

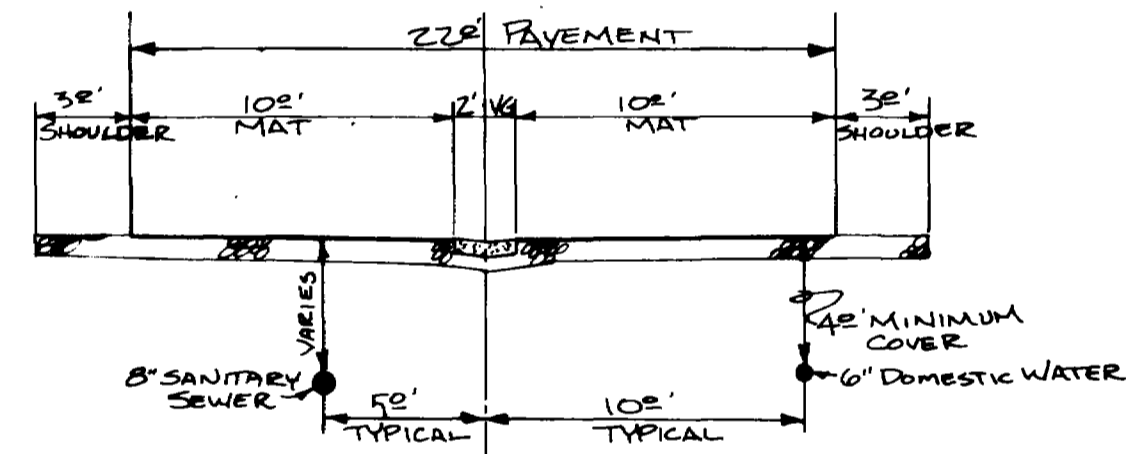
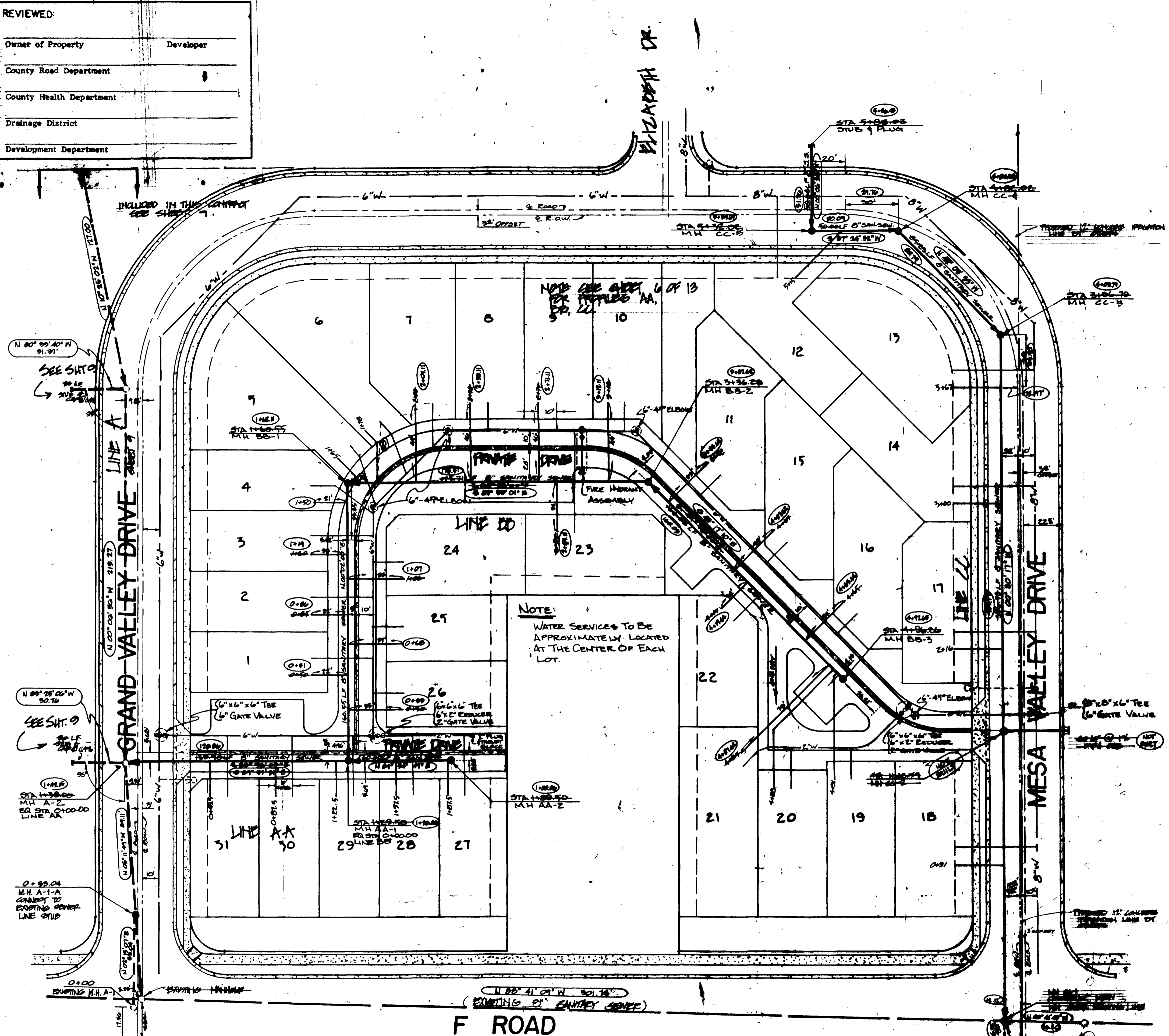
REVIEWED:	
Owner of Property	Developer
County Road Department	
County Health Department	
Drainage District	
Development Department	

KEP /JTP
A-18-83
AS SHOWN

GENERAL NOTES

- SANITARY SEWER TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF GRAND JUNCTION STANDARD SANITARY SEWER DETAILS, DRAWING SS-1 AND SHALL CONFORM TO CITY OF GRAND JUNCTION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WATER LINES, SANITARY SEWERS, STORM DRAINAGE AND IRRIGATION SYSTEMS, 1981, AND CITY OF GRAND JUNCTION GENERAL CONTRACT CONDITIONS FOR PUBLIC WORKS AND UTILITIES CONSTRUCTION GC-37, GC-50, AND GC-65.
- ANY ATTACHMENT, CONNECTION, OR ALTERATION OF OR TO ANY EXISTING CLIFTON WATER MAIN SHALL BE MADE BY CLIFTON WATER DISTRICT PERSONNEL, NOT BY THE CONTRACTOR.
- THE TOP OF MANHOLE ECCENTRIC CONE TO BE SET AT THE TOP OF ROAD SUBGRADE. (ROAD CONTRACTOR TO SET MANHOLE RING AND COVER AT FINISHED ROAD GRADE.)
- SANITARY SEWER MAINS TO BE MAINTAINED AT A 10' MINIMUM SEPARATION FROM DOMESTIC WATER MAINS. (SEWER SERVICES TO MAINTAIN 10' MINIMUM SEPARATION FROM WATER SERVICES, AS POSSIBLE.)
- SERVICES TO EXTEND 10' BEYOND PROPERTY LINE AND MARKED WITH A 2"x4" STAKE.
- MINIMUM COVER FOR ALL WATER MAINS AND SERVICES TO BE 4 FEET.
- WATER SYSTEM CONSTRUCTION SHALL BE IN ACCORDANCE WITH CLIFTON WATER DISTRICT STANDARD SPECIFICATIONS.
- WATER VALVE BOXES TO BE SET TO SUBGRADE IN THE COLLAPSED POSITION. (ROAD CONTRACTOR TO RAISE TO FINISHED STREET GRADE)

PARAGON ENGINEERING, INC.



