

DEVELOPER/OWNER RESPONSIBILITIES

1. Will have water lines designed by a North Carolina Registered Professional Engineer.
2. Will have the water line installed by a North Carolina Licensed Utility Contractor.
3. Will maintain line for 1 year after final approval from North Carolina Department of Environment, Health and Natural Resources.

PROCEDURE FOR WATER LINE DESIGN AND APPROVAL

Sub-dividers or developers will need to supply two sets of designed plans for development. Davidson Water Inc. will mark and make comments on the plans. Davidson Water will keep one set. Sub-divider or developer will take plans to a North Carolina licensed professional engineer, and he will prepare plans and seal. The corrected plans may be mailed or emailed to rwalters@davidsonwater.com.

Then submit to; DENR Public Water Supply Section: 512 N. Salisbury Street, Room 1304C, Raleigh, NC 27604, following their prescribed process.

On some subdivisions or developments it may be necessary for our engineer to design and/or review plans, at the developer's cost. The professional engineer will need to consult with Davidson Water Inc. as to the preparation of specifications.

05/25/2005

PAYBACK POLICY FOR LINE EXTENSIONS ON STATE ROADS

On water lines for new developments where there are no water lines on the state road or if the water lines on the state road are not large enough to serve the development, Davidson Water, Inc. will require the developer to install the necessary water lines on the state road or roads. In order to defray some or all of this cost to the developer, Davidson Water, Inc. agrees to pay the developer \$750.00 for each new tap installed by Davidson Water, Inc. The new tap can be on the state road or in the subdivision, but must be an active account at a dwelling paying a monthly water bill. The \$750.00 refund per tap will be applied against the cost of the water line and fittings on the state road only. The total payback shall not exceed the cost of the water lines and fittings on the state road. All water taps installed by Davidson Water, Inc. by September 30th of each year on the above lines will be included in the count for payback in December of each year for a ten year period. The developer may choose to put his own taps in during the construction phase but this would negate any paybacks. Only if Davidson Water Inc. makes the water taps will a refund occur.

If the developer chooses to make the water taps, Davidson Water, Inc. would require that a capital recovery fee be paid for each connection prior to the construction of the water lines. (see Capital Recovery Fee Policy)

In all cases of water line extensions the developer will be responsible to follow Davidson Water, Inc.'s Subdivision Specifications and Guidelines. Only after the letter of verification of construction has been received from the engineer can water meters be installed. Davidson Water will reimburse the developer for it's portion of cost if any. Verification of payment by the developer to engineer, contractors and vendors must be supplied before reimbursement by Davidson Water, Inc.

Capital Recovery Fee

The purpose of this fee is to help offset capital expenditure that is needed as a result of growth. Our current tap fee structure includes money to be used for capital improvements. These capital improvements are needed as a result of water capacity depletion, each time a new water tap is installed. Our current policy gives the developer the choice of not installing the water meter connections or installing them. If the developer chooses to install the water meter connections, there will be a capital recovery fee of 1/2 the prevailing water meter connection fee per connection. This fee is to be paid by the developer to Davidson Water Inc. The capital recovery fee will be paid before the water line construction begins.

There may be some types of construction or development that will require the water meter connection to be installed during the water line construction, i.e. shopping centers, town homes, apartment complexes, industrial sites, etc. There will be a capital recovery fee per connection. This capital recovery fee will be paid before the water line construction begins. This policy went into effect January 1, 2003.

Capital Recovery Fees Effective January 1, 2020

¾" Water Tap	-	\$950.00
1" Water Tap	-	\$1950.00
1½" Water Tap	-	\$4450.00
2" Water Tap	-	\$5250.00

Mailing Address
Davidson Water Inc.
P.O. Box 969
Welcome, NC 27374
Lexington (336) 731-2341
Winston-Salem (336) 764-2534
Thomasville (336) 475-8229



Shipping Address
Davidson Water Inc.
7040 Old Highway 52
Lexington, NC 27295
Water Plant (336) 787-5800
Office Fax (336) 731-3195
www.davidsonwater.com
email info@davidsonwater.com

Davidson Water, Inc.
PO Box 969
Welcome, NC 27374-0969

January 4, 2005

PAYBACK REQUEST FORM FOR STATE ROAD PAYBACK

Owner/Company Name _____

Address _____

President _____

Secretary _____

Subdivision Name _____

State Road Name _____

NAME OF PERSON OR COMPANY TO REMIT PAYMENT

Name _____

Address _____

Phone Number _____

Signature _____

Print Name _____

_____ Date _____

Title

*Note Please attach an itemized copy of the original invoice for cost of the state road portion of water lines

GENERAL MATERIAL SPECIFICATIONS**ALL MATERIALS MUST MEET OR EXCEED AWWA STANDARDS**

All the parts/components that come in contact with water must meet NSF 61/NSF 372 (new lead free requirements).

