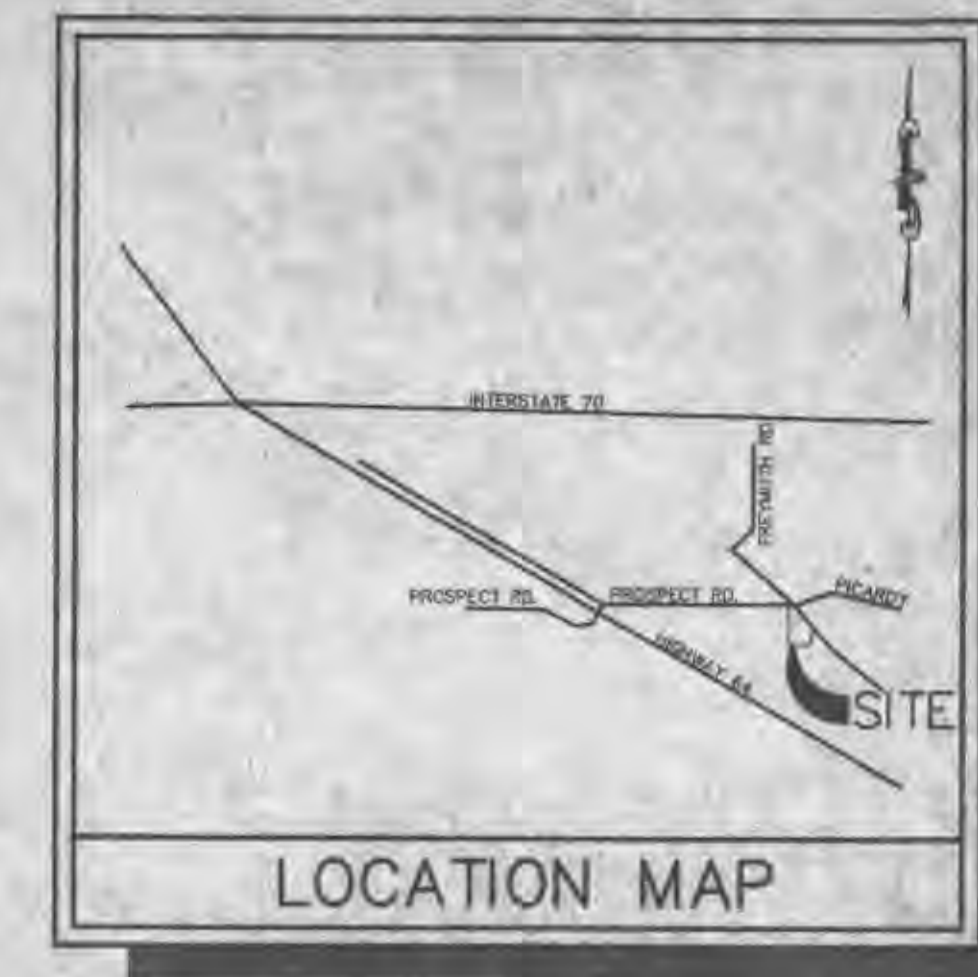


A SET OF IMPROVEMENT PLANS FOR THE SEASONS AT LAKE SAINT LOUIS

A TRACT OF LAND BEING PART OF FRACTIONAL SECTION 33, TOWNSHIP 47 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. CHARLES COUNTY, MISSOURI



GRADING NOTES

- A Geotechnical Engineer shall be employed by the owner and be on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and backfilling operations.
- The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reasonably implied there from, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.
- The Contractor shall notify the Soils Engineer and City Engineer at least two days in advance of the start of the grading operation.
- All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
- A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded area is to be allowed to remain bare without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and silting up existing downstream storm drainage system. Siltation basins shall be constructed as first grading operation.
- Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.
- All trash and debris on site, either existing or from construction, must be removed and properly disposed of off-site.
- Soft soil in the bottom and banks of any existing or former pond sites or tributaries or on any sediment basins or traps should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right-of-way locations or on any storm sewer locations.
- Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and weeds; the grubbing and removal of roots and other surface obstructions from the site; and the demolition and removal of any man-made structures. The material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly disced prior to the placement of any fill. The Soils Engineer shall approve the discing operation.
- Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory roller, or high speed impact type drum rollers acceptable to the Soils Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
- The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to the Owner at regular intervals.
- The Soils Engineer shall notify the Contractor of rejection of a lift of fill or portion thereof. The Contractor shall rework the rejected portion of fill and obtain notification from the Soils Engineer of its acceptance prior to the placement of additional fill.
- All areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted in accordance with the specifications given below. Natural slopes steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches, cut into the slopes before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptability of soils placed. Any unacceptable soils placed shall be removed at the Contractor's expense.
- The sequence of operation in the fill areas will be fill, compact, verify acceptable soil density, and repetition of the sequence. The acceptable moisture contents during the filling operation are those at which satisfactory dry densities can be obtained. The acceptable moisture contents during the filling operation in the remaining areas are from 2 to 8 percent above the optimum moisture control.
- The surface of the fill shall be finished so that it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
- Fill and backfill should be compacted to the criteria specified in the following table:

CATEGORY	MINIMUM PERCENT COMPACTION
Fill in building areas below footings	90%
Fill under slabs, walks, and pavement	90%
Fill other than building areas	85%
Natural subgrade	88%
Pavement subgrade	90%
Pavement base course	90%

Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM-D-1557).

Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

GENERAL NOTES

- Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to any grading or construction of the improvements.
- All manhole tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
- 8" P.V.C. sanitary sewer pipe shall meet the following standards: A.S.T.M.-D-3034 SDR-35, with wall thickness compression joint A.S.T.M.-D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
- All filled places, including trench backfills, under buildings, proposed storm and sanitary sewer lines and/or paved areas, shall be compacted to 90% maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All filled places within public roadways shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test AASHTO T-99, Method C" (A.S.T.M.D.-698).
- All trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of the maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D.-1557). All other trench backfills may be earth material (free of large clods or stones). All trench backfills shall be water jetted.
- All sanitary house connections have been designed so that the minimum vertical distance from the low point of the basement to the flow line of a sanitary sewer at the corresponding house connection is not less than the diameter of the pipe plus the vertical distance of 2 1/2 feet.
- No area shall be cleared without the permission of the Project Engineer.
- All P.V.C. sanitary sewer is to be SDR-35 or equal with clean 1/2" to 1" granular stone bedding uniformly graded. This bedding shall extend from 4" below the pipe to the springline of the pipe. Immediate backfill over pipe shall consist of same size "clean" or minus stone from springline of pipe to 12" above the top of pipe.
- All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
- Easements shall be provided for sanitary sewers, and all utilities on the Record Plat. See Record Plat for location and size of easements.
- Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors.
- All water lines shall be laid at least 10 feet horizontally from any sanitary sewer or manhole. 18" vertical clearance from outside of pipe to outside of pipe shall be maintained wherever water lines must cross sanitary sewers or laterals. The water line shall be laid at such an elevation that the bottom of the water line is above the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equally distant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet horizontally, of any sewer or drain it crosses.
- All PVC water pipe shall conform to ASTM D2241, SDR 21 Standard specification for P.V.C. Pressure Pipe, 200 P.S.I. working pressure for water, with approved joint.
- Water lines, valves, sleeves, meters, and fittings shall meet all specifications and installation requirements of City of the Public Water Supply District No. 2 of St. Charles County.
- All water hydrants and valves shall be ductile iron and installed in accordance with plans and details. All ductile iron pipe for water mains shall conform to A.W.W.A. Specifications C-106 and/or C-108. The ductile iron fittings shall conform to A.W.W.A. Specification GC-110. All rubber gasket joints for water ductile iron pressure pipe and fittings shall conform to A.W.W.A. Specification C-111.
- All sanitary manholes shall be waterpiped on the exterior in accordance with Missouri Department of Natural Resources specifications 10 CSR-8.120 (7)E.
- Brick will not be used in the construction of sanitary sewer manholes.
- All pipes shall have positive drainage through manholes. No flat base structures are allowed.
- The City of Lake Saint Louis and St. Charles County Public Water District No. 2 shall be notified 48 hours prior to construction or coordination and inspection.
- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary or storm sewers, including existing laterals.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system, storm sewer system, or watercourse.
- All construction and materials shall conform to the current construction standards of the City of Lake Saint Louis and St. Charles County Public Water District No. 2.
- All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
- All existing areas disturbed during construction of the effluent sanitary sewer line shall be seeded and mulched to prevent erosion.
- All sanitary sewer laterals shall be a minimum of 6" in diameter per City of Lake Saint Louis.
- No flushing hydrants or water meters shall be located in driveways and or walkways.
- Concrete pipe for storm sewers shall be Class III, A.S.T.M. C-76 with a minimum diameter of 12".
- The ADS N-12 pipe shall have a smooth interior wall.
- Concrete pipe joints shall be MSD type "A" approved compression-type joints and shall conform to the requirements of the specifications for joints for circular concrete sewer and culvert pipe, using flexible, watertight, rubber-type gaskets ASTM C443. Band-type gaskets depending entirely on cement or adhesion and resistance to displacement during jointing shall not be used.
- When HDPE pipe is used, City of Lake Saint Louis specifications or manufacturers specifications, which ever are more stringent, shall be followed.
- The use of High Density Polyethylene Corrugated pipe, ADS N-12 or equal will be permitted as an acceptable alternative to reinforced concrete pipe only outside of public right-of-way. If ADS pipe is used, all sewer crossings shall be concrete encased. Pipe shall meet A.S.T.M. D-2321 and A.A.S.H.T.O. M-294-291.
- All lined end sections and inlet structures will be concrete.
- All storm sewer pipe installed in the Public Right-of-Way shall be Reinforced concrete Class III pipe.
- All concrete pipe or ADS N-12 pipe shall be installed with "O-Ring" Rubber type gaskets per M.S.D. standard construction specifications or manufacturer.
- All pavement radii expressed on Site Plan are to back of curb, unless otherwise noted.
- Perforated tile drain 4" in diameter with fabric sieve shall be provided at all low points within the vertical profile of the streets, and connected to curb inlets or manholes.
- These engineering plans have been prepared at the request of the developer for construction with some rock data, but not sufficient enough to determine the exact location of all existing rock conditions.
- If existing rock conditions are encountered during construction it shall be the responsibility of the developer and or his contractor to contact Bax Engineering Co., Inc. and the soils engineer for the project at the time of encounter to determine the best design to continue construction.
- Blow-off hydrants and water meters shall not be located in pavement (driveways, walkways, or streets). The location of all pavement is not shown on this plan. The relocation of blow-off hydrants or water meters required as the lot develops will be the responsibility of the Developer or Home Builder.

DEVELOPMENT NOTES

- Area of Tracts: 18.34 Acres
- Existing Zoning: PR (Planned Residential)
- Proposed Use: Single Family Homes
- Number of Lots Proposed: 55 Single Family Lots
- The proposed height and lot setbacks are as follows:
Minimum Front Yard: 25 feet
Minimum Side Yard: 6 feet
Minimum Rear Yard: 25 feet
Maximum Height of Building: 3 stories or 40 feet
- Site is served by:
St. Charles County Public Sewer and Water District #2
Culvre River Electric Company
St. Charles Gas Company
TCL Cable Company
Verizon Telephone Company
Wentzville School District
Wentzville Fire Protection District
- No Flood Plain exists on this site per F.I.R.M. #29183CD220-E, 02 August, 1996.
- All homes shall have a minimum of 2 off-street parking places with 2-car garages.
- All utilities must be located underground.
- One street tree per 40' of frontage shall be provided.
- The Developer shall contribute \$900.00 per single family lot to the park fund. Contribution shall be paid at time of final plat approval. A maximum of 50% of total contribution can be credited toward private on site amenities with City Approval.
- Lakes and detention facilities to be maintained by the Subdivision Association.

BENCHMARK U.S.G.S.

Chisler station on a concrete culvert at the intersection of U.S. Highway 40 and Duels Road, located on the west side of Highway 40, (FEMA RM 27) Elev. = 513.50

SITE
Old iron pipe at the northeast corner of the subject property. Elev. = 595.61

Old iron pipe at the northeast corner of the subject property. Elev. = 582.58

LEGEND

CL	CURB INLET	○	FREE LIGHT	1
D.C.I.	DOUBLE CURB INLET	○	EXISTING CONTOUR	2
AA	AREA INLET	○	PROPOSED CONTOUR	3
M.H.	MANHOLE	○	DIRECT SIDE	4
FL.E.	FLARED END SECTION	○	IN MANHOLE SIGN	5-6
E.P.	END PIPE	○	WATER MARK	7
C.P.	CONCRETE PIPE	○	BLow-OFF ASSEMBLY	8-9
R.C.P.	REINFORCED CONCRETE PIPE	○	FLUWING ELEVATION OF HOUSE CONNECTION	10
C.M.P.	COMBUSTIBLE METAL PIPE	○	FLUWING ELEVATION OF SEWER PART	11
C.A.R.P.	CAST IRON PIPE	○	FIRE HYDRANT	12
P.V.C.	POLY VINYL CHLORIDE (PVC)	○	STORM SEWER	13
C.D.	CLEAN OUT	○	SANITARY SEWER	14-17
T.W.	TO BE REMOVED & RELOCATED	○		
U.P.	USE IN PLACE	○		
R.P.T.	RECYCLE PIT	○		

SHEET INDEX

1	COVER SHEET
2	SITE PLAN
3	GRADING PLAN
4	WATER PLAN
5-6	STREET PROFILES & WARPINGS
7	SANITARY SEWER PROFILES
8-9	STORM SEWER PROFILES
10	DRAINAGE AREA MAP
11	HYDRAULICS/DETAILS
12	WATER DETAILS
13	PAVEMENT DETAILS
14-17	CONSTRUCTION DETAILS

RECEIVED
AUG 23 2001
CITY OF FALLON, NV

THE SEASONS AT LAKE SAINT LOUIS IMPROVEMENT PLANS
PREPARED FOR: PAGANO DEVELOPMENT, INC.
103 CLERMONT COURT
ST. LOUIS, MO. 63124
OFFICE: (314)432-3344 FAX: (314)432-3131

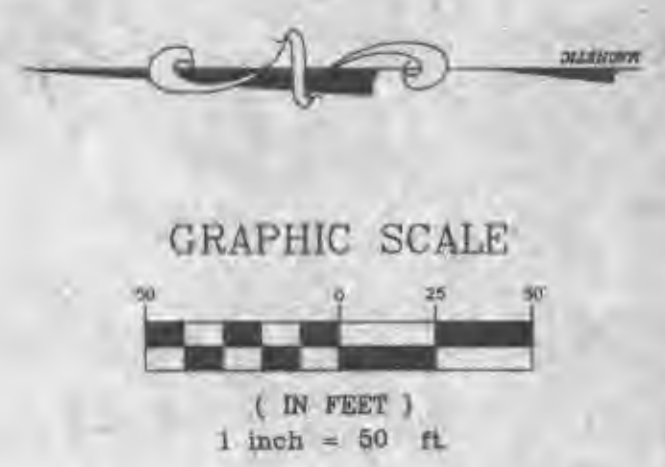


REVISIONS	CITY COMMENTS
8-8-01	



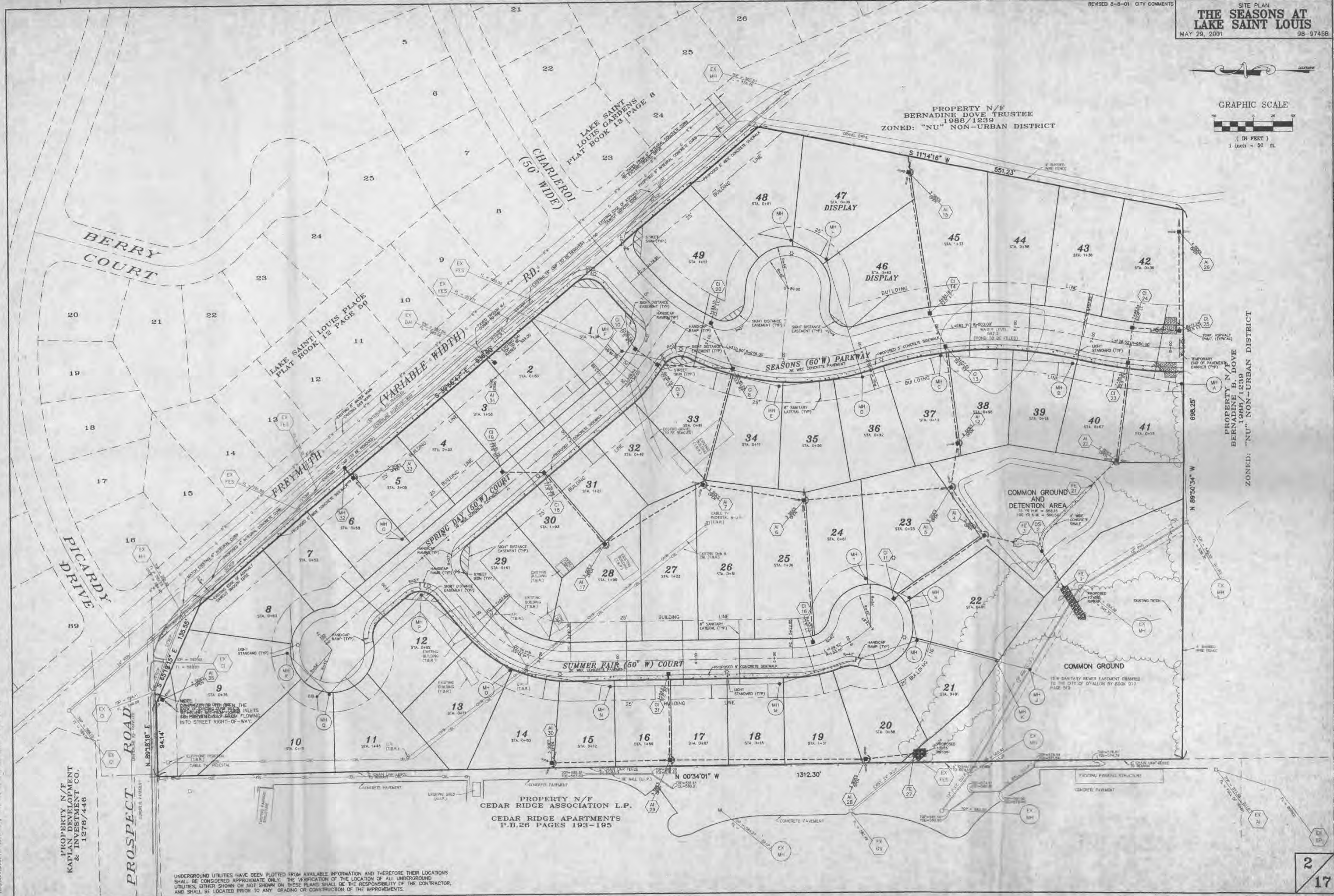
1052 South Cloverleaf Drive
St. Peters, MO. 63376-8445
836-928-6552
FAX 938-1718

