



P:\216088 KUNA LIFT STATION STANDARDS\C\_DESN\CAD\04 CONDOC\15 M MECHANICAL\M-101.DWG LAST SAVED: 3/22/2017 2:54 PM PRINTED: 5/1/2018 2:50 PM

### GENERAL SHEET NOTES

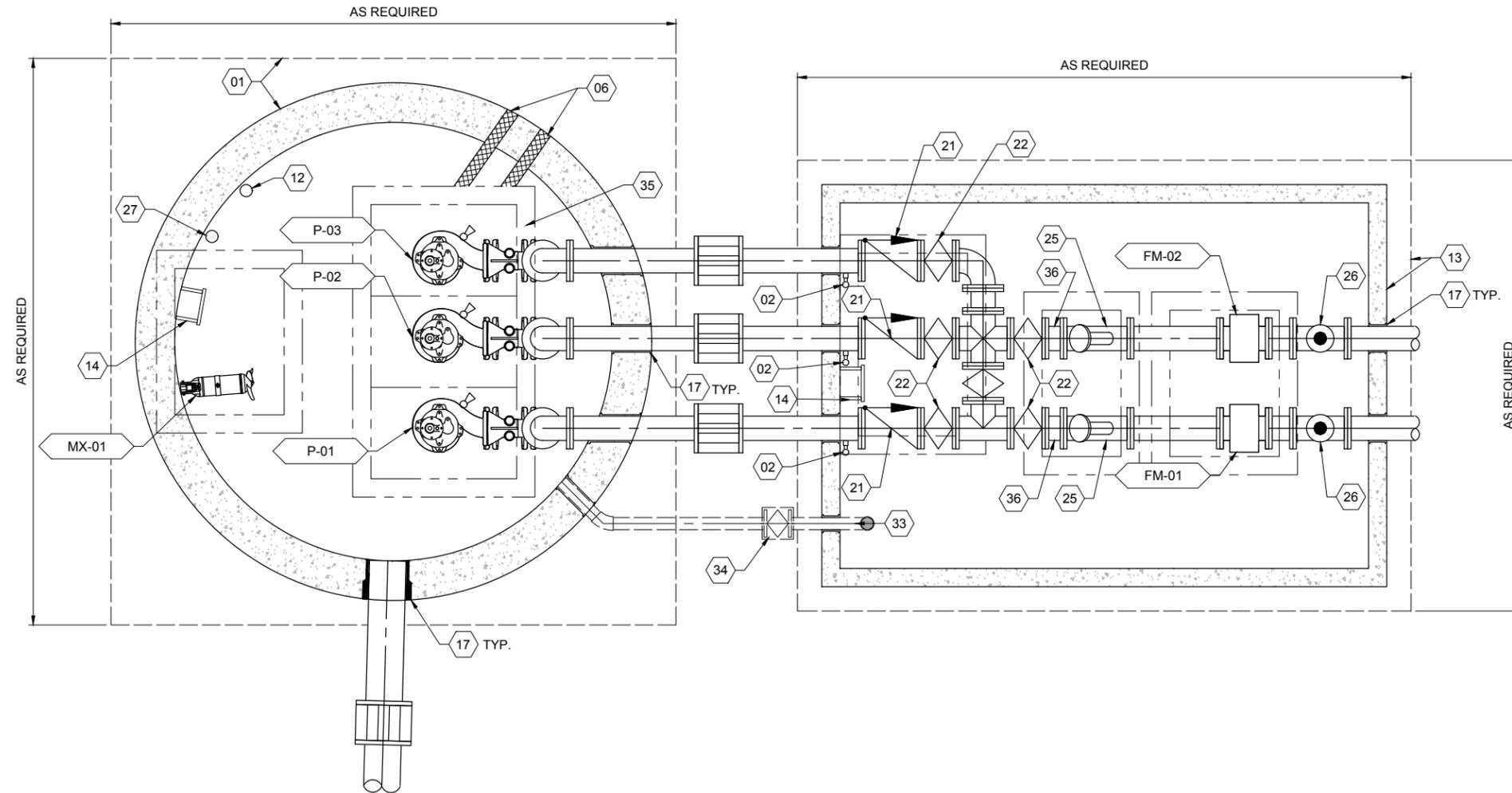
- EQUIPMENT FOR CONFINED SPACE ENTRY WILL BE REQUIRED FOR WORK IN CONFINED SPACES.
- FLOW INTO THE WET WELL MAY NEED TO BE SCREENED. REFER TO KUNA LIFT STATION STANDARDS AND DISCRETION OF THE CITY ENGINEER FOR SCREENING REQUIREMENTS.
- PIPING CONFIGURATION CAN BE MODIFIED FOR SINGLE FORCE MAIN ARRANGEMENT WHEN APPROVED BY CITY ENGINEER.

### SHEET KEYNOTES

- 01 DIAMETER PRECAST MANHOLE SECTIONS PER ASTM C-478, SET PLUMB. COAT INTERIOR WITH SPRAYROQ LINING.
- 02 PRESSURE GAUGE. (TYP 3) WITH ANNULAR SEAL
- 06 ELECTRICAL TROUGH
- 12 VENT PIPE TO WAGER ODOR CONTROL UNIT
- 13 PRECAST CONCRETE UTILITY VAULT WITH LID ASTM-478, HS-20 WHEEL LOAD RATED, WITH PRECAST CONCRETE PAD
- 14 MANHOLE STEPS, RE: ISWPC STANDARD DRAWING SD-509
- 17 APPROVED GASKETED WATERTIGHT SEAL (TYP. ALL PIPE PENETRATIONS)
- 21 BALL CHECK VALVE
- 22 ECCENTRIC PLUG VALVE
- 25 BYPASS PUMP, CLEAN-OUT ASSEMBLY
- 26 COMBINATION AIR RELEASE / VACUUM VALVE ASSEMBLY, MOUNTED AT HIGH POINT, ARI D-020, RE: ISWPC SD513A
- 27 LEVEL SENSOR IN 8" STILLING WELL PIPE, RE: A3/M-501
- 33 4" FLOOR DRAIN WITH BACKWATER BALL VALVE
- 34 4" PLUG VALVE
- 35 HATCH OVER PUMPS WITH INDIVIDUAL DOORS OVER EACH PUMP
- 36 6" MIN. PIPE SPOOL

