COLORADO AVE. BRIDGE 6" STL. MAIN PH. 1

END OF EXISTING 6" Coated Steel main is 23' N.P.L. of Pikes Peak Ave. & 33' W.E.P.L. of SPRUCE. 6" Bull head cap and electronic marker on END.

9# Anode installed 22' N.W. edge of Catch Basin & 17' W.W. edge of Catch Basin

Oil

SPRUCE ST.

EXS. 6" STL.

SPRUCE ST. PROPERTY LINE (APPX.)

Tied into existing 6" main w/ 6" weld 9'11 22' N.W. edge of Catch basin and 4' W.W. edge of Catch basin

6" STL. PIPE SCH. 40 (O.D. 6.625")

LS-475 LINK SEAL (10 EACH)

EXISTING 10" PVC INSERT 10" I.D.

CONCRETE ABUTMENT

CONCRETE ABUTMENT/PIER CROSSING DETAIL

N.T.S.

ASPHALT CUT

FIELD FIT

PROP. 6" STL.

15'-3"

22'

Catch Basin

4'

46'-6"

2-6" WNRF Flanges, Series 150 w/ insulation kit 6' S.W. edge of Bridge & 3' E.W. Abutment of Bridge.

15' TYPICAL

2 SETS OF LINK SEALS, ONE SET AT EACH SIDE OF PIER

PIPE HANGERS

2 SETS OF LINK SEALS, ONE SET AT EACH SIDE OF PIER

2 SETS OF LINK SEALS, ONE SET AT EACH SIDE OF ABUTMENT

2-6" 150 WNRF Flanges Series 150 w/ insulation kit 6' S.W. EDGE OF Bridge & 2' W.E. Abutment of Bridge.

39'-9" from flange to elbow

6" STL.

348' B-B

~280 well

~360'

33'-9"

6" X-TEN

See "Detail A"

25'

APPX. LOCATION OF Z-BEND

2 SETS OF LINK SEALS, ONE SET AT EACH SIDE OF ABUTMENT

APPROACH SLAB

COLORADO AVE. Gray paint.

6" Pipe under the bridge is schedule 40, painted with

PIERS AND DECK IN PLACE

PHASE 1

PHASE 2

PHASE 2 TO BE CONSTRUCTED AFTER TRAFFIC IS MOVED ONTO PHASE 1 AND EXISTING SOUTH HALF OF BRIDGE IS DEMOLISHED

APPROACH SLAB

INSTALL 6" STL. MAIN BEYOND APPROACH SLAB SO THAT IT IS ALIGNED WITH EXS. 6" STL. GAS MAIN COMING FROM CONEJOS ST. (APPX. 35')

47'-3" X-TEN

~130 well

9# Anode 34' E.E. Abutment of Bridge & 17' S.W. EDGE of Bridge.

34'

6" Bull head cap 34' E.E. Bridge Abutment & 5' S.S. side of Phase I Bridge Construction. Electronic Marker installed

ABUTMENT #1 | PIER #2 | PIER #3 | ABUTMENT #4

PLAN VIEW

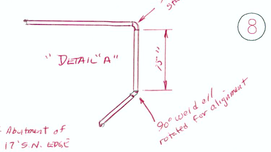
SCALE 1" = 20'

NOTE

THE WORK IN MONUMENT CREEK WILL BE PERFORMED UNDER THE EXISTING ARMY CORPS OF ENGINEERS NATIONWIDE 404 PERMIT OBTAINED BY LAWRENCE CONSTRUCTION CO. TO COORDINATE USE OF PERMIT AND ALL APPLICABLE RESTRICTIONS, CONTACT GREG DOBBS AT 471-2867

