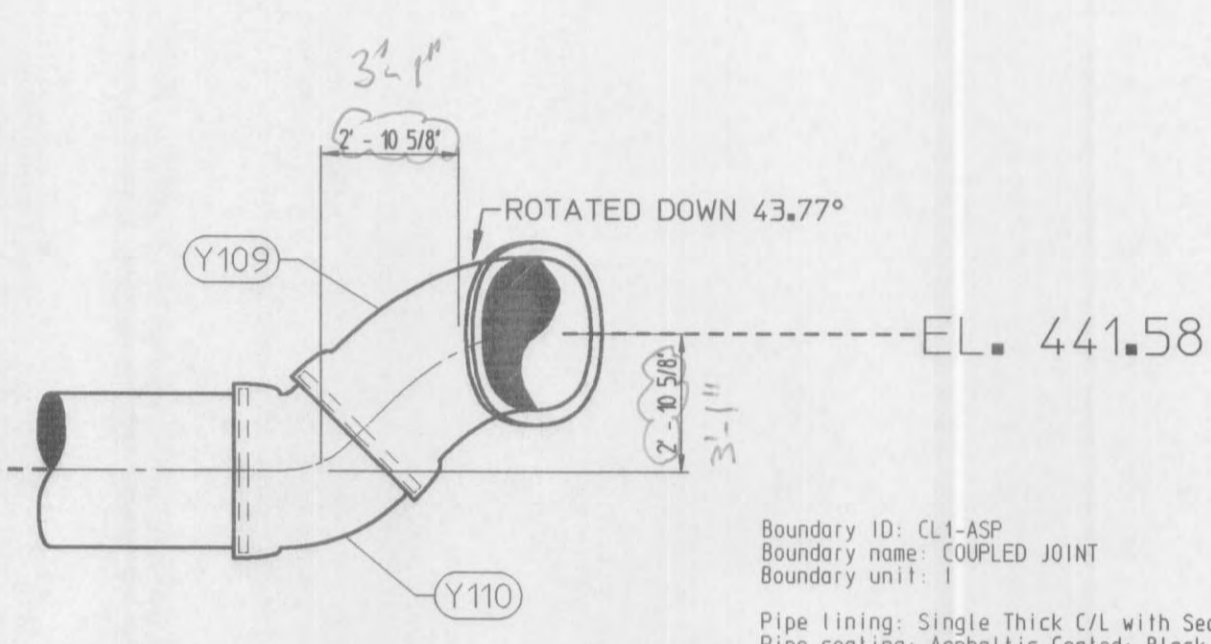
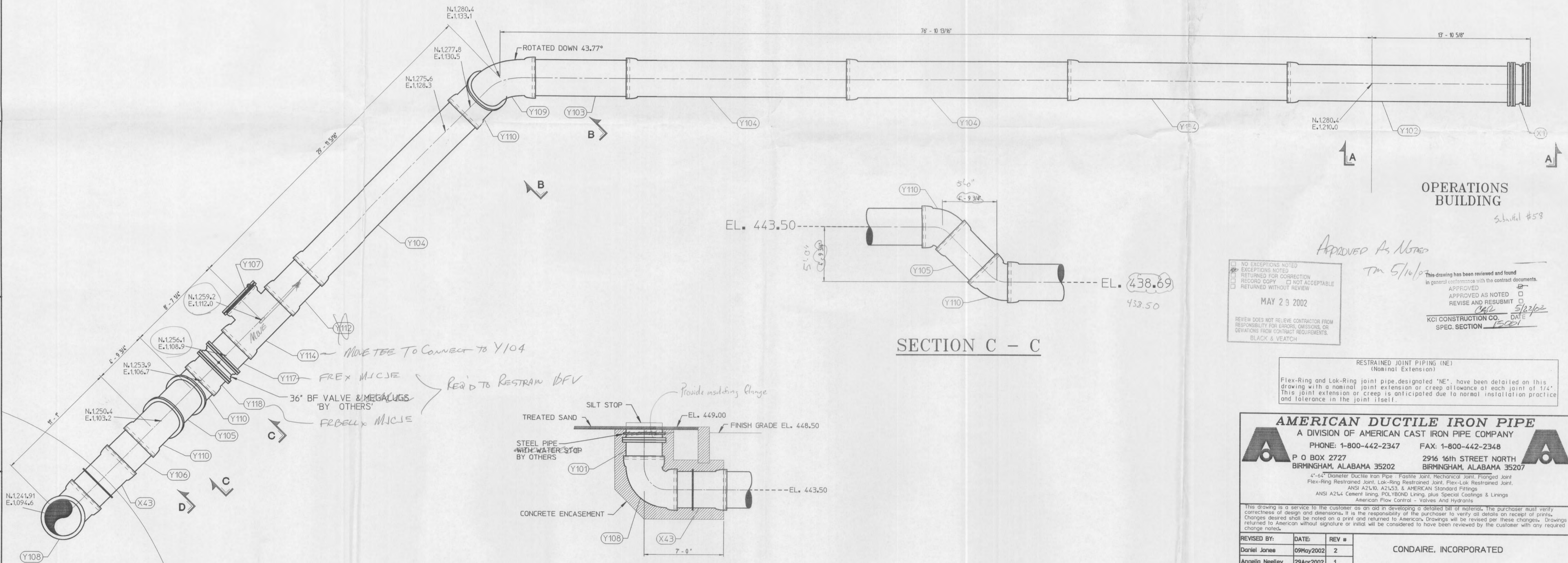


