4}$ " holes that are 1" down from the upper edge. With the holes being $\frac{3}{4}$ " and requiring 4.5 times that diameter from the top, this results in a hole placement at minimum 3- $\frac{3}{8}$ " from the top. With the 1" allowance available from the mounting plate dimensions, this leaves a requirement of 2- $\frac{3}{8}$ " more. As the mixer masts can only be manufactured to the nearest inch; I have instructed that all masts be shortened 3".

This should still easily allow lifting the mixers without difficulty. The attached drawings demonstrate this shortened length for the specific locations as listed under Comment #3.

GRUNDFOS CHICAGO
Tim Tressler
372 Charlton Lane
Tappahannock, VA 22560
Direct: (+1) 630-536-7288
E-mail: ttressler@Grundfos.com

Again I want to thank you for talking the time with me to clarify these points and hope that this letter and attached documentation addresses all concerns you might have.

Respectfully submitted,
Grundfos Chicago



Tim Tressler
Business Development Manager
Water Utility
North American Region

GRUNDFOS CHICAGO
Tim Tressler
372 Charlton Lane
Tappahannock, VA 22560
Direct: (+1) 630-536-7288
E-mail: ttressler@Grundfos.com

Standards & Approvals	Conforming to Standards		EN60947-1, EN60947-5-1, VDE0660-200, UL508, CSA C22-2 No.14						
	Approvals File No. E68961 File No. LR92374 TÜV Rheinland Certificate No. 2005010305145656 Registration No. R9551069 (E-stops) Registration No. R50054316 (Dual Pushbuttons) Registration No. J9650511 (Pilot Lights) Registration No. J9551458 (all other switches)		CSA: pushbuttons and selector switches: A600 pilot lights and illuminated pushbuttons, direct supply pilot lights and illuminated pushbuttons with integral transformer (100/110, 115, 120, 200/220, 230, 240, 380, 400/440, 480V) UL: pushbuttons and selector switches: A600 pilot lights and illuminated pushbuttons, direct supply pilot lights and illuminated pushbuttons with integral transformer (100/110, 115, 120, 200/220, 230, 240, 380, 400/440, 480V) TÜV: pushbuttons and selector switches: A600=P600 (NO, NC)/Q600 (NO-EM, NC-LB) pilot lights and illuminated pushbuttons, direct supply pilot lights and illuminated pushbuttons with integral transformer (100/110, 115, 120, 200/220, 230, 240, 380, 400/440, 480V)						
	Electric Shock Protection		Class 0 conforming to IEC60536						
Safety	Degree of Protection (conforming to IEC60529) (conforming to NEMA ICS6-110)		IP65 (from front of the panel) IP20 (Type HW-F contact block) NEMA 1, 2, 3, 3R, 3S, 4, 4X, 5, 12, 13 (from front of panel) ✓						
	External Short-Circuit Protection		10A 250V fuse conforming to IEC60269-1						
Contact Ratings	Terminal Referencing		Conforming to CENELEC EN50005						
	Pushbuttons		Contact Block			Type HW-C/HW-F /HW-G			
	Illuminated Pushbuttons		Rated Insulation Voltage			600V			
	Selector Switches		Rated Continuous Current			10A			
	Illuminated Selector Switches Pushbutton Selectors		Contact Ratings by Utilization Category			AC-15 (A600) DC-13 (P600)			
Characteristics	Operational Voltage		24V	48V	50V	110V	220V	440V	
	Operational Current	AC 50/60 Hz	AC-12 Control of resistive loads & solid state loads	10A	—	10A	10A	6A	2A
		DC	AC-15 Control of electromagnetic loads (> 72VA)	10A	—	7A	5A	3A	1A
			DC-12 Control of resistive loads & solid state loads	8A	5A	—	2.2A	1.1A	—
		DC-13 Control of electromagnets	5A	2A	—	1.1A	0.6A	—	

For dimensions, see page 551.

LED Lamp Ratings (LSTD Type)

Model No.	LSTD-6Ⓢ		LSTD-1Ⓢ	LSTD-2Ⓢ	LSTD-H2Ⓢ	LSTD-M4Ⓢ		
Lamp Base	BA9S/13							
Rated Voltage	6V AC/DC		12V AC/DC	24V AC/DC	120V AC	240V AC		
Voltage Range	6V AC/DC ±10%		12V AC/DC ±10%	24V AC/DC ±10%	120V AC ±5%	240V AC ±5%		
Current Draw	AC	A, R, W: G, S:	17mA 8mA	11mA	11mA	10mA	10mA	
	DC	A, R, W: G, S:	14mA 5.5mA	10mA	10mA	—	—	
Color Code	A (amber), G (green), R (red), S (blue), W (white)							
Lamp Base Color	Same as illumination color							
Voltage Marking	Die stamped on the base							
Life (reference value)	Approx. 50,000 hours (The luminance reduces to 50% the initial intensity when used on complete DC.)							
Internal Circuit	A, R, W		A, R, W					
	G, S							
				LED Chip		Protection Diode		Zener Diode

In place of Ⓢ, specify the Lens/LED Color Code.

Switches & Pilot Lights

Display Lights

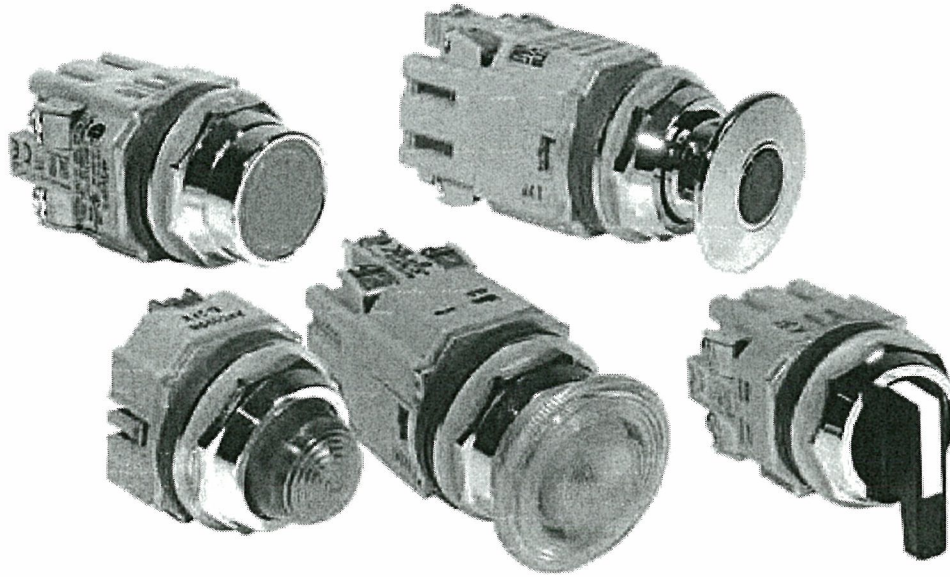
Relays & Sockets

Timers

Terminal Blocks

Circuit Breakers

TWTD Series – Full Size NEMA Pushbuttons



TWTD Series: Heavy duty switches built to last

Key features:

- Variety of button sizes up to 2 9/16" (65mm)
- Rugged construction includes chrome plated zinc locking ring die cast zinc mounting threads, screw mounted contact blocks
- LED or incandescent illumination
- Transformer or full voltage
- Transparent contact windows
- Slow make, double break self-cleaning contacts
- Modular construction for maximum flexibility
- Double nickel plated terminal screws
- Available assembled or as sub-components
- Type 4x and IP65 watertight/oiltight panel

Large two screw terminals with captive terminal plate

The rugged series of TWTD switches offers both variety and durability in an attractive design.

With button sizes up to 2 9/16" (65mm), chrome plated zinc locking rings, die cast zinc mounting threads, steel anti-rotation rings, and self cleaning contacts, the TWTDs are here to stay.

The TWTD series also offers either LED or incandescent illumination in full voltage and transformer models.

Transparent contact windows allow the viewing of IDEC's self cleaning slow-make/slow-break contacts.

