



**Steven M. Clouse WRC Electrical System Improvements Phase II**  
**Solicitation Number: CO-00276**  
**Job No.: 16-6501**

**ADDENDUM 1**  
**February 22, 2021**

To Respondent of Record:

This addendum, applicable to work referenced above, is an amendment to the proposal request, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the Proposal.

<b>RESPONSES TO QUESTIONS</b>
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1. We would like you to please consider adding "Speed Fab-Crete, Kennedale, Texas" as an acceptable manufacturer for Division 13- Special Construction, Concrete Building Prefabricated.

*Response: Any request for substitution shall follow the appropriate procedure after award of contract as outlined in the Contract Documents including, but not limited to, section 5.11 of Article V of the General Conditions and section 01300 of the Technical Specifications.*

2. Robbins Lightning, Inc. has received plans and specifications for the above referenced project; we request to submit a quotation for the required lightning protection materials

*Response: Any request for approval of an "or equal" product or service shall follow the appropriate submittal procedure after award of contract.*

3. We are a Fire Alarm and Security integration company. I have looked over the drawings and specifications and I am only seeing small details for these scopes. Are these systems part of the requested scope for this project? If so would you be able to provide me with those documents so that we can provide a price for that scope for you.

*Response: No fire alarm is included in this project. Security included for the SCADA/IT building only, shown on drawings 40E02, 40E05, and 40N04. Security system requirements are also described in specification section 17550.*

4. Could you please publish full sized plans that has not been reduced? This would improve the accuracy of scaling and resolution.

*Response: Due to the electronic file size the document was compressed, which may be what caused this issue. SAWS has now pulled that same version down and split the original in half. If there are continued issues, please contact Roxanne Lockhart via email at Roxanne.Lockhart@saws.org*

5. Drawing 00E28, LIGHT FIXTURE SCHEDULE, is not legible. Please reissue.

*Response: Due to the electronic file size the document was compressed, which may be what caused this issue. SAWS has now pulled that same version down and split the original in half. If there are continued issues, please contact Roxanne Lockhart via email at Roxanne.Lockhart@saws.org*

6. Please clarify which drawing shows the location of Power Panel SMS-HP. It shows to be in the System Monitor Station-HP; however, System Monitor Station-HP does not show on drawings.

*Response: Panel is shown on drawing 05DE05 on the MCC-SG2 elevation, bucket 5C.*

7. Lighting contactor referenced on Drawing 05E16 for Blower Facility Lights is not shown on the Blower Facility Drawing 05E13. Please clarify.

*Response: The lighting contactor is shown on sheet 05E07, schematic on sheet 05E18. (No reference found on sheet 05E16.) Refer to "Changes to the Plans," item 1.a.*

8. On drawing 10E26 riser diagram for the Aeration Tank Drain Pump Station, note 1 state we are to determine where the existing power feed terminates and connect new feed for the Drain Pumps accordingly. The riser diagram also shows EUH-10 & Instrument Panel AFC. Will these need power as well or is the intent to use the MCPS1-21P to feed all 3 equipment?

*Response: For the drain pump station, no record drawings were available. The riser diagram shown is the only known available information. The circuit shown will be needed, but the contractor must wire all downstream equipment to provide the same functionality as the existing system, including any additional power circuits.*

9. On drawings 10E37,10E54,10E65, unlike Headworks grit tank blowers, the primary effluent blowers do not show disconnects at the blowers. Please clarify if disconnects are required and if so, the sizes.

*Response: No disconnects are to be added for these blowers.*

10. Drawing 20E62 RIO circuit # RIRS24-119 is utilized twice, one for Pipe Gallery cables from GMP-002 and again for MCC-RS-2. Please advise.

*Response: SPD in MCC-RS2 communication circuit changed to RIRS24-122. Refer to "Changes to the Plans," items 1.f and 1.i.*

11. Drawing 20E70 Tunnel Pull Boxes TPB-2\*,3\*,4\* and Pull Box with detail D all show to have an internal steel barrier, however TPB-1\* does not, please clarify if this box requires an internal barrier as well.

*Response: Pull boxes TPB-1\* shall include steel barrier between the instrument and power sections, similar to other pull boxes. Refer to "Changes to the Plans," item 1.j.*

12. Drawing 20E39 & 20E40 shows Flow Element & Flow Indicating Transmitter and 2 LITs each. But no cabling details are shown in the riser diagrams. Please advise if these are to be rewired.

*Response: Refer to "Changes to the Plans," items 1.g and 1.h.*

13. Drawing 20E41 the riser diagram does not indicate the size & # of conductors needed for the control cabling. Also, it does not show the wiring for the motor space heater carried as a part of the control circuit from the MCCs. Please review and advise.

*Response: All power and control wiring, including heaters, shown on one-line diagrams 20E08 and 20E18.*

14. Drawing 20E44 & 20E45, in the riser diagram it indicates a 1-1/2" conduit with 12/#14 & #14 ground wire to both the disconnect and pushbutton station. Neither the riser diagram nor details on 20E96, does not show additional control wiring to the motor status, temp, pressure etc. Please review and revise as required.

*Response: Control schematic shown on sheet 20E65. All wiring for the EAS pump stations is shown on sheets 20E41, 20E42, 20E43, 20E44, 20E45, 20E46, and 20E47.*

#### CHANGES TO THE SPECIFICATIONS

1. Supplementary Instructions to Respondents
  - a. Item E.1.vi, page SIR-3: Remove first sentence in its entirety that reads: "Provide a financial statement prepared within the last twelve (12) months by an independent Certified Public Accountant."
  - b. Item E.1.vi, third paragraph, page SIR-4: Remove "for the current fiscal year to-date".
  - c. Item E.5, page SIR-9: Safety Information for Prime Contractor and Key Subcontractor(s), remove the following from the header, "(Pass/Fail)"
2. Specification 17500
  - a. Part 2.01.A.1, page 17500-5: Remove this sentence in its entirety that reads, "Rockwell Automation ControlLogix 1756-L83E series with Studio 5000 Logix Designer," and replace with, "Rockwell Automation ControlLogix 1756-L8xE series (minimum 20 MB memory) with Studio Logix Designer."
  - b. Part 2.01.G.1.a, page 17500-6: Remove this sentence in its entirety that reads, "Allen Bradley 1753-EN2T," and replace with, "Rockwell 1756-EN2T"
  - c. Part 2.01.G.2.a, page 17500-7: Remove this sentence in its entirety that reads, "Allen Bradley 1753-EN2T," and replace with, "Rockwell 1756-EN2T"
3. Specification 17510, Part 2.07.B.1, Item No. 4, page 17510-10: Remove this item in its entirety that reads, "4 / FactoryTalk Historian Site Edition to Site Edition (Perpetual License with 1 year of 24/7 support) / 1 / 9518M-HSEAORT42," and renumber items 5, 6, 7, and 8 as 4, 5, 6, and 7, respectively (page 17510-11).

#### CHANGES TO THE PLANS

1. Remove the following sheets and replace with the attached sheets:
  - a. 05E07
  - b. 10E13
  - c. 10E19
  - d. 10E42
  - e. 10E48
  - f. 20E17
  - g. 20E39
  - h. 20E40
  - i. 20E62
  - j. 20E70


CLARIFICATIONS

1. N/A

END OF ADDENDUM

This Addendum, including these four (4) pages is fourteen (14) pages with attachments in its entirety.  
Attachments:

Drawings: 10 pages, 11x17 (HALF SIZE)

  
William D. Sako  
Gupta & Associates, Inc.  
TBPE # F-2593



2/22/2021

2/16/2021 3:15 PM Z:\1951\_SAWS\_Dos Rios WRC Electrical System Improvements - Phase II\5 Drawings\Dos Rios Phase II\Electrical\Working\1951\_05E07.dwg Emmanuel Rangel

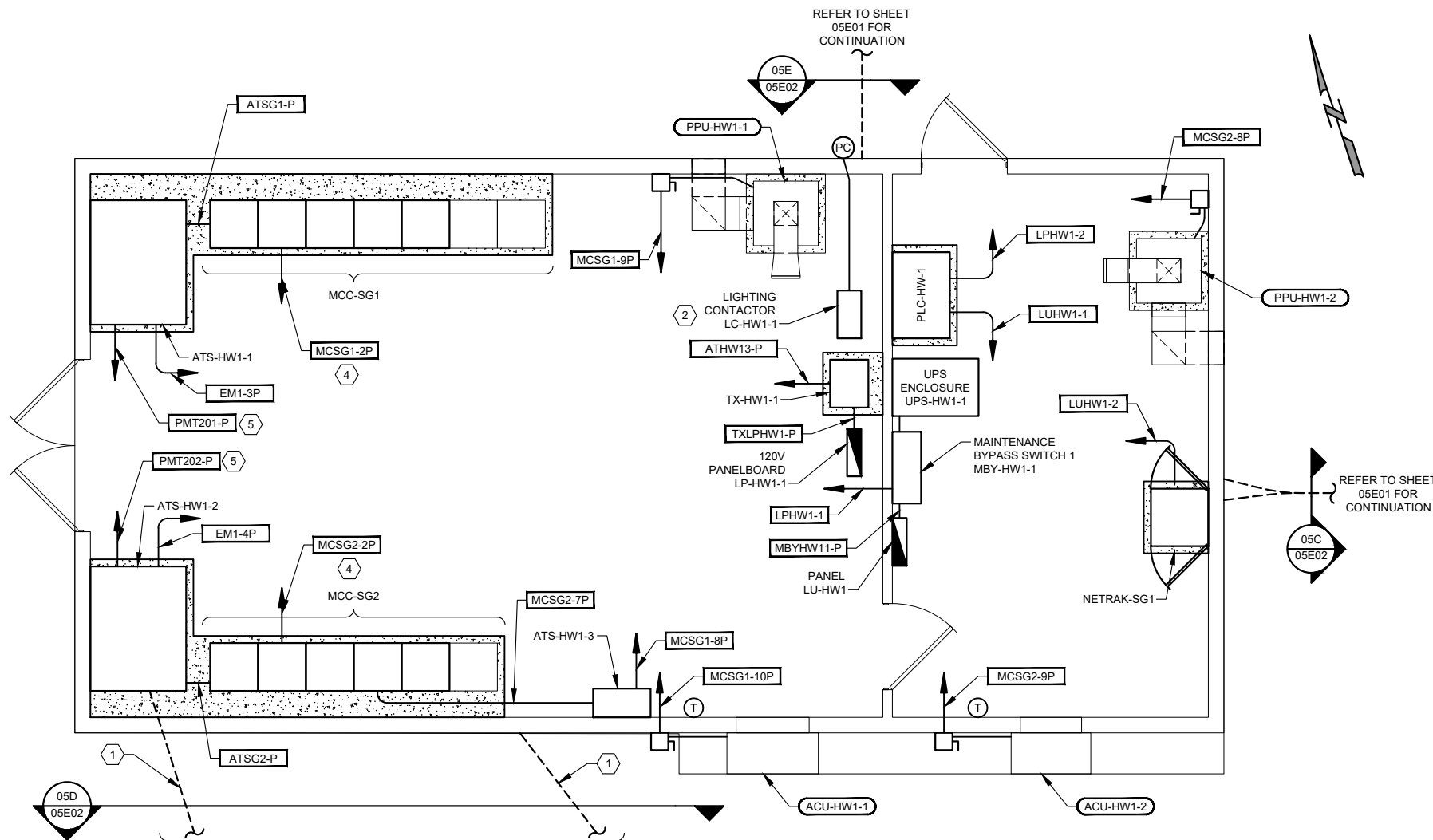
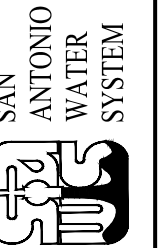
**GENERAL NOTES:**

1. REFER TO SHEET 05N13 FOR THE EQUIPMENT TAGS CROSS REFERENCE.

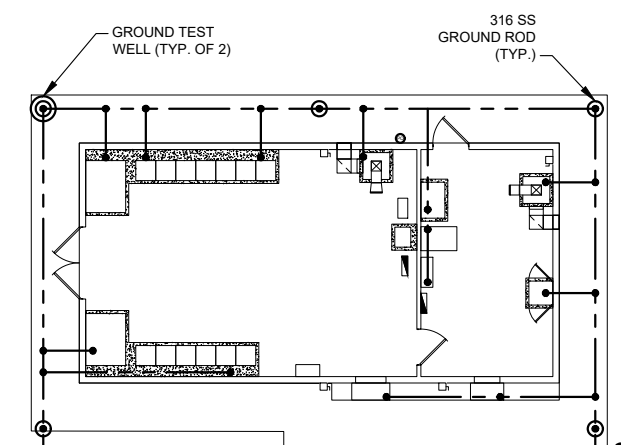
**NOTES:**

1. CONNECT DUCTBANK TO GROUND GRID.
2. REFER TO SHEET 05E18 FOR LIGHTING CONTACTOR SCHEMATIC.
3. COORDINATE STRUCTURAL TO MISS ALL THE UNDERGROUND CONDUITS.
4. REFER TO DUCTBANK SECTION 05D ON SHEET 05E02.
5. REFER TO DUCTBANK SECTION 05E ON SHEET 05E02.

