

FLORIDA RIVER ESTATES H.O.A

CHLORINE CONTACT CHAMBER EXPANSION PROJECT

PROJECT DESCRIPTION

INSTALLATION OF APPROXIMATELY 220 LINEAL FEET OF 18-INCH C-905 DR-18 PVC WATERLINE. PROJECT INCLUDES TWO (2) CONNECTIONS TO EXISTING WATERLINE. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL, LANDSCAPE RESTORATION TO MATCH EXISTING AND DESIGN AND IMPLEMENTATION OF AN EROSION CONTROL PLAN TO ENSURE SEDIMENT IS NOT CARRIED TO THE ADJACENT POND.

SPECIFIC PROJECT NOTES:

- ALL TIE-INS TO THE EXISTING WATER SYSTEM SHALL BE COORDINATED WITH THE ENGINEER AND OPERATOR. EXISTING SYSTEM SHALL REMAIN IN SERVICE AT ALL TIMES EXCEPT FOR THE TIE-INS AND SHALL BE COORDINATED TO ENSURE THE WATER TANK IS FULL AND THE TIMING FOR THE INTERRUPTION IS FULLY COORDINATED WITH THE OWNER AND HIS REPRESENTATIVES.
- ALL FITTINGS SHALL INCLUDE MECHANICAL JOINT RESTRAINT IN ADDITION TO CONCRETE THRUST BLOCKS.
- THE CONTRACTOR SHALL PERFORM THE REQUIRED WORK AS PER THESE PLANS AND SPECIFICATIONS.
- ALL WORK IS OUTSIDE THE TRAFFIC AREAS, BUT CARE MUST BE EXERCISED WHEN WORKING NEAR TRAFFIC. PROPER TRAFFIC CONTROL SHALL BE PROVIDED AS WARRANTED.
- THE EXISTING WATER MAINS SHALL REMAIN IN SERVICE DURING THE NEW LINE CONSTRUCTION. IF AN EXISTING WATER MAIN MUST BE TAKEN OUT OF SERVICE FOR TIE-IN PURPOSES, THE CONTRACTOR IS REQUIRED TO OBTAIN APPROVAL TO INTERRUPT WATER SERVICE FROM THE WATER SYSTEM OPERATOR AT LEAST 24 HOURS PRIOR TO SHUTTING OFF THE MAIN.

GENERAL WATER NOTES:

- ALL WATER MAIN PIPING SHALL BE AWWA C-900 OR C-905 DR 18 PVC PIPE, AS REQUIRED.
- ALL WATER MAIN FITTINGS SHALL BE DUCTILE IRON PIPE, CLASS 52, COMPLYING WITH AWWA C-150.
- ALL PIPE LINES SHALL BE BURIED A MINIMUM OF FOUR FEET, AND BEDDED TO 12" ABOVE THE PIPE, UNLESS OTHERWISE APPROVED AS NOTED ON THE PLANS.
- ALL LINES SHALL BE PRESSURE TESTED PER AWWA STANDARDS. MINIMUM TEST PRESSURE SHALL BE 150 PSI FOR A MINIMUM OF ONE HOUR. A LEAKAGE TEST SHALL BE PERFORMED PER AWWA STANDARDS.
- THE MINIMUM FACE AREA FOR ALL THRUST BLOCKS SHALL BE AS SHOWN IN THE THRUST BLOCK TABLE.
- WHERE MINOR BENDS ARE SHOWN FOR WATER LINES, DEFLECTION IS TO BE TAKEN IN JOINTS NO GREATER THAN 3 DEGREES OR THAT RECOMMENDED BY THE MANUFACTURER, WHICHEVER IS MORE RESTRICTIVE. FOR THE 18 INCH PVC PIPE, THE JOINT DEFLECTION SHALL BE 1.5 DEGREES MAXIMUM, AS RECOMMENDED.

MATERIAL QUANTITIES

##	DESCRIPTION	QUANTITY	UNIT
EXTENSION OF CHLORINE CONTACT CHAMBER			
1.	18" C-905 DR 18 PVC WATERLINE	310	L.F.
2.	8" C-900 DR 18 PVC WATERLINE	10	L.F.
3.	18" DIP 90° M.J. FITTINGS, WITH MEGALUGS	2	E.A.
4.	18" x 8" DIP M.J. REDUCER W/ MEGALUGS	2	E.A.
5.	8" DIP M.J. 45° FITTINGS, W/ MEGALUGS	3	EACH
6.	8" DIP M.J. 22-1/2° FITTINGS W/ MEGALUGS	1	EACH
7.	THRUST BLOCKS	8	EACH
8.	2" DOW BLUEBOARD - 4'x8' SHEETS	28	EACH

NOTE - BLUEBOARD ONLY REQ'D FOR SHALLOW COVER

GENERAL NOTES:

- THE CONTRACTOR MUST BE FAMILIAR WITH THE PROPOSED PROJECT'S EXISTING CONDITIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, DIFFICULT CONSTRUCTION AROUND EXISTING TREES AND UTILITIES, CONNECTING TO EXISTING WATER LINES AND SMALL VERTICAL GRADE ADJUSTMENTS NECESSARY TO AVOID CONSTRUCTION CONFLICTS. THE CONTRACTOR MUST ADJUST PRIOR TO ACCOUNT FOR THESE DIFFICULT CONSTRUCTION SITUATIONS. NO COMPENSATION SHALL BE GIVEN FOR EXISTING SURFACE CONDITIONS THAT MAY CAUSE DIFFICULT FIELD CONSTRUCTION MODIFICATIONS. CONTRACTOR SHALL EXPECT EXCAVATION TO INCLUDE INDIVIDUAL ROCKS OF VARYING SIZE, SOME TO BE VERY LARGE.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THESE PLANS AND SPECIFICATIONS AS SHALL BE MATCH INDUSTRY STANDARDS. ALL WORK SHALL BE INSPECTED AND APPROVED BY PERSONNEL OF THE OWNER.
- THE CONTRACTOR SHALL NOTIFY THE OWNER, TWENTY-FOUR (24) HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:
 - THE LOCATION OF ALL UTILITY LINES, BOTH HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION. THE UTILITIES SHOWN ON THE DESIGN DRAWINGS ARE FROM UTILITY MAPS AND SURFACE EVIDENCE AND MAY NOT REFLECT THE EXACT FIELD LOCATION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PERMITS, FEES, OR TARIFFS REQUIRED FOR THE PROJECT. PERMITS, FEES, OR TARIFFS SHALL BE CONSIDERED INCIDENTAL TO THE WORK.
 - THE NOTIFICATION OF THE PROPER AUTHORITIES PRIOR TO CONSTRUCTION AND A PRE-CONSTRUCTION MEETING WITH THE OWNER'S REPRESENTATIVE.
 - PROVIDING THE OWNER WITH AN "AS CONSTRUCTED" RED LINED PRINT PRIOR TO FINAL ACCEPTANCE OF THE WORK.
 - THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
 - THE PROPER AND LEGAL DISPOSAL OF ALL DEMOLISHED AND EXCESS MATERIALS.
 - ALL BACKFILL, SOIL, AND ASPHALT COMPACTION AND QUALITY TESTS REQUIRED BY THE STANDARDS AND SPECIFICATIONS.
 - THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
 - ALL DIMENSIONS ARE TO THE CENTER OF PIPE AND CENTER OF FITTING.
 - PIPELINE STATIONING IS ALONG THE CENTER LINE OF THE NEW PIPE.
 - THE EXISTING WATER MAINS SHALL REMAIN IN SERVICE DURING THE NEW LINE CONSTRUCTION.
 - IF AN EXISTING WATER MAIN MUST BE TAKEN OUT OF SERVICE FOR TIE-IN PURPOSES, THE CONTRACTOR IS REQUIRED TO OBTAIN APPROVAL OF WATER SERVICE PERMIT FROM OWNER 24 HOURS PRIOR TO SHUTTING OFF THE MAIN.
 - THE CONTRACTOR SHALL REPAIR OR REPLACE THE EXISTING LANDSCAPING, IN KIND, THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL GUARANTEE SAID LANDSCAPING FOR ONE (1) YEAR AFTER THE FINAL ACCEPTANCE OF THE CONSTRUCTION.
 - PIPE BEDDING - ALL PIPE BEDDING SHALL BE 3/4 INCH MINUS MATERIAL BEDDING WITH AT LEAST 12-INCHES OF BEDDING ABOVE THE PIPE AND AT LEAST 4-INCHES OF BEDDING BELOW THE BELLS. ALL BEDDING SHALL BE COMPACTED TO 90% MODIFIED PROCTOR (ASTM 1557).
 - BEDDING MATERIAL - ALL PIPE BEDDING MATERIAL SHALL BE 3/8" MINUS WASHED PEA GRAVEL, CONCRETE SAND, CL. 6 A.B.C GRAVEL OR OTHER MATERIAL AS APPROVED.
 - TRENCH BACKFILL - VEGETATED/NATIVE AREA: ALL TRENCH BACKFILL SHALL BE NATIVE MATERIAL SCREENED TO 3-INCH MINUS MATERIAL AND COMPACTED TO 90% MODIFIED PROCTOR IN ACCORDANCE WITH ASTM 1557 AT ±2% OPTIMUM MOISTURE CONTENT.
 - THE CONTRACTOR SHALL INFORM THE OWNER'S REPRESENTATIVE 24 HOURS IN ADVANCE WHEN TRENCH WILL BE READY FOR COMPACTION TESTS. THE CONTRACTOR SHALL OBTAIN A GEOTECHNICAL TESTING LABORATORY TO PERFORM ALL REQUIRED TESTS.
 - THE CONTRACTOR SHALL PROTECT, REPAIR OR REPLACE ANY UTILITY IN KIND INCLUDING BUT NOT LIMITED TO: RESIDENTIAL SERVICES, WATER LINES, SEWER LINES, STORM DRAINS, ETC., THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR IS ADVISED THAT UNDERGROUND WATER, SEWER, DRAINAGE, TELEPHONE, GAS, AND CABLE TV FACILITIES ARE LOCATED IN THE VICINITY OF THIS PROJECT. LOCATIONS SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE. OTHER UTILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS INCLUDING SEWER AND WATER SERVICE CONNECTIONS.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE TRUE AND CORRECT LOCATIONS OF EXISTING UTILITIES THAT MAY IMPACT EACH PORTION OF THE WORK. 48 HOURS PRIOR TO PERFORMING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY LOCATION SERVICE AT (800) 922-1987 (CALL 811). CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO COMMENCING CONSTRUCTION IF MARKED UTILITIES APPEAR TO CONFLICT WITH PROPOSED IMPROVEMENTS. THE COST OF LOCATING, PROTECTING AND ACCOMMODATING EXISTING UTILITIES SHALL BE INCIDENTAL TO THE COST OF THE PROJECT. IF AN ACTUAL CONFLICT REQUIRES RELOCATION OF AN EXISTING UTILITY OR THE REDESIGN OF THE PROPOSED IMPROVEMENT, THE CITY WILL DETERMINE IF EXTRA PAY IS WARRANTED TO ACCOMMODATE THE CHANGED OR UNFORESEEN CONDITION. MINOR HORIZONTAL OR VERTICAL ADJUSTMENTS OF THE PROPOSED IMPROVEMENTS TO AVOID CONFLICTS SHALL NOT ENTITLE THE CONTRACTOR TO EXTRA PAY.
 - CONTRACTOR MUST OBTAIN & COMPLY WITH ALL LOCAL, STATE, AND EPA REQUIREMENTS REGARDING STORMWATER PERMITTING, EROSION CONTROL AND DISCHARGE.

