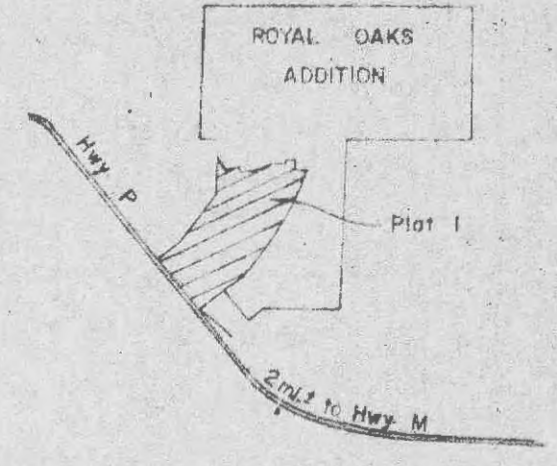


Scale 1" = 100'



GENERAL NOTES

- All materials and methods of construction for streets and storm sewers to meet the requirements of St. Charles County, Missouri.
- All water lines, appurtenances, wells, storage tanks, sanitary sewers and sewage treatment facilities to meet the requirements of St. Charles County, the Missouri State Division of Health and the Missouri Water Pollution Board.
- All concrete pipe under proposed pavement shall be reinforced concrete pipe and meet current A.S.T.M. Specification C-76 and shall be Class II unless otherwise noted on profiles. All other concrete pipe shall meet current A.S.T.M. Specification C-14 and shall be standard strength unless otherwise noted on profiles.
- All Vitrified Clay Pipe to meet current A.S.T.M. Specification C-219 and shall be extra strength unless otherwise noted on profiles.
- All jointing materials for vitrified clay pipe to meet current A.S.T.M. Specification C-42.
- Plastic Pipe if used as an alternate in lieu of Vitrified Clay Pipe for Sanitary Sewers shall be Arma Truss Pipe, or equivalent, meeting current A.S.T.M. Designation D-2000-57, and shall be jointed with either chemically molten or "C" Ring Couplings or their equivalent.
- All water pipe shall be Johns-Manville PVC pipe "SDR 26" with Ring-Tite couplings, or equivalent, conforming to A.S.T.M. tentative Specification D-244 for 200 pounds working pressure at 73 degrees F. All water lines shall be installed in accordance with the specifications with a minimum of 30" cover.
- All transit pipe if used as an alternate in lieu of Plastic pipe shall be Class 200 Johns-Manville Transit Asbestos Cement pipe with ring-tite couplings, or equivalent, and shall meet AWWA Standard C-400.
- Adapters, coupling and/or other accessories and materials for the PVC water pipe shall be those recommended for the pipe being used.
- All Gate Valves shall be AWWA approved for 200 pounds working pressure; Mueller Iron Body Double Disc Gate Valve with 2" square wrench nut, parallel seat-bronze seated, with recommended adapters and couplings for PVC Pipe, or equivalent.
- All valve boxes shall be Mueller Buffalo Type H-1035, or equivalent. Top shall be set even with finish grade.
- Thrust blocks shall consist of poured in place concrete. The design of concrete Thrust Blocks shall be as directed by the Engineer.
- Fire hydrants shall conform to AWWA Specification C-500-4; Mueller 2-way Standard AWWA type Fire Hydrant or 2-way improved AWWA type Hydrant.
- All water lines shall be laid at least 18" horizontally, from any sanitary sewer, storm sewer, or manhole. Whenever water lines must cross sanitary sewers, laterals or storm drains the water lines shall be laid at such an elevation that the bottom of the water line is 1" 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 17' horizontally, of any sewer or drain it crosses.
- All sewer structures to conform to the Standard Details shown in the current Metropolitan St. Louis Sewer District "Standard Construction Specification for Sewers and Drainage Facilities".
- Face of all inlets to be set 1 foot behind back of curb and 3 inches above top of curb.
- All trenches under proposed pavement shall be backfilled to subgrade elevation with approved granular materials and those in the shoulders shall be compacted to a density of 90% of maximum dry density as determined by the Modified AASHTO Compaction Test (current A.S.T.M. Specification D-1557). All other trenches shall be neatly mounded to allow for subsequent settlement unless otherwise noted.
- Entire Right of Way shall be graded and compacted prior to paving. All fill in the Right of Way and the upper 2 feet of subgrade in cut areas where deemed necessary shall be compacted to 90% of maximum dry density as determined by the Modified AASHTO Compaction Test (current A.S.T.M. Specification D-1557). Shoulders shall be backfilled, compacted and shaped to finish grade as soon as curbs are in place and sufficiently set to remove forms.
- Location and elevation of field inlets, manholes and culvert pipes to be adjusted as necessary in the field to meet existing field conditions. Sewer contractors to obtain verification and approval from Engineer after stake out and prior to construction.
- Plan Datum - Assumed Elevation Bench Mark Elevation 200.00 - Old Iron Pipe located at the most Northern corner of Lot 329.
- All fill under storm and sanitary lines constructed above original grade shall be compacted to 90% of maximum dry density as determined by the Modified AASHTO Compaction Test (current A.S.T.M. Specification D-1557) and verified by a Soils Engineer prior to installing pipe.
- Minimum cover over all sanitary sewer lines to be 30".



LEGEND

- Single Inlet
- Manhole
- Storm Sewer
- Sanitary Sewer
- W — Water Main
- ⊗ Gate Valve with Thrust Block
- ⊕ Fire Hydrant

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REVISIONS		
3	1/9/71	Revised Grades
2	12/7/70	Revised Entrance Detail per Mo. State Hwy. Dep.
1	1/19/70	Adopt Water System & General Revisions

**SIXTY EIGHT TWENTY INC.**  
7708 Delmar Blvd St. Louis, Mo. 63130

**ROYAL OAKS ADDITION PLAT 1**  
**IMPROVEMENT PLANS**



Design R.J.B. & D.L.H.  
Drawn E.A.S.  
Checked R.J.B.  
Date November 12, 1970  
Scale as Shown

**CLAYTON SURVEYING & ENGINEERING CO.**  
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