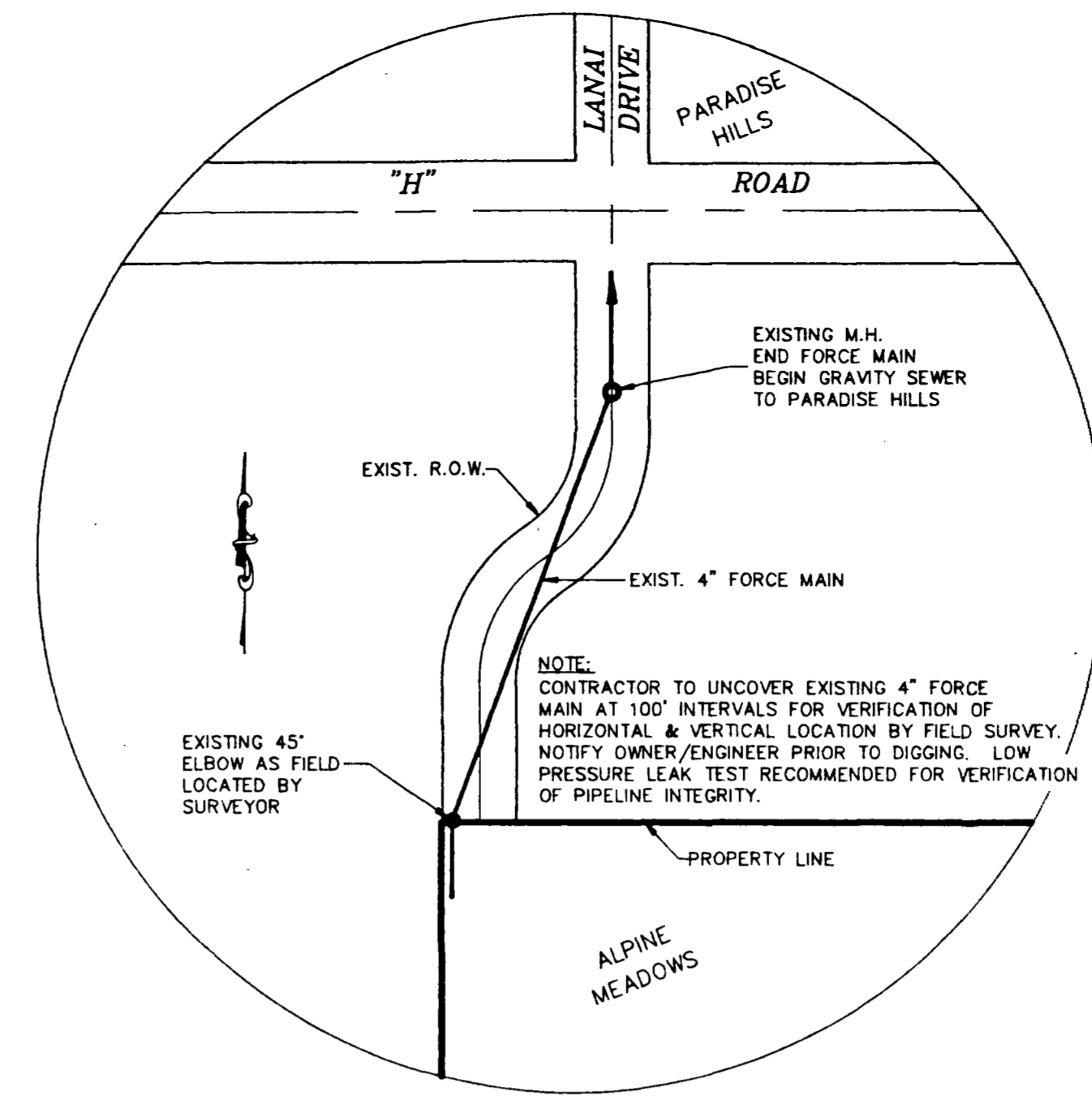


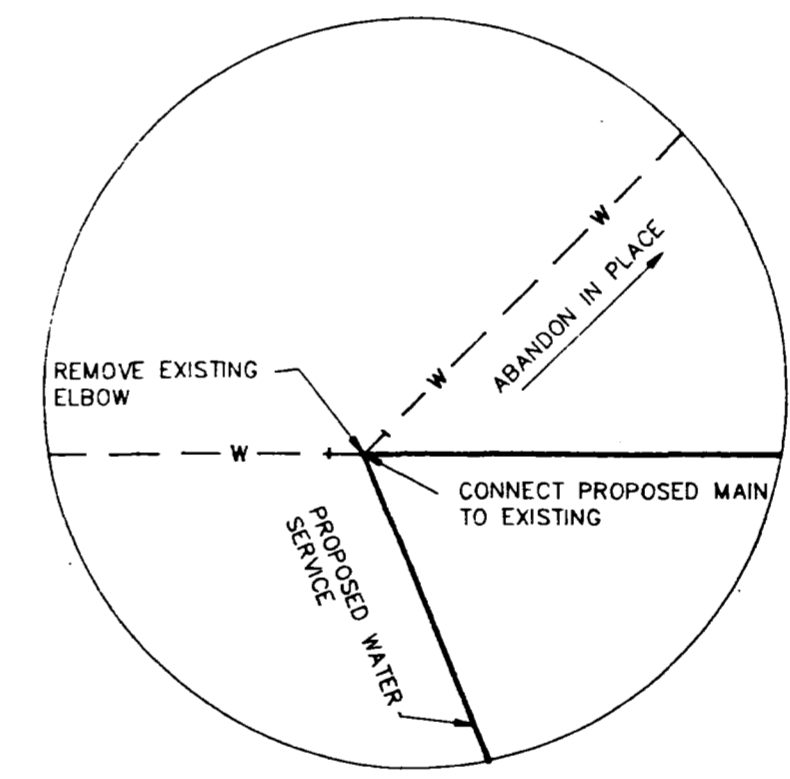
GENERAL CONSTRUCTION NOTES

- SEE SHEET S3 FOR DETAILS.
- ALL PORTLAND CEMENT CONCRETE SHALL BE COLORADO DIVISION OF HIGHWAYS CLASS "B" (SECTION 601.02)
- ALL CEMENT USED IN MORTAR, CONCRETE BASES, VAULTS, GRADE RINGS, RISER SECTIONS, CONES AND FLAT TOPS SHALL BE TYPE V OR MODIFIED TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRICALCIUM ALUMINATE.
- A MINIMUM OF 42 INCHES OF COVER SHALL NEW BE MAINTAINED OVER ALL NEW WATER MAINS. THRUST BLOCKS ARE REQUIRED AT ALL BENDS, ENDS, AND VALVES.
- INDICATED DISTANCES FOR WATERLINES AND APPURTENANCES ARE HORIZONTAL DISTANCES BETWEEN CENTERLINE OF FITTINGS. THEREFORE, DISTANCES SHOWN ARE APPROXIMATE ONLY AND MAY VARY DUE TO VERTICAL ALIGNMENT AND FITTING DIMENSIONS.
- IN ALL CASES A MINIMUM OF 10 FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATERLINES AND SANITARY SEWERS. WHERE SEWER LINES AND WATER MAINS CROSS, THE SEWER PIPE SHALL BE A MINIMUM OF EIGHTEEN (18) INCHES CLEAR DISTANCE VERTICALLY BELOW THE WATER MAIN. IF THIS CLEAR DISTANCE IS NOT FEASIBLE, THE CROSSING MUST BE DESIGNATED AND CONSTRUCTED SO AS TO PROTECT THE WATER MAIN. MINIMUM PROTECTION SHALL CONSIST OF THE INSTALLATION OF AN IMPERVIOUS AND STRUCTURAL SEWER, FOR EXAMPLE:
 - ONE LENGTH OF PIPE AT LEAST 18 FEET LONG CENTERED OVER THE WATER MAIN. JOINTS BETWEEN THE SEWER PIPE AND THE SPECIAL PIPE SHALL BE ENCASED IN A CONCRETE COLLAR AT LEAST 6 INCHES THICK AND EXTENDING AT LEAST 6 INCHES EITHER SIDE OF THE JOINT.
 - CONCRETE OR VITRIFIED CLAY SEWER PIPE WITH REINFORCED CONCRETE ENCASEMENT. ENCASEMENT SHALL BE AT LEAST 6 INCHES THICK AND SHALL EXTEND A DISTANCE OF 10 FEET EITHER SIDE OF THE WATER MAIN.
- ALL WATERLINE CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH UTE WATER SPECIFICATIONS. THE CONTRACTOR SHALL CONDUCT PRESSURE AND LEAKAGE TESTS ON WATERLINES IN THE PRESENCE OF UTE WATER DISTRICT PERSONNEL AND SHALL CHLORINATE ALL WATERLINES IN ACCORDANCE WITH AWWA C-601 PRIOR TO PUTTING THEM INTO SERVICE.
- SANITARY SEWER LINES ARE TO BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH CITY OF GRAND JUNCTION SPECIFICATIONS.
- ALL EXISTING SEWER SERVICES WHICH ARE NOT TO BE USED SHALL BE CAPPED WITH GLUED FITTING AND ABANDONED IN PLACE.
- ALL EXISTING WATER SERVICES WHICH ARE NOT TO BE USED SHALL BE EXCAVATED AT THE MAIN, THE CORP STOP SHALL BE CLOSED, AND THE SERVICE LINE REMOVED.

