

CITY OF GRAND JUNCTION

BID DOCUMENTS

FOR

Primary Clarifier Rehabilitation Project

IFB-4105-15-NJ



August, 2015

Book No. ____

CITY OF GRAND JUNCTION
DEPARTMENT OF PUBLIC WORKS AND PLANNING
ENGINEERING DIVISION

BID DOCUMENTS
FOR
Primary Clarifier Rehabilitation Project

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BID INFORMATION

INVITATION TO BID

The City of Grand Junction will receive sealed bids at the Office of the City Clerk at City Hall, 250 North Fifth Street, Grand Junction, Colorado, 81501, prior to 2:00 p.m. on Tuesday, September 22, 2015 for the Primary Clarifier Rehabilitation Project. All bids will be opened and read aloud at the City Auditorium immediately following the submittal deadline. The project generally consists of painting the Scum Deflector Assembly, Truss Bridge Assembly, Center Pier Assembly, Spur Gear Drive Assembly, Drive Gear Assembly, Influent well Assembly, and the Clevis Rod Assembly. This work will be performed on both of the Primary Clarifiers. The Primary Clarifier tanks are located at the Persigo Waste Water Treatment Plant at 2145 River Road.

Contractors submitting bids over \$50,000 must be prequalified in accordance with the City's "Rules and Procedures for Prequalification of Contractors." Application forms for prequalification are available at the Administration Office of the Department of Public Works and Planning (970-256-4126) or on the Public Works & Planning/Engineering page at www.gjcity.org. Prequalification applications must be submitted two weeks prior to bid opening date. Bids received from non-prequalified contractors will not be opened.

The July 2010 edition of the "City Standard Contract Documents for Capital Improvements Construction", Plans, Specifications and other Bid Documents are available for review or download on the Public Works & Planning/Engineering page at www.gjcity.org. Electronic copies may be obtained on a CD format at the Department of Public Works and Planning at City Hall.

For technical information, please contact Justin Vensel, Project Engineer at the Department of Public Works (970-256-4017).

For contractual information, please contact Nick Jones, Buyer (970-244-1533).

A pre-bid meeting will be held on site 10:00 a.m. on September 16, 2015. Attendance at the meeting is mandatory.

The City Clerk's Office will stamp the date and mark the time received on all bids. Bids not received prior to the date and time indicated on the Invitation to Bid will not be considered. The City is not responsible for delays occasioned by the U.S. Postal Service, the internal mail delivery system of the City, or any other means of delivery employed by the Bidder.

Each Bid shall be submitted on a form furnished by the City and must be accompanied by a certified check, cashier's check or Bid Bond in an amount not less than 5% of the amount of the Bid and made payable to the City of Grand Junction, Colorado. The successful Bidder will be required to furnish a Performance Bond and a Labor and Material Payment Bond, both in the amount of 100% of the total Contract amount, in conformity with the requirements of the Contract Documents and on forms provided by the City.

CITY OF GRAND JUNCTION, COLORADO

Nick Jones, Buyer

Published: The Daily Sentinel – August 30, September 6, and September 13, 2015

CITY OF GRAND JUNCTION
DEPARTMENT OF PUBLIC WORKS AND PLANNING
ENGINEERING DIVISION

INSTRUCTIONS TO BIDDERS

The following instructions are given for the purpose of guiding Bidders in properly preparing their bids and constitute a part of the *Contract Documents* and shall be strictly complied with.

1. Definitions and Terms. See Article I, Section 3 of the General Contract Conditions in the *Standard Contract Documents for Capital Improvements Construction*.
2. Copies of Bid Documents. Complete sets of the *Bid Documents* may be reviewed at the Administration Office of the Department of Public Works and Utilities at City Hall, 250 North 5th Street, Grand Junction, Colorado 81501.

Complete sets of *Bid Documents* shall be used in preparing Bids; neither City nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of *Bid Documents*.

City and Engineer in making copies of *Bid Documents* available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

3. Prequalification of Bidders: Contractors submitting bids over \$50,000 must be prequalified in accordance with the City's "Rules and Procedures for Prequalification of Contractors." Application forms for prequalification are available at the Administration Office of the Department of Public Works and Utilities. Contractors who are currently prequalified with the Colorado Department of Transportation (CDOT) will meet the requirements for prequalification by the City, unless the City has information or basis to the contrary. Application forms for Contractor prequalification are available at the Administration Office of the Department of Public Works and Utilities, City Hall, 250 North 5th Street, Grand Junction, CO, 81501.
4. Liquidated Damages for Failure to Enter Into Contract. Should the Successful Bidder fail or refuse to enter into the Contract within ten Calendar Days from the issuance of the Notice of Award, the City shall be entitled to collect the amount of such Bidder's Bid Guaranty as Liquidated Damages, not as a penalty but in consideration of the mutual release by the City and the Successful Bidder of all claims arising from the City's issuance of the Notice of Award and the Successful Bidder's failure to enter into the Contract and the costs to award the Contract to any other Bidder, to readvertise, or otherwise dispose of the Work as the City may determine best serves its interest.

5. Time of Completion. Time is of the essence with respect to the time of completion of the Project and any other milestones or deadline which are part of the Contract. It will be necessary for each Bidder to satisfy the City of its ability to complete the Work within the Contract Time set forth in the Contract Documents.
6. Examination of Contract Documents and Site. Before submitting a Bid, each Bidder shall:
 - a. Examine the *Contract Documents* thoroughly;
 - b. Visit the site to familiarize itself with local conditions that may in any manner affect cost, progress, or performance of the Work;
 - c. Become familiar with federal, state, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress or performance of the Work;
 - d. Study and carefully correlate Bidder's observations with the *Contract Documents*, and;
 - e. Notify the Engineer of all conflicts, errors, ambiguities or discrepancies in or among the *Contract Documents*

On request, the City will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of a Bid. It shall be the Bidder's responsibility to make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (including without limitation, surface, subsurface and underground utilities) at or contiguous to the site or otherwise which may affect cost, progress or performance of the work and which the Bidder deems necessary to determine its Bid for performing the work in accordance with the time, price and other terms and conditions of the Contract Documents. Location of any excavation or boring made by Bidder shall be subject to prior approval of City and applicable agencies. Bidder shall fill all holes, restore all pavements to match the existing structural section and shall clean up and restore the site to its former condition upon completion of such exploration. The City reserves the right to require the Bidder to execute an access agreement with the City prior to accessing the site.

The lands upon which the Work is to be performed, rights of way, and access thereto, and other lands designated for use by Contractor in performing the Work, are identified on the Drawings.

Information and data reflected in the *Contract Documents* with respect to underground utilities at or contiguous to the site are based upon information and data furnished to the City and the Engineer by the owners of such underground utilities or others, and the City does not assume responsibility for the accuracy or completeness thereof, unless it is expressly provided otherwise in the *Contract Documents*.

By submission of a Bid, the Bidder shall be conclusively presumed to represent that the Bidder has complied with every requirement of these Instructions to Bidders, that the *Contract Documents* are not ambiguous and are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

7. Interpretations. All questions about the meaning or intent of the *Contract Documents* shall be submitted to the Engineer in writing.

Written comments or questions must be received by the Engineer at least forty-eight (48) hours (excluding Saturdays, Sundays, and Holidays) prior to the time set for Bid Opening.

If questions received by the Engineer are deemed to be sufficiently significant and received sufficiently in advance of the Bid opening, an Addendum to the *Bid Documents* may be issued. Otherwise, a written copy of the question and decision or interpretation will be posted in the Engineer's office. It shall be the responsibility of each Bidder to make itself aware of all such posted questions and decisions or interpretations and, by submitting a Bid, each Bidder shall be conclusively be deemed to have such knowledge. After Bid Opening, all Bidders must abide by the decision of the Engineer as to all such decisions or interpretations. Bidders may not rely upon oral interpretations of the meaning of the plans, specifications or other bid documents and any oral or other interpretations or clarifications will be without legal force or effect.

8. Quantities of Work. Materials or quantities stated as unit price items in the Bid are supplied only to give an indication of the general scope of the Work. The City does not expressly or by implication agree that the actual amount of Work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit item of the Work without a change in the unit price except as set forth in Article VIII, Section 70 of the *General Contract Conditions*. The City also reserves the right to make changes in the Work (including the right to delete any bid item in its entirety or add additional bid items) as set forth in Article VIII, Sections 69 through 71 of the *General Contract Conditions*.

9. Substitutions. The materials, products and equipment described in the *Bid Documents* shall be regarded as establishing a standard of required performance, function, dimension, appearance, or quality to be met by any proposed substitution. No substitution will be considered prior to receipt of Bids unless the Bidder submits a written request for approval to the Engineer at least ten (10) days prior to the date for receipt of Bids. Such requests for approval shall include the name of the material or equipment for which substitution is sought and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for evaluation, including samples if requested. The Bidder shall set forth changes in other materials, equipment, or other portions of the Work including changes of the work of other contracts, which incorporation of the proposed substitution would require to be included. The Engineer's decision of approval or disapproval of a proposed substitution shall be final. If the Engineer approves a proposed substitution before receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

10. Bid Guaranty. Each Bid shall as a guaranty of good faith on the part of the Bidder be accompanied by a Bid Guaranty consisting of: a certified or cashier's check drawn on an approved national bank or trust company in the State of Colorado, and made payable without condition to the City; or a Bid Bond in the form set forth in the *Bid Documents* executed by an approved corporate surety in favor of the City. The amount of the Bid Guaranty shall not be less than 5% of the total Bid amount.

Once the City issues a Notice of Award, the apparent Successful Bidder has ten (10) Calendar Days to enter into a Contract in the form prescribed and to furnish the required Performance and Payment Bonds. Failure to do so will result in forfeiture of the Bid Guaranty to the City as Liquidated Damages.

Bid Guaranties for all except the three lowest qualified Bids shall be returned within five (5) Working Days of Bid Opening. When the Successful Bidder files satisfactory Performance and Payment Bonds and Certificates of Insurance, the Bid Guaranties of the three lowest Bidders shall be returned.

Each bidder shall guaranty its total bid price for a period of ninety (90) Calendar Days from the date of the bid opening. Except for forfeiture due to reasons discussed above, Bid Guaranties of all Bidders shall be returned to them within ninety (90) Calendar Days from the date of Bid Opening.

11. Bid Form. The Bid Form, provided by the City, must be completed in ink or by typewriter.

The Bidder shall specify a unit price in figures for each pay item for which a quantity is given and shall provide the products (in numbers) of the respective unit prices and quantities in the Extended Amount column. The total Bid price shall be equal to the sum of all extended amount prices. When an item in the Bid Schedule provides a choice to be made by the Bidder, Bidder's choice shall be indicated in accordance with the specifications for that particular item and thereafter no further choice shall be permitted.

Where the unit of a pay item is lump sum, the lump sum amount shall be shown in the "extended amount" column and included in the summation of the total Bid.

All blank spaces in the Bid Form must be properly filled out.

Bids by corporations must be executed in the corporate name by the president or vice president or other corporate office accompanied by evidence of authority to sign. The corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

Bids by partnerships must be executed in the partnership name and signed by a partner whose title must appear under the signature and the official address of the partnership must be shown below the signature.

All names must be typed or printed below the signature.

The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

The address to which communications regarding the Bid are to be directed must be shown.

12. Irregular Bids. A Bid will be considered irregular and may be rejected for the following reasons:
 - a. Submission of the Bid on forms other than those supplied by the City;
 - b. Alteration, interlineation, erasure, or partial detachment of any part of the forms which are supplied herein;
 - c. Inclusion of unauthorized additions conditional or alternate Bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite, or ambiguous as to its meaning;
 - d. Failure to acknowledge receipt of any or all issued Addenda;
 - e. Failure to provide a unit price or a lump sum price, as appropriate, for each pay item listed except in the case of authorized alternative pay items;
 - f. Failure to list the names of Subcontractors used in the Bid preparation as required in the Bid Form;
 - g. Submission of a Bid that in the opinion of the City Manager is unbalanced so that each item does not reasonably carry its own proportion of cost or which contains inadequate or unreasonable prices for any item;
 - h. Tying of the Bid with any other bid or contract; and
 - i. Failure to calculate Bid prices as described herein.
13. Submission of Bids. The completed Bid Form and Bid Guaranty shall be submitted at the time and place indicated in the Invitation to Bid and must be in a ten-inch by thirteen-inch opaque sealed envelope marked SEALED BID with the project title and the name and address of the Bidder.
14. Modification and Withdrawal of Bids Before Opening. Bids may be modified or withdrawn by an appropriate document duly executed and delivered to the place where Bids are to be submitted at any time prior to Bid Opening.
15. Opening of Bids. Bids will be opened and read aloud at the time and place stated in the Invitation to Bid. All Bidders, their representatives, and other interested parties are encouraged to attend the Bid Opening.

Within five (5) Working Days after Bid Opening, all Bids will be tabulated and copies sent to all Bidders. The bid tabulation sheet(s) will be available to the public.

16. Disqualification of Bidders. A Bid will not be accepted from, nor shall a Contract be awarded to, any person, firm, or corporation that is in arrears to the City, upon debt or contract, or that has defaulted, as surety or otherwise, upon any obligation to the City, or that is deemed irresponsible or unreliable.

Bidders may be required to submit satisfactory evidence that they are responsible, have a practical knowledge of the project bid upon and that they have the necessary financial and other resources to complete the proposed Work.

Either of the following reasons, without limitation, shall be considered sufficient to disqualify a Bidder and Bid:

- a. More than one Bid is submitted for the same Work from an individual, firm, or corporation under the same or different name; and
 - b. Evidence of collusion among Bidders. Any participant in such collusion shall not receive recognition as a Bidder for any future work of the City until such participant has been reinstated as a qualified bidder.
17. Withdrawal of Bids After Opening. No Bid may be withdrawn by any bidder for sixty-five (65) Calendar Days after the Bid Opening.
18. Evaluation of Bids and Bidders. The City reserves the right to:
- reject any and all Bids,
 - waive any and all informalities,
 - negotiate final terms with the Successful Bidder, and
 - disregard any and all nonconforming, nonresponsive or conditional Bids.

Discrepancies between words and figures will be resolved in favor of words. Discrepancies between Unit Prices and Extended Prices will be resolved in favor of the Unit Prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. The corrected extensions and totals will be shown in the tabulation of Bids.

The City may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of Subcontractors and other persons and organizations must be submitted. Operating costs, maintenance considerations performance data, and guarantees of materials and equipment may also be considered by the City.

The City will conduct such investigations as deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the Work in accordance with the *Contract Documents* to the City's satisfaction within the Contract Time.

The Bidder shall furnish the City all information and data requested by the City to determine the ability of the Bidder to perform the Work. The City reserves the right to reject the Bid if the evidence submitted by, or investigation of such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein.

By submitting a Bid, each Bidder authorizes the City to perform such investigation of the Bidder as the City deems necessary to establish the responsibility, qualifications and financial ability of the Bidder and, by its signature thereon, authorizes the City to obtain reference information concerning the Bidder and releases the party providing such information and the City from any and all liability to the Bidder as a result of such reference information so provided.

The City reserves the right to reject the Bid of any Bidder who does not pass any evaluation to the City's satisfaction.

If the Contract is to be awarded, it will be awarded to the Bidder who, by evaluation, the City determines will best meet the City's interests.

The City reserves the right to accept or reject the Work contained in any of the Bid Schedules or alternates, either in whole or in part.

19. Award of Contract. Unless otherwise indicated, a single award will be made for all the bid items in an individual bid schedule. In the event that the Work is contained in more than one Bid Schedule, the City may award Schedules individually or in combination. In the case of two Bid Schedules which are alternative to each other, only one of such alternative Schedules will be awarded. Within forty-five (45) Calendar Days of Bid Opening, the City will issue a Notice of Award to the Successful Bidder which will be accompanied by four (4) unsigned copies of the Contract and the Performance and Payment Bond forms. Within ten (10) Calendar Days thereafter, the Successful Bidder shall sign and deliver four (4) copies of the Contract, Performance Bond, Payment Bond and Certificates of Insurance to the City. Within ten (10) Calendar Days thereafter, the City will deliver two (2) fully executed counterparts of the Contract to the Contractor. No contract shall exist between the Successful Bidder and the City and the Successful Bidder shall have no rights at law or in equity until the Contract has been duly executed by the City.

The Successful Bidder's failure to sign and submit a Contract and other documents set forth in this Paragraph within the prescribed time shall be just cause of annulment of the award, and forfeiture of the Bid Guaranty. The award of Contract may then be made to the next qualified Bidder in the same manner as previously prescribed.

20. Insurance. The Contractor shall secure and maintain such insurance policies as will provide the coverage and contain other provisions specified in the General Contract Conditions, or as modified in the Special Contract Conditions.

The Contractor shall file four (4) copies of the policies or Certificates of Insurance acceptable to the City with the Engineer within ten (10) Calendar Days after issuance of the Notice of Award. These Certificates of Insurance shall contain a provision that coverage afforded under the policies shall not be canceled unless at least thirty (30) Calendar Days prior written notice has been given to the City.

21. Sales and Use Taxes. The Contractor and all Subcontractors are required to obtain exemption certificates from the Colorado Department of Revenue for sales and use taxes in accordance with the provisions of the General Contract Conditions. Bids shall reflect this method of accounting for sales and use taxes on materials, fixtures and equipment.
22. Affirmative Action. In executing a Contract with the City, the Contractor agrees to comply with Affirmative Action and Equal Employment Opportunity regulations presented in the General Contract Conditions.
23. Preconstruction Meeting. Prior to the commencement of construction activities, a preconstruction meeting shall be held which shall include the Contractor, representatives of the City, utility companies and others effected by or involved in the project. Attendance by the Contractor is mandatory.
24. Pre-Bid Meeting. See the Special Conditions for details of pre-bid meeting (if any).

BID FORMS

CITY OF GRAND JUNCTION
DEPARTMENT OF PUBLIC WORKS AND PLANNING
ENGINEERING DIVISION

BID FORM
FOR
Primary Clarifier Rehabilitation Project

TO: The City of Grand Junction
250 North Fifth Street
Grand Junction, Colorado 81501-2668

The undersigned Bidder, having thoroughly examined the Construction Drawings, Specifications, and other Bid Documents; having investigated the location of, and conditions affecting the proposed work, and being acquainted with and fully understanding the extent and character of the Work covered by this Bid; and all other factors and conditions affecting or which may be affected by the Work:

HEREBY PROPOSES and agrees, if this Bid is accepted, to enter into a Contract with the City on the form included in the *Contract Documents* and to furnish all required materials, tools, equipment, and plant; to perform all necessary labor and superintendence; and to undertake and complete the Work or approved portions thereof, in full accordance with and in conformity with the Construction Drawings, Specifications, and all other Contract Documents hereto attached or by reference made a part hereof, and for the following prices.

Bid Schedule: Primary Clarifier Rehabilitation Project

Company Name: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	SP	Clean and Painting of Clarifier #1. Abbrasive blasting for all metal components within the structure as described. Painting of the compnents per special provision utilizing Tnemec Co product or Engineer approved equal		Lump sum	- - -	\$ _____
2	SP	Clean and Painting Clarifier of #2. Abbrasive blasting for all metal components within the structure as described. Painting of the compnents per special provision utilizing Tnemec Co product or Engineer approved equal		Lump sum	- - -	\$ _____
3	SP	Welding for miscellaneous repairs	50.	LF	\$ _____	\$ _____
MCR		Minor Contract Revisions			- - -	\$ <u>30,000.00</u>
Bid Amount:						\$ _____

Bid Amount:

dollars

The undersigned Bidder hereby agrees to execute the Contract in conformity with this Bid, to have ready and furnish the required Payment and Performance Bonds, executed by a Surety acceptable to the City and provide Certificates of Insurance evidencing the coverage and provisions set forth in Contract within ten (10) Calendar Days of the City's issuance of a Notice of Award.

The _____, a corporation of the State of _____, is hereby proposed as Surety on said Performance and Payment Bonds. If such Surety is not approved by the City, another and satisfactory Surety will be proposed.