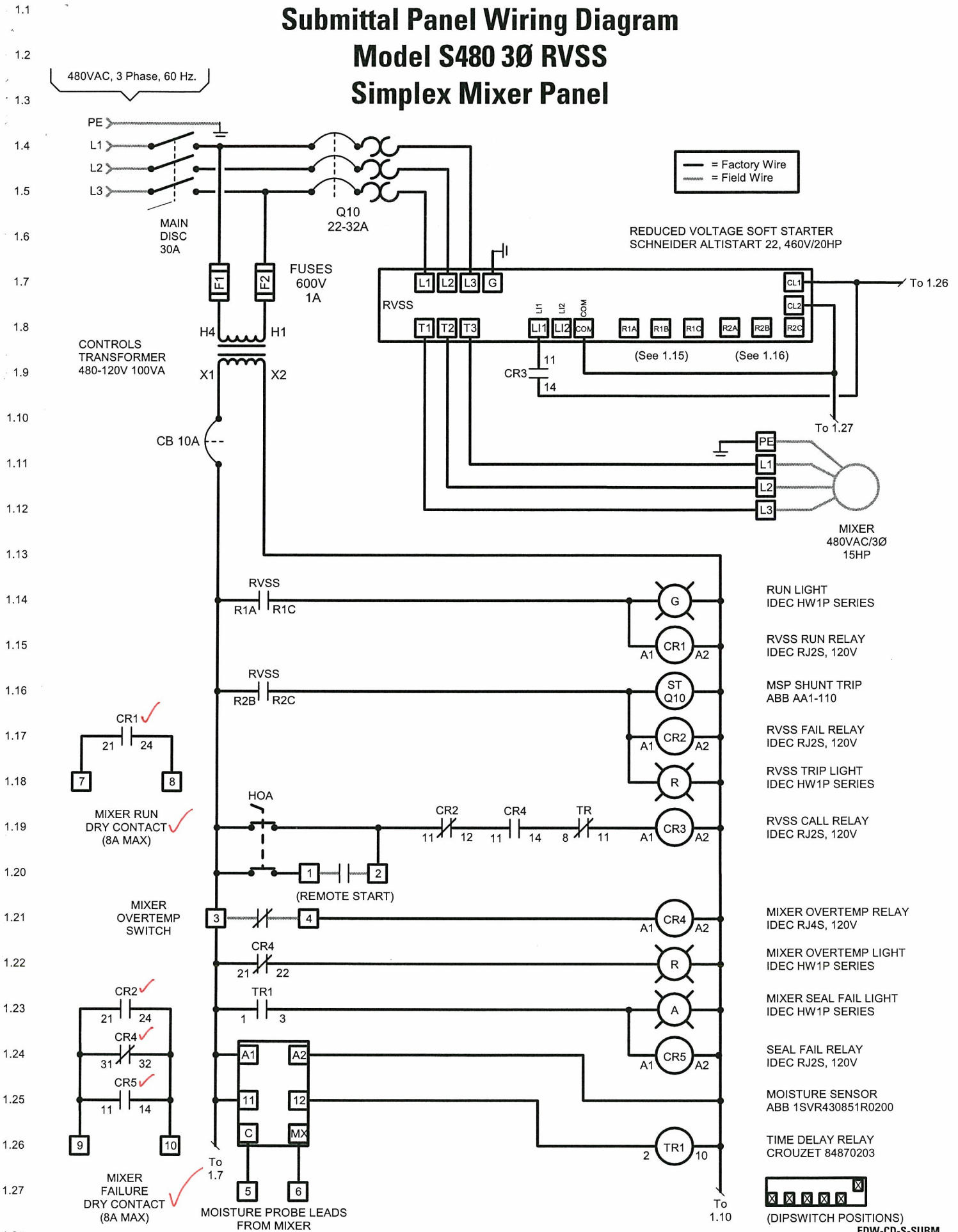
Regardless of your switching needs, the TWTD series provides the kind of long lasting, industrial strength quality you've come to expect from IDEC.



Submittal Panel Wiring Diagram

Model S480 3Ø RVSS

Simplex Mixer Panel



HALLIDAY PRODUCTS, INC.
 ORLANDO, FL
 http://www.hallidayproducts.com



MODEL NO. M4B317BAAAAA

ACTUAL TANK DEPTH 320' ✓

QUANTITY: ~~6~~ 5

ORDER NO. W15321

LOCATION/TAG:

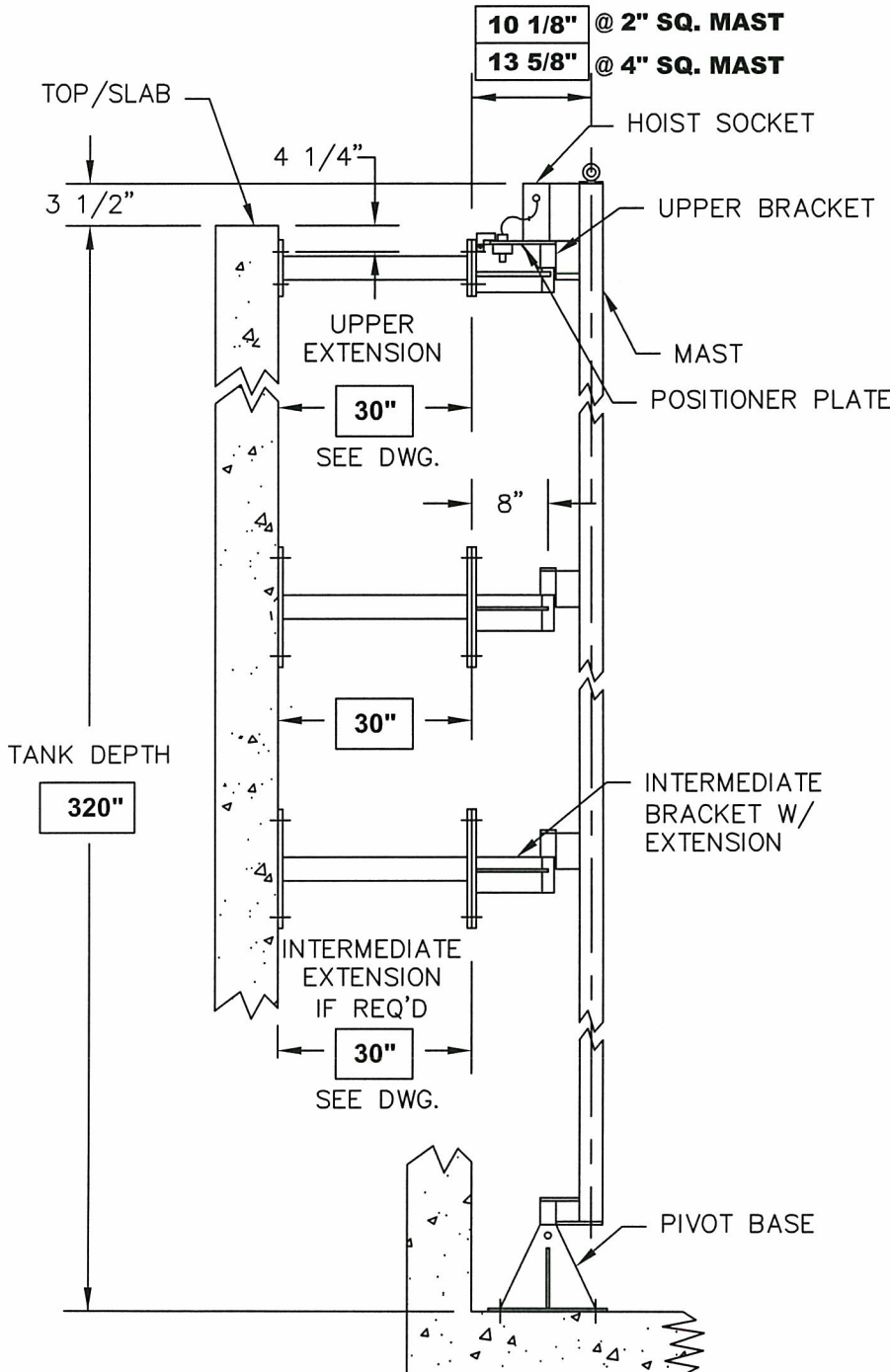
MIXERS# 1, 2, 5, 6, 9, ~~10~~

STANDARD FEATURES:

- ALL S. STL. WELDED CONST.
- MULTIPLE SETTING POSITIONER PLATE
- KYNAR BUSHINGS AT MOUNTING BRKTS.
- CUSTOM FIT FOR EACH APPLICATION
- S. STL. MOUNTING ANCHOR BOLTS SUPPLIED
- PIVOTING BASE BRACKET
- LINED HOIST SOCKET
- S. STL. STATIC CABLE SUPPLIED (NOT SHOWN)
- 3 YEAR GUARANTEE