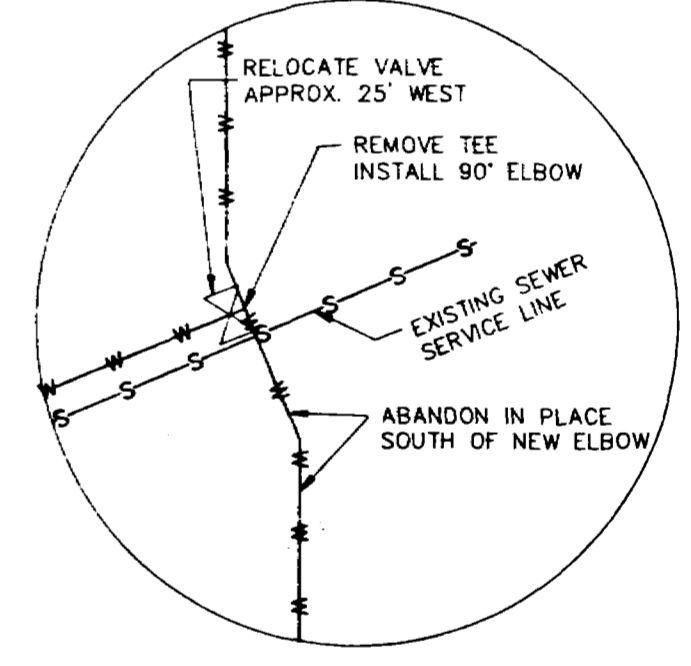


DETAIL OF FORCE MAIN OFFSITE LOCATION
NOT TO SCALE

- NOTE: CONTRACTOR TO EXTEND ALL SERVICE LINES (TO BE UTILIZED) A DISTANCE OF 5' (MIN.) INTO LOT.
- NOTE: CONNECTION TO MANHOLE REQUIRES INSTALLATION OF PIPE THROUGH EXISTING MANHOLE BASE



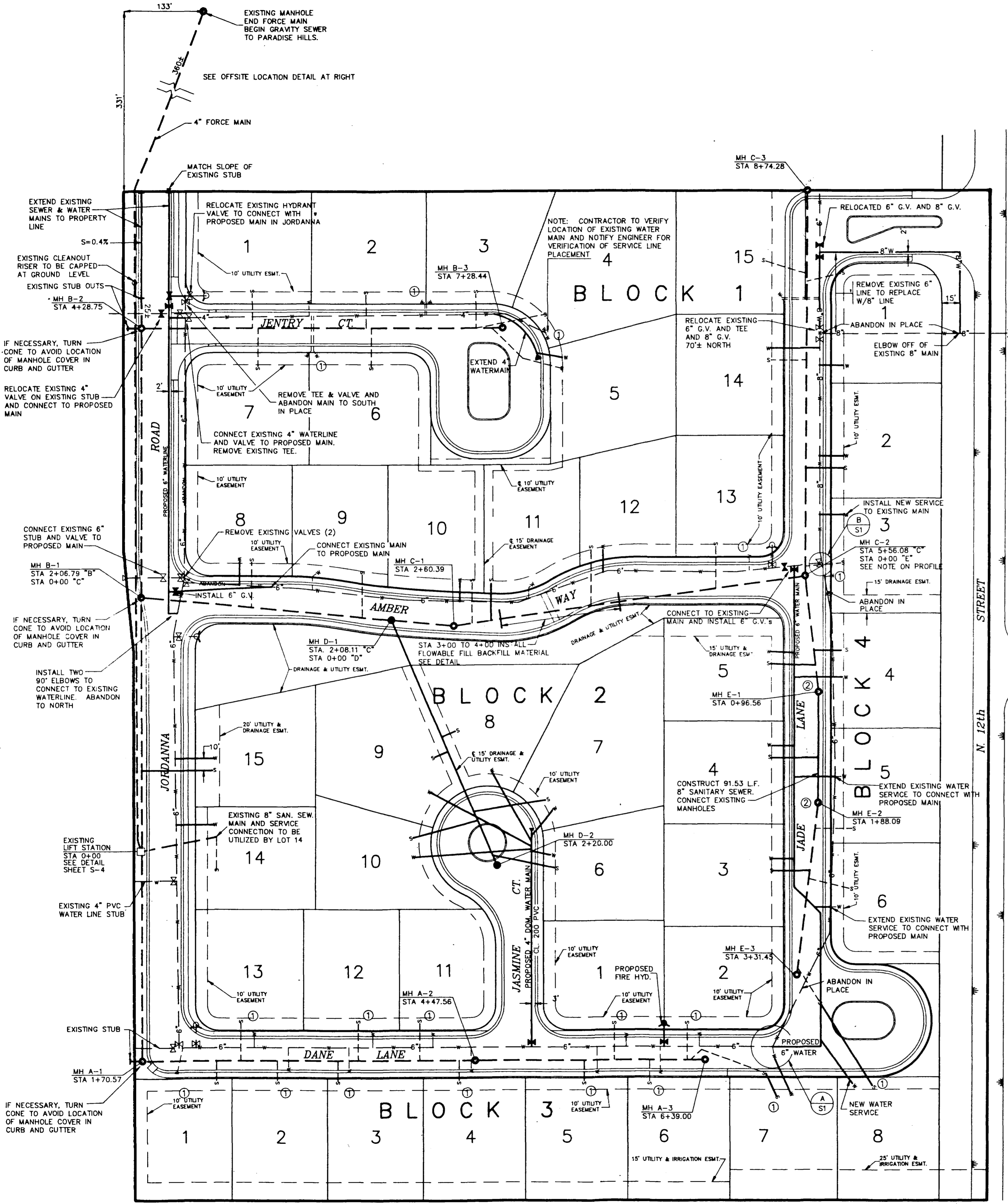
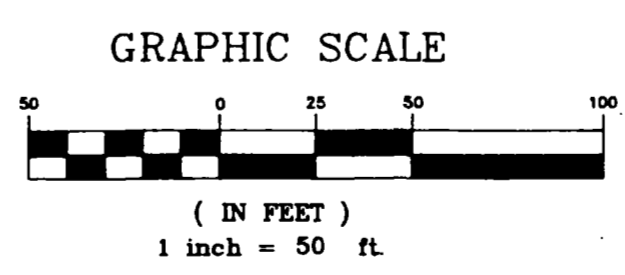
A S1 NTS



B S1 NTS

LEGEND

	EXISTING 8" SANITARY SEWER MAIN w/MANHOLE
	PROPOSED 8" SANITARY SEWER MAIN w/MANHOLE
	EXISTING WATER MAIN w/VALVE
	PROPOSED WATER MAIN w/VALVE
	EXISTING SEWER SERVICE LINE
	PROPOSED 4" SEWER SERVICE LINE
	EXISTING WATER SERVICE LINE
	PROPOSED 3/4" WATER SERVICE LINE
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT

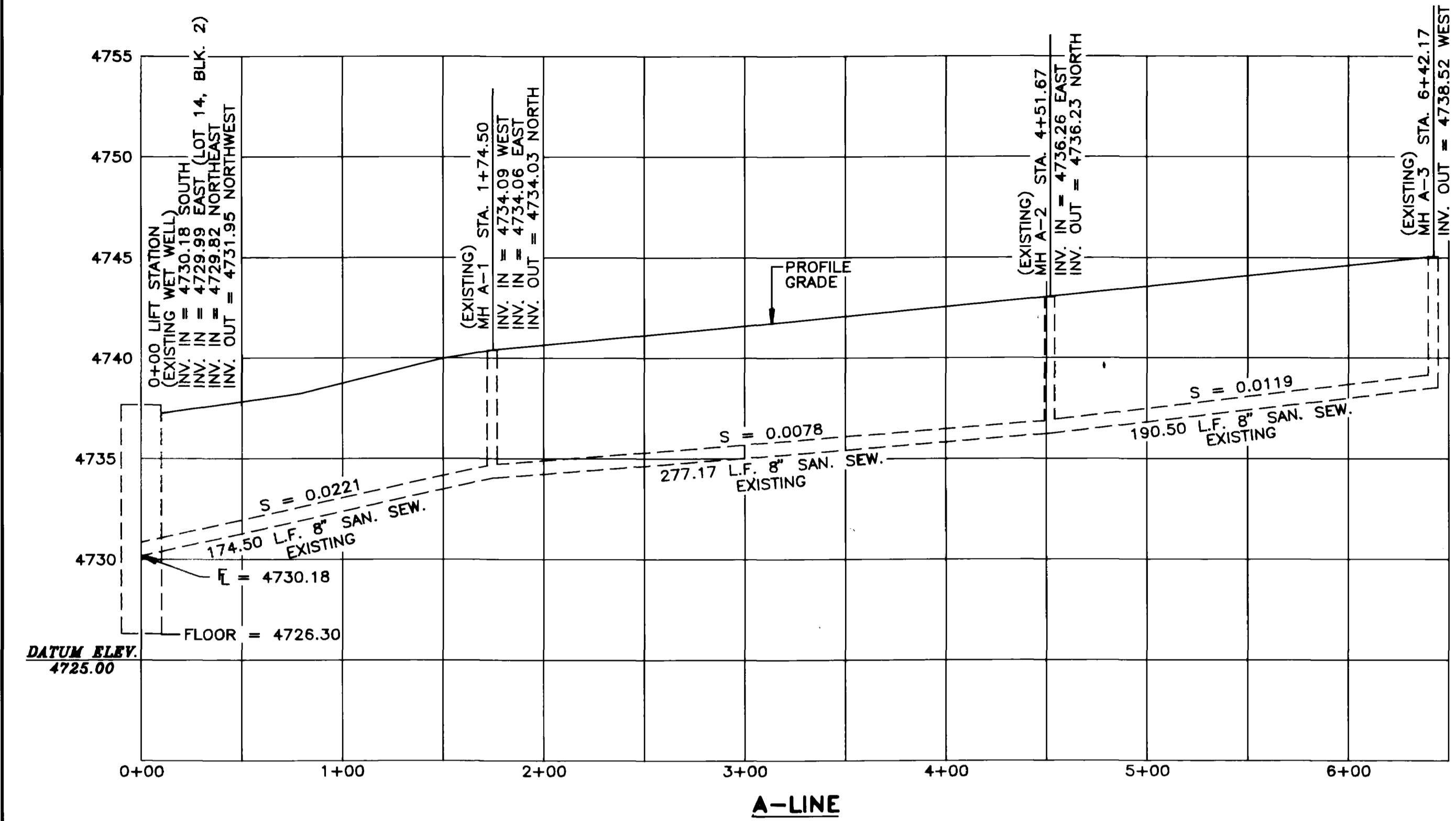


AS-BUILT 9-6-91

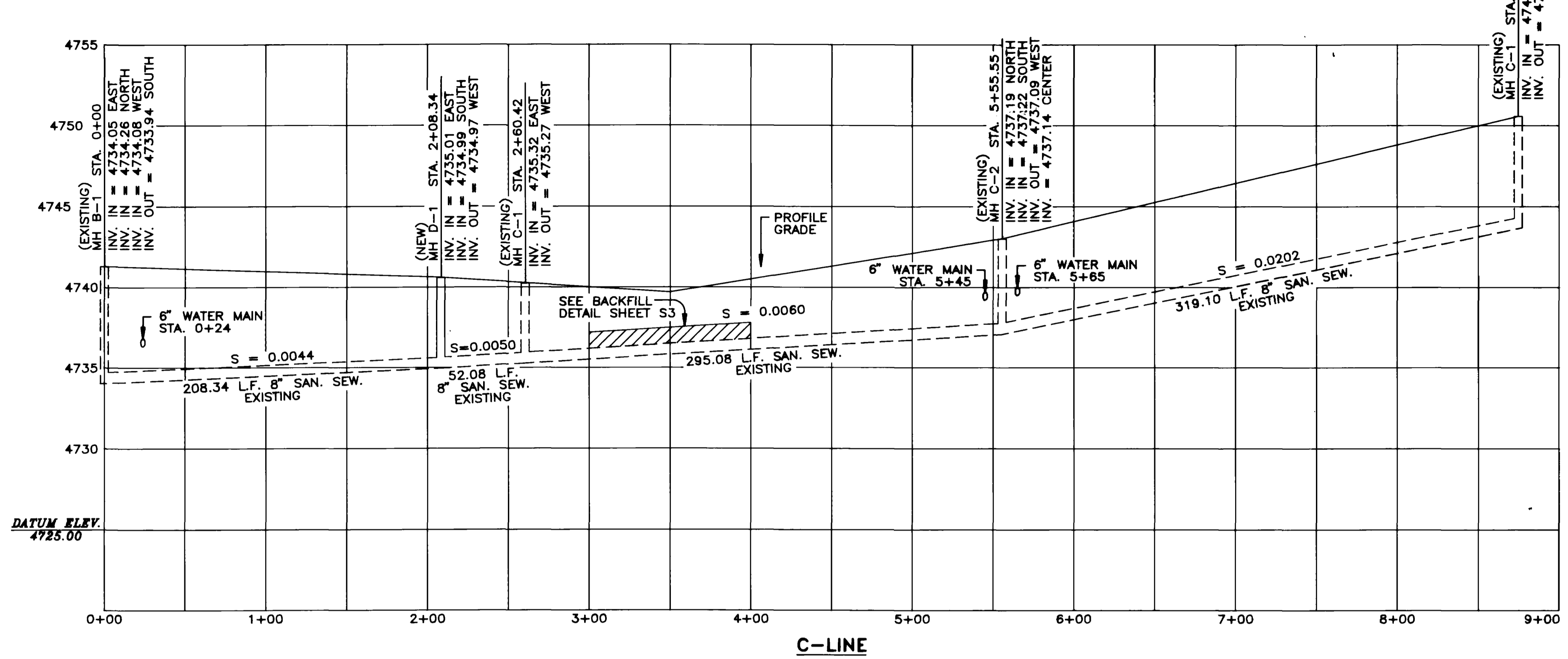
SEWER & WATER PLAN
ALPINE MEADOWS SUBDIVISION
MESA COUNTY, COLORADO

ARMSTRONG CONSULTANTS, INC.
Engineers
Planners
Surveyors
Soil Testing
Material Testing
Geotechnical Engineers
881 WOOD AVENUE
Grand Junction, Colorado 81501
(970) 242-0101

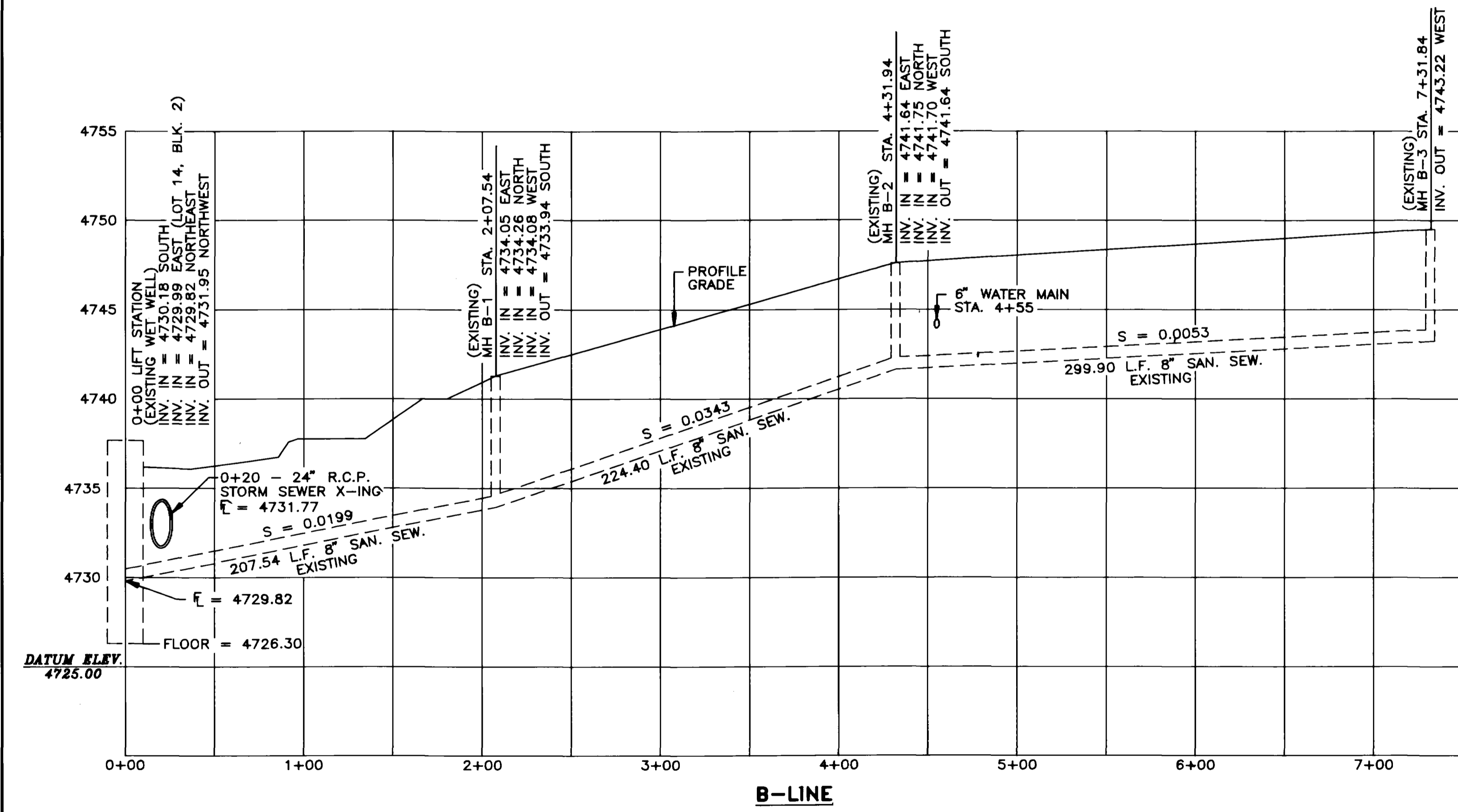
DRAWN BY: D. ERTZ	DATE: DEC., 1990	SHEET S1 of 3
CHECKED BY: P.M.O./T.A.L.	AG NO. 905350	



