



**INVITATION TO BID
LAKE HAVASU CITY, ARIZONA**

ITB NO.: B19-WWTP-3169

FOR

**Island Treatment Plant Screenings Compactor
and Shaft-less Screw Conveyor Equipment Replacement**

Carissa Ochoa, Administrative Specialist II

E-Mail: ochoac@lhcaz.gov

CITY CLERK'S OFFICE
2330 McCulloch Boulevard North
Lake Havasu City, AZ 86403
Phone: (928) 855-2116

BID CLOSING DATE: May 8, 2019

BID CLOSING TIME: 3:00 p.m., ARIZONA TIME

BID OPENING ON THE SAME DAY at 3:00 p.m.

SUBMITTED BY:

Company Name: _____
Address: _____
Phone No.: _____
Fax No.: _____
Contact: _____
Email: _____

An electronic copy of this ITB and attachments, if any, is available from the City's website:

<http://www.lhcaz.gov/community-investment/bids>.

All ITB documents shall be submitted in hard copy. Electronic or e-mailed submissions shall be rejected.

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

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SECTION A - INVITATION TO BID

ITB NO.: **B19-WWTP-3169**

ITB TITLE: **Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement**

ITB DESCRIPTION: Lake Havasu City is seeking a vendor to provide supply and deliver to Lake Havasu City equipment only to replace both the shaft-less screw conveyor and screenings washer compactor at the Island Treatment Plant as specified in this Invitation to Bid. Installation will be performed separately by Lake Havasu City.

Notice is hereby given that sealed bids for Invitation To Bid Number (ITB): **B19-WWTP-3169** for ITB Title: **Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement** shall be received by the **City Clerk's Office, 2330 McCulloch Boulevard N., Lake Havasu City, Arizona, 86403**, until **3:00 p.m. Arizona Time** on **May 8, 2019**. All bids received in proper form shall be publicly opened and read aloud on the same day at 3:00 p.m., Room 109, City Hall, 2330 McCulloch Boulevard N., Lake Havasu City, Arizona, 86403.

It is the sole responsibility of the Bidder to ensure the City receives the bid by the specified time. ALL BIDS MUST BE TIME STAMPED BY THE CITY BY THE STATED DEADLINE. All late bids shall be rejected.

The outside of the sealed package must be clearly marked "**Sealed Bid**" with the **Bidder's Name, Address, Bid Title** and **Number**, and the **Closing Date**. **Bidder will submit one (1) original of the bid response.** Bidder should retain a copy for their records. All bids must be completed in ink or typewritten on a form to be obtained from the ITB documents and returned by the time cited above.

Pursuant to the Americans with Disabilities Act (ADA), Lake Havasu City endeavors to ensure the accessibility of all of its programs, facilities and services to all persons with disabilities. If you need an accommodation for ITB meetings, please contact the City Clerk's Office, at (928) 453-4142. Please provide 24 hours notice so accommodations may be arranged.

Publication Dates: **April 10 and 17, 2019** (Today's News Herald-Havasu)
April 18 and 25, 2019 (Arizona Business Gazette)

SECTION B - INSTRUCTIONS TO BIDDERS

1. **Bid Format.** Bid must be typewritten with a font size no less than 11 points or prepared in ink and must be submitted on the form(s) provided in the Invitation To Bid. Bidders shall return all information and forms as required on the Bidder's response sheet. Failure to complete all required forms may result in the bid being rejected as non-responsive. Bidder must submit one (1) original and two (2) copies of the bid document.
 - a. Unsigned offers will be considered non-responsive and will be rejected.
 - b. Erasures, interlineations or other modifications in the bid must be initialed by a duly authorized vendor or representative and must be the same person that signs the vendor(s) offer.
 - c. In case of error in the extension of prices in the bid, the unit price will govern. No bid shall be altered, amended, or withdrawn after the specified bid closing date and time.
 - d. It is the responsibility of the Bidder to examine the entire bid package and seek clarification of any item or requirement that may not be clear and to check Bidder responses for accuracy before submitting a bid.
 - e. All bids shall be submitted in a sealed package and must be clearly marked "**Sealed Bid**" with the **Bidder's Name, Address, ITB Number and Title**, and the **Closing Date**. Bid packages with insufficient postage will not be accepted by Lake Havasu City.
 - f. Lake Havasu City reserves the right to accept or reject any or all bids or any part thereof and waive informalities deemed in the best interest of the City.
2. **Bid Requirements.** The following forms must be completed, signed and submitted with the vendor's offer to be responsive and must include, but not limited to, the **COVER PAGE, BIDDER SIGNATURE PAGE, BID PRICE SCHEDULE, EXCEPTIONS TO SPECIFICATIONS** (if applicable), and **REFERENCES**. Bids must be signed by a duly authorized representative of the vendor. If a bid is signed by an agent of the Bidder, a Power of Attorney showing the authority of the agent to sign must be submitted with the bid or the bid shall be rejected. **FAILURE TO SIGN AND SUBMIT THE BIDDER SIGNATURE PAGE SHALL RESULT IN REJECTION OF THE BID.**
3. **Taxes.** Bid prices shall exclude Federal Excise Tax. Federal exemption certificates will be furnished upon written request. Lake Havasu City is not exempt from the applicable Arizona Sales Tax; Arizona Sales Tax will be indicated on the pricing sheet and marked as a separate line item after the total combined bid price. The applicable tax of any political subdivision shall not be a factor in determining the award of procurement.
4. **Price to Include Cost of Delivery.** If this is a bid for goods, then unless otherwise provided in the specifications, the bid price for each item must include the cost of delivery of the item(s) FOB within Lake Havasu City limits and to the specific destination shown in the specifications.
5. **Bids Must Conform to the Specifications.** The Bidder shall adhere to the specifications stated herein. Any exception taken to these specifications shall be so stated on the returned bid proposal. Deviations from any of the requirements in the specifications or drawings **MAY RESULT IN BID REJECTION**. Lake Havasu City shall hold the Bidder to all specification requirements. There is no time limit on this requirement. Deviations discovered after the unit(s) is accepted shall be corrected at no cost to the City. Any **VERBAL** communication from the City shall not be construed as approval of the acceptability of any deviation to any requirement or as authorization for any changes or additional charges on any contract. **WRITTEN APPROVAL** is required. Any deviation from the specification, or where submitted literature does not fully support the meeting of the specification, must be clearly cited in writing by the Bidder, but no deviation below minimum specification will be accepted. If this is a bid for goods and manufacturers' names, trade names, make, model or catalog numbers are used in the Specifications, they are for the purpose of describing and establishing commercial and industrial quality levels. Bids for equivalent items will be considered provided that such items are identified by manufacturer name, trade name, make, model and catalog number. If Bidder has any question whether an item is equivalent to the item specified, Bidder must submit a request for substitution.
6. **Silence of Specification.** The apparent silence of the general provisions and specifications as to any detail or the apparent omission from it of a detailed description concerning any point shall be regarded as meaning that only best commercial or industrial practice is to prevail and that only material and workmanship of first run manufacture quality are to be used.
7. **Periods of Time.** Periods of time, stated as a number of days, shall be calendar days unless otherwise specified.
8. **Descriptive Literature.** All Bidders must submit complete manufacturer's descriptive literature regarding the equipment they propose to furnish. Literature shall be sufficient in detail in order to allow full and fair evaluation of the bid submitted. Failure to include this information may result in the bid being rejected.

9. **Demonstrations.** The City may, at its discretion, require a demonstration of the equipment, material or product offered as part of the bid evaluation process. The equipment, material or product shall be provided by the Bidder at no cost to the City for a period of time deemed sufficient to properly evaluate the item.
10. **Replacement Parts.** Submission of this bid shall constitute a guarantee by the Bidder that a stock of replacement parts for the specified equipment, material or product is available to Lake Havasu City.

Captive parts must be available within 48 hours following the placement of an order. The Vendor shall provide part(s) delivery, to include deliveries on Saturday, Sunday and holidays if required for an emergency. If special handling and/or freight are required, the vendor will assume all charges.

11. **Substitutions.** Bidders may propose substitutions. Requests for substitutions will be considered only if physically received by the contact person listed below, not less than ten (10) days before the closing date of the bid. Substitution requests must be submitted in a package marked as follows:

Substitution Request, ITB No.: B19-WWTP-3169
Lake Havasu City
Community Investment Department - Procurement
Attn: Carissa Ochoa,
Purchasing@lhcaz.gov

Samples must be presented for inspection and testing if requested. Samples must be furnished at no cost to the City. If not destroyed or mutilated in testing, samples will, upon request, be returned at Bidder's expense. If a proposed item is determined to be an acceptable substitute, an addendum will be issued.

12. **Bid Withdrawal.** Any bid may be withdrawn at any time prior to the specified date and time for bid closing by delivering a written request to the Procurement Official or designee at the location where bids are received signed by a duly authorized representative of Bidder. All bids shall be irrevocable for ninety (90) calendar days from the day of bid closing.
13. **Document Conflict.** In case of conflict between Specifications and the Contract Terms and Conditions and Instructions for Bidders, the specifications shall take precedence over and will be used in lieu of such conflicting portions of the Contract Terms and Conditions and Instructions to Bidders.
14. **Clarification/Protest/Question.** Any Bidder requesting clarification of or protesting or questioning any of the Specifications must submit specific questions or protests in writing (includes email) to the contact person listed below. Requests for clarification and protests must be physically received no later than April 30, 2019, end of day. Requests must be submitted in a package marked as follows:

Clarification/Protest/Question
ITB No.: B19-WWTP-3169
Lake Havasu City
Community Investment Department - Procurement
Attn: Carissa Ochoa,
Purchasing@lhcaz.gov

A written response will be provided to all written requests for clarification and protests, copies of which will be sent to all vendors in receipt of these bid documents. Questions will not be answered orally. Oral instructions or information concerning the specifications provided by City officers, employees, or agents to prospective Bidders shall not bind the City.

15. **Addenda.** All addenda shall be issued no later than five (5) calendar days prior to the bid closing.
16. **Addenda Acknowledgement.** Receipt of bid addenda must be acknowledged by signing and returning the appropriate procurement document and acknowledging receipt on the proposal form.
17. **Documents are Public Records.** Lake Havasu City is subject to the Arizona Revised Statutes, Title 39, Chapter 1, relating to public records. All documents, reports, bids, submittals, working papers or other materials submitted to the City by Bidders shall become the sole and exclusive property of the City and become a public record.
18. **Copies.** Bidders may request copies of current or past procurement documents. The charge per copy is payable in advance. Please call for a current per copy cost.
19. **Late Delivery of Bid.** Late bids will not be opened or considered under any circumstances. Late Bid Notification will be sent to vendor.
20. **Rejection of Bids.** The City reserves the right to waive technical defects, discrepancies and minor irregularities in a bid. The City reserves the right to re-seal any bid that was opened prematurely. The City has determined this event as a minor irregularity. The Procurement Official shall be notified and shall log the event

and place it in the procurement file. The City reserves the right to award any alternatives set forth in the bid documents in its sole discretion. Bids may be rejected if there is any alteration of the bid form, additions not called for, conditional bids, incomplete bids, or irregularities of any kind. The City reserves the right to reject any bid not in compliance with the bid documents, or prescribed public bidding procedures and requirements. Written notice of rejection of all bids shall be sent to all Bidders. ALL UNSIGNED BIDS SHALL BE REJECTED.

21. Collusion. Upon evidence that collusion exists among Bidders, none of the bids of participants in such collusion will be considered. All involved bids shall be rejected. Bids in which prices are unbalanced may be rejected. The Vendor will be required to complete, notarize and submit a "No-Collusion Affidavit" upon request by the City. **Failure of the vendor to submit a properly executed affidavit upon request by the City shall be grounds for rejection of the bid.**

22. Contract Award.

a. Awards will be made with reasonable promptness to the vendor(s) whose bid(s) is determined to be responsive and responsible that best conforms to the Invitation To Bid and will be the most advantageous to the City with respect to price, conformity to the specifications and other factors. Other factors to be considered may include, but are not limited to, quality, uniformity of product, and vendors past performance on other Contracts with the City.

b. The award will be made by low bid or including but not limited to individual item, category, group or by any combination of these or other methods or by all-or-none basis that is in the best interest of the City.

Bidders to be considered for award by category or group are not required to bid on each item. However, if all or part of the bid is awarded by category or group, only those Bidders who have inserted a bid price for each item in the category or group and who have provided either a percentage off manufacturer's list or percentage mark-up over cost for similar items not listed will be considered for award for that category.

City reserves the right to award the Bid to a primary and an alternate Bidder for the same bid item. The alternate Bidder will be used when the primary Bidder is unable to provide the materials when required, or when such action will provide the lowest final cost to the City.

c. A bid response is an offer by a vendor to Contract with the City based upon the terms, conditions, and specifications contained in the Invitation To Bid. Bids do not become Contracts unless and until they are accepted and an Award is made by Lake Havasu City. A Contract is formed when Lake Havasu City gives written Notice of Award(s) to the successful Bidder(s) and issues a Purchase Order. All Invitation To Bid documents, including but not limited to the specifications, terms and conditions, become the Contract and is extended to every Purchase Order for items or services contained in the submitted offer. The delivery or furnishing of any of the bid items cannot commence until a Contract is duly and properly executed.

23. Rejection of All Bids and Cancellation of Award. The City reserves the right to reject all bids or to cancel award of the Contract at any time before execution of the Contract by both parties if rejection of all bids or cancellation of the award is deemed to be in the City's best interest. In no event shall the City have any liability for the cancellation of award. The Bidder assumes the sole risk and responsibility for all expenses connected with the preparation of its bid and Contract negotiations.

24. Reissuance of Bid. The City reserves the right to re-issue a subsequent procurement for this service at any time if deemed to be in the best interest of the City.

25. Protest of Award. A protest of award must be physically delivered to the Procurement Official within five (5) working days of the notice of award date. Packages containing protests shall be marked as follows:

Bid Award Protest, ITB No.: B19-WWTP-3169
Lake Havasu City
Community Investment Department
Procurement Division
Attn: Lynette Singleton, Procurement Official
2330 McCulloch Blvd N
Lake Havasu City, AZ 86403

26. Notice of Award. Official Notice of Award, if any, shall be sent in the form of an "Award Letter" and shall be signed by the duly authorized Lake Havasu City Official.

27. Vendor Registration and IRS Form. Prior to the award of a Contract, the successful Bidder must properly fill out and complete a City Vendor Registration and IRS W-9 Form and file the documents with the City's Administrative Services Department.

28. **Post Award Conference.** After the award has been made, the Contractor may be required to attend and participate in Post Award Conference. The purpose is to ensure the Contractor has a complete understanding of the specifications and the requirements of the Contract prior to commencing work.
29. **Disputes.** In the event any doubt or differences of opinions exists as to the items or service to be furnished hereunder, or from evaluation and/or testing of substitutes, or the interpretation of the provisions of this procurement, the decision of Lake Havasu City shall be final and binding upon all parties.
30. **Solicitation Document Conflicts.** In the event any discrepancies exist between the proposer(s) submitted response and the original solicitation document, the ITB on file with the City shall govern.
31. **Response Preparation Costs.** Costs incurred by any Bidder in preparation of a response to this Invitation To Bid shall be the sole responsibility of the Bidder and will not be reimbursed by the City.
32. **Bidder Exceptions.** Bidders that list and submit more than ten (10) separate items in "Section K – Exceptions to Specifications" shall be considered non-responsive; and said bid shall be rejected in its entirety.

SECTION C - CONTRACT TERMS AND CONDITIONS

Contract Documents. This Contract includes the following Exhibits listed below and attached herein and incorporated herein by this reference:

- EXHIBIT 1 - EMPLOYMENT ELIGIBILITY VERIFICATION & FORM
- EXHIBIT 2 - AFFIDAVIT OF LAWFUL PRESENCE IN THE UNITED STATES

STANDARD TERMS AND CONDITIONS

1. **Time is of the Essence.** Time is of the essence in the performance of this Contract. Contractor is providing services which involve health, safety and welfare of the general public. Delivery time is of the essence. Delivery must be made in accordance with the delivery schedule as promised by the Contractor.
2. **Contract Amendments.** This Contract shall be modified only by a written Contract Amendment signed by the City Manager or designee or City Official and persons duly authorized to enter into Contracts on behalf of the City Council.
3. **Parole Evidence.** This Contract is intended by the parties as a final expression of their agreement and is intended also as a complete and exclusive statement of the terms of this agreement. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this Contract. Acceptance or acquiescence in a course of performance rendered under this Contract shall not be relevant to determine the meaning of this Contract even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity to object.
4. **Subcontracts and Assignment.** Contractor shall not Subcontract any of the work required by this Contract or assign or transfer any of its interest in this Contract, without the prior written consent of City.
5. **No Third Party Beneficiaries.** City and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives or provides any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name in this Contract and expressly described as intended beneficiaries of this Contract.
6. **Successors in Interest.** The provisions of this Contract shall be binding upon and inure to the benefit of the parties and their successors and approved assigns, if any.
7. **Merger Clause.** This Contract and the attached exhibits constitute the entire agreement between the parties. All understandings and agreements between the parties and representations by either party concerning this Contract are contained in this Contract. No waiver, consent, modification, or change in the terms of this Contract shall bind either party unless in writing and signed by both parties. Any written waiver, consent, modification, or change shall be effective only in the specific instance and for the specific purpose given.
8. **Compliance with Applicable Law.** Contractor shall observe and comply with all established federal, state, and local administrative rules, codes, ordinances, regulations, standards, and laws applicable to the work under this Contract regardless of whether or not they are referred to by the City.
9. **Governing Law.** The provisions of this Contract shall be construed in accordance with the laws of the State of Arizona and the provisions of the Lake Havasu City Municipal Code. In the event of litigation between the parties, venue in state trial courts shall lie exclusively in Mohave County, Arizona. In the event of litigation in a U.S. District Court, exclusive venue shall lie in the U.S. District Court located in Phoenix, Maricopa County, Arizona.
10. **Arbitration.** In accordance with A.R.S. Title 12, parties agree to use arbitration, after exhausting applicable administrative reviews, to resolve disputes arising out of this agreement where the sole relief sought is monetary damages of \$40,000, or less, exclusive of interest and costs.
11. **Early Termination.** This Contract may be terminated as follows:
 - a. City and Contractor, by mutual written agreement, may terminate this Contract at any time.
 - b. City, in its sole discretion, may terminate this Contract for any reason on thirty (30) days written notice to Contractor.
 - c. Either the City or Contractor may terminate this Contract in the event of a breach of the Contract by the other. Prior to such termination, the party seeking termination shall give to the other party written notice of the breach and intent to terminate. If the party committing the breach has not entirely cured the breach within fifteen (15) days of the date of the notice, then the party giving the notice may terminate the Contract at any time thereafter by giving a written notice of termination.
 - d. Notwithstanding paragraph 11(c), City may terminate this Contract immediately by written notice to Contractor upon denial, suspension, revocation, or non-renewal of any license, permit, or certificate that Contractor must hold to provide services under this Contract.

- 12. Payment on Early Termination.** Upon termination pursuant to paragraph 11, payment shall be made as follows:
- a. If terminated under 11(a) or 11(b) for the convenience of the City, the City shall pay Contractor for work performed prior to the termination date if such work was performed in accordance with the Contract. City shall not be liable for direct, indirect, or consequential damages. Termination shall not result in a waiver of any other claim City may have against Contractor.
 - b. If terminated under 11(c) by the Contractor due to a breach by the City, then the City shall pay the Contractor for work performed prior to the termination date if such work was performed in accordance with the Contract.
 - c. If terminated under 11(c) or 11(d) by the City due to a breach by the Contractor, then the City shall pay the Contractor for work performed prior to the termination date provided such work was performed in accordance with the Contract less any setoff to which the City is entitled.
- 13. Remedies.** In the event of breach of this Contract, the parties shall have the following remedies:
- a. If terminated under 11(c) by the City due to a breach by the Contractor, the City may complete the work either itself, by agreement with another Contractor, or by a combination thereof. If the cost of completing the work exceeds the remaining unpaid balance of the total compensation provided under this Contract, then the Contractor shall pay to the City the amount of the reasonable excess.
 - b. In addition to the remedies in paragraphs 11 and 13 for a breach by the Contractor, the City also shall be entitled to any other equitable and legal remedies that are available.
 - c. If the City breaches this Contract, Contractor's remedy shall be limited to termination of the Contract and receipt of Contract payments to which Contractor is entitled.
- 14. Waiver.** Waiver of any default under this Contract by City shall not be deemed to be a waiver of any subsequent default or a modification of the provisions of this Contract.
- 15. Non Waiver of Liability.** The City as a public entity supported by monetary tax funding, in execution of its public trust, shall not agree to waive any lawful or legitimate right to recover monetary funds lawfully due it. Therefore, any Contractor agrees that it will not insist upon or demand any statement whereby the City agrees to limit in advance or waive any right the City might have to recover actual lawful damages in any court of law under applicable Arizona law.
- 16. Conflict of Interest/Contract Cancellation.** Contractor stipulates that its officers and employees do not now have a conflict of interest and it further agrees for itself, its officers, and its employees that it will not contract for or accept employment for the performance of any work or services with any individual business, corporation, or government unit that would create a conflict of interest in the performance of its obligations pursuant to this Contract.
- Pursuant to A.R.S. §38-511, this Contract is subject to cancellation by the City if any person significantly involved in initiating, negotiating, securing, drafting, or creating the Contract on behalf of Lake Havasu City is, at any time while the Contract is in effect, an employee of any other party to the Contract in any capacity or a consultant to any other party of the Contract with respect to the subject matter of the Contract.
- 17. No Kick Back Fee.** Contractor stipulates that no person has been employed or has been retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee; and that no member of the City Council or any employee of City has any interest, financially or otherwise, in this Contract that has not been publically declared and procured in accordance with A.R.S. § 38-501 *et seq.*
- In case of breach or violation of this requirement, the City shall have the right to annul this Contract without liability or at its discretion to deduct from the Contract price or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.
- 18. Gratuities.** The City may, by written notice to the Contractor, cancel this Contract if it is found that gratuities, in the form of entertainment, gifts, or otherwise, were offered or given by the Contractor or any agent or representative of the Contractor, to any officer or employee of the City. In the event this Contract is canceled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold from the Contractor the amount of the gratuity.
- 19. Non Exclusive Contract.** Any subsequent Contract resulting from the solicitation shall be awarded with the understanding and agreement that it is for the sole convenience of the City. The City reserves the right to obtain like goods, service, or finished end product from another source when necessary.
- 20. Ownership of Work.** All work products created by the Contractor as part of Contractor's performance of this Contract shall be the exclusive property of the City. If any such work products contain intellectual property of the Contractor that is or could be protected by federal copyright, patent, or trademark laws, Contractor hereby grants City a perpetual, royalty-free, fully paid-up, non-exclusive and irrevocable license to copy, reproduce, deliver, publish, perform, dispose of, use, re-use, in whole or in part, and to authorize others to do so, all such work products. City shall have no rights in any pre-existing work product of Contractor provided to City by Contractor in the performance of this Contract except to copy, use, and re-use any such work product for City use only. If this Contract is terminated prior to completion, and the City is not in default, City, in addition to any other rights provided by this Contract, may require the Contractor to

transfer and deliver all partially completed work products, reports or documentation that the Contractor has specifically developed or specifically acquired for the performance of this Contract.