### EQUIPMENT KEYNOTES

- P-01 ABS SUBMERSIBLE PUMP
- P-02 ABS SUBMERSIBLE PUMP
- P-03 ABS SUBMERSIBLE PUMP (IF NECESSARY)
- FM-01 FLOW METER
- FM-02 FLOW METER
- MX-01 ABS SUBMERSIBLE PROPELLER MIXER



**A1** TRIPLEX LIFT STATION (DUAL FORCE MAIN) - PLAN

1/2" = 1'-0"



NO.	REVISIONS	BY	DATE

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City of  
Kuna, Idaho

KUNA LIFT STATION STANDARDS  
TRIPLEX LIFT STATION (DUAL FORCE MAIN) -  
PLAN VIEW

PROJECT NO.  
SHEET NO.  
**M-101**

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### GENERAL SHEET NOTES

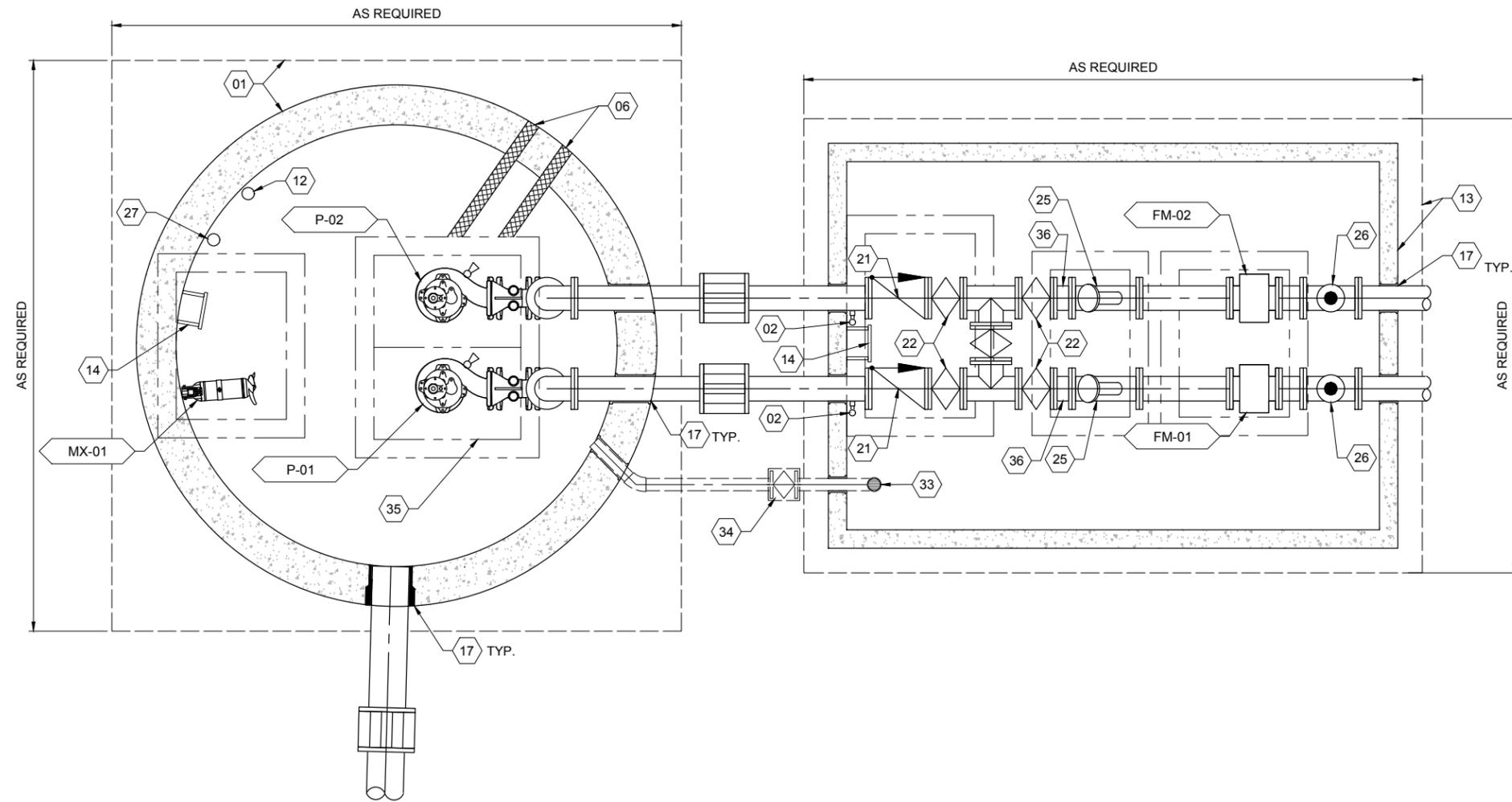
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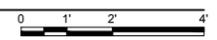
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### EQUIPMENT KEYNOTES

