

REQUEST FOR BOARD ACTION

HENDERSON COUNTY BOARD OF COMMISSIONERS

MEETING DATE: June 5, 2006

SUBJECT: Water Line Extension

ATTACHMENTS: Eagle Pointe

Project Summary
Engineer's Report
County's Review Sheet

SUMMARY OF REQUEST:

The City of Hendersonville has requested County comments on a proposed water line extension project to serve Eagle Pointe.

A City of Hendersonville Project Summary sheet, with backup documents and a County review sheet with staff comments are attached for Board review and action.

COUNTY MANAGER'S COMMENTS:

Recommend that the Board take action to support the referenced water line extension.

City of Hendersonville - Project Summary
Water Line Extension
Eagle Pointe

Date: May 4, 2006

This is a project to extend existing water lines to provide water service to a proposed single-family residential development consisting of 52 lots. This project is located on the east side of Airport Road and adjacent to Blue Ridge Community College to the Southeast.

This project is under the reviewing jurisdiction of: **Henderson County.**

This project requires approximately **3,310** linear feet of water line sized as following:

| Description: | Approximate Length |
|-----------------|--------------------|
| 8" DIP CL350 | 2,410 lf |
| 2" PVC SDR 13.5 | 900 lf |

Fire Protection will be provided by the installation of three (3) fire hydrants.

The entire cost of the proposed water line extension is to be paid for by Eagle Rock Properties, Inc., Etowah, NC

Water pressure and flow in this area is as follows:

| | |
|------------------|---------|
| Static Pressure: | 95 PSI |
| Residual: | 70 PSI |
| Flow: | 800 GPM |

Based on the above information, the Water & Sewer department is capable of supporting the additional connections and recommends approval of the project contingent upon approval of the final plans and specifications from the Water & Sewer Department.

A motion is needed to approve and accept this project. Suggest wording is as follows:

I move to accept this water line extension project and to authorize the City manager to execute the water line extension agreement on behalf of the City.

| | | | |
|------------------------------|--|--------------------------------------|--------------|
| Water & Sewer Department: | <input checked="" type="checkbox"/> Approved | <input type="checkbox"/> Disapproved | Date: 5-3-06 |
| Hendersonville City Council: | <input type="checkbox"/> Approved | <input type="checkbox"/> Disapproved | Date: _____ |

The undersigned represents this utility extension line request has been evaluated in light of the adopted land use plan for the municipality or Henderson County. In the absence of such a plan for the general area to be served, this extension has been evaluated in terms of its future impact on existing land uses.
Reviewing Jurisdiction: Henderson County

Signing Official: _____

Date of Review: _____

☐ Approved ☐ Disapproved

Narrative Comments Provided: ☐ Yes ☐ No

Laughter, Austin and Associates, P.A.
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131 FOURTH AVENUE EAST
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PROJECT NARRATIVE

Project : **W A T E R S Y S T E M I M P R O V E M E N T S**
to serve
EAGLE POINTE SUBDIVISION

Project Number: **LAA05-331**

Owner/Developer: **Eagle Rock Properties, Inc.**

Address: 6750 Brevard Road, Joshua Park, Suite A
Etowah, North Carolina 28729

Telephone: (828) 890-8455
James Black, Partner
R. Norman Stoehr, President

2.7.06

Description:

This proposed water system extension project is being planned to serve the Eagle Pointe Subdivision. Eagle Pointe is a proposed single-family residential subdivision containing 52 lots situated on the East side of Airport Road NCSR1779 and adjacent to Blue Ridge Community College to the Southeast. This project will require an estimated water flow of 400 gallons per connection which requires a total flow demand of 20,800 gallons per day. This extension will provide residential services and fire flow as detailed in the plans for the project. The nearest source of municipal water is located off-site along College Drive.

The improvements will consist of the following: A proposed connection to the City of Hendersonville's distribution system shall be made on College Drive (SR1920) in the vicinity of an existing fire hydrant. The point of connection at an 8"x8"x6" hydrant tee, is on the South side of College Drive on the opposite side of the street from the fire hydrant. Connection shall be made at the hydrant tee or an 8" gate valve at the tee. The proposed water line extension shall extend from the point of connection along the south side of College Drive with approximately 750 feet of 6" ANSI/AWWA C151 A21.5 CL350 DIP where it will be bored and jacked under College Drive and extend Northward approximately 435 feet across private property owned by Blue Ridge Technical College Foundation Inc. to the Southwest border of Eagle Pointe Subdivision. From this point, the