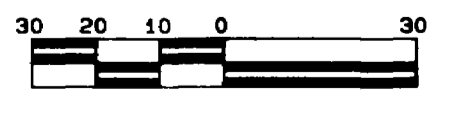
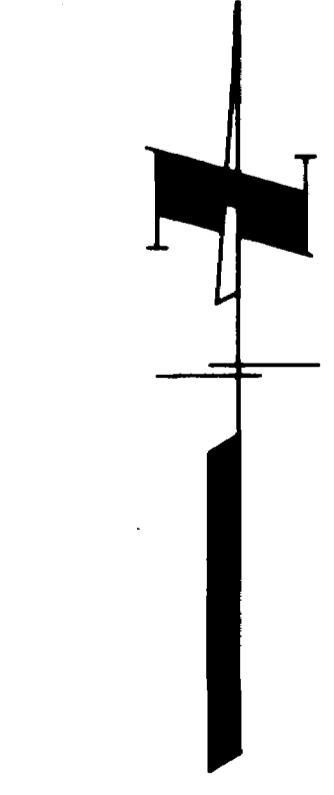
TYPICAL SEWER AND WATER PLACEMENT TRACT D INTERNAL STREETS NO SCALE

AS-BUILT DRAWINGS

NOTE: This is to certify that the system infiltration does not exceed 200 gallons per inch diameter per mile of length per day.
 O indicates as-built information. All other data is as designed and has not been field verified.

QUANTITIES (THIS SHEET)

SEWER	
8" MAIN	1300 LF
4" SERVICE LINES	1000± LF
4" SERVICE TAPS	31 Ea.
STANDARD MANHOLES	9 Ea.
SHOULDER MANHOLE	1 Ea.
WATER	
6" MAIN	725 LF
2" MAIN	140 LF
6" GATE VALVES	2 Ea.
2" GATE VALVES	2 Ea.
6"x6" TEE	3 Ea.
8"x6" TEE	1 Ea.
6"x4" ELBOWS	4 Ea.
6"x2" REDUCER	2 Ea.
FIRE HYDRANT ASSEMBLY:	1 Ea.
(INCLUDES 6"x6" TEE, 6" GATE VALVE, 6" SUPPLY LINE, HYDRANT, THRUST BLOCKS)	
SERVICE CONNECTIONS	31 Ea.



NOTE: WATER SERVICES TO BE APPROXIMATELY LOCATED AT THE CENTER OF EACH LOT.

- LEGEND**
- MANHOLE AND SANITARY SEWER
 - DOMESTIC WATER AND SIZE
 - FIRE HYDRANT ASSEMBLY
 - GATE VALVE
 - THRUST BLOCK
 - REDUCER
 - ELBOWS AND TEES
- SEWER AND WATER TO BE CONSTRUCTED UNDER A DIFFERENT CONTRACT SHOWN DASHED

BENCH MARK: (ARMSTRONG/GINGERY)
CHISELED SQUARE ON CONCRETE SIGN
SUPPORT @ 7-ELEVEN STORE
ELEVATION = 4703.93
(WEST OF PROJECT SITE)