Enclosed herewith is a Bid Guaranty as defined in the attached Instructions to Bidders in the amount of _____ which Bid Guaranty the undersigned Bidder agrees to be paid to and become the property of the City, as Liquidated Damages and not as a penalty should the Bid be accepted, the Contract Notice of Award issued, and should the Bidder fail or refuse for any reason to enter into the Contract in the form prescribed. The Bidder shall furnish the required Bonds and Insurance Certificates within ten (10) Calendar Days of issuance of the Notice of Award.

The following persons, firms or corporations are interested as joint ventures, partners or otherwise with the undersigned Bidder in this proposal:

Name: _____

Address: _____

Name: _____

Address: _____

If there are no such persons, firms or corporations, please so state in the following space. _____

The undersigned Bidder proposes to subcontract the following portion of Work:

Name & address of Sub-Contractor	Description of work to be performed	% of Contract
_____	_____	
_____	_____	
_____	_____	
_____	_____	

The undersigned Bidder acknowledges the right of the City to reject any and all Bids submitted and to waive informalities and irregularities therein in the City's sole discretion.

By submission of the Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without collusion, consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

The Work shall be completed within the Contract Time as specified in the Special Conditions.

Bidder hereby acknowledges receipt of Addenda Numbers: ____, ____, ____, ____.

By submission of a Bid, the Bidder shall be conclusively presumed to represent that the Bidder has complied with every requirement of the "Instructions to Bidders".

Bidder, by his signature hereon, hereby authorizes the obtaining of reference information containing the Bidder's qualifications, experience and general ability to perform the work and hereby releases the party providing such information and the City from any and all liability to Bidder as the result of such reference information being provided. Bidder further waives any right to receive copies of information so provided to the City.

Bidder agrees to perform all Work described in the Contract Documents for the unit prices or the lump sum as shown on the Bid Form, and acknowledges that the quantities shown on the Bid Schedule are approximate only and are intended principally to serve as guides for the purpose of comparing and evaluating Bids.

It is further agreed that any quantities of work to be performed at unit prices and material to be furnished may be increased or decreased as may be considered necessary in the opinion of the City, to complete the Work fully as planned and contemplated, and that all quantities of Work, whether increased or decreased, are to be performed at the unit prices set forth in the Bid, except as otherwise provided for in the Contract Documents.

It is further agreed that any lump sum prices may be increased to cover additional work ordered by the City, but not shown on the Plans or required by the Specifications, in accordance with the provisions of the Contract Documents. Similarly, they may be decrease to cover deletions of work so ordered.

By submitting a Bid, the Bidder acknowledges that the bid process is solely intended to serve the public interest in achieving the highest quality of services and goods at the lowest price, and that no right, interest or expectation shall inure to the benefit of the Bidder as the result of any reliance or participation in the process.

The undersigned Bidder further grants to the City the right to award this Contract on the basis of any possible combination of base bids and alternate(s) (if any) that best suit the City's needs.

Dated this _____ day of _____, 20__.

Bidder: _____

Address: _____

Signature: _____

Name printed: _____

Title: _____

If a corporation:

State of incorporation: _____

Attest: _____

(seal)

BID BOND

KNOW ALL MEN BY THESE PRESENTS,

that we, _____ (___ an individual, ___ a partnership, ___ a corporation incorporated in the State of _____) as Principal, and _____ (incorporated in the State of _____) as Surety, are held and firmly bound unto the City of Grand Junction, Colorado, (hereinafter called "City") in the penal sum of _____ dollars (\$ _____), lawful money of the United States, for the payment of which sum we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that WHEREAS the Principal has submitted the accompanying Bid dated _____ for construction of _____ (the Project) for the City and

WHEREAS, the City has required as a condition for receiving said Bid that the Principal deposit with the City either a cashier's check or a certified check equivalent to not less than five percent of the amount of said Bid or in lieu thereof furnish a Bid Bond for said amount conditioned that in event of a failure to execute the proposed Contract for such construction and to provide the required Performance and Payment Bonds and Insurance Certificates if the Contract be awarded to the Bidder, that said sum be paid immediately to the City as Liquidated Damages and not as a penalty for the Principal's failure to perform.

NOW, THEREFORE, if the Principal shall, within the period specified therefore, on the attached prescribed forms presented to the Bidder for signature, enter into a written Contract with the City in accordance with said Bid as accepted, and give Performance and Payment Bonds with good and sufficient Surety, or Sureties, as may be required upon the forms prescribed by the City, for the faithful performance and the proper fulfillment of said Contract, provide Certificates of Insurance as required by said Contract, and provide all other information and documentation required by the Contract Documents, then this obligation shall be void and of no effect, otherwise to remain in full force and effect. In the event suit is brought upon this bond by the City and the City prevails, the principal and surety shall pay all costs incurred by the City in such suit, including reasonable attorneys' fees and costs to be fixed by the Court.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their several seals the name and corporate seal of each corporate party being hereto affixed and duly signed by its undersigned representative pursuant to authority of its governing board.

Dated this _____ day of _____, 20__.

Principal: _____

Address: _____

Signed: _____

(seal)

Title: _____

Surety: _____

Address: _____

Signed: _____

(seal)

Title: _____

INSTRUCTIONS FOR COMPLETING BID BOND

1. The full legal name and residence of each individual executing this Bond as Principal must be inserted in the first paragraph.
2. If the Principal is a partnership, the full name of the partnership and all individuals must be inserted in the first paragraph which must recite that individuals are partners composing the partnership, and all partners must execute the Bond as individuals.
3. The State of incorporation of each corporate Principal or Surety to the Bond must be inserted in the first paragraph and the Bond must be executed under the corporate seal of said party attested by its secretary or other appropriate officer.
4. Attach a copy of the power-of-attorney for the Surety's agent.

SPECIAL CONDITIONS

CITY OF GRAND JUNCTION
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

Primary Clarifier Rehabilitation Project

SPECIAL CONDITIONS

The performance of the Work for this Project shall conform to the General Contract conditions presented in the City of Grand Junction's *Standard Contract Documents for Capital Improvements Construction*, July 2010, except as specifically modified or supplemented herein or on the Construction Drawings.

SC-1 Project Description: The project generally consists of painting the Scum Deflector Assembly, Truss Bridge Assembly, Center Pier Assembly, Spur Gear Drive Assembly, Drive Gear Assembly, Influent well Assembly, and the Clevis Rod Assembly. Additionally, the damaged squeegees located on the Truss Arm assembly will be replaced. This work will be performed on both of the Primary Clarifiers. The Primary Clarifier tanks are located at the Persigo Waste Water Treatment Plant at 2145 River Road.

Appendix A is a plan sheet exhibit that provides some additional information on the dimensions and layout of the Primary Clarifiers.

SC-2 Project Engineer: The Project Engineer for the Project is Justin Vensel, who can be reached at (970) 256-4017. All notices, letters, submittals, and other communications directed to the City shall be addressed and mailed or delivered to:

City of Grand Junction
Department of Public Works
Attn: Justin Vensel, Project Engineer
250 North Fifth Street
Grand Junction, CO 81501

SC-3 Pre-Bid Meeting:
There will be a pre-bid meeting for this project. The pre-bid meeting is mandatory. A pre-bid meeting will be held at 10:00 a.m. on Wednesday, September 16, 2015, on site the location will be at 2145 River Road, Grand Junction Co 81501. The Pre-Bid Meeting will include a site visit and one tank will be drained and available for inspection by the Bidders.

SC-4 Pre-Qualification Requirement for Bidders: Contractors submitting bids over \$50,000 must be prequalified in accordance with the City's "Rules and Procedures for Prequalification of Contractors." Application forms for prequalification are available at the Administration Office of the Department of Public Works and Utilities (970-244-1575) or on the Public Works & Utilities/Engineering page at www.gjcity.org. Prequalification applications must be submitted by Friday, September 11, 2015 (11

calendar days prior to the bid opening date). Bids received from non-prequalified contractors will not be opened.

In addition to the requirements detailed in the City's "Rules and Procedures for Prequalification of Contractors," in order to be pre-qualified and approved the Contractor shall demonstrate that they have successfully completed a minimum of five projects in the past five years that are of similar magnitude to this project and involved the application of specified products to the surfaces of steel water tanks. The Contractor shall substantiate this requirement by furnishing a list of references.

SC-5 **Affirmative Action:** The Contractor is not required to submit a written Affirmative Action Program for the Project.

SC-6 **Time of Completion:** The scheduled time of Completion for the Project is (March 11, 2016) **145 Calendar Days** from the starting date specified in the Notice to Proceed. Completion is achieved when site clean-up and all punch list items (resulting from the final inspection) have been completed. Final Completion and Substantial Completion shall have the meaning set forth in Article I, Section 3 (Definitions and Terms) of the General Contract Conditions.

The anticipated schedule for the Project is as follows:

Pre-Bid Meeting:	September 16, 2015
Bid Opening:	September 22, 2015
City Council approval:	October 7, 2015
Notice of Award:	October 8, 2015
Contractor delivers Contract, Bond and Insurance Cert.	October 15, 2015
Preconstruction meeting:	October 15, 2015
Begin work:	October 19, 2015
Final Completion:	March 11, 2016
- City observed holidays during construction period:	
Veterans Day	Wednesday November 11, 2015
Thanksgiving Day	Thursday & Friday, November 26 & 27, 2015
Christmas Day	Friday December 25, 2015
New Year's Day	Friday January 1, 2016
Presidents Day	Monday February 15, 2016

SC-7 **Liquidated Damages:**

The Contractor agrees that as a part of the consideration for the City's awarding of this Contract liquidated damages in the daily amount of **\$1000.00** is reasonable and necessary to pay for the actual damages resulting from such delay. The parties agree that the real costs and injury to the City for such delay include hard to quantify items such as: additional engineering, inspection and oversight by the City and its agents; additional contract administration; inability to apply the efforts of those employees to the other work of the City; perceived inefficiency of the City; citizens having to deal with the construction

and the Work, rather than having the benefit of a completed Work, on time; inconvenience to the public; loss of reputation and community standing for the City during times when such things are very important and very difficult to maintain.

The Contractor must complete the Work and achieve final completion included under the Bid Schedule in the number of consecutive calendar days after the City gives its written Notice to Proceed. When the Contractor considers the entire Work ready for its intended use, Contractor shall certify in writing that the Work is substantially complete. In addition to the Work being substantially complete, Final Completion date is the date by which the Contractor shall have fully completed all clean-up, and all items that were identified by the City in the inspection for final completion. Unless otherwise stated in the Special Conditions, for purposes of this liquidated damages clause, the Work shall not be finished and the Contract time shall continue to accrue until the City gives its written Final Acceptance.

If the Contractor shall fail to pay said liquidated damages promptly upon demand thereof after having failed to achieve Final Completion on time, the City shall first look to any retainage or other funds from which to pay said liquidated damages; if retainage or other liquid funds are not available to pay said liquidated damages amounts, the Surety on the Contractor's Performance Bond and Payment Bond shall pay such liquidated damages. In addition, the City may withhold all, or any part of, such liquidated damages from any payment otherwise due the Contractor.

Liquidated damages as provided do not include any sums to reimburse the City for extra costs which the City may become obligated to pay on other contracts which were delayed or extended because of the Contractor's failure to complete the Work within the Contract Time. Should the City incur additional costs because of delays or extensions to other contracts resulting from the Contractor's failure of timely performance, the Contractor agrees to pay these costs that the City incurs because of the Contractor's delay, and these payments are separate from and in addition to any liquidated damages.

The Contractor agrees that the City may use its own forces or hire other parties to obtain Substantial or Final Completion of the work if the time of completion has elapsed and the Contractor is not diligently pursuing completion. In addition to the Liquidated Damages provided for, the Contractor agrees to reimburse the City for all expenses thus incurred.

SC-8 **Working Days and Hours:** The working days and hours shall be as stated in the General Contract Conditions, Section VI, or as mutually agreed upon in the preconstruction meeting.

SC-9 **Permits:** The following permits are required for the Project and will be obtained by the City at no cost to the Contractor:

None

The following permits are required for the Project and shall be obtained and paid for by the Contractor, with the costs included in the total bid price for the Project:

None

- SC-10** **Insurance Limits:** The minimum insurance limits for the Project are as stated in the General Contract Conditions, Section IV. The City of Grand Junction shall be listed as additionally insured on the insurance policy.
- SC-11** **City Furnished Materials:** The City will furnish the following materials for the Project:
 None
- SC-12** **Authorized Representatives of the City:** Those authorized to represent the City shall include engineers and inspectors employed or contracted by the City, only.
- SC-13** **Uranium Mill Tailings:** It is anticipated that radioactive mill tailings will not be encountered on this project.
- SC-14** **Fugitive Petroleum or Other Contamination:** It is anticipated that soil contamination from fugitive petroleum or other contaminants will not be encountered with the Project.
- SC-15** **Schedule of Submittals:** As a minimum, the Contractor shall submit the following information for review by the Engineer prior to the start of construction.
1. Initial Project Schedule. Schedule shall be updated as necessary to reflect actual conditions.
 2. Product and material descriptive literature for each material or product used on the project, including certification of conformance with referenced specifications. Submittal shall be made prior to material delivery.
- SC-16** **Staging Area:** Area is available on site adjacent to the Clarifiers. Any materials, equipment or construction vehicles stored or used on site shall be placed in locations that do not interfere with normal traffic or plant operations.
- SC-17** **Clarifier Down Time:** The project will need to allow one (1) clarifier to operate at all times during construction. Upon final acceptance of repairs and dry time for the first clarifier. The contractor shall allow the City a maximum of seven (7) days to drain the second clarifier. No additional compensation shall be granted for this time.

PROJECT SPECIFICATIONS

Primary Clarifier Rehabilitation Project

PROJECT SPECIFICATIONS

CLEANING & PAINTING

PART I GENERAL

1.1 SCOPE

- A. The work of this section covers the coating of all metal interior surfaces, including but not limited to bridge structure, drum structure, drum support, skimmer arm, rake arms and support, motor and all other metal surfaces.

1.2 REFERENCE SPECIFICATIONS AND STANDARDS

- A. Without limiting the general aspects of the requirements of these specifications, all surface preparation, coating and painting of interior and exterior surfaces shall conform to applicable requirements of the National Association of Corrosion Engineers, the American Water Works Association, the Steel Structures Painting Council and the manufacturer's printed instructions.
- B. The CONTRACTOR shall, in conducting his WORK, conform to the following requirements (references to standards refer to the most recently adopted version of the standard, unless otherwise noted):
 - 1.) Steel Structures Painting Council for Cleaning
 - SSPC - SP10
 - SSPC - SP7
 - SSPC - SP3
 - SSPC - SP2
 - SSPC - PA1
 - SSPC - Vis 1 & Vis 2
 - SSPC - PA2
 - 2.) National Association of Corrosion Engineers-
 - NACE TM 01-70
 - 3.) Paint Manufacturers printed instructions.

- C. The ENGINEER'S decision shall be final as the interpretation and/or discrepancy between any of the referenced specifications and standards contained herein.

1.3 PAINTING CONTRACTOR

- A. The Painting CONTRACTOR shall be approved by the City for performing surface preparation and coating/painting work prior to the beginning of work and shall have a minimum of five years practical experience and successful history in the application of specified products to surfaces of steel water tanks. He shall substantiate this requirement by furnishing a list of references prior to the Pre-Construction Meeting. The City shall give notice to the General CONTRACTOR of acceptance of the Painting CONTRACTOR.

1.4 PRE-CONSTRUCTION MEETING

- A. A pre-construction meeting shall be scheduled prior to start of the painting portion of the work. The OWNER, CONTRACTOR, Coatings and Paint Manufacturer and ENGINEER shall be present. A schedule of work to be accomplished and a list of labor, material and equipment production rates for the work will be established and maintained throughout the project.

1.5 QUALITY CONTROL

A. GENERAL

- 1.) Quality control procedures and practices shall be utilized to monitor all phases of surface preparation, application, and inspection throughout the duration of the project. Procedures or practices not specifically defined herein may be utilized provided they meet recognized and accepted professional standards and are approved by the ENGINEER.

B. SURFACE PREPARATION

- 1.) Surface preparation will be based upon comparison with "Pictorial Surface Preparation Standards for Painting Steel Surfaces", SSPC - Vis 1 ASTM Designation D 220; "Standards Methods of Evaluating Degree of Rusting on Painted Steel Surfaces", SSPC - VIS 2 ASTM Designation D 610; Visual Standard for Surface of New Steel Airblast Cleaned with Sand Abrasive", NACE Standard TM-01-70; and as described below. Anchor profile for prepared surfaces shall be measured by use of a non-destructive instrument such as a Keane-Tator Surface Profile Comparator.
- 2.) To facilitate inspection, the CONTRACTOR shall on the first day of sandblasting operations, sandblast metal panels to both SSPC SP10 and SSPC – SP7 Standards. These panels shall be equivalent to the tank plate

stock with minimum measurement of 8 1/2 inches by 11 inches (216 mm X 280mm). After agreeing a specific panel meets the requirements of the specification, the panel shall be initialed by the CONTRACTOR and ENGINEER and coated with a clear non-yellowing finish. Panels shall be utilized for inspection purposes throughout the duration of sandblasting operations.

C. APPLICATION

- 1.) No coating or paint shall be applied: When the surrounding air temperature or the temperature of the surface to be coated or painted is below the minimum application temperature recommended by the paint manufacturer or below 40 degrees F; to wet or damp surfaces or in rain, snow, fog, or mist; when the temperature is less than 5 degrees above the dewpoint; when it is expected the air temperature will drop below the minimum application temperature recommended by the paint manufacturer, or below 40 degrees F., or *below* 5 degrees F. above the dewpoint within eight hours after application of coating and paint. Dewpoint shall be measured by use of an instrument such as a Sling Psychrometer in conjunction with U.S. Department of Commerce Weather Bureau Psychrometric Tables.
- 2.) If above conditions are prevalent, coating or painting shall be delayed or postponed until conditions are favorable. The day's coating or painting shall be completed in time to permit the film sufficient drying time prior to damage by atmospheric conditions.

D. THICKNESS AND HOLIDAY CHECKING

1.) Thickness of coatings and paint shall be checked with non-destructive, magnetic type thickness gauge in accordance with SSPC - PA2. Use an instrument such as a Tooke Gage if a destructive tester is deemed necessary. Coating integrity of interior coated surfaces below the water line shall be tested with an approved inspection device. Holiday detection shall be performed after application of finish coats. Non-destructive holiday detectors shall not exceed 67 1/2 volts nor shall destructive holiday detectors exceed the voltage recommended by the manufacturer of the coating system. All pinholes shall be marked, repaired in accordance with the manufacturer's printed recommendations and retested. No pinholes or other irregularities will be permitted in the final coating.

E. INSPECTION DEVICES

- 1.) The CONTRACTOR shall furnish, until final acceptance of coating and painting, inspection devices in good working conditions for detection of holidays and measurement of dry-film thickness of coating and paint. The CONTRACTOR shall also furnish U.S. Department of Commerce, National Bureau of Standards certified thickness calibration plates to test accuracy of dry-film thickness and certified instrumentation to test accuracy of holiday detectors.
- 2.) Dry-film thickness gauges and holiday detectors shall be made available for the ENGINEER'S use at all times until final acceptance of application. Holiday detection will be performed by the CONTRACTOR in the presence of the ENGINEER. Holiday detector equipment will also be available for operation by the ENGINEER at ENGINEER'S discretion.

F. ACCEPTABLE INSPECTION DEVICES

- 1.) Acceptable devices for ferrous metal surfaces include, but are not limited to K-D "Bird-Dog" holiday detector for coatings to 20 mils (500 microns) dry film thickness, Tinker-Razor Models AP and AP-W holiday detectors for coating in excess of 20 mils (500 microns) dry-film thickness, and "Inspector" or "Mikrotest" units for dry-film thickness gauging. Non-ferrous metal surfaces shall be checked with an instrument such as an Elcometer "Eddy Current" Tester. Inspection devices shall be operated in accordance with the manufacturer's instructions.

G. WARRANTY INSPECTION

- 1.) Warranty inspection shall be conducted during the eleventh month following completion of all coating and painting WORK. All defective WORK shall be repaired with this specification and to the satisfaction of the City.

