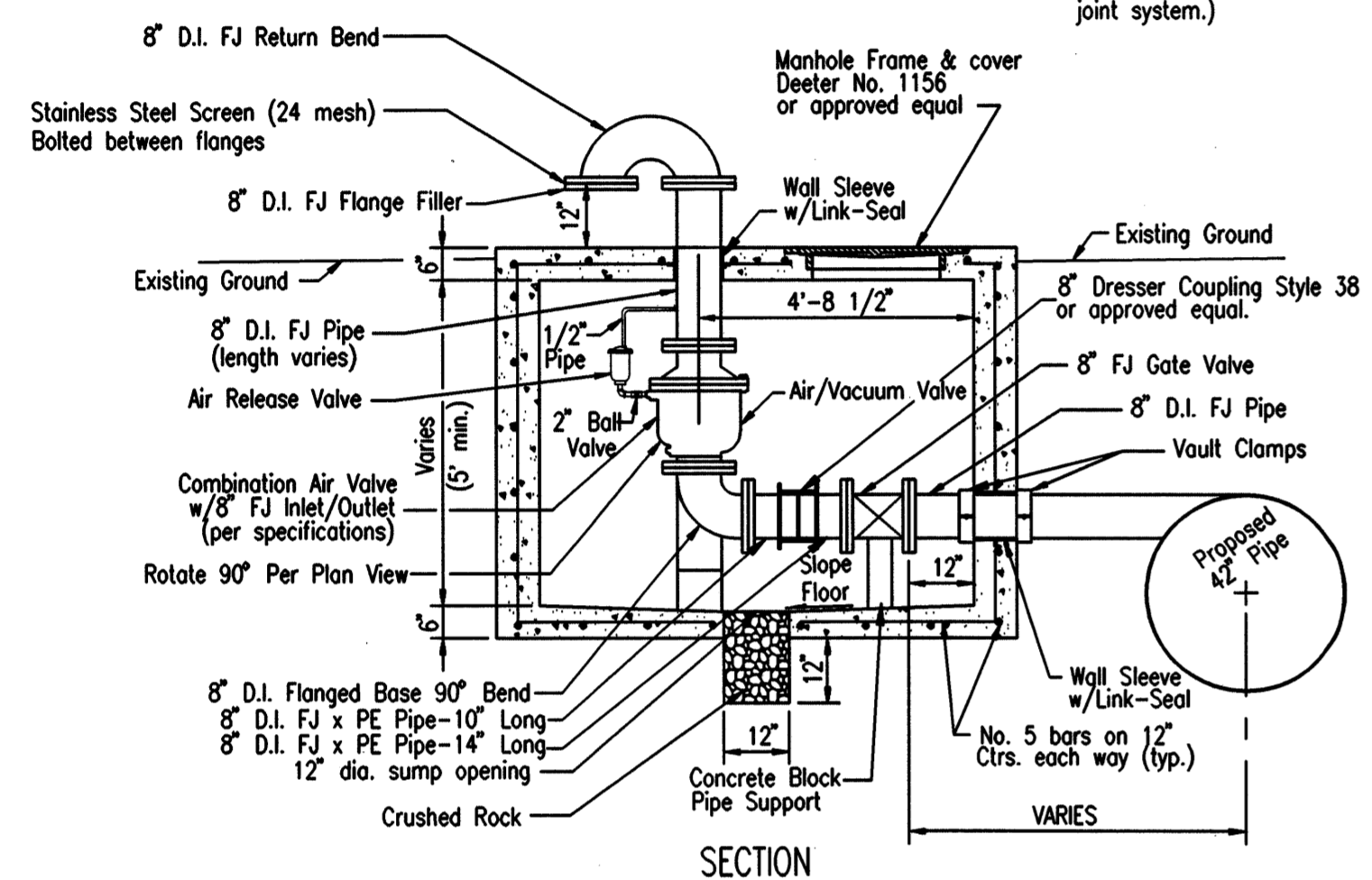


PLAN

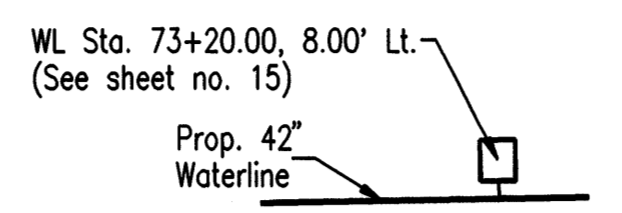
8" DI CL Pipe and Fittings as required to connect to Main at specified station. (All pipe and fittings to be an approved restrained joint system.)



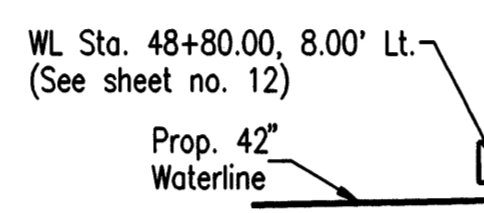
SECTION

**8" AUTOMATIC COMBINATION AIR VALVE AND VAULT**  
(See Sheet No. 12 & 15)

NO SCALE  
NOTE: PROVIDE A CONFINED ENTRY SPACE WARNING SIGN, CHAMPION AMERICAN MODEL 73415HH OR APPROVED EQUAL, FOR VAULT AT LOCATION AS APPROVED BY THE ENGINEER. WARNING SIGN TO BE MOUNTED ON 3#/FT. GALVANIZED "U" CHANNEL POST.  
THE CONTRACTOR SHALL PROVIDE VERTICAL FITTINGS AS REQUIRED TO MEET THE REQUIREMENTS FOR DEPTH OF THE VAULT SHOWN IN THE DETAIL. THE TOP OF THE 8" PIPING INTO THE VAULT SHALL BE BETWEEN 3.5' (MIN.) TO 6' (MAX.) BELOW EXISTING GRADE.