SERIES M
STAINLESS STEEL MIXER MAST
ASSEMBLY

*For Mixer ABM-10
 same tank depth
 applies except
 extensions are
 NOT required.*



MATERIAL:

- T-304
- T-316

SIZE:

- 2" SQ. MAST
- 4" SQ. MAST

SQ. TUBE WALL THICKNESS:

- 1/8"
- 3/16"
- 1/4"

INTERMEDIATE BRACKETS: (PER ASSEMBLY)

- 2 QUANTITY
- NONE (H.P. RECOMMENDS INTERMEDIATE BRACKETS @ 10 FT. SPACING)

UPPER EXTENSION: (PER ASSEMBLY)

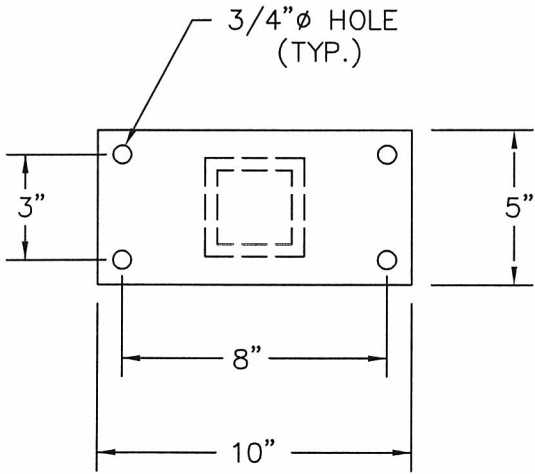
- 1 QUANTITY

INTERMEDIATE EXTENSION: (PER ASSEMBLY)

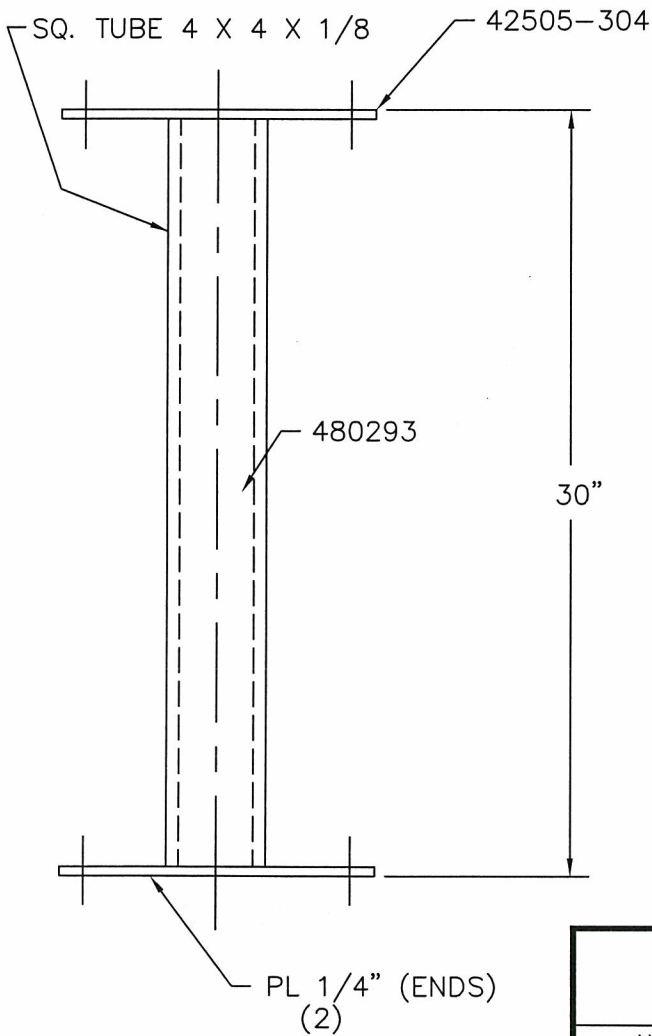
- 2 QUANTITY

* MISCELLANEOUS

* SEE ACCOMPANYING DETAIL DRAWING

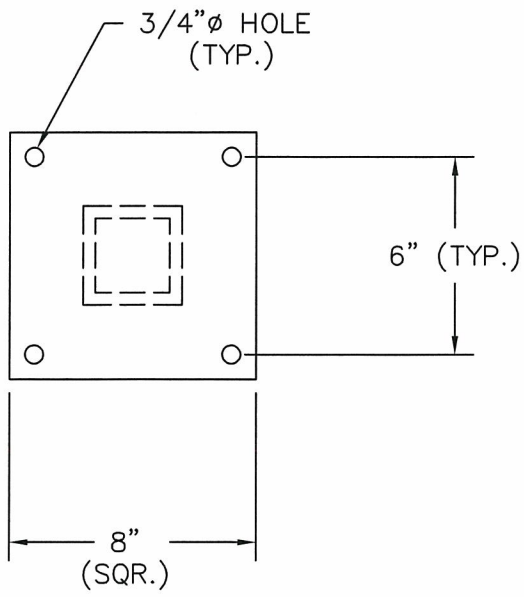


ENDS

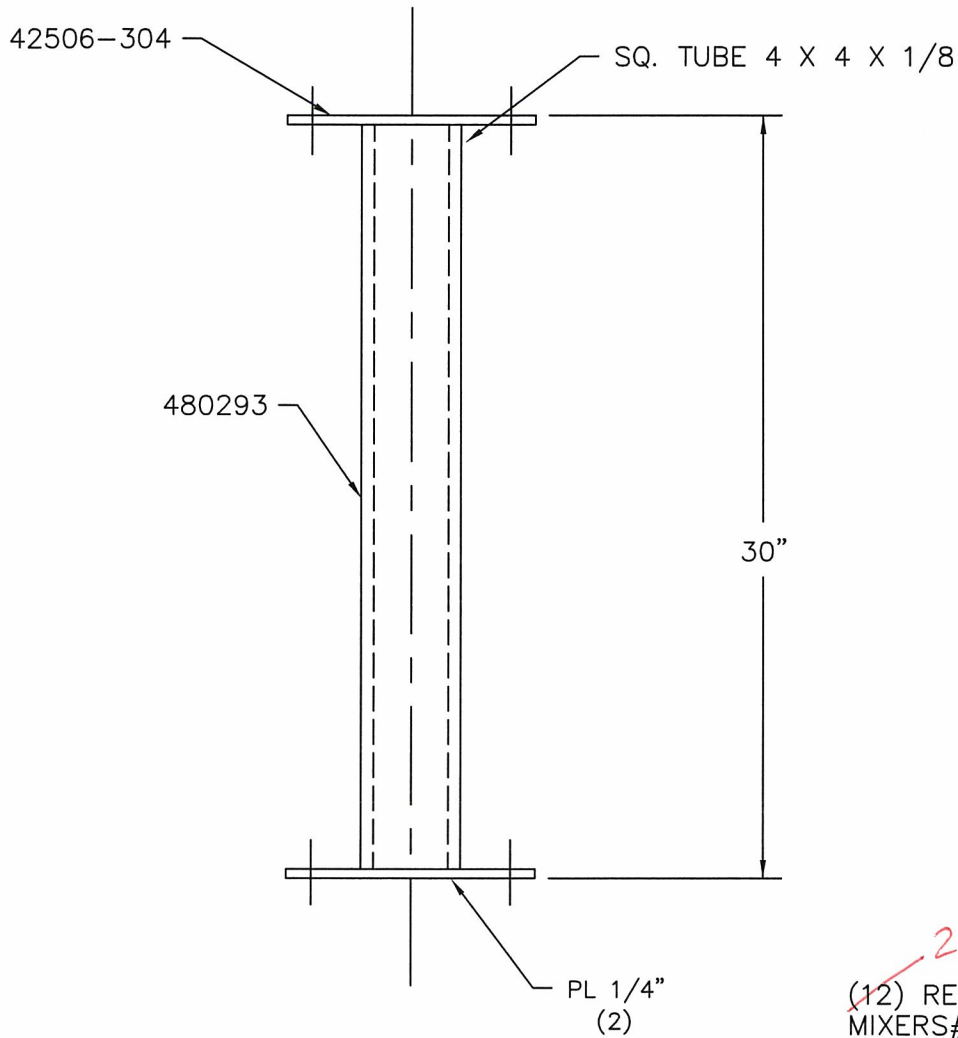


(6) REQ. - TAG: MIXERS# 1, 2, 5, 6, 9, 10
 4, 8, 3, 7, 11


		HALLIDAY PRODUCTS ORLANDO FL.	
SCALE	NONE	UPPER MIXER BRACKET EXTENSION (4" MAST)	STANDARD
DATE	10/15/12		OLD NO.
REVISED		MATERIAL: S. STL. (T-304)	DWG. NO. W15321 M4CB30A