- |       |                                 |
|-------|---------------------------------|
| P-01  | ABS SUBMERSIBLE PUMP            |
| P-02  | ABS SUBMERSIBLE PUMP            |
| FM-01 | FLOW METER                      |
| FM-02 | FLOW METER                      |
| MX-01 | ABS SUBMERSIBLE PROPELLER MIXER |



**A1** DUPLEX LIFT STATION (DUAL FORCE MAIN) - PLAN



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City of  
Kuna, Idaho

KUNA LIFT STATION STANDARDS  
DUPLEX LIFT STATION (DUAL FORCE MAIN) -  
PLAN VIEW

PROJECT NO.	
SHEET NO.	M-102

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### GENERAL SHEET NOTES

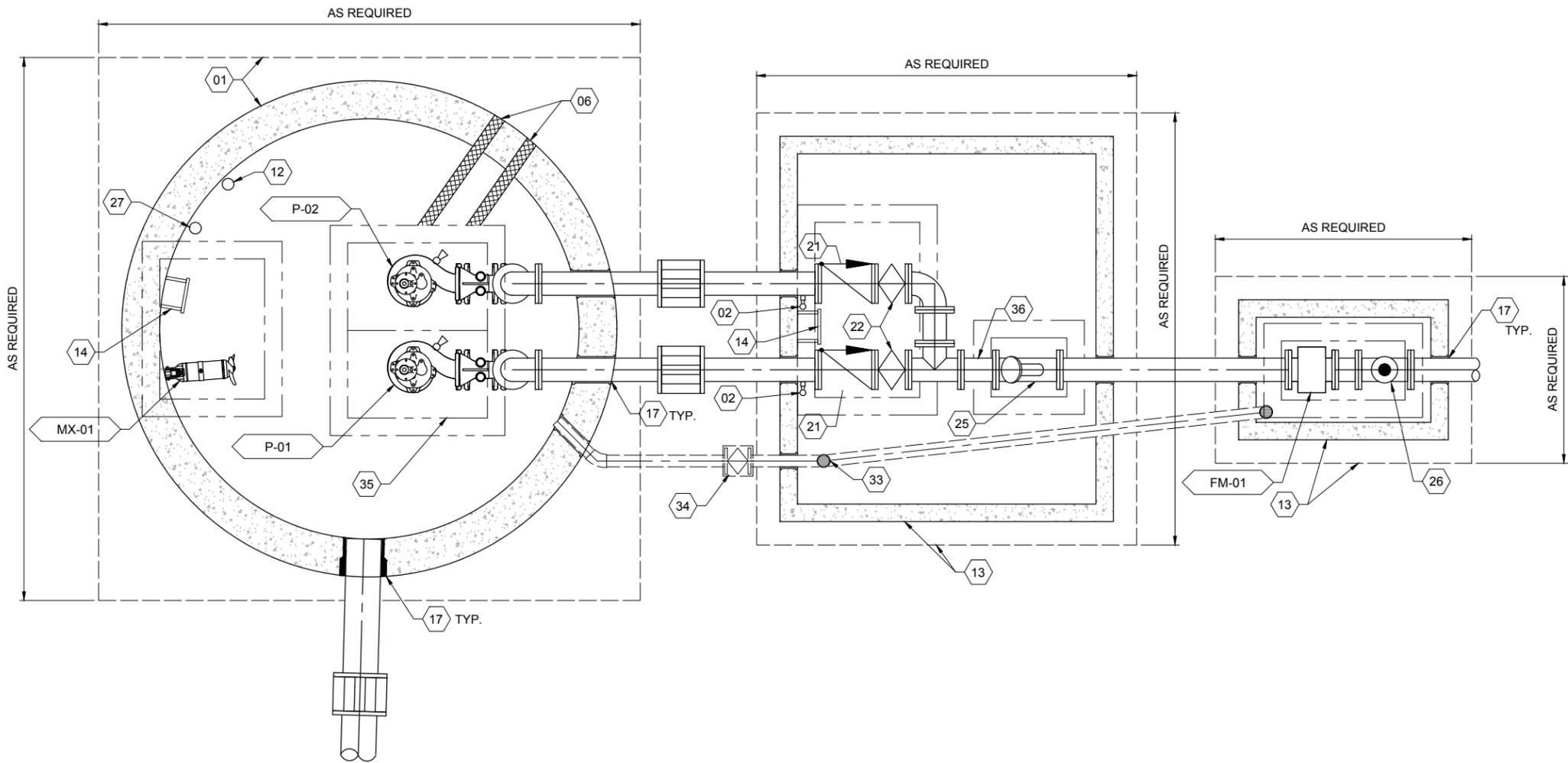
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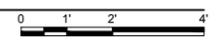
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- 33 4" FLOOR DRAIN WITH BACKWATER VALVE
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- 35 HATCH OVER PUMPS WITH INDIVIDUAL DOORS OVER EACH PUMP
- 36 12" MIN. PIPE SPOOL

### EQUIPMENT KEYNOTES

- |       |                                 |
|-------|---------------------------------|
| P-01  | ABS SUBMERSIBLE PUMP            |
| P-02  | ABS SUBMERSIBLE PUMP            |
| FM-01 | FLOW METER                      |
| FM-02 | FLOW METER                      |
| MX-01 | ABS SUBMERSIBLE PROPELLER MIXER |



