GENERAL NOTES

1. 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 and/or construction of improvements.
2. All standard curb inlets are to have front-of-inlet 2' (two feet) behind curb, within public right-of-way, unless otherwise noted.
3. ~~Storm sewers 18" diameter and smaller shall be A.S.T.M. C-14 unless otherwise shown on the plans.~~
4. Storm sewers 21" diameter and larger shall be A.S.T.M. C-76, ClassII minimum, unless otherwise shown on the plans.
5. **All storm sewer pipe in the right-of-way or easement shall be reinforced concrete pipe (A.S.T.M. C-76, Class III minimum).**
6. Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe AASHO, M36, aluminized or asphalt polymer coated.
7. 8" P.V.C. sanitary sewer pipe shall meet the following standards: A.S.T.M. D-3034 SDR35, 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.
8. All filled places, including under paved areas, under buildings, under proposed storm and sanitary sewer lines, and/or paved areas, shall be compacted to 90% of maximum density as determined by the "Modified AASHTO T-180 Compaction Test", (A.S.T.M. D1557). Test shall be verified by a soils engineer.
9. All trench backfills under paved areas shall be granular backfill, and water jetted. All other trench backfills may be earth material (free of large clods or stones) and shall be water jetted.
10. No slope shall be steeper than 3:1. All slopes shall be seeded and mulched.
11. Barricades will be constructed per the standard specifications as shown in the "Manual of Uniform Traffic Control Devices". End of roadway markers shall be mounted 4 feet above the pavement on two pound "U" channel sign posts. Each marker shall consist of an 18" diamond panel with red reflectors.
12. All construction and materials used shall conform to current City of O'Fallon Standards and Specifications.
13. Easements shall be provided for storm sewers, sanitary sewers, and all utilities on the record plat. See record plat for location size, and width of easements.
14. All water line construction shall conform to current *St. Charles Co. Water Dist. No.2* Standards and Specifications.
15. All sanitary sewer construction shall conform to current *Duckett Creek* Sewer District Standards and Specifications.
16. The Contractor shall prevent all storm/surface water, mud or construction debris from entering the existing sanitary sewer system.
17. Erosion control shall not be limited to what is shown on the plan. The contractor shall take whatever means necessary to prevent siltation and erosion from entering adjacent roadways, properties, and ditches. Such control might include channeling runoff into sediment basins, channeling runoff into areas where an extra row of straw bales are used. A silt fence might be considered, if necessary.
18. All construction and materials shall conform to O'Fallon Fire Protection District Standards.
19. The minimum vertical distance from the low point of the basement to the flowline of the sanitary sewer at the corresponding house connection shall not be less than two and one half feet (2 1/2') plus the diameter of the sanitary sewer.
20. The most stringent of the above requirements shall apply.
21. All streets and right-of-ways shown on these improvement plans will be dedicated to the City of O'Fallon for public use forever.
22. When grading operations are completed or suspended for more than 30 days, permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided according to the City of O'Fallon Specifications.
23. The contractor shall place all fire hydrants within (2') two feet of the street curb.
24. The contractor shall place the "steamer" outlet of the fire hydrant toward the street.
25. All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri D.N.R. Specification 10CSR-8.120 (7)(E).
26. Any wells and/or springs which may exist on this property should be located and sealed in a manner acceptable to the City of O'Fallon.
27. All existing trash and debris on-site must be removed and disposed of off-site.
28. 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.
29. Soft soils in the bottom and banks of any existing or former pond sites or tributaries 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 location.
30. Concrete Pipe Joints shall be M.S.D. Type "A" Approved Compression Joints and shall conform to the requirements of the Specification for Joints and Circular Concrete Sewer and Culvert Pipe, using flexible, watertight, rubber-type gaskets A.S.T.M. C-443 Band-Type. Gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.
31. All sewer tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
32. Gas, water, and other underground utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers including house laterals.
33. No area shall be cleared without permission of the developer.
34. All sanitary laterals shown on plan are to be constructed of 4 Inch P.V.C. pipe.
35. **Brick shall not be used on sanitary manholes.**
36. All grout for rip-rap shall be high slump ready-mix concrete.
37. The *Duckett Creek* Sewer District shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspections.
38. All PVC sanitary sewer pipe 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 springline of pipe to 6" above the top of pipe.
39. All pipes shall have positive drainage through manholes. No flat base structures are allowed.
40. All streets within this set of improvement plans shall be Publicly maintained.

SPECIFICATIONS

1. 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 unsuitable 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.
2. 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.
3. 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.
4. The Soils Engineer shall notify the Contractor of rejections 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.
5. All Areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted to at least 95 percent of the maximum density as determined by the Modified AASHTO T-1800 Compaction Test (ASTM-D1557). 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.
6. 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 content.
7. 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.
8. Fill placed within proposed street R.O.W. shall be compacted to 90% M.O.D Proctor and be 2% below to 5% above optimum moisture content.
9. Soft soil in the bottom and banks of any existing or former pond site should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right-of-way locations or on storm sewer locations.