AGENCIES

DOMESTIC WATER
Florida River Estates HOA
Mike Amato, O.R.C.
(970) 247-2429

NATURAL GAS

Atmos Energy
1 (888) 442-1313
Emergency Phone No.
1 (800) 662-6185

ELECTRICAL POWER

LPEA
45 Stewart Street
Durango, CO 81301
(970) 247-5788

CABLE TELEVISION

Bresnan Communications
146 East 15th Avenue
Durango, CO 81301
(970) 247-2681

TELEPHONE

Century Link
225 Sawyer Drive
Durango, CO 81301
(970) 259-1441

ALL DEPTHS TO EXISTING UTILITIES HAVE BEEN ASSUMED.
CONTRACTOR IS RESPONSIBLE FOR CONFIRMING DEPTHS.

Legend of Civil Features

Existing Features

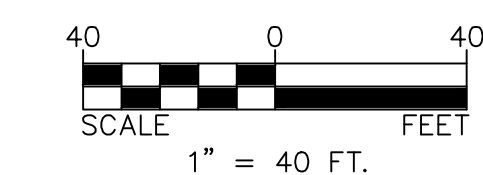
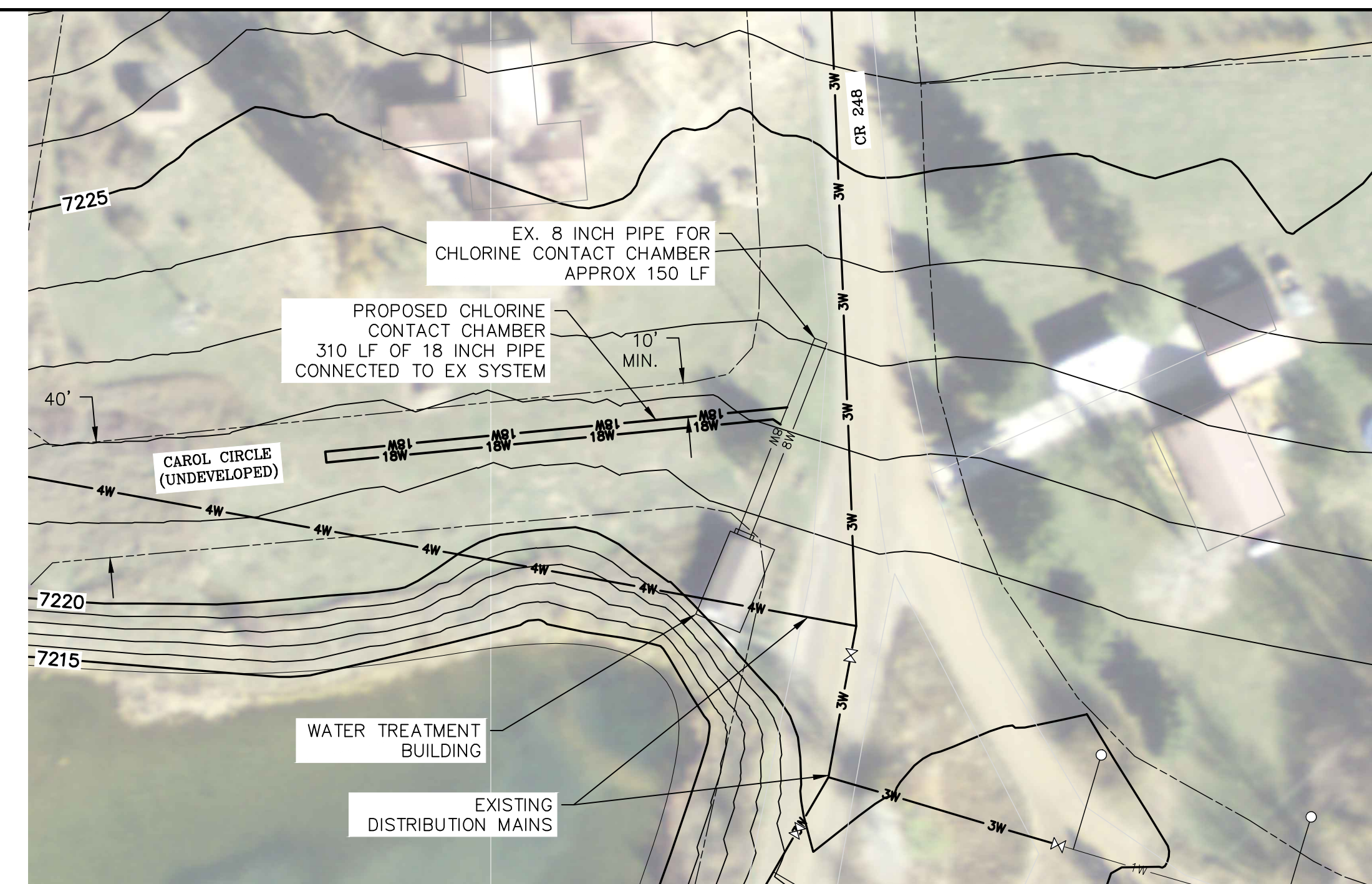
—GW—	WATER MAIN (SIZE NOTED)	⊠	POWER VAULT
—10S—	SEWER MAIN (SIZE NOTED)	⊠	POLE MOUNTED STREET LIGHT
—FM—	SEWER FORCEMAIN	⊠	LUMINARY
—24D—	STORM CULVERT (SIZE NOTED)	⊠	UTILITY POLE
—IRR—	IRRIGATION	⊠	TELE./CATV RISER
—P—	UNDERGROUND POWER	⊠	PHONE BOOTH
—OWP—	OVERHEAD POWER	⊠	POWER JUNCTION BOX
—FO—	UNDERGROUND FIBER OPTIC	⊠	TELE./TV MANHOLE
—TV—	UNDERGROUND TELEVISION	⊠	UTILITY POLE ANCHOR
—T—	UNDERGROUND TELEPHONE	⊠	SIGN ON WOODEN POST
—OHT—	OVERHEAD TV/TELE	⊠	SINGLE WATER SERVICE
—	WATERCOURSE FLOWLINE	⊠	DOUBLE WATER SERVICE
—G—	UNDERGROUND GAS	⊠	WATER MANHOLE - WELLHEAD
—X—	FENCE	⊠	BLOW OFF ASSEMBLY
---	PAVEMENT EDGE	⊠	WATER METER
---	GRAVEL/DIRT ROAD	⊠	FIRE HYDRANT
---	RAILROAD TRACK	⊠	WATER VALVE
---	GUARDRAIL	⊠	GAS VALVE
---	RETAINING WALL	⊠	GAS METER
		⊠	ELECTRICAL CABINET
		⊠	TRANSFORMER