ENDS



20
 (12) REQ. - TAG: (2) EACH
 MIXERS# 1, 2, 5, 6, 9, 10
 4, 8, 3, 7, 11

		HALLIDAY PRODUCTS ORLANDO FL.	
SCALE	NONE	INTERMEDIATE MIXER BRACKET EXTENSION (4" MAST)	STANDARD
DATE	10/15/12	MATERIAL:	S. STL. (T304)
REVISED		DWG. NO.	W15321 M4CD30A
			OLD NO. M4BEXT

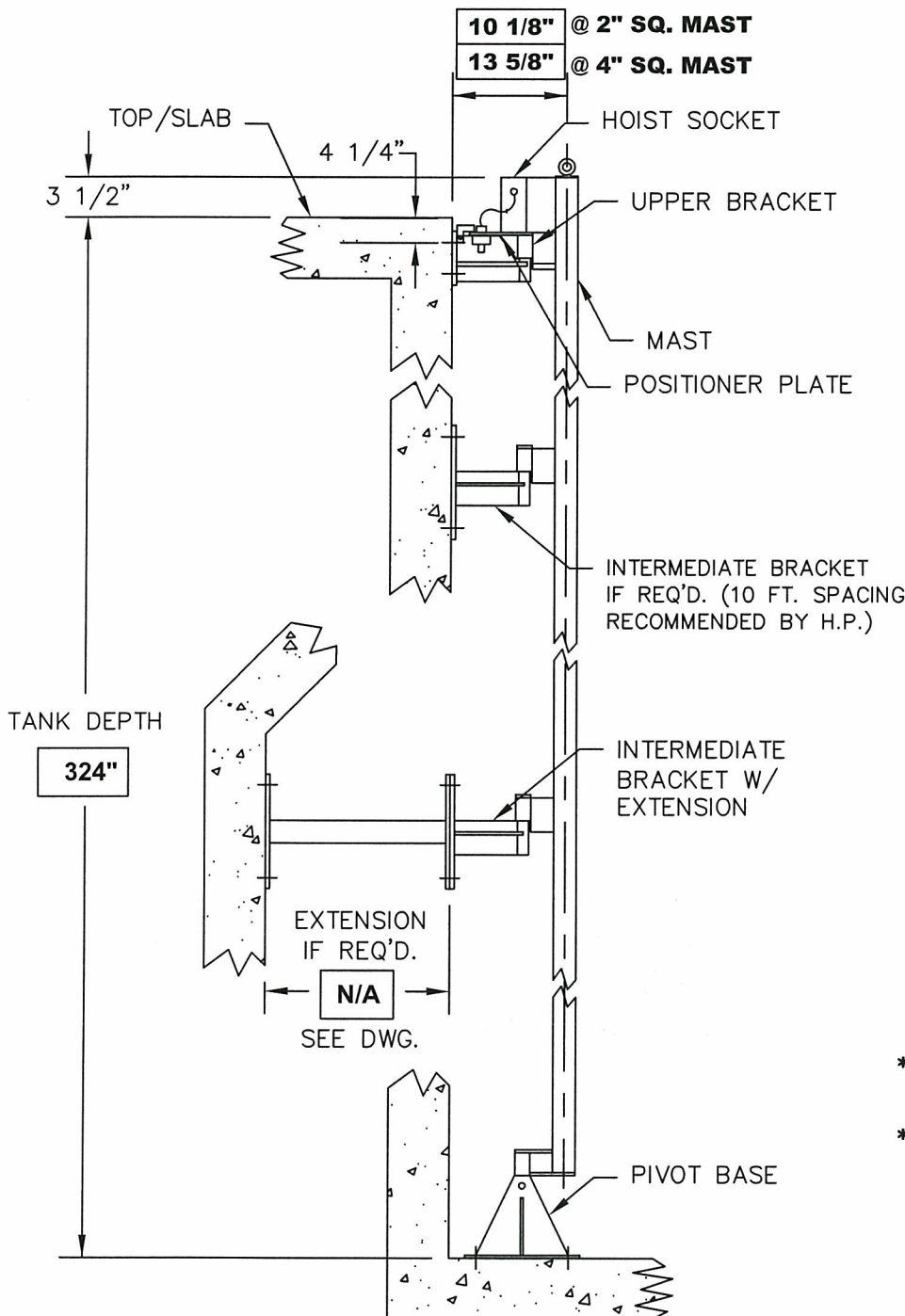


MODEL NO. M4B321BAAAA
 ACTUAL TANK DEPTH 324" ✓
 QUANTITY: 31

ORDER NO. W15321
 LOCATION/TAG:
 MIXERS # 4, 8, 12

SERIES M
STAINLESS STEEL MIXER MAST
ASSEMBLY

*For Mixers ABM-4
 and ABM-8, same
 tank depth applies
 except extension
 required = 30"*



STANDARD FEATURES:

- ALL S. STL. WELDED CONST.
- MULTIPLE SETTING POSITIONER PLATE
- KYNAR BUSHINGS AT MOUNTING BRKTS.
- CUSTOM FIT FOR EACH APPLICATION
- S.STL. MOUNTING ANCHOR BOLTS SUPPLIED
- PIVOTING BASE BRACKET
- LINED HOIST SOCKET
- 3 YEAR GUARANTEE

MATERIAL:

- T-304
- T-316

SIZE:

- 2" SQ. MAST
- 4" SQ. MAST

SQ. TUBE WALL THICKNESS:

- 1/8"
- 3/16"
- 1/4"

INTERMEDIATE BRACKETS: (PER ASSEMBLY)

- 2 QUANTITY
- NONE (H.P. RECOMMENDS INTERMEDIATE BRACKETS @ 10 FT. SPACING)

EXTENSION: (PER ASSEMBLY)