- 21. Licenses and Permits.** Contractor shall maintain in current status all federal, state, and local laws, licenses, and permits required for the operation of the business conducted by the Contractor as applicable to this Contract.
- 22. Force Majeure.**
- a. Except for payment of sums due, neither party shall be liable to the other nor deemed in default under this Contract if and to the extent that such party's performance of this Contract is prevented by reason of force majeure. The term 'force majeure' means an occurrence that is beyond the control of the party affected and occurs without its fault or negligence. Without limiting the foregoing, force majeure includes acts of God; acts of the public enemy; war; riots; strikes; mobilization; labor disputes; civil disorders; fire; flood; lockouts; injunctions-intervention-acts; or failures or refusals to act by government authority; and other similar occurrences beyond the control of the party declaring force majeure which such party is unable to prevent by exercising reasonable diligence.
 - b. Force Majeure shall not include the following occurrences:
 - 1) Late delivery of equipment or materials caused by congestion at a manufacturer's plant or elsewhere, or an oversold condition of the market;
 - 2) Late performance by a subcontractor unless the delay arises out of a force majeure occurrence in accordance with this force majeure term and condition; or
 - 3) Inability of either the Contractor or any subcontractor to acquire or maintain any required insurance, bonds, licenses, or permits.
 - c. If either party is delayed at any time in the progress of the work by force majeure, the delayed party shall notify the other party in writing of such delay, as soon as is practicable and no later than the following working day, of the commencement thereof and shall specify the causes of such delay in such notice. Such notice shall be delivered or mailed certified-return receipt and shall make a specific reference to this article, thereby invoking its provisions. The delayed party shall cause such delay to cease as soon as practicable and shall notify the other party in writing when it has done so. The time of completion shall be extended by Contract Amendment for a period of time equal to the time that results or effects of such delay prevent the delayed party from performing in accordance with this Contract.
 - d. Any delay or failure in performance by either party hereto shall not constitute default hereunder or give rise to any claim for damages or loss of anticipated profits if, and to the extent that such delay or failure is caused, by force majeure.
- 23. Late Submission of Claim.** The City shall not honor any invoices or claims which are tendered one (1) year after the last item of the account accrued.
- 24. Access to Records.** Contractor shall maintain fiscal records and all other records pertinent to this Contract. All fiscal records shall be maintained pursuant to generally accepted accounting standards, and other records shall be maintained to the extent necessary to clearly reflect actions taken. All such records shall be retained and kept accessible for no less than **six (6) years** following final payment. City's authorized representatives shall have the right to direct access to all of Contractor's books, documents, papers and records related to this Contract for the purpose of conducting audits and examinations and making copies, excerpts and transcripts. City shall reimburse Contractor for Contractor's cost of preparing copies.
- 25. Insurance and Performance/Payment Bond Requirements.** Contractor shall maintain throughout the term of the Contract the amounts and limits established and referenced in the solicitation documents and included herein.
- 26. Indemnity.** Contractor shall indemnify and hold harmless City, its officers and employees from and against any and all liabilities, damages, losses, and costs, including reasonable attorney's fees, but only to the extent caused by the negligence, recklessness, or intentional wrongful conduct of Contractor or other persons employed or used by the Contractor in the performance of this Contract. It is agreed that Contractor will be responsible for primary loss investigation, defense, and judgment costs where this indemnification is applicable.
- 27. Indemnity-Patents, Copyright, and Trademark.** Contractor agrees to defend City, mayor, council, appointed boards and commissions, officers, officials, employees, and agents individually and collectively at Contractor's own expense, in all suits, actions, or proceedings in which Contractor is made a defendant for actual or alleged infringement of any United States of America or foreign letters patents resulting from Contractor's use of the goods, service, or finished end product purchased as a result of this Procurement (Invitation To Bid (ITB) or Request For Proposal (RFP)) and subsequent Contract. Contractor further agrees to pay and discharge any and all judgments or decrees which may be rendered in any such suit, action, or proceedings against City. Contractor agrees to indemnify and hold harmless the City from any and all license, royalty and proprietary fees or costs, including legal costs, which may arise out of City's purchase and use of goods, service, or finished end product supplied by the Contractor. Contractor will indemnify City against all claims for damages to persons or property resulting from defects in materials or workmanship. It is expressly agreed by Contractor that these covenants are irrevocable and perpetual.

28. **No Advance Payments.** Advance payments are not authorized. Payment will be made for only actual services or commodities that have been received and accepted by the City.
29. **Advertisement.** Contractor shall not advertise or publish news releases concerning this Contract without the prior written consent of the City Manager or designee.
30. **Americans with Disabilities Act.** The Contractor shall comply with all applicable provisions of the Americans with Disabilities Act, Public Law 101-336, 42 U.S.C. 12101-12213, and applicable federal regulations under the Act.
31. **Anti-Discrimination Clause.** Contractor shall not discriminate based on race, religion, color, sex, marital status, familial status, national origin, age, mental or physical disability, sexual orientation, gender identity, source of income, or political affiliation in programs, activities, services, benefits, or employment. Contractor shall not discriminate against minority-owned, women-owned, or disadvantaged small businesses. Contractor shall include a provision in each sub-contract requiring subcontractors to comply with the requirements of this clause.
32. **OMB Circular A-133.** If Contractor is determined by the City to be a sub-recipient of federal funds passed through the City, the Contractor must submit an annual Federal Compliance Audit in conformity with the OMB Circular A-133, which applies the Federal Single Audit Act of 1984, Public Law 98-502, to non-profit organizations.
33. **Disadvantaged/Minority/Woman Business Enterprise.** Contractor agrees to give Disadvantaged/ Minority/Woman Businesses the maximum practical opportunity to participate in this Contract when possible, by obtaining supplies, materials, and services from such firms.
34. **Non Appropriation Clause - Fiscal Year.** If appropriations are reallocated, reduced or eliminated by legislative action or for any reason these goods and / or services are not funded, during any fiscal year the City may take any of the following actions:
 - a. Accept a decrease in price offered by the Contractor and complete the Contract;
 - b. Place the Contract on-hold and pay the Contractor for work performed up to the date of the non-appropriation notice. Work must be performed in accordance with the Contract prior to payment and be less any setoff to which the City is entitled. The contract may be resumed at a later date when funding is reestablished. Contract cannot be resumed beyond a (4) four year time period from the date of non-appropriation notice. Contractor must also reaffirm pricing and resubmit insurance and bonding certificates, if applicable. Documents must be received by the City prior to resuming the Contract;
 - c. Cancel the Contract and pay the Contractor for work performed up to the date of the non-appropriation notice. Work must be performed in accordance with the Contract prior to payment and be less any setoff to which the City is entitled, and re-solicit a new procurement;
 - d. Cancel the contract and re-solicit the requirements;
 - e. Cancel the contract.
35. **Non Appropriation Clause - Future Fiscal Year.** Funds may not presently be available for performance under this Contract beyond the current City's fiscal year. If payment for performance under this Contract extends into next fiscal year, the City's obligation to pay for such performance is subject to approval of future appropriations to fund this Contract by legislative action. The City shall have no legal liability to pay funds due for performance under the terms of the Contract until and unless funds are appropriated by legislative action.
36. **Notice to Proceed.** The Contractor agrees to render services promptly and diligently upon receipt of written notice by a duly authorized City agent and to proceed with any or all of the services set forth herein.
37. **Right to Assurance.** Whenever one party to this Contract in good faith has reason to question the other party's intent to perform, the former party may demand that the other party give a written assurance of this intent to perform. In the event that a demand is made and no written assurance is given within **seven (7) days**, the demanding party may treat this failure as an anticipatory repudiation of this Contract.

- 38. Non Performance.** In the event of nonperformance under this Contract, the City, after **seven (7) days** written notice to the Contractor, shall have the right to obtain from other sources such products and/or services as may be required to accomplish the work not performed, and it is agreed that the difference in cost, if any, for said work or goods shall be borne by the Contractor.

For purposes of this section, nonperformance shall be defined as failure to appear and perform work and/or deliver goods as specified and scheduled.

- 39. Liens.** Contractor shall hold the City harmless from claimants supplying labor or materials to the Contractor or its subcontractors in the performance of the work required under this Contract. Contractor shall provide written certification that all liens against materials and labor have been satisfied, before the City will make final payment.
- 40. Severability.** If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held invalid.
- 41. Title and Risk of Loss.** The title and risk of loss of materials or service shall not pass to the City until the City actually receives the material or service at the point of delivery FOB; and such loss, injury, or destruction shall not release seller from any obligation hereunder. The City shall notify the Seller promptly of any damaged goods, service, or finished end product, and further shall assist the Seller in arranging for inspection.
- 42. FOB Point of Delivery.** All pricing, labor, materials, and services are to be FOB destination and delivered within the city limits of Lake Havasu City, Arizona, unless otherwise specified elsewhere in the solicitation documents.
- 43. Employment Standards.** The Contractor agrees that upon request by Lake Havasu City, it shall remove from the City's premises any Contractor's employee, who, in the reasonable opinion of Lake Havasu City, is guilty of improper conduct, bringing any unauthorized personnel (including their own children) into a facility or work area, or is not qualified to perform the work assigned. The Contractor shall understand that its employees shall complete and pass a security background check, if so requested.
- 44. Organization–Employment Disclaimer.** The agreement resulting hereunder is not intended to constitute, create, give rise to, or otherwise recognize a joint venture agreement or relationship, partnership or formal business organization of any kind, and the right and obligations of the parties shall be only those expressly set forth in the agreement. The parties agree that no persons supplied by the Contractor in the performance of Contractor's obligations under the agreement are considered to be City employees and that no rights of City civil service, retirement or personnel rules accrue to such persons. The Contractor shall have total responsibility for all salaries, wage bonuses, retirement, withholdings, workers' compensation, occupational disease compensation, unemployment compensation, other employee benefits, and all taxes and premiums appurtenant thereto concerning such persons and shall save and hold the City harmless with respect thereto.
- 45. Cooperative Governmental Purchasing.** Pursuant to A.R.S. § 41-2632, other public agencies may contract directly with Contractor under the terms of the Contract. Contractor may be charged a one percent (1%) administrative fee for the use of said Contract. Contractor shall notify the City prior to their use of the Contract in providing goods, service, or finished end product to other agencies. If applicable, Contractor shall pay the administrative fee upon execution of said Contract, and Contractor shall provide a yearly sales report to the City ending December 31 of each year. Contractor shall make fees payable to the City at time of cooperative agency payment.
- 46. Quarterly Reports.** If requested, parties agree that Contractor shall provide quarterly reports to City which shows each item purchased from City in the prior quarter, the individual cost of each item, and the total cost of all items purchased in the quarter.
- 47. General Product Requirements.** All items delivered shall conform to the Specifications and shall be in first class condition. Acceptance by the City shall be subject to inspection and approval. In case of conflict between the Specifications and Additional Contract Terms and these Standard Terms and Conditions, the Specifications and Additional Contract Terms shall prevail. The apparent silence of the Standard Terms and Conditions and Specifications and Additional Contract Terms as to any detail or the apparent omission of a detailed description concerning any point shall be regarded as meaning that only best commercial practice is to prevail and that only items manufactured with material and workmanship of first quality are to be supplied. All items delivered shall be of identical style, quality, and appointments as those offered to the trade in general during the course of the model year. All items delivered shall be new current models, free and clear of all liens and encumbrances. Unless otherwise provided in the Specifications, items shall, where appropriate, be prepared for delivery to and use by the City by a factory franchised agent. Each item delivered shall be accompanied by all pre-delivery inspection sheets, coupons, certificates, descriptive literature, warranty cards, and information provided by the manufacturer and furnished to the trade in general. All such documents shall be properly completed and signed in accordance with industry standards. All items required by the Specifications to be UL listed shall indicate the current UL listing on the item. All items that are required by the Specifications to have any other certification shall indicate that certification on the item or in the accompanying documentation.

- 48. Inspection and Acceptance.** Goods, service, or finished end product furnished under this Contract shall be subject to inspection and testing by the City at times and places determined by the City within a reasonable time after arrival at its ultimate destination. If the City finds goods, service, or finished end product to be incomplete, unsatisfactory, defective, or of inferior quality or workmanship, or fails to meet the specifications or other requirements or not in compliance with the Contract, the City, at its sole discretion, may either reject the goods, service, or finished end product, require Contractor to correct any defects without charge, or negotiate with Contractor to sell the goods, service, or finished end product to the City at a reduced price, whichever the City deems equitable under the circumstances. Lake Havasu City may return such goods, service, or finished end product to Contractor at Contractor's expense. Contractor shall reimburse Lake Havasu City for any amounts paid by the City for the returned goods, service, or finished end product and any costs incurred by the City to return the goods to the Contractor. If Contractor is unable or refuses to cure any defects within a time deemed reasonable by the City, the City may reject the goods, service, or finished end product and cancel the Contract in whole or in part. Payment for merchandise, service, or finished end product prior to inspection shall not be construed to be an acceptance of unsatisfactory or defective merchandise, service, or finished end product. Nothing in this paragraph shall in any way affect or limit the City's rights as buyer under the Uniform Commercial Code, including the rights and remedies relating to rejection or revocation of acceptance under A.R.S. § 47-2711 et seq.
- 49. Warranty and Service.** Contractor warrants all goods, service, or finished end product delivered to be free from defects in labor, material and manufacture and to be in compliance with the specifications set out in this Contract. All implied and express warranty provisions of the UCC are hereby incorporated by reference. Further, Contractor represents and warrants that Contractor has the power and authority to enter into and perform this Contract and that this Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms. All items delivered shall carry either the standard manufacturer's warranty or service policy providing that warranty work will be performed by any authorized manufacturer's dealer, or if specified in the Specifications, the warranty and service policy called for in the Specifications. In addition, unless otherwise noted in the Specifications, the warranty and service policy indicated above shall include the following terms and conditions:
- a. There shall be no distance or time limitations, not applicable to the trade in general, on either standard or extended warranty or labor. All franchised or authorized dealers of the item in the state shall honor warranty. Warranty maintenance requirements, when performed by City, shall be acceptable to dealer when said work performance meets or exceeds the dealer certification requirements. City shall provide evidence of such work performance upon request, as required by the manufacturer. Any extended warranty period customarily granted shall be made available to City at no additional cost, and
 - b. City shall be advised of all product recalls on all or any part of the item at no additional cost. All product recall information, replacement parts and labor, shall be provided to the City as soon as available to dealer.
- 50. Shipment Reservation Prohibited.** Contractor shall not ship the goods, service, or finished end product under reservation and no tender of a bill of lading will operate or function as a tender of the goods or finished end product.
- 51. No Replacement of Defective Tender.** Contractor tender of goods, service, or finished end product must fully comply with all provisions of this Contract as to time of delivery, quantity, assortment, quality, and the like. If a tender is made which does not fully conform, this shall constitute a breach, and the Contractor shall not have the right to substitute a conforming tender.
- 52. Product Correction.** It is agreed that Contractor shall be fully responsible for making any correction, replacement, or modification necessary for specification or legal compliance. In the event of any call back, Contractor agrees to give the City first priority. Contractor agrees that if the product or service offered does not comply with the foregoing, the City has the right to cancel the purchase at any time with a full refund within thirty (30) days after notice of non-compliance and Contractor further agrees to be fully responsible for any consequential damages suffered by the City.
- 53. Default in One Installment to Constitute Breach.** Each installment or lot of the agreement is dependent on every other installment or lot and a delivery of nonconforming goods, service, or finished end product or a default of any nature under one installment or lot will impair the value of the whole agreement and constitute a breach of the agreement as a whole.
- 54. Hazardous Materials.** Contractor warrants that goods, service, or finished end product provided under this Contract comply with all federal, state, and local safety and health requirements. All items that include hazardous materials shall be labeled in accordance with law with the names of the hazardous ingredients, the hazards of the materials, and the appropriate precautions. Contractor shall provide a Material Safety Data Sheet as defined by OSHA for any goods, service, or finished end product provided under this Contract which may release, or otherwise result in exposure to, a hazardous substance under normal conditions of use. In addition, Contractor shall label, tag, or mark such goods, service, or finished end product. Those materials for which toxicological or hazard data are unavailable shall carry a label stating: "Toxicological and other hazards unknown. Handle as extremely hazardous."
- 55. Security.** Any disclosure or removal of any City material and/or information marked as confidential or private on the part of Contractor shall be cause for immediate cancellation of the Contract. Any liability, including, but not limited to, attorney fees, resulting from any action or suit brought against the City as a result of the Contractor's willful or negligent release of information, documents, or property contained in City facilities shall be borne solely by the Contractor.

56. **Preference for Recycled Materials.** The City shall prefer materials or supplies manufactured from recycled materials if the recycled product is available, it meets the requirements set forth in the Specifications, and the cost of the product does not exceed the cost of non-recycled products by more than five percent (5%).
57. **Prohibition on Government Contracts.** The Contractor shall comply with all applicable provisions of the A.R.S. § 35 Public Finances. Contractor further agrees that they shall not have any scrutinized business operations in Sudan and/or Iran.
58. **Terrorism Country Divestments.** In accordance with A.R.S. § 35 Public Finances, the City is prohibited from purchasing from a company that is in violation of the Export Administration Act. By entering into the Contract, Contractor warrants compliance with the Export Administration Act.
59. **Contractor's Employee E-Verify Eligibility Requirement.** The Contractor shall comply with all applicable provisions of the Federal Immigration and Nationality Act (FINA), A.R.S. § 41-4401 and A.R.S. § 23-214, which requires compliance with federal immigration laws by State employers, State contractors and State subcontractors in accordance with the E-Verify Employee Eligibility Verification Program. See the following website for further information: www.dhs.gov/e-verify.

Pursuant to A.R.S. § 41-4401, the City may request verification of compliance from any contractor or subcontractor performing work under this Contract. The City reserves the right to confirm compliance. Should the City suspect or find that the Contractor or any of its subcontractors are not in compliance, the City may pursue any and all remedies allowed by law, including, but not limited to suspension of work, termination of the Contract for breach or default, and suspension and/or debarment of the Contractor. All costs necessary for compliance shall be solely borne by the Contractor.

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

SECTION D - EMPLOYMENT ELIGIBILITY VERIFICATION FORM

INSTRUCTIONS FOR COMPLETION OF EMPLOYMENT ELIGIBILITY VERIFICATION FORM

WHO MUST COMPLETE THIS FORM:

In accordance with Lake Havasu City Code Chapter 3.30, Employment of Unauthorized Aliens, all contractors and subcontractors furnishing labor, time, or effort for construction or maintenance of any structure, building, transportation facility, or improvements of real property must complete this form.

Contractors or subcontractors, as described above, must certify that they have complied, in good faith, with the applicable requirements of the Federal Immigration Control and Reform Act with respect to the hiring of covered employees. This certification must be executed by an authorized representative.

WHEN THIS FORM MUST BE COMPLETED:

This form must be completed by all contractors and subcontractors and submitted to the City department awarding the contract, license agreement, or lease no later than notification of successful direct selection, bid, request for proposals, request for qualification, or any similar competitive or noncompetitive procurement or bidding process.

This form can be found at:

https://www.lhcaz.gov/docs/default-source/departments/documents/employerverificationofemploymenteligibility.pdf?sfvrsn=4408297c_11

SECTION E - ADDITIONAL TERMS AND CONDITIONS

1. **Purchase Orders.** Lake Havasu City shall issue a purchase order for the goods or services covered by this Contract. All such Purchase Orders will reference the Contract number. Bidder shall have 24-hour order and delivery capability in the event of emergencies, if so required by specifications.
2. **Packing and Shipping.** Deliveries shall be made as specified without charge for boxing, crating, cartage or storage unless otherwise specified, and material(s) and/or product(s) shall be suitably packed to secure lowest transportation cost(s), and in accordance with common carrier's tariffs, ICC regulations, and other applicable transportation laws, rules and requirements. Containers must be clearly marked with the Buyer's Purchase Order number, contact person, phone number, department/division, and FOB destination address. All documents must bear Buyer's Purchase Order (PO) number(s) and must be plainly marked on all invoices, packages, bills of lading, and shipping orders. Supplier must ensure that each shipment is accompanied by a packing slip that indicates, at a minimum Supplier part numbers, Buyer's part numbers and the applicable Purchase Order number(s). Buyer's count and/or weight shall be final and conclusive for each shipment. Shipping receipts or bills of lading shall be forwarded to Buyer on the date material(s) and/or product(s) are shipped. Material(s) and/or Product(s) are to be securely packed to ensure against damage from all incidents of weather and/or transportation.
3. **Terms of Payment.** Bidder shall indicate terms of payment where indicated in the bid documents and any discounts proposed for early payment. For purposes of comparing discounts bids, the City shall only consider discounts that allow a minimum of twenty (20) days for payment. Discount period will start from the date of receipt of goods or current invoice, whichever is later, to the date the City's payment is mailed. Unless freight and other charges are itemized, any discount provided will be taken on full amount of invoice. Payments shall comply with the requirements of A.R.S. § 35-342.
4. **Invoice.** The Contract shall be paid per terms and conditions set herein and upon receipt and acceptance of either the deliverables under Contract or an invoice that is documented and itemized, whichever occurs later. A separate invoice shall be issued for each shipment of deliverables.

The City reserves the right to reject any and all invoices that do not meet the City's accounting standard levels of acceptability. The City will instruct the Contractor on an acceptable invoice format. The City reserves the right to update and make changes to the invoice format that will enhance the City's business practices.

INVOICES FOR ALL DELIVERABLES SHALL BE SUBMITTED IN DUPLICATE TO:

Lake Havasu City
Accounts Payable
2330 McCulloch Boulevard N.
Lake Havasu City, AZ 86403
Email: AccountsPayable@lhcaz.gov

SECTION F - INSURANCE REQUIREMENTS

NOT APPLICABLE

INTENTIONALLY BLANK

SECTION G – INTENT TO BID NOTIFICATION

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

CLOSING DATE & TIME: May 8, 2019 at 3:00 p.m. Arizona Time

LETTER OF INTENT TO BID

This is to notification that it is our present intent to submit a bid in response to the above referenced IFB.

