CITY OF NEW PHILADELPHIA
CHAPTER 1
GENERAL STANDARDS

1. Developer or developer's designer to obtain all required permits from local and/or state regulatory agencies having jurisdiction over these types of facilities.(I.e.: Ohio EPA for approval of water and sewer systems, and Ohio Basic Building Code, Division of Factory and Building for any pump stations, etc.) Provide the city Service Director with copies of approval letters.

2. Designer to obtain Ohio EPA Storm water permit if the scope of the project is within EPA permit limits and forward copy to city Service Director.

3. Developer's designer shall contact the city Water and Wastewater Superintendents to verify available capacity for additional loading to systems at the point of connection to the existing water or sewer system.

4. Verify with Water Superintendent whether project will fall within limits of the City's "Backflow Prevention and Cross-Connection Control Program."

5. Developer is responsible for verifying or obtaining all of the latest copies of the City's appropriate standards and standard drawings, as they are occasionally updated and revised. Incorporate the necessary standard drawings into the plan sheets, include the title and the date of the standard. This will aid the city in filing and for future reference in knowing which standard was in effect at time of construction.

6. Include date, scale, sheet title, name of project and names of persons and firm preparing plans in title block.

7. Include North arrows on appropriate plan sheets.

8. Plan and Profile sheet's horizontal scale should be no smaller than 50 scale with a vertical scale no smaller than 5 feet to the inch.

9. Show all permanent utility easements outside roadway right of way or on private property. Easements shall be 15' minimum width. All permanent easements shall be recorded at Tuscarawas County tax map office.

10. Include roadway typical sections in plan.

11. Proposed streets with properties on both sides to be fifty (50) foot minimum right of way unless previously approved by city.

12. All properties to have twenty-five (25) foot minimum frontage in accordance with city standards.

13. Include certification from Developer's designer or Engineer insuring that site soil conditions are adequate for proposed construction. If site has previously been underground mined, additional documentation regarding mining operations in the area will be required. The city's Service Director reserves the right to require additional subsurface information if the site history is questionable.

CITY OF NEW PHILADELPHIA
CHAPTER 2
WATER STANDARDS

1. All water mains to be 8" minimum diameter, unless looping or gridding of 6" size is accomplished in the network area. Other special conditions or circumstances might also warrant a smaller than 8" size. Any decrease in size from 8" minimum to be approved by City Water Superintendent, processing through the City's Service Directors office.

2. All water main pipe to be Class 52, Ductile Iron Pipe.

3. All ductile iron pipe to have sand bedding all around in accordance with city standard SD-116W.

4. All ductile iron water pipe installed in acidic soil will be encased with polyethylene wrap.

5. Provide a fire hydrant assembly with concrete anchor block at each dead end of waterline. See standard drawing SD-140.

6. Provide mainline water valves no more than 500 foot maximum spacing.

7. Install valve & valvebox each leg at all intersections with water lines in three or more directions.

8. Service lines: Type "K" copper, ¾"- 2" diameter.

9. Corporation Stops: "Mueller", flare fitting. (H-15000).

10. Curb Stops: "Mueller", flare to flare. (H-15204).

11. Curb Boxes: "Bibby" S7E, Croix Foundries, Inc., fig 94E - shaft screw service box.

12. 2" Roadway Box: 4½" shaft, 39"-54" round cast iron.

13. Mainline Valve: "Mueller", AWWA C-500, Double Disk, cast iron, non-rising stem, open left

14. Mainline Valve Box: 5¼" shaft, three piece valve box, 36"-48" cast iron.

15. `Provide back-flow preventers above waterline main elevation of 1010.0.

16. Require privately owned individual booster pumps on all service connection lines above waterline main elevation of 1031.0.

17. No Fire Hydrants Installed above waterline main elevation of 990.0.

18. No water service will be allowed above waterline main elevation of 1077.0.

19. Stamp or etch a "W" into top of new curb over service line location during curb construction.

20. On plans, show all service tap locations , curb stop and box for each property.

21. Include brand names and model numbers along with material, construction and testing specifications on plans.

22. Maintain all clearances between water lines and sanitary sewers, both in lateral and crossing locations as required by Ohio EPA.

23. All tapping valves and sleeves connecting to an existing waterline will be installed by city forces. The cost of materials and labor will be billed back to the Developer.

24. All cast iron water main to have a concurrent leakage and pressure test applied after installation in accordance with AWWA C600 standards using the following formula.

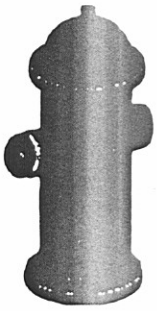
$$L = SD\sqrt{P} \div 133{,}200$$

Where:

L = allowable leakage, in gallons per hour
S = length of pipe tested, in feet
D = nominal diameter of the pipe, in inches
P = average test pressure during the leakage test, in pounds per square inch (gauge)

25. Refer to City Standard Drawings for additional details.

For additional information and details, refer to addendum 'A' of this manual titled "Rules and Regulations" of the City of New Philadelphia, prepared by Gary Espenschied, dated Revised July 11,1994.