**A1** DUPLEX LIFT STATION (SINGLE FORCE MAIN) - PLAN



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City of  
Kuna, Idaho

KUNA LIFT STATION STANDARDS  
DUPLEX LIFT STATION (SINGLE FORCE MAIN) -  
PLAN VIEW

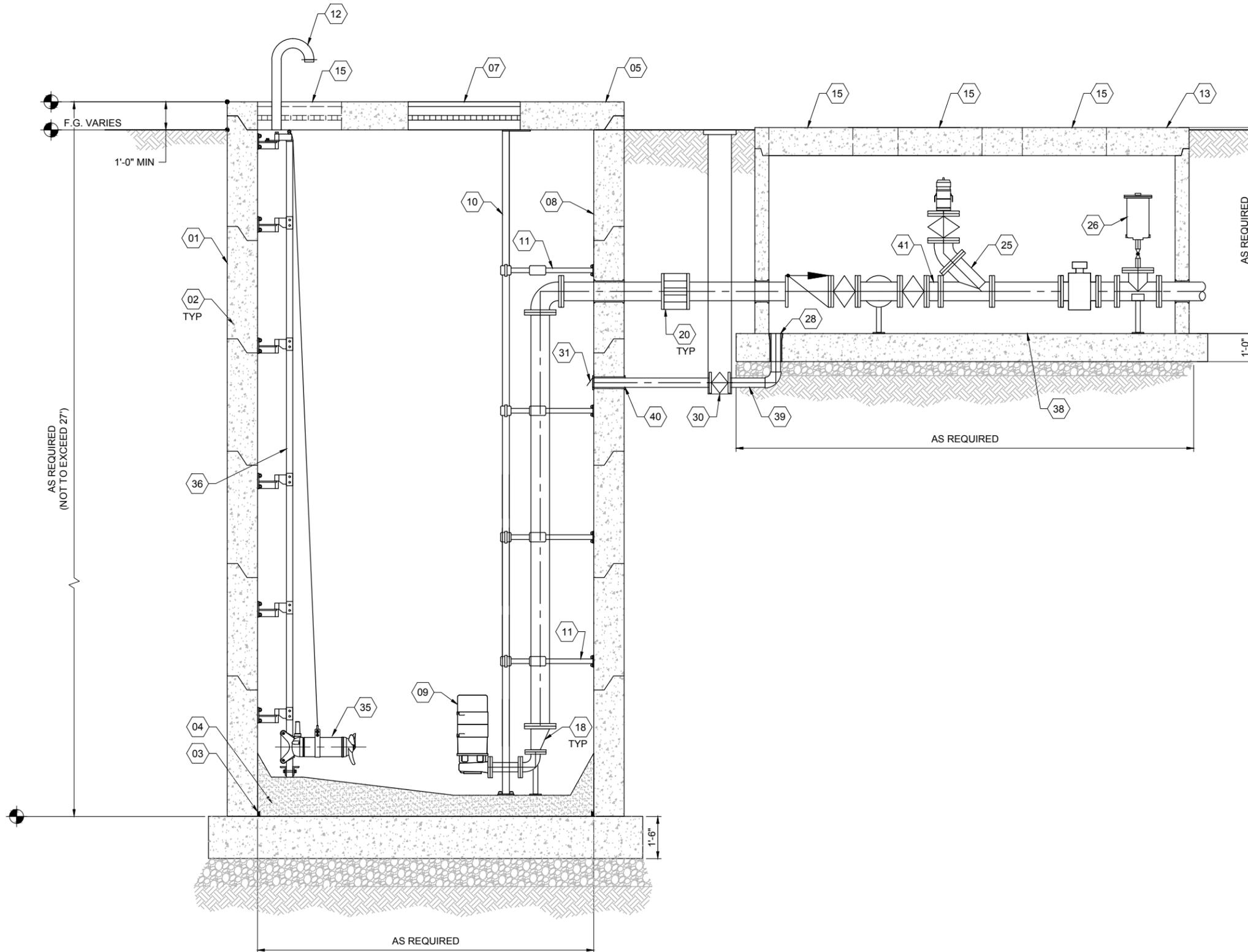
PROJECT NO.	
SHEET NO.	M-103

**GENERAL SHEET NOTES**

- EQUIPMENT FOR CONFINED SPACE ENTRY WILL BE REQUIRED FOR WORK IN CONFINED SPACES.
- FLOW INTO THE WET WELL MAY NEED TO BE SCREENED. REFER TO KUNA LIFT STATION STANDARDS AND DISCRETION OF THE CITY ENGINEER FOR SCREENING REQUIREMENTS.

**SHEET KEYNOTES**

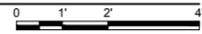
- PRECAST MANHOLE SECTIONS PER ASTM C-478, SET PLUMB.
- MANHOLE JOINT
- ADEKA MC201 SEAL, PLACE AROUND INSIDE OF JOINT BEFORE INTERIOR CONCRETE IS PLACED
- CONCRETE FILL PLACED AFTER WET WELL SECTIONS ARE SET PLUMB, SLOPE TO PUMPS
- PRECAST CONCRETE LID, HS-20 WHEEL LOAD RATED
- ALUMINUM DOUBLE LEAF ACCESS DOOR W/ HINGED SAFETY GATES PER CITY OF KUNA LIFT STATION STANDARDS.
- GROUT PENETRATIONS PRIOR TO SPRAYING SPRAYROQ COATING
- ABS SUBMERSIBLE PUMPS PER MANUFACTURERS INSTALLATION GUIDE
- STAINLESS STEEL PIPE GUIDE RAILS FOR SUBMERSIBLE PUMP
- STAINLESS STEEL RAIL SUPPORTS AS REQUIRED BY MANUFACTURER
- WAGER ODOR CONTROL UNIT, LOCATION AND ORIENTATION PER DIRECTION OF CITY STAFF.
- PRECAST CONCRETE UTILITY VAULT WITH LID ASTM-478, HS-20 WHEEL LOAD RATED
- ALUMINUM ACCESS DOOR PER CITY OF KUNA LIFT STATION STANDARDS, ORIENTATION PER DIRECTION OF CITY STAFF.
- FLEXIBLE COUPLING
- BYPASS PUMPING, CLEAN-OUT ASSEMBLY: 8" Y ELBOW, 8" PLUG VALVE WITH LEVER, BLEED-OFF VALVE, AND 8" CAMLOCK WITH BLIND CAP
- COMBINATION AIR RELEASE / VACUUM VALVE ASSEMBLY, MOUNTED AT HIGH POINT, ARI D-020, RE: ISPWC SD513A
- CAST IRON FLOOR DRAIN WITH BACKWATER VALVE, SLOPE FLOOR TO DRAIN
- 4" PLUG VALVE AND BOX
- SCHEDULE 40 PVC FLAP VALVE
- ABS SUBMERSIBLE MIXER
- INSTALL STAINLESS STEEL RAIL FOR SUBMERSIBLE MIXER
- ALUMINUM ACCESS DOOR
- SLOPE VAULT FLOOR TO DRAIN (MIN. 2% SLOPE)
- 4" DRAIN LINE; SLOPE TO WET WELL (MIN 2% SLOPE)
- DRAIN PIPE PENETRATION TO BE LEVEL TO ENSURE FLAP VALVE SEATING
- 6" MIN. PIPE SPOOL