The individual to whom all information regarding this IFB should be transmitted is:

Company Name: _____

Contact Name: _____

Street Address: _____

City, State, & Zip: _____

Phone Number: Fax Number: _____

E-Mail Address: _____

Submit this Letter of Intent by the deadline for requests for clarification and protests which must be physically received by April 30, 2019, end of day, Arizona Time.

Clarification/Protest/Question/Letter of Intent to Bid
ITB No.: **B19-WWTP-3169**
Lake Havasu City
Community Investment Department, Procurement
Attn: Carissa Ochoa
2330 McCulloch Blvd N
Lake Havasu City, AZ 86403
Email to: purchasing@lhcaz.gov

SECTION H - NO BID NOTIFICATION

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

CLOSING DATE & TIME: May 8, 2019 at 3:00 p.m. Arizona Time

Lake Havasu City is interested in receiving competitive pricing on all procurements. It is the desire to keep your firm as a vendor and a supplier of materials, equipment, services, etc. Therefore, it is important for us to determine why you are not submitting a bid on this procurement. Your input will be carefully analyzed to try and determine if future changes are needed in our specifications and procedures.

Please indicate which statement is true for your firm: (PLEASE CHECK ITEMS THAT APPLY)

- _____ Time frame for bidding was too short.
- _____ No bid at this time.
- _____ We do not supply the requested product or service(s).
- _____ Quantities offered are too small or too large to be supplied by our company. (Please circle one of the underlined.)
- _____ Specifications are "restrictive" or written around a particular product. (Please elaborate by submitting information on a separate sheet.)
- _____ Can not bid against the manufacturer, distributor or jobber on this procurement.
- _____ Other: _____

COMPANY NAME: _____

AUTHORIZED SIGNATURE: _____

RETURN TO: Community Investment Department, Procurement
Attn: Carissa Ochoa
2330 McCulloch Blvd N
Lake Havasu City, AZ 86403
Email to: purchasing@lhcaz.gov

SECTION I - TECHNICAL SPECIFICATIONS

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

BUDGET: Budget \$107,300

LOCATION: 1150 McCulloch Blvd. N., Lake Havasu City, AZ 86403

Replacement of both the Shaft-less screw conveyor and Screenings washer compactor. Jim Myers & Sons Projects 07-1025 and 08-1009 will be used as a basis of design. Please see attached plans and photos. This is an Equipment Only Bid. Submittals will be approved prior to equipment deliveries. Lake Havasu City Staff shall complete the installation with Manufacturer supplied plans and Installation instructions.

A. Screw Conveyor Design Requirements

1. 10" Full pitch X 51'-73/8" long, RH shaft-less spiral auger. 3/4" thick X 3" wide with torque tube and deflector disc.
2. SEW 3HP drive, 159.6:1 Ratio, 60mm hollow output bore at 11 rpm or approved equal.
3. Explosion proof motor 3ph 460V.
4. Purgeable flanged gland seal.
5. 10" Conveyor trough (per plans) with snap-in wear liners made of UHMW-PE.
6. Conveyor supports per plan.
7. Inlet chutes per plan.
8. All mounting hardware.
9. E-Stop pull cable switch.

B. Compactor Design Requirements

1. 3 HP foot mounted helical gear reducer SEW Type F97 or approved equal.
2. Explosion proof motor 3ph 460V.
3. Housing, 304L Stainless Steel.
4. Spray bar wash water quality is Effluent.
5. Single Water connection with inlet filter and 4 spray nozzles.
6. Compactor screw brush will be 304L Stainless Steel with one spare.
7. Discharge piping connected to existing 14" 90 deg. elbow. As called out in plans (not all piping will be replaced).
8. E-Stop pull cable switch.
9. Perforated base plate and wear bar assembly. Including one spare of each.

C. Control Panel

1. Existing control panel will be used.
2. There are dry contacts provided for control and communication with the City's SCADA system. No analog signals are required. Equipment status is displayed on the face of the control panel via indication lights.

D. Project Schedule

1. The Equipment Delivery is preferred prior to June 30th, 2019 (End of fiscal year).

2. Project Installation will be performed during the summer season (May through August) when the wastewater treatment plant's influent flow is at decreased levels. Installation shall be performed during normal business hours, Monday through Friday. No weekend work will be performed. It is the City's intent to schedule installation as one consecutive set of dates until completion with no break in the schedule. The exception will be weekends when no work will be performed. Technical Installation Assistance shall be made available by phone only.

E. Deliverable-based Progress Payments

1. Progress payments may be requested. The City will only consider progress payments if contract completion shall exceed thirty (30) calendar days from initial delivery of the equipment.
 - a. In no case will any payment be made as an advance.
 - b. The Manufacturer may submit an invoice for progress payment by deliverable upon acceptance by the City's department representative (or designee).
 - c. No progress payment will be made for any deliverable that is deemed deficient, unsatisfactory, or otherwise unacceptable to the City.
 - d. Payments will be made by the City in response to a properly submitted invoice in accordance with the actual equipment received and/or services performed.
 - e. Final payment will be made upon acceptable completion of all contract requirements.

F. List of attached plans and photos:

1. Compactor Drive Spec
2. Compactor Motor Spec
3. Disconnect
4. Gearbox
5. ITP auger
6. ITP Screens Conv, Screw
7. ITP Screw Conv 2019
8. Panel
9. Panel1
10. Screw
11. Screw1
12. Screw2
13. Screw3
14. Screw4
15. Screw5

SECTION J - BIDDER SIGNATURE PAGE

ITB NO.: **B19-WWTP-3169**

ITB TITLE: **Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement**

By signature below, the Bidder certifies that the specifications, general provisions and the attached Contract Terms and Conditions have been carefully examined. If the bid is accepted, Bidder agrees to contract with Lake Havasu City to furnish the item(s) and/or services in the manner and time herein prescribed and according to all the requirements set forth.

The Bidder hereby certifies that Bidder:

- 1) Has not discriminated against disadvantaged, minority, or women small business enterprises in obtaining any required subcontracts in accordance with A.R.S.
- 2) Acknowledge receipt of Addendum(s). The modifications to the bid documents noted therein have been considered and all costs thereto are included in the bid sum.

| | | | |
|------------|-------|-------|-------|
| Addendum # | _____ | Dated | _____ |
| Addendum # | _____ | Dated | _____ |
| Addendum # | _____ | Dated | _____ |
| Addendum # | _____ | Dated | _____ |

- 3) Complete, sign and return the attached bid documentation:

- Cover Title/Page
- Section I - Bidder Signature Page
- Section J - Bid Price Schedule
- Section K - Exceptions to the Specifications
- Section L - References

- 4) The term "CONTRACT DOCUMENTS" includes, but may not be limited to, the documents incorporated into this **ITB No.: B19-WWTP-3169, ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement**, issued on April 10, 2019, as follows:

- | | |
|---|---------------------------------|
| A. Invitation To Bid | H. No Bid Notification |
| B. Instructions To Bidders | I. Technical Specifications |
| C. Contract Terms and Conditions | J. Bidder Signature Page |
| D. Employment Eligibility Verification Form | K. Bid Price Schedule |
| E. Additional Terms and Conditions | L. Exceptions to Specifications |
| F. Insurance Requirements | M. References |
| G. Intent to Bid Notification | |

- 5) The Bidder may withdraw a bid at any time prior to the bid opening by providing written request to the Procurement Official or designee. However, all bids shall be irrevocable for ninety (90) calendar days from the day of the bid opening.
- 6) Discount payment terms are _____% _____ days/net _____ days.

The Bidder agrees that pursuant to Section 34-253 of the Arizona Revised Statutes, the undersigned certifies that neither he/she nor anyone associated with vendor's company listed below has directly, or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this procurement. Further, vendor agrees to provide a notarized "NO COLLUSION AFFIDAVIT" if so required by the City, at a future date.

NAME/TITLE _____

SIGNATURE _____

ARIZONA TAX ID: _____

FEDERAL TAX ID: _____

NAME OF FIRM: _____

ADDRESS: _____

PHONE: _____ **FAX:** _____

EMAIL: _____

SEAL, IF BID BY CORPORATION:

FAILURE TO SIGN AND SUBMIT THIS FORM SHALL BE CAUSE FOR BID REJECTION

SECTION K - BID PRICE SCHEDULE

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

BIDDER AGREES TO PROVIDE ALL REQUIRED EQUIPMENT, MATERIAL, FREIGHT AND / OR LABOR AS SPECIFIED IN BID DOCUMENTS HEREIN FOR THE FOLLOWING PRICES AS LISTED:

| QUANTITY | DESCRIPTION | EXTENDED PRICE |
|---------------|--|----------------|
| 1 Lump Sum | | |
| | | |
| | | |
| | | |
| | SUB TOTAL | |
| | (If bidding outside of Arizona, vendor to apply the Lake Havasu City Sales Tax of 7.85 percent . All other in-state applicable city sales tax apply. Please insert the applicable sales tax rate.) <div style="text-align: right;">____ % SALES TAX RATE</div> | |
| | GRAND TOTAL | |

WARRANTY (if applicable): _____

VENDOR'S NAME: _____

FAILURE TO SUBMIT THIS FORM SHALL BE CAUSE FOR BID REJECTION

SECTION L - EXCEPTIONS TO SPECIFICATIONS

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

Please list all deviations from specifications contained herein and state in the space provided below. Please note item number and description for which you are listing the deviations. Unless an exception is noted below, the City shall assume that all minimum requirements have been met or exceeded.

| <u>ITEM NO.</u> | <u>DESCRIPTION</u> |
|------------------------|---------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
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| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

VENDOR'S NAME: _____

FAILURE TO SUBMIT THIS FORM MAY BE CAUSE FOR BID REJECTION

SECTION M - REFERENCES

ITB NO.: B19-WWTP-3169

ITB TITLE: Island Treatment Plant Screenings Compactor and Shaft-less Screw Conveyor Equipment Replacement

- 1. Agency/Company _____
Phone/Fax _____
Contact(s) & Title(s) _____
Email(s) _____

- 2. Agency/Company _____
Phone/Fax _____
Contact(s) & Title(s) _____
Email(s) _____

- 3. Agency/Company _____
Phone/Fax _____
Contact(s) & Title(s) _____
Email(s) _____

- 4. Agency/Company _____
Phone/Fax _____
Contact(s) & Title(s): _____
Email(s) _____

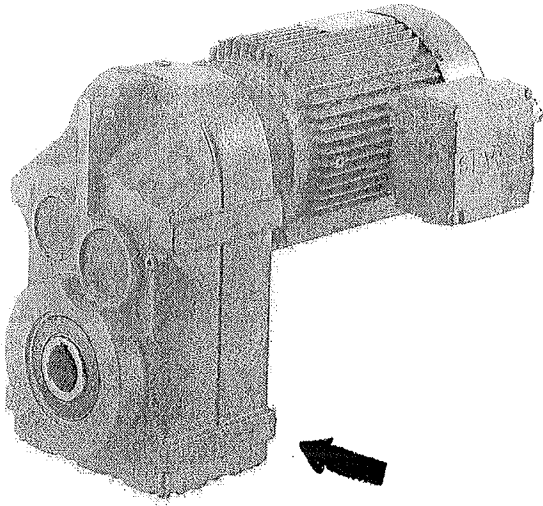
- 5. Agency/Company _____
Phone/Fax _____
Contact(s) & Title(s) _____
Email(s) _____

The references indicated above will be current contacts responsible for purchasing or the end user of the item bid.

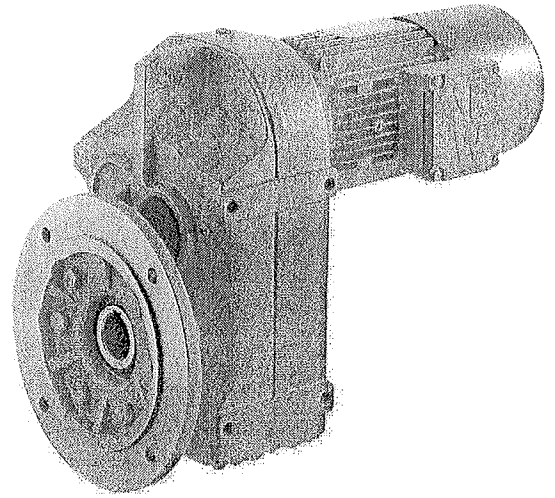
VENDOR'S NAME: _____

FAILURE TO SUBMIT THIS FORM MAY BE CAUSE FOR BID REJECTION

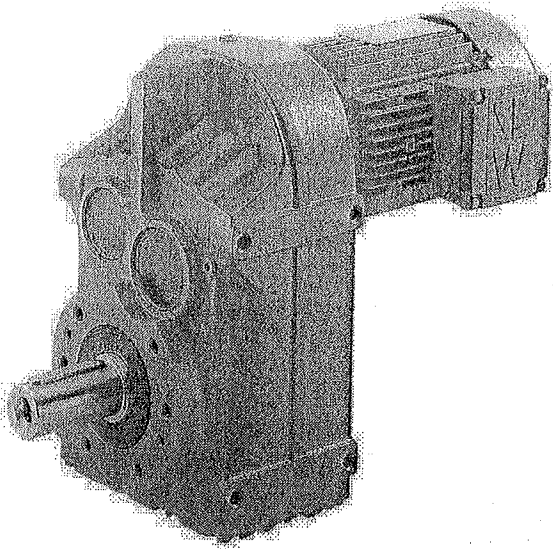
the **SNUGGLER**[®] Helical Gear Units



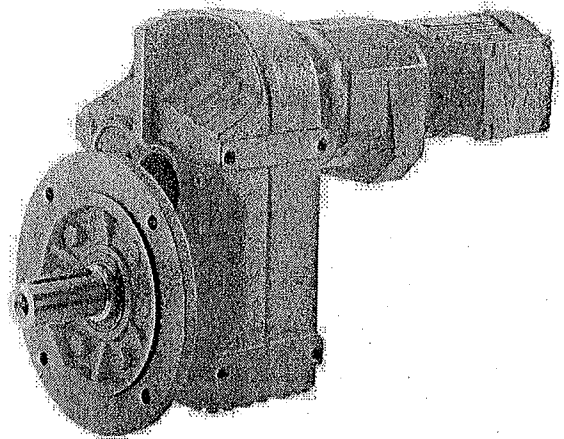
FA..DT../DV..



FAF..DT../DV..



F..DT../DV..



FF..R..DT../DV..

Selections

ASTAGUMER F.. Compact Drive Series

Speed Reducer with NEMA C-Face Adapter - Type F..LP..

Input Speed = 1750 rpm - Service Factor = 1.0

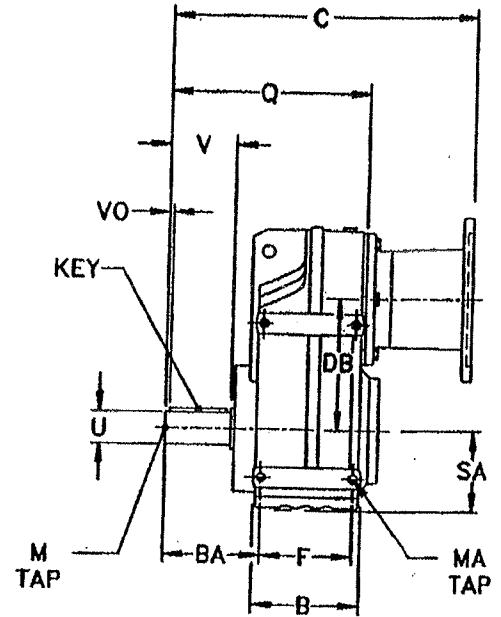
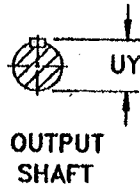
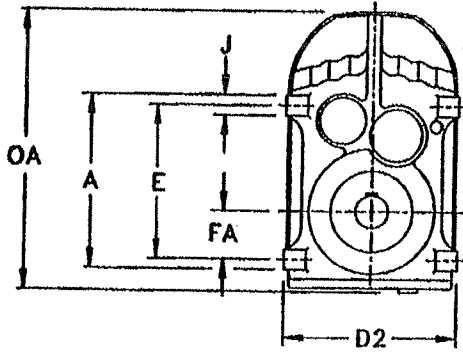
F..97

| Gear Ratio <i>i</i> | Output Speed <i>n₂</i> rpm | Output Torque <i>T_{2 max}</i> lb-in | Output OHL ¹⁾ <i>F_{2H}</i> lb | Stages ²⁾ | | LP | | | | |
|------------------------|---|--|---|----------------------|------|-----|-----|---------|---------|---------|
| | | | | PrL | Sec. | 182 | 184 | 213/215 | 254/256 | 284/286 |
| 276.77 | 6.3 | 38000 | 6720 | 3 | - | | | | | |
| 253.41 | 6.9 | 38000 | 6720 | 3 | - | | | | | |
| 223.88 | 7.8 | 38000 | 6720 | 3 | - | | | | | |
| 189.92 | 9.2 | 38000 | 6720 | 3 | - | | | | | |
| 174.87 | 10 | 38000 | 6720 | 3 | - | | | | | |
| 158.30 | 11 | 38000 | 6720 | 3 | - | | | | | |
| 140.71 | 12 | 38000 | 6720 | 3 | - | | | | | |
| 127.42 | 14 | 38000 | 6720 | 3 | - | | | | | |
| 112.99 | 15 | 38000 | 6720 | 3 | - | | | | | |
| 102.16 | 17 | 38000 | 6720 | 3 | - | | | | | |
| 97.58 | 18 | 38000 | 6720 | 3 | - | | | | | |
| 89.65 | 19 | 38000 | 6720 | 3 | - | | | | | |
| 86.59 | 20 | 38000 | 6700 | 3 | - | | | | | |
| 80.31 | 22 | 38000 | 6450 | 3 | - | | | | | |
| 75.63 | 23 | 38000 | 6250 | 3 | - | | | | | |
| 72.28 | 24 | 38000 | 6110 | 3 | - | | | | | |
| 65.47 | 27 | 38000 | 5800 | 3 | - | | | | | |
| 58.06 | 30 | 38000 | 5440 | 3 | - | | | | | |
| 52.49 | 33 | 38000 | 5150 | 3 | - | | | | | |
| 44.49 | 39 | 38000 | 4690 | 3 | - | | | | | |
| 38.86 | 45 | 38000 | 4330 | 3 | - | | | | | |
| 32.50 | 54 | 38000 | 3890 | 3 | - | | | | | |
| 43.28 | 40 | 27200 | 5590 | 2 | - | | | | | |
| 36.64 | 48 | 27200 | 5150 | 2 | - | | | | | |
| 33.91 | 52 | 38000 | 3990 | 2 | - | | | | | |
| 30.39 | 58 | 38000 | 3730 | 2 | - | | | | | |
| 27.44 | 64 | 38000 | 3490 | 2 | - | | | | | |
| 24.92 | 70 | 38000 | 3270 | 2 | - | | | | | |
| 22.11 | 79 | 38000 | 3010 | 2 | - | | | | | |
| 20.07 | 87 | 38000 | 2810 | 2 | - | | | | | |
| 17.25 | 101 | 38000 | 2500 | 2 | - | | | | | |
| 15.06 | 116 | 38000 | 2240 | 2 | - | | | | | |
| 12.77 | 137 | 38000 | 1940 | 2 | - | | | | | |
| 11.16 | 157 | 38300 | 1860 | 2 | - | | | | | |
| 9.06 | 193 | 20900 | 2630 | 2 | - | | | | | |
| 8.22 | 213 | 20900 | 2480 | 2 | - | | | | | |
| 7.07 | 248 | 20900 | 2260 | 2 | - | | | | | |
| 6.17 | 284 | 19900 | 2160 | 2 | - | | | | | |
| 5.23 | 334 | 19000 | 2230 | 2 | - | | | | | |
| 4.57 | 383 | 18100 | 2270 | 2 | - | | | | | |

¹⁾ Applies to foot mounted with solid shaft units only.
²⁾ PrL = primary reducer, Sec. = secondary reducer
 Dimension information begins on page 202.



Dimensions Type F Speed Reducers with NEMA C-Face - Rail Mounted



Gearcase

| Model | A | B | BA | D2 | DB | E | F | FA | J | MA | OA | Q | SA |
|-------|-------|-------|-------|-------|-------|-------|------|------|------|------------|-------|-------|------|
| F97 | 15.75 | 9.45 | 7.50 | 15.75 | 11.22 | 13.78 | 8.07 | 4.72 | 1.97 | M20 x 1.10 | 24.53 | 16.38 | 7.01 |
| | 400 | 240 | 190.5 | 400 | 285 | 350 | 205 | 120 | 60 | M20 x 28 | 623 | 416 | 178 |
| F107 | 18.11 | 10.24 | 9.51 | 17.72 | 13.09 | 15.75 | 8.66 | 4.92 | 2.36 | M24 x 1.42 | 28.23 | 19.06 | 7.87 |
| | 460 | 260 | 241.6 | 450 | 332.4 | 400 | 220 | 125 | 60 | M24 x 36 | 717 | 484 | 200 |

Output Shaft Inch Series/Optional Metric Series

| Model | U | UY | V | VO | Key | M |
|-------|---------------------------------------|------|------|------|-------------------|-----------------|
| F97 | 2.875 ⁺⁰ _{-.001} | 3.20 | 5.51 | 0.67 | 3/4 x 3/4 x 4 3/8 | 3/4 - 10 x 1.61 |
| | 70 ^{+0.030} _{+.011} | 74.5 | 140 | 7.5 | 20 x 12 x 125 | M20 x 42 |
| F107 | 3.625 ⁺⁰ _{-.001} | 4.01 | 6.69 | 0.63 | 7/8 x 7/8 x 5 3/8 | 1 - 8 x 2.13 |
| | 90 ^{+0.035} _{+.013} | 95 | 170 | 5 | 25 x 14 x 160 | M24 x 50 |

Motor Compatibility - NEMA

| Model | | NEMA LP | | | | | |
|-------|---|----------------|----------------|----------------|----------------|----------------|----------------|
| | | 182TC 184TC | 213TC 215TC | 254TC 256TC | 284TC 286TC | 324TC 326TC | 364TC 365TC |
| F97 | C | 23.46 | 23.46 | 26.57 | 28.62 | — | — |
| | | 596 | 596 | 675 | 727 | — | — |
| F107 | C | 25.91 | 25.91 | 29.02 | 31.06 | 35.47 | 35.47 |
| | | 658 | 658 | 737 | 789 | 901 | 901 |

Dimensions are Inch
mm

Dimension C is to motor mounting surface

For the selected LP adapter size the pinion bore must be available in the desired gear ratio for the reducer. Please see the compatibility tables beginning on page 182.

Refer to page 556 for standard NEMA C-Face dimensions.

See page 264 for available output shaft sizes.

