

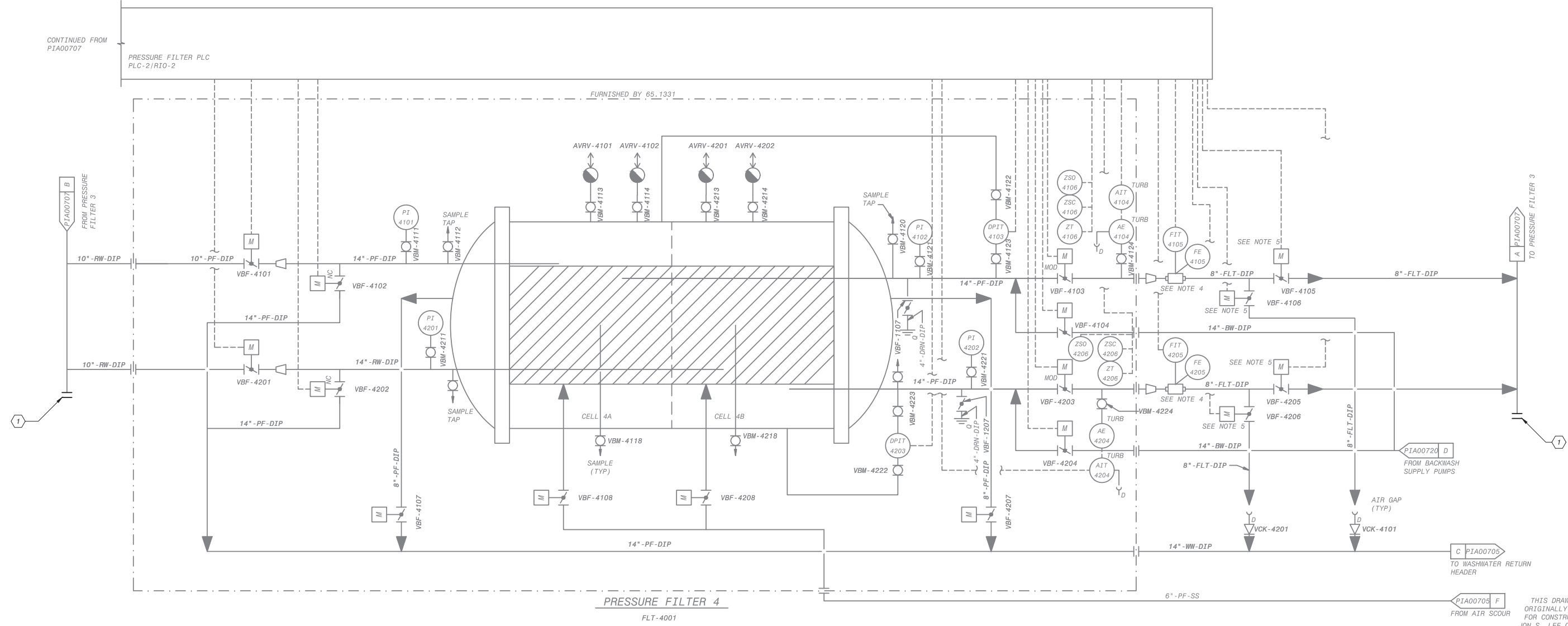
PLC-1/RIO-1

**AWTP EXPANSION NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

- INSTALL NEW FLANGE AND REMOVE CONNECTION FROM PRESSURE FILTER 4 TO PRESSURE FILTER 5.



**NOTES:**

- SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
- TAG NUMBERS TO BE PRECEDED WITH SYSTEM CODE "PF" UNLESS OTHERWISE NOTED.
- REFER TO VENDOR P&ID FOR DETAIL DESIGN AND COMPLETE I/O REQUIREMENT.
- THE FLOWMETERS SHALL BE FURNISHED BY 64.0200 BUT CONTROLLED BY PRESSURE FILTER VENDOR.
- THE PRESSURE FILTER VALVES SHALL BE FURNISHED BY 70.0100 BUT CONTROLLED BY PRESSURE FILTER VENDOR.

PRESSURE FILTERS  
 DIAMETER: 12 FT (2 PARTITIONED FILTERS PER VESSEL)  
 LENGTH: 39 FT (SIDE SHELL LENGTH)

THIS DRAWING WAS  
 ORIGINALLY APPROVED  
 FOR CONSTRUCTION BY  
 JON S. LEE ON 06/12/09  
 AND SEALED BY  
 CHRISTOPHER J. KINDLE,  
 A LICENSED  
 PROFESSIONAL ENGINEER  
 IN THE STATE OF  
 CALIFORNIA, E17946



**City of Santa Monica**  
**PUBLIC WORKS DEPARTMENT**  
 1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
 TEL. (310) 458-8721 FAX. (310) 393-4425

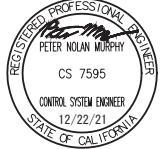
NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20\_\_  
 REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20\_\_  
 SUNNY WANG, P.E. - WATER RESOURCES MANAGER  
 CURTIS CASTLE, P.E. - PRINCIPAL C.E.  
 REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20\_\_  
 OMEED POUR, P.E. - PROJECT MANAGER

REFERENCE :  
 DATE : \_\_\_\_\_, 20XX  
 SUBMITTED BY : \_\_\_\_\_  
 COMPUTER FILE NAME :  
 SP-FILE NO. : SP2602  
 APPROVED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20XX  
 ALEX NAZARCHUK, P.E. - CITY ENGINEER

DESIGNED BY : WT  
 DRAWN BY : CR  
 CHECKED BY : XX  
 CONSULTANT JOB/SHEET NO.  
 DRAWING NO. 7078  
**PIA00708**  
 SH 273 OF 303 SHS



OLYMPIC WELL FIELD RESTORATION  
 AND ARCADIA WTP EXPANSION

P&ID PRESSURE FILTER 4

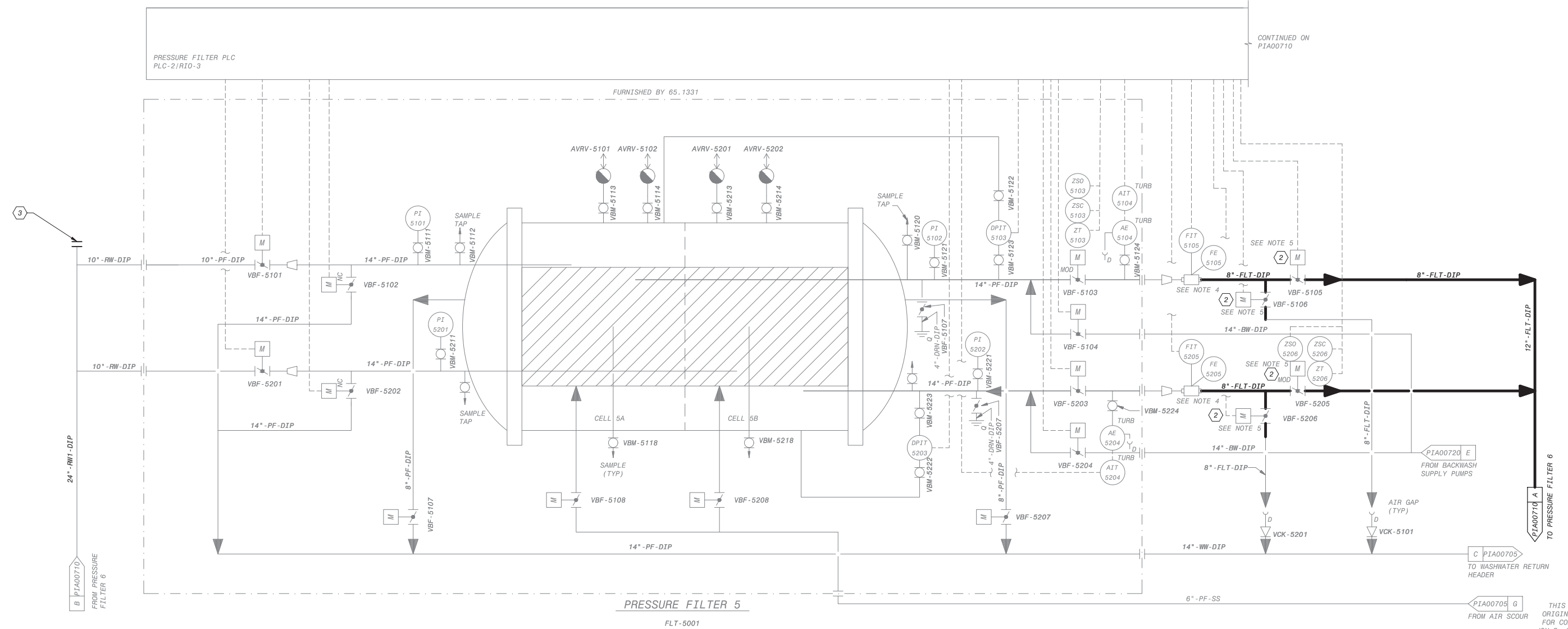
PROJECT AND SHEET TITLE

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PLC-1/RIO-1

**AWTP EXPANSION NOTES:**  
 1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.  
 2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**  
 1. NOT USED.  
 2. RELOCATE VALVE AND ACTUATOR AS SHOWN ON SHEET D-02-3001.  
 3. INSTALL NEW FLANGE AND REMOVE CONNECTION FROM PRESSURE FILTER 4 TO PRESSURE FILTER 5.



**NOTES:**  
 1. SEE LEGEND ON DRAWINGS PI000001, PI000002, PI000003.  
 2. TAG NUMBERS TO BE PRECEDED WITH SYSTEM CODE "PF" UNLESS OTHERWISE NOTED.  
 3. REFER TO VENDOR P&ID FOR DETAIL DESIGN AND COMPLETE I/O REQUIREMENT.  
 4. THE FLOWMETERS SHALL BE FURNISHED BY 64.0200 BUT CONTROLLED BY PRESSURE FILTER VENDOR.  
 5. THE PRESSURE FILTER VALVES SHALL BE FURNISHED BY 70.0100 BUT CONTROLLED BY PRESSURE FILTER VENDOR.

PRESSURE FILTERS  
 DIAMETER: 12 FT (2 PARTITIONED FILTERS PER VESSEL)  
 LENGTH: 39 FT (SIDE SHELL LENGTH)

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



**City of Santa Monica**  
**PUBLIC WORKS DEPARTMENT**  
 1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
 TEL. (310) 458-8721 FAX. (310) 393-4425

NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY: _____ DATE: _____, 20__	REFERENCE: _____
REVIEWED BY: _____ DATE: _____, 20__	DATE: _____, 20XX COMPUTER FILE NAME: _____
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	SUBMITTED BY: _____ SP-FILE NO.: SP2602
REVIEWED BY: _____ DATE: _____, 20__	CURTIS CASTLE, P.E. - PRINCIPAL C.E.
OMIED POUR, P.E. - PROJECT MANAGER	APPROVED BY: _____ DATE: _____, 20XX
CITY CLIENTS	ALEX NAZARCHUK, P.E. - CITY ENGINEER
ENGINEERING AND STREET SERVICES	

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

**P&ID PRESSURE FILTER 5**

DESIGNED BY: WT  
 DRAWN BY: CR  
 CHECKED BY: XX  
 CONSULTANT JOB/SHEET NO.  
 DRAWING NO. 7078  
**PIA00709**  
 SH 274 OF 303 SHS

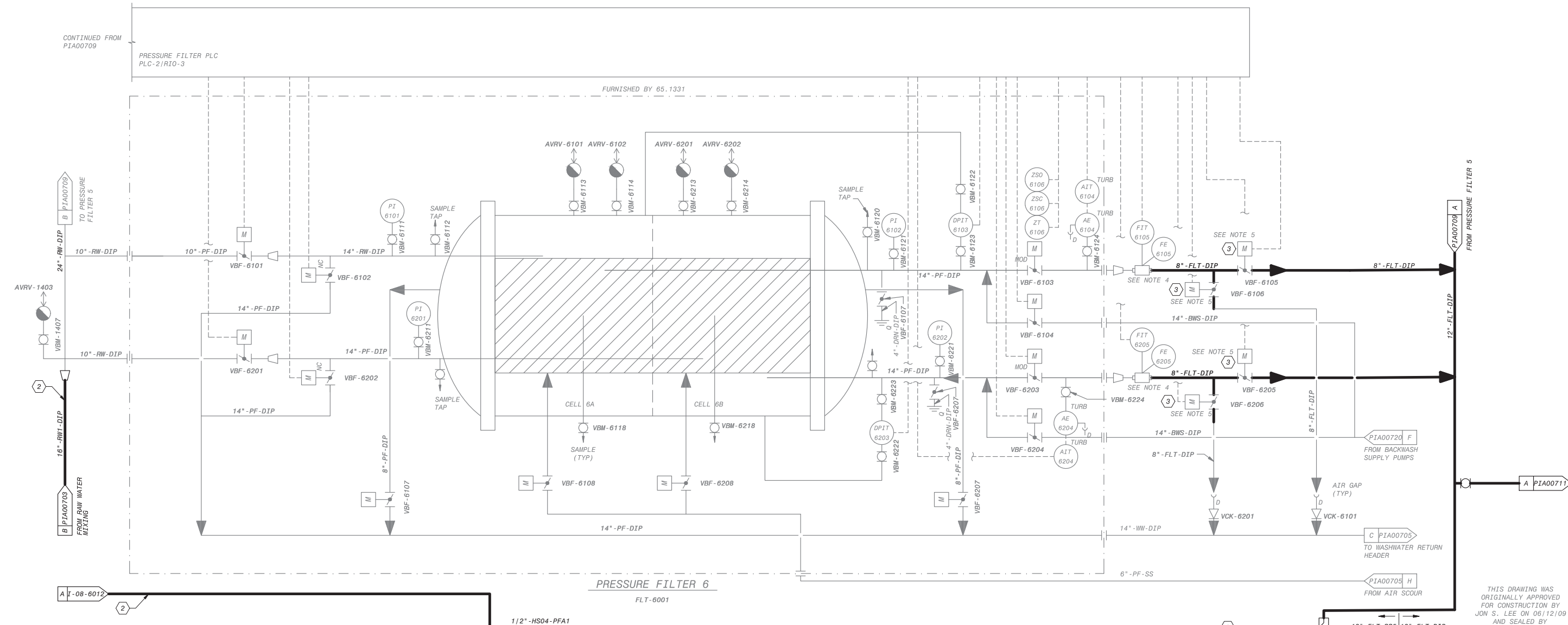
PLC-1/RI0-1

**AWTP EXPANSION NOTES:**

1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

1. EXISTING CONNECTION TO RO FEED TANK IS REMOVED. FILTER WATER EFFLUENT IS PIPED TO NEW UVAOP SYSTEM.
2. NOT USED.
3. RELOCATE VALVE AND ACTUATOR AS SHOWN ON SHEET D-02-3001.



**NOTES:**

1. SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
2. TAG NUMBERS TO BE PRECEDED WITH SYSTEM CODE "PF" UNLESS OTHERWISE NOTED.
3. REFER TO VENDOR P&ID FOR DETAIL DESIGN AND COMPLETE I/O REQUIREMENT.
4. THE FLOWMETERS SHALL BE FURNISHED BY 64.0200 BUT CONTROLLED BY PRESSURE FILTER VENDOR.
5. THE PRESSURE FILTER VALVES SHALL BE FURNISHED BY 70.0100 BUT CONTROLLED BY PRESSURE FILTER VENDOR.

PRESSURE FILTERS  
DIAMETER: 12 FT (2 PARTITIONED FILTERS PER VESSEL)  
LENGTH: 39 FT (SIDE SHELL LENGTH)

THIS DRAWING WAS  
ORIGINALLY APPROVED  
FOR CONSTRUCTION BY  
JON S. LEE ON 06/12/09  
AND SEALED BY  
CHRISTOPHER J. KINDLE,  
A LICENSED  
PROFESSIONAL ENGINEER  
IN THE STATE OF  
CALIFORNIA, E17946



**City of Santa Monica**  
PUBLIC WORKS DEPARTMENT  
1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
TEL. (310) 458-8721 FAX. (310) 393-4425

NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**  
CONSULTANT

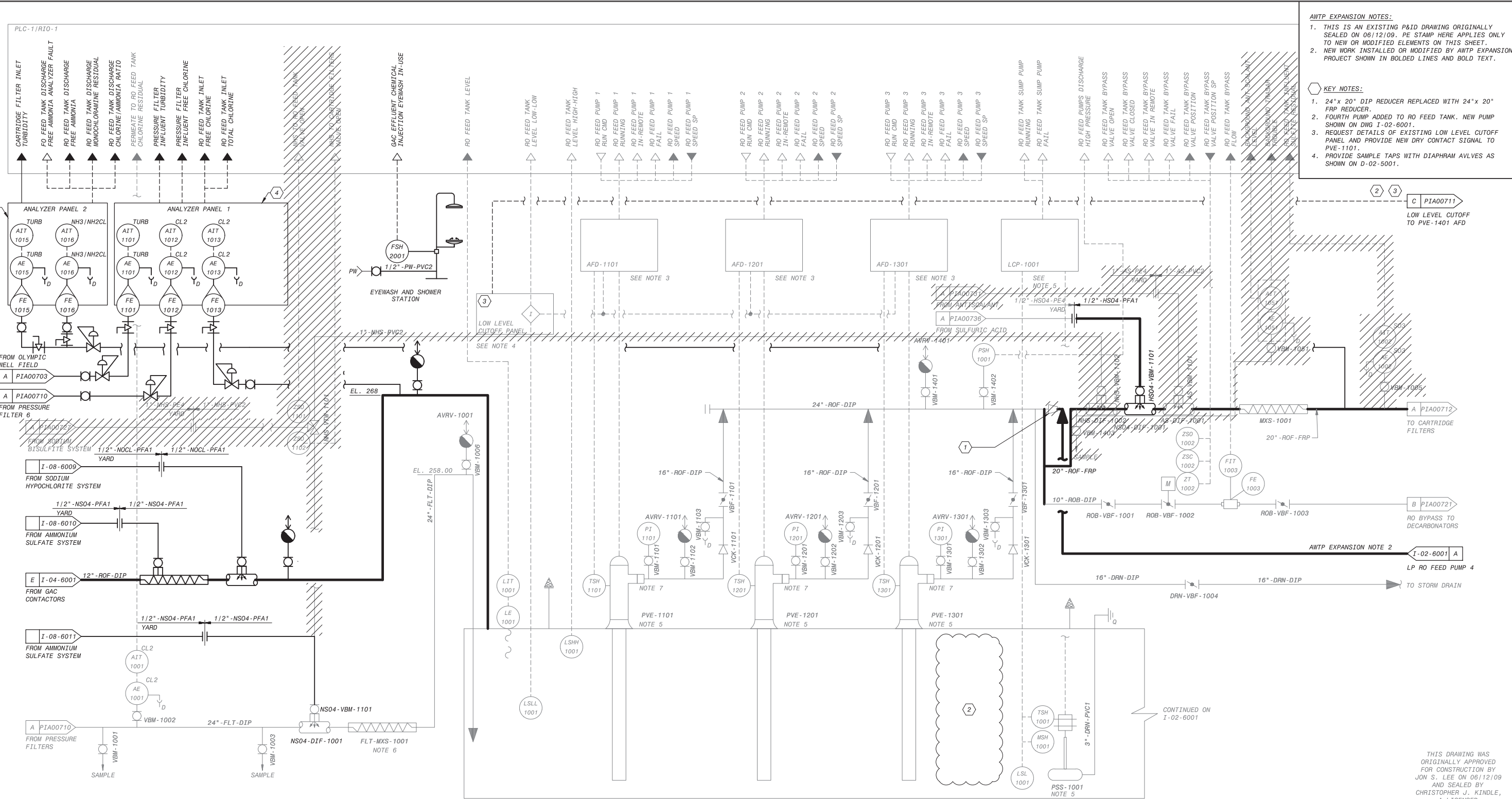
REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20\_\_  
SUNNY WANG, P.E. - WATER RESOURCES MANAGER  
REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20\_\_  
OMED POUR, P.E. - PROJECT MANAGER

REFERENCE: \_\_\_\_\_ DATE: \_\_\_\_\_, 200X  
COMPUTER FILE NAME: \_\_\_\_\_  
SUBMITTED BY: \_\_\_\_\_  
SP-FILE NO.: SP2602  
APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20XX  
ALEX NAZARCHUK, P.E. - CITY ENGINEER

DESIGNED BY: WT  
DRAWN BY: CR  
CHECKED BY: XX  
CONSULTANT JOB SHEET NO.  
DRAWING NO. 7078  
**PIA00710**  
SHT 275 OF 303 SHS

OLYMPIC WELL FIELD RESTORATION  
AND ARCADIA WTP EXPANSION  
**P&ID PRESSURE FILTER 6**  
PROJECT AND SHEET TITLE

C:\BCP\W\0408747\PIA00711.DWG 12/21/2021 4:28 PM  
 SHEET NO. 1 OF 3  
 TITLE OF PROJECT: OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION



**AWTP EXPANSION NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

- 24" x 20" DIP REDUCER REPLACED WITH 24" x 20" FRP REDUCER.
- FOURTH PUMP ADDED TO RO FEED TANK. NEW PUMP SHOWN ON DWG I-02-6001.
- REQUEST DETAILS OF EXISTING LOW LEVEL CUTOFF PANEL AND PROVIDE NEW DRY CONTACT SIGNAL TO PVE-1101.
- PROVIDE SAMPLE TAPS WITH DIAPHRAM AVLVES AS SHOWN ON D-02-5001.

- NOTES:**
- SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
  - TAG NUMBERS TO BE PRECEDED WITH SYSTEM CODE ROF UNLESS OTHERWISE NOTED.
  - AFDS AND MCC SHALL PROVIDE LOCAL INDICATING LIGHTS AND CONTROL SWITCHES AS PER SPEC. P.O. 73.0200.
  - LOW LEVEL CUTOFF PANEL SHALL BE FURNISHED AND INSTALLED BY P.O. 73.0200.
  - FURNISHED BY 67.9201.
  - FURNISHED BY 65.1211.
  - DISMANTLING JOINT TO BE FURNISHED BY 70.0100.