- 0 QUANTITY

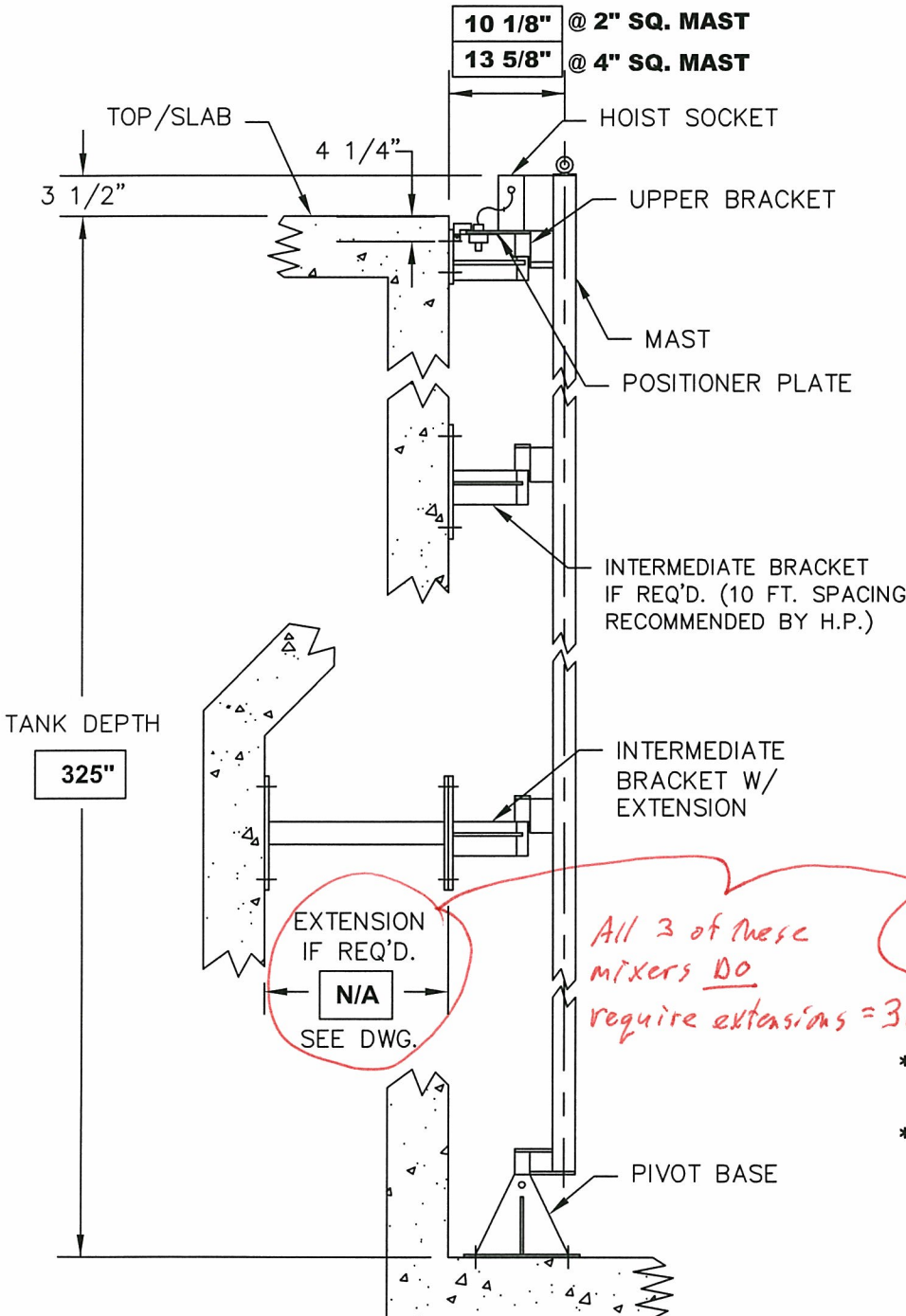
* MISCELLANEOUS

* SEE ACCOMPANYING DETAIL DRAWING



MODEL NO. M4B322BAAAA
 ACTUAL TANK DEPTH IS 325" ✓
 QUANTITY: 3 ✓
 ORDER NO. W15321
 LOCATION/TAG:
 MIXERS# 3, 7, 11 ✓

SERIES M
STAINLESS STEEL MIXER MAST
ASSEMBLY



STANDARD FEATURES:
 ALL S. STL. WELDED CONST.
 MULTIPLE SETTING POSITIONER PLATE
 KYNAR BUSHINGS AT MOUNTING BRKTS.
 CUSTOM FIT FOR EACH APPLICATION
 S.STL. MOUNTING ANCHOR BOLTS SUPPLIED
 PIVOTING BASE BRACKET
 LINED HOIST SOCKET
 3 YEAR GUARANTEE

MATERIAL:

T-304
 T-316

SIZE:

2" SQ. MAST
 4" SQ. MAST

SQ. TUBE WALL THICKNESS:

1/8"
 3/16"
 1/4"

INTERMEDIATE BRACKETS: (PER ASSEMBLY)

2 QUANTITY
 NONE (H.P. RECOMMENDS INTERMEDIATE BRACKETS @ 10 FT. SPACING)

EXTENSION: (PER ASSEMBLY)

0 QUANTITY

* MISCELLANEOUS

* SEE ACCOMPANYING DETAIL DRAWING

EXTENSION IF REQ'D. N/A SEE DWG.

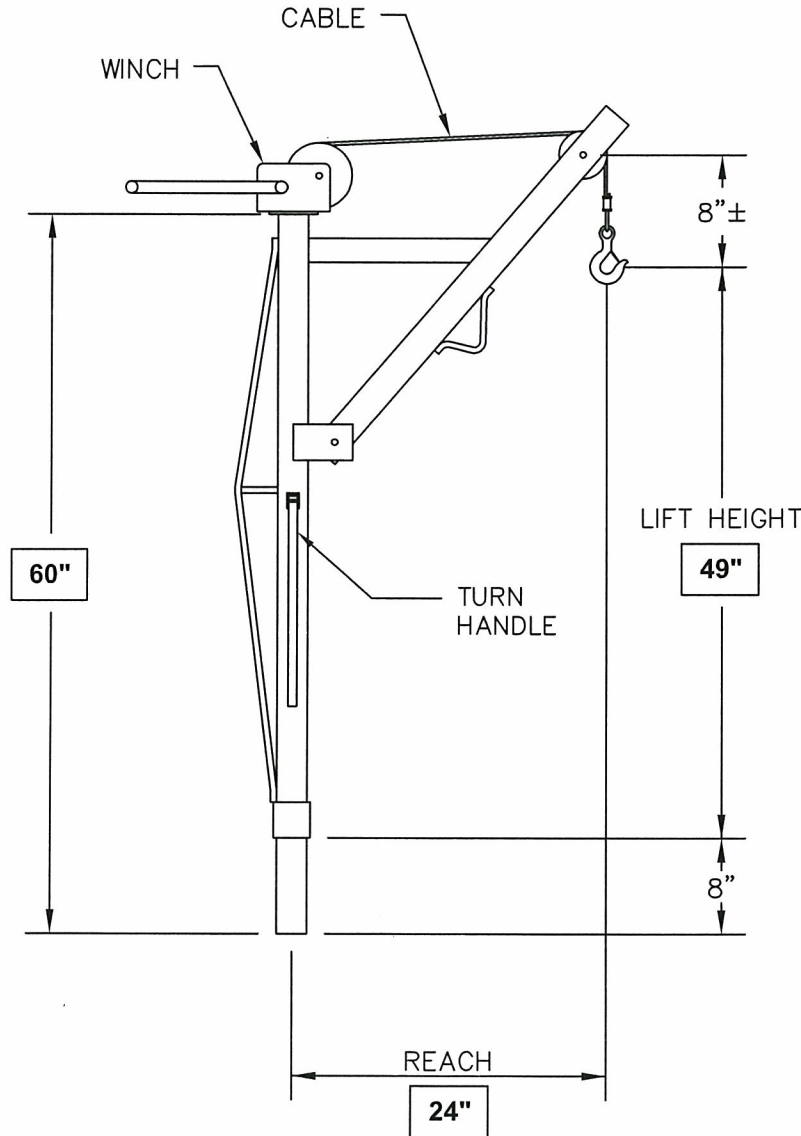
All 3 of these mixers DO require extensions = 30"

HALLIDAY PRODUCTS, INC.
 ORLANDO, FL
<http://www.hallidayproducts.com>



MODEL NO. D2M24R40GC60BA
 QUANTITY: 12
 ORDER NO. W15321
 LOCATION/TAG:

SERIES DM
FIXED REACH PORTABLE HOIST



STANDARD FEATURES:

STAINLESS STEEL CONSTRUCTION
 S.STL. CABLE
 3 YEAR GUARANTEE
1000 LB. MAX. CAPACITY
40 FT. CABLE LENGTH
85 LB. UNIT WEIGHT

CABLE DIA.	<input type="checkbox"/> 3/16"	<input checked="" type="checkbox"/> 1/4"
CABLE MAT'L.	<input checked="" type="checkbox"/> T-304	<input type="checkbox"/> T-316
HOIST MAT'L.	<input checked="" type="checkbox"/> T-304	<input type="checkbox"/> T-316

STANDARD CABLE ENDS:

(ALL CABLE END ASSEMBLIES
 INCLUDE COPPER NICOPRESS
 SLEEVE W/ S.STL. THIMBLE)
 GALV. SAFETY HOOK (STANDARD)

OPTIONAL ENDS:

S.STL. SAFETY HOOK
 S.STL. SHACKLE
 3/8" SHACKLE SIZE

TYPE WINCH:

NONE

MARINE GRADE BRAKE WINCHES:

<input type="checkbox"/>	DUTTON-LAINSON B-1200B
<input type="checkbox"/>	DUTTON-LAINSON B-1500
<input type="checkbox"/>	DUTTON-LAINSON B-2500
<input type="checkbox"/>	DUTTON-LAINSON DLB-1200A
<input checked="" type="checkbox"/>	DUTTON-LAINSON DLB-2500A
<input type="checkbox"/>	THERN 4022PB
<input type="checkbox"/>	THERN 4312PB
<input type="checkbox"/>	4WM2 WORM GEAR