1.6 SAFETY AND HEALTH REQUIREMENTS

A. GENERAL

- 1.) In accordance with requirements set forth by regulatory agencies applicable to the construction industry and manufacturer's printed instructions and appropriate technical bulletins and manuals, the CONTRACTOR shall provide and require use of personnel protective lifesaving equipment for persons working in or about the project site, and as required by AWWA D 102-78 Section 7.

B. HEAD AND FACE PROTECTION AND RESPIRATORY DEVICES

- 1.) Equipment shall include protective helmets which shall be worn by all persons while in the vicinity of the WORK. In addition, workers engaged in or near the WORK during sandblasting shall wear eye and face protection devices and air purifying, half-mask or mouthpiece respirator with appropriate filter. Barrier creams shall be used on any exposed areas of the skin.

C. VENTILATION

- 1.) Where ventilation is used to control hazardous exposure, all equipment shall be explosion proof. Ventilation shall reduce the concentration of air contaminant to the degree that a hazard does not exist. Air circulation and exhausting of solvent vapors shall be continued until coatings have fully cured.

D. SOUND LEVELS

- 1.) Whenever the occupational noise exposure exceeds maximum allowable sound levels, the CONTRACTOR shall provide and require the use of approved ear protective devices.

E. ILLUMINATION

- 1.) Adequate illumination shall be provided while work is in progress, including explosion-proof lights and electrical equipment. Whenever required by the ENGINEER, the CONTRACTOR shall provide additional illumination and necessary supports to cover all areas to be inspected. The level of illumination for inspection purposes shall be determined by the ENGINEER.

F. TEMPORARY LADDERS AND SCAFFOLDING

- 1.) All temporary ladders and scaffolding shall conform to applicable safety requirements. They shall be erected where requested by the ENGINEER to facilitate inspection and be moved by the CONTRACTOR to locations requested by the ENGINEER.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Materials specified are those which have been evaluated for the specific service. Products by the Tnemec Co., Inc. are listed to establish standards of quality. Requests for approval of "equals" must be approved in writing by the City. "Equals" shall have a successful experience record verifiable and acceptable to the City.
- B. All materials shall be brought to jobsite in original sealed containers. They shall not be used until the ENGINEER has inspected contents and obtained data from information on containers or label. Materials exceeding storage life recommended by the manufacturer shall be rejected.
- C. All coatings and paints shall be stored in enclosed structures to protect them from weather and excessive heat or cold. Flammable coatings or paint must be stored to conform with all safety codes for flammable coating or paint materials. At all times coatings and paints shall be protected from freezing.
- D. Interior steel surfaces shall be coated with the following coating systems at the dry film thickness (DFT) in mils per coat as noted:

Interior Surfaces at and above the water line:

Primer: One coat of Series 91-H2O Hydro-Zinc (2.5-3.5 DFT)

Intermediate coat: Tnemec Ser. N140F-1255 Pota-Pox Plus, Beige (4.0-8.0 DFT)

Finish coat: Tnemec Series N140F-15BL Pota-Pox Plus, White (4.0-8.0 DFT)

Total Coating System Film Thickness: 10.5 – 19.5 mils DFT

Interior Surfaces below the water line:

Finish coat: Tnemec Series N140F-15BL Pota-Pox Plus, White (4.0-8.0 DFT)

In specific areas a prime and intermediate coat will be required. Refer to Section 3.2.J of Project Specifications. When required, the prime and intermediate coats shall be:

Primer: One coat of Series 91-H2O Hydro-Zinc (2.5-3.5 DFT)

Intermediate coat: Tnemec Ser. N140F-1255 Pota-Pox Plus, Beige (4.0-8.0 DFT)

Finish coat: Tnemec Series N140F-15BL Pota-Pox Plus, White (4.0-8.0 DFT)

Total Coating System Film Thickness: 10.5 – 19.5 mils DFT

PART 3 EXECUTION

3.1 GENERAL

- A. All surface preparation, coating and painting shall conform to applicable standards of the National Association of Corrosion Engineers, the Steel Structures Painting Council, the American Water Works Association and the manufacturer's printed instructions. Material applied prior to approval of the surface by the ENGINEER shall be removed and re-applied to the satisfaction of the ENGINEER at the expense of the CONTRACTOR.
- B. All work shall be performed by skilled craftsman qualified to perform the required work in a manner comparable with the best standards of practice. Continuity of personnel shall be maintained and transfers of key personnel shall be limited by the CONTRACTOR to emergency conditions only. Key personnel shall be continuously on job during CONTRACT.
- C. The Painting CONTRACTOR shall provide a supervisor at the work site during cleaning and application operations. The supervisor shall have the authority to sign for change orders, coordinate work and make decisions pertaining to the fulfillment of the CONTRACT.
- D. Dust, dirt, oil, grease or any foreign matter that will affect the adhesion or durability of the finish must be removed by washing with clean rags dipped in approved cleaning solvent and wiped dry with clean rags.
- E. Coating and painting systems include surface preparations, prime coating and finish coatings. Unless otherwise specified, prime coating shall be field applied. Where prime coatings are shop applied, the CONTRACTOR shall instruct suppliers to provide the prime coat compatible with the finish coat specified. Any off-site work which does not conform to this specification is subject to rejection by the ENGINEER.
- F. Shop applied prime coatings which are damaged during transportation, construction or installation shall be thoroughly cleaned and touched up in the field as approved by the ENGINEER. The CONTRACTOR shall use repair procedures which insure the complete protection of all adjacent primer. The specified repair method and equipment may include hand or power tool cleaning and dry air blast cleaning. In order to prevent injury to surrounding painted areas cleaning may require use of lower air pressure, small nozzle and abrasive particle sizes, short blast nozzle distance from surface, shielding and masking. If damage is too extensive or uneconomical to touch-up, then the item shall be re-cleaned and coated or painted as approved by the ENGINEER.,

- G. The CONTRACTOR'S coating and painting equipment shall be designed for application of materials specified and shall be maintained in first class working condition. Compressors shall have suitable traps and filters to remove water and oils from the air. CONTRACTOR'S equipment shall be subject to approval of the ENGINEER.
- H. Application of the first coat shall follow immediately after surface preparation and cleaning and prior to any formation of any rust bloom. Any cleaned areas not receiving first coat prior to the formation of any rust bloom shall be re-cleaned prior to application of first coat.
- I. Prior to assembly, all surfaces made inaccessible after assembly shall be prepared as specified herein and shall receive the coating or paint system specified.

3.2 SURFACE PREPARATION

- A. The latest revision of the following surface preparation specifications of the Steel Structures Painting Council shall form a part of this specification:
 - 1.) Power Washing: The entire clarifier steel assembly shall be power washed using a solution of Great Lakes Laboratories Pre Paint Degreaser in water at an approximate concentration of 10%. The pressure washer shall have a pressure rating of 2,400 to 2,500 psi. The owner will furnish water for tank cleaning.
 - 2.) Hand Tool Cleaning (SSPC-SP2): Removal of loose rust, loose mill scale and other detrimental foreign matter to degree specified by hand chipping, scrapping, sanding and wirebrushing.
 - 3.) Power Tool Cleaning (SSPC-SP3): Removal of loose rust, loose mill scale and other detrimental foreign matter to degree specified by power wirebrushing, power impact tools or power sanders.
 - 4.) White Metal Blast Cleaning (SSPC-SP5): Blast cleaning to a gray-white uniform metallic color until each element of surface area is free of all visible residues.
 - 5.) Commercial Blast Cleaning (SSPC-SP6): Blast cleaning until at least two-thirds of each elements of surface area is free of all visible residues.
 - 6.) Brush-off Blast Cleaning (SSPC-SP7): Blast cleaning to remove loose rust, loose mill scale and other detrimental foreign matter to degree specified.

- 7.) Near White Blast Cleaning (SSPC-SP10): Blast cleaning to nearly white metal cleanliness, until at least 95 percent of each element of surface area is free of all visible residues.

All of which are contained in Volume 2 SSPC Manual.

- B. Field blast cleaning for all surfaces shall be by dry method unless otherwise directed.
- C. Particle size of abrasives used in blast cleaning shall be that which will produce a 1 1/2 - 2 mil (37.5 microns - 50.0 microns) surface profile or in accordance with recommendations of the manufacturer of the specified coating or paint system to be applied.
- D. Abrasive used in blast cleaning operations shall be new, washed, graded and free of contaminants that would interfere with adhesion of coating or paint and shall not be reused unless specifically approved by the ENGINEER.
- F. During blast cleaning operations, caution shall be exercised to insure that existing coatings or paint are not exposed to abrasion from blast cleaning.
- G. The CONTRACTOR shall keep the area of this WORK in a clean condition and shall not permit blasting materials to accumulate as to constitute a nuisance or hazard to the prosecution of the work or the operation of the existing facilities.
- H. Blast cleaned surfaces shall be cleaned prior to application of specified coatings or paint. No coatings or paint shall be applied over damp or moist surfaces.
- I. All welds shall be neutralized with a suitable chemical compatible with the specified coating materials.
- J. Specific Surface Preparation: Surface preparation for the specific system shall be as required by the specific paint system to be furnished and the manufacturer's requirements.

Interior Surfaces at and above the water line:

Near White Blast Cleaning (SSPC-SP10): Blast cleaning to nearly white metal cleanliness, until at least 95 percent of each element of surface area is free of all visible residues.

Interior Surfaces below the water line:

Brush-off Blast Cleaning (SSPC-SP7): Blast cleaning to remove loose rust, loose mill scale and other detrimental foreign matter and to etch the surface per the following:

Then, abrasive blast with appropriate type and size aggregate, and appropriate air pressure, all remaining sound, existing coatings to thoroughly and uniformly degloss and to evenly etch/scarify existing coating. All surfaces shall be reasonably free of dirt, dust and fines prior to applying new coating.

In the event the finish coat and primer is removed and underlying steel is exposed, those areas are to be prepared per SSPC-SP10 as well – feather to existing sound coating edge and prime with one coat of Tnemec Series 91-H2O Hydro-Zinc (2.5-3.5 DFT). Then apply an intermediate coat of Tnemec N140F-1255, Beige (4.0-8.0 DFT).

In the event the finish coat is easily removed and the underlying primer is exposed, those areas will receive a prime coat of Tnemec N140F-1255, Beige (4.0-8.0 DFT).

Up to 10% of the “below the water line” surface area of the tanks may require additional surface preparation to the SSPC-SP10 level in order to address localized areas of corrosion and/or bare spots.

Up to 15% of the surface area of the tanks may require the following cleanings:

Hand Tool Cleaning (SSPC-SP2): Removal of loose rust, loose mill scale and other detrimental foreign matter to degree specified by hand chipping, scrapping, sanding and wirebrushing.

Power Tool Cleaning (SSPC-SP3): Removal of loose rust, loose mill scale and other detrimental foreign matter to degree specified by power wirebrushing, power impact tools or power sanders.

- K. Grind all rough edges, weld seams, and erection scab marks to a smooth curve prior to coating. Re-blast any ground or smoothed surfaces.

3.3 APPLICATION, GENERAL

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. Apply additional coats when undercoats, or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
- C. Scheduling Painting: Apply first coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation

and before subsequent surface deterioration.

- D. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- E. Mixing, thinning and application procedures shall be in accordance with the instructions provided on product labels and in current catalogs of the material supplier. All coatings shall be thoroughly mixed before use and shall be agitated often enough during application to maintain proper pigment suspension. Deficiencies in film thickness shall be corrected by the application of an additional coat(s) of paint.
- F. Adequate ventilation shall be provided during the application of coatings to tank interiors and during the curing periods between coats to assure complete removal of solvent vapors from the tank. All paint applications shall be in strict accordance with SSPC-PAL-64 and manufacturer's instructions. All thickness readings shall be taken with a Elecometer DFT reading device as per SSPC-PA2.
- G. When spraying primer over blasted steel, all rivets, seams and plate edges and pits shall first receive a "mist" coat; followed with the full prime coat. Drying times between coats and cure must be strictly followed per manufacturer's instructions and as conditions dictate.
- H. All material shall be applied as specified or according to manufacturer's printed instructions.
- I. All welds and irregular surfaces shall receive a brush coat of the primer prior to application of the first complete priming coat.

3.4 COATING SYSTEMS APPLICATION

- A. Apply coatings in accordance with manufacturers recommendations.
- B. After the coatings have been cured, the ENGINEER will inspect the coated surfaces. Any damaged or defective coatings shall be repaired by approved methods.

3.5 COLOR SCHEME

- A. The City shall select the colors for use in the clarifiers. The Painting CONTRACTOR shall submit a current chart of the manufacturer's available colors to the ENGINEER thirty days prior to the start of coating and painting operations.

3.6 SOLVENT VAPOR REMOVAL

- A. All solvent vapors shall be completely removed by suction type exhaust fans, and blowers before placing tank in operating service.

3.7 CLEAN UP

- A. Upon completion of the work, all staging, scaffolding and containers shall be removed from the site or destroyed in a manner approved by the ENGINEER. Coating or paint spots and/or oil stains upon adjacent surfaces shall be removed and the job site cleaned. All damage to surfaces resulting from WORK of this section shall be cleaned, repaired, or refinished to the satisfaction of the ENGINEER at no cost to the OWNER.
- B. Clean-Up: During progress of work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day.
- C. Upon completion of painting work, a full cleaning of facility will be performed
- D. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Engineer.

3.8 SAFETY PRECAUTIONS

- A. Precaution shall be exercised at all times for protection of persons and property. Safety provisions of applicable laws, building and construction codes shall be observed. Machinery and equipment and other hazards shall be guarded in accordance with safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are consistent with applicable laws of regulations.
- B. All necessary precautions shall be taken to protect any and all personnel and any and all property from dangers which may result from falls, toxic fumes, fire, explosion or any other harm as a result of the prosecution of this project.
- C. The Engineer shall have the right to institute reasonable safety precautions he deems necessary for the protection of life, limb and property. Failure to observe safety procedures will be considered sufficient cause for suspension of work.
- D. Failure of the Engineer to institute safety procedures shall not relieve the contractor of any liability.
- E. All applicable standards of the Federal Occupational Safety and Health Act shall apply.

3.9 Inspection/Reporting

- A. Visual inspection for pinholes, holidays, dry spray, sags and other flaws shall be performed after each coat is applied. All such flaws shall be corrected before the next coat is applied.
- B. For all exterior surfaces, a pinhole free and continuous film is essential. All coated steel surfaces shall receive holiday testing with a Tinker and Razor Model M01, or equivalent, low voltage holiday detector. Any areas failing this test shall be marked and receive an additional repair coat until satisfactory test results are achieved. Holiday testing will be performed between the intermediate coat and final coat by contractor to insure all repairs and touch-ups are performed before final coat.
- C. If film defects on the clarifier assembly are suspected to involve a significant void or holiday, or the film has been damaged to the substrate, the affected areas shall be masked off and spot abraded mechanically cleaned in accordance with SSPC-SP3 Power Tool Cleaning and successive coats applied until the specified film thickness is achieved.
- D. The final film is to be visually inspected and should be free of sags, runs, wrinkles and other excessive film build characteristics and surface defects.
- E. All daily reporting will be available for engineer and owner review at all times. All weekly compilations of work progress and product usage will be due by the following Wednesday.

3.10 FIELD QUALITY CONTROL

- A. The right is reserved by Owner to invoke the following material testing procedure at any time, and any number of times during period of field painting:
 - 1. Engage services of an independent testing laboratory to sample paint being used. Samples of materials delivered to project site will be taken, identified and sealed, and certified in presence of Contractor.
 - 2. Testing laboratory will perform appropriate tests for any or all of following characteristics: Abrasion resistance, apparent reflectivity, flexibility, wash ability, absorption, accelerated weathering, dry opacity, accelerated yellowness, recoating, skinning, color retention, alkali resistance and quantitative materials analysis.
- B. If test results show that material being used does not comply with specified requirements, Contractor may be directed to stop painting work, and remove non complying paint; pay for testing; repaint surfaces coated with rejected paint; remove rejected paint from previously painted surfaces if, upon repainting with specified paint, the two coatings are non compatible.

- C. If requested, it will be the responsibility of the Owner to arrange for inspections. All parts of the work area shall be made accessible, through proper rigging, so that the independent inspector can record DFT measurements, before and after application of paint systems. DFT measurements shall be taken by the independent inspector using a typical apparatus such as a Mikrotest single prong gage. The Owner/Engineer may require, in addition to or as a substitute for the test apparatus described above, testing by the low voltage, wet sponge method: All thickness readings shall be taken per SSPC-PA2-73T Standard.
- D. Any deficiencies in the continuity of the coating shall be corrected by applying additional finish coats, at the expense of the Contractor. The Contractor or representative of the paint manufacturer shall furnish the necessary test equipment and perform all tests in the presence of the Owner/Engineer.

3.11 STERILIZATION AND FILLING OF THE TANK

- A. No Sterilization requirement of the Coating Contractor as there is no potable water coating work performed.

3.12 PAINT COLOR.

- A. The color of the clarifier will be immersion off white, rail and walkway atmospheric safety yellow.

3.13 COMPATIBILITY.

- A. It shall be the responsibility of the Contractor to make investigations and ascertain that paint products compatible with the existing tank system.

3.14 SITE REPAIR.

- A. Any property, belonging to Owner, damaged by the Contractor during the course of his work, will be repaired to equal or better than original condition. This includes lawns, paved areas castings for subterranean structures, fences, etc.

3.15 DAMAGE TO THE PROPERTY OF OTHERS

- A. All claims of property damage caused by the Contractor shall be corrected immediately so that no undue burden is placed upon the claimant.
- B. The Contractor shall be responsible for any damages that are incurred to structures nearby or motor vehicles during the painting of the tank.

3.16 TOUCH UP PAINT

- A. The Contractor shall furnish the Owner with four (4) gallon cans of paint. The cans shall not have been opened, and shall be the same type and color as specified in these specifications.

3.17 CLEAN-UP AND PROTECTION

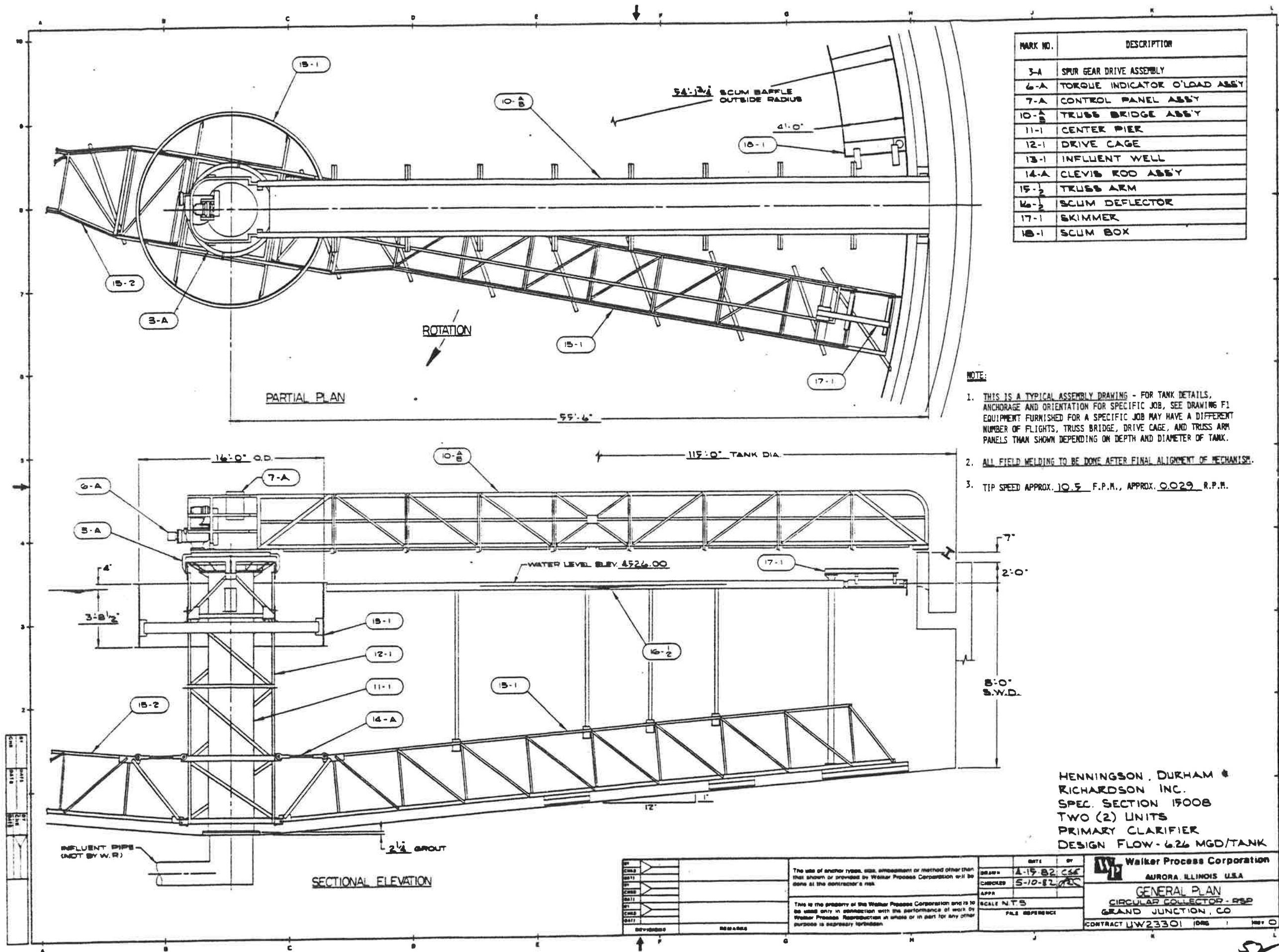
3.18 FIRST ANNIVERSARY INSPECTION

- A. The First Anniversary Inspection will be performed for any repairs that may be needed at no expense of the owner. There will not be any financial reimbursement available to owner for time while facility is not in operation.

