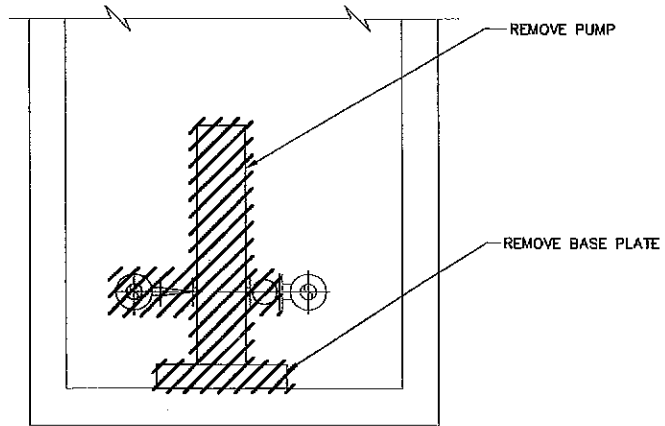


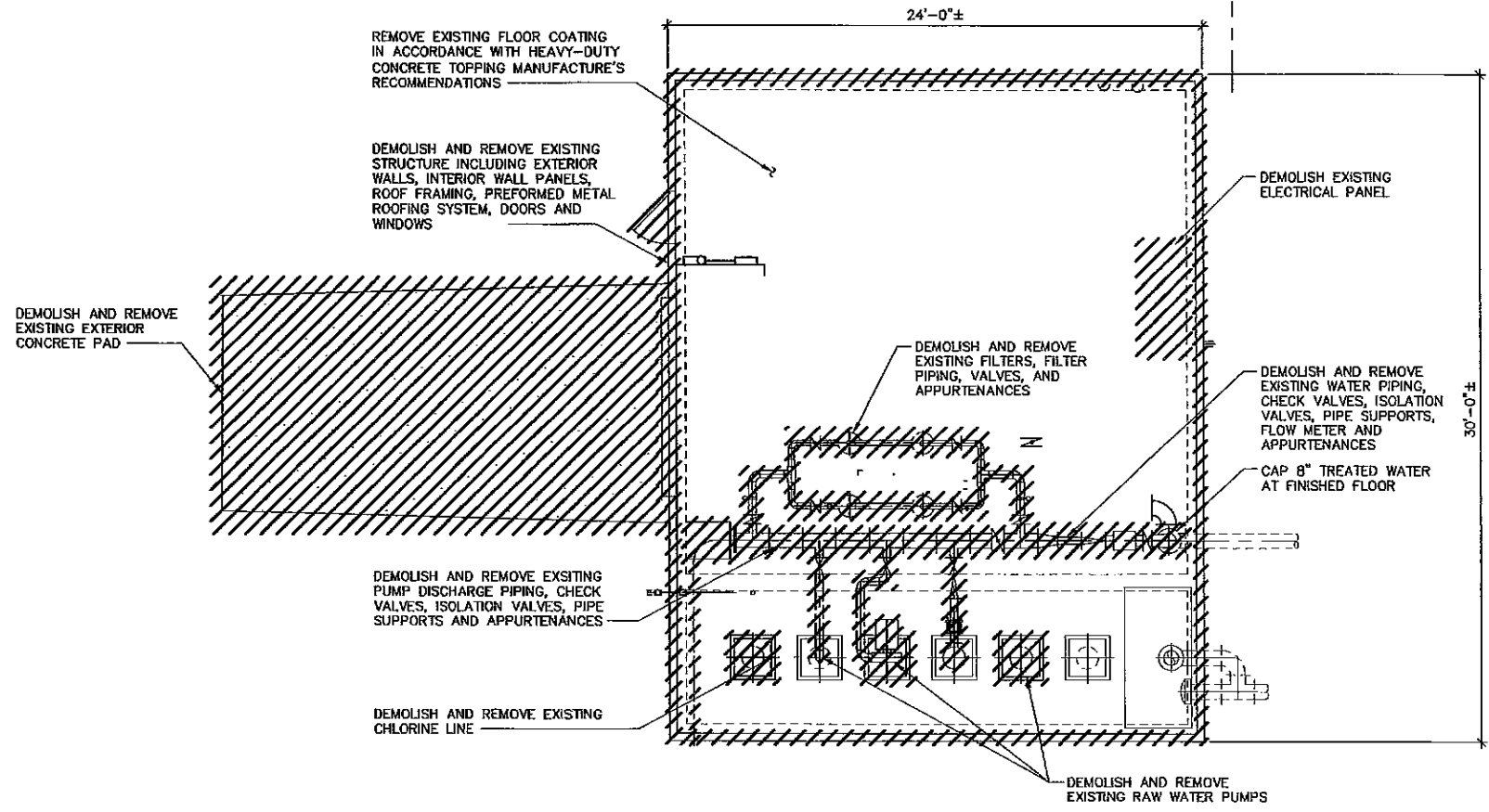
**BOOSTER PUMP STATION PLAN**

SCALE: 1/2" = 1'-0"



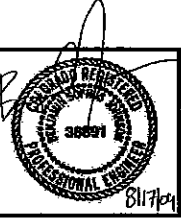
**SECTION**

SCALE: 1/2" = 1'-0"



**PLAN**  
SCALE: 1/4" = 1'-0"

- NOTES:
- REPAIR EXISTING CONSTRUCTION TO REMAIN THAT IS DAMAGED BY DEMOLITION.
  - ALL DIMENSIONS SHALL BE FIELD VERIFIED.
  - DRAWINGS DO NOT SHOW THE EXTENT OF ALL EXISTING EQUIPMENT, CONDUIT, PIPING AND SIMILAR ITEMS MOUNTED ON EXISTING SUBSTRUCTURE. CONTRACTOR SHALL FIELD VERIFY THE EXTENT AND LOCATION OF ALL SUCH ITEMS.
  - SALVAGE PUMPS, EQUIPMENT PIPE, VALVES AND FITTINGS AND DELIVER TO OWNER.
  - STAGE DEMOLITION TO MAINTAIN PUMP OPERATIONS AS DIRECTED IN SECTION 01143, COORDINATION WITH OWNER'S OPERATIONS.