05-29-01
DATE
98-9745B
PROJECT NUMBER
1 OF 17
SHEET OF
9745BCOV.DWG
FILE NAME
JLK MGG
DRAWN CHECKED



PROPERTY N/F
BERNADINE DOVE TRUSTEE
1988/1239
ZONED: "NU" NON-URBAN DISTRICT

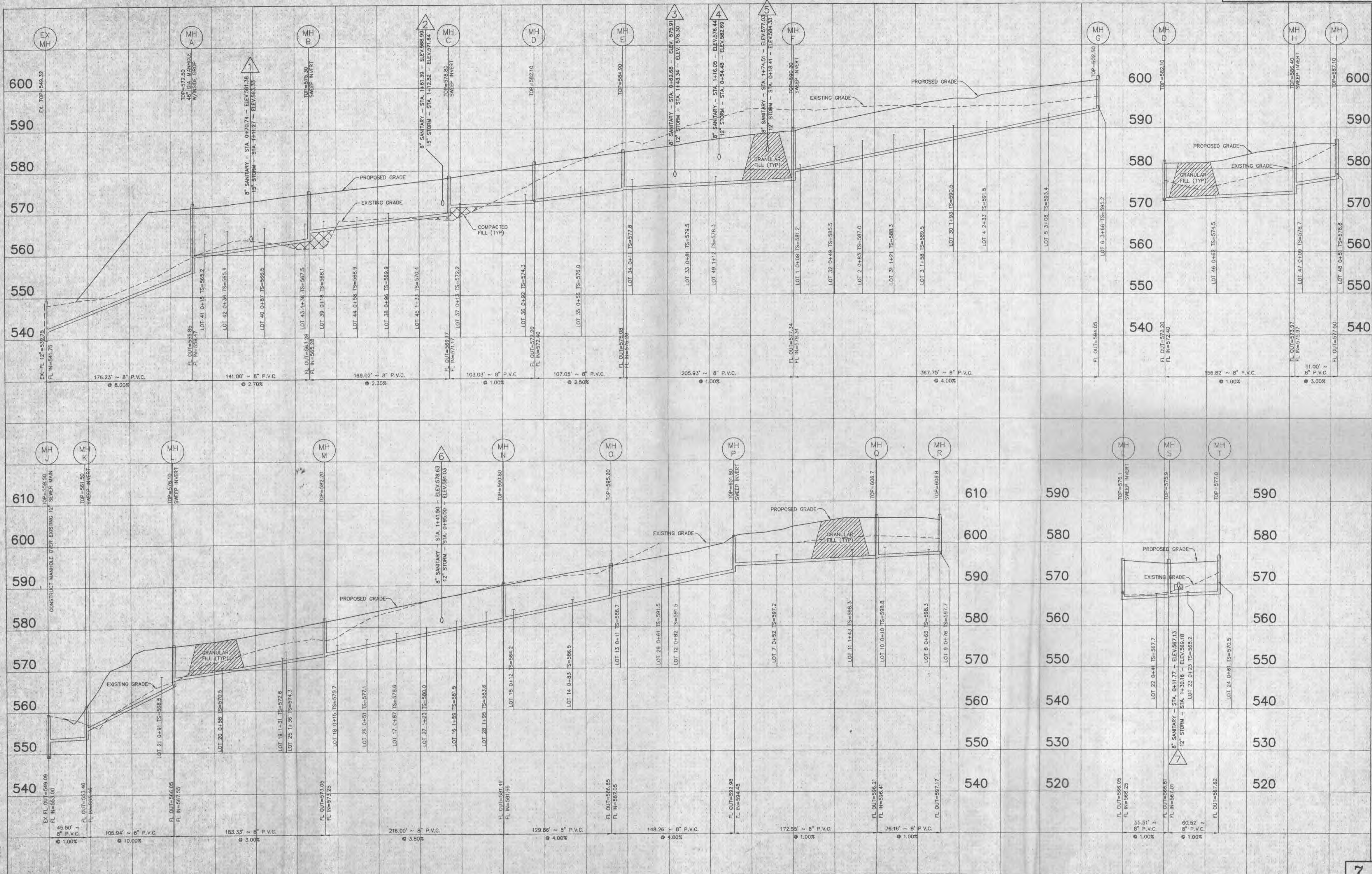
PROPERTY N/F
BERNADINE B. DOVE
1988/1239
ZONED: "NU" NON-URBAN DISTRICT



NOTE:
CONCRETE PAVEMENT ON ONE SIDE OF THE ROADWAY SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

PROPERTY N/F
KAPLAN DEVELOPMENT
& INVESTMENT CO.
1278/448

PROPERTY N/F
CEDAR RIDGE ASSOCIATION L.P.
CEDAR RIDGE APARTMENTS
P.B.26 PAGES 193-195



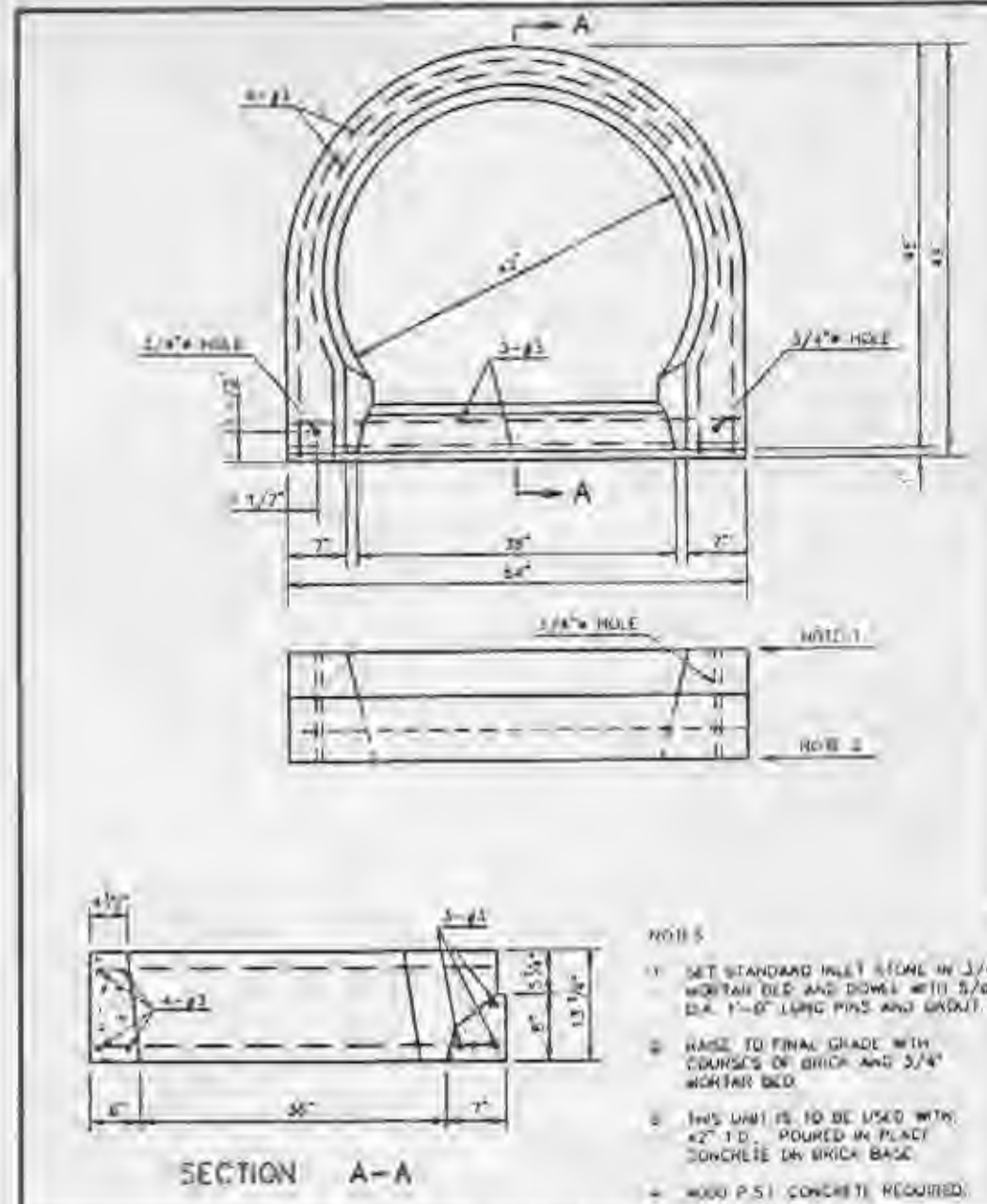
E:\jms\98000\980145\ecm.dwg Thu Aug 09 08:35:35 2001 STATION 6 (R/L)

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

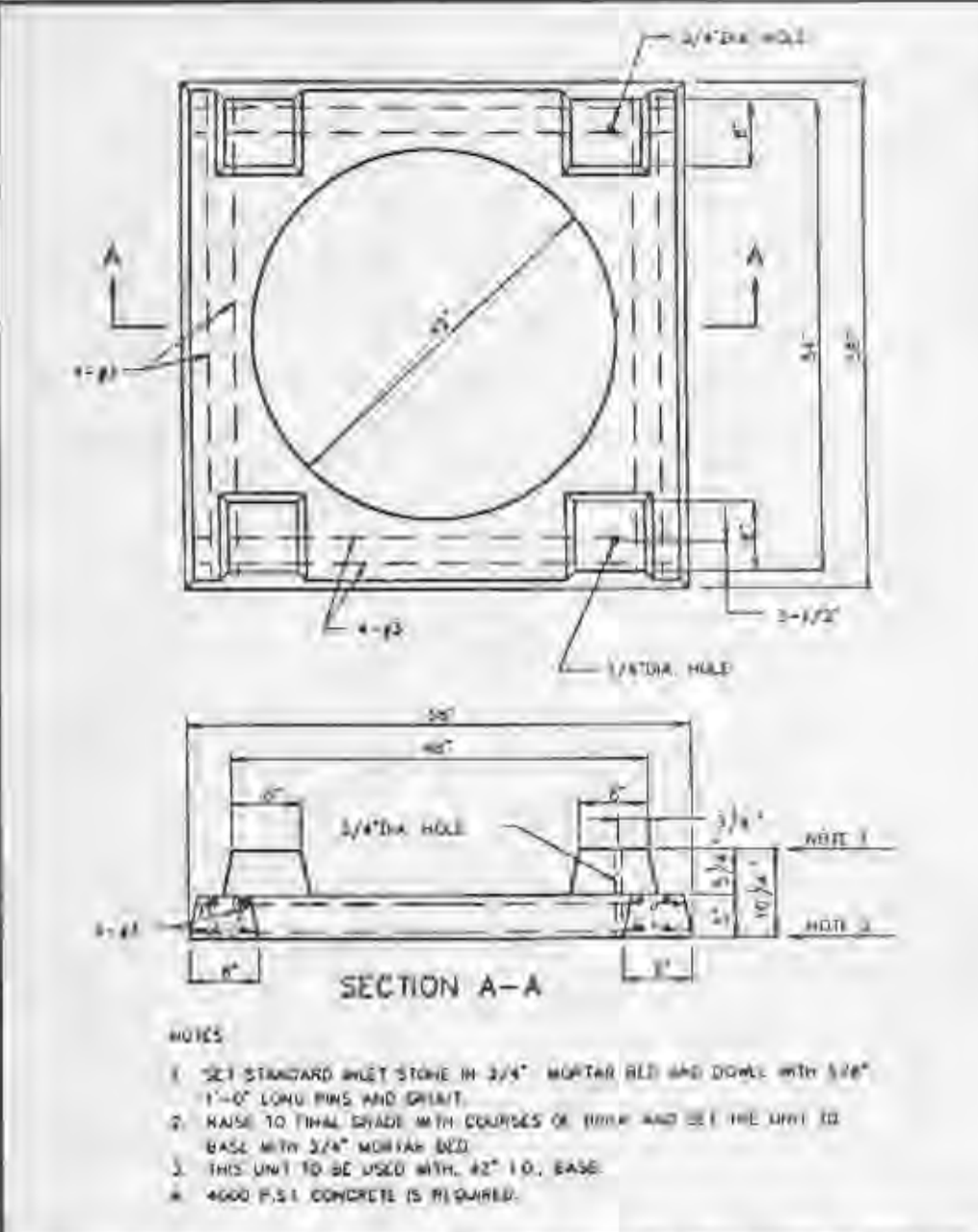
SCALE:
VERTICAL : 1" = 10'
HORIZONTAL : 1" = 50'

