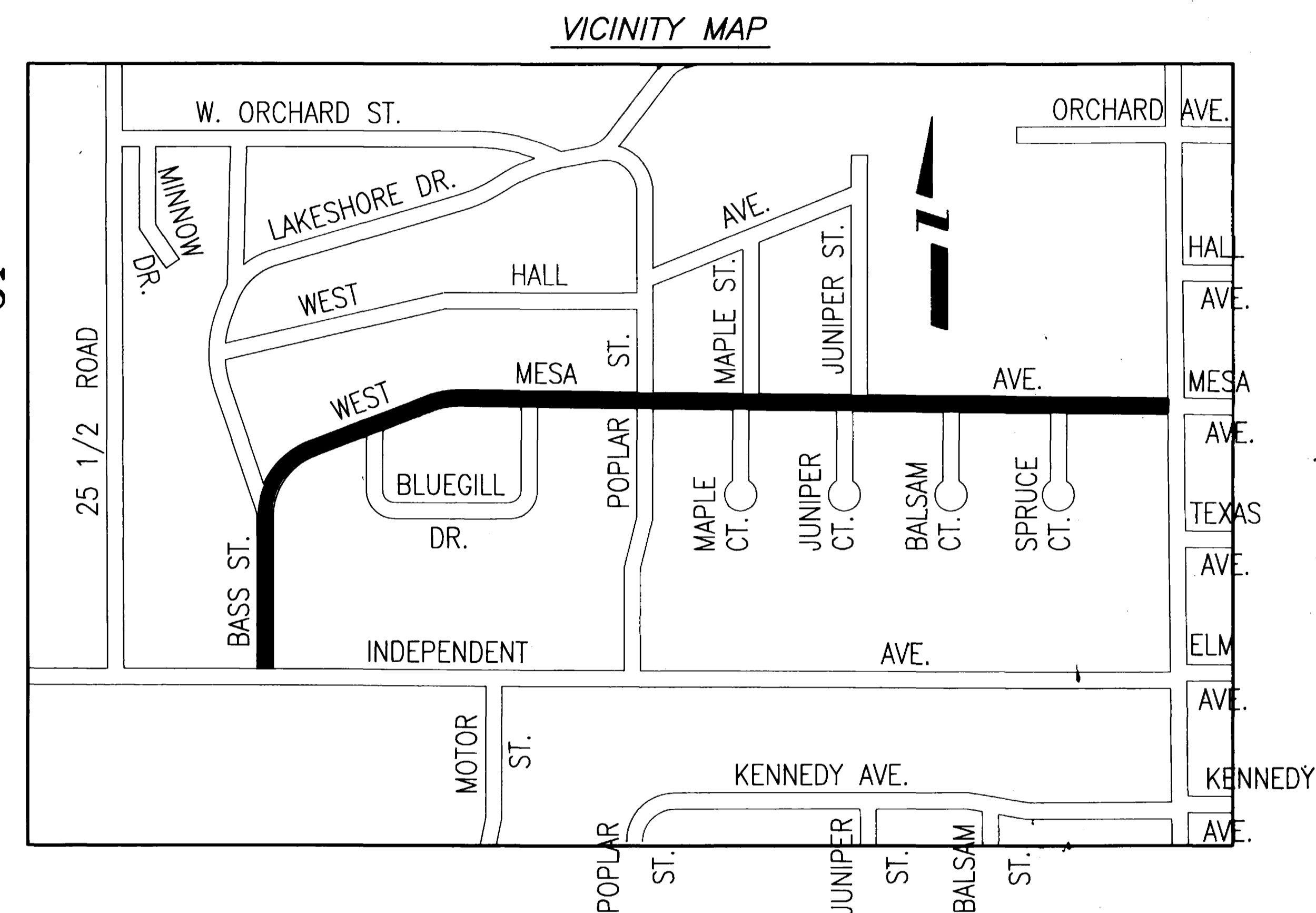


UTILITY LINE REPLACEMENTS

WEST MESA & BASS, FIRST ST. to INDEPENDENT AVE.

1993

1. Cover Sheet
2. Drafting Standards & Abbreviations
- 3-3A. Summary of Approximate Quantities
- 4-5. Waterline Replacement Plan & Profiles
6. Waterline Master Plan
- 7-11. San. & Storm Sewer Plan & Profiles
- 12-13. Storm Sewer Details
- 14-16. Irrigation System Modifications
17. Irrigation System Details
18. Exhibit "F" Standard Storm Drain Details
19. Exhibit "H" Standard Waterline Details
20. Exhibit "I" Standard Sanitary Sewer Details



AS CONSTRUCTED DRAWINGS
CONTRACTOR = PARKERSON CONST.
PROJECT ENGINEER = JAMES H. TAYLOR
CONSTRUCTION INSPECTOR = TIM J. PATTY

City of Grand Junction, Colorado

Department of Public Works & Utilities

Engineering Division

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	REF. NO.	CONTRACT ITEM	UNIT	QUANTITY	ITEM NO.	REF. NO.	CONTRACT ITEM	UNIT	QUANTITY
WATERLINE REPLACEMENT									
					29		RESET MAIL BOX	EACH	3
1		REMOVE ASPHALT PAVEMENT TO A NEAT LINE	S.Y.	190	30		RESET RAILROAD TIES & BOTTOM STEPS	LUMP SUM	LUMP SUM
2		REMOVE 6" & 8" GATE VALVE & RETURN TO CITY	EACH	2	31		GRANULAR STABILIZATION MATERIAL (TYPE B) UNDER SEWERLINE WHERE AUTHORIZED INCLUDING OVER EXCAVATION	TON	250
3		CLOSE VALVE, REMOVE TOP OF VALVE BOX & FILL VOID WITH WASHED ROCK	EACH	2	?				
4		REMOVE FIRE HYDRANT & RETURN TO CITY	EACH	1	32		MINOR CONTRACT REVISIONS FOR SANITARY SEWERLINE	FA	
STORM SEWER CONSTRUCTION									
5		REMOVE 6" X 8" REDUCER & 6" SOLID SLEEVE AT TEE & RETURN TO CITY	LUMP SUM	LUMP SUM					
6		CAPPING AND THRUST BLOCKING OF LINE TO MAINTAIN SERVICE	LUMP SUM	LUMP SUM	33		REMOVE ASPHALT PAVEMENT TO A NEAT LINE	S.Y.	150
7		REMOVE SIGN, RESET BY OTHERS.	EACH	1	34		REMOVE INLET, PLUG END OF PIPE THAT REMAINS	EACH	1
8		RESET MAIL BOX	EACH	1	35		REMOVE 12" RCP FROM EXISTING MANHOLE, ENLARGE HOLE IF NECESSARY TO INSTALL 12" PVC	LUMP SUM	LUMP SUM
9		8" DIA. PVC WATERLINE (AWWA C-900, CLASS 150) INCLUDING FITTINGS, EXCAVATION & BACKFILL	L.F.	740	36		48" DIA. MANHOLE WITH RING & COVER INCLUDING EXCAVATION & BACKFILL	EACH	9
10		6" DIA. PVC WATERLINE (AWWA C-900, CLASS 150) INCLUDING FITTINGS, EXCAVATION & BACKFILL	L.F.	70	37		12" DIA. PVC STORM SEWERLINE (ASTM 3034, SDR 35) INCLUDING EXCAVATION, BACKFILL & ADJUSTMENT OF WATER SERVICE LINE WHEN REQUIRED.	L.F.	1270
11		8" GATE VALVE MJ x FL WITH VALVE BOX	EACH	1	38		10" DIA. PVC STORM SEWERLINE (ASTM 3034, SDR 35) INCLUDING EXCAVATION, BACKFILL & ADJUSTMENT OF WATER SERVICE LINE WHEN REQUIRED	L.F.	920
12		8" GATE VALVE (MJ) WITH VALVE BOX	EACH	2	39		STORM DRAIN INLET WITH GRATE	EACH	1
13		6" GATE VALVE MJ X FL WITH VALVE BOX	EACH	3	40		STORM DRAIN INLET WITH GRATE & CURB OPENING	EACH	11
14		FIRE HYDRANT	EACH	2	41		12" DIA. PVC STORM SEWER CONNECTOR PIPE WITH FITTINGS IF REQUIRED (ASTM 3034, SDR35)	L.F.	50
15		8" X 1" BRASS SADDLE WITH 1" CORPORATION STOP	EACH	5	42		10" DIA. PVC STORM SEWER CONNECTOR PIPE WITH FITTINGS IF REQUIRED (ASTM 3034, SDR 35)	L.F.	75
16		8" X 1 1/2" BRASS SADDLE WITH 1 1/2" CORPORATION STOP	EACH	1	43		VERTICAL ADJUSTMENT OF 6" DIA. WATERLINE TO CLEAR STORM SEWER. REQUIRES 2-6" DIA. X 18" OFFSETS, MJ X PE AND A 6" DIA. SOLID SLEEVE.	EACH	3
17		6" X 2" BRASS SADDLE WITH 2" CORPORATION STOP	EACH	1	44		AGGREGATE BASE COURSE CLASS 6	TON	95
18		1" DIA. COPPER SERVICE LINE WITH FITTINGS, EXCAVATION & BACKFILL	L.F.	25	45		HOT BITUMINOUS PAVEMENT (GRADING C) PATCHING (3" THICKNESS)	TON	30
19		1 1/2" DIA. COPPER SERVICE LINE WITH FITTINGS, EXCAVATION & BACKFILL	L.F.	5	46		MINOR CONTRACT REVISIONS FOR STORM SEWERS	FA	
20		2" DIA. COPPER SERVICE LINE WITH FITTINGS, EXCAVATION & BACKFILL	L.F.	15	IRRIGATION SYSTEM MODIFICATIONS				
21		GRANULAR STABILIZATION MATERIAL (TYPE B) UNDER WATERLINE WHERE AUTHORIZED INCLUDING OVER EXCAVATION	TON	50					
22		AGGREGATE BASE COURSE CLASS 6	TON	300	47		CUT PIPES OUTSIDE OF BOX, REMOVE & DISPOSE OF CONCRETE IRRIGATION BOX	LUMP SUM	LUMP SUM
23		HOT BITUMINOUS PAVEMENT (GRADING C) PATCHING (3" THICKNESS)	TON	50	48		REMOVE CONCRETE IRRIGATION STRUCTURE	EACH	2
24		MINOR CONTRACT REVISIONS FOR WATERLINES	FA		49		REMOVE CONCRETE IRRIGATION STRUCTURE & PIPE AS NECESSARY. PLUG END OF REMAINING 12" PIPE WITH CONCRETE.	EACH	2
SANITARY SEWER REPLACEMENT									
25		REMOVE EXISTING MANHOLE, FURNISH & INSTALL 48" DIA. MANHOLE WITH NEW RING & COVER INCLUDING EXCAVATION & BACKFILL	EACH	10	50		REMOVE SIGN. RESET BY OTHERS	EACH	4
26		8" DIA. PVC SEWERLINE (ASTM 3034, SDR 35) INCLUDING REMOVAL OF EXISTING LINE EXCAVATION & BACKFILL	L.F.	2070	51		REMOVE PIPE (8" TO 12" DIA.)	L.F.	410
27		6" DIA. PVC SEWERLINE (ASTM 3034, SDR 35) INCLUDING REMOVAL OF EXISTING LINE, EXCAVATION & BACKFILL.	L.F.	385	52		REMOVE CONCRETE DITCH, SAWCUT WHERE NECESSARY	L.F.	230
28		4" DIA. PVC SEWERLINE (ASTM 3034, SDR 35) FOR SERVICE TAP INCLUDING SADDLE & NECESSARY FITTINGS	L.F.	430	53		SAWCUT & REMOVE 10" WIDE CONCRETE CURB	L.F.	28
					54		REMOVE EXISTING 6" PIPE INTO EXISTING SUMP & PLUG HOLE	LUMP SUM	LUMP SUM
					55		RESET CHAIN LINK FENCE, POSTS & TOP RAIL ON CURB	L.F.	22
					56		RESET SPRINKLER HEAD	EACH	2

AS CONSTRUCTED

DESCRIPTION	DATE	DRAWN BY	L. MARTIN	DATE	4/93
REVISION Δ		CHECKED BY	J.H.T.	DATE	4/93
REVISION Δ		APPROVED BY	J.H.T.	DATE	4/93
REVISION Δ		FIELD BOOK NO.		PAGE	

**DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO**

**UTILITY LINE REPLACEMENTS
W. MESA & BASS, 1st./INDEPENDENT AVE
Summary of Approximate Quantities**

SHEET NO.	3
OF	21
FILE NO.	89264QTY.DWG

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	REF. NO.	CONTRACT ITEM	UNIT	QUANTITY	ITEM NO.	REF. NO.	CONTRACT ITEM	UNIT	QUANTITY
IRRIGATION SYSTEM MODIFICATIONS CONT.					86		SANITARY FACILITY	LUMP SUM	LUMP SUM
57		RESET RAILROAD TIE BORDER	LUMP SUM	LUMP SUM					
58		RESET SIGN POSTS AT 48+51 & 48+62.5, 22.7' LT.	EACH	2					
59		EXISTING IRRIGATION MANHOLES, RESET TO 38+86.75 & 39+38.25, 25' RT.	EACH	2					
60		RELAY EXISTING 8" PVC IRRIGATION LINE	L.F.	480					
61		8" TEE-WYE AS CLEAN-OUT WITH RISER PIPE & CAP	EACH	2					
62		24" DIA. RCP MANHOLE WITH CONCRETE BASE & REDWOOD LID	EACH	2					
63		30" DIA. RCP MANHOLE WITH CONCRETE BASE & REDWOOD LID	EACH	3					
64		30" DIA. RCP MANHOLE WITH CONCRETE BASE, CAST IRON RING & SMOOTH COVER	EACH	3					
65		CONCRETE IRRIGATION STRUCTURE 49+45, 21' LT.	LUMP SUM	LUMP SUM					
66		8" DIA. PLASTIC IRRIGATION PIPE (100 PSI) STATIONS 47+04 TO 48+32	L.F.	130					
67		6" DIA. PVC SEWER PIPE (ASTM 3034, SDR 35) INCLUDING CONNECTIONS TO EXISTING STRUCTURES	L.F.	12					
68		STUB 8" PVC SEWER PIPE (ASTM 3034, SDR 35) OUT OF MANHOLE & GROUT END INTO EXISTING DITCH	L.F.	3					
69		STUB 12" PVC PIPE OUT OF MANHOLE & CONNECT TO THE EXISTING PIPE.	L.F.	5					
70		10" PVC SEWER PIPE (ASTM 3034, SDR 35)	L.F.	580					
71		12" PVC SEWER PIPE (ASTM 3034, SDR 35) INCLUDING FITTINGS & CONNECTIONS TO THE EXISTING SYSTEM	L.F.	35					
72		8" DIA. DUCTILE IRON PIPE, CLASS 52	L.F.	37					
73		12" DIA. DUCTILE IRON PIPE, CLASS 52 INCLUDING FITTINGS & CONNECTION TO THE EXISTING SYSTEM.	L.F.	72					
74		ACROSS STREETS & SCHOOL DRIVEWAY, BACKFILL PIPE WITH FLOWFILL	CU. YD.	80					
75		EXTEND EXISTING 12" CONCRETE PIPE	L.F.	8					
76		6" DIA. CORRUGATED METAL PIPE INCLUDING FITTINGS	L.F.	5					
77		10" WIDE CONCRETE CURB	L.F.	22					
78		MINOR CONTRACT REVISIONS FOR IRRIGATION SYSTEMS.	FA						
MISCELLANEOUS CONTRACT ITEMS									
79		TRAFFIC CONTROL (ADVANCE WARNING SIGNS, BARRICADES & FLAGMEN WHEN REQUIRED)	LUMP SUM	LUMP SUM					
80		CONSTRUCTION SURVEYING	LUMP SUM	LUMP SUM					
81		MOBILIZATION	LUMP SUM	LUMP SUM					
82		PROJECT SIGNS	EACH	2					
83		NEWS LETTERS APPROXIMATELY 135 REQUIRED PER WEEK	WEEKS	10					
84		DUST CONTROL	DAYS	65					
85		AGGREGATE BASE COURSE CLASS 6, 4" THICKNESS ON SANITARY & STORM SEWER TRENCH	TONS	725					

AS CONSTRUCTED

REVISION Δ	DESCRIPTION	DATE	DRAWN BY	L. MARTIN	DATE	4/93	SCALE	PLAN	PROFILE	
REVISION Δ			CHECKED BY	J.H.T.	DATE	4/93	HORIZ.	1"=20'	HORIZ.	1"=20'
REVISION Δ			APPROVED BY	J.H.T.	DATE	4/93	VERT.	1"=5'		
REVISION Δ			FIELD BOOK NO.		PAGE					

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

UTILITY LINE REPLACEMENTS
W. MESA & BASS, 1st./INDEPENDENT AVE
Summary of Approximate Quantities