REVISIONS			
NO.	BY	DATE	REMARKS

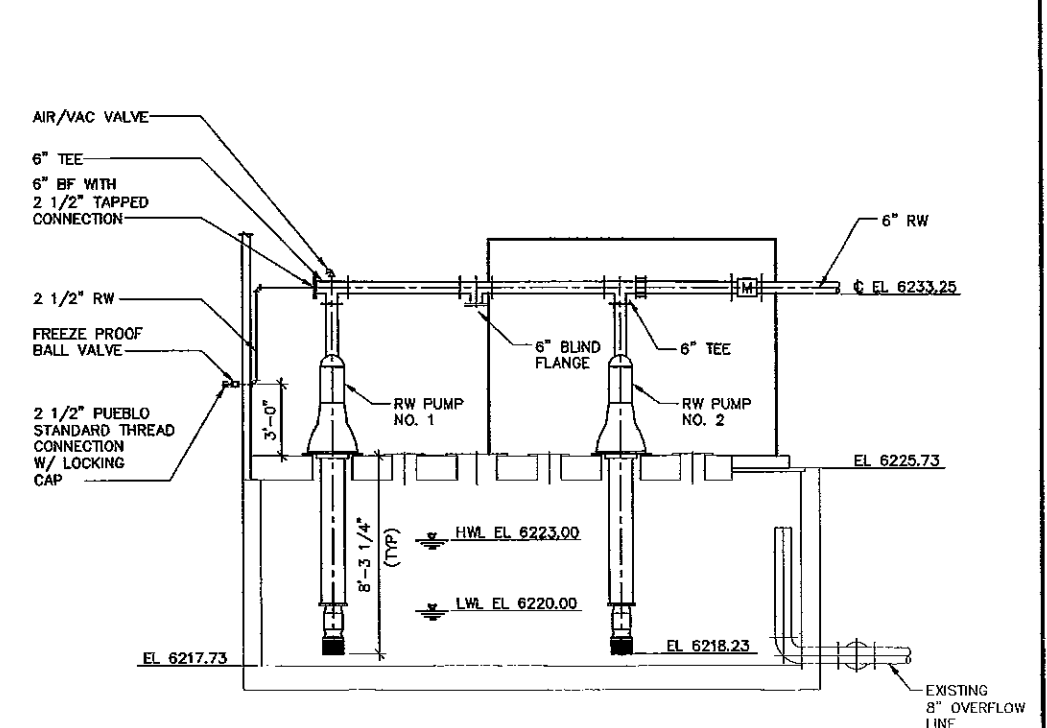
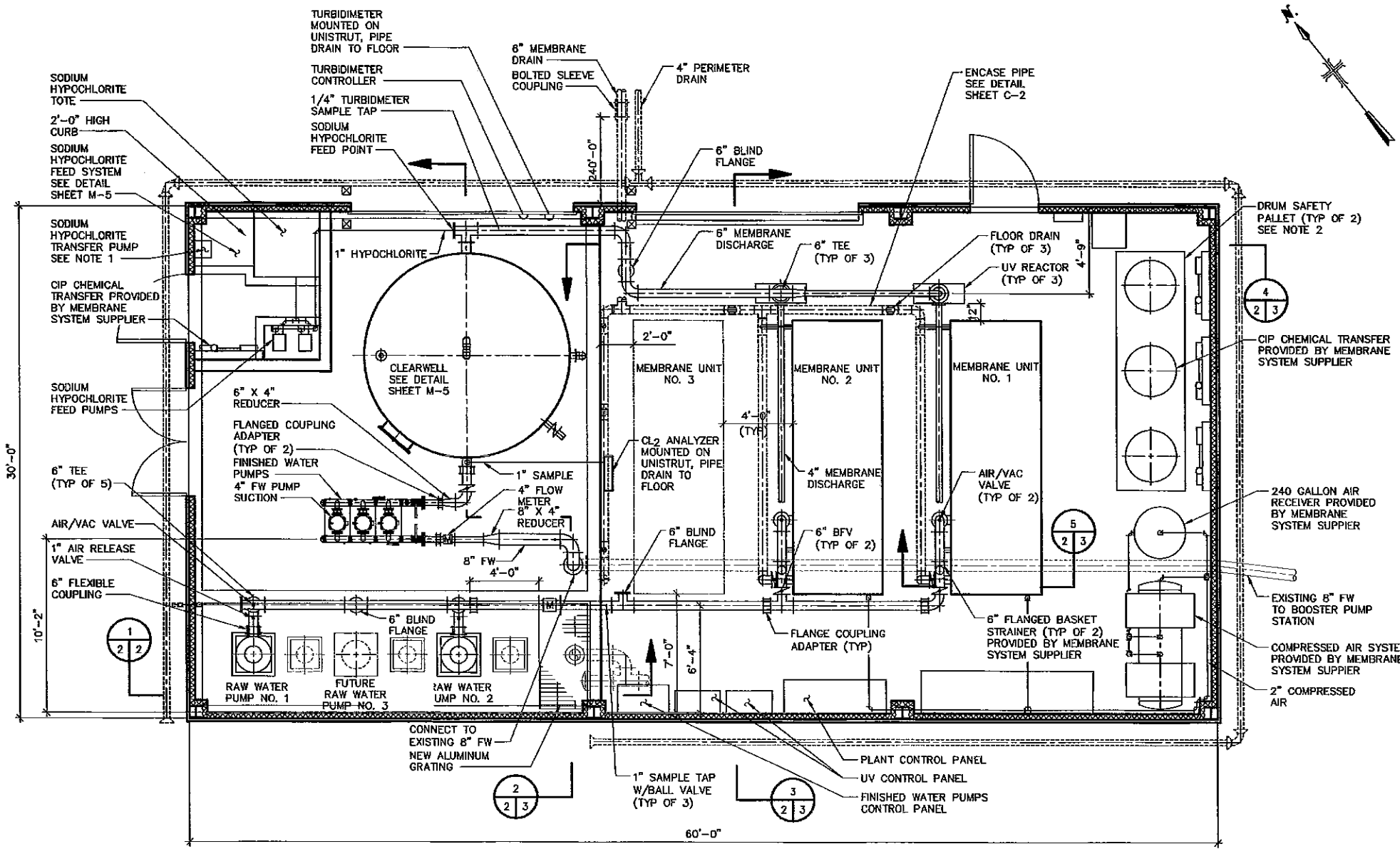
DES NF  
DWN JR  
CRD BSI



COLORADO CITY METROPOLITAN DISTRICT  
COLORADO CITY, COLORADO  
COLD SPRING WTP IMPROVEMENTS

PROCESS DEMOLITION PLANS AND SECTIONS  
SCALE: AS SHOWN

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M SHEET 1 OF  
CAD REF. NO. 6450M001



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

**PLAN**  
SCALE: 1/4" = 1'-0"

- NOTES:**
1. PROVIDE LUTZ DRUM PUMP, TYPE MSL-PVDF, WITH TYPE B28 MOTOR, OR EQUAL.
  2. PROVIDE ENPAC 2-DRUM WORK STATION WITH RAMP, OR EQUAL.
  3. CHEMICAL PIPING FOR CIP CHEMICAL TRANSFER NOT SHOWN FOR CLARITY. CONTRACTOR SHALL PIPE SODIUM HYPOCHLORITE, CITRIC ACID, SODIUM BISULFITE AND SODIUM HYDROXIDE FROM PUMP PANELS SUPPLIED BY MEMBRANE SYSTEM SUPPLIER TO MEMBRANE UNITS. COORDINATE CONNECTIONS WITH MEMBRANE SYSTEM SUPPLIER.
  4. SEE SECTION 15052, EXPOSED PIPE INSTALLATION, FOR PIPING SCHEDULE.
  5. SEE SECTION 15051, BURIED PIPE INSTALLATION, FOR PIPING SCHEDULE.
  6. PIPE AIR/VAC RELEASE AND PUMP SEAL OUTLET DRAIN TO WETWELL AS REQUIRED.
  7. CONTRACTOR SHALL FIELD VERIFY WETWELL FLOOR ELEVATION PRIOR TO SUBMITTING RAW WATER PUMP SHOP DRAWING TO ALLOW SUFFICIENT CLEARANCE BETWEEN PUMP SUCTION AND FLOOR.
  8. PIPE SUPPORTS NOT SHOWN FOR CLARITY. SEE SHEET M-7 AND SECTION 15055, PIPE HANGERS AND SUPPORTS FOR DETAILS.
  9. CONTRACTOR SHALL COORDINATE WITH FINISHED WATER PUMP MANUFACTURER TO CONFIRM PUMP DISCHARGE SIZE, VALVES, PIPING AND APPURTENANCES.
  10. CONTRACTOR SHALL COORDINATE WITH UV REACTOR SUPPLIER TO CONFIRM INLET AND OUTLET PIPING CONNECTIONS.