-END OF SECTION-

APPENDIX A

CLARIFIER ASSEMBLY DRAWINGS AND DETAILS



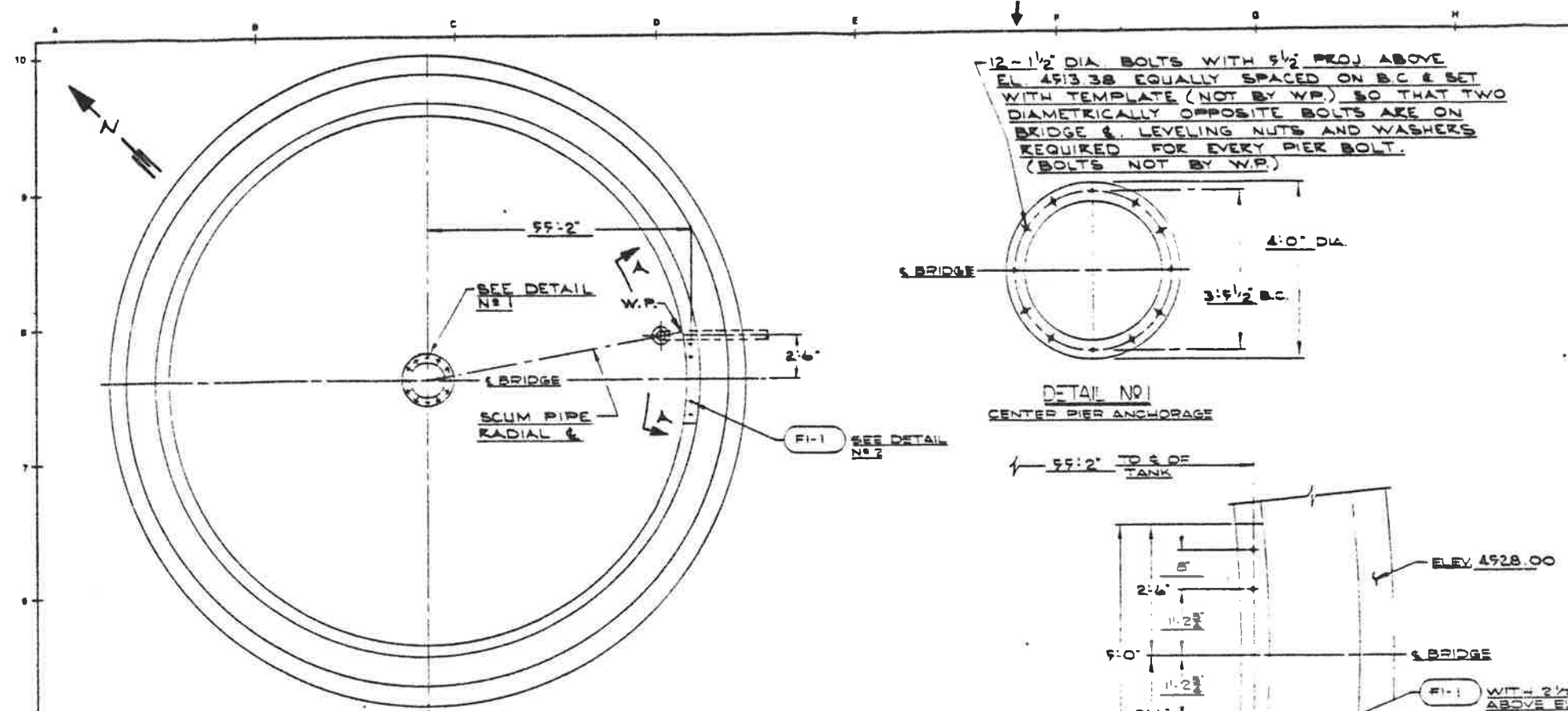
MARK NO.	DESCRIPTION
3-A	SPUR GEAR DRIVE ASSEMBLY
6-A	TORQUE INDICATOR O'LOAD ASSY
7-A	CONTROL PANEL ASSY
10-A	TRUSS BRIDGE ASSY
11-1	CENTER PIER
12-1	DRIVE CAGE
13-1	INFLUENT WELL
14-A	CLEVIS ROD ASSY
15-1	TRUSS ARM
16-2	SCUM DEFLECTOR
17-1	SKIMMER
18-1	SCUM BOX

- NOTE:**
- THIS IS A TYPICAL ASSEMBLY DRAWING - FOR TANK DETAILS, ANCHORAGE AND ORIENTATION FOR SPECIFIC JOB, SEE DRAWING F1 EQUIPMENT FURNISHED FOR A SPECIFIC JOB MAY HAVE A DIFFERENT NUMBER OF FLIGHTS, TRUSS BRIDGE, DRIVE CAGE, AND TRUSS ARM PANELS THAN SHOWN DEPENDING ON DEPTH AND DIAMETER OF TANK.
 - ALL FIELD WELDING TO BE DONE AFTER FINAL ALIGNMENT OF MECHANISM.
 - TIP SPEED APPROX. 10.5 F.P.M., APPROX. 0.029 R.P.M.

HENNINGSON, DURHAM &
 RICHARDSON INC.
 SPEC. SECTION 15008
 TWO (2) UNITS
 PRIMARY CLARIFIER
 DESIGN FLOW - 6.26 MGD/TANK

DATE DRAWN CHECKED APPR. SCALE N.T.S. FILE REFERENCE	DATE BY CHECKED APPR. SCALE N.T.S. FILE REFERENCE	The use of another type, size, arrangement or method other than that shown or provided by Walker Process Corporation will be done at the contractor's risk. This is the property of the Walker Process Corporation and is to be used only in connection with the performance of work by Walker Process Corporation. Reproduction in whole or in part for any other purpose is expressly forbidden.	Walker Process Corporation AURORA, ILLINOIS U.S.A. GENERAL PLAN CIRCULAR COLLECTOR - RSP GRAND JUNCTION, CO CONTRACT LW23301 1086 1 1087 0
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52



SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
2	FI-1	4	BOLT, 1/2" x 9" LG W/NUT & WASHER	A307 GALV.
16	FI-3	8	BOLT, 3/8" x 6" LG W/NUT & WASHER	A307 GALV.

ANCHORAGE BOLTS:

THE ANCHORAGE BOLTS MUST BE PLACED ACCURATELY TO AVOID FUTURE ERECTION DIFFICULTIES; PLEASE KEEP IN MIND THAT THE LOCATION AND PROJECTION OF ALL ANCHORAGE IS CRITICAL. WHERE APPLICABLE, WALKER PROCESS FURNISHES A TEMPLATE FOR POSITIONING THE ANCHORAGE BOLTS. THE SPECIFIED PROJECTION CAN BE FOUND ON THE CONTRACT ANCHORAGE DRAWING. IF A TEMPLATE HAS NOT BEEN FURNISHED, REFER TO THE CONTRACT ANCHORAGE DRAWING FOR BOTH LOCATION AND SPECIFIED PROJECTION.

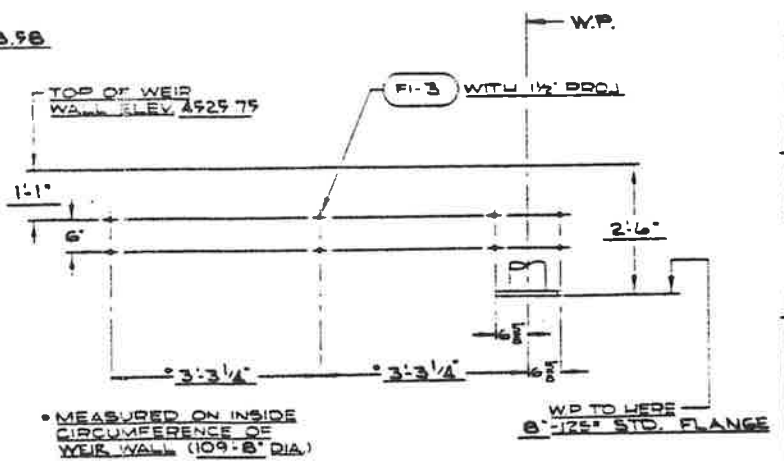
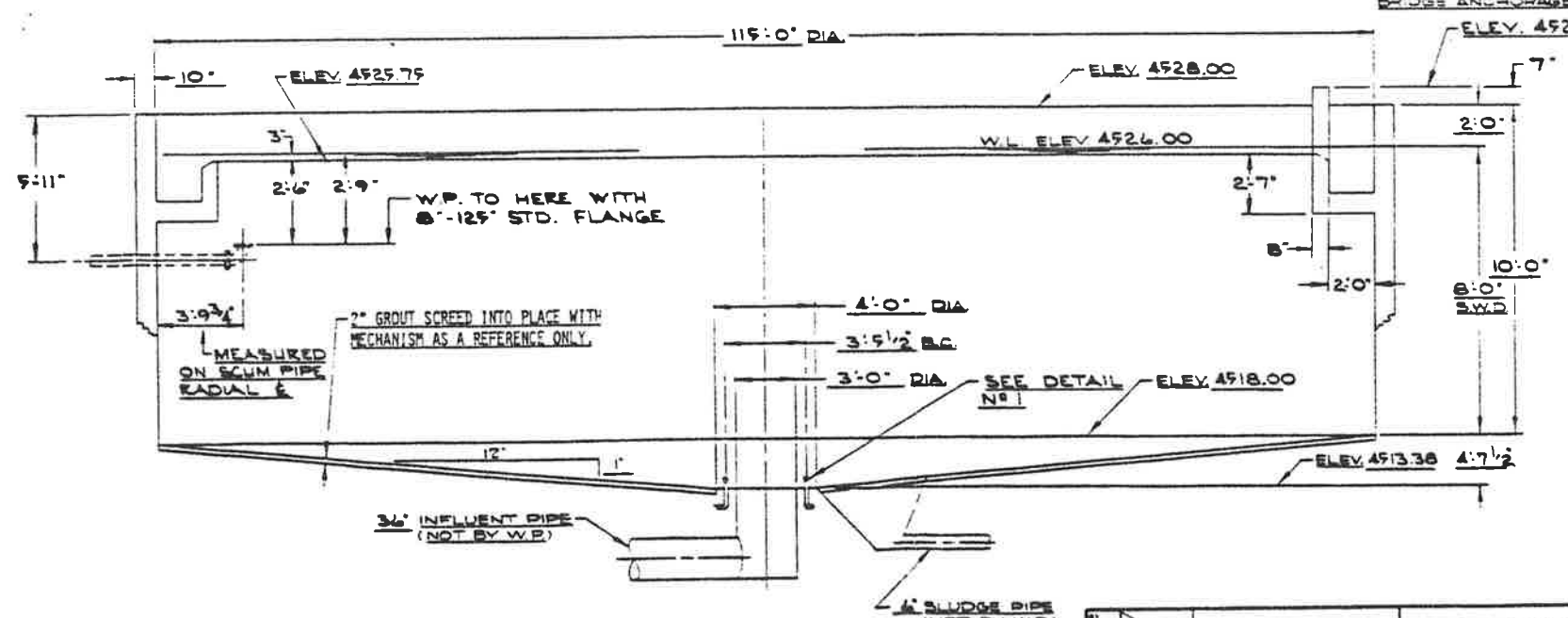
ANCHORAGE BOLTS ARE SHIPPED DIRECT TO THE JOB UPON RECEIPT OF THE APPROVED PRINTS IN OUR AURORA OFFICE. NOTIFY WALKER PROCESS IF ANCHORAGE BOLTS ARE NOT RECEIVED IN ORDER THAT YOU WILL NOT BE DELAYED IN CONSTRUCTION.

PRIOR TO EQUIPMENT INSTALLATION, CLEAN THREADS OF ALL ANCHORAGE BOLTS AND OIL THEM.

PLAN VIEW
CLARIFIER NO. 1 - AS SHOWN
CLARIFIER NO. 2 - OPPOSITE HAND

DETAIL NO. 1
CENTER PIER ANCHORAGE

DETAIL NO. 2
BRIDGE ANCHORAGE



VIEW A-A
SCUM BOX AND APPROACH LIP ANCHORAGE

SECTIONAL ELEVATION

DATE	
BY	
CHECKED	
SCALE	
REVISION	

NO.	REVISIONS	DATE	BY

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FILE REFERENCE	

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AURORA ILLINOIS U.S.A.

FOUNDATION LAYOUT
CIRCULAR COLLECTOR - RSP
GRAND JUNCTION, CO.

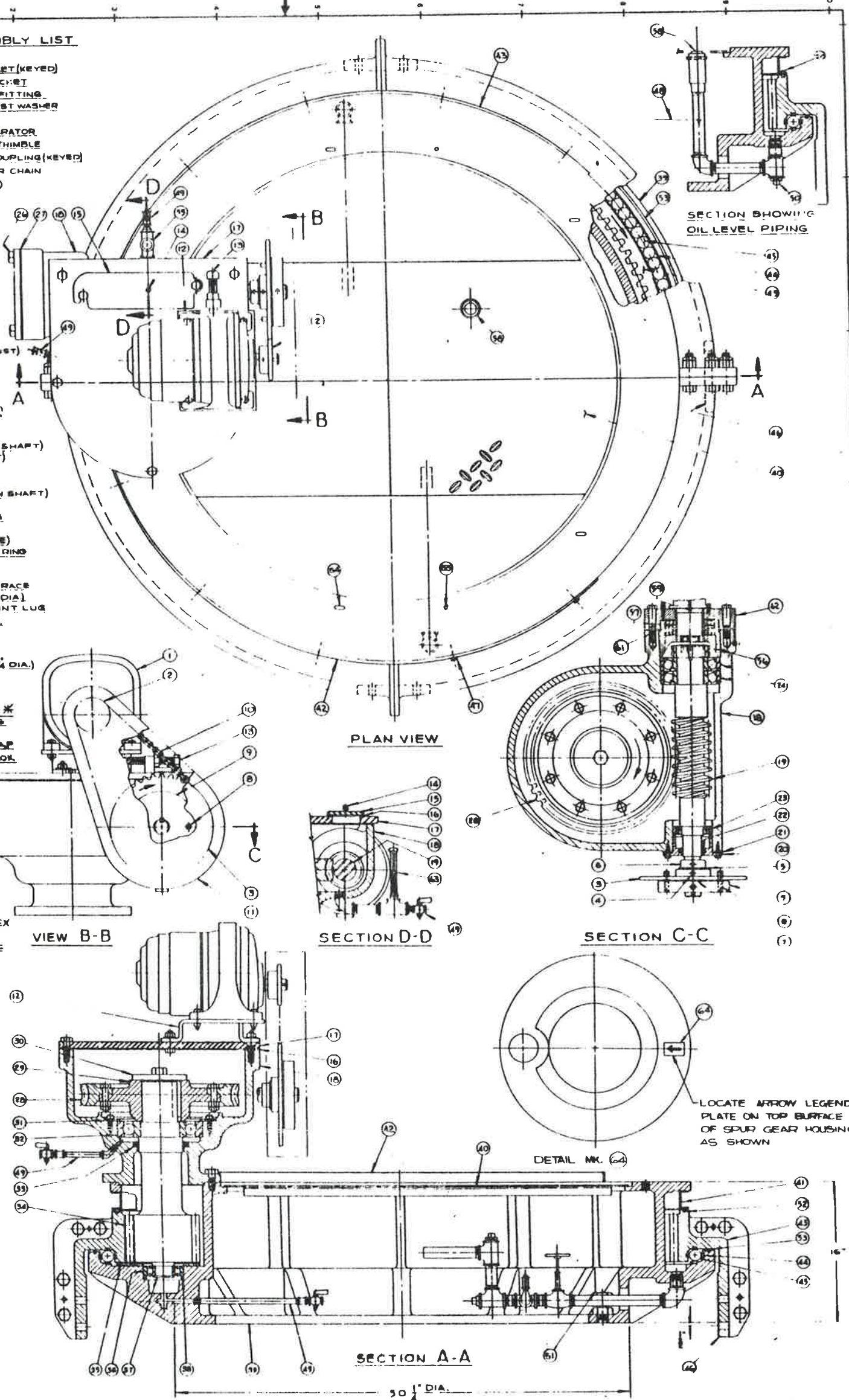
CONTRACT LW23301 DWG F1 REV 0

BY	DATE	BY	DATE
CHG	DATE	CHG	DATE

ASSEMBLY LIST

- 1 REAR MOTOR
- 2 DRIVE SPROCKET (KEYED)
- 3 DRIVEN SPROCKET
- 4 LUBRICATION FITTING
- 5 BRONZE THRUST WASHER
- 6 SET COLLAR
- 7 BRONZE SEPARATOR
- 8 SHEAR PIN & THIMBLE
- 9 SHEAR PIN COUPLING (KEYED)
- 10 STEEL ROLLER CHAIN
- 11 CHAIN GUARD (OIL TIGHT)
- 12 MOTOR BASE
- 13 CHAIN TIGHTENING SCREW
- 14 AIR VENT
- 15 INSPECTION HOLE & OIL FILL COVER
- 16 NEOPRENE GASKET
- 17 HOUSING COVER
- 18 WORM GEAR HOUSING
- 19 WORM SHAFT
- 20 BEARING CAP (FRONT)
- 21 GASKET & SHIMS (FRONT)
- 22 OIL SEAL (WORM SHAFT)
- 23 BEARING (WORM SHAFT)
- 24 BEARING (WORM SHAFT THRUST)
- 25 LOCKNUT & WASHER
- 26 BEARING CAP (REAR)
- 27 GASKET & SHIMS (REAR)
- 28 WORM GEAR
- 29 WORM GEAR HUB (KEYED)
- 30 GEAR RETAINER
- 31 BEARING RETAINER
- 32 BEARING, UPPER (PINION SHAFT)
- 33 OIL SEAL (PINION SHAFT)
- 34 PINION SHAFT
- 35 PINION WEARING PLATE
- 36 BEARING, LOWER (PINION SHAFT)
- 37 BEARING CAP
- 38 BEARING SUPPORT RING
- 39 SPUR GEAR HOUSING
- 40 HOUSING COVER (4-PIECE)
- 41 SPUR GEAR ANTI-LIFT RING
- 42 TOE PLATE
- 43 SPUR GEAR (SPLIT)
- 44 REPLACEMENT BEARING RACE
- 45 BALL BEARING (1.36-1/8 DIA)
- 46 DRIVE CAGE ATTACHMENT LUG
- 47 CAPSCREW - 3/8" x 3/4" LG.
- 48 OIL LEVEL
- 49 OIL DRAIN
- 50 DRAIN PLUG
- 51 LEVELING SCREW (4 - 1/4" DIA.)
- 52 BELT SEAL (UPPER)
- 53 BELT SEAL (LOWER)
- 54 EYEBOLT - 4-1"
- 55 SETSCREW - 2-1/4" LG. *
- 56 OVERLOAD THRUST RING
- 57 THRUST SHAFT
- 58 OIL LEVEL DIPSTICK & CAP
- 59 CAPSCREW - 1/2" x 3/4" LG. NYLON
- 60 OIL HOLE COVER
- 61 BELLVILLE DISC
- 62 SPRING
- 63 OVERLOAD CAP
- 64 OIL LEVEL GAUGE
- 65 ARROW LEGEND PLATE W/2 DRIVE SCREWS

*COAT SETSCREW THREADS WITH PERMATEX WHEN INSTALLING. TOP OF SETSCREW MUST BE FLUSH OR BELOW SURFACE OF SPUR GEAR.