**GAI**  
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CONSULTING ENGINEERING  
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Tel: 972-485-1255  
Email: gaito@gaifirm.com



EB-HW-1  
POWER  
PLAN  
SCALE: 3/8" = 1'-0"  
0 1' 2' 5' 8'



EB-HW-1  
GROUNDING  
PLAN  
SCALE: 1/8" = 1'-0"  
0 4' 8' 16' 24'

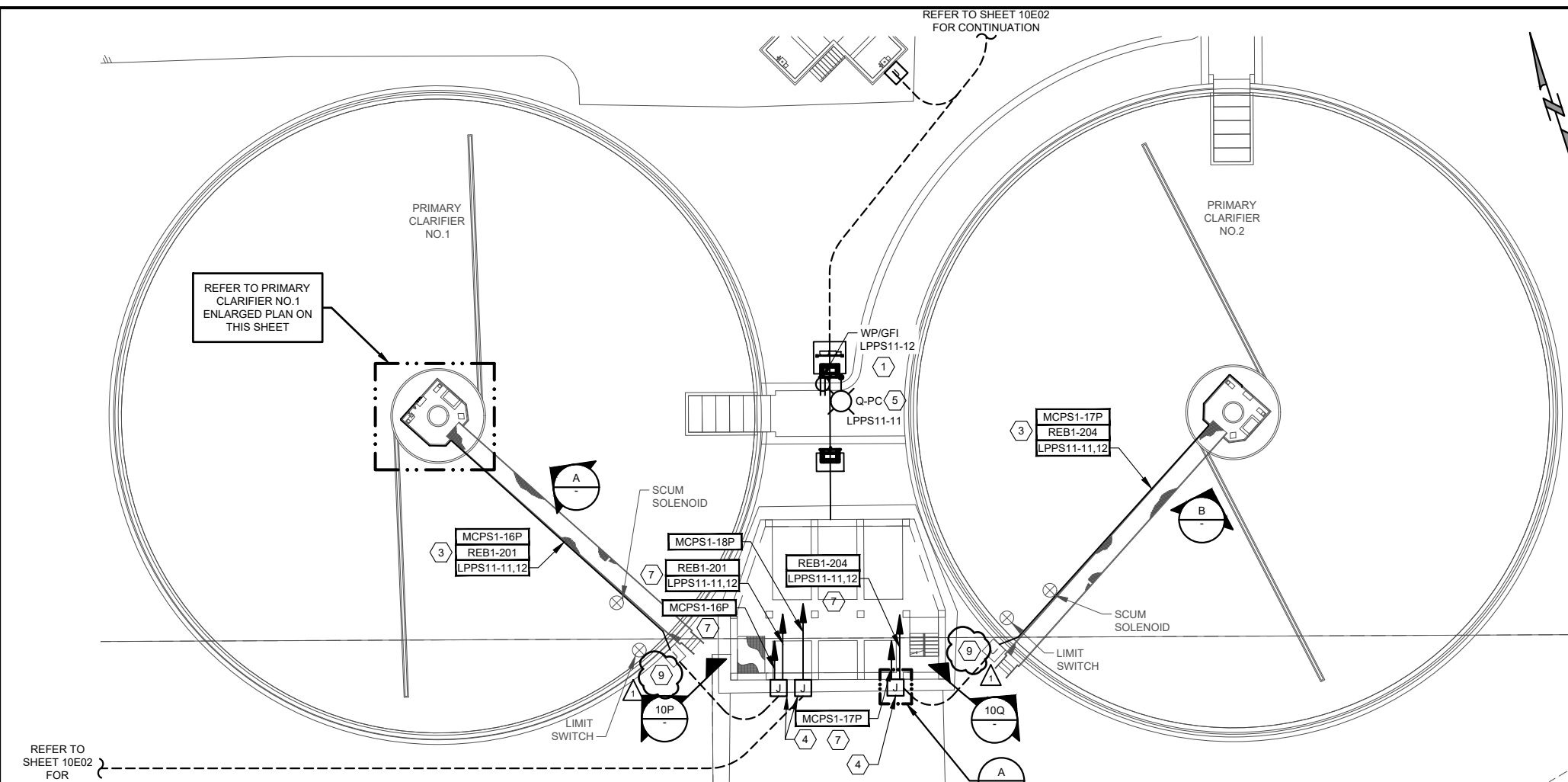
REV. NO.	DATE	DRWN	REMARKS
1	02/17/21	ER	ADDITIONAL NO. 1

**SAN ANTONIO WATER SYSTEM**  
STEVEN M. CLOUSE WRC  
ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
**HEADWORKS**  
**ELECTRICAL BUILDING EB-HW-1**  
**POWER AND GROUNDING PLAN**

DESIGNED BY: T.HERNANDEZ  
DRAWN BY: E.RANGEL  
SHEET CHKD BY: V.K. GUPTA  
APPROVED BY: W.SAKO  
DATE: JANUARY 2021  
SAWS JOB NO.: 16-6501  
FILE NAME: 1951\_05E07

SHEET NO.  
**05E07**  
101 OF 500

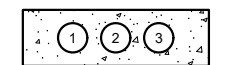
2/16/2021 3:15 PM Z:\1951\_SAWS\_Dos Rios WRC Electrical System Improvements - Phase II\Drawings\Dos Rios Phase II\Electrical\Working\1951\_10E13.dwg Emmanuel Rangel



- GENERAL NOTES:**
- REFER TO LIGHT FIXTURE SCHEDULE ON SHEET 00E26.
  - CONDUITS SHALL BE SEALED AT CLASSIFICATION BOUNDARIES AND AS REQUIRED BY THE NEC.

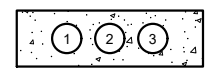
- NOTES:**
- RECEPTACLE SHALL BE MOUNTED 4FT. ABOVE FLOOR (OUTSIDE OF ANY CLASSIFIED AREA).
  - REFER TO 00E11 SHEETS FOR THE CLASSIFICATION OF THE AREA.
  - INSTALL NEW WIRES IN EXISTING CONDUIT.
  - WHERE THE J-BOXES ARE LOCATED AT THE PUMP STATION, ALIGN THEM WITH THE CENTER OF THE COLUMN SO THAT THE SPACE BETWEEN THE COLUMN IS NOT BLOCKED.
  - INSTALL NEW LIGHT FIXTURE.
  - REFER TO STANDARD DUCTBANK DETAILS.
  - REFER TO SHEET 10E17 FOR CONDUIT ROUTING.
  - THE NUMBER OF CONDUITS AND SPARES WILL VARY FOR DUCTBANK FROM THE DRAIN PUMP STATION (WHERE PRESENT). DETAIL APPLIES TO PS-1 AND PS-1A.

COORDINATE MODIFICATION WITH THE CLARIFIER CONTRACTOR.



DUCTBANK SECTION 10P

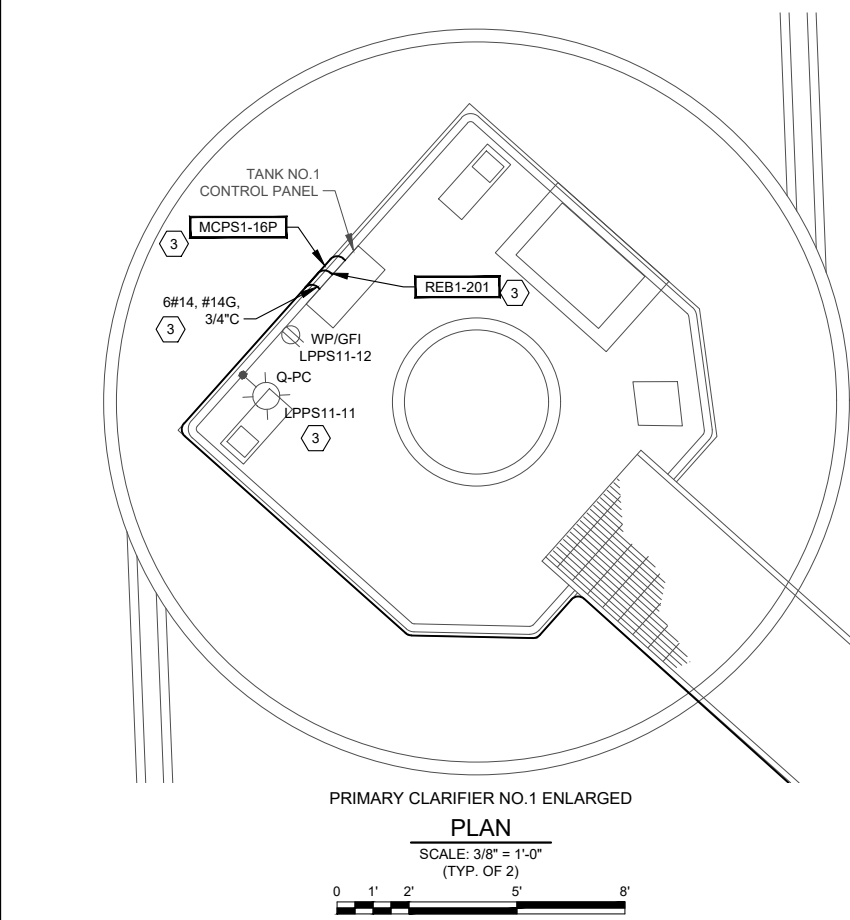
TABLE FOR SECTION 10P			
CONDUIT NO.	CONDUIT TAG	CONDUIT SIZE	DESCRIPTION
1	MCPS1-16P	1" C	MCC-PS-1 TO PRIMARY CLARIFIER NO.1
2	REB1-201, LPPS11-11,12	1" C	RIO AND LP-PS-1 TO PRIMARY CLARIFIER NO.1
3	SPARE	1" C	CLARIFIER NO.1 J-BOX TO PS-1 J-BOX



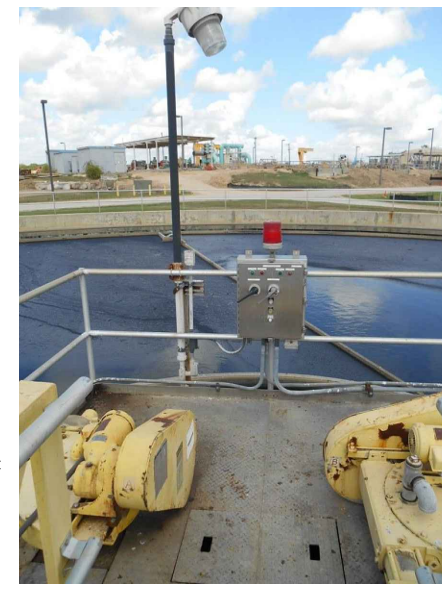
DUCTBANK SECTION 10Q

TABLE FOR SECTION 10Q			
CONDUIT NO.	CONDUIT TAG	CONDUIT SIZE	DESCRIPTION
1	MCPS1-17P	1" C	MCC-PS-1 TO PRIMARY CLARIFIER NO.2
2	REB1-204, LPPS11-11,12	1" C	RIO AND LP-PS-1 TO PRIMARY CLARIFIER NO.2
3	SPARE	1" C	CLARIFIER NO.2 J-BOX TO PS-1 J-BOX

CONDUIT TAG	SHEET REFERENCE
MCPS1-XX	10E07
REB1-XX	10E27, 10E28
LPPS1X-XX	10E10



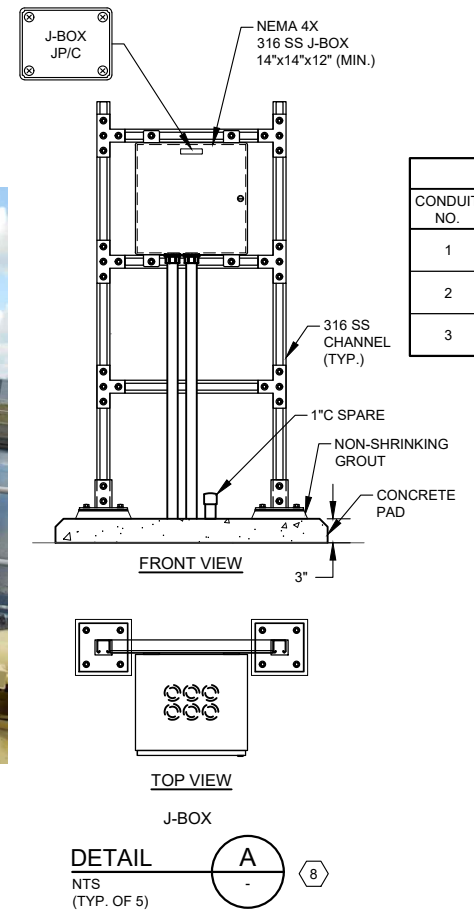
PRIMARY CLARIFIER NO.1 ENLARGED PLAN  
SCALE: 3/8" = 1'-0" (TYP. OF 2)



PRIMARY CLARIFIER NO.1 PHOTOGRAPH A

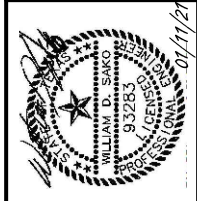


PRIMARY CLARIFIER NO.2 PHOTOGRAPH B



J-BOX DETAIL A

**GAI**  
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Dallas, Texas 75244  
Tel: 972-485-1725  
Email: gait@gaiconsulting.com