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REVISIONS		NO.	BY	DATE	REMARKS

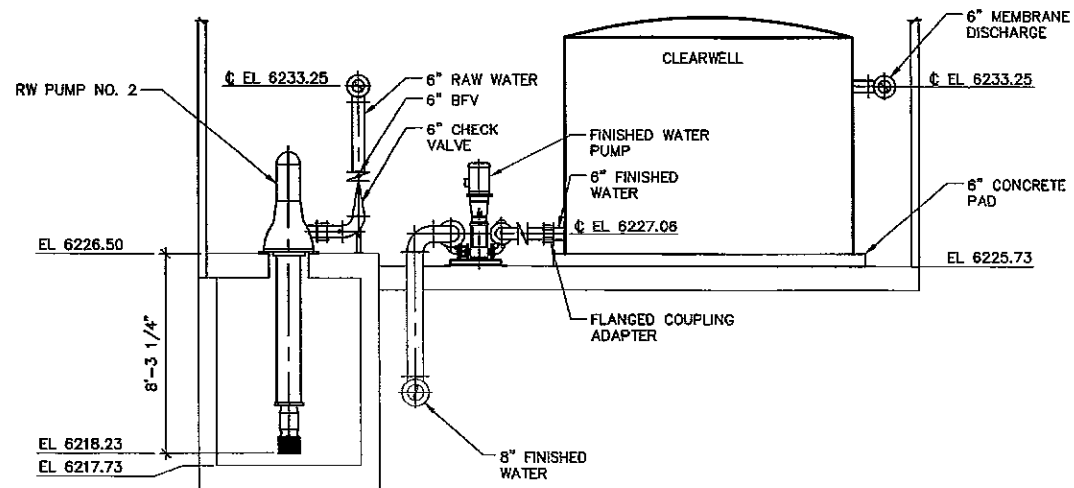
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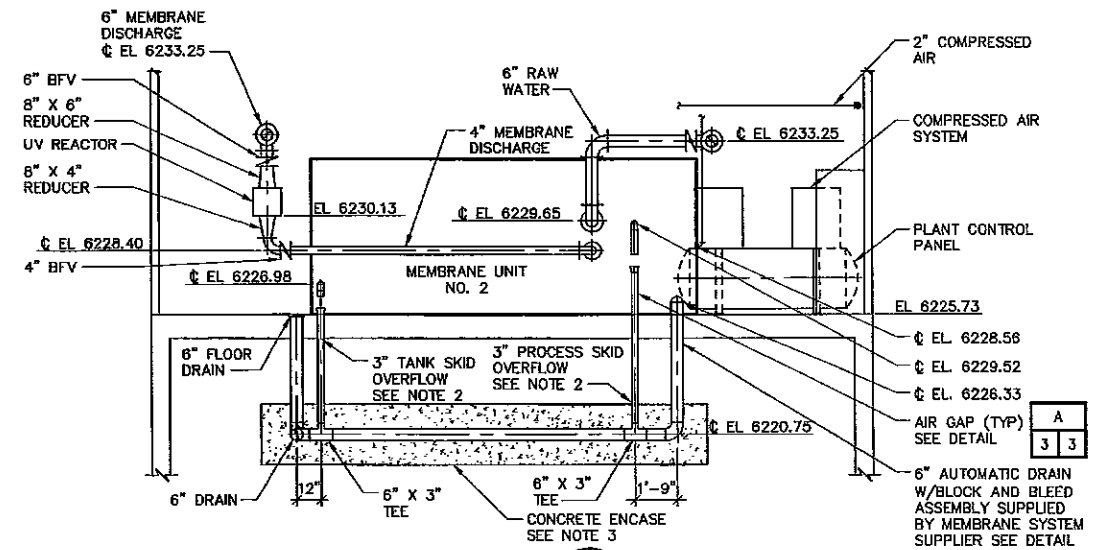
COLORADO CITY METROPOLITAN DISTRICT  
COLORADO CITY, COLORADO  
**COLD SPRING WTP IMPROVEMENTS**

**PROCESS PLAN AND SECTION**  
SCALE: AS SHOWN

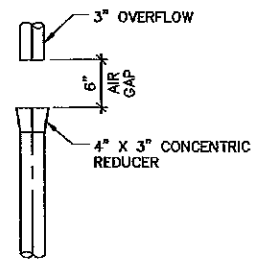
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DATE: AUGUST 2009  
M SHEET 2 OF  
CAD REF. NO. 6450M002



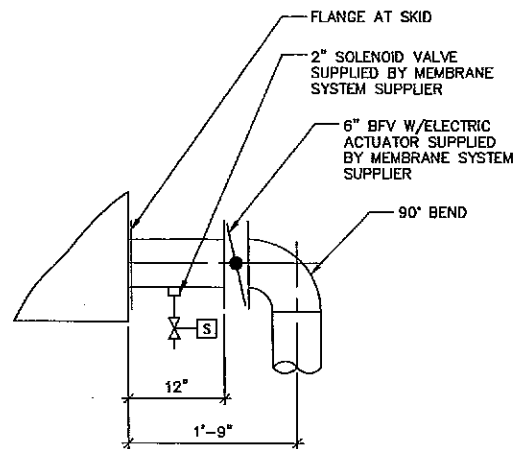
SECTION 2  
SCALE: 1/4" = 1'-0"



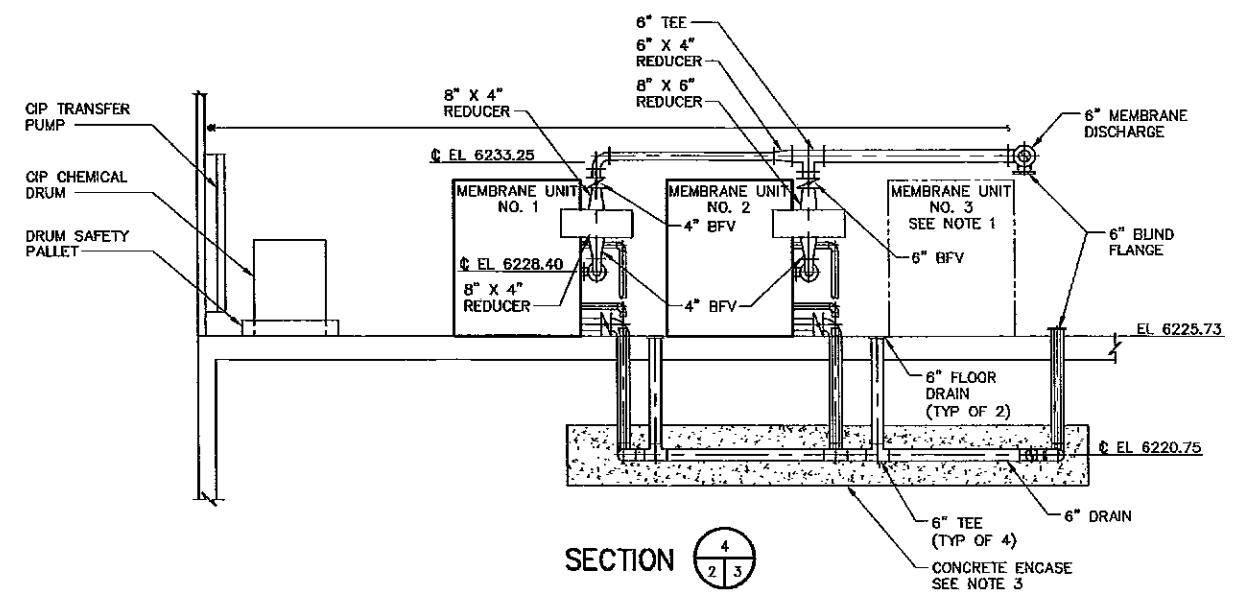
SECTION 3  
SCALE: 1/4" = 1'-0"



DETAIL A  
SCALE: 1" = 1'-0"



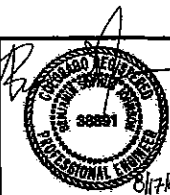
DETAIL B  
SCALE: 1" = 1'-0"



SECTION 4  
SCALE: 1/4" = 1'-0"

- NOTES:
- MEMBRANE SKID NO. 3 WILL BE INSTALLED AT A LATER DATE. STUB UP DRAIN CONNECTIONS 12" AFF AND CAP.
  - PROVIDE AIR GAP BETWEEN 90 DEGREE ELBOW AND PIPE ON 3" TANK SKID OVERFLOW AND 3" PROCESS SKID OVERFLOW.
  - ALL PIPES BELOW SLAB SHALL BE CONCRETE ENCASED. SEE DETAILS SHEET C-2.