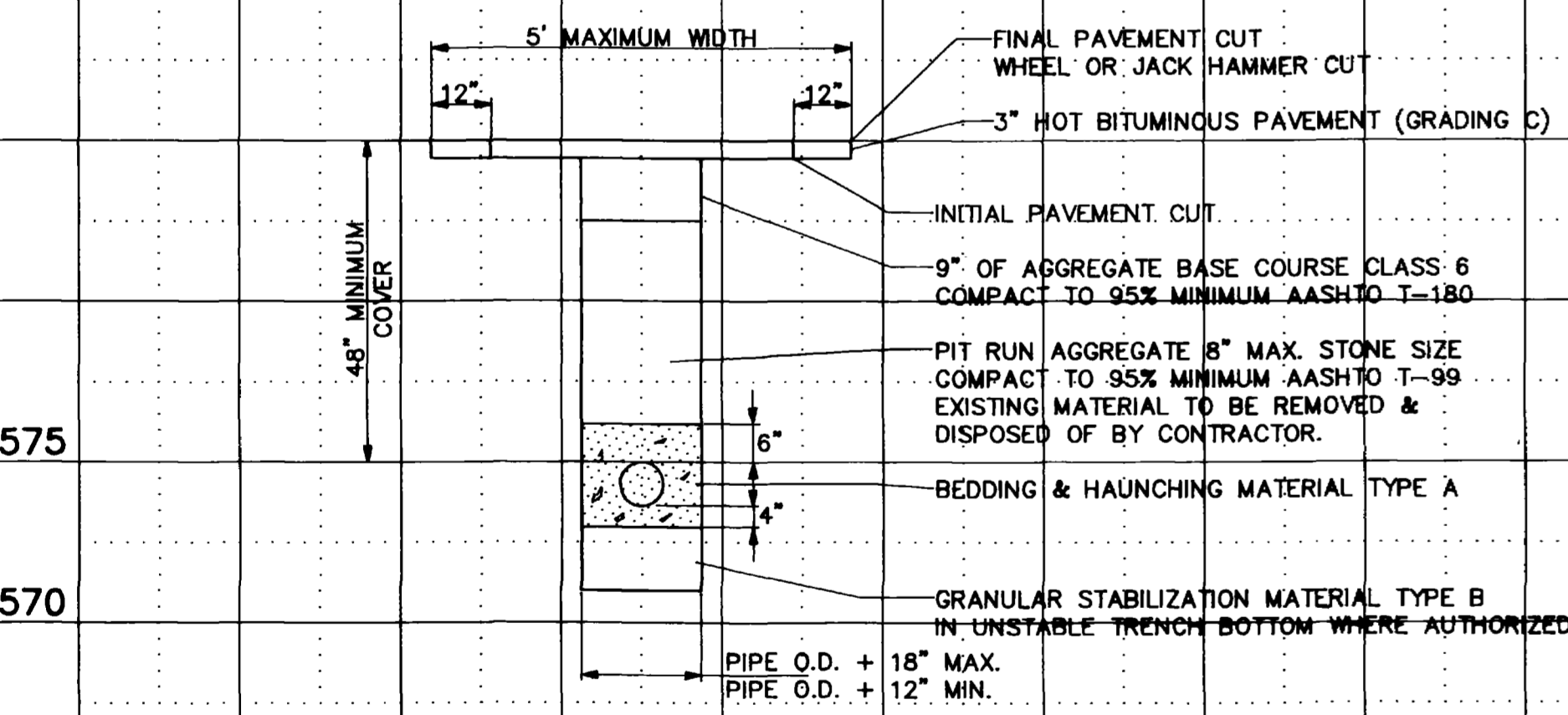
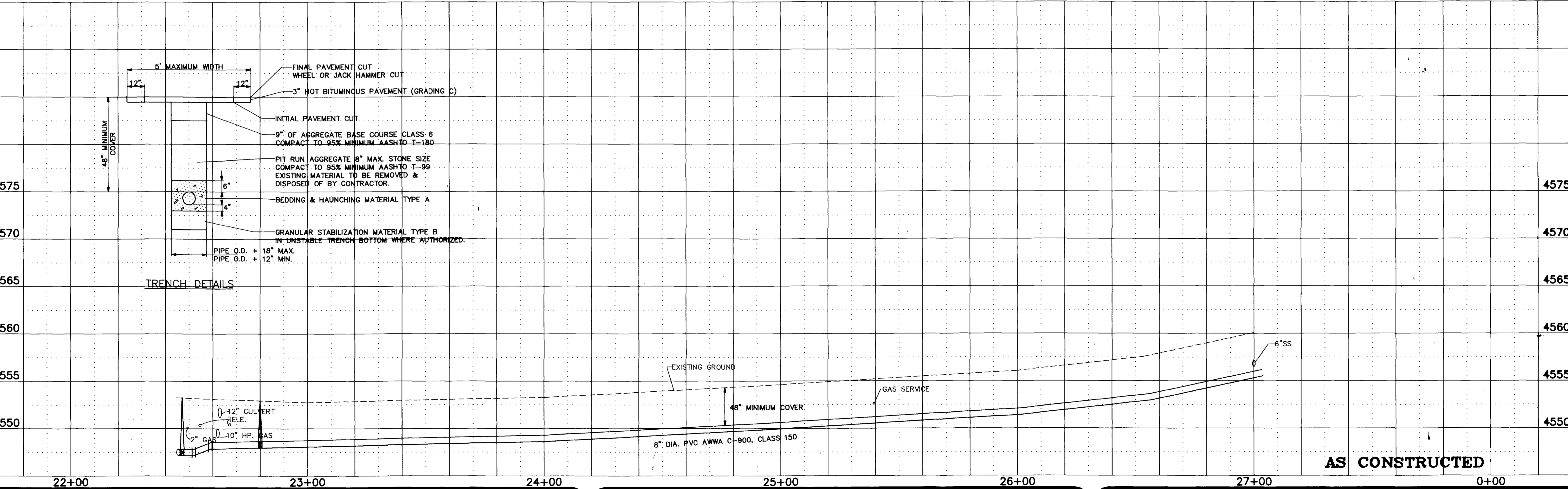
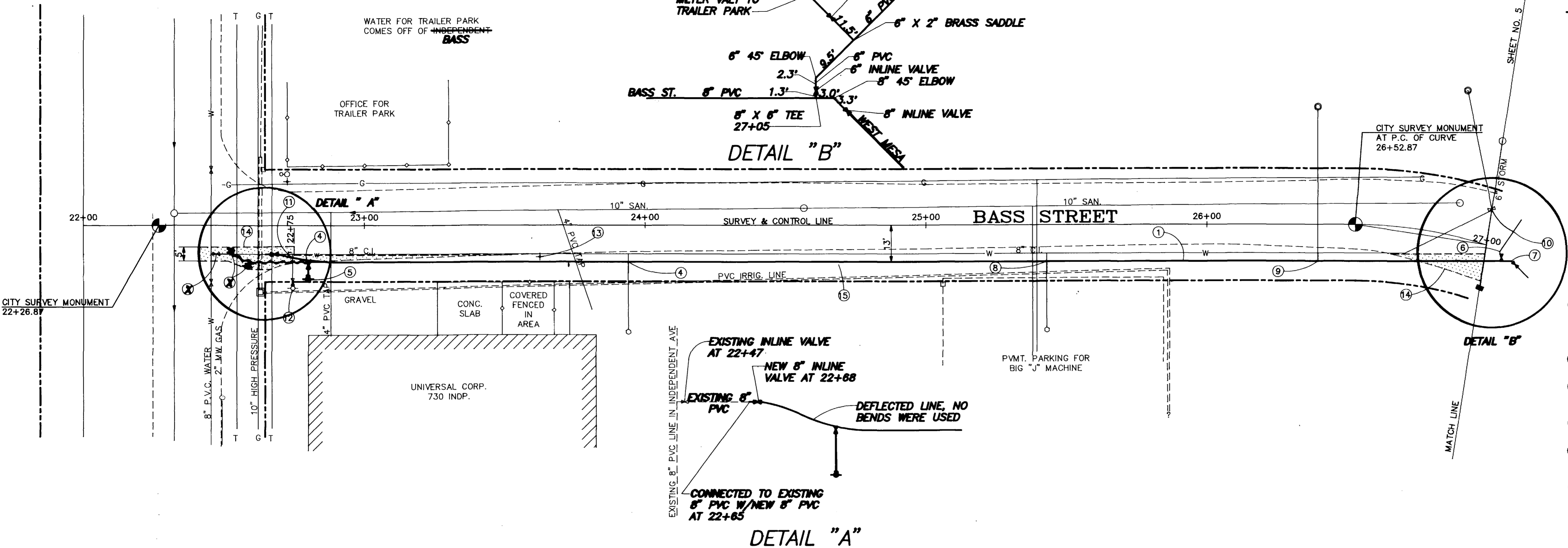
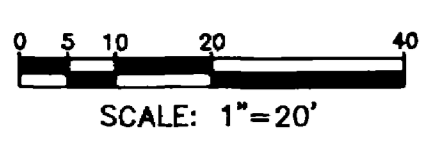
SHEET NO.	3A
OF	?
FILE NO.	89264QT1.DWG

CONTROL LINE CURVE DATA:

P.C. = 26+52.87
 Δ = 82° 24' 37"
 R = 152.24'
 T = 133.3'
 P.R.C. = 28+71.84

CONSTRUCTION NOTES:

- ① FURNISH & INSTALL 8" DIA. PVC WATERLINE AWWA C900, CLASS 150
- ② 22+47.2, 10.1' RT. REMOVE EXISTING 6" GATE VALVE & RETURN TO CITY. FURNISH & INSTALL NEW 6" GATE VALVE (FL X MJ) WITH VALVE BOX.
- ③ 22+62, 10.1' RT. & 22+50.0, 13' RT. FURNISH & INSTALL 6" 22 1/2° BENDS WITH THRUST BLOCKS.
- ④ 22+80, 13' RT. FURNISH & INSTALL 8" X 6" TEE (MJ X FL) 6" GATE VALVE (FL X MJ) WITH VALVE BOX 6" PVC WATERLINE (6 L.F.)
- ⑤ 22+80, 19' RT. FURNISH & INSTALL NEW FIRE HYDRANT.
- ⑥ 27+03.42, 1.96' RT. FURNISH & INSTALL 8" X 6" TEE (MJ X FL) 6" GATE VALVE (FL X MJ) WITH VALVE BOX 6" 45° BEND WITH THRUST BLOCK.
- ⑦ 27+02.28, 1.00' RT. 6" 45° BEND WITH THRUST BLOCK.
- ⑧ 27+06.78, 3.70' RT. FURNISH & INSTALL 8" 45° BEND WITH THRUST BLOCK 6" GATE VALVE (MJ) WITH VALVE BOX
- ⑧ FURNISH & INSTALL 8" X 1" BRASS SADDLE WITH 1" CORP STOP. RUN 1" COPPER SERVICE LINE FROM NEW WATERLINE TO CONNECT TO EXISTING SERVICE LINE AND MAKE THE CONNECTION WITH THE NECESSARY FITTINGS.
- ⑨ FURNISH & INSTALL 8" X 1 1/2" BRASS SADDLE WITH 1 1/2" CORP STOP. RUN 1 1/2" COPPER SERVICE LINE FROM NEW LINE TO CONNECT TO THE EXISTING SERVICE LINE AND MAKE THE CONNECTION WITH THE NECESSARY FITTINGS.
- ⑩ FURNISH & INSTALL 6" X 2" BRASS SADDLE WITH 2" CORP STOP. RUN 2" COPPER SERVICE LINE FROM NEW WATERLINE TO CONNECT TO THE EXISTING SERVICE LINE AND MAKE THE CONNECTION WITH THE NECESSARY FITTINGS.
- ⑪ CAPPING AND THRUST BLOCKING OF LINE MAYBE REQUIRED TO KEEP THE EXISTING LINE IN SERVICE.
- ⑫ CLOSE VALVE, REMOVE TOP OF VALVE BOX & FILL VOID WITH WASHED ROCK. REMOVE HYDRANT & RETURN TO THE CITY.
- ⑬ CONTRACTOR TO REMOVE SIGN, RESET WILL BE BY OTHERS.
- ⑭ WHEELCUT OR JACK HAMMER PAVEMENT FOR REMOVAL AND REPLACEMENT. PAY WIDTH IS 5' MAX. SEE TRENCH DETAIL THIS SHEET.
- ⑮ SHOULDER AREAS SHALL BE GRAVELED WITH AGGREGATE BASE COURSE CLASS 6, 6" MINIMUM THICKNESS, 5' MAXIMUM PAY WIDTH.



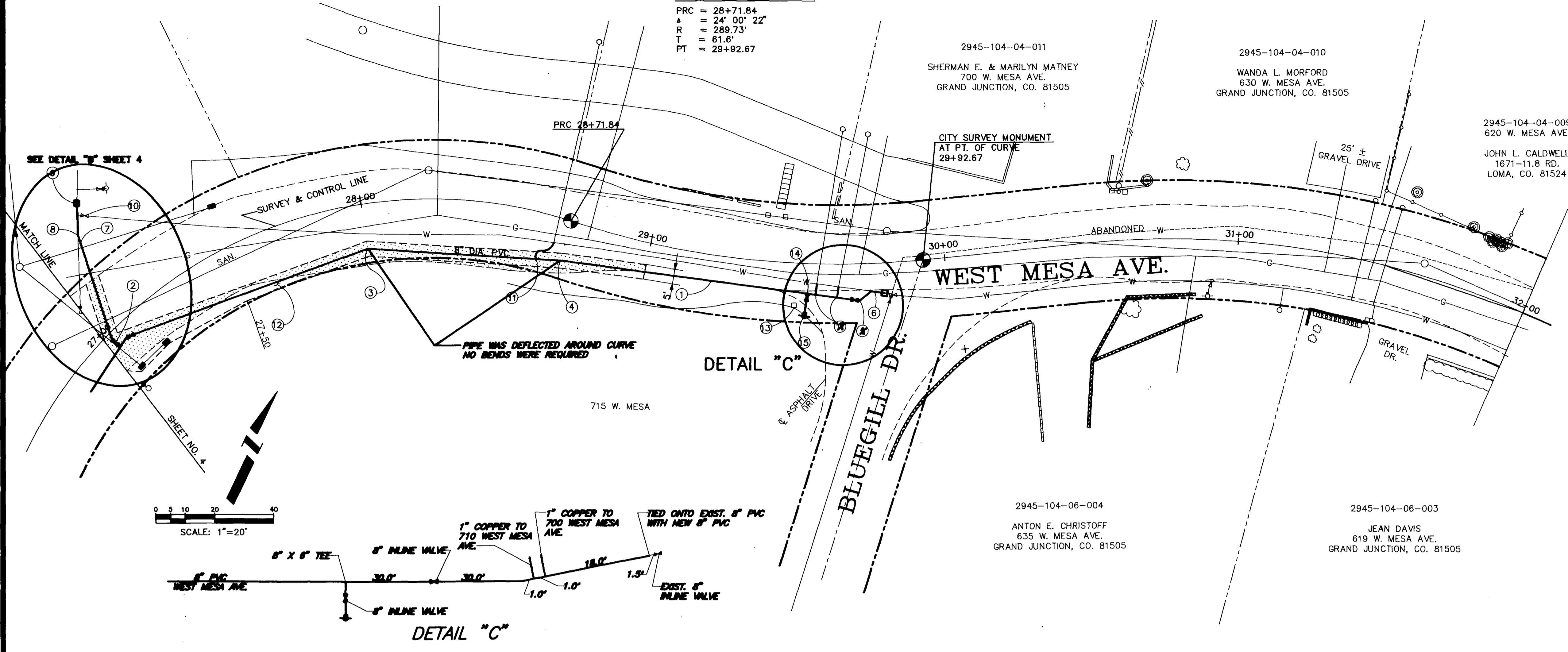
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REVISION			J.H.T.	3/93	PROFILE 1"=5'
REVISION			J.H.T.	3/93	
REVISION					

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING DIVISION
 CITY OF GRAND JUNCTION, COLORADO

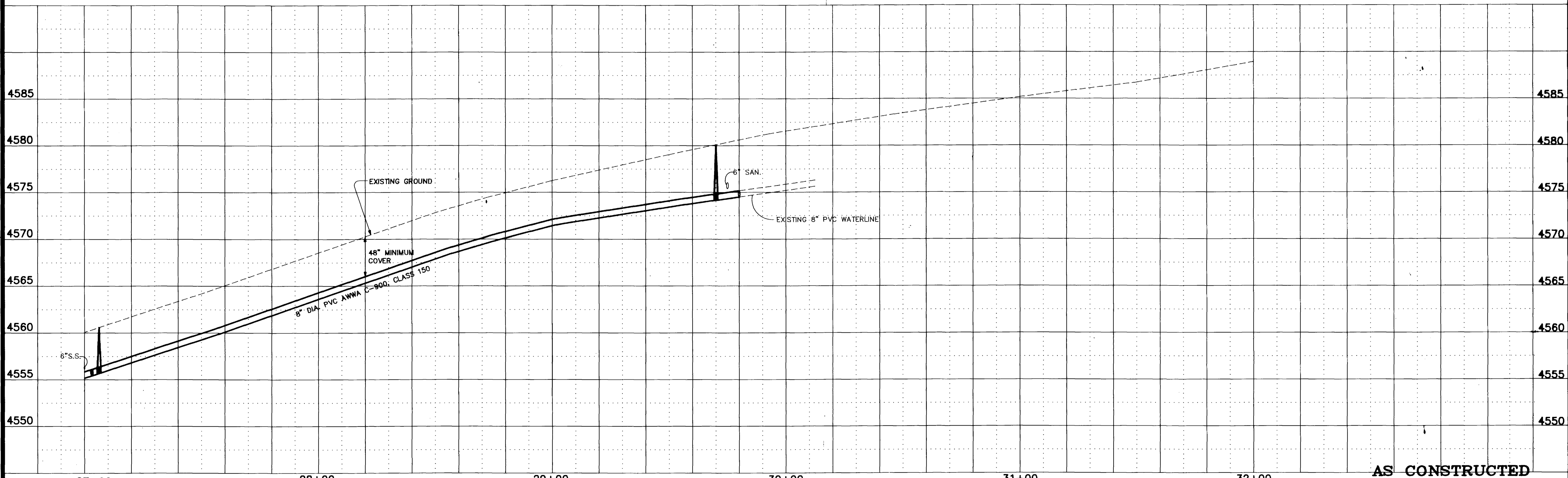
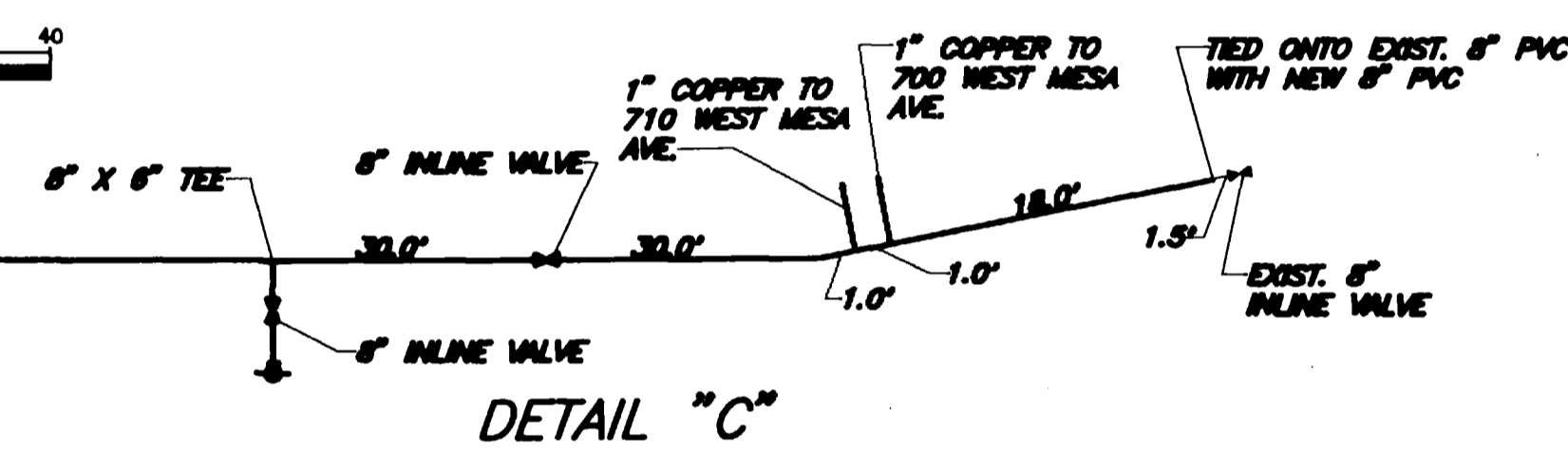
WATERLINE REPLACEMENT - 1993
 BASS - INDEPENDENT TO WEST MESA
 Plan & Profile

SHEET NO. 4
 OF 20
 FILE NO. 99306-1.DWG

CONTROL LINE DATA:
 PRC = 28+71.84
 Δ = 24° 00' 22"
 R = 289.73'
 T = 61.6'
 PT = 29+92.67



- CONSTRUCTION NOTES:**
- ① FURNISH & INSTALL 8" DIA WATERLINE AWWA C-900, CLASS 150
 - ② FOR TEE & VALVE INFORMATION & DESCRIPTIONS, REFER TO NOTE 7 OF PREVIOUS SHEET.
 - ③ 28+00, 15.19' RT. FURNISH & INSTALL 6" 22 1/2' BEND WITH THRUST BLOCK.
 - ④ 28+71.84, 17.67' RT. FURNISH & INSTALL 6" 11 1/4' BEND WITH THRUST BLOCK.
 - ⑤ 29+76.01, 13.16' RT. FURNISH & INSTALL 6" 45' BEND WITH THRUST BLOCK. REMOVE EXISTING 6" X 6" REDUCER & 6" SOLID SLEEVE AT TEE. INSTALL NEW 6" PVC WATERLINE INTO THE EXISTING TEE. USE AN 6" SOLID SLEEVE TO CONNECT PIPES IF NECESSARY.
 - ⑥ 29+76.27, 8.94' RT. FURNISH & INSTALL 6" 45' BEND WITH THRUST BLOCK. REMOVE EXISTING 6" X 6" REDUCER & 6" SOLID SLEEVE AT TEE. INSTALL NEW 6" PVC WATERLINE INTO THE EXISTING TEE. USE AN 6" SOLID SLEEVE TO CONNECT PIPES IF NECESSARY.
 - ⑦ FURNISH & INSTALL 6" DIA. PVC WATERLINE AWWA C-900, CLASS 150
 - ⑧ 27+15.72, 31.71' LT. FURNISH & INSTALL 6"-11 1/4' BEND WITH THRUST BLOCK.
 - ⑨ 27+21, 42.5' LT. REMOVE EXISTING 6" GATE VALVE CONNECT PIPES TOGETHER WITH A 6" SOLID SLEEVE.
 - ⑩ CLOSE VALVE & REMOVE TOP OF VALVE BOX. FILL VOID THAT REMAINS WITH WASHED ROCK.
 - ⑪ FURNISH & INSTALL 8" X 1" BRASS SADDLE WITH 1" CORP STOP. RUN 1" COPPER SERVICE LINE FROM NEW WATERLINE TO CONNECT TO THE EXISTING SERVICE LINE AND MAKE CONNECTIONS WITH THE NECESSARY FITTINGS.
 - ⑫ WHEEL CUT OR JACKHAMMER PAVEMENT FOR REMOVAL & REPLACEMENT. PAY WIDTH IS 5' MAX. SEE TRENCH DETAIL PREVIOUS SHEET.
 - ⑬ RESET MAIL BOX
 - ⑭ 29+54, 11.61' RT. FURNISH & INSTALL 8" X 6" TEE (MJ X FL) 6" GATE VALVE (MJ X FL) WITH VALVE BOX 6" PVC WATERLINE (7.68 L.F.)
 - ⑮ 29+53.45, 19' RT., FURNISH & INSTALL NEW FIRE HYDRANT.

