

**ENGINEERING REPORT**

***FOREST SOUTH***

**A Residential Subdivision in Nixa, Missouri**

**Carlson - Gardner Properties, Inc.**

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**Prepared By**

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# **FOREST SOUTH**

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## ***I. INTRODUCTION***

This report presents the results of an Engineering Study for a proposed residential development to be located in Nixa, Missouri. The report was authorized by Mr. Dolph Woodman in compliance with requirements established by the City of Nixa.

## ***II. SITE LOCATION / DESCRIPTION***

The proposed development will be a 40 acre 165 lot R-7 Cluster subdivision. The property is located in the SW 1/4 of the NE 1/4 of Section 26, T 27 N, R 22 W. Direct access will be provided via Rosedale Road on the south and Norton Road on the west. Highway 160 is approximately 1/4 mile east of the proposed development off of Rosedale Road.

## ***III. SITE TOPOGRAPHY***

The topography of Forest South varies from 0.5% slopes on the north and west ends to 7% slopes on the south and east ends. The land will be reshaped to provide adequate slopes for the lots and roads as specified in the City of Nixa's Land Development Code and Technical Specifications. Currently, the property is undeveloped and has existed primarily as pasture land. The highest elevation in the subdivision is approximately 1310 feet and the lowest elevation is 1240 feet with both elevations based on U.S.G.S. datum.

## ***IV. PROPOSED USE***

Currently the site is being developed into 165 residential (R7) lots. The lot sizes vary from 5250 s.f. to 15,000 s.f.. This is proposed as a Cluster subdivision and the appropriate amount of usable open space is being dedicated per the City of Nixa's Land Development Code. There will be 3.27 acres of open space provided and only 1.37 acres of open space is required. Both Preliminary and Final Plats will be placed on file with the City of Nixa. The final plat will be recorded at the Christian County Courthouse. Water, sewer, gas, electric, streets and stormwater improvements will be provided by the developer to serve all lots within the proposed subdivision.

## ***V. STORMWATER RUNOFF AND DETENTION***

A stormwater detention basin designed by the SCS method will be constructed in the southeast portion of the property. This basin will limit the peak post developed outflows to that of the peak predeveloped outflows. A stormwater conveyance system consisting of the

streets, curb inlets, and storm sewer pipe will be installed per the City of Nixa's Stormwater Management Plan's guidelines and will safely convey all the stormwater into the detention basin.

## ***VI. UTILITY SUPPLIERS***

### **A. WATER**

Water service for the proposed subdivision will be supplied by the City of Nixa. This development will utilize an existing 8" waterline which was ended at the southeast corner of Forest Park Phase V. Fire hydrants and gate valves will be located in accordance with the City of Nixa's Technical Specifications.

### **B. GAS**

Gas service for the proposed development will be supplied by Missouri Gas Energy. Existing gas mains within Forest Park will be extended into the proposed development. Proposed gas lines will be constructed in accordance to MGE requirements.

### **C. ELECTRICAL**

Electrical service for the proposed subdivision will be supplied by the City of Nixa. The electric lines will be extended from Forest Park to this proposed site. Electrical easements within the subdivision will be provided in accordance with City requirements.

### **D. ROADWAY CONFORMITY**

Proposed streets will be constructed to serve all lots in the development. The street construction will conform to the latest edition of the "City of Nixa Technical Specifications". A fifty-foot right-of-way will be provided for all the roadways within the development. All streets will be 31' from back of curb to back of curb with 2" of surface asphalt mix over 4" of bituminous base over 4" of crushed stone base.

### **E. WASTEWATER DISPOSAL**

Sanitary Sewer service for the proposed subdivision will be supplied by the City of Nixa. This development will be served by a proposed lift station located in the southeast portion of the site next to the detention basin. This lift station will pump the wastewater via a PVC force main to an existing manhole on the eastern end of Forest Park. The wastewater will then be carried by an existing 12" gravity trunk sewer to the City of Nixa's waste water treatment plant. An 8" on-site sanitary sewer collection system is to be constructed for the proposed subdivision with manholes provided as indicated by accepted engineering practice. All sewerline construction will be in accordance with the City of Nixa's construction standards.

## ***VII. SUMMARY***

Due to the availability and adequacy of all necessary utilities, and with the proposed construction of both onsite and offsite utilities and streets, the proposed subdivision should not cause the development of any undesirable conditions.