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NO.	BY	DATE	REMARKS

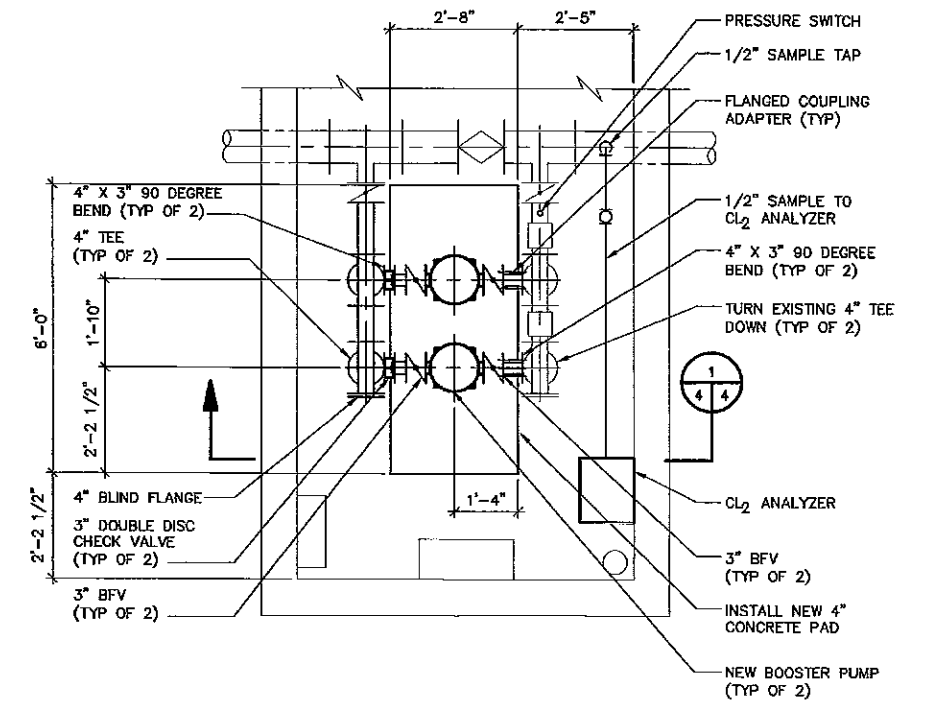
DES: NF  
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COLORADO CITY METROPOLITAN DISTRICT  
COLORADO CITY, COLORADO  
COLD SPRING WTP  
IMPROVEMENTS

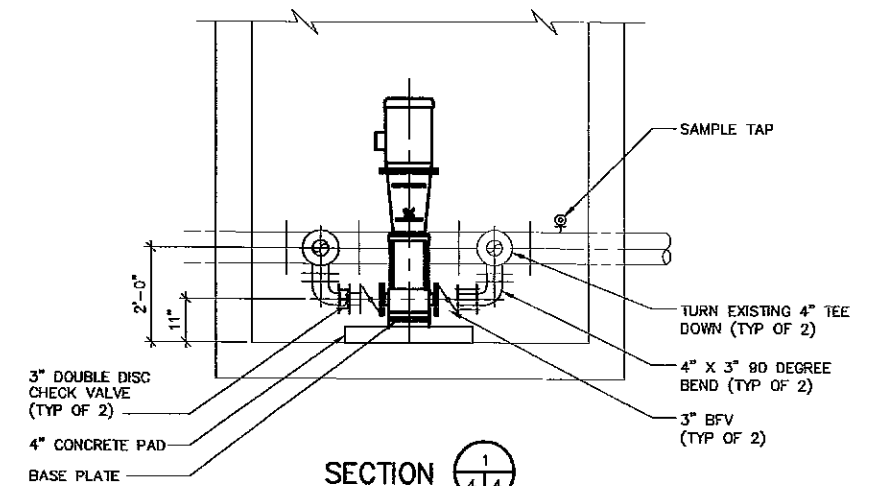
PROCESS  
SECTIONS  
SCALE: AS SHOWN

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CAD REF. NO. 6450M003



**BOOSTER PUMP STATION PLAN**

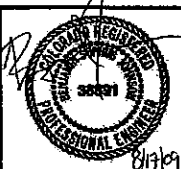
SCALE: 1/2" = 1'-0"



**SECTION**

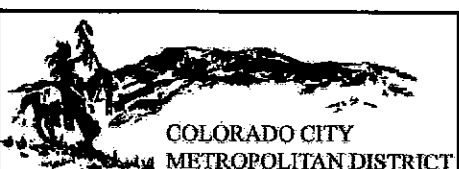
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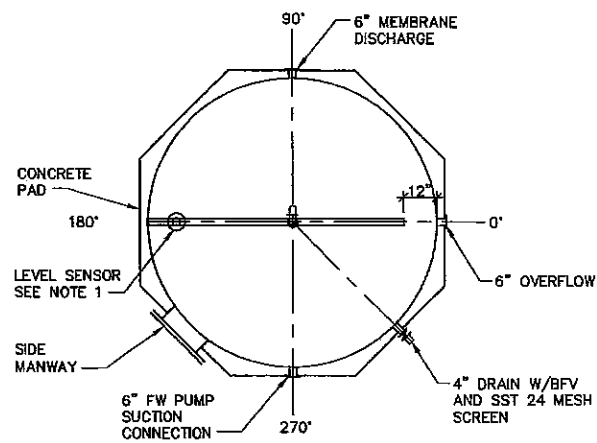
DES. NF  
DWN. BJ  
CHD.