S.STL. WINCHES:

THERN 4042PBSS
 THERN 4312PBSS

MIXERMAST HOIST:

2 24" TURN HANDLES

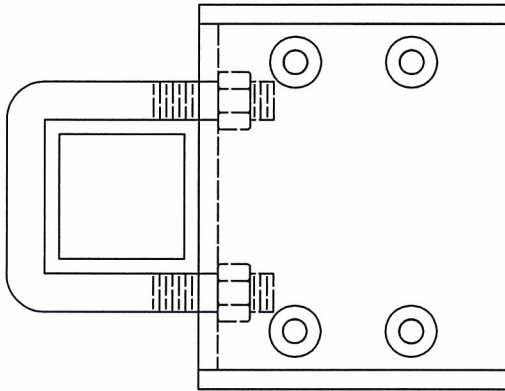
HALLIDAY PRODUCTS, INC.
ORLANDO, FL
<http://www.hallidayproducts.com>



MODEL NO. M4C J
QUANTITY: 12
ORDER NO. W15321
LOCATION/TAG

SERIES M
STAINLESS STEEL MIXER MAST STOP
ASSEMBLY

TOP VIEW

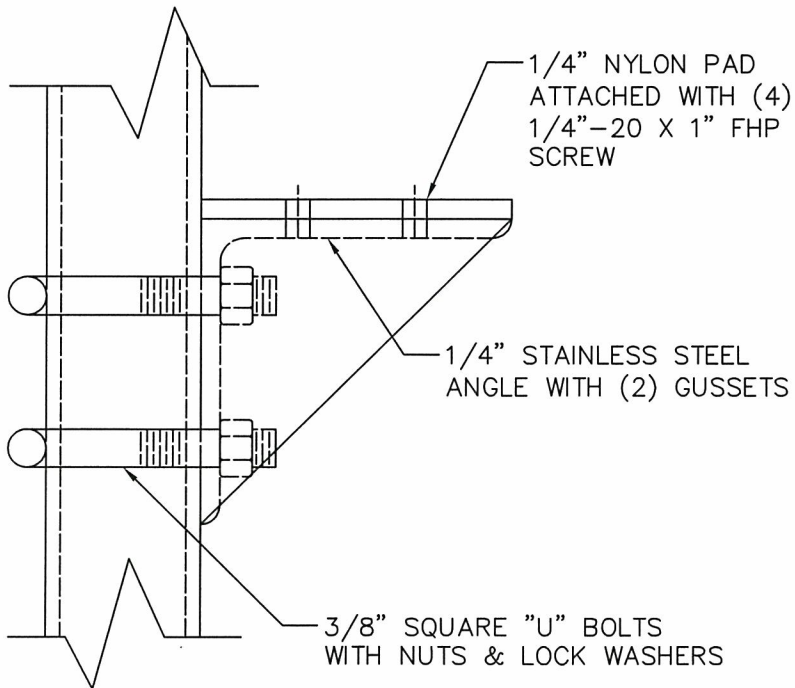


MATERIAL:

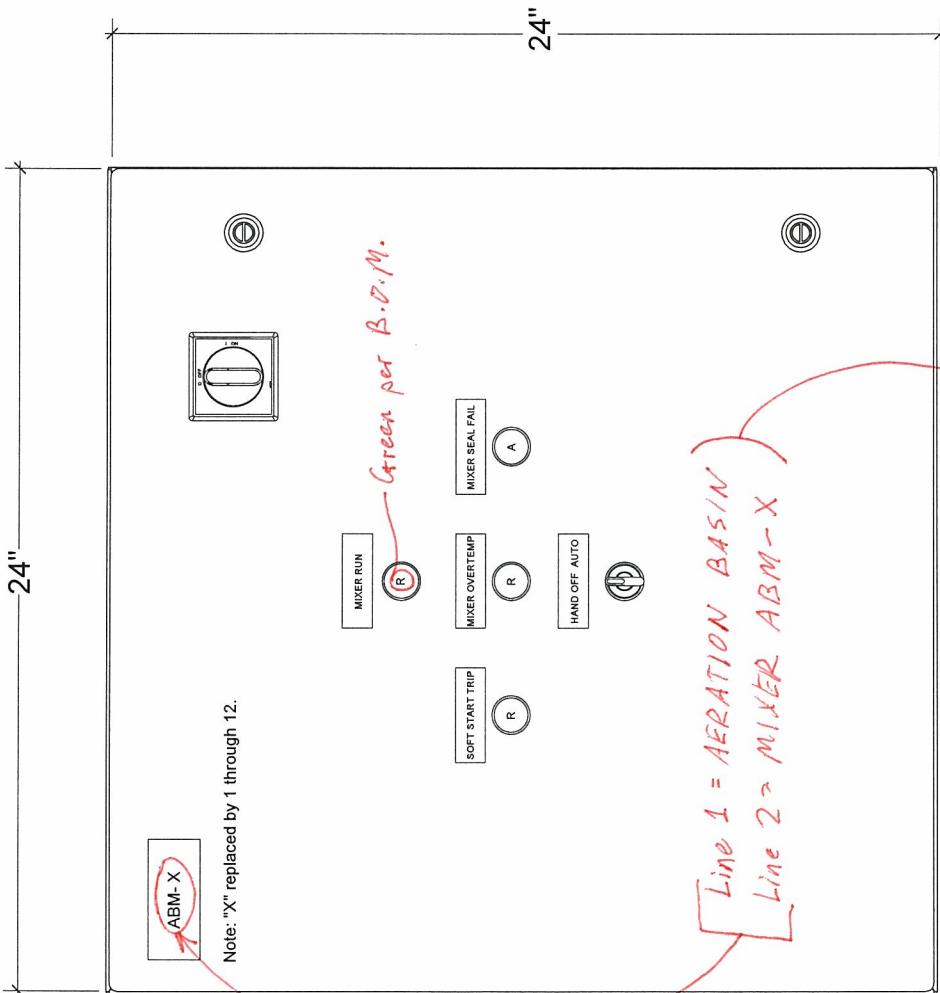
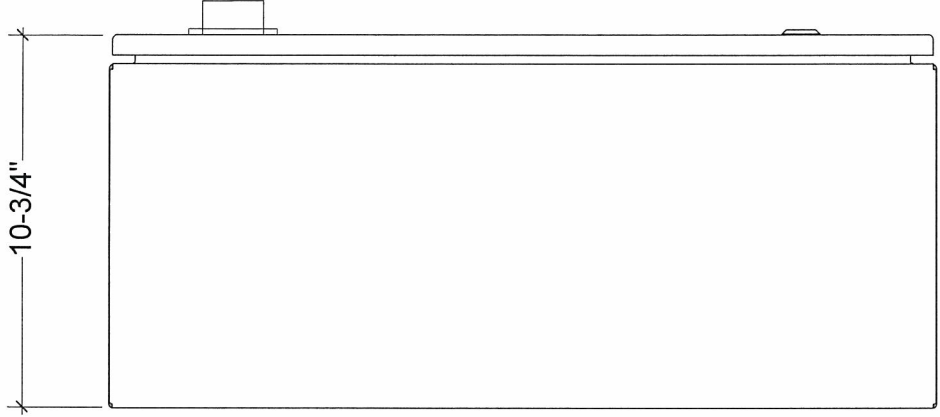
<input checked="" type="checkbox"/>	T-304
<input type="checkbox"/>	T-316

SIZE:

<input type="checkbox"/>	2" SQ. MAST
<input checked="" type="checkbox"/>	4" SQ. MAST

