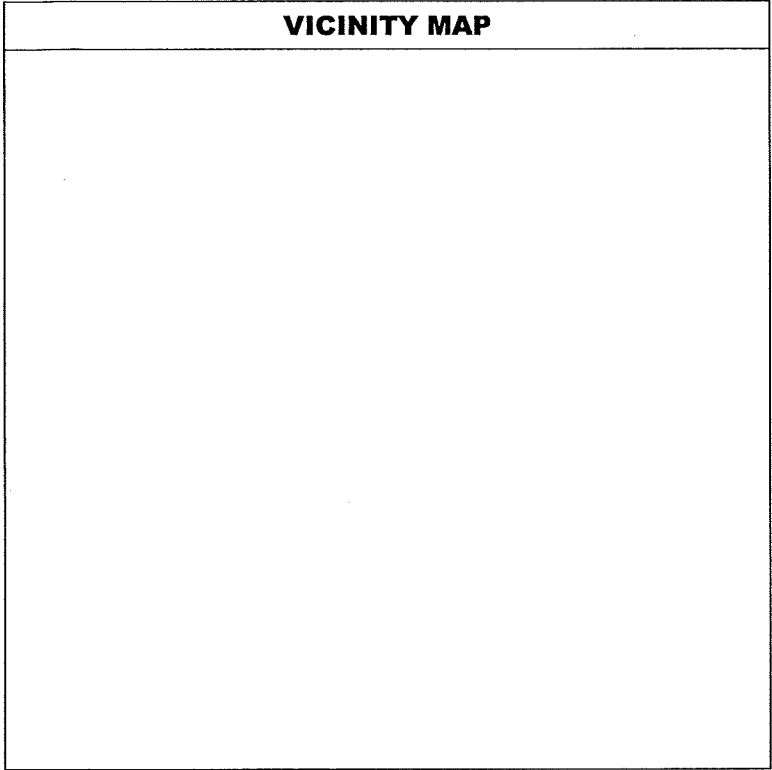


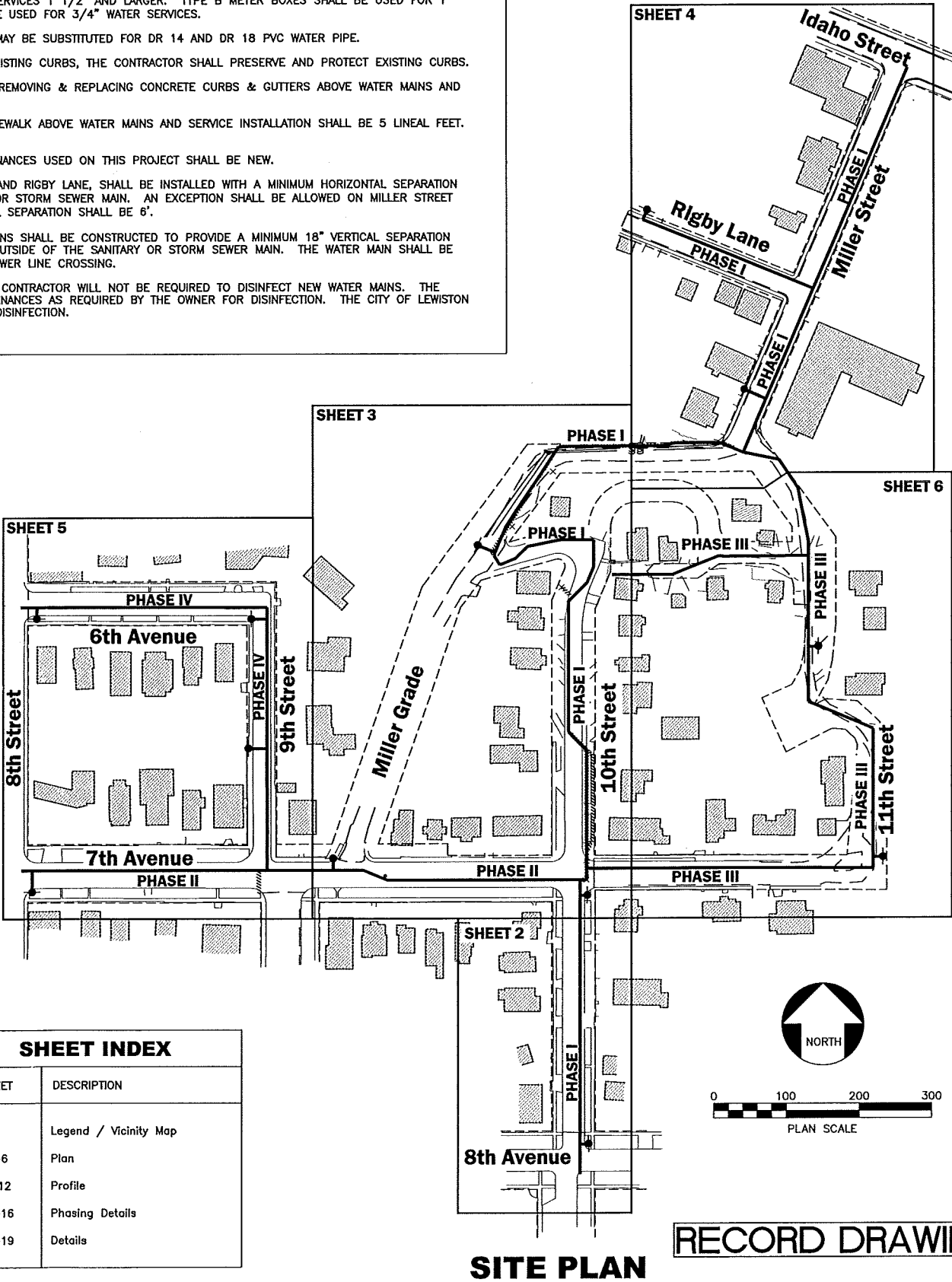
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- CONSTRUCTION NOTES
- UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS IN FIELD PRIOR TO EXCAVATION. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR OR UTILITY COMPANY, AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE UTILITY COMPANY.
 - ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITION OR BETTER UPON COMPLETION OF WORK. ALL DISTURBED AREA OUTSIDE OF THE ROADWAY/SIDEWALK CORRIDOR SHALL BE SEEDED AS SPECIFIED.
 - THRUST BLOCKS SHALL BE INSTALLED AT ALL FITTING LOCATIONS AS SPECIFIED ON DETAIL $\frac{A}{18}$.
 - TYPE C METER BOXES SHALL BE USED FOR ALL SERVICES 1 1/2" AND LARGER. TYPE B METER BOXES SHALL BE USED FOR 1" WATER SERVICES. TYPE A METER BOXES SHALL BE USED FOR 3/4" WATER SERVICES.
 - PRESSURE CLASS 350 DUCTILE IRON WATER PIPE MAY BE SUBSTITUTED FOR DR 14 AND DR 18 PVC WATER PIPE.
 - WHEN WATER SERVICES ARE REQUIRED BENEATH EXISTING CURBS, THE CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING CURBS.
 - UNLESS NOTED OTHERWISE, THE PAY LENGTH FOR REMOVING & REPLACING CONCRETE CURBS & GUTTERS ABOVE WATER MAINS AND HYDRANT LEADS SHALL BE 5 LINEAL FEET.
 - THE PAY LENGTH FOR REMOVING & REPLACING SIDEWALK ABOVE WATER MAINS AND SERVICE INSTALLATION SHALL BE 5 LINEAL FEET.
 - ALL PIPE, PIPE FITTINGS, AND WATERLINE APPURTENANCES USED ON THIS PROJECT SHALL BE NEW.
 - ALL WATER MAINS, EXCEPT ALONG MILLER STREET AND RIGBY LANE, SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL SEPARATION OF 10' BETWEEN THE WATER MAIN AND SANITARY OR STORM SEWER MAIN. AN EXCEPTION SHALL BE ALLOWED ON MILLER STREET AND RIGBY LANE, WHERE THE MINIMUM HORIZONTAL SEPARATION SHALL BE 6'.
 - AT ALL WATER/SEWER MAIN CROSSINGS, WATER MAINS SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM 18" VERTICAL SEPARATION BETWEEN THE OUTSIDE OF THE WATER MAIN AND OUTSIDE OF THE SANITARY OR STORM SEWER MAIN. THE WATER MAIN SHALL BE INSTALLED WITH A MINIMUM 20' LENGTH AT THE SEWER LINE CROSSING.
 - EXCEPT AS REQUIRED IN THE SPECIFICATIONS, THE CONTRACTOR WILL NOT BE REQUIRED TO DISINFECT NEW WATER MAINS. THE CONTRACTOR SHALL INSTALL FITTINGS AND APPURTENANCES AS REQUIRED BY THE OWNER FOR DISINFECTION. THE CITY OF LEWISTON WATER DEPARTMENT WILL THEN PERFORM SYSTEM DISINFECTION.

LEGEND					
EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM
		Deciduous Tree			Power
		Shrub			Telephone
		Traffic Sign			Storm Drain
		Telephone Riser			Sanitary Sewer
		Utility Pole			Survey Control Point
		Utility Pole Anchor			Monument
		Gas Meter			Wire Fence
		Catch Basin			Right-of-Way Line
		Storm Drain Manhole			Property Line
		Sanitary Sewer Manhole			Edge of Pavement
		Water Meter Setting			Curb, Gutter & Sidewalk
		Water Valve			Building
		Fire Hydrant			P.C.C. Pavement
		Tee			A.C. Pavement
		90° Elbow			Gravel
		45° Elbow			Detail or Section Designation
		22.5° Elbow			Sheet Number on Which Detail Appears
		11.25° Elbow			
		Pressure Reducing Valve (PRV) Station			
		Remove & Replace (Fire Hydrant or Water Meter Setting)			
		Tie into Existing (Fire Hydrant or Water Meter Setting)			
		Remove (Fire Hydrant or Water Meter Setting)			
		Water			
		Gas			

SHEET INDEX	
SHEET	DESCRIPTION
1	Legend / Vicinity Map
2-6	Plan
7-12	Profile
13-16	Phasing Details
17-19	Details



7/28/00
DATE
100-008
JOB NO.

DATE
100-008
F.B. NO.

DRAWN
JLN

DESIGNED
JLN

APPROVED
DLW

7/28/00
DATE

100-008
JOB NO.

DATE
100-008
F.B. NO.

THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS

GREAT FALLS-BOZEMAN-KALISPELL
SPOKANE
LEWISTON

MONTANA
WASHINGTON
IDAHO

MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

SITE PLAN, VICINITY MAP
AND LEGEND

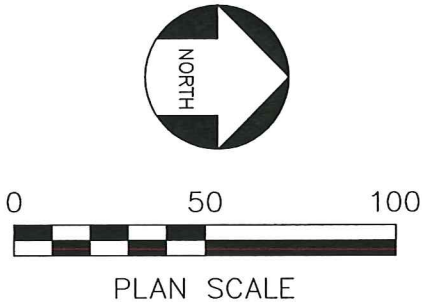
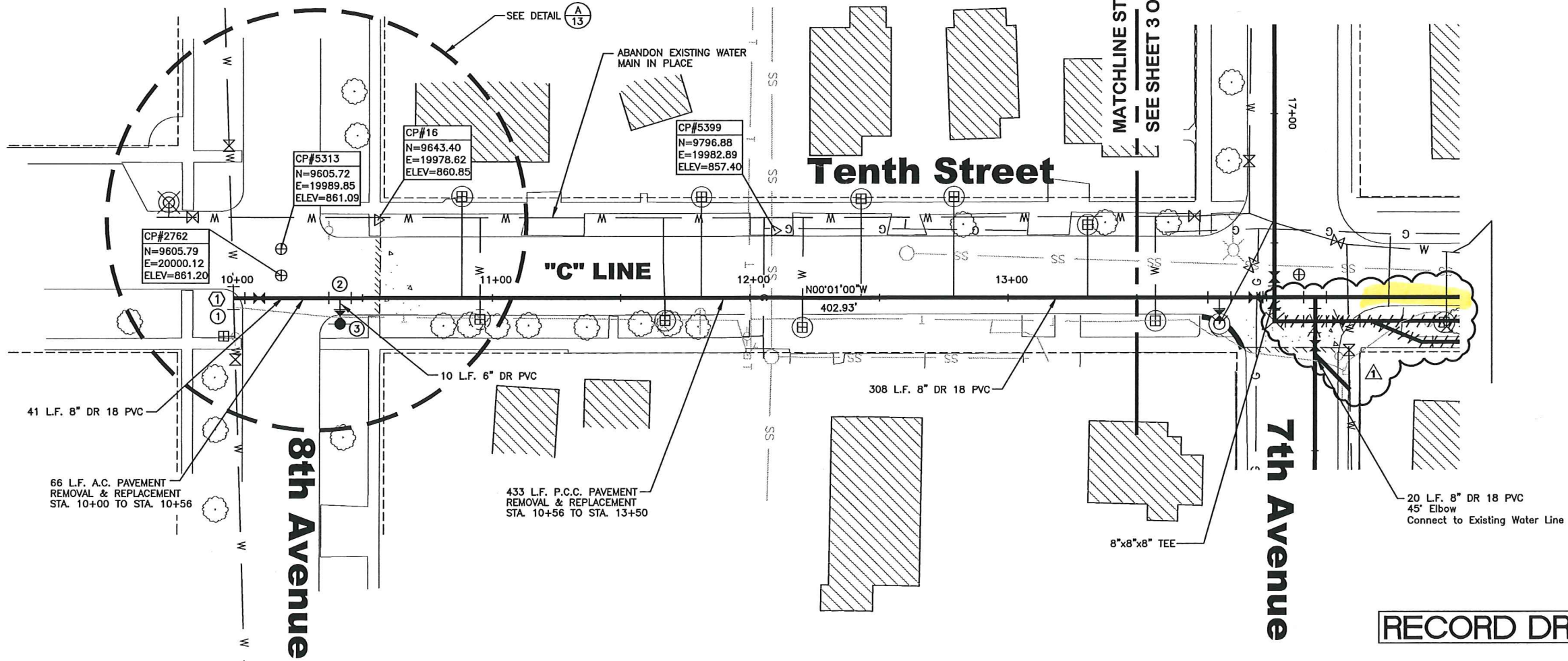
SHEET 1 OF 19 SHEETS

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WATER MAIN SCHEDULE				
NO.	LINE	STATION	OFFSET	NOTES
①	'C'	10+00.00	0'	CONNECT TO EXISTING 8" MAIN 8"x8"x8" TEE 8" GATE VALVE
②	'C'	10+41.25	0'	8"x8"x6" TEE 6" GATE VALVE
③	'C'	10+41.25	10' RT.	INSTALL NEW FIRE HYDRANT

WATER SERVICE NOTES							
LINE	STATION	SIDE	SERVICE SIZE	SERVICE LENGTH	CORP. STOP SIZE	METER SIZE	METER BOX TYPE
'C'	10+88.22	LT.	1"	39'	1"	3/4"	A
'C'	10+95.19	RT.	1"	8'	1"	N.A.	N.A.
'C'	11+66.99	RT.	1"	9'	1"	3/4"	A
'C'	11+81.15	LT.	1"	39'	1"	3/4"	A
'C'	12+20.19	RT.	1"	11'	1"	3/4"	A
'C'	12+42.85	LT.	1"	38'	1"	3/4"	A
'C'	12+78.98	LT.	1"	39'	1"	3/4"	A
'C'	13+30.93	LT.	1"	28'	1"	3/4"	A