7
17

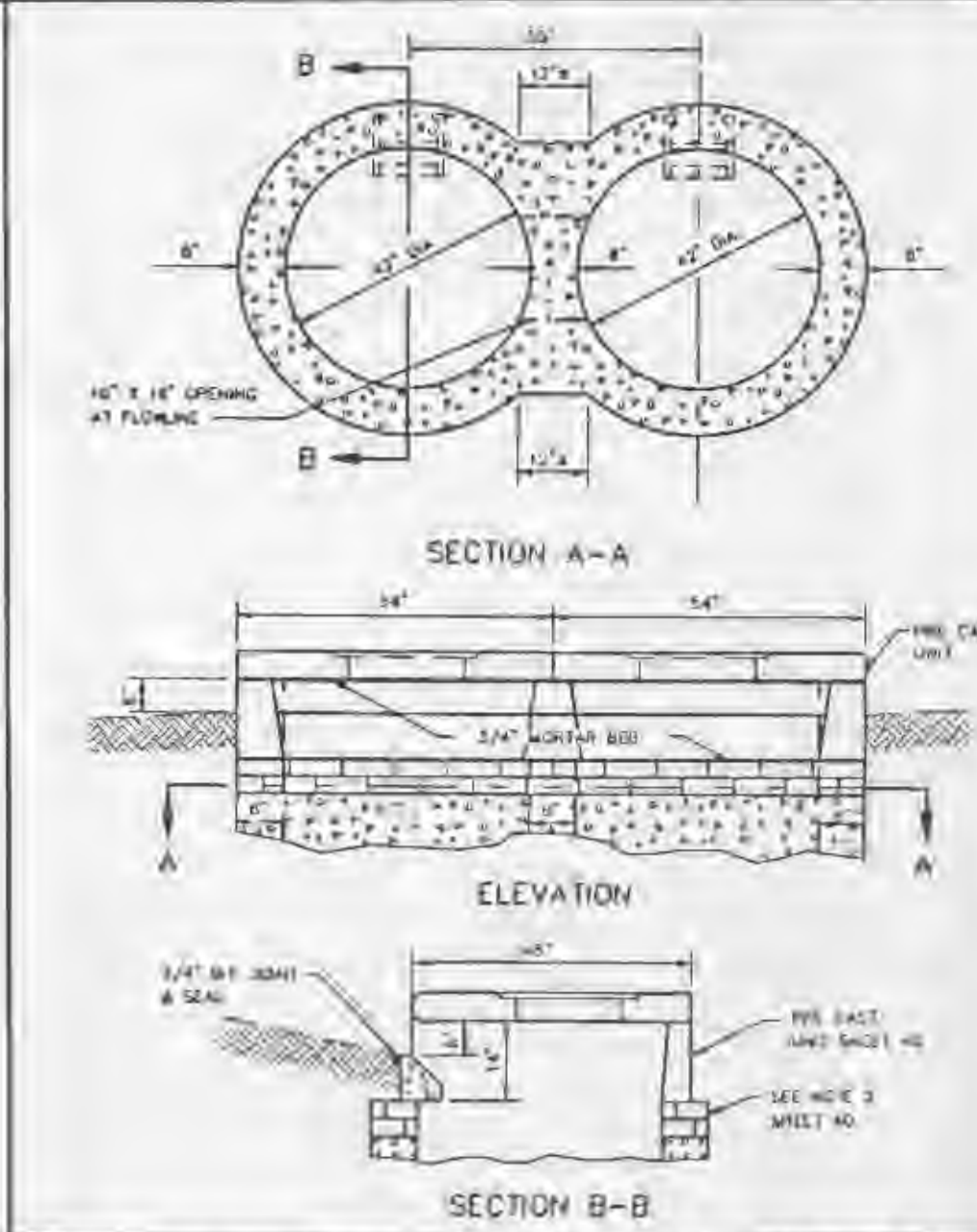
ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"M" PAYLINE WIDTH OF TRENCH (FEET)	PAY-LINES DI. EL. PER FT.	INSIDE DIMENSIONS OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"M" PAYLINE WIDTH OF TRENCH (FEET)	PAY-LINES DI. EL. PER FT.
4	30	2.50	3.20				
6	30	2.50	3.50				
8	30	2.50	3.80				
10	30	2.50	4.00				
12	30	2.50	4.20				
15	36	3.00	5.50				
18	36	3.00	5.70	14 x 23	41	3.42	5.94
21	39	3.20	6.41				
24	42	3.50	7.38	19 x 30	48	4.00	7.80
27	45	3.75	8.10	22 x 34	53	4.42	8.61
30	48	4.00	9.30	24 x 38	58	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	56	4.67	11.43	29 x 45	66	5.50	11.72
39				32 x 49	71	5.92	12.18
42	63	5.25	13.36	34 x 53	75	6.25	14.05
45	66	5.50	14.67	36 x 56	80	6.57	15.16
48	70	5.83	15.67	38 x 60	85	6.92	16.18
51	75	6.25	17.15	40 x 64	90	7.27	17.20
54	81	6.75	18.75	42 x 68	96	7.62	18.22
57	87	7.25	20.73	44 x 72	101	8.00	19.24
60	93	7.75	22.45	46 x 76	106	8.38	20.26
63	99	8.25	24.37	48 x 80	111	8.75	21.28
66	105	8.75	26.39	50 x 84	116	9.13	22.30
69	111	9.25	28.37	52 x 88	121	9.50	23.32
72	117	9.75	30.37	54 x 92	126	9.88	24.34
75	123	10.25	32.37	56 x 96	131	10.25	25.36
78	129	10.75	34.37	58 x 100	136	10.63	26.38
81	135	11.25	36.37	60 x 104	141	11.00	27.40
84	141	11.75	38.37	62 x 108	146	11.38	28.42
87	147	12.25	40.37	64 x 112	151	11.75	29.44
90	153	12.75	42.37	66 x 116	156	12.13	30.46
93	159	13.25	44.37	68 x 120	161	12.50	31.48
96	165	13.75	46.37	70 x 124	166	12.88	32.50
99	171	14.25	48.37	72 x 128	171	13.25	33.52
102	177	14.75	50.37	74 x 132	176	13.63	34.54
105	183	15.25	52.37	76 x 136	181	14.00	35.56
108	189	15.75	54.37	78 x 140	186	14.38	36.58
111	195	16.25	56.37	80 x 144	191	14.75	37.60
114	201	16.75	58.37	82 x 148	196	15.13	38.62
117	207	17.25	60.37	84 x 152	201	15.50	39.64
120	213	17.75	62.37	86 x 156	206	15.88	40.66
123	219	18.25	64.37	88 x 160	211	16.25	41.68
126	225	18.75	66.37	90 x 164	216	16.63	42.70
129	231	19.25	68.37	92 x 168	221	17.00	43.72
132	237	19.75	70.37	94 x 172	226	17.38	44.74
135	243	20.25	72.37	96 x 176	231	17.75	45.76
138	249	20.75	74.37	98 x 180	236	18.13	46.78
141	255	21.25	76.37	100 x 184	241	18.50	47.80
144	261	21.75	78.37	102 x 188	246	18.88	48.82
147	267	22.25	80.37	104 x 192	251	19.25	49.84
150	273	22.75	82.37	106 x 196	256	19.63	50.86
153	279	23.25	84.37	108 x 200	261	20.00	51.88
156	285	23.75	86.37	110 x 204	266	20.38	52.90
159	291	24.25	88.37	112 x 208	271	20.75	53.92
162	297	24.75	90.37	114 x 212	276	21.13	54.94
165	303	25.25	92.37	116 x 216	281	21.50	55.96
168	309	25.75	94.37	118 x 220	286	21.88	56.98
171	315	26.25	96.37	120 x 224	291	22.25	58.00
174	321	26.75	98.37	122 x 228	296	22.63	59.02
177	327	27.25	100.37	124 x 232	301	23.00	60.04
180	333	27.75	102.37	126 x 236	306	23.38	61.06
183	339	28.25	104.37	128 x 240	311	23.75	62.08
186	345	28.75	106.37	130 x 244	316	24.13	63.10
189	351	29.25	108.37	132 x 248	321	24.50	64.12
192	357	29.75	110.37	134 x 252	326	24.88	65.14
195	363	30.25	112.37	136 x 256	331	25.25	66.16
198	369	30.75	114.37	138 x 260	336	25.63	67.18
201	375	31.25	116.37	140 x 264	341	26.00	68.20
204	381	31.75	118.37	142 x 268	346	26.38	69.22
207	387	32.25	120.37	144 x 272	351	26.75	70.24
210	393	32.75	122.37	146 x 276	356	27.13	71.26
213	399	33.25	124.37	148 x 280	361	27.50	72.28
216	405	33.75	126.37	150 x 284	366	27.88	73.30
219	411	34.25	128.37	152 x 288	371	28.25	74.32
222	417	34.75	130.37	154 x 292	376	28.63	75.34
225	423	35.25	132.37	156 x 296	381	29.00	76.36
228	429	35.75	134.37	158 x 300	386	29.38	77.38
231	435	36.25	136.37	160 x 304	391	29.75	78.40
234	441	36.75	138.37	162 x 308	396	30.13	79.42
237	447	37.25	140.37	164 x 312	401	30.50	80.44
240	453	37.75	142.37	166 x 316	406	30.88	81.46
243	459	38.25	144.37	168 x 320	411	31.25	82.48
246	465	38.75	146.37	170 x 324	416	31.63	83.50
249	471	39.25	148.37	172 x 328	421	32.00	84.52
252	477	39.75	150.37	174 x 332	426	32.38	85.54
255	483	40.25	152.37	176 x 336	431	32.75	86.56
258	489	40.75	154.37	178 x 340	436	33.13	87.58
261	495	41.25	156.37	180 x 344	441	33.50	88.60
264	501	41.75	158.37	182 x 348	446	33.88	89.62
267	507	42.25	160.37	184 x 352	451	34.25	90.64
270	513	42.75	162.37	186 x 356	456	34.63	91.66
273	519	43.25	164.37	188 x 360	461	35.00	92.68
276	525	43.75	166.37	190 x 364	466	35.38	93.70
279	531	44.25	168.37	192 x 368	471	35.75	94.72
282	537	44.75	170.37	194 x 372	476	36.13	95.74
285	543	45.25	172.37	196 x 376	481	36.50	96.76
288	549	45.75	174.37	198 x 380	486	36.88	97.78
291	555	46.25	176.37	200 x 384	491	37.25	98.80
294	561	46.75	178.37	202 x 388	496	37.63	99.82
297	567	47.25	180.37	204 x 392	501	38.00	100.84
300	573	47.75	182.37	206 x 396	506	38.38	101.86
303	579	48.25	184.37	208 x 400	511	38.75	102.88
306	585	48.75	186.37	210 x 404	516	39.13	103.90
309	591	49.25	188.37	212 x 408	521	39.50	104.92
312	597	49.75	190.37	214 x 412	526	39.88	105.94
315	603	50.25	192.37	216 x 416	531	40.25	106.96
318	609	50.75	194.37	218 x 420	536	40.63	107.98
321	615	51.25	196.37	220 x 424	541	41.00	109.00
324	621	51.75	198.37	222 x 428	546	41.38	110.02
327	627	52.25	200.37	224 x 432	551	41.75	111.04
330	633	52.75	202.37	226 x 436	556	42.13	112.06
333	639	53.25	204.37	228 x 440	561	42.50	113.08
336	645	53.75	206.37	230 x 444	566	42.88	114.10
339	651	54.25	208.37	232 x 448	571	43.25	115.12
342	657	54.75	210.37	234 x 452	576	43.63	116.14
345	663	55.25	212.37	236 x 456	581	44.00	117.16
348	669	55.75	214.37	238 x 460	586	44.38	118.18
351	675	56.25	216.37	240 x 464	591	44.75	119.20
354	681	56.75	218.37	242 x 468	596	45.13	120.22
357	687	57.25	220.37	244 x 472	601	45.50	121.24
360	693	57.75	222.37	246 x 476	606	45.88	122.26
363	699	58.25	224.37	248 x 480	611	46.25	123.28
366	705	58.75	226.37	250 x 484	616	46.63	124.30
369	711	59.25	228.37	252 x 488	621	47.00	125.32
372	717	59.75	230.37	254 x 492	626	47.38	126.34
375	723	60.25	232.37	256 x 496	631	47.75	127.36
378	729	60.75	234.37	258 x 500	636	48.13	128.38
381	735	61.25	236.37	260 x 504	641	48.50	129.40
384	741	61.75	238.37	262 x 508	646	48.88	130.42
387	747	62.25	240.37	264 x 512	651	49.25	131.44
390	753	62.75	242.37	266 x 516	656	49.63	132.46
393	759	63.25	244.37	268 x 520	661	50.00	133.48
396	765	63.75	246.37	270 x 524	666	50.38	134.50
399	771	64.25	248.37	272 x 528	671	50.75	135.52
402	777	64.75	250.37	274 x 532	676	51.13	136.54
405	783	65.25	252.37	276 x 536	681	51.50	137.56
408	789	65.75	254.37	278 x 540	686	51.88	138.58
411	795	66.25	256.37	280 x 544	691	52.25	139.60
414	801	66.75	258.37	282 x 548	696	52.63	140.62
417	807	67.25	260.37	284 x 552	701	53.00	141.64
420	813	67.75	262.37	286 x 556	706	53.38	142.66
423	819	68.25	264.37	288 x 560	711	53.75	143.68
426	825	68.75	266.37	290 x 564	716	54.13	144.70
429	831	69.25	268.37	292 x 568	721	54.50	145.72
432	837	69.75	270.37	294 x 572	726	54.88	146.74
435	843	70.25	272.37	296 x 576	731	55.25	147.76
438	849	70.75	274.37	298 x 580	736	55.63	148.78
441	855	71.25	276.37	300 x 584	741	56.00	149.80
444	861	71.75	278.37	302 x 588	746	56.38	150.82
447	867	72.25	280.37	304 x 592	751	56.75	151.84
450	873	72.75	282.37	306 x 596	756	57.13	152.86
453							



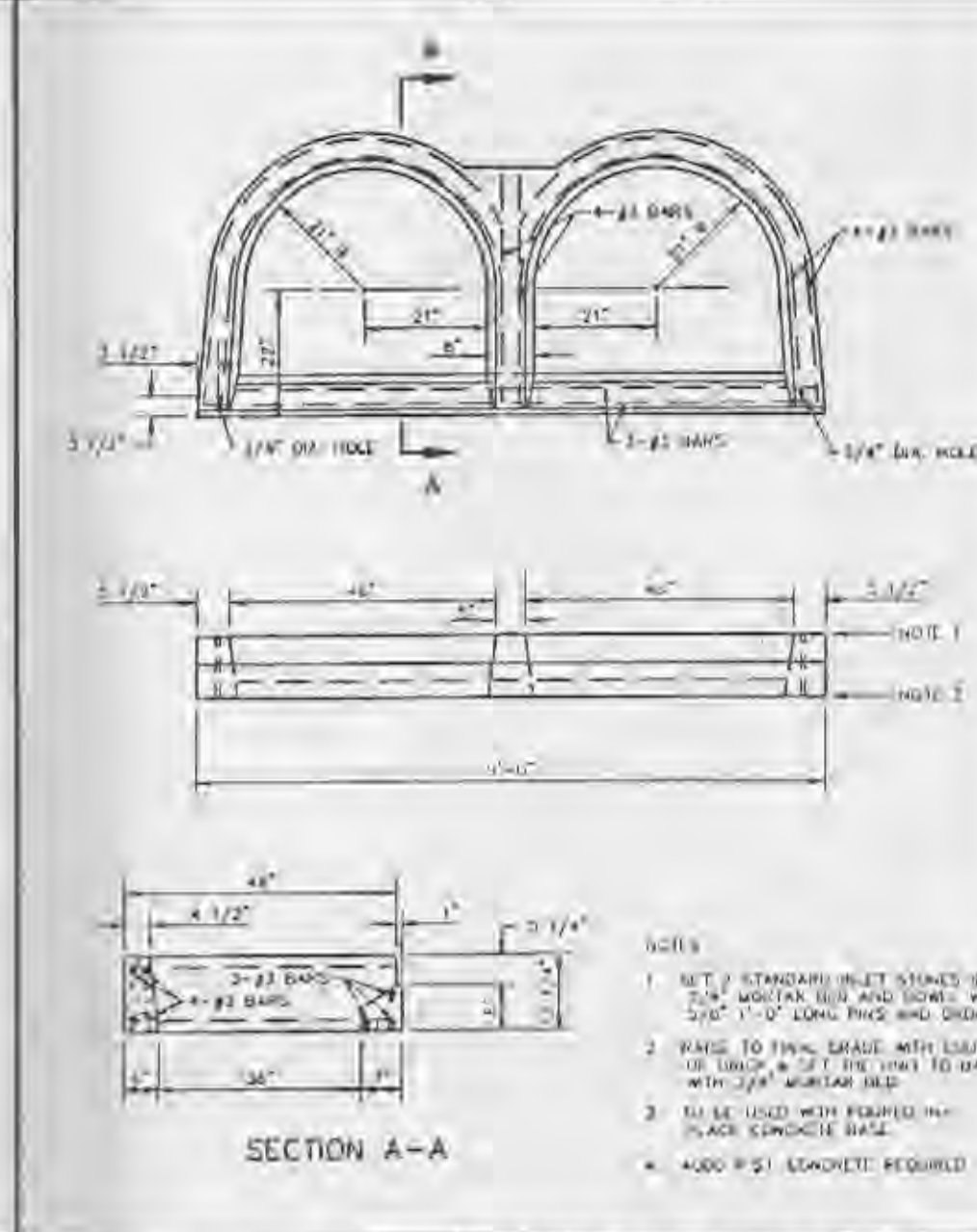
PRE-CAST CONCRETE UNIT FOR SINGLE STREET INLET
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. W.S.H. Cr. J.C.K. 1992 SHEET 37



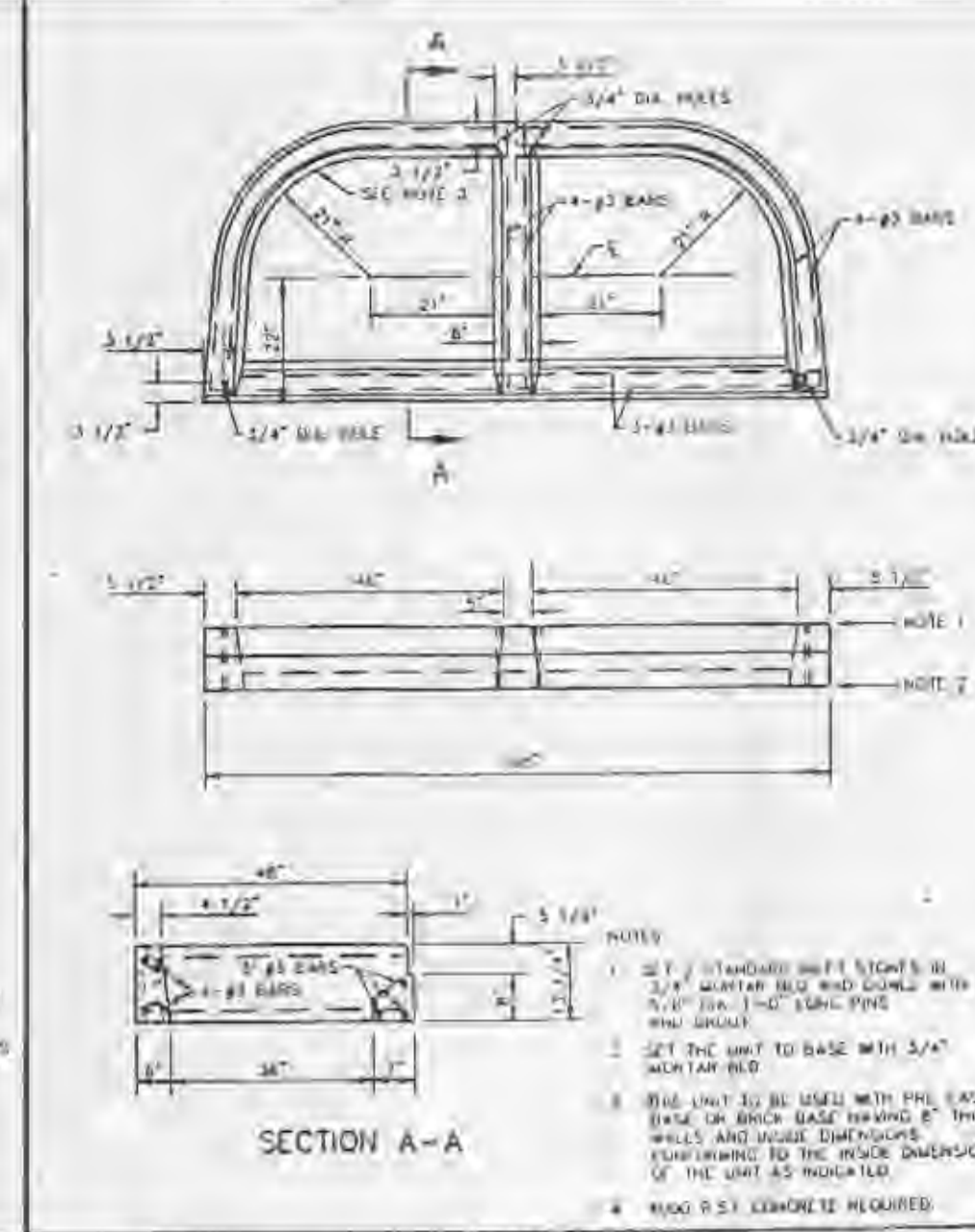
PRE-CAST CONCRETE UNIT FOR 4-WAY AREA INLET
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. D.A.B. Cr. J.C.K. 1992 SHEET 38



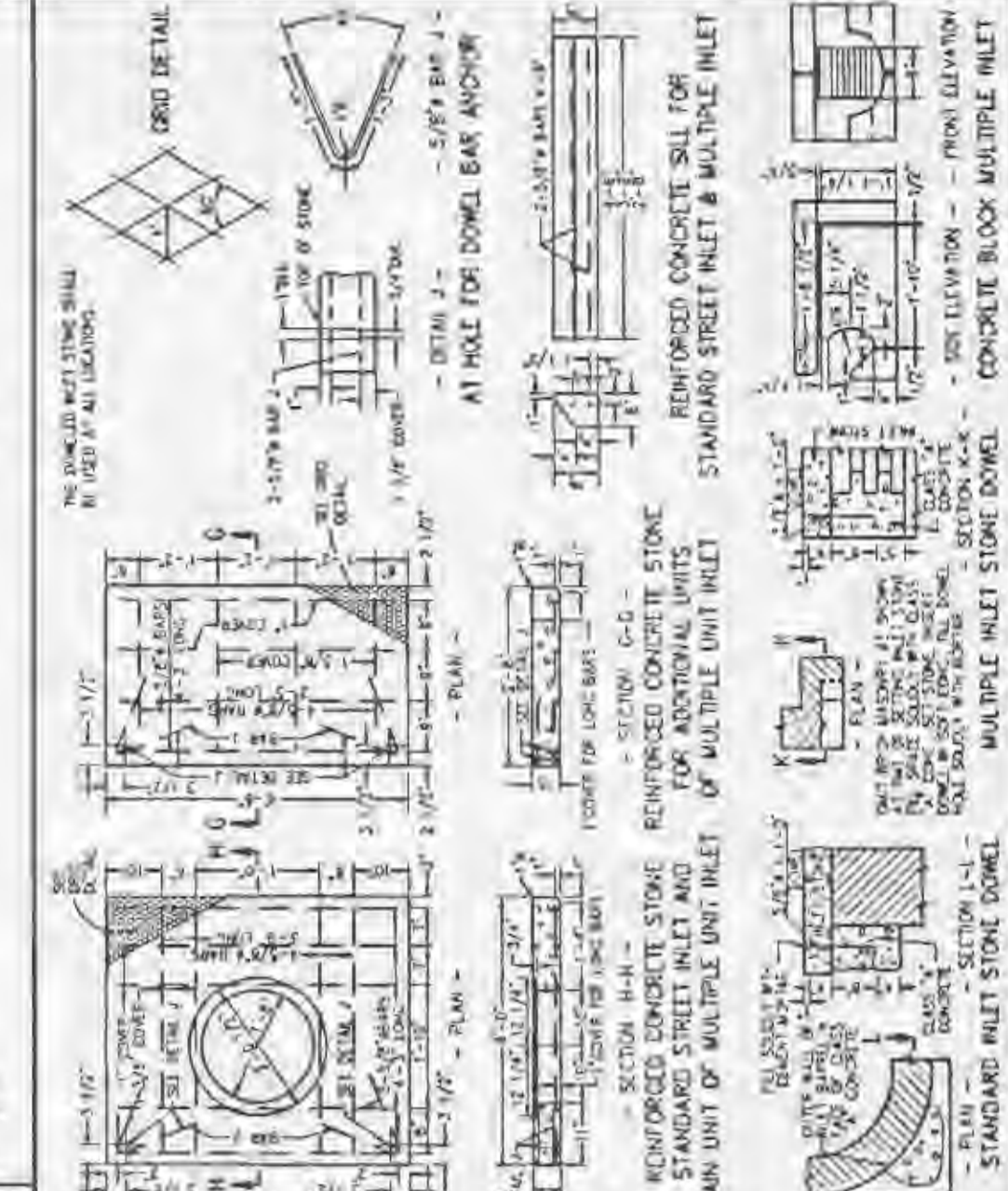
CONCRETE DOUBLE STREET INLET W/PRE CAST CONCRETE UNIT A
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. R.D.M. Cr. J.C.K. 1992 SHEET 39