**SAN ANTONIO WATER SYSTEM**

REV. NO.	DATE	DRWN	REMARKS
A	02/17/21	ER	ADDENDUM NO.1

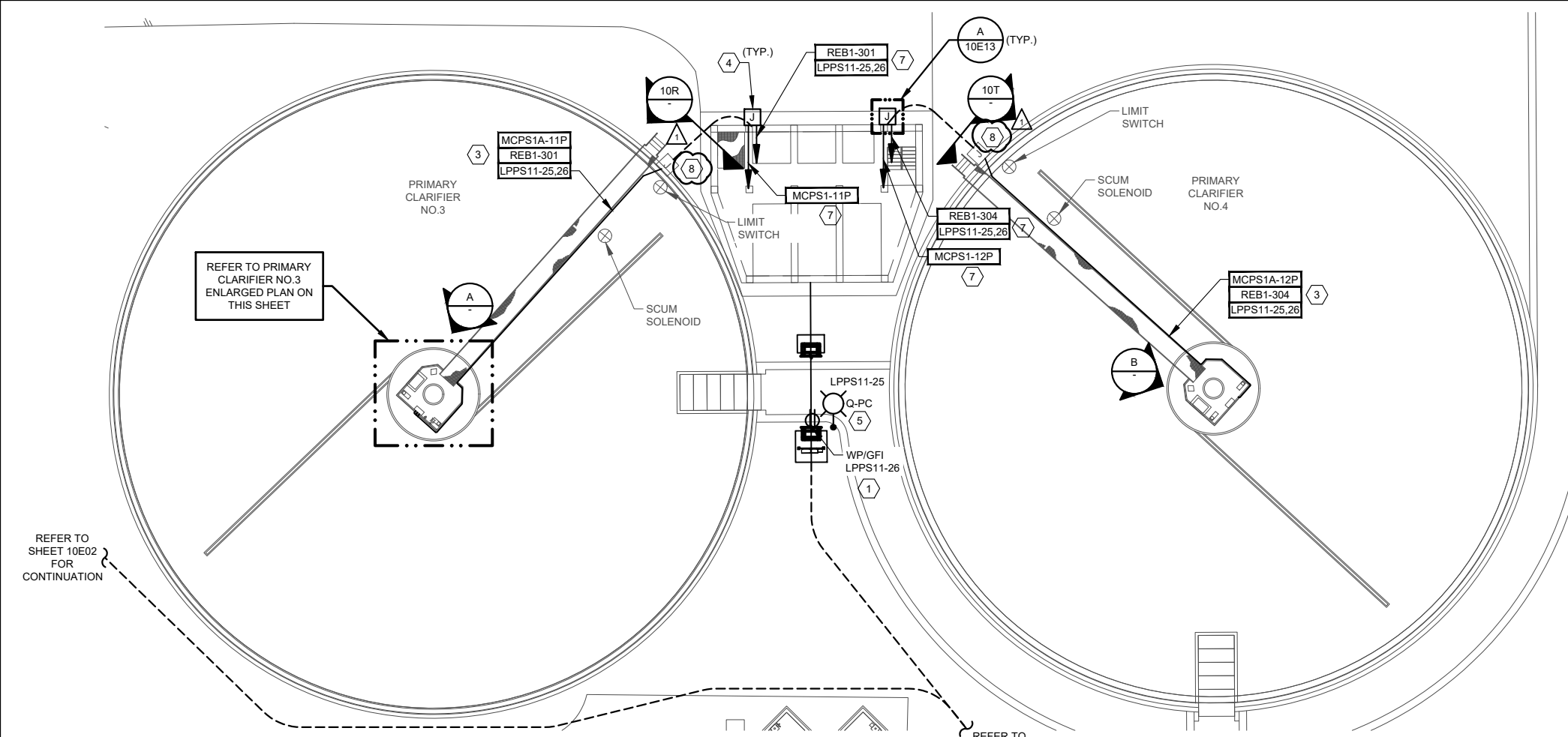
**SAN ANTONIO WATER SYSTEM**  
STEVEN M. CLOUSE WRC  
ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
**PRIMARY CLARIFIERS 1-4**  
**CLARIFIER NO.1 AND NO.2**  
**POWER PLAN**

DESIGNED BY: A. SINGH  
DRAWN BY: E. RANGEL  
SHEET CHKD BY: V.K. GUPTA  
APPROVED BY: W. SAKO  
DATE: JANUARY 2021  
SAWS JOB NO.: 16-6501  
FILE NAME: 1951\_10E13

SHEET NO.  
**10E13**  
177 OF 500



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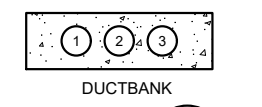


**GENERAL NOTES:**

1. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET 00E26.
2. CONDUITS SHALL BE SEALED AT CLASSIFICATION BOUNDARIES AND AS REQUIRED BY THE NEC.

**NOTES:**

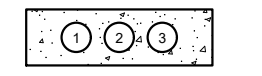
- 1 RECEPTACLE SHALL BE MOUNTED 4FT. ABOVE FLOOR (OUTSIDE OF ANY CLASSIFIED AREA).
- 2 REFER TO SHEET 00E11 FOR THE CLASSIFICATION OF THE AREA.
- 3 INSTALL NEW WIRES IN EXISTING CONDUIT.
- 4 WHERE THE J-BOXES ARE LOCATED AT THE PUMP STATION, ALIGN THEM WITH THE CENTER OF THE COLUMN SO THAT THE SPACE BETWEEN THE COLUMNS IS NOT BLOCKED.
- 5 INSTALL NEW LIGHT FIXTURE.
- 6 REFER TO STANDARD DUCTBANK DETAILS.
- 7 REFER TO SHEET 10E22 FOR CONDUIT ROUTING.
- 8 COORDINATE MODIFICATION WITH THE CLARIFIER CONTRACTOR.



DUCTBANK SECTION 10R

TABLE FOR SECTION 10R

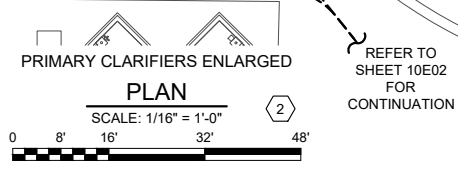
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1	MCPS1A-11P	1" C	MCC-PS-1A TO PRIMARY CLARIFIER NO.3
2	REB1-301, LPPS11-25,26	1" C	RIO AND LP-PS-1 TO PRIMARY CLARIFIER NO.3
3	SPARE	1" C	CLARIFIER NO.3 J-BOX TO PS-1A J-BOX



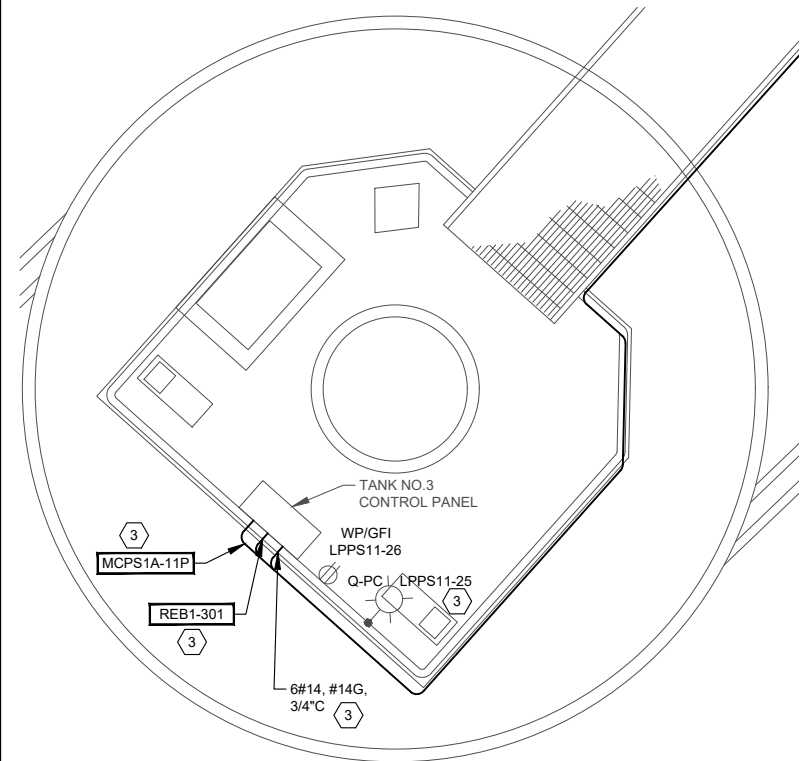
DUCTBANK SECTION 10T

TABLE FOR SECTION 10T

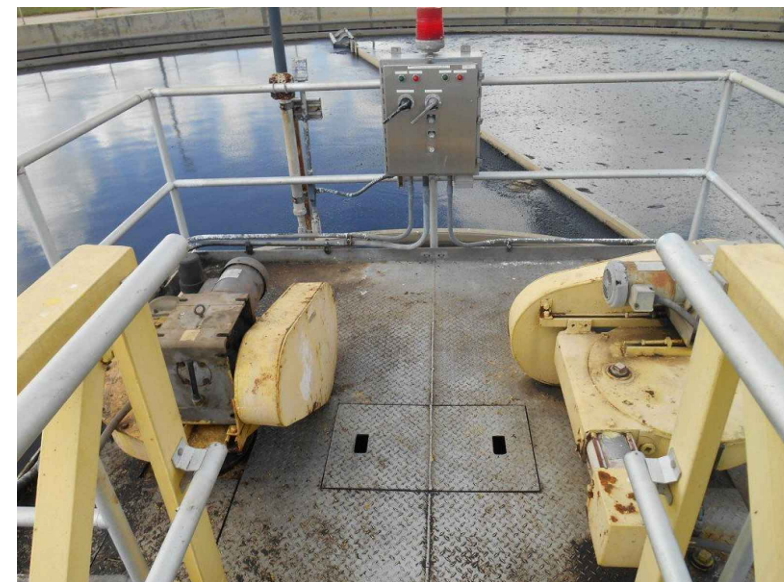
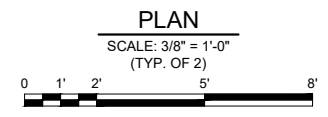
CONDUIT NO.	CONDUIT TAG	CONDUIT SIZE	DESCRIPTION
1	MCPS1A-17P	1" C	MCC-PS-1A TO PRIMARY CLARIFIER NO.4
2	REB1-304, LPPS11-25,26	1" C	RIO AND LP-PS-1 TO PRIMARY CLARIFIER NO.4
3	SPARE	1" C	CLARIFIER NO.4 J-BOX TO PS-1A J-BOX



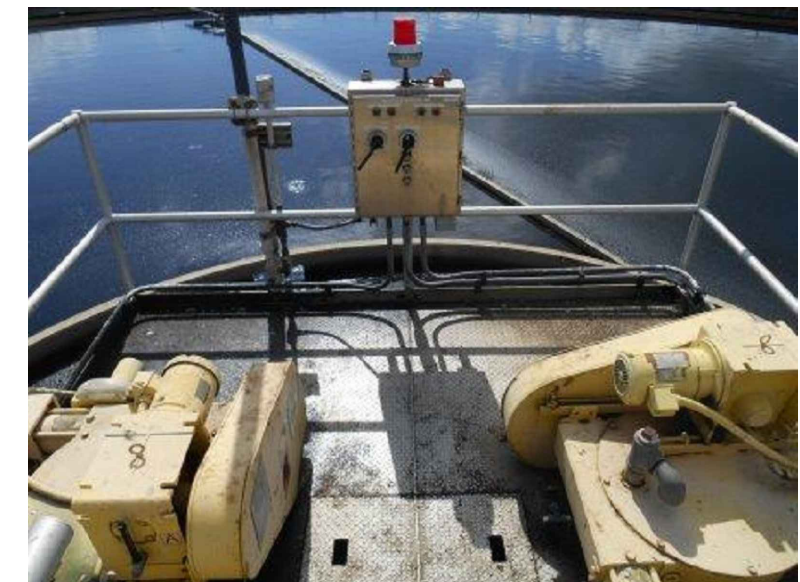
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PRIMARY CLARIFIER NO.3 ENLARGED PLAN



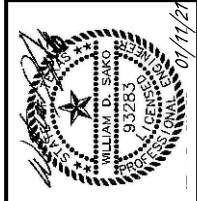
PRIMARY CLARIFIER NO.3 PHOTOGRAPH A



PRIMARY CLARIFIER NO.4 PHOTOGRAPH B

CONDUIT TAG	SHEET REFERENCE
MCPS1-XX	10E07
REB1-XX	10E27, 10E28
LPPS1X-XX	10E10

**GAI**  
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CONSULTING ENGINEERING  
Registration No. F-25983  
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Dallas, Texas 75244  
Tel: 972-418-1725  
Email: gait@gaiconsulting.com