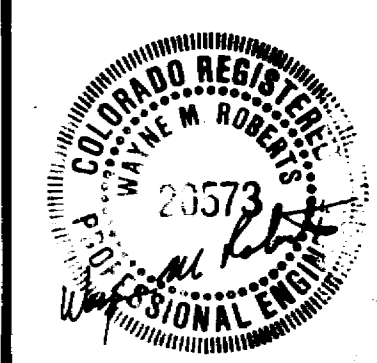
A REPLAT OF TRACT D
MESA VALLEY ESTATES
SEWER AND WATER PLANS

MESA VALLEY ESTATES

CHECKED BY
KEP/JTP
DATE
4-12-83
SCALE
AS SHOWN

REVISIONS	BY
5/17/83	WML
8-8-83	WML

PARAGON ENGINEERING, INC.
2874 CROSSROADS BLVD.
GRAND JUNCTION, COLORADO 81504 (303)243-8966



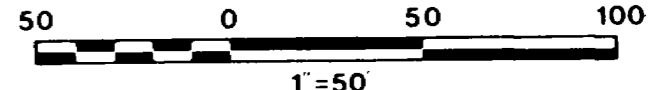
MESA VALLEY ESTATES
SEWER PLAN

SHEET
9
14
CF

CURVE DATA TABLE

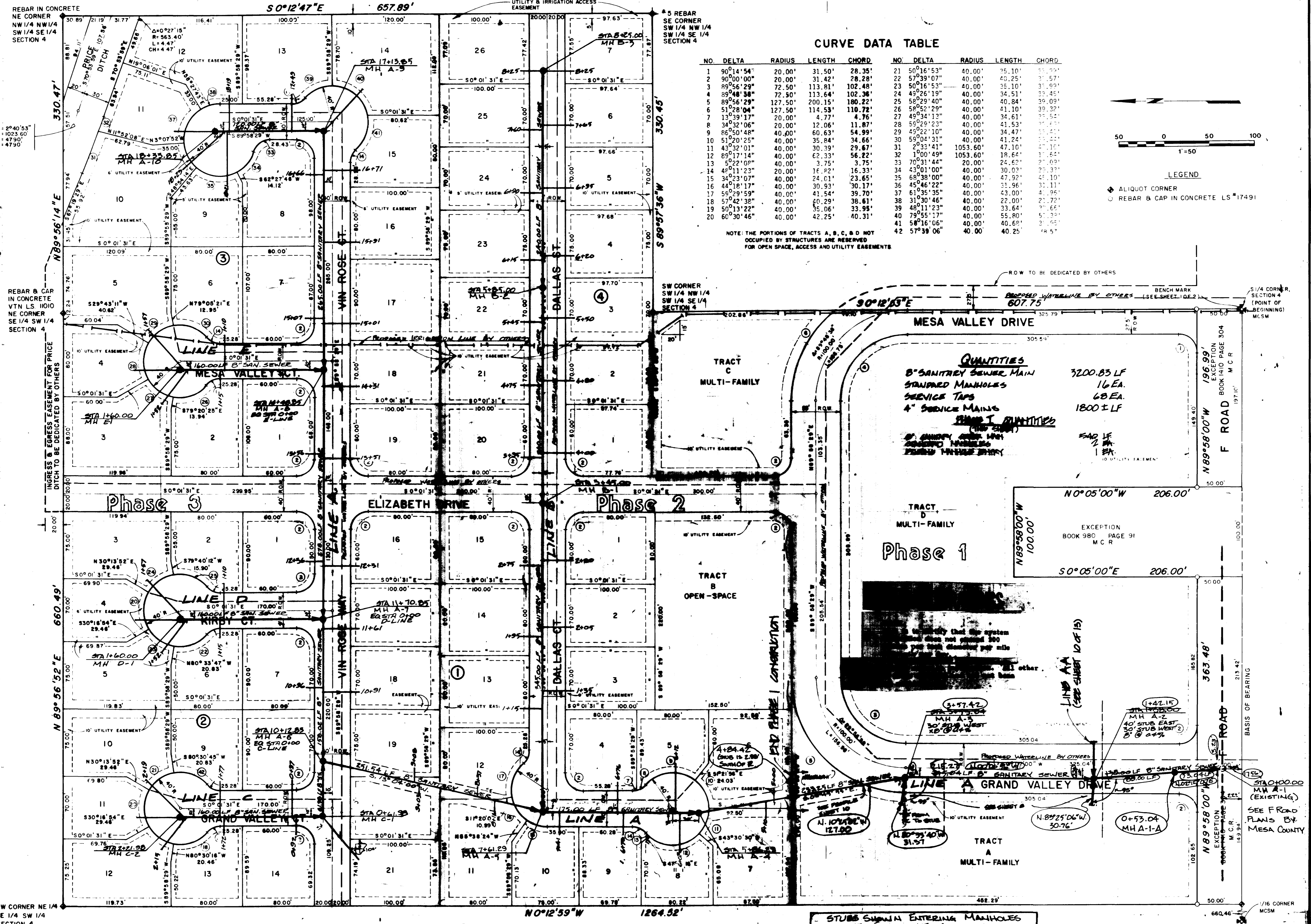
NO.	DELTA	RADIUS	LENGTH	CHORD	NO.	DELTA	RADIUS	LENGTH	CHORD
1	90°14'54"	20.00'	31.50'	28.35'	21	50°16'53"	40.00'	25.10'	21.29'
2	90°00'00"	20.00'	31.42'	28.28'	22	57°39'07"	40.00'	40.25'	31.57'
3	89°56'29"	72.50'	113.81'	102.48'	23	50°16'53"	40.00'	35.10'	31.09'
4	89°48'38"	72.50'	113.64'	102.36'	24	49°26'19"	40.00'	34.51'	29.45'
5	89°56'29"	127.50'	200.15'	180.22'	25	58°29'40"	40.00'	40.84'	30.09'
6	51°28'04"	127.50'	114.53'	110.72'	26	58°52'23"	40.00'	41.10'	30.32'
7	13°39'17"	20.00'	4.77'	4.76'	27	49°38'13"	40.00'	34.61'	27.54'
8	34°32'06"	20.00'	12.06'	11.87'	28	59°28'23"	40.00'	41.53'	31.63'
9	86°50'48"	40.00'	60.63'	54.99'	29	49°22'10"	40.00'	34.47'	29.42'
10	51°20'25"	40.00'	35.84'	34.66'	30	59°04'31"	40.00'	41.24'	31.44'
11	43°32'01"	40.00'	30.39'	29.67'	31	2°33'41"	1053.60'	47.10'	47.10'
12	89°17'14"	40.00'	62.33'	56.22'	32	1°00'49"	1053.60'	18.64'	18.64'
13	5°22'08"	40.00'	3.75'	3.75'	33	7°31'44"	20.00'	24.62'	20.09'
14	48°11'23"	20.00'	16.82'	16.33'	34	43°01'00"	40.00'	30.02'	28.33'
15	34°23'07"	40.00'	24.01'	23.65'	35	68°38'00"	40.00'	47.92'	41.10'
16	44°18'17"	40.00'	30.93'	30.17'	36	45°46'22"	40.00'	31.96'	31.11'
17	59°29'59"	40.00'	41.54'	39.70'	37	61°35'35"	40.00'	43.00'	41.96'
18	57°42'38"	40.00'	40.29'	38.61'	38	31°30'46"	40.00'	22.00'	21.72'
19	50°13'22"	40.00'	35.06'	33.95'	39	48°11'23"	40.00'	33.64'	31.66'
20	60°30'46"	40.00'	42.25'	40.31'	40	79°55'17"	40.00'	55.80'	51.29'
					41	58°16'05"	40.00'	40.69'	31.65'
					42	57°39'06"	40.00'	40.25'	28.57'

NOTE: THE PORTIONS OF TRACTS A, B, C, & D NOT OCCUPIED BY STRUCTURES ARE RESERVED FOR OPEN SPACE, ACCESS AND UTILITY EASEMENTS



LEGEND

- ALLOT CORNER
- REBAR & CAP IN CONCRETE LS#17491



QUANTITIES
 8" SANITARY SEWER MAIN 3200.83 LF
 STANDARD MANHOLES 16 EA.
 SERVICE TAPS 68 EA.
 4" SERVICE MAINS 1800 ± LF

PHASE 1 QUANTITIES
 8" SANITARY SEWER MAIN 2400 LF
 STANDARD MANHOLES 12 EA.
 SERVICE TAPS 1 EA.

EXCEPTION
 BOOK 980 PAGE 91
 M.C.R.

STUBS SHOWN ENTERING MANHOLES ARE TO ENTER 0.2 FT. ABOVE FLOWLINE OF MAIN PIPE.

THIS DRAWING IS THE PROPERTY OF PARAGON ENGINEERING, AND IS NOT TO BE REPRODUCED, MODIFIED, OR USED FOR ANY OTHER PROJECT OR EXTENSION OF THIS PROJECT EXCEPT BY AGREEMENT WITH PARAGON ENGINEERING.

NOTE: BEARINGS BASED ON N89°58'00"W FOR SOUTH LINE OF SECTION 4.
 FRONT LOT EASEMENTS 6', UNLESS NOTED.
 BACK LOT EASEMENTS 10', UNLESS NOTED.
 SIDE LOT EASEMENTS 5', UNLESS NOTED.


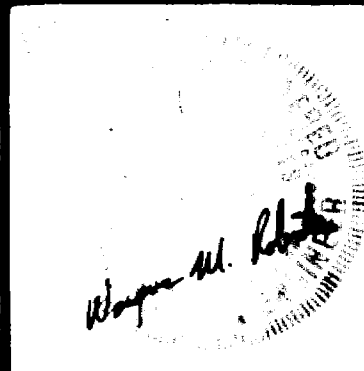
REBAR IN CONCRETE NE CORNER SW 1/4 NW 1/4 SECTION 4