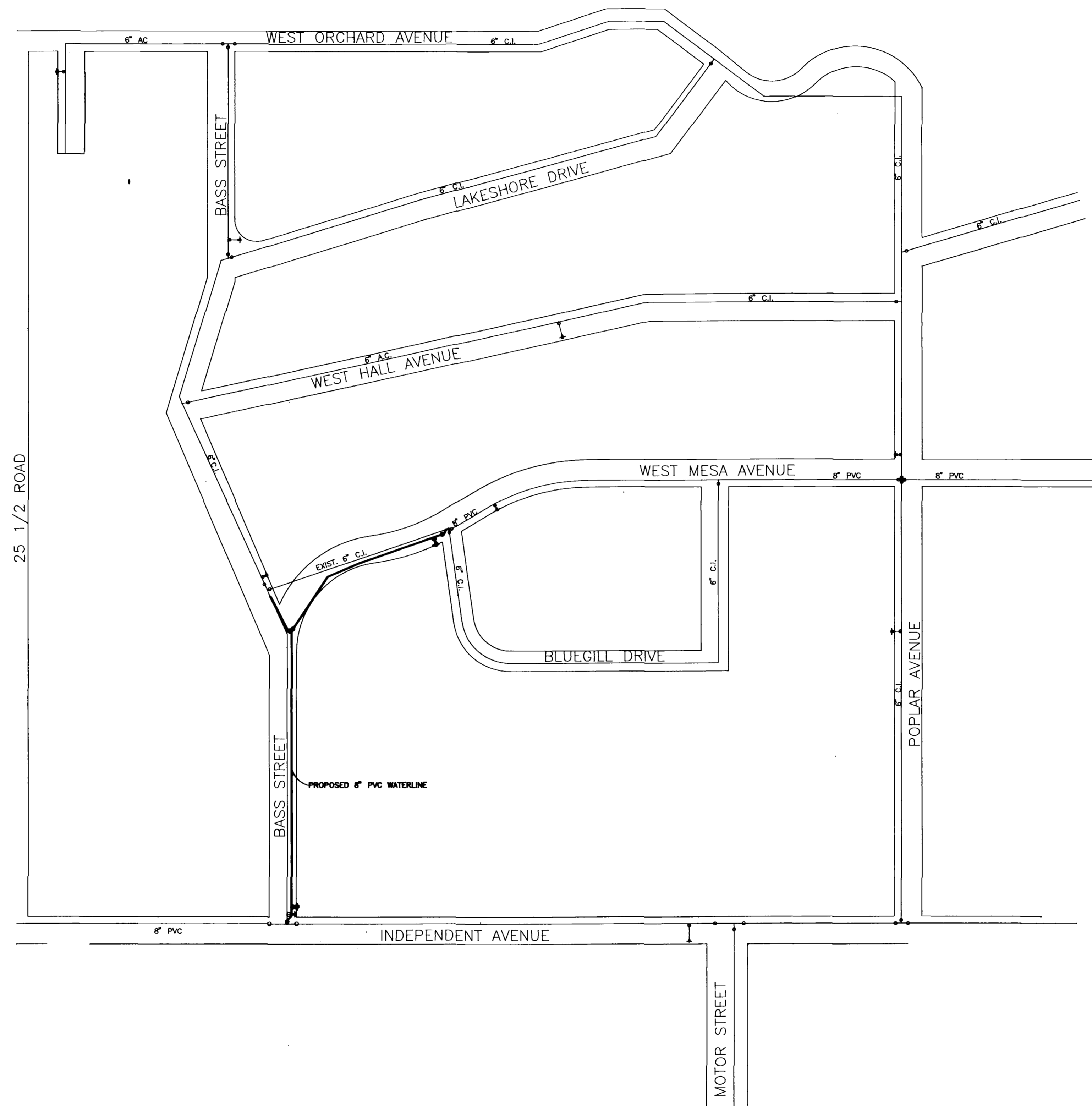


REVISION	DESCRIPTION	DATE	DRAWN BY LUTHER M.	DATE 3/93
REVISION			CHECKED BY J.H.T.	DATE 3/93
REVISION			APPROVED BY J.H.T.	DATE 3/93
REVISION			FIELD BOOK NO.	PAGE

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING DIVISION
 CITY OF GRAND JUNCTION, COLORADO

WATERLINE REPLACEMENT - 1993
 WEST MESA - BASS TO BLUEGILL
 Plan & Profile

SHEET NO.	5
OF	20
FILE NO.	99306-2.DWG



AS CONSTRUCTED

REVISION Δ	DESCRIPTION	DATE	DRAWN BY LUTHER M.	DATE 3/93	SCALE PLAN PROFILE HORIZ. N.T.S. HORIZ. N.T.S. VERT. N.T.S.
REVISION Δ			CHECKED BY J.H.T.	DATE 3/93	
REVISION Δ			APPROVED BY J.H.T.	DATE 3/93	
REVISION Δ			FIELD BOOK NO.	PAGE	

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING DIVISION
 CITY OF GRAND JUNCTION, COLORADO

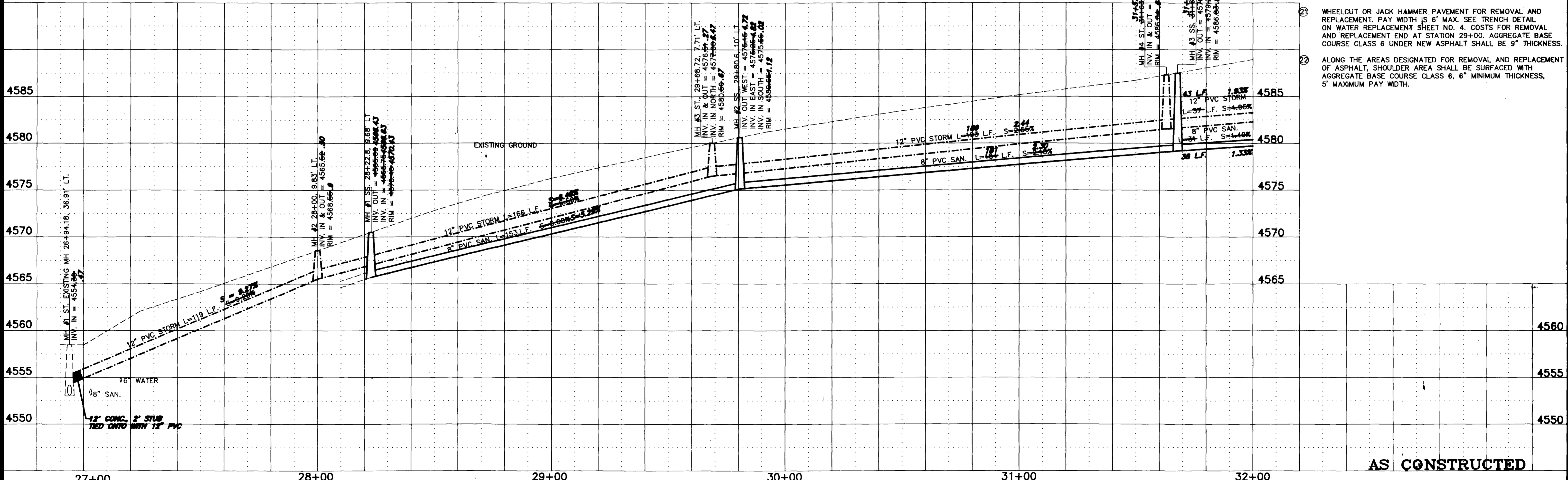
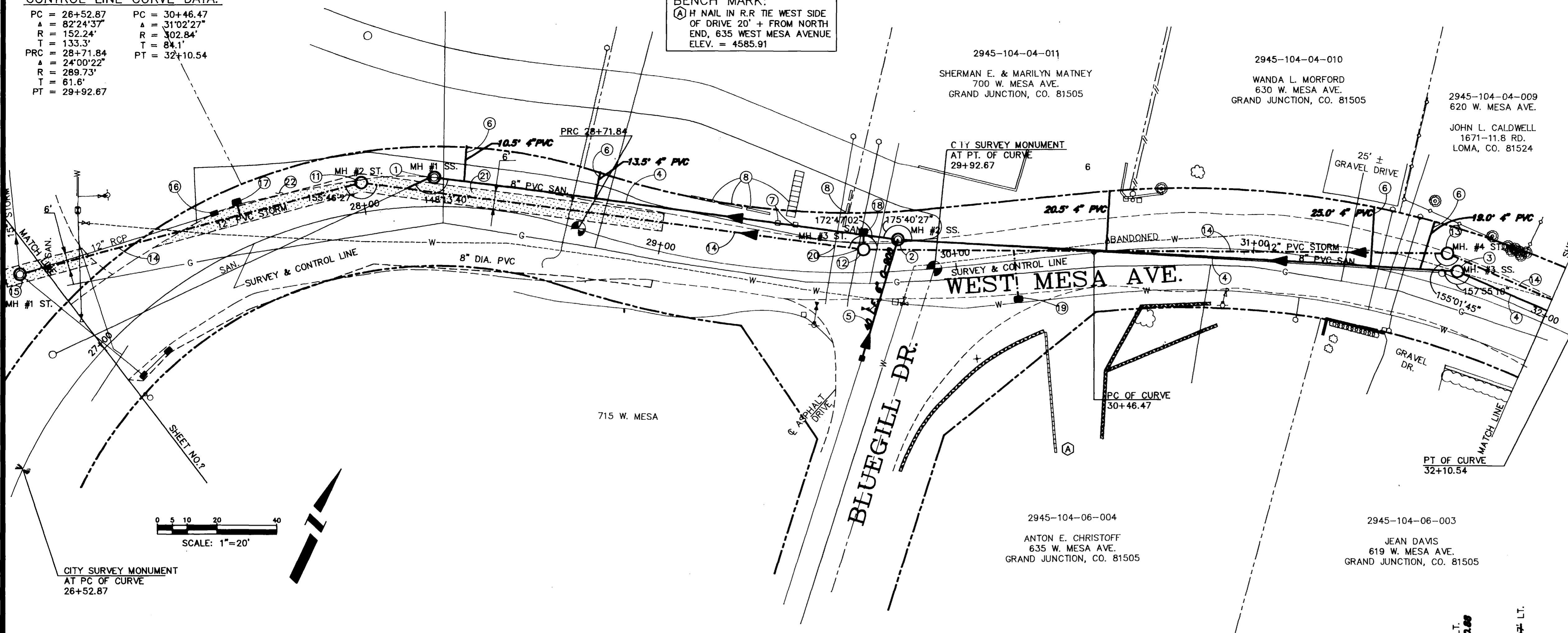
WATERLINE REPLACEMENT 1993
 BASS STREET & WEST MESA AVENUE
 Waterline Master Plan

SHEET NO. 6
OF 20
FILE NO. 99306MP.DWG

CONTROL LINE CURVE DATA:
 PC = 26+52.87 PC = 30+46.47
 Δ = 82°24'37" Δ = 31°02'27"
 R = 152.24' R = 102.84'
 T = 133.3' T = 84.1'
 PRC = 28+71.84 PT = 32+10.54
 Δ = 24°00'22"
 R = 289.73'
 T = 61.6'
 PT = 29+92.67

BENCH MARK:
 (A) H NAIL IN R.R. TIE WEST SIDE OF DRIVE 20' + FROM NORTH END, 635 WEST MESA AVENUE. ELEV. = 4585.91

- CONSTRUCTION NOTES:**
- SANITARY SEWER**
- 28+22.80, 9.68' LT. REPLACE EXISTING MANHOLE WITH NEW 48" DIA. SANITARY SEWER MANHOLE INCLUDING RING AND COVER.
 - 29+80.60, 10.0' LT. ~~31+62.48~~ ~~31+67.82, 6.07' LT.~~
 - REPLACE EXISTING SEWER LINE WITH NEW 8" DIA. PVC SEWER LINE ASTM 3035, SDR 35.
 - REPLACE EXISTING SEWER LINE WITH NEW 6" DIA. PVC SEWER LINE ~~ASTM 3036, SDR 35, C-800~~ LENGTH = 40 L.F. CONNECT NEW PIPE TO EXISTING WITH CALDER COUPLING ENCASED IN CONCRETE COLLAR.
 - REPLACE EXISTING 4" SERVICE TAP FROM MAIN TO THE PROPERTY LINE. THE EXACT LOCATION OF THE TAP IS NOT KNOWN. THE END OF THE TAP SHALL BE CUT SQUARE PRIOR TO MAKING THE CONNECTION WITH A CALDER COUPLING. CONNECTION OF THE TAP TO THE MAIN SHALL BE MADE WITH AN APPROVED SADDLE CONNECTION.
 - RESET MAILBOX (2 EACH)
 - RESET RAILROAD TIES & BOTTOM STEPS AFTER NEW LINES HAVE BEEN INSTALLED PAST THIS LOCATION.
- STORM SEWER**
- 28+00, 9.83' LT. FURNISH AND INSTALL NEW 48" DIA. STORM SEWER MANHOLE WITH NEW RING AND COVER.
 - 29+68.72, 7.71' LT. ~~31+57.86~~ ~~31+62.10, 6.3' LT.~~
 - FURNISH AND INSTALL NEW 12" DIA. PVC STORM SEWER LINE ASTM 3034, SDR 35.
 - REMOVE EXISTING 12" RCP FROM MANHOLE AND INSTALL NEW 12" PVC STORM DRAIN PIPE. MAY REQUIRE ENLARGING THE OPENING INTO THE MANHOLE. PLUG END OF CONCRETE PIPE THAT REMAINS.
 - REMOVE INLET. PLUG END OF PIPE THAT REMAINS.
- | STORM DRAIN INLET WITH GRATE AND CURB OPENING | | | | |
|---|-------------------------------|-------------------------------|----------------------|----------------------------|
| STATION | OFFSET TO FRONT EDGE OF FRAME | FRONT EDGE OF FRAME ELEVATION | BOX INVERT ELEVATION | CONNECTOR PIPE SIZE LENGTH |
| 17: 27+55** | 15' LT. | 4583.85
4584.66 | 4581.40
4581.66 | 12" PVC 3' |
| 18: 29+68.72 | 13' LT | 4580.20
4586.42 | 4578.00
4577.42 | 12" PVC 3.3' |
| 19: 30+19.71** | 13' RT. | 4582.34
4582.47 | 4578.38
4578.38 | 12" PVC 15.7' |
- * CONNECTION REQUIRES 12" X 12" PVC TEE ON THE MAIN.
 ** INLET WITH GRATE ONLY
- WATER SERVICE LINES CROSSING STORM SEWER MAY REQUIRE VERTICAL ADJUSTMENT. (TYPICAL). COSTS FOR ALL ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO INSTALLING STORM SEWER PIPE.
 - WHEELCUT OR JACK HAMMER PAVEMENT FOR REMOVAL AND REPLACEMENT. PAY WIDTH IS 6' MAX. SEE TRENCH DETAIL ON WATER REPLACEMENT SHEET NO. 4. COSTS FOR REMOVAL AND REPLACEMENT END AT STATION 29+00. AGGREGATE BASE COURSE CLASS 6 UNDER NEW ASPHALT SHALL BE 9" THICKNESS.
 - ALONG THE AREAS DESIGNATED FOR REMOVAL AND REPLACEMENT OF ASPHALT, SHOULDER AREA SHALL BE SURFACED WITH AGGREGATE BASE COURSE CLASS 6, 6" MINIMUM THICKNESS, 5' MAXIMUM PAY WIDTH.



REVISION	DESCRIPTION	DATE

DRAWN BY	LUTHER M.	DATE	3/93
CHECKED BY	J.H.T.	DATE	3/93
APPROVED BY	J.H.T.	DATE	3/93
FIELD BOOK NO.		PAGE	

SCALE	
PLAN	PROFILE
HORIZ. 1"=20'	HORIZ. 1"=20'
	VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING DIVISION
 CITY OF GRAND JUNCTION, COLORADO

SAN/STORM SEWER REPLACEMENT 1993
 WEST MESA - FIRST ST. TO BASS ST.
 Plan & Profile

SHEET NO. 7
 OF 20
 FILE NO. 89264-1.DWG

CONSTRUCTION NOTES:

SANITARY SEWER

- ① REPLACE EXISTING MANHOLE WITH NEW 48" DIA. SANITARY SEWER MANHOLE INCLUDING NEW RING & COVER.
- ② REPLACE EXISTING SEWER LINE WITH NEW 8" DIA. PVC SEWER LINE ASTM 3034, SDR35.
- ③ REPLACE EXISTING SEWER LINE WITH NEW 8" DIA. PVC SEWER LINE ASTM 3034, SDR35.
- ④ 8" DIA. LENGTH 35 L.F. REPLACE EXISTING SEWER LINE WITH NEW PVC SEWER LINE ASTM 3034, SDR35. CONNECT NEW PIPE TO EXISTING WITH CALDER COUPLING ENCASED WITH CONCRETE.
- ⑤ 6" DIA. LENGTH 40 L.F. REPLACE EXISTING SEWER LINE WITH NEW PVC SEWER LINE ASTM 3034, SDR35. CONNECT NEW PIPE TO EXISTING WITH CALDER COUPLING ENCASED WITH CONCRETE.
- ⑥ REPLACE EXISTING 4" SERVICE TAP FROM MAIN TO THE PROPERTY LINE. THE EXACT LOCATION OF THE TAP IS NOT KNOWN. THE END OF THE TAP SHALL BE CUT SQUARE PRIOR TO MAKING THE CONNECTION WITH A CALDER COUPLING. CONNECTION OF THE TAP TO THE MAIN SHALL BE MADE WITH AN APPROVED SADDLE CONNECTION.
- ⑦ ATTACH SADDLE TO MAIN, RUN SERVICE TAP AT MINIMUM SLOPE TO A POINT 5' BEHIND THE PROPERTY LINE. AT THIS LOCATION ATTACH NEW TO EXISTING.

STORM SEWER

- ⑧ RESET MAIL BOX (1 EACH)
- ⑪ FURNISH & INSTALL NEW 48" DIA. STORM SEWER MANHOLE WITH NEW RING AND COVER.
- ⑫ FURNISH & INSTALL NEW 12" DIA. PVC STORM SEWER LINE ASTM 3034, SDR 35.