REV	DATE	BY	CHKD	DESCRIPTION
1	10/1/53	AD	AD	REVISED

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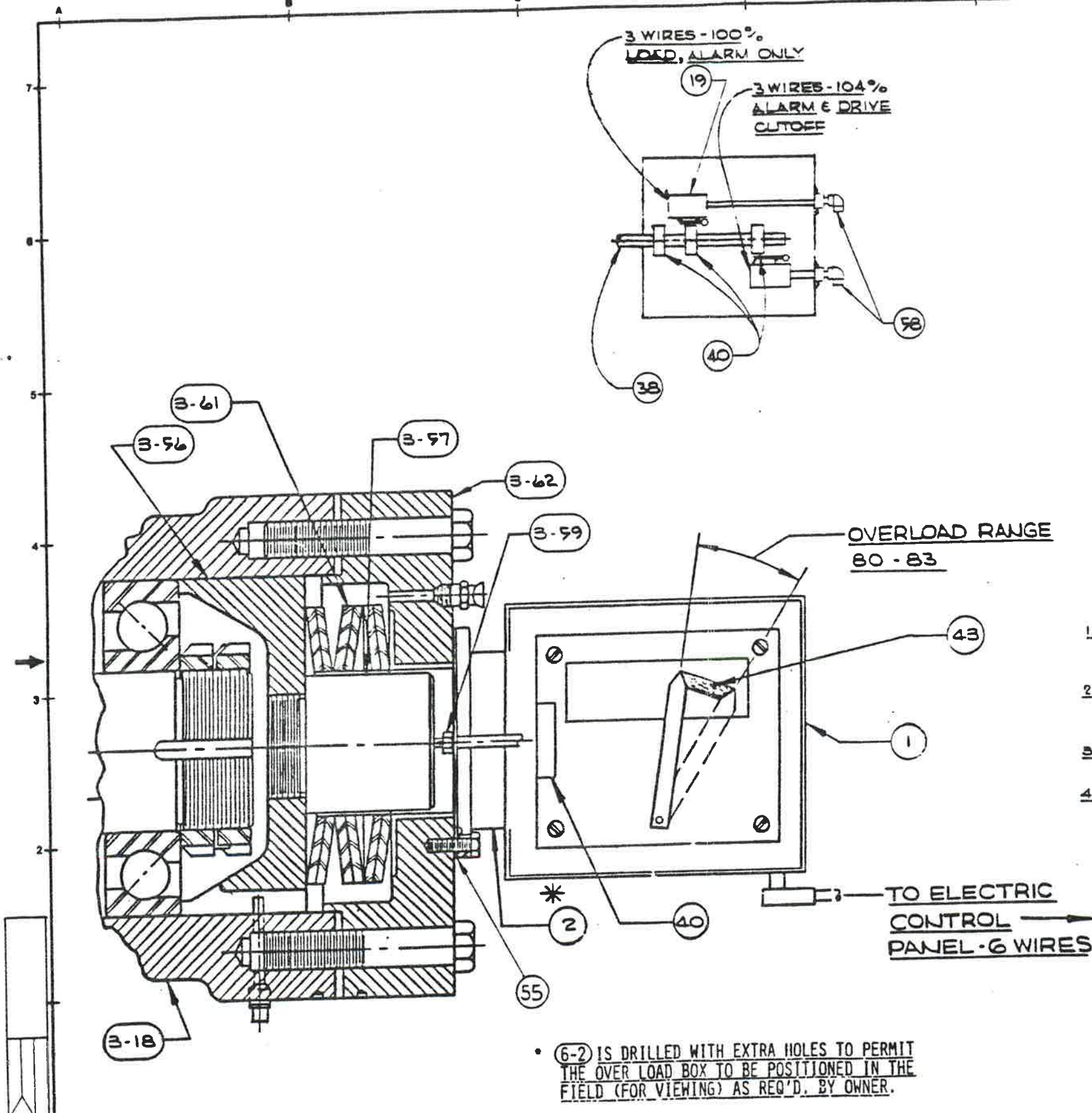
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DATE	BY	CHKD	APP	SCALE	FILE NUMBER
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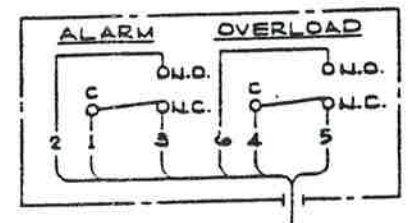
WALKER PROCESS CORPORATION
MILWAUKEE, WISCONSIN, U.S.A.

SPUR GEAR DRIVE ASSEMBLY
60" PD SPLIT GEAR

57



SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
2	6-A	1	TORQUE INDICATOR BOX ASSEMBLY	
	6-1	1	ENCLOSURE, NEMA IV, CLAMP COVER BOX	STEEL
	6-2	1	OVERLOAD ATTACHMENT RING	A519
	6-19	2	LIMIT SWITCH, MICRO SWITCH TYPE EXH-AR33	
	6-38	1	SHAFT, 1/4" DIA. x 10 7/16 LG.	AISI 302
	6-40	5	SET COLLAR FOR 1/4" SHAFT	STEEL
	6-43	1	RANGE MARKER, RED, MACTAC MR-1 REMOVABLE ADHESIVE, CUT TO FIT BETWEEN 80 & 83 ON DIAL	PAPER
	6-55	1	OVERLOAD DIAPHRAGM	NEOPRENE
	6-58	2	CONDUIT ELBOW, 1/2" x 90°, FEMALE	GALV. M.I.



- 1- REMOTE ALARM SYSTEM
A-NORMALLY OPEN ALARM CONTACT-TERMINALS 1 & 2
B-NORMALLY CLOSED ALARM CONTACT-TERMINALS 1 & 3
- 2- MOTOR OVERLOAD CUTOFF
A-NORMALLY OPEN CONTACTS-TERMINALS 4 & 4
B-NORMALLY CLOSED CONTACTS-TERMINALS 4 & 5
- 3- REFER TO CONTRACT DRAWINGS FOR OVERLOAD & ALARM CIRCUITRY.
- 4- FOR MAINTAINED CONTACT CONTROL SYSTEM, LOCKOUT DEVICE IS RECOMMENDED.

BY	CHK	DATE
BY	CHK	DATE

BY	DATE	REVISIONS	REMARKS

The use of anchor types, size, embedment or method other than that shown or provided by Walker Process Corporation will be done at the contractor's risk.

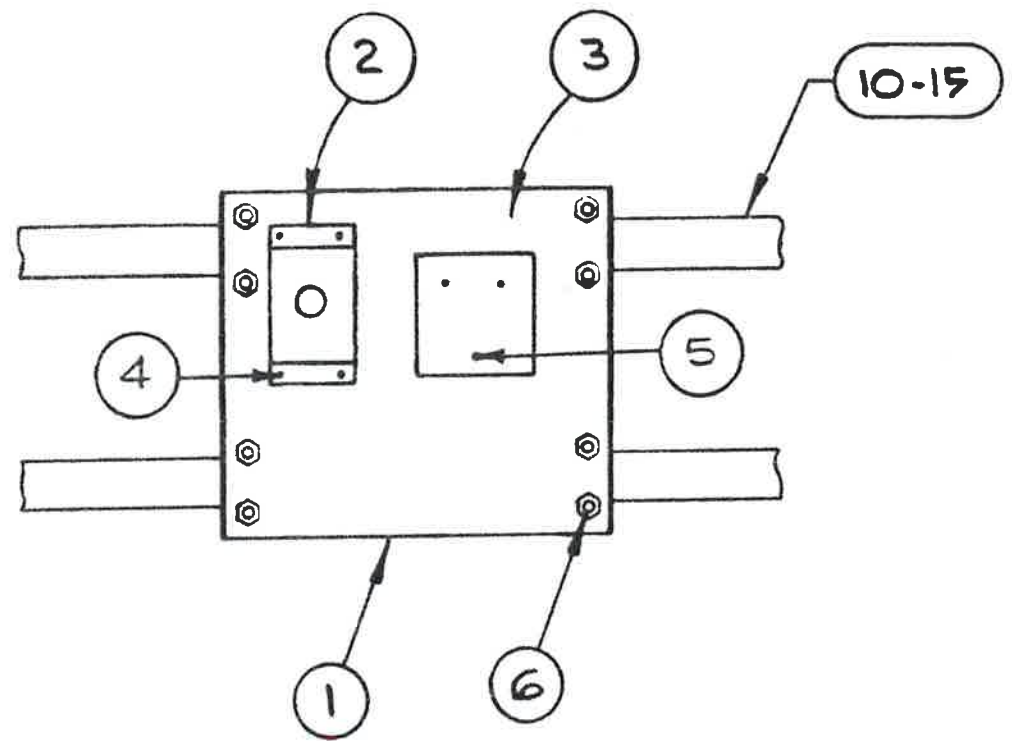
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4-14-82	CSE
DATE	BY
5-10-82	REC
SCALE	FILE REFERENCE

Walker Process Corporation
AURORA, ILLINOIS U.S.A.

TORQUE INDICATOR OVERLOAD ASSEMBLY

CONTRACT UW23301 DRG 6 REV 0



SHIP PCS.	MARK NO.	QTY./ UNIT	DESCRIPTION	MATERIAL
2	7-A	1	CONTROL PANEL ASS'Y	
	7-1	1	MOUNTING PLATE	5052-H32
	7-2	1	ON-OFF SELECTOR SWITCH	
	7-3	1	ALARM HORN	
	7-4	4	MACHINE SCREW, #12 RD. HEAD W/NUT	AISI 304
	7-5	3	MACHINE SCREW, #8 RD. HEAD W/NUT	AISI 304
8	7-6	4	U-BOLT, 1/4 DIA. W/NUTS	AISI 304

BY	DA	DATE
CHKD		
DATE		
BY		
CHKD		
DATE		
BY		
CHKD		
DATE		

REVISIONS	REMARKS
1	ADDED MKS. 7-4 & 7-5, CHANGED 7-1 MATERIAL

The use of anchor types, size, embedment or method other than that shown or provided by Walker Process Corporation will be done at the contractor's risk.

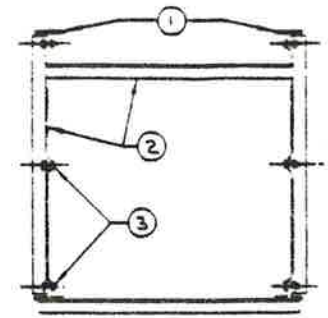
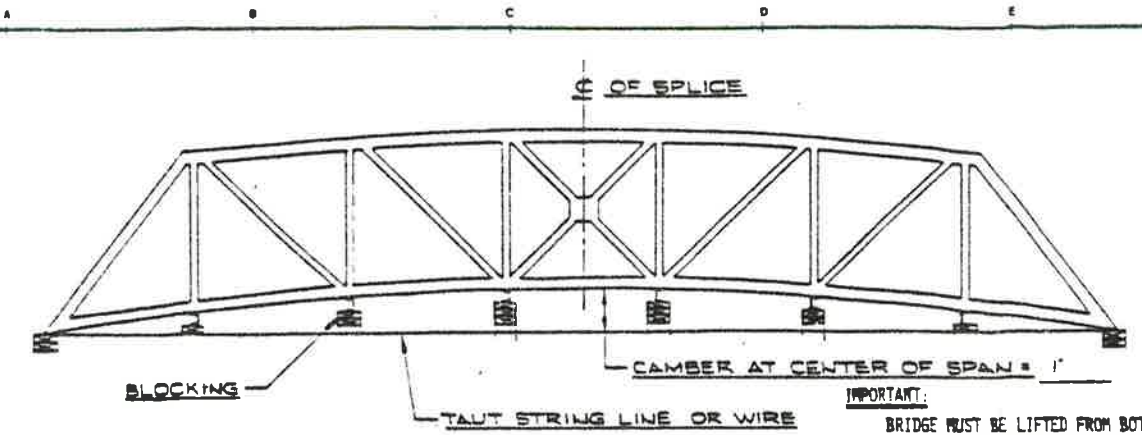
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	DATE	BY
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SCALE		
FILE REFERENCE		

WP Walker Process Corporation
AURORA, ILLINOIS U.S.A.

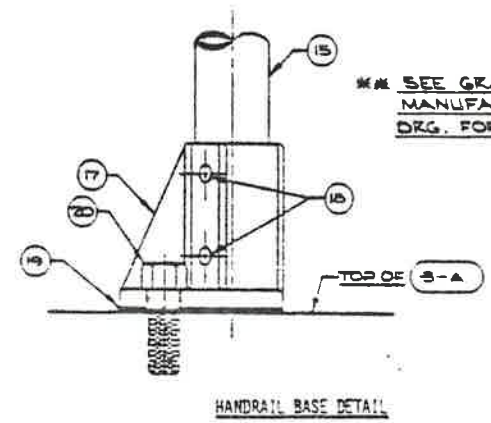
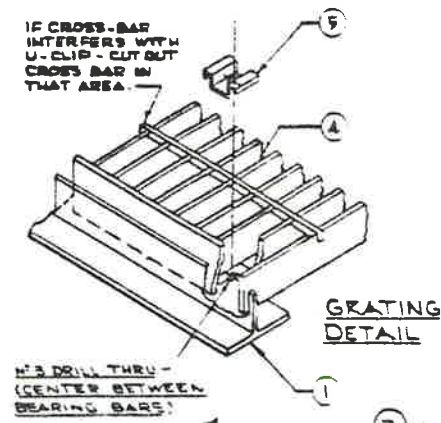
CONTROL PANEL ASS'Y

CONTRACT LW23301 DRG 7 REV. 1

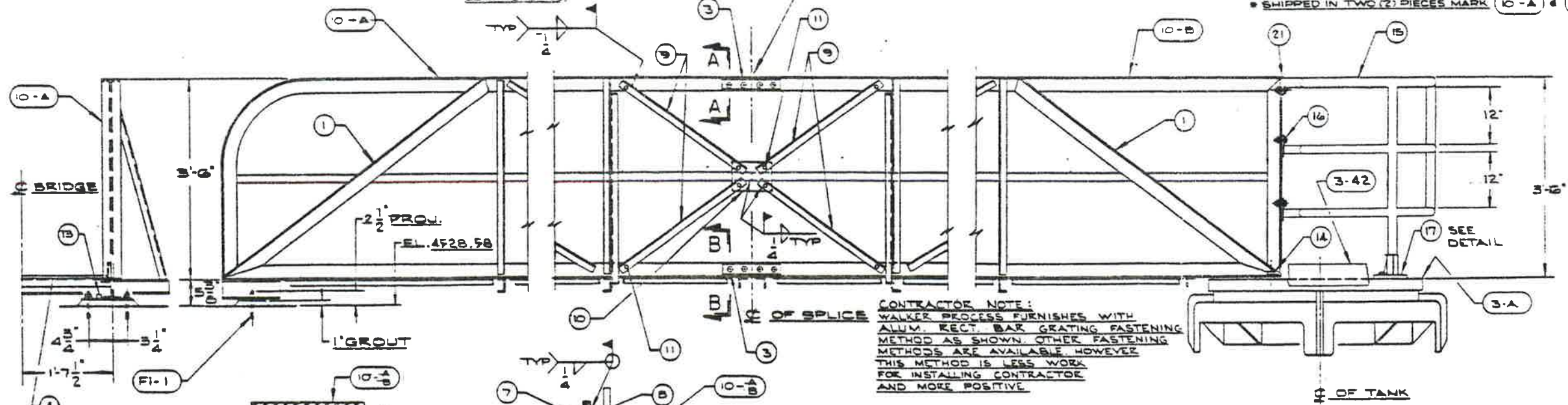


- SPLICING INSTRUCTIONS**
- BRIDGE TO BE ERECTED WITH CAMBER AS SHOWN (EXAGGERATED) IN SKETCH.
 - BUTT BRIDGE HALVES TOGETHER & LEVEL ENDS.
 - BLOCK UNDER TWO CENTER PANEL POINTS TO OBTAIN CAMBER SHOWN IN BOTTOM CHORD.
 - REMOVE SHIPPING FRAMES (2) AND SAVE EIGHT (8) FASTENERS (3) FOR USE ON FIELD SPICE.
 - TOP & BOTTOM CHORDS MUST BE IN CONTACT (WITHIN 1/8") AT SPICE POINTS. THIS MAY BE ACCOMPLISHED BY BLOCKING UNDER OTHER PANEL POINTS AS REQUIRED. TAKE CARE TO MAINTAIN REQUIRED CAMBER AT CENTER.
 - INSTALL PIECES MARK (7) (8) (9) & (10).
 - TACK FLANGE BUTT JOINT.
 - LIGHTLY LOOSEN BOLTS ON ONE SIDE OF PIECE (7) & (8).
 - BUTT WELD FLANGES OF STRUCTURAL TEE MEMBERS AS SHOWN.
 - FILLET WELD SPICE PLATES (7) & (8) TO WEB OF STRUCTURAL TEE MEMBERS.

IMPORTANT:
BRIDGE MUST BE LIFTED FROM BOTH ENDS OF THE BOTTOM CHORDS. LIFTING FROM CENTER AND/OR TOP CHORDS MAY RESULT IN DAMAGE, SINCE STRESSES EXERTED WILL BE OPPOSITE FROM THOSE FOR WHICH THIS BRIDGE WAS DESIGNED.