- (A) 6" STL. – 90° ELBOW
- (B) 2 – 6" STL. – 150# W.N.R.F. FLANGE, 6" – 150# GASK-O-SEAL GASKET W/ INSULATION KIT
- (C) EACH SET OF LINK SEALS CONSISTS OF 10 LS-475C LINK SEALS
- (D) 6" STL. EULLHEAD ASSEMBLY: 6" STL. CAP, 3/4" WELD X THREAD NIPPLE, 3/4" THREADED PLUG VALVE, 3/4" THREADED PLUG
- (E) 7/8" ALL-THREAD
- (F) GRINNELL 8" PIPE ROLLS (FIG. 181)
- (G) 6" GLAS-MESH INSULATOR (240°)
- (H) 9# ANODE

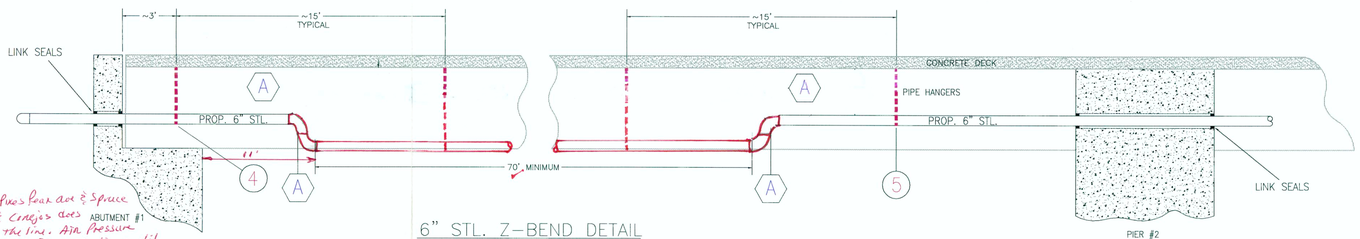
1. TIE INTO EXS. 6" STL., 85' N.N.P.L. OF COLORADO AVE., 16' SOUTH OF THE NORTH BUILDING LINE OF 404 W. COLORADO AVE. AND 23' W.E.P.L. OF SPRUCE ST.
2. CLEAR ABUTMENT #1 COMPLETELY BEFORE INSTALLING 90° ELBOW TO TURN NORTH
3. INSTALL 6" 90° ELBOW SUCH THAT THE PROP. 6" STL. LINES UP WITH THE EXS. 6" STL. IN CONEJOS ST. WHICH IS 22' W.E.P.L. OF CONEJOS ST., OR GAS DEPT. WALL
4. THE PROP. 6" STL. PIPE SHOULD BE AT IT'S NORMAL HEIGHT THROUGH AT LEAST ONE PIPE HANGER UPON EXITING ABUTMENT #1, AND BEFORE ENTERING PIER #2
5. PIPE HANGERS WILL BE SUPPORTED WITH CABLE OR ANGLE-IRON DURING PIPE INSTALLATION TO PREVENT SWAYING AND BENDING
6. UTILIZE PAINTED STEEL PIPE ON EXPOSED BRIDGE CROSSING TRANSITION TO COATED PIPE FOR BURIED PORTIONS
7. EXTEND 6" STL. SOUTH TOWARDS CONEJOS ST. AS FAR AS POSSIBLE (NEAR PH. 1 – PH. 2 DIVISION)
8. EXISTING EMERGENCY VALVE (G-3406) IS 30' SOUTH OF NORTH CURB LINE OF PIKES PEAK AVE. AND 20' WEST OF EAST CURB LINE OF SPRUCE ST. USE THIS VALVE TO PURGE THE NEW GAS LINE. AFTER PURGING, CLOSE VALVE AGAIN AND LEAVE NEW GAS LINE PRESSURIZED WITH GAS



STRESS CALCULATION RESULTS

ASSUMPTIONS			MAOP DETERMINATION (THE OPERATING PRESSURE OF THE PIPELINE MUST NOT EXCEED THE LOWEST OF THE FOLLOWING);		
PIPE OUTSIDE DIAMETER	6.625	IN.			
PIPE WALL THICKNESS	.280	IN.			
PIPE SMYS	35,000	P.S.I.	DESIGN PRESSURE	1183	P.S.I.
CLASS LOCATION	4		LOWEST FITTING RATING	275	P.S.I.
OPERATING PRESSURE	60	P.S.I.	TEST PRESSURE/1.5	200	P.S.I.
TEST PRESSURE	300	P.S.I.	ADJACENT SYSTEM MAOP	63	P.S.I.