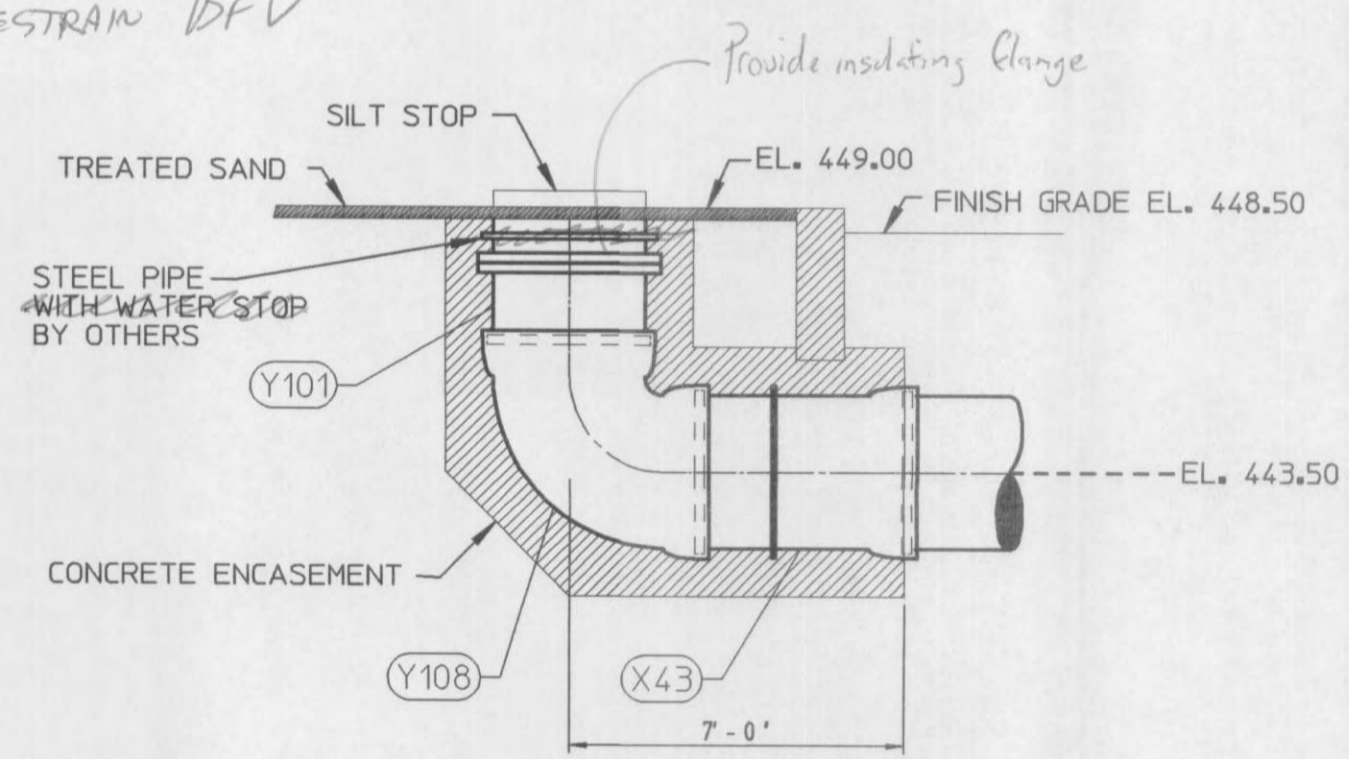
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