REBAR & CAP IN CONCRETE VTN L.S. 1010 NE CORNER SE 1/4 SW 1/4 SECTION 4

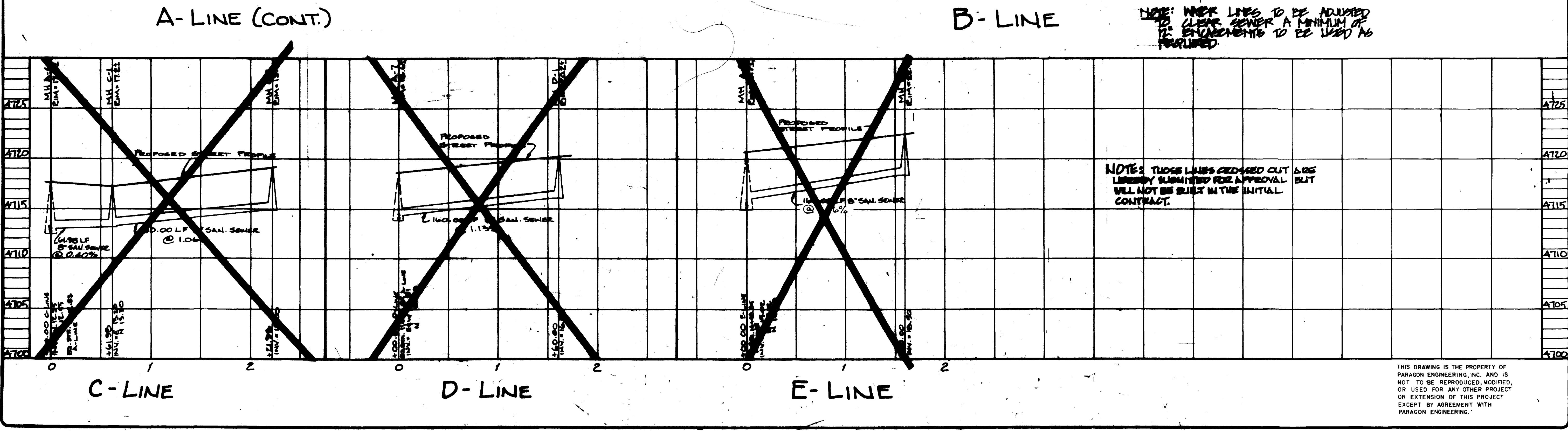
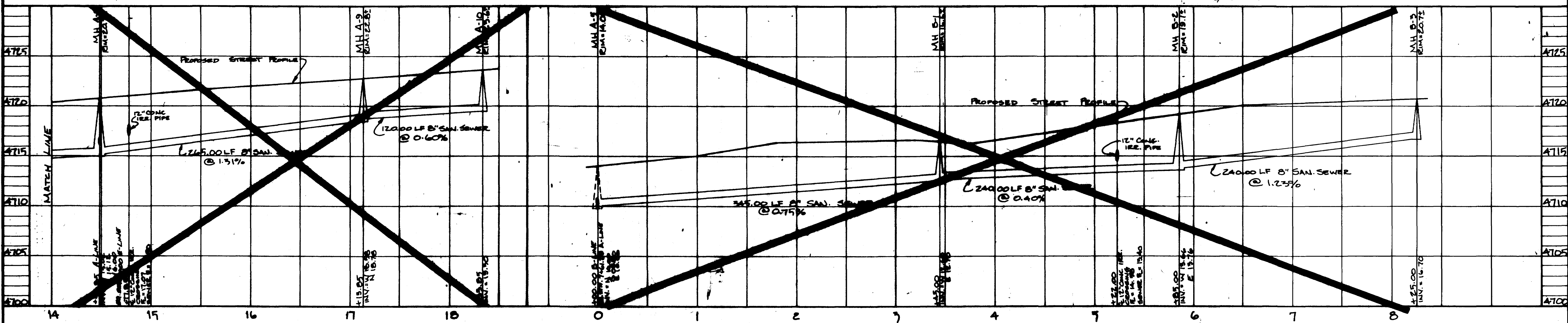
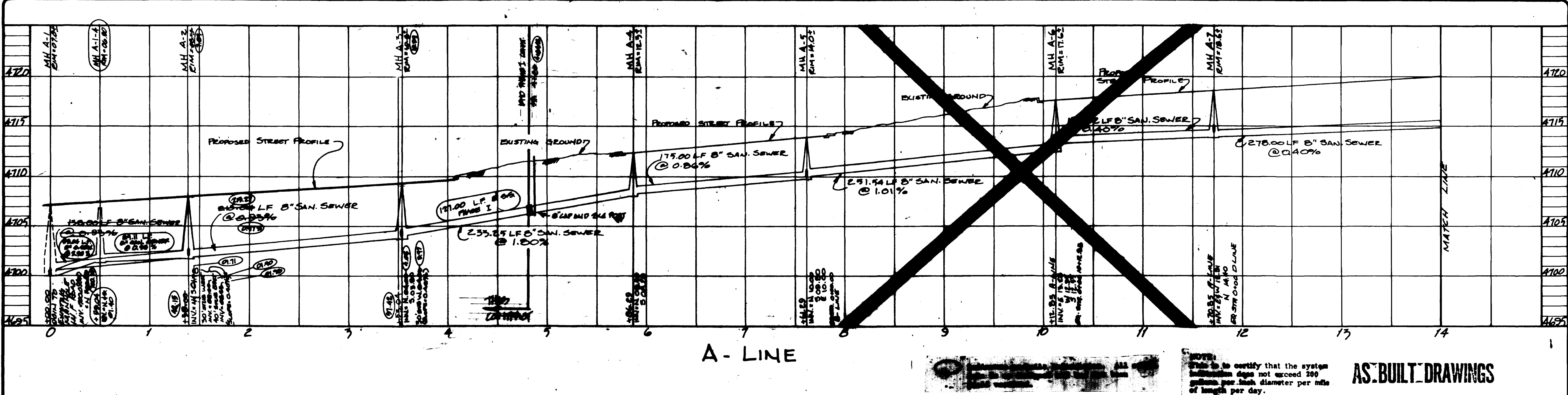
NW CORNER NE 1/4 SE 1/4 SW 1/4 SECTION 4