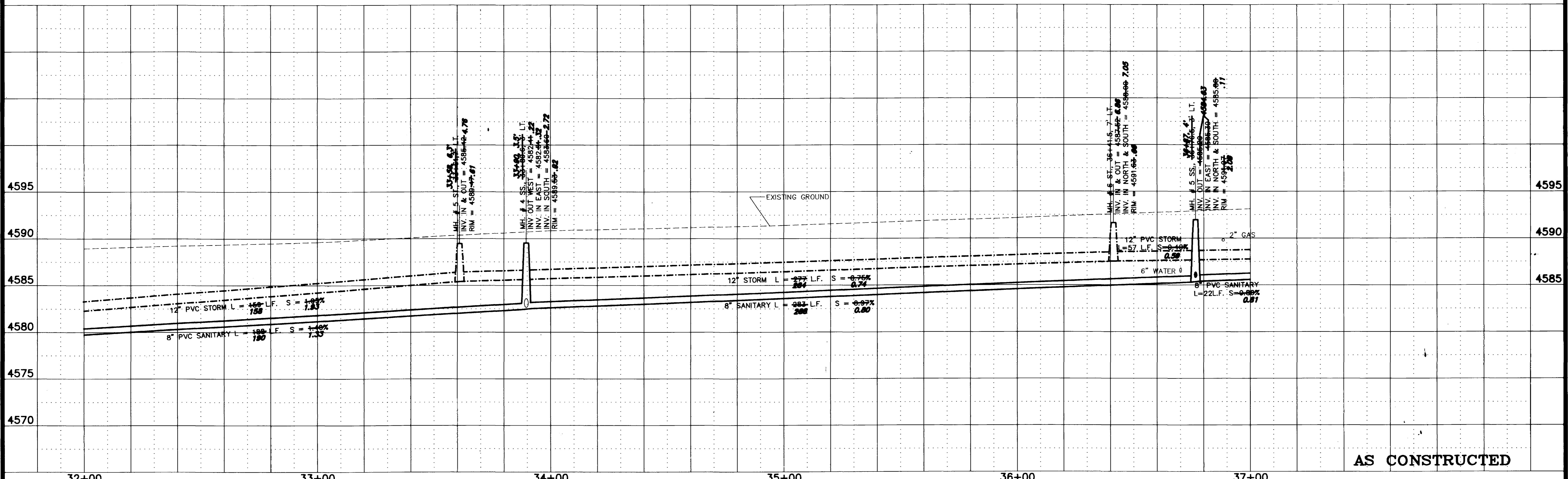
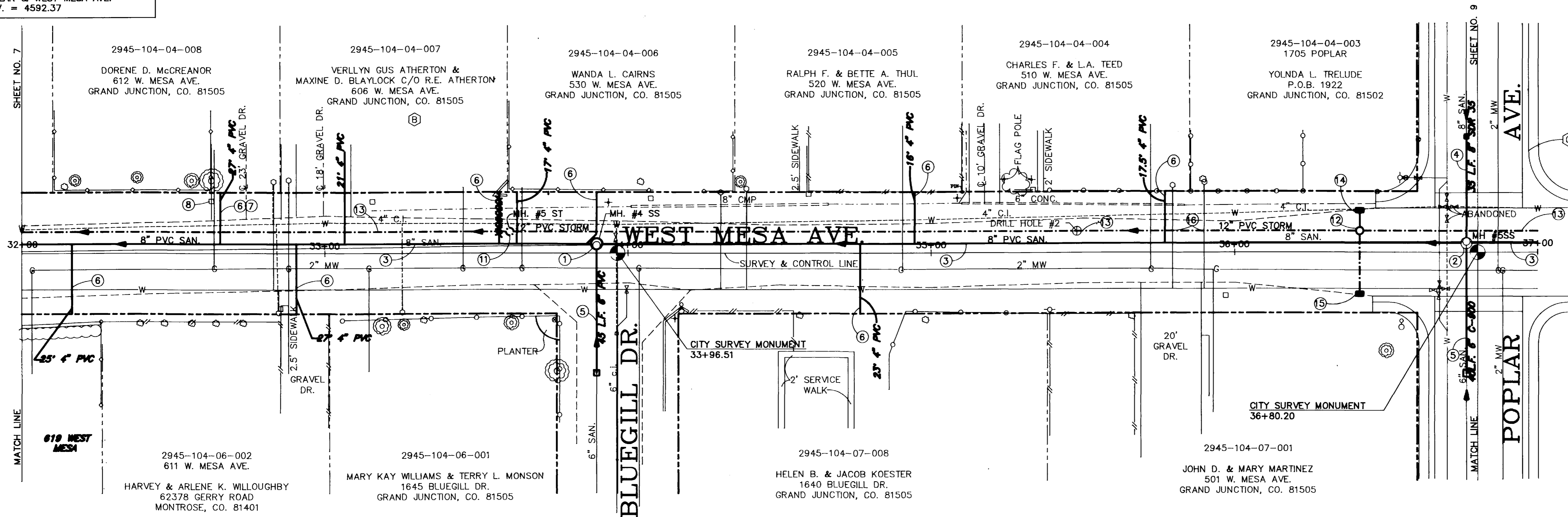
STORM DRAIN INLET WITH GRATE AND CURB OPENING				
STATION	OFFSET TO FRONT EDGE OF FRAME	FRONT EDGE OF FRAME ELEVATION	BOX INVERT ELEVATION	CONNECTOR PIPE SIZE LENGTH
⑭ 36+41.25	13' LT.	4587.45	4586.35	12" PVC 4.0'
⑮ 36+41.25	13' RT.	4587.62	4586.37	12" PVC 18.0'

⑯ WATER SERVICE LINES CROSSING STORM SEWER WAY REQUIRE VERTICAL ADJUSTMENTS (TYPICAL) 600TS FOR ALL ADJUSTMENTS. SHALL BE CONSIDERED INCIDENTAL TO INSTALLING STORM SEWER PIPE.

BENCH MARKS:

⑧ SOUTH EAST CORNER ON TOP OF BOTTOM STEP AT 606 WEST MESA AVE. ELEV. = 4590.38

⑨ CHISELED SQUARE ON TOP CURB NORTH CURB RETURN, NE. CORNER POPLAR & WEST MESA AVE. ELEV. = 4592.37



AS CONSTRUCTED

REVISION	DESCRIPTION	DATE	DRAWN BY LUTHER M	DATE 1/93
REVISION			CHECKED BY J.H.T.	DATE 1/93
REVISION			APPROVED BY ?	DATE ?
REVISION			FIELD BOOK NO.	PAGE

SCALE	
PLAN	PROFILE
HORIZ. 1"=20'	HORIZ. 1"=20'
	VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

SAN/STORM SEWER REPLACEMENT 1993
WEST MESA, FIRST ST. TO BASS ST.
Plan & Profile

SHEET NO. 8
OF 20
FILE NO. 89264-2

CONSTRUCTION NOTES:

- SANITARY SEWER**
- REPLACE EXISTING MANHOLE WITH NEW 48" DIA. SANITARY SEWER MANHOLE INCLUDING NEW RING & COVER
 - REPLACE EXISTING SEWER LINE WITH NEW 8" PVC SEWER LINE ASTM 3034, SDR 35
 - 6" DIA. LENGTH = 40 L.F. REPLACE EXISTING SEWER LINE WITH NEW PVC SEWER LINE - ASTM 3034
 - 6" DIA. LENGTH = 15 L.F. 8" DIA. C-900
 - 6" DIA. LENGTH = 40 L.F. CONNECT NEW PIPE TO EXISTING WITH CALDER COUPLING ENCASED IN CONCRETE.
 - 6" DIA. LENGTH = 30 L.F.
 - REPLACE 4" SERVICE TAP FROM THE MAIN TO THE PROPERTY LINE. THE EXACT LOCATION OF THE TAP IS NOT KNOWN. THE END OF THE TAP SHALL BE CUT SQUARE PRIOR TO MAKING THE CONNECTION WITH A CALDER COUPLING. CONNECTION OF THE TAP TO THE MAIN SHALL BE MADE WITH AN APPROVED SADDLE CONNECTION.

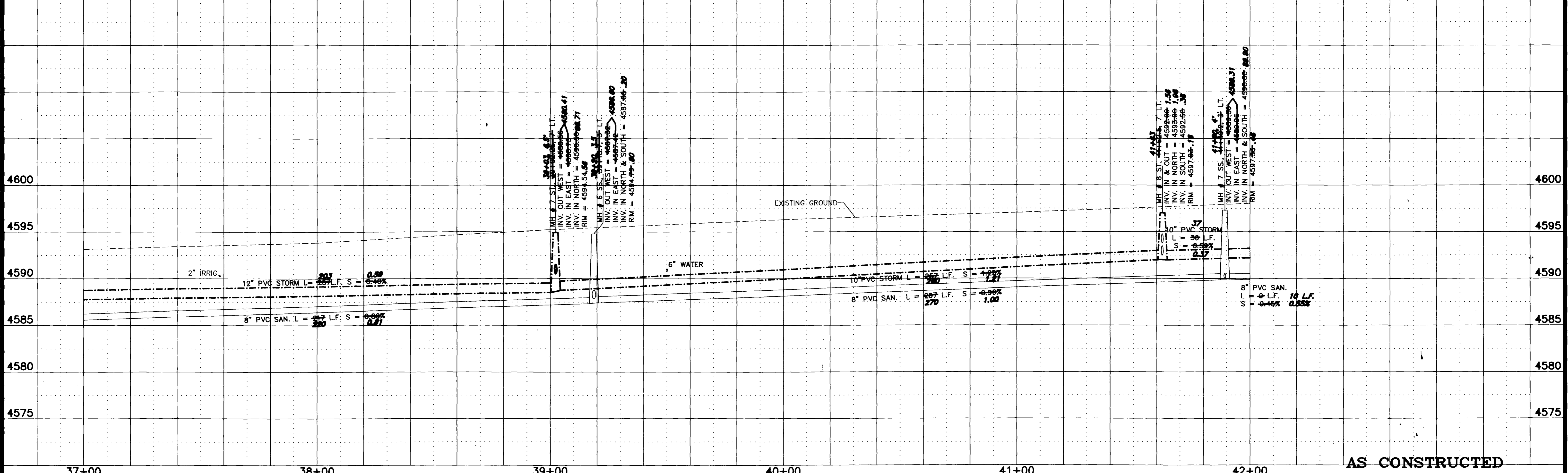
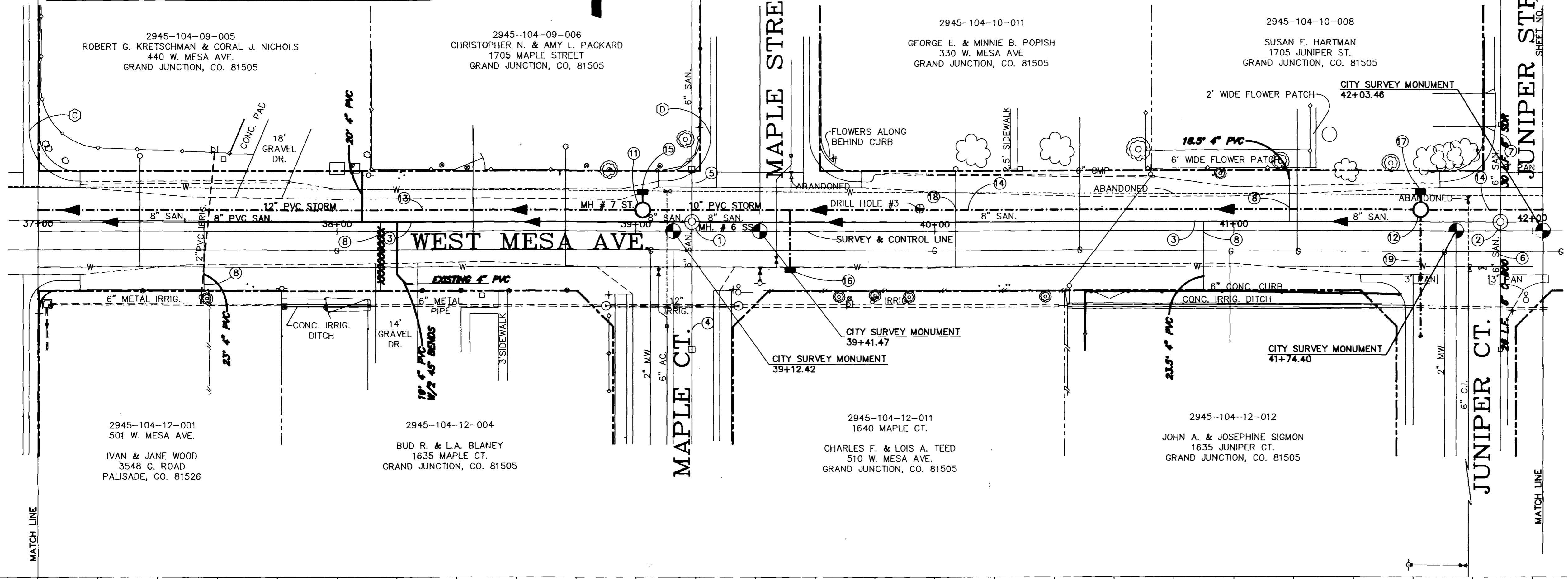
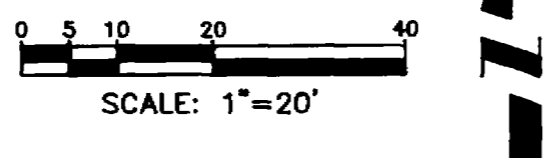
- STORM SEWER**
- FURNISH & INSTALL 48" DIA. STORM SEWER MANHOLE WITH NEW RING & COVER.
 - 12" DIA. PIPE FURNISH & INSTALL NEW PVC STORM SEWER LINE ASTM 3034, SDR 35.
 - 10" DIA. PIPE

STORM DRAIN INLET WITH GRATE & CURB OPENING				
STATION	OFFSET TO FRONT EDGE OF FRAME	FRONT EDGE OF FRAME ELEVATION	BOX INVERT ELEVATION	CONNECTOR PIPE SIZE LENGTH
15	39+02.25	13' LT. 4594.35	4591.35	12" PVC 4.0'
16	39+51.5	13' RT. 4594.65	4592.45	10" PVC *20.0
17	41+62.5	13' LT. 4594.87	4591.87	10" PVC 4.0'

- * CONNECTION REQUIRES 10" X 10" PVC TEE ON MAIN.
- WATER SERVICE LINES CROSSING STORM SEWER MAY REQUIRE ADJUSTMENTS (TYPICAL). OFFSETS FOR ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO INSTALLING STORM SEWER PIPE.
- FURNISH & INSTALL 10" DIA. PVC STORM SEWER LINE ASTM 3034, SDR 35. LENGTH = 40' SLOPE = 0.20% CAP END OF PIPE.

BENCH MARKS:

- CHISEL SQUARE ON TOP OF CURB NORTH CURB RETURN, NE CORNER POPLAR & WEST MESA AVE. ELEV.=4592.37
- CHISEL SQUARE ON TOP OF CURB SOUTH CURB RETURN, SE CORNER JUNIPER & WEST MESA AVE. ELEV.=4597.85
- CHISEL SQUARE ON TOP OF CURB NORTH CURB RETURN, NW CORNER MAPLE & WEST MESA AVE. ELEV.=4595.11



<p>REVISION _____</p> <p>REVISION _____</p> <p>REVISION _____</p> <p>REVISION _____</p>	<p>DESCRIPTION _____</p> <p>DATE _____</p>	<p>DRAWN BY LUTHER M. DATE 3/93</p> <p>CHECKED BY J.H.T. DATE 3/93</p> <p>APPROVED BY J.H.T. DATE 3/93</p> <p>FIELD BOOK NO. _____ PAGE _____</p>	<p>SCALE</p> <p>PLAN _____ PROFILE _____</p> <p>HORIZ. 1"=20' HORIZ. 1"=20'</p> <p>VERT. 1"=5'</p>	<p>DEPARTMENT OF PUBLIC WORKS AND UTILITIES</p> <p>ENGINEERING DIVISION</p> <p>CITY OF GRAND JUNCTION, COLORADO</p>	<p>SAN./STORM SEWER REPLACEMENT 1993</p> <p>WEST MESA, FIRST ST. TO BASS ST.</p> <p>Plan & Profile</p>	<p>SHEET NO. 9</p> <p>OF 20</p> <p>FILE NO. 89264-3</p>
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CONSTRUCTION NOTES:

SANITARY SEWER

- ① 44+46.5, 4" LT. REPLACE EXISTING MANHOLE WITH NEW 48" DIA. SANITARY SEWER MANHOLE INCLUDING RING & COVER.
- ② REPLACE EXISTING SEWER LINE WITH NEW 8" DIA. PVC SEWER LINE ASTM 3034, SDR 35.
- ③ 6" DIA. LENGTH = 40 L.F. REPLACE EXISTING SEWER LINE WITH PVC SEWER LINE ASTM 3034, SDR 35, C-800
- ④ 8" DIA. LENGTH = 16 L.F. CONNECT NEW PIPE TO EXISTING WITH A CALDER COUPLING ENCASED IN A CONCRETE COLLAR.
- ⑤ REPLACE EXISTING 4" SERVICE TAP FROM MAIN TO THE PROPERTY LINE. THE EXACT LOCATION OF THE TAP IS NOT KNOWN. THE END OF THE TAP SHALL BE CUT OFF SQUARE PRIOR TO MAKING THE CONNECTION WITH THE MAIN SHALL BE MADE WITH AN APPROVED SADDLE CONNECTION.

STORM SEWER

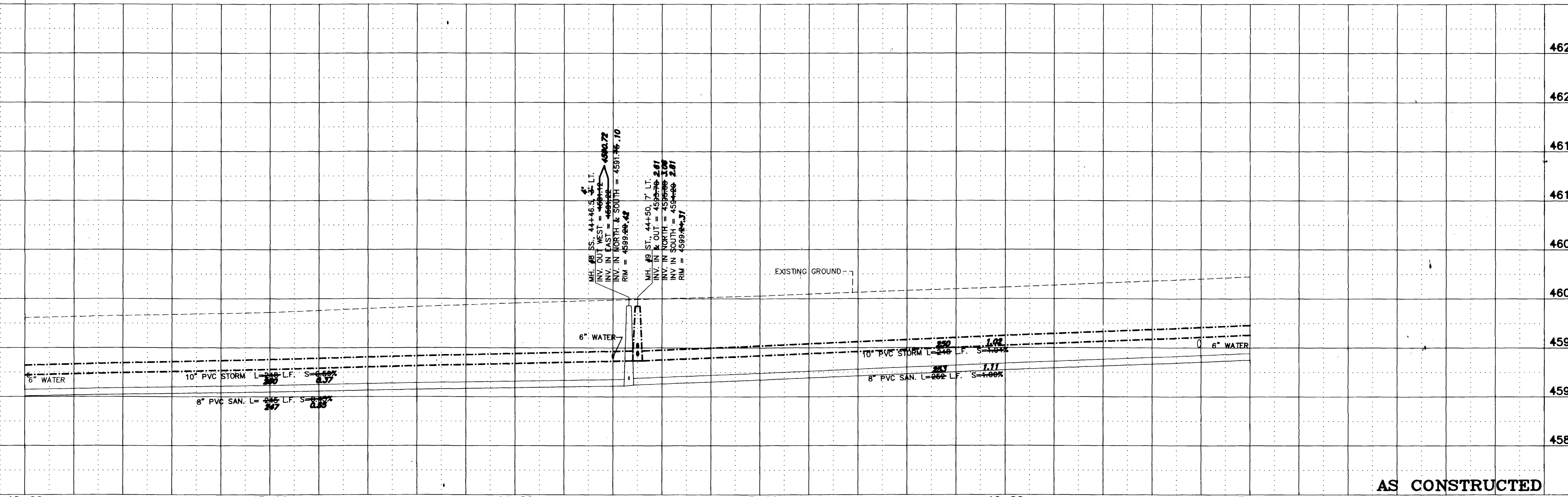
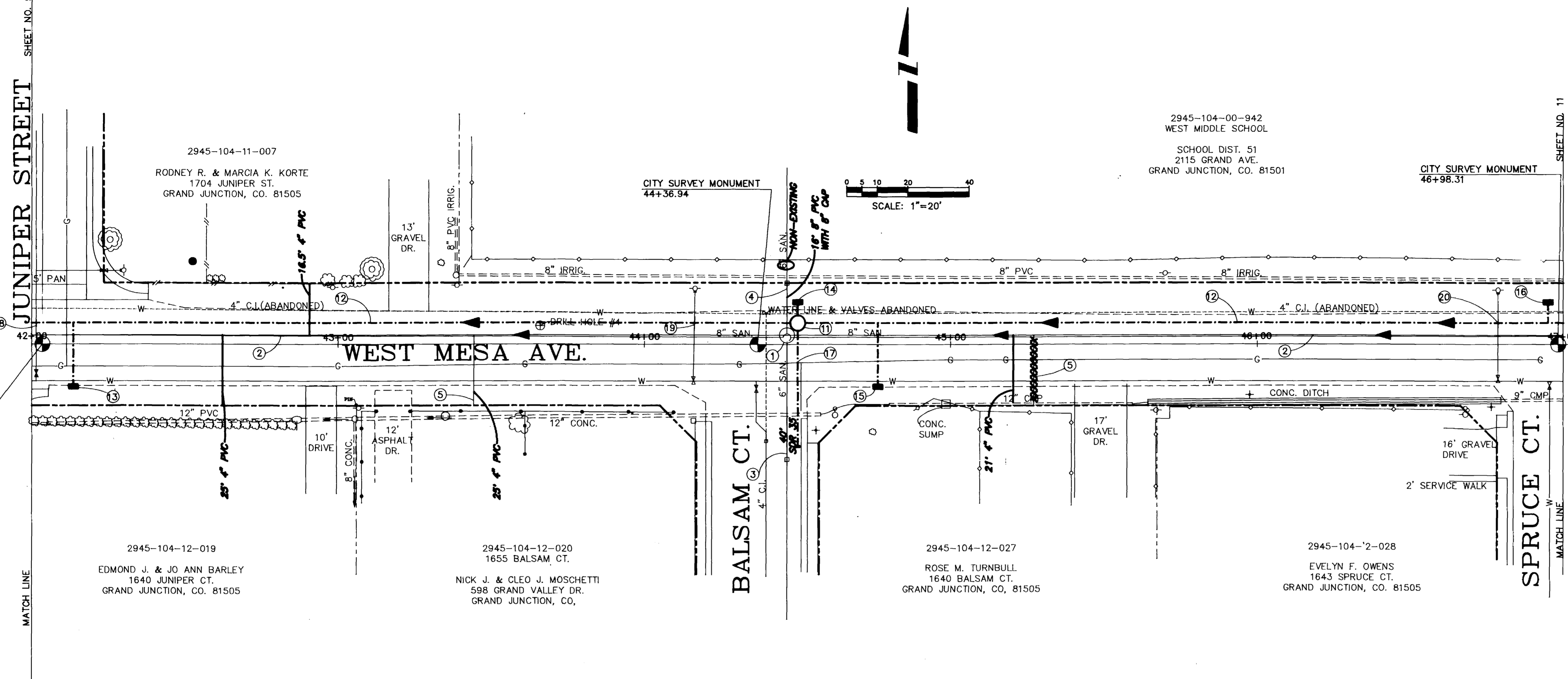
- ⑪ 44+50, 7" LT. FURNISH & INSTALL NEW 48" DIA. STORM SEWER MANHOLE WITH RING & COVER.
- ⑫ FURNISH & INSTALL NEW 10" DIA. PVC STORM SEWER LINE ASTM 3034, SDR 35.

