

**City of Hendersonville - Project Summary
Water Line Extension
Preserves on Willow**

Date: March 23, 2006

This is a project to extend existing water lines to provide water service to a proposed major sub-division development. This project covers a total of ninety (90 acres) and consists of forty-four units. This project is located on the south side of Willow Mountain Road.

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

This project requires approximately **6,600** linear feet of water line sized as following:

Description:	Approximate Length
8" DIP CL350	4,300'
6" DIP CL350	2,300'

Fire Protection will be provided by the installation of twelve (12) fire hydrants.

The entire cost of the proposed water line extension is to be paid for by Willow Road LLC of Delray Beach, Florida.

Water pressure and flow in this area is as follows:

Static Pressure: 156 PSI
Residual: 112 PSI
Flow: 1000 + 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: 8-18-06
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: _____	
<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved	
Narrative Comments Provided: <input type="checkbox"/> Yes <input type="checkbox"/> No	

.0307 ENGINEER'S REPORT , WATER SYSTEM MANAGEMENT PLAN AND OTHER PLANS

(b) Engineer's Report. The Engineer's Report shall contain a system description for the entire project, including scheduled phase development and the following information, where applicable:

1. Description of any existing water system related to this project;

This project involves the construction of approximately 4,300 LF of 8-inch DIP and 2300 LF of 6-inch DIP water service utilities to supply a 44 lot single family home subdivision. The subdivision has one main road, Monarch Drive, which terminates in a cul-de-sac. A second cul-de-sac, Long Trail Road has the second section of 8-inch line which is proposed to tie to the existing 8-inch line on Willow Mountain Road. The other cul-de-sacs are served by 6-inch DIP to provide fire flow. The development is located southwest of the City of Hendersonville along Willow Mountain Road near Little Willow Circle and Indian Cave Road. The water line will be privately constructed but the ownership, once commissioned, will be the City of Hendersonville.

2. Identification of the municipality, community, area, or facility to be served by the proposed water system;

This project will extend the City of Hendersonville's water supply into the proposed Preserve on Willow subdivision. Forty-four residential customers will be added to the City's water supply customer base.

3. The name and address of the applicant;

Civic Address

City of Hendersonville
145 Fifth Ave. E.
Hendersonville, NC
28793

Mailing Address

City of Hendersonville
PO Box 1760
Hendersonville, NC
28793-1760

4. A description of the nature of the establishments and of the area to be served by the proposed water system;

The proposed project involves the construction of 44 single family homes on lots ranging from 0.9 to 3.6 acres.

5. A description of the future service areas of the public water system for 5, 10, 15 and 20 years;

This is a single dead end waterline installed to provide water service to 44 single family homes. Given the lot layout, the local topography and surrounding development it is unlikely that any future development will be served with this water line. It is anticipated the development will be built out within a two to four year period of time.

6. Consideration of alternative plans for meeting the water supply requirements of the area, including, for new systems, obtaining water service from an existing system;

There are no reasonable alternatives to supply the required water for this proposed development. Drilling individual wells or constructing a community well is not cost effective for the development given the availability of the City of Hendersonville water line already laid along two sides of the proposed property. Discussion of the feasibility of the underlying aquifer to supply the groundwater is beyond the scope of this discussion.

7. For applicants seeking State loan or grant support for the project, financial considerations, including:

- (A) any technical alternatives;
- (B) costs of integral units; and
- (C) total costs

This project is privately funded.

8. Population records and trends, present and anticipated future water demands, present and future yield of source or sources of water supply, including provisions to supply water to other systems;

This project will not affect the City's ability to supply water to its customers. See approved Water Supply Management Plan.

9. Character of source or sources of water supply, including:

- (A) hydrological or hydrogeological data;
- (B) stream flow rates or well yields;
- (C) for surface sources, analytical results for chemical, mineral, bacteriological, and physical qualities; and
- (D) location and nature of sources of pollution.

See approved Water Supply Management Plan and attached 2002 Local Water Supply Plan for reference.

10. Proposed water treatment processes, including:

- (A) criteria and basis of design of units;
- (B) methods or procedures used in arriving at recommendations; and
- (C) reasons or

No proposed new treatment systems; see approved Water Supply Management Plan.

11. For purchased water, a copy of the agreement with the supplier and the hydraulic analysis showing the supplier's capabilities for supplying the purchased water;

No purchase required; this is a City of Hendersonville system.

12. A description of the design basis of the source, treatment, and distribution system, and the useful life of all sources, treatment, and transmission facilities including pipes, pumping stations, and storage facilities;

This is not a creation of a new water source; see approved Water Supply Management Plan.

13. For existing system projects intending to alter or expand a distribution system, provide a state of maximum daily treated water supply and maximum daily demand. Provide supporting documentation and calculations; and

Annual average water production for 2002 is 7.504 MGD (53% of WTP capacity). Maximum day occurred in September 2005 at 9.33 MGD. It is anticipated that this development will require 17,600 GPD assuming 44 single family homes with 400 GPD per residential connection.

14. For existing systems, a prioritized list of infrastructure improvements.

This is not part of the City of Hendersonville's development or maintenance program. This is a privately funded project. The infrastructure additions related to this project include the extension of the waterline and its necessary appurtenant features (valves, tee's, hydrants, meters and plugs).

HENDERSON COUNTY REVIEW OF CITY WATER LINE EXTENSIONS

Project Name: Preserves on Willow
 Size of Water Line (Main & Distribution Pipe Size): 8" DIP CL 350 – 4,300 lf.; 6" DIP CL 350 – 2,300 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: March 21, 2006
 Action: Approved with conditions
 Conditions: Conditions regarding final plat requirements, soil erosion plan approval, water approval and other standard conditions.
 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

The Preserves on Willow project is consistent with the CCP. The Plan recommends water access in the Urban Area.

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 11 ft or more. Yes No N/A

BOARD OF COMMISSIONERS APPROVAL



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

Date of Board Review: _____
 Comments: _____



SCALE: 1" = 100'
100 0 100
SCALE OF MAP MAY BE REDUCED
DUE TO METHODS OF REPRODUCTION.

NOTE:
REFER TO FINAL SITE PLAN BY OTHERS
FOR SITE RELATED DETAILS THAT
MAY NOT BE SHOWN ON THESE PLANS.

 EXISTING WATERLINES
 PROPOSED WATERLINES