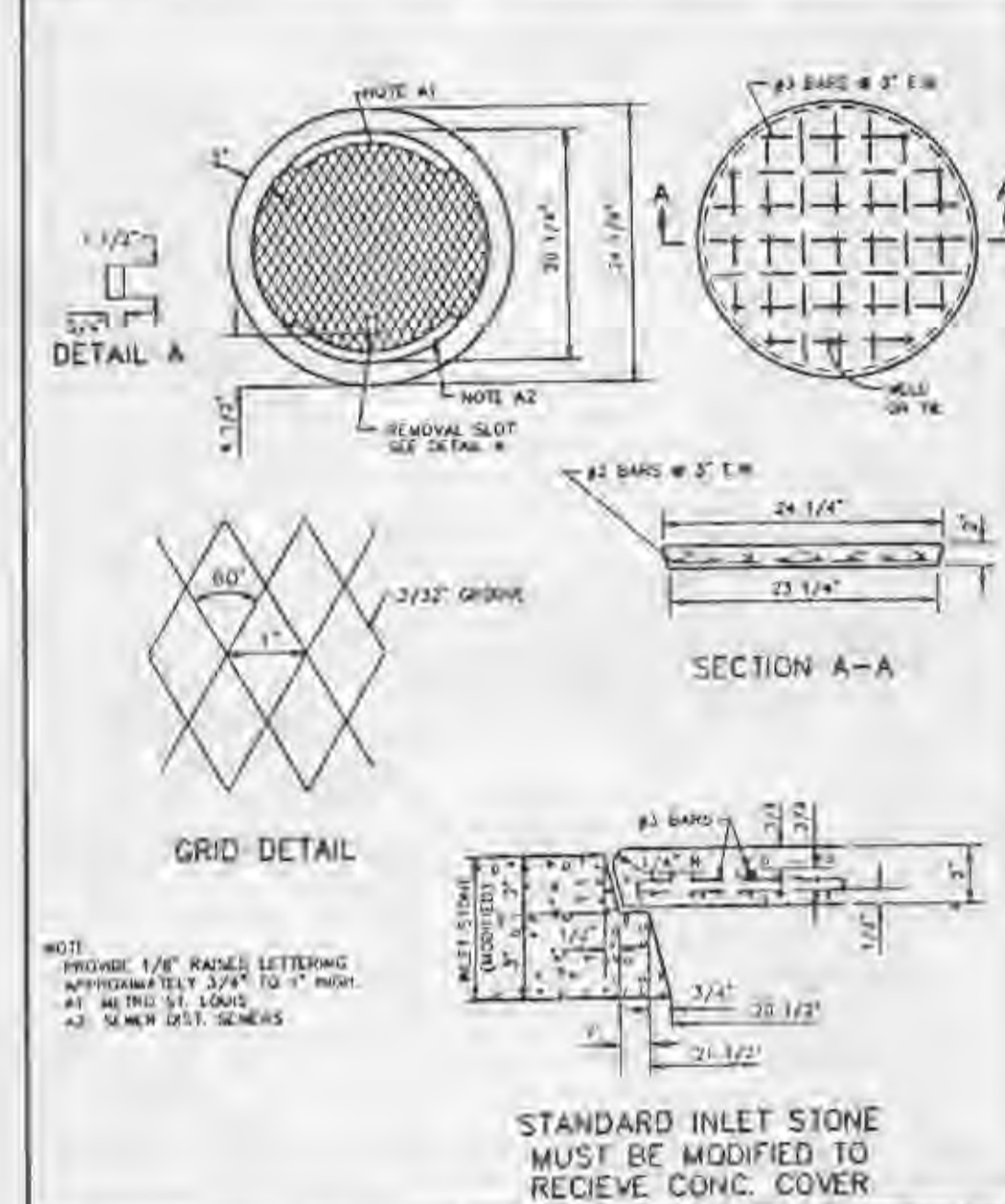
PRE-CAST CONCRETE UNIT A FOR STREET DOUBLE INLET
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. R.D.M. Cr. J.C.K. 1992 SHEET 40



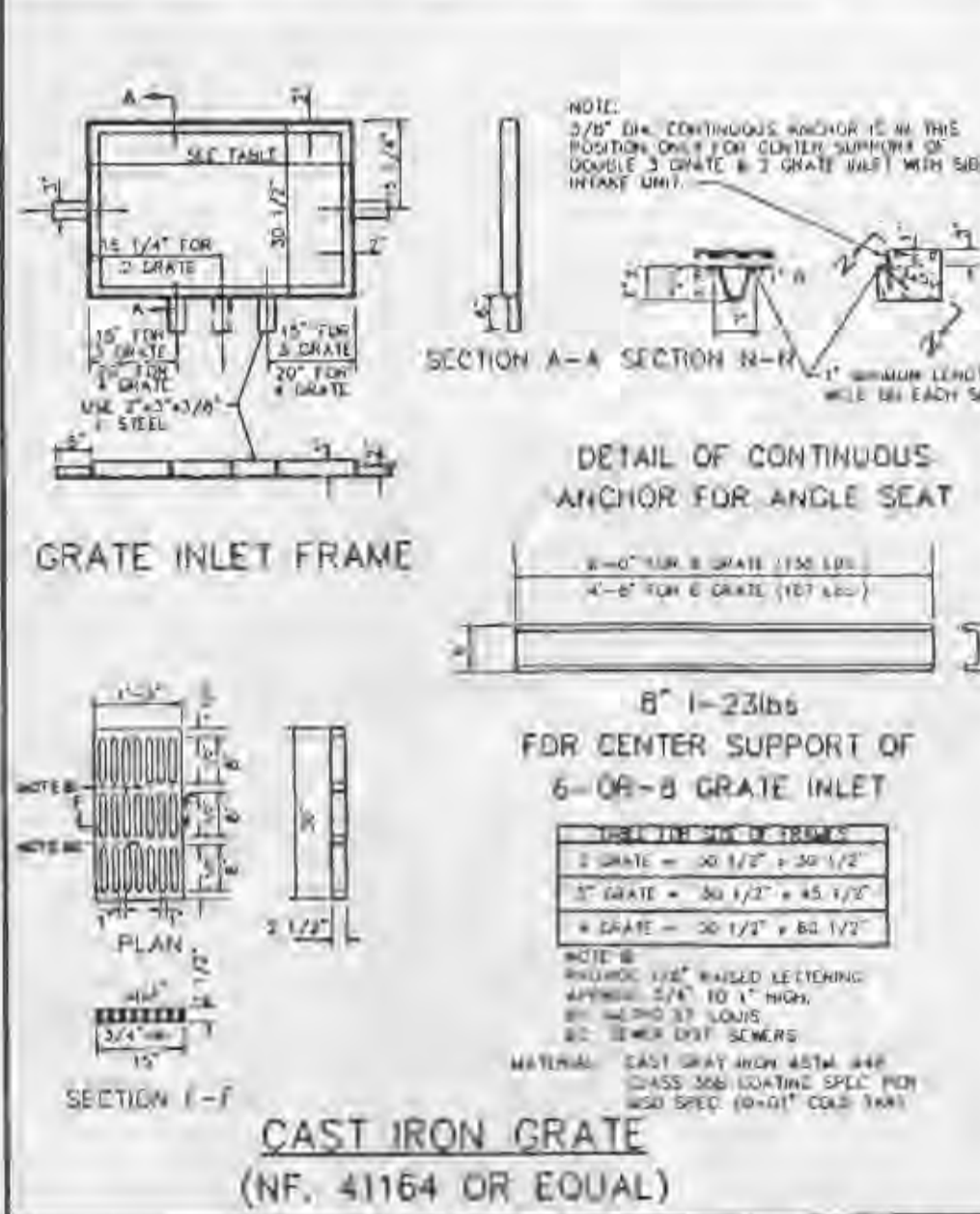
PRE-CAST CONCRETE UNIT B FOR STREET DOUBLE INLET
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
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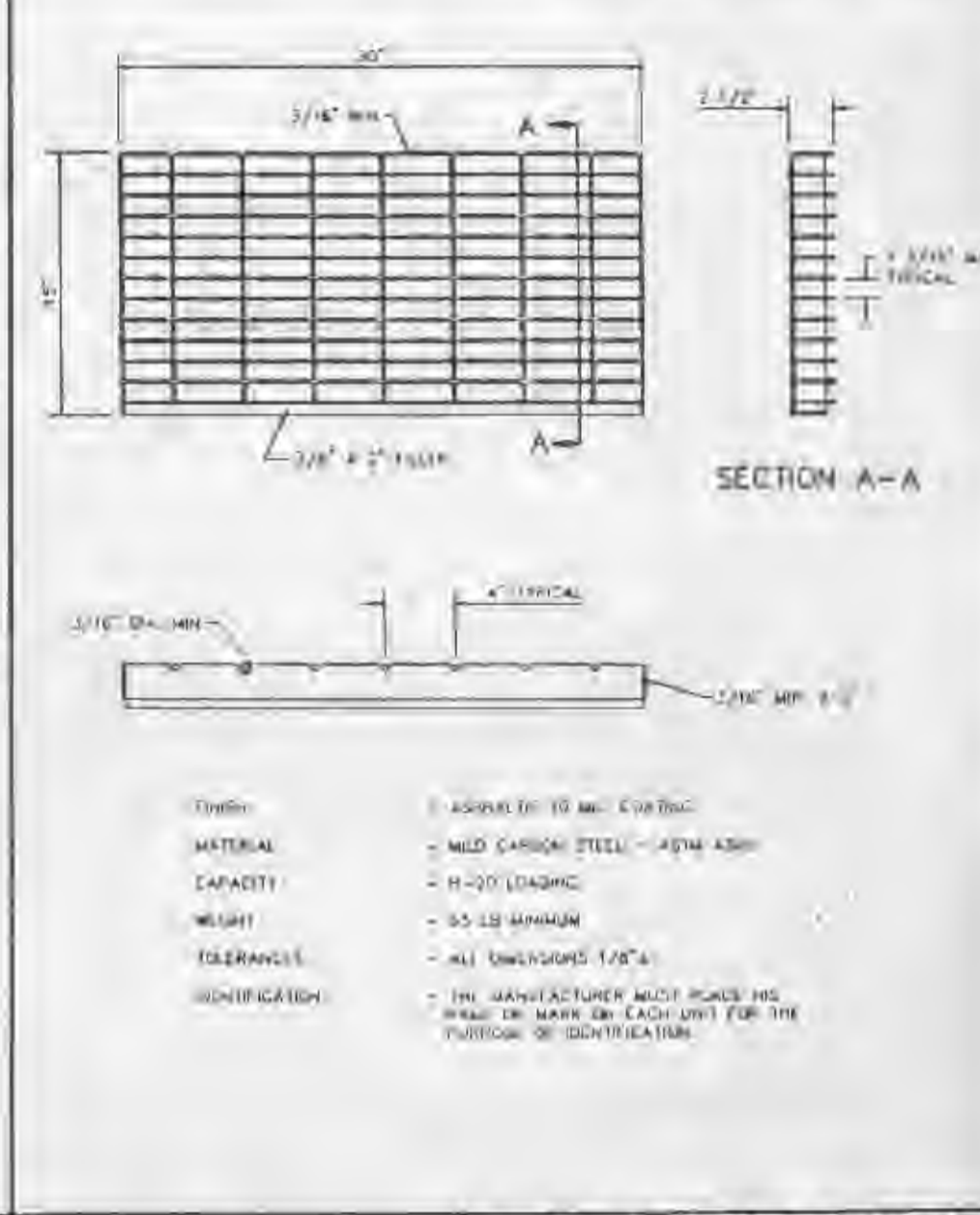
CONSTRUCTION DETAILS
 STANDARD - INLET STONES, BLOCKS & DESIGN DETAILS
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. W.S.H. Cr. J.C.K. 1992 SHEET 42



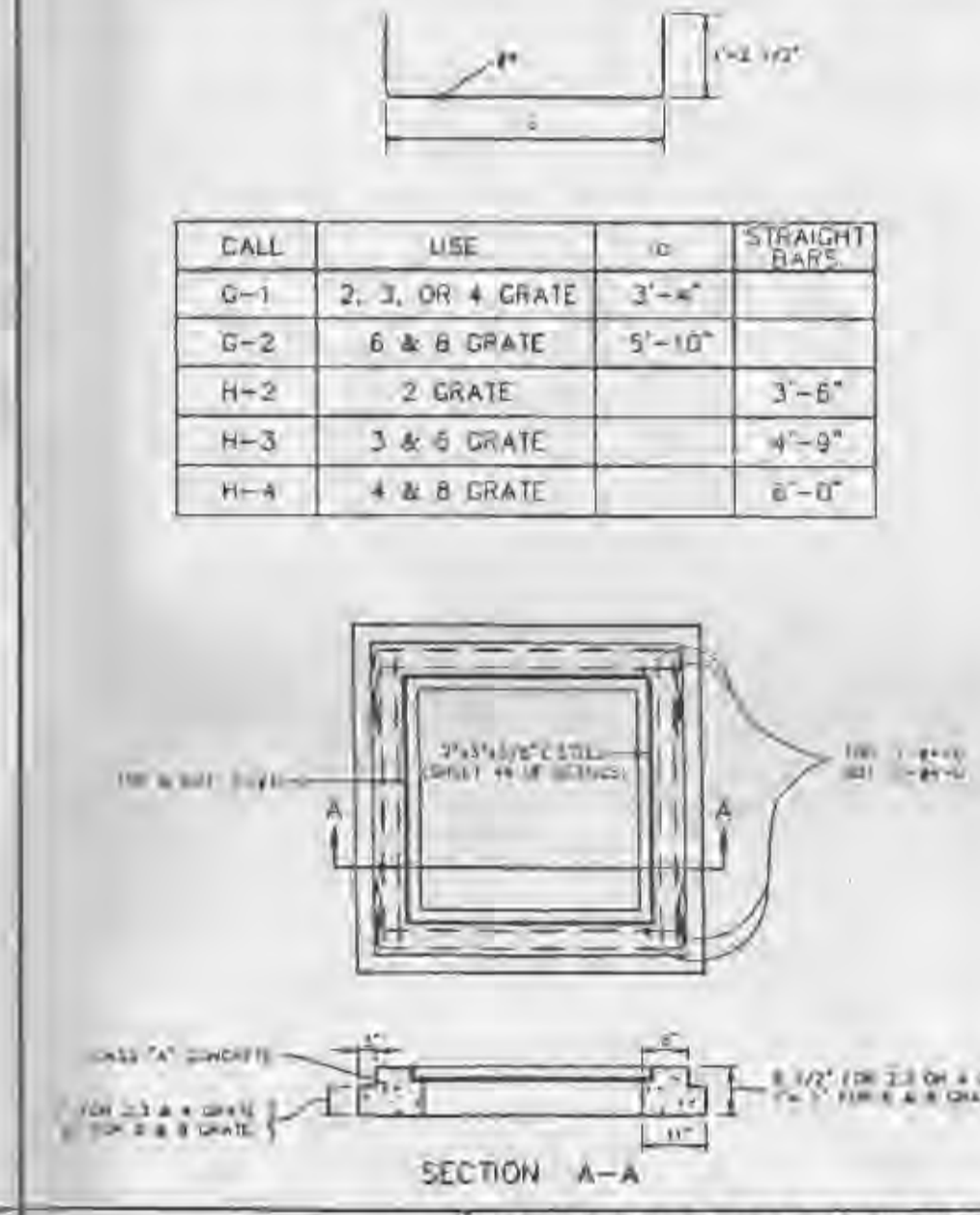
PRE-CAST CONCRETE INLET COVER
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. R.D.M. Cr. J.C.K. 1992 SHEET 43



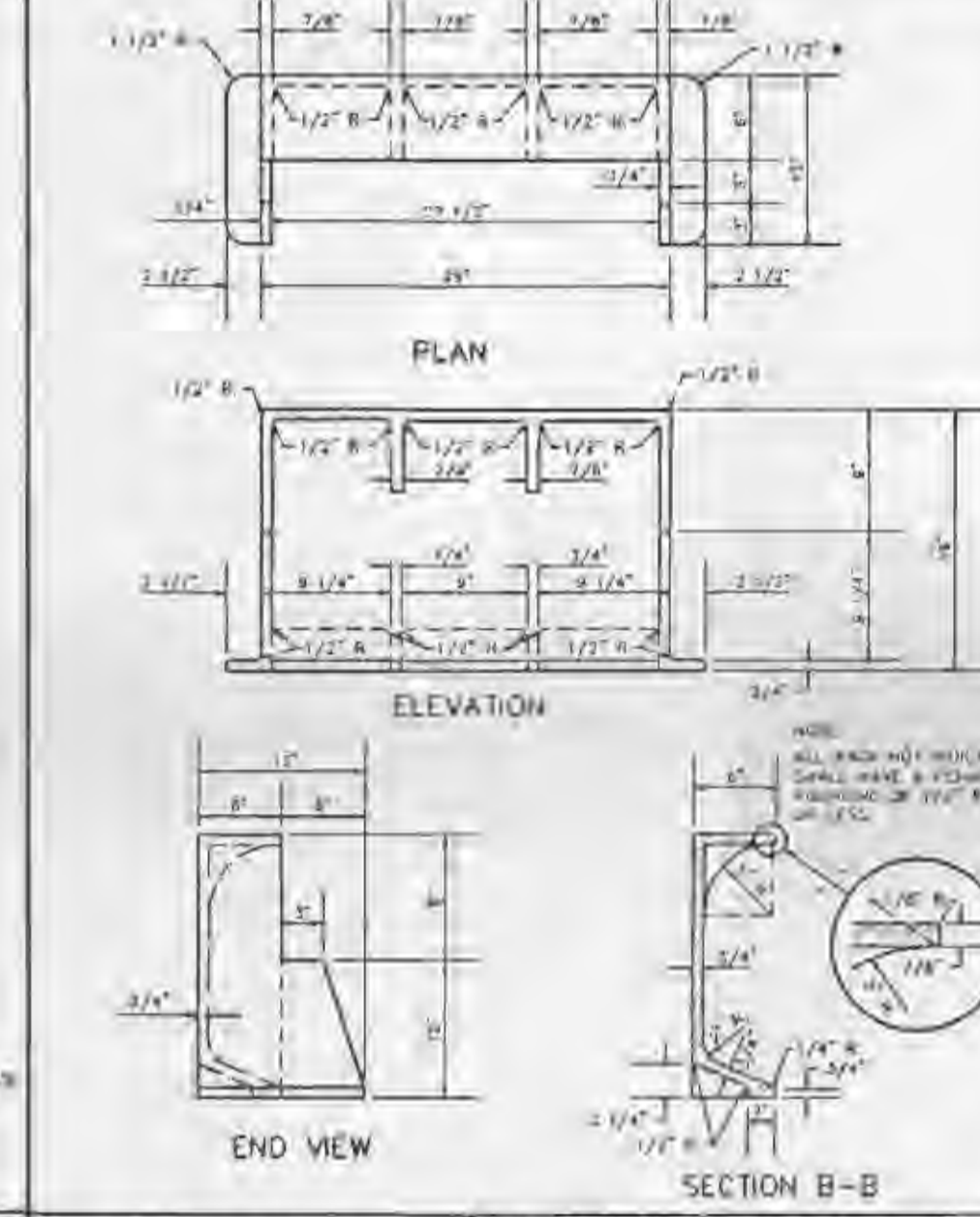
DETAILS OF INLET FRAME AND GRATES
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. R.D.M. Cr. J.C.K. 1992 SHEET 44