Proposed Features

—	WATERLINE	⊠	DETAIL #
▶	WATERLINE REDUCER	⊠	SHEET #
E	WATERLINE CAP		
⊠	WATERLINE VALVE		
⊠	WATERLINE TEE		
⊠	WATERLINE CROSS		

Sheet Index

- C1.0 COVER SHEET & SITE PLAN
- C2.0 PIPE LAYOUT PLAN & DETAILS



OVERALL SITE PLAN

GOFF
ENGINEERING + SURVEYING INC.

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FLORIDA RIVER ESTATES
CHLORINE CONTACT PROJECT
DURANGO, COLORADO

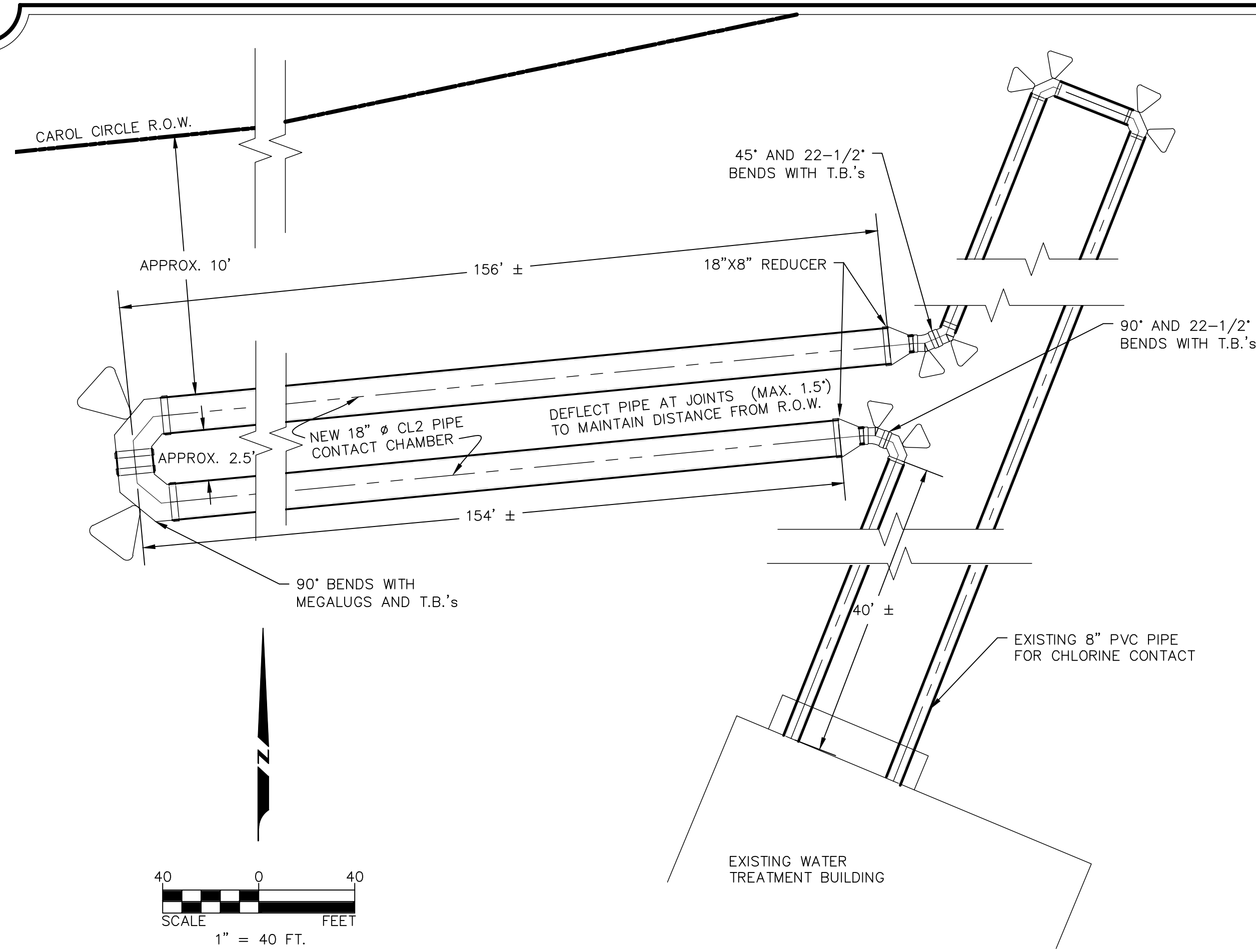
Issue Record:
REVIEW 12-15-2011

Revisions:
EXPAND CL2 CHAMBER 08-21-2012

Project Number: 11-063
Drawn By: RCM
Designed by: BAH
Checked By: BAH

Sheet
C1.0

COVER SHEET
& SITE PLAN



ENLARGED PIPE LAYOUT PLAN

GENERAL CHLORINE CONTACT CHAMBER NOTES:

- 18" DIA. C-905 DR 18 PIPE TO BE USED FOR CL2 CHAMBER.
- FITTINGS SHALL BE DUCTILE IRON PIPE OF THE SIZES SHOWN.
- MEGALUG JOINT RESTRAINTS SHALL BE PROVIDED FOR ALL FITTINGS.
- DEPTH OF BURY SHALL BE 4'; IF 4' IS NOT OBTAINABLE, DOW BLUEBOARD INSULATION SHALL BE INSTALLED AT 1' ABOVE TOP OF PIPE AS A FROST BREAK FOR FREEZE PROTECTION. IF ALLOWABLE, THE FINISHED GRADE ABOVE PIPE CAN BE RAISED UP TO ONE FOOT ABOVE EXISTING GRADE TO PROVIDE FROST PROTECTION IN LIEU OF RIGID INSULATION.
- SPACING FOR 18" PIPES IN PARALLEL IS APPROX. 24".
- CONTRACTOR SHALL CONTACT UNDERGROUND LINE LOCATION SERVICE (CALL 811) FOR UTILITY LOCATES PRIOR TO CONSTRUCTION.
- UTILITY PERMIT FOR WORK WITHIN COUNTY RIGHT-OF-WAY SHALL BE OBTAINED PRIOR TO CONSTRUCTION.
- ALL PERMIT FEES TO BE PAID BY CONTRACTOR.
- CONTRACTOR TO UNCOVER EXISTING 8" PIPE TO VERIFY ANGLES FOR FITTINGS

REQUIRED FREE CHLORINE RESIDUAL:

REFER TO CALCULATIONS INCLUDED FOR REQUIRED CONTACT CHAMBER LENGTHS TO ACHIEVE ADDITIONAL LOG REMOVAL AS REQUIRED.

PRESENT DESIGN PROVIDES PRE FILTER CHLORINATION.

PLUMBING CHANGES PROPOSED WILL CHANGE EXISTING CHLORINATION LOCATION TO POST FILTER CHLORINATION.

STRAINRITE FILTER BAGS SUGGEST MAXIMUM 0.6 mg/L CHLORINE RESIDUAL THROUGH FILTERS. DUE TO SEASONAL DEMANDS AND WATER QUALITY A SECOND CHLORINATOR IS PROPOSED TO ALLOW PRE OR POST FILTER CHLORINATION TO BE DETERMINED BY OPERATION OF RESPONSIBLE CHARGE (ORC). ORC TO USE EITHER OR BOTH CHLORINATORS BASED UPON SYSTEM REQUIREMENTS AND TO ENSURE MAXIMUM CHLORINE DOSAGE THROUGH FILTER BAGS IS NOT EXCEEDED.

**SODIUM HYPOCHLORITE FEED CALCULATIONS:
(FOR PRE-FILTER LOCATION)**

ASSUME 6% SOLUTION (60,000 mg/L)

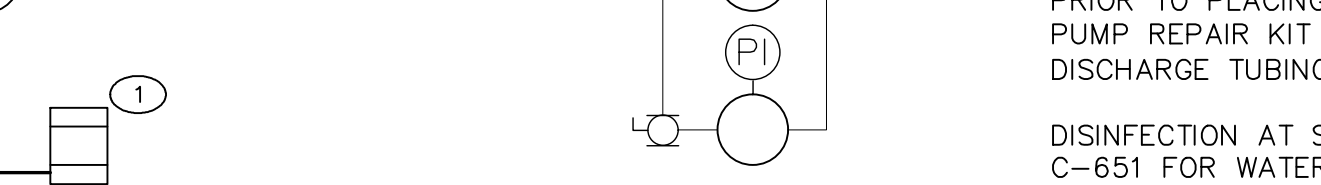
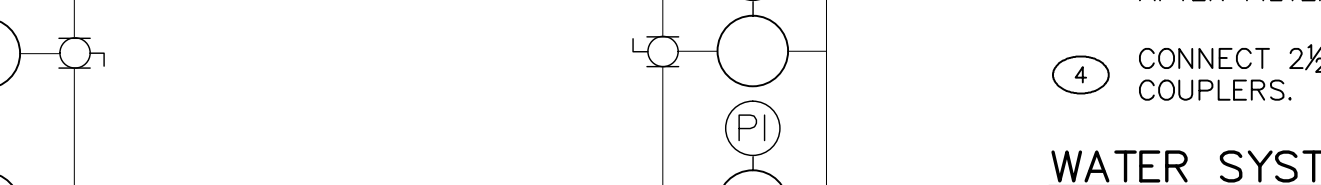
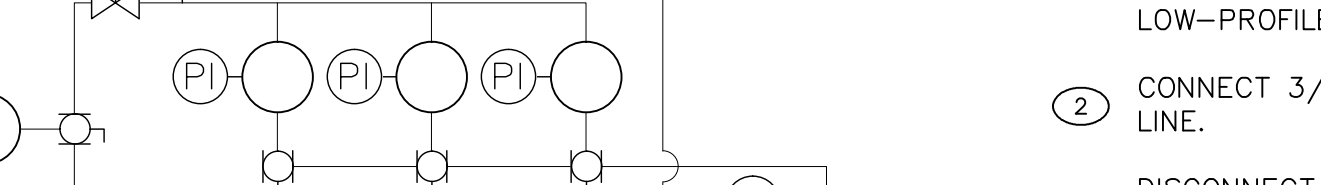
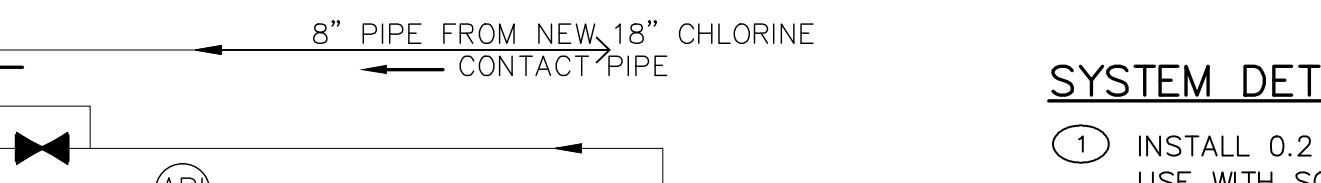
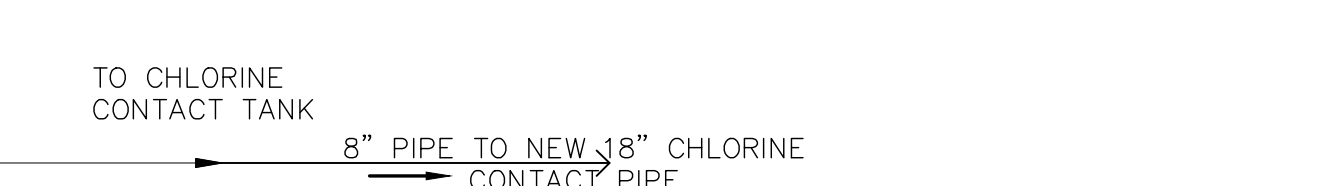
DESIRED FREE CHLORINE RESIDUAL = 0.6 mg/L