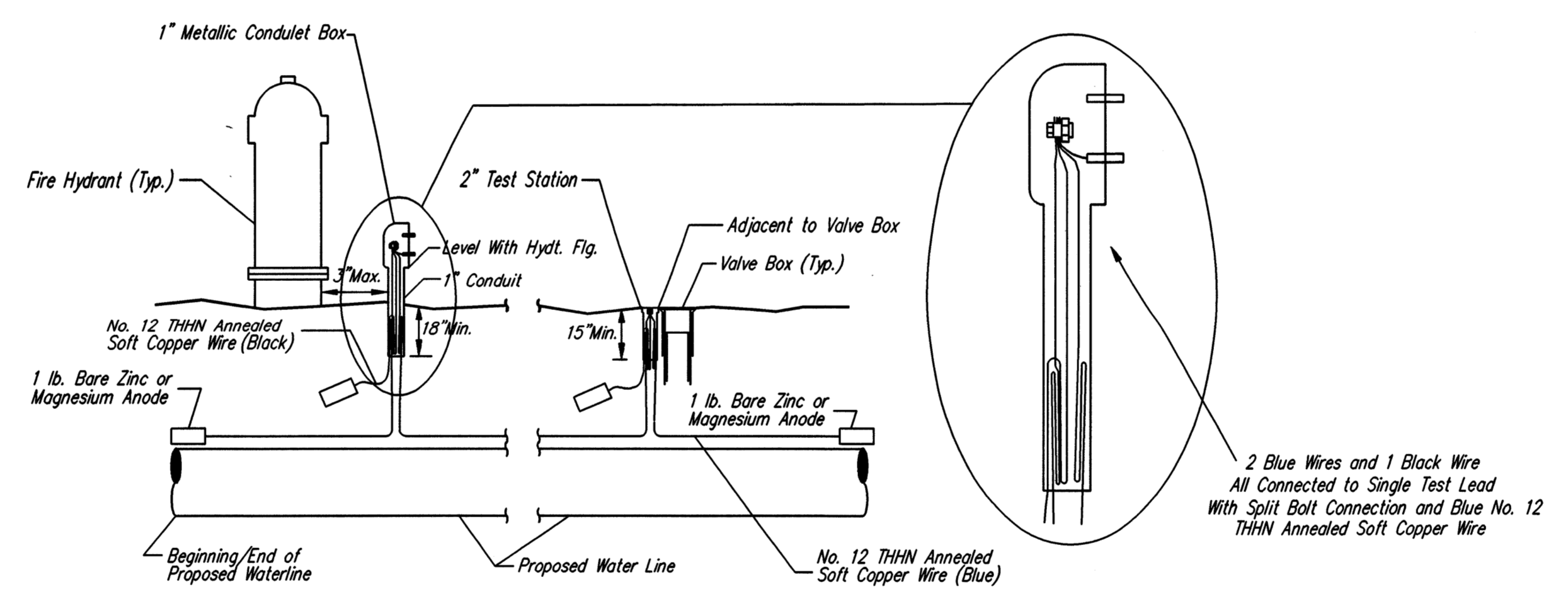


WL Sta. 73+20.00, 8.00' Lt.  
(See sheet no. 15)  
Prop. 4 1/2" Waterline



WL Sta. 48+80.00, 8.00' Lt.  
(See sheet no. 12)  
Prop. 4 1/2" Waterline

**8" AUTOMATIC COMBINATION AIR VALVE AND VAULT HORIZONTAL LAYOUTS**



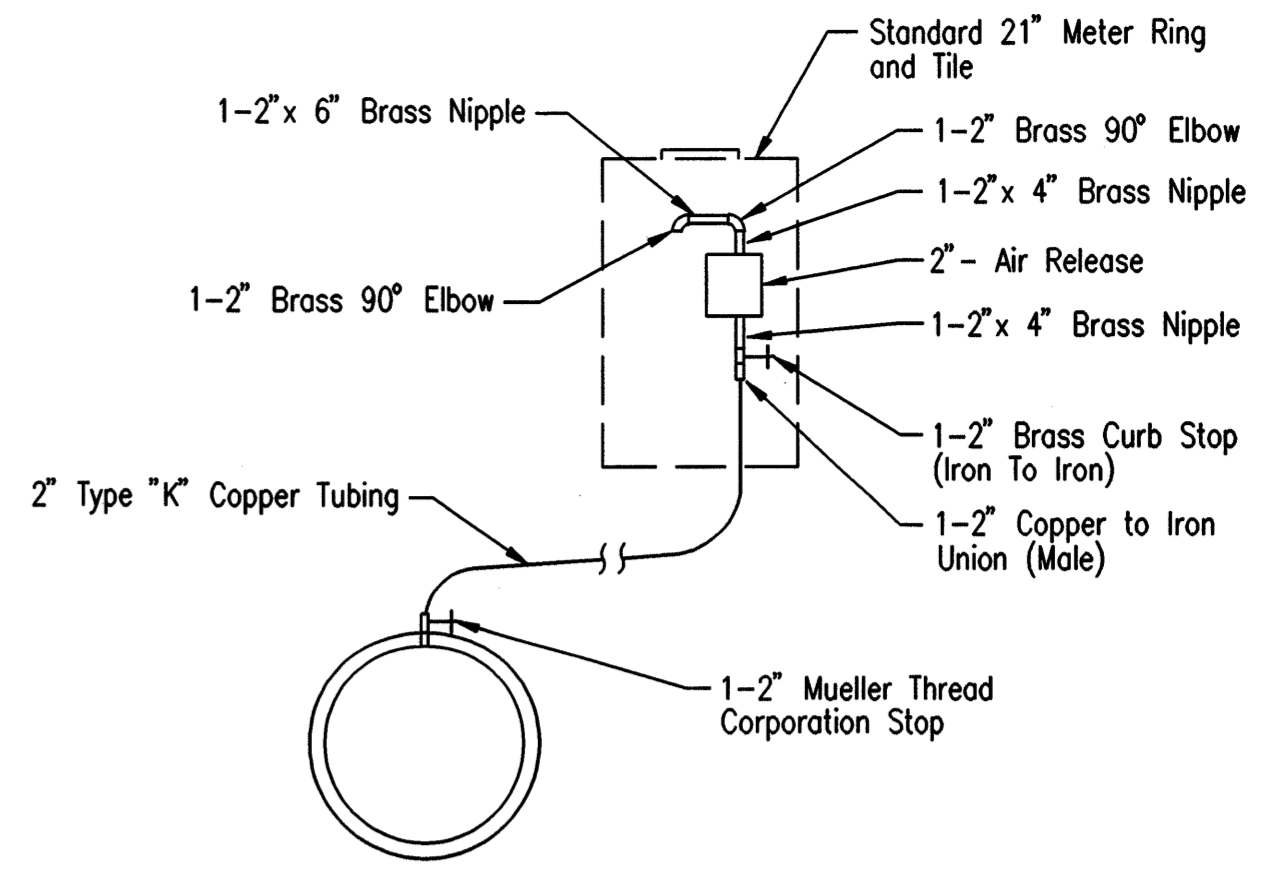
**TRACER WIRE**  
Conductive type pipe locator/tracer wire shall be installed to locate waterline pipes. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. A typical layout of the tracer wire and test station is provided in the above figure.