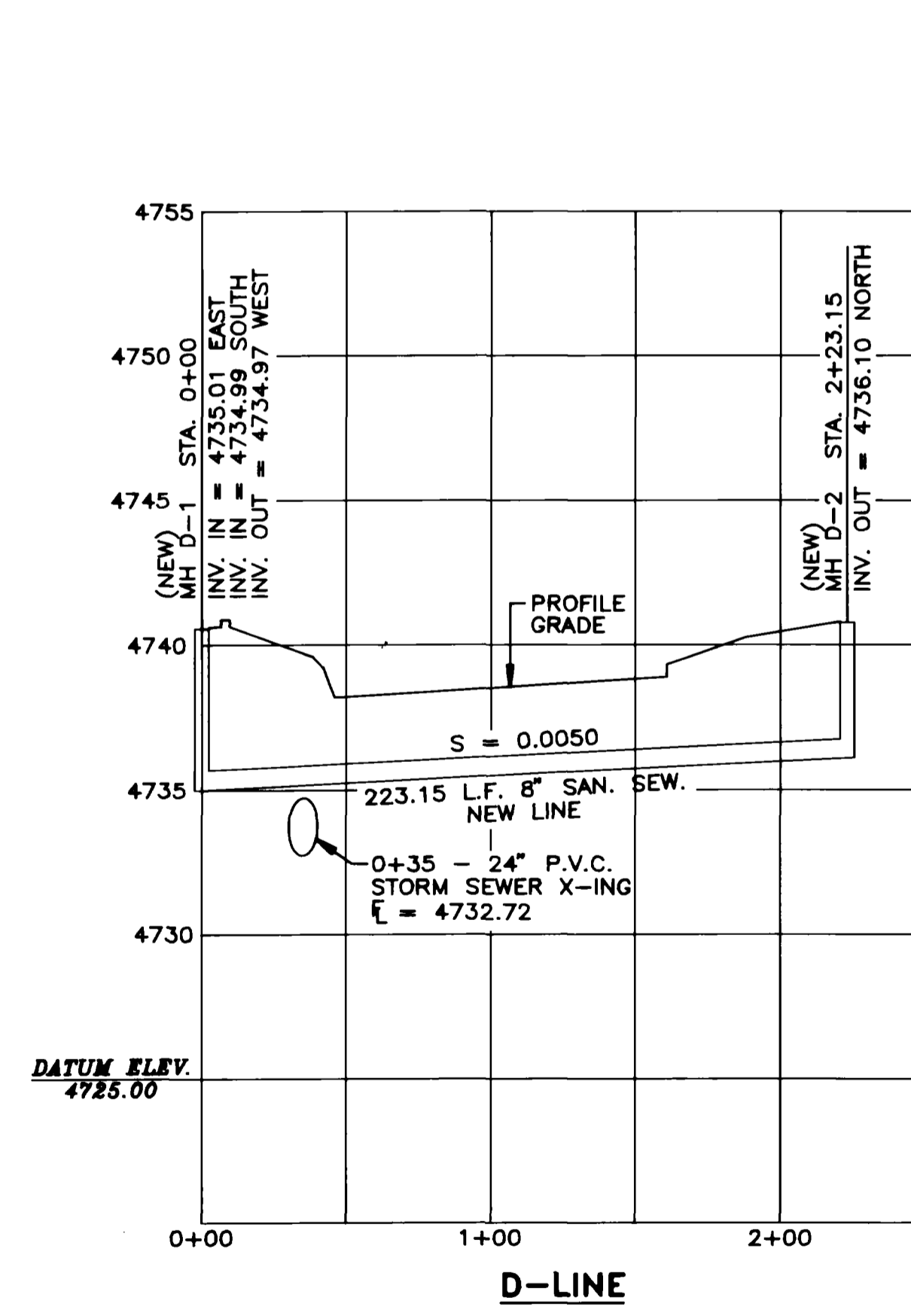
A-LINE



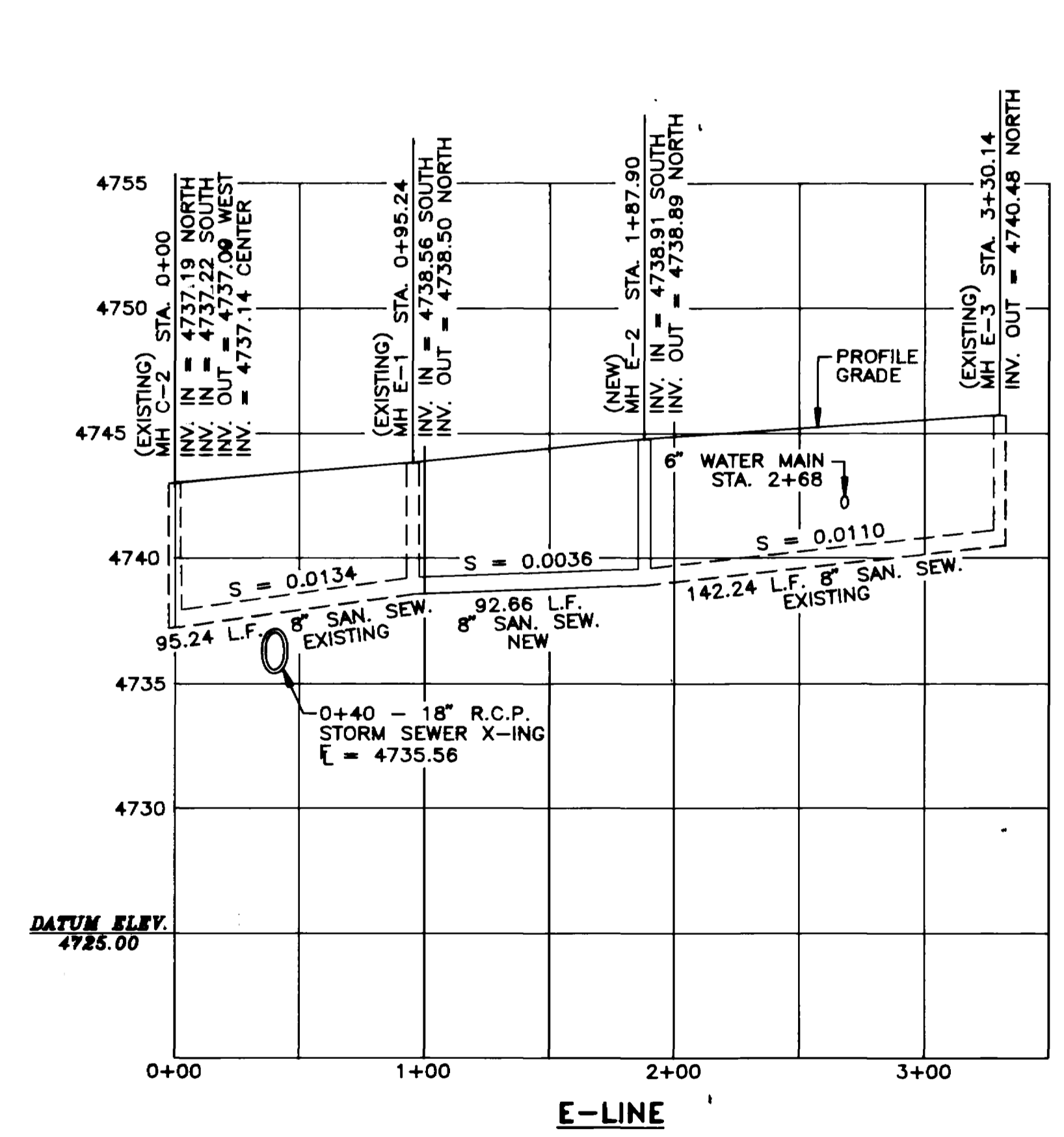
C-LINE



B-LINE



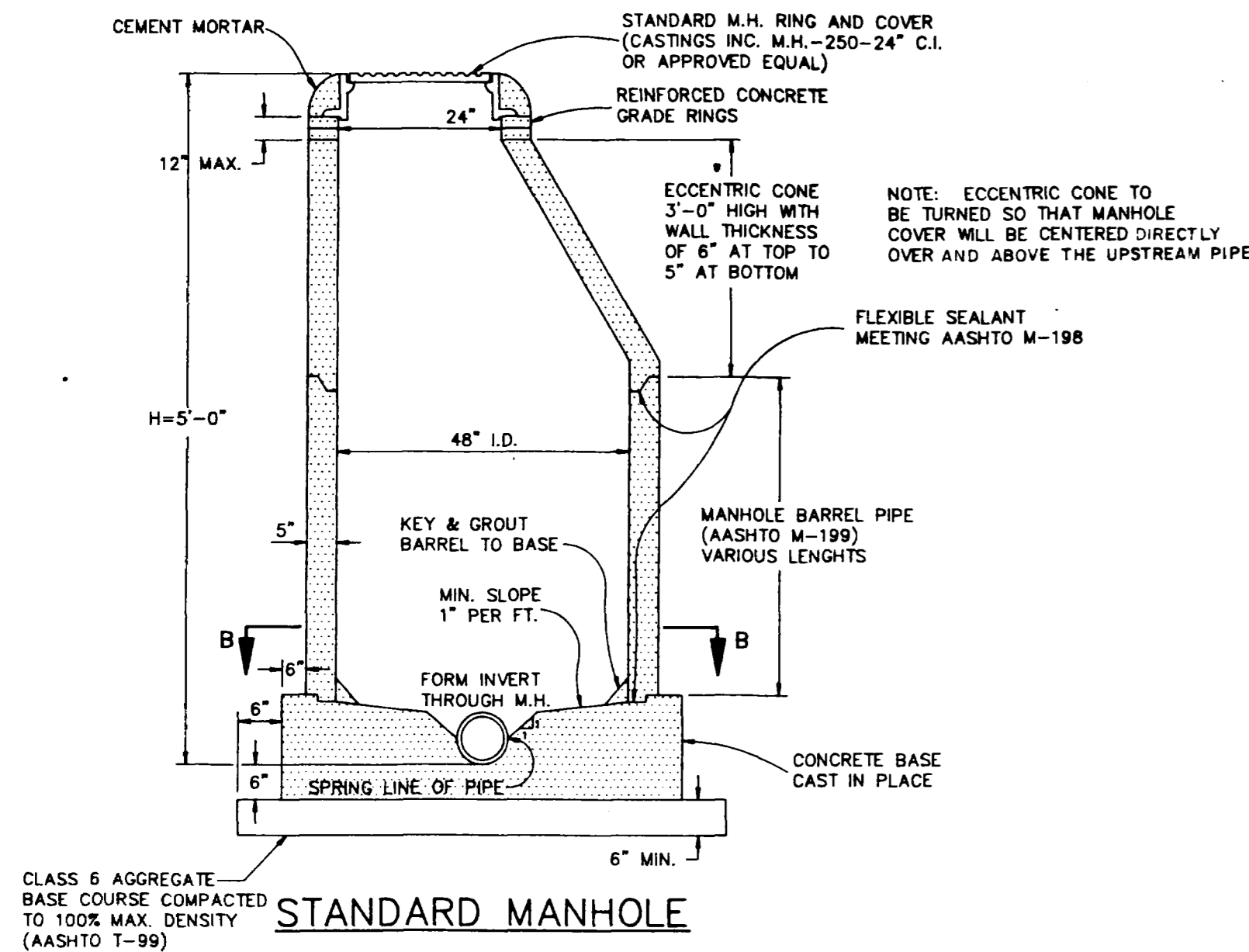
D-LINE



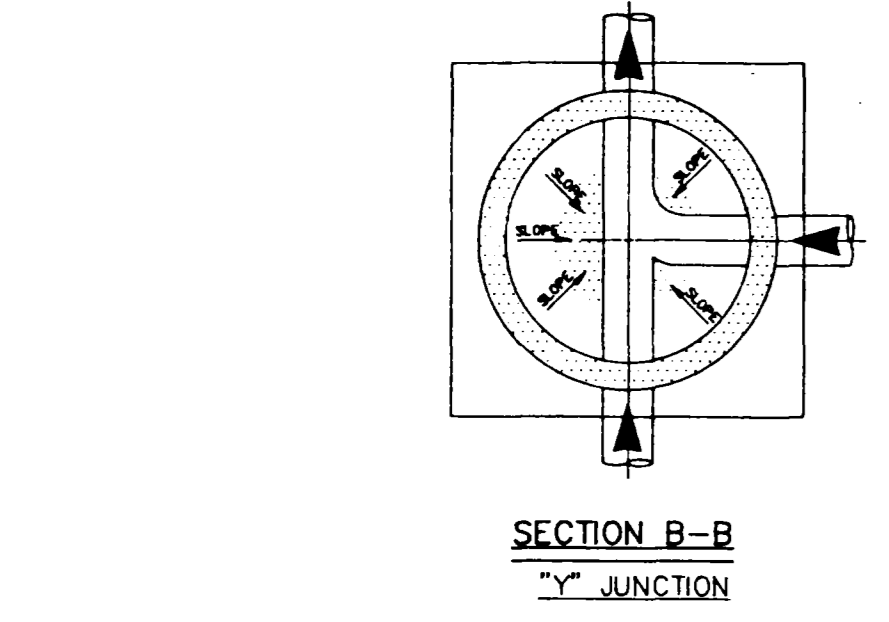
E-LINE

NOTE: PROFILE GRADE LINES APPROXIMATE ONLY.

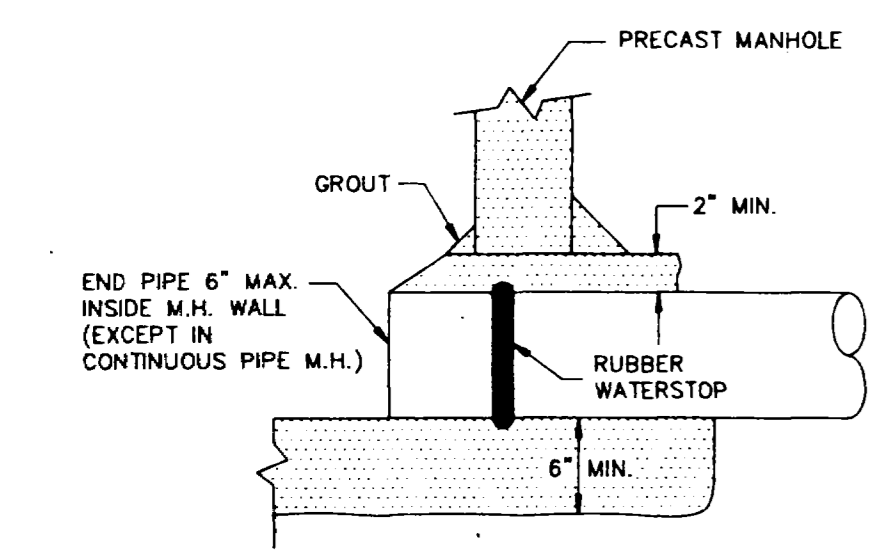
		SEWER PROFILES	
		ALPINE MEADOWS SUBDIVISION MESA COUNTY, COLORADO	
AS-BUILT DRAWINGS FOR			
ALPINE MEADOWS SUBDIVISION SANITARY SEWER PROFILES			
MESA COUNTY, COLORADO		881 ROOD AVENUE Grand Junction, Colorado 81501 (303) 242-0101	
SURVEYED R.A.M.	DRAWN M.J.L.		
DATE 9-6-91	WEI DWG. NO. 2954-1148-1		ACI NO. 905350
			SHEET S2 OF 2