STATION	OFFSET TO FRONT EDGE OF FRAME	FRONT EDGE OF FRAME ELEVATION	BOX INVERT ELEVATION	CONNECTOR PIPE SIZE	PIPE LENGTH
⑬ 42+13.4	13' RT.	4597.40 4597.36	4594.70 4594.66	10"	20.0'
⑭ 44+50	13' LT.	4598.12 4598.18	4596.02 4596.18	10"	4.0'
⑮ 44+76.2	13' RT.	4598.75 4598.68	4596.75 4596.68	10"	20.0'
⑯ 46+95	13' LT.	4591.58 4591.52	4589.58 4589.52	10"	5.6'

*CONNECTION REQUIRES 10" X 10" TEE ON THE MAIN.

- ⑰ FURNISH & INSTALL 10" DIA. PVC STORM SEWER LINE ASTM 3034, SDR 35. LENGTH = 40 L.F. SLOPE = 0.25% CAP END OF PIPE.

- ⑱ 42+01.5 VERTICAL ADJUSTMENT OF 8" DIA. WATERLINE REQUIRED. MAKE ADJUSTMENTS USING 2" DIA. X 18" OFFSETS IN X-PE AND A 6" DIA. SOLID SLEEVE.
- ⑲ 44+17
- ⑳ 46+78



AS CONSTRUCTED

REVISION	DESCRIPTION	DATE	DRAWN BY LUTHER M. DATE 1/93	CHECKED BY J.H.T. DATE 1/93	APPROVED BY J.H.T. DATE 4/93	FIELD BOOK NO.	PAGE
REVISION							
REVISION							
REVISION							

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

SAN/STORM SEWER REPLACEMENT 1993
WEST MESA, FIRST ST. TO BASS ST.
Plan & Profile

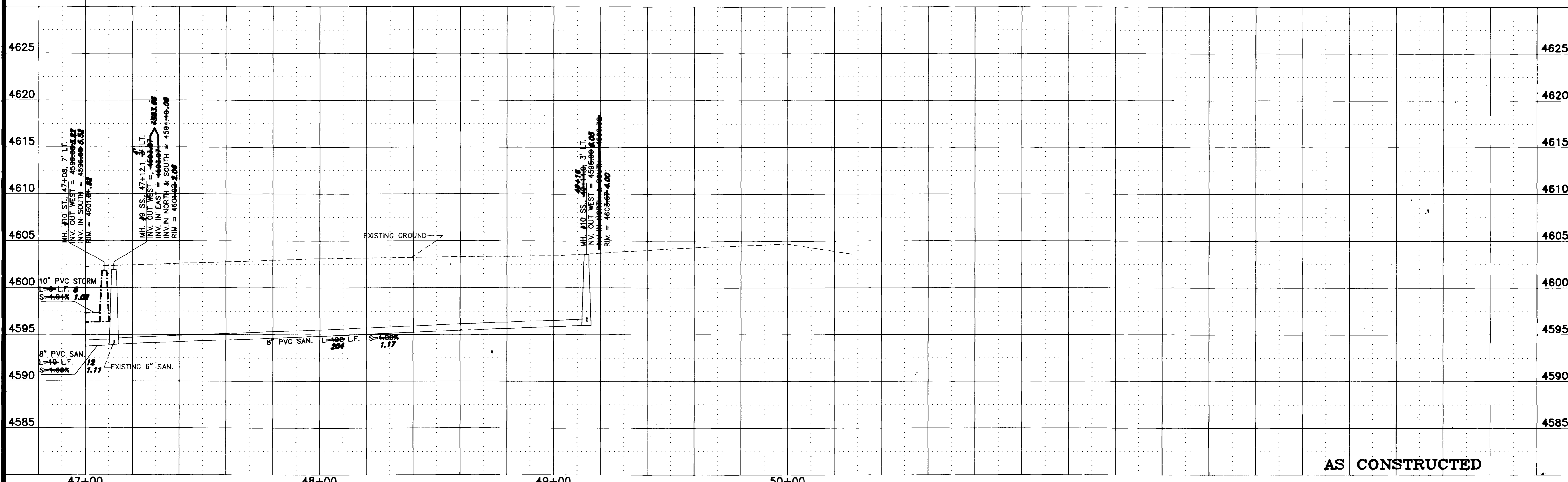
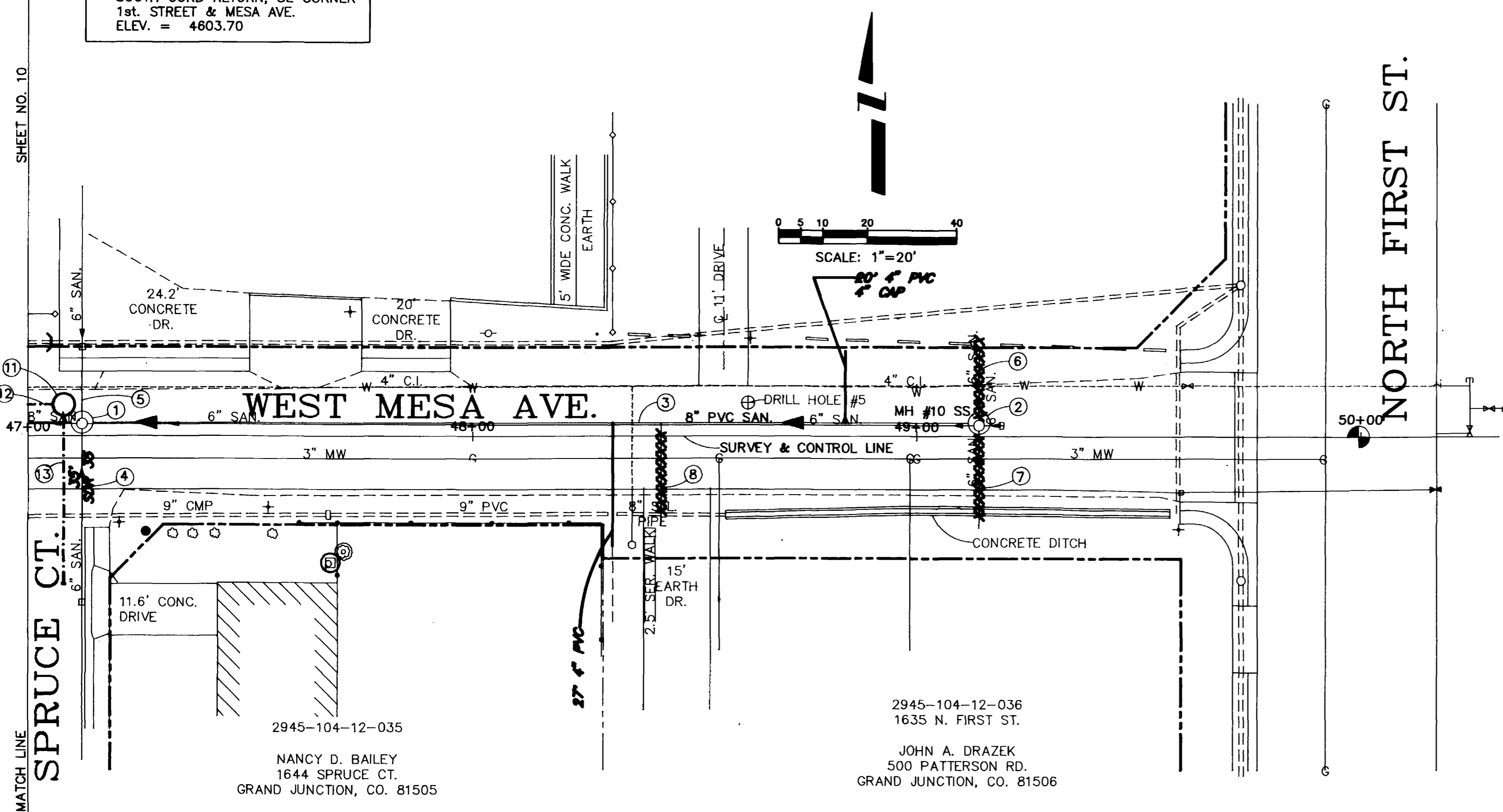
SHEET NO. 10
OF 20
FILE NO. 89264-4

BENCH MARK:
 CHISEL SQUARE TOP CURB
 SOUTH CURB RETURN, SE CORNER
 1st STREET & MESA AVE.
 ELEV. = 4603.70

CONSTRUCTION NOTES:

- SANITARY SEWER**
- ① 47+12.1, 3' LT. } REPLACE EXISTING MANHOLE WITH NEW 48" DIA. SANITARY SEWER MANHOLE INCLUDING RING AND COVER.
 - ② 49+14.0, 3' LT. }
 - ③ REPLACE EXISTING SEWERLINE WITH NEW 8" DIA. PVC SEWERLINE ASTM 3034, SDR 35.
 - ④ 6" DIA., LENGTH = 40 L.F. }
 - ⑤ 6" DIA. LENGTH = 15 L.F. } REPLACE EXISTING SEWER LINE WITH NEW PVC SEWER LINE ASTM 3034, SDR 35, C-900
 - ⑥ 6" DIA. LENGTH = 16 L.F. } CONNECT NEW PIPE TO EXISTING WITH CALDER COUPLING ENCASED IN A CONCRETE COLLAR.
 - ⑦ 6" DIA. LENGTH = 22 L.F. }
 - ⑧ REPLACE EXISTING 4" SERVICE TAP FROM MAIN TO THE PROPERTY LINE. THE EXACT LOCATION OF THE TAP IS NOT KNOWN. THE END OF THE TAP SHALL BE CUT SQUARE PRIOR TO MAKING THE CONNECTION WITH THE CALDER COUPLING. CONNECTION OF THE TAP TO THE MAIN SHALL BE MADE WITH AN APPROVED SADDLE CONNECTION.

- STORM SEWER**
- ⑪ 47+08, 7' LT. FURNISH & INSTALL NEW 48" DIA. STORM SEWER MANHOLE WITH NEW RING AND COVER.
 - ⑫ FURNISH & INSTALL NEW 10" DIA. PVC STORM SEWER LINE ASTM 3034, SDR 35.
 - ⑬ FURNISH & INSTALL 10" DIA. PVC STORM SEWER LINE ASTM 3034, SDR 35. LENGTH = 40 L.F. SLOPE = 0.25% CAP END OF PIPE.



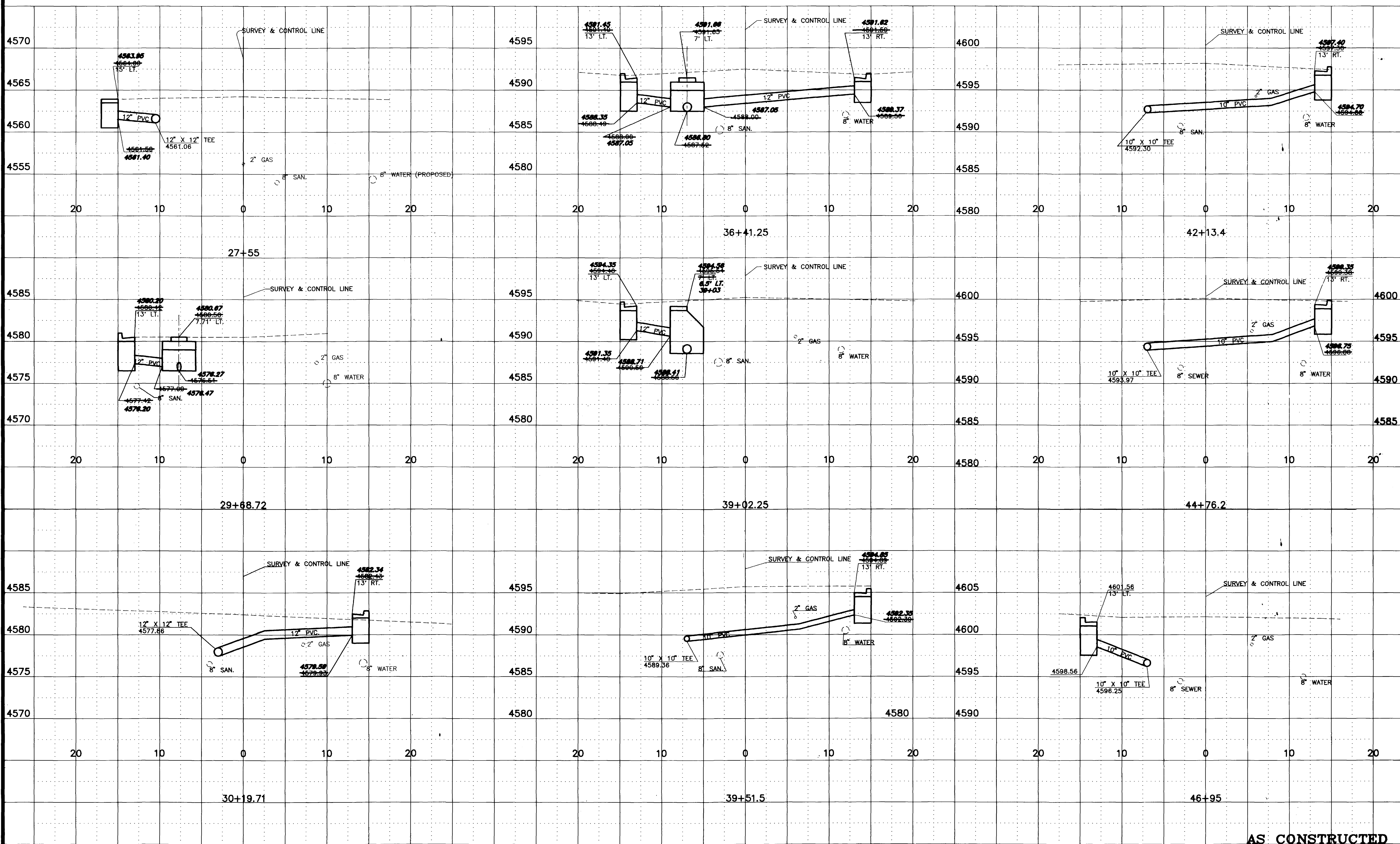
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REVISION	DATE	DRAWN BY	LUTHER M.	DATE	3/93
REVISION		CHECKED BY	J.H.T.	DATE	3/93
REVISION		APPROVED BY	J.H.T.	DATE	3/93
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DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING DIVISION
 CITY OF GRAND JUNCTION, COLORADO