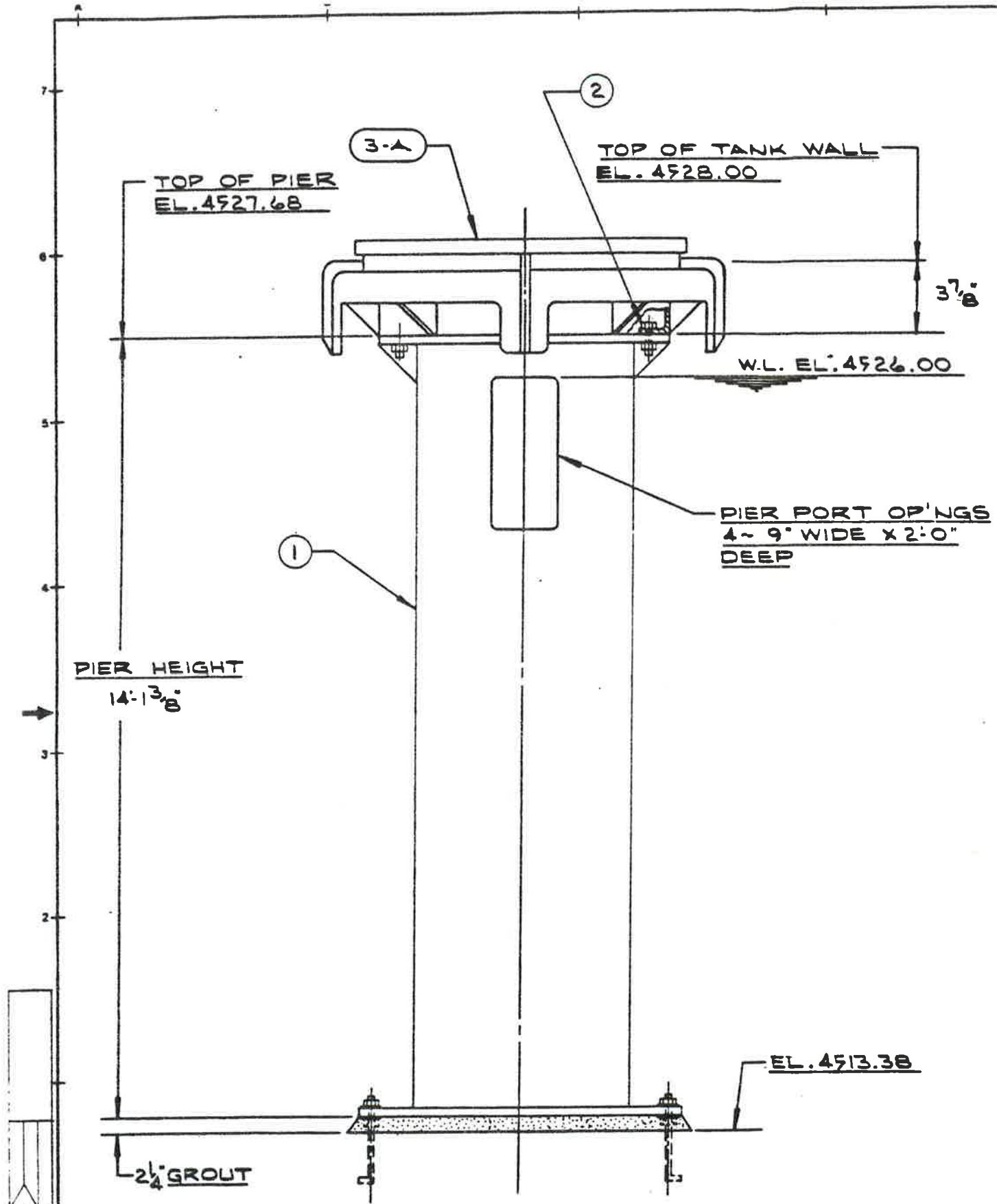
SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
2	10-A	1	TRUSS BRIDGE ASSEMBLY	
2	10-B	1	TRUSS BRIDGE ASSEMBLY	
	10-1	1	TRUSS BRIDGE, 1/2" MIN. STRUCTURAL MEMBERS	STEEL
	10-2	2	SHIPPING FRAME	STEEL
	10-3	12	CAPSCREW, 1/2" x 1 1/2" LG W/NUT	A307 GALV
	10-4		GRATING GARY GALV. 125 1/2" x 3/4" BRG BARS W/4" HIGH TOE PL	ALUM.
	10-5		FASTENING CLIP, GARY TYPE 'CB' (4 PER PANEL)	GALV.
	10-6		THREAD FORMING SCREW 1/2" x 1 1/4" LG. HEX. HD.	GALV.
12	10-7	6	CHORD SPICE ANGLE	M1020
4	10-8	2	CHORD SPICE BAR	M1020
16	10-9	8	BRIDGE DIAGONAL	A36
4	10-10	2	DIAGONAL CONNECTING PLATE	M1020
32	10-11	16	CAPSCREW, 3/8" x 1" LG. W/NUT	A307 GALV
16	10-12	8	MACHINE SCREW, 1/2" x 1 1/2" LG. FLAT HEAD W/NUT	A307 GALV
4	10-13	2	BRIDGE SLIDE PLATE	M1020
4	10-14	2	CAPSCREW, 1" x 1 1/2" LG. W/S.A.E. WASHER	A307 GALV
2	10-15	1	END HANDRAIL, 1 1/2" SCHED. 40 PIPE	6063-T5
24	10-16	12	CAPSCREW, 3/8" x 1 1/2" LG. W/NUT	A151 304
4	10-17	2	HANDRAIL BASE	319
8	10-18	4	SET SCREW, 3/8" x 1/2" HEX. SOC. HD., CUP PT.	A151 304
4	10-19	2	ISOLATION GASKET	ASBESTOS
8	10-20	4	CAPSCREW, 3/4" x 2"	A151 304
12	10-21	6	ISOLATION GASKET	NEOP.



* SHIPPED IN TWO (2) PIECES MARK 10-A & 10-B

REV	DATE	BY	CHKD

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SHIP PCS.	MARK NO.	QTY./ UNIT	DESCRIPTION	MATERIAL
2	11-1	1	CENTER PIER ~ 3'-0" O.D. x 1/4" WALL	STEEL
24	11-2	12	CAPSCREW ~ 1" x 3 1/2" LONG, W/NUT	A307 GALV.

BY	CHK	DATE
BY	CHK	DATE

BY	CHKD	DATE	REVISIONS	REMARKS

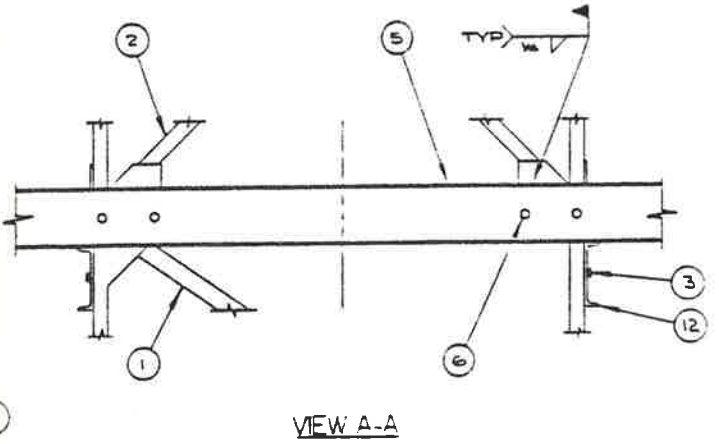
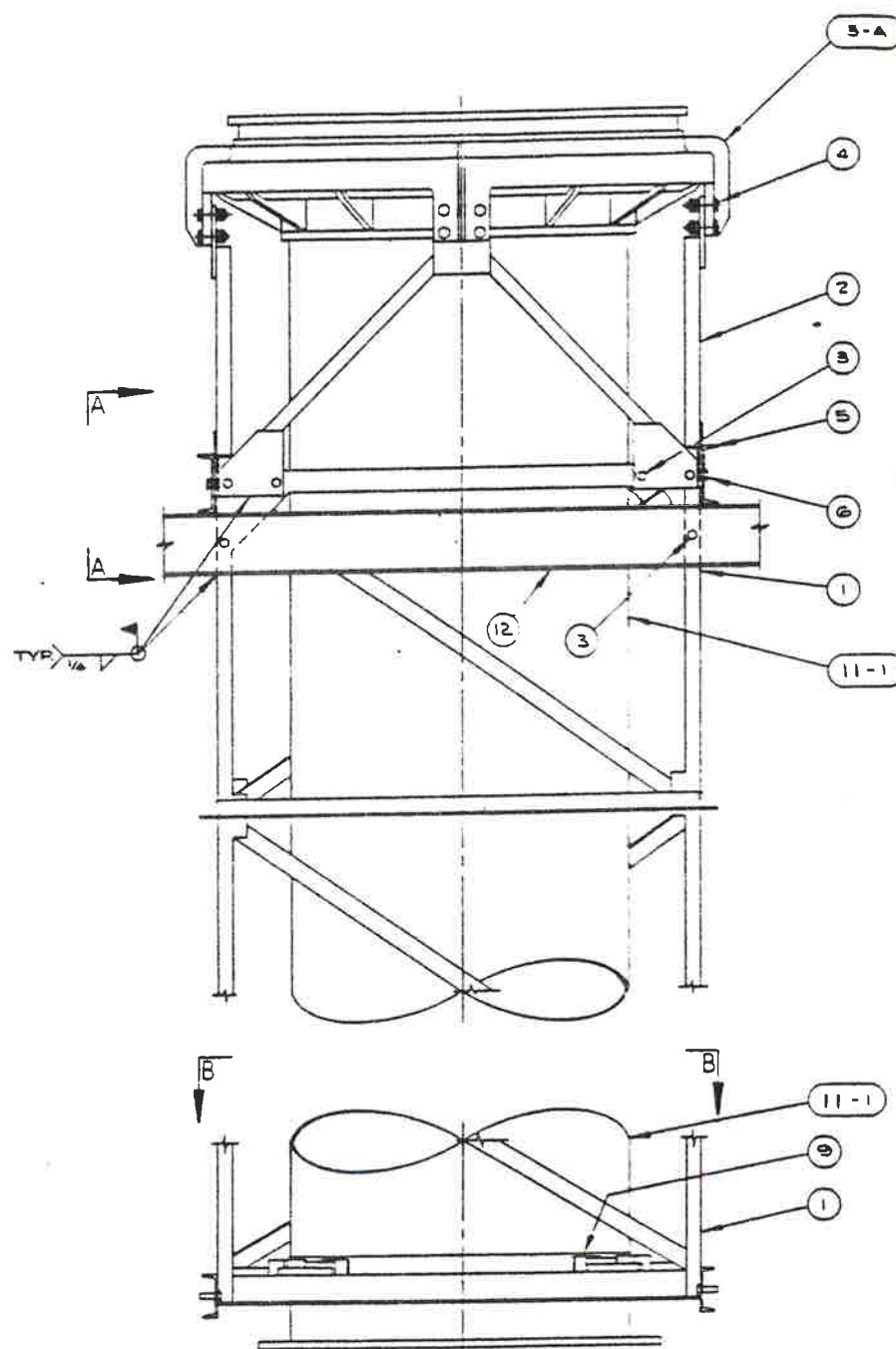
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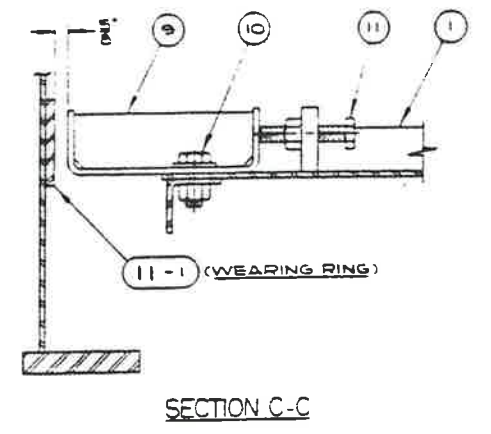
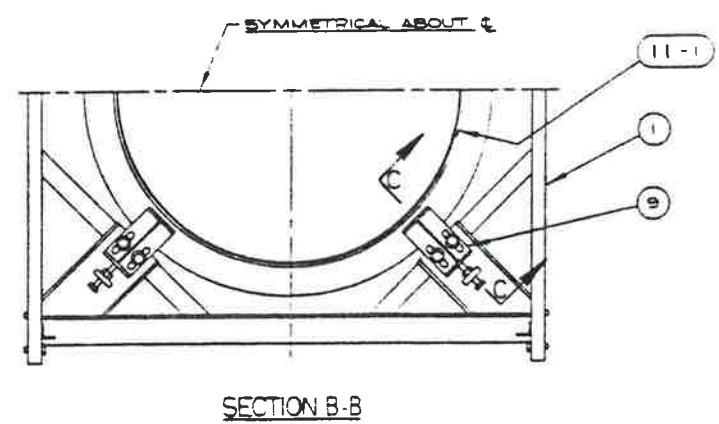
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5-10-82	REC
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SCALE	
FILE REFERENCE	

Walker Process Corporation
 AURORA, ILLINOIS U.S.A.
CENTER PIER ASSEMBLY

CONTRACT UW23301 DRG 11 REV 0



NOTE:
FIELD WELDING TO BE DONE AFTER ASSEMBLY
AND FINAL ALIGNMENT OF MECHANISM.

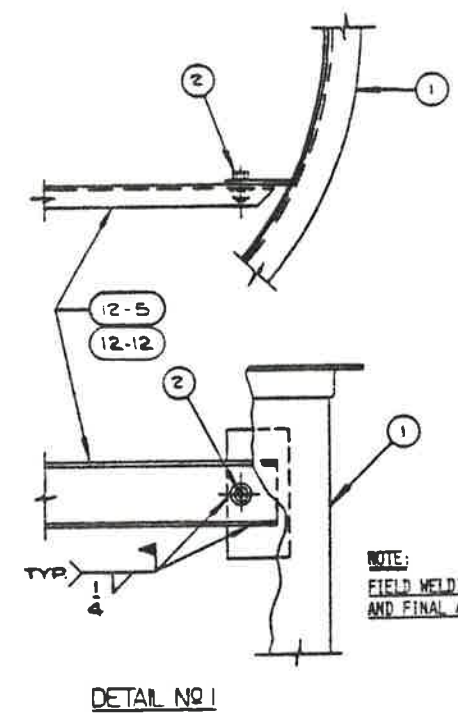
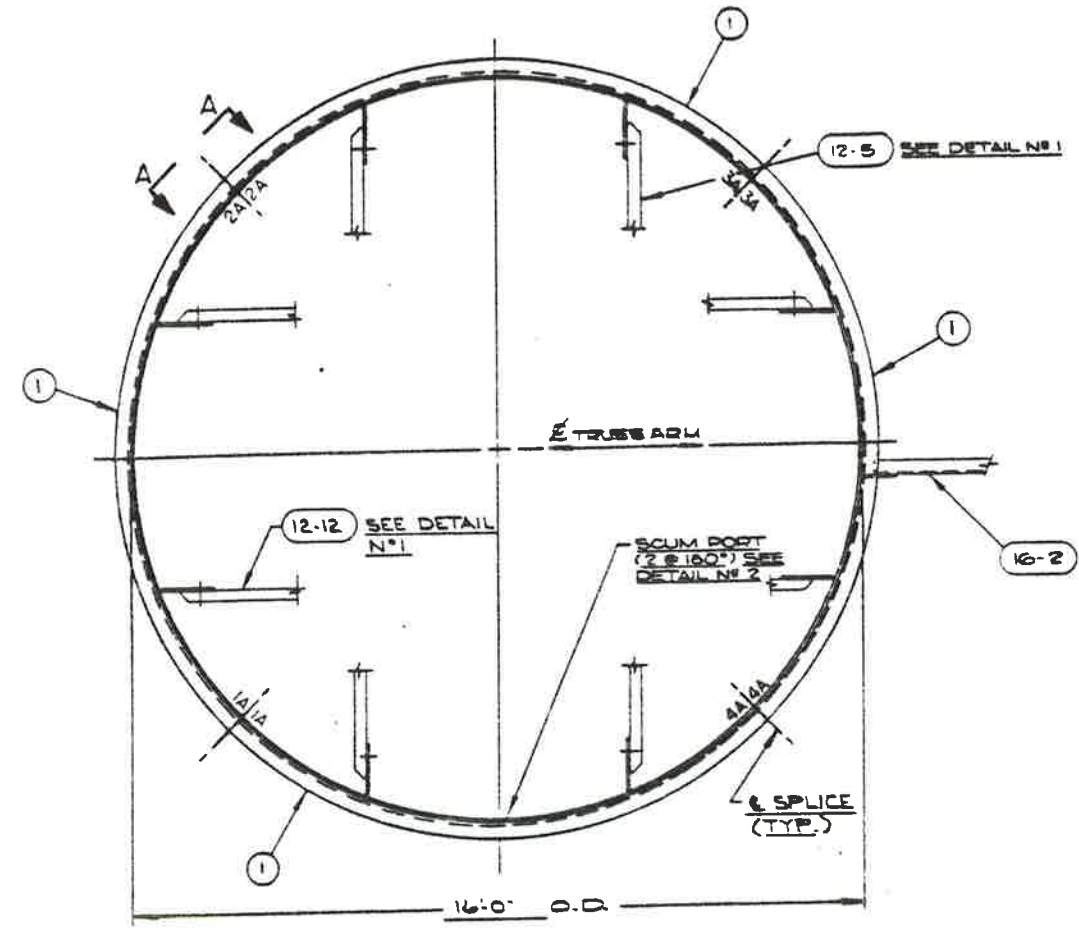


SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
2	12-1	1	DRIVE CAGE - 5'-8 1/4" SQ. 1/4" MIN. STRUCTURAL MEMBERS	STEEL
8	12-2	4	DRIVE CAGE HANGER	STEEL
24	12-3	12	CAPSCREW, 5/8" x 1 1/2" LG. W/NUT	A307 GALV
32	12-4	16	CAPSCREW, 7/8" x 3 1/2" LG. W/NUT AND JAM NUT	A307 GALV
4	12-5	2	INFLUENT WELL HANGER	A36
16	12-6	8	CAPSCREW, 5/8" x 1 3/4" LG. W/NUT	A307 GALV
8	12-9	4	GUIDE SHOE	M1020
16	12-10	8	CAPSCREW, 3/4" x 2" LG W/NUT & WASHER	A307 GALV
8	12-11	4	CAPSCREW, 3/4" x 4" LG. W/NUT	A307 GALV
4	12-12	2	INFLUENT WELL HANGER	STEEL

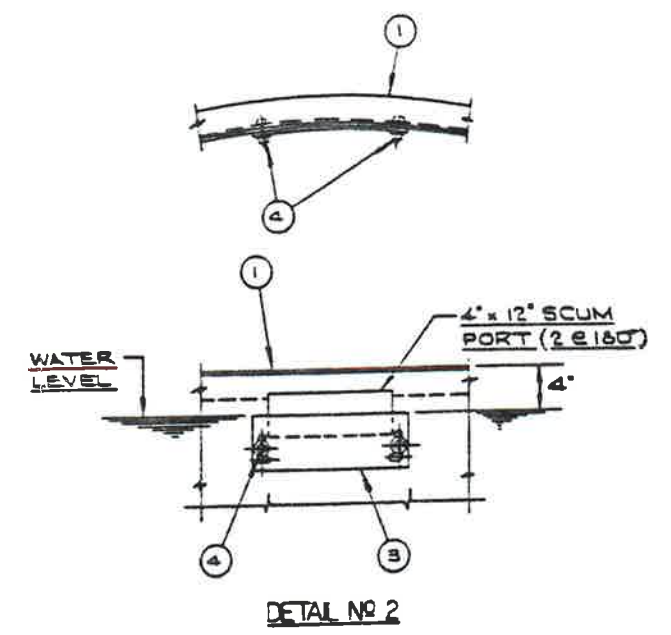
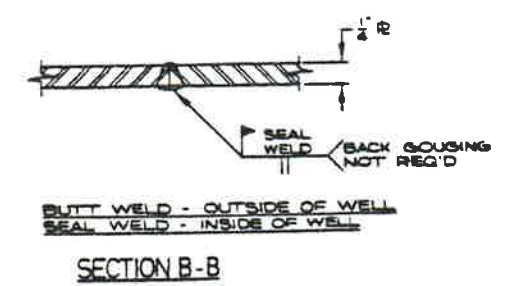
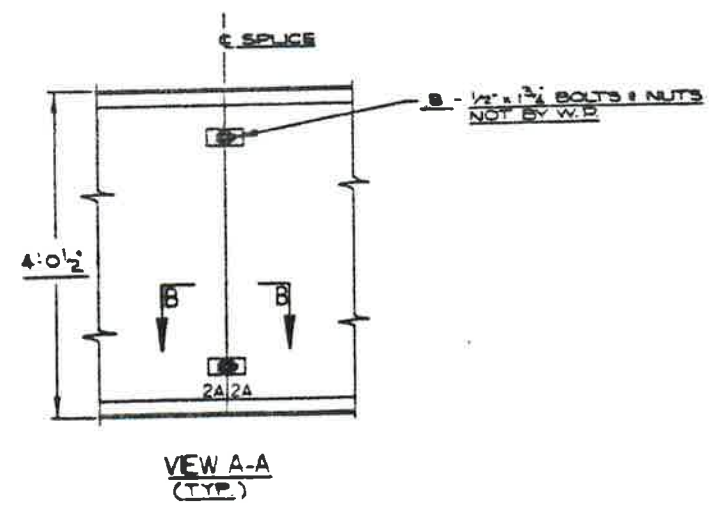
SCALE: 1" = 3'-0"

REVISIONS BY: _____ DATE: _____	The use of anchor types, size, embedment or method other than that shown or provided by Walker Process Corporation will be done at the contractor's risk.	DATE: 4-6-82 BY: CSE CHECKED: 5-6-82 BY: KAC	Walker Process Corporation AURORA ILLINOIS U.S.A. DRIVE CAGE ASSEMBLY 60" SPUD GEAR DRIVE
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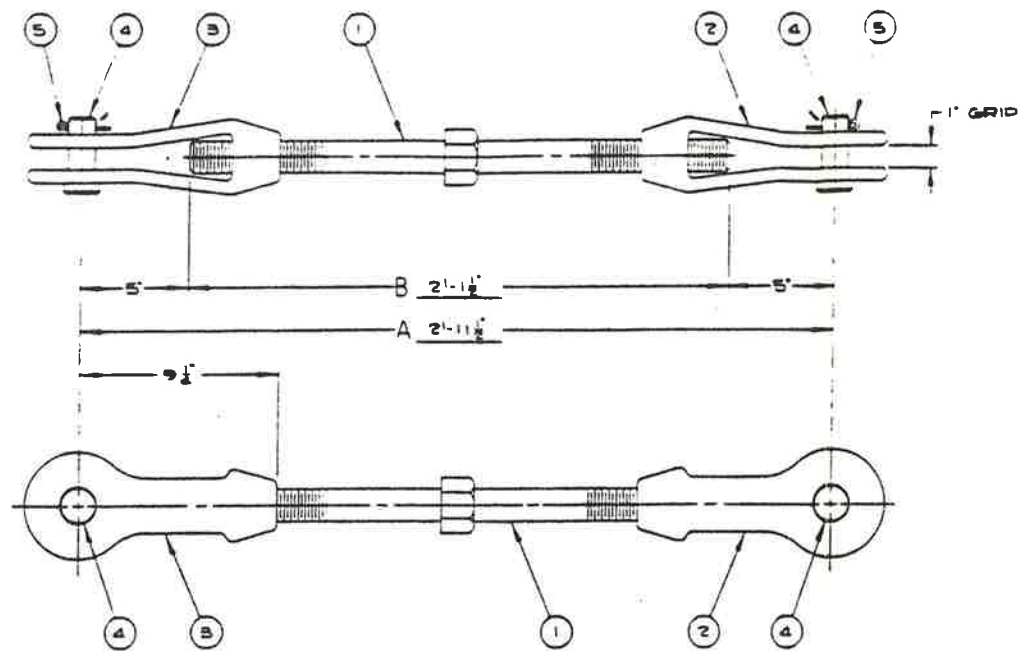
SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
8	13-1	4	INFLUENT WELL - 1/4" PLATE	STEEL
16	13-2	8	CAPSCREW, 3/4" x 1 1/2" LG. W/ NUT & WASHER	A307 GALV
4	13-3	2	SCUM WEIR PLATE	A569
8	13-4	4	NUT, 1/2" HEX. W/ WASHER	GALV



NOTE
MATCH-MARKING ON WELL SHOWN IS '1A-2A', ETC.
OTHER WELL IS SIMILAR '1B-2B', ETC.