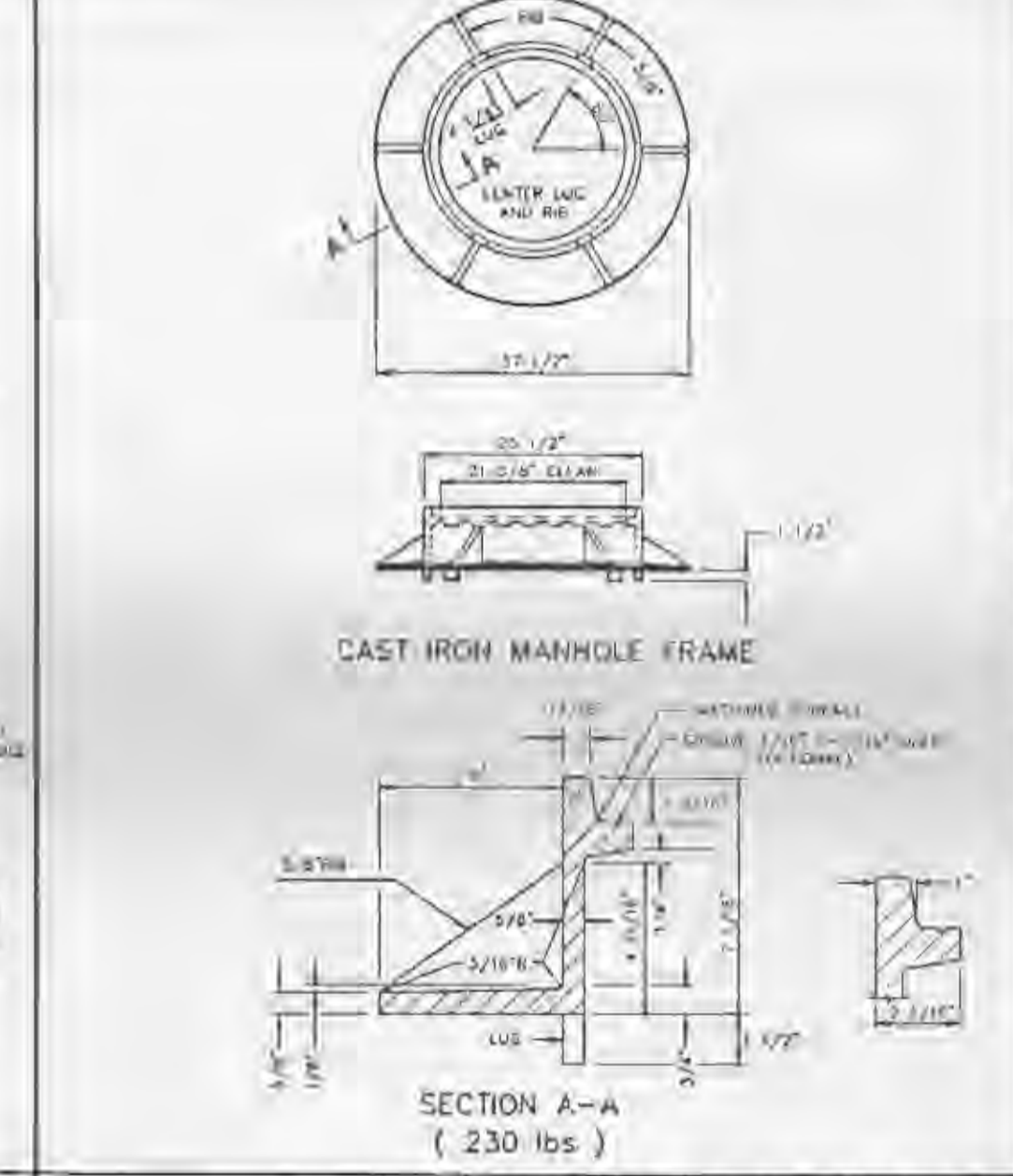
DETAIL OF STEEL GRATE
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
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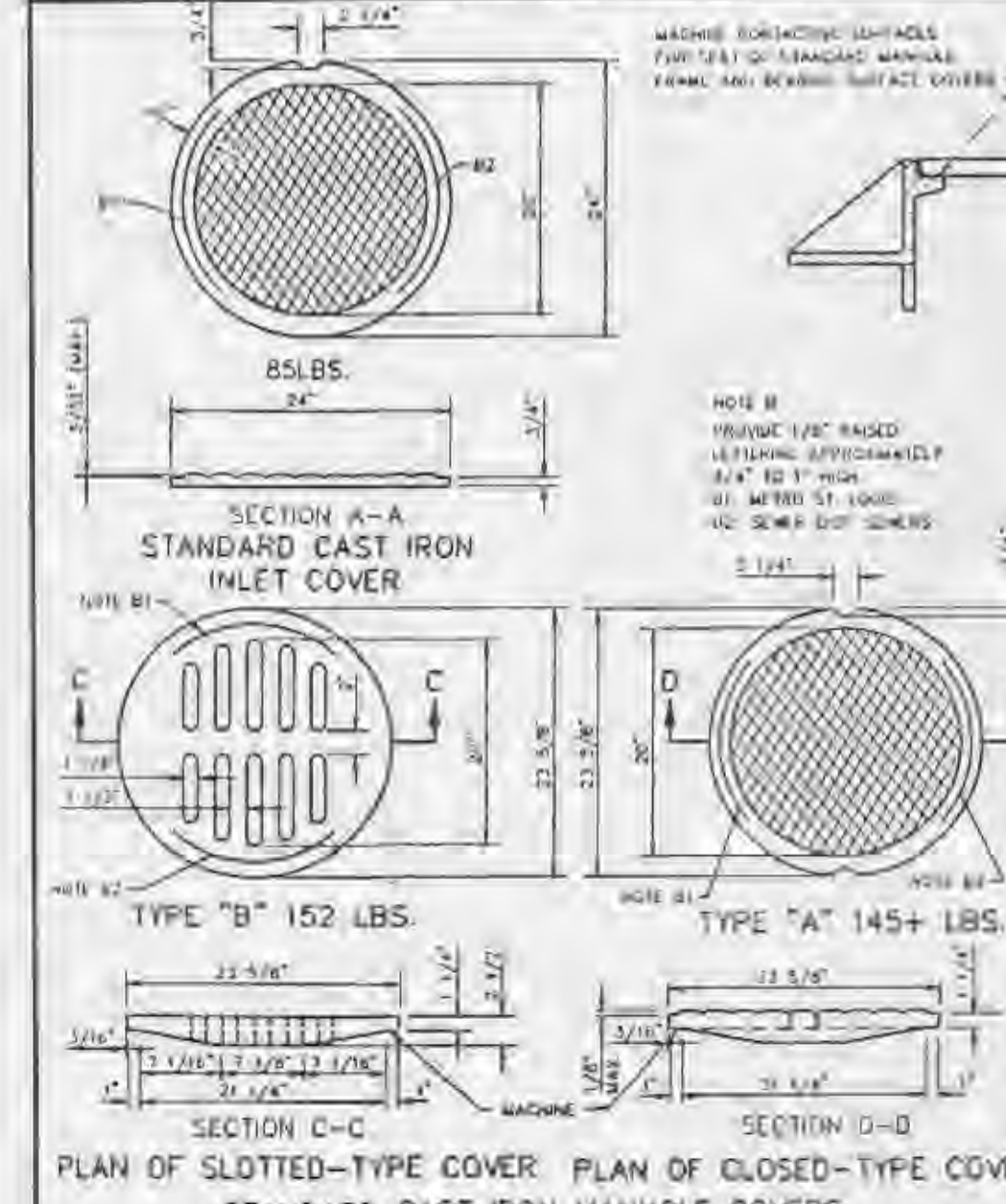
STEEL REQUIREMENTS FOR GRATE INLET SEAT
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
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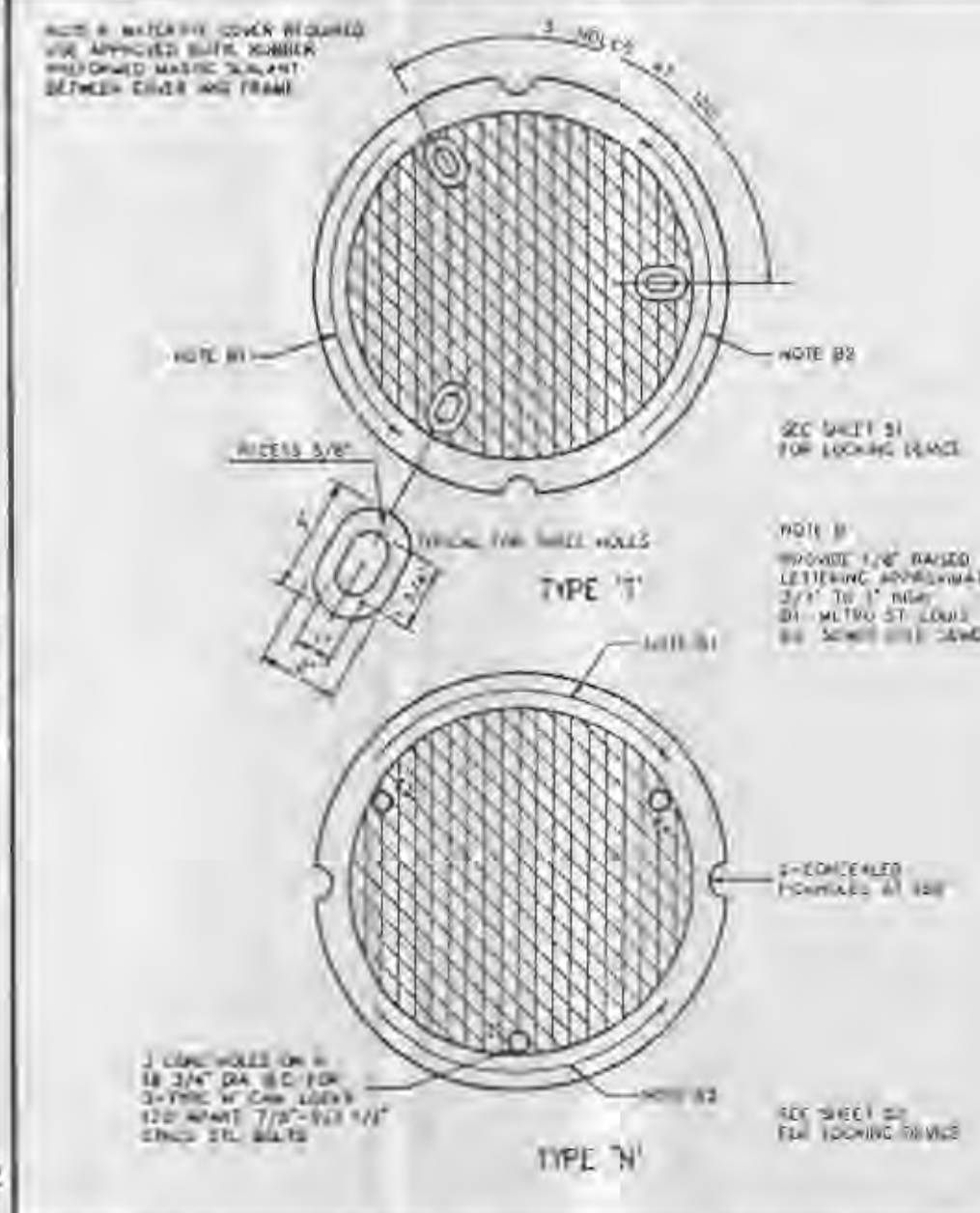
CAST IRON SIDE INTAKE UNIT FOR GRATED INLETS 249 LBS.
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
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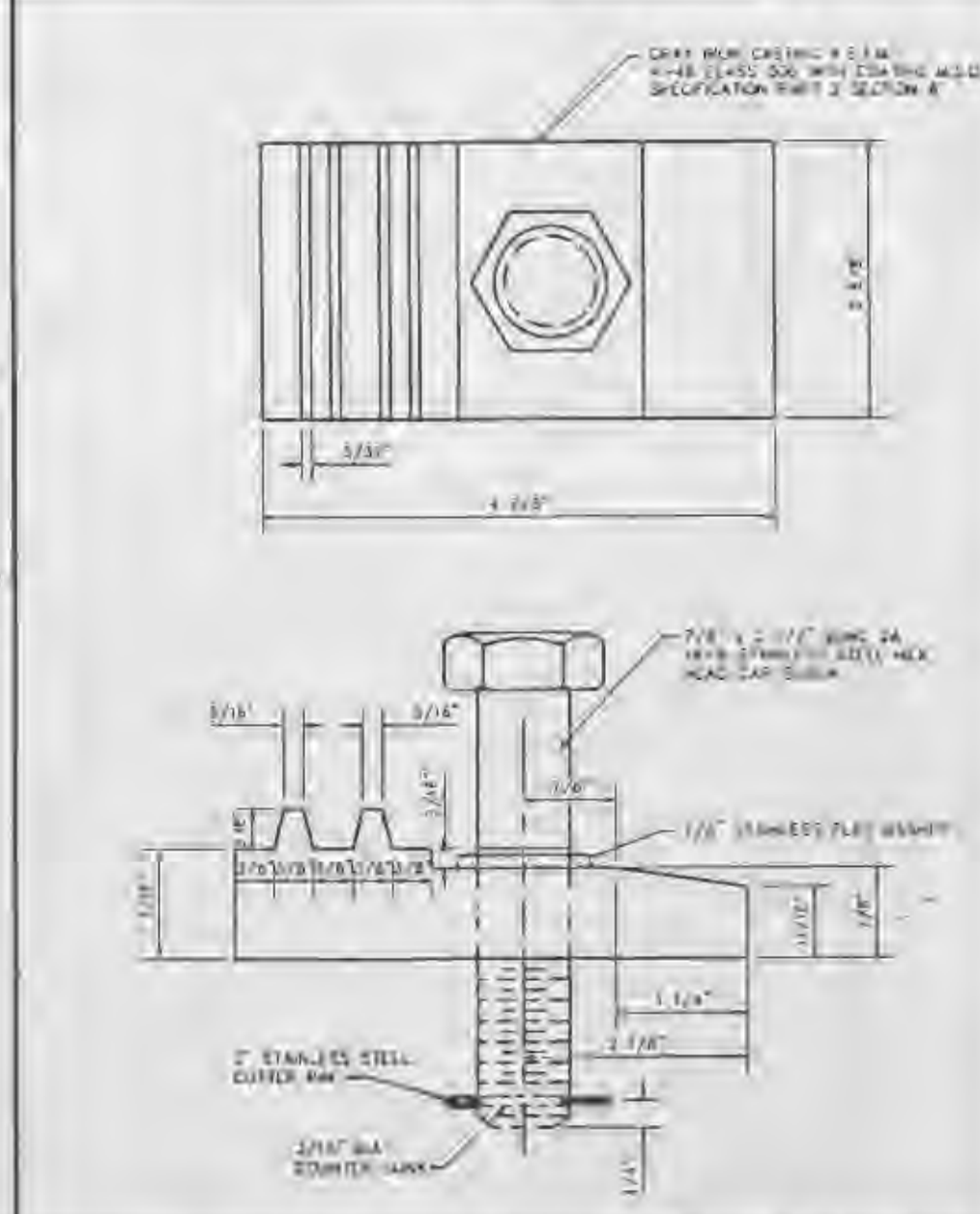
CAST IRON MANHOLE FRAME
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
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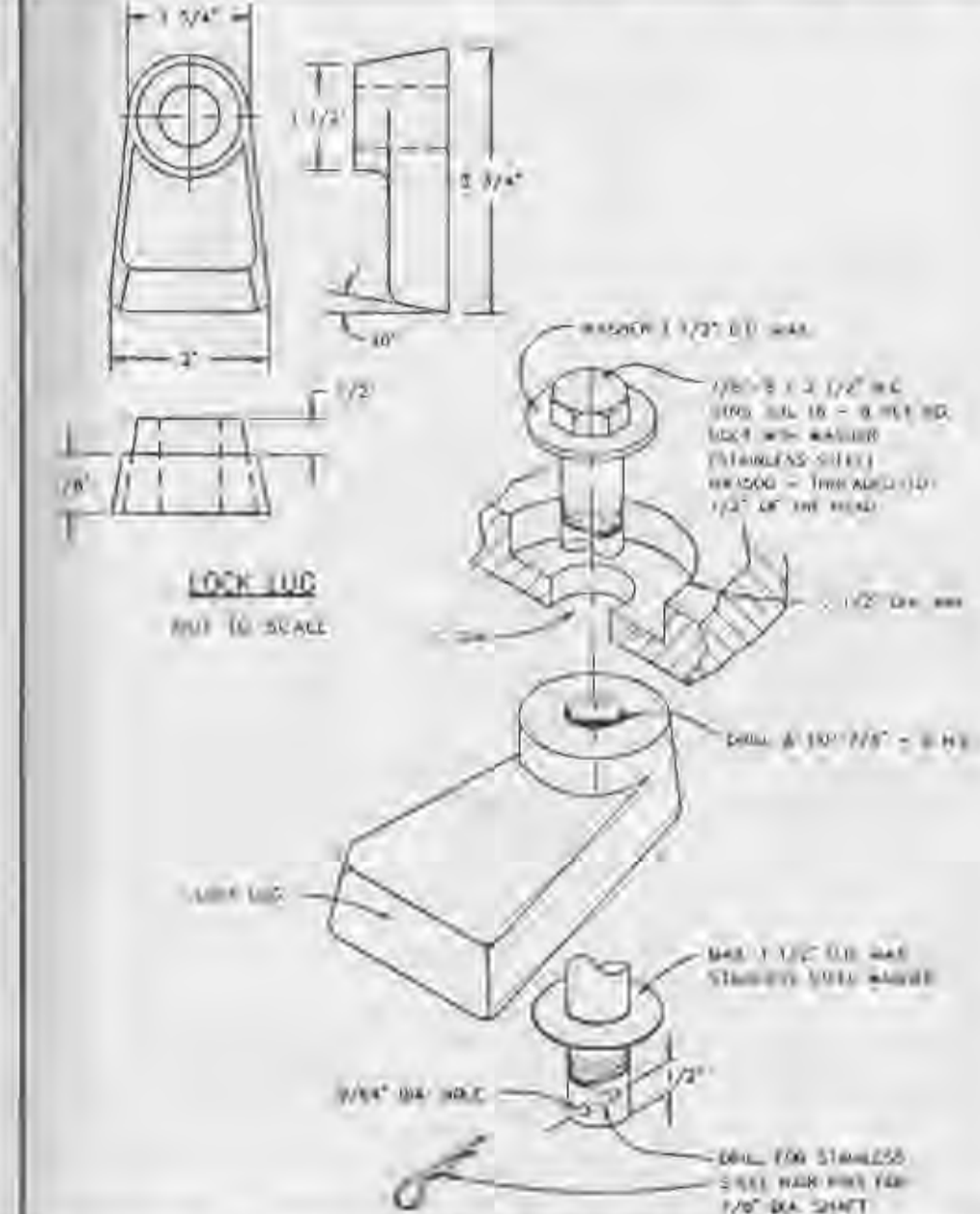
CAST IRON COVERS MANHOLES AND INLETS
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
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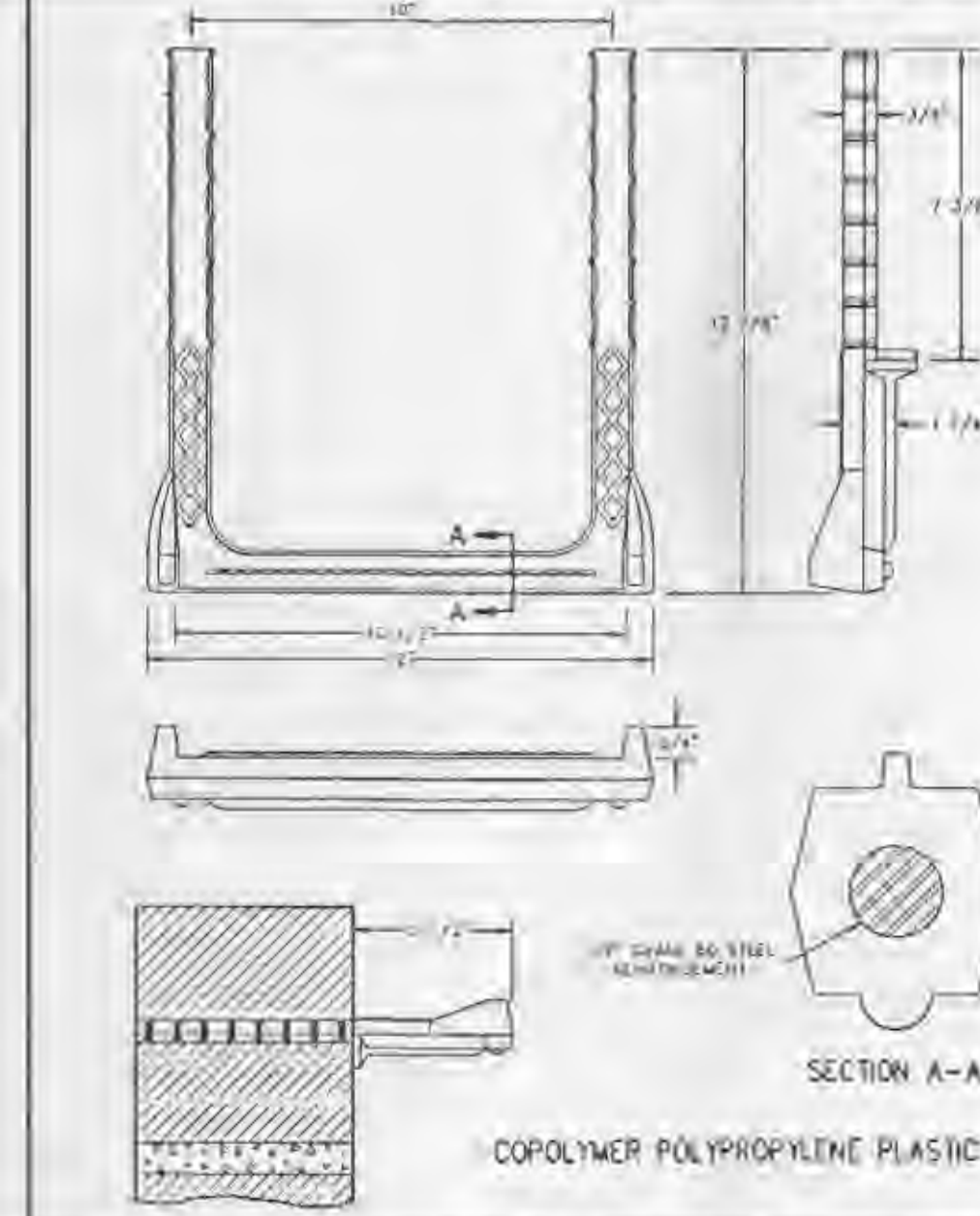
CAST IRON MANHOLE COVERS (LOCK TYPE)
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. W.S.H. Cr. J.C.K. 1992 SHEET 50