SAN/STORM SEWER REPLACEMENT 1993
 WEST MESA, FIRST ST. TO BASS ST.
 Plan & Profile

SHEET NO. 11
 OF 20
 FILE NO. 89264-5



AS CONSTRUCTED

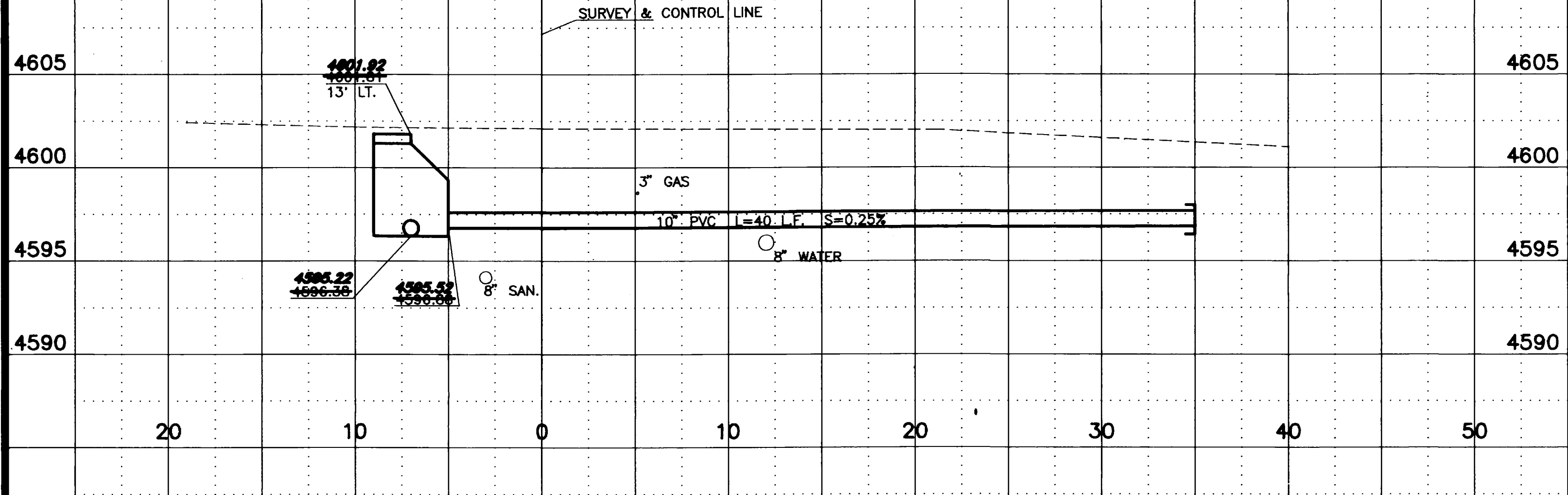
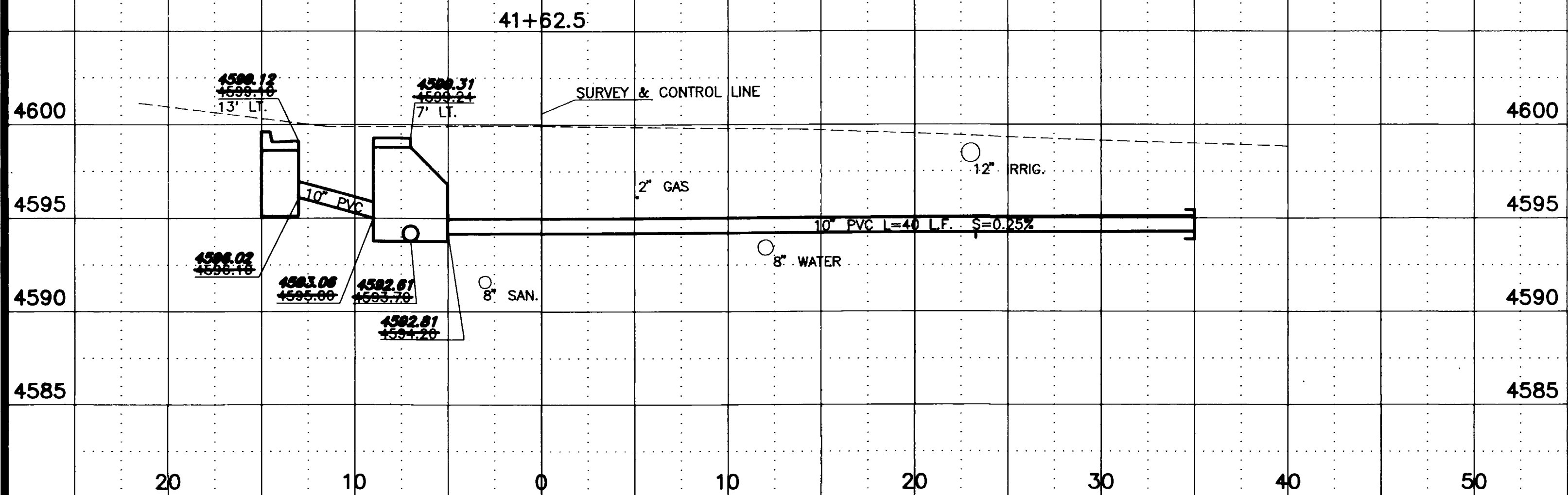
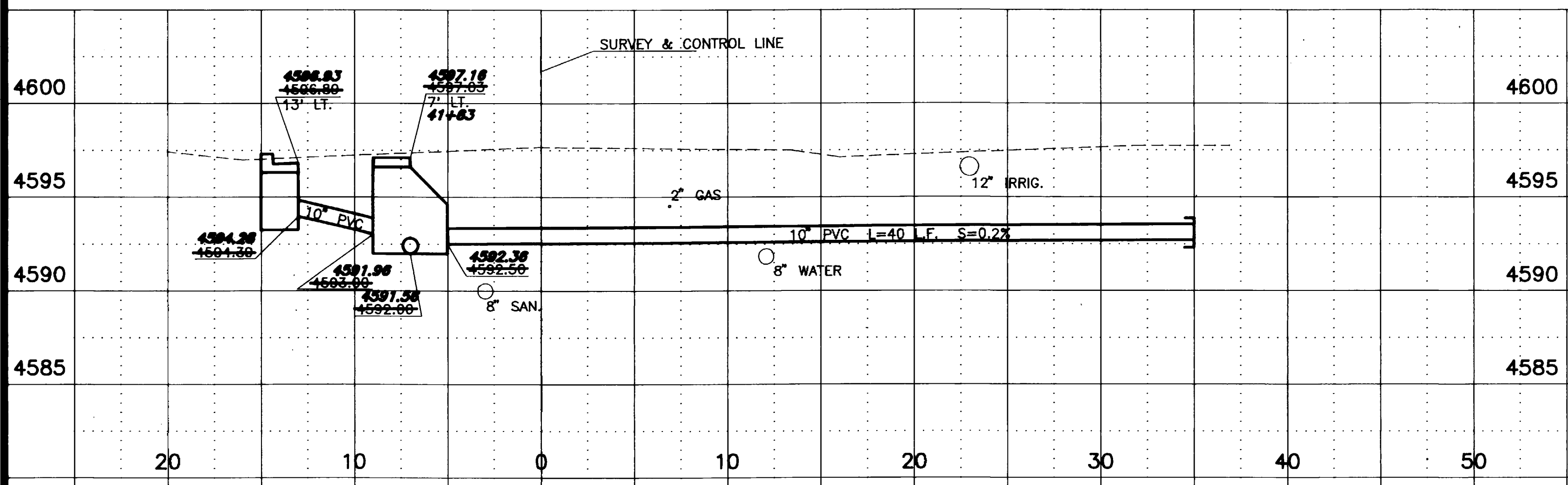
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REVISION		CHECKED BY	J.H.T.	DATE	4/93
REVISION		APPROVED BY	J.H.T.	DATE	4/93
REVISION		FIELD BOOK NO.		PAGE	

SCALE	PLAN	PROFILE
HORIZ. 1"=5'	HORIZ. 1"=5'	VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

SAN./STORM SEWER REPLACEMENT 1993
WEST MESA, FIRST ST. to BASS ST.
Storm Sewer Details

SHEET NO.	12
OF	20
FILE NO.	99305D1.DWG



AS CONSTRUCTED

REVISION	DESCRIPTION	DATE
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DRAWN BY L. MARTIN DATE 4/93
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 APPROVED BY J.H.T. DATE 4/93
 FIELD BOOK NO. PAGE

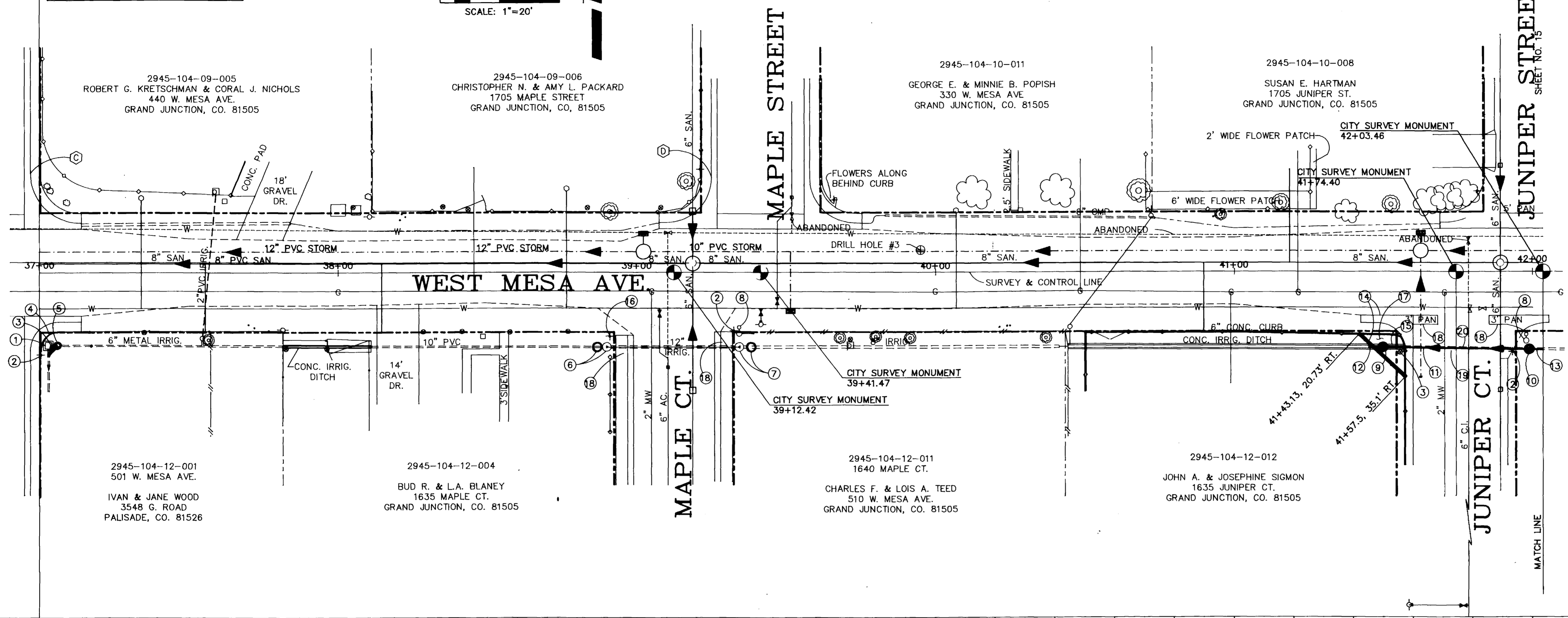
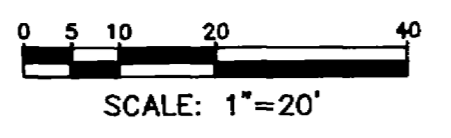
SCALE
 PLAN 1"=5'
 PROFILE 1"=5'
 HORIZ. 1"=5'
 VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING DIVISION
 CITY OF GRAND JUNCTION, COLORADO

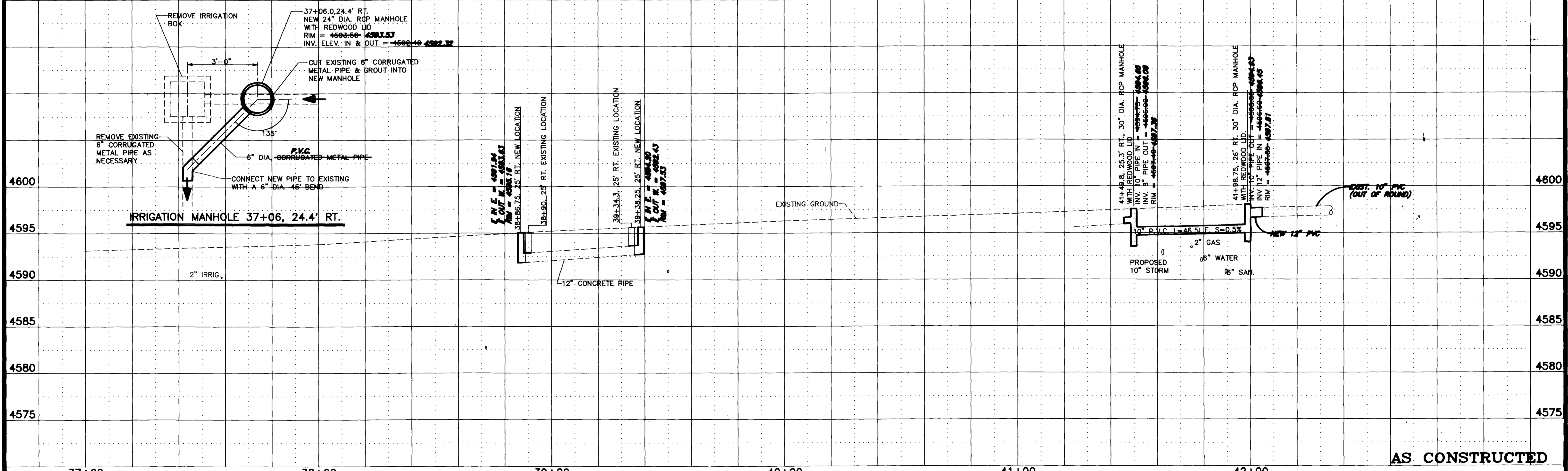
SAN./STORM SEWER REPLACEMENT 1993
 WEST MESA, FIRST ST. to BASS ST.
 Storm Sewer Details

SHEET NO. 13
 OF 20
 FILE NO. 99305D2.DWG

BENCH MARKS:
 ① CHISEL SQUARE ON TOP OF CURB
 NORTH CURB RETURN, NW CORNER
 MAPLE & WEST MESA AVE.
 ELEV.=4595.11



- CONSTRUCTION NOTES:**
- CUT THE PIPES GOING INTO THE BOX ON THE OUTSIDE OF THE BOX. REMOVE & DISPOSE OF CONCRETE IRRIGATION BOX.
 - REMOVE STOP SIGN IF NECESSARY. RESET WILL BE BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A TEMPORARY STOP SIGN UNTIL THIS SIGN CAN BE RESET.
 - RESET SPRINKLER HEAD (2 EACH)
 - RESET FENCE IF DISTURBED, COST INCIDENTAL TO CONSTRUCTION.
 - 37+06.0, 24.4' RT. CENTERLINE OF NEW 24" DIA. RCP MANHOLE. SEE DETAIL THIS SHEET.
 - 38+90, 25' RT. EXISTING IRRIGATION MANHOLES, RESET TO 38+86.75, 25' RT. AND 39+38.25, 25' RT.
 - 39+34.3, 25' RT. EXTEND EXISTING BOTTOM 12" CONCRETE PIPE A TOTAL LENGTH OF 7.5 L.F. AND REGROUT INTO LOWER HOLES. REMOVE EXISTING 10" PIPE AS NECESSARY AND REGROUT INTO UPPER HOLES.
 - STREET LIGHT TO BE REMOVED BY PUBLIC SERVICE CO.
 - 41+49.8, 25.3' RT. NEW 30" DIA. RCP MANHOLE WITH CONCRETE BASE AND REDWOOD LID.
 - 41+98.75, 26' RT.
 - FURNISH AND INSTALL 10" P.V.C. SEWER PIPE ASTM 3034, SDR 35. LENGTH = 46.5 L.F.
 - STUB 3 L.F. OF 8" P.V.C. SEWER PIPE ASTM 3034, SDR 35. OUT OF MANHOLE AND GROUT END INTO THE EXISTING DITCH.
 - STUB 5 L.F. 12" P.V.C. PIPE OUT OF MANHOLE AND CONNECT TO THE EXISTING PIPE.
 - SAWCUT CURB AT 41+43.13, 20.73' RT. & AT 41+57.5, 35.1' RT. & REMOVE CURB BETWEEN THESE STATIONS. REMOVE & SALVAGE CHAIN LINK FENCE POSTS & TOP RAIL ON THIS CURB. POUR NEW 10" WIDE CONCRETE CURB ACROSS CORNER AS SHOWN & INCORPORATE 8" PIPE THROUGH CURB. RESET 22 L.F. OF CHAIN LINK FENCE, POSTS & TOP RAIL ON CURB.
 - SAWCUT AND REMOVE CONCRETE IRRIGATION DITCH (11 L.F.)
 - REMOVE SIGN, RESET BY OTHERS.
 - SALVAGE AS MUCH OF THE LAVA ROCK AS POSSIBLE AND STOCK PILE FOR REUSE.
 - REMOVE CONCRETE CURBS, GUTTERS, SIDEWALKS OR DRAINAGE PANS AS NECESSARY. COSTS ARE INCIDENTAL TO OTHER CONSTRUCTION ITEMS.
 - REMOVE PIPE (8" TO 12" DIA.) (42 L.F.)
 - ACROSS STREET, BACKFILL PIPE USING FLOW FILL.

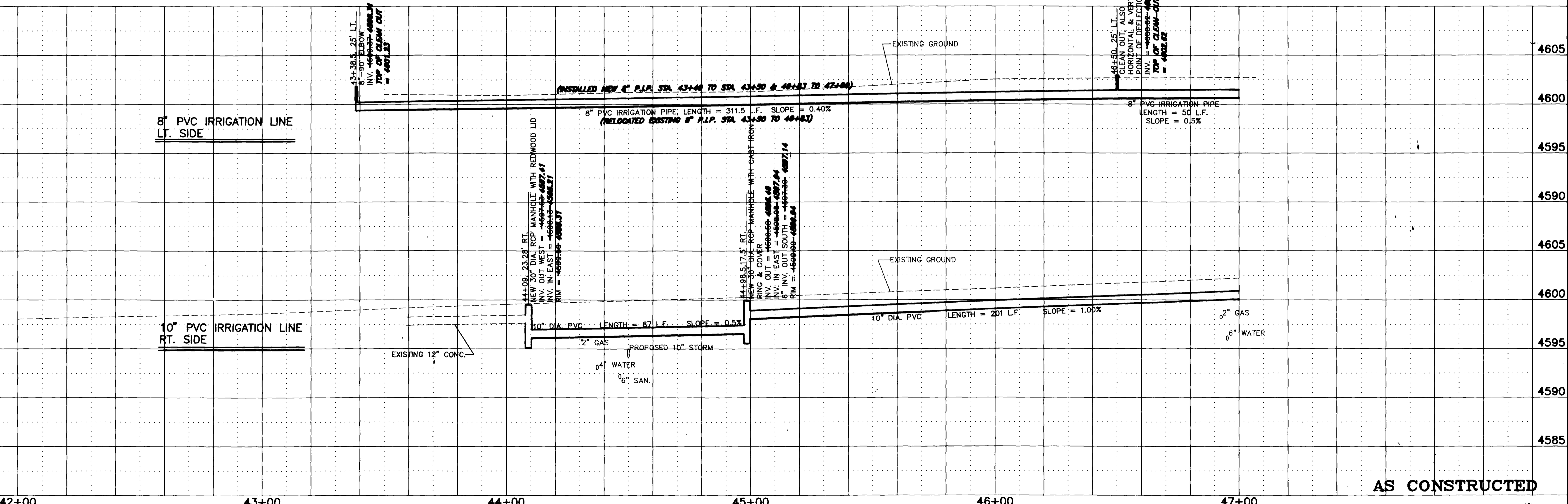
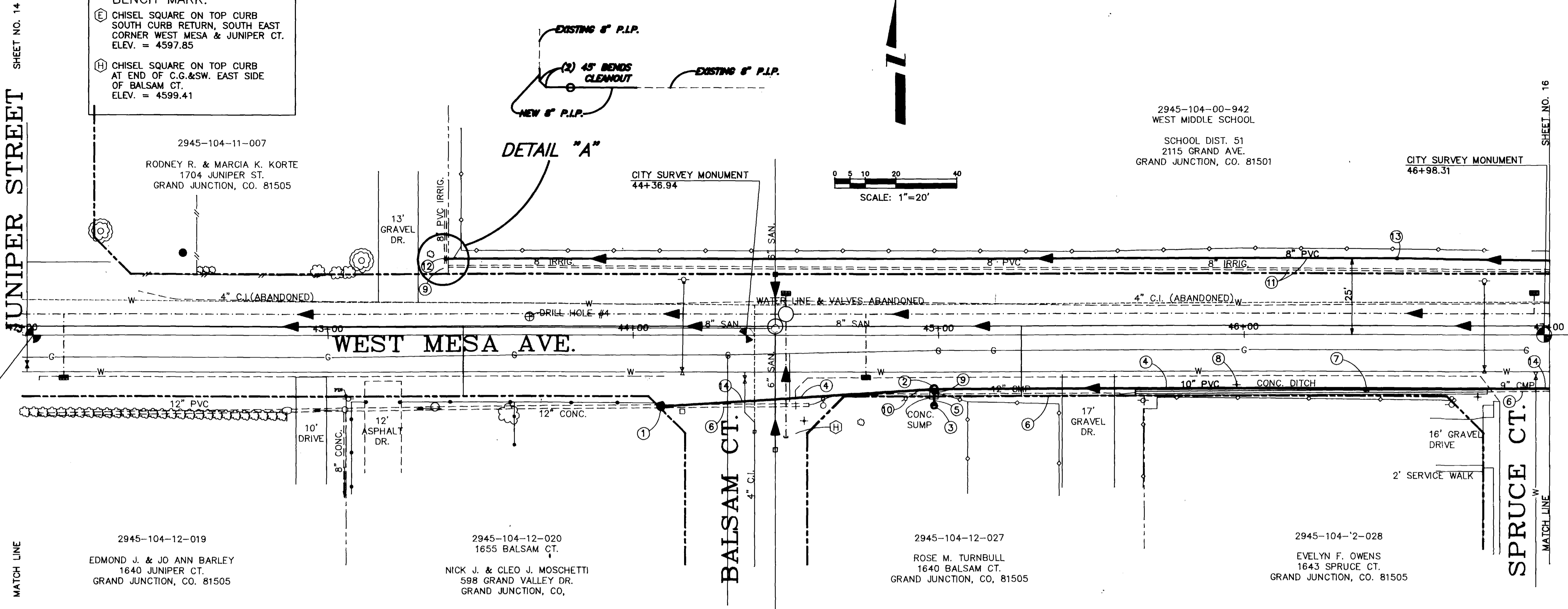