COORDINATE TABLE		
NO.	NORTHING	EASTING
①	9587.44	20008.86



RECORD DRAWING

MILLER STREET WATERLINE REPLACEMENT

CITY OF LEWISTON, IDAHO

PLAN
"C" LINE STA. 10+00 TO STA. 13+50

SHEET	OF
2	19
SHEETS	

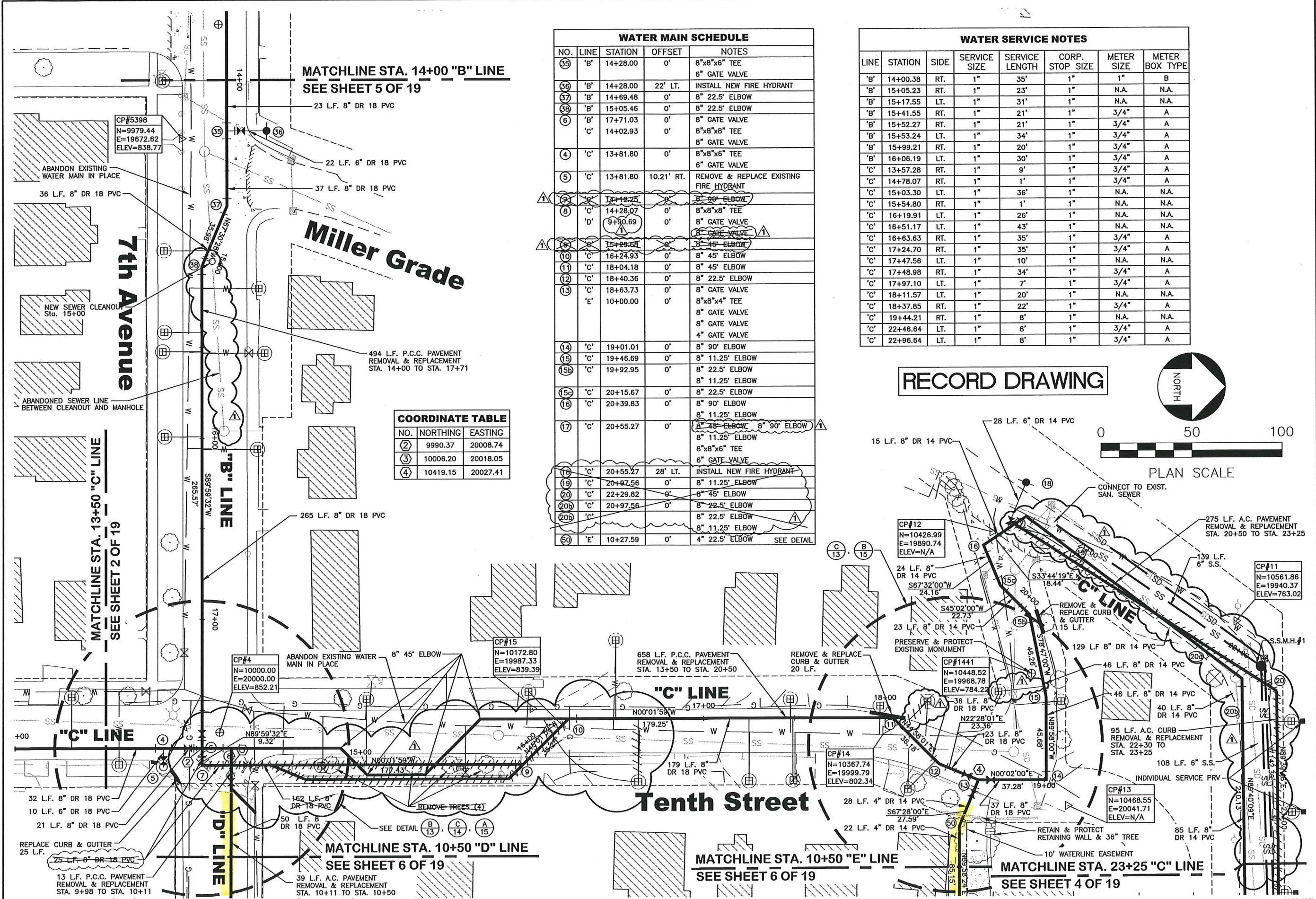
REVISIONS
BY HRF DATE 10/6/00 DESC. Per DEC.
BY KLO DATE 11/26/01 DESC. Record Drawing
BY DATE DESC.

THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS
GREAT FALLS-BOZEMAN-KALISPELL
SPokane WASHINGTON
LEWISTON IDAHO

DATE 7/28/00
JOB NO. L00-008
F.B. NO.

PROFESSIONAL ENGINEER
STATE OF IDAHO
DAVID L. LEWISTON

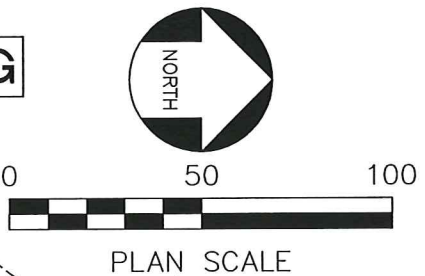
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WATER MAIN SCHEDULE				
NO.	LINE	STATION	OFFSET	NOTES
35	'B'	14+28.00	0'	8"x8"x6" TEE
36	'B'	14+28.00	22' LT.	6" GATE VALVE
37	'B'	14+69.48	0'	8" 22.5' ELBOW
38	'B'	15+05.46	0'	8" 22.5' ELBOW
6	'B'	17+71.03	0'	8" GATE VALVE
	'C'	14+02.93	0'	8"x8"x8" TEE
4	'C'	13+81.80	0'	8" GATE VALVE
5	'C'	13+81.80	10.21' RT.	8"x8"x6" TEE
				6" GATE VALVE
				REMOVE & REPLACE EXISTING FIRE HYDRANT
8	'C'	14+28.07	0'	8"x8"x8" TEE
	'D'	9+90.69	0'	8" GATE VALVE
10	'C'	16+24.93	0'	8" 45' ELBOW
11	'C'	18+04.18	0'	8" 45' ELBOW
12	'C'	18+40.36	0'	8" 22.5' ELBOW
13	'C'	18+63.73	0'	8" GATE VALVE
	'E'	10+00.00	0'	8"x8"x4" TEE
				8" GATE VALVE
				8" GATE VALVE
				4" GATE VALVE
14	'C'	19+01.01	0'	8" 90' ELBOW
15	'C'	19+46.69	0'	8" 11.25' ELBOW
15b	'C'	19+92.95	0'	8" 22.5' ELBOW
15c	'C'	20+15.67	0'	8" 11.25' ELBOW
16	'C'	20+39.83	0'	8" 22.5' ELBOW
17	'C'	20+55.27	0'	8" 90' ELBOW
				8" 11.25' ELBOW
				8" 45' ELBOW
				8" 11.25' ELBOW
				8"x8"x6" TEE
				6" GATE VALVE
18	'C'	20+55.27	28' LT.	INSTALL NEW FIRE HYDRANT
19	'C'	20+97.56	0'	8" 11.25' ELBOW
20	'C'	22+29.82	0'	8" 45' ELBOW
20b	'C'	20+97.56	0'	8" 22.5' ELBOW
20c	'C'	20+97.56	0'	8" 22.5' ELBOW
20d	'C'	20+97.56	0'	8" 11.25' ELBOW
50	'E'	10+27.59	0'	4" 22.5' ELBOW SEE DETAIL

WATER SERVICE NOTES							
LINE	STATION	SIDE	SERVICE SIZE	SERVICE LENGTH	CORP. STOP SIZE	METER SIZE	METER BOX TYPE
'B'	14+00.38	RT.	1"	35'	1"	1"	B
'B'	15+05.23	RT.	1"	23'	1"	N.A.	N.A.
'B'	15+17.55	LT.	1"	31'	1"	N.A.	N.A.
'B'	15+41.55	RT.	1"	21'	1"	3/4"	A
'B'	15+52.27	RT.	1"	21'	1"	3/4"	A
'B'	15+53.24	LT.	1"	34'	1"	3/4"	A
'B'	15+99.21	RT.	1"	20'	1"	3/4"	A
'B'	16+06.19	LT.	1"	30'	1"	3/4"	A
'C'	13+57.28	RT.	1"	9'	1"	3/4"	A
'C'	14+78.07	RT.	1"	1'	1"	3/4"	A
'C'	15+03.30	LT.	1"	36'	1"	N.A.	N.A.
'C'	15+54.80	RT.	1"	1'	1"	N.A.	N.A.
'C'	16+19.91	LT.	1"	26'	1"	N.A.	N.A.
'C'	16+51.17	LT.	1"	43'	1"	N.A.	N.A.
'C'	16+63.63	RT.	1"	35'	1"	3/4"	A
'C'	17+24.70	RT.	1"	35'	1"	3/4"	A
'C'	17+47.56	LT.	1"	10'	1"	N.A.	N.A.
'C'	17+48.98	RT.	1"	34'	1"	3/4"	A
'C'	17+97.10	LT.	1"	7'	1"	3/4"	A
'C'	18+11.57	LT.	1"	20'	1"	N.A.	N.A.
'C'	18+37.85	RT.	1"	22'	1"	3/4"	A
'C'	19+44.21	RT.	1"	8'	1"	N.A.	N.A.
'C'	22+46.64	LT.	1"	8'	1"	3/4"	A
'C'	22+96.64	LT.	1"	8'	1"	3/4"	A

RECORD DRAWING



THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS
GREAT FALLS-BOZEMAN-KALISPELL
SPOKANE WASHINGTON
IDAHO

REVISIONS

BY HRF DATE 10/6/00 DESC. Per DEC.

BY HRF DATE 9/06/01 DESC. Water/Sewer

BY KLO DATE 11/26/01 DESC. Record Drawing.

MILLER STREET WATERLINE REPLACEMENT

CITY OF LEWISTON, IDAHO

PLAN

"B" LINE STA. 14+00 TO STA. 17+71.03

"C" LINE STA. 13+50 TO STA. 23+25

"D" LINE STA. 10+00 TO STA. 10+50

SHEET

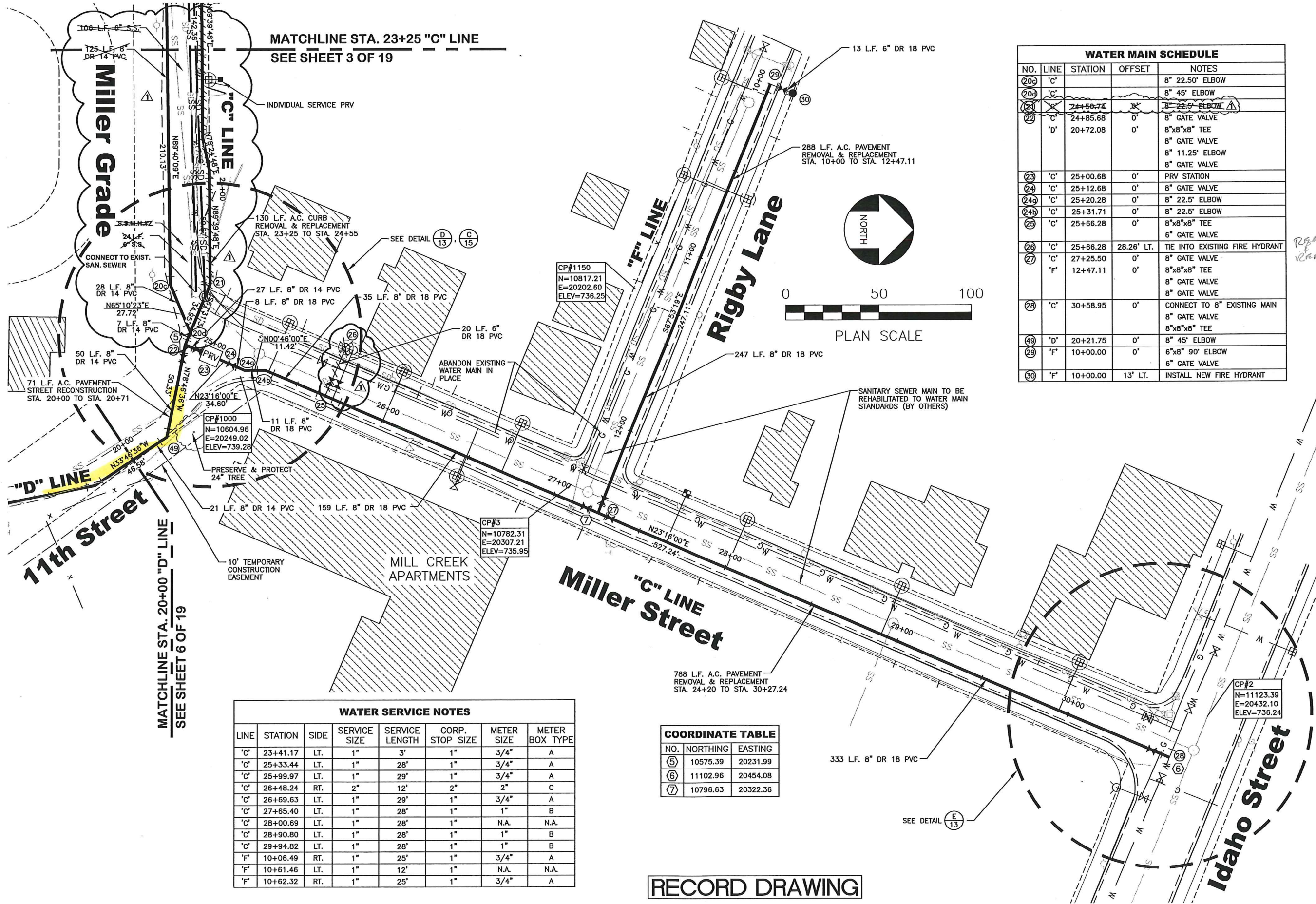
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19

SHEETS

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WATER MAIN SCHEDULE				
NO.	LINE	STATION	OFFSET	NOTES
(20c)	'C'			8" 22.50' ELBOW
(20d)	'C'			8" 45' ELBOW
(21)	'C'	24+58.74	0'	8" 22.5' ELBOW
(22)	'C'	24+85.68	0'	8" GATE VALVE
	'D'	20+72.08	0'	8"x8"x8" TEE
				8" GATE VALVE
				8" 11.25' ELBOW
				8" GATE VALVE
(23)	'C'	25+00.68	0'	PRV STATION
(24)	'C'	25+12.68	0'	8" GATE VALVE
(24a)	'C'	25+20.28	0'	8" 22.5' ELBOW
(24b)	'C'	25+31.71	0'	8" 22.5' ELBOW
(25)	'C'	25+66.28	0'	8"x8"x8" TEE
				6" GATE VALVE
(26)	'C'	25+66.28	28.26' LT.	TIE INTO EXISTING FIRE HYDRANT
(27)	'C'	27+25.50	0'	8" GATE VALVE
	'F'	12+47.11	0'	8"x8"x8" TEE
				8" GATE VALVE
				8" GATE VALVE
(28)	'C'	30+58.95	0'	CONNECT TO 8" EXISTING MAIN
				8" GATE VALVE
				8"x8"x8" TEE
(49)	'D'	20+21.75	0'	8" 45' ELBOW
(29)	'F'	10+00.00	0'	6"x8" 90' ELBOW
				6" GATE VALVE
(30)	'F'	10+00.00	13' LT.	INSTALL NEW FIRE HYDRANT

WATER SERVICE NOTES							
LINE	STATION	SIDE	SERVICE SIZE	SERVICE LENGTH	CORP. STOP SIZE	METER SIZE	METER BOX TYPE
'C'	23+41.17	LT.	1"	3'	1"	3/4"	A
'C'	25+33.44	LT.	1"	28'	1"	3/4"	A
'C'	25+99.97	LT.	1"	29'	1"	3/4"	A
'C'	26+48.24	RT.	2"	12'	2"	2"	C
'C'	26+69.63	LT.	1"	29'	1"	3/4"	A
'C'	27+65.40	LT.	1"	28'	1"	1"	B
'C'	28+00.69	LT.	1"	28'	1"	N.A.	N.A.
'C'	28+90.80	LT.	1"	28'	1"	1"	B
'C'	29+94.82	LT.	1"	28'	1"	1"	B
'F'	10+06.49	RT.	1"	25'	1"	3/4"	A
'F'	10+61.46	LT.	1"	12'	1"	N.A.	N.A.
'F'	10+62.32	RT.	1"	25'	1"	3/4"	A

COORDINATE TABLE		
NO.	NORTHING	EASTING
5	10575.39	20231.99
6	11102.96	20454.08
7	10796.63	20322.36

PROFESSIONAL ENGINEER
STATE OF IDAHO
DAVID L. THOMAS
11123

DATE 7/28/00
JOB NO. 100-008
F.B. NO.
DESIGNED JUN
APPROVED DLW
RECORD DRAWING

THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS
GREAT FALLS-BOZEMAN-KALISPELL
SPOKANE
LEWISTON
MONTANA
WASHINGTON
IDAHO

