Addendum No. 1
Screening Equipment Replacement, Capital Project No. 1858

This Addendum No. 1, dated December 7, 2018, to the Invitation to Bid: Screening Equipment Replacement, Capital Project No. 1858, bid opening December 17, 2018 at 10:00 am, supersedes all contrary and conflicting information in the above-mentioned instructions, specifications, and contract documents which are hereby supplemented or revised in certain particulars as follows:

AD1-1 General Information
The District submits this Addendum to provide new information and to change existing information for potential respondents.

AD1-2
Minutes and sign-in sheet of the mandatory pre-bid meeting held on December 3, 2018 are attached to this addendum.

AD1-3 Section 01010 Summary Of Work
3.4 Miscellaneous Items, third paragraph:
Item 1 of 2, first sentence, following the word "piping" insert the words "(City Water and Plant Water)."

Item 2 of 2, at the end of the paragraph insert the following sentence, "All City Water and Plant Water piping shall be insulated and jacketed."

AD1-4 Section 01700 Miscellaneous Requirements
Paragraph 1.4.D, insert the following sentence at the end of this paragraph, "The Contractor is responsible for ample planning & scheduling and shall ensure the screening equipment manufacturer (FSM/Enviro-Care and/or Drydon Equipment) is present during initial start up of each set of screening equipment."

AD1-5 Section 05530 Grating
Paragraph 2-1.01, first sentence of second paragraph, delete the word "Fiberglass."

AD1-6 Section 11000 Screens & Washer Compactor Shop Drawings
At the end of this section, insert the attached Screen "Enviro-Care Receiving, Storage, Installation Instructions" and the attached Screenings Wash Press "Enviro-Care Receiving, Storage, Installation Instructions."

AD1-7 Section 15430 Plumbing Insulation
Item 1 of 3, Paragraph 2.1.A, following the word "insulated" insert the words "and jacketed."

Item 2 of 3, Paragraph 3.3.A Water Supply Services Piping Insulation Schedule, delete the words "Domestic Cold Water" and replace with the words "City Water and Plant Water."

Item 3 of 3, Paragraph 3.3.B Drainage Services Piping Insulation Schedule, replace the schedule with the words "Drain and Vent Piping Insulation Is Not Required."

AD1-8 Section III Existing Screen Data Sheet
Following the data sheet insert the attached "Existing Parkson Screen Shop Drawing Excerpts" for additional information on the existing screen installation.

AD1-9 Sheet No. 2 of 14 General Notes
Item 1 of 3, Demolition Notes, Note 5, delete "THE PLANT" and replace with "THE CITY WATER PIPING, THE PLANT."

Item 2 of 3, Mechanical Notes, Note 1, following the words "ALL NEW," insert "CITY WATER AND."

Item 3 of 3, Electrical Notes, Note 2, delete "CLASS 1 DIVISION 2 GROUP D" and replace with "HAZARDOUS CLASS 1 DIVISION 1."

AD1-10 Sheet No. 4 of 14 Mechanical Demolition Plan – Screen Room & Loading Area
Add the following to the upper right hand corner of the sheet:
"NOTES: 1. AFTER SCREEN REMOVAL, CONTRACTOR SHALL PROVIDE A TEMPORARY COVER OR OTHER MEANS OF FALL PROTECTION AROUND THE RESULTANT OPENINGS, AS APPROVED BY RRWRD."

AD1-11 Sheet No. 5 of 14 Mechanical: Lower Screen Room
Following Note 7, insert the following notes:
"8. ALL NEW AND REMAINING CITY WATER PIPING SHALL BE INSULATED.

9. SEE CITY WATER PIPING DETAIL IN ADDENDUM 1 FOR NEW CITY WATER PIPING LAYOUT.

10. SEE PLANT WATER PIPING DETAIL IN ADDENDUM 1 FOR NEW PLANT WATER PIPING LAYOUT.

11. SEE DRAIN AND VENT PIPING DETAIL IN ADDENDUM 1 FOR DRAIN AND VENT PIPING CONNECTION LOCATIONS. NEW PIPING LAYOUT SHALL COLLECT ALL EXISTING AND NEW DRAINS AND VENTS."

AD1-12 Sheet 6 of 14: New Screen – Plan View
On the Plan View, between the Upper Screen Room and the Loading Area, add a note "REMOVE THE EXISTING 36" DOOR AND FRAME, PROVIDE A NEW DOOR AND FRAME."

AD1-13 Sheet 7 of 14: Mechanical: New Screen Profiles
Side View – New Screen and Wash Presses
Item 1 of 3, Upper Screen Room add the following note with an arrow pointing to the gap between the screen and the floor: "PROVIDE AND INSTALL REMOVABLE 2" ALUMINUM BORDEN TYPE GRATING TO FILL IN ALL VOIDS LARGER THAN 6" WIDE AT THE SCREENS. ADD SUPPORTS PER GRATING DETAILS SHEET IN ADDENDUM NO. 1."

Item 2 of 3, Lower Screen Room add the following note with an arrow pointing to the gap between the screen influent side and the floor: "PROVIDE AND INSTALL REMOVABLE 2" ALUMINUM BORDEN TYPE GRATINGS TO FILL IN THE VOIDS UPSTREAM OF THE SCREENS. ADD SUPPORTS AS NEEDED PER GRATING DETAILS SHEET IN

ADDENDUM NO. 1. GRATINGS SHALL BE PROVIDED WITH REMOVABLE RESTRAINTS TO PREVENT FLOATATION."

Item 3 of 3, Lower Screen Room add the following note with an arrow pointing to the gap between the screen effluent side and the floor: "PROVIDE AND INSTALL ADJUSTMENTS TO THE 2" CHECKERED PLATE COVER TO FILL NEW VOIDS DOWNSTREAM OF THE SCREENS. ADD SUPPORTS AS NEEDED PER GRATING DETAILS SHEET IN ADDENDUM NO. 1. NEW PLATE SECTIONS SHALL BE PROVIDED WITH REMOVABLE RESTRAINTS TO PREVENT FLOATATION."

AD1-14 Sheet 10 of 14: Electrical – Demolition Plan

Item 1 of 2, Electrical Demolition Note 5, immediately after the word "NEW," insert the following, "(SWP-1 DISCONNECT AND E-STOP CAN BE RE-USED)."

Item 2 of 2, Electrical Demolition Note 6, immediately after the word "NEW", insert the following "(SWP-2 DISCONNECT AND E-STOP CAN BE RE-USED)."

AD1-15 Sheet 11 of 14: Electrical Power Plan

Notes, replace note 1 with the following: "1. SEE SHEET 2 OF 14 GENERAL NOTES, FOR ADDITIONAL ELECTRICAL NOTES."

AD1-16 Sheet 12 of 14: Details

Screen Anchor Detail, at the end of this detail's title add "- UPPER SCREEN ROOM."

AD1-17 Sheet 13 of 14: Details

Screen Channel Wall Repair Detail Plan, add the following note adjacent to the detail: "ADD AN 18"+/- LONG STAINLESS STEEL ANGLE TO THE TOP OF EACH (4 TOTAL) CHANNEL WALL REPAIR TO MATCH THE EXISTING CONFIGURATION. EMBED THE ANGLE PER THE GRATING SUPPORT DETAILS, AT TOP SCREEN CHANNEL REPAIRS. ALIGN THE ANGLE WITH EXISTING ANGLES EACH SIDE OF THE REPAIR AND WELD IN PLACE. SECURE IN PLACE UNTIL CONCRETE CURES."

AD1-18

Incorporate the attached detail sheets into the bid documents, including:

City Water Piping
Plant Water Piping
Drain & Vent Piping Connections
Grating Details

AD1-19 Main Pump Station No. 2

The attached plan sheets (BM1 and BM2) and section sheet (BM5) are attached for your information only and are not part of the Contract Documents. Bidders are responsible for familiarizing themselves with the existing site and facilities along with confirmation of the information shown.

This information shall be taken into consideration by bidders when preparing the bid. Bidders shall acknowledge all project addenda on Proposal Form. This addendum and attachments will be emailed to all plan holders as well as posted on District's website at www.rrwrd.dst.il.us.

End of Addendum No. 1

Issued December 7, 2018

Rock River Water Reclamation District

Christopher Baer, PE
Engineering Manager

I:\District Projects\Screen Replacement 1858\Engineering\Specs\Addendum 1 dated 20181207

Screening Equipment Replacement
Capital Project No. 1858
Pre-Bid Meeting – December 3, 2018

General:
Sign-in sheet is attached for this mandatory pre-bid meeting and site tour.

Bids due at 10:00 A.M. Monday, December 17, 2018 at the Rock River Water Reclamation District (RRWRD) office, at which time bids will be opened and read aloud. Conditional bids will not be read. Recommendation for contract award will be made at the December 21 Board meeting. Bid packages are to include proposal on District bid form, bid security on District form (5% of bid amount), completed Fair Employment Practices Affidavit on District form, and Contractor's statement of qualifications. Apparent low bidder shall submit their Schedule of Values, with subcontracted work identified, before 10:00 am on Wednesday December 19, 2018.

Due to the critical nature of this project, RRWRD pre-purchased the main equipment. The RRWRD provided equipment includes 2 screens, 2 screening chutes, 2 screen control panels, 2 screening wash presses, and screening discharge pipes. The equipment is expected to be delivered around January 14, 2019. Equipment shop drawings for the RRWRD pre-purchased equipment are saved in an electronic file that is included with the bid documents.

This is a lump sum contract; bid shall include all work associated with the project to provide a complete functional system. Contractor shall perform at least 40% of the project with their own forces. Warranty is 2 years from acceptance of the work.

Written questions should be submitted to RRWRD no later than December 12, 2018 to allow time to address by addendum. An addendum will be issued with this meeting's notes, sign-in sheet, and other modifications as necessary.

Project Schedule:
Shop drawing submittals are required for all materials that will be incorporated into the work. Assume two weeks RRWRD review time for each submittal.

Contractor's schedule shall consider plant operations, requiring screening equipment systems to remain functional throughout the project.

The project includes 3 deadlines that are critical to plant operations. The following dates are based on Notice To Proceed (NTP) being issued 1/14/2019. Project shall be fully complete, including all restoration and close out documentation, by May 31, 2019 (20 weeks from NTP); liquidated damages shall be $300 per calendar day for completion following this final completion deadline. Screen 2 and its associated equipment shall be functional to receive full plant flow by March 11, 2019 (8 weeks from NTP); liquidated damages shall be $1,500 per calendar day following this deadline until Screen 2 equipment is in operation. Screen 1 and its associated equipment shall be functional to receive full plant flow by April 22, 2019 (14 weeks from NTP); liquidated damages shall be $1,500 per calendar day following this deadline until Screen 1 equipment is in operation.

Pay requests should be submitted to the District by the 5th day of the month for consideration at that month's Board meeting. Retention is 10% of each pay application. Certified payroll and waivers of lien are required for each application for payment.

Sequencing is critical to maintain operation of the treatment systems throughout the project. Contractor shall coordinate all shut downs and all start ups.

Existing system outages necessary to complete work shall be requested at least 7 days in advance of the planned outage. Outage requests shall include a detailed schedule and sequence of activities; request shall verify that all required materials are on site. Additional time may be necessary in order to prepare for taking a process off line. Contractor shall ensure that truck access to the Loading Area is maintained at all times for removal of screenings.

Project:

Project generally consists of:

1. Shop drawings, O&M manuals, training, and as-built drawings.
2. Shore ground over the 84" influent pipe to minimize crane loads on the 84" pipe.
3. Provide temporary power to existing Screen 1, SWP 1, and associated equipment then demolish the Screen 2 electrical as indicated.
4. Pump out the South screen channel and seal gate leakage, remove Screen 2's chute, remove SWP 2, remove Screen 2, clean channel, and repair channel.
5. Fabricate and install screen support plates, along with support angles provided with the screens.
6. Install Screen 2 and secure in place, secure bottom and side channel seals.
7. Install SWP 2, Screen 2 discharge chute, and SWP 2 discharge piping. Enlarge the wall opening to Loading Area as needed to accommodate the new piping. Install new concrete equipment pad for the new SWP.
8. Provide and install a new dual breaker in MCC-14 for the new screen panels.
9. Replace breaker, new provided by RRWRD, in the existing SWP 2 Control Panel.
10. Temporarily install Screen 2 Control Panel, until such time that the existing Fine Screen Control Panel and equipment pad can be removed.
11. Provide and install new conduit, wiring, disconnects, E-stops, and supports for Screen 2, SWP 2, and associated equipment. New copper wiring is required for all electrical work.
12. All new electrical conduit shall be rigid galvanized in Control Room and Utility Room and shall be rigid galvanized PVC coated in Loading Area, Lower Screen Room, and Upper Screen Room.
13. All control wiring shall be installed and labeled by the Contractor. Terminations in existing RRWRD plant control system PLC cabinet will be performed by RRWRD. Wiring to and from, along with all terminations in the other panels, shall be performed by Contractor.
14. Start-up Screen 2 and all associated Contractor installed equipment. After Screen 2 and associated equipment run appropriately for one week, RRWRD will isolate flow to Screen 1.

15. Replace the skylight, removed for screen removal and installation, and seal water tight.
16. Generally repeat items 4 through 15 for Screen 1.
17. Demolish the existing sample pump in Lower Screen Room, including conduit, wiring, stand, discharge piping, supports, and influent piping to valve at the wall (cap).
18. Install new Sample Pump Panel, provided by RRWRD. Install new conduit as indicated.
19. Remove all copper plant water piping and city water piping in the Lower Screen Room. Replace city water and plant water piping with Schedule 80 PVC piping and valves. Use stainless steel components for items not available in PVC (backflow preventers, strainers, etc.). Replace 2 plant water hose bibs and the piping to them, in Upper Screen Room and in Loading Area. Insulate all new water piping.
20. Remove all metal drain and vent piping in the Lower Screen Room. Replace with Schedule 40 PVC piping. Where pipes pass through walls and floors, leave no more than 4' of CIP before the wall/floor penetration and tie in the new PVC to the existing CIP with Fernco type shear couplings. Replace 3 floor drains in the Upper Screen Room as part of this work.
21. Painting of walls and ceilings, along with pipes, ducts, and conduits mounted to them, shall all be cleaned and painted in the Loading Area, Upper Screen Room, Lower Screen Room, and Utility Room. New pipes shall be labeled with plastic wrap around labels.
22. Repair concrete floor openings in the Lower Screen Room and Upper Screen Room as indicated on the drawings.
23. Remove and replace the 36" hollow metal door and frame with new between the Upper Screen Room and the Loading Area.
24. Remove platform at the SWPs and install new 3' rail section to fill the void.