COLORADO CITY METROPOLITAN DISTRICT  
COLORADO CITY, COLORADO  
**COLD SPRING WTP IMPROVEMENTS**

PROCESS  
**BOOSTER PUMP STATION PLAN AND SECTION**  
SCALE: AS SHOWN

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CAD REF. NO. 6450M004

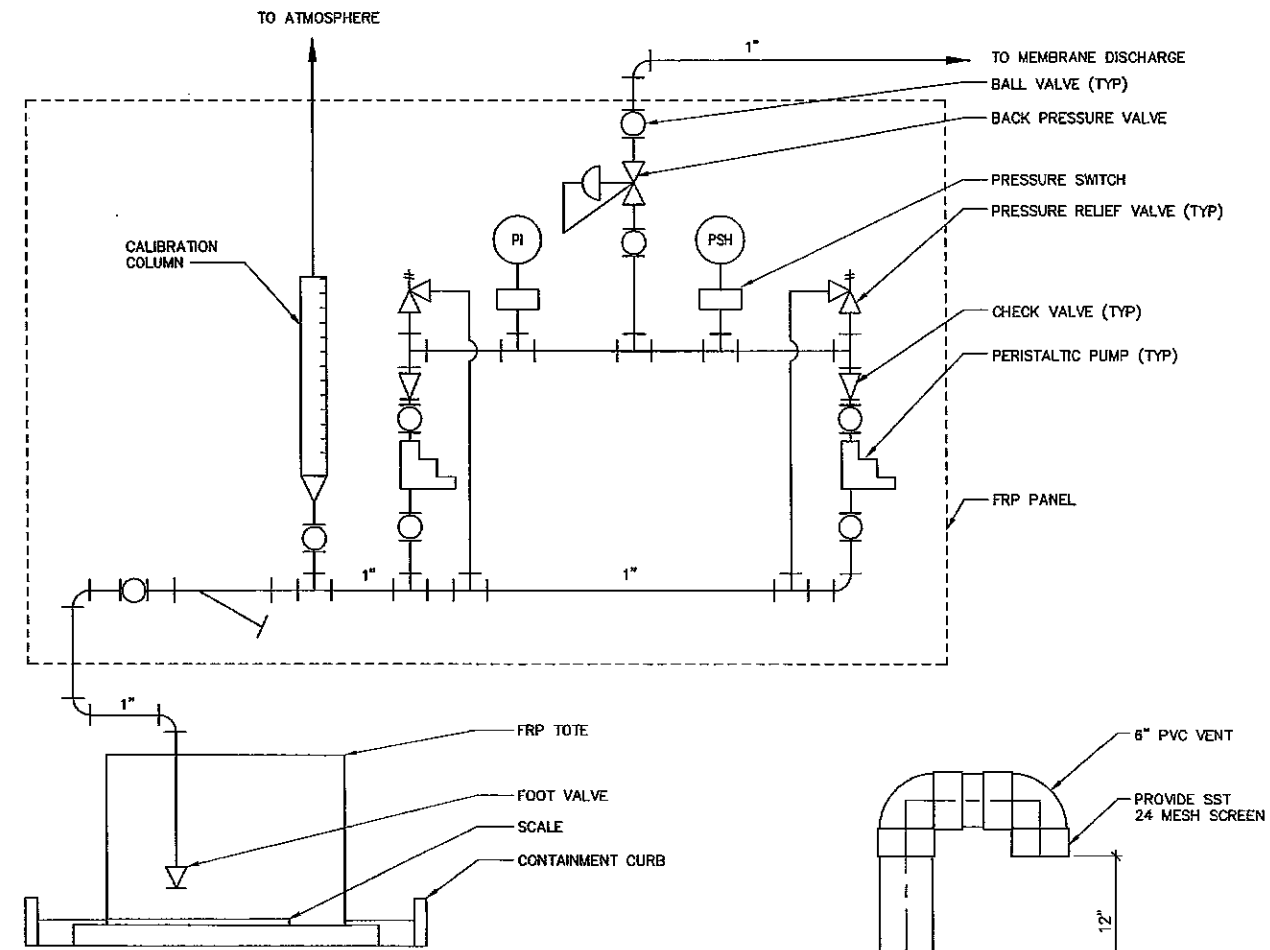


**CLEARWELL ORIENTATION PLAN**  
NOT TO SCALE

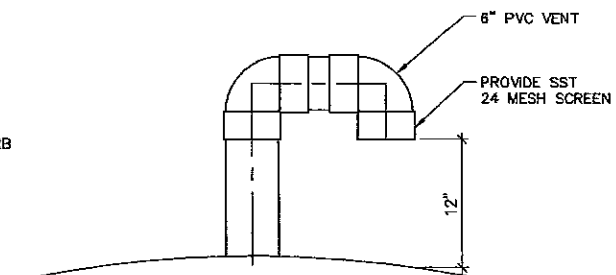
**NOTES:**

1. LEVEL SENSOR TO BE ULTRASONIC TYPE. SEE INSTRUMENTATION SHEETS. LOCATION FROM TANK WALL SHALL BE IN ACCORDANCE WITH LEVEL SENSOR MANUFACTURER'S REQUIREMENTS. SEE TABLE BELOW AND MEMBRANE BUILDING CHEMICAL PLAN FOR ORIENTATION AND PENETRATION LOCATIONS.
2. PROVIDE CAPPED PERFORATED PVC PIPE FULL LENGTH OF TANK. PROVIDE FOUR ROWS OF 1" DIAMETER PERFORATIONS 2 INCHES ON CENTER. SUPPORT PIPE FROM TANK WALL.

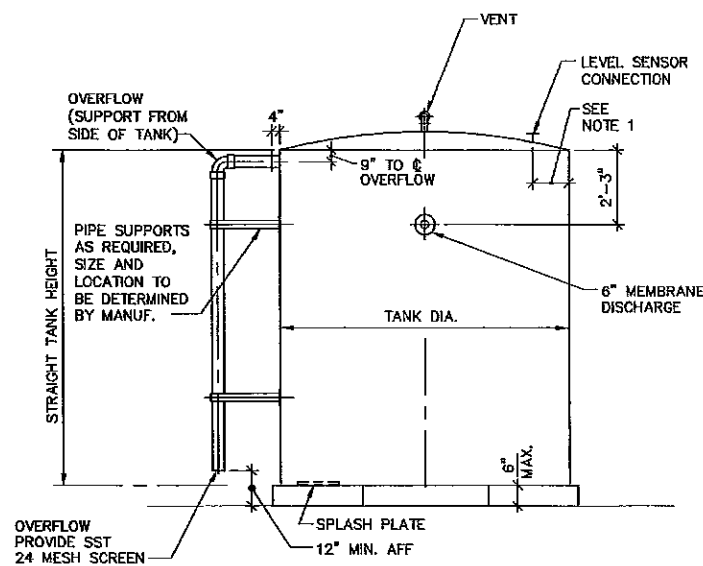
BULK STORAGE TANK PENETRATION SCHEDULE						
BULK STORAGE TANK	PENETRATION	6" MEMBRANE DISCHARGE	OVERFLOW DRAIN	PUMP SUCTION	SIDE MANWAY	LEVEL SENSOR
CLEARWELL		90'	0'	270'	225'	180'
						315'



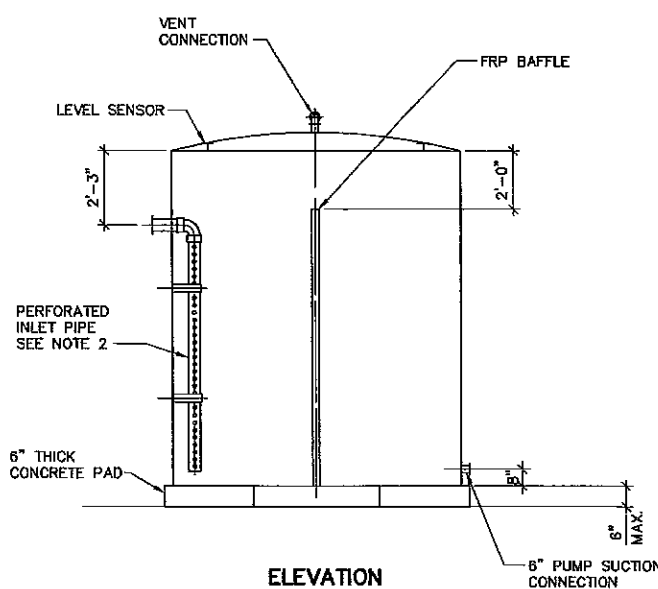
**SODIUM HYPOCHLORITE SYSTEM SCHEMATIC**  
NOT TO SCALE



**VENT DETAIL**  
NOT TO SCALE

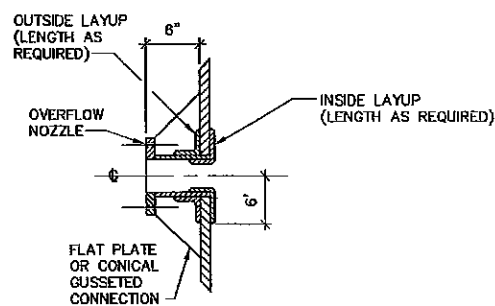


**ELEVATION**

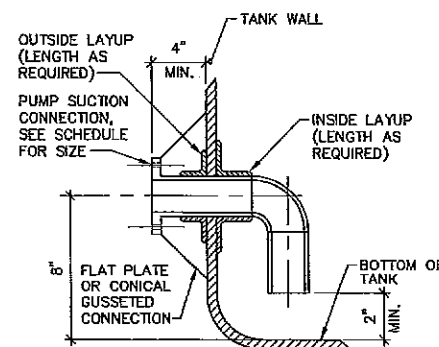


**ELEVATION**

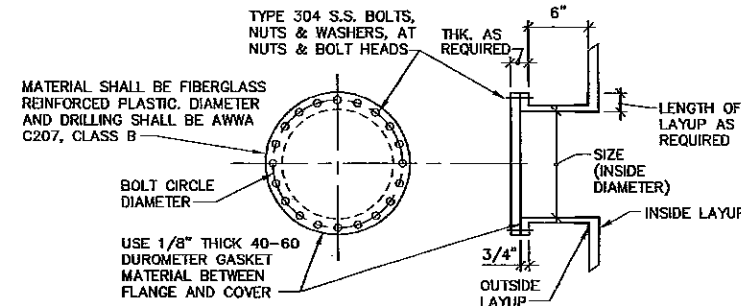
**TYPICAL TANK ARRANGEMENT DETAIL**  
NOT TO SCALE