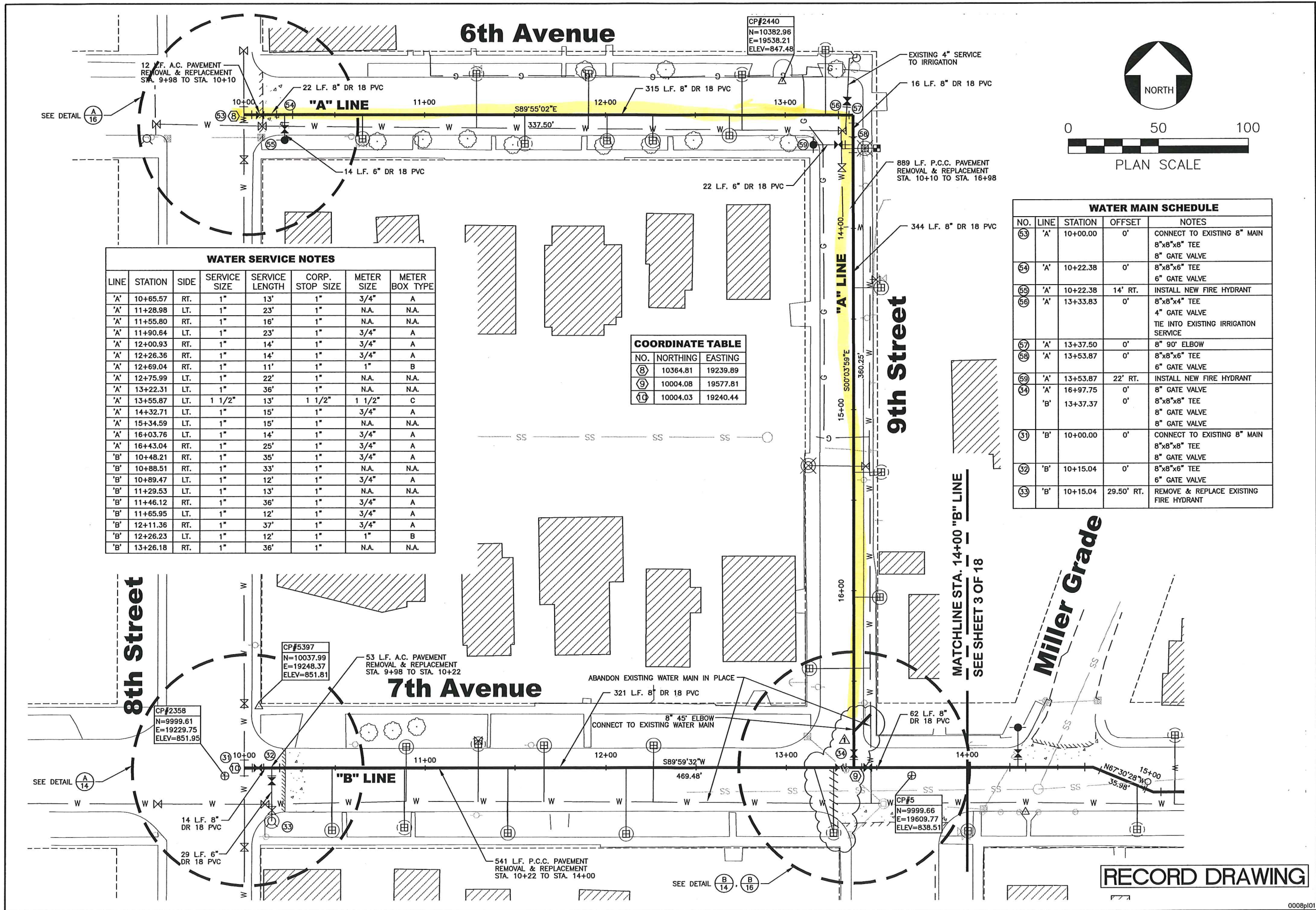
MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

PLAN
"C" LINE STA 23+25 TO STA. 30+58.95
"D" LINE STA. 20+00 TO STA. 20+72.08
"F" LINE STA. 10+00 TO STA. 12+47.11

SHEET 4
OF 19
SHEETS

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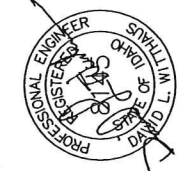
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WATER SERVICE NOTES							
LINE	STATION	SIDE	SERVICE SIZE	SERVICE LENGTH	CORP. STOP SIZE	METER SIZE	METER BOX TYPE
'A'	10+65.57	RT.	1"	13'	1"	3/4"	A
'A'	11+28.98	LT.	1"	23'	1"	N.A.	N.A.
'A'	11+55.80	RT.	1"	16'	1"	N.A.	N.A.
'A'	11+90.64	LT.	1"	23'	1"	3/4"	A
'A'	12+00.93	RT.	1"	14'	1"	3/4"	A
'A'	12+26.36	RT.	1"	14'	1"	3/4"	A
'A'	12+69.04	RT.	1"	11'	1"	1"	B
'A'	12+75.99	LT.	1"	22'	1"	N.A.	N.A.
'A'	13+22.31	LT.	1"	36'	1"	N.A.	N.A.
'A'	13+55.87	LT.	1 1/2"	13'	1 1/2"	1 1/2"	C
'A'	14+32.71	LT.	1"	15'	1"	3/4"	A
'A'	15+34.59	LT.	1"	15'	1"	N.A.	N.A.
'A'	16+03.76	LT.	1"	14'	1"	3/4"	A
'A'	16+43.04	RT.	1"	25'	1"	3/4"	A
'B'	10+48.21	RT.	1"	35'	1"	3/4"	A
'B'	10+88.51	RT.	1"	33'	1"	N.A.	N.A.
'B'	10+89.47	LT.	1"	12'	1"	3/4"	A
'B'	11+29.53	LT.	1"	13'	1"	N.A.	N.A.
'B'	11+46.12	RT.	1"	36'	1"	3/4"	A
'B'	11+65.95	LT.	1"	12'	1"	3/4"	A
'B'	12+11.36	RT.	1"	37'	1"	3/4"	A
'B'	12+26.23	LT.	1"	12'	1"	1"	B
'B'	13+26.18	RT.	1"	36'	1"	N.A.	N.A.

COORDINATE TABLE		
NO.	NORTHING	EASTING
(8)	10364.81	19239.89
(9)	10004.08	19577.81
(10)	10004.03	19240.44

WATER MAIN SCHEDULE				
NO.	LINE	STATION	OFFSET	NOTES
(53)	'A'	10+00.00	0'	CONNECT TO EXISTING 8" MAIN 8"x8"x8" TEE 8" GATE VALVE
(54)	'A'	10+22.38	0'	8"x8"x6" TEE 6" GATE VALVE
(55)	'A'	10+22.38	14' RT.	INSTALL NEW FIRE HYDRANT
(56)	'A'	13+33.83	0'	8"x8"x4" TEE 4" GATE VALVE TIE INTO EXISTING IRRIGATION SERVICE
(57)	'A'	13+37.50	0'	8" 90° ELBOW
(58)	'A'	13+53.87	0'	8"x8"x6" TEE 6" GATE VALVE
(59)	'A'	13+53.87	22' RT.	INSTALL NEW FIRE HYDRANT
(34)	'A'	16+97.75	0'	8" GATE VALVE
(34)	'B'	13+37.37	0'	8"x8"x8" TEE 8" GATE VALVE 8" GATE VALVE
(31)	'B'	10+00.00	0'	CONNECT TO EXISTING 8" MAIN 8"x8"x8" TEE 8" GATE VALVE
(32)	'B'	10+15.04	0'	8"x8"x6" TEE 6" GATE VALVE
(33)	'B'	10+15.04	29.50' RT.	REMOVE & REPLACE EXISTING FIRE HYDRANT



7/28/00
DATE
JOB NO. L00-008
F.B. NO.
DRAWN HRF
DESIGNED JLN
APPROVED DLW
REVISIONS
BY HRF DATE 10/16/00 DESC. Per. DEQ.
BY KLO DATE 11/26/01 DESC. Record Drawing
BY DATE DESC.

THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS
GREAT FALLS-BOZEMAN-KALISPELL
SPOKANE
LEWISTON
MONTANA
WASHINGTON
IDAHO

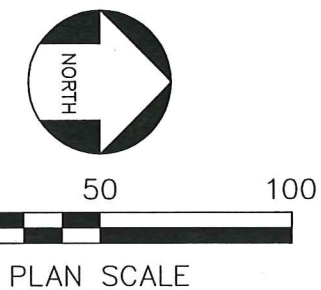
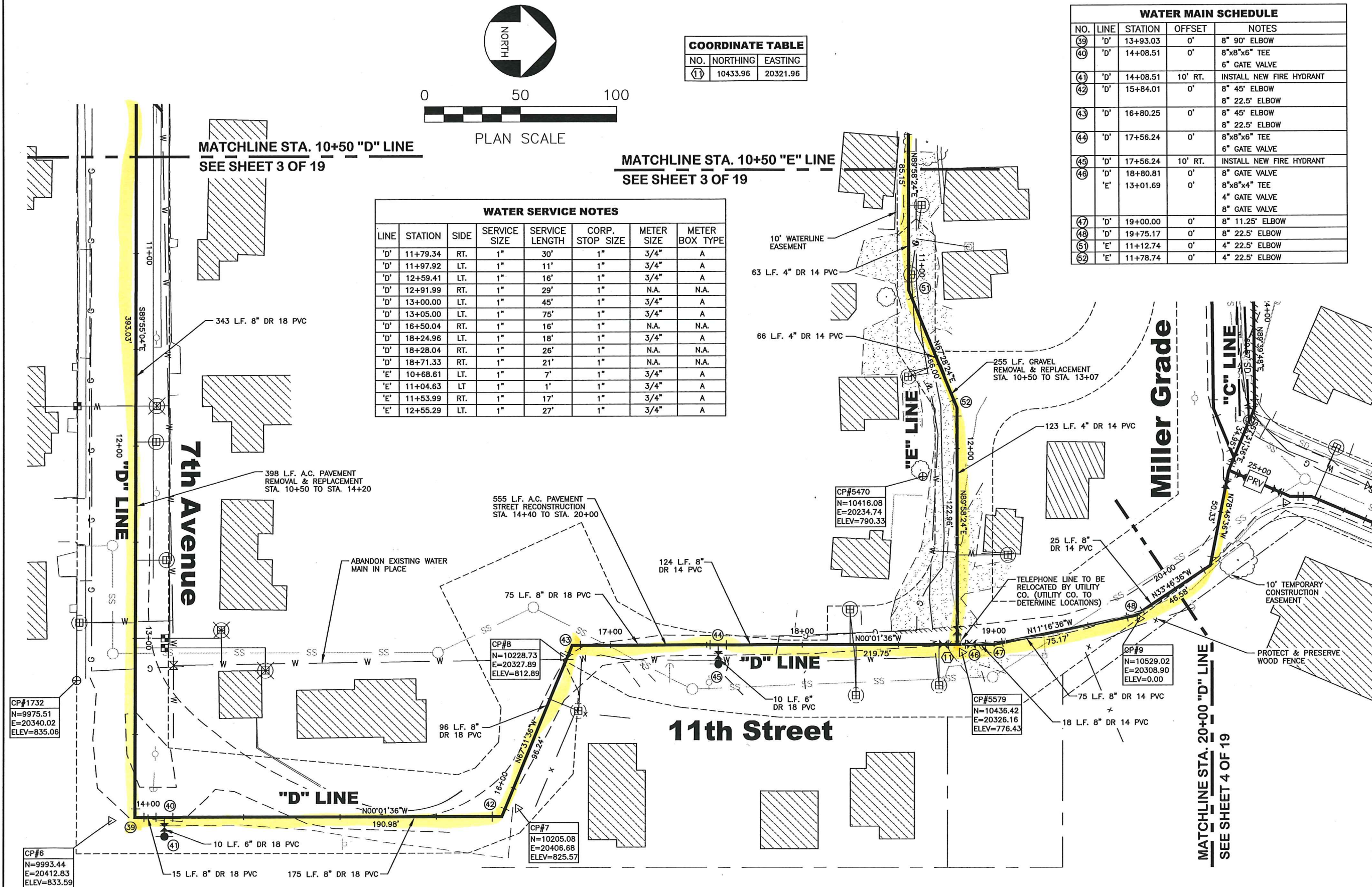
TD&H

MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

PLAN
"A" LINE STA. 10+00 TO STA. 16+47.45
"B" LINE STA. 10+00 TO STA. 14+00

SHEET 5 OF 19 SHEETS

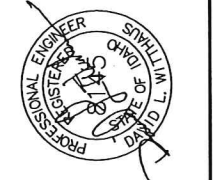
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COORDINATE TABLE		
NO.	NORTHING	EASTING
11	10433.96	20321.96

WATER SERVICE NOTES							
LINE	STATION	SIDE	SERVICE SIZE	SERVICE LENGTH	CORP. STOP SIZE	METER SIZE	METER BOX TYPE
'D'	11+79.34	RT.	1"	30'	1"	3/4"	A
'D'	11+97.92	LT.	1"	11'	1"	3/4"	A
'D'	12+59.41	LT.	1"	16'	1"	3/4"	A
'D'	12+91.99	RT.	1"	29'	1"	N.A.	N.A.
'D'	13+00.00	LT.	1"	45'	1"	3/4"	A
'D'	13+05.00	LT.	1"	75'	1"	3/4"	A
'D'	16+50.04	RT.	1"	16'	1"	N.A.	N.A.
'D'	18+24.96	LT.	1"	18'	1"	3/4"	A
'D'	18+28.04	RT.	1"	26'	1"	N.A.	N.A.
'D'	18+71.33	RT.	1"	21'	1"	N.A.	N.A.
'E'	10+68.61	LT.	1"	7'	1"	3/4"	A
'E'	11+04.63	LT.	1"	1'	1"	3/4"	A
'E'	11+53.99	RT.	1"	17'	1"	3/4"	A
'E'	12+55.29	LT.	1"	27'	1"	3/4"	A

WATER MAIN SCHEDULE				
NO.	LINE	STATION	OFFSET	NOTES
39	'D'	13+93.03	0'	8" 90° ELBOW
40	'D'	14+08.51	0'	8"x8"x6" TEE
				6" GATE VALVE
41	'D'	14+08.51	10' RT.	INSTALL NEW FIRE HYDRANT
42	'D'	15+84.01	0'	8" 45° ELBOW
				8" 22.5° ELBOW
43	'D'	16+80.25	0'	8" 45° ELBOW
				8" 22.5° ELBOW
44	'D'	17+56.24	0'	8"x8"x6" TEE
				6" GATE VALVE
45	'D'	17+56.24	10' RT.	INSTALL NEW FIRE HYDRANT
46	'D'	18+80.81	0'	8" GATE VALVE
	'E'	13+01.69	0'	8"x8"x4" TEE
				4" GATE VALVE
				8" GATE VALVE
47	'D'	19+00.00	0'	8" 11.25° ELBOW
48	'D'	19+75.17	0'	8" 22.5° ELBOW
51	'E'	11+12.74	0'	4" 22.5° ELBOW
52	'E'	11+78.74	0'	4" 22.5° ELBOW



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REVISIONS
BY HRF DATE 10/6/00 DESC. Per DEC.
BY DATE DESC.
BY DATE DESC.

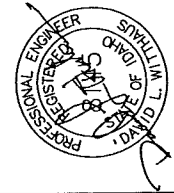
DRAWN HRF DATE 7/28/00
DESIGNED JLN JOB NO. 00-008
APPROVED DLW F.B. NO.

MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

PLAN
"D" LINE STA. 10+50 TO STA. 20+00
"E" LINE STA. 10+00 TO STA. 13+01.69

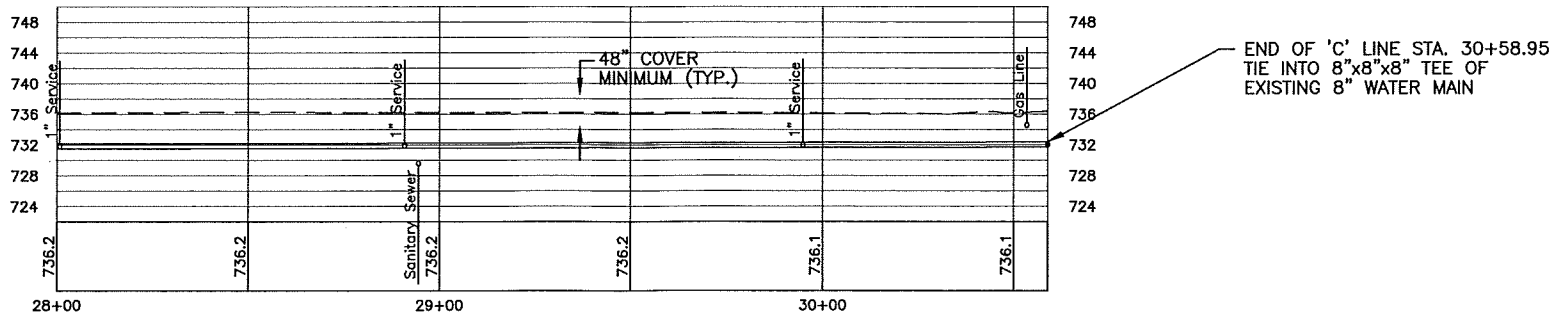
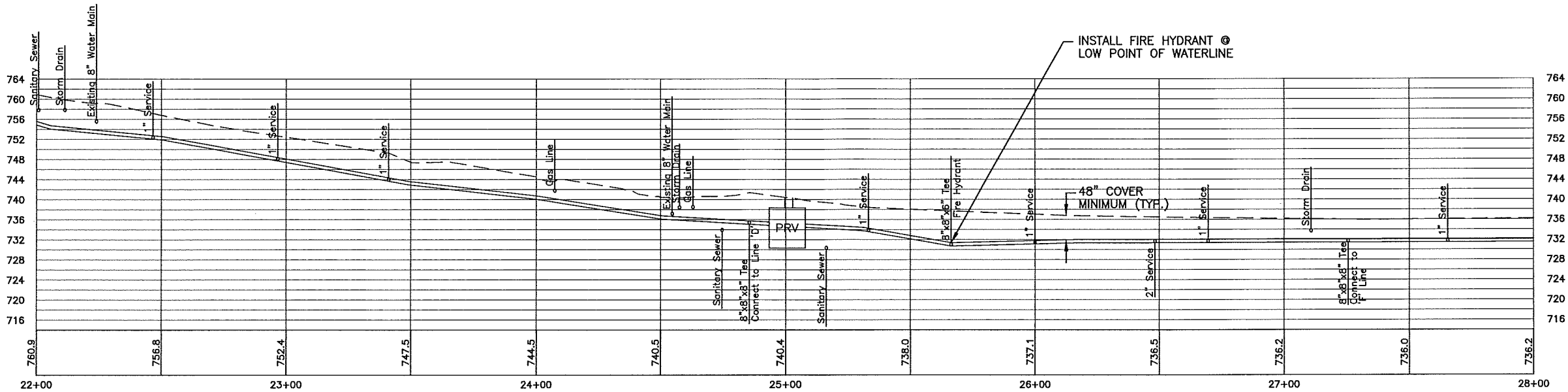
SHEET 6 OF 19 SHEETS