**SAN ANTONIO WATER SYSTEM**

REV. NO.	DATE	DRWN	REMARKS
A	02/17/21	ER	ADDENDUM NO.1

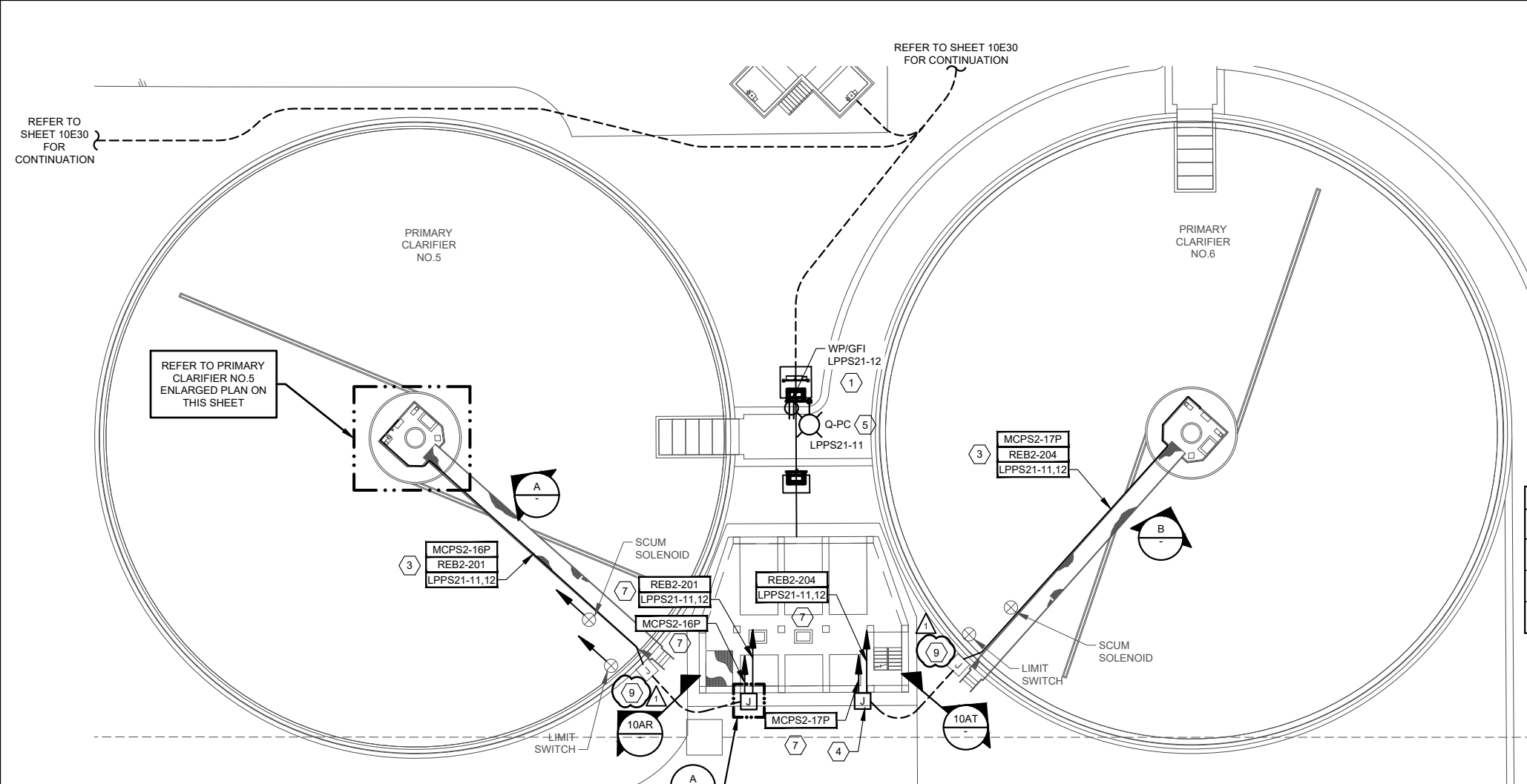
**SAN ANTONIO WATER SYSTEM**  
STEVEN M. CLOUSE WRC  
ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
**PRIMARY CLARIFIERS 1-4**  
**CLARIFIER NO.3 AND NO.4**  
**POWER PLAN**

DESIGNED BY: A. SINGH  
DRAWN BY: E. RANGEL  
SHEET CHKD BY: V.K. GUPTA  
APPROVED BY: W. SAKO  
DATE: JANUARY 2021  
SAWS JOB NO.: 16-6501  
FILE NAME: 1951\_10E19

SHEET NO.  
**10E19**  
183 OF 500



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**GENERAL NOTES:**

1. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET 00E26.
2. CONDUITS SHALL BE SEALED AT CLASSIFICATION BOUNDARIES AND AS REQUIRED BY THE NEC.

**NOTES:**

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- 2 REFER TO SHEET 00E11 FOR THE CLASSIFICATION OF THE AREA.
- 3 INSTALL NEW WIRES IN EXISTING CONDUIT.
- 4 WHERE THE J-BOXES ARE LOCATED AT THE PUMP STATION, ALIGN THEM WITH THE CENTER OF THE COLUMN SO THAT THE SPACE BETWEEN THE COLUMNS IS NOT BLOCKED.
- 5 INSTALL NEW LIGHT FIXTURE.
- 6 REFER TO STANDARD DUCTBANK DETAILS.
- 7 REFER TO 10E46 FOR CONDUIT ROUTING.
- 8 THE NUMBER OF CONDUITS AND SPARES WILL VARY FOR DUCTBANK FROM THE DRAIN PUMP STATION (WHERE PRESENT). DETAIL APPLIES TO PS-2 AND PS-2A.
- 9 COORDINATE MODIFICATION WITH THE CLARIFIER CONTRACTOR.

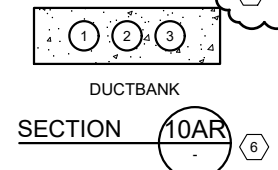


TABLE FOR SECTION 10AR

CONDUIT NO.	CONDUIT TAG	CONDUIT SIZE	DESCRIPTION
1	MCPS2-16P	1" C	MCC-PS-2 TO PRIMARY CLARIFIER NO.5
2	REB2-201, LPPS21-11,12	1" C	RIO AND LP-PS-2 TO PRIMARY CLARIFIER NO.5
3	SPARE	1" C	CLARIFIER NO.5 J-BOX TO PS-2 J-BOX

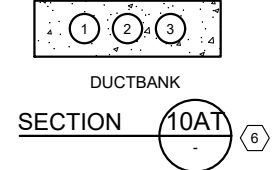
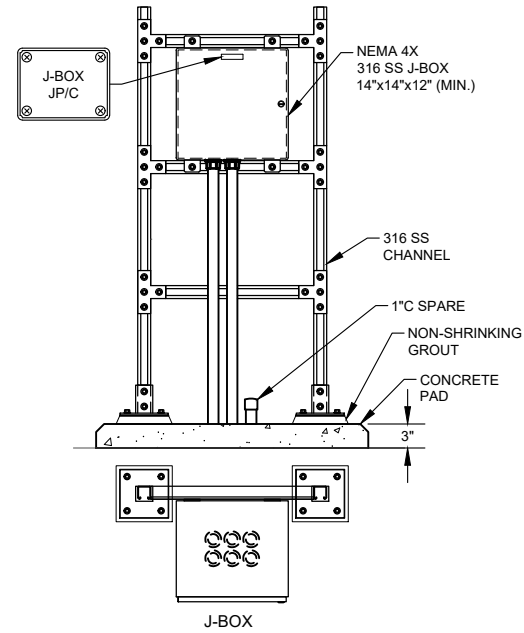


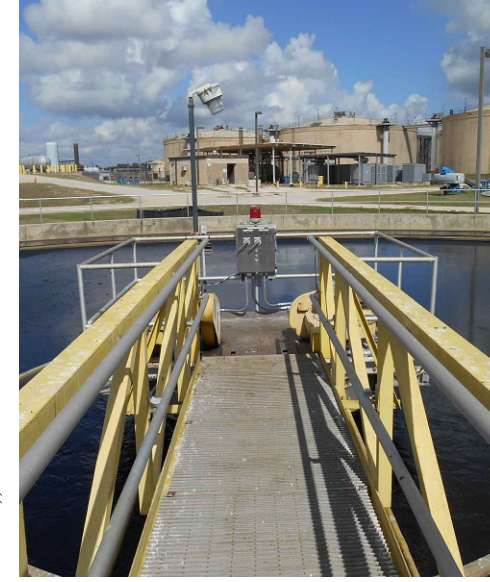
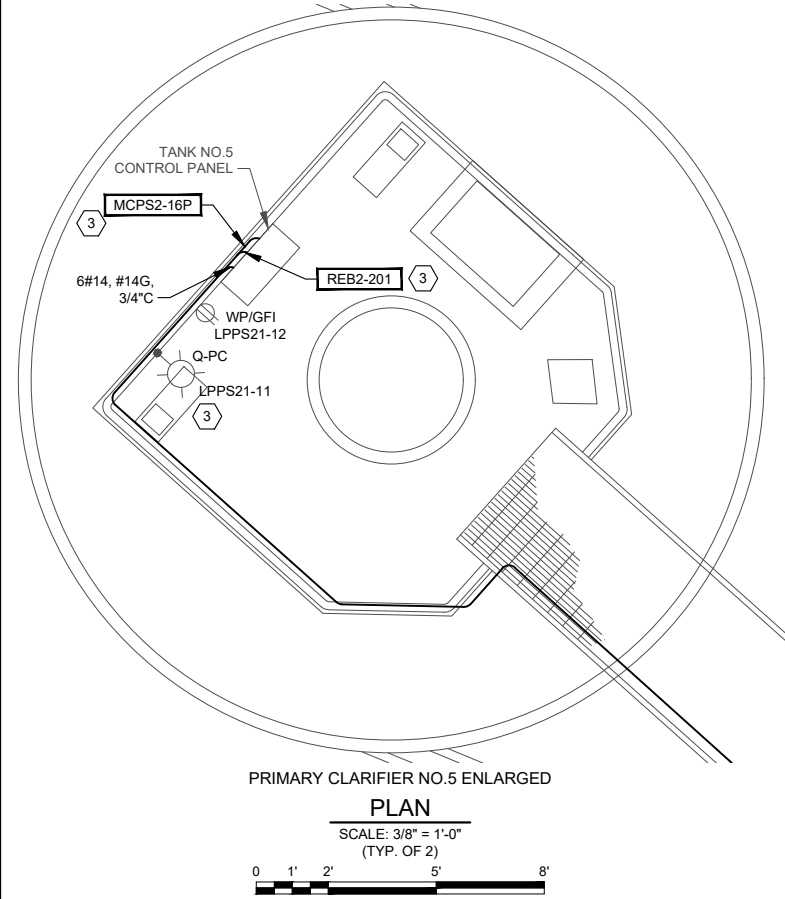
TABLE FOR SECTION 10AT

CONDUIT NO.	CONDUIT TAG	CONDUIT SIZE	DESCRIPTION
1	MCPS2-17P	1" C	MCC-PS-2 TO PRIMARY CLARIFIER NO.6
2	REB2-204, LPPS21-11,12	1" C	RIO AND LP-PS-2 TO PRIMARY CLARIFIER NO.6
3	SPARE	1" C	CLARIFIER NO.6 J-BOX TO PS-2 J-BOX



CONDUIT TAG	SHEET REFERENCE
MCPS2-XX	10E35
REB2-XX	10E58, 10E59
LPPS2X-XX	10E39

DETAIL A (TYP. OF 5)



PHOTOGRAPH A



PHOTOGRAPH B

PRIMARY CLARIFIERS ENLARGED PLAN  
SCALE: 1/16" = 1'-0"  
0 8' 16' 32' 48'

**GAI**  
Gupta & Associates, Inc.  
CONSULTING ENGINEERING  
Registration No. F-2593  
13777 N. Metro Road  
Dallas, Texas 75244  
Tel: 972-485-1725  
email: gai@gaiair.com



**SAN ANTONIO WATER SYSTEM**

REV. NO.	DATE	DRWN	ER	ADDENDUM NO.1	REMARKS
A	02/17/21				

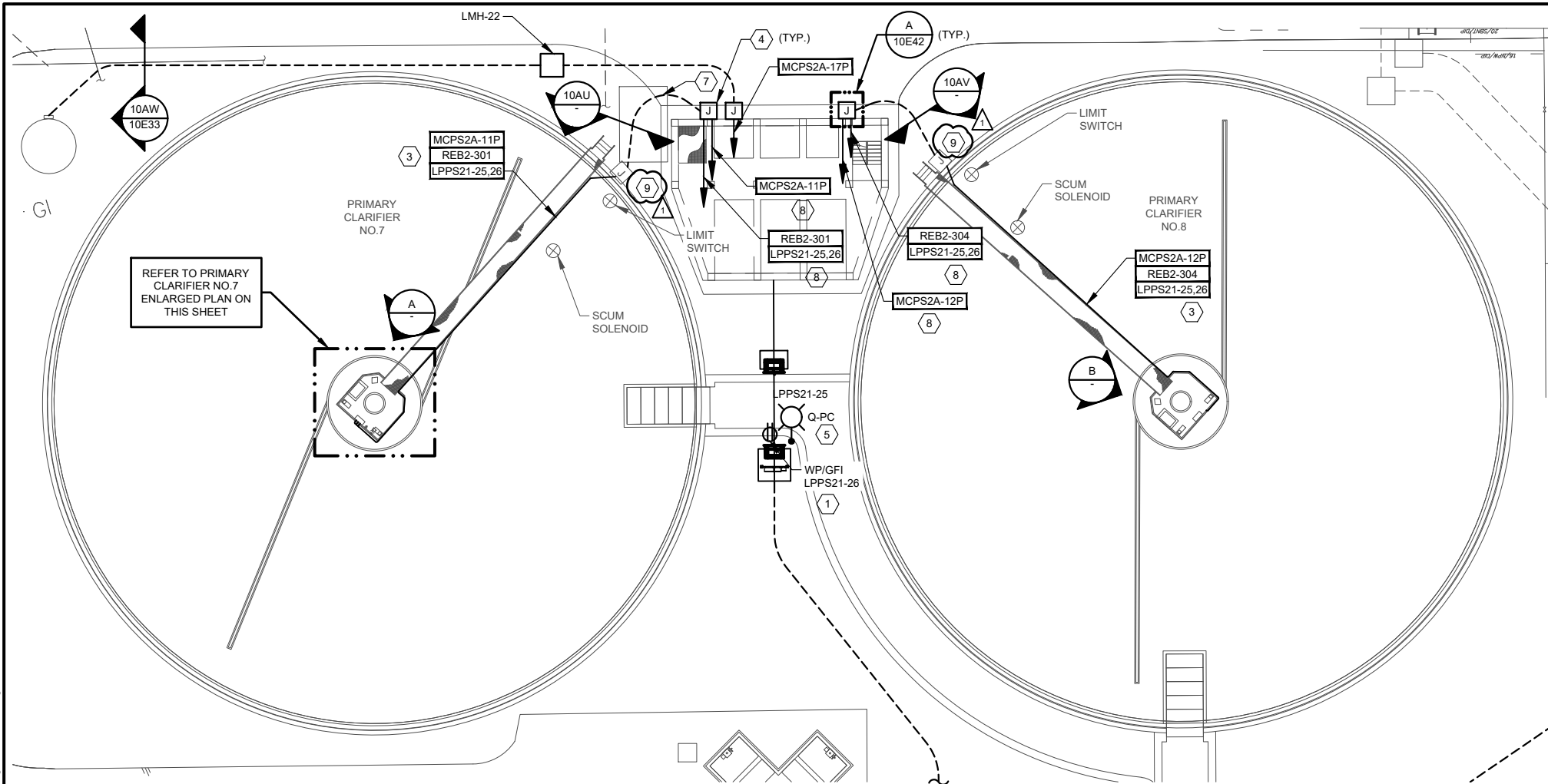
**SAN ANTONIO WATER SYSTEM**  
STEVEN M. CLOUSE WRC  
ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
**PRIMARY CLARIFIERS 5-8**  
**CLARIFIER NO.5 AND NO.6**  
POWER PLAN