**LP RO FEED PUMPS**  
 FLOW: 3,500 GPM  
 TSH: 100 FT  
 HP: 150 HP

**RAW WATER EQUALIZATION TANK**  
 ROF-TNK-1001  
 DIMENSIONS: 65FT X 46FT  
 WATER HEIGHT: 10FT

**RO FEED TANK SUMP PUMP**  
 FLOW: 100 GPM  
 TSH: 20 FT  
 HP: 2 HP

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDEL, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



REVIEWED BY:	DATE:	20	REFERENCE:
REVIEWED BY:	DATE:	20	COMPUTER FILE NAME:
SUNNY WANG, P.E. - WATER RESOURCES MANAGER			SP-FILE NO.: SP2602
REVIEWED BY:	DATE:	20	APPROVED BY:
OMED POUR, P.E. - PROJECT MANAGER			ALEX NAZARCHUK, P.E. - CITY ENGINEER
			DATE: 20XX

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

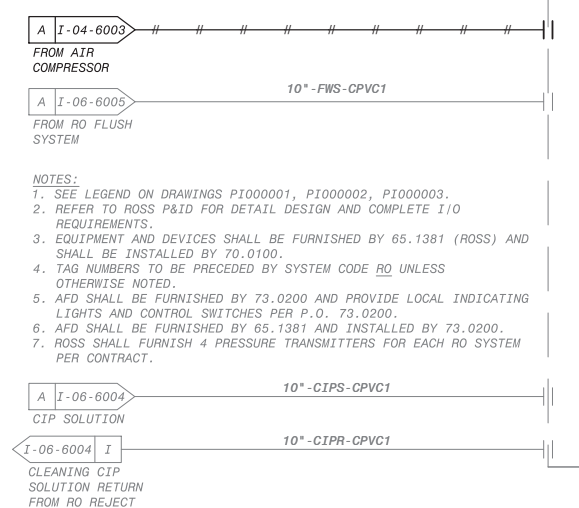
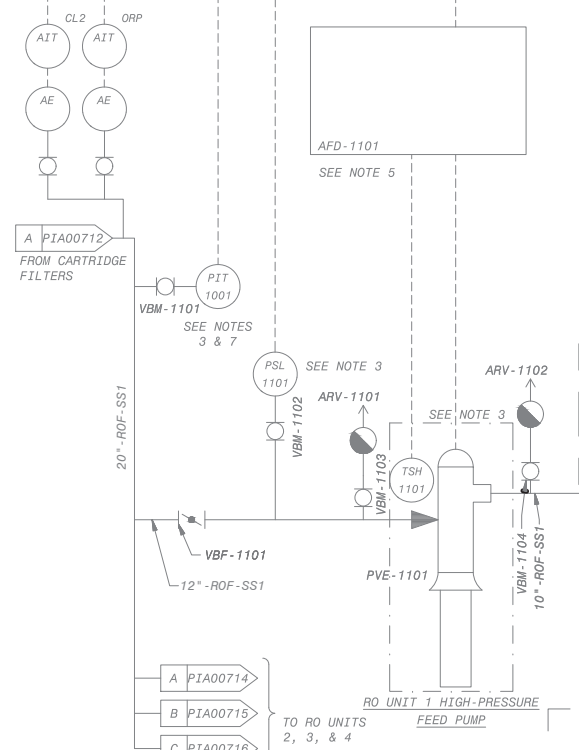
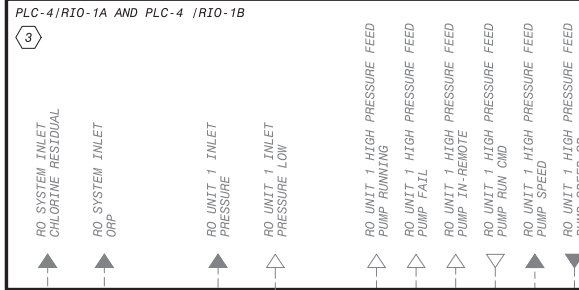
P&ID RO FEED TANK AND LP RO FEED PUMPS

DESIGNED BY:	WT
DRAWN BY:	CR
CHECKED BY:	XX
CONSULTANT JOB/SHEET NO.	
DRAWING NO. 7078	
PIA00711	
SHT 276 OF 303 SHS	

NO.	DATE	BY	DESCRIPTION	APPROVED







**NOTES:**  
 1. SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.  
 2. REFER TO ROSS P&ID FOR DETAIL DESIGN AND COMPLETE I/O REQUIREMENTS.  
 3. EQUIPMENT AND DEVICES SHALL BE FURNISHED BY 65.1381 (ROSS) AND SHALL BE INSTALLED BY 70.0100.  
 4. TAG NUMBERS TO BE PRECEDED BY SYSTEM CODE RO UNLESS OTHERWISE NOTED.  
 5. AFD SHALL BE FURNISHED BY 73.0200 AND PROVIDE LOCAL INDICATING LIGHTS AND CONTROL SWITCHES PER P.O. 73.0200.  
 6. AFD SHALL BE FURNISHED BY 65.1381 AND INSTALLED BY 73.0200.  
 7. ROSS SHALL FURNISH 4 PRESSURE TRANSMITTERS FOR EACH RO SYSTEM PER CONTRACT.

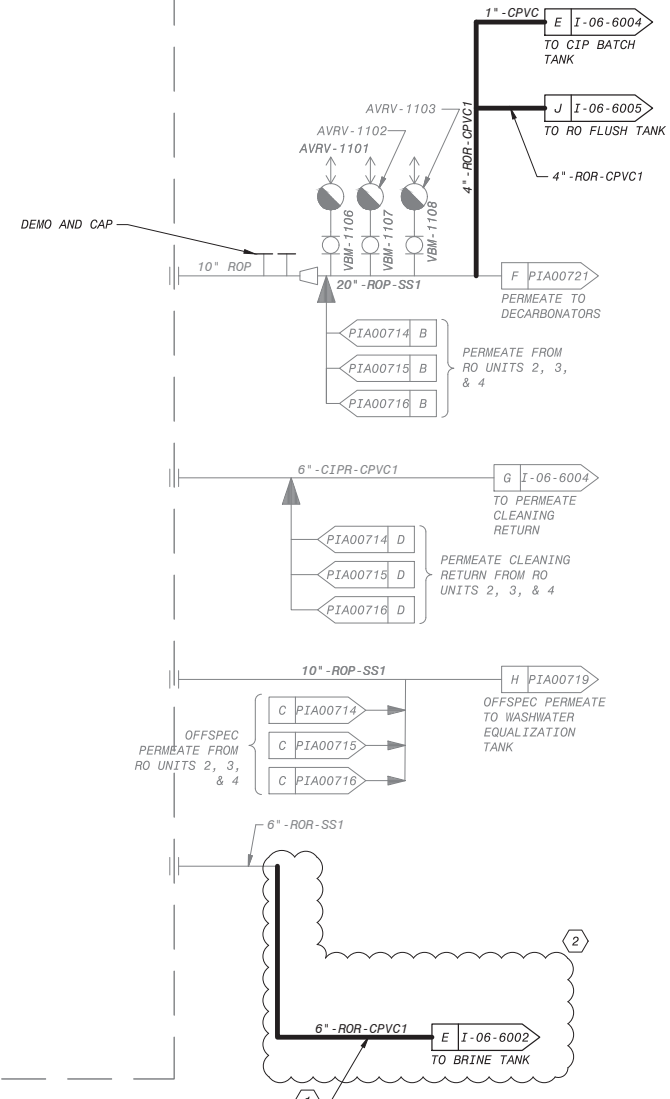
REFER TO EQUIPMENT VENDOR REFERENCE DRAWINGS FOR DETAILED PIPING AND INSTRUMENTATION DIAGRAMS FOR RO UNIT 1 MODIFICATIONS (SEE R-06-0001)

**AWTP EXPANSION NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 6/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

- EXISTING OFF PAGE CONNECT REPLACED WITH NEW OFF PAGE CONNECTOR TO THE BRINE TANK.
- NOT USED.
- PLC-4/RIO-1A IS EXISTING WITH EXISTING SIGNALS. ALL NEW SIGNALS FOR RO TRAIN 1 SHALL BE INTEGRATED INTO PLC-4/RIO-1B (PROVIDED BY RO SYSTEM VENDOR). ALL PLC-4 RIO UNITS SHALL COMMUNICATE WITH PLC-4 VIA A REDUNDANT ETHERNET/IP DEVICE-LEVEL RING PER I-01-6001. PLC-4 SHALL BE PROVIDED BY AND PROGRAMMED BY THE RO SYSTEM VENDOR. ALL MONITORING AND ALARMING POINTS AT THE VENDOR CONTROL PANEL SHALL BE MADE AVAILABLE TO SCADA OVER THE PLANT FIBER OPTIC SCADA NETWORK.
- REFER TO SECTION 40 61 93 ATTACHMENT B FOR A LIST OF SIGNALS TO BE INTEGRATED INTO THE SYSTEM VENDOR SUPPLIED CONTROL PANEL.



THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



RO UNIT 1

**City of Santa Monica**  
**PUBLIC WORKS DEPARTMENT**  
 1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
 TEL. (310) 458-8721 FAX. (310) 393-4425



REVIEWED BY : SUNNY WANG, P.E. - WATER RESOURCES MANAGER	DATE : _____, 20__	REFERENCE : DATE : _____, 20XX	COMPUTER FILE NAME :
REVIEWED BY : OMED POUR, P.E. - PROJECT MANAGER	DATE : _____, 20__	SUBMITTED BY : CURTIS CASTLE, P.E. - PRINCIPAL C.E.	SP-FILE NO. : SP2602
APPROVED BY : ALEX NAZARCHUK, P.E. - CITY ENGINEER	DATE : _____, 20XX	DESIGNED BY : WT	

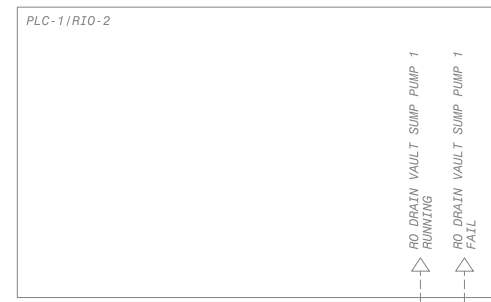
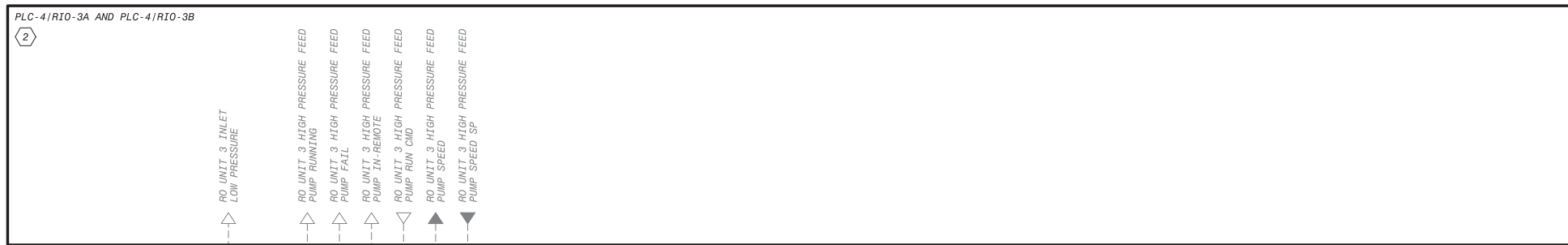
**OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION**  
**P&ID REVERSE OSMOSIS UNIT 1**

DESIGNED BY : WT
DRAWN BY : CR
CHECKED BY : XX
CONSULTANT JOB SHEET NO.
DRAWING NO. 7078 <b>PIA00713</b>
SHT 278 OF 303 SHS



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SHEET  
DWG. NO. 1

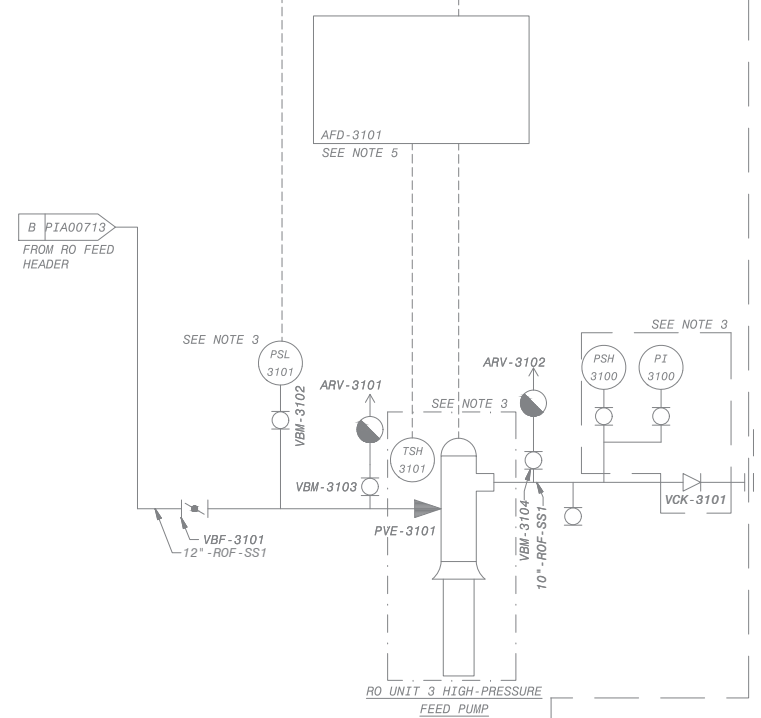


**AWTP EXPANSION NOTES:**

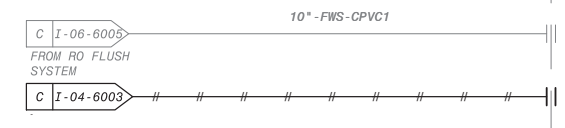
- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 6/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

- EXISTING OFF PAGE CONNECTOR REPLACED WITH NEW OFF PAGE CONNECTOR TO THE BRINE TANK.
- PLC-4/RIO-3A IS EXISTING WITH EXISTING SIGNALS. ALL NEW SIGNALS FOR RO TRAIN 3 SHALL BE INTEGRATED INTO PLC-4/RIO-3B (PROVIDED BY RO SYSTEM VENDOR). ALL PLC-4 RIO UNITS SHALL COMMUNICATE WITH PLC-4 VIA A REDUNDANT ETHERNET/IP DEVICE-LEVEL RING PER I-01-6001. PLC-4 SHALL BE PROVIDED BY AND PROGRAMMED BY THE RO SYSTEM VENDOR. ALL MONITORING AND ALARMING POINTS AT THE VENDOR CONTROL PANEL SHALL BE MADE AVAILABLE TO SCADA OVER THE PLANT FIBER OPTIC SCADA NETWORK.
- REFER TO SECTION 40 61 93 ATTACHMENT B FOR A LIST OF SIGNALS TO BE INTEGRATED INTO THE SYSTEM VENDOR SUPPLIED CONTROL PANEL.



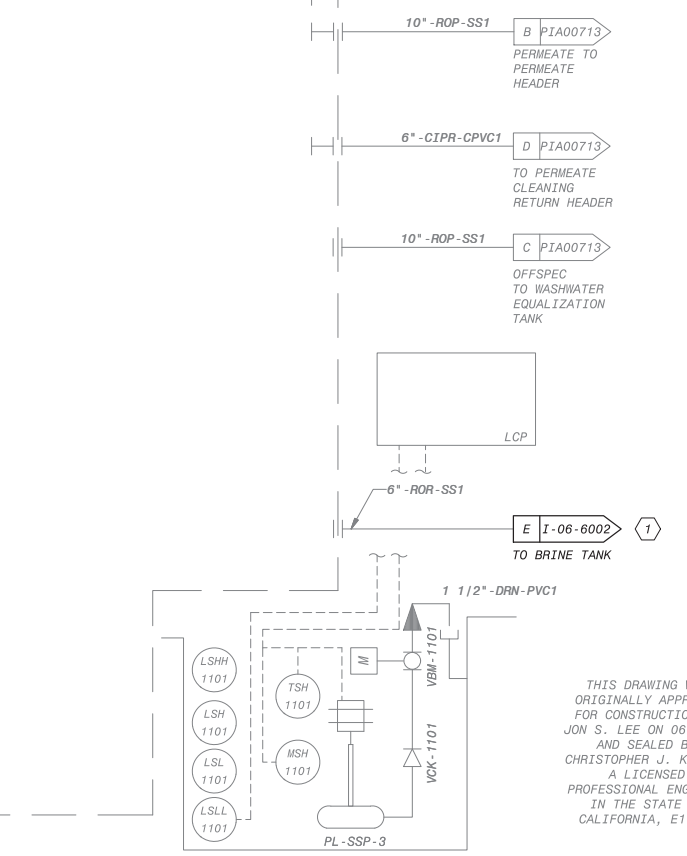
REFER TO EQUIPMENT VENDOR REFERENCE DRAWINGS FOR DETAILED PIPING AND INSTRUMENTATION DIAGRAMS FOR RO UNIT 3 MODIFICATIONS (SEE R-06-0001)



**NOTES:**

- SEE LEGEND ON DRAWINGS PI000001, PI000002, PI000003.
- REFER TO ROSS P&ID FOR DETAIL DESIGN AND COMPLETE I/O REQUIREMENTS.
- EQUIPMENT AND DEVICES SHALL BE FURNISHED BY 65.1381 (ROSS) AND SHALL BE INSTALLED BY 70.0100.
- TAG NUMBERS TO BE PRECEDED BY SYSTEM CODE RO UNLESS OTHERWISE NOTED.
- AFD SHALL BE FURNISHED BY 73.0200 AND PROVIDE LOCAL INDICATING LIGHTS AND CONTROL SWITCHES PER P.O. 73.0200.
- AFD SHALL BE FURNISHED BY 65.1381 AND INSTALLED BY 73.0200.

SKID ROSS SCOPE (SEE NOTE 3)



THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



RO UNIT 3



NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20\_\_

REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20\_\_

SUNNY WANG, P.E. - WATER RESOURCES MANAGER

REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20\_\_

OMEDD POUR, P.E. - PROJECT MANAGER

REFERENCE :

DATE : \_\_\_\_\_, 20\_\_

COMPUTER FILE NAME :

SP-FILE NO. : SP2602

APPROVED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20\_\_

ALEX NAZARCHUK, P.E. - CITY ENGINEER

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

P&ID REVERSE OSMOSIS UNIT 3

PROJECT AND SHEET TITLE

DESIGNED BY : WT

DRAWN BY : CR

CHECKED BY : XX

CONSULTANT JOB/SHEET NO.

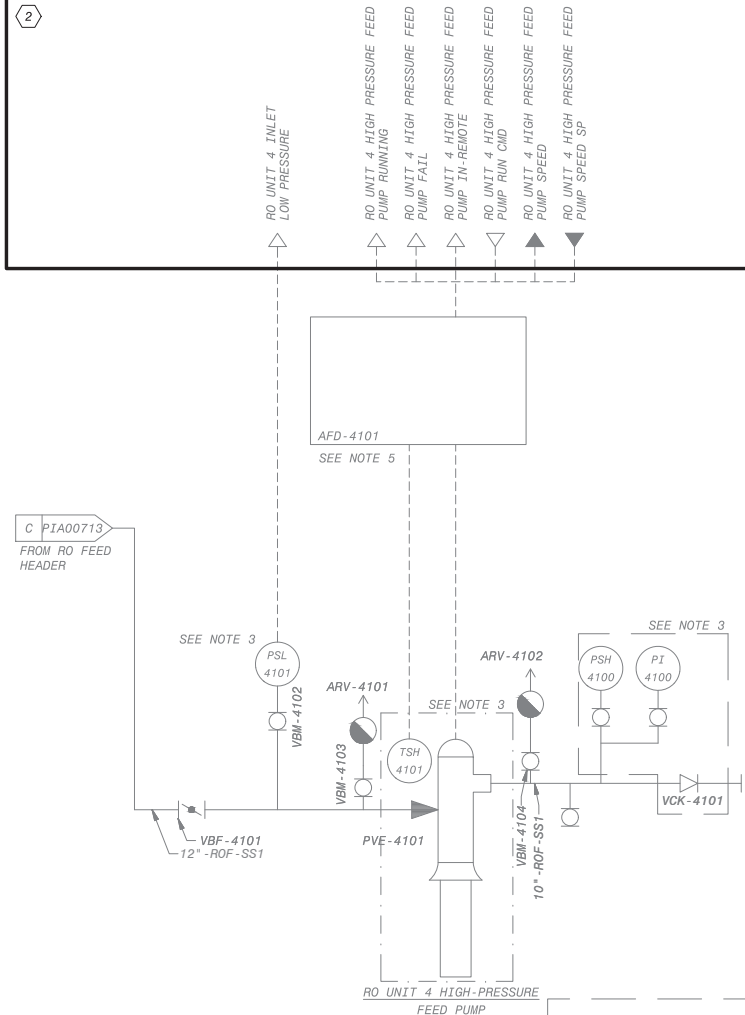
DRAWING NO. 7078

PIA00715

SHT 280 OF 303 SHS



PLC-4/RIO-4A AND PLC-4/RIO-4B

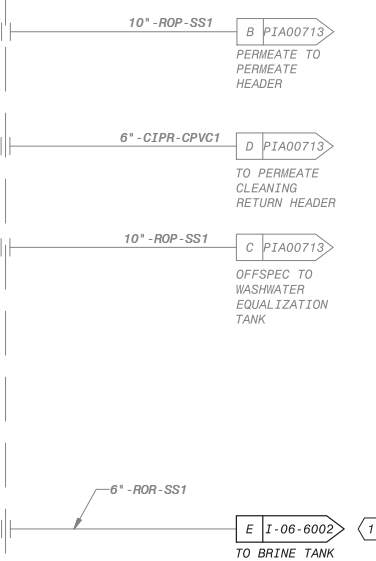


REFER TO EQUIPMENT VENDOR REFERENCE DRAWINGS FOR DETAILED PIPING AND INSTRUMENTATION DIAGRAMS FOR RO UNIT 4 MODIFICATIONS (SEE R-06-0001)

3

- AWTP EXPANSION NOTES:**
- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 6/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
  - NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
- KEY NOTES:**
- EXISTING OFF PAGE CONNECTOR REPLACED WITH NEW OFF PAGE CONNECTOR TO THE BRINE TANK.
  - PLC-4/RIO-4A IS EXISTING WITH EXISTING SIGNALS. ALL NEW SIGNALS FOR RO TRAIN 4 SHALL BE INTEGRATED INTO PLC-4/RIO-4B (PROVIDED BY RO SYSTEM VENDOR). ALL PLC-4 RIO UNITS SHALL COMMUNICATE WITH PLC-4 VIA A REDUNDANT ETHERNET/IP DEVICE-LEVEL RING PER I-01-6001. PLC-4 SHALL BE PROVIDED BY AND PROGRAMMED BY THE RO SYSTEM VENDOR. ALL MONITORING AND ALARMING POINTS AT THE VENDOR CONTROL PANEL SHALL BE MADE AVAILABLE TO SCADA OVER THE PLANT FIBER OPTIC SCADA NETWORK.
  - REFER TO SECTION 40 61 93 ATTACHMENT B FOR A LIST OF SIGNALS TO BE INTEGRATED INTO THE SYSTEM VENDOR SUPPLIED CONTROL PANEL.