1. Pipe; SDR 17 Lengths 20' Max. 2", 3". Pipe must have NSF/PW seal stamped on it. **ASTM: D2241**
2. Pipe; SDR 21 Lengths 20' Max. 2", 3", 4". Pipe must have NSF/PW seal stamped on it. **ASTM: D2241**
3. Pipe; Ductile Iron P.C. 350 6", 8", 10", 12", 16"
AWWA C151
4. Valves; AWWA Standard specifications. Valves shall open left, non-rising stem. 200 PSI working pressure iron body, resilient seat gate valve 2", 3", 4", 6", 8", Mueller, M & H, American Darling, Kennedy.
AWWA C509/515
5. Fire Hydrants; AWWA Type Dry Top National Standard, Traffic type. 4 1/2" valve opening, 1 1/2" pent., two 2 1/2" openings, one 4 1/2" opening, bronze to bronze seat, yellow barrel, red bonnet caps, not less than 3' 6" bury, open left. Mueller, Super Centurion 200, M & H #129, American Darling, MARK 73-1, Kennedy, K81A. **AWWA C502**
6. Fittings; Ductile Iron
Push on, M.J.
All fire hydrants shall branch off with hydrant tee and and most stub outs.
AWWA C153
7. All MIPX Bell Adapters 2" and 3" shall be Harco.
8. All threaded pipe (nipples etc.) shall be brass 2" and 3".
9. Valve boxes 5 1/4" cast iron with WATER written on the lid, screw type.
10. Meter box plastic 12" deep Brooks #1419-12, Jones, Meter box lid, solid cast iron 15 lb. min.
11. Linesetter; Ford LSVBHH41-233W, Mueller B-2418F-2A with H-14222 and H-14227 end pieces.
12. Tubing; Type K Copper ASTM B-88.
13. Corporation stops; Ford F-1000, Mueller H-15008.
14. Service saddles; Muller H-134, Ford S70, CC Threads.
15. Tapping sleeves Stainless Steel, full rubber back, JCM, Romac-SST, Ford, Smith-Blair.

ENGINEER'S NOTES

1. Minimum 3 feet cover on water lines, a maximum of 4 feet. (SEE TRENCH SECTION AND LINESETTER INSTALLATION TYPICAL)
2. Water line shall be placed at least 3 feet from edge of pavement but no greater than 5 feet from edge of pavement. (SEE TRENCH SECTION AND LINESETTER INSTALLATION TYPICAL)
3. Special care should be take at cul-de-sacs to keep the water line the proper distance from the pavement. (SEE CUL-DE-SAC TYPICAL)
4. Water lines 6" and over shall be Ductile Iron.
5. The developer is responsible for the installation of taps or encasements on the long side when the subsurface of the roadway cannot be bored. (SEE SERVICE ENCASEMENT TYPICALS)
6. The maximum distance for a 2" line is 500'. The maximum number of taps on a 2" line is 6. (SEE CUL-DE-SAC TYPICAL)
7. Minimum fire flow shall be 500 gallons per minute at 30 P.S.I.
8. Water mains running under the pavement are to be Ductile Iron.
9. Fire Hydrants shall be spaced no more than 900 feet apart (SOME TYPES OF DEVELOPMENTS MAY REQUIRE CLOSER SPACING).
10. At all creek crossings where the water line is run through or under the creek, there shall be 5 foot cover and steel encasement pipe, D.I. used as a carrier.
11. All lines, smaller than 6", with a pressure of 100 psi (static or dynamic) or greater, shall be constructed of ducile iron. (TYPE OF MATERIAL SHALL BE DETERMINED BY DAVIDSON WATER, INC.)
12. Provide Davidson Water, Inc. with a digital copy of the street/water line layout.
13. Before Engineer writes letter for verification of construction, Davidson Water, Inc. Waterline Represenative, Engineer or agent and contractor, shall perform a final inspection.

INSTALLATION SPECIFICATIONS

These Installation Specifications are intended to meet or exceed the North Carolina Rules Governing Public Water Systems, American Water Works Association/ AWWA Standards, and North Carolina Department of Transportation Rules. (In case of conflict the requirements of the more stringent standard, DWI, AWWA, GPWS and NCDOT rules, shall apply)

1. Work to be performed shall consist of furnishing and installing complete and ready for service all water main and appurtenances in accordance with the contract plans and specifications. Prior to commencing work, the Contractor will provide 2 working days notice to Davidson Water Inc., NCDOT, and all other appropriate utility companies.