AS CONSTRUCTED

REVISION _____ REVISION _____ REVISION _____ REVISION _____	DATE _____ DATE _____ DATE _____ DATE _____	DRAWN BY LUTHER M. DATE 3/93 CHECKED BY J.H.T. DATE 3/93 APPROVED BY J.H.T. DATE 3/93 FIELD BOOK NO. _____ PAGE _____	SCALE PLAN 1"=20' PROFILE 1"=5'	DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION CITY OF GRAND JUNCTION, COLORADO	IRRIGATION SYSTEM MODIFICATIONS 1993 WEST MESA, FIRST ST. TO BASS ST. Plan & Profile	SHEET NO. 14 OF 20 FILE NO. 89264-13
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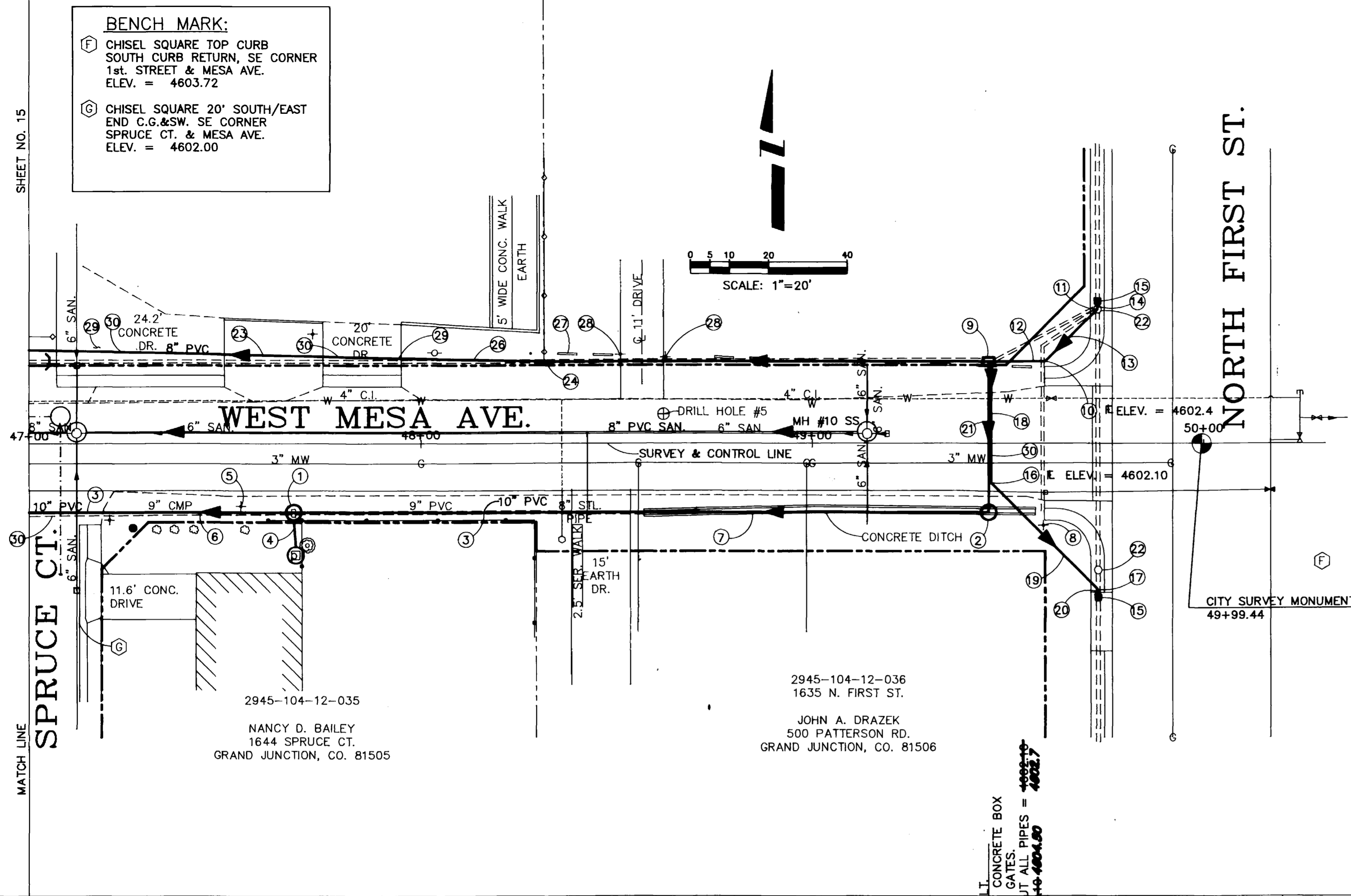
- CONSTRUCTION NOTES:**
- ① 44+09, 23.28' RT. NEW 30" DIA. RCP MANHOLE WITH A CONCRETE BASE & REDWOOD LID.
 - ② 44+98.5, 17.5' RT. NEW 30" DIA RCP MANHOLE WITH A CONCRETE BASE & CAST IRON RING AND COVER.
 - ③ 44+98.5, 23' RT. NEW 24" DIA. RCP MANHOLE WITH A CONCRETE BASE & REDWOOD LID. RESET IRRIGATION PUMP TO MANHOLE RIM ELEV. = 4800.00 INV. IN NORTH = 4597.00 PROVIDE 2' OF SUMP BELOW INVERT IN TO MANHOLE.
 - ④ FURNISH & INSTALL 10" DIA. PVC SEWER PIPE ASTM 3034, SDR 35.
 - ⑤ CONNECT MANHOLES TOGETHER WITH 3.5 L.F. OF 6" PVC SEWER PIPE ASTM 3034, SDR 35.
 - ⑥ REMOVE PIPE (8" TO 12" DIA.) (149 L.F.)
 - ⑦ REMOVE CONCRETE DITCH (116 L.F.)
 - ⑧ REMOVE SIGN. RESET BY OTHERS (1 EACH)
 - ⑨ REMOVE CONCRETE IRRIGATION STRUCTURE (2 EACH)
 - ⑩ MOVEABLE FENCE. RESET AFTER MANHOLES ARE SET. COST IS INCIDENTAL TO CONSTRUCTION.
 - ⑪ RELAY EXISTING 8" PVC IRRIGATION LINE TO THE NEW LOCATION SHOWN (STA. 43+38.5, TO 47+04)
 - ⑫ 43+38.5, 25' LT. FURNISH & INSTALL AN 8" TEE-WYE VERTICALLY AS A CLEAN OUT. THE RISER SECTION TO EXTEND 12" ABOVE THE EXISTING GROUND. PROVIDE CAP ON RISER. FURNISH & INSTALL AN 8"-90° ELBOW AND BEGIN TO RELAY 8" PIPE AT THIS POINT.
 - ⑬ 46+50, 25' LT. FURNISH & INSTALL AN 8" TEE-WYE VERTICALLY AS A CLEAN OUT. THE RISER SECTION TO EXTEND 6" ABOVE THE EXISTING GROUND, PROVIDE CAP ON RISER. BEGIN HORIZONTAL DEFLECTION TO 48+32, 21' LT.
 - ⑭ ACROSS STREET, BACKFILL PIPE USING FLOW FILL.

BENCH MARK:
 (E) CHISEL SQUARE ON TOP CURB SOUTH CURB RETURN, SOUTH EAST CORNER WEST MESA & JUNIPER CT. ELEV. = 4597.85
 (H) CHISEL SQUARE ON TOP CURB AT END OF C.G.&SW. EAST SIDE OF BALSAM CT. ELEV. = 4599.41

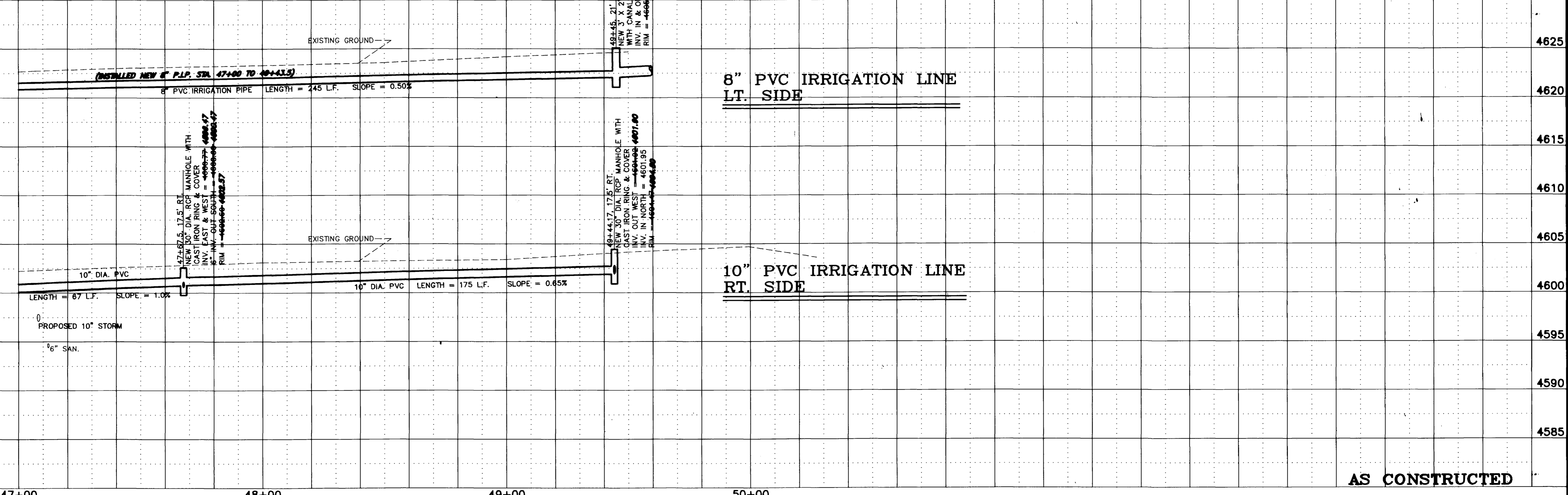


REVISION REVISION REVISION REVISION	DESCRIPTION DATE	DRAWN BY LUTHER M. DATE 1/93 CHECKED BY J.H.T. DATE 1/93 APPROVED BY J.H.T. DATE 4/93 FIELD BOOK NO. PAGE	SCALE PLAN HORIZ. 1"=20' VERT. 1"=5'	DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION CITY OF GRAND JUNCTION, COLORADO	IRRIGATION SYSTEM MODIFICATIONS 1993 WEST MESA, FIRST ST. TO BASS ST. Plan & Profile	SHEET NO. 15 OF 20 FILE NO. 89264-14
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BENCH MARK:
 (F) CHISEL SQUARE TOP CURB SOUTH CURB RETURN, SE CORNER 1st. STREET & MESA AVE. ELEV. = 4603.72
 (G) CHISEL SQUARE 20' SOUTH/EAST END C.G.&SW. SE CORNER SPRUCE CT. & MESA AVE. ELEV. = 4602.00



- CONSTRUCTION NOTES:**
- 1 47+67.5, 17.5' RT. } NEW 30" DIA. RCP MANHOLE WITH CONCRETE BASE AND CAST IRON RING AND COVER.
 - 2 49+44.17, 17.5' RT. }
 - 3 FURNISH AND INSTALL 10" PVC SEWER PIPE ASTM 3034, SDR 35.
 - 4 REMOVE EXISTING 6" PIPE INTO EXISTING SUMP AND PLUG HOLE. CUT NEW HOLE INTO SUMP AT ELEV. 4600.45 FURNISH AND INSTALL 8 L.F. OF 6" PVC SEWER PIPE INTO EXISTING SUMP.
 - 5 REMOVE SIGN, RESET BY OTHERS (1 EACH)
 - 6 REMOVE (8" TO 12" DIA.) (157 L.F.)
 - 7 REMOVE CONCRETE DITCH (100 L.F.)
 - 8 REMOVE STOP SIGN, RESET WILL BE BY OTHERS. THE CONTRACTOR WILL BE RESPONSIBLE FOR A TEMPORARY STOP SIGN UNTIL THE SIGN IS RESET. (1 EACH)
 - 9 49+45, 21' LT. CENTERLINE OF NEW CONCRETE IRRIGATION STRUCTURE SEE SHEET 17 FOR DETAILS.
 - 10 49+59.5, 21' LT. }
 - 11 49+72.9, 34.4' LT. } LOCATIONS OF 12"-45' BENDS.
 - 12 13 L.F. }
 - 13 18.95 L.F. } FURNISH AND INSTALL 12" DIA. PVC SEWER PIPE ASTM 3034, SDR 35.
 - 14 2 L.F. }
 - 15 CONNECT EXISTING 12" PIPE TO NEW 12" PIPE WITH A CONCRETE COLLAR. COLLAR TO BE 12" WIDE X 3" THICK MINIMUM.
 - 16 49+45.67, 10' RT. }
 - 17 49+73, 37.33' RT. } LOCATIONS OF 12"-45' BENDS.
 - 18 30 L.F. }
 - 19 38.65 L.F. } FURNISH & INSTALL 12" DIA. DUCTILE IRON PIPE, CLASS 52
 - 20 2 L.F. }
 - 21 FURNISH & INSTALL 37 L.F. OF 8" DIA. DUCTILE IRON PIPE, CLASS 52.
 - 22 REMOVE CONCRETE IRRIGATION STRUCTURE & PIPE AS NECESSARY. PLUG END OF REMAINING 12" PIPE WITH CONCRETE. (2 EACH)
 - 23 FURNISH & INSTALL 8" PLASTIC IRRIGATION PIPE (100 PSI) BETWEEN STATIONS 47+04 TO 48+32.
 - 24 48+32, 21' LT. ANGLE POINT IN LINE FROM 46+50, 25' LT.
 - 25 RELAY THE EXISTING 8" PVC IRRIGATION LINE BETWEEN STATION 48+32, & 49+43, 21' LT.
 - 26 EXISTING 12" CMP BETWEEN STATION 47+04 TO 48+32, ONLY REMOVE THAT PORTION OF CMP THAT IS PHYSICALLY IN CONFLICT WITH INSTALLING THE NEW PIPE. (APPROXIMATELY 60 L.F.)
 - 27 RESET RAILROAD TIE BORDER AT 20' LT.
 - 28 RESET SIGN POSTS AT 48+51 & 48+62.5, 22.7' LT. (2 EACH)
 - 29 REMOVE CONCRETE ACROSS DRIVEWAY AS NECESSARY TO INSTALL PIPE. COST OF REMOVAL IS INCIDENTAL TO INSTALLING PIPE.
 - 30 ACROSS STREETS & DRIVEWAYS, BACKFILL PIPE USING FLOW FILL.



REVISION	DESCRIPTION	DATE	DRAWN BY LUTHER M.	DATE 3/93	SCALE
REVISION			CHECKED BY J.H.T.	DATE 3/93	PLAN
REVISION			APPROVED BY J.H.T.	DATE 3/93	PROFILE
REVISION			FIELD BOOK NO.	PAGE	HORIZ. 1"=20'
					VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING DIVISION
 CITY OF GRAND JUNCTION, COLORADO