**LIFT STATION (DUAL FORCE MAIN) - SECTION VIEW**

**A1**

1/2" = 1'-0"



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**City of  
Kuna, Idaho**

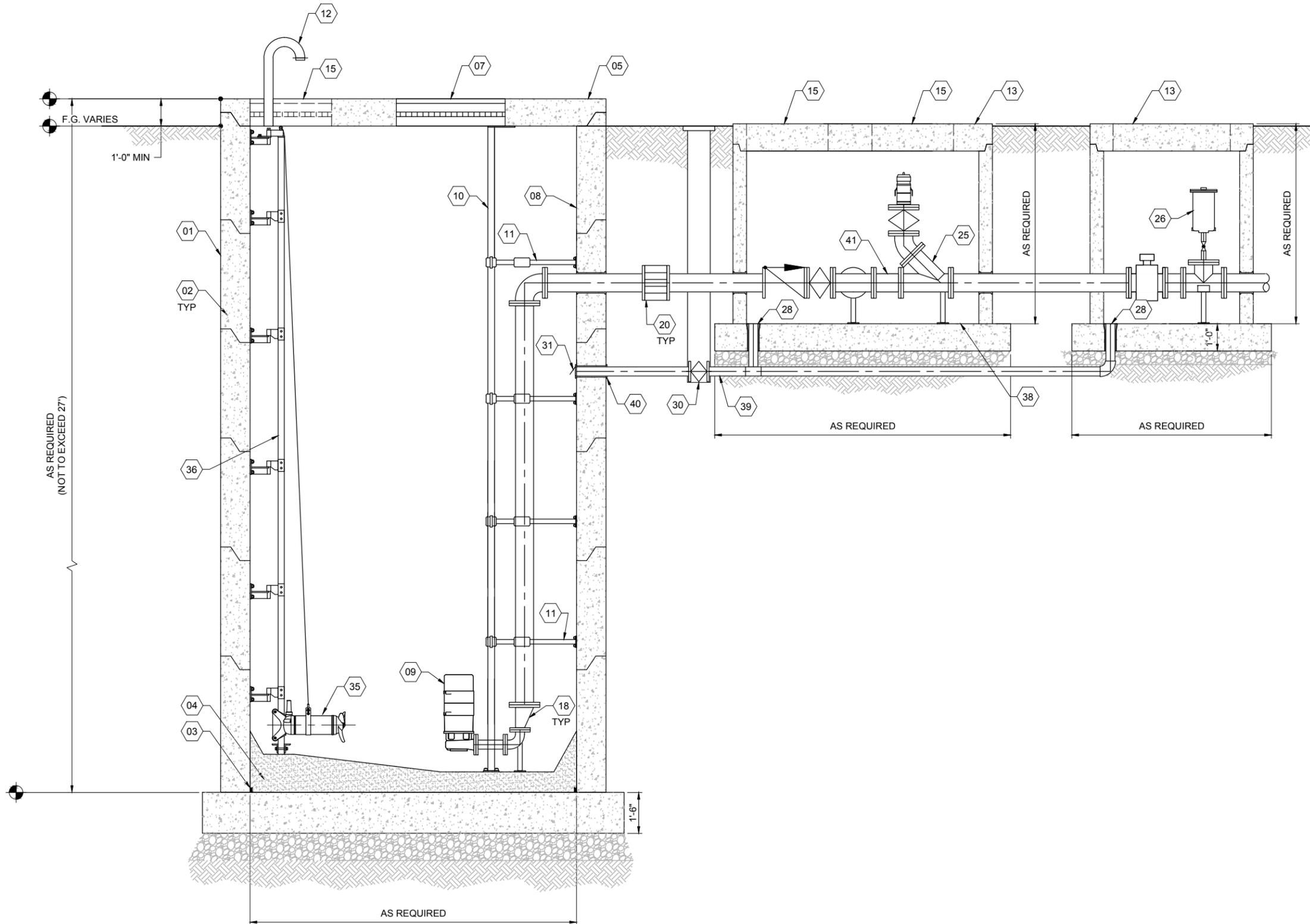
<b>KUNA LIFT STATION STANDARDS</b>		PROJECT NO.
<b>LIFT STATION (DUAL FORCE MAIN) - SECTION</b>		SHEET NO. <b>M-301</b>

**GENERAL SHEET NOTES**

- EQUIPMENT FOR CONFINED SPACE ENTRY WILL BE REQUIRED FOR WORK IN CONFINED SPACES.
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**SHEET KEYNOTES**