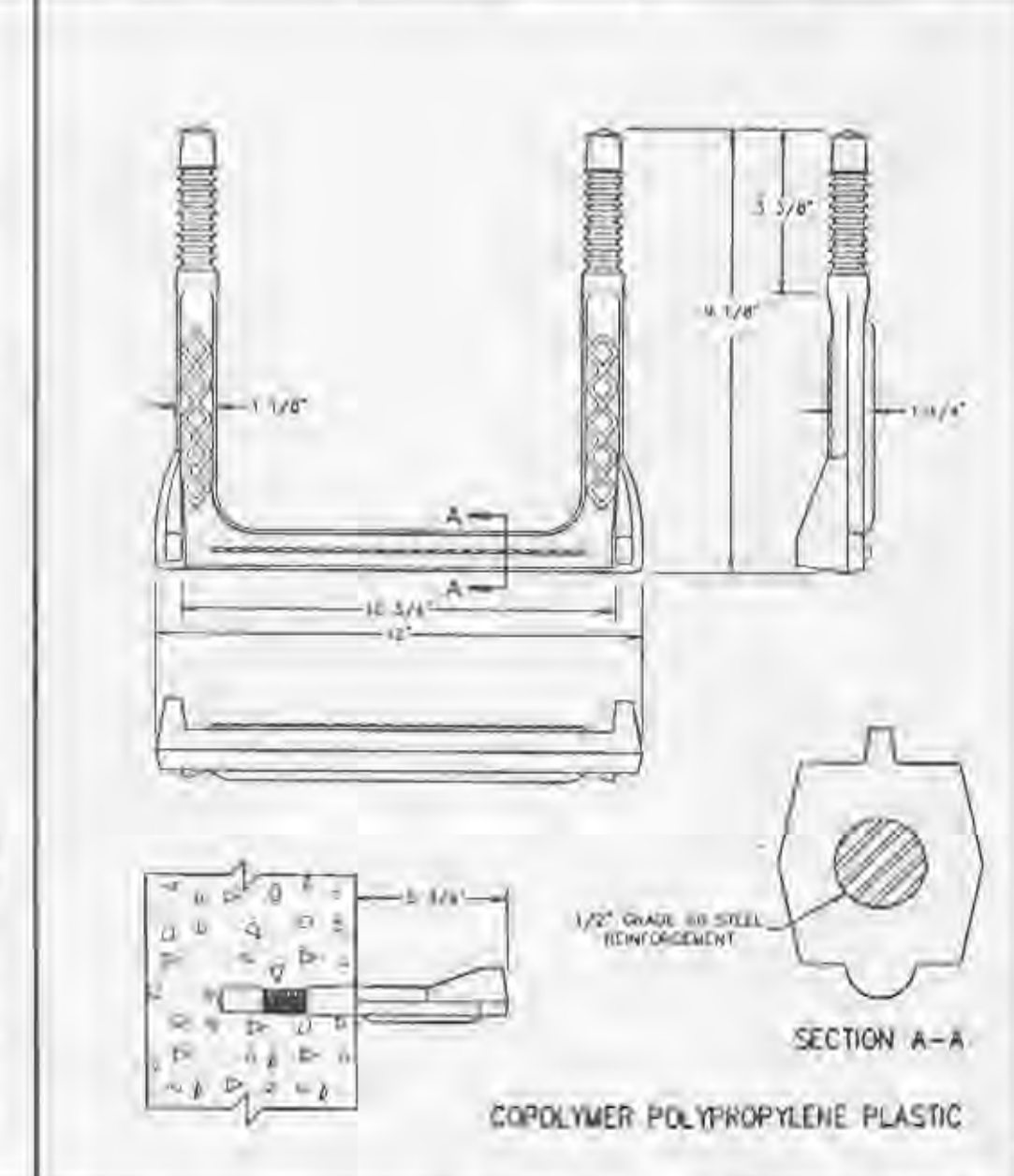
LOCKING DEVICE FOR TYPE 'M' LOCK TYPE MANHOLE COVER
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
 Dr. R.D.M. Cr. J.C.K. 1992 SHEET 51