MAX PUMP FLOW RATE = 60 gpm (CURRENT APPROVED)

REQUIRED CHLORINE = 600 gal/min (0.6 mg/L) (3.7854 L/gal) = 136.3 mg/min

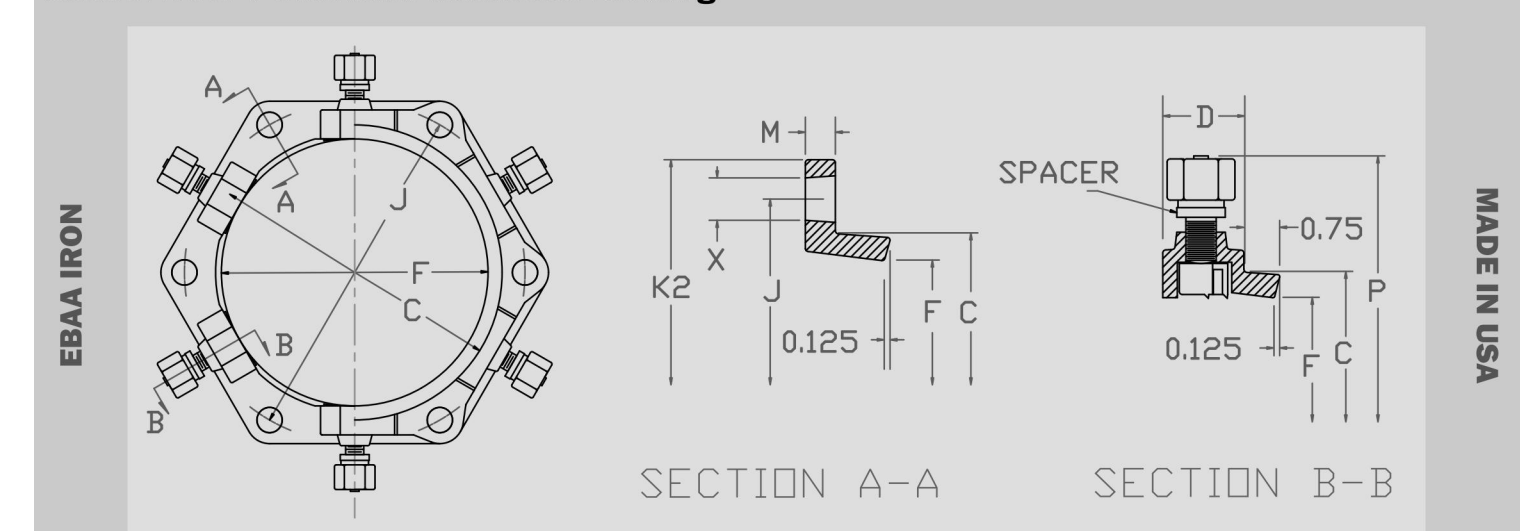
CHEMICAL FEED PUMP CAPABLE OF DELIVERING BETWEEN 0.07 AND 0.22 mL PER STROKE. FOR THE ABOVE SOLUTION, IF SET AT SAY 0.1 mL/STROKE, CHEMICAL FEED PUMP WILL DELIVER 60,000 mg/L (0.1 mL/STROKE) (1 L/1000 mL) = 6 mg/STROKE

THEREFORE, FOR THE ABOVE SOLUTION SET INITIAL CHEMICAL FEED PUMP SPEED AT (136.3 mg/min) / (106.25 mg/min-STROKE) = 22 STROKES, AND ADJUST ACCORDINGLY TO ACCOUNT FOR CHLORINE DEMAND AND FREE RESIDUAL.



WATER TREATMENT FACILITY PLUMBING SCHEMATIC (NO SCALE)

Series 2000PV Submittal Reference Drawing



Nominal Pipe Size	Series Number	C	D	F	M	P	P*	X	J	K2	Wedge Qty	Bolt Qty	Weight (lbs.)
8	2008PV	10.17	1.68	9.15	0.62	14.5	13.6	7/8	11.75	13.38	6	6	16.3
18	2018PV	20.60	2.25	19.68	1.13	25.9	25.1	1 1/2	23.25	24.88	12	12	61.8