Miscellaneous:
The Lower Screen Room atmosphere can contain hydrogen sulfide gas. The Contractor is responsible for providing adequate ventilation, gas detection, and other devices as necessary to protect their workers. A safe work plan shall be submitted to RRWRD; comments will not be returned to the Contractor.

Contractor to provide their own equipment for completion of work; RRWRD's equipment (such as Upper Screen Room bridge crane hoist) is not available for Contractor use.

Site security shall be maintained at all times and gates to remain closed. Contractor will be issued two gate fobs for duration of the project; Fobs need to be returned prior to final payment. Contractor shall coordinate access for their employees and their subcontractors. No contractor deliveries are to be received by RRWRD.

Contractor parking and staging areas are shown on the drawings. Contractor toilet and wash facilities shall be located within this area. 480 volt electric power can be made available for the Contractor's trailer, requiring Contractor to install a meter and pay for power used, at RRWRD's power cost (approximately $0.08 per kW-Hr).

Project status meetings shall be conducted by the Contractor on-site every other week. Minutes of the meetings shall be prepared by the Contractor and submitted to all attendees.

This is a wastewater treatment process equipment replacement project and RRWRD is not applying for a building permit with the City of Rockford.

The Contractor is responsible for quality control, testing, and monitoring.

A visit to the project site was conducted as part of the pre-bid meeting.

PRE-BID MEETING QUESTIONS AND ANSWERS

1) Are drawings available that show the 84" sewer to the pump station?
   A) Reference drawings are included with Addendum 1.

2) Are drawings available that show the Parkson screen anchors and mounting to the channel walls and floor?
   A) Shop drawing excerpts are included with Addendum 1.

3) The documents call out both Class 1 Division 1 and Class 1 Division 2; which area classification are the screen rooms?
   A) Addendum 1 will update the drawings to Class 1 Division 1.

4) Is an electrical coordination study required for the new breakers?
   A) Since changes to the loads are minimal, no coordination study is required as part of this project's work.

5) Are new screen and screening wash press e-stops being provided by RRWRD as part of the new screening equipment?
   A) No, the e-stops shall be provided by the Contractor. But Addendum 1 allows the two Screenings Wash Press e-stops to be re-used in the work. Contractor shall confirm condition of the e-stops prior to removal and shall properly store them.

6) Is asbestos present in the water piping fitting insulation?
   A) Sampling was performed and if present, asbestos containing materials will be remediated by RRWRD.

7) Does angle iron need to be added to top of the screen channel infill concrete to match the existing embedded support angles?
   A) Yes, details are added to Addendum 1 to address this item.

Pre-Bid Meeting – Attendance Sheet
Screening Equipment Replacement, Capital Project No. 1858

Date: December 3, 2018

NAME	COMPANY	TELEPHONE	E-MAIL
Larry McFall	RRWRD	815-387-7584	lmcfall@rrwrd.illinois.gov
Christopher Baer	RRWRD	815-387-7678	cbaer@rrwrd.illinois.gov
Scot Strassburg	RRWRD	815-387-7657	sstrassburg@rrwrd.illinois.gov
Mark Finnan	Mechanical Inc	815-238-3972	
Jon McClelland	Civil Inc	815-238-1457	
Collin Martinovich	Sjostrom & Sons	815-226-0330	
Jason Bottensek	Nelson Carlson Mech.	815-398-1910	
Verlyn Swanson	Morse Electric	608-425-9444	
Brian Folz	Ballard Electric	815-873-8368	
Todd Byxbe	Miller Engineering	815-963-4878	

SECTION 01700 INSERT

SCREEN

RECEIVING, STORAGE, INSTALLATION INSTRUCTIONS

General Precautions

Receiving Material

The equipment pieces and components received may have been shipped from:

1. WAM North America | Enviro-Care, Gurnee, IL.
2. A fabricator acting under WAM North America | Enviro-Care Inc. instructions.
3. A "buy-out" distributor such as a motor or pump manufacturer.

Since there will often be more than one shipment to the job site, it is important to coordinate the receiving and storage of all items accordingly. All material has been thoroughly checked and inspected before shipment. However, there may be times when equipment is missing, damaged in transit or received with broken packaging. When receiving equipment, it is necessary to properly acknowledge receipt and any shortage or damage on the shipping documents. This must be done in a manner that helps assign responsibility to the proper party for the various parts of shipping and receiving equipment.

When receiving a shipment, the following procedures must be followed. These procedures are also listed on the Bill of Lading the shipping company provides and must be signed to prove delivery of the goods. If the following procedures are not followed, WAM North America | Enviro-Care will not be liable for any shortages or damage on your shipments.

Receiving Procedure

Before signing the Bill of Lading (BOL) in receipt of the goods shown thereon, and **before** the driver leaves, do the following:

1. After inspecting the shipment, **note** any damage or shortages (according to what is listed on the BOL). Be as detailed as necessary.
2. Have the driver sign the notation in acknowledgment.
3. Retain a copy (of the notated BOL) for use in filing a freight claim.
4. If there is damage, **notify** WAM North America | Enviro-Care (call 815-636-8306 **immediately** so that arrangements can be made with the carrier, if necessary, to have the damaged goods inspected by their agent.

After signing the BOL and receiving the shipment, do the following:

1. Use the attached/enclosed packing list to further inspect the entire shipment for shortages and/or damage and retain this list for future reference.
2. **Notify** WAM North America | Enviro-Care within **three** (3) working days from date of receipt, of any further shortages or concealed damage. If certain items are missing or damaged, make notes of this on the shipping papers to protect all interests and notify WAM North America | Enviro-Care (815) 636-8306 **immediately.**

Handling and Storage

Please handle the equipment properly when unloading and erecting. All cartons, electrical equipment, and gear drives should be stored under cover and protected from moisture, grit, and mud. All rolled steel sections must be stored on edge or blocked up to prevent distortion. If allowed to lie flat, these items may lose their shape which could hinder erection and proper alignment of the equipment.

Fasteners

All stainless steel erection fasteners shall incorporate anti-seize during assembly. Failure to utilize this will cause significant extra time by the erection and maintenance crews.

Foundation anchor bolts

Notify WAM North America | Enviro-Care immediately if anchor bolts are not received.

Anchor bolts must be placed accurately to avoid future erection difficulties. Where applicable and upon request, WAM North America | Enviro-Care can furnish a template for positioning the anchor bolts. If a template has not been furnished, remember that the location and projection of all anchorage is critical. The specified amount of projection and location are shown on the general arrangement drawings. Prior to equipment installation, clean the threads of all anchorage bolts and oil them.

If using epoxy anchors, confirm the expiration date of the epoxy, typically posted on the packing, prior to mixing and application. Epoxy adhesives have a limited shelf life and shall therefore be provided by the installing contractor, not by WAM North America | Enviro-Care. Installer to adhere to epoxy installation procedures noted on packaging.

Shortages, Discrepancies and Field Charges

Please notify WAM North America | Enviro-Care immediately if any apparent manufacturing discrepancies or shortages are encountered with machinery, since no field charges for alterations or shortages will be accepted unless authorized in writing by our authorized representative.

Fabricated steel parts and assemblies furnished by WAM North America | Enviro-Care are manufactured following best shop practices and standards. However, some misfits and imperfect work may arise. In such cases, the American Institute of Steel Construction Manual, Thirteenth Edition, "Code of Standard Practice", will apply to erection of this equipment. It reads as follows:

Corrections and Errors

"The correction of minor misfits by moderate amounts of reaming, grinding, welding or cutting, and the drawing of elements into line with drift pins, shall be considered normal erection operations. Errors that cannot be corrected using the foregoing means, or that require major changes in member or Connection configuration, shall be promptly reported to the Owner's Designated Representatives for Design and Construction and the Fabricator by the Erector, to enable the responsible entity to either correct the error or approve the most efficient and economical method of correction to be used by others."

Company policy dictates that **no field charges will be allowed without prior approval.** Written authority must be given in the form of a WAM North America | Enviro-Care Field Change Authorization with an associated warranty tracking number, if applicable. The warranty tracking number will be issued when the extent of such modifications and the price for performing these modifications have been agreed upon. In general, when parts require replacement, and WAM North America | Enviro-Care agrees that replacement is necessary, WAM North America | Enviro-Care will furnish the parts. The contractor will remove the defective parts and install the replacement parts at a cost agreed upon by both parties.

Structural Lifting Precautions

All structural components should be lifted and handled as instructed below. Proper handling is necessary to protect special coverings and to ensure ease of assembly during equipment installation.

1. Make sure the equipment being lifted or the lifting equipment cannot come into contact with overhead electrical cables, etc.
2. The lifting and transport of the equipment can be done by means of a suitable lifting system verified for the weight and dimensions of the equipment.
3. All rigging and lifting should be done by experienced personnel.
4. Before the equipment is removed from the delivery trucks, check to be sure the blocking, bracing, and banding securing it to the carrier have been removed and is ready for moving.
5. Use multiple point lifting whenever possible.
6. Always lift and handle the equipment using the eyebolt fixed on the equipment.
7. Always attach the lifting eyebolt by means of hooks with safety fasteners.
8. When lifting structural members of this equipment, avoid twisting or bending the members. Use spreader beams, as necessary, to fully support the pieces as they are lifted.
9. Before lifting the machine from the ground entirely preassembled, make sure that all the nuts and bolts for connection are tight, some attachments could loosen due to transportation.
10. Lift the equipment an inch or two off the trailer to be sure it is free to be moved and balanced correctly. Adjust as necessary.
11. Check the component balance until it is entirely hoisted.

    Hoisting has to be carried out steadily (without jerks and thrusts), never allow it to strike the ground, tank or other equipment.

Danger - Warning

Do not pull, drag, push or dump the structural components off the delivery trucks.
Stand clear as the equipment is lifted.

Section Two: Installation Instructions

Basic Installation

The sequence and procedures listed below are suggested and should not take precedence over the experience of the erector if, due to special circumstances or available equipment, he should decide to vary the given steps.

Caution

The equipment can tip during transport. Pay attention to the center of gravity (the center of gravity is located above the vertical center of the machine) and the weight (see General Arrangement drawing).

If installation is not immediately started upon delivery of the equipment, the appropriate storage procedure must be followed, as described in the ***Storage and Shutdown Precautions*** of this manual.

The FSM FRS-3 Filter Screen is typically shipped fully assembled, with the possible exception that the motor is detached for shipment.

1. The FSM FRS 3 Perforated Screen is shipped with the side seals facing in (see Figure 2-1). Before installing the screen in the channel, remove the fasteners, seal retainer plates and neoprene side seals (see Figure 2-1).

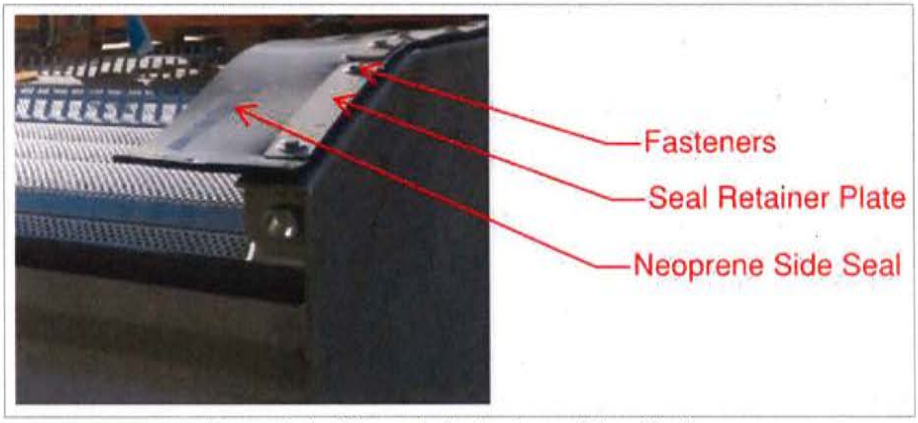


Figure 2-1: Side seals facing inward for shipping

2. Flip the neoprene seal over and reinstall the seal retainer plates and fasteners. (See Figure 2-2)

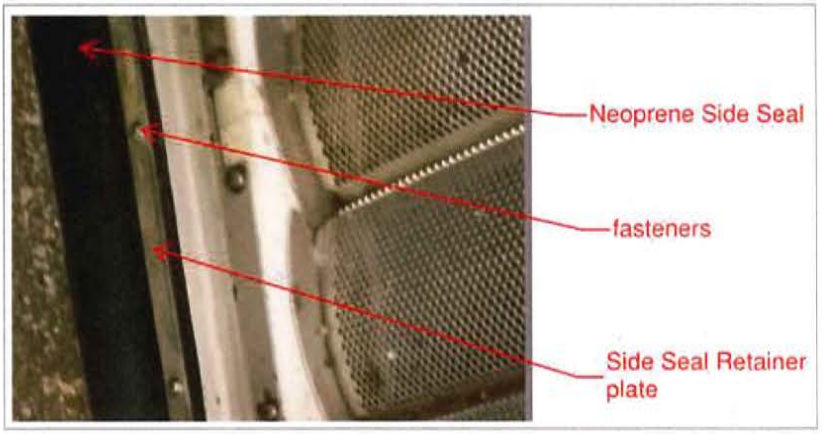


Figure 2-2: Side seals as installed

3. Lift the machine using the eyebolts welded on the body. Position the machine to final location. (see Figure 2-3)

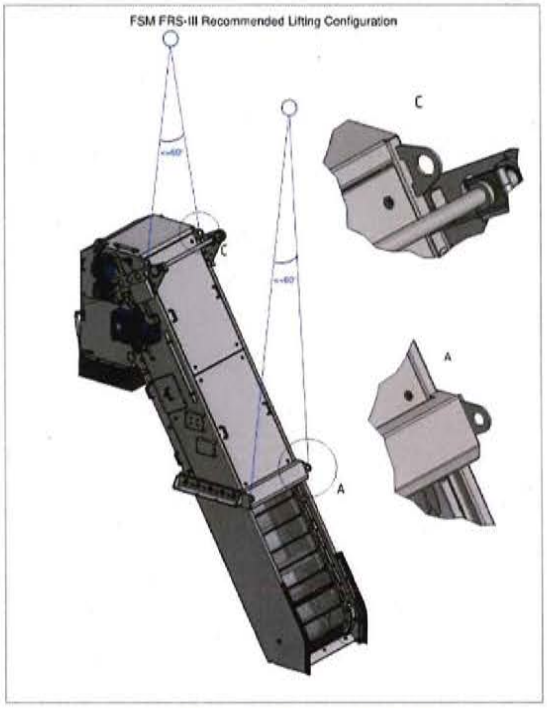


Figure 2-3: Lifting Configuration

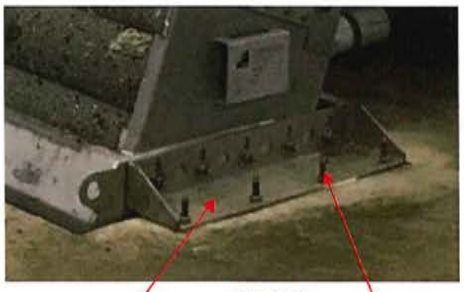


Fig. 2-5

4. The bottom of the screen should lay flush with the bottom of the channel and the side seals should seal securely against the sides of the channel as indicated on the general arrangement drawing(s). Tighten all the fasteners for the support frame.
5. Position the machine to obtain an angle shown on the general arrangement drawing(s). (see Section Six – Enclosures)
6. With the machine still supported in its final position, install anchors at mounting brackets. (See Fig 2-5)
7. Once the screen has been installed in the channel, the floor plate of the screen must be adjusted so that it will lie flat on the bottom of the channel to not allow any debris to go under the screen. (See Figure 2-4) (For Pivoting Screen Only)