DESIGNED BY: A. SINGH  
DRAWN BY: E. RANGEL  
SHEET CHKD BY: V.K. GUPTA  
APPROVED BY: W. SAKO  
DATE: JANUARY 2021  
SAWS JOB NO.: 16-6501  
FILE NAME: 1951\_10E42

SHEET NO.  
**10E42**  
206 OF 500



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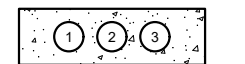


**GENERAL NOTES:**

- REFER TO LIGHT FIXTURE SCHEDULE ON SHEET 00E26.
- CONDUITS SHALL BE SEALED AT CLASSIFICATION BOUNDARIES AND AS REQUIRED BY THE NEC.

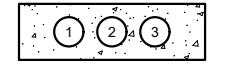
**NOTES:**

- RECEPTACLE SHALL BE MOUNTED 4FT. ABOVE FLOOR (OUTSIDE OF ANY CLASSIFIED AREA).
- REFER TO SHEET 00E11 FOR THE CLASSIFICATION OF THE AREA.
- INSTALL NEW WIRES IN EXISTING CONDUIT.
- WHERE THE J-BOXES ARE LOCATED AT THE PUMP STATION, ALIGN THEM WITH THE CENTER OF THE COLUMN SO THAT THE SPACE BETWEEN THE COLUMNS IS NOT BLOCKED.
- INSTALL NEW LIGHT FIXTURE.
- REFER TO STANDARD DUCTBANK DETAILS.
- IF NECESSARY RUN DUCTBANK THROUGH MANHOLE LMH-22 TO GET AROUND EXISTING STRUCTURES.
- REFER TO SHEET 10E51 FOR CONDUIT ROUTING.
- COORDINATE MODIFICATION WITH THE CLARIFIER CONTRACTOR.



DUCTBANK SECTION 10AU

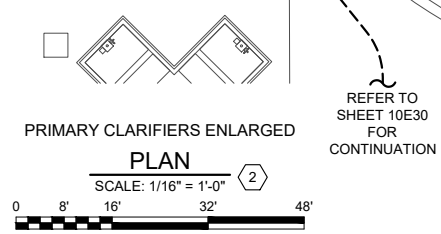
TABLE FOR SECTION 10AU			
CONDUIT NO.	CONDUIT TAG	CONDUIT SIZE	DESCRIPTION
1	MCPS2A-11P	1" C	MCC-PS-2A TO PRIMARY CLARIFIER NO.7
2	REB2-301, LPPS21-25,26	1" C	RIO AND LP-PS-2 TO PRIMARY CLARIFIER NO.7
3	SPARE	1" C	CLARIFIER NO.7 J-BOX TO PS-2A J-BOX



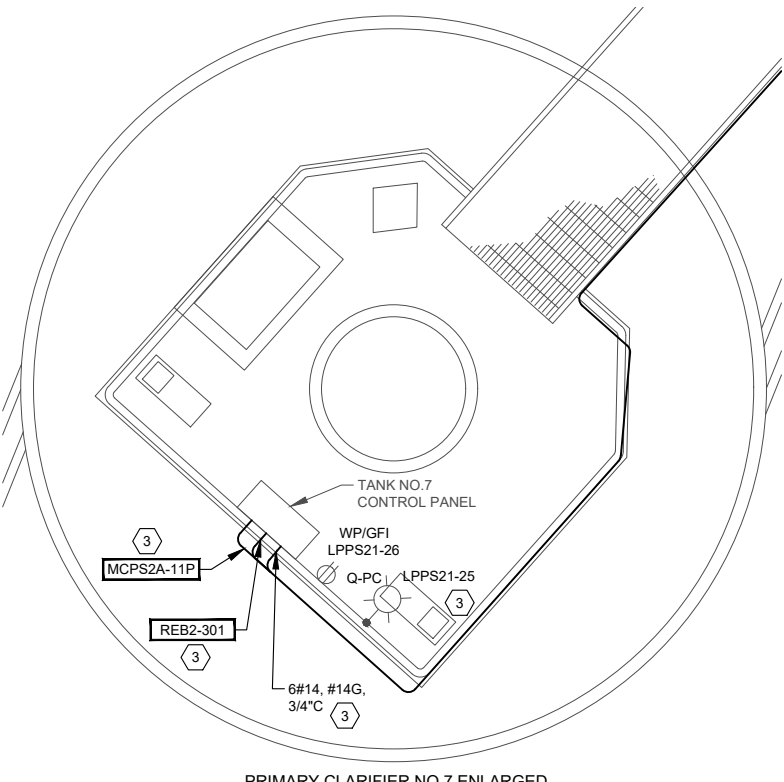
DUCTBANK SECTION 10AV

TABLE FOR SECTION 10AV			
CONDUIT NO.	CONDUIT TAG	CONDUIT SIZE	DESCRIPTION
1	MCPS2A-12P	1" C	MCC-PS-2A TO PRIMARY CLARIFIER NO.8
2	REB2-304, LPPS21-25,26	1" C	RIO AND LP-PS-2 TO PRIMARY CLARIFIER NO.8
3	SPARE	1" C	CLARIFIER NO.8 J-BOX TO PS-2A J-BOX

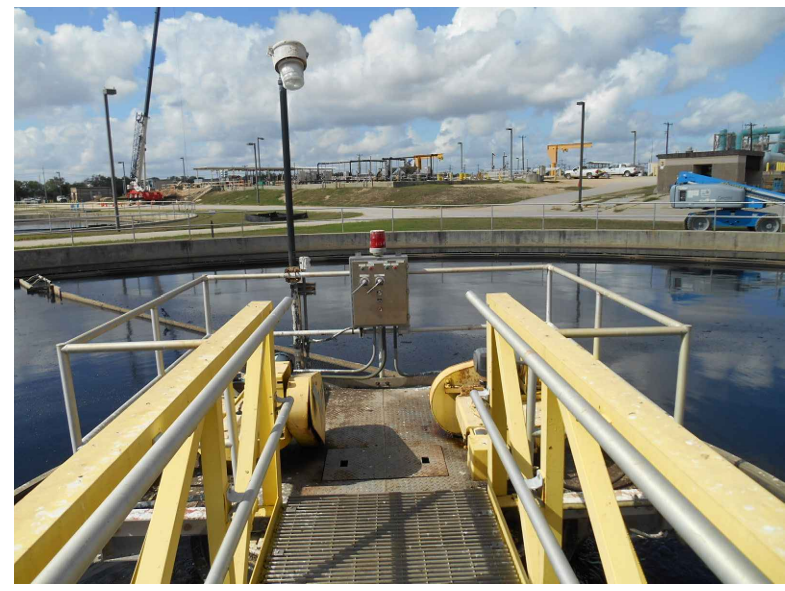
CONDUIT TAG	SHEET REFERENCE
MCPS2-XX	10E35
REB2-XX	10E56, 10E59
LPPS21-XX	10E39



PRIMARY CLARIFIERS ENLARGED PLAN



PRIMARY CLARIFIER NO. 7 ENLARGED PLAN

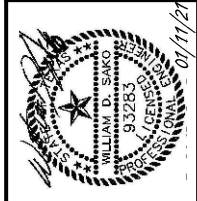


PRIMARY CLARIFIER NO.7 PHOTOGRAPH A



PRIMARY CLARIFIER NO.8 PHOTOGRAPH B

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**SAN ANTONIO WATER SYSTEM**

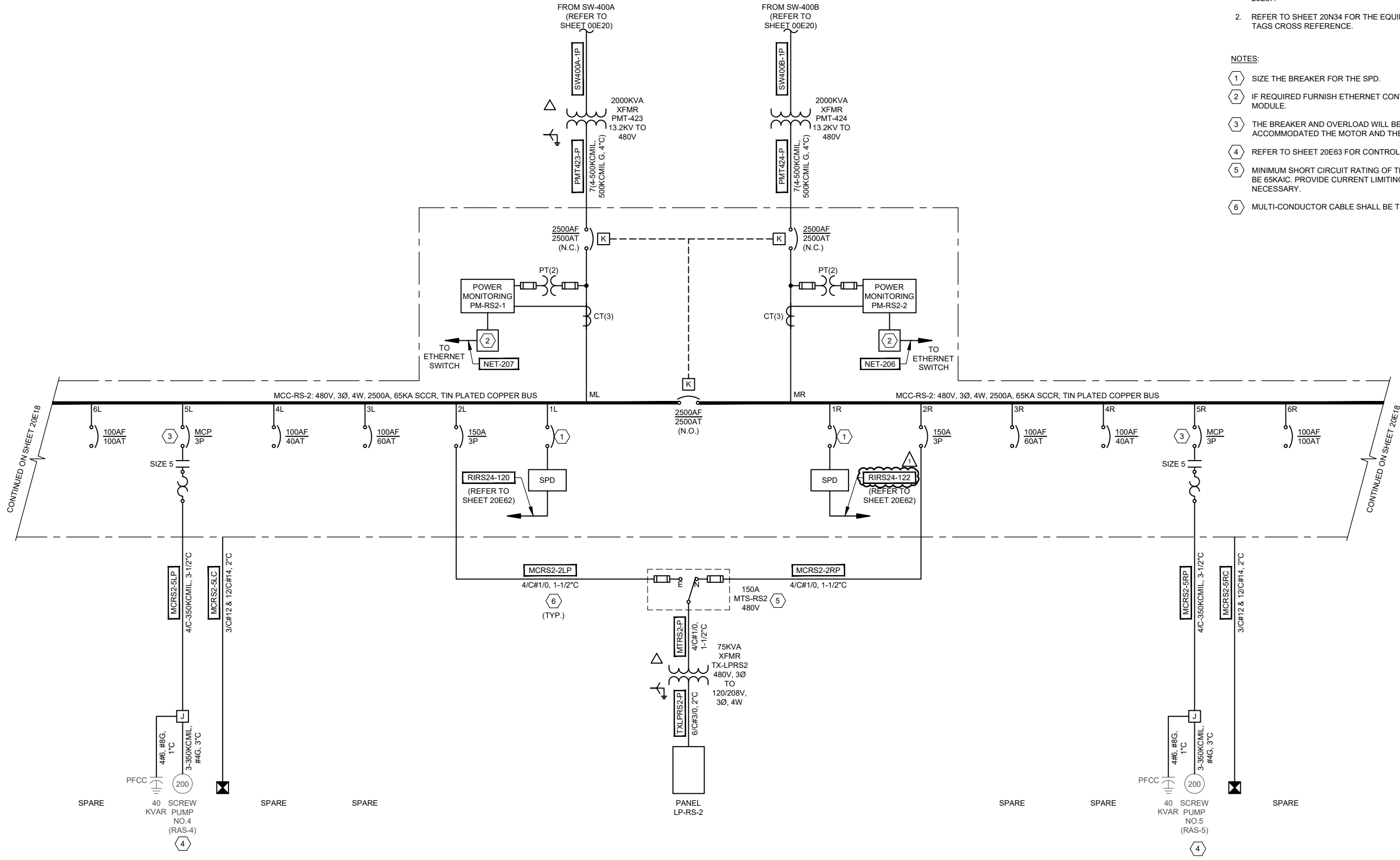
REV. NO.	DATE	DRWN	ER	ADDENDUM NO.1	REMARKS
1	02/17/21				

**SAN ANTONIO WATER SYSTEM**  
STEVEN M. CLOUSE WRC  
ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
**PRIMARY CLARIFIERS 5-8**  
**CLARIFIER NO.7 AND NO.8**  
**POWER PLAN**

DESIGNED BY: A. SINGH  
DRAWN BY: E. RANGEL  
SHEET CHKD BY: V.K. GUPTA  
APPROVED BY: W. SAKO  
DATE: JANUARY 2021  
SAWS JOB NO.: 16-6501  
FILE NAME: 1951\_10E48

SHEET NO.  
**10E48**  
212 OF 500

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MCC-RS-2 ONE-LINE  
DIAGRAM

GENERAL NOTES:

1. REFER TO OVERALL ONE-LINE DIAGRAM ON SHEET 20E87.
2. REFER TO SHEET 20N34 FOR THE EQUIPMENT TAGS CROSS REFERENCE.

NOTES:

- ① SIZE THE BREAKER FOR THE SPD.
- ② IF REQUIRED FURNISH ETHERNET CONVERTER MODULE.
- ③ THE BREAKER AND OVERLOAD WILL BE SIZED TO ACCOMMODATE THE MOTOR AND THE PFCC.
- ④ REFER TO SHEET 20E63 FOR CONTROL SCHEMATIC.
- ⑤ MINIMUM SHORT CIRCUIT RATING OF THE ATS SHALL BE 65KAIC. PROVIDE CURRENT LIMITING FUSES IF NECESSARY.
- ⑥ MULTI-CONDUCTOR CABLE SHALL BE TRAY RATED.