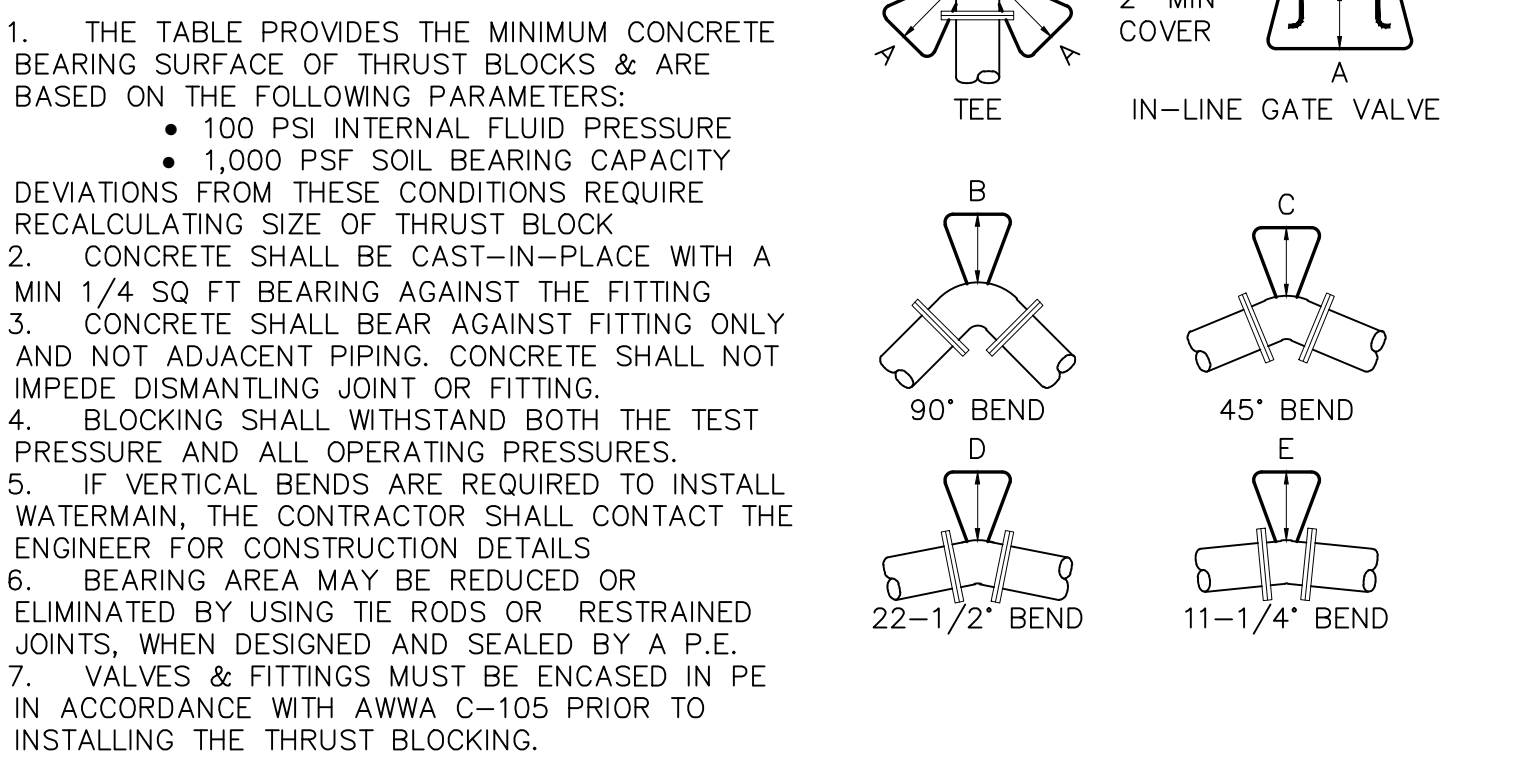
NOTE: Dimensions are in inches and are subject to change without notice. For applications or pressures other than those shown, please contact EBAA for assistance.

Nominal Pipe Size	Series Number	Rating for Ordinary Water Works or Transient surges only					Rating for Peak Pressures used in Storage Tanks and other installations designed for Cyclic Surges of 1 Mill. Cycles					CSOS PVC Pipe						
		DR14	DR18	DR25	SDR17	SDR21	SDR26	DR14	DR18	DR25	SDR17	SDR21	SDR26	DR18	DR25	DR32.5	DR41	
8	2008PV	305	235	165	250	200	160	244	188	132	200	160	120	-	-	-	-	-
18	2018PV	-	-	-	-	-	-	-	-	-	-	-	200	165	-	-	-	

* Refer to Series 2200 to achieve rated pressure on DR41 in stated pipe size.

MINIMUM REQUIRED BEARING AREA (SQ FT)

PIPE	Tees/ends	90°, 45°, 22.5°, 11.25°				
		A	B	C	D	E
4"	1.3	1.8	1.0	0.5	--	
6"	2.8	4.0	2.2	1.1	0.5	
8"	5.0	7.1	3.8	2.0	1.0	
10"	7.8	11.1	6.0	3.0	1.5	
12"	11.3	16.0	8.6	4.4	2.2	
14"	15.4	21.7	11.8	6.0	3.0	
18"	25.4	36.0	19.4	10.0	5.0	



THRUST BLOCKING SCHEDULE (NO SCALE)

SYSTEM DETAIL KEYNOTES:

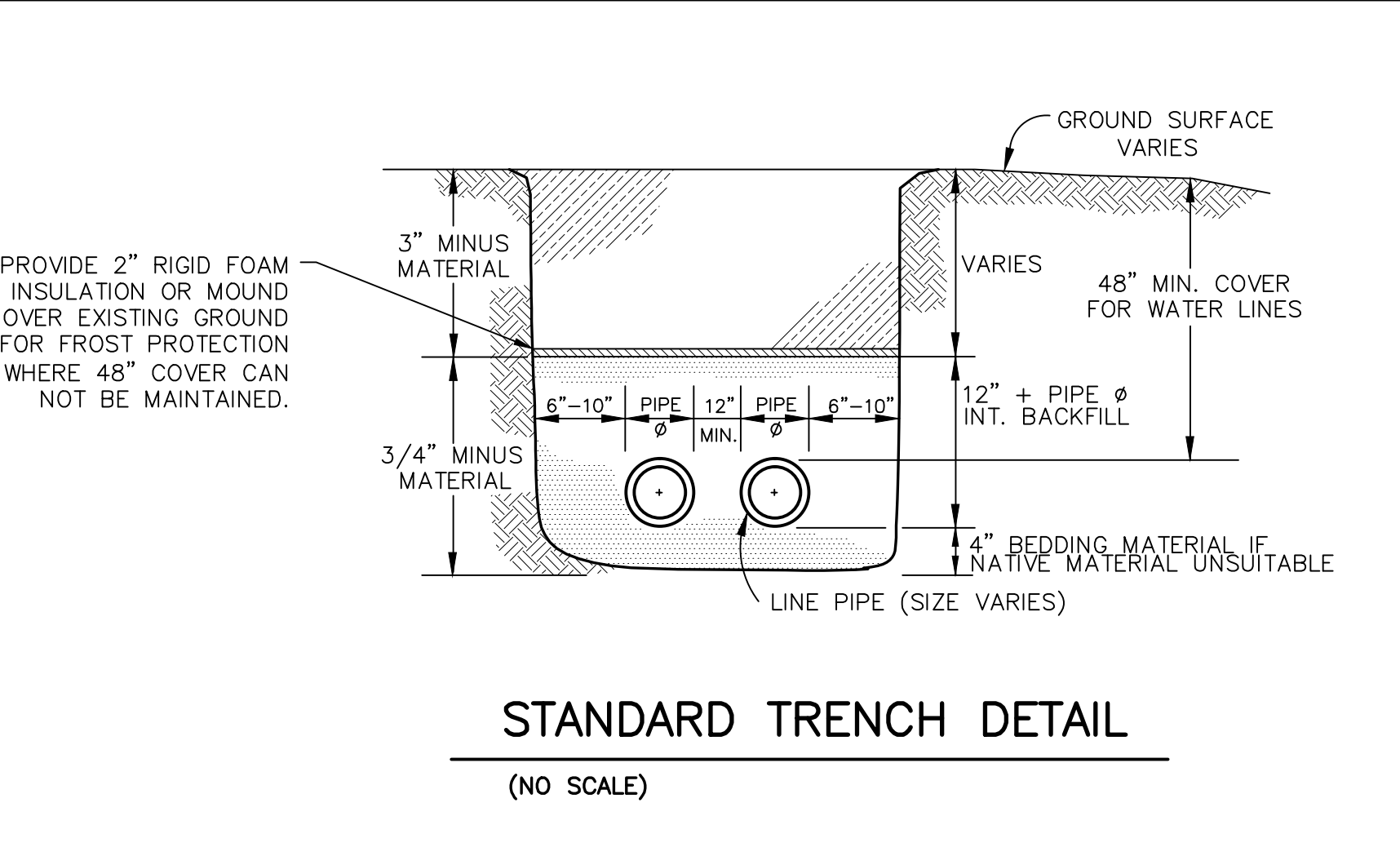
1. INSTALL 0.2 GPH LMI MILTON ROY ELECTRONIC METERING PUMP (SERIES P76 MODEL P12-150 PSI) FOR USE WITH SODIUM HYPOCHLORITE) ON SHELF OF LMI 35-GALLON SOLUTION TANK (MODEL 27400). USE NSF 60 COMPLIANT SODIUM HYPOCHLORITE SOLUTION. SOLUTION TANK TO BE PLACED ON LOW-PROFILE 19-GALLON CONTAINMENT TRAY (BLUEBOOK MODEL MG-42657).
2. CONNECT 3/8" CL2 SOLUTION TUBING (NSF 61 COMPLIANT) FROM CHEMICAL FEED PUMP TO WATER LINE.
3. DISCONNECT THESE 2 1/2" Ø PVC LINES TO REROUTE FLOW PATH FOR CHLORINE CONTACT PIPES TO BE AFTER FILTER SYSTEM.
4. CONNECT 2 1/2" Ø SCH 40 PVC PIPE INTO NEW FLOW PATH AS SHOWN. PROVIDE PIPE, FITTINGS AND COUPLERS.

WATER SYSTEM CONSTRUCTION NOTES:

PRIOR TO PLACING NEW CHLORINATION DEVICE INTO SERVICE, CONTRACTOR TO SUPPLY LMI CHEMICAL FEED PUMP REPAIR KIT AND SUFFICIENT CHEMICAL FEED PUMP REPLACEMENT SUCTION TUBING (CLEAR PVC) AND DISCHARGE TUBING (PE).
DISINFECTION AT STARTUP SHALL COMPLY WITH AWWA STD. C-652 FOR STORAGE TANKS AND AWWA STD. C-651 FOR WATER MAINS.
ALL WATER PIPING AND APPURTENANCES SHALL COMPLY WITH NSF STANDARD 61 FOR POTABLE WATER USE.

DAILY REQUIRED CHLORINE DOSE:

AVERAGE DAY WATER DEMAND FOR SUBDIVISION = 30,000 MPD (0.03 MGD)
AVERAGE DAY WATER DEMAND FOR WEST PUMPHOUSE = SAY 0.5 MGD
CHLORINE DEMAND OF WATER UNKNOWN, THEREFORE REQUIRED CHLORINE DOSE AT MINIMUM = [2.0 mg/L (0.5 MGD) (8.345 lb-L/mg-MG)] / 0.125 = 2.5 lb/day, OR 0.3 gal/day OF SODIUM HYPOCHLORITE SOLUTION THAT IS 6% AVAILABLE CHLORINE.



STANDARD TRENCH DETAIL (NO SCALE)

LEGEND

	GATE VALVE		PRESSURE GAUGE
	AIR RELIEF VALVE		DIFFERENTIAL PRESSURE GAUGE
	PRESSURE REDUCING VALVE		BADGEMETER T200
	FLOW CONTROL VALVE		TURBIDIMETER
	TREATMENT WATER SPIGOT		FLOW DIRECTION
	SIEMENS VSD1 SUBMERSIBLE PUMPS		2.5 INCH PIPE (SCH 40 PVC)
	CHLORINE 55 GALLON DRUM		LINE CROSSING
			REMOVED PIPE



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DURANGO, COLORADO

Issue Record:

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EXPAND CL2 CHAMBER	08-21-2012
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Drawn By: RCM
Designed by: BAH
Checked By: BAH

Sheet
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PIPE LAYOUT PLAN AND DETAILS