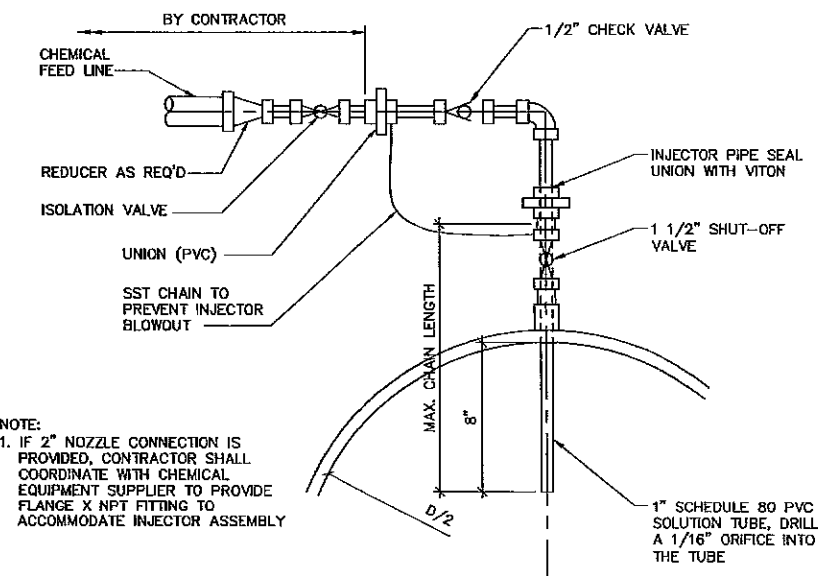
**TYPICAL NOZZLE DETAIL**  
NOT TO SCALE



**PUMP SUCTION CONNECTION**  
NOT TO SCALE



**FIBERGLASS TANK MANWAY DETAIL**  
NOT TO SCALE



NOTE:  
1. IF 2" NOZZLE CONNECTION IS PROVIDED, CONTRACTOR SHALL COORDINATE WITH CHEMICAL EQUIPMENT SUPPLIER TO PROVIDE FLANGE X NPT FITTING TO ACCOMMODATE INJECTOR ASSEMBLY

**DIFFUSER DETAIL**  
NOT TO SCALE

**MALCOLM PIRNIE**



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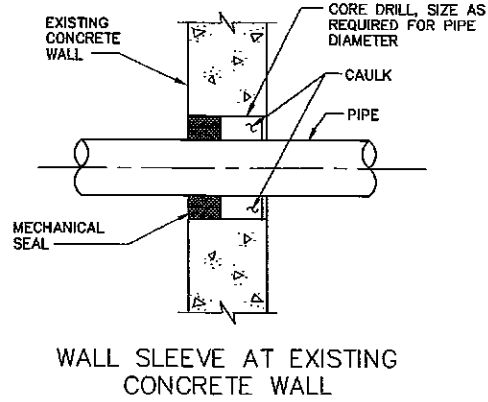
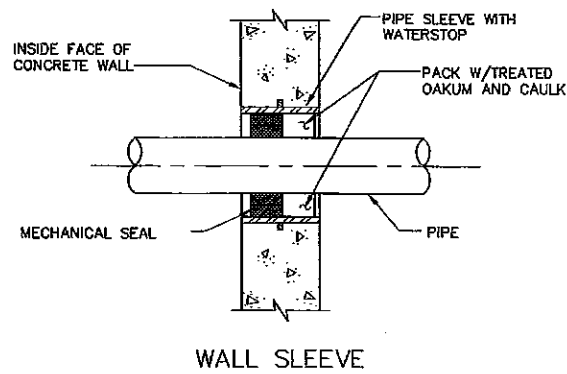
DES NF  
DWN JR  
CKD BBT



**COLORADO CITY METROPOLITAN DISTRICT**  
COLORADO CITY, COLORADO  
**COLD SPRING WTP IMPROVEMENTS**

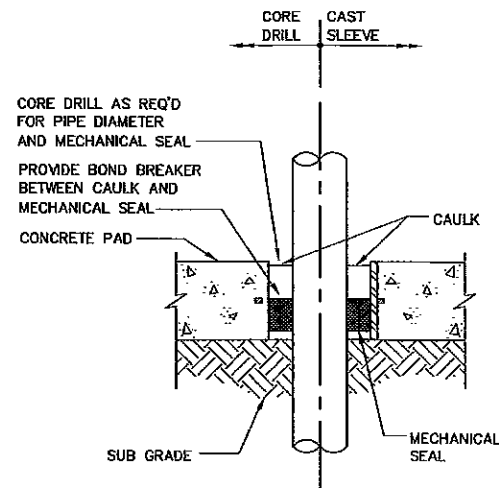
**PROCESS CHEMICALS AND CLEARWELL DETAILS**  
SCALE: AS SHOWN

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M SHEET 5 OF 5  
CAD REF. NO. 6450M005

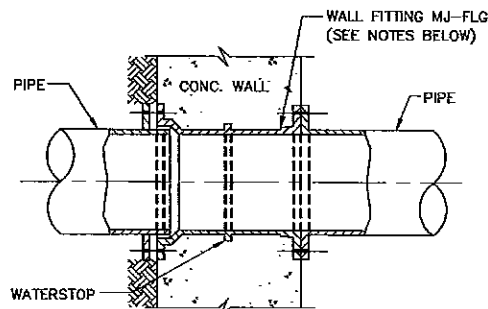


**TYPICAL WALL SLEEVE DETAIL**  
SCALE: NOT TO SCALE

NOTE:  
MECHANICAL SEAL W/ S.S. BOLTS  
(PROVIDE TWO SETS FOR 24" AND  
LARGER PIPE, AND ONE SET FOR  
PIPE LESS THAN 24").

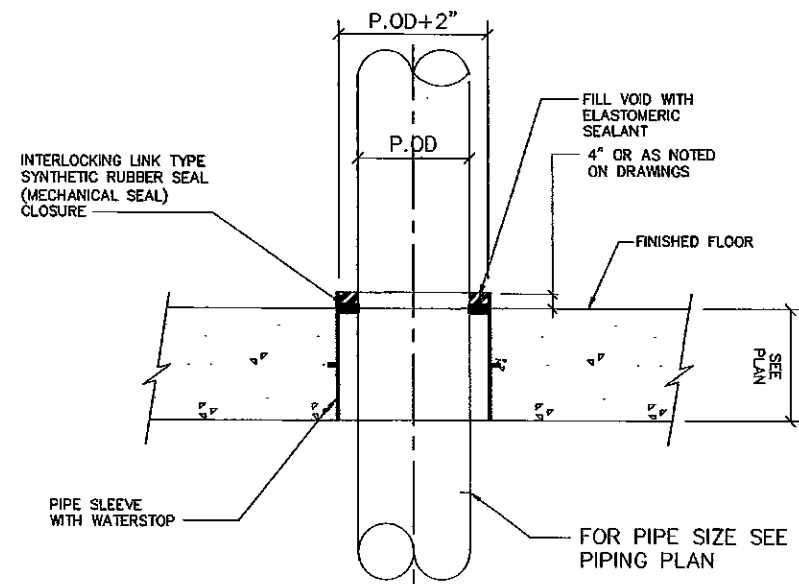


**TYPICAL PAD SLEEVE DETAIL**  
NOT TO SCALE

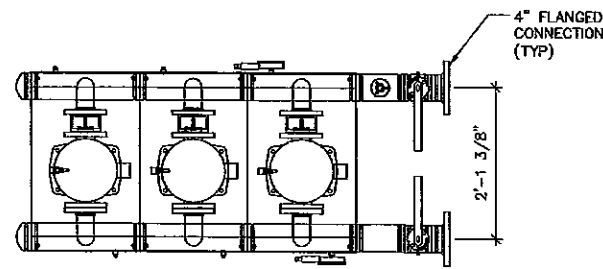


NOTES: 1. WALL PIPE CAN BE MJ-FLG. (ABOVE) MJ-MJ  
FLG.-FLG., MJ-PE AND PLG.-PE.  
2. WALL PIPE IS TO SET FLUSH WITH WALL  
UNLESS OTHERWISE NOTED.  
3. FLANGES & MJ SHOULD BE DRILLED AND  
TAPPED FOR STUDS.