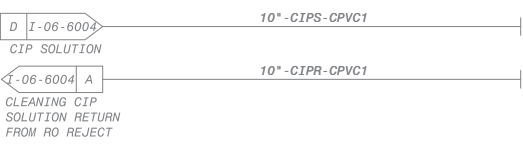
SKID ROSS SCOPE (SEE NOTE 3)



THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



- NOTES:**
- SEE LEGEND ON DRAWINGS PI000001, PI000002, PI000003.
  - REFER TO ROSS P&ID FOR DETAIL DESIGN AND COMPLETE I/O REQUIREMENTS.
  - EQUIPMENT AND DEVICES SHALL BE FURNISHED BY 65.1381 (ROSS) AND SHALL BE INSTALLED BY 70.0100.
  - TAG NUMBERS TO BE PRECEDED BY SYSTEM CODE RO UNLESS OTHERWISE NOTED.
  - AFD SHALL BE FURNISHED BY 73.0200 AND PROVIDE LOCAL INDICATING LIGHTS AND CONTROL SWITCHES PER P.O. 73.0200.
  - AFD SHALL BE FURNISHED BY 65.1381 AND INSTALLED BY 73.0200.



RO UNIT 4



NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20XX  
 SUNNY WANG, P.E. - WATER RESOURCES MANAGER

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20XX  
 OMEED POUR, P.E. - PROJECT MANAGER

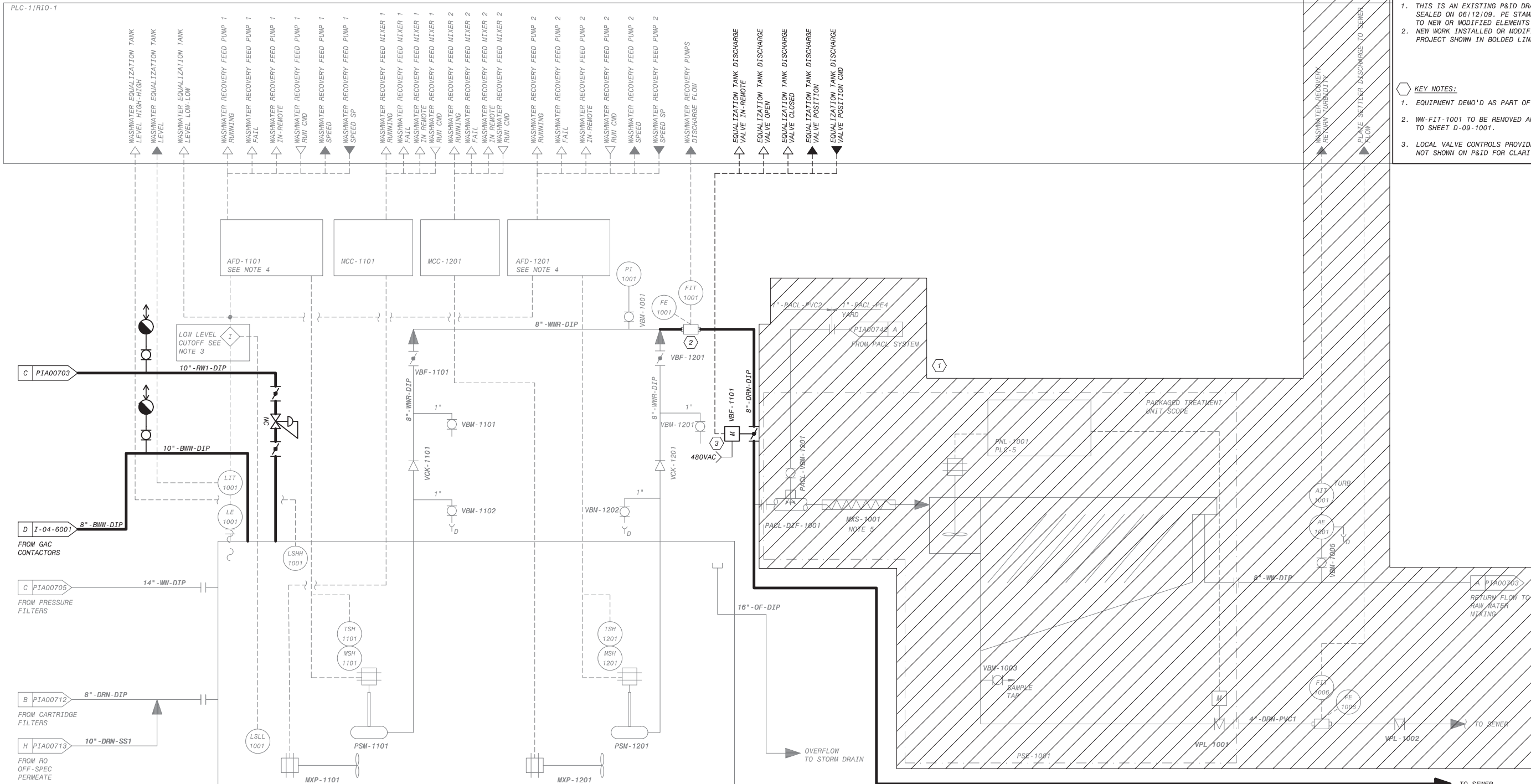
REFERENCE: \_\_\_\_\_ DATE: \_\_\_\_\_, 20XX  
 CURTIS CASTLE, P.E. - PRINCIPAL C.E.

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20XX  
 ALEX NAZARCHUK, P.E. - CITY ENGINEER

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

P&ID REVERSE OSMOSIS UNIT 4

DESIGNED BY: WT  
 DRAWN BY: CR  
 CHECKED BY: XX  
 CONSULTANT JOB/SHEET NO.  
 DRAWING NO. 7078  
**PIA00716**  
 SH 281 OF 303 SHEETS



**EQUALIZATION TANK AND WASHWATER RECOVERY SYSTEM FEED PUMPS**      **PACKAGED TREATMENT UNIT**

**EQUALIZATION TANK**  
 WW-TNK-1001  
 DIMENSIONS: 50' X 20'  
 WATER HEIGHT: 12'

**WASHWATER RECOVERY PUMPS**  
 FLOW: 650 GPM  
 TSH: 42'  
 HP: 10 HP

**SUBMERSIBLE MIXERS**  
 HP: 8 HP

**NOTES:**

- SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
- TAG NUMBERS TO BE PRECEDED WITH SYSTEM CODE **WW** UNLESS OTHERWISE NOTED.
- LOW LEVEL CUTOFF PANEL SHALL BE FURNISHED AND INSTALLED BY P.O. 73.0200.
- AFDS AND MCC SHALL BE FURNISHED WITH LOCAL INDICATING LIGHTS AND CONTROL SWITCHES AS PER SPEC. P.O. 73.0200.
- FURNISHED BY 65.1211.

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



City of **Santa Monica**  
**PUBLIC WORKS DEPARTMENT**  
 1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
 TEL. (310) 458-8721 FAX. (310) 393-4425

NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**  
 CONSULTANT

REVIEWED BY: _____ DATE: _____, 20__	REFERENCE: _____
REVIEWED BY: _____ DATE: _____, 20__	DATE: _____, 20XX COMPUTER FILE NAME: _____
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	SUBMITTED BY: _____ SP-FILE NO.: SP2602
REVIEWED BY: _____ DATE: _____, 20__	APPROVED BY: _____ DATE: _____, 20XX
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

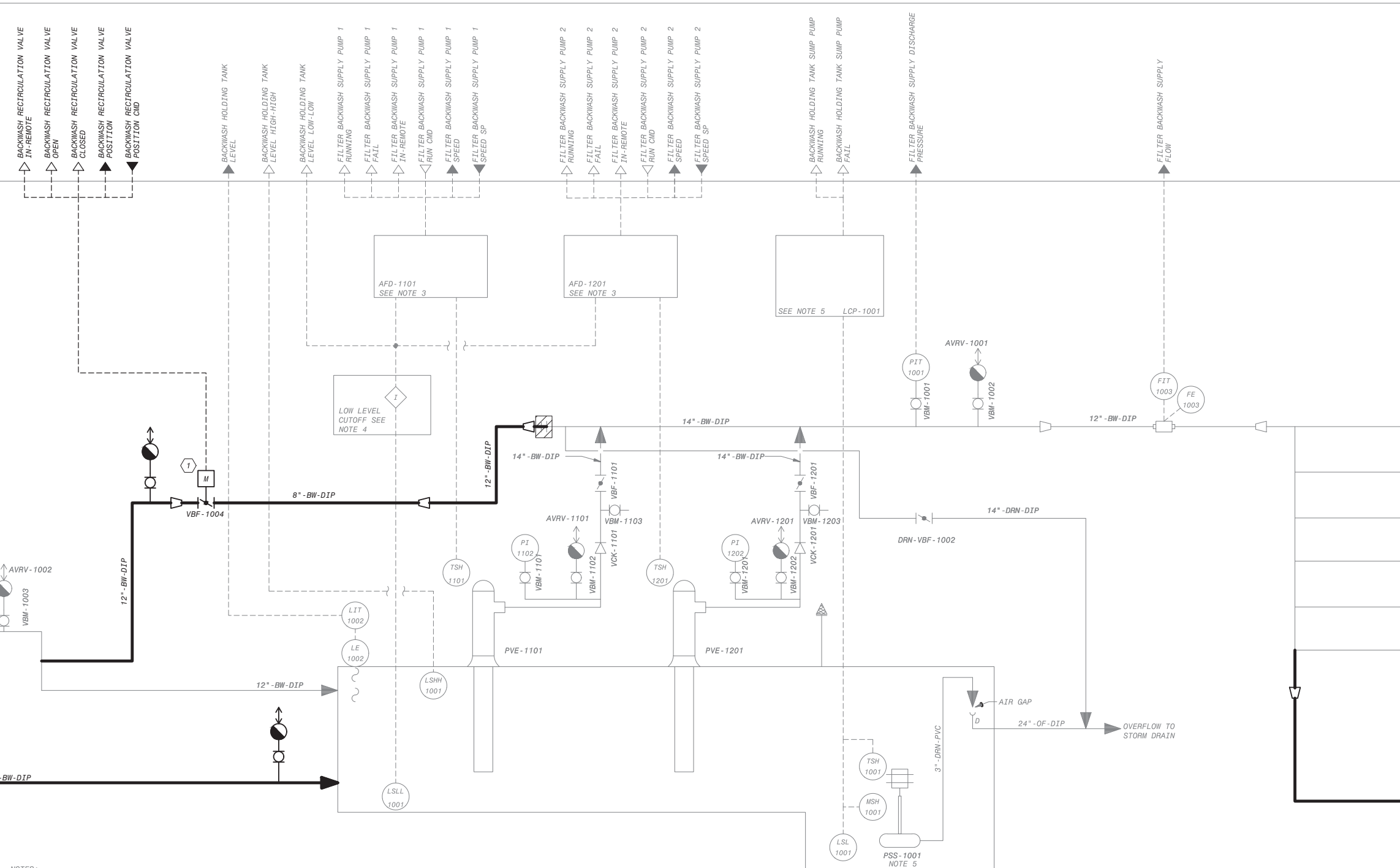
**P&ID WASHWATER RECOVERY SYSTEM**

DESIGNED BY: WT  
 DRAWN BY: CR  
 CHECKED BY: XX  
 CONSULTANT JOB SHEET NO. \_\_\_\_\_

DRAWING NO. 7078  
**PIA00719**  
 SH 282 OF 303 SHS

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PLC-1/RIO-1



**AWTP EXPANSION NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

- LOCAL VALVE CONTROL PROVIDED PER 40 05 57.23, NOT SHOWN ON P&ID FOR CLARITY.

- NOTES:**
- SEE LEGEND ON DRAWINGS PI000001, PI000002, PI000003.
  - TAG NUMBERS TO BE PRECEDED BY SYSTEM CODE "BW" UNLESS OTHERWISE NOTED.
  - AFDS AND MCC SHALL BE FURNISHED WITH LOCAL INDICATING LIGHTS AND CONTROL SWITCHES PER SPEC. P.O. 73.0200.
  - LOW LEVEL CUTOFF PANEL SHALL BE FURNISHED AND INSTALLED BY P.O. 73.0200.
  - SUMP PUMP AND LCP SHALL BE FURNISHED BY 70.0100.

**BACKWASH HOLDING TANK AND BACKWASH SUPPLY PUMPS**

<b>BACKWASH HOLDING TANK</b> BW-TNK-1001 DIMENSION: 65' X 22' WATER HEIGHT: 10'	<b>BACKWASH SUPPLY PUMPS</b> FLOW: 3450 GPM TSH: 45' HP: 75 HP	<b>BACKWASH HOLDING TANK SUMP PUMP</b> FLOW: 100 GPM TSH: 20' HP: 2 HP
--	---	---

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY: _____ DATE: _____, 20__	REFERENCE: _____
REVIEWED BY: _____ DATE: _____, 20__	DATE: _____, 20XX COMPUTER FILE NAME: _____
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	SUBMITTED BY: _____ SP-FILE NO.: SP2602
REVIEWED BY: _____ DATE: _____, 20__	APPROVED BY: _____ DATE: _____, 20XX
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER

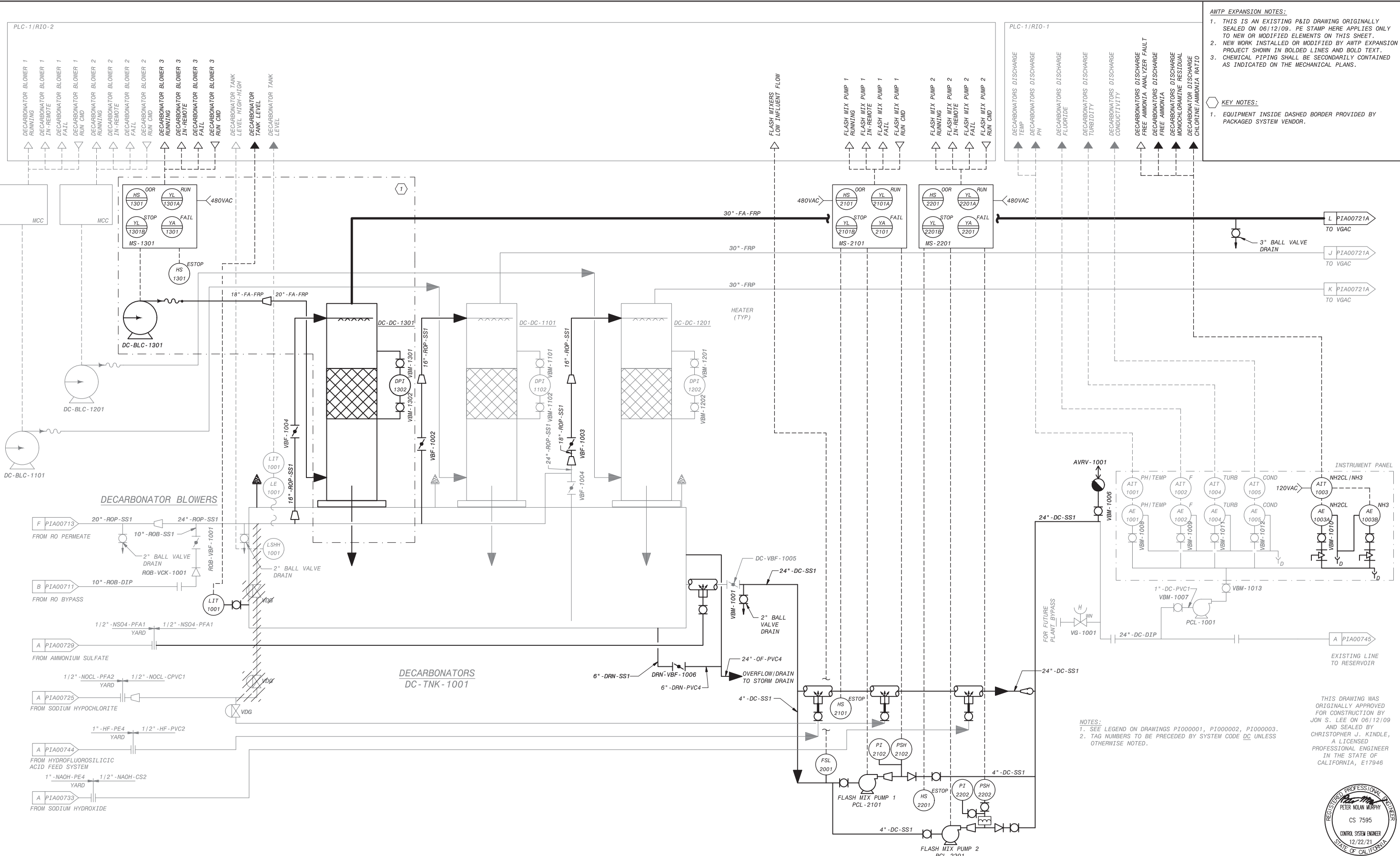
OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

**P&ID BACKWASH SUPPLY SYSTEM**

DESIGNED BY: WT  
DRAWN BY: CR  
CHECKED BY: XX  
CONSULTANT JOB SHEET NO.  
DRAWING NO. 7078  
**PIA00720**  
SHT 283 OF 303 SHS

PROJECT AND SHEET TITLE
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**AWTP EXPANSION NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
- CHEMICAL PIPING SHALL BE SECONDARILY CONTAINED AS INDICATED ON THE MECHANICAL PLANS.

**KEY NOTES:**

- EQUIPMENT INSIDE DASHED BORDER PROVIDED BY PACKAGED SYSTEM VENDOR.

**DECARBONATOR BLOWERS**

F PIA00713 20"-ROP-SS1 24"-ROP-SS1  
FROM RO PERMEATE 10"-ROB-SS1  
2" BALL VALVE DRAIN ROB-VCK-1001  
B PIA00711 10"-ROB-DIP  
FROM RO BYPASS 2" BALL VALVE DRAIN  
LIT 1001

1/2"-NS04-PFA1 1/2"-NS04-PFA1  
FROM AMMONIUM SULFATE YARD

1/2"-NOCL-PFA2 1/2"-NOCL-CPVC1  
FROM SODIUM HYPOCHLORITE YARD

1"-HF-PE4 1/2"-HF-PVC2  
FROM HYDROFLUOROSILICIC ACID FEED SYSTEM

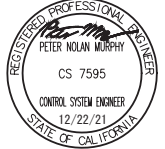
1"-NAOH-PE4 1/2"-NAOH-CS2  
FROM SODIUM HYDROXIDE YARD

**DECARBONATORS**  
DC-TNK-1001

**NOTES:**

- SEE LEGEND ON DRAWINGS PI000001, PI000002, PI000003.
- TAG NUMBERS TO BE PRECEDED BY SYSTEM CODE DC UNLESS OTHERWISE NOTED.

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NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**

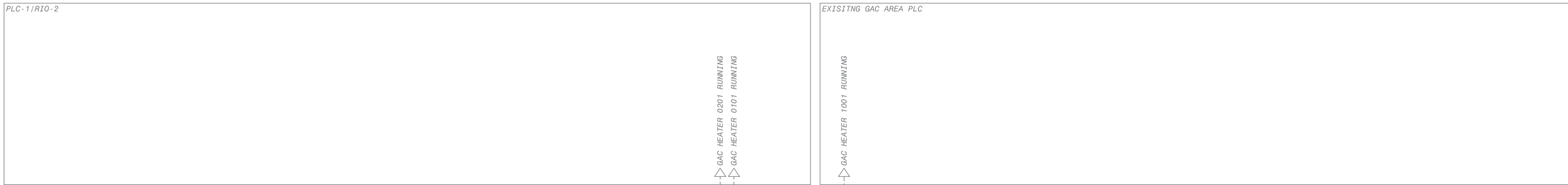
REVIEWED BY: _____ DATE: _____, 20__	REFERENCE: _____
REVIEWED BY: _____ DATE: _____, 20__	DATE: _____, 20__ COMPUTER FILE NAME: _____
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	SUBMITTED BY: _____ SP-FILE NO.: SP2602
REVIEWED BY: _____ DATE: _____, 20__	APPROVED BY: _____ DATE: _____, 20__
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER
CITY CLIENTS	ENGINEERING AND STREET SERVICES

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

P&ID DECARBONATORS POST-TREATMENT

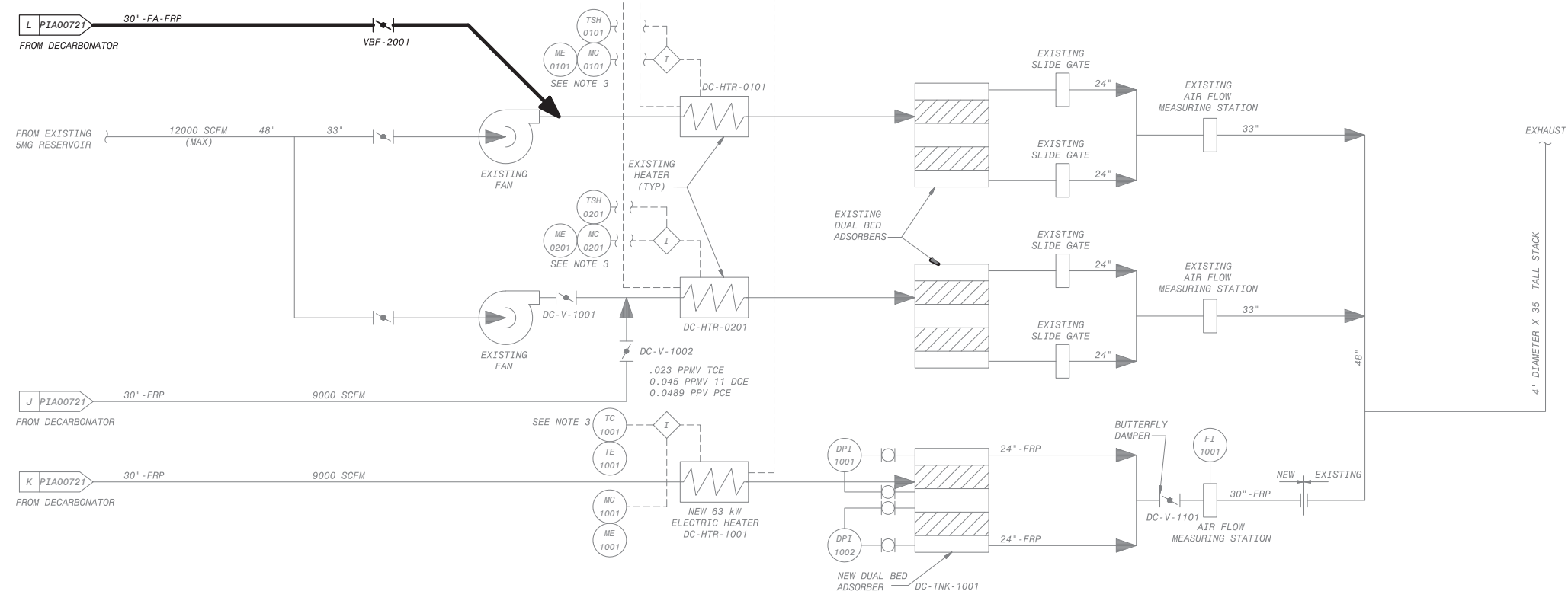
DESIGNED BY: WT  
DRAWN BY: CR  
CHECKED BY: XX  
CONSULTANT JOB/SHEET NO.  
DRAWING NO. 7078  
PIA00721  
SHT 284 OF 303 SHS





**AWTP EXPANSION NOTES:**

1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.