BILL OF MATERIAL			
QTY	SP/ID	MARK	DESCRIPTION
1	CL-ASP	Y101	36" FLG FRP PIPE CL-53 0.58" 2'-2-2-2
1	CL-ASP	Y102	36" FRBELL MJC/E PIPE CL-50 0.43" 19'-5" 2-2-2-2
1	CL-ASP	Y103	36" FRP FRP PIPE CL-50 0.43" 9'-9-1/8" 2-2-2-2
4	CL-ASP	Y104	36" FRBELL FRP PIPE CL-50 0.43" 19'-5" ASPHALTIC COATED IN SOCKET, ASPHALTIC COATED ON SPIGOT END, 2-2-2-2
1	CL-ASP	Y105	36" FRBELL FRP PIPE CL-50 0.43" 4'-0-3/8" 2-2-2-2
1	CL-ASP	Y106	36" FRP FRP PIPE CL-50 0.43" 3'-1-1/4" 2-2-2-2
1	ASP-ASP	Y107	36" M/P DISHED PLUG, 250 PSL, 1-2-2-2
1	CL-ASP	Y108	36" FRBELL C153 90 BEND, ALL CENTERS 25.75", 250 PSL, 4-2-2-2
1	CL-ASP	Y109	36" FRBELL C110 60 BEND, ALL CENTERS 28", 250 PSL, 4-2-2-2
3	CL-ASP	Y110	36" FRBELL FRP C153 45 BEND, CENTER TO FRBELL SOCKET 12", CENTER TO FRP END 2", 250 PSL, 4-2-2-2
1	CL-ASP	Y112	36" FRBELL FRP PIPE CL-50 0.43" 3'-7-1/8" 2-2-2-2
1	CL-ASP	Y114	36" FRBELL FRP M/J C110 TEE, CENTER TO FRBELL SOCKET 28", CENTER TO FRP END 36", CENTER TO M/J SOCKET 28", 250 PSL, 4-2-2-2
1	CL-ASP	Y117	36" FRP M/P PIPE CL-50 0.43" 2'-2-2-2
1	CL-ASP	Y118	36" FRBELL M/P PIPE CL-50 0.43" 1'-2-2-2-2
1	CL-ASP	X1	36" M/TAPPED FOR STUDS DWG P000097, M/TAPPED FOR STUDS DWG P000097, C110 STATIC CAST PIPE, 130/16 OVERALL (71L), W/DI COLLAR 10" FROM M/FACE, 250 PSL, 4-2-2-2/N
1	CL-ASP	X43	36" FRBELL FRP PIPE CL-53 0.58" 5'-1-1/8" OVERALL (43-1/2" L), W/STL COLLAR 2'-3/4" FROM FRP, 2-2-2-2

\*\* - Indicates the item has been placed on order.