**WIRES**  
The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

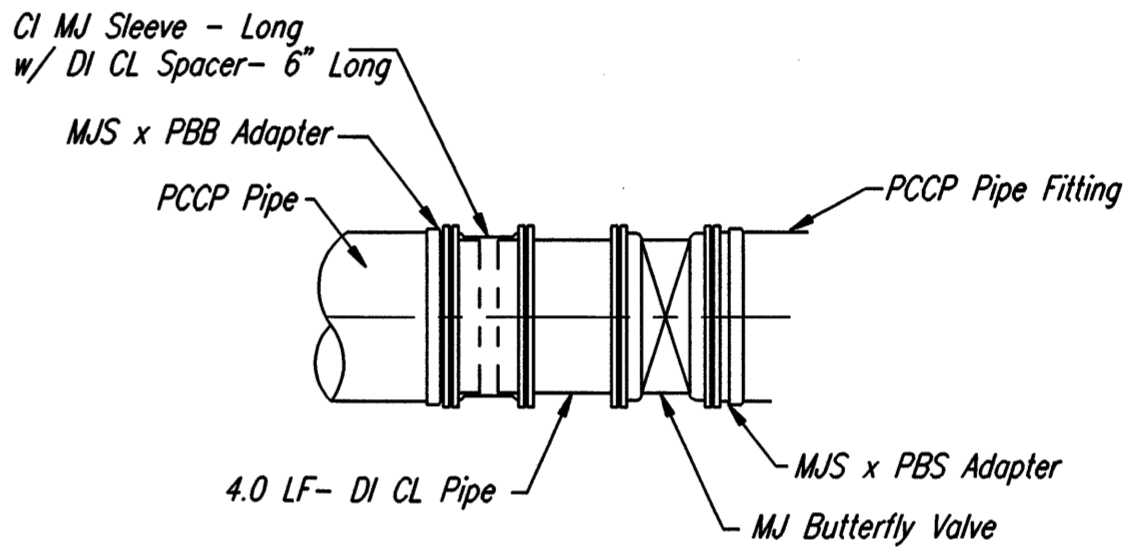
**TEST STATIONS**  
The test station for fire hydrant applications shall be a 1 inch galvanized conduit style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2P53B as manufactured by HANDLEY Industries or approved equal. The conduit style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