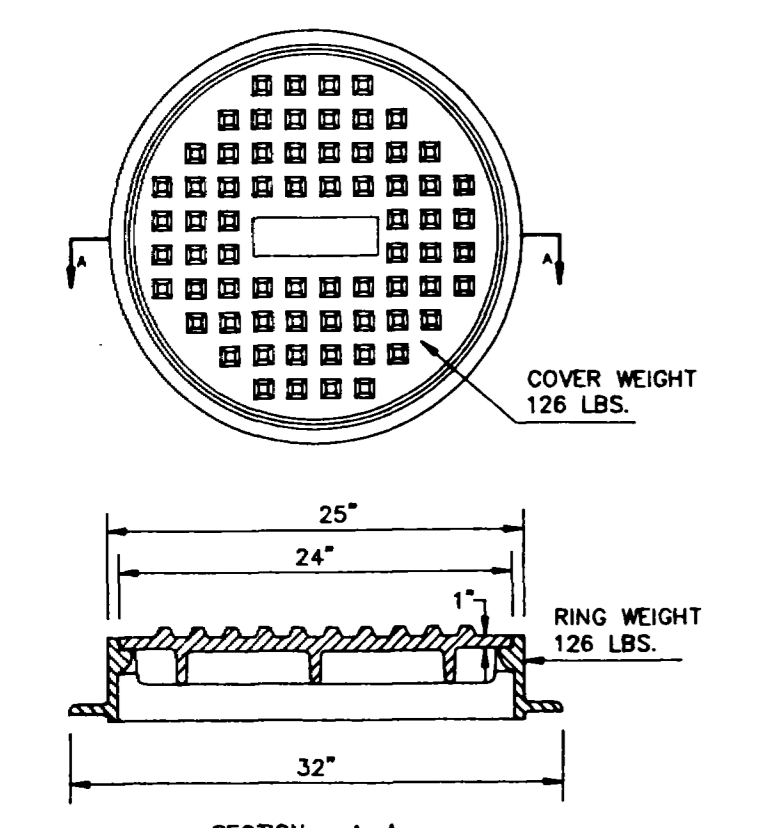
STANDARD MANHOLE



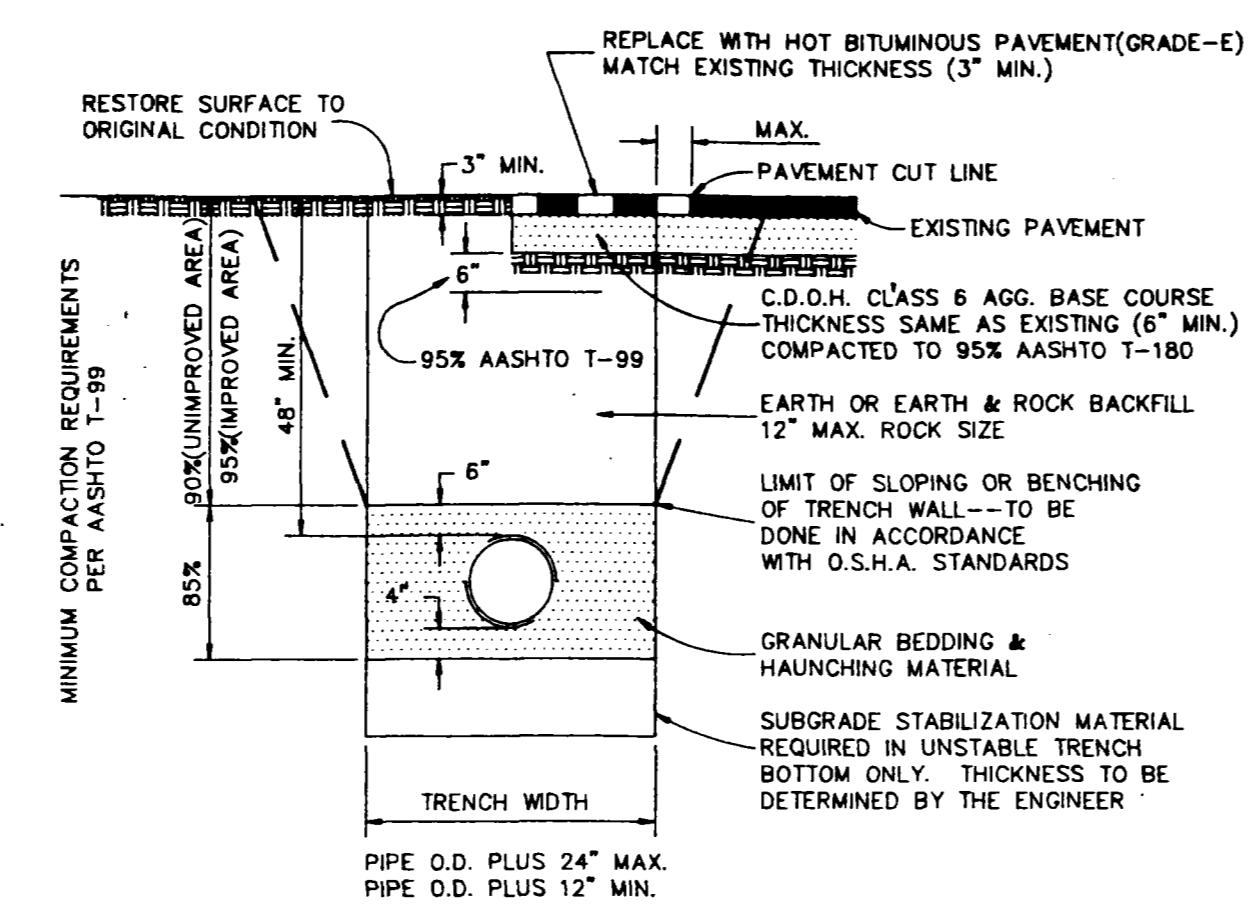
**SECTION B-B
Y JUNCTION**



MANHOLE ENTRANCE DETAIL



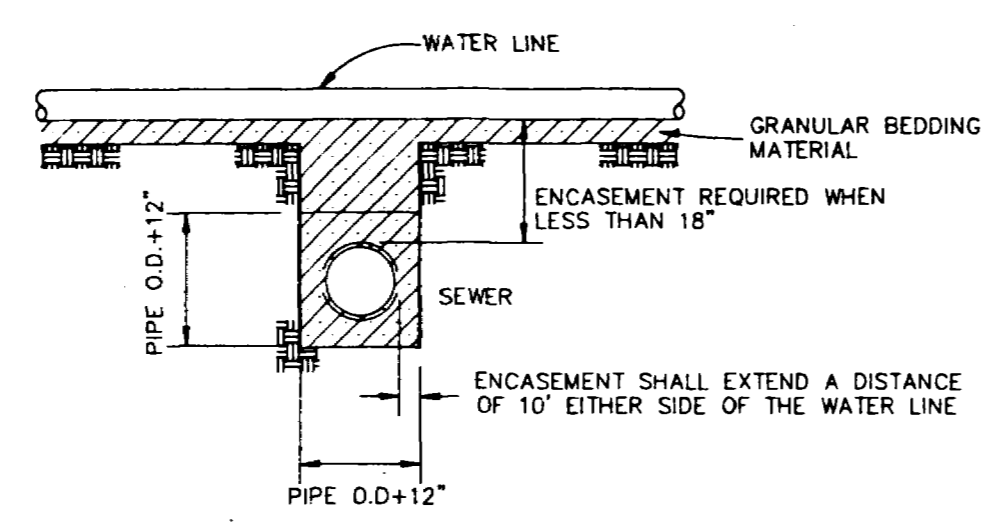
STANDARD CAST IRON MANHOLE RING AND COVER
NOT TO SCALE



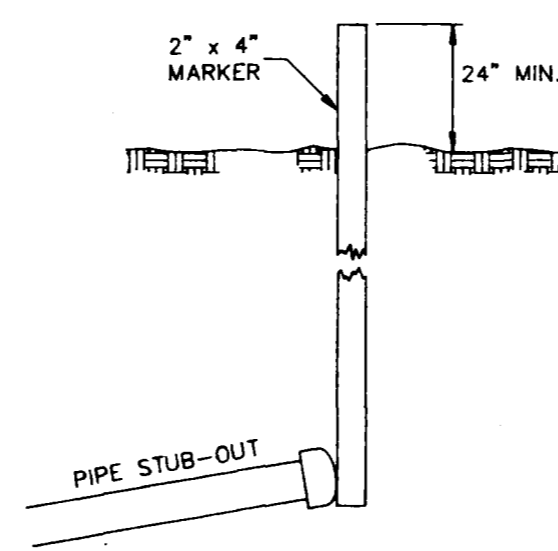
SIEVE SIZE	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES	
	PIPE BEDDING & HAUNCHING MATERIAL (CRUSHED ROCK)	GRANULAR STABILIZATION MATERIAL (SCREENED OR CRUSHED ROCK)
2 INCH	100	100
1 INCH	90-100	-----
3/4 INCH	20-55	-----
3/8 INCH	0-10	-----
NO. 4	0-5	-----
NO. 8	0-5	-----
NO. 200	20 MAX	20 MAX

ALL BACKFILL MATERIAL SHALL BE PLACED FULL WIDTH IN 12\"/>

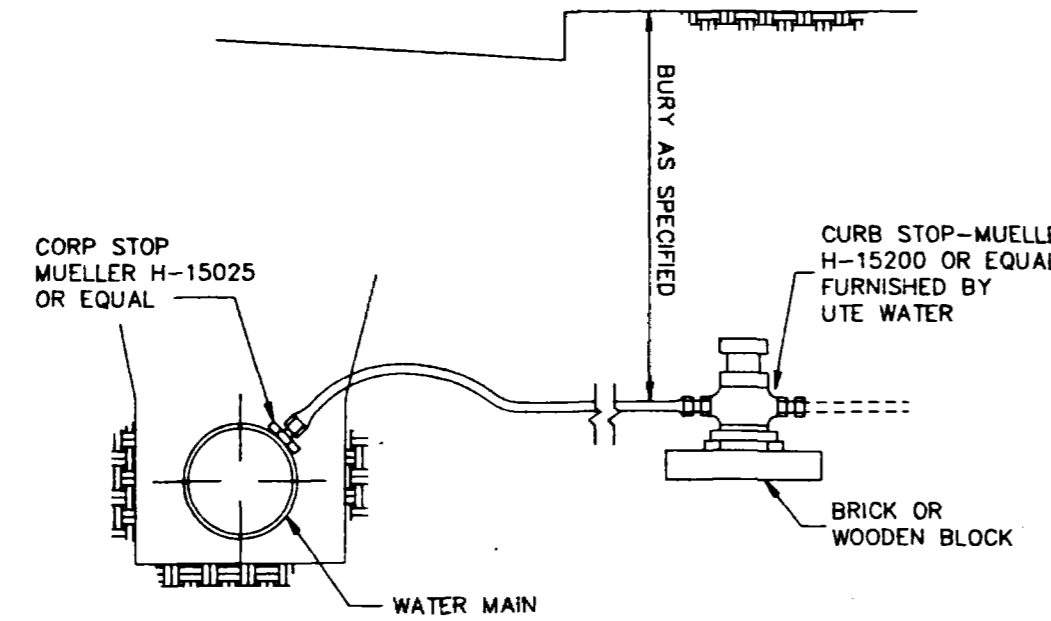
TYPICAL TRENCH DETAIL FOR ALL UNDERGROUND CONDUIT