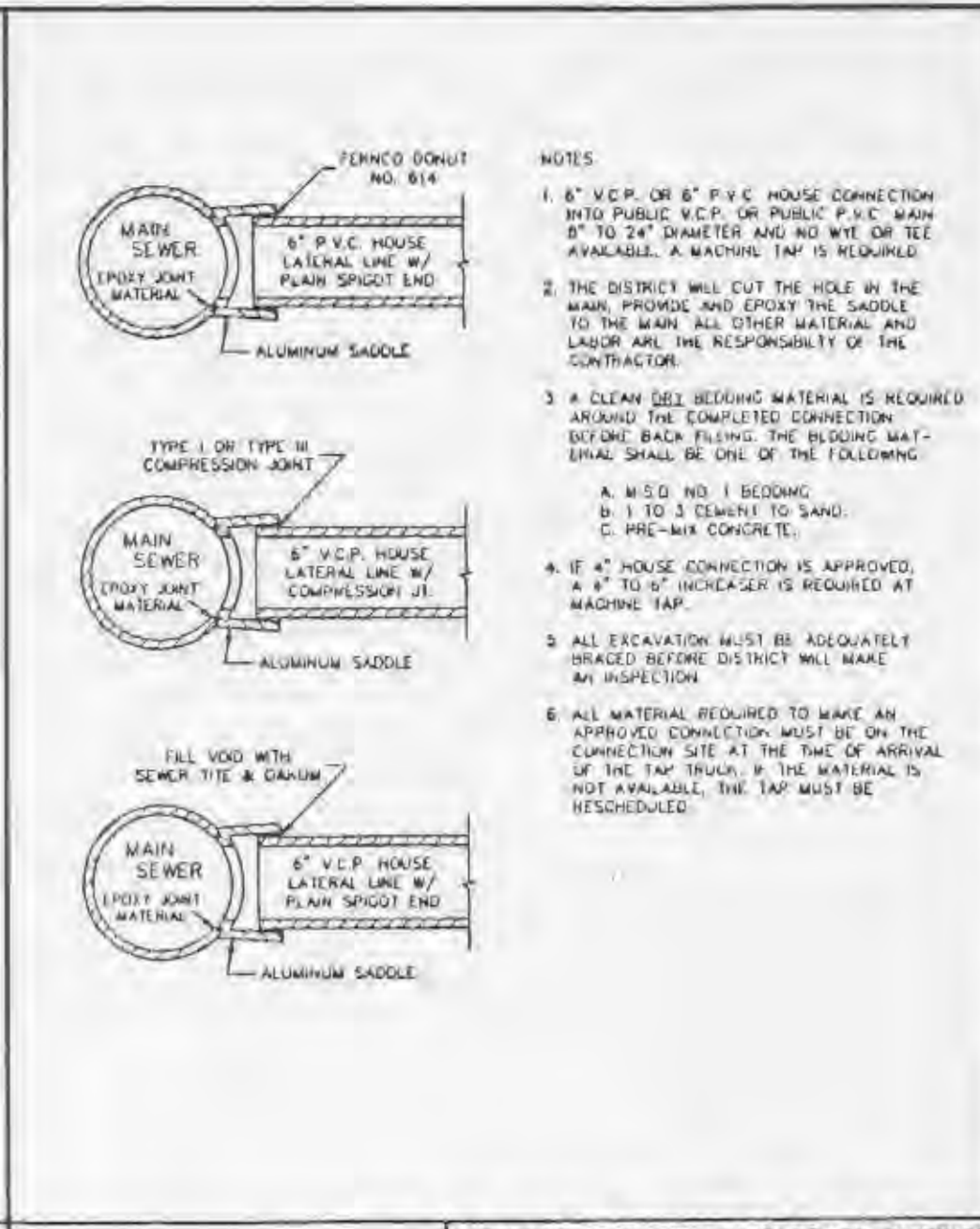
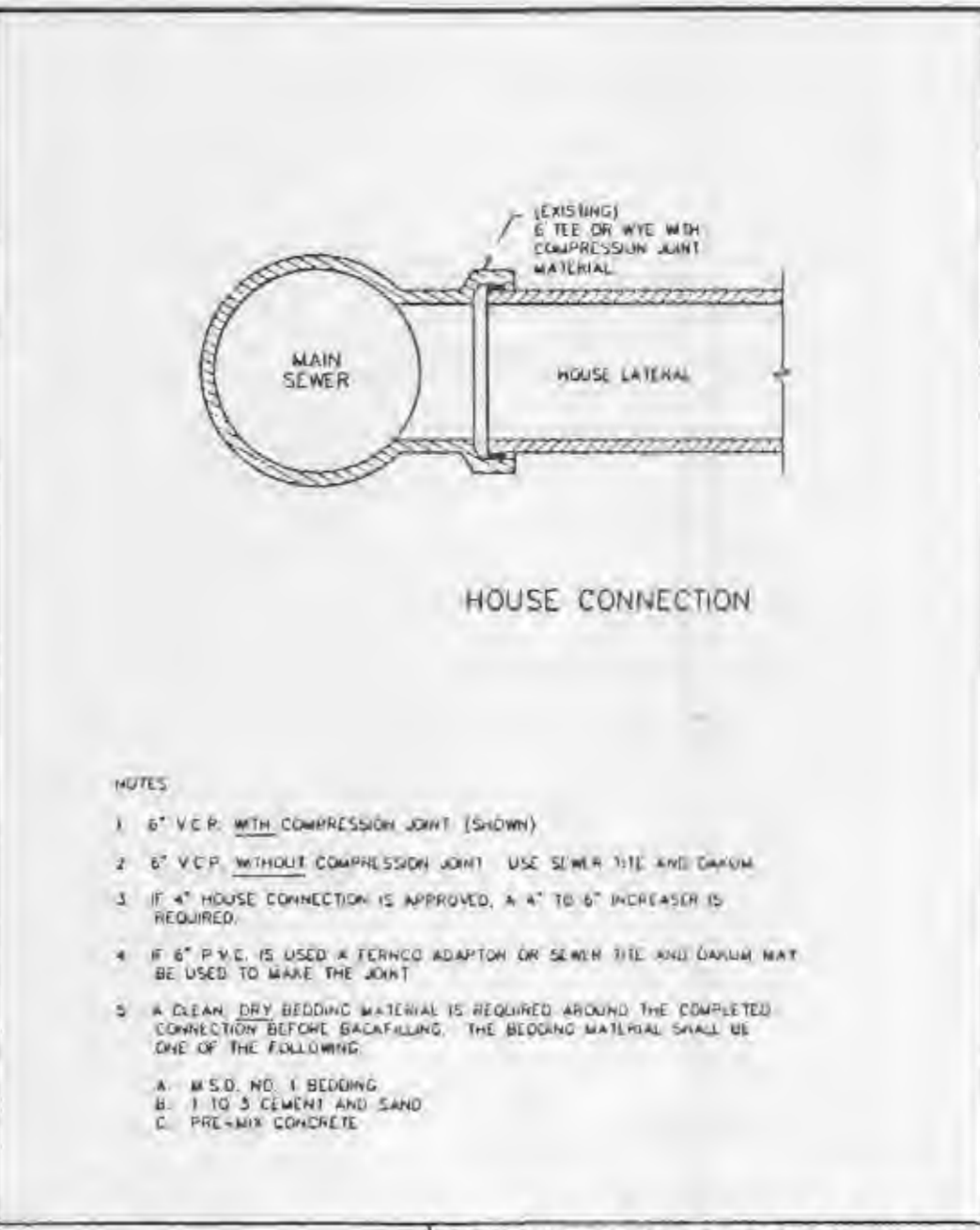
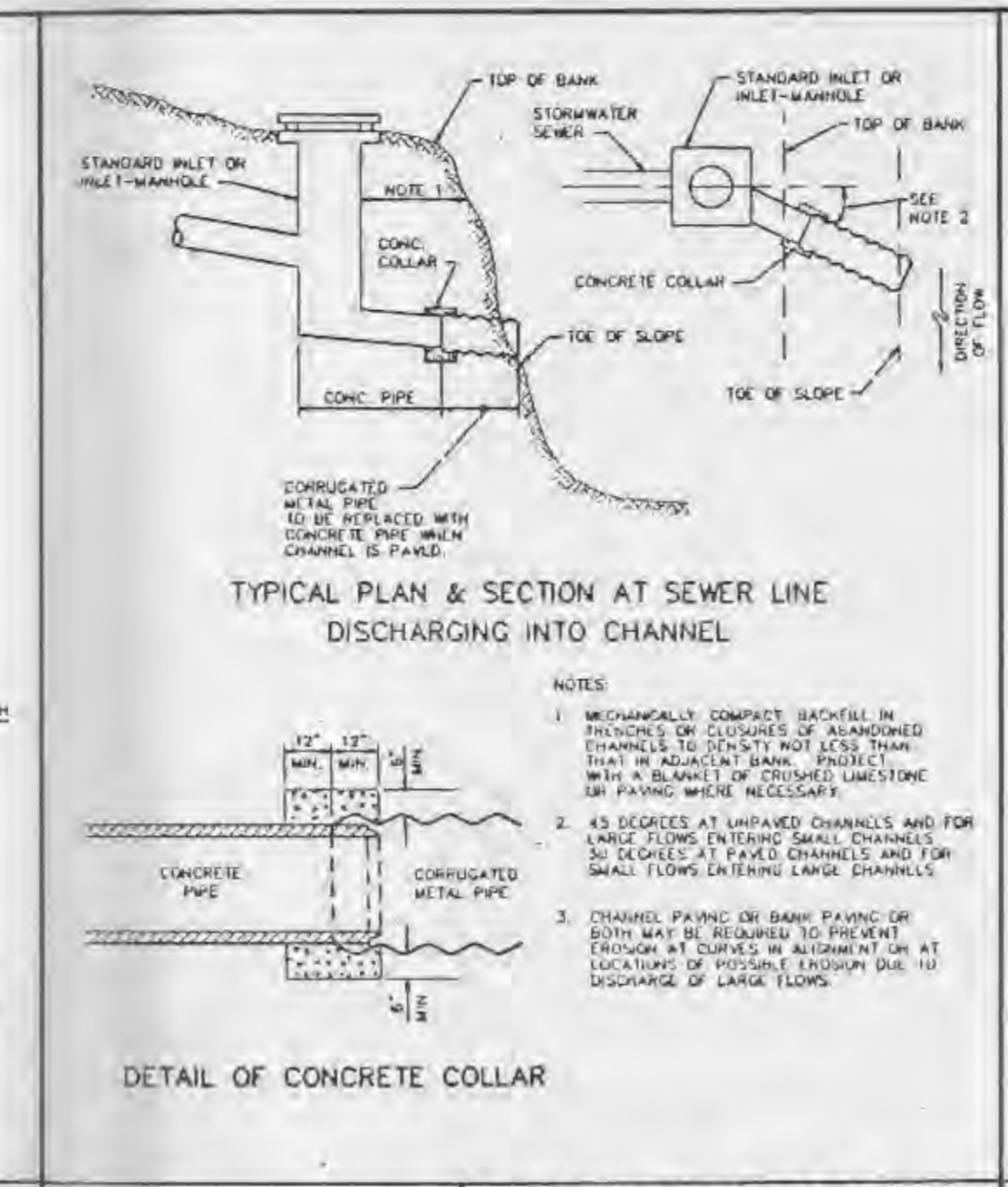
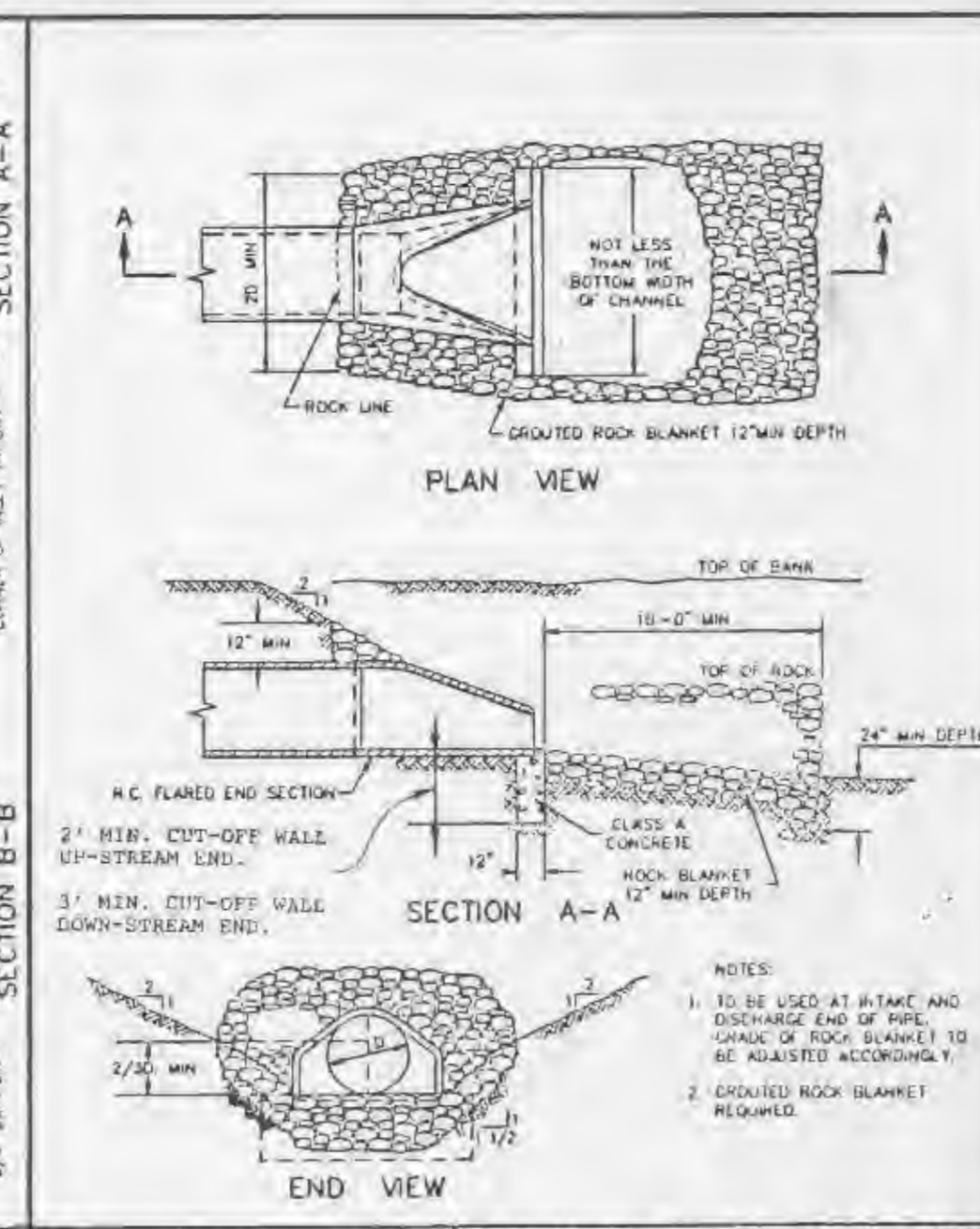
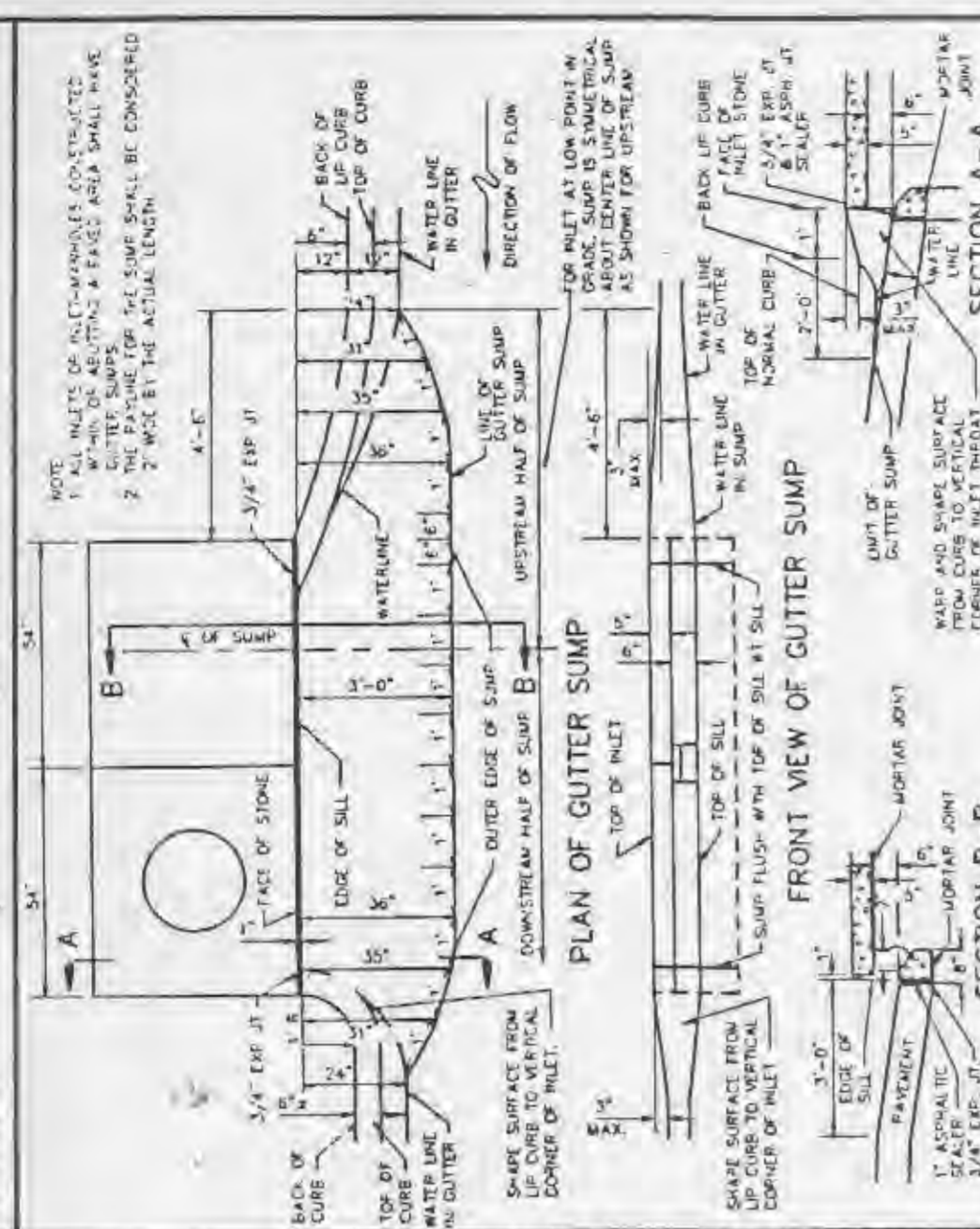
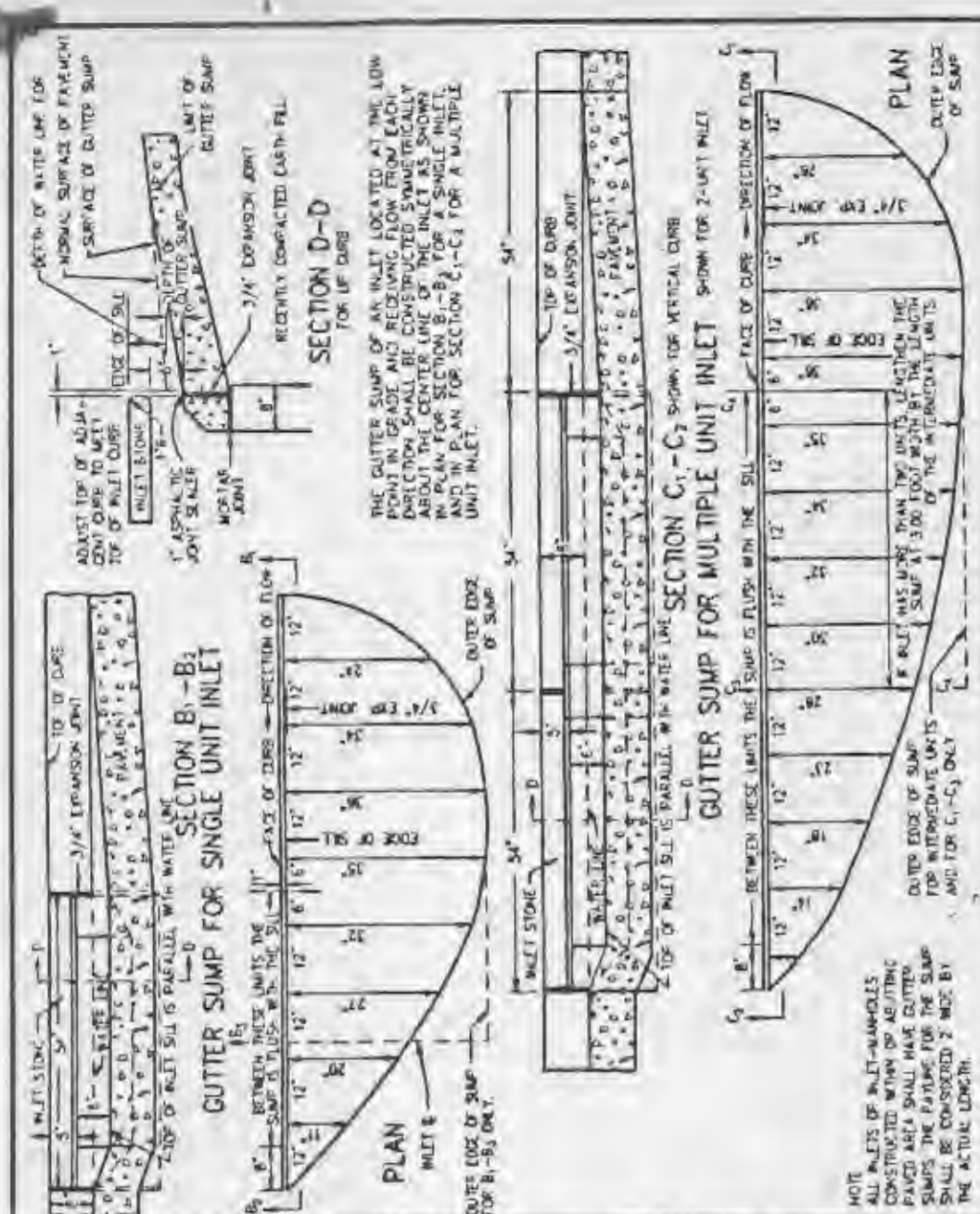
LOCKING DEVICE FOR TYPE 'M' LOCK TYPE MANHOLE COVER
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PS-1-B MANHOLE STEP INTO JOINT
 METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction
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MANHOLE STEP FOR PRECAST MANHOLE
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GUTTER SUMPS FOR VERTICAL CURB	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
	Dr. W.S.H. Ch. J.C.K.	1992	SHEET 55