RECORD DRAWING

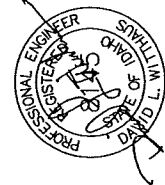


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"C" LINE



RECORD DRAWING



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SPokane LEWISTON
MONTANA WASHINGTON IDAHO



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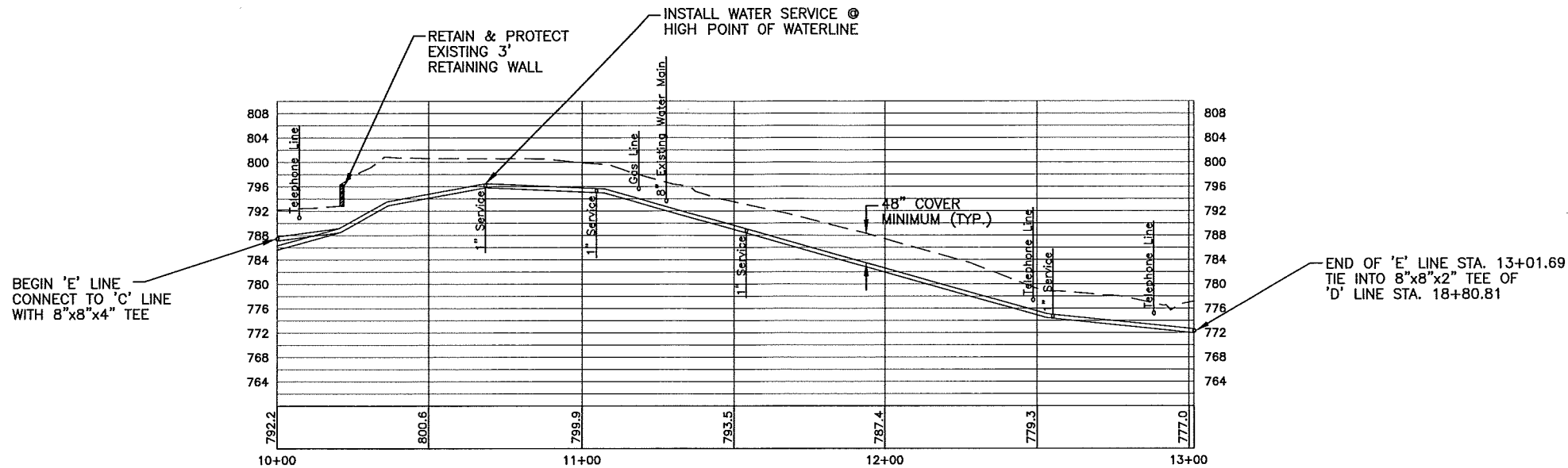
PROFILE
"C" LINE STA. 22+00 TO STA. 30+58.95

SHEET 8 OF 19 SHEETS

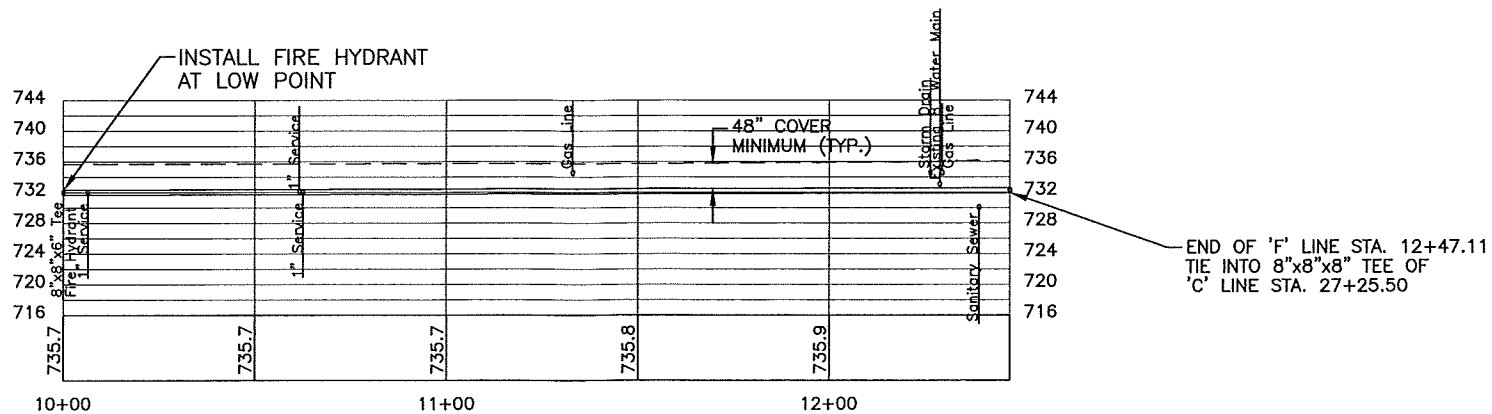
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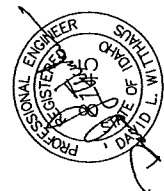
"E" LINE



"F" LINE

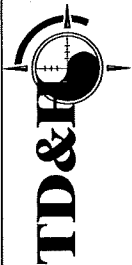


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THOMAS, DEAN & HOSKINS, INC.
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MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

PROFILE
"E" LINE STA. 10+00 TO STA. 13+01.69
"F" LINE STA. 10+00 TO STA. 12+47.11

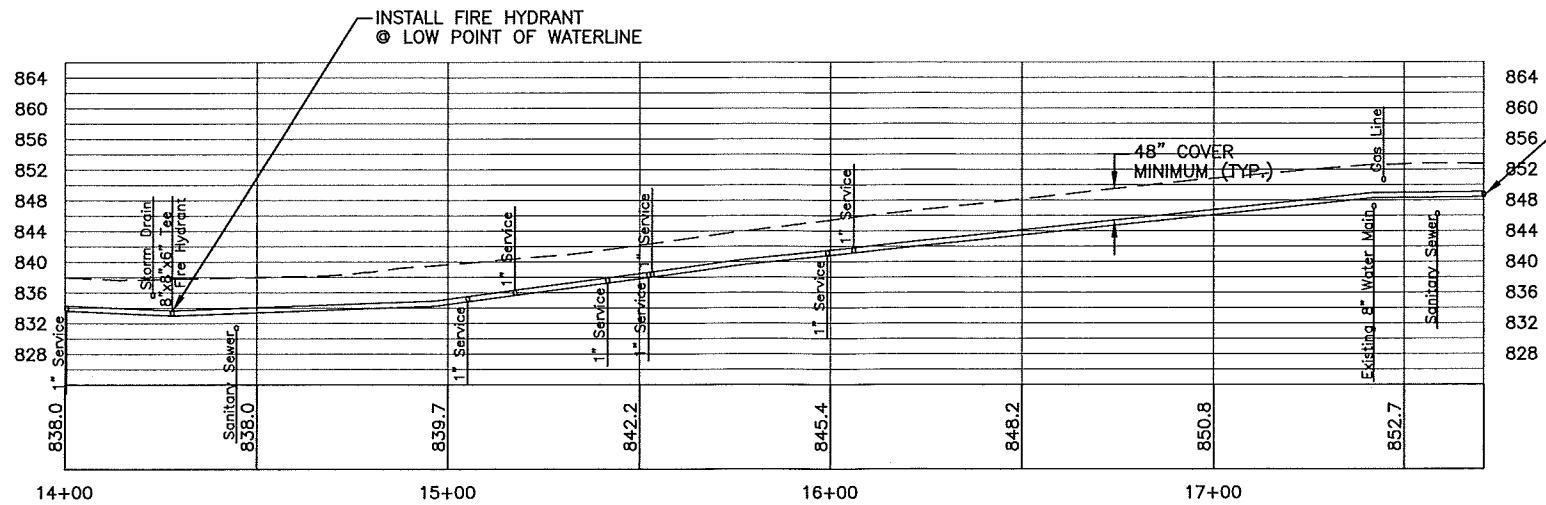
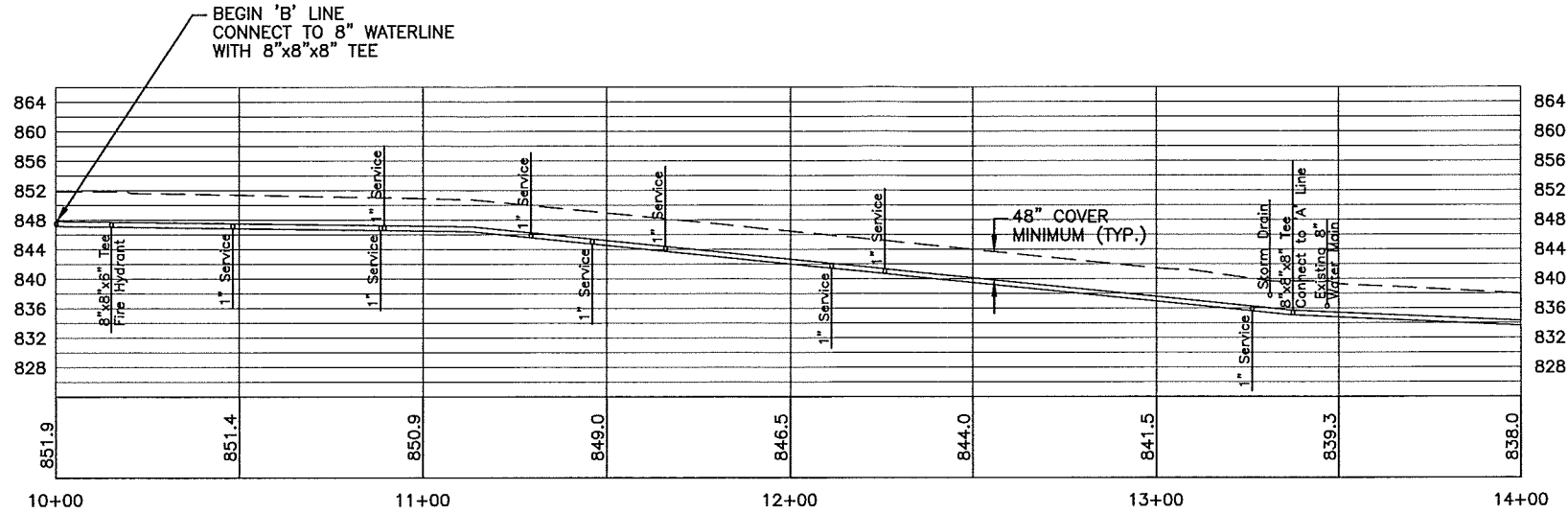
SHEET
9

OF
19
SHEETS

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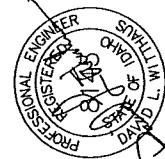
"B" LINE



END OF 'B' LINE STA. 17+71.03
TIE INTO 8"x8"x8" TEE OF
'C' LINE STA. 14+02.93

RECORD DRAWING

0008pr04

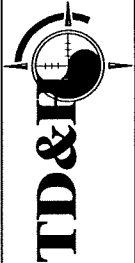


REVISIONS
BY HRF DATE 10/6/00 DESC. Per Deq
BY DATE DESC.
BY DATE DESC.

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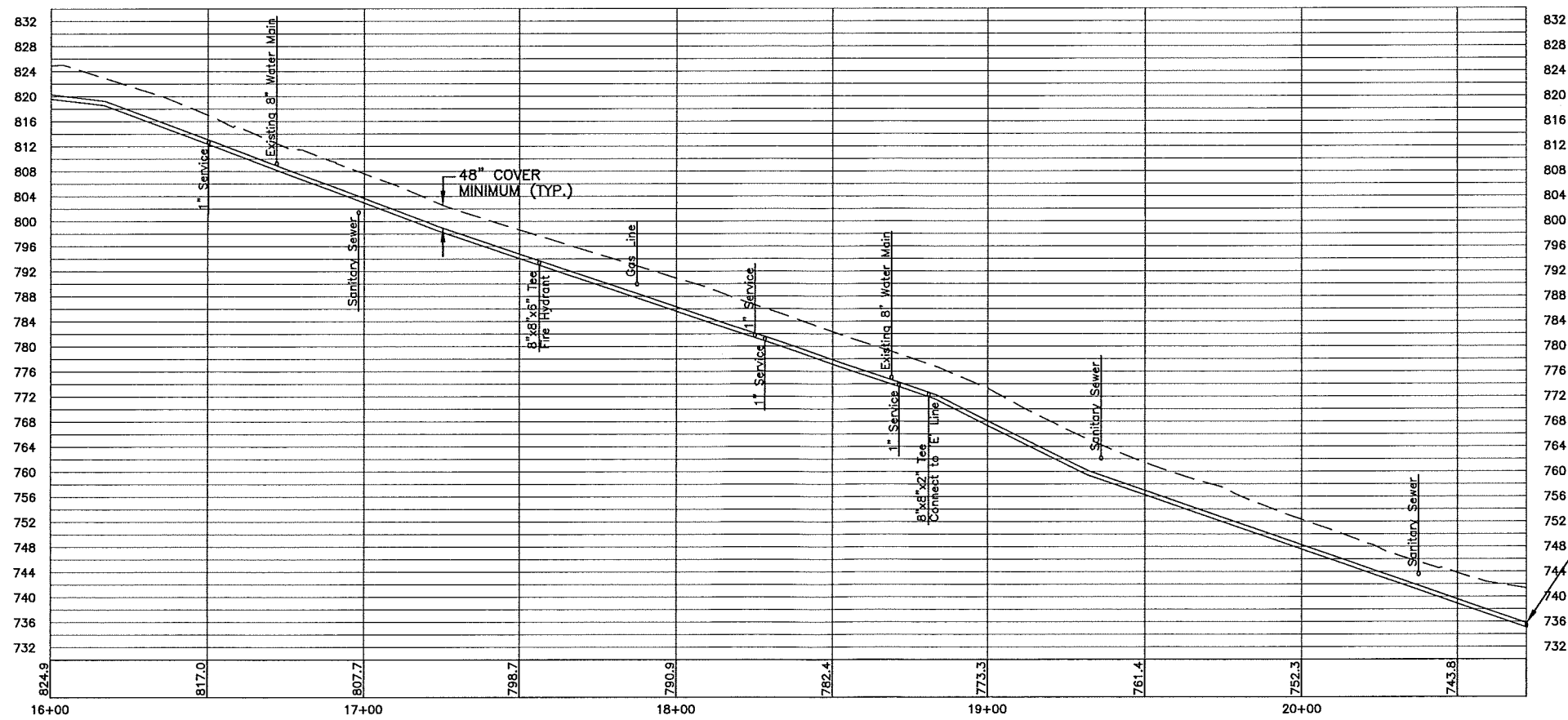
SHEET
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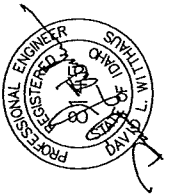


PROFILE
"B" LINE STA. 10+00 TO STA. 17+71.03

OF
19
SHEETS



RECORD DRAWING



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 BY DATE DATE DESC.

MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

CITY OF LEWISTON, IDAHO

PROFILE

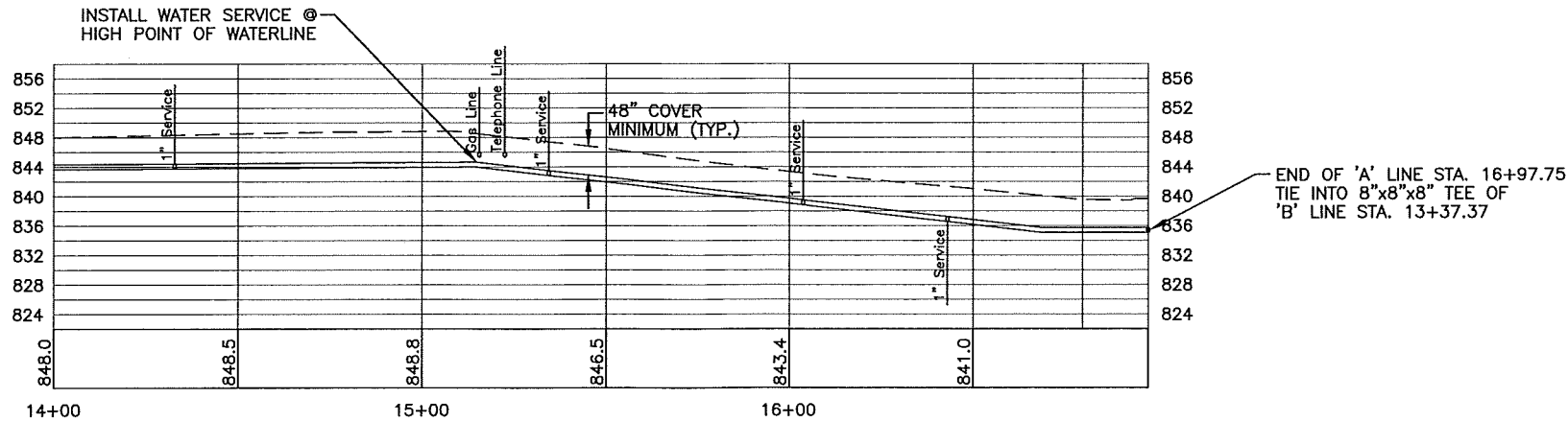
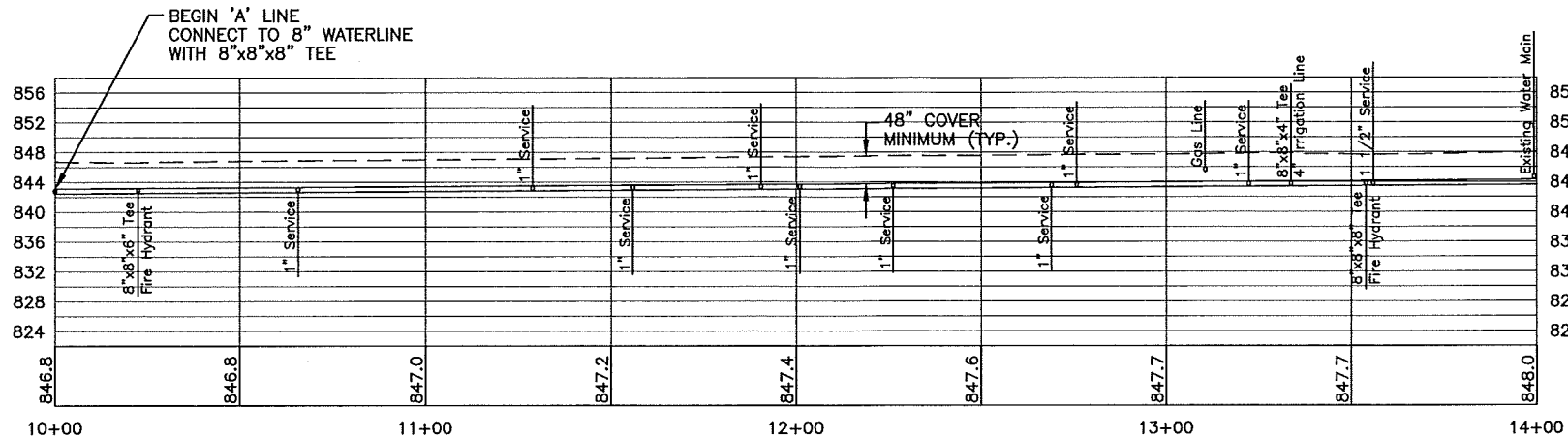
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SHEET
11

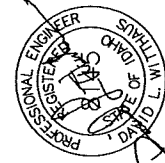
OF
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SHEETS

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"A" LINE

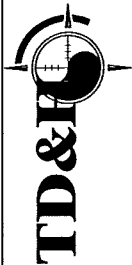


RECORD DRAWING



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CITY OF LEWISTON, IDAHO

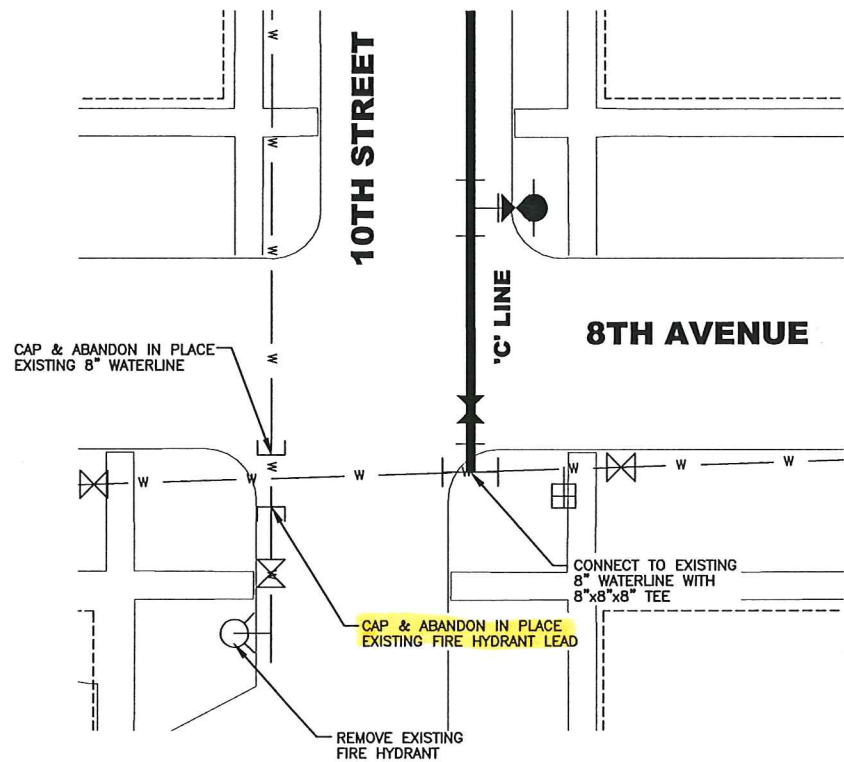
PROFILE
"A" LINE STA. 10+00 TO STA. 16+97.75

SHEET
12

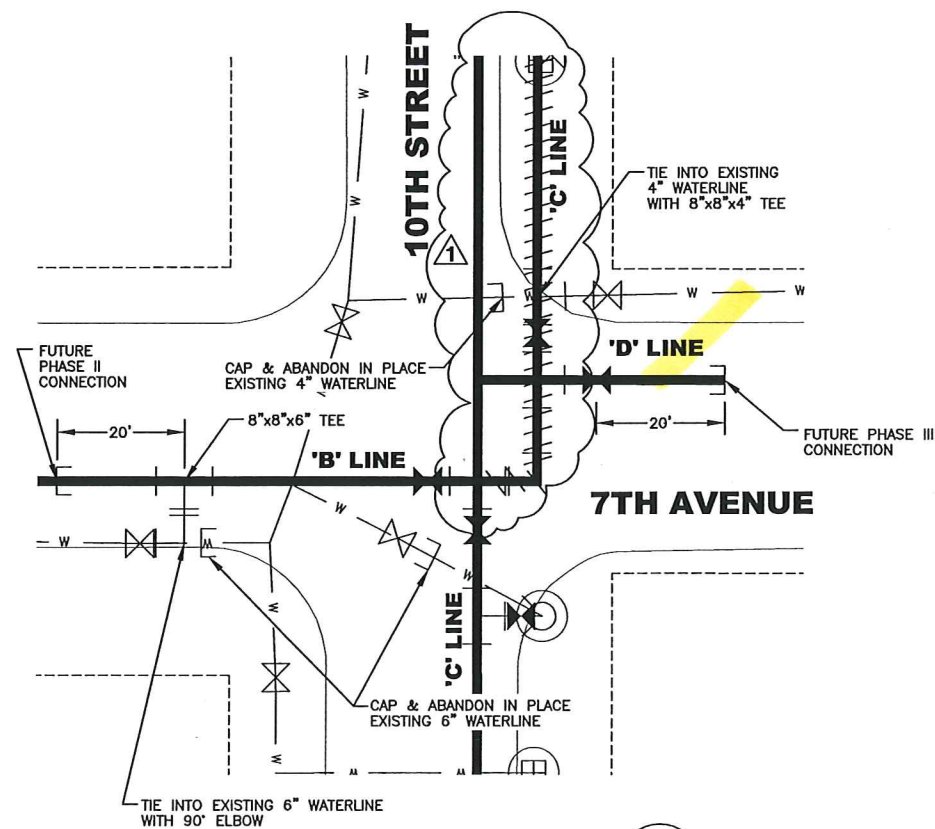
OF
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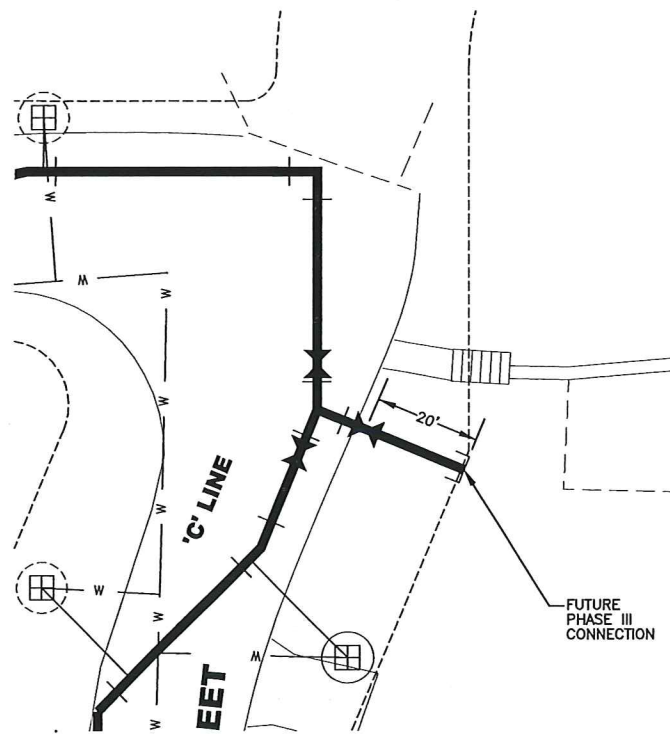


DETAIL A
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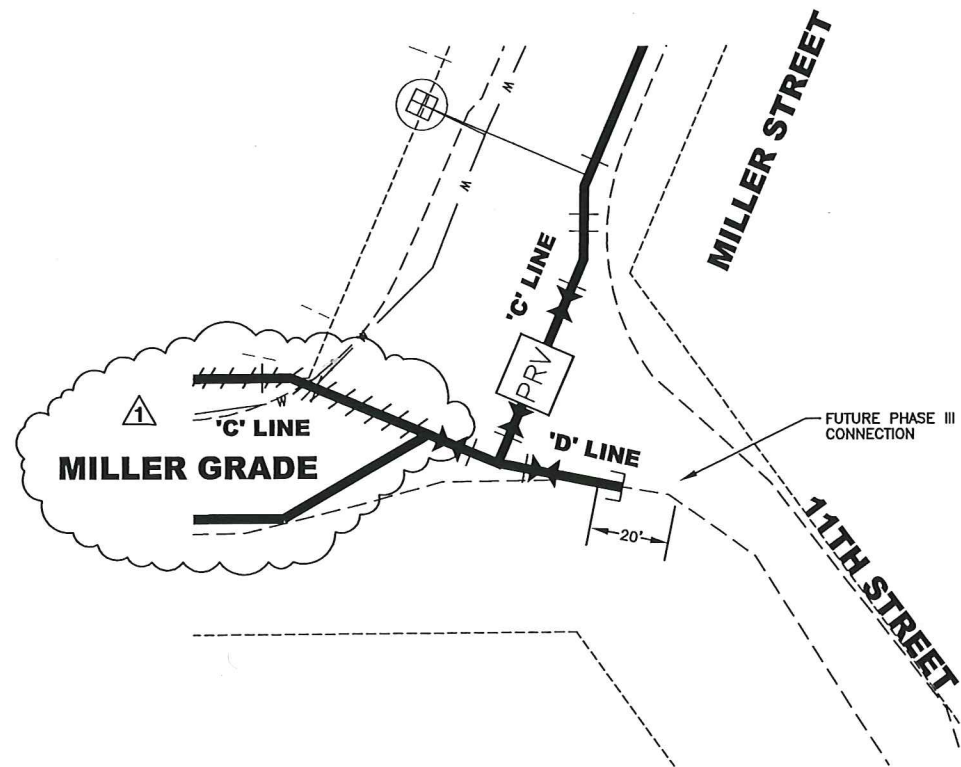


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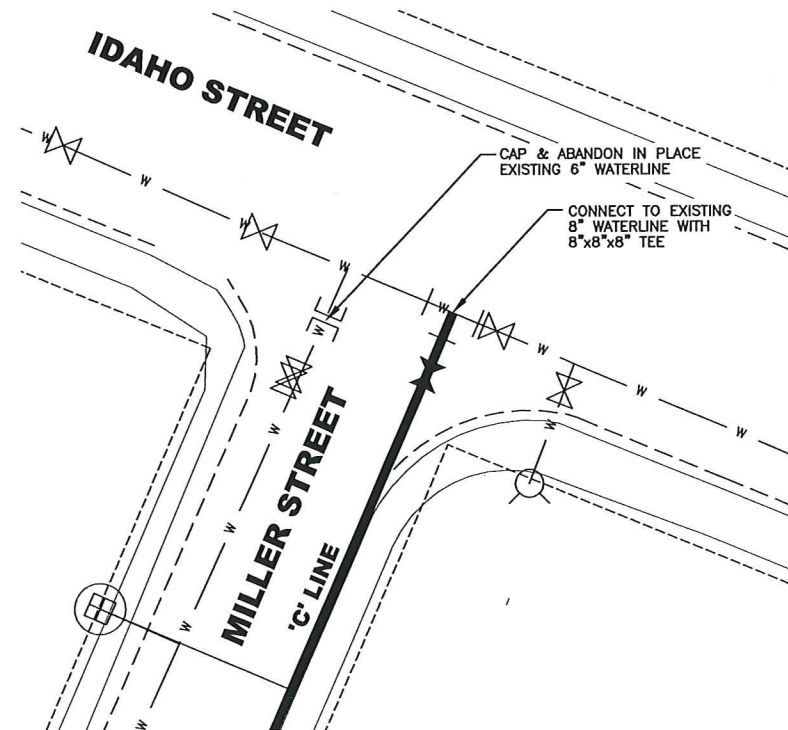
PHASE I DETAILS



DETAIL C
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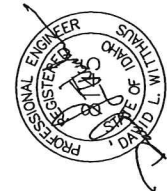


DETAIL D
Not to Scale



DETAIL E
Not to Scale

RECORD DRAWING



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APPROVED DLW F.B. NO.

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BY KLO DATE 11/26/01 DESC. A Record Drawing
BY DATE DESC.