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**SAN ANTONIO WATER SYSTEM**

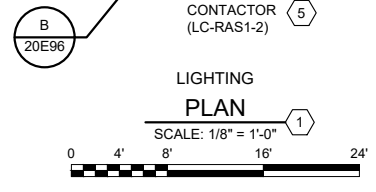
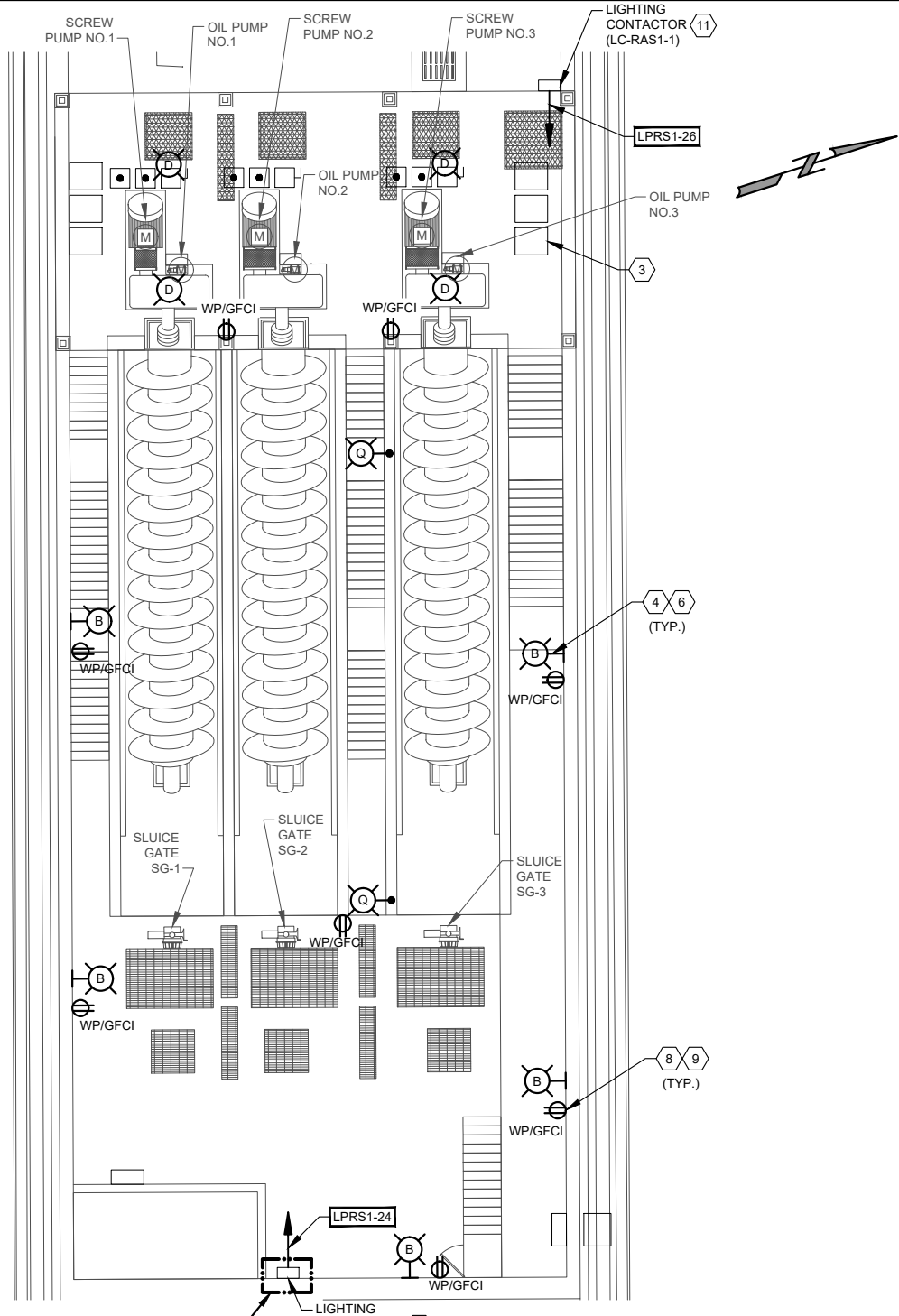
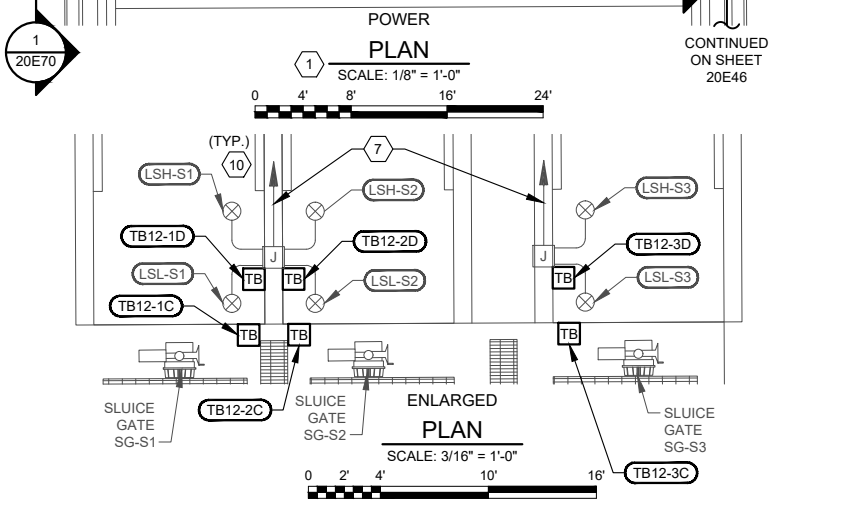
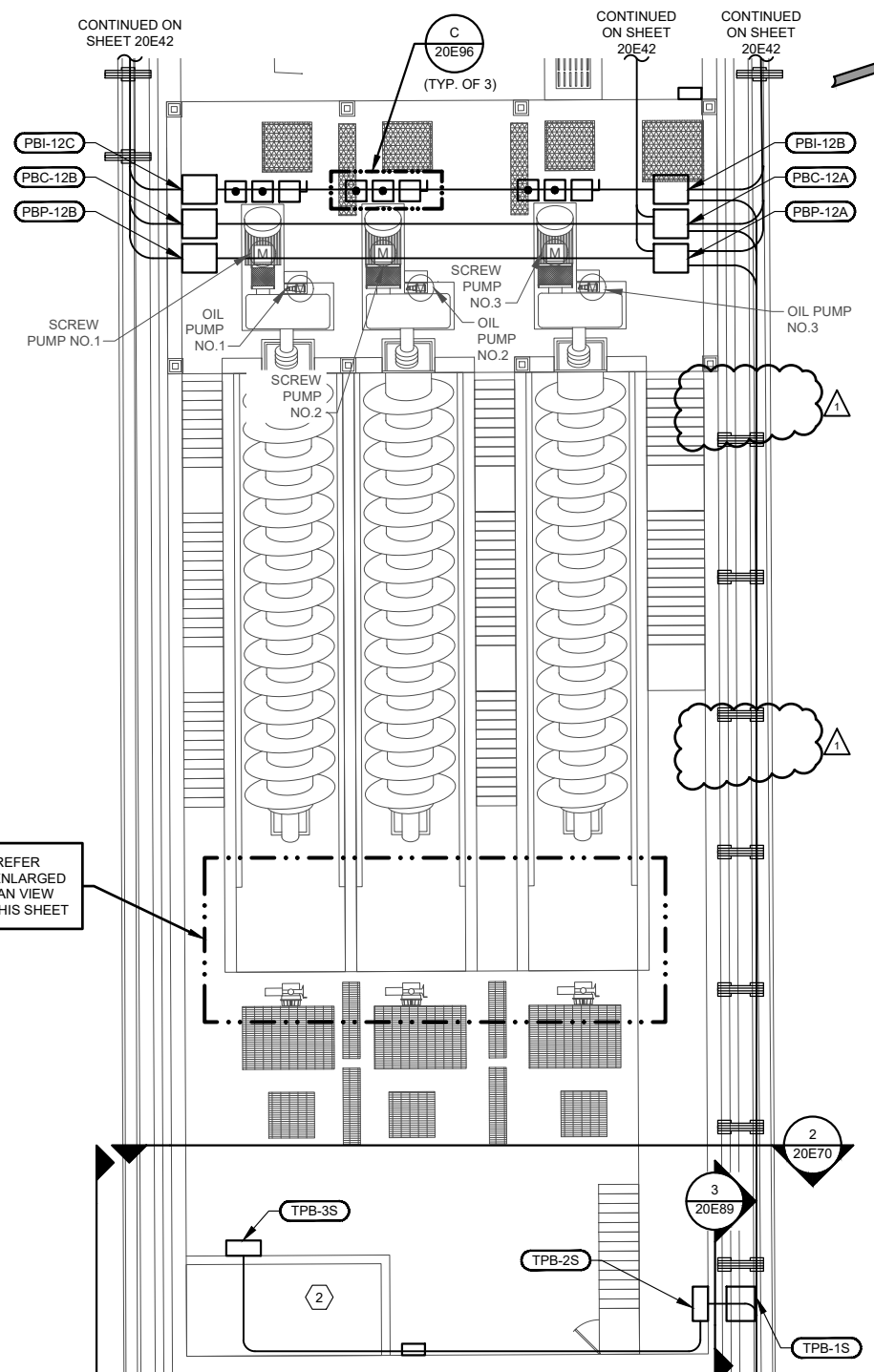
REV. NO.	DATE	DRWN	ER	ADDENDUM NO.1	REMARKS
A	02/17/21				

**SAN ANTONIO WATER SYSTEM**  
STEVEN M. CLOUSE WRC  
ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
ELECTRICAL  
**FIRST STAGE AERATION TANKS**  
MCC-RS-2 ONE-LINE DIAGRAM - I

DESIGNED BY:	K. KADAM
DRAWN BY:	E. RANGEL
SHEET CHKD BY:	V.K. GUPTA
APPROVED BY:	W. SAKO
DATE:	JANUARY 2021
SAWS JOB NO.:	16-6501
FILE NAME:	1951_20E17

SHEET NO.  
**20E17**  
312 OF 500

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- GENERAL NOTES:**
- REFER TO SHEET 20N34 FOR THE EQUIPMENT TAGS CROSS REFERENCE.
- NOTES:**
- REFER TO SHEET 20E46 FOR POWER CONTROL AND LIGHTING RISE DIAGRAM.
  - REFER TO SHEET 20E54 FOR PIPE GALLERY SOUTH RISER DIAGRAM.
  - ROUTE NEW LIGHT AND RECEPTACLE WIRE AND CONDUIT RUNS TO EXISTING AVAILABLE J-BOXES.
  - ALL LIGHT FIXTURES AND RECEPTACLES AT RAS SOUTH TO BE REPLACED WITH NEW UNITS. CONTRACTOR TO FIELD VERIFY NUMBER OF LIGHTS TO BE REPLACED AND RUN NEW CABLES AND CONDUITS.
  - REFER TO SHEET 20E67 FOR CONTROL SCHEMATIC.
  - FURNISH AND INSTALL NEW MOUNTING HARDWARE AND SUPPORT FOR THE NEW FIXTURES AT RAS P.S.
  - EXISTING FLOAT SWITCHES, EXISTING WIRES AND CONDUITS TO SOUTH SLUDGE WELL HIGH LEVEL ALARM PANEL TO REMAIN.
  - POWER TO THE RECEPTACLES AT RAS P.S. SOUTH TO BE FROM LPRS1-22.
  - RECEPTACLES TO BE MOUNTED AT MINIMUM 4' AFF.
  - REFER TO SHEET 20E42 FOR MORE DETAILS.
  - REFER TO SHEET 20E65 FOR CONTROL SCHEMATIC.