REVISIONS	BY
6-21-83 SHT. NO.	MMR
6-16-83	MMR
NO-BUILT 8-10-89	MMR

PARAGON ENGINEERING, INC.
2784 CROSSROADS BLVD.
GRAND JUNCTION, COLORADO 81501 (303)243-8966

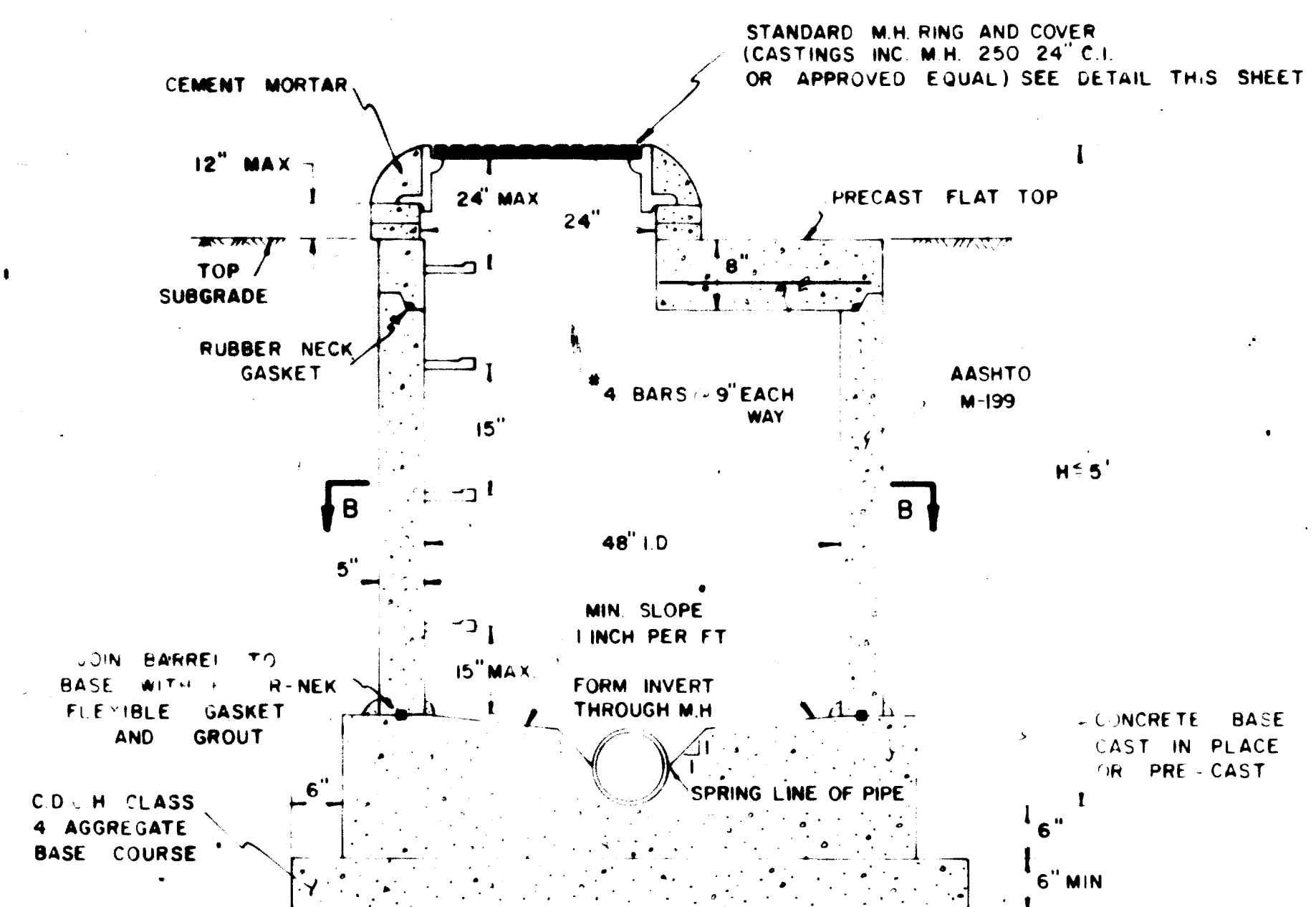
MESA VALLEY ESTATES
SEWER PROFILES



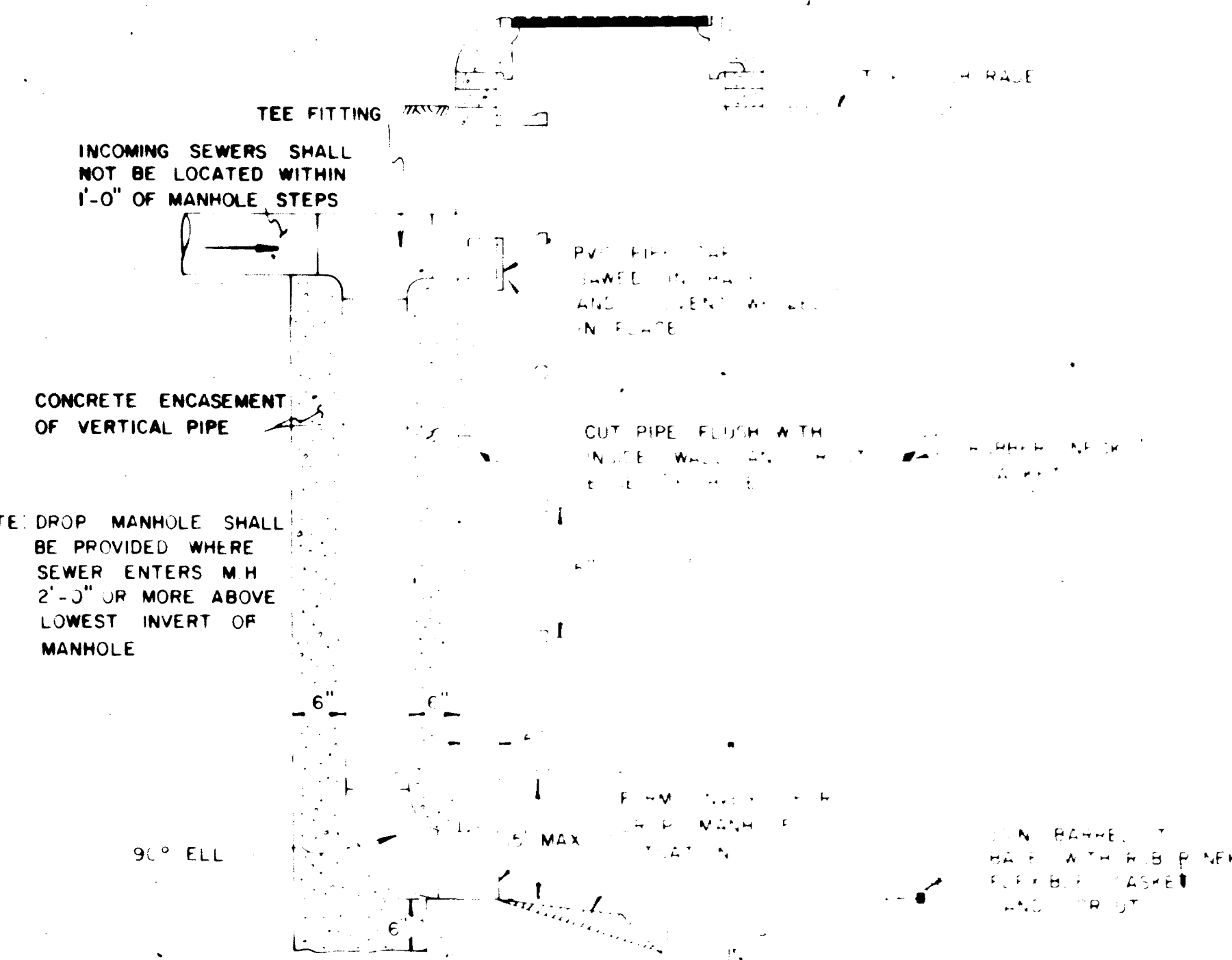
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MANHOLE NOTES

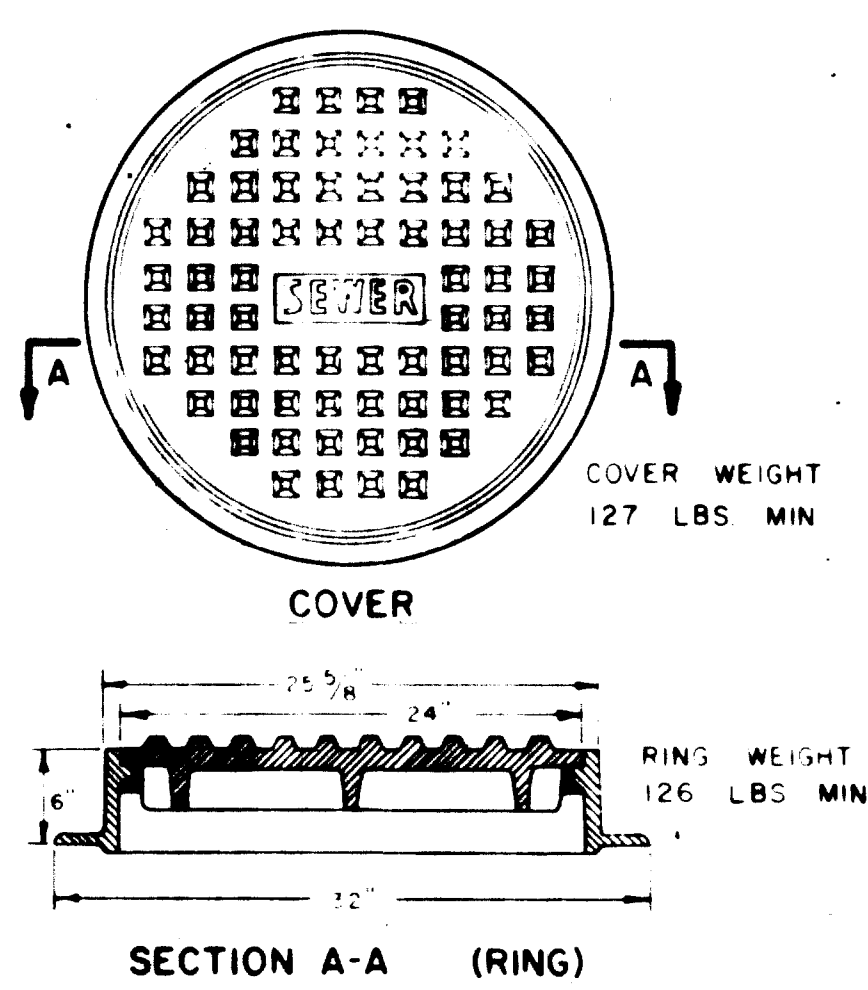
1. CONCRETE SHALL BE COLORADO DIVISION OF HIGHWAYS CLASS "B" (SECTION 601.02).
2. ALL CEMENT USED IN MORTAR, CONCRETE BASES, GRADE RINGS, RISER SECTIONS, CONES, AND FLAT TOPS, FOR SANITARY SEWER MANHOLES, SHALL BE TYPE V OR MODIFIED TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRISULPHUM ALUMINATE.
3. MANHOLE RISER SECTIONS, CONES, FLAT TOPS, AND GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE CONFORMING TO ASTM C-478 OR AASHTO M-199.