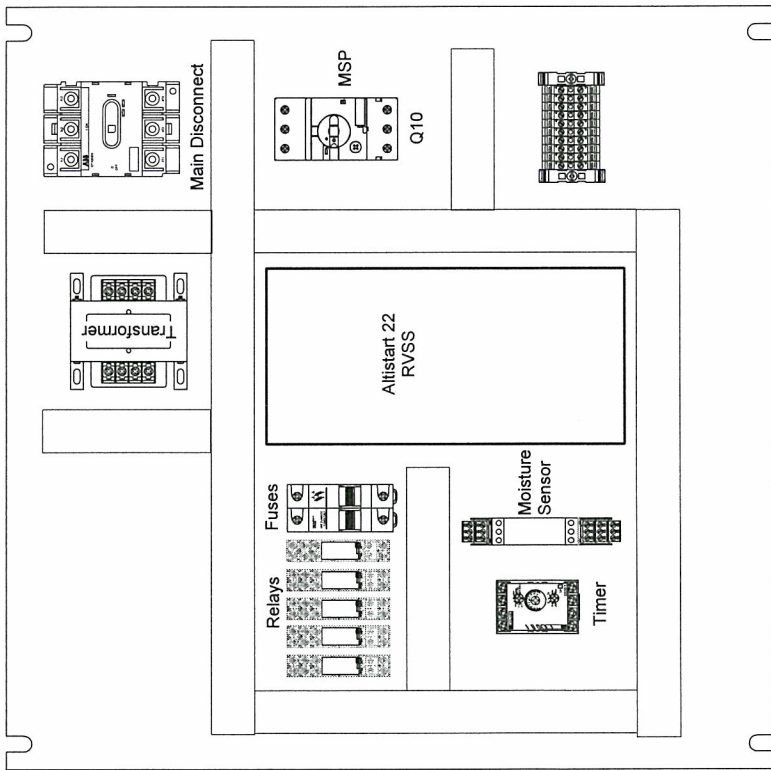


Designed By: D. McGregor	Drawn By: D. McGregor	Title: S480 3Ø Mixer Panel
Approved By:	Drawing: 1 of 1	Drawing No. <Submittal/Exterior>
Date Approved:	Revision: 1.1	Date: 10/30/12
		Scale: 1" = 3.5"



as requested in review comment no. 4.d. for Shop Submittal No. 11160-001 and acknowledged by supplier's response in Shop Submittal No. 11160-001A.

Designed By: D. McGregor	Drawn By: D. McGregor	Title: S480 3Ø Mixer Panel
Approved By:	Drawing: 1 of 1	Drawing No. <Submittal/Backpanel>
Date Approved:	Revision: 1.1	Date: 11/13/12
		Scale: 1" = 3.5"



NOTE: Componentry layout is for submittal purposes only; actual locations on backpanel asbuilt may vary.

To: John Jacob <john@weavercm.com>
From: Mark Morton <mamorton@gmsengr.com>
Subject: RE: mixer submittal 11160-001B
Cc:
Bcc:
Attached: F:\Scanned\mam\DOC127.PDF; F:\Scanned\mam\DOC128.PDF;

John,

To follow up our phone conversation earlier today, below are comments on resubmittal 11160-001B. This equipment needs to get through the shop submittal process so I am trying to help speed up that process. Please talk through these items with your supplier, if written verification can be provided to answer these comments then send that to me and I will append 11160-001B with that information.

1. Comment No. 5: The 11160-001B response indicates the Bill of Materials was updated to show the NEMA rating of the control panel indicating lights and switches. But the submitted Bill of Materials only shows NEMA rating for the disconnect switch, it does not show NEMA rating for the HOA switch. Also, the submitted Bill of Materials does not show NEMA ratings for the indicator lights under the Lights and Pushbuttons section. Verify those missing NEMA ratings.
2. Comment No. 6.c: This comment requested a mixer run status contact and a fault condition contact be provided in the control panel for connection/monitoring in the SCADA system. The wiring diagram was updated to show a Call To Run contact, but we need a Run Status contact. We want to know if the mixer is running, whether by remote signal or by manual operation at the control panel, not if there has been a call for it to run. Does this contact need to be revised? For the fault condition contact, this is a common fault contact that will be energized under any and all fault conditions. Does the submitted contact give indication of *all* faults, including a seal failure?

3. Comment No. 7: Attached is my tally of mixer mast lengths and required mast bracket extensions handwritten on AB-11, as well as my mixer tag number listing on Detail 1/AB-13. It seems to me that my responses to the mixer mast inquiry form that I sent to you on 9-5-12 still have not been accounted for in this 11160-001B submittal. The 11160-001B submittal responses are still not addressing the mixers according to tag numbers as was requested, which were shown on the AB-11 drawing that was included in my email response to you on 9-5-12.

As you can see, my attached tally was based on this 9-5-12 version of AB-11 so the mixer tag numbers can be correlated to the mast lengths and bracket extension requirements. Note the north arrow direction on AB-11, it is "to the right" on the drawing. It seems the 11160-001B responses may be assuming north is "up" on the drawing. Please review the attached drawings with your supplier. If it was a simple misunderstanding of the north direction and you both agree with my tally, then you can revise the submittal drawings accordingly. But you must be sure that you and your supplier confirm and agree on whatever tally you submit as final. I have a feeling you may need to resubmit the mixer mast assembly drawings with the correct quantities, tag number designations and mast lengths in response to our previous review comment no. 7.

4. Comment No. 9: The 11160-001B response to previous comment no. 9 talked about the height of the mixer above the aeration equipment, while the comment was asking for vertical

information on the mast brackets. Please respond to comment no. 9 regarding the mast bracket vertical locations.

At 09:25 AM 11/6/2012, John Jacob wrote:
Ok. Call me on my cell phone 303-917-4593.

From: Mark Morton [mailto:mamorton@gmsengr.com]
Sent: Tuesday, November 06, 2012 9:12 AM
To: John Jacob
Subject: mixer submittal

John,

Mixer responses still need some correction, I think somebody is not getting the whole picture here. I will call you later this morning to talk through the issues.

Mark A. Morton, P.E.
GMS, Inc.
611 N. Weber, Ste. 300
Colorado Springs, CO 80903
Phone: 719-475-2935
Fax: 719-475-2938

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Mark A. Morton, P.E.

GMS, Inc.