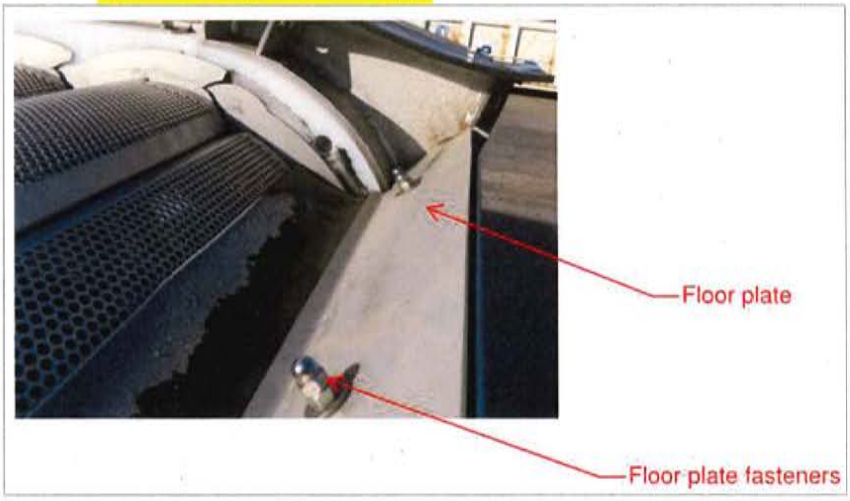


Figure 2-4: Floor plate adjusted to lay flat on channel floor

8. If a spray wash system is provided, connect facility spray wash piping to the pipe connection(s) located as shown on the general arrangement drawing(s).
9. If provided, mount the level sensor(s) as indicated on the general arrangement drawing(s).
10. Install electrical control panel and connect to supply power.
11. A qualified electrician should wire the FSM FRS-3 Filter Screen screen drive motor, the motor safety cut-out switch (if provided), the level sensor(s), the solenoid valve, and E-Stop push button. Jog the drive motor. Ensure that the drive shaft rotates in the proper direction, causing the perforated filter panels to travel up on the upstream side of the screen.
12. Ensure proper screenings receptacle is in place.
13. Unless specifically mentioned in this manual, all piping for connecting spray wash is by others.
14. All wiring external to motors and controls is by others.

Information

Anti-seize compound must be used on all stainless steel fasteners to prevent gailing or seizing.

Final Check for Level

Ensure that the FSM FRS-3 Filter Screen is level.

1. Use a carpenter's level to check level of support mounting brackets.
2. If necessary, install a non-shrink grout (not by Enviro-Care) under the mounting brackets for levelling.

Caution

Before proceeding with the start/stop of the equipment, check that nothing is obstructing the operation of the equipment.

Before proceeding to start/stop of the equipment, check that all the safety guards and devices are present and in correct working order.

Information

For pivoting units, flexible wiring to electrical connections on the machine is recommended to allow for maintenance.

SECTION 01700 INSERT

SCREENINGS WASH PRESS

RECEIVING, STORAGE, INSTALLATION INSTRUCTIONS

General Precautions

Receiving Material

The equipment pieces and components received may have been shipped from:

1. WAM North America | Enviro-Care, Gurnee, IL.
2. A fabricator acting under WAM North America | Enviro-Care Inc. instructions.
3. A "buy-out" distributor such as a motor or pump manufacturer.

Since there will often be more than one shipment to the job site, it is important to coordinate the receiving and storage of all items accordingly. All material has been thoroughly checked and inspected before shipment. However, there may be times when equipment is missing, damaged in transit or received with broken packaging. When receiving equipment, it is necessary to properly acknowledge receipt and any shortage or damage on the shipping documents. This must be done in a manner that helps assign responsibility to the proper party for the various parts of shipping and receiving equipment.

When receiving a shipment, the following procedures must be followed. These procedures are also listed on the Bill of Lading the shipping company provides and must be signed to prove delivery of the goods. If the following procedures are not followed, WAM North America | Enviro-Care will not be liable for any shortages or damage on your shipments.

Receiving Procedure

Before signing the Bill of Lading (BOL) in receipt of the goods shown thereon, and **before** the driver leaves, do the following:

1. After inspecting the shipment, **note** any damage or shortages (according to what is listed on the BOL). Be as detailed as necessary.
2. Have the driver sign the notation in acknowledgment.
3. Retain a copy (of the notated BOL) for use in filing a freight claim.
4. If there is damage, **notify** WAM North America | Enviro-Care (call 815-636-8306 **immediately** so that arrangements can be made with the carrier, if necessary, to have the damaged goods inspected by their agent.

After signing the BOL and receiving the shipment, do the following:

1. Use the attached/enclosed packing list to further inspect the entire shipment for shortages and/or damage and retain this list for future reference.
2. **Notify** WAM North America | Enviro-Care within **three** (3) working days from date of receipt, of any further shortages or concealed damage. If certain items are missing or damaged, make notes of this on the shipping papers to protect all interests and notify WAM North America | Enviro-Care (815) 636-8306 **immediately.**

Handling and Storage

Please handle the equipment properly when unloading and erecting. All cartons, electrical equipment, and gear drives should be stored under cover and protected from moisture, grit, and mud. All rolled steel sections must be stored on edge or blocked up to prevent distortion. If allowed to lie flat, these items may lose their shape which could hinder erection and proper alignment of the equipment.

Fasteners

All stainless steel erection fasteners shall incorporate anti-seize during assembly. Failure to utilize this will cause significant extra time by the erection and maintenance crews.

Foundation anchor bolts

Notify WAM North America | Enviro-Care immediately if anchor bolts are not received.

Anchor bolts must be placed accurately to avoid future erection difficulties. Where applicable and upon request, WAM North America | Enviro-Care can furnish a template for positioning the anchor bolts. If a template has not been furnished, remember that the location and projection of all anchorage is critical. The specified amount of projection and location are shown on the general arrangement drawings. Prior to equipment installation, clean the threads of all anchorage bolts and oil them.

If using epoxy anchors, confirm the expiration date of the epoxy, typically posted on the packing, prior to mixing and application. Epoxy adhesives have a limited shelf life and shall therefore be provided by the installing contractor, not by WAM North America | Enviro-Care. Installer to adhere to epoxy installation procedures noted on packaging.

Shortages, Discrepancies and Field Charges

Please notify WAM North America | Enviro-Care immediately if any apparent manufacturing discrepancies or shortages are encountered with machinery, since no field charges for alterations or shortages will be accepted unless authorized in writing by our authorized representative.

Fabricated steel parts and assemblies furnished by WAM North America | Enviro-Care are manufactured following best shop practices and standards. However, some misfits and imperfect work may arise. In such cases, the American Institute of Steel Construction Manual, Thirteenth Edition, "Code of Standard Practice", will apply to erection of this equipment. It reads as follows:

Corrections and Errors

"The correction of minor misfits by moderate amounts of reaming, grinding, welding or cutting, and the drawing of elements into line with drift pins, shall be considered normal erection operations. Errors that cannot be corrected using the foregoing means, or that require major changes in member or Connection configuration, shall be promptly reported to the Owner's Designated Representatives for Design and Construction and the Fabricator by the Erector, to enable the responsible entity to either correct the error or approve the most efficient and economical method of correction to be used by others."

Company policy dictates that **no field charges will be allowed without prior approval.** Written authority must be given in the form of a WAM North America | Enviro-Care Field Change Authorization with an associated warranty tracking number, if applicable. The warranty tracking number will be issued when the extent of such modifications and the price for performing these modifications have been agreed upon. In general, when parts require replacement, and WAM North America | Enviro-Care agrees that replacement is necessary, WAM North America | Enviro-Care will furnish the parts. The contractor will remove the defective parts and install the replacement parts at a cost agreed upon by both parties.

Structural Lifting Precautions

All structural components should be lifted and handled as instructed below. Proper handling is necessary to protect special coverings and to ensure ease of assembly during equipment installation.

1. Make sure the equipment being lifted or the lifting equipment cannot come into contact with overhead electrical cables, etc.
2. The lifting and transport of the equipment can be done by means of a suitable lifting system verified for the weight and dimensions of the equipment.
3. All rigging and lifting should be done by experienced personnel.
4. Before the equipment is removed from the delivery trucks, check to be sure the blocking, bracing, and banding securing it to the carrier have been removed and is ready for moving.
5. Use multiple point lifting whenever possible.
6. Always lift and handle the equipment using the eyebolt fixed on the equipment.
7. Always attach the lifting eyebolt by means of hooks with safety fasteners.
8. When lifting structural members of this equipment, avoid twisting or bending the members. Use spreader beams, as necessary, to fully support the pieces as they are lifted.
9. Before lifting the machine from the ground entirely preassembled, make sure that all the nuts and bolts for connection are tight, some attachments could loosen due to transportation.
10. Lift the equipment an inch or two off the trailer to be sure it is free to be moved and balanced correctly. Adjust as necessary.
11. Check the component balance until it is entirely hoisted.

    Hoisting has to be carried out steadily (without jerks and thrusts), never allow it to strike the ground, tank or other equipment.

Danger - Warning

Do not pull, drag, push or dump the structural components off the delivery trucks.
Stand clear as the equipment is lifted.

Section Two: Installation Instructions

Basic Installation

The sequence and procedures listed below are suggested and should not take precedence over the experience of the erector if, due to special circumstances or available equipment, he should decide to vary the given steps. Refer to *General Arrangement Drawings(s)*.

If installation is not immediately started upon delivery of the equipment, the appropriate short- or long-term storage procedure, as prescribed in the *Storage and Shutdown Precautions* section of this manual, must be followed.

The Wash Press is preassembled in the shop. Only minor field assembly is required.

1. Position the Wash Press unit to accept the solids from the screen or conveyor. The inlet hopper should be fastened to the washer body to confirm that the inlet is in the proper position to accept solids. Also confirm the proper position of the solids discharge pipe. Mark the position of each anchor and move the Wash Press, if required, to allow for installation of the anchors.
2. Install Wash Press anchors per the anchor manufacturer's instructions in the *Accessory Equipment* section and the general arrangement drawing of this manual.
3. Adjust each anchor leveling nut face to the same elevation.
4. Install Wash Press onto the anchors. Adjust leveling nuts until unit is level in all directions. Finger-tighten locking nuts to secure bases in position. Make sure the unit is level to allow for proper liquid drainage out of the drain pan before permanently tightening nuts.
5. Install inlet hopper, if inlet hopper was not assembled during Step 1.
6. Attach the discharge pipe(s) as shown on the equipment drawing using the supplied bolts. Confirm that the discharge pipe will drop solids as shown on the *General Arrangement Drawings(s)*. If pipe supports are provided, install and anchor as shown on the *General Arrangement Drawings(s)*.
7. If required, install the motor to the reducer using the provided bolts listed on the *General Arrangement Drawings(s)*. Be sure to engage the motor and reducer shaft couplings with the spider.
8. If required, install the solenoid valves to the spray wash connection. Unions and ball valves (not by Enviro-Care) should be used on adjacent piping to facilitate future maintenance of the solenoid valves.
9. If required, install "piping" to the drain outlet(s), not by Enviro-Care.
10. If the screen is directly depositing solids into the Wash Press, make sure that the transition chute is aligned to accept all of the solids. If the screen is a pivoting design, take care to insure that the Wash Press is positioned as necessary to allow the screen to pivot without moving the entire Wash Press unit, if possible, so that the screen may be more easily maintained. Removal of the washer inlet hopper may be necessary.
11. A qualified electrician should wire the Wash Press drive motor and spray wash solenoid(s). Ensure that the drive shaft rotates in the proper direction so as to cause the screw to convey and compact material through the discharge pipe.
12. In order to avoid corrosion, touch-up any paint or galvanizing damaged during installation.

Final Check for Level

Ensure that the Wash Press is level.

1. Leveling nuts are supplied with the anchor rods (two nuts per anchor).
2. Use a carpenter's level to check level of support frame base.
3. If adjustment is necessary, lower or raise the corresponding leveling nuts, as required.
4. When the Wash Press is level and properly located, secure the support frame base with top locking nut and grout with a non-shrink grout (not by Enviro-Care).

Caution

Before proceeding with the start/stop of the equipment, check that nothing is obstructing the operation of the equipment.