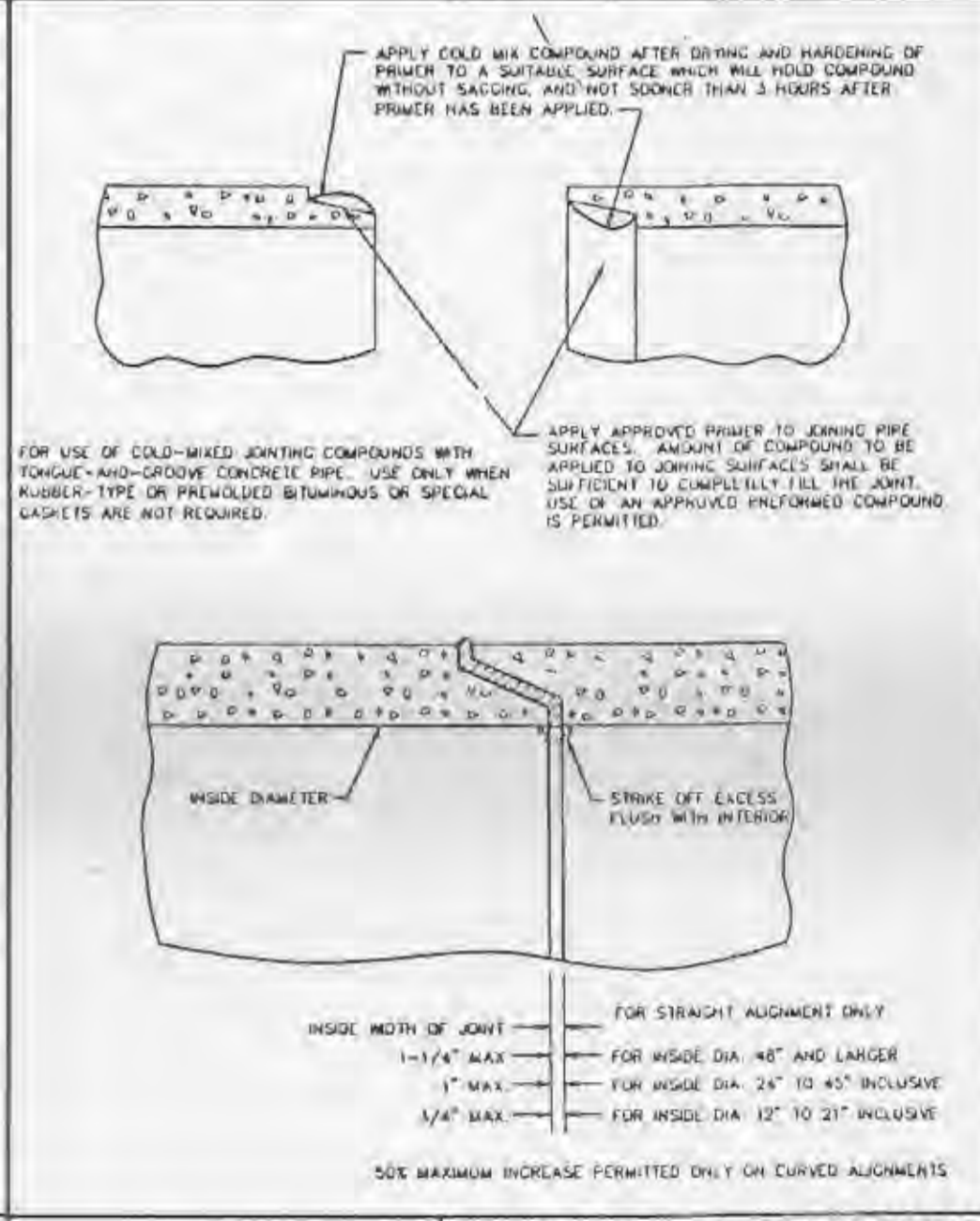
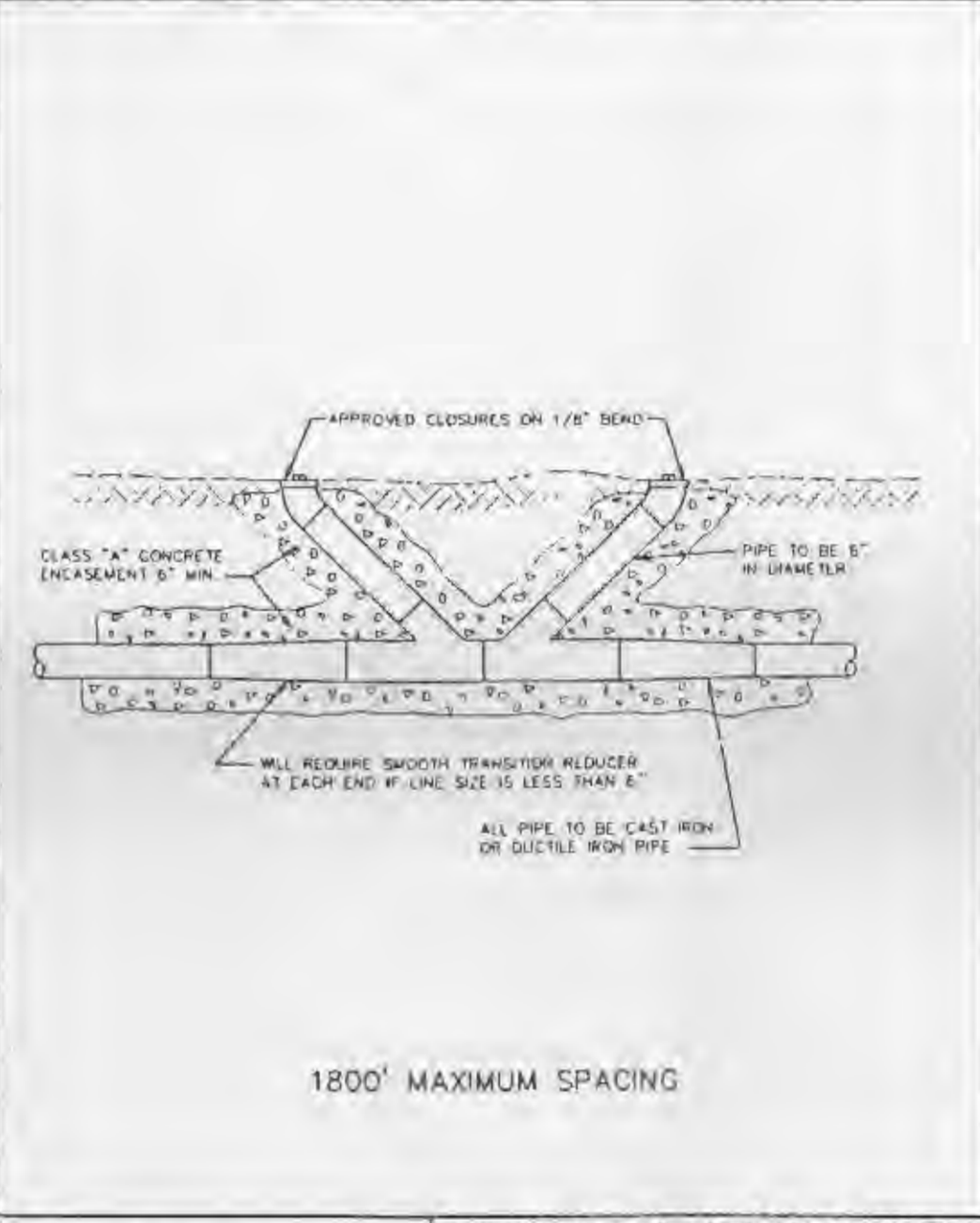
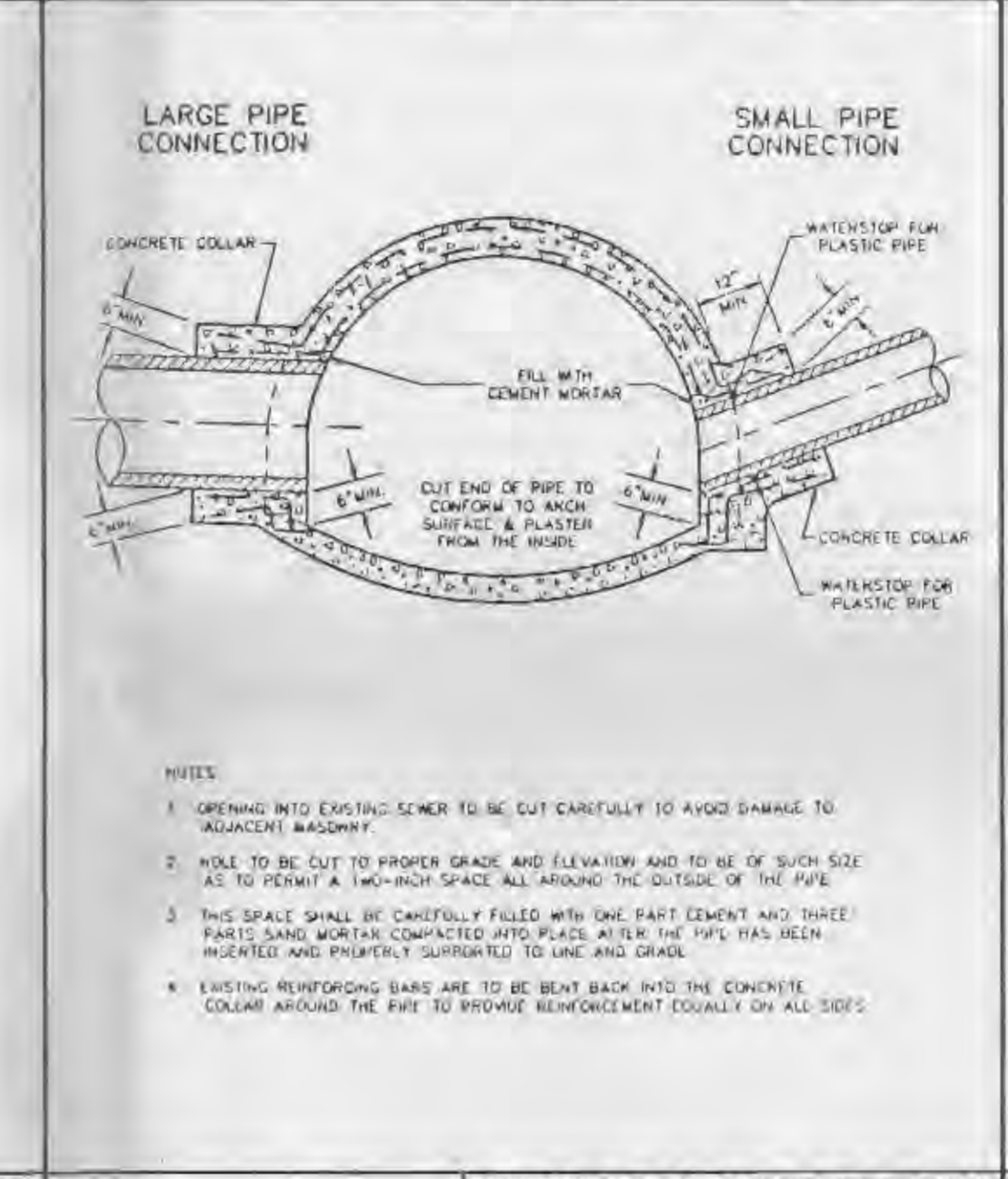
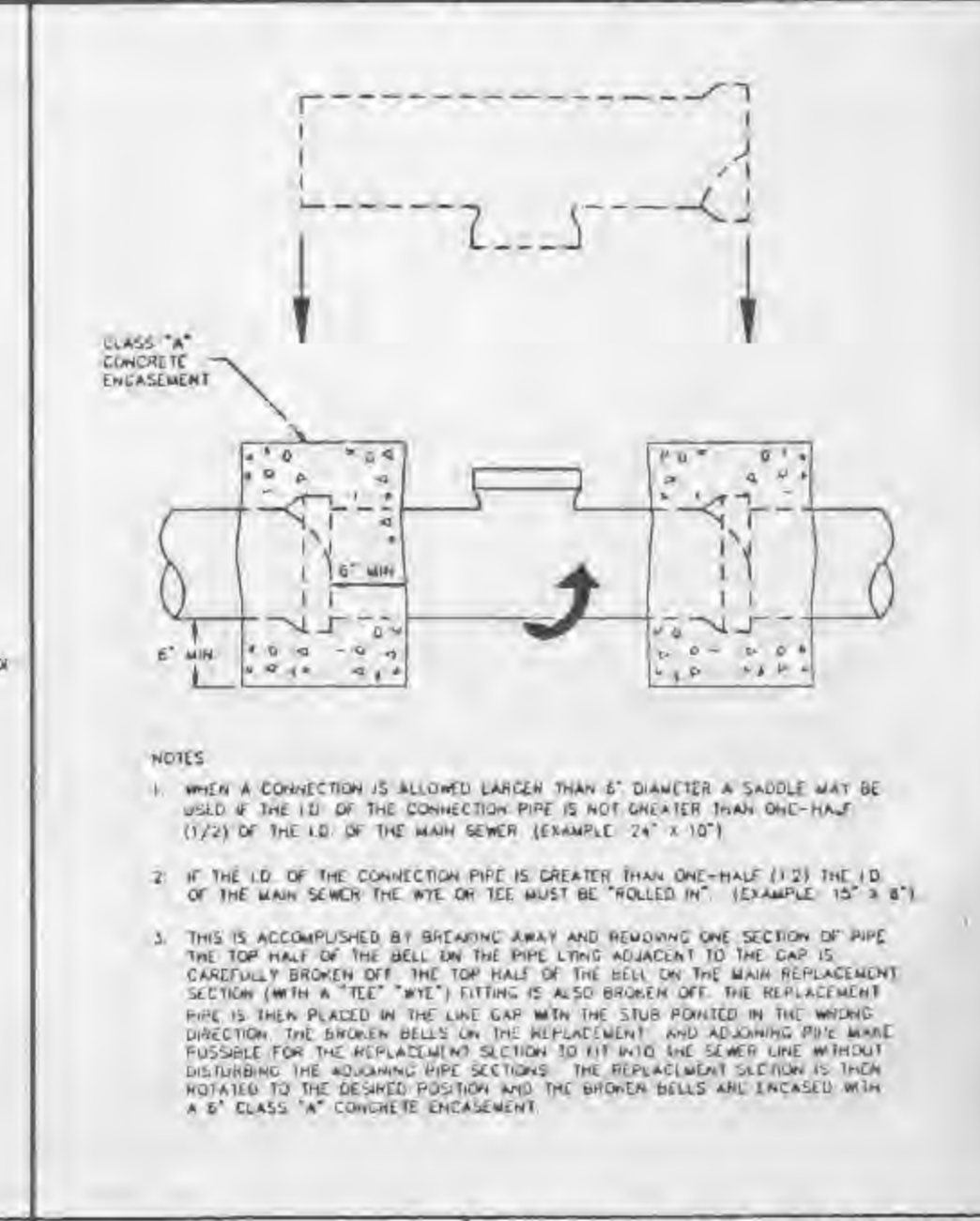
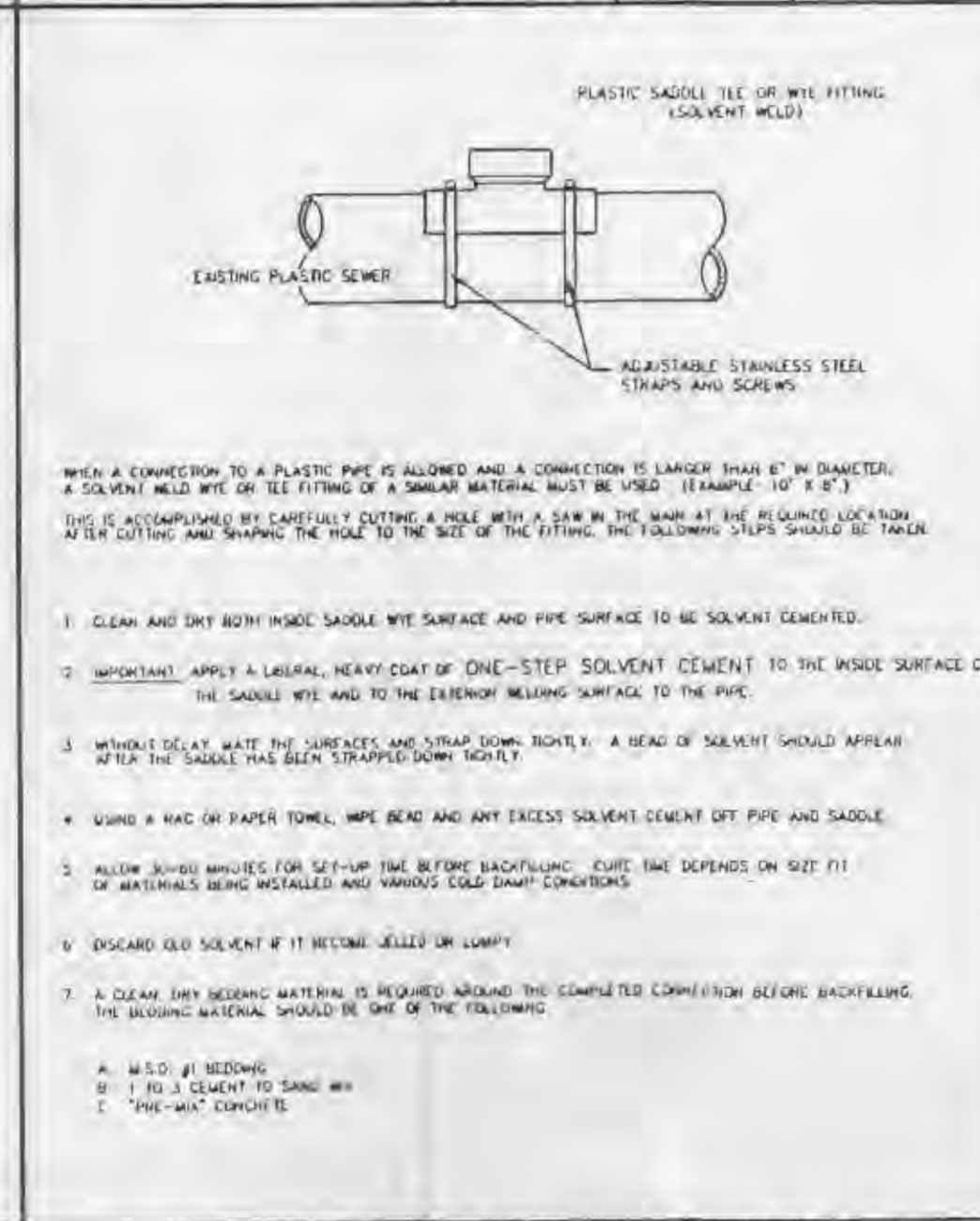
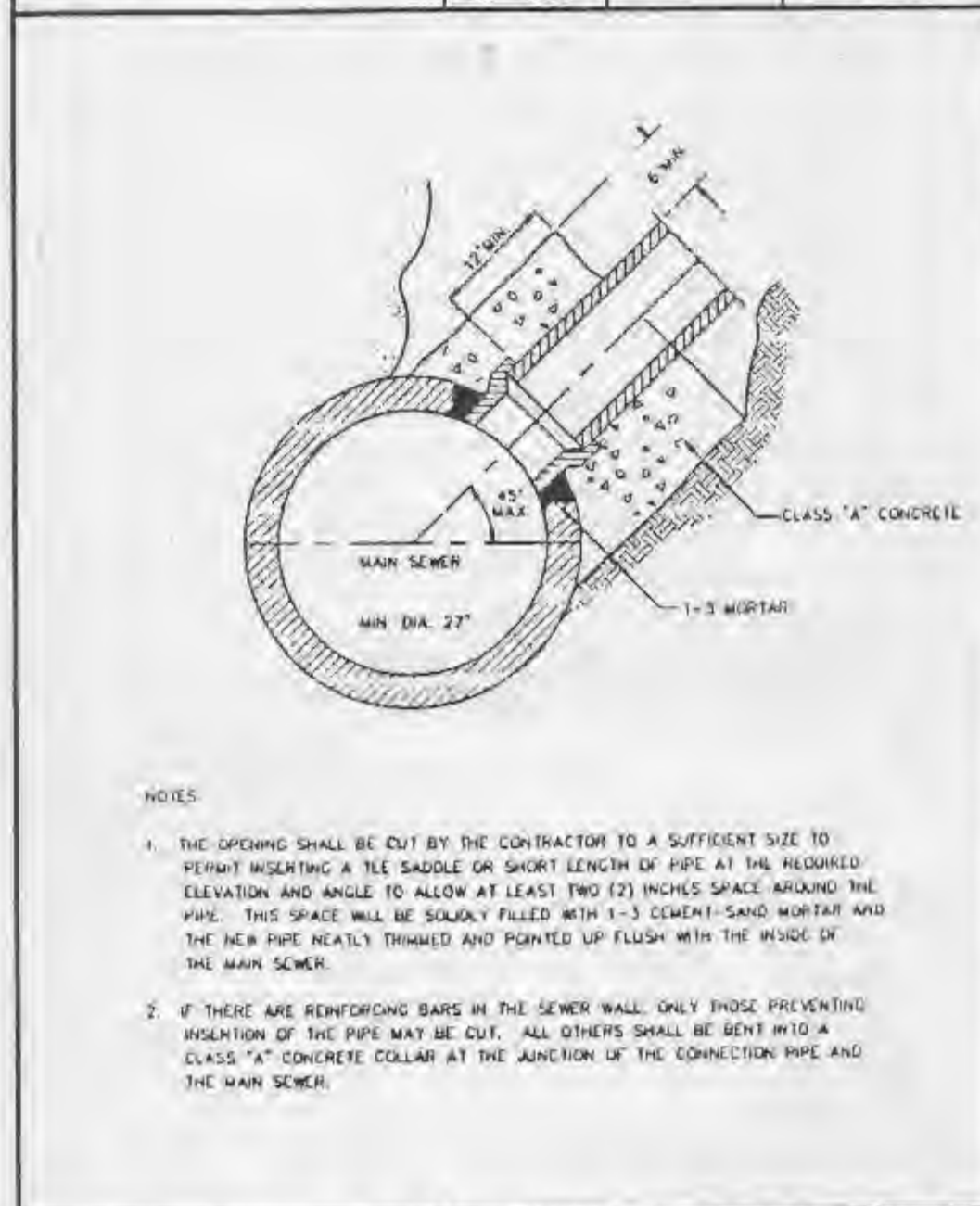
GUTTER SUMP FOR LIP CURB	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
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FLARED END SECTION	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
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HOUSE CONNECTION TO EXISTING TEE OR WYE	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
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MACHINE TAP	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
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HOUSE CONNECTIONS ALLOWED BY TEE SADDLE	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
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B" (& LARGER) CONNECTION TO PLASTIC MAIN	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
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"ROLL-IN" (FOR EXISTING CLAY OR CONCRETE PIPE)	METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction		
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