PROJECT NARRATIVE, continued

City of Hendersonville
Water Main Extension to serve
EAGLE POINTE SUBDIVISION
located on Airport Road

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proposed 6-inch water line will be extended along Eagle Creek Trail with approximately 1,180 feet of 6" C151 DIP and end at the cul-de-sac. Approximately 575 feet of 2" SDR13.5 PC315 PVC will be extended along Eagle Pointe Way, Eagle Crest Drive and the Western-end of Eagle Creek Trail. Two fire hydrants will be provided along Eagle Creek Trail as noted on the plans. The 6-inch waterline along Eagle Creek Trail will be plugged at the northernmost cul-de-sac with a 6" gate valve for possibility of future connection and extension by the City.

In summary, a total of approximately 2,365 feet of 6" ANSI/AWWA A21.5 CL350 DIP along with all related appurtenances will be installed along off-site route and on-site. In addition, a total of approximately 575 feet of 2" SDR13.5 CL315 PVC along with all related appurtenances will be installed on-site.

In General;

The installation of this Water System Extension is expected to begin shortly after all approvals and permits have been issued and "authorization to start" has been given by the City of Hendersonville Water & Sewer Department and the Project Engineer. The utility contractor for this project will be determined at a later date and the W/S Dept. will be notified along with a "request to start construction".

These water system improvements shall be installed in accordance with all local and state regulations by a N.C. licensed utility contractor to be selected by the Owner/Developer and approved by the Project Engineer.

Laughter, Austin and Associates, P.A. (Consulting Engineers) shall provide installation monitoring services during the construction and installation process. The Engineer will provide 'completion certification' and/or 'asbuilt' record drawings (if applicable) when the job is completed as required by the NC Department of Environmental Health and the City of Hendersonville.

ENGINEER'S REPORT

WATER MAIN EXTENSION

To Serve

EAGLE POINTE SUBDIVISION

Henderson County
HENDERSONVILLE
NORTH CAROLINA

Project Number: LAA05-331
Engineer's Report No.: LAA05331



FEB 07 2006

Prepared By:

LAUGHTER, AUSTIN AND ASSOCIATES, P.A.
131 Fourth Avenue East
Hendersonville, North Carolina 28792

February 7, 2006

ENGINEER'S REPORT – LAA05331
EAGLE POINTE SUBDIVISION
WATER MAIN EXTENSION

1. NAME AND ADDRESS OF APPLICANT

City Of Hendersonville Water & Sewer Department
P.O. Box 1760
Hendersonville, NC 28793

2. PROJECT DESCRIPTION & INTRODUCTION

This proposed water system extension project is located on the east side of NCSR1779 (Airport Road) between US176 and I-26 on the southeast side of Hendersonville in Henderson County. The proposed development is a 52 lot single-family residential subdivision being owned and developed by Eagle Rock Properties, Inc.

A proposed water main extension will be extended from an existing 8-inch water line located on the south side of NCSR1920 (College Drive) at a stub-out from a hydrant tee. A new 6-inch water line will extend west along the south side of NCSR1920 approximately 750 feet to a point where it will be bored and jacked under NCSR1920 and extend northward across private property to the southwest corner of Eagle Pointe subdivision. This extension will provide residential services and fire flow as detailed in the plans for the project. A detailed description of the water main extension is more fully described as follows:

The improvements will consist of the following: A proposed connection to the City of Hendersonville's distribution system shall be made on College Drive (SR1920) in the vicinity of an existing fire hydrant. The point of connection at an 8"x8"x6" hydrant tee, is on the South side of College Drive on the opposite side of the street from the fire hydrant. Connection shall be made at the hydrant tee or an 8" gate valve at the tee. The proposed water line extension shall extend from the point of connection along the south side of College Drive with approximately 750 feet of 6" ANSI/AWWA C151 A21.5 CL350 DIP where it will be bored and jacked under College Drive and extend Northward approximately 435 feet across private property owned by Blue Ridge Technical College Foundation Inc. to the Southwest border of Eagle Pointe Subdivision. From this point, the proposed 6-inch water line will be extended along Eagle Creek Trail with approximately 1,180 feet of 6" C151 DIP and end at the cul-de-sac. Approximately 575 feet of 2" SDR13.5 PC315 PVC will be extended along Eagle Pointe Way, Eagle Crest Drive and the Western-end of Eagle Creek Trail. Two fire hydrants will be provided along Eagle Creek Trail as noted on the plans. The 6-inch waterline along Eagle Creek Trail will be plugged at the northernmost cul-de-sac with a 6" gate valve for possibility of future connection and extension by the City.