**NOTES:**

1. SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
2. TAG NUMBERS TO BE PRECEDED BY SYSTEM CODE DC UNLESS OTHERWISE NOTED.
3. MUMMIOISTAT AND THERMOSTAT FURNISHED WITH THE ELECTRIC HEATERS.

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_ 20\_\_

REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_ 20\_\_

SUNNY WANG, P.E. - WATER RESOURCES MANAGER

REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_ 20\_\_

OMIED POUR, P.E. - PROJECT MANAGER

REFERENCE :

DATE : \_\_\_\_\_, 20XX

COMPUTER FILE NAME :

SP-FILE NO. : SP2602

APPROVED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20XX

ALEX NAZARCHUK, P.E. - CITY ENGINEER

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

P&ID BED ABSORBERS

PROJECT AND SHEET TITLE

DESIGNED BY : WT

DRAWN BY : CR

CHECKED BY : XX

CONSULTANT JOB/SHEET NO.

DRAWING NO. 7078

**PIA00721A**

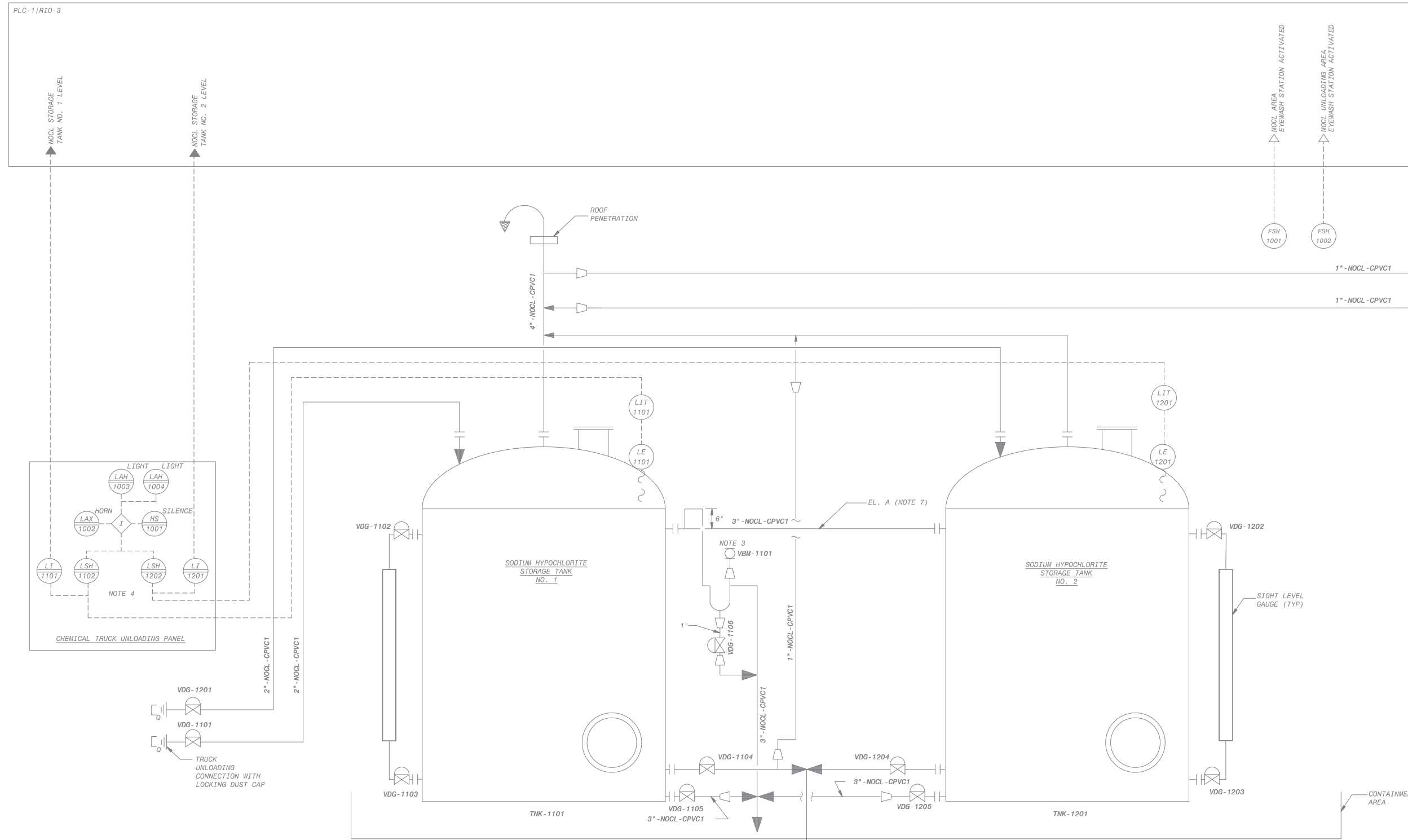
SH 285 OF 303 SHS

**AWTP EXPANSION NOTES:**

1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

1. EXISTING OFF PAGE CONNECTORS MODIFIED TO NEW OFF PAGE CONNECTION.



- NOTES:**
1. SEE LEGEND ON DRAWINGS PI000001, PI000002, AND PI000003.
  2. SYSTEM CODE IS NOCL UNLESS OTHERWISE NOTED.
  3. LOCATE P-TRAP FILL VALVE NO MORE THAN 5 FEET ABOVE FINISHED FLOOR
  4. LOCATE LOCAL LEVEL INDICATION SUCH THAT IT CAN BE VIEWED FROM THE TRUCK LOADING CONNECTION.
  5. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
  6. LOCAL CONTROL DEVICES, SUCH AS INDICATING LIGHTS AND SWITCHES, LOCATED ON MCCS OR AT EQUIPMENT, MAY NOT BE INDICATED ON THIS P&ID.
  7. THE ENTIRE TANK OVERFLOW HEADER SHALL BE INSTALLED AT ELEVATION A.
  8. METERING PUMP SUCTION PIPING SHALL BE ROUTED TO SLOPE CONTINUOUSLY DOWNWARD FROM THE BULK STORAGE TANK.

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



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NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**

REVIEWED BY :	DATE :	20
REVIEWED BY :	DATE :	20
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	CURTIS CASTLE, P.E. - PRINCIPAL C.E.	
REVIEWED BY :	DATE :	20
OMED POUR, P.E. - PROJECT MANAGER		

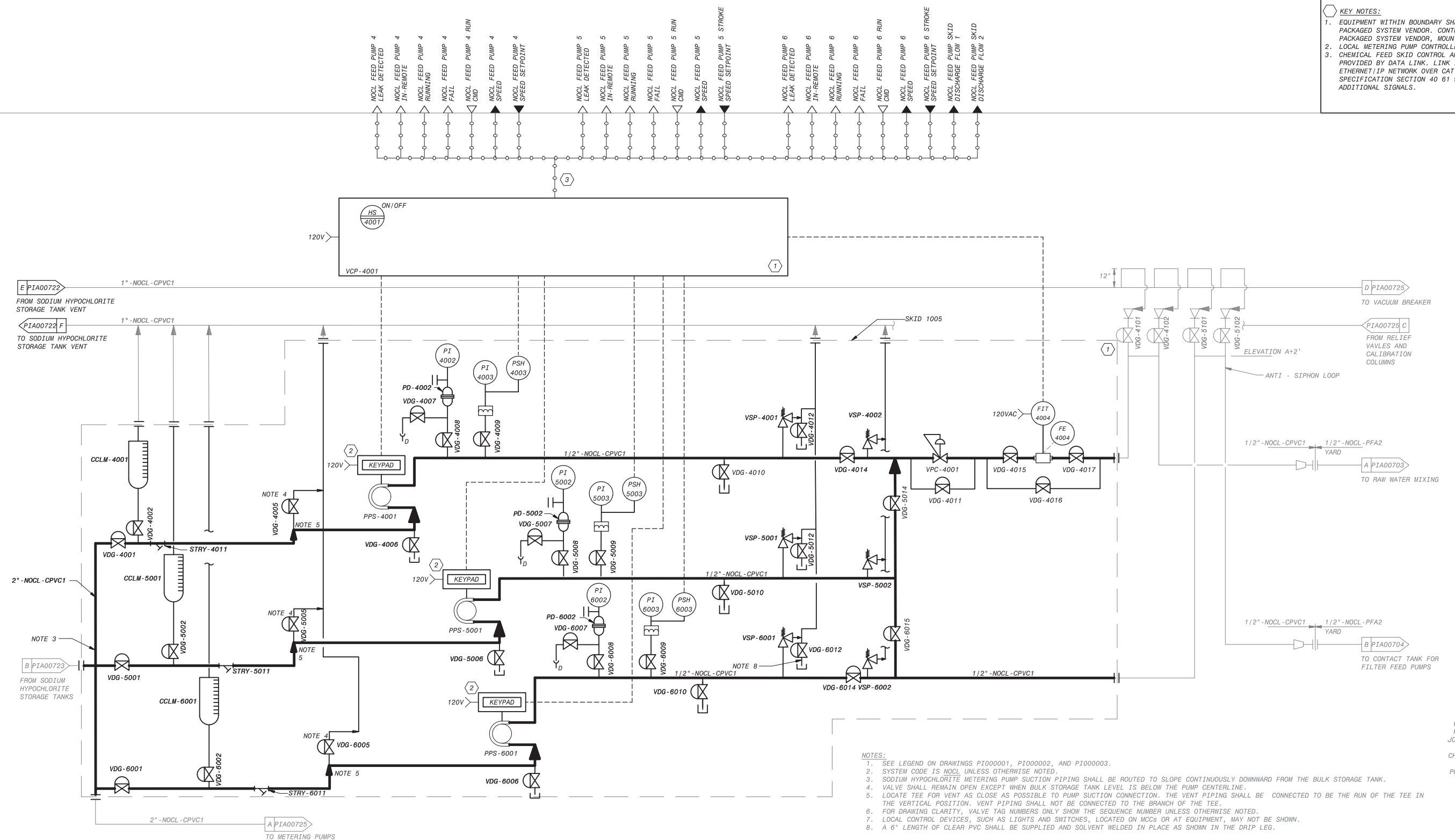
REFERENCE :	DATE :	20XX	COMPUTER FILE NAME :

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION  
**P&ID SODIUM HYPOCHLORITE STORAGE**

DESIGNED BY :	PM
DRAWN BY :	CR
CHECKED BY :	XX
CONSULTANT JOB/SHEET NO.	
DRAWING NO. 7078	PIA00722
SHT	286 OF 303 SHS

PLC-1/RIO-3

- AWTP EXPANSION NOTES:**
- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
  - NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
- KEY NOTES:**
- EQUIPMENT WITHIN BOUNDARY SHALL BE PROVIDED BY PACKAGED SYSTEM VENDOR. CONTROL PANEL PROVIDED BY PACKAGED SYSTEM VENDOR, MOUNTED INTEGRAL TO SKID.
  - LOCAL METERING PUMP CONTROLLER, INTEGRAL TO PUMP.
  - CHEMICAL FEED SKID CONTROL AND STATUS MONITORING PROVIDED BY DATA LINK. LINK IS PROVIDED VIA ETHERNET/IP NETWORK OVER CAT-6 MEDIA. SEE SPECIFICATION SECTION 40 61 96 FOR DETAILS AND ADDITIONAL SIGNALS.



- NOTES:**
- SEE LEGEND ON DRAWINGS PI000001, PI000002, AND PI000003.
  - SYSTEM CODE IS NOCL UNLESS OTHERWISE NOTED.
  - SODIUM HYPOCHLORITE METERING PUMP SUCTION PIPING SHALL BE ROUTED TO SLOPE CONTINUOUSLY DOWNWARD FROM THE BULK STORAGE TANK.
  - VALVE SHALL REMAIN OPEN EXCEPT WHEN BULK STORAGE TANK LEVEL IS BELOW THE PUMP CENTERLINE.
  - LOCATE TEE FOR VENT AS CLOSE AS POSSIBLE TO PUMP SUCTION CONNECTION. THE VENT PIPING SHALL BE CONNECTED TO BE THE RUN OF THE TEE IN THE VERTICAL POSITION. VENT PIPING SHALL NOT BE CONNECTED TO THE BRANCH OF THE TEE.
  - FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
  - LOCAL CONTROL DEVICES, SUCH AS LIGHTS AND SWITCHES, LOCATED ON MCCs OR AT EQUIPMENT, MAY NOT BE SHOWN.
  - A 6' LENGTH OF CLEAR PVC SHALL BE SUPPLIED AND SOLVENT WELDED IN PLACE AS SHOWN IN THE DRIP LEG.

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



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NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
WALSH  
CONSULTANT

REVIEWED BY:	DATE:	20XX
SUNNY WANG, P.E. - WATER RESOURCES MANAGER		
REVIEWED BY:	DATE:	20XX
OMED POUR, P.E. - PROJECT MANAGER		

REFERENCE:	DATE:	20XX	COMPUTER FILE NAME:
CURTIS CASTLE, P.E. - PRINCIPAL C.E.			
APPROVED BY:	DATE:	20XX	SP-FILE NO.:
ALEX NAZARCHUK, P.E. - CITY ENGINEER			SP2602

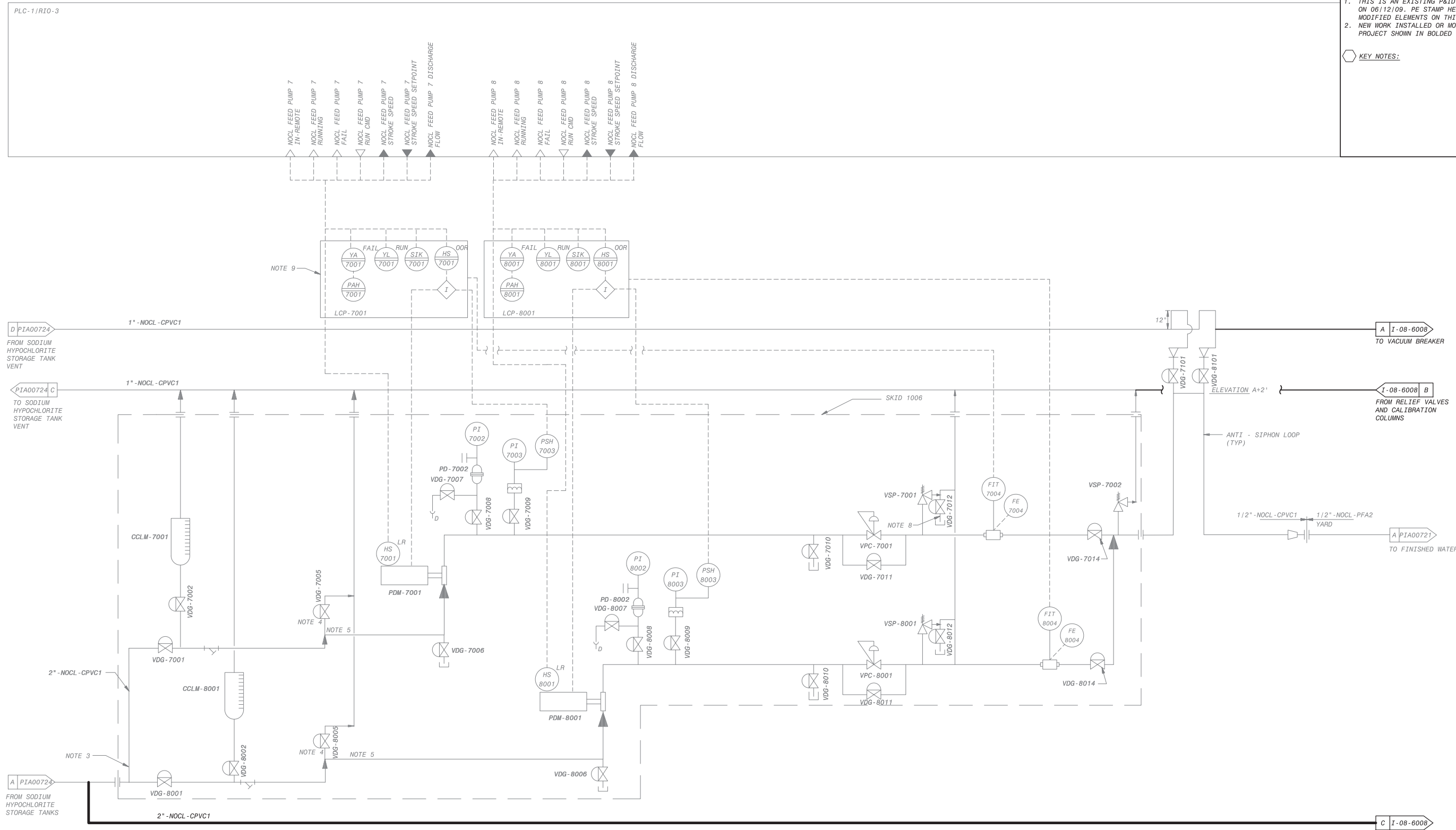
OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION  
P&ID SODIUM HYPOCHLORITE FEED 1 OF 4  
PROJECT AND SHEET TITLE

DESIGNED BY:	PM
DRAWN BY:	CR
CHECKED BY:	XX
CONSULTANT JOB/SHEET NO.	
DRAWING NO.	7078
PIA00724	
SHT	287 OF 303 SHS

**AWTP EXPANSION NOTES:**

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2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**



- NOTES:**
1. SEE LEGEND ON DRAWINGS P1000001, P1000002, AND P1000003.
  2. SYSTEM CODE IS NOCL UNLESS OTHERWISE NOTED.
  3. SODIUM HYPOCHLORITE METERING PUMP SUCTION PIPING SHALL BE ROUTED TO SLOPE CONTINUOUSLY DOWNWARD FROM THE BULK STORAGE TANK.
  4. VALVE SHALL REMAIN OPEN EXCEPT WHEN BULK STORAGE TANK LEVEL IS BELOW THE PUMP CENTERLINE.
  5. LOCATE TEE FOR VENT AS CLOSE AS POSSIBLE TO PUMP SUCTION CONNECTION. THE VENT PIPING SHALL BE CONNECTED TO BE THE RUN OF THE TEE IN THE VERTICAL POSITION. VENT PIPING SHALL NOT BE CONNECTED TO THE BRANCH OF THE TEE.
  6. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
  7. LOCAL CONTROL DEVICES, SUCH AS LIGHTS AND SWITCHES, LOCATED ON MCCS OR AT EQUIPMENT, MAY NOT BE SHOWN.
  8. A 6" LENGTH OF CLEAR PVC SHALL BE SUPPLIED AND SOLVENT WELDED IN PLACE AS SHOWN IN THE DRIP LEG.
  9. METERING PUMP CONTROL PANELS SHALL BE INTEGRAL TO THE SKID

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



**City of Santa Monica**  
**PUBLIC WORKS DEPARTMENT**  
 1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
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REVIEWED BY :	DATE :	20__	REFERENCE :
REVIEWED BY :	DATE :	20__	DATE :
REVIEWED BY :	DATE :	20__	COMPUTER FILE NAME :
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	CURTIS CASTLE, P.E. - PRINCIPAL C.E.		SP-FILE NO. : SP2602
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER	DATE :	20XX

DESIGNED BY : PM  
 DRAWN BY : CR  
 CHECKED BY : XX  
 CONSULTANT JOB/SHEET NO.  
 DRAWING NO. 7078  
**PIA00725**  
 SH 288 OF 303 SHS

**OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION**  
**P&ID SODIUM HYPOCHLORITE FEED 2 OF 4**

PROJECT AND SHEET TITLE

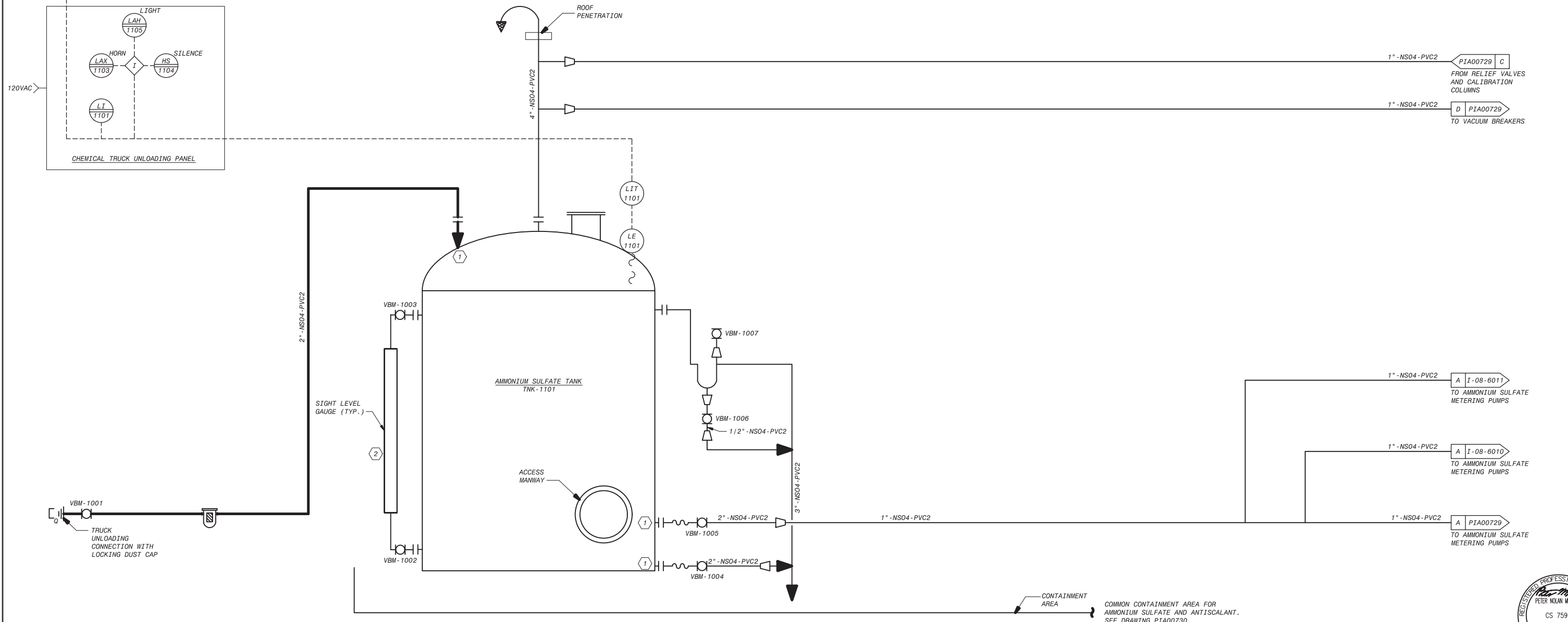
NO.	DATE	BY	DESCRIPTION	APPROVED



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PLC-1/RI0-3  
NS04 TANK LEVEL

- GENERAL NOTES:**
1. SYSTEM CODE IS NS04 UNLESS OTHERWISE NOTED.
  2. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
  3. LOCAL CONTROL DEVICES, SUCH AS INDICATING LIGHTS AND SWITCHES, LOCATED ON MCCs OR AT EQUIPMENT, MAY NOT BE INDICATED ON THIS P&ID. NEW WORK INSTALLED OR MODIFIED BY AWT/ EXPANSION PROJECT SHOWN IN BOLDED LINES AND BOLD TEXT.
  4. AMMONIUM SULFATE TOTES DEMOLISHED AND REPLACED WITH NEW TANK, PIPING AND FILL STATION.
- KEY NOTES:**
1. FILL PIPING AND SUCTION PIPING SHALL EXTEND 3 INCHES INSIDE TANK.
  2. LOCATE LOCAL LEVEL INDICATION SUCH THAT IT CAN BE VIEWED FROM THE TRUCK UNLOADING CONNECTION.