MILLER STREET WATERLINE REPLACEMENT

CITY OF LEWISTON, IDAHO

PHASING DETAILS

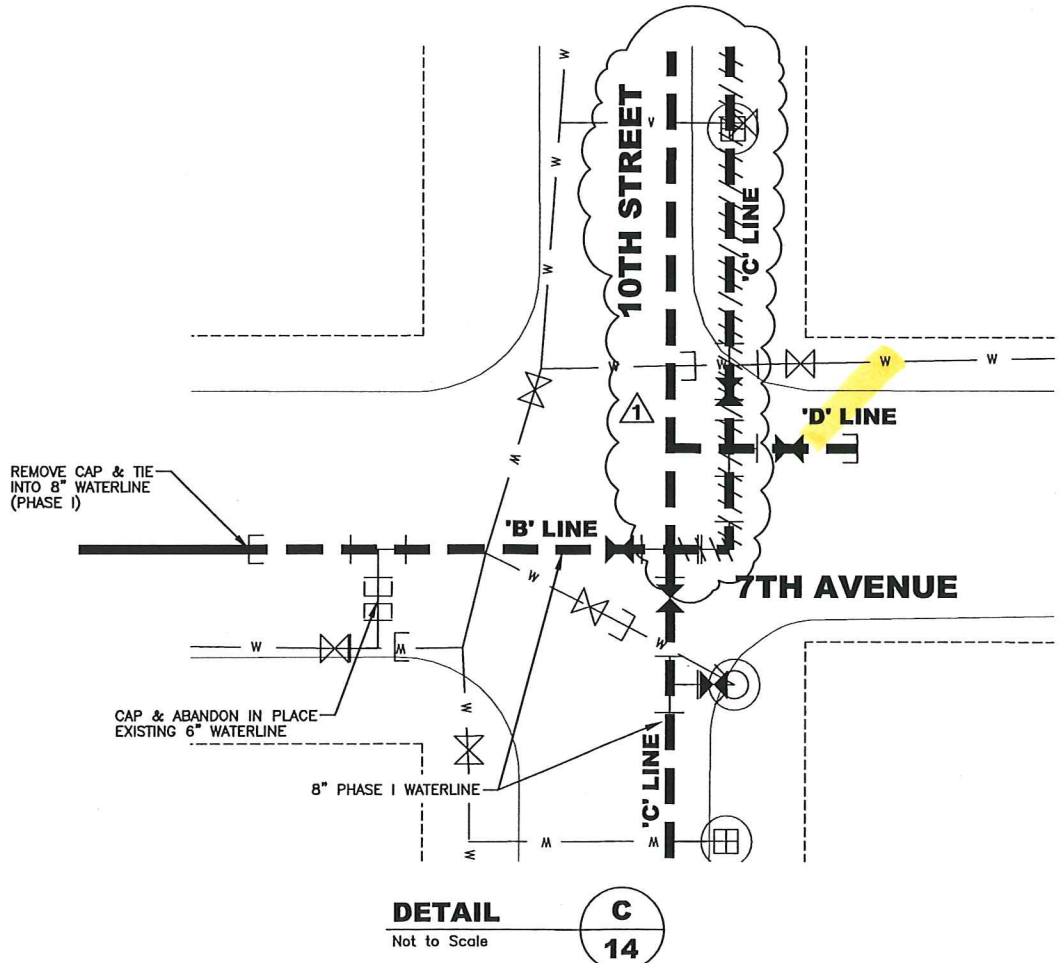
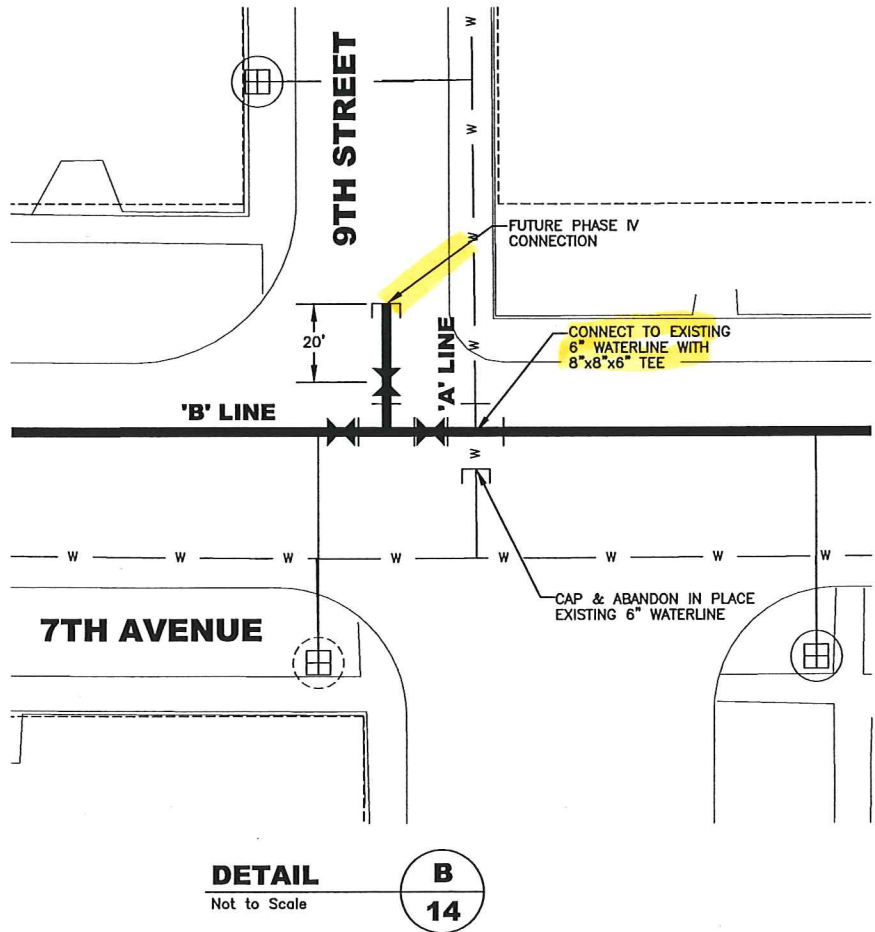
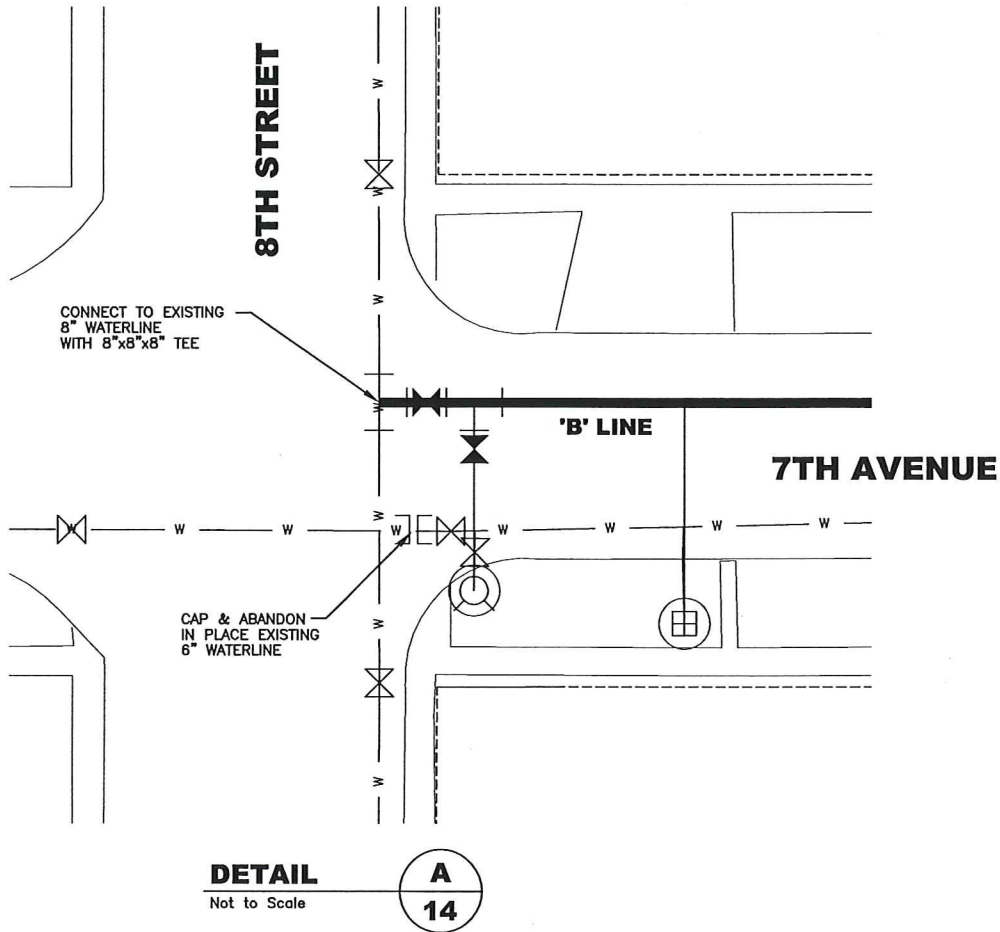
SHEET 13

OF 19 SHEETS

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PHASE II DETAILS



RECORD DRAWING

MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

SHEET
14

PHASING DETAILS

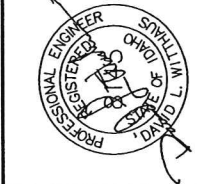
OF
19
SHEETS

REVISIONS
BY HRF DATE 10/6/00 DESC. Per DEC. Record Drawing
BY KLO DATE 11/26/01 DESC. A
BY DATE DATE



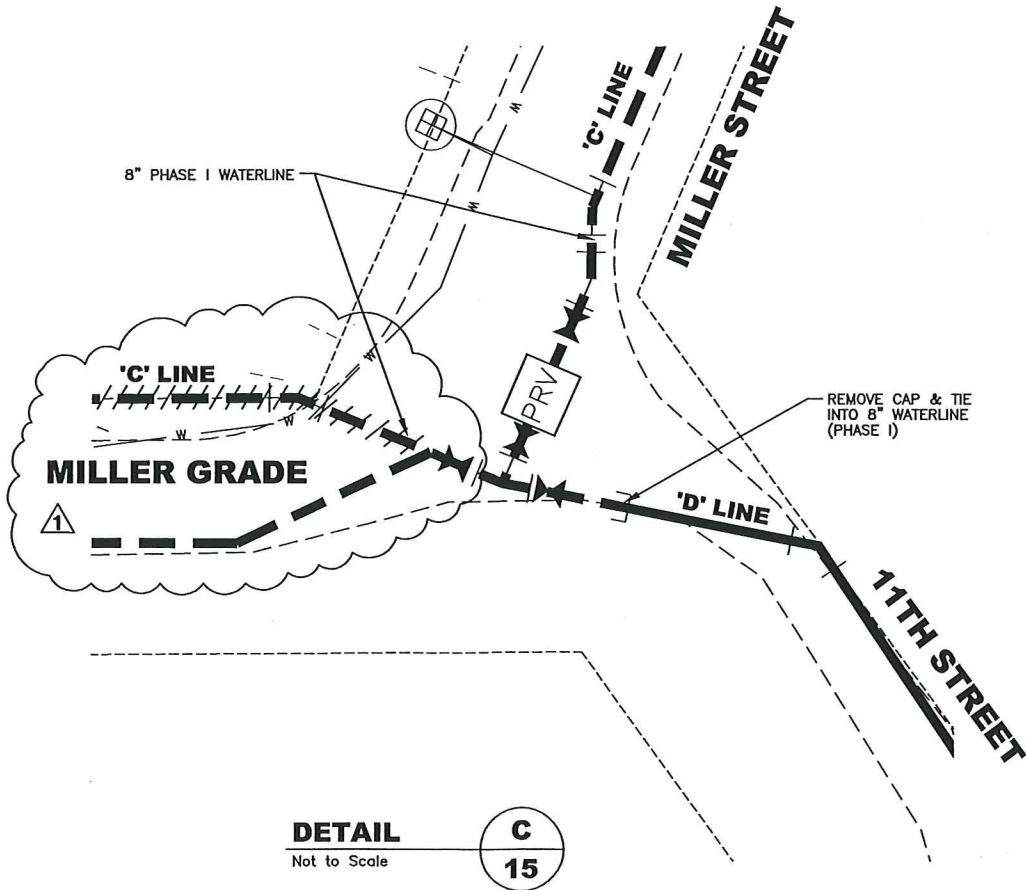
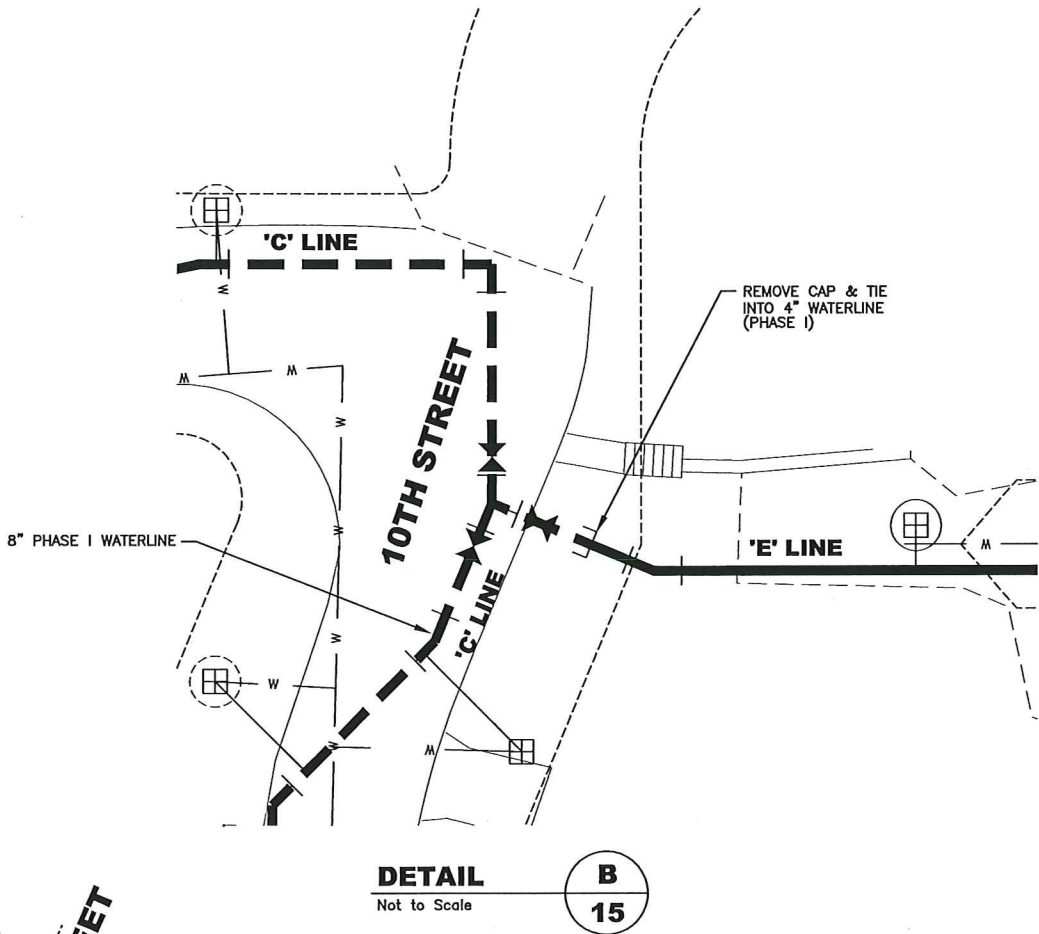
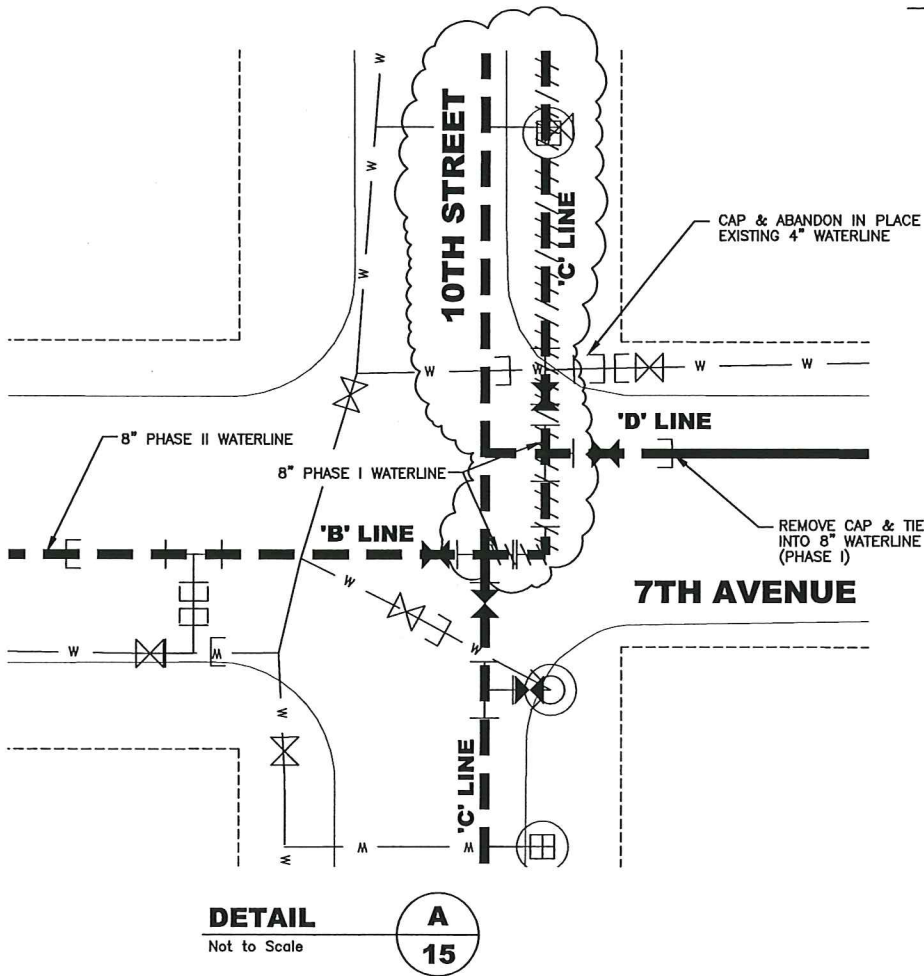
THOMAS, DEAN & HOSKINS, INC.
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SPOKANE WASHINGTON
LEWISTON IDAHO

DRAWN HRF DATE 7/28/00
DESIGNED JLN JOB NO. 100-008
APPROVED DLW F.B. NO.



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PHASE III DETAILS



RECORD DRAWING

MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

SHEET
15

PHASING DETAILS

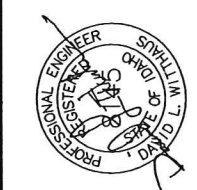
OF
19
SHEETS

REVISIONS
BY HRF DATE 10/5/00 DESC. Per DEC
BY KLO DATE 11/26/01 DESC. A Record Drawing
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DRAWN HRF DATE 7/28/00
DESIGNED JLN JOB NO. 100-008
APPROVED DLW F.B. NO.