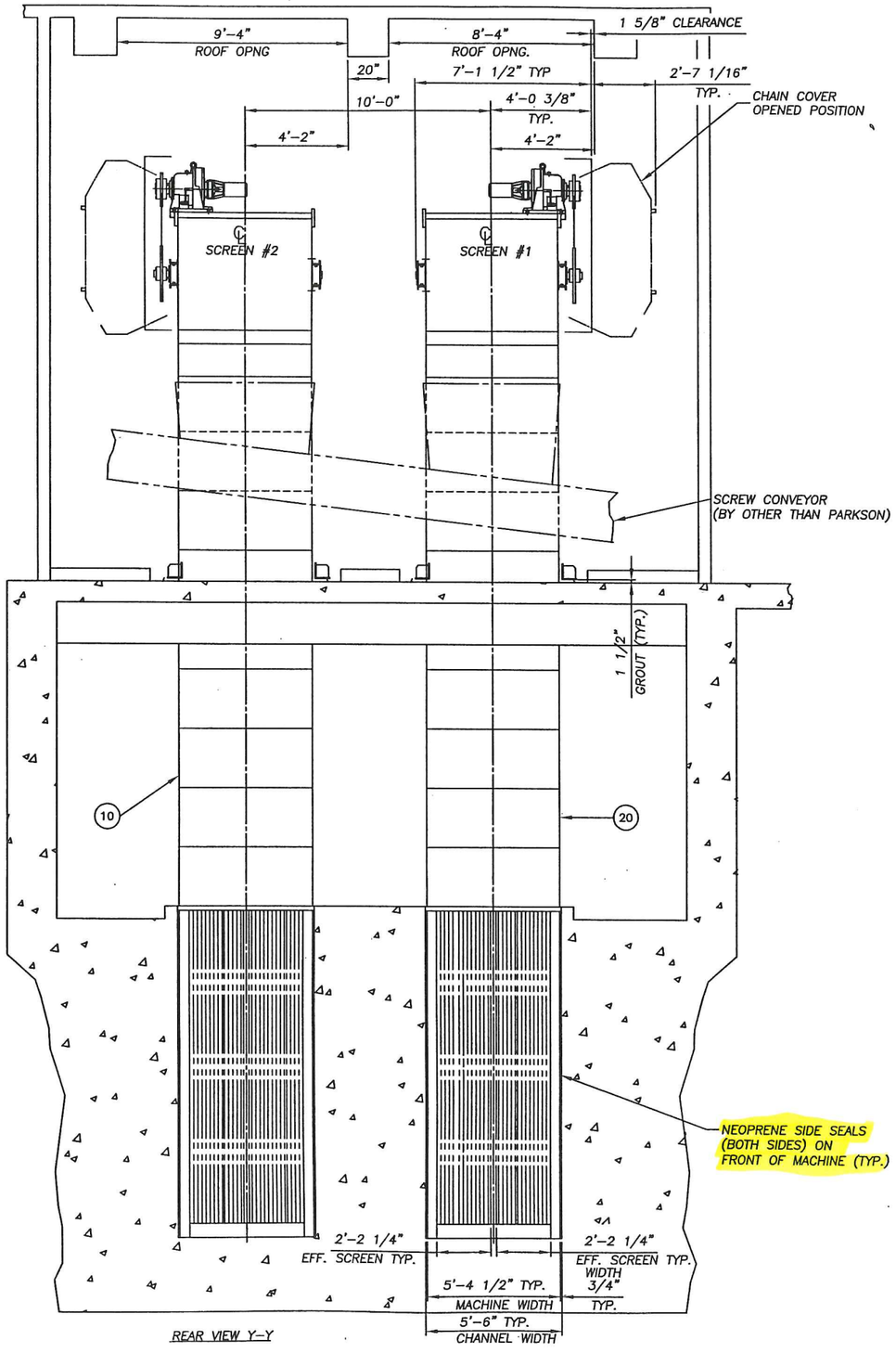
Before proceeding to start/stop of the equipment, check that all the safety guards and devices are present and in correct working order.

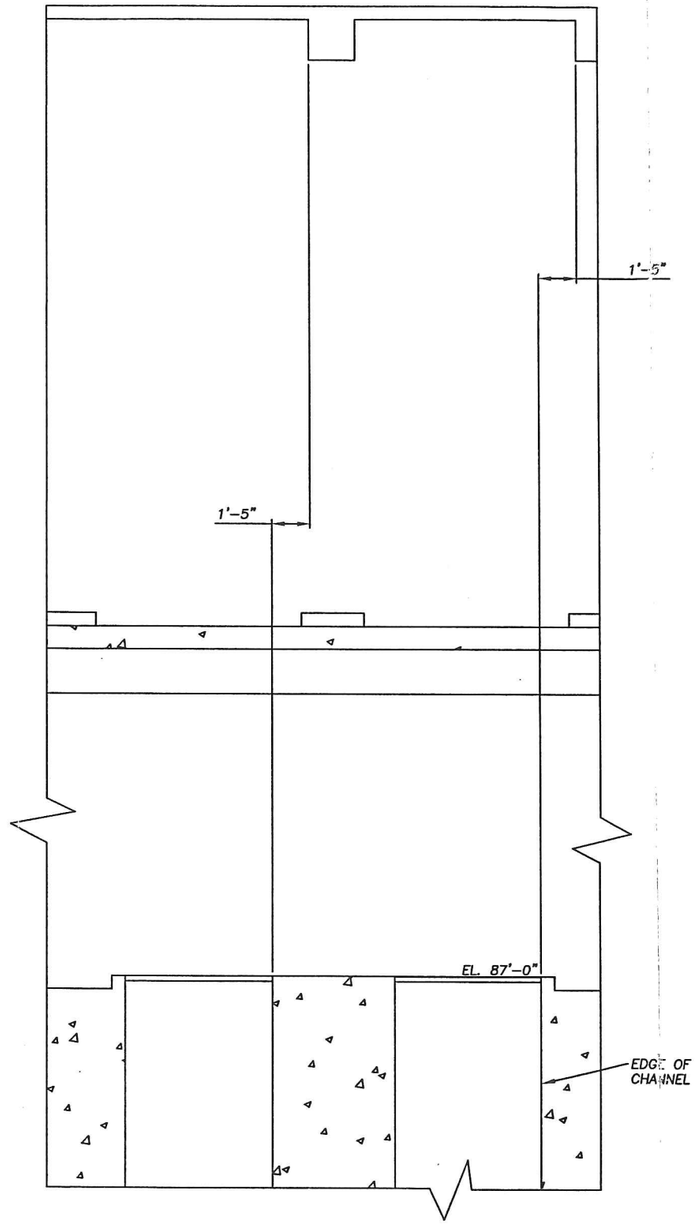
Information

For pivoting units, flexible wiring to electrical connections on the machine is recommended to allow for maintenance.

SECTION III INSERT

EXISTING PARKSON SCREEN SHOP DRAWING EXCERPTS





NOTE:
FOR SIDE ELEVATION SEE DWG. 016699–01
FOR PLAN VIEW Z–Z SEE DWG. 016699–03

PARKSON CORPORATION
Aqua Guard® Screen

GENERAL ARRANGEMENT
(2) 5'–4 1/2"W. X 34'–6" DH
AG–S 85°

PROJECT NUMBER: 200132
PROJECT NAME: ROCK RIVER WRD
ROCKFORD, IL

DRAWING FILE NUMBER: 016699–02
SHEET NUMBER: 2 OF 3
REVISION: 1

SIGNATURES		DATE
DRAWN:	M. BAPTISTE	12/21/00
CHECKED:	V. BERSOK	1–29–01
APPROVED:	C. ROBAINA	1–29–01

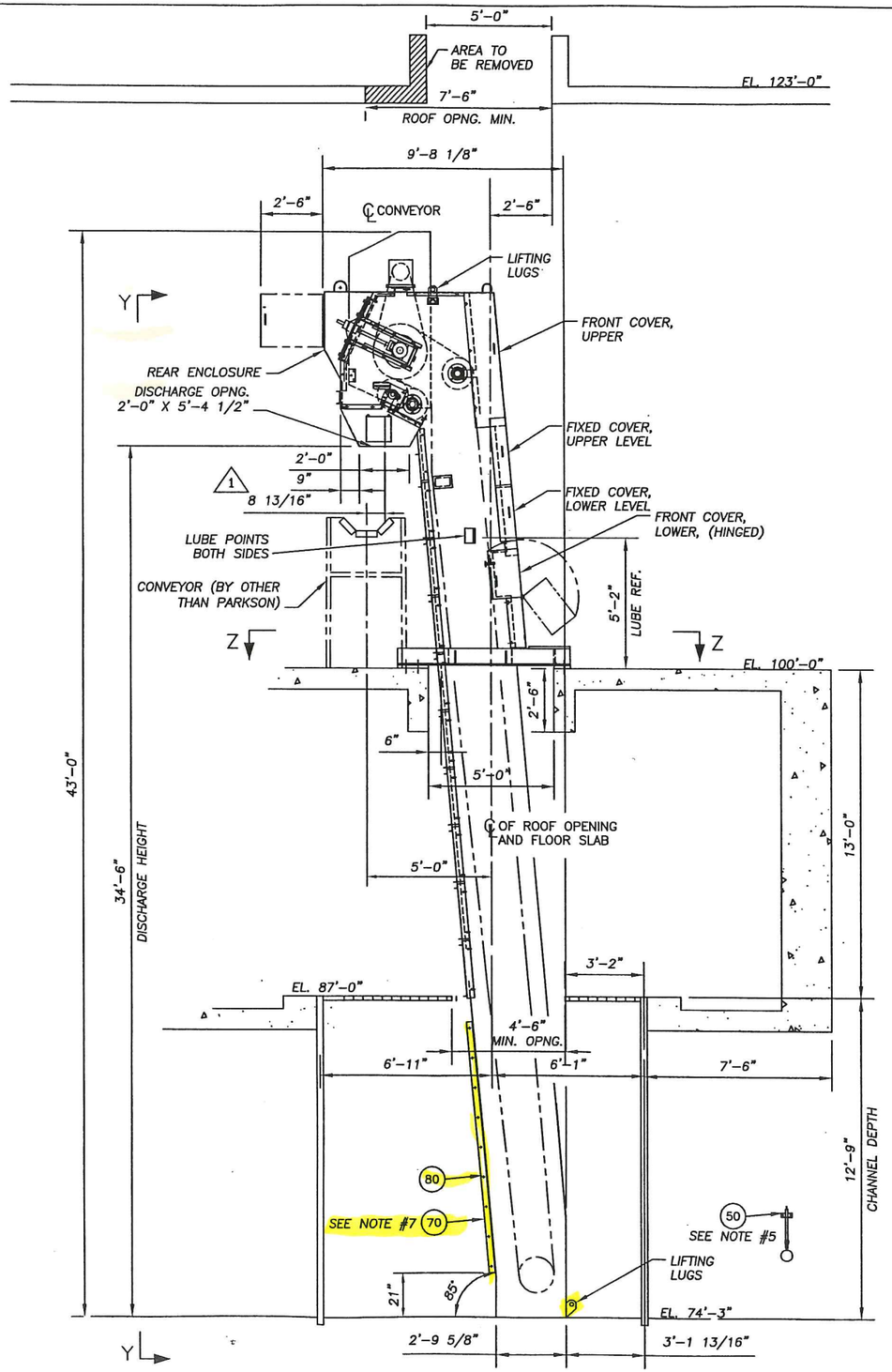
SIZE: D
SCALE: 3/8"=1'–0"

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN FEET AND INCHES
TOLERANCE: ±

REVISION	BY:	CHECKED:	DATE:
1. REMOVED PLEASE VERIFY, 4'–2" DIMS WERE 4'–1 1/2" AND 4'–2 1/2",1 5/8" CLEARANCE WAS 2 1/8", 20" DIM WAS 21",1'–5" DIMS WERE 1'–4 1/2" AND 1'–5 1/2".	D. ROUSSEAU	V. BERSOK	4–6–01

APPROVED:
DESCRIPTION

THE OWNER, PROJECT ENGINEER, AND ALL OTHERS INVOLVED WITH THE PROJECT DESIGN MUST IMPLEMENT AND FOLLOW ALL SAFETY STANDARDS REQUIRED BY LOCAL, STATE AND FEDERAL LAWS WHEN INCORPORATING PARKSON CORPORATION EQUIPMENT INTO THE OVERALL PROJECT DESIGN. PARKSON CORPORATION WILL NOT BE RESPONSIBLE FOR LOCATION AND/OR PLACEMENT OF EQUIPMENT IN THE PLANT DESIGN, NOR IS PARKSON RESPONSIBLE FOR PLANT SAFETY DESIGN AND FOR THE FAILURE TO FOLLOW APPROPRIATE SAFETY PRECAUTIONS IN THE OPERATION AND MAINTENANCE OF PARKSON CORPORATION EQUIPMENT.



NOTES:

1. SCREEN SPEED – 7 FPM
2. OVERLOAD PROTECTION – TSUBAKI SHOCK RELAY TSB–50 (SHIP LOOSE).
3. 5'–6" CLEARANCE REQ'D ON ONE SIDE OF MACHINE TO DISASSEMBLE SCREEN. USE SERVICE FIXTURE (ITEM #30) TO HOLD SCREEN IN PLACE WHILE DISASSEMBLING.
4. DUE TO CHANNEL CONFIGURATION, MACHINE WILL NOT PIVOT.
5. MOUNT FLOAT SWITCH TO SUIT.
6. ITEMS 30, 60, & 110 ARE NOT SHOWN. SEE MATERIAL LIST FOR DESCRIPTIONS AND QUANTITIES OF ALL NUMBERED PARTS.
7. USE BACKING ANGLES (ITEM #70) AS A TEMPLATE TO DRILL HOLES IN CONCRETE.