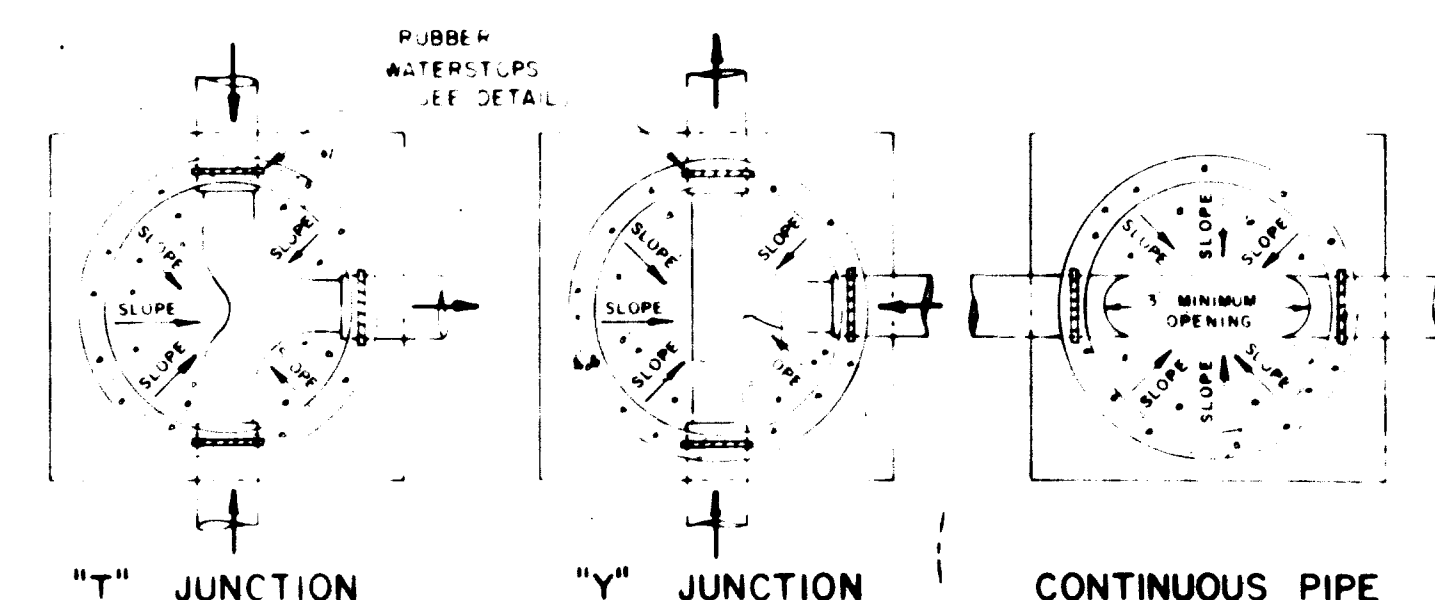
STANDARD SHALLOW MANHOLE



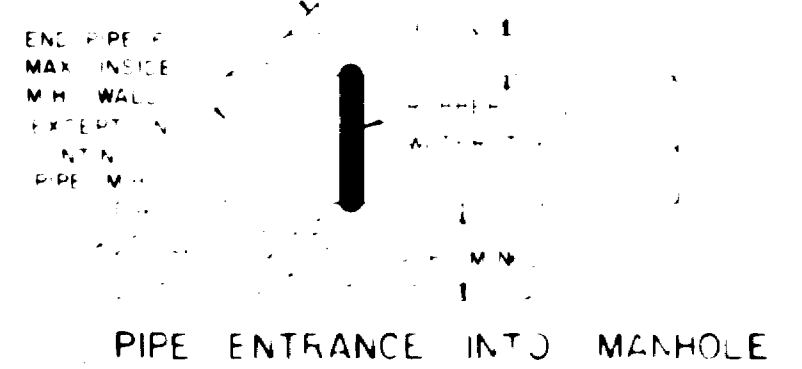
DROP MANHOLE



STANDARD CAST IRON MANHOLE RING & COVER

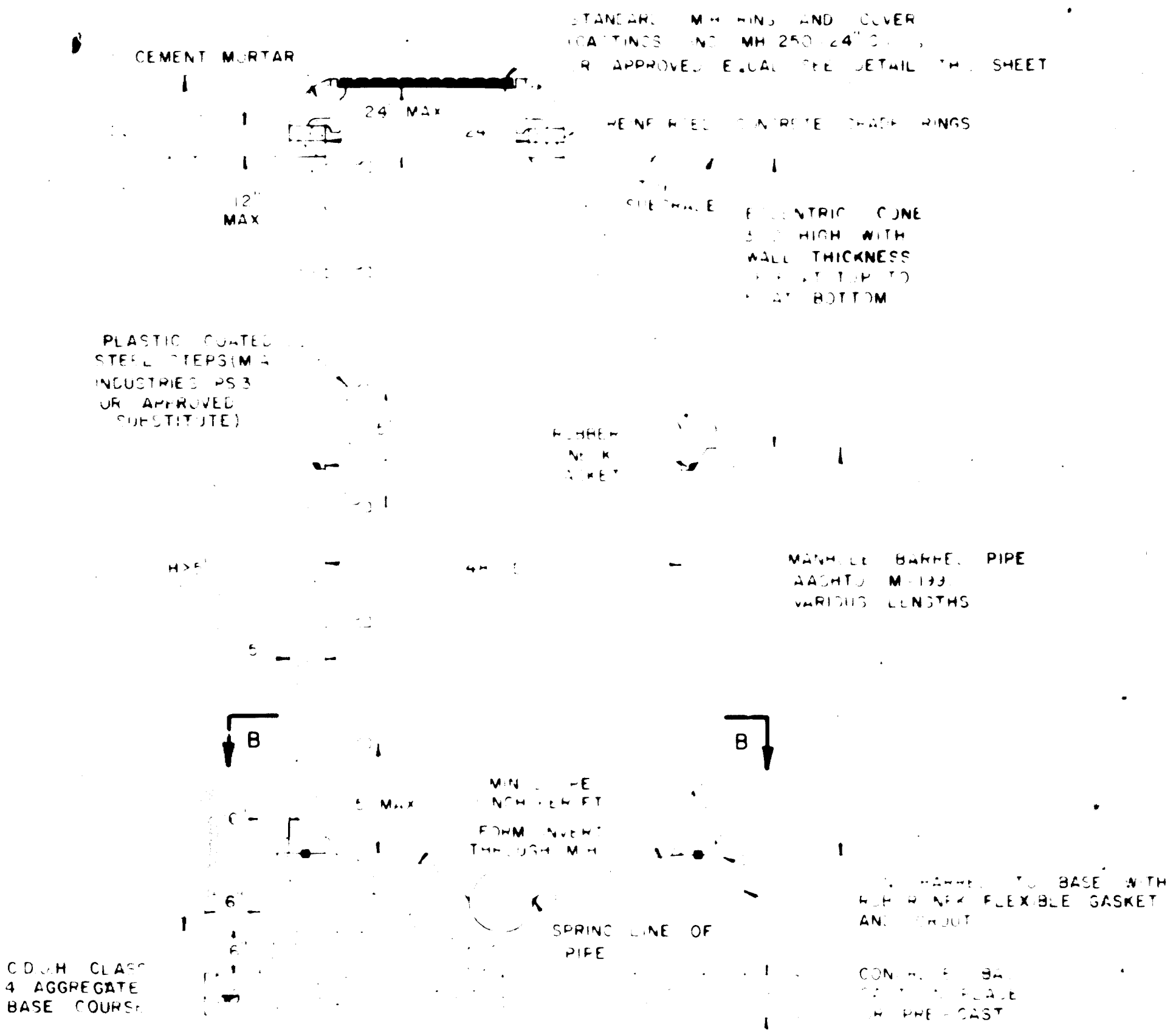


SECTION B-B

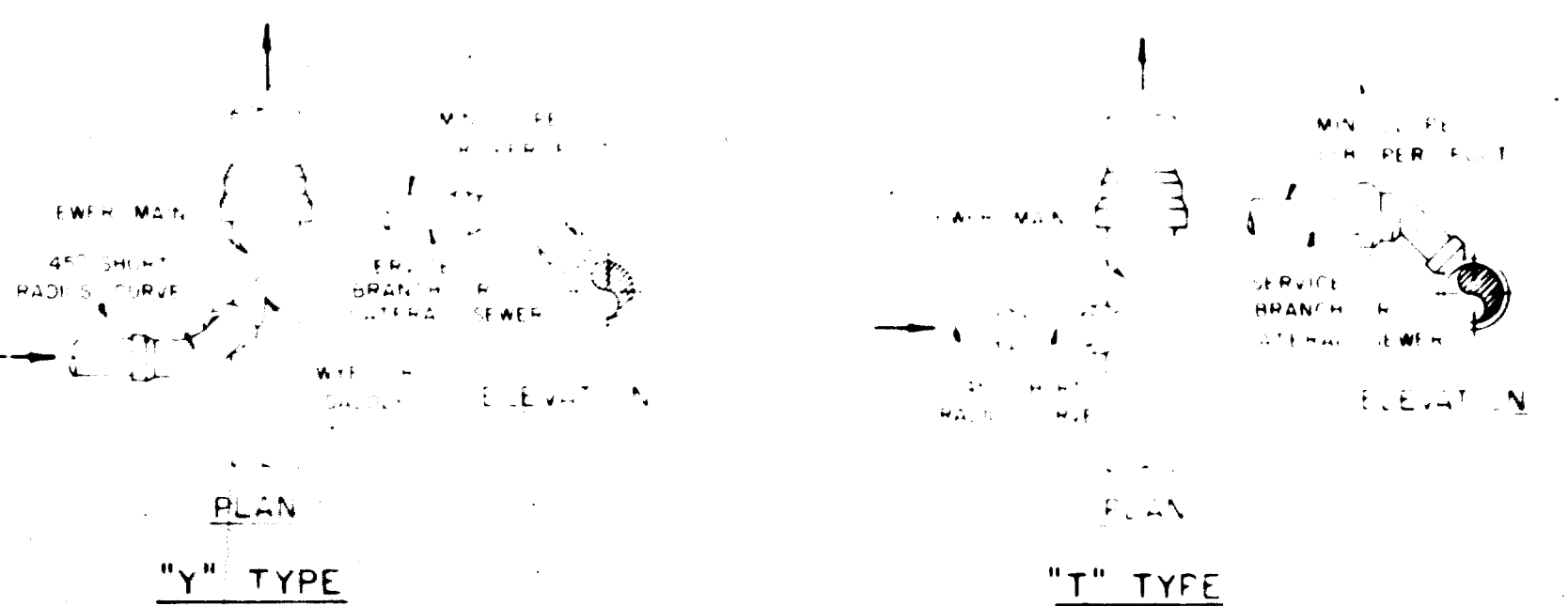


GENERAL SEWER NOTES

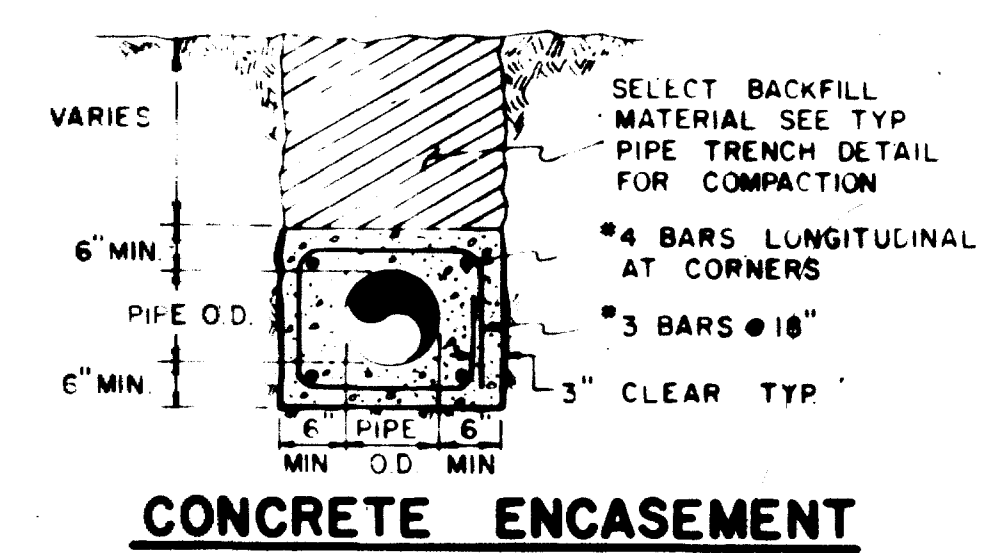
1. SEWER MANHOLE MAINTENANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE PLAN AND THE PRESENT SPECIFICATIONS OF THE CENTRAL GRAND VALLEY SANITATION DISTRICT.
2. ANY BREAKINGS OR MODIFICATIONS TO EXISTING INSTALLATIONS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER'S REPRESENTATIVE.
3. MINIMUM RELATIVE DENSITY SHALL BE 95% FOR ALL BACKFILL MATERIALS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL BURIED UTILITIES.
5. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 5 FEET OF EXISTING ROADWAY MANHOLES NOT LOCATED IN EXISTING RIGHT-OF-WAY.
6. DUE TO TRAFFIC CONCERNS, THE CONTRACTOR SHALL REMOVE ANY ASPHALT SURFACE AND REPLACE WITH EXISTING PAVEMENT. EXISTING PAVEMENT SHALL BE REPAIRED TO ORIGINAL THICKNESS AND CENTERLINE OF THE EXISTING ROADWAY. WHEN EXCAVATING, CARE SHALL BE TAKEN TO MINIMIZE THE DISTURBANCE TO THE EXISTING PAVEMENT SURFACE.
7. ALL TRENCH COMPACTION AND COMPACTION TESTING FOR SANITARY SEWER LINES LYING IN DEDICATED ROAD RIGHTS-OF-WAY SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE MESA COUNTY ROAD DEPARTMENT.