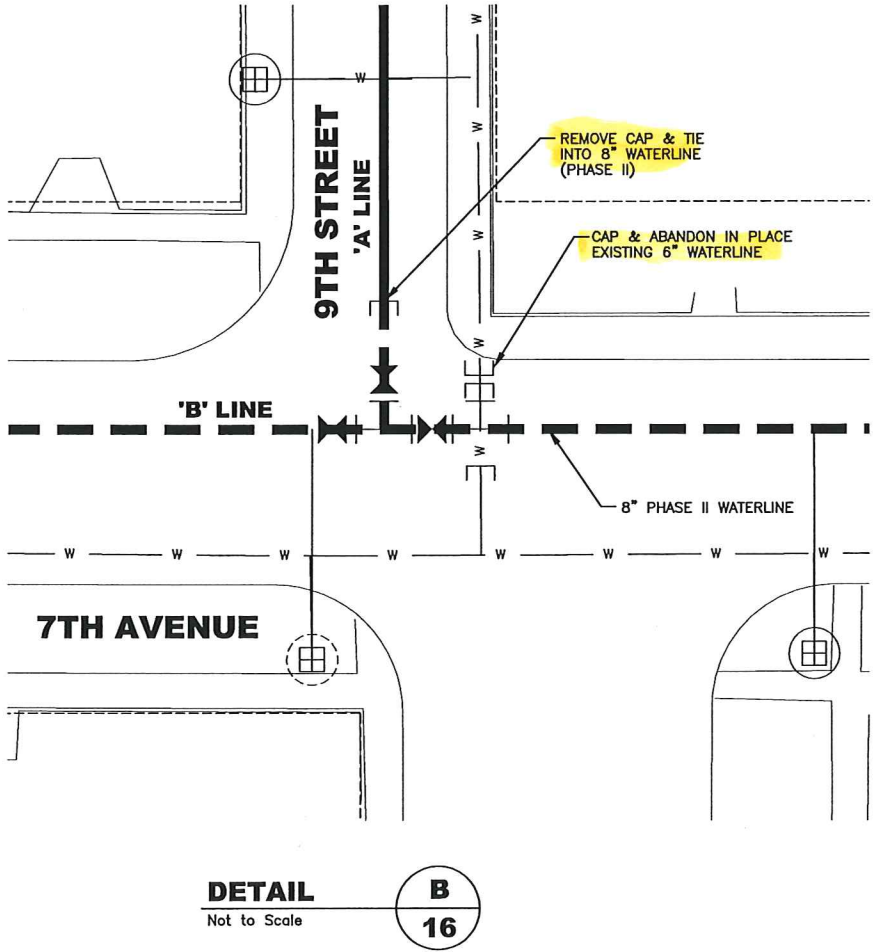
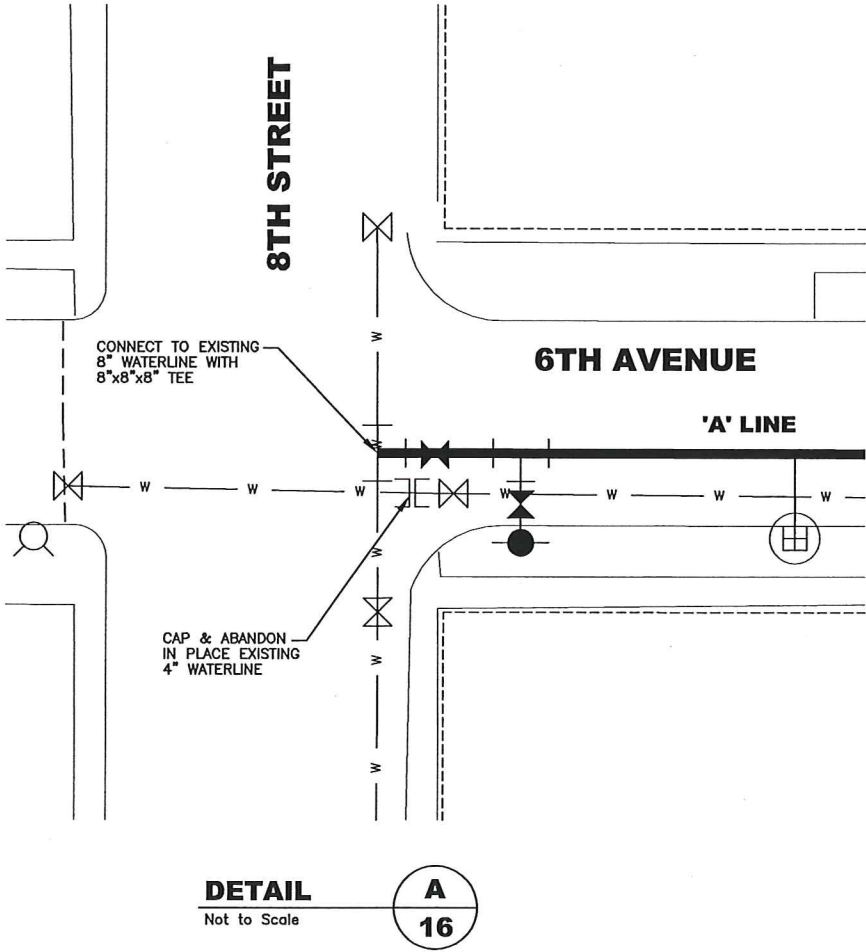
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SPOKANE
LEWISTON
MONTANA
WASHINGTON
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PHASE IV DETAILS



RECORD DRAWING

MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

SHEET
16

PHASING DETAILS

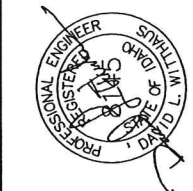
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19
SHEETS

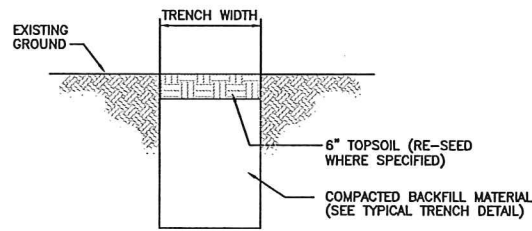
REVISIONS
BY HRF DATE 10/5/00 DESC. Per DEO
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SPOKANE WASHINGTON
LEWISTON IDAHO

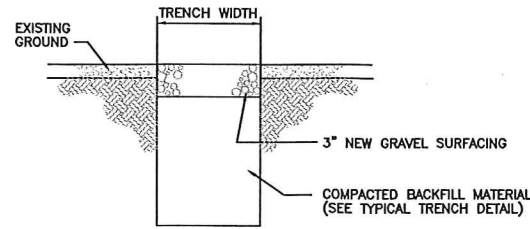
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APPROVED DLW F.B. NO.





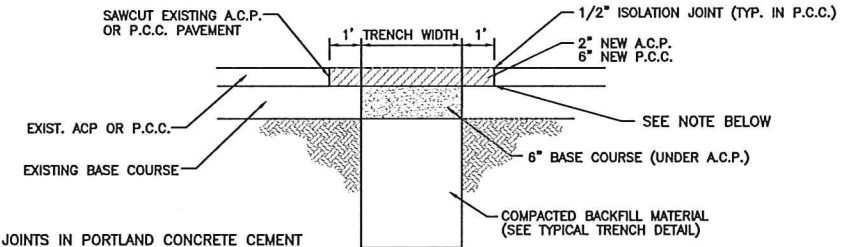
TOPSOIL RESTORATION DETAIL
NOT TO SCALE

(A)
17



GRAVEL RESTORATION DETAIL
NOT TO SCALE

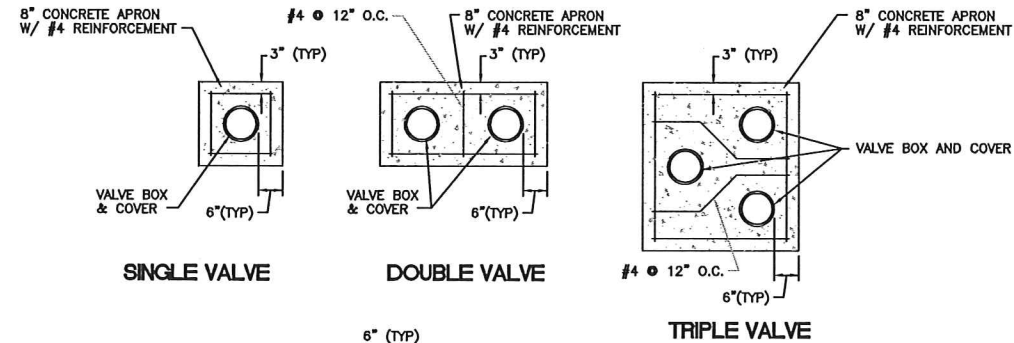
(B)
17



NOTE: PLACE JOINTS IN PORTLAND CEMENT REPLACEMENT AREAS IN ACCORDANCE WITH PUBLICATION "CITY STREETS, THE CONCRETE ADVANTAGE" BY THE PORTLAND CEMENT ASSOCIATION.

PAVEMENT REMOVAL/REPLACEMENT DETAIL
NOT TO SCALE

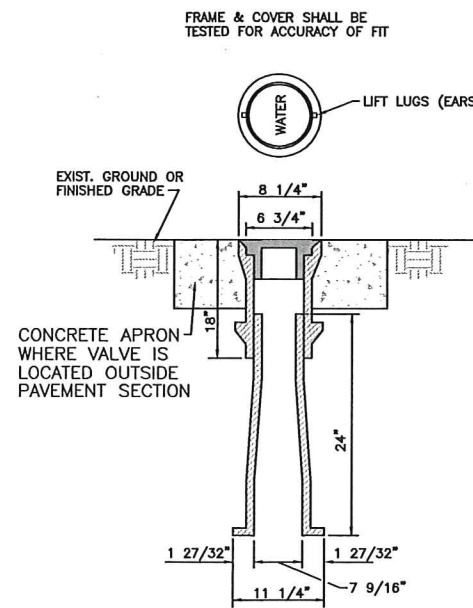
(C)
17



NOTE: CONCRETE APRON ONLY REQUIRED WHEN VALVE IS NOT INSTALLED WITHIN A PAVED ROADWAY SECTION

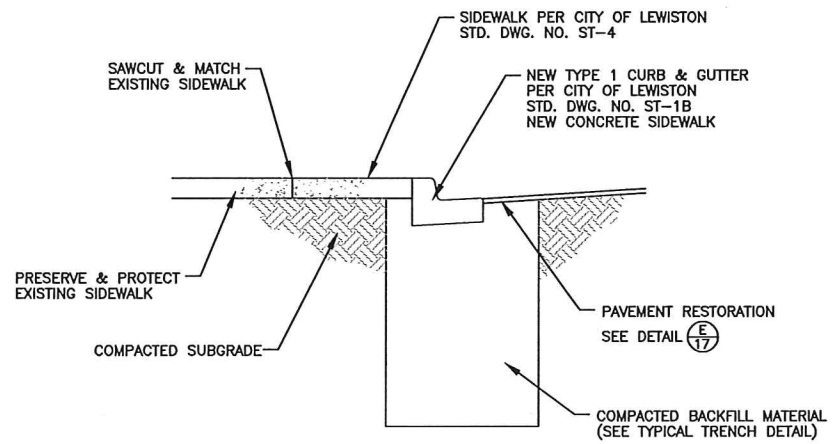
CONCRETE VALVE BOX APRON DETAILS
NOT TO SCALE

(D)
17



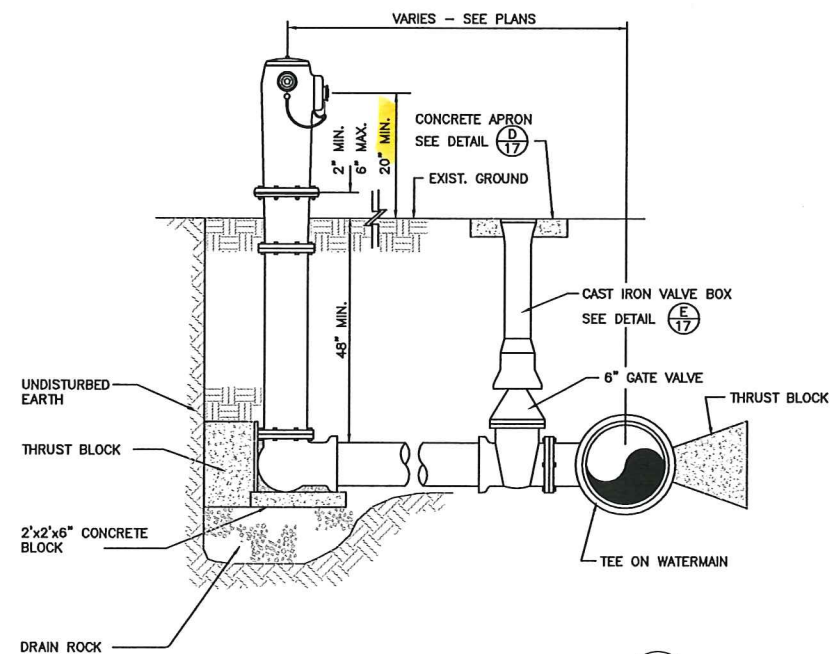
CAST IRON VALVE BOX
NOT TO SCALE

(E)
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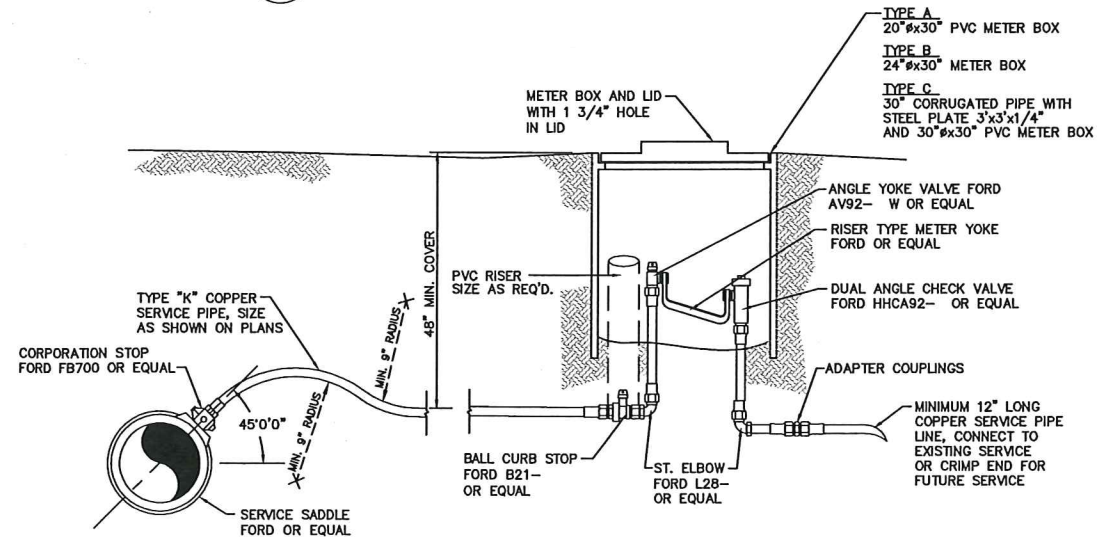
CURB AND GUTTER RESTORATION DETAIL
NOT TO SCALE

(F)
17



FIRE HYDRANT ASSEMBLY DETAIL
NOT TO SCALE

(G)
17

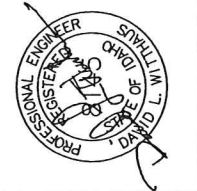


NOTE: THE SIZE OF BALL CURB STOP, METER YOKE, DUAL ANGLE CHECK VALVE, ELBOWS AND FITTINGS SHALL MATCH THE METER SIZE.

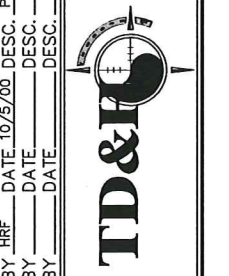
WATER SERVICE DETAIL
NOT TO SCALE

(H)
17

RECORD DRAWING



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MONTANA
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IDAHO



MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

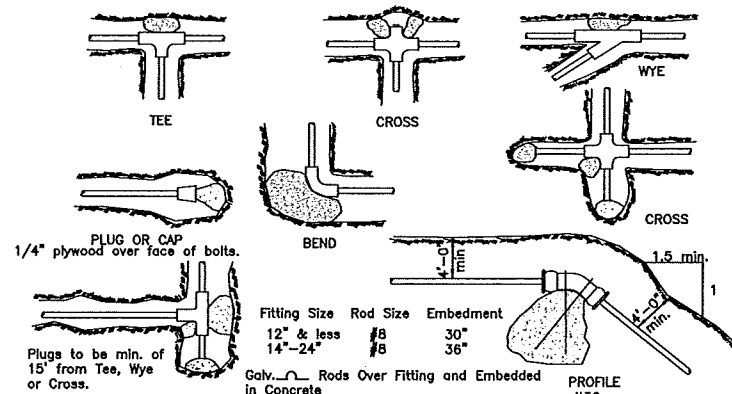
SHEET 17 OF 19 SHEETS

DETAILS

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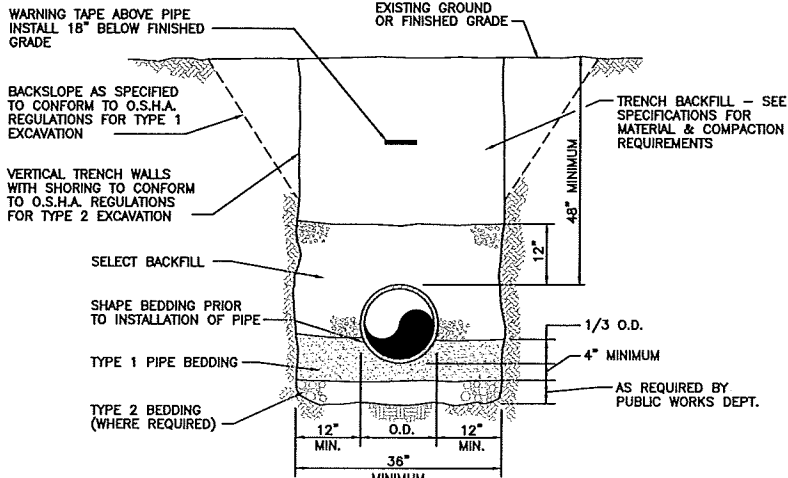
Fitting Size	BEARING AREA OF THRUST BLOCKS IN SQ. FT.				
	Tee, Wye, Plug or Cap	90° Bend Plugged Cross; Tee	45° Bend	22 1/2° Bend	11 1/4° Bend
4	1.0	1.4	1.0	---	---
6	2.1	3.0	1.6	1.0	---
8	3.8	5.3	2.9	1.5	1.0
10	5.9	8.4	4.8	2.4	1.2
12	8.5	12.0	6.6	3.4	1.7
14	11.5	16.3	8.9	4.6	2.3
16	15.0	21.3	11.6	6.0	3.0
18	19.0	27.0	14.6	7.6	3.8
20	23.5	33.3	18.1	9.4	4.7
24	34.0	48.0	26.2	13.6	6.8

Fitting Size	VOLUME OF THRUST BLOCK IN CU.YD.			
	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	---	---	---	---
6	1.3	---	---	---
8	2.3	1.1	---	---
10	3.7	1.8	---	---
12	5.5	2.8	1.2	---
14	7.6	3.9	1.7	---
16	9.9	5.1	2.3	0.9
18	---	6.3	3.2	1.4
20	---	7.7	4.0	1.8
24	---	11.1	5.7	2.6

NOTE:
Above volumes based on test pressure of 150 p.s.i. & the weight of concrete=4050 lbs./cu.yd. To compare volumes for different test pressures use the following equation: Volume=(test pressure/150)(table value).
Thrust blocks for vertical up-bends shall be the same as for horizontal bends.