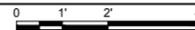
- 01 PRECAST MANHOLE SECTIONS PER ASTM C-478, SET PLUMB.
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- 04 CONCRETE FILL PLACED AFTER WET WELL SECTIONS ARE SET PLUMB, SLOPE TO PUMPS
- 05 PRECAST CONCRETE LID, HS-20 WHEEL LOAD RATED
- 07 ALUMINUM DOUBLE LEAF ACCESS DOOR W/ HINGED SAFETY GATES PER CITY OF KUNA LIFT STATION STANDARDS.
- 08 GROUT PENETRATIONS PRIOR TO SPRAYING SPRAYROQ COATING
- 09 ABS SUBMERSIBLE PUMPS PER MANUFACTURERS INSTALLATION GUIDE
- 10 STAINLESS STEEL PIPE GUIDE RAILS FOR SUBMERSIBLE PUMP
- 11 STAINLESS STEEL RAIL SUPPORTS AS REQUIRED BY MANUFACTURER
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- 15 ALUMINUM ACCESS DOOR PER CITY OF KUNA LIFT STATION STANDARDS, ORIENTATION PER DIRECTION OF CITY STAFF.
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- 31 SCHEDULE 40 PVC FLAP VALVE
- 35 ABS SUBMERSIBLE MIXER
- 36 INSTALL STAINLESS STEEL RAIL FOR SUBMERSIBLE MIXER
- 37 ALUMINUM ACCESS DOOR
- 38 SLOPE VAULT FLOOR TO DRAIN (MIN. 2% SLOPE)
- 39 4" DRAIN LINE; SLOPE TO WET WELL (MIN 2% SLOPE)
- 40 DRAIN PIPE PENETRATION TO BE LEVEL TO ENSURE FLAP VALVE SEATING
- 41 6" MIN. PIPE SPOOL



**LIFT STATION (SINGLE FORCE MAIN) - SECTION VIEW**

**A1**

1/2" = 1'-0"



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**City of  
Kuna, Idaho**

**KUNA LIFT STATION STANDARDS**  
**LIFT STATION (SINGLE FORCE MAIN) - SECTION**

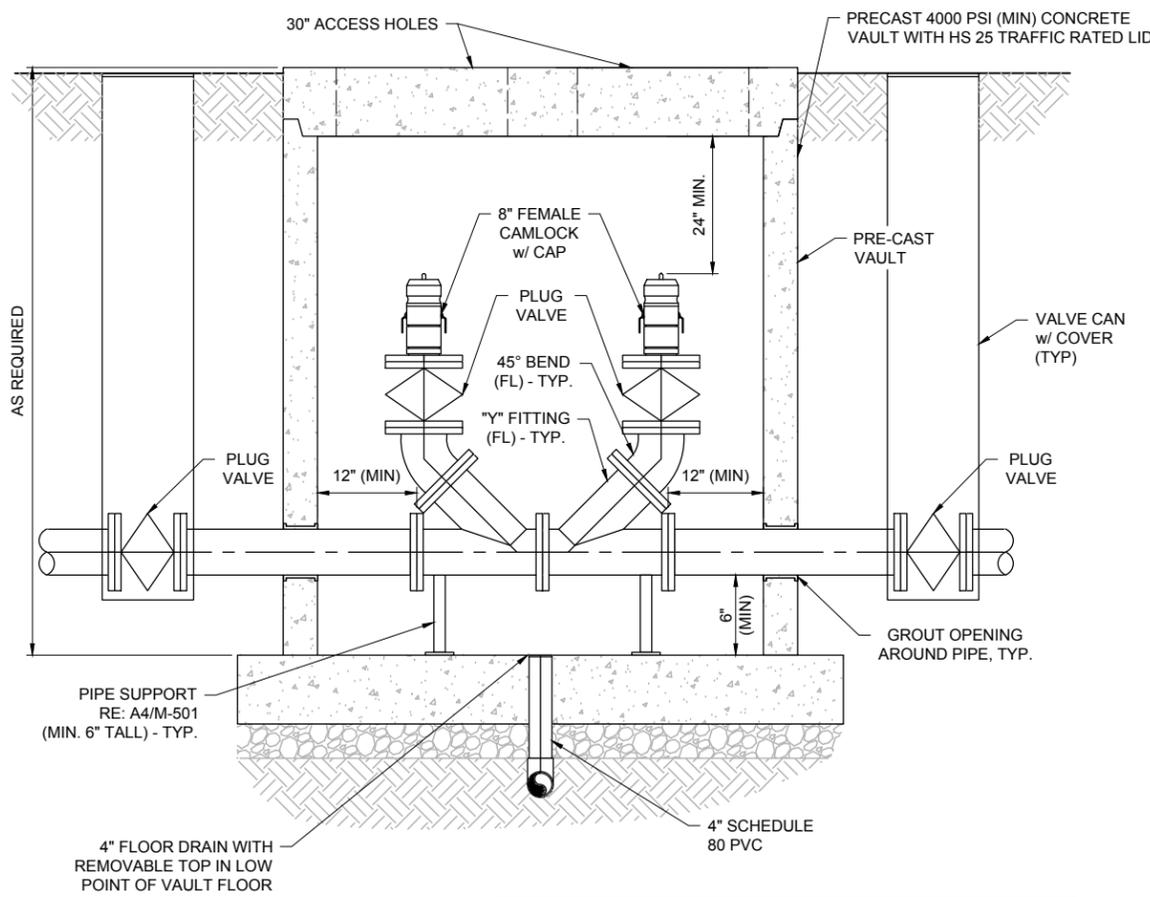
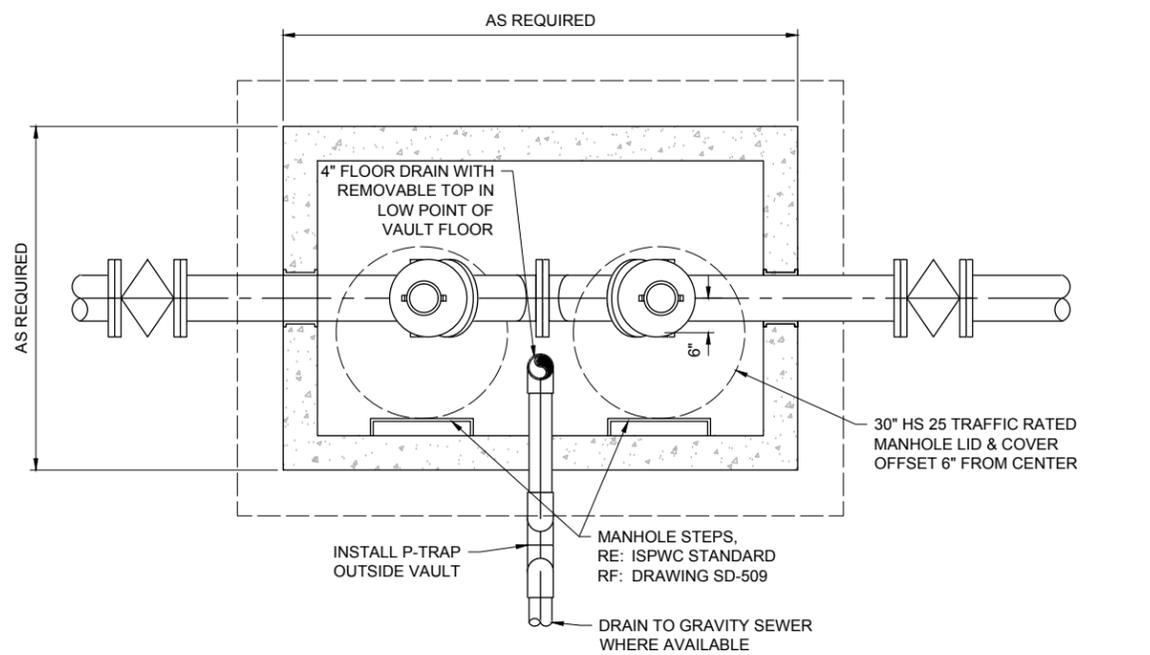
PROJECT NO.  
SHEET NO.  
**M-302**