SAWS Dos Rios WRC Electrical System Improvements - Phase II

SAINT ANTONIO WATER SYSTEM

DESIGNED BY: E. CLEMENT

DRAWN BY: E. RANGEL

SHEET CHKD BY: V.K. GUPTA

APPROVED BY: W. SAKO

DATE: JANUARY 2021

SAWS JOB NO.: 16-6501

FILE NAME: 1951\_20E39

SAINT ANTONIO WATER SYSTEM

STEVEN M. CLOUSE WRC

ELECTRICAL SYSTEM IMPROVEMENTS PHASE II

FIRST STAGE AERATION TANKS

EXISTING RAS PUMP STATION (SOUTH)

POWER & LIGHTING PLAN - MODIFICATION

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	02/17/21	ER	ADDENDUM NO.1

REMARKS

ONE INCH AT FULL SIZE IF NOT OTHERWISE NOTED

SCALE

SAINT ANTONIO WATER SYSTEM

20E39

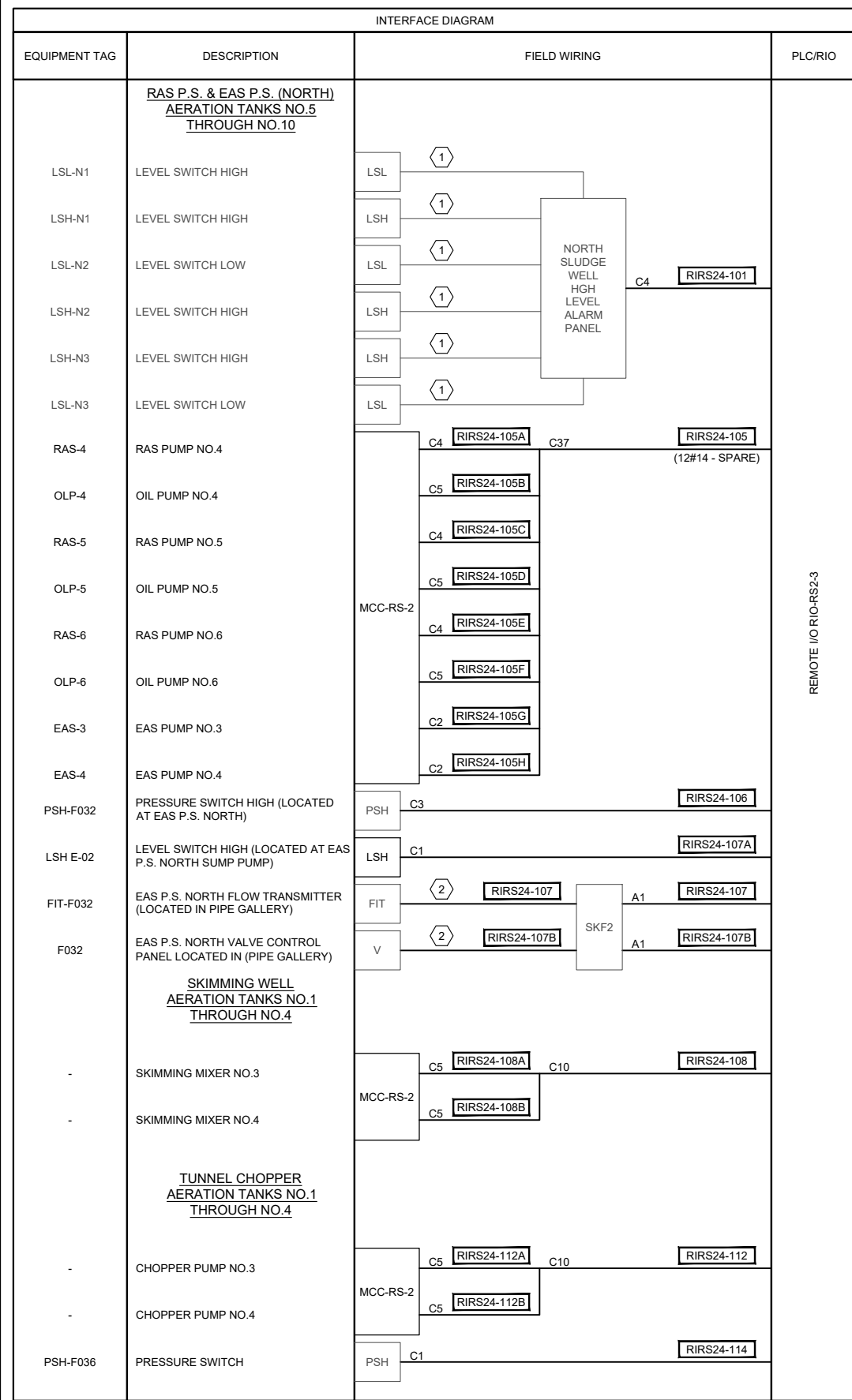
334 OF 500



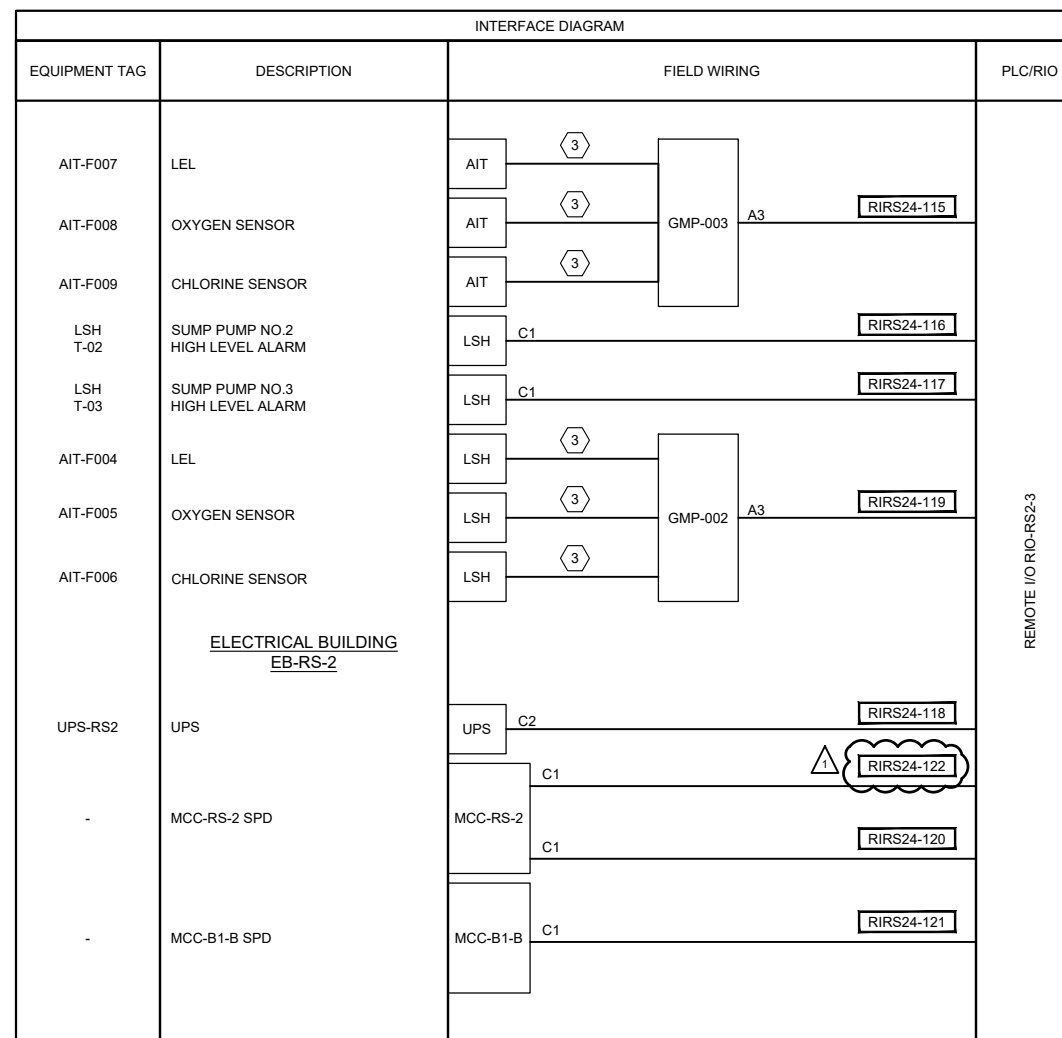




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REMOTE I/O RIO-RS2-3



REMOTE I/O RIO-RS2-3

**GENERAL NOTES:**

- ALL THE CONDUIT AND WIRE RUNS ARE SHOWN INDIVIDUALLY FOR CLARITY. CONTRACTOR TO ROUTE WIRES AND CONDUITS AS PER RISER DIAGRAM.
- THE CONDUIT SIZE AS SHOWN ARE MINIMUM.
- ALL WIRES SHALL BE TERMINATED ON TERMINAL BLOCK. THERE SHALL BE NO LOOSE WIRES.
- THE SIZES AS SHOWN ARE MINIMUM. THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH THE CABINET AND TERMINATE ALL WIRES PLUS 25% SPARE TERMINAL BLOCKS.
- ALL CAT-6 CABLE TO BE ROUTED IN CONDUIT ONLY.
- REFER TO SHEET 20N34 FOR THE EQUIPMENT TAGS CROSS REFERENCE.

**NOTES:**

- (1) EXISTING EQUIPMENT, CABLES AND CONDUITS.
- (2) EXISTING EQUIPMENT. PROVIDE NEW CABLES IN EXISTING CONDUITS.
- (3) MANUFACTURER PROVIDED CABLE IN 1".

**CONTROL & INSTRUMENTATION WIRE/CONDUIT SCHEDULE**

C#	SIZE	A#	DESCRIPTION
C1	2#14, 3/4"C	A1	1-1Pr#16 TSP, 3/4"C
C2	4#14, 3/4"C	A2	2-1Pr#16 TSP, 3/4"C
C3	6#14, 1"C	A3	3-1Pr#16 TSP, 3/4"C
C4	8#14, 1"C	A4	4-1Pr#16 TSP, 1"C
C5	10#14, 1"C	A5	5-1Pr#16 TSP, 1"C
C6	12#14, 1-1/4"C	A6	6-1Pr#16 TSP, 1-1/2"C
C7	14#14, 1-1/4"C	A7	7-1Pr#16 TSP, 2"C
C8	16#14, 1-1/4"C	A8	8-1Pr#16 TSP, 2"C
C9	18#14, 1-1/4"C	A9	9-1Pr#16 TSP, 2"C
C10	20#14, 1-1/4"C	A10	10-1Pr#16 TSP, 2"C
C11	22#14, 1-1/2"C	A11	11-1Pr#16 TSP, 2"C
C12	24#14, 1-1/4"C	M1	1-CAT-5e, 1"C
C14	28#14, 1-1/4"C	M2	2-CAT-5e, 1-1/2"C
C30	60#14, 3-1/2"C	M3	3-CAT-5e, 2"C
C37	74#14, 4"C	M4	4-CAT-5e, 2"C

**CONTROL & INSTRUMENTATION WIRE/CONDUIT TABLE NOTES:**

- NOT ALL POSSIBLE COMBINATIONS ARE LISTED. INCLUDE A SEPARATE GROUND WIRE IN EACH CONDUIT RUN.
  - # REPRESENTS PAIR OF WIRE
  - EXAMPLE C10 = 20#14 WIRES
  - EXAMPLE C20 = 40#14 WIRES
  - C# = CONTROL
- ANALOG CABLES ARE INTENDED TO BE INDIVIDUALLY INSULATED TWISTED SHIELDED PAIRS UNLESS OTHERWISE NOTED ON THE DRAWING.

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**SAN ANTONIO WATER SYSTEM**