**TYPICAL WALL FITTING DETAIL**  
NOT TO SCALE

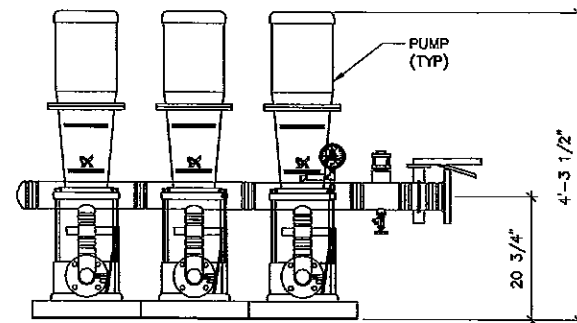


**TYPICAL FLOOR SLEEVE THROUGH NEW FLOOR**  
NOT TO SCALE



PLAN

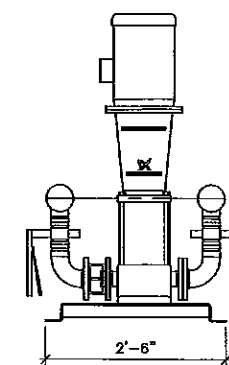
NOTE:  
ALL COMPONENTS SHOWN  
ARE PART OF FW PUMP  
MANUFACTURER SUPPLY.



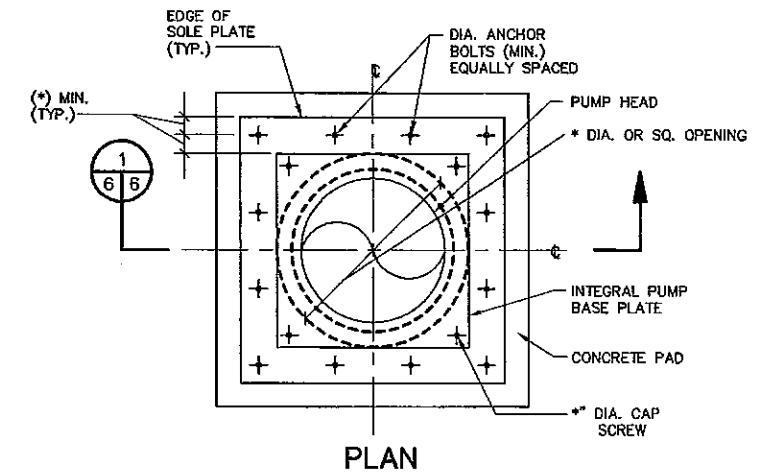
ELEVATION

FW PUMP SKID

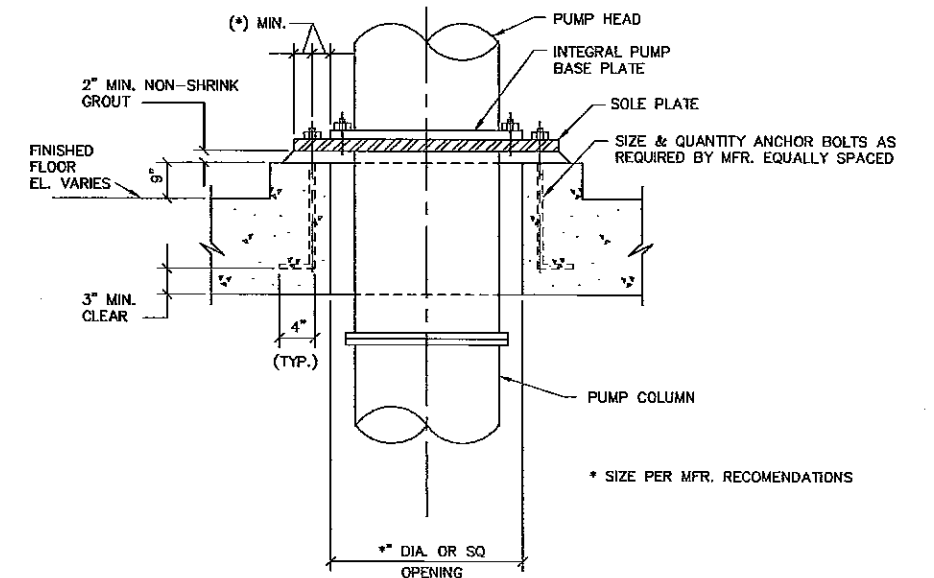
SCALE: 3/4" = 1'-0"