**GENERAL SHEET NOTES**

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- WET WELL AND VALVE VAULT ACCESS LIDS TO BE ORIENTED PER DIRECTION OF CITY STAFF.

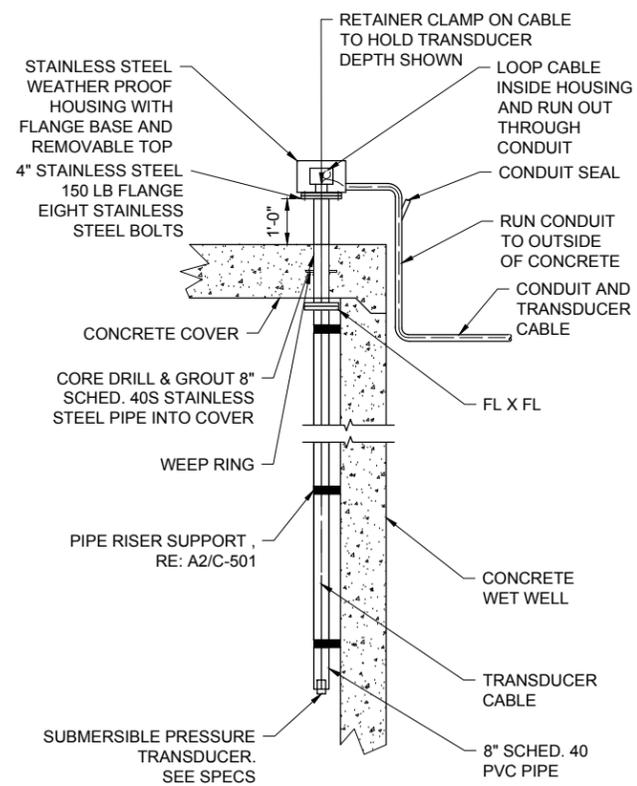
**SHEET KEYNOTES**

01 ---



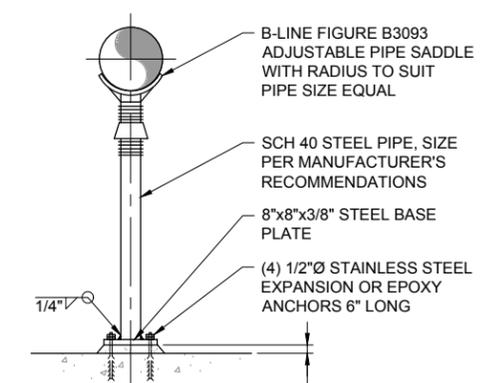
- NOTES:**
- ALL FITTINGS AND VALVES TO MATCH FORCE MAIN SIZE.
  - ALL PIPE FITTINGS TO BE DUCTILE IRON PER ISPWC.
  - ADJUST DEPTH OF PRESSURE SEWER MAIN ON BOTH SIDES OF CLEANOUT VAULT TO MATCH DEPTH OF PRESSURE SEWER MAIN THROUGH VAULT.