IRRIGATION SYSTEM MODIFICATIONS 1993
 WEST MESA, FIRST ST. TO BASS ST.
 Plan & Profile

SHEET NO. 16 OF 20
 FILE NO. 89264-15

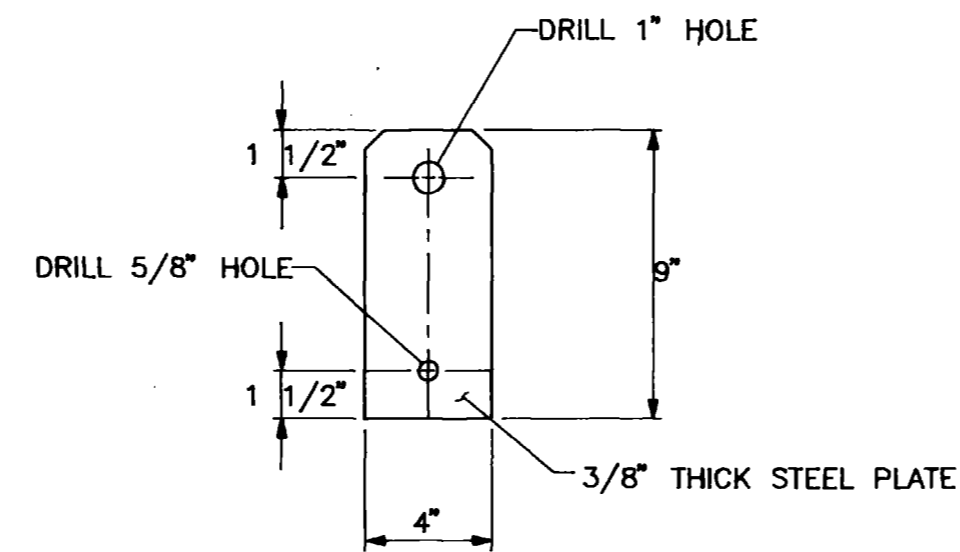
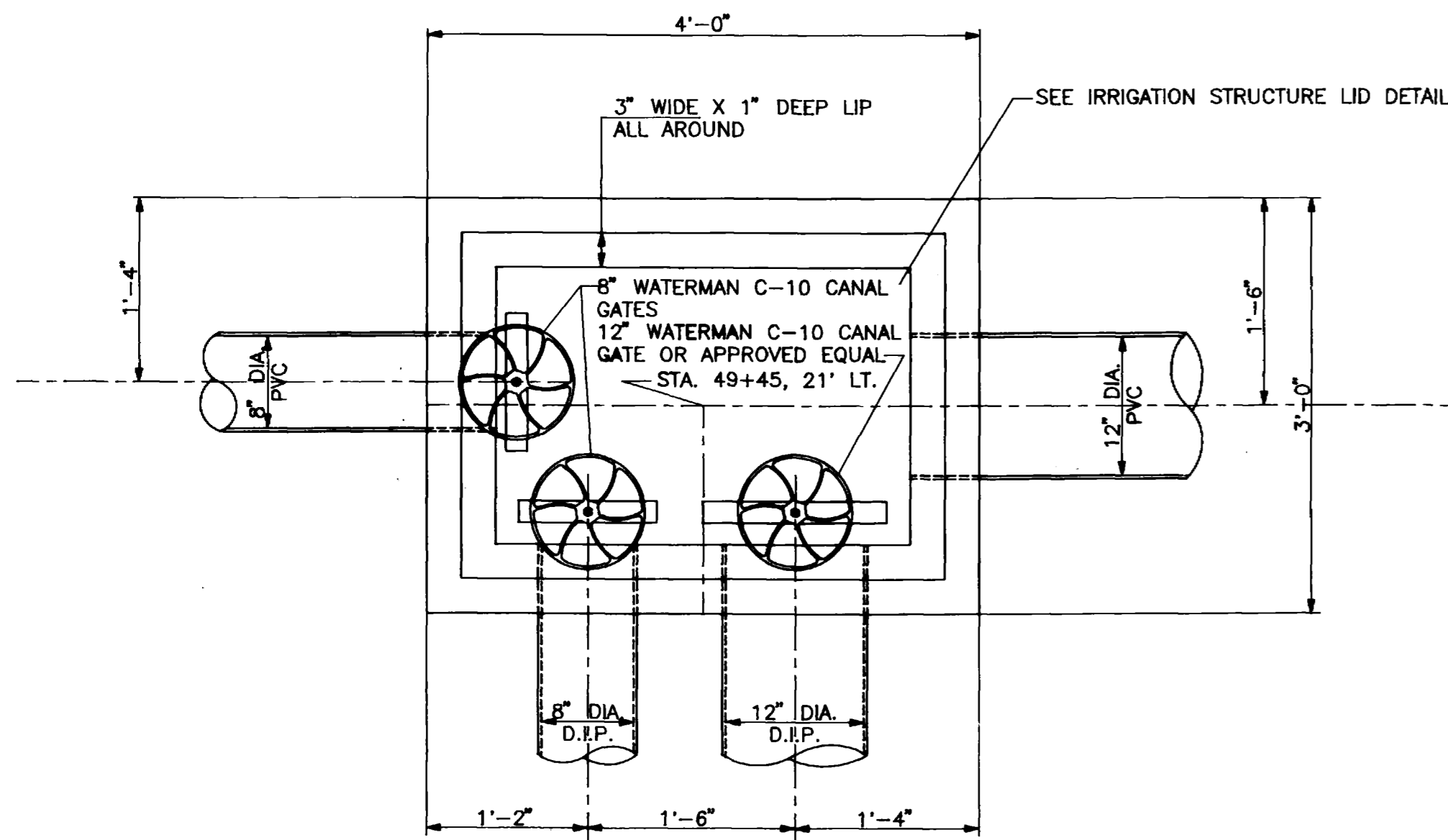
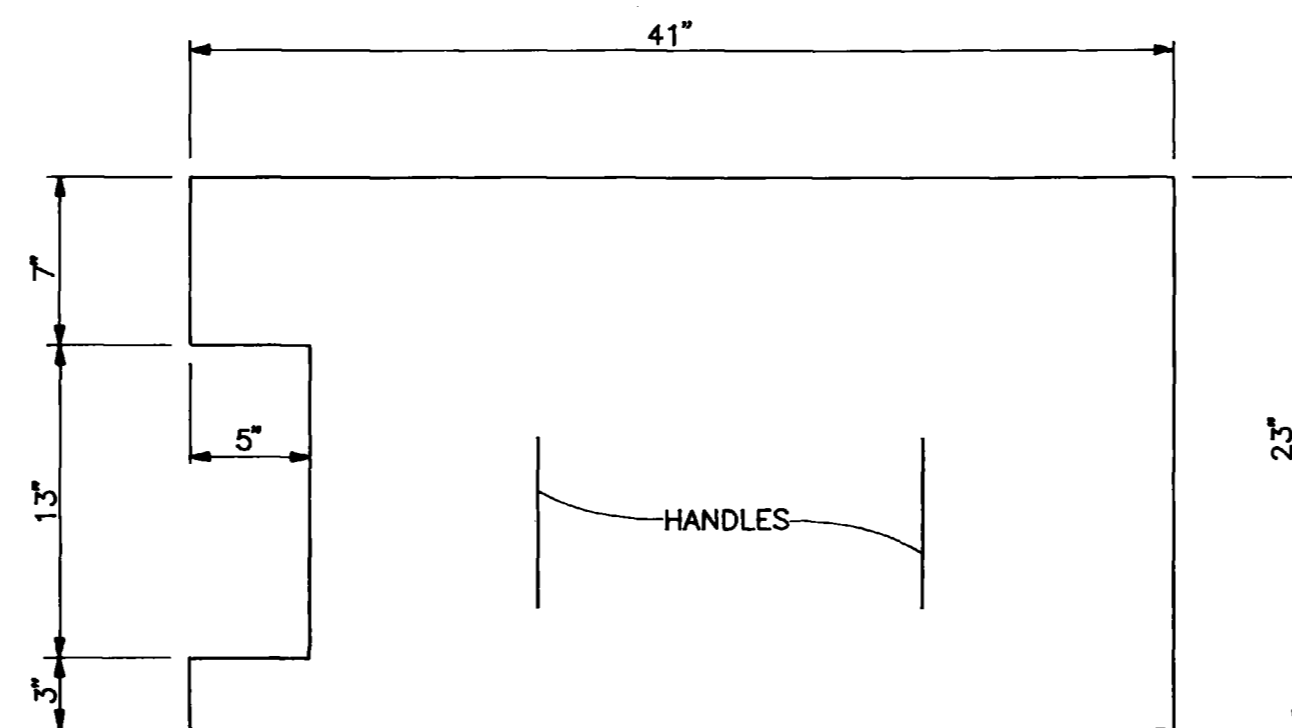
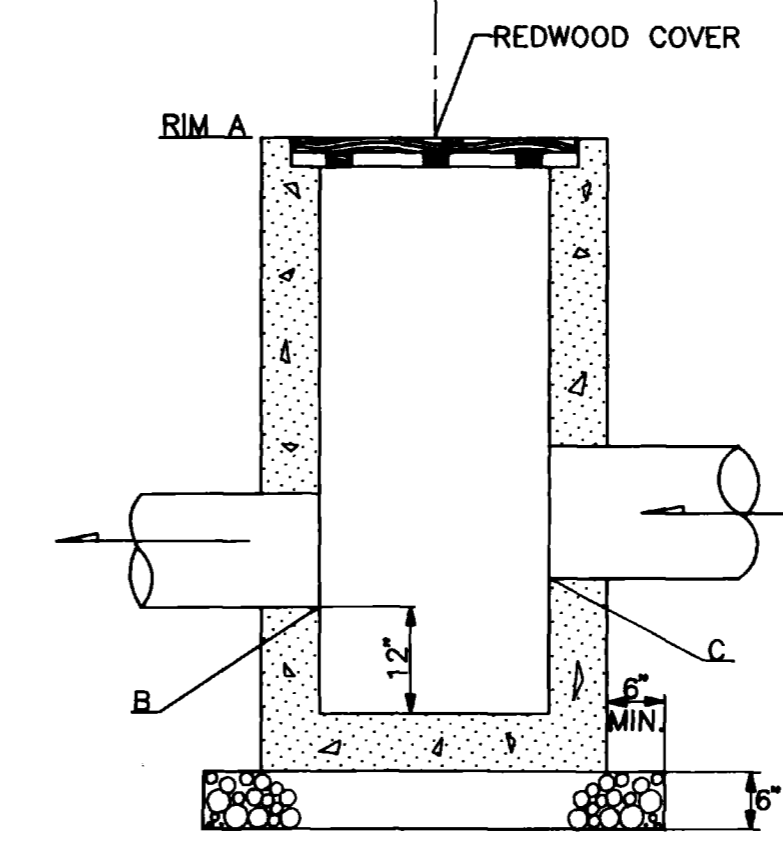
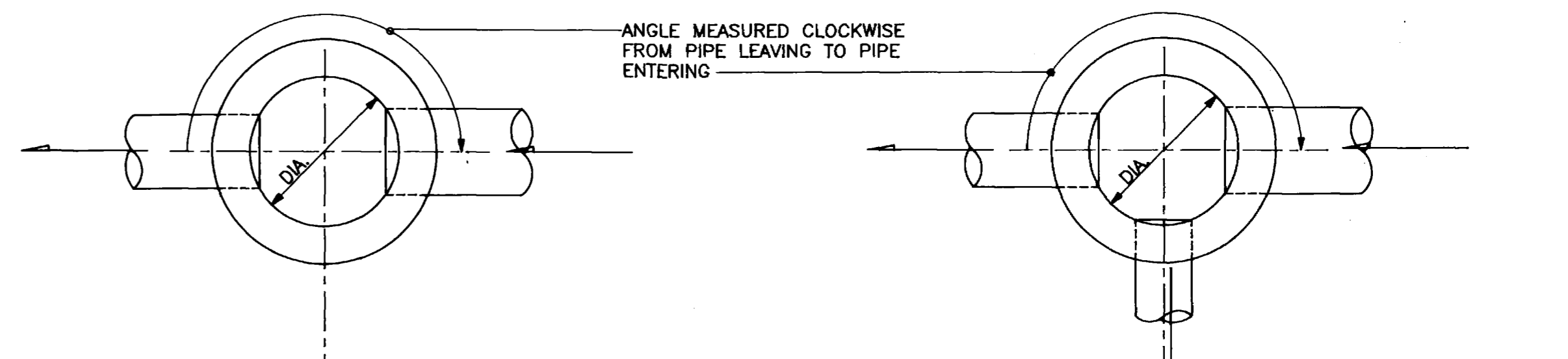


PLATE DETAIL

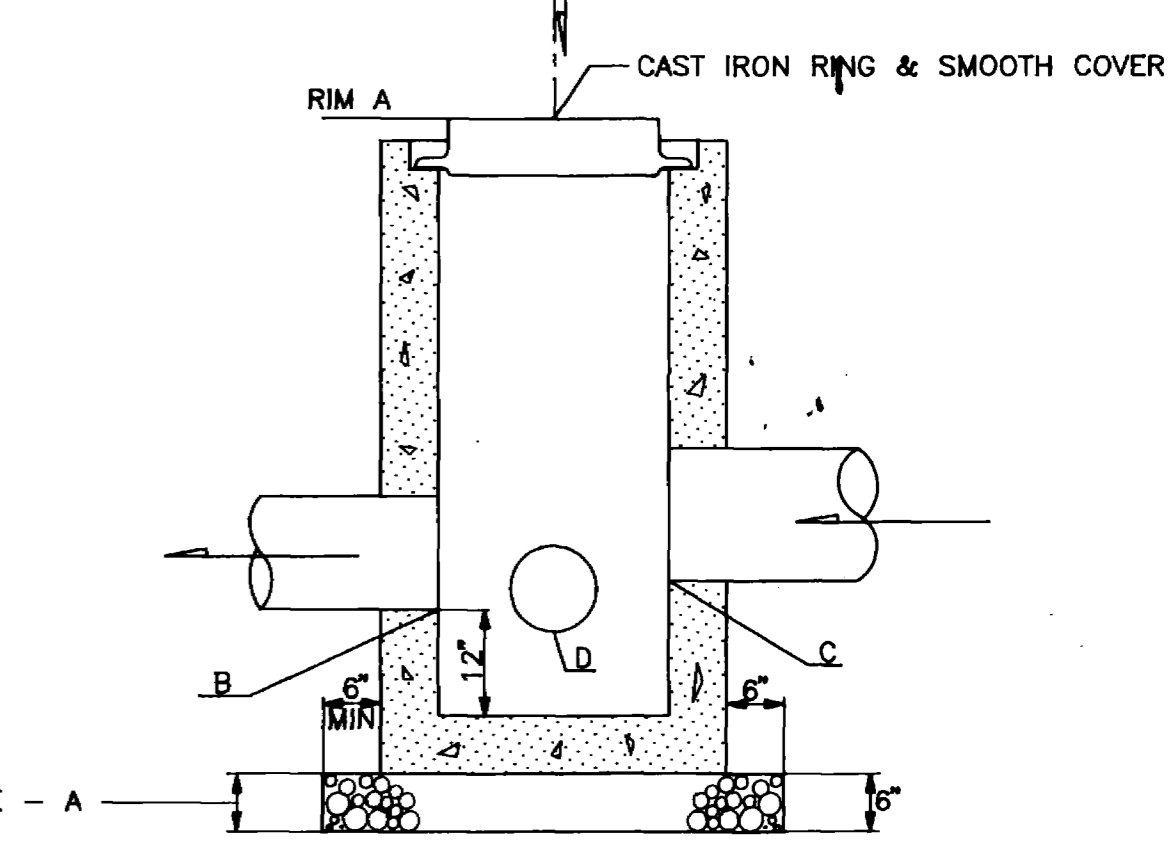


- NOTES:
1. FABRICATE LID FROM 1/4" THICK STEEL PLATE
 2. WELD 2-6" X 2" HANDLES TO LID. USE 3/8" DIA. STEEL ROD. WELD HANDLES IN SUCH POSITION THAT THE 3/4" DIA. STEEL LOCK ROD WILL PASS THROUGH HANDLES.
 3. ALL SURFACES SHALL BE THOROUGHLY CLEANED. THE SURFACES SHALL BE PRIMED & PAINTED WITH TWO COATS OF ALUMINUM PAINT ALL DONE IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS, SECTION 708.03 & 708.04.

IRRIGATION STRUCTURE LID DETAIL

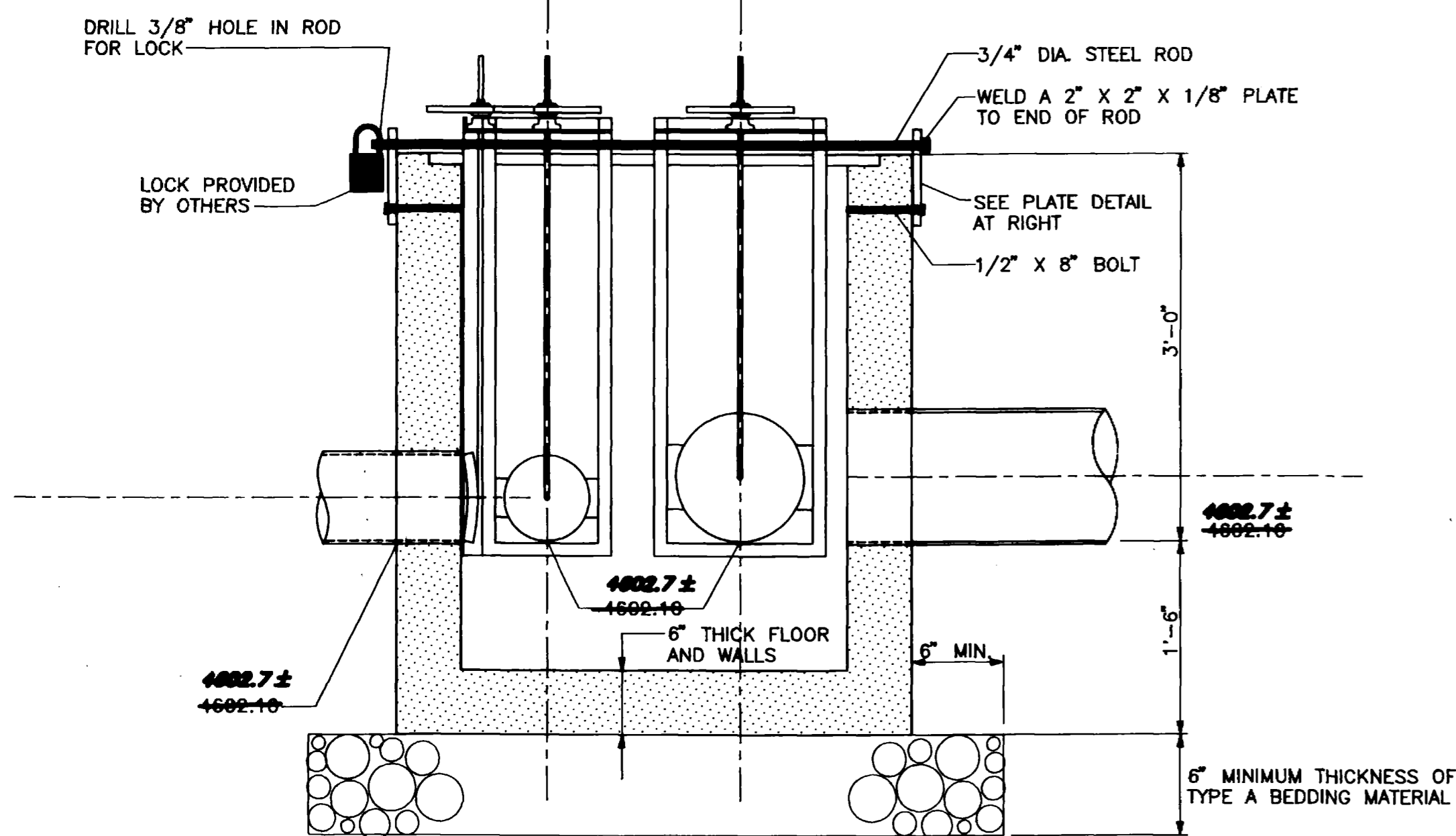


DETAIL A



DETAIL B

REINFORCED CONCRETE PIPE IRRIGATION MANHOLES WITH CONCRETE BASES



CONCRETE IRRIGATION STRUCTURE
49+45, 21' LT

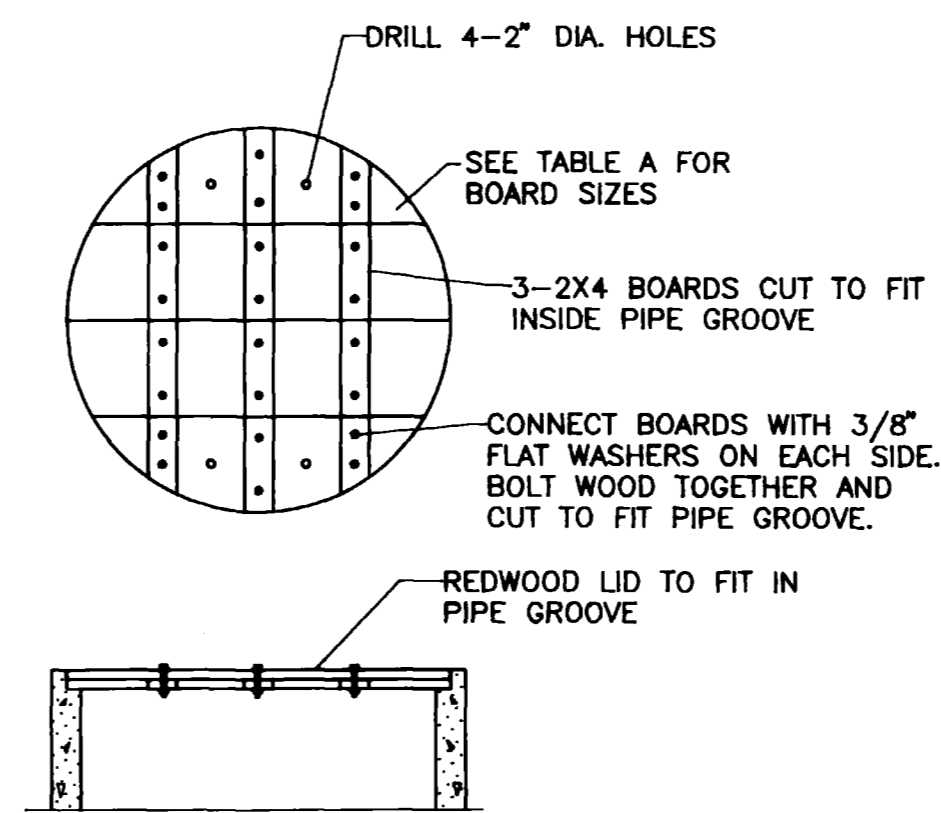


TABLE A

MANHOLE DIA.	SIZE OF BOARDS	NUMBER OF BOARDS
30"	2 X 12' s	3
24"	2 X 8' s	4

REDWOOD LID DETAIL

STATION & OFFSET	DETAIL NO & DIA.	RIM ELEV. A	INVERT OUT, DIA. B	INVERT IN, DIA. C	SIDE PIPE DIA. DIRECTION* D	ANGLE
37+06.0 24.4' RT.	A 24"	4582.50 4883.53	4582.40 6" 4882.32	4582.50 6" 4882.32		225°
41+49.8 23.5' RT.	A 30"	4587.40 4887.39	4586.80 8" 4886.08	4584.75 10" 4884.65		180°
41+98.75 26' RT.	A 30"	4587.86 4887.81	4585.80 10" 4884.83	4586.80 12" 4886.45		180°
44+09.0 23.28' RT.	A 30"	4588.50 4888.31	4587.80 10" 4887.41	4588.10 10" 4888.21		180°
44+98.5 17.5' RT.	B 30"	4588.80 4888.84	4588.50 10" 4888.48	4588.80 10" 4887.14	4587.30 6" LT. 4887.14	
47+67.5 17.5' RT.	B 30"	4600.60 4882.57	4600.70 10" 4882.47	4600.70 10" 4882.47	4600.60 6" LT. 4882.47	180°
49+44.17 17.5' RT.	B 30"	4604.40 4884.30	4604.40 10" 4881.90	4601.95 8"		90°

* LEFT OR RIGHT DIRECTION DETERMINED BY LOOKING AT DIRECTION OF FLOW THROUGH MANHOLE.
** PROVIDE 2' OF SUMP BELOW INVERT ELEV. INTO MANHOLE.

AS CONSTRUCTED

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REVISION			L. MARTIN	3/93	PLAN
REVISION			J.H.T.	3/93	PROFILE
REVISION			J.H.T.	3/93	HORIZ. N.T.S.
REVISION					VERT. N.T.S.

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IRRIGATION SYSTEM MODIFICATIONS
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Irrigation System Details