Motor Compatibility - IEC

| Model | | IEC LP | | | | | | | |
|-------|---|--------|-------|-------|--------|-------|-------|-------|-------|
| | | 100 | 112 | 132ML | 132S/M | 160 | 180 | 200 | 225 |
| F97 | C | 22.44 | 22.44 | 25.98 | 23.46 | 27.17 | 28.58 | — | — |
| | | 570 | 570 | 660 | 596 | 690 | 726 | — | — |
| F107 | C | 24.88 | 24.88 | 28.43 | 25.91 | 29.61 | 31.02 | 34.60 | 36.06 |
| | | 632 | 632 | 722 | 658 | 752 | 788 | 884 | 916 |

Technical Data

ATTACHMENT F1 - Compactor Drive Spec
Weights

Listed below are weights for complete units less oil. Reducer weights less input cover are shown in the left side chart and input weights are shown in the right side chart. To obtain the unit's total weight, add the reducer weight from the left chart to the input weight from the right chart. For various mounting options add the additional weight shown in the left side chart (a negative value must be subtracted). For compound reducers, add the AD weight that corresponds to the secondary reducer size (i.e. for an F97R57AD3, the reducer weight is 390 lbs, the AD3 weight for the R57 is 15 lbs for a total of 405 lbs plus lubrication).
Note: Oil weighs approximately 7.5 lbs/gallon (2 lb/liter). Reference Lubrication page for volume of oil required. All weights in lbs.

| Model | Reducer | Add for | | |
|------------|------------|-----------|------------|-----------|
| | | FF | FA | FAF |
| F37 | 26 | 7 | 2 | 4 |
| F47 | 40 | 7 | -2 | 4 |
| F57 | 53 | 11 | -4 | 9 |
| F57R37 | 75 | 11 | -4 | 9 |
| F67 | 75 | 11 | -4 | 4 |
| F67R37 | 97 | 11 | -4 | 4 |
| F77 | 126 | 18 | -11 | 2 |
| F77R37 | 148 | 18 | -11 | 2 |
| F87 | 203 | 51 | -13 | 31 |
| F87R57 | 247 | 51 | -13 | 31 |
| F97 | 346 | 75 | -33 | 18 |
| F97R57 | 390 | 75 | -33 | 18 |
| F107 | 545 | 57 | -31 | 18 |
| F107R77 | 617 | 57 | -31 | 18 |
| F127 | 785 | 88 | -75 | 0 |
| F127R77 | 858 | 88 | -75 | 0 |
| F127R87 | 904 | 88 | -75 | 0 |
| F157 | 1416 | 169 | -119 | 7 |
| F157R97 | 1623 | 159 | -119 | 7 |

FA97B182TC Weight =
346-33+39=352 lb.

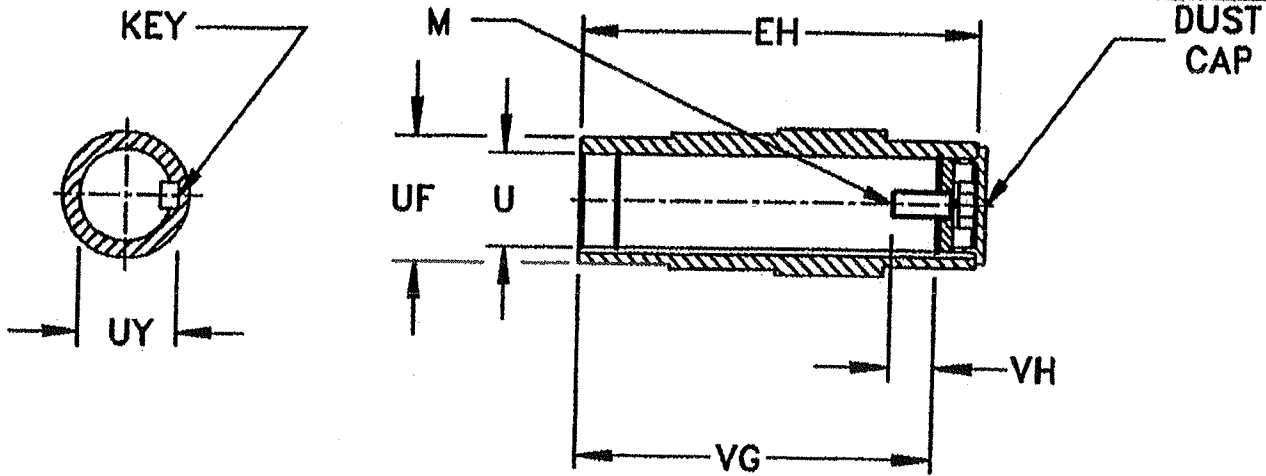
| Model | Add for | | | | | | | |
|-----------------|---------|-----|-----|-----|-----|-----|-----|-----|
| | AD1 | AD2 | AD3 | AD4 | AD5 | AD6 | AD7 | AD8 |
| F37, F47 R37 | 5 | 7 | — | — | — | — | — | — |
| F57, F67 R57 | — | 8 | 15 | — | — | — | — | — |
| F77 R77 | — | 11 | 18 | 31 | — | — | — | — |
| F87 R87 | — | 13 | 22 | 36 | 69 | — | — | — |
| F97 R97 | — | — | 27 | 38 | 75 | 105 | — | — |
| F107 | — | — | 34 | 48 | 78 | 108 | — | — |
| F127 | — | — | — | 69 | 95 | 121 | 120 | 169 |
| F157 | — | — | — | — | 117 | 154 | 141 | 193 |

| Model | Add for NEMA LP | | | | | | | |
|-----------------|-----------------|-----------|--------------|---------|---------|---------|---------|---------|
| | 56 | 143/145 | 182/184 | 213/215 | 254/256 | 284/286 | 324/326 | 364/365 |
| F37, F47 R37 | 9.5 | 11.3/12.1 | — | — | — | — | — | — |
| F57, F67 R57 | 10.4 | 12.4/13.2 | 26/28 | 33/33 | — | — | — | — |
| F77 R77 | 15.2 | 17/18 | 29/29 | 35/35 | — | — | — | — |
| F87 R87 | — | 22/22 | 37/37 | 44/44 | 62/62 | — | — | — |
| F97 R97 | — | — | 39/39 | 48/48 | 66/66 | 84/84 | — | — |
| F107 | — | — | 45/45 | 51/51 | 73/73 | 90/90 | 210/210 | 217/217 |
| F127 | — | — | — | — | 101/101 | 119/119 | 237/237 | 243/243 |
| F157 | — | — | — | — | — | — | 285/285 | 292/292 |

| Model | Add for IEC LP | | | | | | | | | | | |
|-----------------|----------------|------|------|------|-----|-----|--------------|-------|-----|-----|-----|-----|
| | 63 | 71 | 80 | 90 | 100 | 112 | 132S 132M | 132ML | 160 | 180 | 200 | 225 |
| F37, F47 R37 | 8 | 8 | 11.5 | 12.6 | — | — | — | — | — | — | — | — |
| F57, F67 R57 | 8.8 | 8.8 | 12.6 | 13.7 | 28 | 25 | 33 | — | — | — | — | — |
| F77 R77 | 13.7 | 13.7 | 17 | 18 | 30 | 30 | 38 | — | — | — | — | — |
| F87 R87 | — | — | 21 | 22 | 39 | 39 | 47 | 70 | 82 | — | — | — |
| F97 R97 | — | — | — | — | 41 | 41 | 49 | 75 | 86 | 93 | — | — |
| F107 | — | — | — | — | 47 | 47 | 55 | 82 | 93 | 99 | 205 | 221 |
| F127 | — | — | — | — | — | — | — | 112 | 121 | 128 | 232 | 247 |
| F157 | — | — | — | — | — | — | — | — | — | — | 280 | 295 |



Technical Data
Available Output Hollowshafts



OUTPUT HOLLOWSHAFT

INCH Shafts

Dimensions are inch

| Model | EH | U | UF | UY | VG | VH | Key | M |
|---------------|-------|--|------|------|-------|------|-----------------------|------------------|
| FA/FAF/FAZ37 | 4.72 | 1.250 ^{+0.001} ₋₀ | 1.77 | 1.37 | 4.13 | 0.67 | 1/4 x 1/4 x 1 11/16 | 7/16 - 14 x 1 |
| FA/FAF/FAZ47 | 5.91 | 1.375 ^{+0.001} ₋₀ | 1.87 | 1.62 | 5.20 | 0.65 | 5/16 x 5/16 x 1 13/16 | 1/2 - 13 x 1 |
| | 5.91 | 1.250 ^{+0.001} ₋₀ | 1.87 | 1.37 | 5.20 | 0.67 | 1/4 x 1/4 x 1 11/16 | 7/16 - 14 x 1 |
| FA/FAF/FAZ57 | 6.54 | 1.500 ^{+0.001} ₋₀ | 2.17 | 1.67 | 5.59 | 1.36 | 3/8 x 3/8 x 2 1/4 | 5/8 - 11 x 1 3/4 |
| FA/FAF/FAZ67 | 7.09 | 1.500 ^{+0.001} ₋₀ | 2.17 | 1.67 | 6.14 | 1.36 | 3/8 x 3/8 x 2 1/4 | 5/8 - 11 x 1 3/4 |
| | 7.09 | 1.4375 ^{+0.001} ₋₀ | 2.17 | 1.61 | 6.14 | 1.36 | 3/8 x 3/8 x 2 1/4 | 5/8 - 11 x 1 3/4 |
| FA/FAF/FAZ77 | 8.27 | 2.000 ^{+0.001} ₋₀ | 2.76 | 2.22 | 7.20 | 1.16 | 1/2 x 1/2 x 2 5/8 | 5/8 - 11 x 1 3/4 |
| | 8.27 | 1.8375 ^{+0.001} ₋₀ | 2.76 | 2.16 | 7.20 | 1.16 | 1/2 x 1/2 x 2 5/8 | 5/8 - 11 x 1 3/4 |
| FA/FAF/FAZ87 | 9.45 | 2.375 ^{+0.001} ₋₀ | 3.35 | 2.65 | 8.27 | 1.39 | 5/8 x 5/8 x 3 5/8 | 3/4 - 10 x 2 |
| | 9.45 | 2.4375 ^{+0.001} ₋₀ | 3.35 | 2.62 | 8.27 | 1.39 | 5/8 x 7/16 x 3 | 3/4 - 10 x 2 |
| FA/FAF/FAZ97 | 11.81 | 2.750 ^{+0.001} ₋₀ | 3.74 | 3.03 | 10.63 | 1.24 | 5/8 x 5/8 x 3 5/8 | 3/4 - 10 x 2 |
| | 11.81 | 2.8375 ^{+0.001} ₋₀ | 3.74 | 3.14 | 10.63 | 1.24 | 3/4 x 1/2 x 3 1/2 | 3/4 - 10 x 2 |
| FA/FAF/FAZ107 | 13.78 | 3.625 ^{+0.001} ₋₀ | 4.65 | 3.89 | 12.32 | 1.24 | 7/8 x 5/8 x 3 1/2 | 3/4 - 10 x 2 |
| | 13.78 | 3.250 ^{+0.001} ₋₀ | 4.65 | 3.59 | 12.32 | 1.24 | 3/4 x 3/4 x 4 1/8 | 3/4 - 10 x 2 |
| | 13.78 | 3.4375 ^{+0.001} ₋₀ | 4.65 | 3.70 | 12.32 | 1.24 | 7/8 x 5/8 x 3 1/2 | 3/4 - 10 x 2 |
| FA/FAF/FAZ127 | 16.14 | 4.000 ^{+0.001} ₋₀ | 5.31 | 4.44 | 14.69 | 1.28 | 1 x 1 x 6 | 1 - 8 x 2 1/4 |
| FA/FAF/FAZ157 | 19.69 | 4.500 ^{+0.001} ₋₀ | 6.10 | 4.95 | 18.11 | 1.28 | 1 x 1 x 6 | 1 - 8 x 2 1/4 |

¹⁾ INX shaft options incur an additional charge.

METRIC Shafts

Dimensions are mm

| Model | EH | U | UF | UY | VG | VH | Key | M |
|---------------|-----|-------------------------------------|-----|-------|-----|----|---------------|----------|
| FA/FAF/FAZ37 | 120 | 30 ^{+0.021} ₋₀ | 45 | 33.3 | 105 | 17 | 8 x 7 x 40 | M10 x 25 |
| FA/FAF/FAZ47 | 150 | 35 ^{+0.025} ₋₀ | 60 | 38.3 | 132 | 22 | 10 x 8 x 45 | M12 x 30 |
| | 150 | 30 ^{+0.025} ₋₀ | 60 | 33.3 | 132 | 16 | 8 x 7 x 40 | M10 x 25 |
| FA/FAF/FAZ57 | 168 | 40 ^{+0.025} ₋₀ | 55 | 43.3 | 142 | 29 | 12 x 8 x 50 | M16 x 40 |
| FA/FAF/FAZ67 | 180 | 40 ^{+0.025} ₋₀ | 55 | 43.3 | 156 | 29 | 12 x 8 x 50 | M16 x 40 |
| FA/FAF/FAZ77 | 210 | 50 ^{+0.025} ₋₀ | 70 | 53.8 | 183 | 32 | 14 x 8 x 60 | M16 x 45 |
| FA/FAF/FAZ87 | 240 | 60 ^{+0.030} ₋₀ | 85 | 64.4 | 210 | 36 | 18 x 11 x 100 | M20 x 60 |
| FA/FAF/FAZ97 | 300 | 70 ^{+0.030} ₋₀ | 95 | 74.9 | 270 | 34 | 20 x 12 x 110 | M20 x 60 |
| FA/FAF/FAZ107 | 350 | 90 ^{+0.035} ₋₀ | 118 | 85.4 | 313 | 40 | 25 x 14 x 160 | M24 x 60 |
| | 350 | 60 ^{+0.030} ₋₀ | 118 | 65.4 | 313 | 30 | 22 x 14 x 125 | M20 x 60 |
| FA/FAF/FAZ127 | 410 | 100 ^{+0.035} ₋₀ | 135 | 106.4 | 373 | 38 | 28 x 16 x 180 | M24 x 60 |
| FA/FAF/FAZ157 | 500 | 120 ^{+0.035} ₋₀ | 155 | 127.4 | 460 | 36 | 32 x 18 x 200 | M24 x 60 |

Technical Data Lubrication

The approximate lubricant in US gallons and liters per mounting position is as follows:

| Gear Unit | Mounting Position | | | | | | | | | | | |
|--------------------------------|-------------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| | M1 | | M2 | | M3 | | M4 | | M5 | | M6 | |
| | Gallons | Liters | Gallons | Liters | Gallons | Liters | Gallons | Liters | Gallons | Liters | Gallons | Liters |
| F37 | 0.26 | 1 | 0.32 | 1.2 | 0.18 | 0.7 | 0.32 | 1.2 | 0.26 | 1 | 0.29 | 1.1 |
| F47 | 0.40 | 1.5 | 0.48 | 1.8 | 0.29 | 1.1 | 0.50 | 1.9 | 0.40 | 1.5 | 0.45 | 1.7 |
| F57 | 0.69 | 2.6 | 0.86 | 3.7 | 0.55 | 2.1 | 0.92 | 3.5 | 0.74 | 2.8 | 0.77 | 2.9 |
| F67 | 0.71 | 2.7 | 1.00 | 3.8 | 0.50 | 1.9 | 1.00 | 3.8 | 0.77 | 2.9 | 0.85 | 3.2 |
| F77 | 1.32 | 5 | 1.93 | 7.3 | 1.14 | 4.3 | 2.11 | 8 | 1.59 | 6 | 1.66 | 6.3 |
| F87 | 2.64 | 10 | 3.43 | 13 | 2.03 | 7.7 | 3.65 | 13.8 | 2.65 | 10.0 | 2.91 | 11 |
| F97 | 4.69 | 18.5 | 5.94 | 22.5 | 3.33 | 12.6 | 6.66 | 25.2 | 4.89 | 18.5 | 5.28 | 20 |
| F107 | 6.47 | 24.5 | 8.45 | 32 | 5.15 | 19.5 | 9.91 | 37.5 | 7.13 | 27 | 7.13 | 27 |
| F127 | 10.70 | 40.5 | 14.53 | 55 | 8.98 | 34 | 16.12 | 61 | 12.29 | 46.5 | 12.42 | 47 |
| F157 | 18.23 | 69 | 27.48 | 104 | 16.64 | 63 | 27.74 | 105 | 22.72 | 86 | 20.61 | 78 |
| FF37 | 0.26 | 1 | 0.32 | 1.2 | 0.18 | 0.7 | 0.34 | 1.3 | 0.26 | 1 | 0.29 | 1.1 |
| FF47 | 0.42 | 1.6 | 0.50 | 1.9 | 0.29 | 1.1 | 0.50 | 1.9 | 0.40 | 1.5 | 0.45 | 1.7 |
| FF57 | 0.74 | 2.8 | 1.00 | 3.8 | 0.55 | 2.1 | 0.96 | 3.7 | 0.77 | 2.9 | 0.78 | 3 |
| FF67 | 0.71 | 2.7 | 1.00 | 3.8 | 0.50 | 1.9 | 1.00 | 3.8 | 0.77 | 2.9 | 0.85 | 3.2 |
| FF77 | 1.35 | 5.1 | 1.93 | 7.3 | 1.14 | 4.3 | 2.14 | 8.1 | 1.59 | 6 | 1.66 | 6.3 |
| FF87 | 2.72 | 10.3 | 3.49 | 13.2 | 2.06 | 7.8 | 3.73 | 14.1 | 2.91 | 11 | 2.96 | 11.2 |
| FF97 | 5.02 | 19 | 5.94 | 22.5 | 3.33 | 12.6 | 6.74 | 25.5 | 4.99 | 18.9 | 5.42 | 20.5 |
| FF107 | 6.74 | 25.5 | 8.45 | 32 | 5.15 | 19.5 | 10.17 | 38.5 | 7.27 | 27.5 | 7.40 | 28 |
| FF127 | 10.96 | 41.5 | 14.80 | 56 | 8.98 | 34 | 16.64 | 63 | 12.29 | 46.5 | 12.96 | 49 |
| FF157 | 19.02 | 72 | 27.74 | 105 | 16.91 | 64 | 28.01 | 106 | 22.88 | 87 | 20.87 | 79 |
| FAF/HF/FV37 FAZ/FHZ/FVZ37 | 0.26 | 1 | 0.32 | 1.2 | 0.18 | 0.7 | 0.32 | 1.2 | 0.26 | 1 | 0.29 | 1.1 |
| FAF/HF/FV47 FAZ/FHZ/FVZ47 | 0.40 | 1.5 | 0.48 | 1.8 | 0.29 | 1.1 | 0.50 | 1.9 | 0.40 | 1.5 | 0.45 | 1.7 |
| FAF/HF/FV57 FAZ/FHZ/FVZ57 | 0.71 | 2.7 | 1.00 | 3.8 | 0.55 | 2.1 | 0.95 | 3.6 | 0.77 | 2.9 | 0.78 | 3 |
| FAF/HF/FV67 FAZ/FHZ/FVZ67 | 0.71 | 2.7 | 1.00 | 3.8 | 0.50 | 1.9 | 1.00 | 3.8 | 0.77 | 2.9 | 0.85 | 3.2 |
| FAF/HF/FV77 FAZ/FHZ/FVZ77 | 1.32 | 5 | 1.93 | 7.3 | 1.14 | 4.3 | 2.11 | 8 | 1.59 | 6 | 1.66 | 6.3 |
| FAF/HF/FV87 FAZ/FHZ/FVZ87 | 2.64 | 10 | 3.43 | 13 | 2.03 | 7.7 | 3.65 | 13.8 | 2.65 | 10.0 | 2.91 | 11 |
| FAF/HF/FV97 FAZ/FHZ/FVZ97 | 4.69 | 18.5 | 5.94 | 22.5 | 3.33 | 12.6 | 6.61 | 25 | 4.89 | 18.5 | 5.28 | 20 |
| FAF/HF/FV107 FAZ/FHZ/FVZ107 | 6.47 | 24.5 | 8.45 | 32 | 5.15 | 19.5 | 9.91 | 37.5 | 7.13 | 27 | 7.13 | 27 |
| FAF/HF/FV127 FAZ/FHZ/FVZ127 | 10.30 | 39 | 14.53 | 55 | 8.98 | 34 | 16.12 | 61 | 11.90 | 45 | 12.29 | 46.5 |
| FAF/HF/FV157 FAZ/FHZ/FVZ157 | 17.97 | 68 | 27.21 | 103 | 16.38 | 62 | 27.48 | 104 | 22.46 | 85 | 20.34 | 77 |