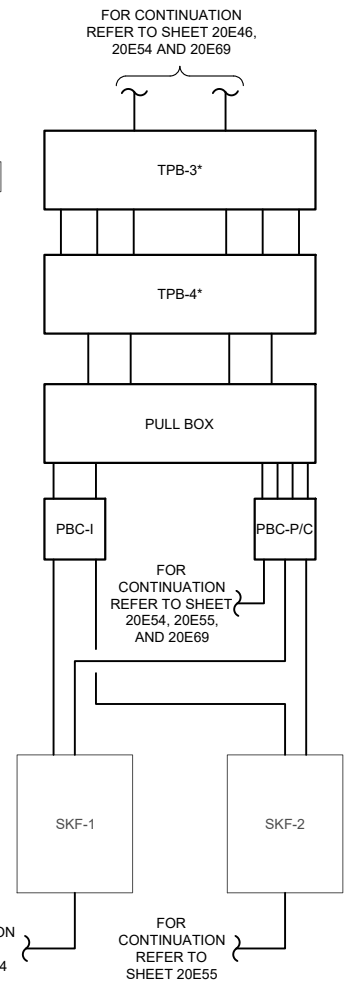
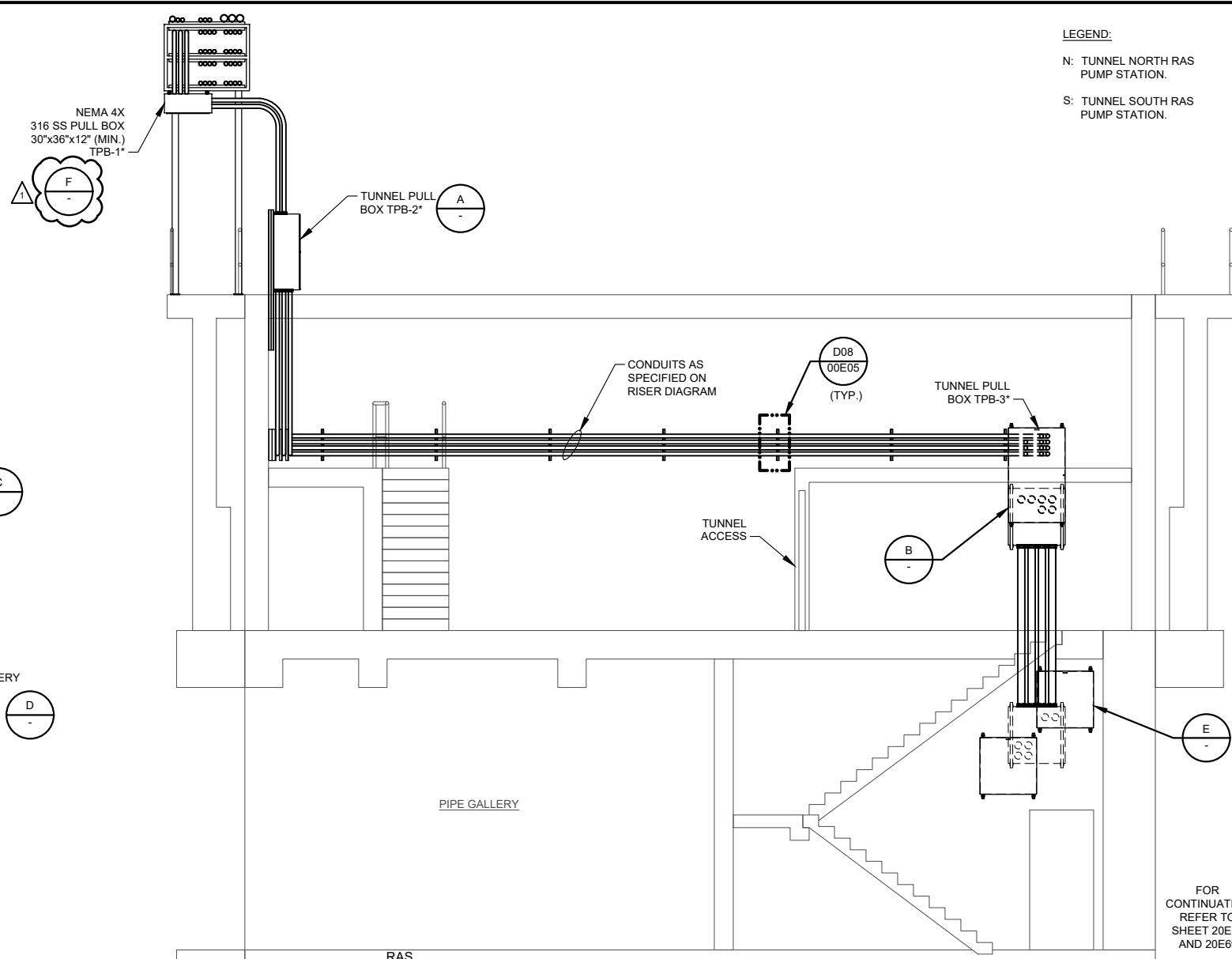
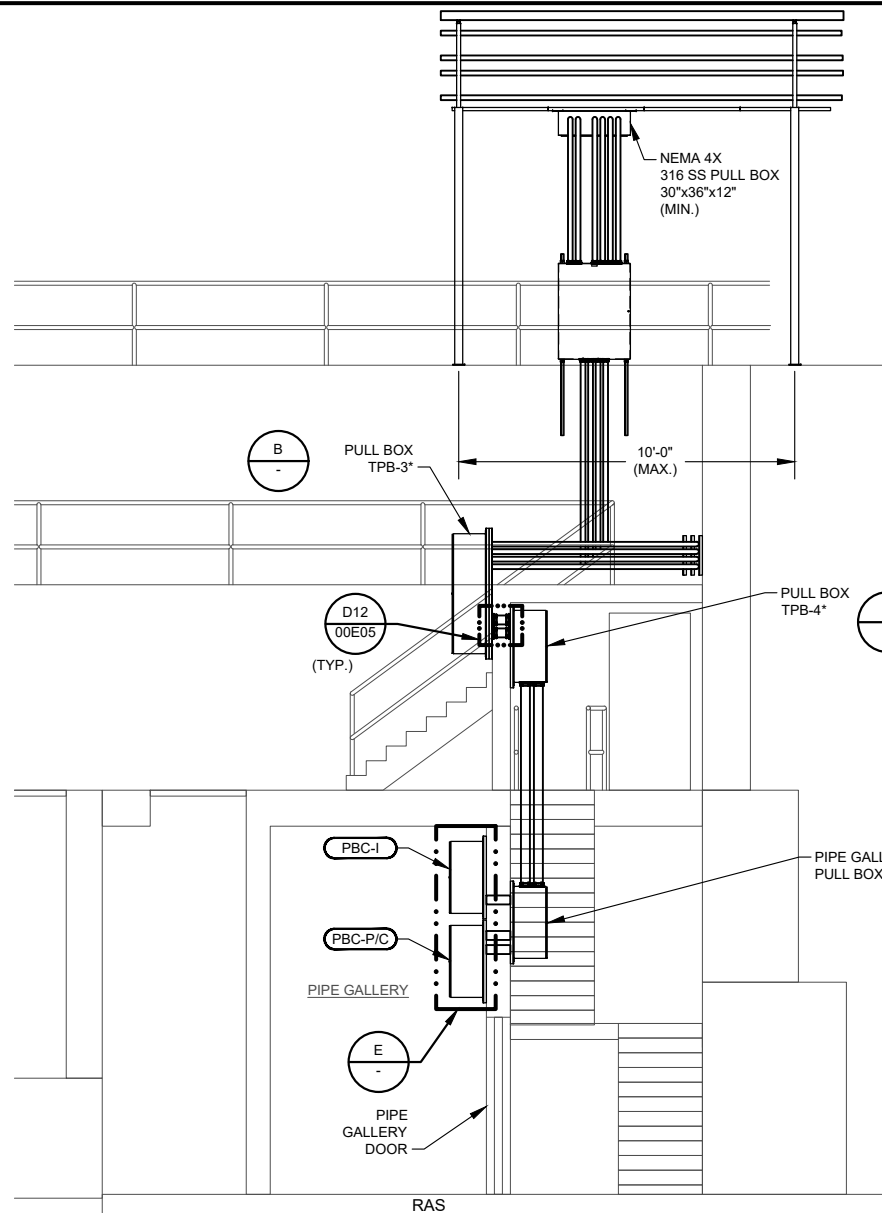
REV. NO.	DATE	DRWN	ER	ADDED/REV. NO.1	REMARKS
1	02/17/21				

**SAN ANTONIO WATER SYSTEM**  
STEVEN M. CLOUSE WRC  
ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
**FIRST STAGE AERATION TANKS RAS P.S. AND EAS P.S. (NORTH) INTERFACE DIAGRAM**

DESIGNED BY: K. KADAM  
DRAWN BY: E. RANGEL  
SHEET CHKD BY: V.K. GUPTA  
APPROVED BY: W. SAKO  
DATE: JANUARY 2021  
SAWS JOB NO.: 16-6501  
FILE NAME: 1951\_20E62

SHEET NO.  
**20E62**  
357 OF 500

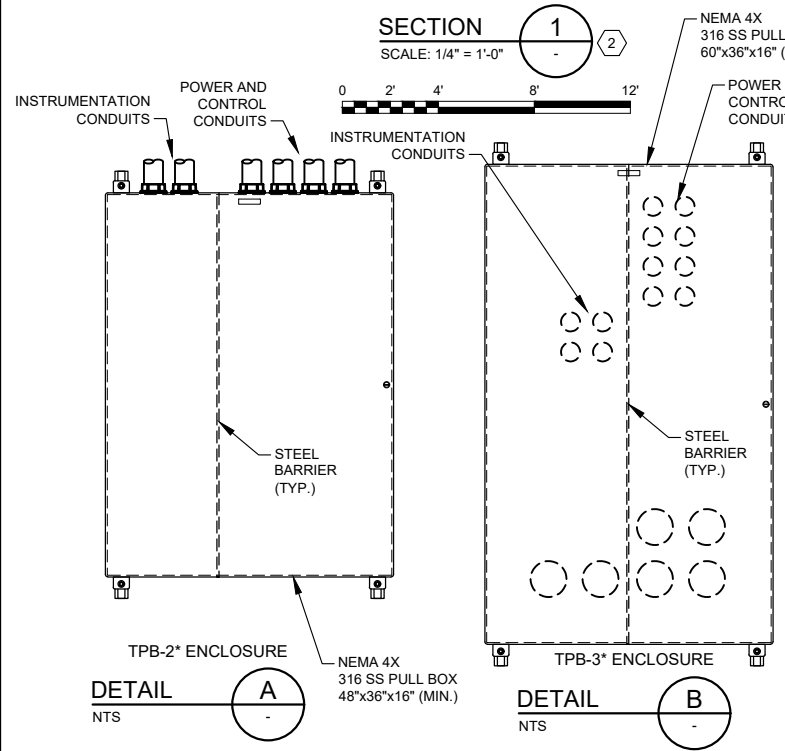
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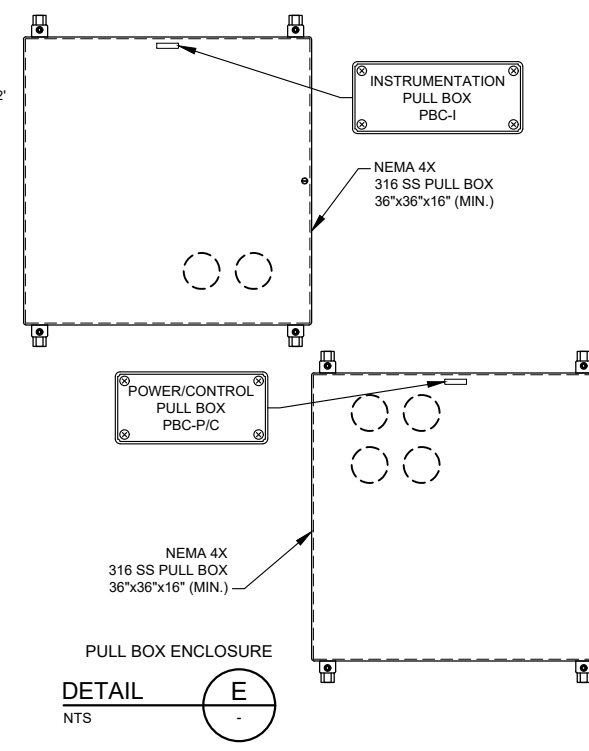
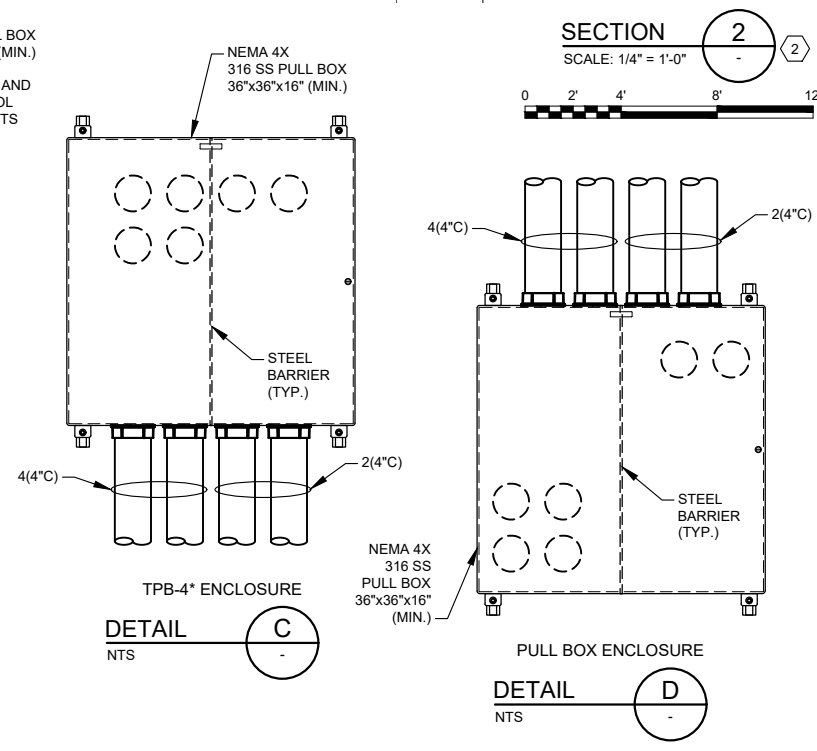
**LEGEND:**  
 N: TUNNEL NORTH RAS PUMP STATION.  
 S: TUNNEL SOUTH RAS PUMP STATION.

**NOTES:**  
 1 4" C THROUGH WALL CONDUITS.  
 2 SECTIONS ARE TYPICAL FOR NORTH AND SOUTH RAS PUMP STATION.  
 \* = N OR S. REFER TO SHEETS 20E39 AND 20E40.

**SECTION 1**  
 SCALE: 1/4" = 1'-0"  
 0 2' 4' 8' 12'

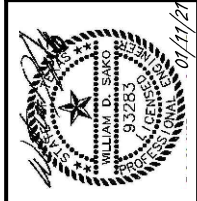


**SECTION 2**  
 SCALE: 1/4" = 1'-0"  
 0 2' 4' 8' 12'



**INSTRUMENTATION POWER AND CONTROL CABLE ROUTING DIAGRAM**

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**SAN ANTONIO WATER SYSTEM**

REV. NO.	DATE	DRWN	REMARKS
A	02/17/21	ER	ADDENDUM NO. 1

ONE INCH AT FULL SIZE IF NOT OTHERWISE NOTED

**SAN ANTONIO WATER SYSTEM**  
 STEVEN M. CLOUSE WRC  
 ELECTRICAL SYSTEM IMPROVEMENTS PHASE II  
**FIRST STAGE AERATION TANKS**  
**RAS NORTH AND SOUTH PUMP STATIONS**  
**SECTION, DETAILS AND RISER DIAGRAM**

DESIGNED BY: E. CLEMENT  
 DRAWN BY: E. RANGEL  
 SHEET CHKD BY: V.K. GUPTA  
 APPROVED BY: W. SAKO  
 DATE: JANUARY 2021  
 SAWS JOB NO.: 16-6501  
 FILE NAME: 1951\_20E70

SHEET NO.  
**20E70**  
 365 OF 500