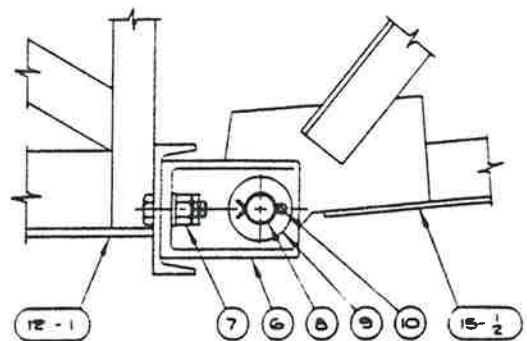
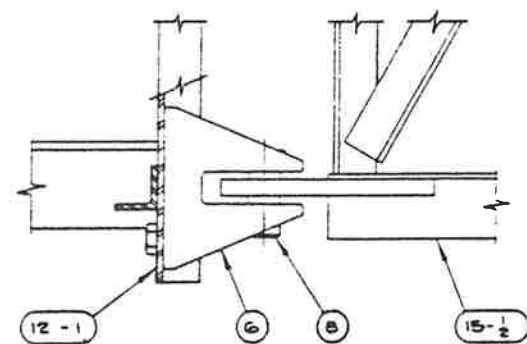
BY	DATE	DR	Walker Process Corporation AURORA ILLINOIS U.S.A. INFLUENT WELL ASSEMBLY
CHKD	DATE	APPD	
DATE	DATE	SCALE	N.T.S.
DATE	DATE	FILE REFERENCE	
REVISIONS	REVISIONS	CONTRACT	UW23301 DRG 13



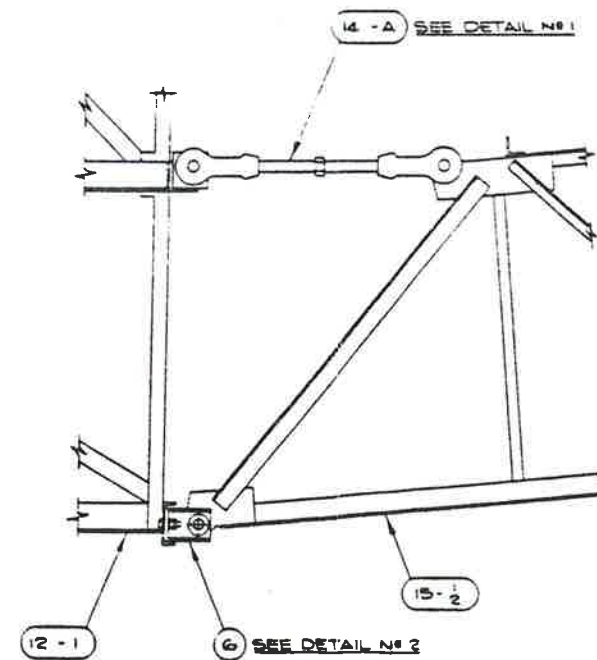
DETAIL NO 1

FLOOR SLOPE	A	B
FLAT	3'- 3 1/2"	2'- 5 1/2"
1/4:12	3'- 2 1/2"	2'- 4 1/2"
1/2:12	3'- 1 1/2"	2'- 3 1/2"
3/4:12	3'- 0 1/2"	2'- 2 1/2"
1:12	2'- 11 1/2"	2'- 1 1/2"
1 1/4:12	2'- 10 1/2"	2'- 0 1/2"
1 1/2:12	2'- 9 1/2"	1'- 11 1/2"
1 3/4:12	2'- 8 1/2"	1'- 10 1/2"
2:12	2'- 7 1/2"	1'- 9 1/2"
2 1/4:12	2'- 6 1/2"	1'- 8 1/2"
2 1/2:12	2'- 5 1/2"	1'- 7 1/2"
2 3/4:12	2'- 4 1/2"	1'- 6 1/2"
3:12	2'- 3 3/4"	1'- 5 3/4"
3 1/4:12	2'- 2 3/4"	1'- 4 3/4"
3 1/2:12	2'- 1 3/4"	1'- 3 3/4"
3 3/4:12	2'- 1"	1'- 3"
4:12	2'- 0"	1'- 2"

SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
B	14-A	4	CLEVIS ROD ASSEMBLY	
	14-1	4	CLEVIS ROD, 1 1/2" DIA.	1018
	14-2	4	CLEVIS NUT, NO. 5, 1 5/16" DIA. HOLE FOR PIN, 1" GRIP, SHOP TAP 1 1/2" - 6 UNC-2B RIGHT HAND	STEEL
	14-3	4	CLEVIS NUT, NO. 5, 1 5/16" DIA. HOLE FOR PIN, 1" GRIP, SHOP TAP 1 1/2" - 6 UNC-2B LEFT HAND	STEEL
	14-4	8	CLEVIS PIN, 1 1/4" DIA.	1018
	14-5	8	COTTER PIN, 1/4" x 2" LG.	GALV
B	14-6	4	TRUSS ARM ATTACHMENT BRACKET	A48, CLSD
16	14-7	8	NUT, 3/4" HEX. W/LOCKNUT & S.A.E. WASHER	A307 GALV
B	14-8	4	CLEVIS PIN, 1 1/2" DIA.	1018
B	14-9	4	WASHER, 1 1/2" S.A.E. PLAIN	GALV
B	14-10	4	COTTER PIN, 1/4" x 2" LG.	GALV



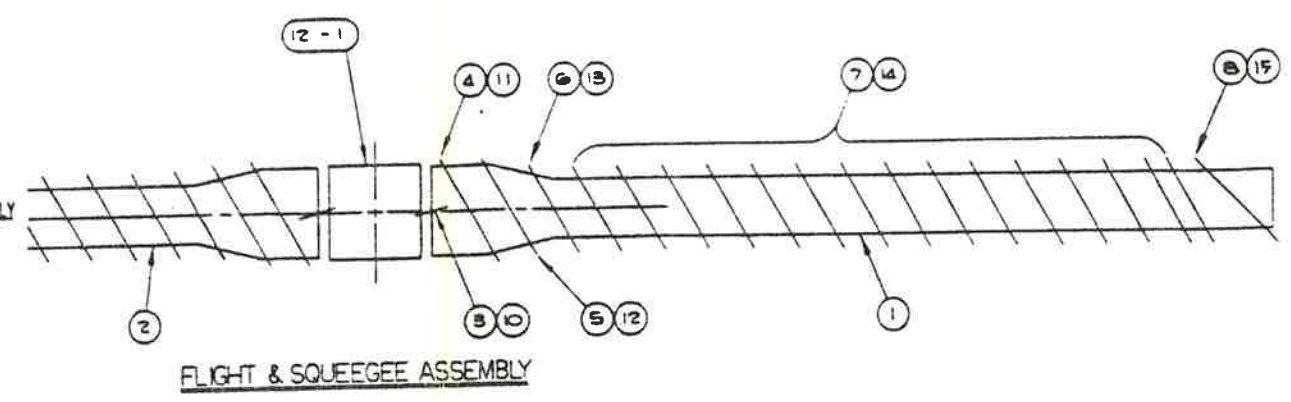
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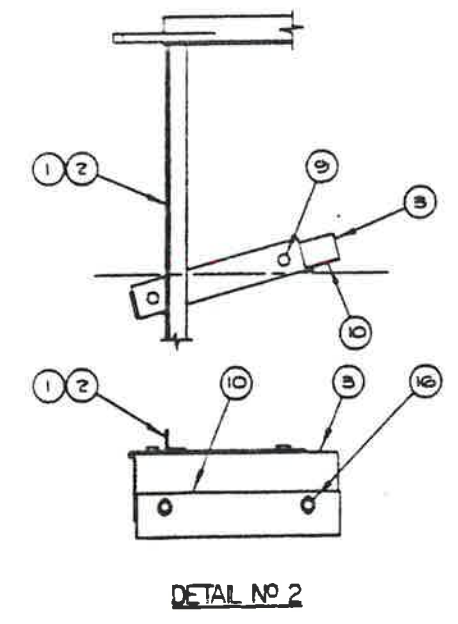
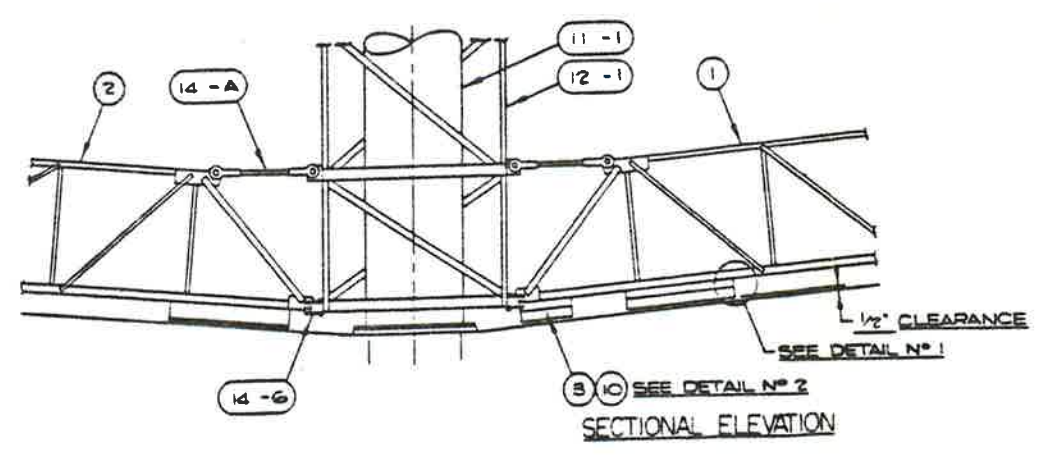
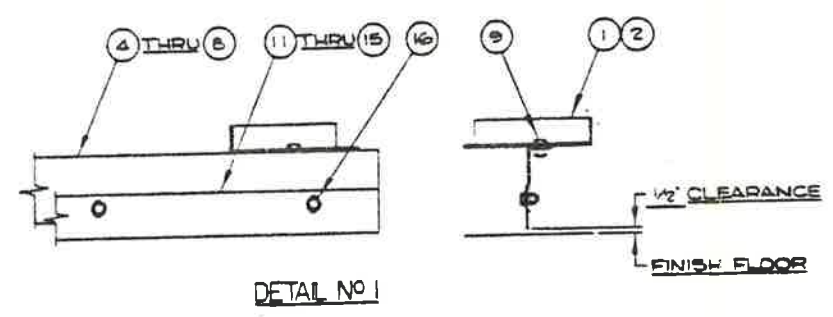
DATE	BY
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FILE REFERENCE																																									

FLIGHT & SQUEEGEE ASSEMBLY
IDENTICAL FOR THIS ARM



SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
2	15-1	1	TRUSS ARM, 1/4" MIN. THICKNESS ON STRUCTURAL MEMBERS	STEEL
2	15-2	1	TRUSS ARM, 1/4" MIN. THICKNESS ON STRUCTURAL MEMBERS	STEEL
4	15-3	2	FLIGHT, (2'-0") 1/4" PL.	M1020
4	15-4	2	FLIGHT, (7'-4") 1/4" PL.	M1020
4	15-5	2	FLIGHT, (6'-9") 1/4" PL.	M1020
4	15-6	2	FLIGHT, (6'-3") 1/4" PL.	M1020
60	15-7	30	FLIGHT, (6'-0") 1/4" PL.	M1020
4	15-8	2	FLIGHT, (8'-0") 1/4" PL.	M1020
160	15-9	80	CAPSCREW, 5/8" x 1 1/4" LG. W/NUT	A307 GALV.
4	15-10	2	SQUEEGEE, (2'-0") 20 GA.	B19
4	15-11	2	SQUEEGEE, (7'-4") 20 GA.	B19
4	15-12	2	SQUEEGEE, (6'-9") 20 GA.	B19
4	15-13	2	SQUEEGEE, (6'-3") 20 GA.	B19
60	15-14	30	SQUEEGEE, (6'-0") 20 GA.	B19
4	15-15	2	SQUEEGEE, (8'-0") 20 GA.	B19
316	15-16	158	CAPSCREW, 1/2" x 1 1/4" LG. W/NUT & WASHER	A307 GALV.

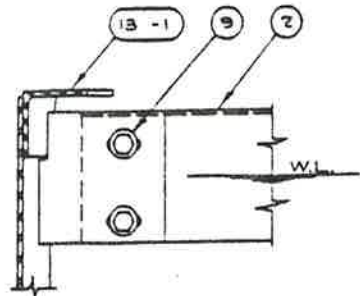


NO.	DATE	BY	CHKD.

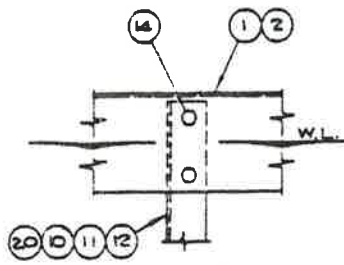
REVISIONS	REMARKS

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4-8-82	CEK
CHECKED	5-10-82
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SCALE	
FILE REFERENCE	

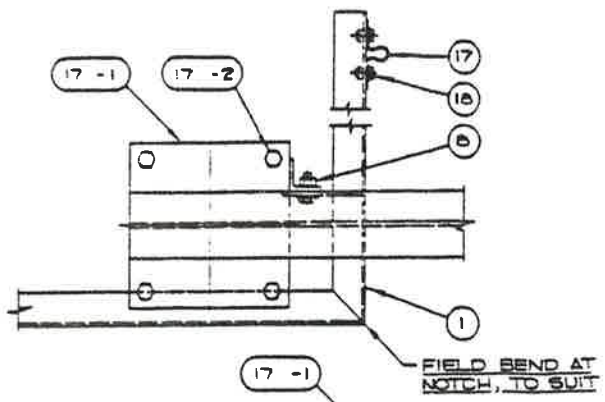
Walker Process Corporation
AURORA ILLINOIS U.S.A.
TRUSS ARM ASSEMBLY
5'-8 1/4" DRIVE CAGE
CONTRACT LW23301 JORG 15 INC 0



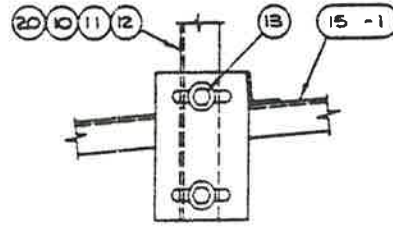
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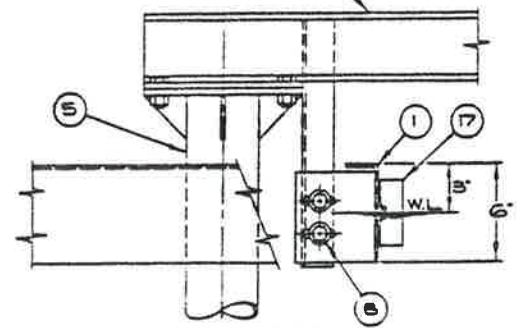
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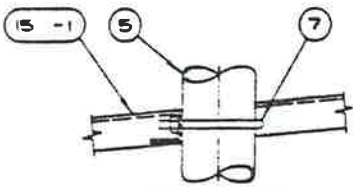
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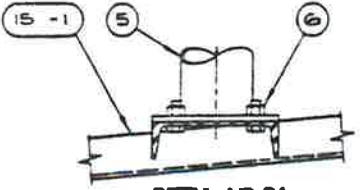
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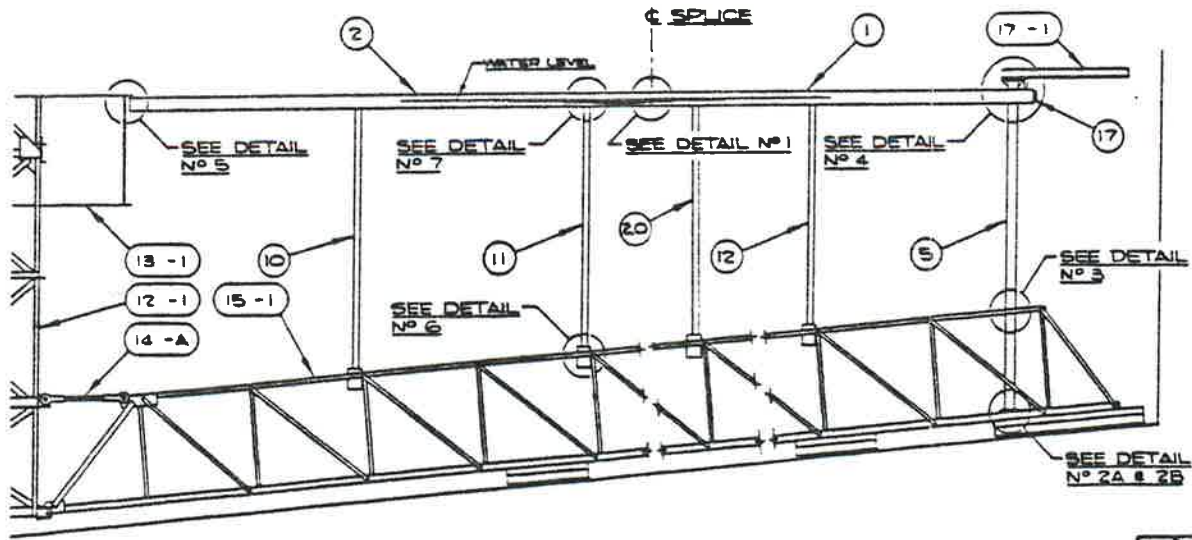