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NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY : SUNNY WANG, P.E. - WATER RESOURCES MANAGER	DATE : _____, 20__	REFERENCE :	DATE : _____, 20XX	COMPUTER FILE NAME :
REVIEWED BY : OMIED POUR, P.E. - PROJECT MANAGER	DATE : _____, 20__	SUBMITTED BY :	CURTIS CASTLE, P.E. - PRINCIPAL C.E.	SP-FILE NO. : SP2602
APPROVED BY :	DATE : _____, 20XX	APPROVED BY :	ALEX NAZARCHUK, P.E. - CITY ENGINEER	DATE : _____, 20XX

OLYMPIC WELL FIELD RESTORATION  
AND ARCADIA WTP EXPANSION  
**P&ID AMMONIUM SULFATE STORAGE**

DESIGNED BY : PM  
DRAWN BY : CR  
CHECKED BY : XX  
CONSULTANT JOB SHEET NO.  
DRAWING NO. 7078  
**PIA00728**  
SHT 289 OF 303 SH15

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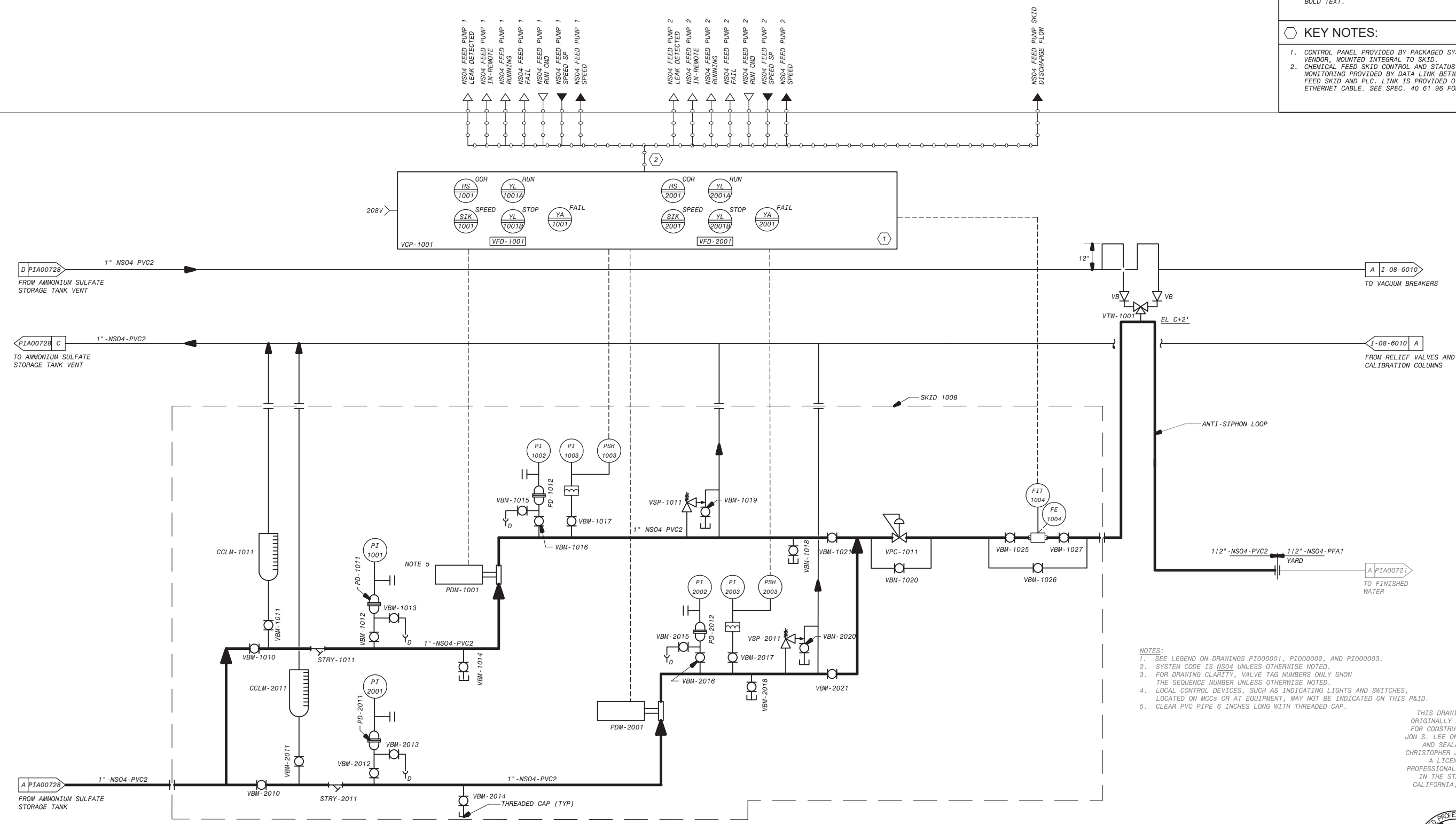
PLC-1/RIO-3

**GENERAL NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWWP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

- CONTROL PANEL PROVIDED BY PACKAGED SYSTEM VENDOR, MOUNTED INTEGRAL TO SKID.
- CHEMICAL FEED SKID CONTROL AND STATUS MONITORING PROVIDED BY DATA LINK BETWEEN CHEM FEED SKID AND PLC. LINK IS PROVIDED OVER CAT6 ETHERNET CABLE. SEE SPEC. 40 61 96 FOR DETAILS.



**NOTES:**

- SEE LEGEND ON DRAWINGS PI000001, PI000002, AND PI000003.
- SYSTEM CODE IS NS04 UNLESS OTHERWISE NOTED.
- FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
- LOCAL CONTROL DEVICES, SUCH AS INDICATING LIGHTS AND SWITCHES, LOCATED ON MCCs OR AT EQUIPMENT, MAY NOT BE INDICATED ON THIS P&ID.
- CLEAR PVC PIPE 6 INCHES LONG WITH THREADED CAP.

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



**City of Santa Monica**  
**PUBLIC WORKS DEPARTMENT**  
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 TEL. (310) 458-8721 FAX. (310) 393-4425

NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**

REVIEWED BY: _____	DATE: _____, 20XX	REFERENCE: _____
REVIEWED BY: _____	DATE: _____, 20XX	DATE: _____, 20XX
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	CURTIS CASTLE, P.E. - PRINCIPAL C.E.	COMPUTER FILE NAME: _____
REVIEWED BY: _____	DATE: _____, 20XX	SP-FILE NO.: SP2602
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER	DATE: _____, 20XX

OLYMPIC WELL FIELD RESTORATION  
 AND ARCADIA WTP EXPANSION

**P&ID AMMONIUM SULFATE FEED SYSTEM**  
 1 OF 3

DESIGNED BY: PM  
 DRAWN BY: CR  
 CHECKED BY: XX  
 CONSULTANT JOB SHEET NO. \_\_\_\_\_

DRAWING NO. 7078  
**PIA00729**  
 SH 290 OF 303 SHS

GENERAL NOTES:

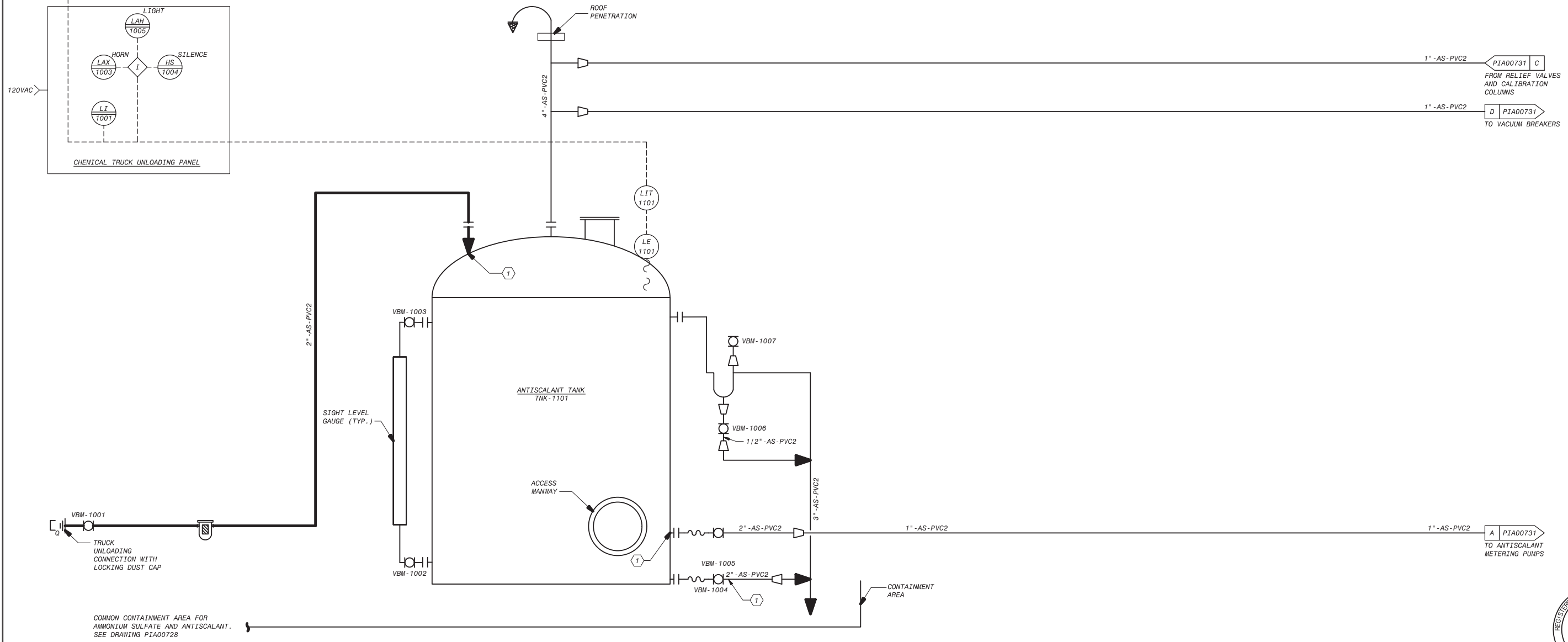
1. SYSTEM CODE IS AS UNLESS OTHERWISE NOTED.
2. LOCATE LOCAL LEVEL INDICATION SUCH THAT IT CAN BE VIEWED FROM THE TRUCK UNLOADING CONNECTION.
3. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
4. EXISTING ANTISCALANT TOTES DEMOLISHED AND REPLACED WITH NEW TANK, PIPING AND FILL STATION. TO ASSOCIATED WITH TOTES DEMOLISHED. SEE ORIGINAL VERSION OF PIA00730 FOR DETAILS ON EXISTING TOTE SYSTEM, INSTRUMENTS AND IO.

KEY NOTES:

1. FILL PIPING AND SUCTION PIPING SHALL EXTEND 3 INCHES INSIDE TANK.

PLC-1/RI0-3

AS TANK LEVEL



COMMON CONTAINMENT AREA FOR AMMONIUM SULFATE AND ANTISCALANT. SEE DRAWING PIA00728



NO.	DATE	BY	DESCRIPTION	APPROVED

REVIEWED BY : _____ DATE : _____, 20__	REFERENCE : _____
REVIEWED BY : _____ DATE : _____, 20__	DATE : _____, 20XX COMPUTER FILE NAME : _____
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	CURTIS CASTLE, P.E. - PRINCIPAL C.E.
REVIEWED BY : _____ DATE : _____, 20__	SP-FILE NO. : SP2602
OMED POUR, P.E. - PROJECT MANAGER	APPROVED BY : _____ DATE : _____, 20XX
_____	ALEX NAZARCHUK, P.E. - CITY ENGINEER
CITY CLIENTS	ENGINEERING AND STREET SERVICES

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

P&ID ANTISCALANT STORAGE SYSTEM

PROJECT AND SHEET TITLE

DESIGNED BY : PM

DRAWN BY : CR

CHECKED BY : XX

CONSULTANT JOB/SHEET NO.

DRAWING NO. 7078

PIA00730

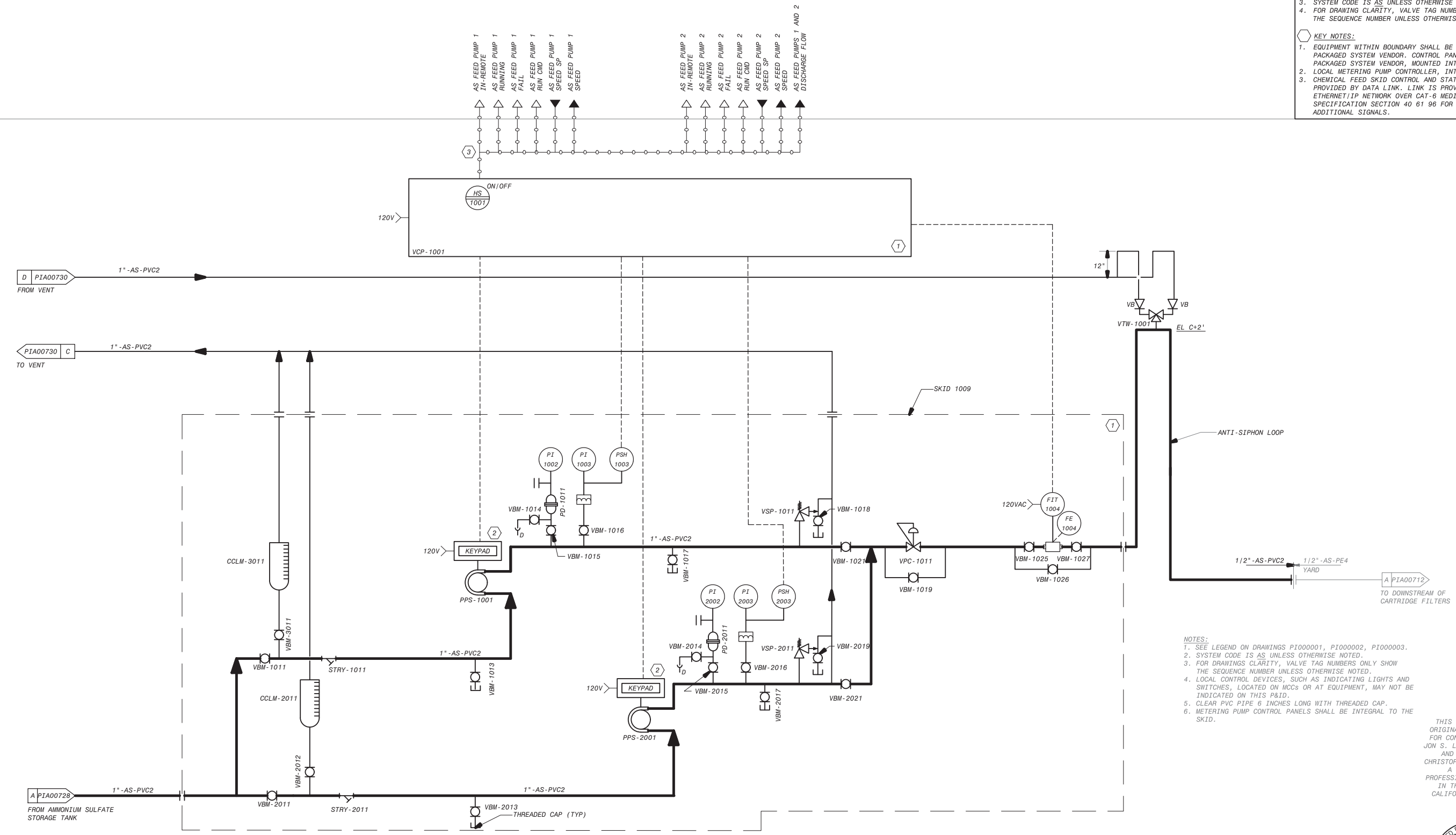
SHT 291 OF 303 SHS

**AWTP EXPANSION NOTES:**

1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
3. SYSTEM CODE IS AS UNLESS OTHERWISE NOTED.
4. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.

**KEY NOTES:**

1. EQUIPMENT WITHIN BOUNDARY SHALL BE PROVIDED BY PACKAGED SYSTEM VENDOR. CONTROL PANEL PROVIDED BY PACKAGED SYSTEM VENDOR, MOUNTED INTEGRAL TO SKID.
2. LOCAL METERING PUMP CONTROLLER, INTEGRAL TO PUMP.
3. CHEMICAL FEED SKID CONTROL AND STATUS MONITORING PROVIDED BY DATA LINK. LINK IS PROVIDED VIA ETHERNET/IP NETWORK OVER CAT-6 MEDIA. SEE SPECIFICATION SECTION 40 61 96 FOR DETAILS AND ADDITIONAL SIGNALS.



**NOTES:**

1. SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
2. SYSTEM CODE IS AS UNLESS OTHERWISE NOTED.
3. FOR DRAWINGS CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
4. LOCAL CONTROL DEVICES, SUCH AS INDICATING LIGHTS AND SWITCHES, LOCATED ON MCCS OR AT EQUIPMENT, MAY NOT BE INDICATED ON THIS P&ID.
5. CLEAR PVC PIPE 6 INCHES LONG WITH THREADED CAP.
6. METERING PUMP CONTROL PANELS SHALL BE INTEGRAL TO THE SKID.

THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



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City of **Santa Monica**  
PUBLIC WORKS DEPARTMENT  
1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
TEL. (310) 458-8721 FAX. (310) 393-4425

NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20\_\_  
SUNNY WANG, P.E. - WATER RESOURCES MANAGER

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20\_\_  
CURTIS CASTLE, P.E. - PRINCIPAL C.E.