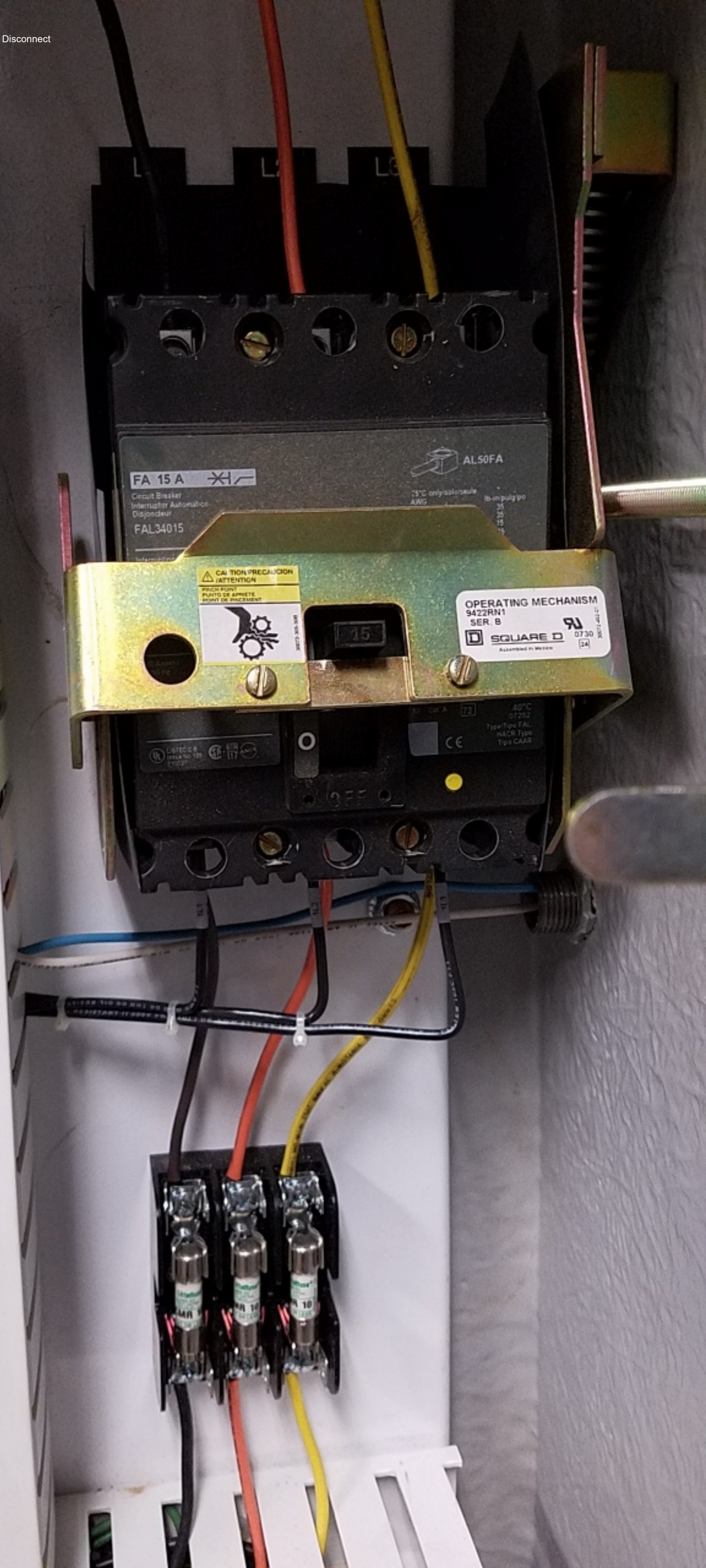
For compound drives the R reducer requires its own oil filling as shown in the chart:

| Gear Unit | Mounting Position | | | | | |
|-----------|-------------------|--------|---------|--------|---------|--------|
| | M1/M3/MS/MS | | M2 | | M4 | |
| | Gallons | Liters | Gallons | Liters | Gallons | Liters |
| R17 | 0.07 | 0.25 | 0.16 | 0.6 | 0.16 | 0.6 |
| R37 | 0.11 | 0.4 | 0.24 | 0.9 | 0.29 | 1.1 |
| R57 | 0.21 | 0.8 | 0.48 | 1.8 | 0.53 | 2 |
| R77 | 0.32 | 1.2 | 1.00 | 3.8 | 1.06 | 4.1 |
| R87 | 0.63 | 2.4 | 1.8 | 6.8 | 2.03 | 7.7 |
| R97 | 1.35 | 5.1 | 3.14 | 11.9 | 3.70 | 14 |

Performance Data: VM7042T

| | | | |
|-------------------|--------------|----------------------------|------------------|
| Rated Output: | 3 | Full Load Torque: | 9 |
| Volts: | 208-230/460 | Break Down Torque: | 36.5 |
| Full Load Amps: | 9-8.6/4.3 | Locked Rotor Torque: | 28.8 |
| Speed: | 1725 | Starting Current(Amps): | 30 |
| Hertz: | 60 | No-Load Current(Amps): | 2.4 |
| Phase: | 3 | Line-line Resist. @ 25° C: | 5.07 A ph 0 B ph |
| NEMA Design Code: | B | Temp Rise, C @ FL: | 67 |
| LR KVA Code: | H | | |
| Efficiency: | 82.5 | | |
| Power Factor: | 75 | | |
| Service Factor: | 1.15 | | |
| Rating - Duty: | 40C AMB-CONT | | |

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| Power Factor: | 38 | 59 | 72 | 79 | 83 | 86 | 81 |
| Efficiency: | 74.4 | 82.6 | 84.5 | 84.2 | 82.9 | 80.9 | 83.4 |
| Speed (RPM): | 1783 | 1766 | 1748 | 1728 | 1706 | 1680 | 1715 |
| Line Amperes: | 2.5 | 2.9 | 3.5 | 4.2 | 5.1 | 6.1 | 4.8 |



FA 15 A

Circuit Breaker
Interrupteur Automatique
Disjoncteur

FAL34015

AL50FA

75°C only/soleuse
AWG 15-35
15-35
15-35

CAUTION PRECAUTION
ATTENTION



OPERATING MECHANISM
9422RN1
SER. B
SQUARE D
Assembled in Mexico

UL LISTED
Issue No. 199
E10271

CSA
117

40°C
07282

Type Type FAL
NACR Type
Type CAAR




AGGLER®

W. H. ... INC. USA

| | | | |
|-------------------|----------------------|----------------|-------------|
| Type | FAZ87DF100LS4-KS-102 | | |
| S.O. | 880068995.08.00.001 | | |
| Input rpm | 1720 | Output | 11 |
| HP | | Torque | 17546 lb-in |
| Efficiency | 159.61 | Service Factor | 1.5 |
| Mounting Position | N1 | | |
| Oil | MOBIL 600XP 220 | Min Amb | -10°C |
| lub | | Max Amb | 40°C |

See Operator Instructions for lubrication details

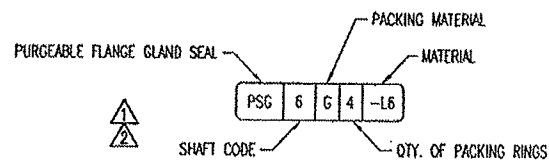




EQUIPMENT LISTING**JMS 10inch Shaftless Screw Conveyor****JMS #08-1009 – Island Waste Water Treatment Plant - Lake Havasu, AZ**

| ITEM | QTY | DESCRIPTION |
|------------------------------|-----|---|
| Screw Conveyor Drive | 1 | SEW Eurodrive FAZ87DT100LS4-KS 3 HP, 159.6:1 Ratio, 60 mm Hollow Output Bore, 11 rpm, w/1750 RPM motor 3/60/230-460v severe duty |
| Shaftless Screw | 1 | 9 ½" O. D X 10" (Full) pitch x 51' – 7 3/8" Long, RH Shaftless Spiral; 220 min Brinnell, ¾" thick x 3" wide w/ 9 ½"x 2 7/16" 3 bolt torque tube & ¼" deflector disc |
| Coupling Bolts | 3 | 5/8" Dia HHMB W/ LW & Hex Nut CCB5-SS |
| Drive Shaft | 1 | 2 7/16" Dia. Drive Shaft, C1045, SDS87-7-3 |
| Purgeable Flanged Gland Seal | 1 | 2 7/16" Purgeable Flanged Gland Seal, w/ 5 rings Teflon packing & Bronze Lantern Ring PSGA5T |
| Liners | 13 | 1/2" Thick x 4'-0" long UHMW-PE Snap-in wear Liners for 10" Trough |
| Hold Down | 10 | Shaftless Hold down angle, 2'-0" long, M10TSHDA-SS |
| Safety stop switch | 1 | CCC Model RS-2 Pull Cable Safety Switch |

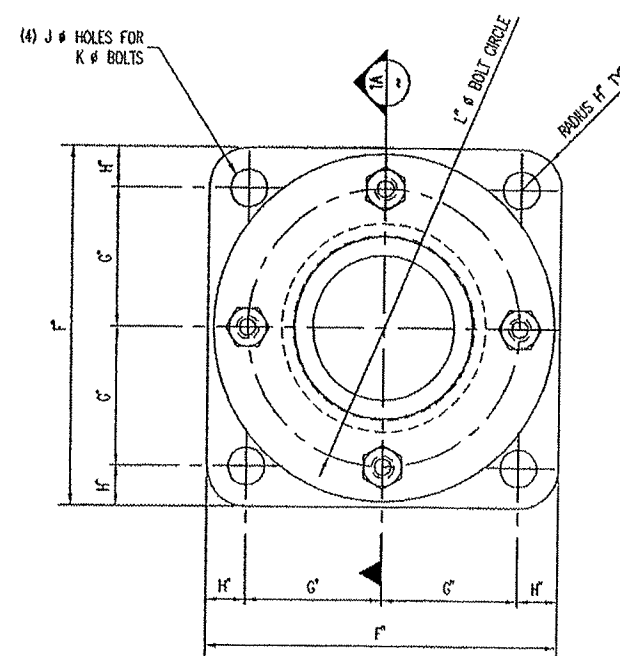
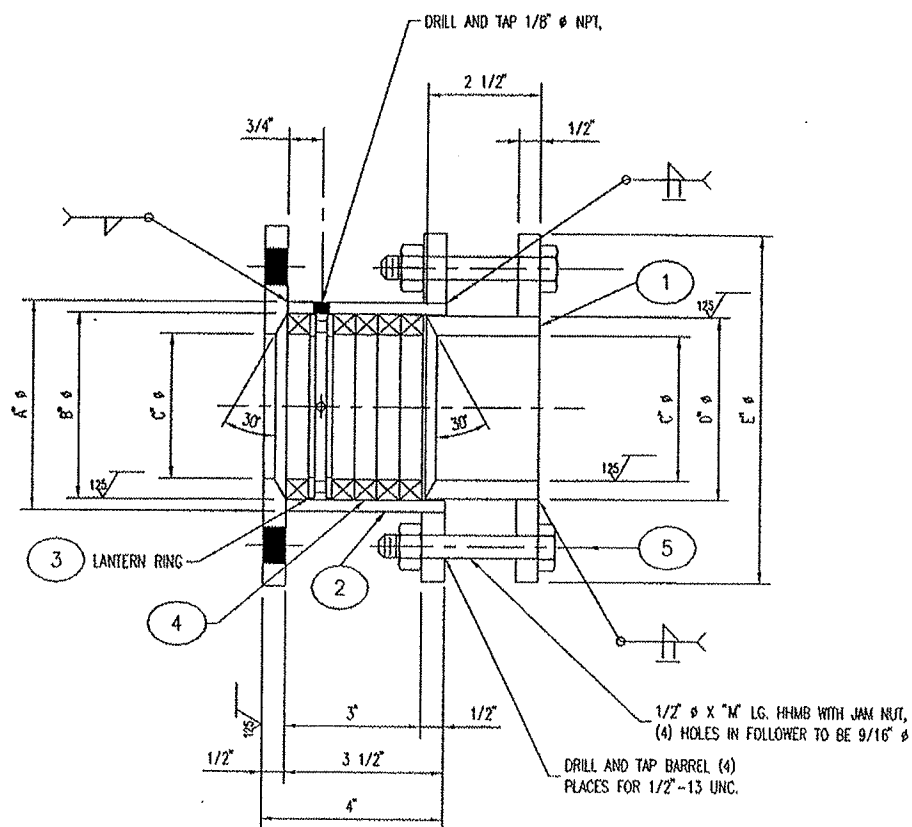
BILL OF MATERIAL WRITE UP 3" PURGEABLE FLANGE GLAND SEAL



| SHAFTS | |
|--------|----------|
| CODE | SIZE |
| 3 | 1 1/2" |
| 4 | 2" |
| 5 | 2 7/16" |
| 6 | 3" |
| 7 | 3 7/16" |
| 8 | 3 15/16" |
| 9 | 4 7/16" |
| 10 | 4 15/16" |
| 11 | 5 7/16" |

| MATERIAL | |
|----------|--------|
| | A36 |
| -SS | 304SS |
| -L4 | 304LSS |
| -S6 | 316SS |
| -L6 | 316LSS |
| -G | HDC |

| PKG. MATL. | |
|------------|--------------|
| | GRAPHITE |
| G | GRAPHITE |
| T | WHITE TEFLON |
| F | FIBER FRAY |



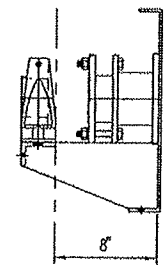
- 1 FOLLOWER
- 2 BARREL
- 3 LANTERN RING (BRONZE) - REF. STD. DWG. TCS02E-06-08
- 4 PACKING (1/2" OR 5/8" SQ.)
- 5 ADJUSTING BOLTS

THE PACKING GLAND SEAL PROVIDES THE MAXIMUM DEGREE OF SEALING THE CONVEYOR AGAINST PRODUCT LEAKAGE AND AGAINST THE ENTRANCE OF CONTAMINANTS FROM OUTSIDE THE CONVEYOR. THE SEAL CONSISTS OF THE GLAND BARREL, GLAND FOLLOWER, PACKING, ADJUSTING BOLTS, AND OPTIONAL LANTERN RING TO FACILITATE PURGING OF THE SEAL. THE GLAND BARREL IS MOUNTED TO THE TROUGH END WITH (4) HEX. HD. MACH. BOLTS, THE GLAND BARREL WILL CONTAIN FROM (4) TO (5) RINGS OF 1/2" OR 5/8" SQ. BRAIDED ROPE PACKING & MAY ALSO INCLUDE A LANTERN RING FOR PURGING. THE GLAND FOLLOWER IS INSERTED INTO THE GLAND BARREL. THE ADJUSTING BOLTS ARE THEN ALTERNATELY TIGHTENED TO COMPRESS THE PACKING AGAINST THE SHAFT. AS THE PACKING WEARS PERIODIC ADJUSTMENTS CAN BE MADE BY MERELY TIGHTENING THE ADJUSTING BOLTS.

- REPLACING PACKING:**
1. REMOVE (4) ADJUSTING BOLTS.
 2. SLIDE GLAND FOLLOWER OUT AWAY FROM GLAND BARREL FAR ENOUGH TO ALLOW ACCESS TO THE INTERIOR OF THE GLAND BARREL.
 3. REMOVE WORN PACKING RINGS.
 4. INSTALL NEW PACKING RINGS. ENDS OF EACH RING OF PACKING SHOULD BE ALTERNATED @ APPROXIMATELY 180° INTERVALS.
 5. SLIDE GLAND FOLLOWER BACK INTO GLAND BARREL. REPLACE ADJUSTING BOLTS, TIGHTEN AS REQUIRED TO FORM EFFECTIVE SEAL & LOCK WITH JAM NUT.

NOTE: THE FOLLOWING PACKING SEQUENCE SHOULD BE FOLLOWED.
(1) RING OF PACKING IN BASE OF GLAND BARREL THEN LANTERN RING THEN THREE OR FOUR RINGS OF PACKING AS DESIGN REQUIREMENTS DICTATE.

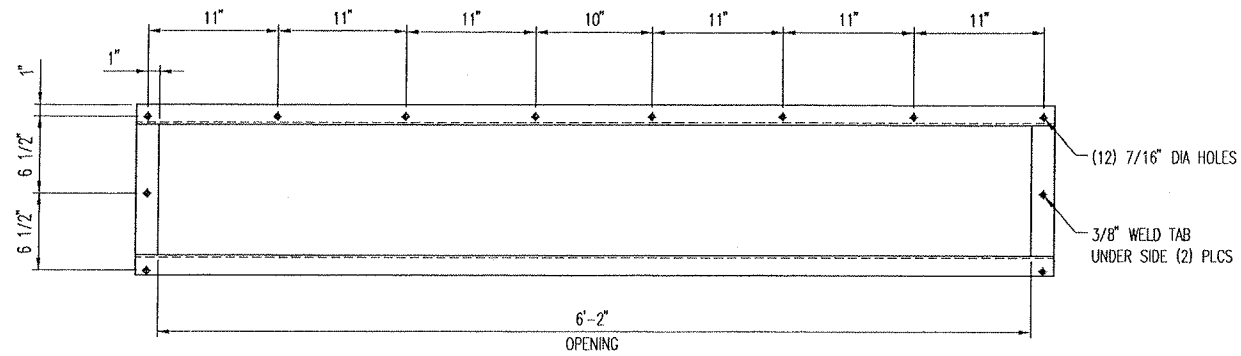
NOTE:
REQUIRES 8" CLEARANCE FROM OUTSIDE FACE OF TROUGH END.



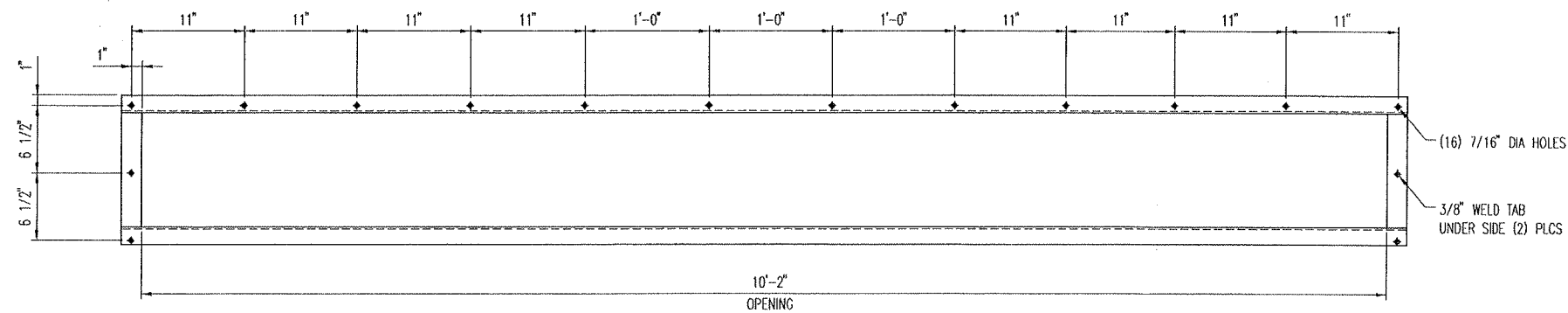
- MANUFACTURING NOTES:**
1. FACE OFF FLANGES & BASE AFTER WELDING
 2. TRUE UP ALL INSIDE DIAMETERS & OUTSIDE DIAMETER OF FOLLOWER
 3. MACHINED TOLERANCE: ± .005
 4. FOR 3 7/16" Ø SHAFT, MAXIMUM NO. OF PACKING RINGS WILL BE FOUR.

THIS DRAWING, OR PARTS THEREOF, IS PROPERTY OF THOMAS CONVEYOR AND MAY NOT BE REPRODUCED IN ANY FORM BY ANY METHOD, FOR ANY PURPOSE

| NO | BY | DATE | REVISION | CHK'D | DATE | TITLE | | | | | | | | | | | | | | |
|--|--------|---------------|----------------------------|--------|----------|--|-------------|-----|---------------|----|-------|----------|-----------------------------|-----------|--------|------|---------|--------|--|----------|
| 1 | SS | 1/4/05 | REVISE PART NUMBER | MW | 2/10/05 | PURGEABLE FABRICATED FLANGED GLAND SEAL WITH (4) OR (5) RINGS OF PACKING 1 1/2" THRU 5 7/16" | | | | | | | | | | | | | | |
| 2 | WAA | 5-6-05 | IMPLEMENTED NEW NO. SYSTEM | WS | 9/28/05 | | | | | | | | | | | | | | | |
| CUSTOMER | | | | | | | | | | | | | | | | | | | | |
| <table border="0"> <tr> <td>APPROVED BY</td> <td>WAA</td> <td>ENGINEERED BY</td> <td>MW</td> <td>SCALE</td> <td>6"=1'-0"</td> <td>PURCHASE ORDER NO.</td> </tr> <tr> <td>DATE</td> <td>6-6-02</td> <td>DATE</td> <td>6/10/02</td> <td>U.N.O.</td> <td></td> <td></td> </tr> </table> | | | | | | | APPROVED BY | WAA | ENGINEERED BY | MW | SCALE | 6"=1'-0" | PURCHASE ORDER NO. | DATE | 6-6-02 | DATE | 6/10/02 | U.N.O. | | |
| APPROVED BY | WAA | ENGINEERED BY | MW | SCALE | 6"=1'-0" | PURCHASE ORDER NO. | | | | | | | | | | | | | | |
| DATE | 6-6-02 | DATE | 6/10/02 | U.N.O. | | | | | | | | | | | | | | | | |
| DRAWING NO. TCS02E-06-01.0 | | | | | | | | | | | | | | | | | | | | |
| <table border="0"> <tr> <td colspan="6"> </td> <td> ENGINEERING STANDARD </td> </tr> <tr> <td colspan="6">SECTION 6</td> <td>PAGE 1.0</td> </tr> </table> | | | | | | | | | | | | | ENGINEERING STANDARD | SECTION 6 | | | | | | PAGE 1.0 |
| | | | | | | ENGINEERING STANDARD | | | | | | | | | | | | | | |
| SECTION 6 | | | | | | PAGE 1.0 | | | | | | | | | | | | | | |



DETAIL ~ 6'-2" INLET DRILLING
N.T.S.



DETAIL ~ 10'-2" INLET DRILLING
N.T.S.

GENERAL NOTES

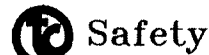
- SHOP ASSEMBLE; MATCH MARK AND KNOCK DOWN ONLY AS REQUIRED TO SHIP.
- PAINT SPIRAL ONE COAT; SHOP STANDARD GRAY. NO PAINTING REQUIRED ON STAINLESS STEEL SURFACES. ALL BEARINGS, SEALS, DRIVE COMPONENTS AND OTHER PURCHASED COMPONENTS WILL BE FURNISHED WITH MANUFACTURERS STANDARD PAINT SYSTEM. SAFETY GUARDS TO BE SAFETY YELLOW.
- DESIGN PARAMETERS:
DESIGN TEMPERATURE: AMBIENT
DESIGN PRESSURE: ATMOSPHERIC
- FINISH REQUIREMENTS:
A. STAINLESS STEEL (GENERAL CLEAN-UP):
REMOVE WELD SPLATTER, SCALE AND OTHER FOREIGN MATERIALS BY HAND OR POWER TOOL CLEANING; NO GRINDING ON WELDS, PITS & CREVICES PERMISSIBLE (CEMA I). PURCHASE MATERIAL WITH STANDARD MILL FINISH, ACID WASH. NO GRINDING IS REQUIRED.
- TAG AS FOLLOWS:
TAG: J.M.S. NAME PLATE ONLY, NO T.C.C. NAMEPLATE.
SERIAL NO: 08095C
JOB: 08-1006
- FILL DRIVE REDUCER WITH OIL TO OPERATING LEVEL AND SHOP TEST. RECORD INFO ON J.M.S. SHOP TEST FORM.(AMPS, N.P. DATA, PERF. INFO)
- CONVEYOR IS NOT DESIGNED TO START UNDER UPSET CONDITIONS (100% TROUGH LOADING).