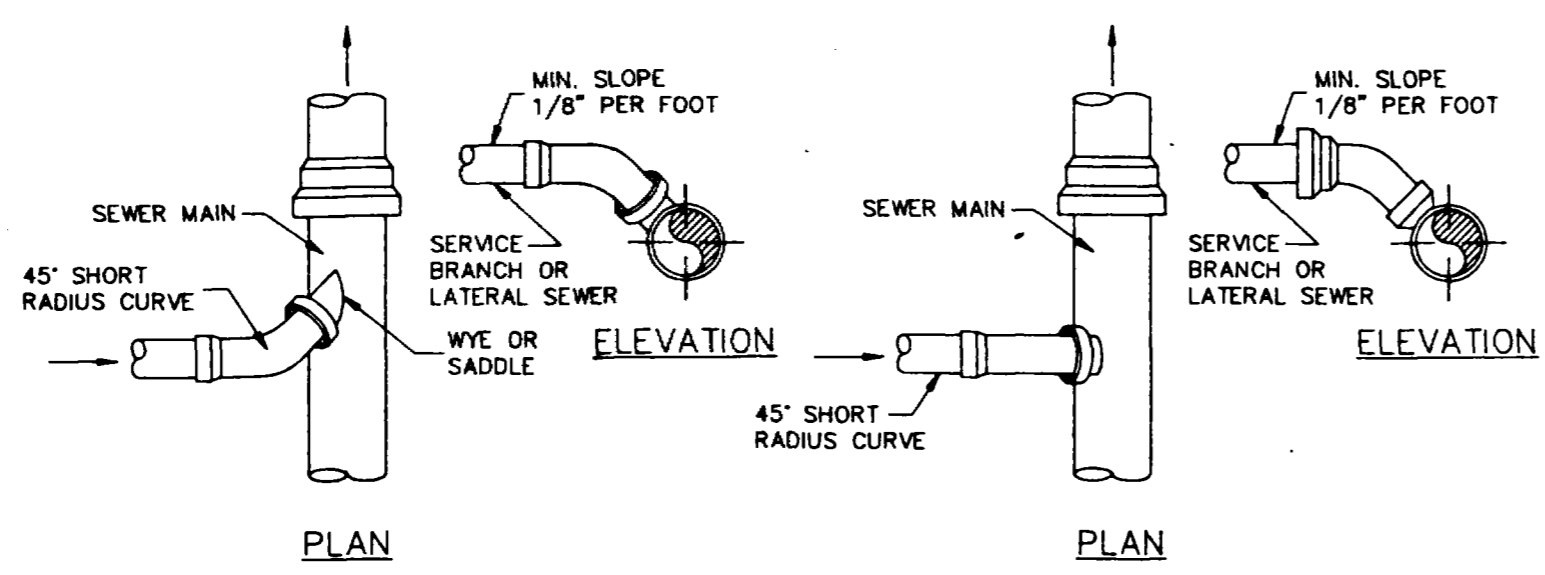
ENCASEMENT DETAIL



SERVICE MARKER



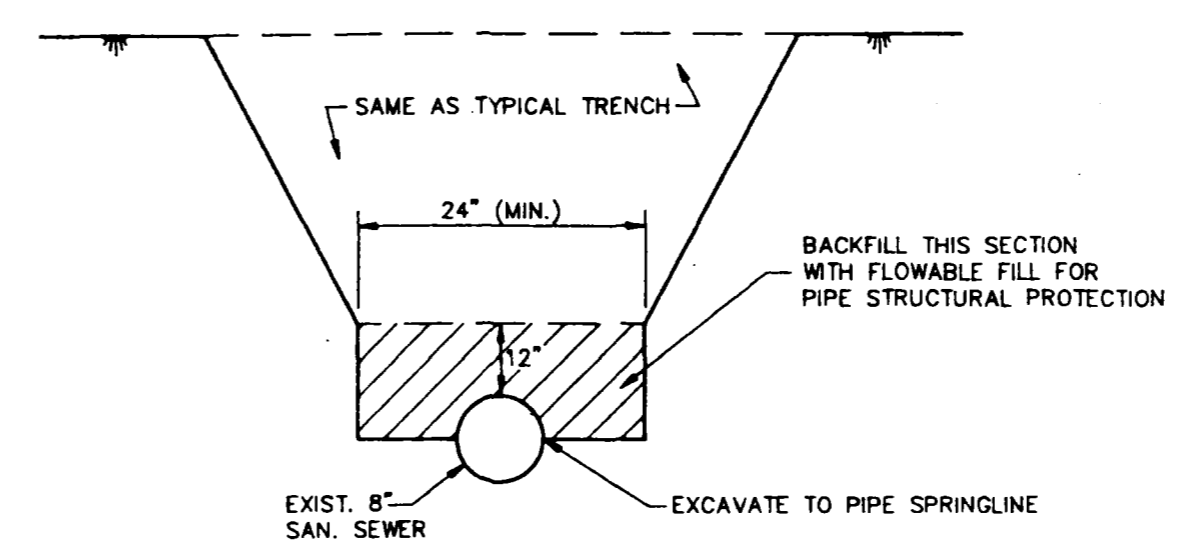
TYPICAL SERVICE CONNECTION



Y TYPE

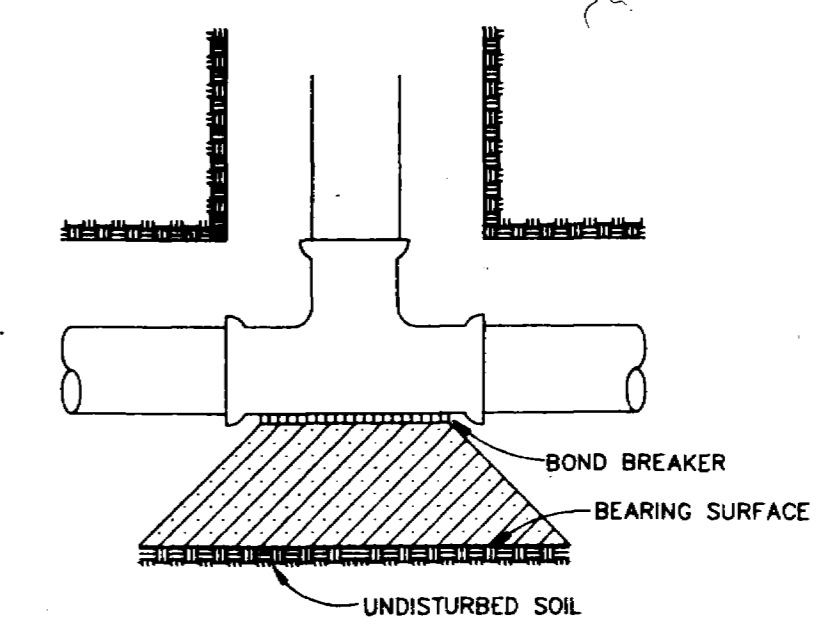
T TYPE

SERVICE CONNECTIONS



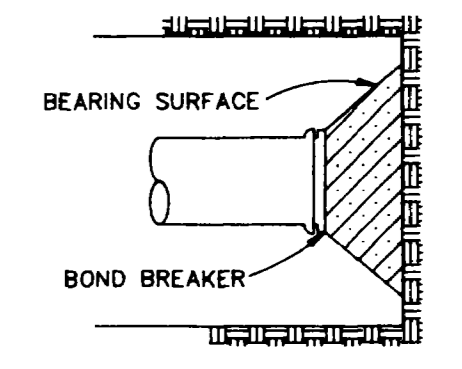
BACKFILL DETAIL

(INSTALL STA 3+00 TO 4+00, C-LINE ONLY)