611 N. Weber, Ste. 300

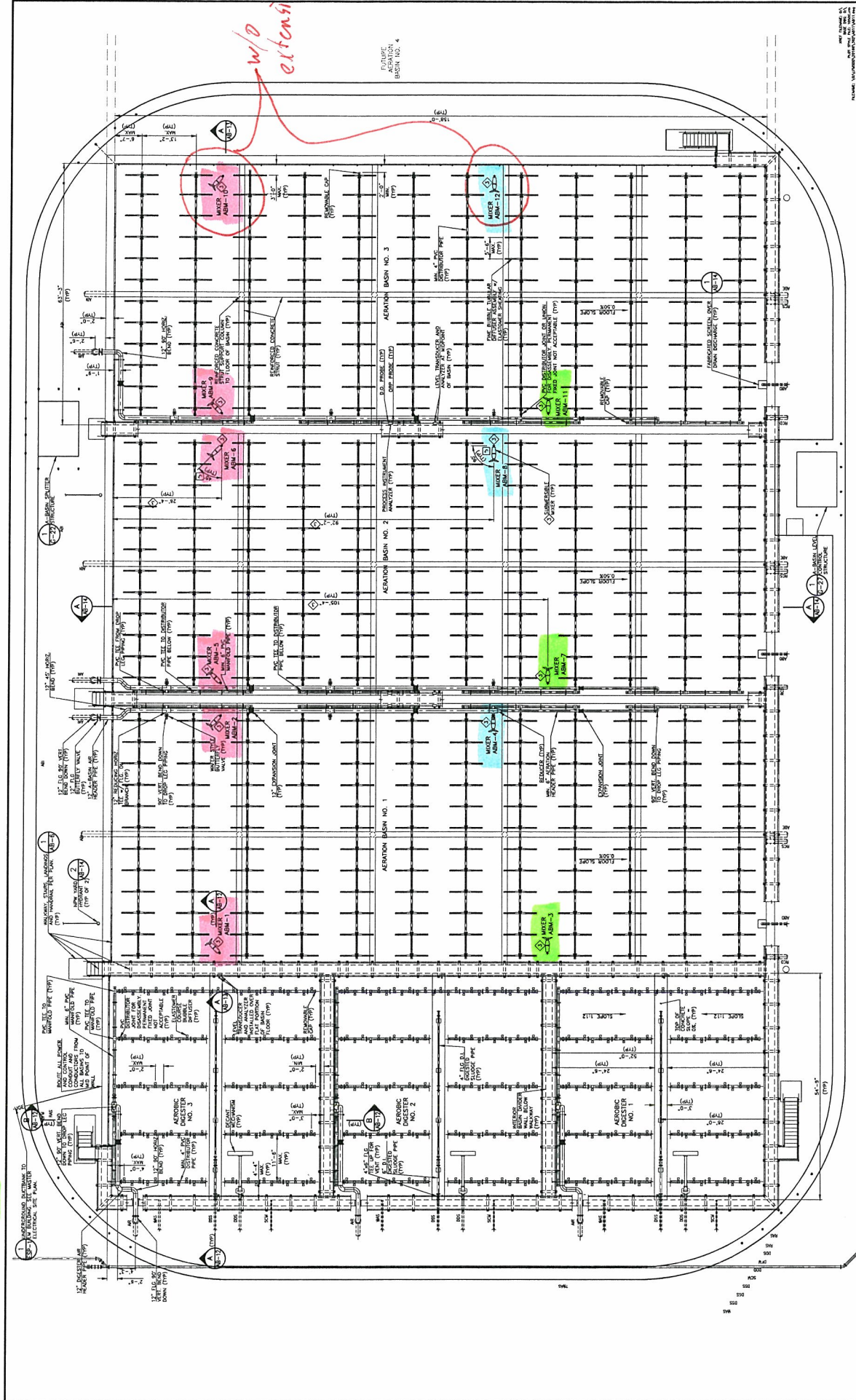
Colorado Springs, CO 80903

Phone: 719-475-2935

Fax: 719-475-2938

Floor el. = 86.61 → most length = 326 → quant. = 6 total, 1 w/o extensions
 Floor el. = 85.74 → most length = 324 → quant. = 3 total, 1 w/o extensions
 Floor el. = 85.67 → most length = 325 → quant. = 3 total

w/o extensions



PROCESS EQUIPMENT AND PIPING PLAN
 AEROBIC DIGESTER AND AERATION BASINS
 HANCOCK COUNTY REGIONAL RECREATION FACILITY
 LOWER FORTHAN METROPOLITAN SEWER DISTRICT

DESIGNED BY: GMS, INC.
 CHECKED BY: [Name]
 PROJECT NO.: 2018.04.02
 SHEET NO.: AB-11
 OF 11

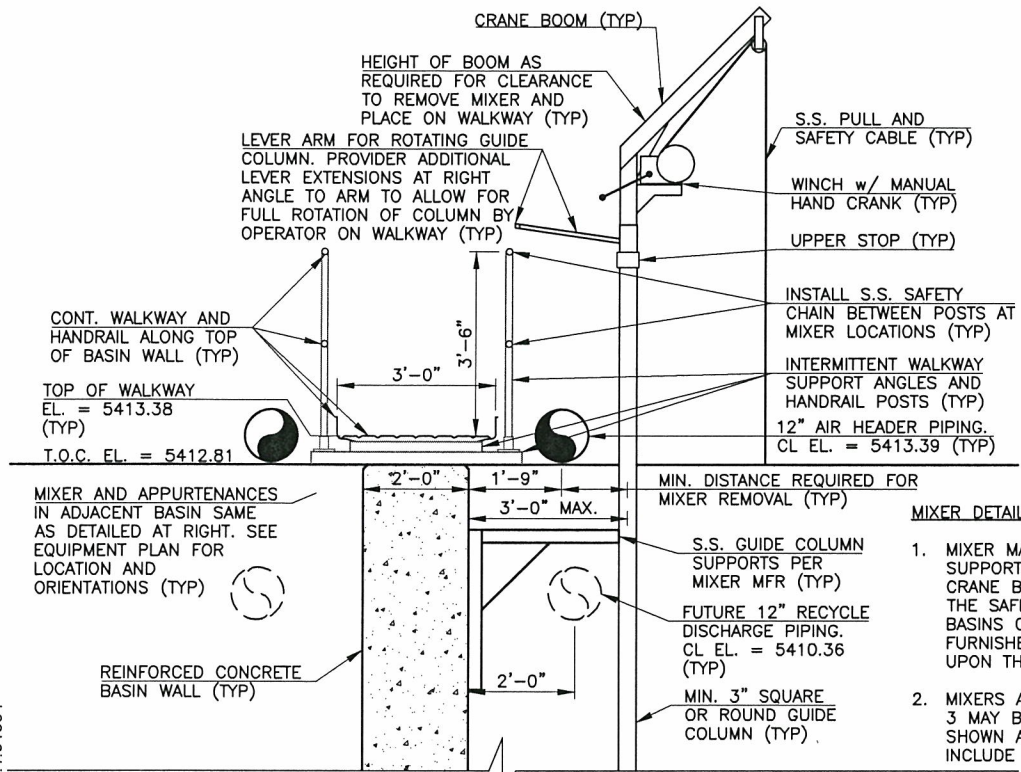
CONSULTING ENGINEERS
 611 N. WEBER, SUITE 300
 COLORED SPRINGS, COLORADO 80903
 GMS FILE NO.: 2399

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NO.	DATE	DESCRIPTION
1	10/20/2017	ISSUE FOR PERMIT (PARTIAL) AS SHOWN PER PLAN
2	10/20/2017	ISSUE FOR PERMIT (PARTIAL) AS SHOWN PER PLAN
3	10/20/2017	ISSUE FOR PERMIT (PARTIAL) AS SHOWN PER PLAN

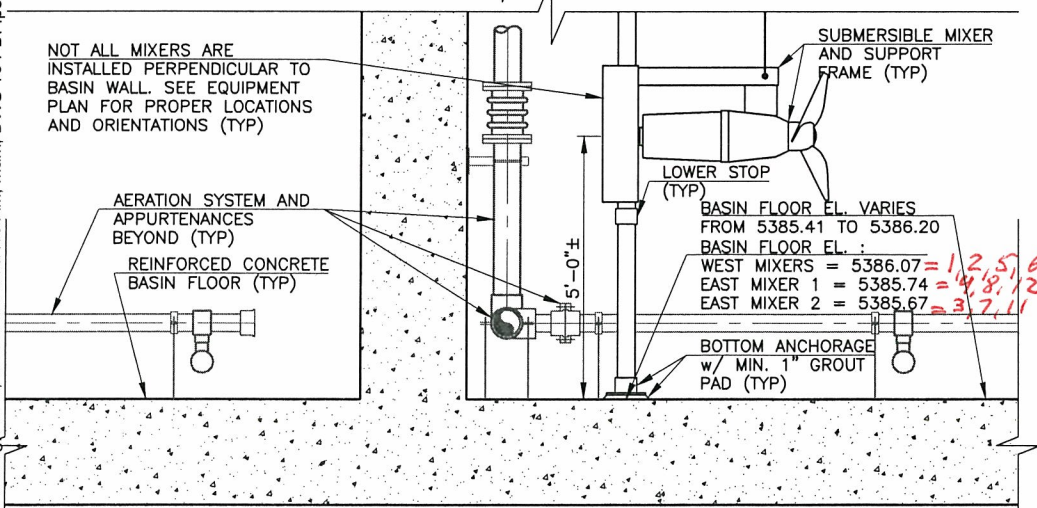
REVISIONS

G:\LFMSDD\20166362\AB13.dwg AB13_7/24/2012 10:27:06 AM, mam, DWG To PDF, pc3, 1:1, 31364



MIXER DETAIL NOTES:

1. MIXER MANUFACTURER SHALL DESIGN AND PROVIDE THE SUPPORTS, UPPER SECTIONS OF GUIDE COLUMN, WINCH, CRANE BOOM, PIVOT JOINTS AND APPURTENANCES FOR THE SAFE AND EASY REMOVAL OF THE MIXERS FROM THE BASINS ONTO THE WALKWAY. ACTUAL EQUIPMENT FURNISHED MAY VARY FROM THAT SHOWN DEPENDING UPON THE MANUFACTURER AND MIXERS PROVIDED.
2. MIXERS ALONG THE NORTH WALL OF AERATION BASIN NO. 3 MAY BE PLACED CLOSER TO THE WALL THAN THAT SHOWN ABOVE SINCE THAT NORTH BASIN WALL DOES NOT INCLUDE A CONTINUOUS WALKWAY OR PROCESS PIPING.



1 TYPICAL MIXER DETAIL
 AB-13 SCALE: NONE

XREF FILENAME: G:\
 BASE DWG: G\
 PLOT STYLE FILE: 10500.ctb
 FILENAME: G:\LFMSDD\20166\362\AB13\AB13.dwg