2. Trench excavation in rock shall be a minimum of 2 feet wider than the nominal pipe diameter. Excavation shall be 6" below the proposed invert of the PVC pipe and backfilled(cushioned) with clean soil or sand.

3. Backfill along sides and immediately over pipe by hand. Backfill material around pipe shall be free of rocks and other debris. Trench backfill under existing or proposed paving and road shoulders shall be compacted to a density of 95 percent of maximum dry density.

4. Encasement pipe shall be installed by dry boring and jacking. Casing diameter, length, and wall thickness shall be as shown on plans. Materials and workmanship in the existing or proposed NCDOT right of way shall conform to NCDOT standards and specifications. The contractor making the bored crossing shall notify NCDOT prior to the start of work with enough notice for NCDOT to provide inspectors.

5. Water mains shall be laid at least 10 feet laterally from existing or proposed sanitary sewers. Water mains shall have a minimum of 18" vertical separation over sewer mains. Where this separation is not possible or the water main is laid under the sewer main, both the water and sewer pipe shall be ductile iron pipe. Center pipe spans at point of intersection in order to have 10 feet from water line joint to point of intersection.

5A. DIP/PVC Installation: AWWA C600/605, GPWS Rule 0.0904 Storm Sewer Crossing Rule (In case of conflict the requirements of the more stringent standard, DWI, AWWA, GPWS and NCDOT rules, shall apply)

6. Minimum cover for water mains shall be 36 inches. Maximum cover shall be 48 inches. Minimum trench width shall be pipe diameter plus 18 inches. (SEE TRENCH SECTION AND LINESETTER TYPICAL)

7. All pipe shall be thoroughly cleaned of all earth material and rubbish before being placed in the trench. Bell holes will be dug at each joint. Pipe shall be placed on firm, smooth foundation to prevent subsequent settlement.

8. Concrete thrust blocking shall be constructed at all bends, tees, reducers, and dead ends and where conditions warrant. All fittings and accessories to be wrapped with polyethylene film prior to placing blocking. (SEE BLOCKING TYPICALS)

9. Hydrants shall be set plumb as indicated on the drawings with the pumper connection 18 inches above grade. The back of the hydrant, opposite the pipe connection, shall be firmly blocked against the vertical face of the trench with poured-in-place concrete to prevent the hydrant from blowing off the line. In fill areas or soils that are not solid hydrants shall be rodded or restrained by mega-lug using Ductile Iron pipe not PVC. Clean crushed stone or gravel shall be placed around the base of each hydrant above the supporting foundation and to within 12 inches of the ground line. Stone or gravel shall extend at least 10 inches away from the hydrant barrel in all directions. Hydrants shall be opened and flushed prior to pressure testing of the lines. SEE HYDRANT INSTALLATION TYPICAL)

10. Valve box assembly shall be set plumb, true and to grade. (SEE VALVE INSTALLATION TYPICAL)

11. All water mains shall be pressure tested with a test pressure at the high point of the main twice the working pressure or 200 PSI, whichever is greater. Test pressure shall be maintained for a minimum of 3 hours. Make up water shall not exceed the following amounts in gallons per 1000 feet of main: 2" line - .50, 3" line - 0.74, 4" line - 1.11, 6" line - 1.65, 8" line 2.22, 12" line-3.3, 16" line - 3.96 and 24" line - 5.97.

11A. DIP/PVC LEAKAGE AND TESTING: AWWA C600/C605/ (DWI specifications exceed min. pressure and min. test times above the AWWA standards)

12. All water mains shall be flushed and disinfected prior to being put in service. Flushing shall be accomplished with sufficient water velocity (Minimum of 2.5 fps) to thoroughly clean the main. The mains shall be disinfected using a chlorine equal to or greater than 50 milligrams per liter (50 ppm). The chlorine solution shall remain in the mains for a minimum of 24 hours. Bacteriological test samples shall be taken by **(Davidson Water Inc., State Certified Lab)** for evaluation and line disinfectant approval. After disinfection is complete, the new lines shall be flushed sufficiently so that the chlorine concentration level in the new lines do not exceed existing line concentration.

12A Disinfection: AWWA C651

13. Water lines shall be placed at least 3 feet minimum from the edge of the pavement but no greater than 5 feet from the edge of the pavement. (SEE TRENCH SECTION AND LINESETTER INSTALLATION TYPICAL)

14. Special care should be taken at cul-de-sacs to ensure water line is kept proper distance from the edge of the pavement. (SEE CUL-DE-SAC TYPICAL)

15. All tapping sleeves and valves shall be air tested at 150 P.S.I. for a minimum of 15 minutes.

16. Davidson Water, Inc. has a State Certified Lab for testing Bacteriological samples.