This water main extension and all other appurtenances necessary to provide adequate water distribution shall be installed.

3. DESCRIPTION OF FUTURE SERVICE AREAS

No future connections or extensions to this line are being considered at this time. All existing lines are adequate for serving surrounding areas.

4. PRESENT AND ANTICIPATED WATER DEMANDS

Present demands for water service are for Eagle Pointe Subdivision only. Anticipated and estimated flow requirements will be 20,800 GPD (52 lots X 400 gpd). Additional connections will not be applicable to this water main extension project.

5. CHARACTER OF THE SOURCE SUPPLY

The water supply for this project is from the City of Hendersonville Water Treatment Plant.

6. AGREEMENTS TO PURCHASE WATER

The City of Hendersonville has approved the water system extension for this project and agrees to provide water service as provided by the plans and specifications. A Water Line Extension Agreement will be signed between the City and the Developer/Owner.

7. USEFUL LIFE OF FACILITIES

The useful life of the water lines for this project is expected to be 50 years minimum.

8. MAXIMUM DAILY TREATED WATER SUPPLY AND MAXIMUM DAILY DEMAND

The maximum daily treated water supply for the City of Hendersonville water plant is 12MGD. The average demand is 7.2 MGD, with a daily peak (for the year) of 9.5 MGD

9. IDENTIFICATION & DESCRIPTION OF THE SERVICE AREA

The service area for this project is dedicated to the proposed Eagle Pointe Subdivision for potable water distribution and supply.

10. CONSIDERATION OF ALTERNATIVES TO CONSTRUCTING A NEW WATER SYSTEM.

Not applicable

11. POPULATION RECORDS AND TRENDS

According to the Office of State Planning, The population of the City of Hendersonville in 1998 was 9,538 persons. The growth rate from 1990 to 1998 was 30.9%.

12. PRESENT AND FUTURE YIELD FROM THE SOURCES OF SUPPLY

The City of Hendersonville Water Plant currently draws water from the Mills River. The present and future yield of the source of supply is expected to be adequate for the City of Hendersonville's needs.

13. PROPOSED WATER TREATMENT PROCESSES

Not Applicable

14. DESIGN BASIS

The design basis for this project is to provide adequate flow @ 20 psi minimum at all individual service taps.

15. PRIORITIZED LIST OF INFRASTRUCTURE IMPROVEMENTS

Not Applicable

**HENDERSON COUNTY
REVIEW OF CITY WATER LINE EXTENSIONS**

Project Name: Eagle Pointe
Size of Water Line (Main & Distribution Pipe Size): 8" DIP CL 350 - 2,410 lf.; 2" PVC SDR 3.5 - 900 lf.
County Staff Reviewing Extension: Rocky Hyder, Fire Marshal; Matt Card, Subdivision Admin.; Rodney Tucker, Project Mgr.

Has the project been reviewed under the **County Subdivision Ordinance**? ☒ Yes ☐ No ☐ N/A

Date reviewed: January 17, 2006
Action: Approved with conditions
Conditions: Final plat requirements, road standard conditions, water and sewer approvals and development plan revisions.
Comments:

Has the project been reviewed under the **County Manufactured Park Ordinance**? ☐ Yes ☐ No ☒ N/A

Date reviewed: _____
Action: _____
Conditions: _____
Comments:

Has the project been reviewed under the **County Zoning Ordinance (i.e. Special-Use or Conditional-Use Permit)**? ☐ Yes ☐ No ☒ N/A

Date reviewed: _____
Action: _____
Conditions: _____
Comments:

Is the project subject to **any other County Land Use Ordinance**? ☐ Yes ☒ No ☐ N/A

If yes, explain:

Does the project conform with the **2020 Henderson County Comprehensive Plan (CCP)**? ☒ Yes ☐ No ☐ N/A

This water line extension project is consistent with CCP's Urban Area use and proposed activity.

Does the project have **adequate hydrant location and spacing**? ☒ Yes ☐ No ☐ N/A

Description of **hydrant type and thread**: Mueller Centurion - National Standard Thread

Does the estimated flow rate (gpm) meet **fire protection standards**? Meets standard for structure spacing of more than thirty feet. ☒ Yes ☐ No ☐ N/A

BOARD OF COMMISSIONERS APPROVAL

- ☐ Approved
☐ Not Approved
☐ Conditional Approval (See Comments)

Date of Board Review: _____
Comments: _____