PERCENT OF SMYS DUE TO TEST PRESSURE	10.1	%
PERCENT OF SMYS DUE TO OPERATING PRESSURE	2.0	%
PRESSURE WHICH PRODUCES STRESS OF 20% SMYS	591	P.S.I.



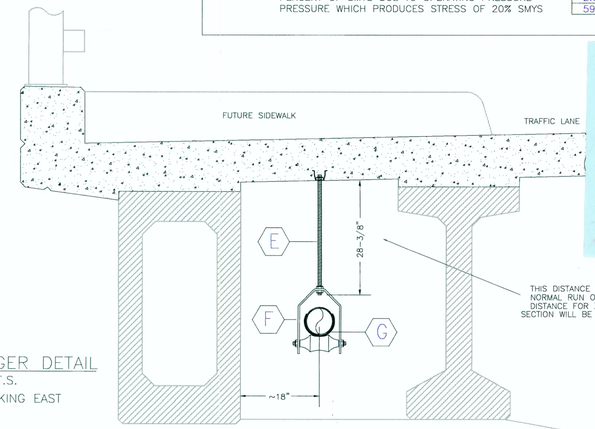
6" STL. Z-BEND DETAIL

SCALE 1" = 4'

SECTION A-A

NOTE: 6" main from Pikes Peak Ave & Spruce to Colorado Ave & Conejos does not have gas in the line. Air Pressure of 110psig has been left on the line until Gas Distribution reconstructs the intersection of Pikes Peak & Spruce and makes the tie-in.

Section of 6" coated steel main from Tie-in at "A" to Pikes Peak & Spruce was air tested to 300 psig for 18 hrs. 1000



PIPE HANGER DETAIL

N.T.S.

VIEW LOOKING EAST

Per Dave Deutsch, G-3406 was blind flanged by Distribution

G-3406

4'

8'

E

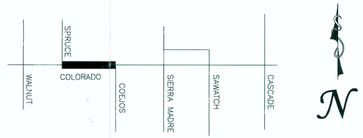
Existing 6" to 6" Bola Av. Bridge

G-3406 is scheduled for repl. Ek. 02/05/97 (WR 25406)

(MAIN) (SERVICE) WORKMAP

DATE COMPLETED:	12-13-96
CONTRACTOR:	Sweetfeger
FOREMAN:	Dunagan
~~FUSIONS BY:~~	Welds By - Mark Lees
TESTED BY:	C. Dunagan
INSPECTOR:	Deutsch
TESTED WITH AIR TO	300 P.S.I. FOR 18 HR. ~~MIN.~~
SOAP TESTED: (Y) (N)	
GAS CONCENTRATION AFTER PURGE:	% System not Purged
WALL THICKNESS OF EXISTING STEEL (IF APPLICABLE):	

SITE MAP – N.T.S.



PROJECT MANAGER

GREG DOBBS, LAWRENCE CONSTRUCTION
(719) 471-2867 FIELD OFFICE
(719) 651-6560 MOBILE

LEGEND

- PROPERTY LINE
- CURB LINE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN & SERVICES
- ABUTMENTS/PIERS

N

FIMS MAP: G-34

COLORADO SPRINGS UTILITIES – DEPARTMENT OF GAS
101 S. CONEJOS ST. – COLORADO SPRINGS, COLORADO 80903

DESIGN DATA

DESIGN BY:	R. SOLLER	DATE:	OCTOBER 8, 1996
DRAWN BY:	B. GROSS	SCALE:	SEE DETAILS
APPROVED BY:	P. LEONARD	JOB NO:	7-7197-376
CATH. PROT BY:		FILE NAME:	
REVISIONS:		SHEET NO:	1 OF 1
RECEPTION NO.:		DATE:	
DRAWING TITLE:	COLORADO AVENUE BRIDGE 6" STL. MAIN PH. 1		

W5407