FOR REAR ELEVATION Y–Y, SEE DWG 016699–02
FOR PLAN VIEW Z–Z, SEE DWG 016699–03

PARKSON CORPORATION
Aqua Guard® Screen

GENERAL ARRANGEMENT
(2) 5'-4 1/2" W X 34'-6" DH
AG-S 85°

DRAWING FILE NUMBER: 016699-01
SHEET NUMBER: 1 OF 3
REVISION: 1

PROJECT NUMBER: 200132
PROJECT NAME: ROCK RIVER WRD
ROCKFORD, IL

SIGNATURES		DATE
DRAWN:	M. BAPTISTE	12/20/00
CHECKED:	V. BERSOK	1-29-01
APPROVED:	C. ROBAINA	1-29-01
SIZE: D		SCALE: 3/8"=1'-0"

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN FEET AND INCHES
TOLERANCE: ±

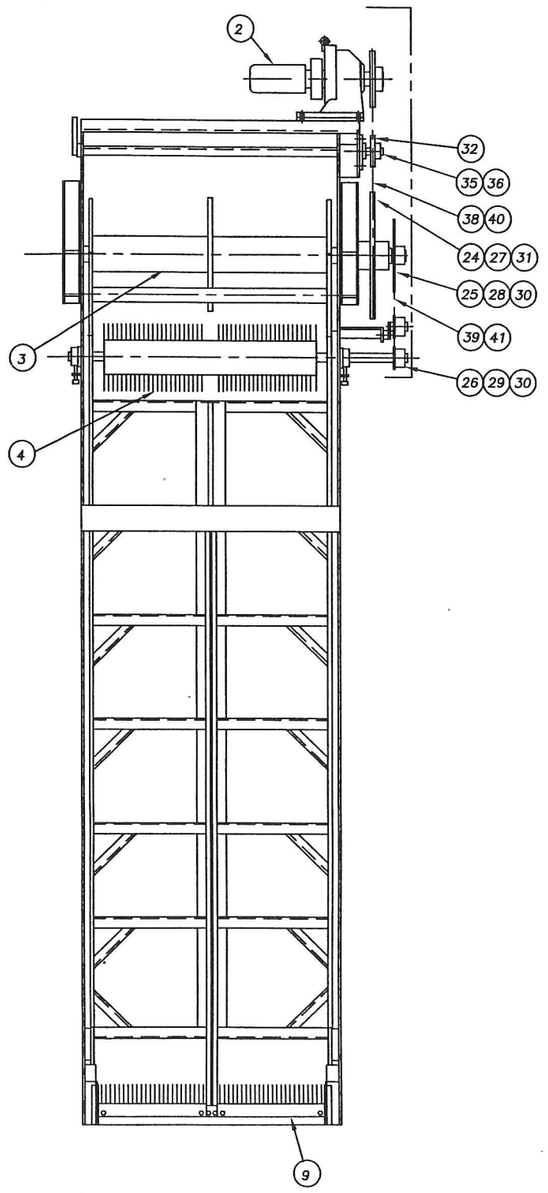
REVISION			
DATE:	BY:	CHECKED:	DESCRIPTION
4-6-01	D. ROUSSEAU	V. BERSOK	1. ADDED DIM BETWEEN CENTERLINES OF DISCHARGE AND CONVEYOR. REMOVED
APPROVED:			

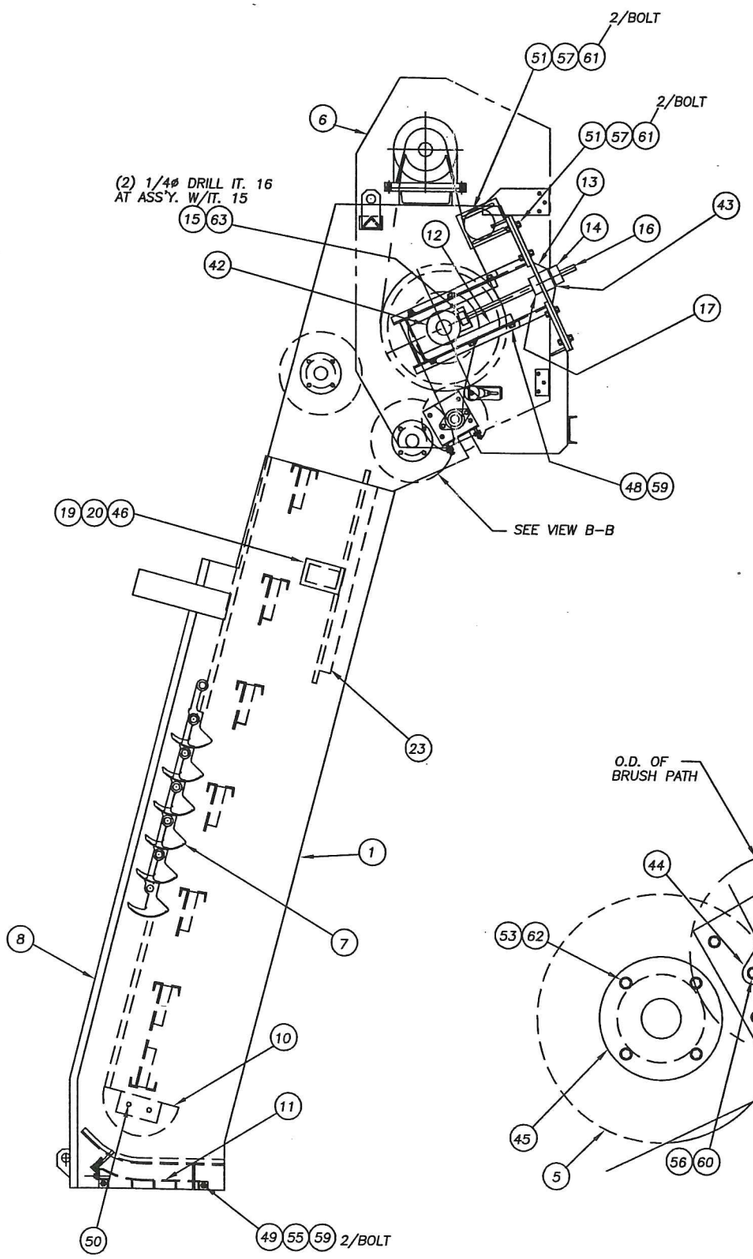
PLEASE VERIFY.

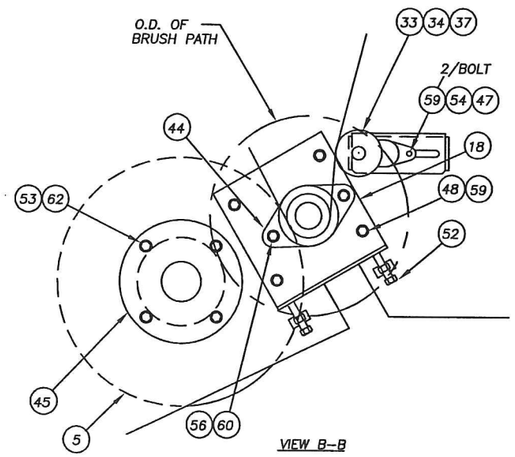
THE OWNER, PROJECT ENGINEER, AND ALL OTHERS INVOLVED WITH THE PROJECT DESIGN MUST IMPLEMENT AND FOLLOW ALL SAFETY STANDARDS REQUIRED BY LOCAL, STATE AND FEDERAL LAWS WHEN INCORPORATING PARKSON CORPORATION EQUIPMENT INTO THE OVERALL PROJECT DESIGN. PARKSON CORPORATION WILL NOT BE RESPONSIBLE FOR LOCATION AND/OR PLACEMENT OF EQUIPMENT IN THE PLANT DESIGN, NOR IS PARKSON RESPONSIBLE FOR PLANT SAFETY DESIGN AND FOR THE FAILURE TO FOLLOW APPROPRIATE SAFETY PRECAUTIONS IN THE OPERATION AND MAINTENANCE OF PARKSON CORPORATION EQUIPMENT.

NOTES:

1. FOR L.H. MACHINE, ASSEMBLE DRIVE ASS'Y. DRIVE SHAFT & SPROCKETS, BRUSH CHAIN & SPROCKETS AND CHAIN COVER ON OPP. SIDE.
2. LOCTITE #242 SHALL BE USED ON ALL SHOP ASSEMBLED FASTENERS AT ASSEMBLY UNLESS OTHERWISE NOTED.
3. ALL CHAINS & MASTER LINKS (ITEM 38–41) TO BE COTTER PIN TYPE.







VIEW B–B

ITEM NO.	QTY.	DESCRIPTION	REFERENCE	MATERIAL	REMARKS
63	2	ROLL PIN – 1/4ø X 3		SEE D.L.	
62	16	WASHER – FLAT 3/4ø (AN960) #C1216			
61	36	WASHER – FLAT 5/8ø			
60	4	WASHER – FLAT 9/16ø			
59	22	WASHER – FLAT 1/2ø			
58	12	WASHER – FLAT 3/8ø			
57	18	NUT – HEX 5/8–11			
56	4	NUT – HEX 9/16–12			
55	8	NUT – HEX 1/2–13			
54	6	NUT – HEX 3/8–16			
53	16	BOLT – HEX HD. 3/4–10 X 1 3/4			
52	4	BOLT – HEX HD. 5/8–11 X 3 FULL LGTH. THD.			
51	10	BOLT – HEX HD. 5/8–11 X 2 1/2			
50	4	BOLT – HEX HD. 5/8–11 X 2			
49	4	BOLT – HEX HD. 1/2–13 X 1 1/2			
48	20	BOLT – HEX HD. 1/2–13 X 1			
47	2	BOLT – HEX HD. 3/8–16 X 1 1/2			
46	8	BOLT – HEX HD. 3/8–16 X 3/4		SEE D.L.	
45	4	FLANGE BEARING	#044730		DODGE
44	2	FLANGE BEARING	#FX3U231N		PTC
43	2	THRUST BEARING	#T–618		ROLLWAY
42	2	TAKE UP BLOCK	#T–B22455H		PTC
41	1	MASTER LINK	#50		BROWNING
40	1	MASTER LINK	#160		
39	1	CHAIN – 156 PITCHES	#50		
38	1	CHAIN – 76 PITCHES	#160		
37	1	TIGHTENER SHAFT	#N2		
36	1	TIGHTENER SHAFT	#N5		
35	1	DRIVE TIGHTENER	#FFTQ–1		
34	1	DRIVE TIGHTENER	#ATQ		
33	1	IDLER SPROCKET	#HN50B17		BROWNING
32	1	IDLER SPROCKET	160B9F		BREWER
31	1	KEY – 7/8 SQ. X 6 3/4		SEE D.L.	
30	2	KEY – 1/2 SQ. X 2 1/2		SEE D.L.	
29	1	BUSHING – 1 15/16ø BORE	Q1		BROWNING
28	1	BUSHING – 2ø BORE	Q1		BROWNING
27	1	BUSHING – 3 3/8ø BORE	S2		BROWNING
26	1	SPROCKET	50Q23		BROWNING
25	1	SPROCKET	50Q80		BROWNING
24	1	SPROCKET	160S45		BROWNING
23	2	DECATENARY RAIL ASS'Y.	SEE D.L.		
22	1	NAME & SERIAL PLATE ASS'Y.			NOT SHOWN
21	1	LUBRICATION ASS'Y.			NOT SHOWN
20	2	GASKET – SERVICE COVER			
19	2	COVER – SERVICE OPNG.			
18	2	BRUSH BRG. MTG. PL.			
17	2	STOP NUT – ADJ. SHAFT			
16	2	ADJUSTING SHAFT			
15	2	ADJUSTING NUT BOSS			
14	2	ADJUSTING NUT			
13	2	ADJUSTING FRAME			
12	4	TAKE UP RAIL			
11	1	LOWER CURVE PLATE			
10	2	LOWER GUIDE RAIL			
9	2	FRONT SEAL ASS'Y.			
8	1	SEALS, COVERS & CHUTES ASS'Y.			NOT SHOWN
7	1	SCREEN ASS'Y.			
6	1	CHAIN COVER ASS'Y.			
5	2	ROTATING GUIDE RAIL			
4	1	ROTATING BRUSH ASS'Y.			
3	1	DRIVE SHAFT			
2	1	DRIVE ASS'Y.			
1	1	FRAME WELDMENT	SEE D.L.		

PARKSON CORPORATION

AQUA GUARD SCREEN
MAIN ASSEMBLY
AG–S DW

Drawn By: D. ROUSSEAU	Checked By: V. BERSOK	Approved By:	Micro Rev.	Ref: A00680
Date: 4–6–01	Date: 4–11–01	Date:	Date:	Size:

AG–S
W/ ROTATING GUIDE RAILS

Dwg. No. 018602–01 Rev. 0

Description / Revision / By / Chk'd / Date

Date : 09-05-01 [09:33]
Parkson Corp. Live Data
Session: TIEDMP901M000

MATERIAL LIST

Project : 200132 ROCK RIVER WRD ROCKFORD IL
E-Item : 20025301 AG-S,5'-6"x34'-6"x85degx6mm(2)
E-Item Revision: 3 Added the rest of the bill
that was deleted for shop release
Drawing/Spec Reference: 016699-01_1.dwg

Pos.	Item	Rev.	Drawing/Spec	Description	Component Type	Size	Material	Item Type	Item Group	Length [in]	Width [in]	No. of Units	Net Quantity	Unit
10	20025302	3	018602-01.dwg	Main Assy, (RH)	E-Item			M	270				1.0000	ea
20	20025303	3	018602-01.dwg	Main Assy, (LH)	E-Item			M	270				1.0000	ea
30	1003222	0	A00604 A	Service Fixture,AG-S,A-36	Item		A-36	M	360				1.0000	set
40	1006084	0		Rod,Threaded,1-8x13,304	Item	1-8	304	P	360				12.0000	ea
50	1002626	6	2a-2303 Rev F	Level Sensor Float Switch	Item	Pipe = 2'-0"	304	M	270				2.0000	ea
60	20025399	1		Spare,Parts	E-Item			M	270				1.0000	ea
				Spare Parts shall be properly bound and labeled for easy identification										
				without opening the package and suitably protected for long-term										
				storage.										
70	1006589	0	A01611	Angle,Backing,L45=10'-0",304	Item		304	P	360				4.0000	ea
80	0002811	0		Stud Anchor,3/8-16x3 3/4,304	Item		304	P	320				36.0000	ea
				HILTI #00230396										
90	0000672	0		Nut,Hex,1-8,304	Item	1-8	304	P	320				12.0000	ea
100	0001475	0		Washer,Flat,1,304	Item	1	304	P	320				12.0000	ea
110	0000815	3		Relay,Shock,w/Cur,Trans,TSB-50	Item	TSB-50		P	250				2.0000	ea
				MANUFACTURER:	U.S. Tsubaki, Inc.									
				MODEL NUMBER:	TSB-50									
				NOTES:										
				1. One (1) O & M Manual to be shipped with vendor equipment.										
				2. One (1) O & M Manual must be shipped at least (4) weeks										
				before vendor equipment is shipped. Manual to be shipped										
				to the Att'n:										
				Kirk Wong, Parkson Corporation,										
				2727 N.W. 62nd Street, Fort Lauderdale, FL. 33309										
				REVISIONS:										