BILL OF MATERIAL

| ITEM NO. | QUANTITY | | PART NO. | MTRL. REF. | DESCRIPTION | DETAIL DWG. |
|----------|----------|-------|--------------|------------|---|-------------|
| | EACH | TOTAL | | | | |
| A | ONE | ONE | SC-10-SS | | SHAFTLESS SCREW CONVEYOR ASSEMBLY: 10' X 52'-0" LONG PER CUSTOMER SPECIFICATIONS. CONVEYOR TO CONSIST OF: | |
| A1 | 1 | 1 | | | C.S. 9 1/2" O.D.(F0'-3/8") X FULL (10') PITCH X 51'-7 3/8" LG. RIGHT HAND SHAFTLESS SPIRAL (MINIMUM 220 BRINNEL HARDNESS) 3/4" THICK X 3" WIDE BAR (1/8" RADIUS ON OUTSIDE EDGES) WITH: | A4 |
| A1.1 | 1 | 1 | | | 9 1/2" X 2 7/16" 3-BOLT TORQUE TUBE W/ 1/4" THK DEFLECTOR DISC W/ COPEL SLOT TO CLEAR SPIRAL | |
| A2 | 3 | 3 | CCBS-SS | 304 | 5/8" DIA. COUPLING BOLTS W/ LW. & H.N. | |
| A3 | 1 | 1 | SOSB7-7-3 | 1045 | 2 7/16" DIA DRIVE SHAFT | |
| A4 | 1 | 1 | 1080USSTF | 304 | 10" X 1/4" THK. BLIND TROUGH END | |
| A5 | 1 | 1 | 108RH5-SS-CS | 304 | 10" X 2 7/16" BULKHEAD TROUGH END | |
| A5.1 | 1 | 1 | PS6AST | 304 | 2 7/16" PURGABLE FLANGE GLAND SEAL W/ (5) TEFLON PACKING RINGS AND (1) BRONZE LANTERN RING | |
| A6 | 1 | 2 | M10CTF7-10 | 304 | 10" X 3/16 THK. X 10' LG. FORM FLANGE U-TROUGH WITH: | |
| A6.1 | A/R | A/R | | | 1/2" THK. X 4'-0" LG. UHMW SNAP-IN WEAR LINERS | |
| A6.2 | A/R | A/R | | | 3/8" THK. LINER RETAINER CLIPS | |
| A6.3 | 2 | 4 | M10TSHDA-SS | 304 | SHAFTLESS HOLD DOWN ANGLE 2'-0" LONG | A3 |
| A6.4 | 2 | 4 | 10SBU-SS | 304 | 10" SEAL BAR | |
| A7 | 1 | 1 | M10CTF7 | 304 | 10" X 3/16 THK. X 11'-11 1/4" LG. FORM FLANGE U-TROUGH WITH: | |
| A7.1 | A/R | A/R | | | 1/2" THK. X 4'-0" LG. UHMW SNAP-IN WEAR LINERS | |
| A7.2 | A/R | A/R | | | 3/8" THK. LINER RETAINER CLIPS | |
| A7.3 | 1 | 1 | M10TS010 | 304 | 10" X 15" LONG X 10GA DISCHARGE LESS FLANGE | |
| A7.4 | 2 | 4 | M10TSHDA-SS | 304 | SHAFTLESS HOLD DOWN ANGLE 2'-0" LONG | A3 |
| A7.5 | 1 | 1 | 10SBU-SS | 304 | 10" SEAL BAR | |
| A8 | 1 | 1 | M10CTF7-10 | 304 | 10" X 3/16 THK. X 10' LG. FORM FLANGE U-TROUGH WITH: | |
| A8.1 | A/R | A/R | | | 1/2" THK. X 4'-0" LG. UHMW SNAP-IN WEAR LINERS | |
| A8.2 | A/R | A/R | | | 3/8" THK. LINER RETAINER CLIPS | |
| A8.3 | 2 | 4 | M10TSHDA-SS | 304 | SHAFTLESS HOLD DOWN ANGLE 2'-0" LONG | |
| A8.4 | 3 | 6 | 10SBU-SS | 304 | 10" SEAL BAR | |
| A9 | 1 | 1 | M10CTF7-10 | 304 | 10" X 3/16 THK. X 10' LG. FORM FLANGE U-TROUGH WITH: | |
| A9.1 | A/R | A/R | | | 1/2" THK. X 4'-0" LG. UHMW SNAP-IN WEAR LINERS | |
| A9.2 | A/R | A/R | | | 3/8" THK. LINER RETAINER CLIPS | |
| A9.3 | 2 | 4 | M10TSHDA-SS | 304 | SHAFTLESS HOLD DOWN ANGLE 2'-0" LONG | |
| A9.4 | 1 | 1 | 10SBU-SS | 304 | 10" SEAL BAR | |
| A10 | 7 | 7 | CS10-SS | 304 | 10" SADDLES | |
| A11 | 1 | 1 | | | PULL CABLE SAFETY SWITCH ASSEMBLY CONSISTING OF: | |
| A11.1 | 1 | 1 | | | CCC MODEL RS-2 PULL CABLE SAFETY SWITCH | |
| A11.2 | 52 | 52 | | | 3/32" GALVANIZED AIRCRAFT CABLE W/ SAFETY ORANGE COVER | |
| A11.3 | 4 | 4 | PCB-SS | 304 | CABLE END CLAMPS | |
| A11.4 | 1 | 1 | PCBS-SS | 304 | PULL CABLE SAFETY SWITCH BRACKET | |
| A11.5 | 6 | 6 | PCBS-SS | 304 | PULL CABLE SUPPORT BRACKET | |
| A12 | 1 | 1 | M10TCF10 | 304 | 10" X 10GA X 11" LG. FLANGED COVER BOLTED ON 6" CTRS. | |
| A12.1 | 1 | 1 | M10TFS7-SS | 304 | 10" X 11" LONG FEEDER SHROUD WELDED TO COVER W/ 1/2" THK UHMW LINER | A3 |
| A13 | 1 | 1 | M10TCF10 | 304 | 10" X 10GA X 1'-2 1/2" LG. FLANGED COVER BOLTED ON 6" CTRS. | |
| A14 | 1 | 1 | M10TCF10 | 304 | 10" X 10GA X 10 1/2" LG. FLANGED COVER BOLTED ON 6" CTRS. | |
| A15 | 2 | 2 | M10TCF10 | 304 | 10" X 10GA X 1'-0 1/2" LG. FLANGED COVER BOLTED ON 6" CTRS. | |
| A16 | 1 | 1 | M10TCF10 | 304 | 10" X 10GA X 10'-11" LG. FLANGED COVER BOLTED ON 6" CTRS. | |
| A17 | 6 | 6 | 10TFC-BN | | 1/8" THK. BLACK NEOPRENE GASKET FOR TROUGH CONNECTION | |
| A18 | A/R | A/R | BNT50 | | 1/8" THK. X 1 1/2" BLACK NEOPRENE COVER AND INLET GASKET | |
| A19 | A/R | A/R | | | ASSEMBLY BOLTS, NUTS, AND WASHERS | |
| A20 | ONE | 1 | | | 3 HP 11 RPM DRIVE ASSEMBLY CONSISTING OF: 3 HP 1750 RPM 3/80/230-460V TEFC SEW INTEGRAL GEARMOTOR W/ DT100S4 FRAME SEW FAZB7DT100LS4-KS X 2 7/16" SCREW CONV. DRIVE WITH 60MM BORE, 159.6:1 RATIO, ROLLER BEARING, CEMA ADAPTER, FOR 2 7/16" DIA. DRIVE SHAFT, AND MNTD. @ 12 O'CLOCK (M1 POSITION), LESS WASTE PACK SEAL TERMINAL BOX POS. 0, CABLE ENTRY POS. X, LESS NYLOS RINGS | |

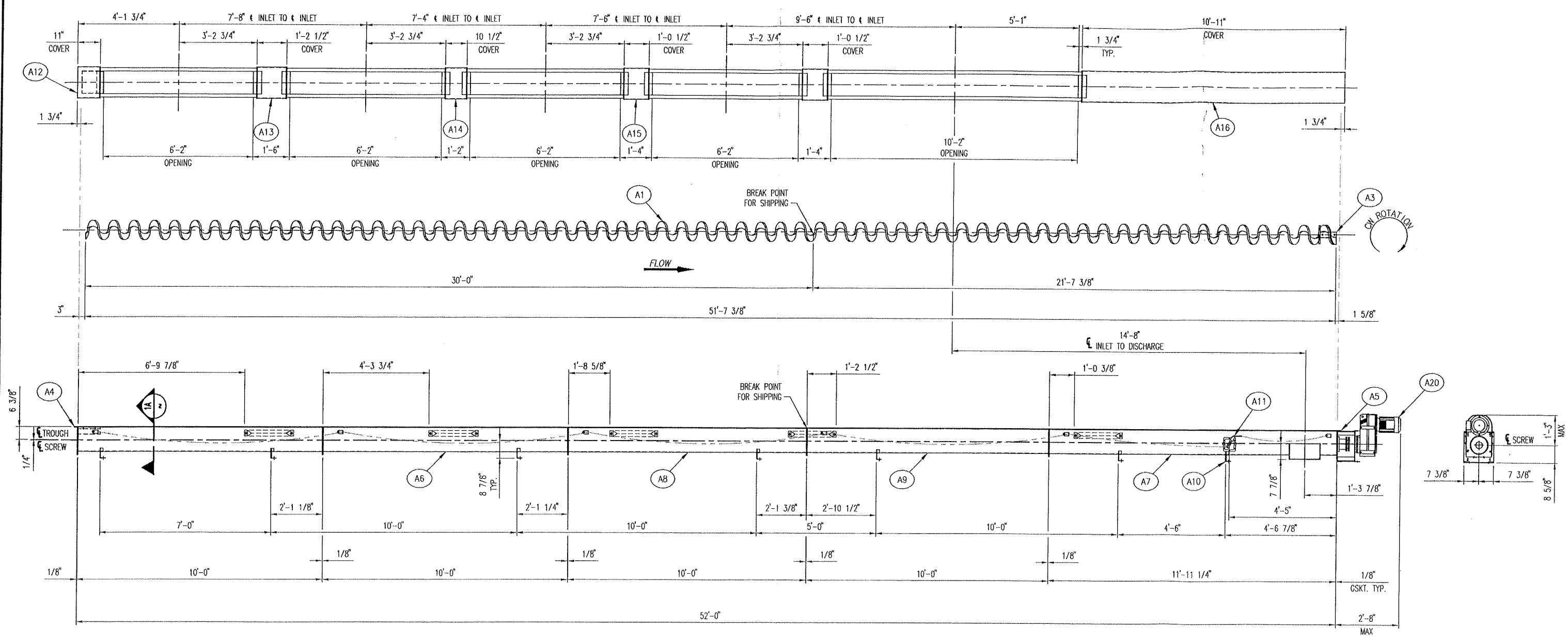
SHIP LOOSE (SPARES)

| ITEM NO. | QUANTITY | | PART NO. | MTRL. REF. | DESCRIPTION | DETAIL DWG. |
|----------|----------|-------|----------|------------|--|-------------|
| | EACH | TOTAL | | | | |
| A21 | | 13 | | | 1/2" THK X 4'-0" LONG UHMW SNAP-IN WEAR LINERS | |



Refer to Thomas Conveyor Company standards TCS-001 thru TCS-009 for location of warning and caution labels.

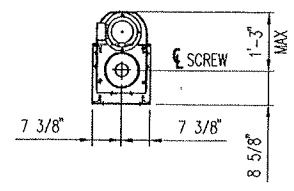
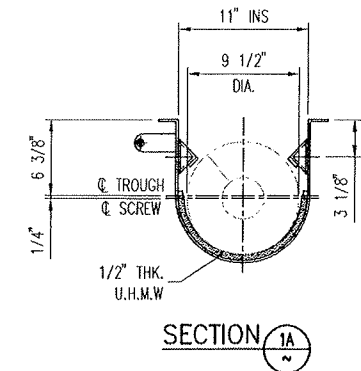
It is the responsibility of the contractor, installer, owner and user to install, maintain and operate the conveyor and/or elevator components and conveyor assemblies manufactured and supplied by Thomas Conveyor Company in such a manner as to comply with the Williams-Steiger Occupational Safety and Health Act and with all state and local laws and ordinances and the American National Standard Institute Safety Code as currently in effect.

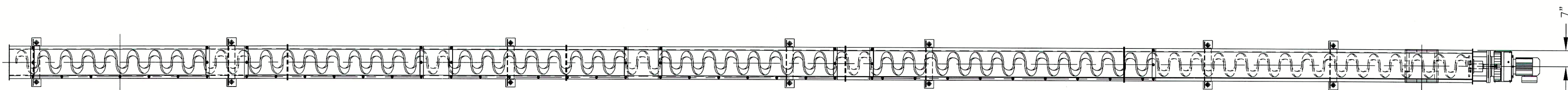


Safety M

Refer to Thomas Conveyor Company standards TCS-001 thru TCS-009 for location of warning and caution labels.

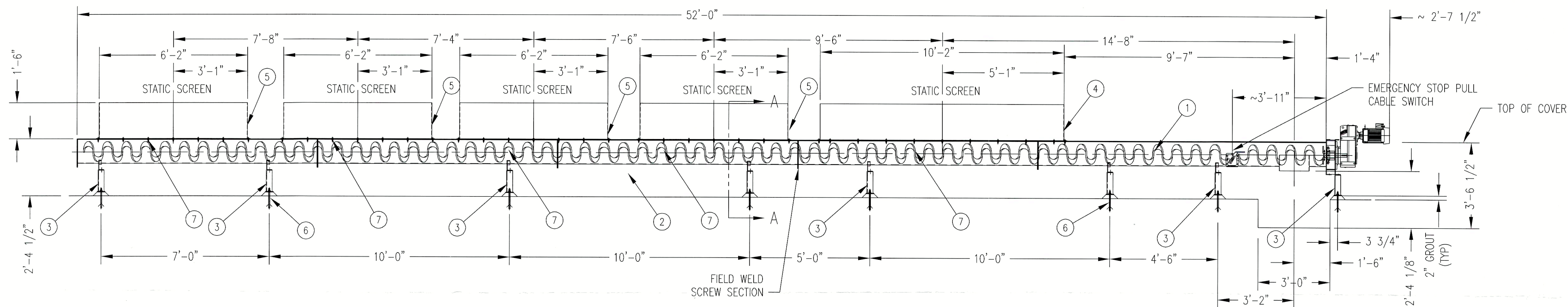
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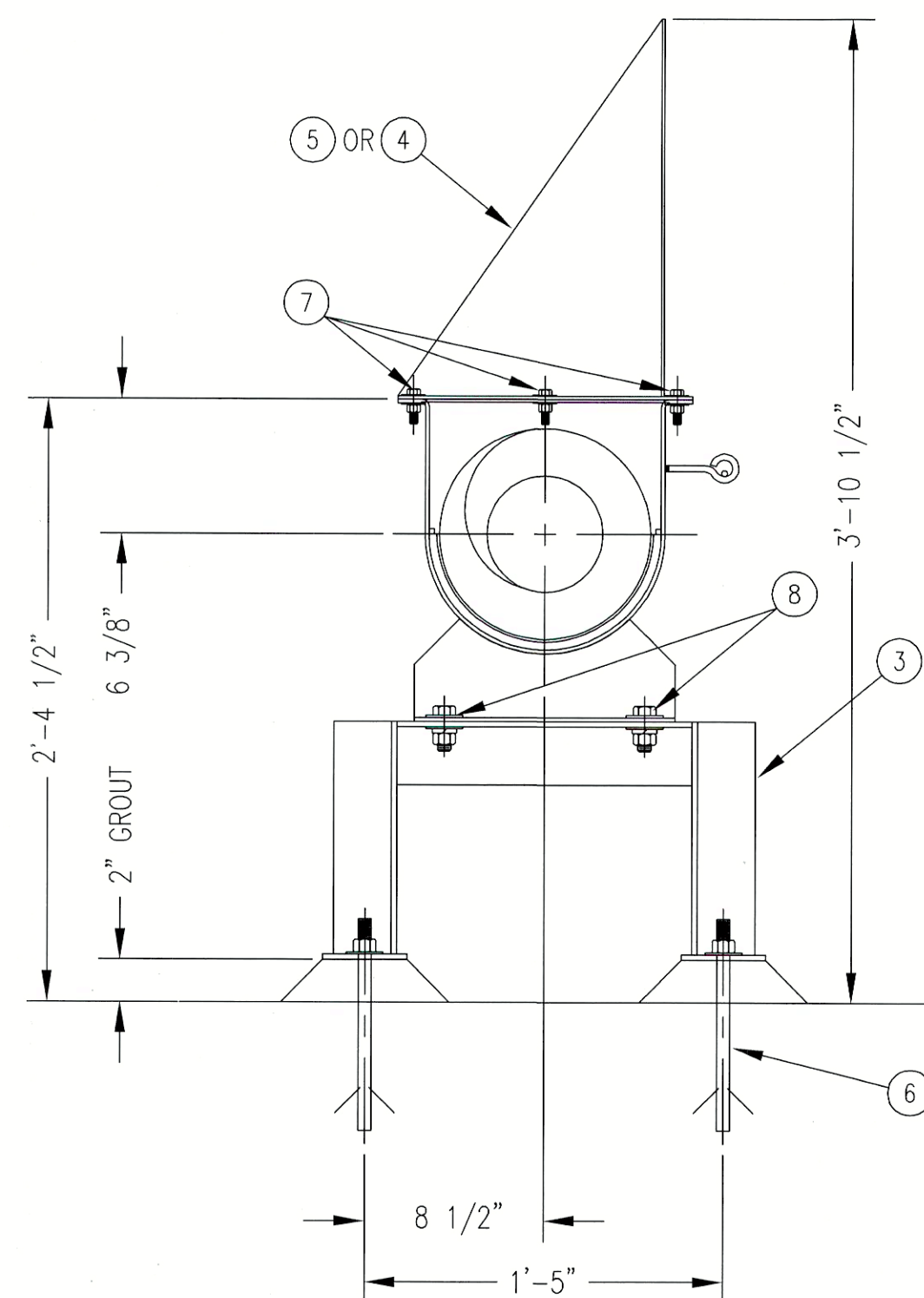


PLAN VIEW

| BILL OF MATERIAL | | | | |
|------------------|-------|----------|---|---------|
| REF. | QUAN. | PART NO. | DESC. | REMARKS |
| 1 | 1 | | Ø10" SHAFTLESS SCREW CONVEYOR HEAD SECTION | 304 SS |
| 2 | 1 | | Ø10" SHAFTLESS SCREW CONVEYOR TAIL SECTION | 304 SS |
| 3 | 8 | M1-1 | L3" X 3" X 1/4" CONVEYOR SUPPORTS X 11 1/8" | 304 SS |
| 4 | 1 | M2-2 | #10 GA. INLET CHUTE X 10'-2" | 304 SS |
| 5 | 4 | M2-1 | #10 GA. INLET CHUTE X 6'-2" | 304 SS |
| 6 | 16 | | Ø5/8" X 10" CHEM. ANCHORS W/FW & LNUT | 304 SS |
| 7 | 91 | | Ø3/8" X 1 1/2" HHMB W/FW & LNUT | 304 SS |
| 8 | 16 | | Ø1/2" X 2" HHMB W/FW & LNUT | 304 SS |



Ø10" SHAFTLESS SCREW CONVEYOR - ELEVATION



SECTION A-A

NOTES:

- 10" SHAFTLESS SCREW CONVEYOR W/304 SS HOUSING, COVERS, SUPPORTS. SPIRAL IS COLD FORMED HIGH STRENGTH ALLOY STEEL.
- DRIVE SYSTEM:
 - A. MOTOR: 3 HP, 1800 RPM, 230/460 VOLT, 3 PHASE, 60 Hz, TEFC, SEVERE DUTY -
 - B. REDUCER: PARALLEL HELICAL GEAR REDUCTION UNIT (FAF87) 11 RPM OUTPUT
- (1) EMERGENCY STOP PULL CABLE SWITCH 110V-1 PH

O & M MANUAL

| | | | |
|-----------|------|-------------------------|---------|
| 03/04/08 | MDC | RELEASED FOR PRODUCTION | |
| 02/06/08 | RA | ORIGINAL ISSUE | |
| NO. | DATE | BY | REMARKS |
| REVISIONS | | | |

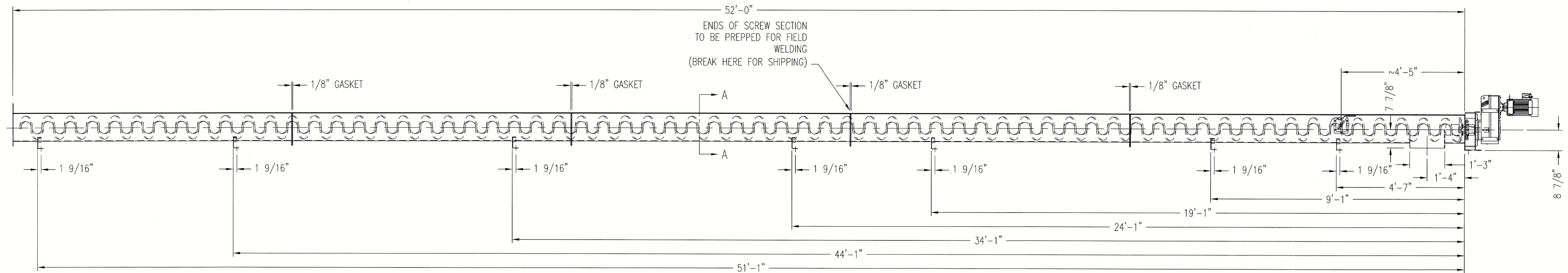
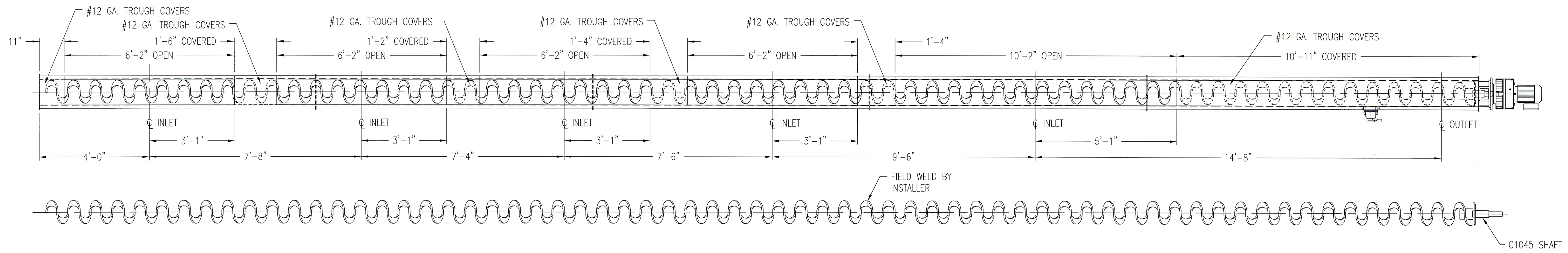
JIM MYERS & SONS, INC.
 P.O. BOX 240038 CHARLOTTE, N.C. 28224