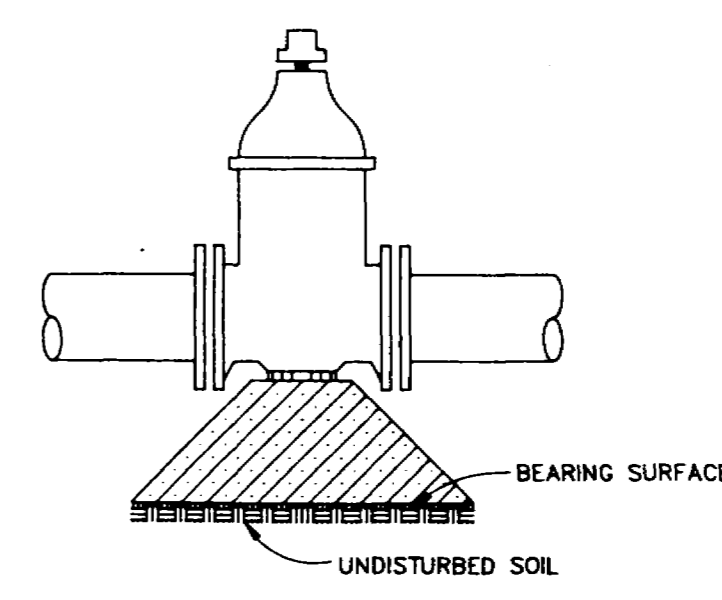
TEE DETAIL

NOT TO SCALE



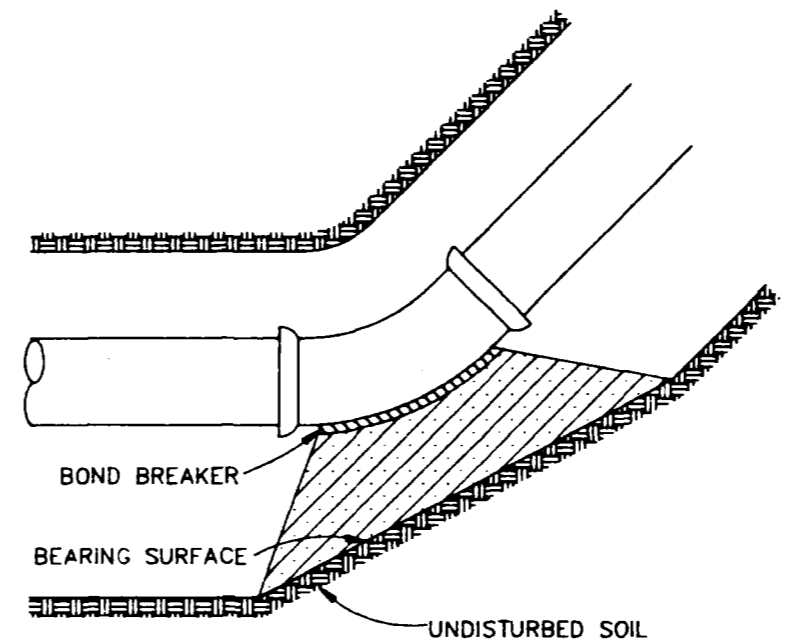
DEAD END DETAIL

NOT TO SCALE



VALVES

NOT TO SCALE



11 1/4, 22 1/2, 45, 90° BENDS

NOT TO SCALE

TABLE FOR CONCRETE THRUST BLOCKING

SIZE	BEARING AREAS (IN SQ. FT.)			
	90°	45°	22 1/2°	11 1/4°
3	1.0	0.6	0.3	0
4	1.8	1.0	0.5	0
6	4.0	2.2	1.1	0
8	7.1	3.8	2.0	1.0
10	11.1	6.0	3.0	1.5
12	16.0	8.6	4.4	2.2
14	21.7	11.8	6.0	3.0
15	25.0	13.5	7.0	3.5
16	28.4	15.3	8.0	4.0
18	36.0	19.4	10.0	5.0
20	44.2	24.0	12.2	6.1
21	49.0	26.5	13.5	6.8
22	54.0	29.0	14.8	7.4
24	64.0	34.5	17.7	8.8
30	100.0	54.0	27.6	13.8
36	144.0	78.0	40.0	20.0

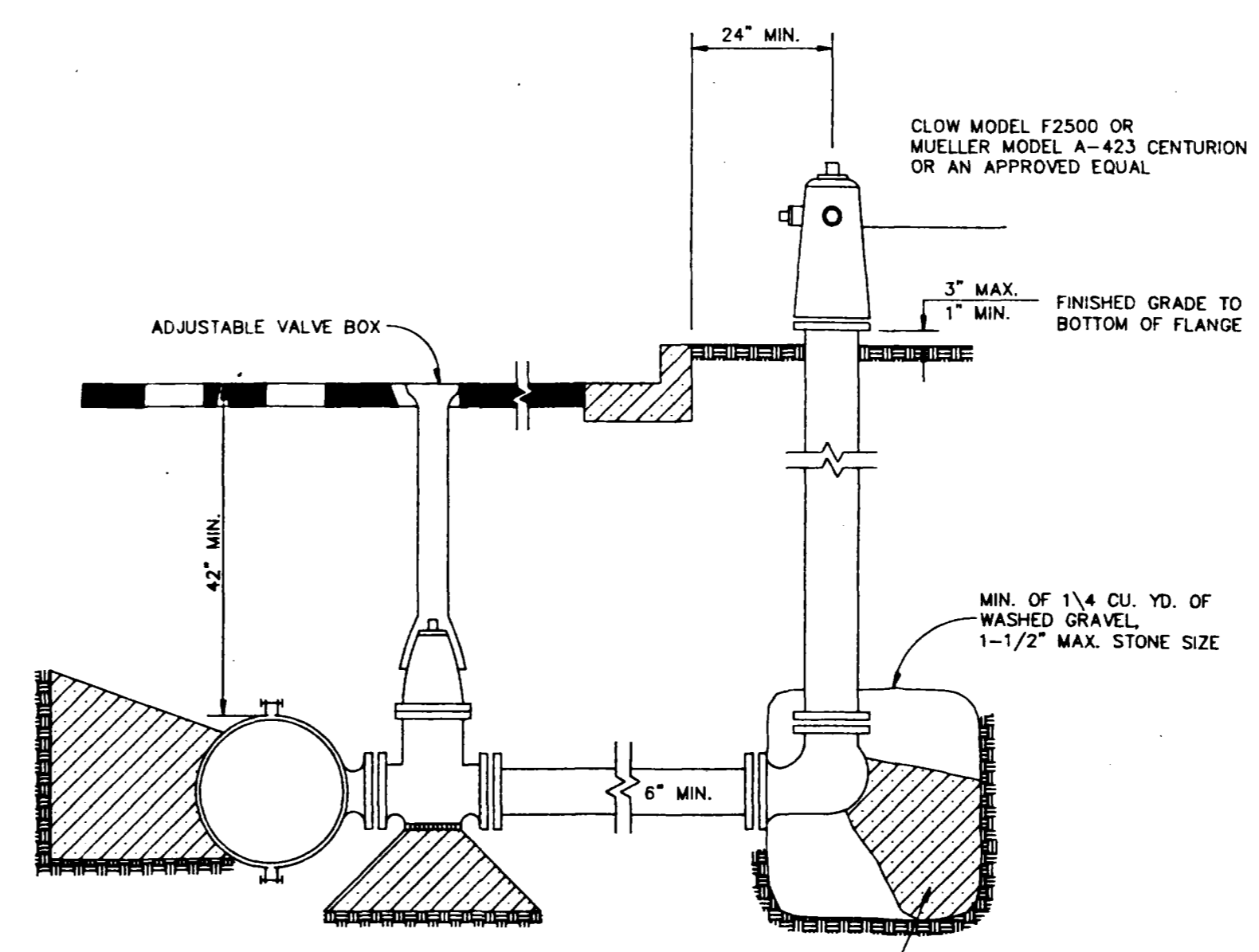
NOTE: TEE SIZE IS BRANCH SIZE.

AREAS GIVEN IN TABLE ARE BASED UPON INTERNAL STATIC PRESSURE OF 100 P.S.I. AND A SOIL BEARING CAPACITY OF 1,000 LBS. PER SQ. FT.

BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F"

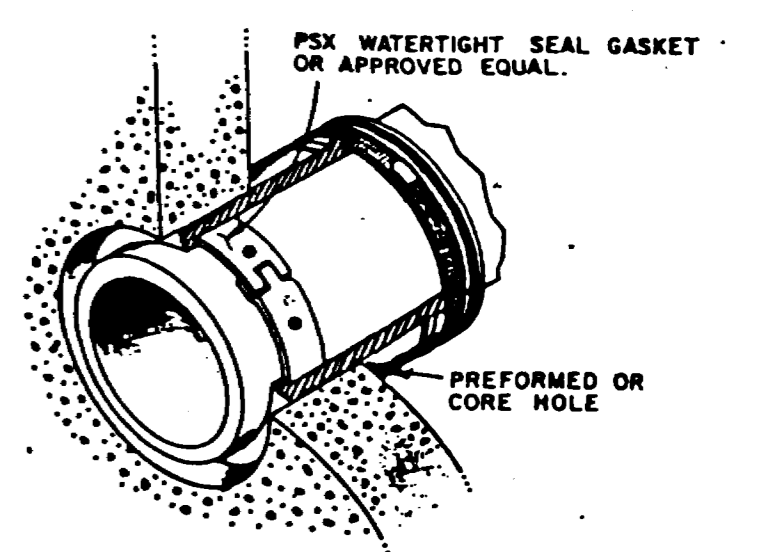
F = ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS. / ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.

SOIL BEARING CAPACITIES SHALL BE DETERMINED BY THE ENGINEER



TYPICAL FIRE HYDRANT DETAIL

NOT TO SCALE



MANHOLE PIPE ENTRANCE

AS-BUILT 9-6-91

SEWER DETAILS
ALPINE MEADOWS SUBDIVISION
MESA COUNTY, COLORADO

ARMSTRONG CONSULTANTS, INC.
881 ROOD AVENUE
Grand Junction, Colorado 81501
(303) 242-0101

DRAWN BY: D. ERTZ
CHECKED BY: P.M.O./T.A.L.
DATE: DEC. 1990
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