MATERIAL LIST

E-Item : 20025301 AG-S,5'-6"x34'-6"x85degx6mm(2)

Pos.	Item	Rev.	Drawing/Spec	Description	Component Type	Size	Material	Item Type	Item Group	Length [in]	Width [in]	No. of Units	Net Quantity	Unit
				1. Added Text.	CSM 07/13/99									
				2.										
				3. Voided Rev.2	CSM 09/07/99									
120	10007820	0		Brush,Hilti,1",Item#00255784	E-Item			M	160				1.0000	ea
				For HY 150 Refill Pack										
130	0007668	0		Adhesive,Epoxy,Hilti HY 150,	Item	11.1 oz.		P	100				3.0000	ea
				Item HIT HY 150 #00246650										
140	0007669	0		Dispenser,Adhesive,MD2000,Hilt	Item	MD2000		P	100				1.0000	ea
				Item HIT #00229154										

CUSTOMER ITEM LIST

Date : 05-23-01 [07:11] **Page : 1**

Project: 200132
E-Item: 20025303 Main Assy, (LH)
E-Item Revision: 2 POS.70 WAS 1001880
ADDED POS.140

Drawing Reference: 018602-01.DWG

Find No.	Item	Description	Material	Net Quantity	Unit
10	20025311	Reducer,62500in.lbs.SUMITOMO MANUFACTURER: TYPE: MODEL NO: RATIO: INPUT RPM: OUTPUT RPM: MAX. OUTPUT TORQUE: ASSEMBLY: INPUT SHAFT KEYWAY: OUTPUT SHAFT DIA: OUTPUT SHAFT KEYWAY: INPUT: UNIT WEIGHT: NOTES: 1.One (1) O & M Manual to be s 2.One (1) O & M Manual must be Vendor Equipment is shipped Kirk Wong, Parkson Corporati 2727 N.W. 62nd Street, Fort 3.Unit to be C-Face input, Sol 4.Parkson to fill the Buddybox REVISIONS:		1.0000	ea

Project: 200132
E-Item: 20025303 Main Assy, (LH)

Find No.	Item	Description	Material	Net Quantity	Unit
		1. Note 4 was "Unit to be fille RMR 5-4-01			
20	0006908	Motor,3HP,XP,182TC,Baldor MANUFACTURER: TYPE: MODEL NUMBER: FRAME: RPM: POWER: SERVICE FACTOR: DUTY: INSULATION: AMBIENT TEMPERATURE: MOUNTING: FLA: NLA: APPROX. WEIGHT: EFFICIENCY: NOTES: 1.One (1) O & M Manual to be sh One (1) O & M Manual must be Vendor Equipment is shipped. Kirk Wong, Parkson Corporatio 2727 N.W. 62nd Street, Fort L 2.Nema Design B REVISIONS: 1.Description was "Motor,Spec#M Old Part# field was "NOP" Old Dwg# field was "MDR-818" Deleted "MDR-818" in form 3 o		1.0000	ea

Project: 200132
E-Item: 20025303 Main Assy, (LH)

Find No.	Item	Description	Material	Net Quantity	Unit
		Revised Text			
30	1006054	Assy,Chain Cover,#120 ,LH WITH 304 Hardware	FRP	1.0000	ea
40	0006858	Nameplate,Data,Aqua Guard Frosted Silver Aluminum	Aluminum	1.0000	ea
50	1000871	Side,Plate,AquaGuard,304	304	504.0000	ea
60	1000739	Washer,Roller,AquaGuard,D500	Delrin	252.0000	ea
70	1007742	Chain Link Assembly,AG-S,304	304	252.0000	ea
80	1000858	Element,6,2,LgHk,WShk,W/Rib Old Part Number is EL623CB	Plastic	6930.0000	ea
90	1000736	Warning Label,AquaGuard Plastic	Plastic	2.0000	ea
100	1000540	Brush,Screen,15 O.D.,Nylon Dim A=24.25 DWG 2A-2042-04 A I/B#51779-3	Nylon	2.0000	ea
110	1000722	Hub,Brush,AquaGuard,Screen DIM A=2.005 DIM B=.50 x .25 MATERIAL C=ALUMINUM	Aluminum	2.0000	ea
120	0001398	Nameplate,Parkson,5x20x.030	Aluminum	2.0000	ea
130	0000276	Ring,Ret,Truarc#5100-137-HST Do Not Reorder - Use inventory is on hand and then switch to i 0004896 per Rui.	HST	252.0000	ea
140	1007750	Chain Link Assy,Centr,AG-S,304	304	126.0000	ea

Section 8 Post-Erection Storage

The following procedure must be followed if the unit is to sit idle for more than (5) days:

1. With the correct quantity of running oil, run the unit for approximately 30 minutes each day to warm up the motor and to get any moisture out which may have accumulated due to condensation. Keep the same frequency to grease the motor bearings as under Operating Conditions.

2. If the unit cannot be run as in Paragraph (1) and equipment will remain idle for (60) days, follow Paragraph (1) in Pre-Erection Storage.

Section 9 Installation

The contractor should determine what equipment is required to install the unit using drawings attached.

(Continued on the following Page)

NOTES: FOR SPECIFIC INFORMATION REGARDING MECHANICAL OR ELECTRICAL EQUIPMENT, REFER TO THE INSTALLATION, LUBRICATION, WIRING, TEST, CHECK-OUT, START-UP TROUBLE-SHOOTING AND ALL WARNING INSTRUCTIONS CONTAINED IN THE MAINTENANCE MANUALS FOR THE SPECIFIC UNIT. AGAIN, FAILURE TO DO SO PRIOR TO INSTALLATION OR START-UP COULD RESULT IN SERIOUS DAMAGE TO THE EQUIPMENT AND VOIDANCE OF ANY WARRANTIES.

WE DO NOT ACCEPT LIABILITY FOR ANY CORRECTIVE OR OTHER WORK OR EXPENDITURES OF ANY KIND THAT HAVE NOT BEEN **AUTHORIZED** BY PARKSON CORPORATION **IN WRITING** PRIOR TO THE COMMENCEMENT OF SUCH WORK OR PRIOR TO COMMITTING TO SUCH EXPENDITURES, WITHOUT EXCEPTION.

Section 9 Installation (Cont'd)

CAUTION

Before installing the Aqua Guard unit in the channel, check that the walls of the channel are vertical (straight within 1/4") and parallel to one another. This prevents by-passing of water and debris around the unit.

CAUTION: Before installing the Aqua Guard unit make certain that all concrete, rocks, sand, wood or other materials are removed from the channel. Such material under, behind, or in the Aqua Guard unit can damage it.

A. Check that the channel width and depth are per the specifications for which the Aqua Guard was designed.

B. Check that the mounting bolts are properly spaced and firmly secured into the concrete operating floor.

C. Locating the unit in the channel:

1) Model AG-S-T: These Aqua Guard units have lifting lugs welded into place on each side of the frame near the center of gravity of the unit. To mount the Aqua Guard in position, it is recommended that hooks and cable with a spreader-bar of sufficient size and strength to support the total weight of the Aqua Guard be attached to the lifting lugs. The unit should be carefully lifted by a fork-lift truck or crane and set onto the mounting bolts. Care must be exercised to make certain that both sides of the unit are level and parallel to the channel walls.

Add additional shims and/or grout beneath the mounting plates to insure the levelness of the unit. Make sure that the flat washers and lock washers are in place on the mounting bolts and then tighten the nuts.

CAUTION

MAKE CERTAIN THAT THE AQUA GUARD IS NOT TWISTED. THE UNIT WILL BE DAMAGED IF THE FRAME IS TWISTED OR WARPED.

D. Check that the outer rubber seals are in contact with both walls of the channel along their full length from the bottom to above the maximum water level. Install back-up angles on channel wall behind screen frame. Use screen frame as template for angle location.

E. Mount the drive motor/speed reducer/chain sprocket assembly on motor mount saddle and connect the drive chains over the motor drive sprocket and the Aqua Guard drive sprocket. Adjust the main drive and brush drive idlers to insure good contact of the chains. Check to make certain that the start-up shear pin is in place.

F. Connect electrical lines to the drive motor, but **DO NOT START THE MOTOR.**

G. After the unit has been installed and properly inclined, place item 70 (the backing angle) against the downstream of the unit and against the channel wall. Use item 70 as a template to drill holes in concrete. Each unit has two backing angles on either side of the channel. Refer to drawing 016699-01 for placement. Note the 21" is the minimum distance from the channel bottom. Is better to install item 70 as close to the cover as possible.

Use item 80 to anchor item 70.

NOTE: See Mechanical Operation and Maintenance Manual before running unit.

DRAWING ADDITIONS - DETAILS

-CITY WATER SYSTEM
-PLANT WATER SYSTEM
-DRAIN AND VENT PIPING
-GRATING DETAILS

CITY WATER SYSTEM

PUMP / MOTOR ROOM

NEW 1" CITY WATER PIPING , INCREASE TO 2" AND CONNECT 2" COPPER APPROXIMATELY 6" BELOW CEILING. PROVIDE 1" UNION BEFORE THE 1"x2" REDUCER.

LOWER SCREEN ROOM

PROVIDE NEW PIPING AFTER THIS ISOLATION VALVE

PROVIDE 1" STAINLESS STEEL BACKFLOW PREVENTER WITH STAINLESS STEEL BALL VALVES EACH SIDE.

1"Ø CITY WATER; REPLACE COPPER PIPING WITH 1" SCHEDULE 80 PVC. SUPPORT OFF WALL.

1"Ø CITY WATER PIPING, SUPPORT OFF CEILING

PROVIDE 1" SCH. 80 PVC ALONG WALL AND 1" STAINLESS STEEL BALL VALVE AND BARBED HOSE CONNECTION 4' ABOVE THE FLOOR. PROVIDE SUPPORTS ON BOTH SIDES OF VALVE.

SCREEN 2

SCREEN 1

CW

MP

NOTES:

1. USE STAINLESS STEEL SUPPORTS AND HARDWARE.
2. INSULATE AND JACKET THE CITY WATER PIPING.
3. DISINFECT THE CITY WATER PIPING WITH CHLORINE SOLUTION AFTER TESTING AND PRIOR TO ACTIVATING.
4. DEMOLISH THE REMAINDER OF THE CITY WATER PIPING IN THE LOWER SCREEN ROOM.

Rock River Water Reclamation District

ROCK RIVER WATER RECLAMATION DISTRICT
3501 KISHWAUKEE STREET ROCKFORD, ILLINOIS 61109
(815) 387-7660

MAIN PUMP - SCREEN REPLACEMENT - 2019
CAPITAL IMPROVEMENT PROJECT #1858

MECHANICAL: LOWER SCREEN ROOM
CITY WATER SYSTEM

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X OF XX

Date
12/6/2018

PLANT WATER SYSTEM

NOTES:

1. CONNECTION OF NEW PVC TO EXISTING COPPER SHALL USE MALE THREADED ADAPTER ON COPPER PIPE AND FEMALE THREADED ADAPTER ON PVC PIPE AND A UNION ON THE PVC PIPING.
2. ALL WATER PIPES SHALL BE INSULATED AND JACKETED.
3. ADD STAINLESS STEEL SUPPORTS FOR ALL PIPING.
4. ALL VOIDS BETWEEN PIPES AND SLEEVES/CORES SHALL BE SEALED.

SEAL WALL SLEEVE VAPOR-TIGHT

INSTALL 2" STAINLESS STEEL BACKFLOW PREVENTER 4' ± ABOVE THE FLOOR WITH STAINLESS STEEL BALL VALVES EACH SIDE

3/4" PVC -CONNECT TO 2" PIPE DOWNSTREAM OF THE BACKFLOW PREVENTER. PROVIDE VALVE ON THE 3/4" PIPE.

OUTSIDE HOSE BIB

PVC TO EXISTING COPPER CONNECTION

OUTSIDE 4" PLANT WATER VALVE BOX

4' ABOVE THE FLOOR, CONNECT EXISTING 2" GALVANIZED STEEL TO NEW 2" PVC PIPING.

CONNECT 2" PVC TO EXISTING 2" COPPER ±2' INSIDE PUMP / MOTOR ROOM.

PUMP / MOTOR ROOM

2" STAINLESS STEEL BALL VALVES

2"x2"x1" TEE DOWN WITH 1" STAINLESS STEEL BALL VALVE WITH BARBED HOSE CONNECTION

2" TO 1" REDUCER

DROP FOR 1" STAINLESS STEEL BALL VALVE WITH BARBED HOSE CONNECTION, SUPPORT BOTH SIDES OF THE VALVE.

1" TO UPPER SCREEN ROOM, CONNECT TO EXISTING COPPER PIPE 18" ± ABOVE THE FLOOR IN THE UPPER SCREEN ROOM.

LOWER SCREEN ROOM

2" TO 1" REDUCER

1" TO UPPER SCREEN ROOM

SCREEN 2

SCREEN 1

REPLACE PLANT WATER TO AND INCLUDING HOSE BIB IN UPPER SCREEN ROOM. INSTALL NEW HOSE BIB 3' ABOVE THE FLOOR.

DROP FOR 1" STAINLESS STEEL BALL VALVE WITH BARBED HOSE CONNECTION, SUPPORT BOTH SIDES OF THE VALVE.

REPLACE PLANT WATER TO AND INCLUDING HOSE BIB IN LOADING AREA.