DRAWING OF: Ø10 SCREW CONVEYOR ASSEMBLY
 JOB NAME: ISLAND WASTEWATER TREATMENT PLANT
 JOB LOC.: CITY OF LAKE HAVASU
 CUSTOMER: CITY OF LAKE HAVASU
 ENGR.: CITY OF LAKE HAVASU
 DRAWN BY: RA DATE: 02/06/08 CKD. BY: DATE:

| | | | |
|-----|------|----------|--------|
| 2+1 | CUST | 02/06/08 | APPV'L |
| NO. | TO | DATE | FOR |

PRINT RECORD

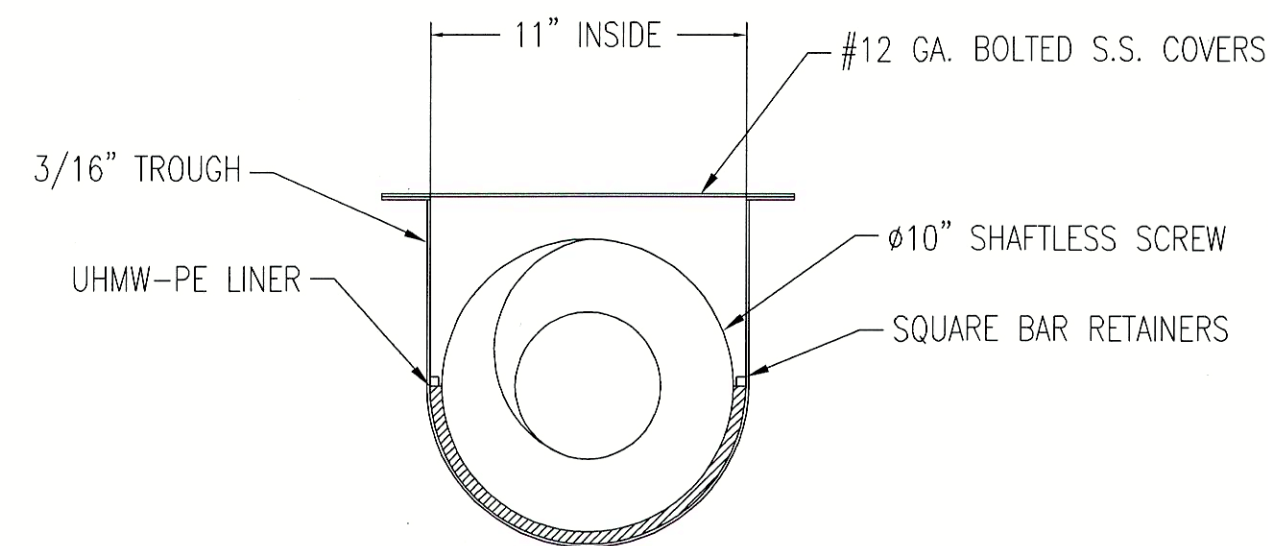
CONTR. NO. **08-1009** SHEET **GA1**



Ø10" SHAFTLESS SCREW CONVEYOR

- NOTE:
- CONVEYOR TROUGHS TO BE 3/16" THICK TYPE 304 S.S. W/10" X 15" PLAIN OUTLET
 - TROUGH COVERS TO BE #12 GA THICK TYPE 304 S.S.
 - TROUGH LINERS TO BE 1/2" UHMW-PE. LINERS TO BE SECURED WITH SQUARE BAR RETAINERS. LAST LINER AT DISCHARGE TO HAVE RETAINING BOLTS.
 - ASSEMBLY HARDWARE TO BE TYPE 304 S.S.
 - 304 SS END PLATES, STAND OFF PLATE FOR DRIVE MOUNT, PACKING GLAND, SHAFT SEAL
 - E-STOP PULL CORD SWITCH W/CABLE, CONVEYOR COMPONENTS CORP MODEL RS2
 - DRIVE TO BE EURODRIVE PARALLEL HELICAL GEARMOTOR. 3 HP 460V, 3PH, 60Hz 159.61:1 RATIO 1.5 S.F. 11.0 RPM OUTPUT FA87DT100LS4-KS, SEVERE DUTY
 - SPIRAL FLIGHTS TO BE COLD FORMED MICRO-ALLOY, BRINELL 250, 3/4" THICK X 3" WIDE, DRIVE SHAFT C1045
- SPARES: ONE SET OF 1/2" LINER UHMW-PE LINERS

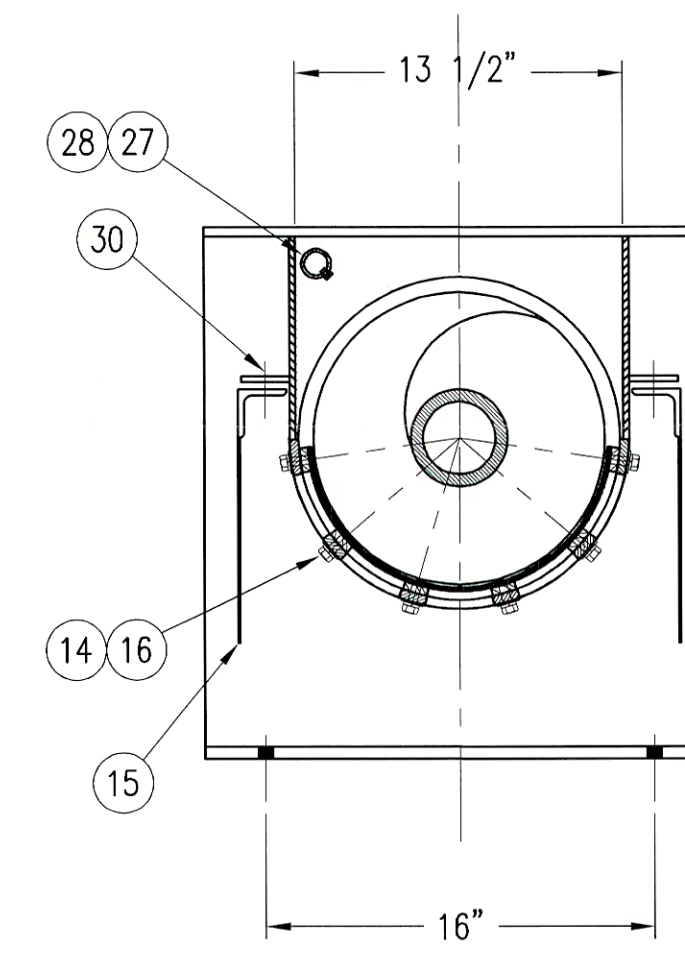
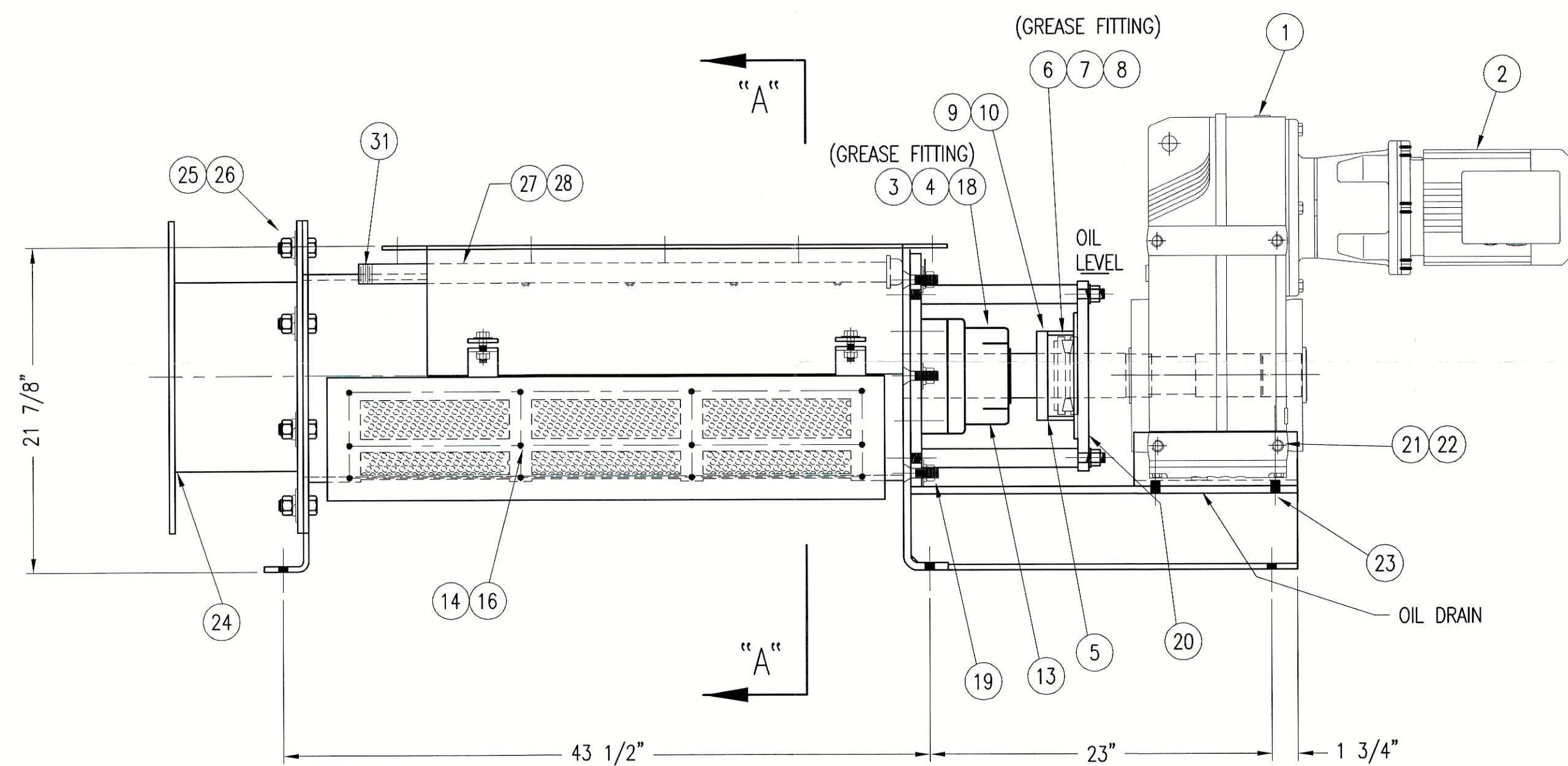
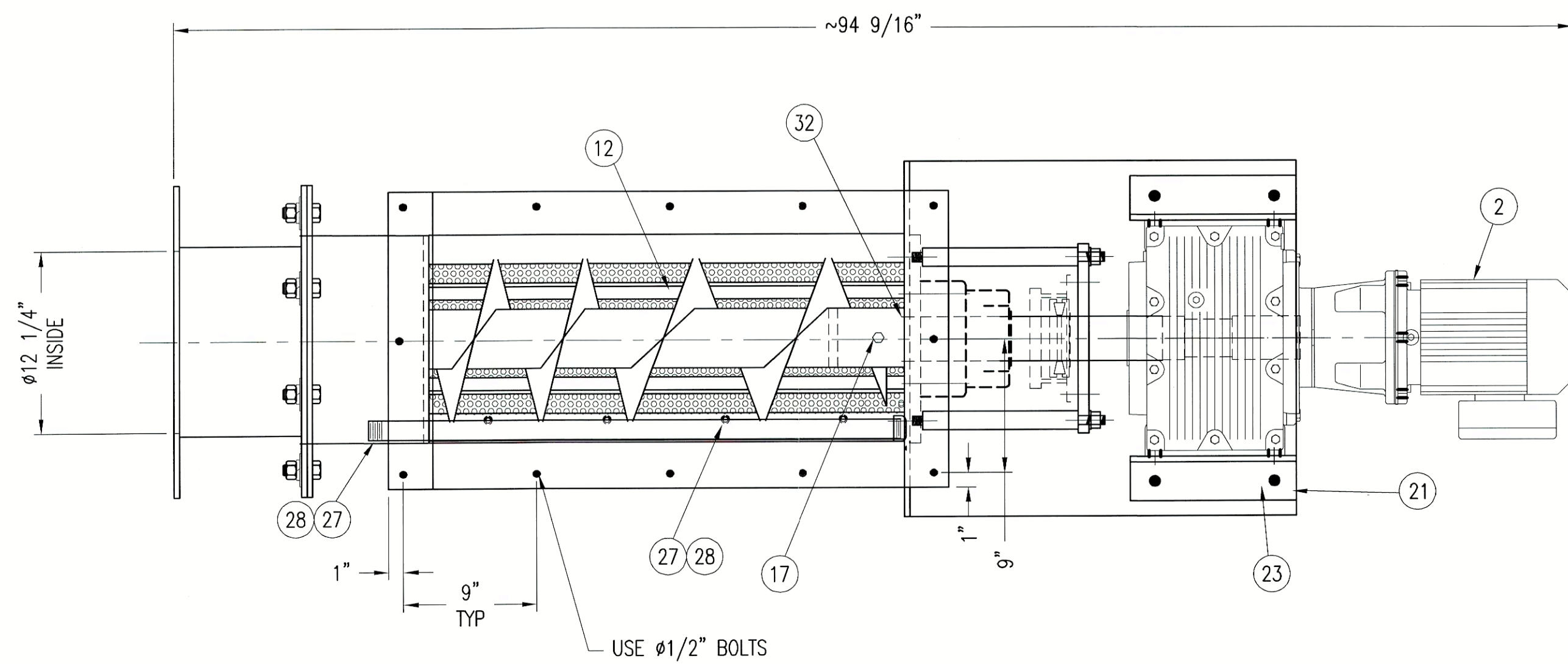
O & M MANUAL



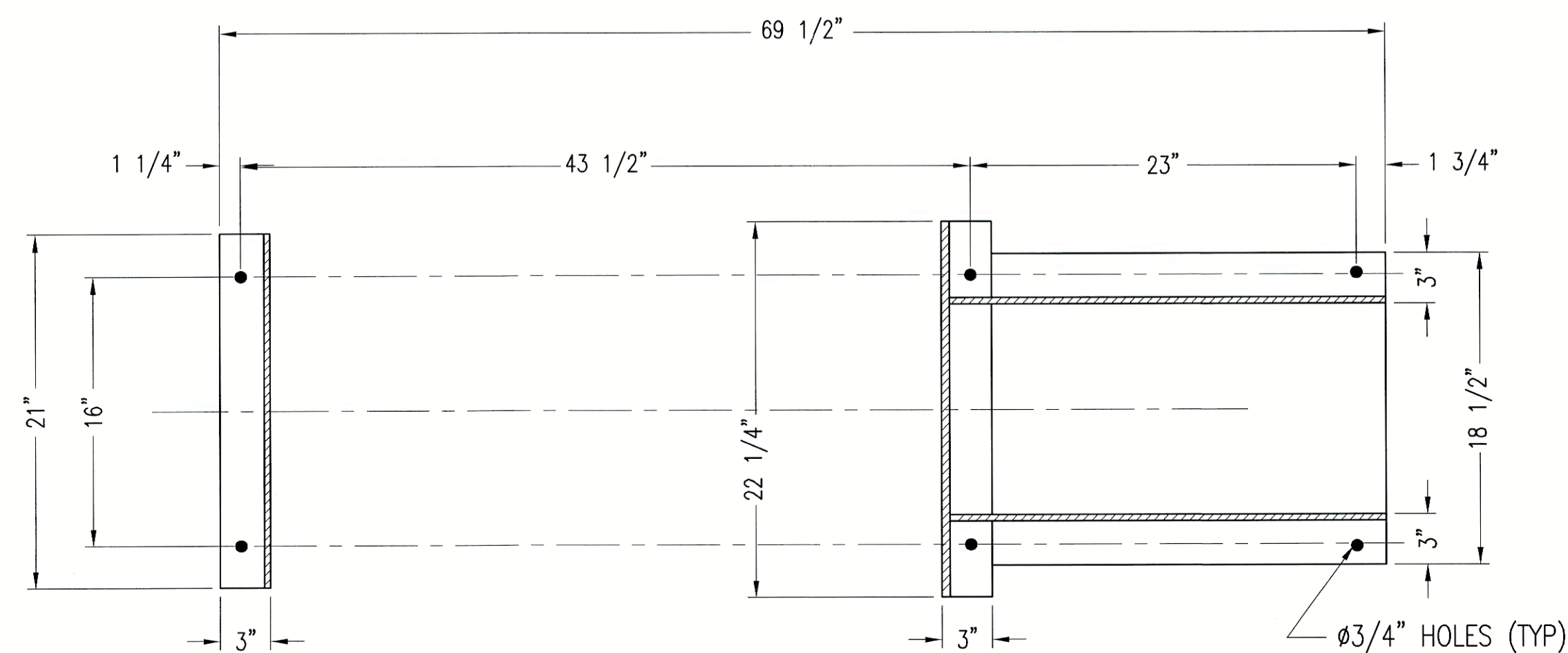
SECTION A-A

| | | |
|-----------|------|------------------|
| 3/6/08 | TS | RELEASED FOR FAB |
| 02/06/08 | RA | ORIGINAL ISSUE |
| NO. | DATE | BY |
| | | REMARKS |
| REVISIONS | | |

| | | | |
|--|------|----------|--------|
| <p>JIM MYERS & SONS, INC. P.O. BOX 240038 CHARLOTTE, N.C. 28224</p> | | | |
| DRAWING OF 10" SCREW CONVEYOR ASSEMBLY | | | |
| JOB NAME ISLAND WASTEWATER TREATMENT PLANT | | | |
| JOB LOC. LAKE HAVASU, AZ | | | |
| CUSTOMER CITY OF LAKE HAVASU | | | |
| ENGR. CITY OF LAKE HAVASU | | | |
| DRAWN BY RA DATE 02/06/08 CKD. BY DATE | | | |
| 2 | SHOP | 3/8/08 | FAB |
| 2+1 | CUST | 02/06/08 | APPV'L |
| NO. | TO | DATE | FOR |
| PRINT RECORD | | | |
| CONTR. NO. 08-1009 | | SHEET E1 | |



SECTION "A-A"



FOOTPRINT

NOTES:

1. UTILITIES:
CONTROL PANEL: 460/3/60
WATER: $\phi 1"$ NPT, 15 GPM @ 40 PSI
2. SEVERE DUTY PAINT ON DRIVE:
BURKE INDUSTRIAL SUPERLIFE-316 DTMR.
3. APPROXIMATE WEIGHT: 1000 LB

BILL OF MATERIAL

| REF. | QUAN. | PART NO. | DESC. | REMARKS |
|------|-------|-------------|---|---------------------------------|
| 1 | 1 | FA97B AM182 | 3 HP FOOT MOUNTED GEAR REDUCER W/HOLLOWSHAFT 174.87:1 RATIO 10 RPM OUTPUT 2 15/16" BORE W/FEET, SEVERE DUTY, 2.0 S.F., | EURODRIVE M-1 MOUNT POS |
| 2 | 1 | VM7042T | BALDOR 3HP, 1800 RPM, EXPLOSION PROOF MOTOR TEFC 230/460 - 3 - 60, 182TC FRAME | BALDOR |
| 3 | 1 | EFR-B22448H | 3" SHERICAL ROLLER BEARING | LINK BELT |
| 4 | 1 | SDNS-3 | $\phi 3"$ SEAL, DURA SHIELD W/COMPRESSION SLEEVES | DURA SHIELD |
| 5 | 1 | M6 | 3" DRIVE SHAFT | TYPE 304 S.S. |
| 6 | 2 | 3100-300 | 3" EXT. RET. RING | IRR |
| 7 | 1 | T-301W | 3" THRUST BEARING | TIMKEN |
| 8 | 1 | M4-2 | THRUST WASHER | C-1045 |
| 9 | 2 | 417349 | NATIONAL OIL SEAL (DBL. LIP) | |
| 10 | 1 | M4-1 | THRUST BEARING HOUSING | |
| 11 | 1 | M2 | COMPACTOR HOUSING WELDMENT | TYPE 304L S.S. |
| 12 | 1 | M5 | 12" VARIABLE PITCH SCREW, TYPE 304L S.S. W/ $\phi 3$ 1/2" SCH. 80 PIPE SHAFT, 3/8" FLIGHTS WITH BRUSH | TYPE 304L S.S. |
| 13 | 1 | M3 | BEARING MOUNT ASSEMBLY | TYPE 304L S.S. |
| 14 | 1 | M8 | PERFORATED METAL SCREEN WLEDMENT | TYPE 304L S.S. |
| 15 | 2 | M9 | SPLASH GUARDS | TYPE 304L S.S. |
| 16 | 24 | | 3/8-16 x 1" HH SCREWS W/LW, FW | TYPE 304 S.S. |
| 17 | 4 | | 3/4" x 5 1/2" H.H.M.B. W/N&LW | TYPE 304 S.S. |
| 18 | 2 | | 3/4" x 5" H.H.M.B. W/N&LW | TYPE 304 S.S. |
| 19 | 6 | | 5/8" N, LW | TYPE 304 S.S. |
| 20 | 6 | | 1/4"-20 x 1" H.H. SCREWS W/LW & FW | TYPE 304 S.S. |
| 21 | 2 | M7-1 | REDUCER MOUNTING FEET | TYPE 304L S.S. |
| 22 | 4 | | M20 X 30 HH SCREWS, W/ LW | TYPE 304 S.S. |
| 23 | 4 | | 3/4" x 2" H.H.M.B. W/N&LW | TYPE 304 S.S. |
| 24 | 1 | M12-4 | $\phi 12"$ x 9" LONG DISCHARGE SPOUT | TYPE 304 S.S. |
| 25 | | | NOT USED | |
| 26 | 8 | | $\phi 5/8$ x 2" H.H.M.B. W/N&LW | TYPE 304 S.S. |
| 27 | 1 | M10 | 1" SPRAY HEADER PIPE | TYPE 304L S.S. |
| 28 | 4 | | SPRAY NOZZLES, 1/8 HH SS 5 | SPRAY SYST INCLUDES 8 SPARES |
| 29 | | | NOT USED | |
| 30 | 4 | | $\phi 1/2"$ x 2-1/2" TAP BOLT, 2 FW, N | TYPE 304 S.S. |
| 31 | 1 | | SPRAY PIPING ASSEMBLY (NOT SHOWN) | TYPE 304L S.S. |
| 32 | 1 | | EXCLUDER RING FOR 3" SHAFT | THOMAS |
| 33 | 1 | 4422K3 | WATER FILTERS (NOT SHOWN) | McMASTER-CARR |