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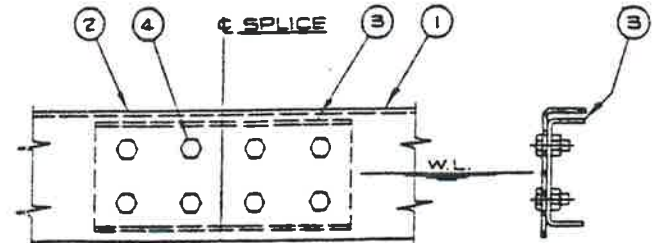


DETAIL NO 2B

SHIP PCS.	MARK NO.	QTY./ UNIT	DESCRIPTION	MATERIAL
2	16-1	1	SCUM DEFLECTOR	M1020
2	16-2	1	SCUM DEFLECTOR	M1020
2	16-3	1	SPLICE BAR	M1020
16	16-4	8	CAPSCREW, 1/2" x 1 1/4" L6. W/NUT	A307 GALV
2	16-5	1	SKIMMER SUPPORT	STEEL
8	16-6	4	NUT, 5/8" HEX.	GALV
2	16-7	1	U-BOLT, 1/2" DIA. W/NUTS	GALV
4	16-8	2	CAPSCREW, 1/2" x 1 1/2" L6. W/NUT & 2-WASHER	A307 GALV
4	16-9	2	CAPSCREW, 1/2" x 1 1/4" L6. W/NUT & WASHER	A307 GALV
2	16-10	1	SCUM DEFLECTOR SUPPORT	A36
2	16-11	1	SCUM DEFLECTOR SUPPORT	A36
2	16-12	1	SCUM DEFLECTOR SUPPORT	A36
16	16-13	8	CAPSCREW, 5/8" x 1 3/4" L6. W/NUT & 2-WASHER	A307 GALV
16	16-14	8	CAPSCREW, 1/2" x 1 1/4" L6. W/NUT	A307 GALV
2	16-17	1	SCUM DEFLECTOR WIPER	NEOPRENE
4	16-18	2	CAPSCREW, 3/8" x 1" L6. W/NUT & WASHER	A307 GALV
2	16-19	1	BAR, 7" DIA. x 3'-2" L6. (COUNTERWEIGHT)	M1020
2	16-20	1	SCUM DEFLECTOR SUPPORT	A36

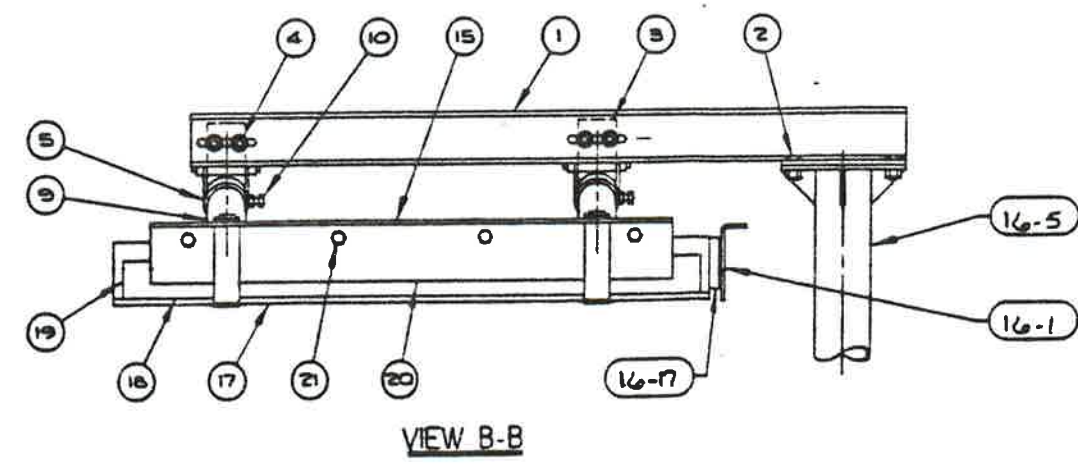
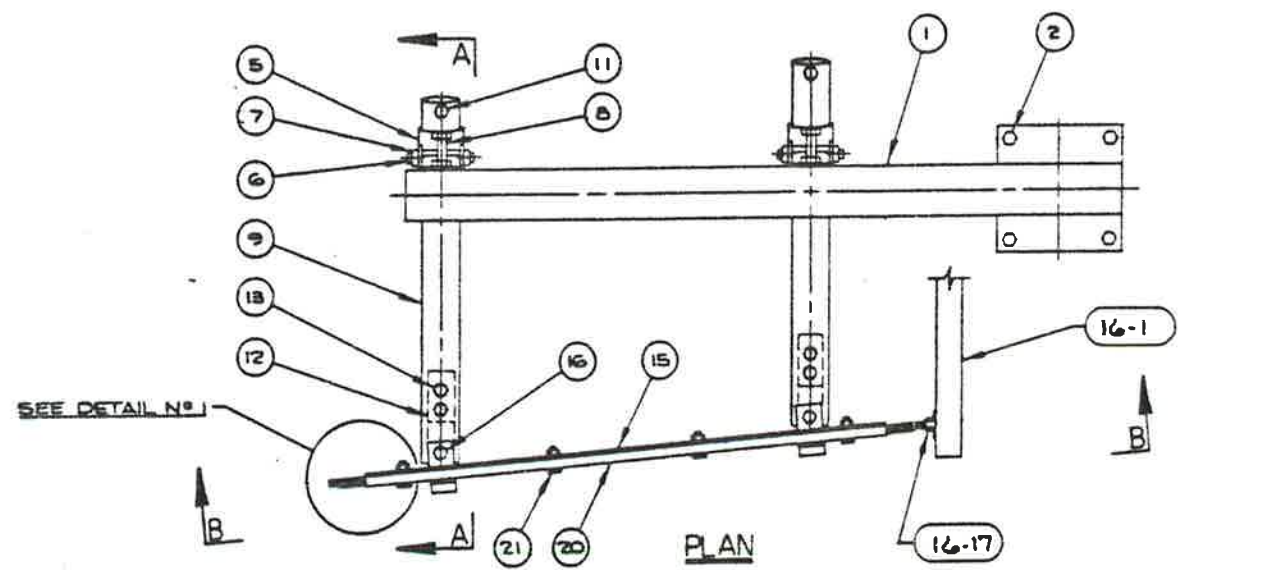
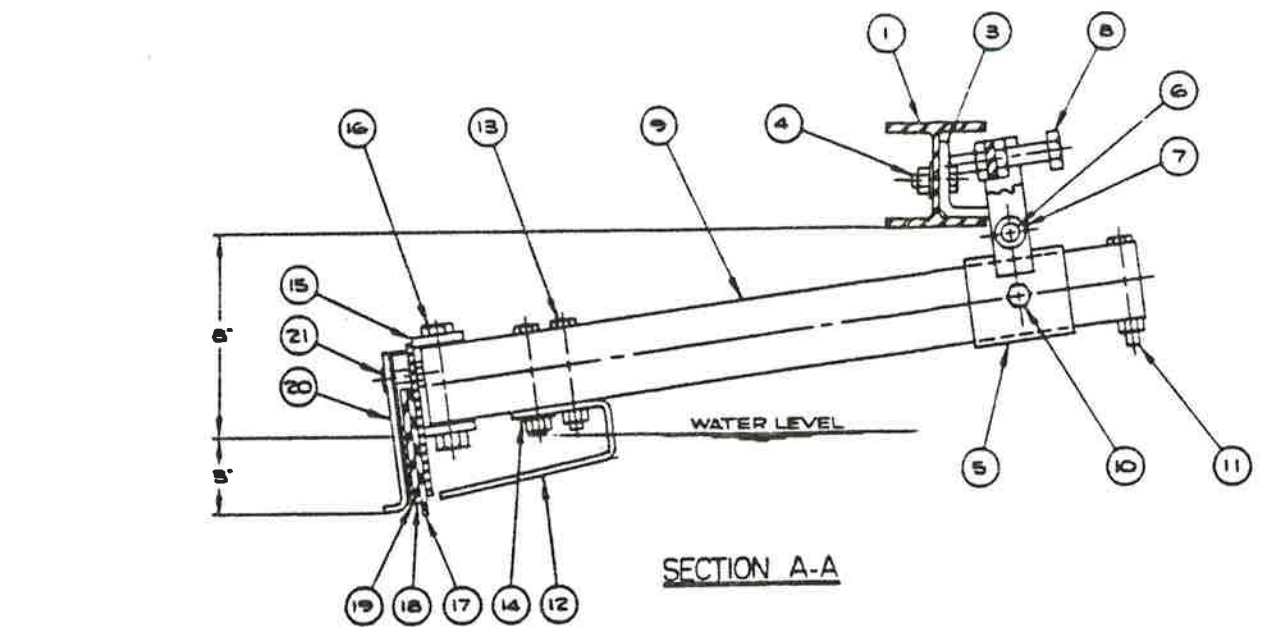


SECTIONAL ELEVATION

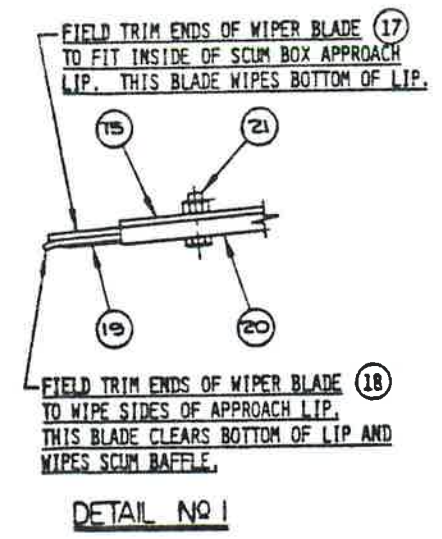


DETAIL NO 1

DATE: 4-12-82 DRAWN BY: CAC CHECKED BY: MEC SCALE: FILE REFERENCE	Walker Process Corporation AURORA, ILLINOIS U.S.A. SCUM DEFLECTOR ASSEMBLY CONTRACT UJW23301 DRG 16 INT C
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SHIP PCS.	MARK NO.	QTY./ UNIT	DESCRIPTION	MATERIAL
2	17-1	1	SKIMMER BOOM	STEEL
8	17-2	4	CAPSCREW, 5/8" x 1 1/2" LG. W/NUT	A307 GALV
4	17-3	2	PIVOT BRACKET	STEEL
8	17-4	4	CAPSCREW, 1/2" x 1 1/2" LG. W/NUT & WASHER	A307 GALV
4	17-5	2	PIVOT SLEEVE	STEEL
4	17-6	2	BAR, 3/4" DIA. x 5 1/4" LG.	1018
8	17-7	4	SET COLLAR FOR 3/4" DIA. SHAFT	GALV.
4	17-8	2	CAPSCREW, 3/4" x 4" LG., FULL THREAD W/2 - JAM NUTS	A307 GALV
4	17-9	2	SKIMMER ARM	6061-T6
4	17-10	2	CAPSCREW, 1/2" x 1" LG. W/JAM NUT	A307 GALV
4	17-11	2	CAPSCREW, 1/2" x 4" LG. W/NUT	A307 GALV
4	17-12	2	SKIMMER RIDER BAR	5052-H32
8	17-13	4	CAPSCREW, 1/2" x 4" LG. W/NUT	A307 GALV
4	17-14	2	WASHER, 1/2" STD. PLAIN	GALV.
2	17-15	1	BACK-UP PLATE	6061-T6
4	17-16	2	CAPSCREW, 5/8" x 4 1/2" LG. W/NUT	A307 GALV
2	17-17	1	SHEET, 1/4" x 5" x 4'-2" LG.	NEOPR.
2	17-18	1	SHEET, 1/4" x 4 1/2" x 4'-6" LG.	NEOPR.
2	17-19	1	STRIP, .090" x 3" x 3'-10 1/2"	5052-H32
2	17-20	1	WIPER CLAMP	5052-H32
8	17-21	4	CAPSCREW, 1/2" x 1 3/4" LG. W/NUT	A307 GALV



BY	DATE	CHK	DATE
W.C.D.	9-3-81		
CHK			

NO.	REVISIONS	REMARKS

The use of anchor types, size, embedment or method other than that shown or provided by Walker Process Corporation will be done at the contractor's risk.

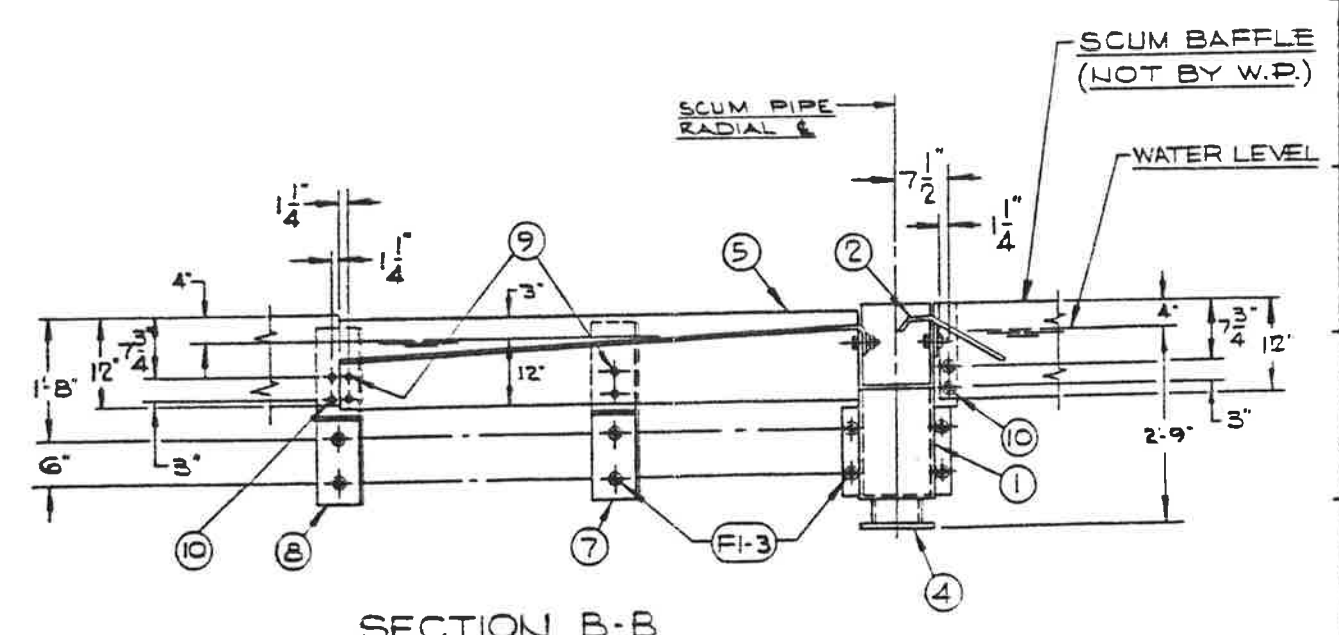
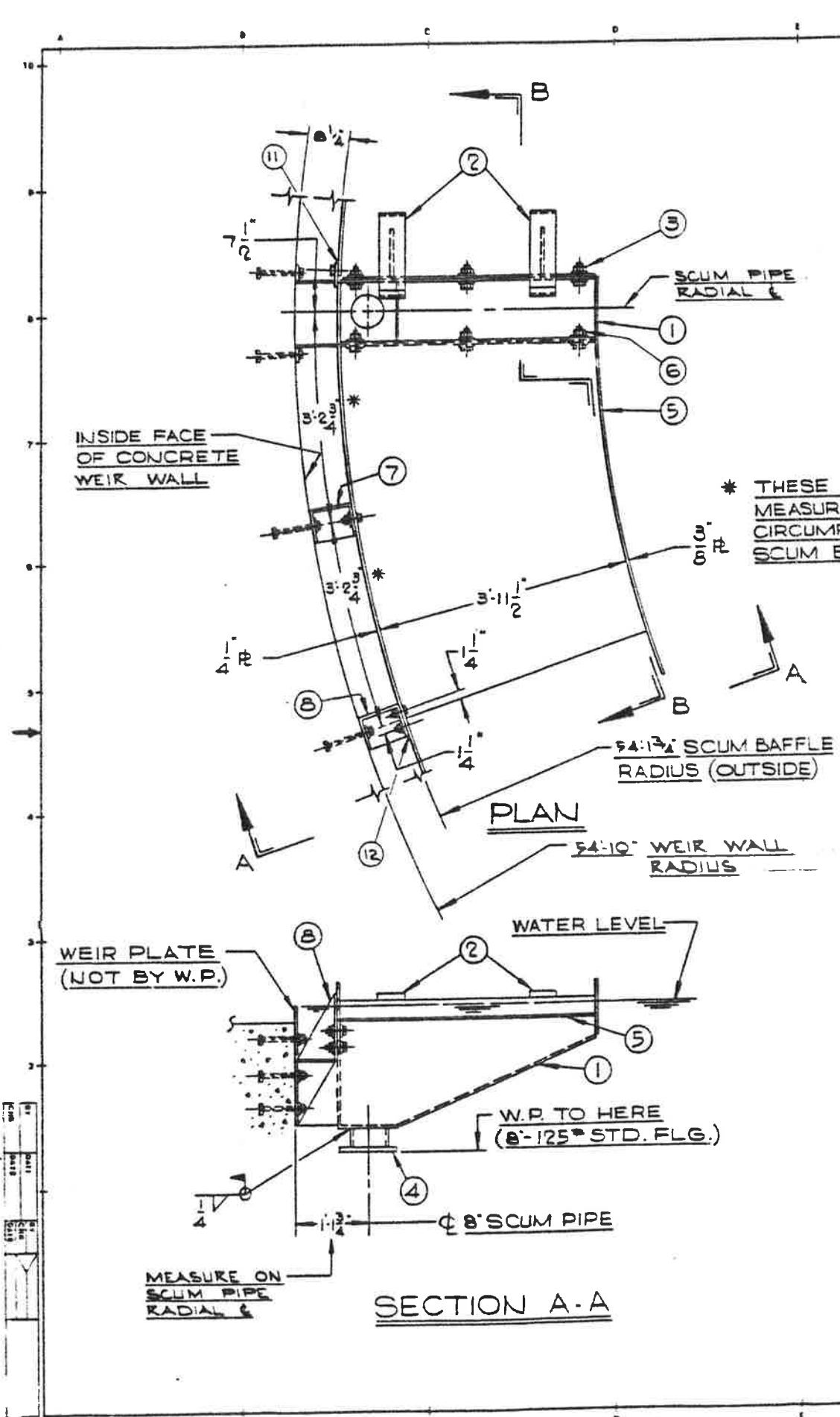
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DATE	BY
4-12-82	CSE
CHECKED	5-10-82 REC
APPR	
SCALE	
FILE REFERENCE	3C1293 0

Walker Process Corporation
AURORA, ILLINOIS U.S.A.

SKIMMER ASSEMBLY

CONTRACT UW23301 DRG 17 REV 0



SHIP PCS.	MARK NO.	QTY./UNIT	DESCRIPTION	MATERIAL
2	18-1	1	SCUM BOX	STEEL
2	18-2	1	RIDER STRAP & BACK PLATE	STEEL
6	18-3	3	NUT, 1/2" HEX. W/WASHER	GALV
2	18-4	1	SCUM PIPE SPOOL	STEEL
2	18-5	1	APPROACH LIP	STEEL
6	18-6	3	NUT, 1/2" HEX. W/WASHER	GALV
2	18-7	1	APPROACH LIP BRACKET	STEEL
2	18-8	1	APPROACH LIP & SCUM BAFFLE BRACKET	STEEL
8	18-9	4	CAPSCREW, 5/8" x 1 3/4" LG. W/NUT & WASHER	A307 GALV
8	18-10	4	CAPSCREW, 5/8" x 1 3/4" LG. SLOTTED FLAT HD. W/NUT & WASHER	A151 304
2	18-11	1	ISOLATION GASKET	NEOP.
2	18-12	1	ISOLATION GASKET	NEOP.

DATE	BY	Walker Process Corporation AURORA ILLINOIS U.S.A.
4-12-82	JAC	
DESIGNED	6-10-82	SCUM BOX & APPROACH LIP ASSEMBLY
APPROVED	JAC	
SCALE	FILE REFERENCE	CONTRACT UW23301 IDWG 18

APPENDIX B
Existing Condition Photos



Catwalk Bridge



Truss Arm w/ Squeegee



Influent well



Mezzanine walk