1" TO 3/4" REDUCER

3/4" PIPING

3/4" STAINLESS STEEL BALL VALVE

PVC TO EXISTING COPPER CONNECTION

OUTSIDE HOSE BIB

Rock River Water Reclamation District

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MAIN PUMP - SCREEN REPLACEMENT - 2019
CAPITAL IMPROVEMENT PROJECT #1858

MECHANICAL: LOWER SCREEN ROOM
PLANT WATER SYSTEM

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Date
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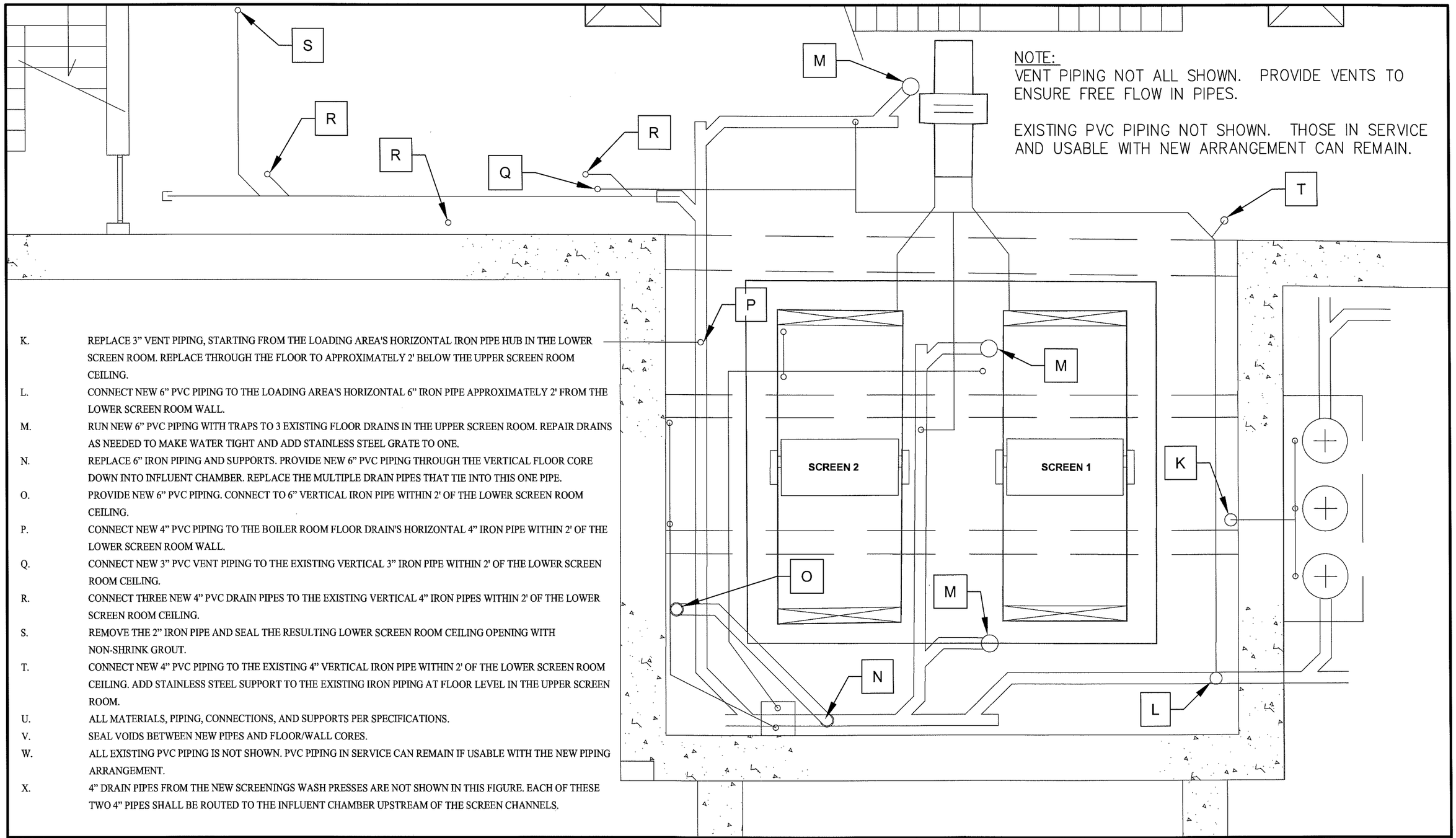

NOTE:
VENT PIPING NOT ALL SHOWN. PROVIDE VENTS TO ENSURE FREE FLOW IN PIPES.

EXISTING PVC PIPING NOT SHOWN. THOSE IN SERVICE AND USABLE WITH NEW ARRANGEMENT CAN REMAIN.

K. REPLACE 3" VENT PIPING, STARTING FROM THE LOADING AREA'S HORIZONTAL IRON PIPE HUB IN THE LOWER SCREEN ROOM. REPLACE THROUGH THE FLOOR TO APPROXIMATELY 2' BELOW THE UPPER SCREEN ROOM CEILING.

L. CONNECT NEW 6" PVC PIPING TO THE LOADING AREA'S HORIZONTAL 6" IRON PIPE APPROXIMATELY 2' FROM THE LOWER SCREEN ROOM WALL.

M. RUN NEW 6" PVC PIPING WITH TRAPS TO 3 EXISTING FLOOR DRAINS IN THE UPPER SCREEN ROOM. REPAIR DRAINS AS NEEDED TO MAKE WATER TIGHT AND ADD STAINLESS STEEL GRATE TO ONE.

N. REPLACE 6" IRON PIPING AND SUPPORTS. PROVIDE NEW 6" PVC PIPING THROUGH THE VERTICAL FLOOR CORE DOWN INTO INFLUENT CHAMBER. REPLACE THE MULTIPLE DRAIN PIPES THAT TIE INTO THIS ONE PIPE.

O. PROVIDE NEW 6" PVC PIPING. CONNECT TO 6" VERTICAL IRON PIPE WITHIN 2' OF THE LOWER SCREEN ROOM CEILING.

P. CONNECT NEW 4" PVC PIPING TO THE BOILER ROOM FLOOR DRAIN'S HORIZONTAL 4" IRON PIPE WITHIN 2' OF THE LOWER SCREEN ROOM WALL.

Q. CONNECT NEW 3" PVC VENT PIPING TO THE EXISTING VERTICAL 3" IRON PIPE WITHIN 2' OF THE LOWER SCREEN ROOM CEILING.

R. CONNECT THREE NEW 4" PVC DRAIN PIPES TO THE EXISTING VERTICAL 4" IRON PIPES WITHIN 2' OF THE LOWER SCREEN ROOM CEILING.

S. REMOVE THE 2" IRON PIPE AND SEAL THE RESULTING LOWER SCREEN ROOM CEILING OPENING WITH NON-SHRINK GROUT.

T. CONNECT NEW 4" PVC PIPING TO THE EXISTING 4" VERTICAL IRON PIPE WITHIN 2' OF THE LOWER SCREEN ROOM CEILING. ADD STAINLESS STEEL SUPPORT TO THE EXISTING IRON PIPING AT FLOOR LEVEL IN THE UPPER SCREEN ROOM.

U. ALL MATERIALS, PIPING, CONNECTIONS, AND SUPPORTS PER SPECIFICATIONS.

V. SEAL VOIDS BETWEEN NEW PIPES AND FLOOR/WALL CORES.

W. ALL EXISTING PVC PIPING IS NOT SHOWN. PVC PIPING IN SERVICE CAN REMAIN IF USABLE WITH THE NEW PIPING ARRANGEMENT.

X. 4" DRAIN PIPES FROM THE NEW SCREENINGS WASH PRESSES ARE NOT SHOWN IN THIS FIGURE. EACH OF THESE TWO 4" PIPES SHALL BE ROUTED TO THE INFLUENT CHAMBER UPSTREAM OF THE SCREEN CHANNELS.

Rock River Water Reclamation District

ROCK RIVER WATER RECLAMATION DISTRICT
3501 KISHWAUKEE STREET ROCKFORD, ILLINOIS 61109
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MAIN PUMP - SCREEN REPLACEMENT - 2019
CAPITAL IMPROVEMENT PROJECT #1858

MECHANICAL: LOWER SCREEN ROOM DRAIN AND VENT PIPING

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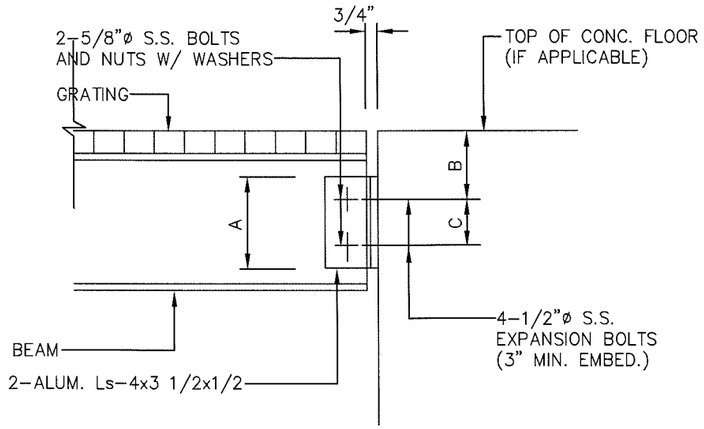
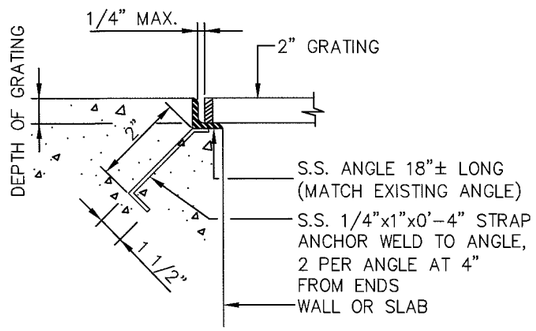
Date
12/6/2018



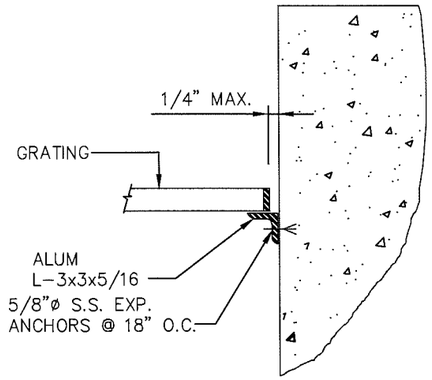
TYPE	BEAM	A	B	C
ALUM. ASSOC. STD. I BEAM	8x5.62 #/FT.	6"	4 1/2"	3"

GRATING SUPPORT BEAM CONNECTION DETAIL



AT TOP SCREEN CHANNEL REPAIRS

NOTE: GRATING SHALL BE REMOVABLE.
PROVIDE RETAINING CLIPS TO PREVENT FLOATING IN THE LOWER SCREEN ROOM.
ANGLES SHALL BE WELDED TO THE EXISTING ANGLES AND SECURED IN PLACE UNTIL CONCRETE CURES.



ON FACE OF NEW OR EXIST. CONC. WALL

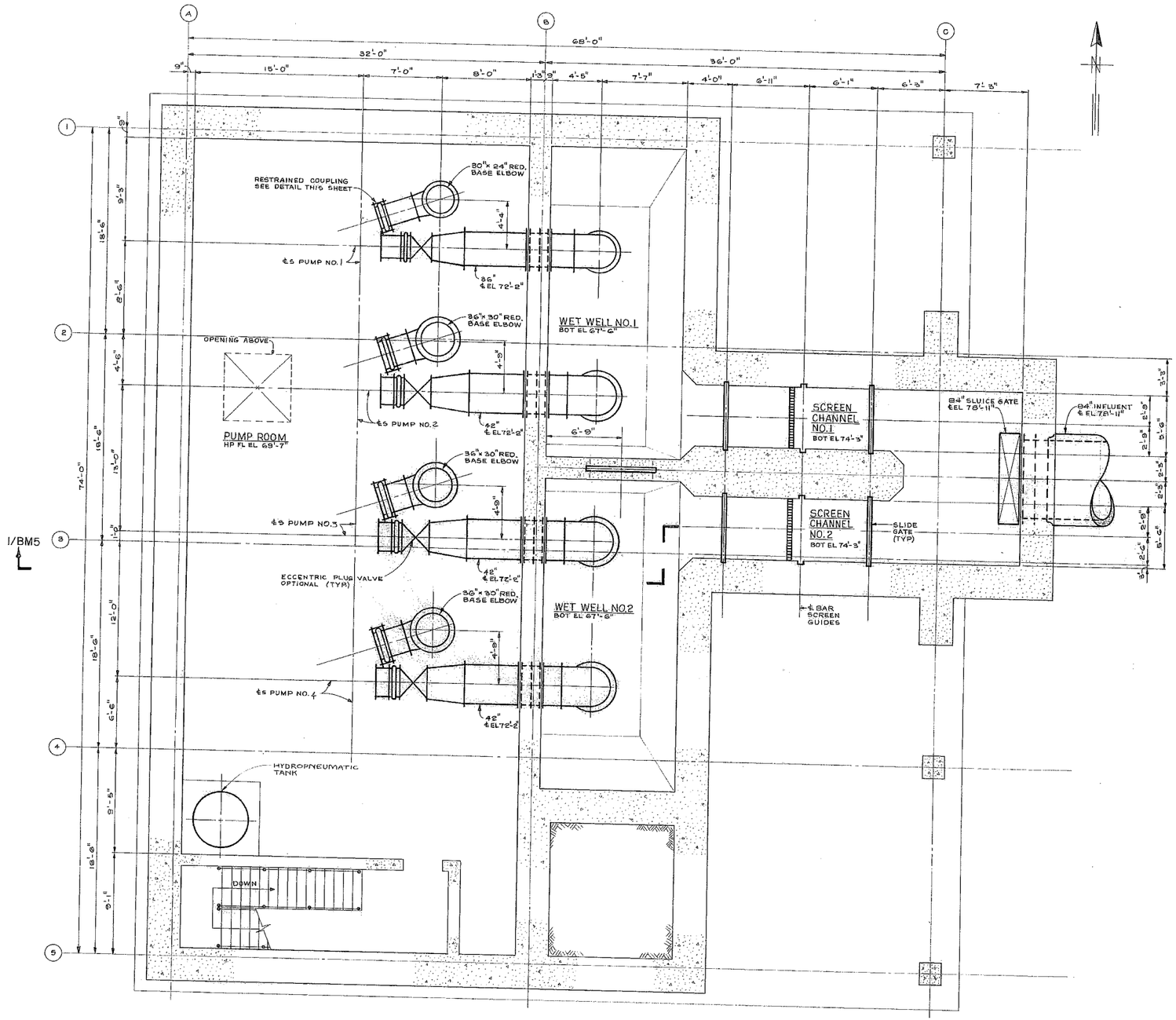
GRATING SUPPORT DETAILS

Rock River Water Reclamation District ROCK RIVER WATER RECLAMATION DISTRICT 3501 KISHWAUKEE STREET ROCKFORD, ILLINOIS 61109 (815) 387-7660	MAIN PUMP - SCREEN REPLACEMENT - 2019 CAPITAL IMPROVEMENT PROJECT #1858	GRATING DETAILS	Sheet No. X OF XX
			Date 12/6/2018

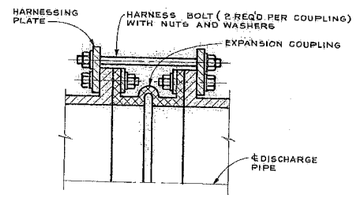
EXISTING MAIN PUMP STATION

RECORD DRAWINGS FOR INFORMATION ONLY

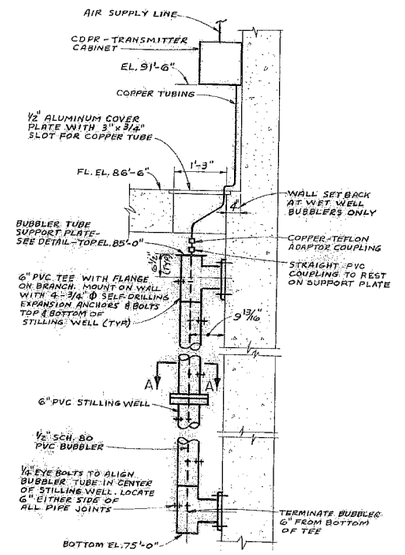
(These drawings do not necessarily represent current equipment conditions.)