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20\_\_  
OMED POUR, P.E. - PROJECT MANAGER

REFERENCE: \_\_\_\_\_

DATE: \_\_\_\_\_, 20\_\_  
COMPUTER FILE NAME: \_\_\_\_\_

DATE: \_\_\_\_\_, 20\_\_  
SUBMITTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_, 20\_\_  
SP-FILE NO.: SP2602

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_, 20\_\_  
ALEX NAZARCHUK, P.E. - CITY ENGINEER

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

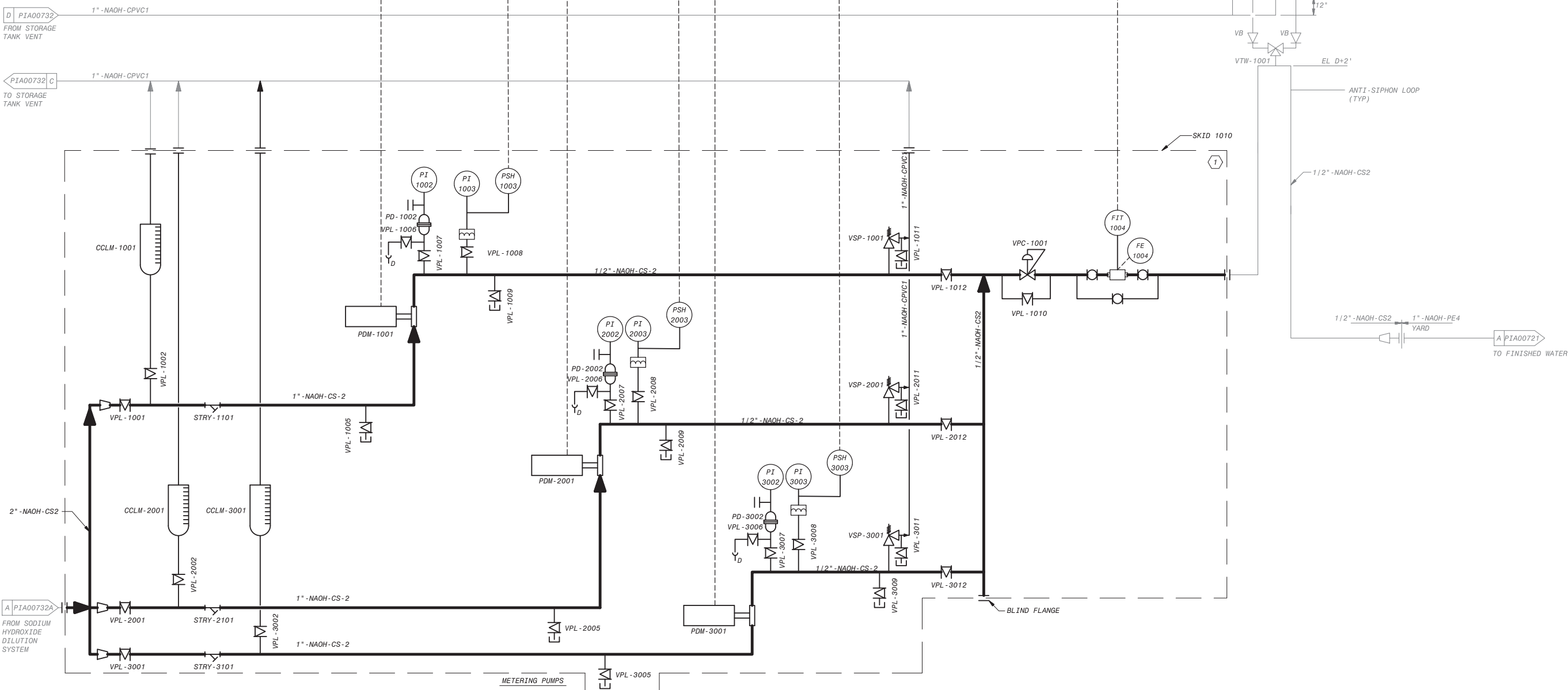
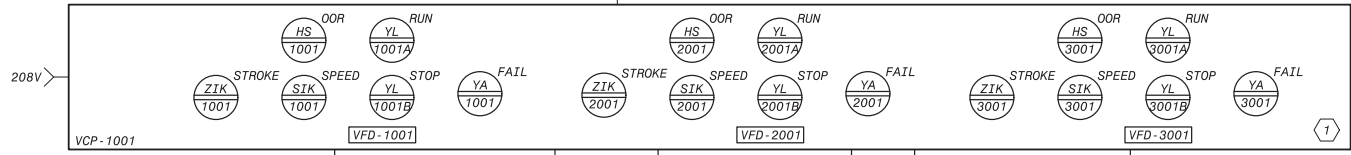
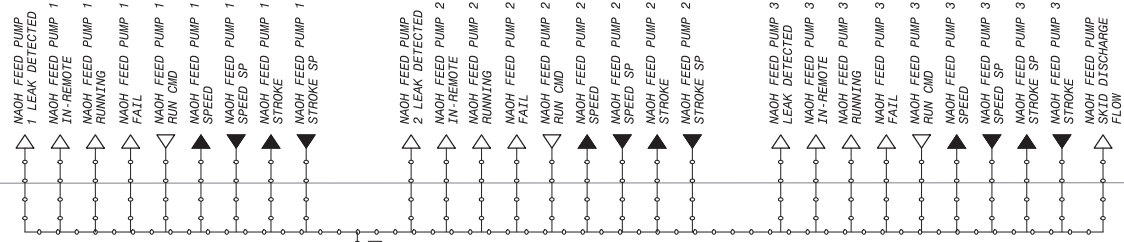
P&ID ANTISCALANT FEED SYSTEM

DESIGNED BY: PM  
DRAWN BY: CR  
CHECKED BY: XX  
CONSULTANT JOB/SHEET NO.  
DRAWING NO. 7078  
PIA00731  
SHT 292 OF 303 SHS

PROJECT AND SHEET TITLE



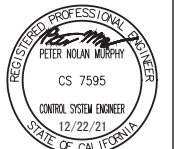
PLC-1/RIO-3



- AWTP EXPANSION NOTES:**
1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
  2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
  3. SYSTEM CODE IS **NAOH** UNLESS OTHERWISE NOTED.
  4. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.

- KEY NOTES:**
1. EQUIPMENT WITHIN BOUNDARY SHALL BE PROVIDED BY PACKAGED SYSTEM VENDOR. CONTROL PANEL PROVIDED BY PACKAGED SYSTEM VENDOR, MOUNTED INTEGRAL TO SKID.
  2. CHEMICAL FEED SKID CONTROL AND STATUS MONITORING PROVIDED BY DATA LINK. LINK IS PROVIDED VIA ETHERNET/IP NETWORK OVER CAT-5E MEDIA. SEE SPECIFICATION SECTION 40 61 96 FOR DETAILS AND ADDITIONAL SIGNALS.

THIS DRAWING WAS  
ORIGINALLY APPROVED  
FOR CONSTRUCTION BY  
JON S. LEE ON 06/12/09  
AND SEALED BY  
CHRISTOPHER J. KINDLE,  
A LICENSED  
PROFESSIONAL ENGINEER  
IN THE STATE OF  
CALIFORNIA, E17946



**City of Santa Monica**  
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1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
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NO.	DATE	BY	DESCRIPTION	APPROVED

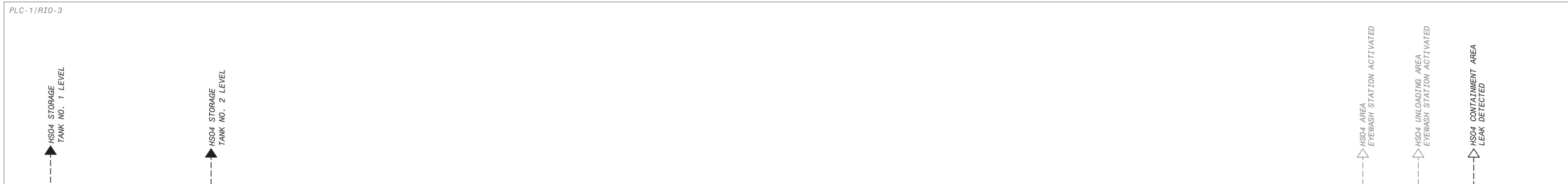


REVIEWED BY : SUNNY WANG, P.E. - WATER RESOURCES MANAGER	DATE : _____ 20__	REFERENCE : DATE : _____, 20XX	COMPUTER FILE NAME :
REVIEWED BY : OMED POUR, P.E. - PROJECT MANAGER	DATE : _____ 20__	SUBMITTED BY : CURTIS CASTLE, P.E. - PRINCIPAL C.E.	SP-FILE NO. : SP2602
APPROVED BY : ALEX NAZARCHUK, P.E. - CITY ENGINEER	DATE : _____, 20XX	ENGINEERING AND STREET SERVICES	

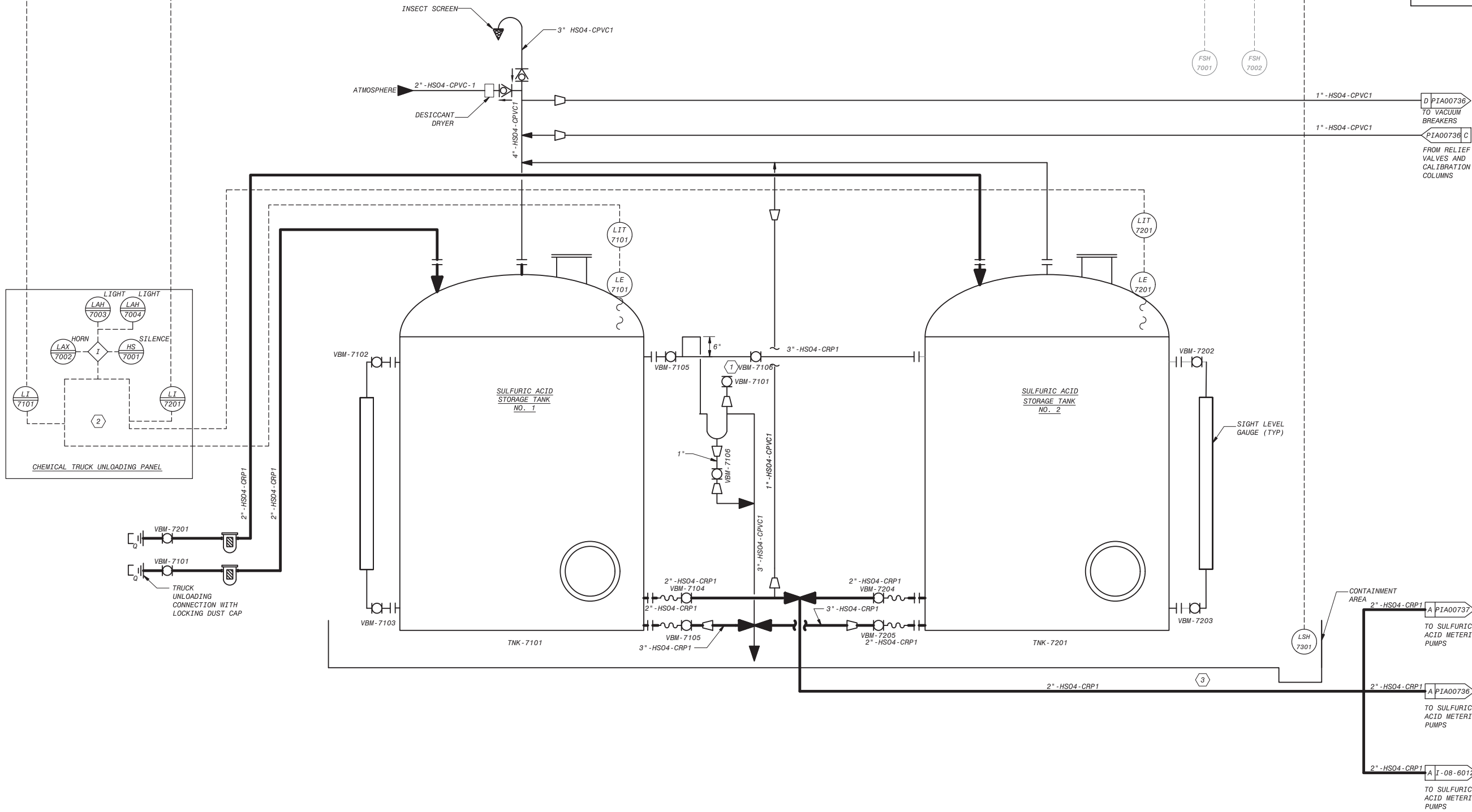
OLYMPIC WELL FIELD RESTORATION  
AND ARCADIA WTP EXPANSION

**P&ID SODIUM HYDROXIDE FEED SYSTEM**

DESIGNED BY : PM  
DRAWN BY : CR  
CHECKED BY : XX  
CONSULTANT JOB/SHEET NO.  
DRAWING NO. 7078  
**PIA00733**  
SHT 293 OF 303 SHS



- NOTES:**
1. SYSTEM CODE IS H2SO4 UNLESS OTHERWISE NOTED.
  2. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
  3. NEW WORK INSTALLED OR MODIFIED BY AWWP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
- KEY NOTES:**
1. LOCATE P-TRAP FILL VALVE NO MORE THAN 5 FEET ABOVE FINISHED FLOOR.
  2. LOCATE LOCAL LEVEL INDICATION SUCH THAT IT CAN BE VIEWED FROM THE TRUCK LOADING CONNECTION.
  3. METERING PUMP SUCTION PIPING SHALL BE ROUTED TO SLOPE CONTINUOUSLY DOWNWARD FROM THE BULK STORAGE TANK.



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City of **Santa Monica**  
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NO.	DATE	BY	DESCRIPTION	APPROVED



REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_ 20\_\_

REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_ 20\_\_

SUNNY WANG, P.E. - WATER RESOURCES MANAGER

REVIEWED BY : \_\_\_\_\_ DATE : \_\_\_\_\_ 20\_\_

OMED POUR, P.E. - PROJECT MANAGER

REFERENCE :

DATE : \_\_\_\_\_, 20XX

COMPUTER FILE NAME :

SP-FILE NO. : SP2602

APPROVED BY : \_\_\_\_\_ DATE : \_\_\_\_\_, 20XX

ALEX NAZARCHUK, P.E. - CITY ENGINEER

ENGINEERING AND STREET SERVICES

OLYMPIC WELL FIELD RESTORATION  
 AND ARCADIA WTP EXPANSION

**P&ID SULFURIC ACID STORAGE SYSTEM**

PROJECT AND SHEET TITLE



DESIGNED BY : WT

DRAWN BY : CR

CHECKED BY : XX

CONSULTANT JOB/SHEET NO.

DRAWING NO. 7078

**PIA00735**

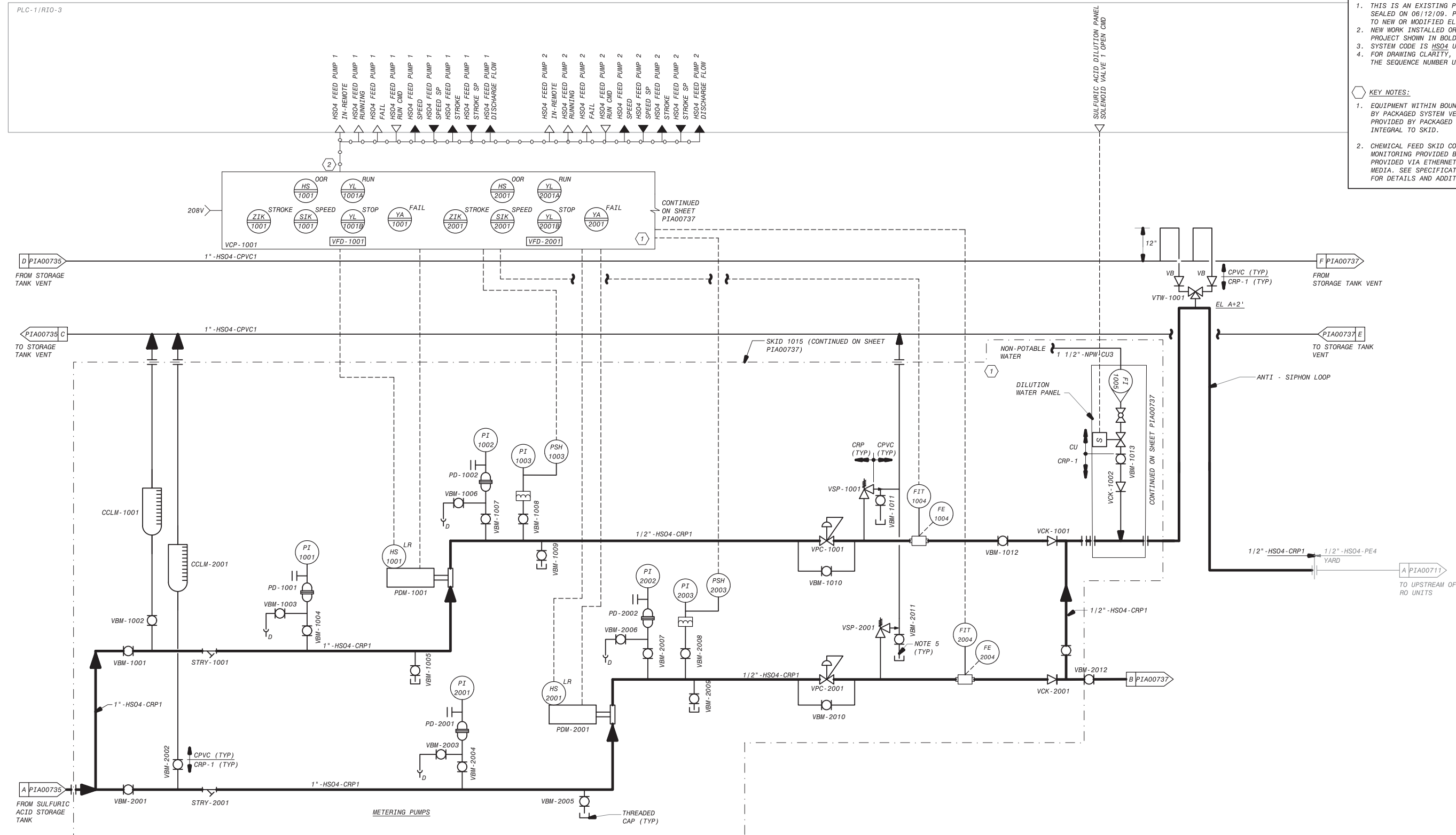
SHT 294 OF 303 SHS

**AWTP EXPANSION NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
- SYSTEM CODE IS HSO4 UNLESS OTHERWISE NOTED.
- FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.

**KEY NOTES:**

- EQUIPMENT WITHIN BOUNDARY SHALL BE PROVIDED BY PACKAGED SYSTEM VENDOR. CONTROL PANEL PROVIDED BY PACKAGED SYSTEM VENDOR, MOUNTED INTEGRAL TO SKID.
- CHEMICAL FEED SKID CONTROL AND STATUS MONITORING PROVIDED BY DATA LINK. LINK IS PROVIDED VIA ETHERNET/IP NETWORK OVER CAT-6 MEDIA. SEE SPECIFICATION SECTION 40 61 96 FOR DETAILS AND ADDITIONAL SIGNALS.



THIS DRAWING WAS ORIGINALLY APPROVED FOR CONSTRUCTION BY JON S. LEE ON 06/12/09 AND SEALED BY CHRISTOPHER J. KINDLE, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA, E17946



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REVIEWED BY: _____ DATE: _____, 20__	REFERENCE: _____
REVIEWED BY: _____ DATE: _____, 20__	DATE: _____, 20XX COMPUTER FILE NAME: _____
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	SUBMITTED BY: _____ SP-FILE NO.: SP2602
REVIEWED BY: _____ DATE: _____, 20__	APPROVED BY: _____ DATE: _____, 20XX
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER

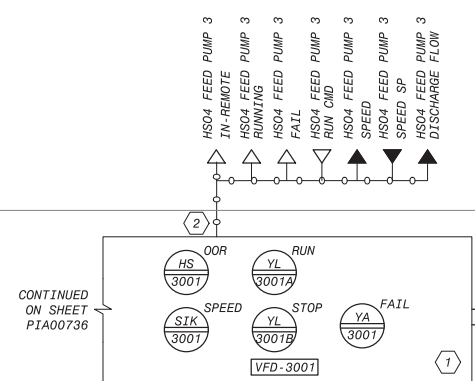
**OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION**  
**P&ID SULFURIC ACID FEED SYSTEM**  
 1 OF 3

DESIGNED BY: XX
DRAWN BY: XX
CHECKED BY: XX
CONSULTANT JOB SHEET NO. _____
DRAWING NO. 7078
<b>PIA00736</b>
SHT 295 OF 303 SHS

NO.	DATE	BY	DESCRIPTION	APPROVED

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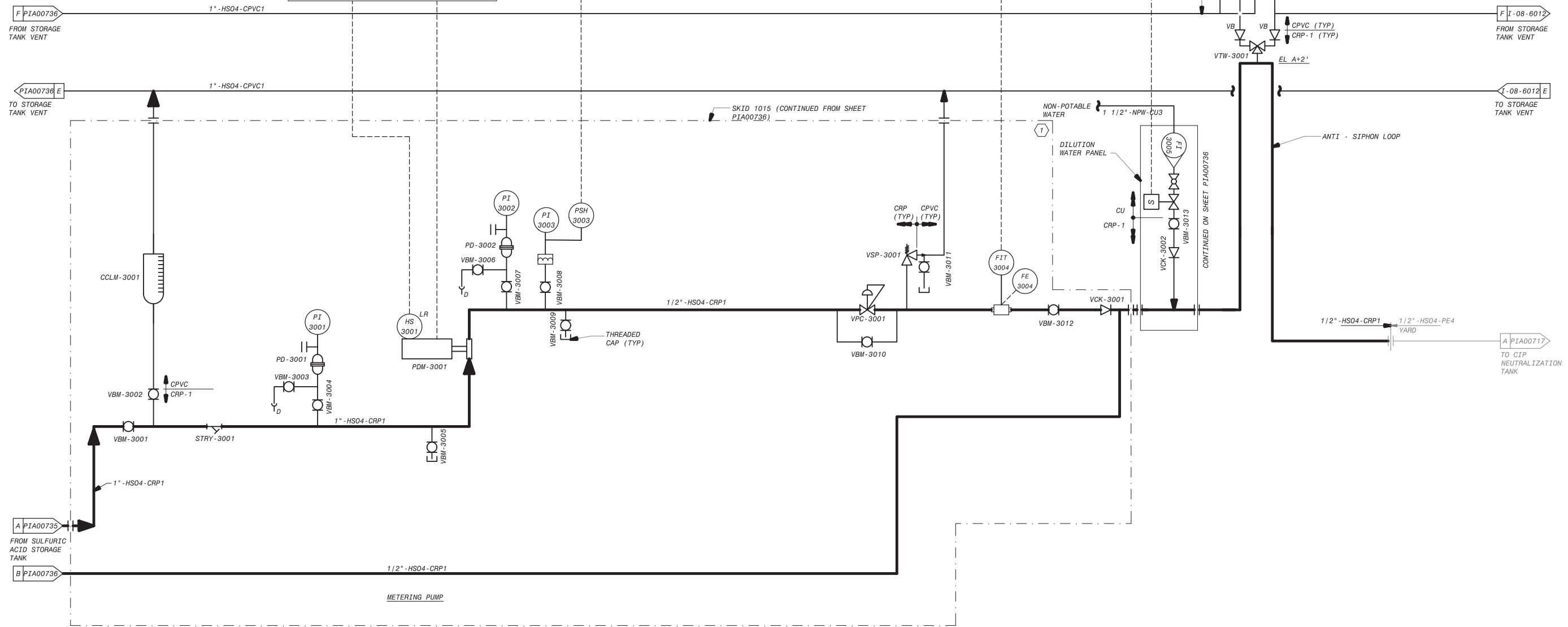


**AWTP EXPANSION NOTES:**

- THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
- NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
- SYSTEM CODE IS HSD4 UNLESS OTHERWISE NOTED.
- FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.

**KEY NOTES:**

- EQUIPMENT WITHIN BOUNDARY SHALL BE PROVIDED BY PACKAGED SYSTEM VENDOR. CONTROL PANEL PROVIDED BY PACKAGED SYSTEM VENDOR, MOUNTED INTEGRAL TO SKID.
- CHEMICAL FEED SKID CONTROL AND STATUS MONITORING PROVIDED BY DATA LINK. LINK IS PROVIDED VIA ETHERNET/IP NETWORK OVER CAT-6 MEDIA. SEE SPECIFICATION SECTION 40 61 96 FOR DETAILS AND ADDITIONAL SIGNALS.