The use of High Density Polyethylene Corrugated Pipe with smooth interior wall will be permitted as an acceptable alternative to R.C.P. outside of Public R/W. Pipe shall meet A.S.T.M. D-2321 A.A.S.H.T.O. M-294-921. Concrete Flared End Sections & Inlet Structures shall be required.

The sediment control plan should be implemented before grading begins. No graded area is to remain bare without being seeded and mulched. Also, when deemed necessary, positive steps should be exercised to prevent this soil from damaging adjacent property and silting up all storm drainage systems whether on or off site.

All low places whether on-site or off-site should be graded to allow drainage. This can be accomplished with temporary ditches. Any off-site drainage easements will be acquired before grading begins.

Water main must be Class 200, SDR 21 or "Ultra-Blue" PVC, installed with tracer tape and locator wire.

Fire hydrants must be 6 inch 3-way with auxiliary valve, Mueller "Centurion" or Clow "Eddy". Hydrants must be installed with the steamer connection facing the street.

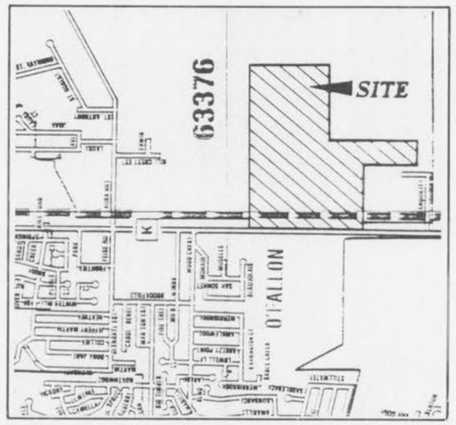
Public Water Supply District No. 2 shall be notified at least twenty-four (24) hours prior to the start of water line installation for inspection coordination.

Blow-off Hydrants and water meters shall not be located in sidewalks or driveways.

PLAT THREE

CHERRYWOOD PARC

A TRACT OF LAND BEING PART OF SECTION 4, TOWNSHIP 46 N., RANGE 3 E., CITY OF O'FALLON, ST. CHARLES CO., MO.



LOCATION MAP
N.T.S.

LEGEND

- BUILDING LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- 460' EXISTING CONTOUR
- 460' PROPOSED CONTOUR
- EXISTING WOOD AREA
- SILTATION CONTROL
- CREEK OR DITCH
- FL FLOWLINE
- GAS MAIN
- T TELEPHONE CABLE
- W WATER MAIN
- UE UNDERGROUND ELECTRIC
- OE OVERHEAD ELECTRIC
- STREET SIGN
- GENERAL SURFACE DRAINAGE
- LIGHT STANDARD
- CLEARING AND GRADING LIMITS
- STORM SEWER DESIGNATOR
- SANITARY MANHOLE DESIGNATOR

SHEET INDEX

PROJECT BENCHMARK
FIRE HYDRANT AT S.E. CORNER
OF DARDENNE ELEMENTARY SCHOOL
"M" IN MUELLER
U.S.G.S. DATUM ELEV. 574.74

DEVELOPMENT NOTES:

1. AREA OF TRACT — *95.01*
2. PRESENT ZONING — *R-4 SINGLE FAMILY RESIDENTIAL*
3. PROPOSED USE — *SINGLE FAMILY RESIDENTIAL SUBD.*
4. TOTAL LOTS PROPOSED — *323*
5. MINIMUM LOT AREA — *7,500 SQ.FT.*
6. SITE IS LOCATED IN OR IS SERVED BY THE FOLLOWING:

   WATER DISTRICT - ST.CHARLES CO. WATER DISTRICT NO. 2
   SANITARY - DUCKETT CRK. SEWER DISTRCT
   ELECTRIC - UNION ELECTRIC CO.
   GAS - ST. CHARLES GAS CO.
   TELEPHONE - G.T.E.

7. MINIMUM SETBACK REQUIREMENTS
   FRONT YARD = 25 FEET
   SIDE YARD = 6 FEET
   REAR YARD = 25 FEET
8. THE DEVELOPER SHALL COMPLY WITH CURRENT TREE PRESERVATION ORDINANCE NO. 1689 AND PROVIDE LANDSCAPING AS SET FORTH IN ARTICLE 23 OF THE CITY OF O'FALLON ZONING ORDINANCE.

ENGINEERS AUTHENTICATION

The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically excludes revisions after this date unless re-authenticated.

ST. CHARLES ENGINEERING AND SURVEYING

MICHAEL NEWELL MEINERS
MISSOURI PROFESSIONAL ENGINEER NUMBER E-22483

APPROVED
Todd Cunill
12/04/95

PREPARED FOR

OWEN & SONS DEVELOPMENT CO.
235 JUNGERMAN RD. SUITE 207
ST. PETERS, MO. 63376

Revised

Sheet 1 of 13

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St. Charles, Missouri 63301
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Order No. 94-306

Date 12/21/95