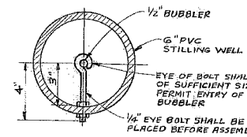
PLAN - FL EL 69'-7"
SCALE 1/4" = 1'-0"



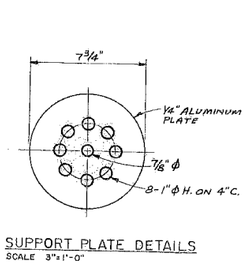
RESTRAINED COUPLING DETAIL
NOT TO SCALE



ELEVATION
SCALE 3/4" = 1'-0"

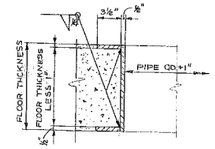


SECTION A
SCALE 3" = 1'-0"



SUPPORT PLATE DETAILS
SCALE 3" = 1'-0"

BUBBLER TUBE STILLING WELL DETAILS



PIPE OPENING THRU FLOOR
SCALE: 1 1/2" = 1'-0"

RECORD DRAWING
THIS RECORD DRAWING IS NOT WARRANTED BUT IS BELIEVED TO REPRESENT CONDITIONS UPON COMPLETION OF CONSTRUCTION WITHIN REASONABLE ENGINEERING BASED UPON THE INFORMATION FURNISHED TO THE ENGINEER PERTAINING TO CHANGES MADE DURING CONSTRUCTION.

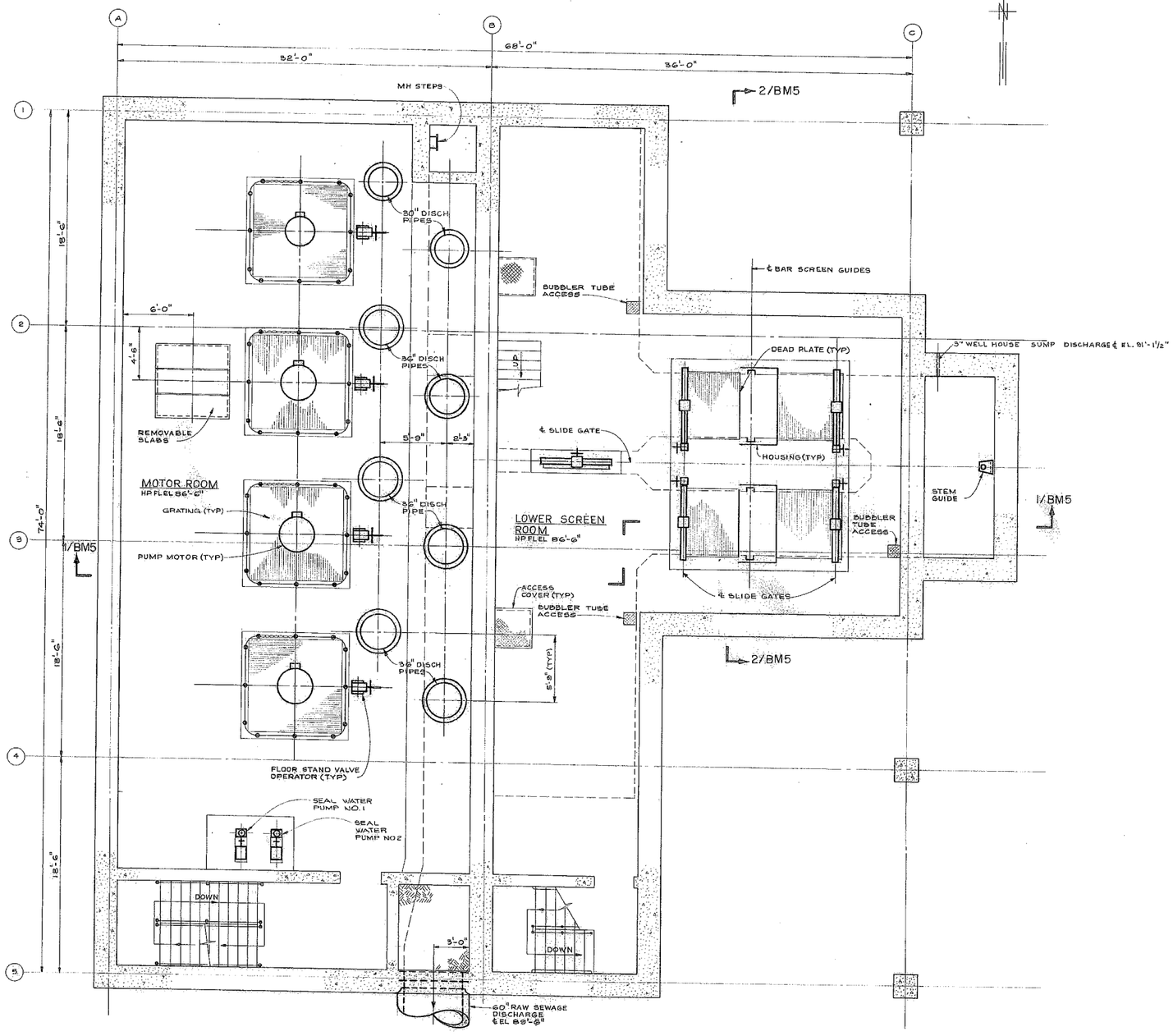
VFD ONLY

Michael R. Ale

GREELEY AND HANSEN ENGINEERS 222 S. RIVERSIDE PLAZA CHICAGO, ILLINOIS 60606	DESIGNED P G DRAWN Z S CHECKED J P	APPROVED	NO. DATE APPD REVISION	SCALE	THE SANITARY DISTRICT OF ROCKFORD ROCKFORD, ILLINOIS DIVISION TPI-S SEWAGE TREATMENT PLANT ADDITIONS

MAIN PUMPING STATION NO.2
EQUIPMENT
PLAN - EL. 69'-7" AND DETAILS

PROJ NO. 0772-300
DWG BMI
SHEET 13 OF 63

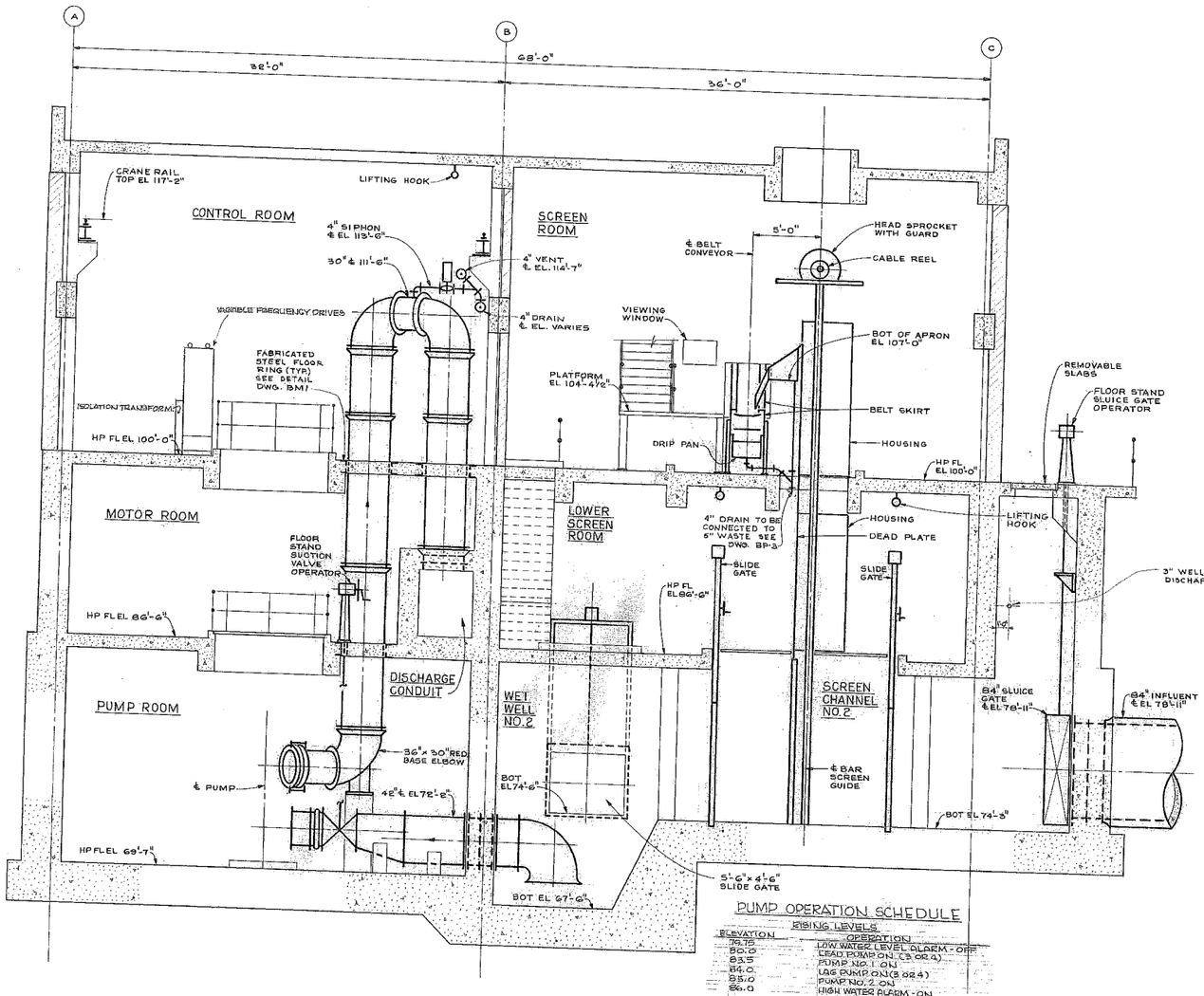


PLAN - FL EL 86'-6"

RECORD DRAWING

THIS RECORD DRAWINGS IS NOT WARRANTED BUT IS BELIEVED TO REPRESENT CONDITIONS UPON COMPLETION OF CONSTRUCTION, WITHIN REASONABLE TOLERANCES, BASED UPON THE INFORMATION FURNISHED TO THE ENGINEER PERTAINING TO CHANGES MADE DURING CONSTRUCTION.

GREELEY AND HANSEN ENGINEERS 222 S. RIVERSIDE PLAZA CHICAGO, ILLINOIS 60606	DESIGNED PG DRAWN ZS CHECKED JP	APPROVED	NO. DATE APPD REVISION	SCALE	THE SANITARY DISTRICT OF ROCKFORD ROCKFORD, ILLINOIS DIVISION TPI-S SEWAGE TREATMENT PLANT ADDITIONS	MAIN PUMPING STATION NO.2 EQUIPMENT PLAN - EL. 86'-6"	PROJ NO. 0772-300 DWG BM2 SHEET 14 OF 63 DATE MARCH, 1977 REV 0



SECTION 1/BM 1,2,3,4,

PUMP OPERATION SCHEDULE

RISING LEVELS

ELEVATION	OPERATION
79.75	LOW WATER LEVEL ALARM - OFF
80.0	LEAD PUMP ON (3.92.4)
83.5	PUMP NO. 1 ON
84.0	LAG PUMP ON (3.92.4)
85.0	PUMP NO. 2 ON
86.0	HIGH WATER ALARM - ON

FALLING LEVELS

85.5	HIGH WATER ALARM - OFF
84.5	PUMP NO. 2 OFF
84.0	LAG PUMP OFF (3.92.4)
83.0	PUMP NO. 1 OFF
80.0	LEAD PUMP OFF (3.92.4)
79.25	LOW WATER LEVEL ALARM - ON

VFD ONLY

RECORD DRAWING
THIS RECORD DRAWING IS NOT WARRANTED BUT IS BELIEVED TO REPRESENT CONDITIONS UPON COMPLETION OF CONSTRUCTION WITHIN REASONABLE TOLERANCES, BASED UPON THE INFORMATION FURNISHED TO THE ENGINEER PERTAINING TO CHANGES MADE DURING CONSTRUCTION.

Michael R. Olson

REVISED 1-26-87 ADDED VFD'S AND PUMP OPERATION SCHEDULE (M. Olson)

GREELEY AND HANSEN
ENGINEERS
222 S. RIVERSIDE PLAZA
CHICAGO, ILLINOIS 60606

DESIGNED P G
DRAWN Z S
CHECKED J P
APPROVED

NO.	DATE	APPD	REVISION

SCALE

THE SANITARY DISTRICT OF ROCKFORD
ROCKFORD, ILLINOIS
DIVISION TPI-S
SEWAGE TREATMENT PLANT ADDITIONS

MAIN PUMPING STATION NO. 2
EQUIPMENT
SECTION

PROJ NO. 0772-300
DWG BM5
SHEET 17 OF 63
DATE MARCH 1977 REV. 0