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NO.	DATE	BY	DESCRIPTION	APPROVED

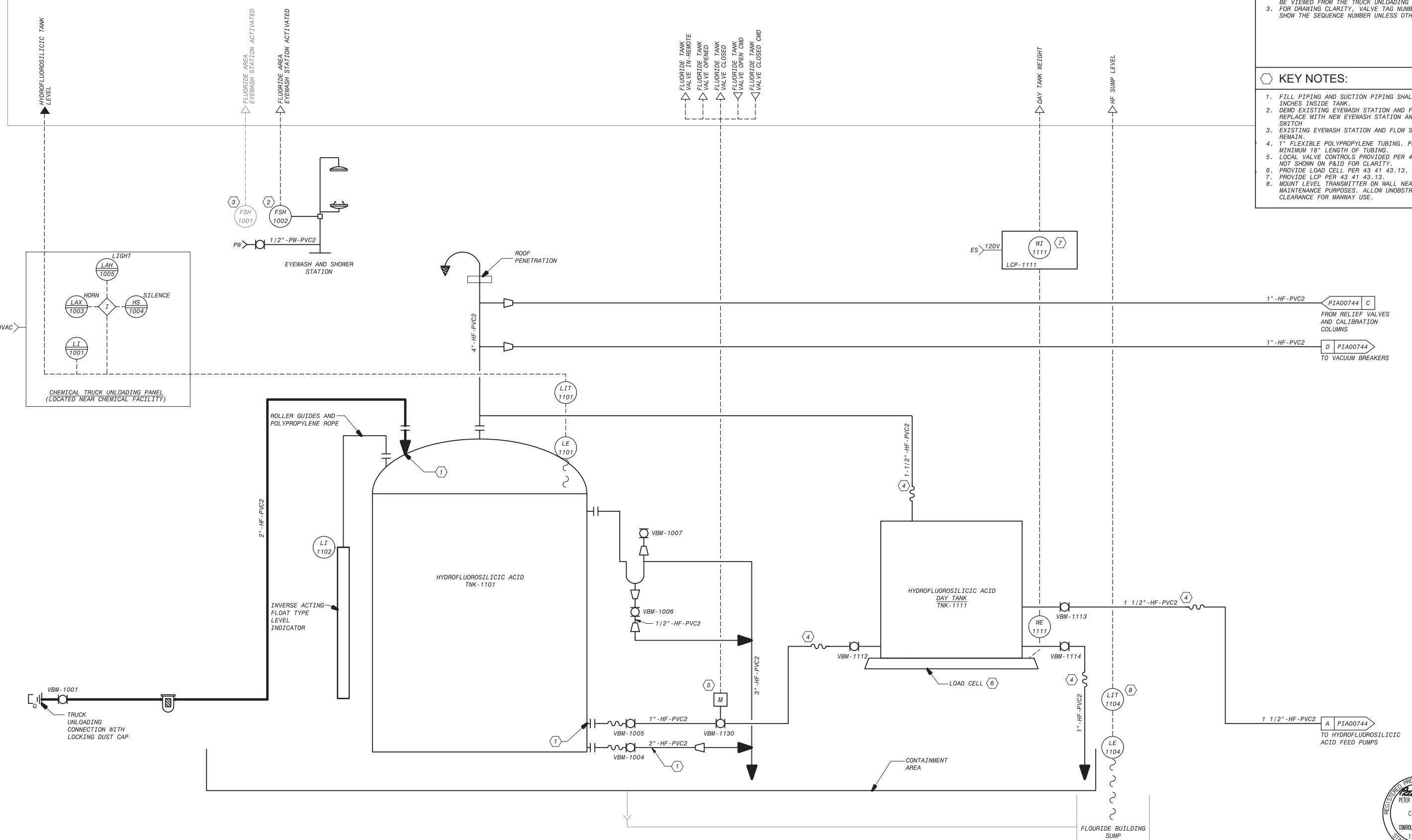
REVIEWED BY: _____	DATE: _____, 20__	REFERENCE: _____
REVIEWED BY: _____	DATE: _____, 20__	DATE: _____, 20__
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	CURTIS CASTLE, P.E. - PRINCIPAL C.E.	COMPUTER FILE NAME: _____
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER	SP-FILE NO.: SP2602

**OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION**  
**P&ID SULFURIC ACID FEED SYSTEM**  
**2 OF 3**

DESIGNED BY: XX
DRAWN BY: XX
CHECKED BY: XX
CONSULTANT JOB SHEET NO. _____
DRAWING NO. 7078
<b>PIA00737</b>
SHT 296 OF 303 SHS

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PLC-1/RI0-3

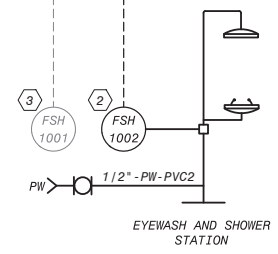
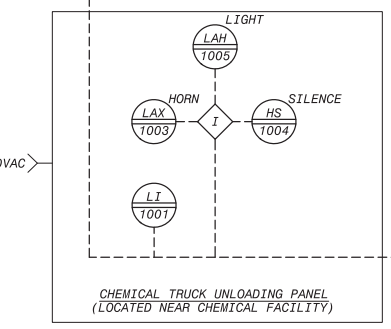


**GENERAL NOTES:**

1. SYSTEM CODE IS HF UNLESS OTHERWISE NOTED.
2. LOCATE LOCAL LEVEL INDICATION SUCH THAT IT CAN BE VIEWED FROM THE TRUCK UNLOADING CONNECTION.
3. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.

**KEY NOTES:**

1. FILL PIPING AND SUCTION PIPING SHALL EXTEND 3 INCHES INSIDE TANK.
2. DEMO EXISTING EYEWASH STATION AND FLOW SWITCH. REPLACE WITH NEW EYEWASH STATION AND FLOW SWITCH.
3. EXISTING EYEWASH STATION AND FLOW SWITCH TO REMAIN.
4. 1" FLEXIBLE POLYPROPYLENE TUBING. PROVIDE MINIMUM 18" LENGTH OF TUBING.
5. LOCAL VALVE CONTROLS PROVIDED PER 40 05 57.23, NOT SHOWN ON P&ID FOR CLARITY.
6. PROVIDE LOAD CELL PER 43 41 43.13.
7. PROVIDE LCP PER 43 41 43.13.
8. MOUNT LEVEL TRANSMITTER ON WALL NEAR MANWAY FOR MAINTENANCE PURPOSES. ALLOW UNOBSTRUCTED CLEARANCE FOR MANWAY USE.



**City of Santa Monica**  
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 1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
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NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**  
 CONSULTANT

REVIEWED BY: _____ DATE: _____, 20__	REFERENCE: _____
REVIEWED BY: _____ DATE: _____, 20__	DATE: _____, 20__ COMPUTER FILE NAME: _____
SUNNY WANG, P.E. - WATER RESOURCES MANAGER	SUBMITTED BY: _____ SP-FILE NO.: SP2602
REVIEWED BY: _____ DATE: _____, 20__	APPROVED BY: _____ DATE: _____, 20__
OMED POUR, P.E. - PROJECT MANAGER	ALEX NAZARCHUK, P.E. - CITY ENGINEER

**OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION**  
**P&ID HYDROFLUOROSILICIC ACID STORAGE SYSTEM**  
 PROJECT AND SHEET TITLE

DESIGNED BY: XX
DRAWN BY: XX
CHECKED BY: XX
CONSULTANT JOB/SHEET NO. _____
DRAWING NO. 7078
<b>PIA00743</b>
SHT 297 OF 303 SHS

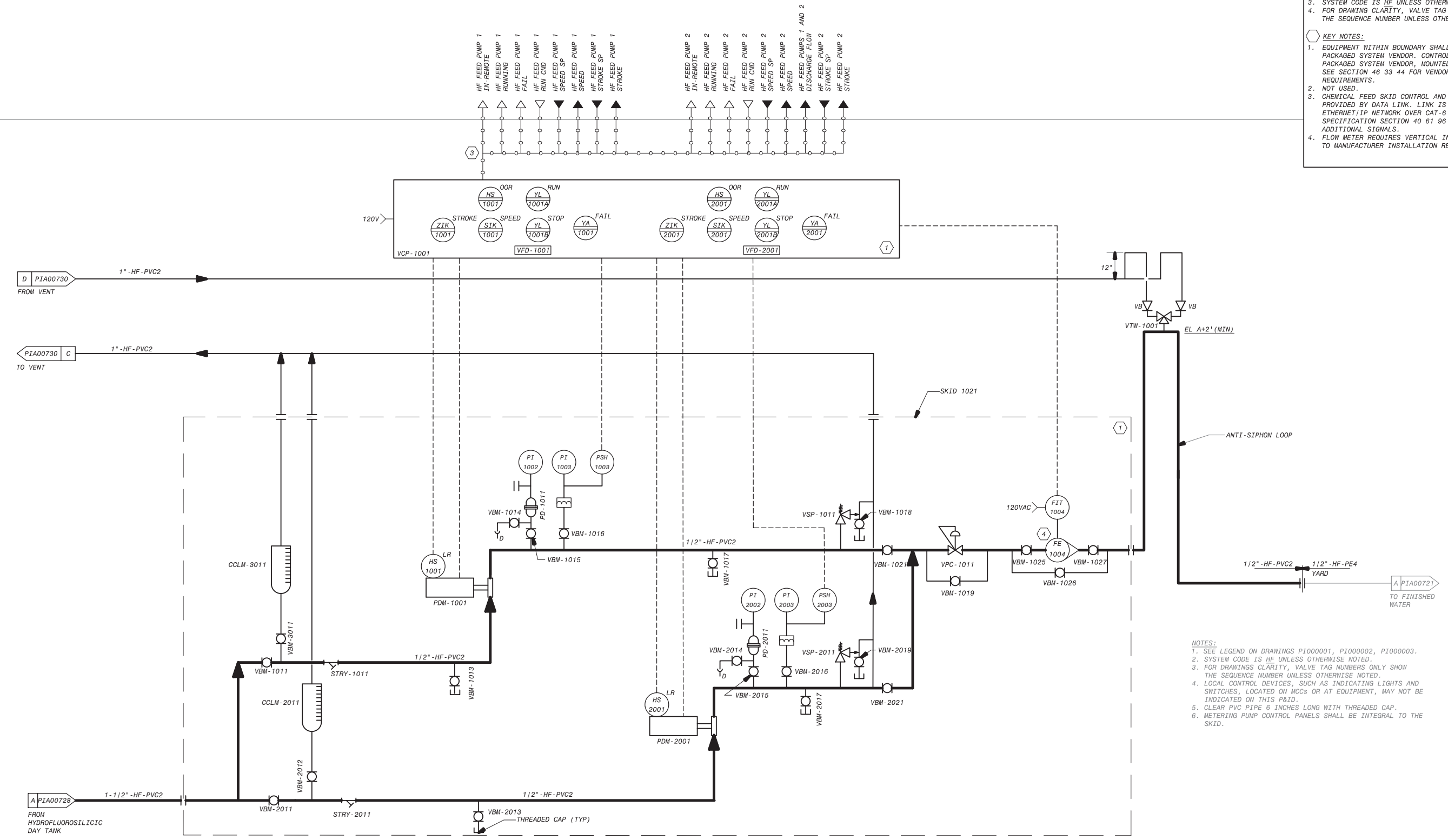


**AWTP EXPANSION NOTES:**

1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.
3. SYSTEM CODE IS HF UNLESS OTHERWISE NOTED.
4. FOR DRAWING CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.

**KEY NOTES:**

1. EQUIPMENT WITHIN BOUNDARY SHALL BE PROVIDED BY PACKAGED SYSTEM VENDOR. CONTROL PANEL PROVIDED BY PACKAGED SYSTEM VENDOR, MOUNTED INTEGRAL TO SKID. SEE SECTION 46 33 44 FOR VENDOR CONTROL PANEL REQUIREMENTS.
2. NOT USED.
3. CHEMICAL FEED SKID CONTROL AND STATUS MONITORING PROVIDED BY DATA LINK. LINK IS PROVIDED VIA ETHERNET/IP NETWORK OVER CAT-6 MEDIA. SEE SPECIFICATION SECTION 40 61 96 FOR DETAILS AND ADDITIONAL SIGNALS.
4. FLOW METER REQUIRES VERTICAL INSTALLATION. REFER TO MANUFACTURER INSTALLATION REQUIREMENTS.



**NOTES:**

1. SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
2. SYSTEM CODE IS HF UNLESS OTHERWISE NOTED.
3. FOR DRAWINGS CLARITY, VALVE TAG NUMBERS ONLY SHOW THE SEQUENCE NUMBER UNLESS OTHERWISE NOTED.
4. LOCAL CONTROL DEVICES, SUCH AS INDICATING LIGHTS AND SWITCHES, LOCATED ON MCCS OR AT EQUIPMENT, MAY NOT BE INDICATED ON THIS P&ID.
5. CLEAR PVC PIPE 6 INCHES LONG WITH THREADED CAP.
6. METERING PUMP CONTROL PANELS SHALL BE INTEGRAL TO THE SKID.

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City of **Santa Monica**  
**PUBLIC WORKS DEPARTMENT**  
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 TEL. (310) 458-8721 FAX. (310) 393-4425

NO.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**

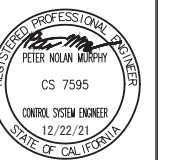
REVIEWED BY :	DATE : _____ 20__
REVIEWED BY :	DATE : _____ 20__
REVIEWED BY :	DATE : _____ 20__
OMMED POUR, P.E. - PROJECT MANAGER	

REFERENCE :	DATE : _____, 20XX	COMPUTER FILE NAME :
SUBMITTED BY :		SP-FILE NO. : SP2602
APPROVED BY :	DATE : _____, 20XX	
ALEX NAZARCHUK, P.E. - CITY ENGINEER		

OLYMPIC WELL FIELD RESTORATION  
 AND ARCADIA WTP EXPANSION

**P&ID HYDROFLUOROSILICIC ACID  
 FEED SYSTEM**

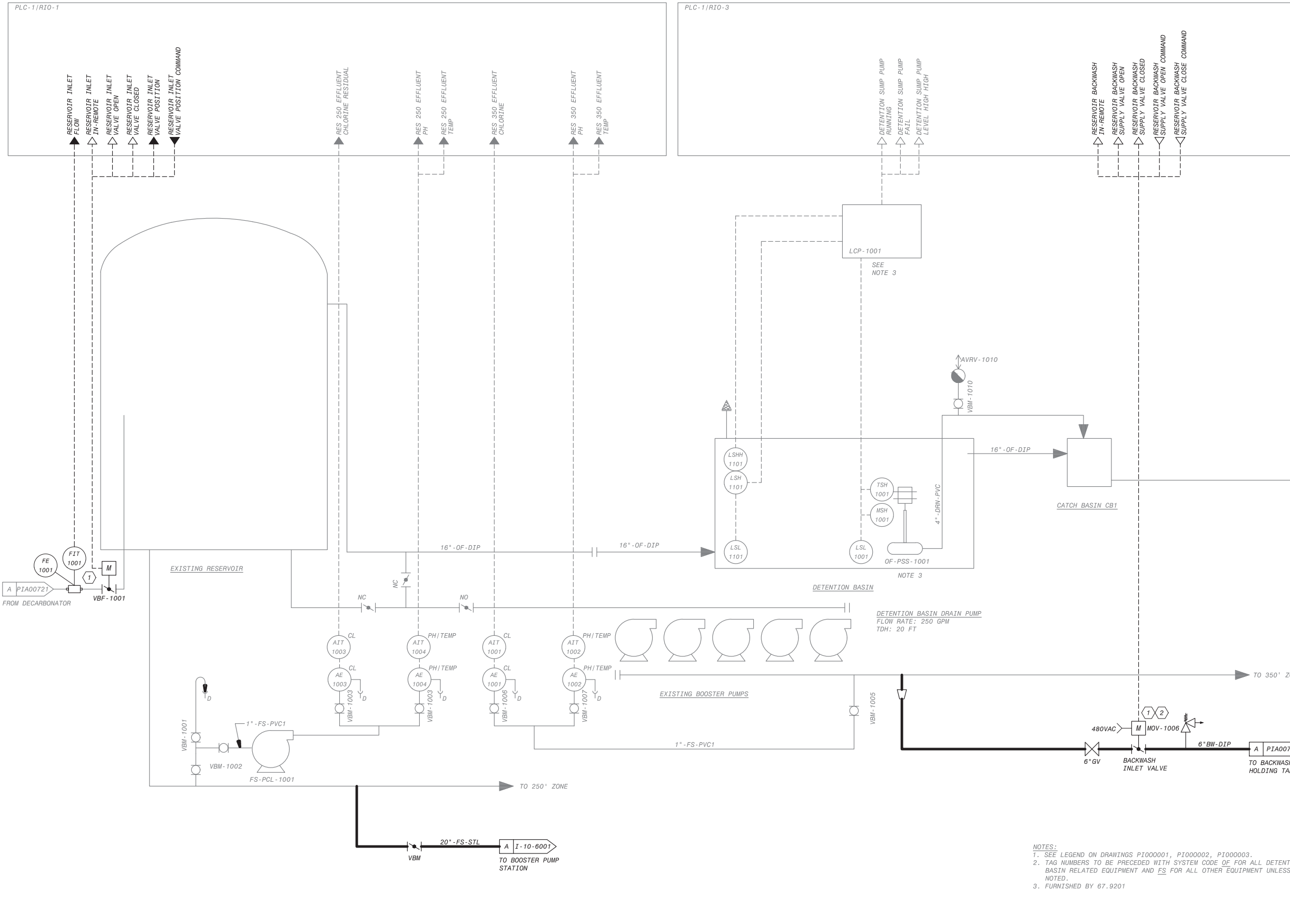
PROJECT AND SHEET TITLE



DESIGNED BY :	XX
DRAWN BY :	XX
CHECKED BY :	XX
CONSULTANT JOB SHEET NO.	
DRAWING NO. 7078	
<b>PIA00744</b>	
SHT 298 OF 303 SHS	

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SHEET NO. 1



**AWTP EXPANSION NOTES:**

1. THIS IS AN EXISTING P&ID DRAWING ORIGINALLY SEALED ON 06/12/09. PE STAMP HERE APPLIES ONLY TO NEW OR MODIFIED ELEMENTS ON THIS SHEET.
2. NEW WORK INSTALLED OR MODIFIED BY AWTP EXPANSION PROJECT SHOWN IN BOLD LINES AND BOLD TEXT.

**KEY NOTES:**

1. LOCAL VALVE CONTROLS PROVIDED PER 40 05 57.23, NOT SHOWN ON P&ID FOR CLARITY.
2. VALVE NOT TO EXCEED 25% OPEN POSITION DURING OPERATION. SET ACTUATOR OPEN LIMIT SWITCH TO 25% OPEN POSITION.

**NOTES:**

1. SEE LEGEND ON DRAWINGS P1000001, P1000002, P1000003.
2. TAG NUMBERS TO BE PRECEDED WITH SYSTEM CODE OF FOR ALL DETENTION BASIN RELATED EQUIPMENT AND FS FOR ALL OTHER EQUIPMENT UNLESS OTHERWISE NOTED.
3. FURNISHED BY 67.9201

THIS DRAWING WAS  
ORIGINALLY APPROVED  
FOR CONSTRUCTION BY  
JON S. LEE ON 06/12/09  
AND SEALED BY  
CHRISTOPHER J. KINDLE,  
A LICENSED  
PROFESSIONAL ENGINEER  
IN THE STATE OF  
CALIFORNIA, E17946



**City of Santa Monica**  
PUBLIC WORKS DEPARTMENT  
1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
TEL. (310) 458-8721 FAX. (310) 393-4425

NO.	DATE	BY	DESCRIPTION	APPROVED

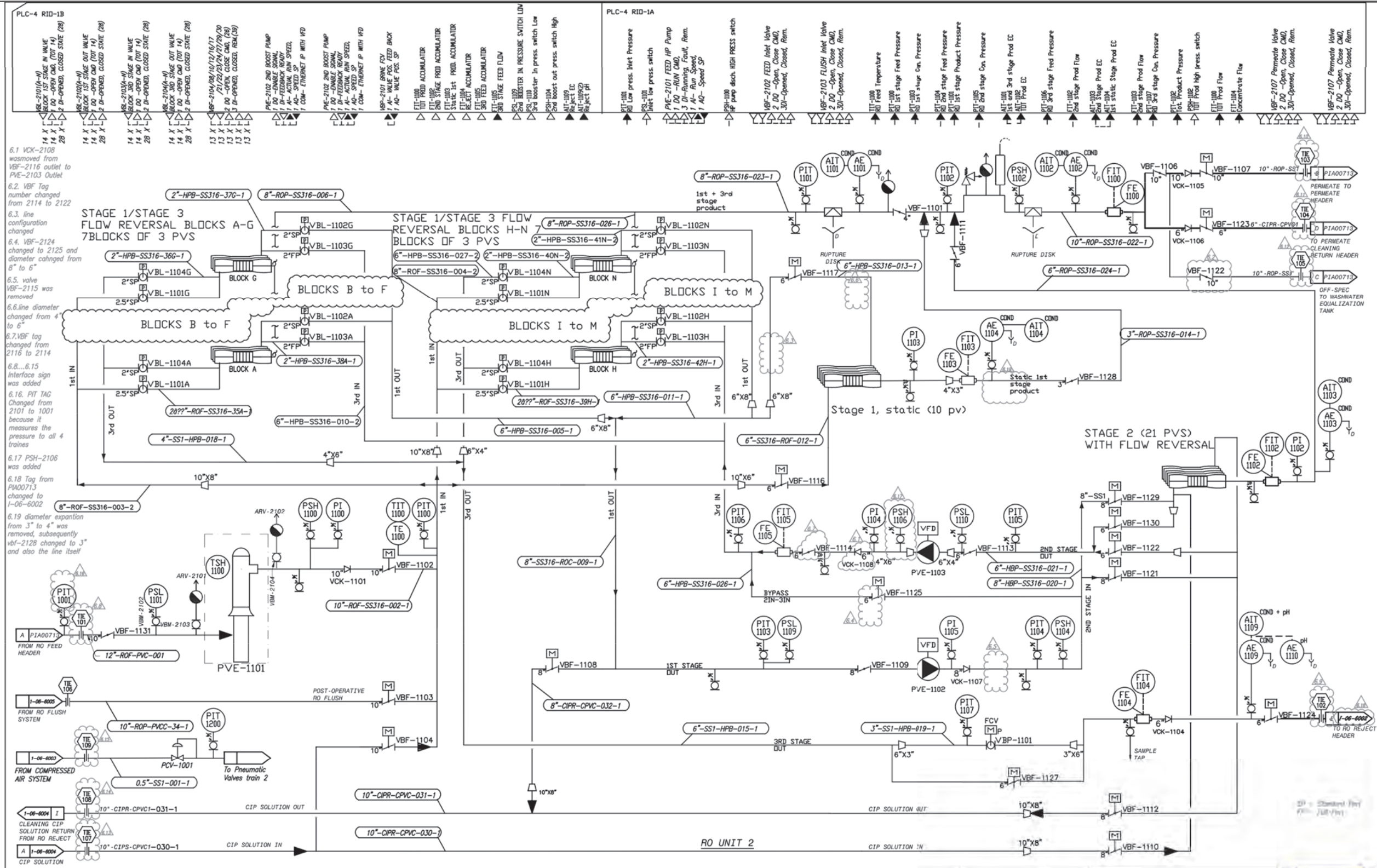
**Brown and Caldwell**  
**WALSH**

REVIEWED BY : SUNNY WANG, P.E. - WATER RESOURCES MANAGER	DATE : _____ 20__	REFERENCE :	DATE : _____, 20XX
REVIEWED BY : OMED POUR, P.E. - PROJECT MANAGER	DATE : _____ 20__	COMPUTER FILE NAME :	SP-FILE NO. : SP2602
APPROVED BY : ALEX NAZARCHUK, P.E. - CITY ENGINEER	DATE : _____, 20XX		