SECTION



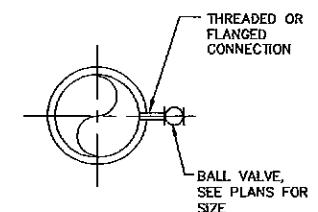
PLAN



SECTION

**TYPICAL VERTICAL PUMP INSTALLATION DETAIL**  
NOT TO SCALE

\* SIZE PER MFR. RECOMMENDATIONS



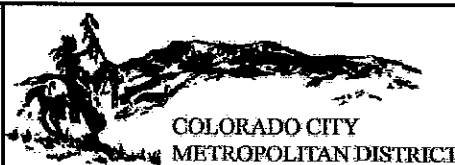
SAMPLE TAP  
NOT TO SCALE

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NO.	BY	DATE	REMARKS

DES NF  
DWN JR  
CID BST

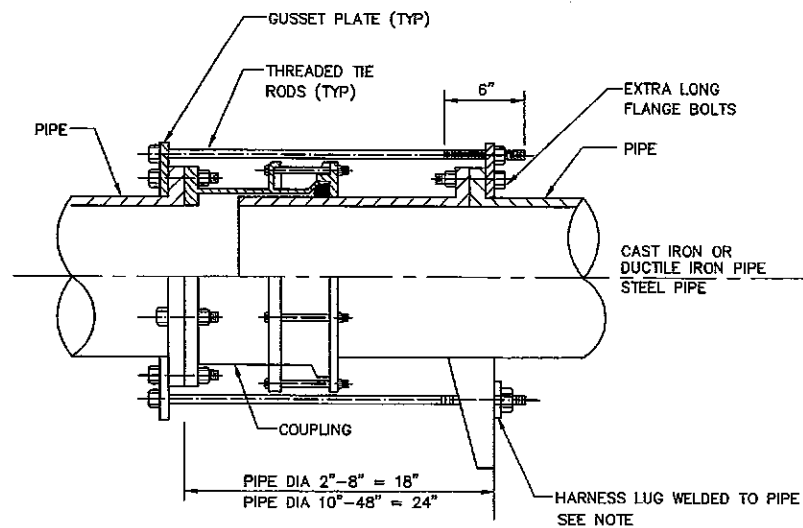


COLORADO CITY METROPOLITAN DISTRICT  
COLORADO CITY, COLORADO  
**COLD SPRING WTP IMPROVEMENTS**

PROCESS  
DETAILS

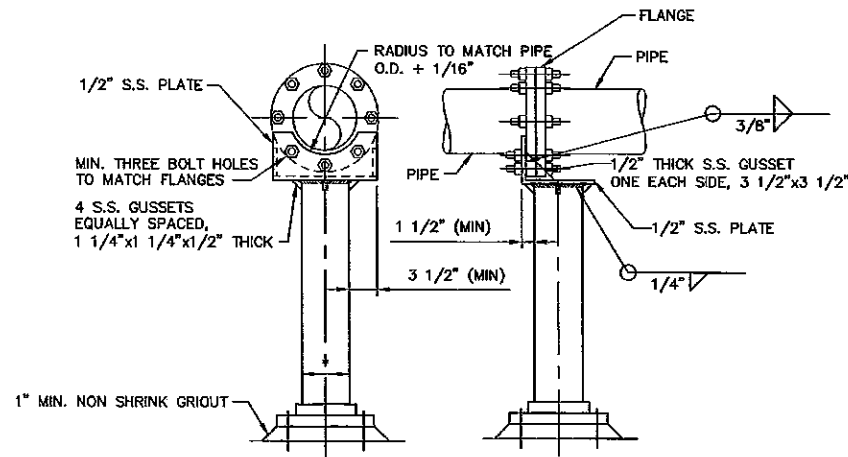
SCALE: AS SHOWN

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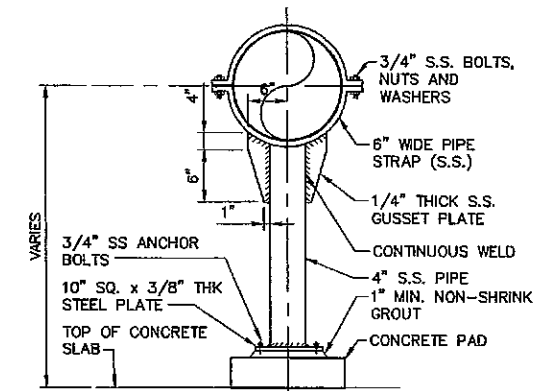
NOTE: THE NUMBER OF TIE RODS, HARNESS LUGS CONFIGURATION AND MATERIAL THICKNESS SHALL BE IN ACCORDANCE WITH AWWA M-11, STEEL PIPE - A GUIDE FOR DESIGN AND INSTALLATION.

**HARNESSED FLANGED COUPLING ADAPTER DETAIL**  
NOT TO SCALE

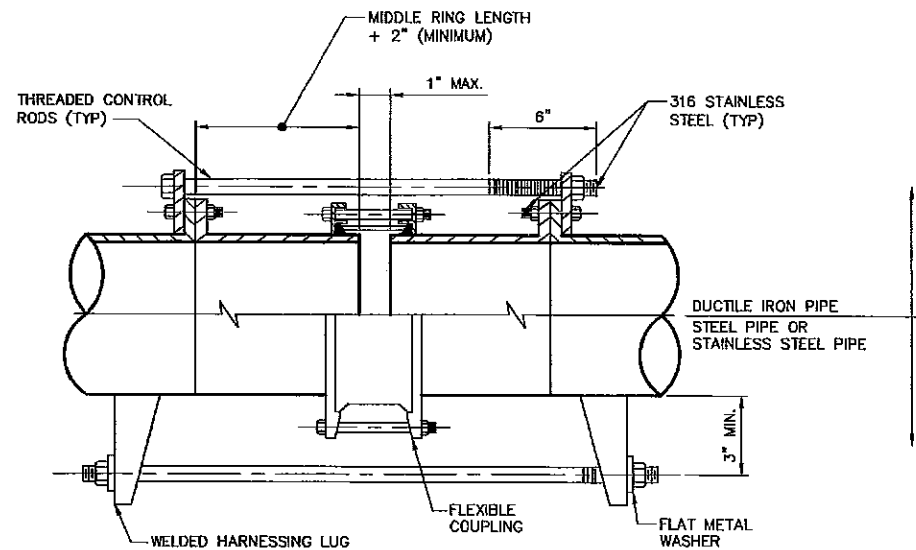


**FLANGE PIPE SUPPORT**  
NOT TO SCALE

\* DIMENSION IN ACCORDANCE WITH MSS-SP38 (TYPE 38), AND AS REQUIRED BY SELECTED MFR.

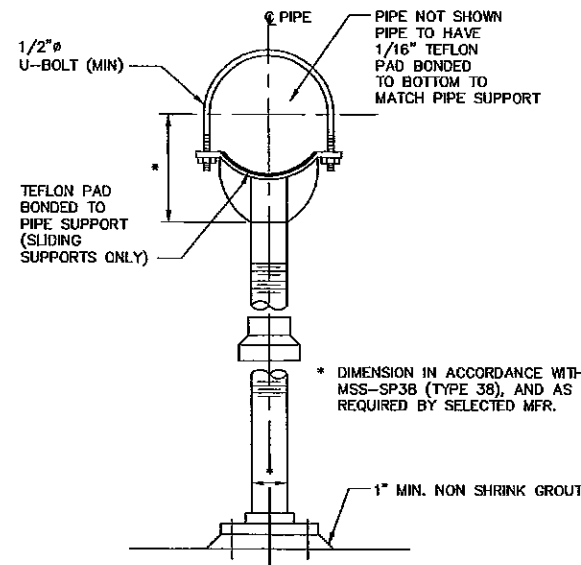


**SADDLE SUPPORT**  
(FOR DIAMETER 10" OR GREATER)  
NOT TO SCALE



**TYPICAL HARNESSED FLEXIBLE COUPLING FOR EXPOSED SERVICE**  
NOT TO SCALE

NOTE: THE NUMBER OF TIE RODS, HARNESS LUGS CONFIGURATION AND MATERIAL THICKNESS SHALL BE IN ACCORDANCE WITH AWWA M-11, STEEL PIPE - A GUIDE FOR DESIGN AND INSTALLATION.



**ADJUSTABLE SADDLE SUPPORT**  
NOT TO SCALE

\* DIMENSION IN ACCORDANCE WITH MSS-SP38 (TYPE 38), AND AS REQUIRED BY SELECTED MFR.

**GENERAL NOTES:**

- WHERE NO REFERENCE TO PIPE SUPPORT SYSTEMS ARE GIVEN ON THE DRAWINGS, THE CONTRACTOR SHALL REFER TO MSS SP58 AND SP69 AND SPECIFICATION SECTION 15220.
- ALL HANGERS AND SUPPORTS SHALL BE TYPE 304L STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- EXPANSION ANCHORS SHALL NOT BE USED AT ANY LOCATIONS. WHERE DETAILS CALL FOR EXPANSION ANCHORS, 2-PART EPOXY TYPE ANCHORS ARE TO BE USED.
- MSS REFERS TO THE MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, STANDARD PRACTICE SP58 AND SP69.
- CONCRETE INSERTS IN AREAS BELOW WATER SURFACE SUBJECT TO SUBMERGING SHALL BE EMBEDDED ANCHOR BOLTS.
- ALL PIPING SUPPORTED BY HANGERS AND/OR STRUCTURAL ATTACHMENTS SHALL BE BRACED AGAINST HORIZONTAL, VERTICAL, AXIAL, AND LONGITUDINAL SWAY. BRACING'S SHALL BE CALCULATED TO RESIST SEISMIC LOADINGS AS SPECIFIED BY SMACNA.
- FITTINGS SHALL NOT BE LESS THAN MSS CL B.
- UNLESS OTHERWISE SPECIFIED, TRAPEZE AND PIPE RACK COMPONENTS, SHALL HAVE A MINIMUM STAINLESS STEEL THICKNESS OF 12 GAGE WITH A MAXIMUM DEFLECTION 1/240 OF THE SPAN. MINIMUM CHANNEL COMPONENT SIZE SHALL BE 1 5/8" SQUARE AS MANUFACTURED BY SUPER STRUT, UNISTRUT, ELCEN, OR EQUAL.
- FOR COPPER PIPE, PROVIDE PLASTIC COATED VERSION OF HANGER COMPONENT. FOR OTHER SUPPORTS USED WITH COPPER PIPE, PROVIDE A FULL 360° WRAP OF 1/16 INCH NEOPRENE BONDED TO PIPE.

REVISIONS			
NO.	BY	DATE	REMARKS