SPECIFICATION BOUNDARY DEFINITIONS

Boundary ID: ASP-ASP Service type: PROCESS  
 Boundary name: ASP-ASP Service temp: 50  
 Boundary unit: 1 Environment: EXT/BURIED

Pipe lining: Asphaltic Lined, Black, 1-Coat, 3-Avg, 1-Min  
 Pipe coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min  
 Filling lining: Asphaltic Lined, Black, 1-Coat, 3-Avg, 1-Min  
 Filling coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min

Gasket types  
 FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene  
 M/J COUPLED - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene

Boundary ID: CL-ASP Service type: PROCESS  
 Boundary name: CL-ASP Service temp: 50  
 Boundary unit: 1 Environment: EXT/BURIED

Pipe lining: Single Thick C/L with Seal Coat, Black, 1-Coat, AMMA C104  
 Pipe coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min  
 Filling lining: Double Thick C/L with Seal Coat, Black, 1-Coat, AMMA C104  
 Filling coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min

Gasket types  
 FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene  
 FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene  
 FLG LESS ACCESSORIES - none  
 FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene  
 M/J - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene  
 RIGID GROOV LESS ACC - none

NO EXCEPTIONS NOTED  
 EXCEPTIONS NOTED  
 RETURNED FOR CORRECTION  
 RECORD COPY  
 RETURNED WITHOUT REVIEW

MAY 23 2002

REVIEW DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS, OMISSIONS, OR DEVIATIONS FROM CONTRACT REQUIREMENTS.  
 BLACK & VEATCH

APPROVED AS NOTED  
 TM 5/10/02

This drawing has been reviewed and found in general conformance with the contract documents.

APPROVED  
 APPROVED AS NOTED  
 REVISE AND RESUBMIT  
 DATE 5/23/02  
 KCI CONSTRUCTION CO. DATE 5/23/02  
 SPEC. SECTION 15001

RESTRAINED JOINT PIPING (NE)  
 (Nominal Extension)

Flex-Ring and Lok-Ring joint pipe, designated 'NE', have been detailed on this drawing with a nominal joint extension or creep allowance at each joint of 1/4". This joint extension or creep is anticipated due to normal installation practice and tolerance in the joint itself.

**AMERICAN DUCTILE IRON PIPE**  
 A DIVISION OF AMERICAN CAST IRON PIPE COMPANY

PHONE: 1-800-442-2347 FAX: 1-800-442-2348

P O BOX 2727 BIRMINGHAM, ALABAMA 35202 2916 16th STREET NORTH BIRMINGHAM, ALABAMA 35207

4'-6" Diameter Ductile Iron Pipe - Fastite Joint, Mechanical Joint, Flanged Joint  
 Flex-Ring Restrained Joint, Lok-Ring Restrained Joint, Flex-Lok Restrained Joint  
 ANSI A21.10, A21.53, & AMERICAN Standard Fittings  
 ANSI A21.4 Cement Lining, POLYBOND Lining, plus Special Coatings & Linings  
 American Flow Control - Valves And Hydrants

This drawing is a service to the customer as an aid in developing a detailed bill of material. The purchaser must verify correctness of design and dimensions. It is the responsibility of the purchaser to verify all details on receipt of prints. Changes desired shall be noted on a print and returned to American. Drawings will be revised per these changes. Drawings returned to American without signature or initial will be considered to have been reviewed by the customer with any required change noted.

REVISED BY:	DATE:	REV #
Daniel Jones	09May2002	2
Angelia Neelley	29Apr2002	1

CONDAIRE, INCORPORATED

WATER TREATMENT FACILITIES  
 O'FALLON, MO  
 36" HSPS HIGH SERVICE PUMP STATION  
 REF. DWGS. B1, B2, D7 & G1

DRAWN BY: Angelia Neelley DATE DRAWN: 5Apr2002 SCALE: NTS PROJECT NUMBER: KM001998 **C02010-Y1**