OLYMPIC WELL FIELD RESTORATION  
AND ARCADIA WTP EXPANSION

**P&ID RESERVOIR OVERFLOW, DRAIN,  
SAMPLE PUMP**

DESIGNED BY : PM  
DRAWN BY : CR  
CHECKED BY : XX  
CONSULTANT JOB/SHEET NO.  
DRAWING NO. 7078  
**PIA00745**  
SHT 299 OF 303 SHS



No.	DESCRIPTION	DATE	BY	APP. CHK.	APP. DATE	APP. DATE	APP. DATE	APP. DATE	APP. DATE	DESCRIPTION
6										
5	For Design	04.02.21	OM	OM	04.02.21					
4	For 60% submission	04.02.21	OM	OM	04.02.21					

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CLIENT	ROTEC	PROJECT No.
BY DATE	BY DATE	SM ARCADIA
CHECKED	DESIGNED	
APPROVED	DRAWN	
APPROVED	CHECKED	
APPROVED	APPROVED	

Scale: NTS  
Drawing No: R190604-PRC-2-PID-0001

**City of Santa Monica**  
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1685 MAIN STREET, MAIL STOP 15, SANTA MONICA, CA 90401  
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No.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**  
CONSULTANT

REVIEWED BY	DATE	REFERENCE
SUNNY WANG, P.E. - WATER RESOURCES MANAGER		
OMED POUR, P.E. - PROJECT MANAGER		
CURTIS CASTLE, P.E. - PRINCIPAL C.E.		
ALEX NAZARCHUK, P.E. - CITY ENGINEER		

**OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION**

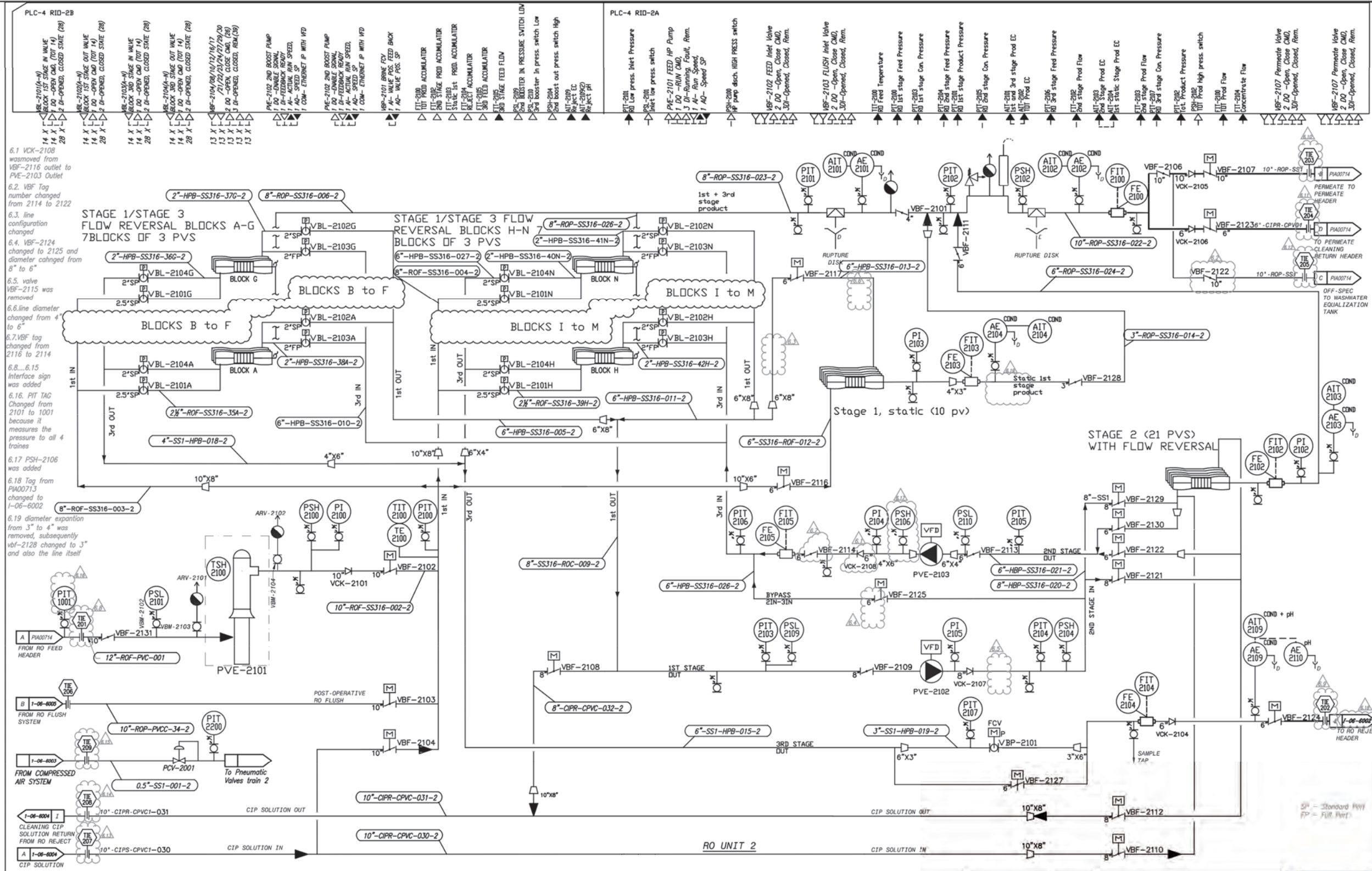
**P&ID REFERENCE DRAWING 1**

DESIGNED BY: WT  
DRAWN BY: QS  
CHECKED BY: XK  
CONSULTANT JOB SHEET NO.  
DRAWING NO. 7078  
**R-06-0001**  
SHEET 300 OF 303 SHEETS

FOR REFERENCE ONLY



C:\BCP\W\0408747R-06-0002.DWG 12/23/2021 10:51 AM  
 SHEET NO. 1  
 TITLE OF PROJECT:



- 6.1 VCK-2108 was removed from VBF-2116 outlet to PVE-2103 Outlet
- 6.2 VBF Tag number changed from 2114 to 2122
- 6.3 line configuration changed
- 6.4 VBF-2124 changed to 2125 and diameter changed from 8" to 6"
- 6.5 valve VBF-2115 was removed
- 6.6 line diameter changed from 4" to 6"
- 6.7 VBF tag changed from 2116 to 2114
- 6.8...6.15 Interface sign was added
- 6.16 PIT TAC Changed from 2101 to 1001 because it measures the pressure to all 4 trains
- 6.17 PSH-2106 was added
- 6.18 Tag from PIA00713 changed to I-06-6002
- 6.19 diameter expansion from 3" to 4" was removed, subsequently vbf-2128 changed to 3" and also the line itself

No.	DESCRIPTION	DATE	BY	CHK.	APP.	APP. CHK.	APP.	APP.	DRAWING No.	DESCRIPTION
6										
5	For Design	30/09/21								
4	For 60% submission	04.02.21								

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CLIENT		ROTECH		PROJECT No.	
BY	DATE	BY	DATE	SM	ARCADIA
CHECKED	DESIGNED				
APPROVED	DRAWN				
APPROVED	CHECKED				
APPROVED	APPROVED				

TITLE: WELL FIELD RESTORATION PROJECT ARCADIA  
 REVERSE OSMOSIS UNIT 2 RETROFIT, SANTA MONICA  
 P & I DIAGRAM  
 Scale: NTS  
 Drawing No.: R190604-PRC-2-PID-0001  
 REV. 6 A1

**City of Santa Monica**  
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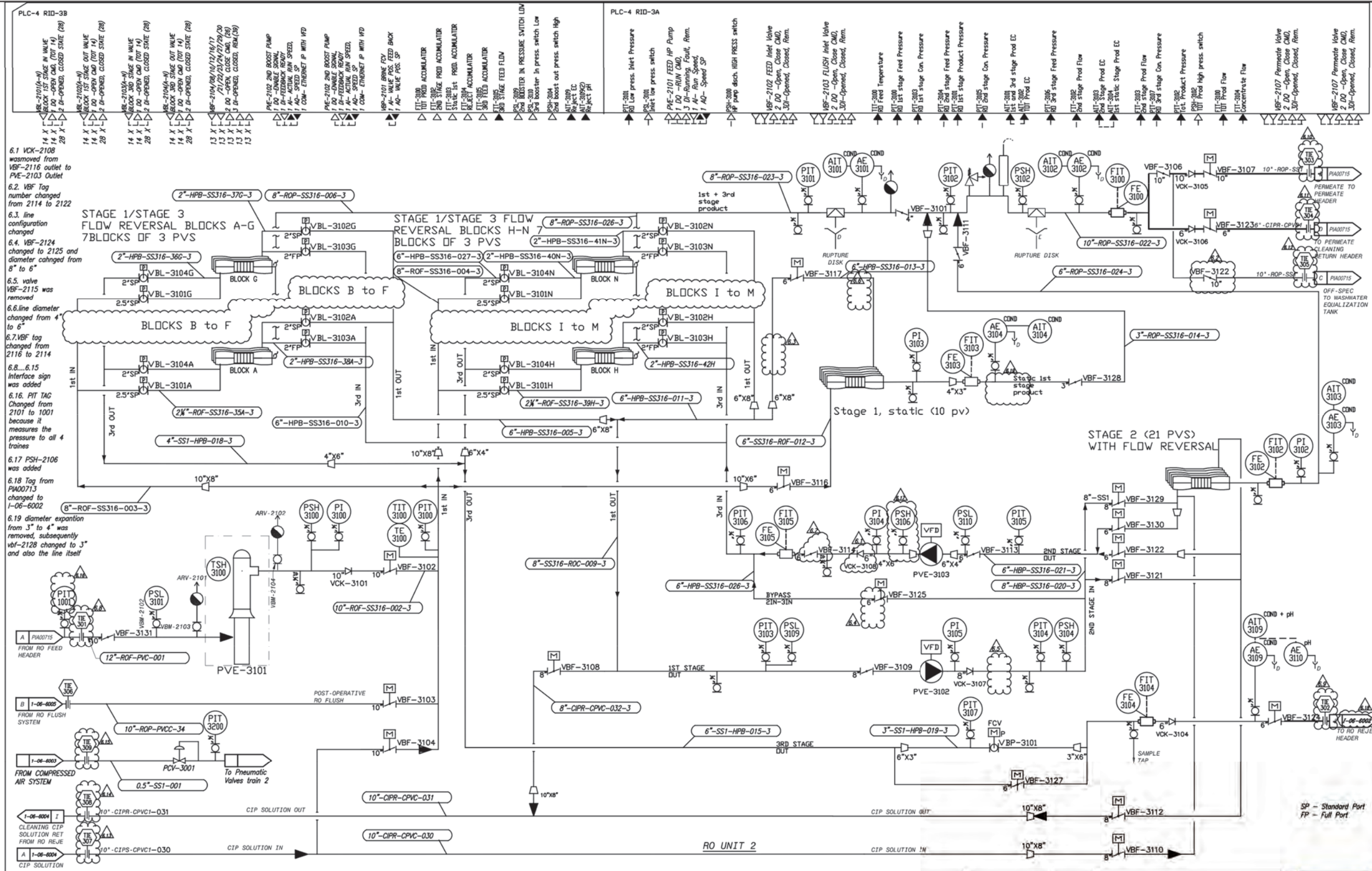
No.	DATE	BY	DESCRIPTION	APPROVED

REVIEWED BY:	DATE:	REFERENCE:
SUNNY WANG, P.E. - WATER RESOURCES MANAGER		CURTIS CASTLE, P.E. - PRINCIPAL C.E.
OMED POUR, P.E. - PROJECT MANAGER		ALEX NAZARCHUK, P.E. - CITY ENGINEER

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION  
 P&ID REFERENCE DRAWING 2  
 PROJECT AND SHEET TITLE  
 DESIGNED BY: WT  
 DRAWN BY: QS  
 CHECKED BY: XK  
 CONSULTANT JOB/SHEET NO.  
 DRAWING NO. 7078  
**R-06-0002**  
 SH 301 OF 303 SHS



C:\BCP\W\0408747R-06-0003.DWG 12/23/2021 10:54 AM  
 SHEET NO. 1  
 TITLE OF PROJECT:



- 6.1 VCK-2108 was removed from VBF-2116 outlet to PVE-2103 Outlet
- 6.2 VBF Tag number changed from 2114 to 2122
- 6.3 line configuration changed
- 6.4 VBF-2124 changed to 2125 and diameter changed from 8" to 6"
- 6.5 valve VBF-2115 was removed
- 6.6 line diameter changed from 4" to 6"
- 6.7 VBF tag changed from 2116 to 2114
- 6.8...6.15 Interface sign was added
- 6.16 PIT TAC Changed from 2101 to 1001 because it measures the pressure to all 4 trains
- 6.17 PSH-2106 was added
- 6.18 Tag from P400713 changed to 1-06-6002
- 6.19 diameter expansion from 3" to 4" was removed, subsequently vbf-2128 changed to 3" and also the line itself

No.	DESCRIPTION	DATE	BY	CHK.	APP.	APP. CHK.	APP.	APP.	DRAWING No.	DESCRIPTION
6										
5	For Design	30/09/2021								
4	For 60% submission	04.02.21			04.02.21					

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CLIENT		ROTEC		PROJECT No.		Brown and Caldwell	
BY	DATE	BY	DATE	SM	ARCADIA		
CHECKED		DESIGNED	DP	29Sep20	WELL FIELD RESTORATION PROJECT ARCADIA REVERSE OSMOSIS UNIT 3 RETROFIT, SANTA MONICA P & I DIAGRAM		
APPROVED		DRAWN	DP	29Sep21			
APPROVED		CHECKED	DP	7	Scale	Drawing No.	
APPROVED		APPROVED	OM	7	NTS	R190604-PRC-2-PID-0001	

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No.	DATE	BY	DESCRIPTION	APPROVED

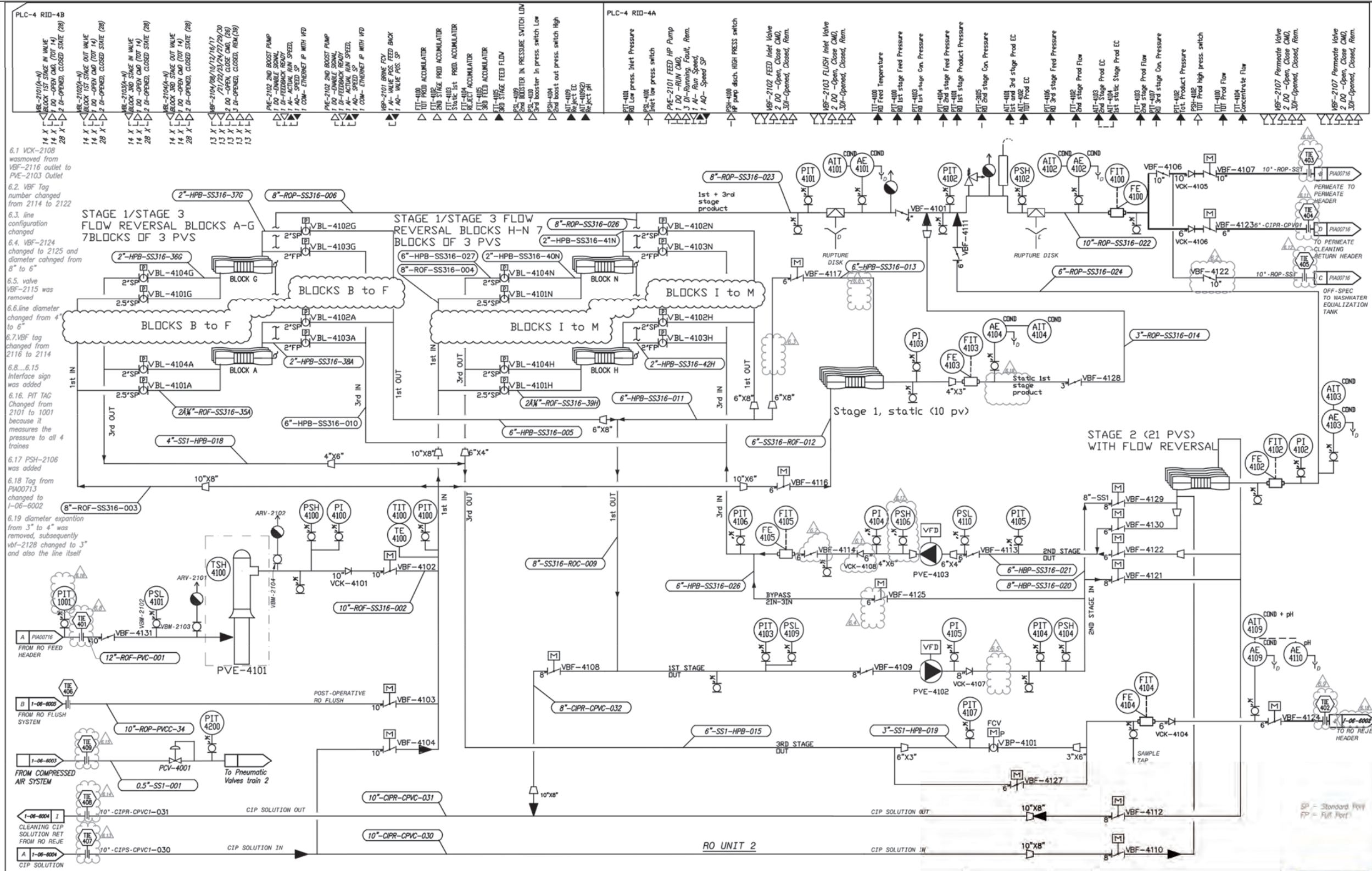
CONSULTANT

REVIEWED BY:	DATE:	20__	REFERENCE:
REVIEWED BY:	DATE:	20__	DATE: _____, 20XX
REVIEWED BY:	DATE:	20__	COMPUTER FILE NAME:
SUNNY WANG, P.E. - WATER RESOURCES MANAGER			SP-FILE NO.: SP2602
OMED POUR, P.E. - PROJECT MANAGER			APPROVED BY:
			ALEX NAZARCHUK, P.E. - CITY ENGINEER

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION  
 P&ID REFERENCE DRAWING 3  
 DESIGNED BY: WT  
 DRAWN BY: QS  
 CHECKED BY: XK  
 CONSULTANT JOB SHEET NO.  
 DRAWING NO. 7078  
**R-06-0003**  
 SHEET 302 OF 303 SHEETS

FOR REFERENCE ONLY





- 6.1 VCK-2108 was removed from VBF-2116 outlet to PVE-2103 Outlet
- 6.2 VBF Tag number changed from 2114 to 2122
- 6.3 line configuration changed
- 6.4 VBF-2124 changed to 2125 and diameter changed from 8" to 6"
- 6.5 valve VBF-2115 was removed
- 6.6 line diameter changed from 4" to 6"
- 6.7 VBF tag changed from 2116 to 2114
- 6.8...6.15 Interface sign was added
- 6.16 PIT TAC Changed from 2101 to 1001 because it measures the pressure to all 4 trains
- 6.17 PSH-2106 was added
- 6.18 Tag from PIA00713 changed to 1-06-6002
- 6.19 diameter expansion from 3" to 4" was removed, subsequently vbl-2128 changed to 3" and also the line itself

No.	DESCRIPTION	DATE	BY	APP. CHK.	APP. DATE	APP. DATE	APP. DATE	DRAWING No.	DESCRIPTION
6									
5	For Design	30/09/2021							
4	For 60% submission	04.02.21	OM	OM	04.02.21				

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CLIENT	ROTECH	PROJECT No.	SM ARCADIA
BY	DATE	BY	DATE
CHECKED	DESIGNED		
APPROVED	DRAWN		
APPROVED	CHECKED		
APPROVED	APPROVED		

Scale: NTS

Drawing No. R190604-PRC-2-PID-0001

REV. 6 A1

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No.	DATE	BY	DESCRIPTION	APPROVED

**Brown and Caldwell**  
**WALSH**

REVIEWED BY: DATE: \_\_\_\_\_ 20\_\_

REVIEWED BY: DATE: \_\_\_\_\_ 20\_\_

SUNNY WANG, P.E. - WATER RESOURCES MANAGER

REVIEWED BY: DATE: \_\_\_\_\_ 20\_\_

OMED POUR, P.E. - PROJECT MANAGER

REFERENCE: DATE: \_\_\_\_\_, 20\_\_

SUBMITTED BY: CURTIS CASTLE, P.E. - PRINCIPAL C.E.

SP-FILE NO.: SP2602

APPROVED BY: ALEX NAZARCHUK, P.E. - CITY ENGINEER

DATE: \_\_\_\_\_, 20\_\_

OLYMPIC WELL FIELD RESTORATION AND ARCADIA WTP EXPANSION

P&ID REFERENCE DRAWING 4

DESIGNED BY: WT  
 DRAWN BY: QS  
 CHECKED BY: XK  
 CONSULTANT JOB SHEET NO.  
 DRAWING NO. 7078  
**R-06-0004**  
 SH 303 OF 303 SHS

FOR REFERENCE ONLY

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