**ANODES**  
The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

**TRACER WIRE DETAIL**  
COST IS SUBSIDIARY TO PIPE INSTALLATION



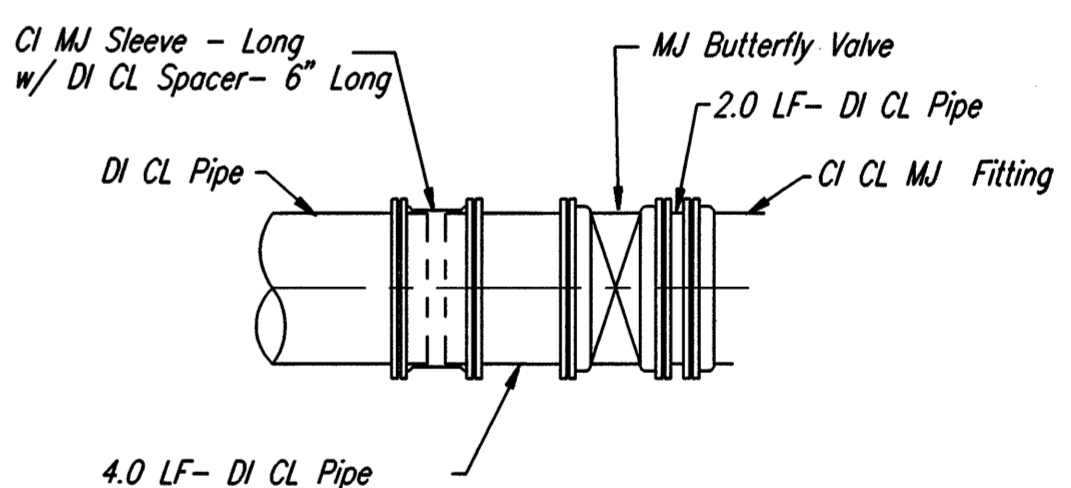
**AIR RELEASE ASSEMBLY DETAIL**



**VALVE ASSEMBLY DETAIL\*\***  
PCCP OPTION

\*\*THE CONTRACTOR SHALL UTILIZE RESTRAINED JOINT PIPE AND TIE RODS TO RESTRAIN ALL PIPING AT THE VALVE LOCATIONS.

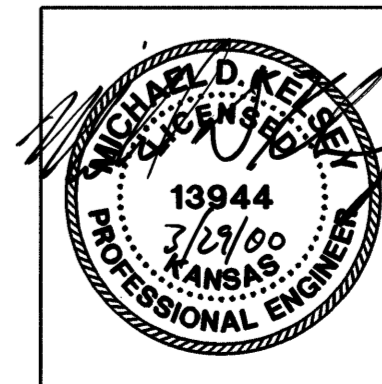
- MATERIALS LIST**
- 1 - MJ Butterfly Valve
  - 1 - 6" Valve Box
  - 1 - CI MJ Sleeve - Long
  - 1 - DI CL Spacer - 6" Long
  - 4' - of DI CL SJ Pipe
  - 1 - MJS x PBB Adapter
  - 1 - PBS x MJS Adapter



**VALVE ASSEMBLY DETAIL\*\***  
DI CL OPTION

\*\*THE CONTRACTOR SHALL UTILIZE RESTRAINED JOINT PIPE AND TIE RODS TO RESTRAIN ALL PIPING AT THE VALVE LOCATIONS.

- MATERIALS LIST**
- 1 - MJ Butterfly Valve
  - 1 - 6" Valve Box
  - 1 - CI MJ Sleeve - Long
  - 1 - DI CL Spacer - 6" Long
  - 6' - of DI CL SJ Pipe



No.	Revision	By	Date
CITY OF WICHITA, KANSAS MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER NORTHEAST TRANSMISSION FACILITY - PHASE 2A <b>WATERLINE DETAILS</b> C.O.W. Proj. No. 448-76-245-89465-000-000-001 <b>Professional Engineering Consultants, P.A.</b> 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	MDK, KJW	Job No.	34-96151-3
Drawn by	JLM	Date	September 1999
			Sh. 6 of 17