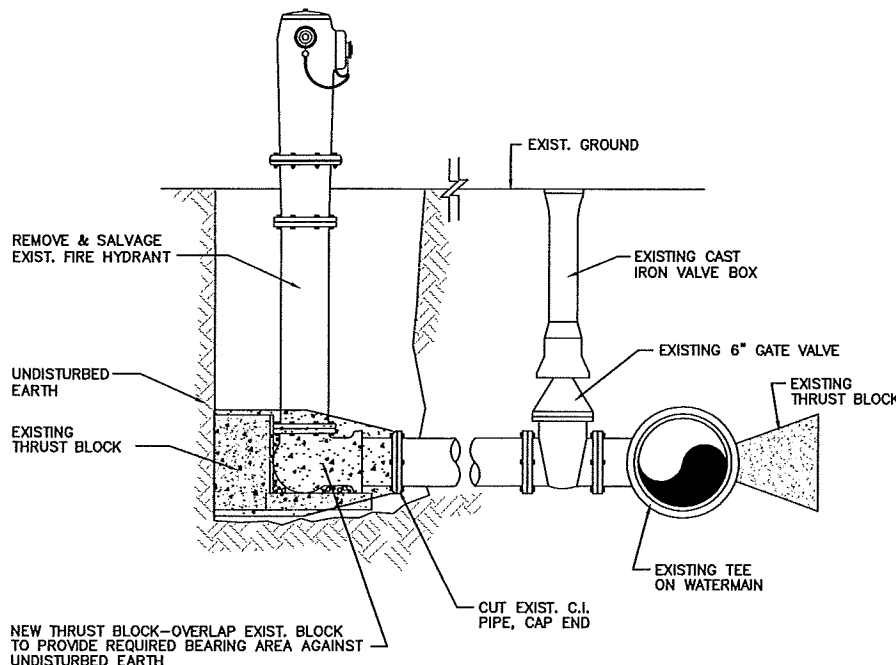
THRUST BLOCK DETAIL
NOT TO SCALE

A
18



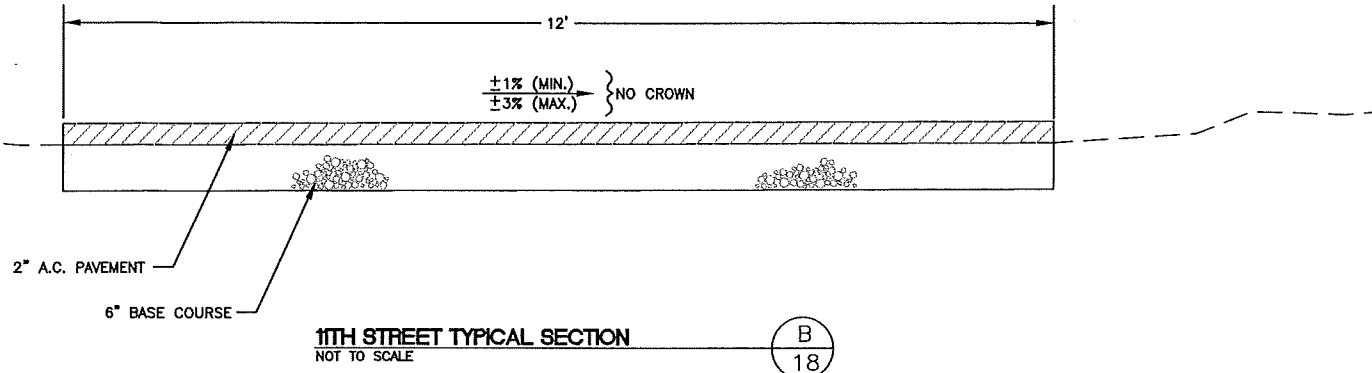
TYPICAL TRENCH DETAIL
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C
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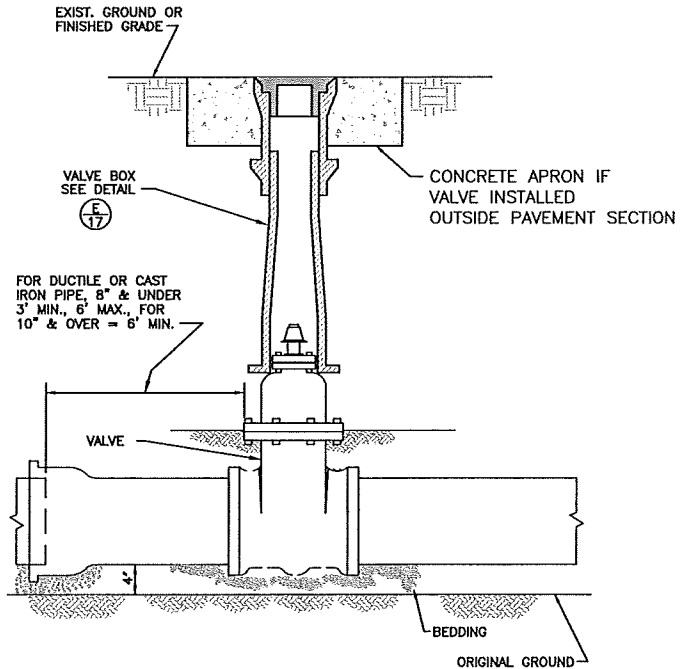


FIRE HYDRANT REMOVAL DETAIL
NOT TO SCALE

D
18



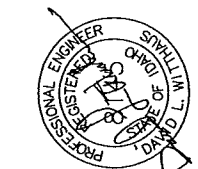
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GATE VALVE INSTALLATION DETAIL
NOT TO SCALE

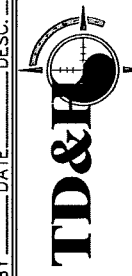
E
18

RECORD DRAWING



DATE 7/28/00
JOB NO. 100-008
DRAWN BY
DESIGNED BY
APPROVED BY

THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS
GREAT FALLS-BOZEMAN-KALISPELL
SPOKANE
LEWISTON
MONTANA
WASHINGTON
IDAHO



MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

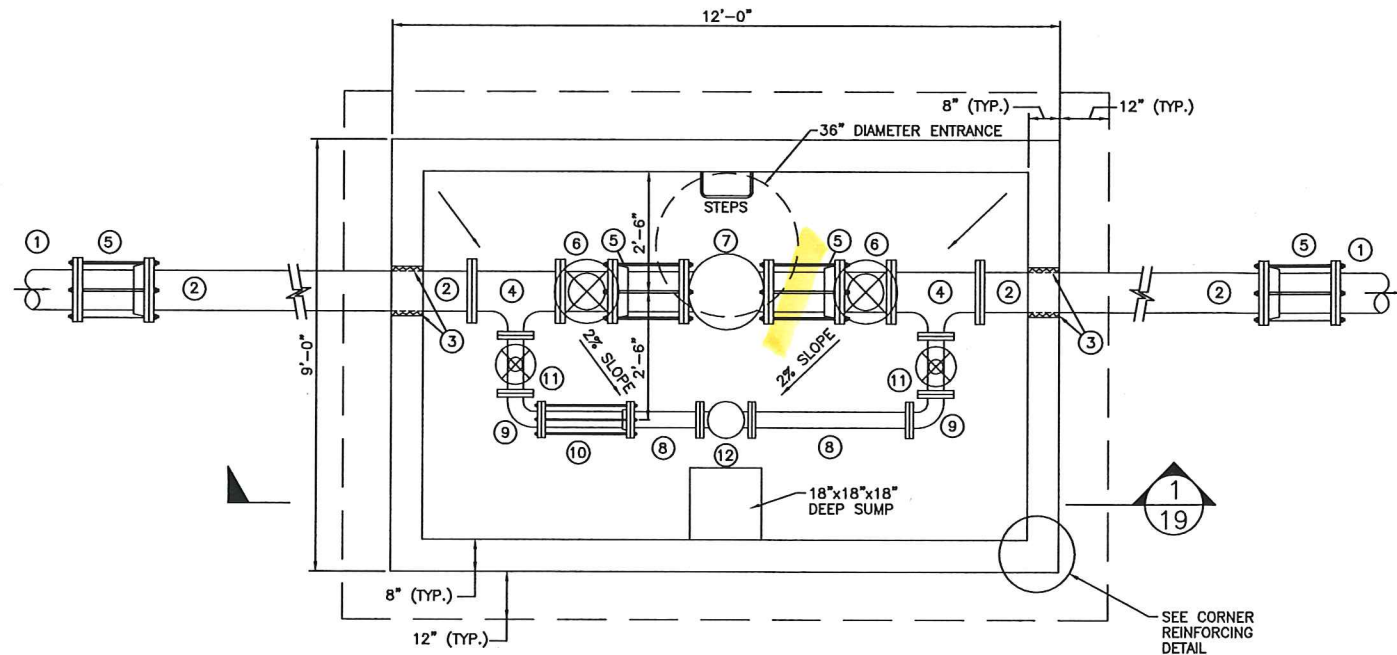
DETAILS

SHEET
18

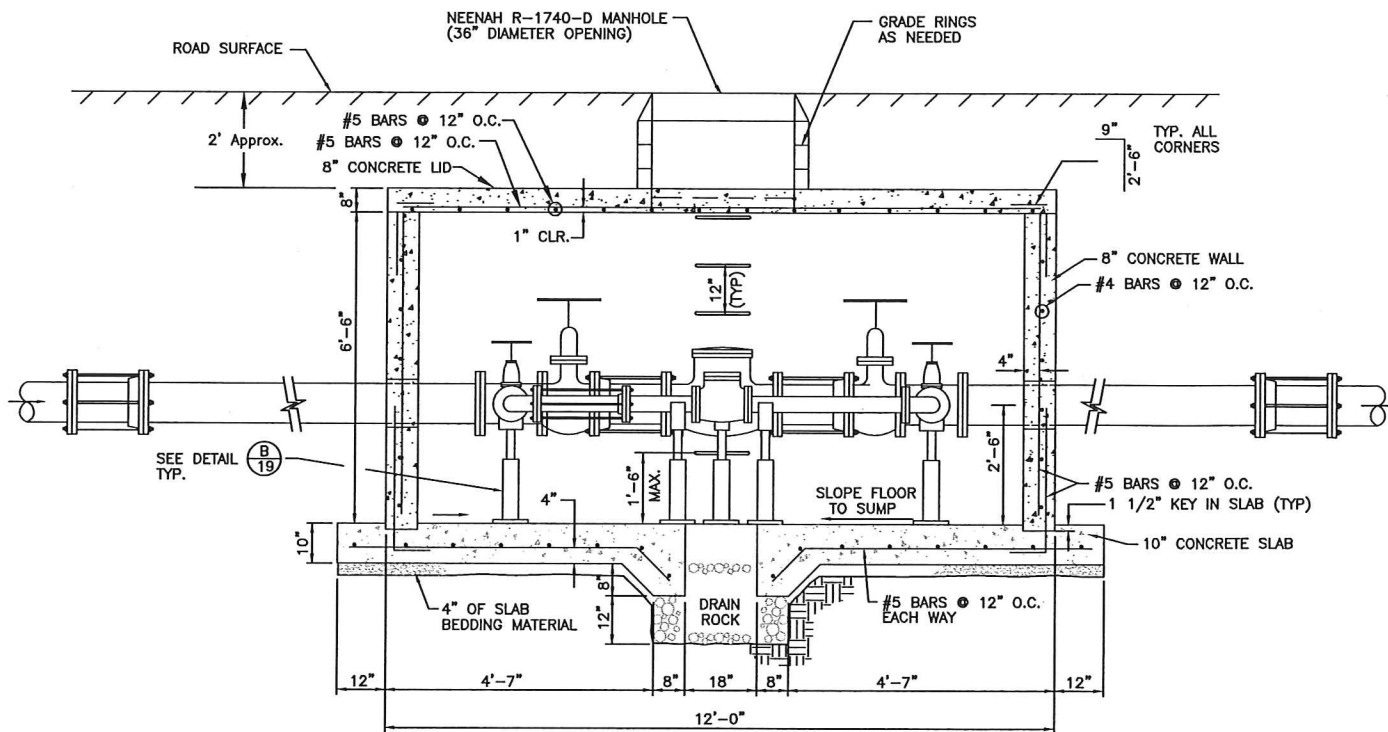
OF
19
SHEETS

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PLAN VIEW
NOT TO SCALE



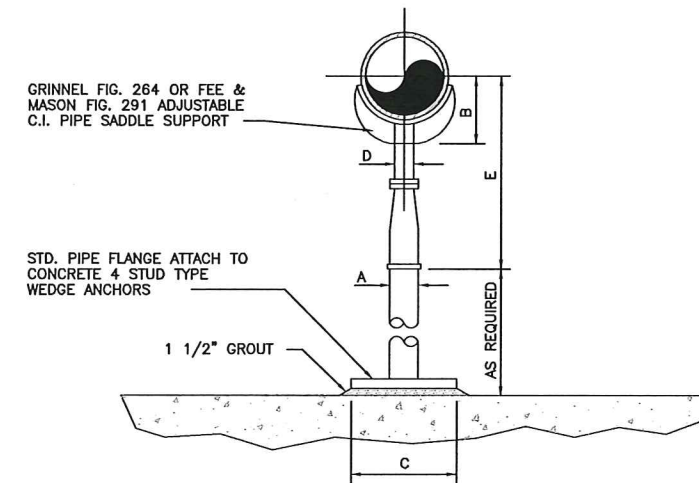
SECTION 1
NOT TO SCALE

PRESSURE REDUCING VALVE STATION
NOT TO SCALE

A
19

RECORD DRAWING

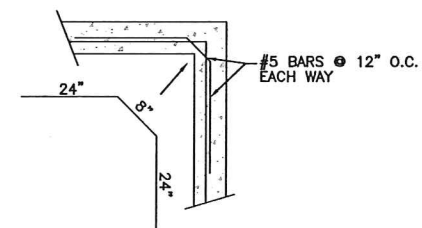
- ① - 8" PVC OR D.I. PIPE
- ② - 8" D.I. PIPE
- ③ - WALL PENETRATION SEAL
- ④ - 8"x8"x3" TEE AND PIPE SUPPORT
- ⑤ - 8" FLEXIBLE COUPLING W/ TIE RODS
- ⑥ - 8" GATE VALVE W/ HANDWHEEL
- ⑦ - 8" REDUCED PORT PRESSURE REDUCING/SUSTAINING VALVE AND PIPE SUPPORT
- ⑧ - 3" STEEL PIPE AND PIPE SUPPORT
- ⑨ - 3"x90° ELBOW
- ⑩ - 3" FLEXIBLE COUPLING W/ TIE RODS
- ⑪ - 3" GATE VALVE W/ HANDWHEEL
- ⑫ - 3" REDUCED PORT PRESSURE REDUCING/SUSTAINING VALVE



FOR BASE, HEIGHT & FLANGE DIMENSIONS. SEE TABLE BELOW

PIPE SUPPORT
NOT TO SCALE

PIPE SIZE	A	B	C	D	E	
					MIN.	MAX.
3"	3	3 3/4	9	1 1/2	8 1/4	13 1/4
8"	3	6 7/8	9	2 1/2	11 3/4	16 1/2



CORNER REINFORCING DETAIL
NOT TO SCALE

C
19



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MILLER STREET WATERLINE REPLACEMENT
CITY OF LEWISTON, IDAHO

DETAILS

SHEET
19

OF
19
SHEETS

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