FOR APPROVAL ONLY

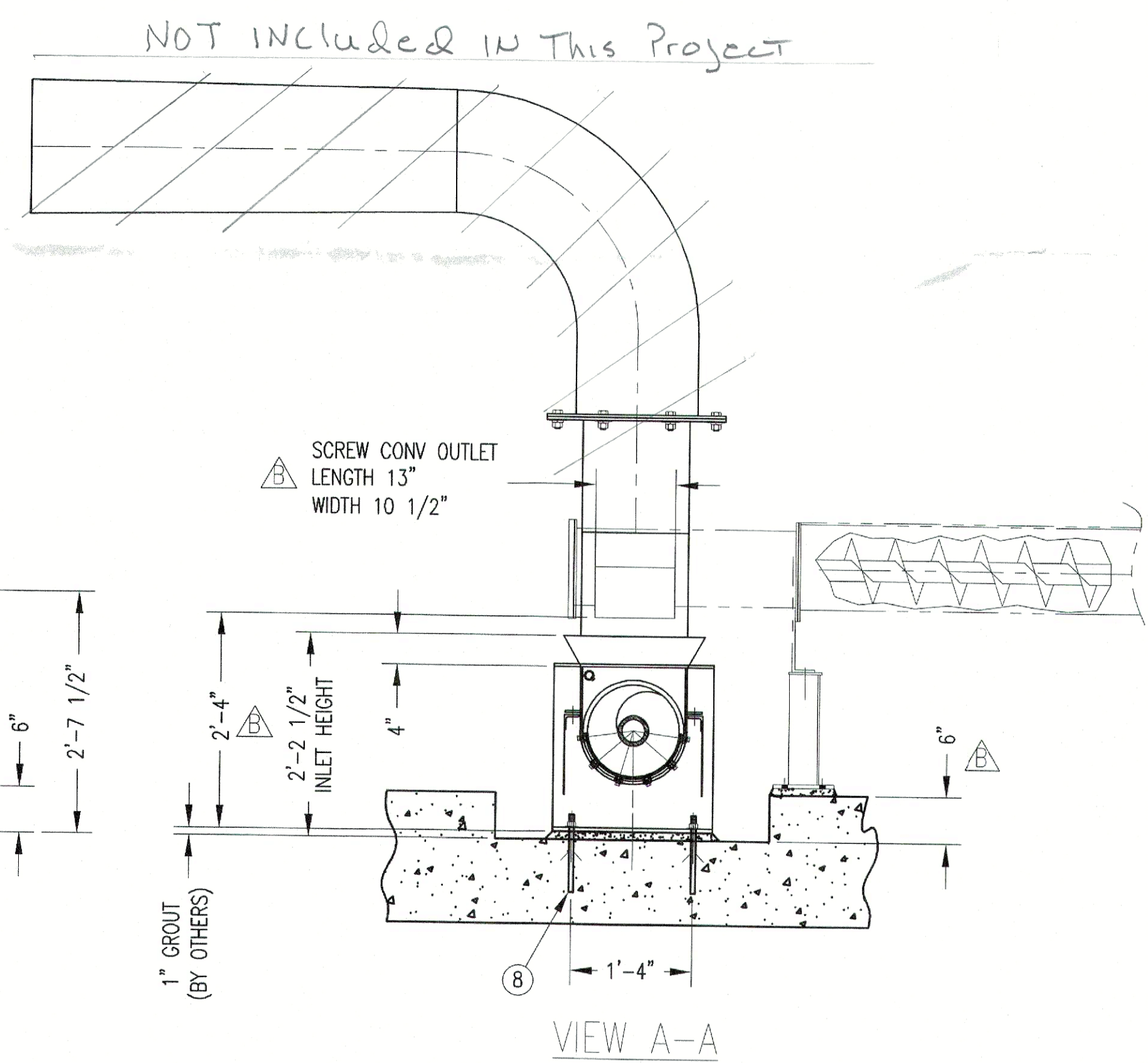
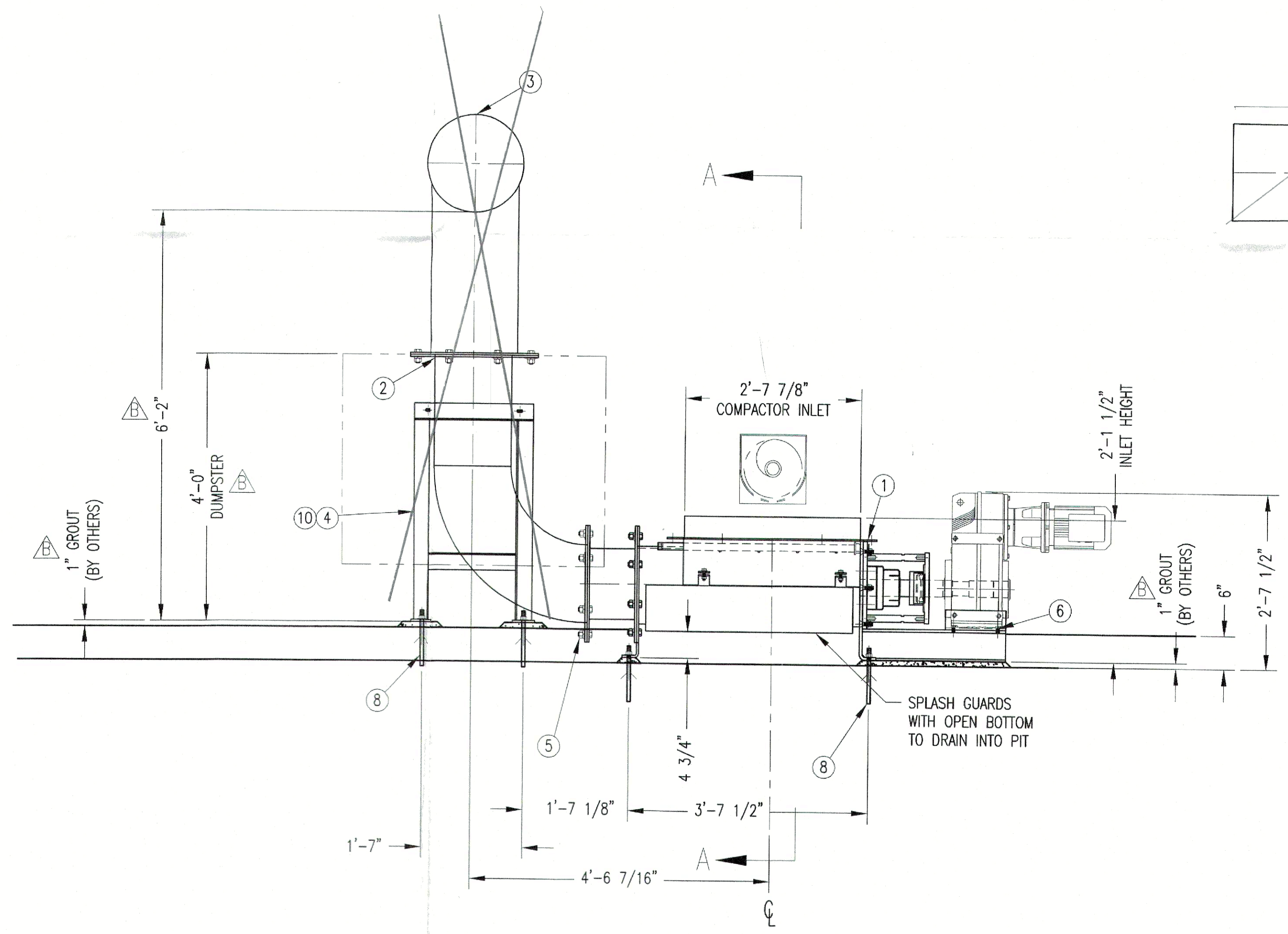
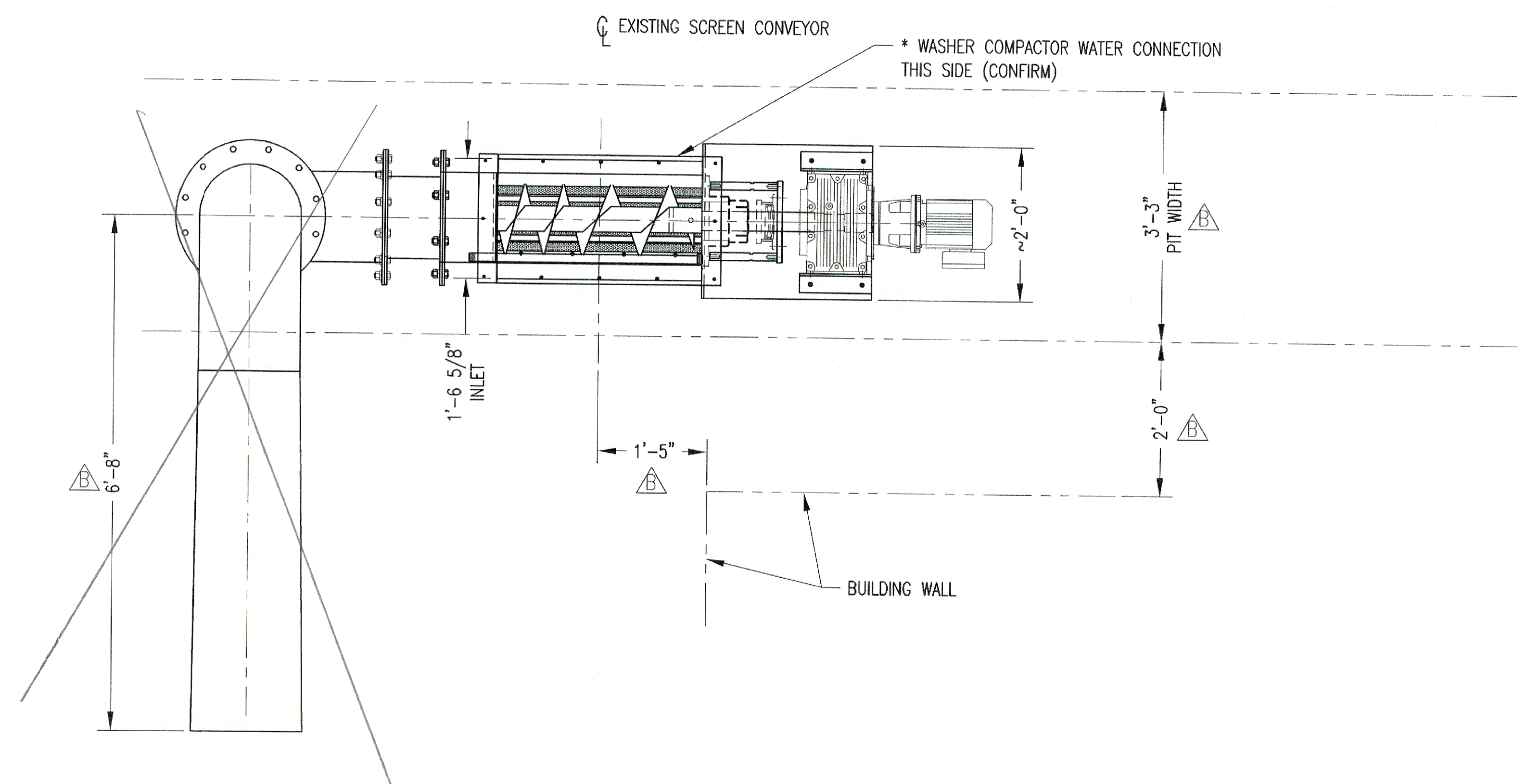
| 7/16/07 | BPW | ORIGINAL ISSUE | |
|-----------|------|----------------|---------|
| NO. | DATE | BY | REMARKS |
| REVISIONS | | | |

JIM MYERS & SONS, INC.
P.O. BOX 240038 CHARLOTTE, N.C. 28224

DRAWING OF: $\phi 12"$ SCREW COMPACTOR
JOB NAME: COMPACTOR WASHER
JOB LOC.: CITY OF LAKE HAVASU, AZ
CUSTOMER: CITY OF LAKE HAVASU
ENGR.: CITY OF LAKE HAVASU
DRAWN BY: BPW DATE 5/17/07 CKD. BY: DATE

| | | | |
|--------------|----|------|-----|
| NO. | TO | DATE | FOR |
| PRINT RECORD | | | |

CONTR. NO. **07-1025** SHEET **E1**



| BILL OF MATERIAL | | | | |
|------------------|-------|------------|---|--------------------------|
| REF. | QUAN. | PART NO. | DESC. | REMARKS |
| 1 | 1 | 07-1025-E1 | #12" SCREW COMPACTOR | |
| 2 | 1 | M12-1 | #14" 90° ELBOW (L.R.) W/19 1/2" STRAIGHT | 304L S.S. |
| 3 | 1 | M12-2 | #16" 90° ELBOW (L.R.) W/16" TO 17.5" DISCHARGE PIPE | 304L S.S. |
| 4 | 1 | M12-3 | PIPE SUPPORT | 304L S.S. |
| 5 | 28 | | #5/8" X 2 1/2" HHMB W/2FW, LW, NUT | PIPE FLANGES 304 S.S. |
| 6 | 6 | | #5/8" X 2" HHMB W/2FW, LW, NUT | PIPE FLANGES 304 S.S. |
| 7 | | | NOT USED | |
| 8 | 6 | | #5/8" X 10" CHEM ANCHORS W/2FW, LW, NUTS | 304 S.S. |
| 9 | 1 | PCD-2S | E-STOP PULL CABLE SWITCH | MAT'L CONTROL |
| 10 | 1 | | #5/8" X #14" U-BOLTS W/2FW, LW, NUT | 304 S.S. |
| 11 | 1 | | CONTROL PANEL | NOT SHOWN |

△ SPARES:

| BILL OF MATERIAL | | | | |
|------------------|-------|----------|-----------------------------|----------|
| REF. | QUAN. | PART NO. | DESC. | REMARKS |
| 12 | 1 | | PERF. PLATE & WEAR BAR ASSY | 304 S.S. |
| 13 | 1 | | BRUSH FOR SCREW | 304 S.S. |

- NOTES:
- UTILITIES:
460V TO CONTROL PANEL
WATER REQUIREMENT: #1" NPT, 15 GPM @40 PSI
 - FINISH:
ALL STAINLESS STEEL TO BE CLEANED SSPC-SP1
THEN BRUSH BLAST TO SSPC-SP7

| NO. | DATE | BY | REMARKS |
|-----|---------|-----|---|
| △ | 7/2/07 | BPW | UPDATED FIELD DIMENSIONS PER CUSTOMERS COMMENTS |
| △ | 5/22/07 | BPW | ISSUED FOR FIELD DIMENSIONS |

JIM MYERS & SONS, INC.
P.O. BOX 240038 CHARLOTTE, N.C. 28224

DRAWING OF: GENERAL ARRANGEMENT
JOB NAME: SCREENING WASHER COMPACTOR
JOB LOC.: CITY OF LAKE HAVASU, AZ
CUSTOMER: CITY OF LAKE HAVASU

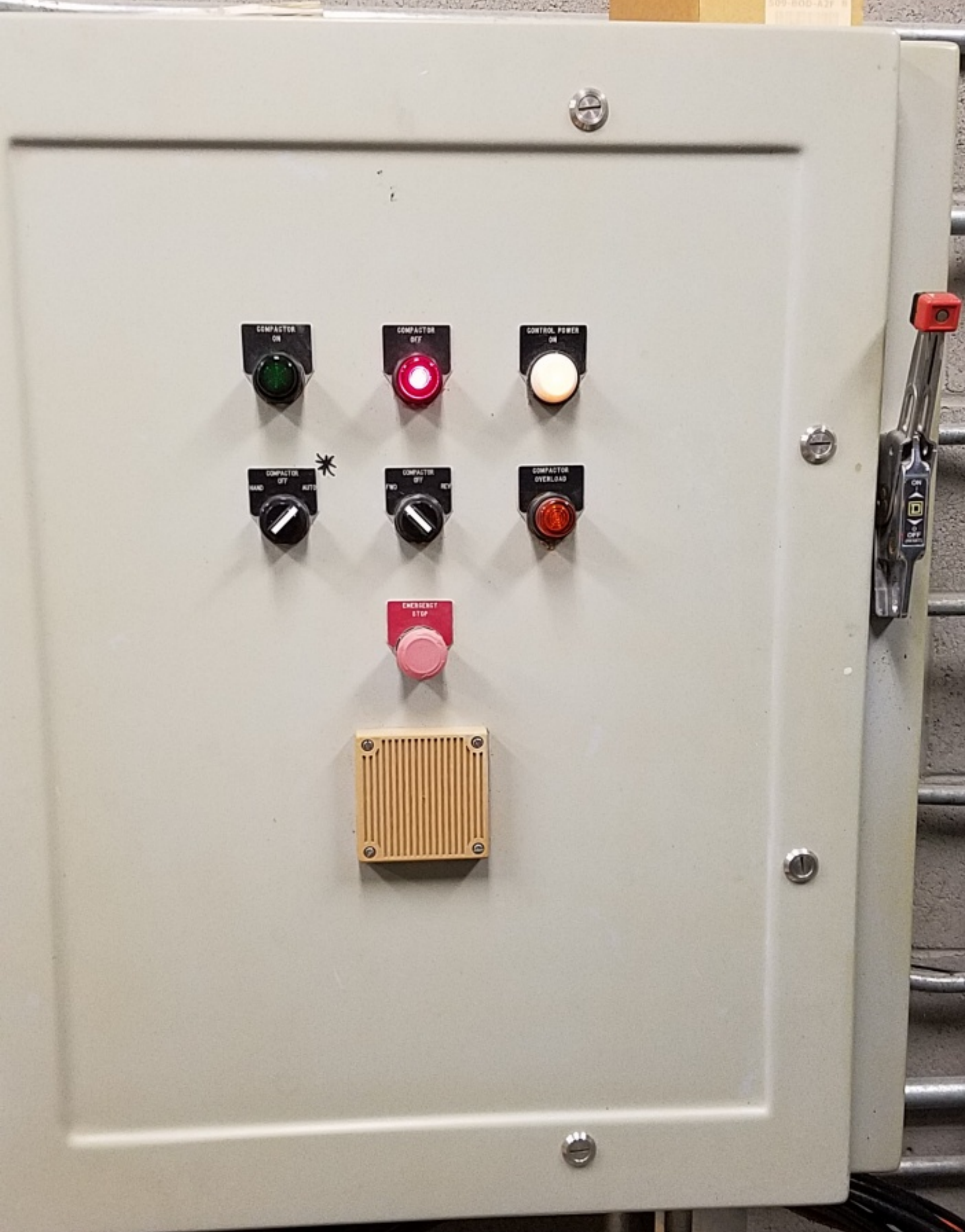
ENGR. _____
DRAWN BY: BPW DATE: 5/18/07 CKD. BY: _____ DATE: _____

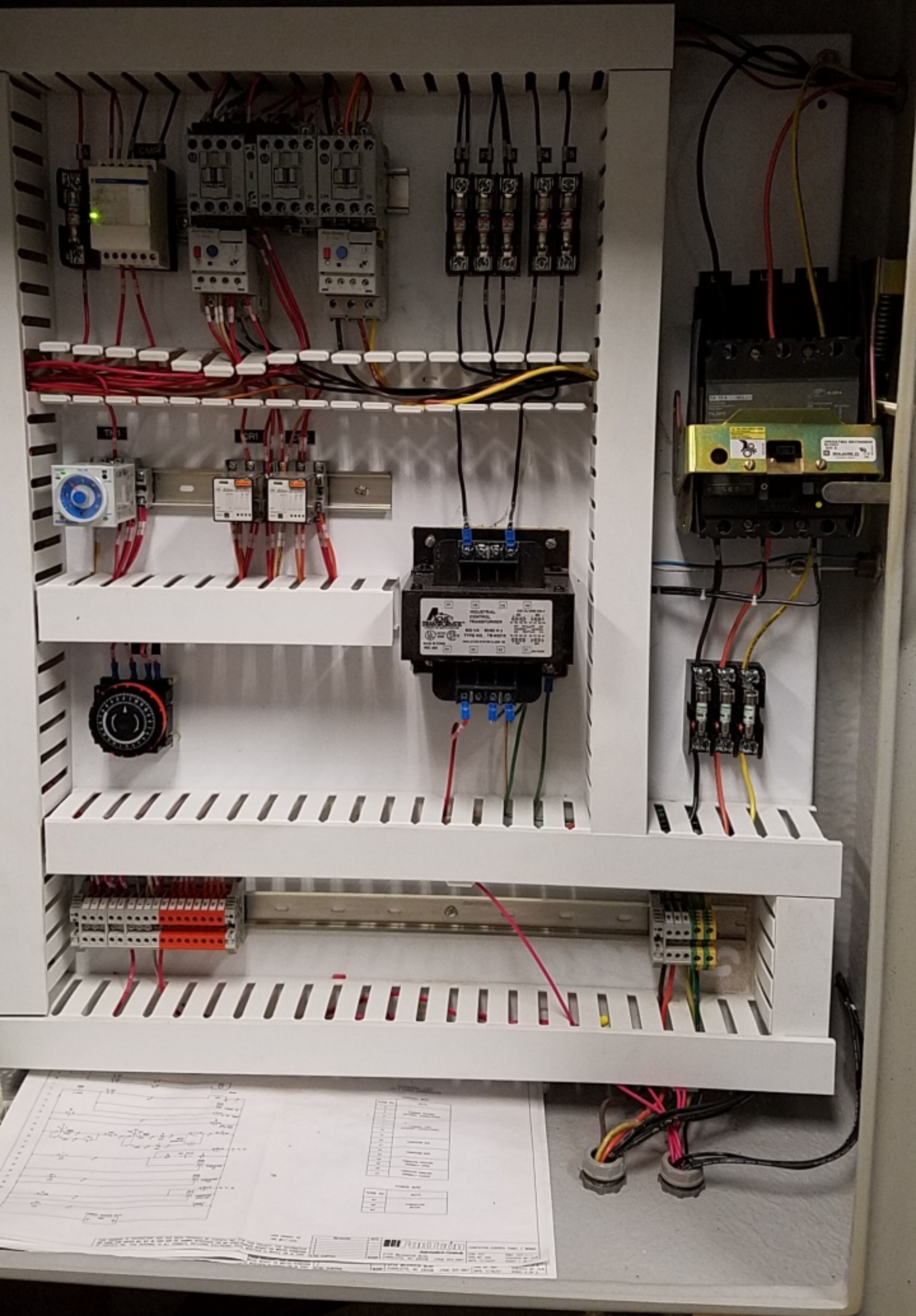
CONTR. NO. 07-1025 SHEET GA1

| NO. | TO | DATE | FOR |
|-----|------|---------|--------|
| | CUST | 5/18/07 | APPV'L |

PRINT RECORD

USED SPARE # / (COMPACTOR NOT NEW)
509-800-827











SNUGGLER

SEW EURODRIVE
1500 INDUSTRIAL DRIVE
MILWAUKEE, WI 53219
TEL: 414-224-2200
FAX: 414-224-2201
WWW.SEW-EURODRIVE.COM

SEW SEVERE DUTY MOTOR
This motor is designed for applications in hostile environments. The motor is equipped with drain holes which are installed for the mounting position as shown on the nameplate. For different mounting positions, consult the factory.