**A1** FORCE MAIN CLEANOUT  
3/4" = 1'-0"



- NOTES:**
- PIPE SHALL BE PERFORATED FROM 1 FOOT ABOVE HIGH LEVEL TO TOP OF WALL, AND SOLID WALL FROM 1 FOOT ABOVE HIGH LEVEL DOWN TO PRESSURE TRANSDUCER.

**A3** LEVEL SENSOR  
N.T.S.



**A4** PIPE SUPPORT TYPE 'H'  
N.T.S. REV: 6/5/15

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1	CLEANOUT DETAIL	JW	04-30-18

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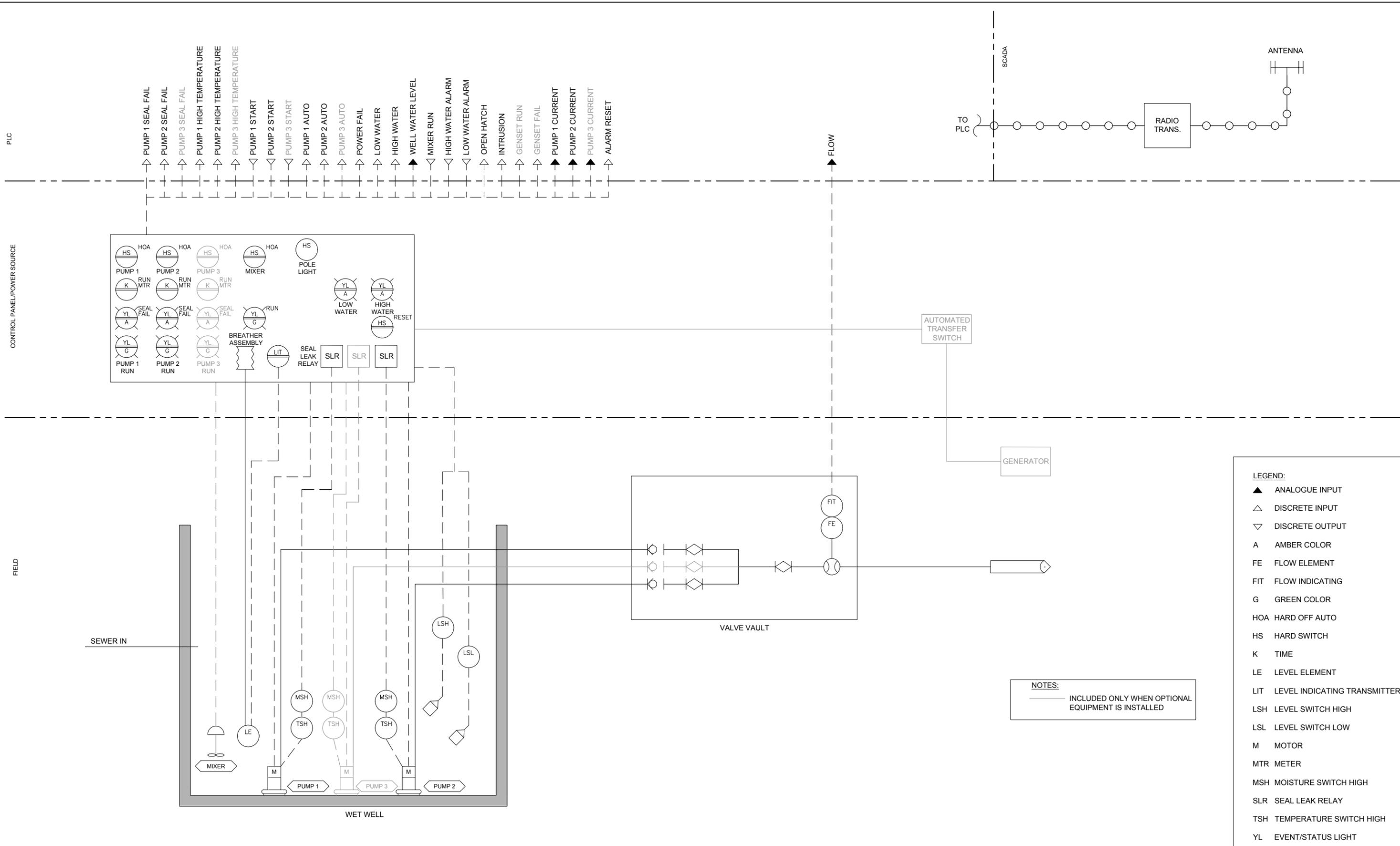
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**City of Kuna, Idaho**

<b>KUNA LIFT STATION STANDARDS</b>		PROJECT NO.
<b>MECHANICAL DETAILS</b>		SHEET NO. <b>M-501</b>



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**LEGEND:**

- ▲ ANALOGUE INPUT
- △ DISCRETE INPUT
- ▽ DISCRETE OUTPUT
- A AMBER COLOR
- FE FLOW ELEMENT
- FIT FLOW INDICATING
- G GREEN COLOR
- HOA HARD OFF AUTO
- HS HARD SWITCH
- K TIME
- LE LEVEL ELEMENT
- LIT LEVEL INDICATING TRANSMITTER
- LSH LEVEL SWITCH HIGH
- LSL LEVEL SWITCH LOW
- M MOTOR
- MTR METER
- MSH MOISTURE SWITCH HIGH
- SLR SEAL LEAK RELAY
- TSH TEMPERATURE SWITCH HIGH
- YL EVENT/STATUS LIGHT

**NOTES:**  
 — INCLUDED ONLY WHEN OPTIONAL EQUIPMENT IS INSTALLED

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**City of Kuna, Idaho**

<b>KUNA LIFT STATION STANDARDS</b>		PROJECT NO.
<b>CONTROL P&amp;ID</b>		SHEET NO. <b>EI-701</b>