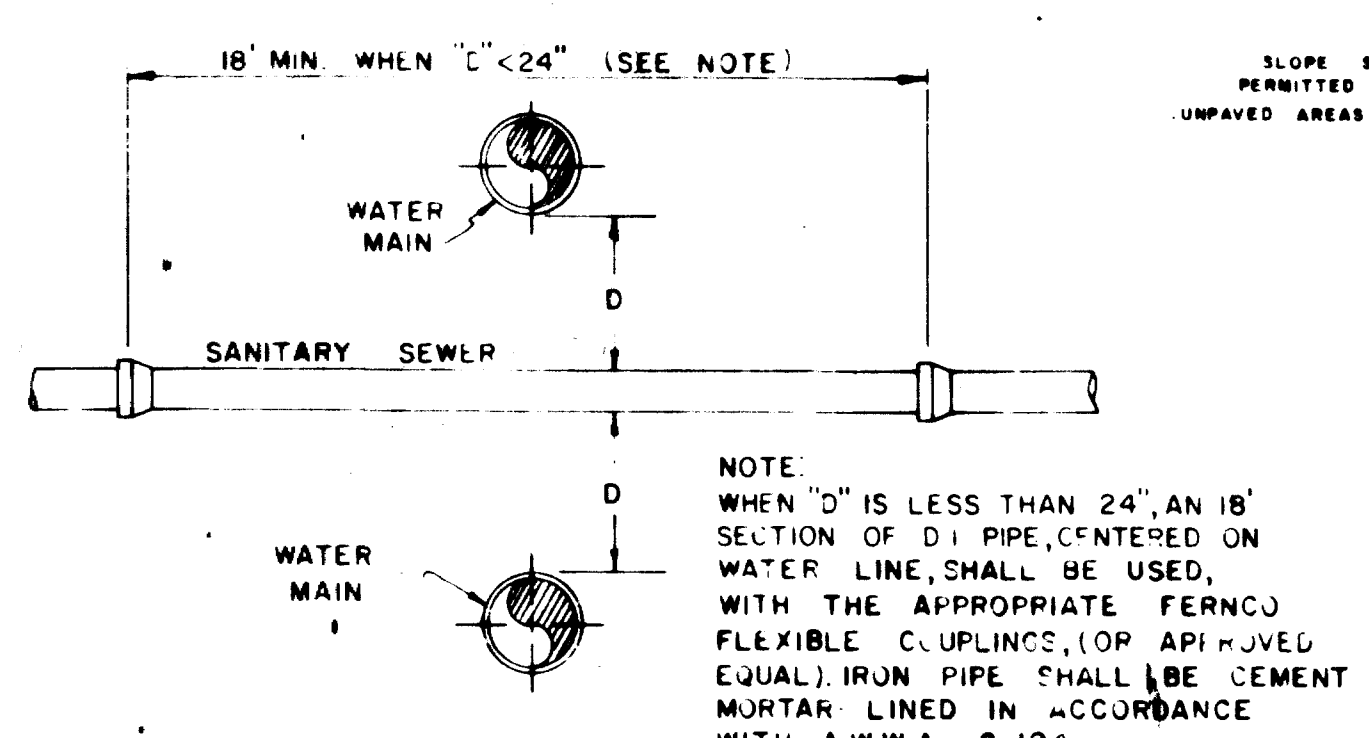
STANDARD MANHOLE



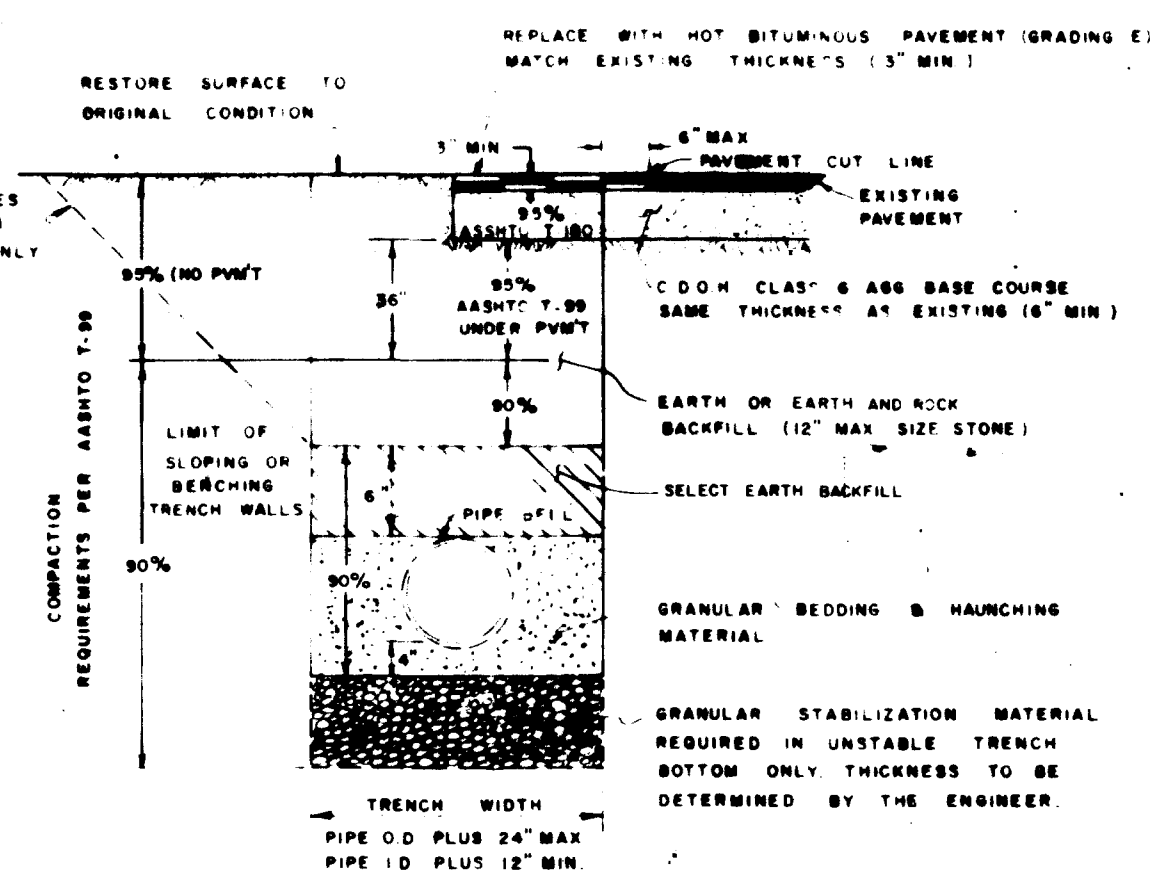
SERVICE CONNECTIONS



CONCRETE ENCASEMENT



SANITARY SEWER - WATER MAIN CROSSING



TYPICAL TRENCH

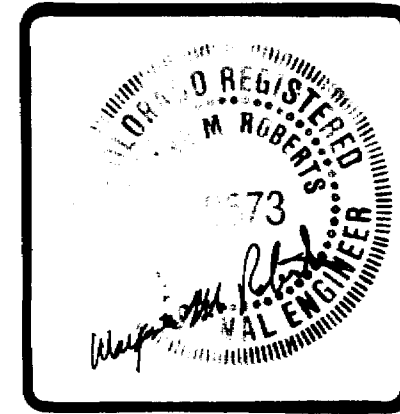
SIEVE SIZE	PERCENT BY WEIGHT	MINIMUM RELATIVE DENSITY
4 INCH	100	95
1 INCH	100	95
No 200	0-12	95

ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS WITH A MAXIMUM WIDTH IN 6" MAX LIFTS AND COMPACTED TO THE MINIMUM RELATIVE DENSITIES SHOWN.

CHECKED
JTP
DATE
4-4-83
SCALE
AS SHOWN

REVISIONS
BY
DATE
Sht. No. 9/27/83 WMR

PARAGON ENGINEERING, INC.
1000 WEST 10TH AVENUE
DENVER, COLORADO 80202
TEL: 333-3333



MESA VALLEY ESTATES

CENTRAL GRAND VALLEY SANITATION DISTRICT
SANITARY SEWER DETAILS

SHEET
11
OF 14 SHEETS