City of New Philadelphia, Ohio
310 Mill Ave. Rear 44663
Department of Water Utilities
Gary A Espenschied, Superintendent

January 8, 1996

RE: Fire Systems

To Whom it may concern,

The City of New Philadelphia, Ohio, Water Department's Policy on **Fire Systems** are as follows:

#1 - ***The Water Department Superintendent must be notified at least seven days in advance of any tests, new installations, repairs, or service calls on a fire system within the city.***

#2 - ***No flow tests of any kind can begin before 11:00 PM or end after 5:00 AM.***

#3 - ***Emergency calls or repairs must be reported to Superintendent immediately.***

The Water Department takes static flow tests each year when flushing hydrants. This test is performed while two other hydrants are already opened. Results of these tests are available in the Superintendent's office.

If you have any questions or concerns please contact me at the above address or by phone (216) 339-2332.

Please Note: *Phone number is also FAX number.*

Sincerely,

Gary A. Espenschied
Water Department Superintendent
City of New Philadelphia

CITY OF NEW PHILADELPHIA
CHAPTER 3
SANITARY SEWER STANDARDS

1. Use vitrified, extra-strength pipe meeting ASTM-C700 with premium joints meeting ASTM-C425. (ODOT, Type B conduit,706.08 with 706.12 joints)

   or

   Polyvinyl chloride (PVC) pipe and fittings conforming or exceeding ASTM-D3034, SDR 35, or ASTM-F789 for pipe 4" to 15" diameter. Use ASTM-F679, Type PS-46 with T-1 minimum wall thickness, with joints meeting ASTM-D3212 for pipe 18" to 27" diameter.

   All flexible elastomeric seals meeting ASTM-F477. Solvent weld joints not permitted.

2. Furnish all pipe fittings and accessories of same manufacturer as pipe. Use wye fittings for laterals, no saddles permitted.

3. Show all sewer wyes and laterals to each property line on plans.

4. All service lateral wyes may be 4" minimum if sub-division is deed restricted to single family residences, otherwise 6" for unrestricted deed, multi-family or business usage.

5. Stamp or etch a "S" into top of new curb over sewer lateral location during curb construction.

6. Maintain all clearances between sanitary sewers and water lines, both lateral and crossing locations as required by Ohio EPA.

7. Obtain approval of any proposed sanitary sewer pump station from Ohio EPA and Ohio Department of Commerce, Division of Factory and Building. Furnish copy of approval letters with plans to City Service Director at time of review request. All pump stations will have a by-pass piping arrangement to allow a portable pump hook up in case of primary pump failure. Check with city sewer department for size and type of quick disconnect fitting. In lieu of piping arrangement, a spare pump can be provided to city sewer department. All pump stations will have a visible and audible high water alarm system in case of pump failure.

8. Include construction, material and testing specifications for sanitary sewers on plans.

9. Refer to City Standard Drawings for additional details.

CITY OF NEW PHILADELPHIA
CHAPTER 4
DRAINAGE DESIGN STANDARDS

1. Prepare general hydraulic design of drainage facilities in accordance with the latest edition of the Ohio Department of Transportation "Location and Design Manual, Volume Two, Drainage Design".

2. Base storm sewer design on a 10-year storm frequency with the hydraulic grade line checked using a 25-year storm frequency. Use Manning's "n" value in accordance with the ODOT drainage manual.

3. Use a 2-year storm frequency to determine catch basin or inlet spacing on all streets. Manning's "n" used for pavement drainage is 0.015.

   The maximum allowable spread of flow is six (6) feet into the traveled lane.

4. The minimum size conduit for culverts, storm sewers and drive pipes is 12" .

5. All culverts (ODOT Type A conduits) shall be rigid pipe meeting the requirements of Item 603 of the ODOT Construction and Material Specifications.

6. All storm sewers (ODOT Type B & C conduits) and drive pipes (ODOT Type D conduits) shall be rigid pipe or corrugated polyethylene smooth lined pipe meeting the requirements of Item 603 of the ODOT Construction and Material Specifications.

7. Provide headwalls and pipe outlet protection as recommended in the ODOT Drainage Manual. Additionally, provide headwalls at the open ends of all drive pipes 24" diameter or greater.

8. Submit all drainage calculations including catch basin or inlet spacing calculations to the City for review and approval.

9. Include delineated drainage areas on contour mapping with all drainage calculations submitted for review.

10. Include pipe underdrains on all new roadways and detail sufficiently on plans for contractor to construct underdrains correctly.

11. Include on plans the construction and material specifications for pipe underdrain systems.

12. All drainage calculations to be signed and dated by a Registered Engineer.

13. Refer to City Standard Drawings for additional details.

14. Two (2) sets of plans and calculations shall be submitted for review.

CITY OF NEW PHILADELPHIA
CHAPTER 5
GENERAL PLAN NOTES

Add the following standard notes to plan in addition to other notes needed:

1. ROOF DRAIN NOTE:
   Roof drains, foundation drains, and other clean water connections to the sanitary sewer system are strictly prohibited.

2. PIPE UNDERDRAINS:
   Pipe underdrain material to be ODOT item 707.31, corrugated polyethylene drainage tubing, (perforated). All underdrains will outlet into proposed catch basins or storm sewer lines. A ten (10) foot section of item 603 conduit, type F, 707.33 (non-perforated) shall be used to connect underdrain to catch basin or storm sewer. Where possible, underdrain outlet elevation to be 6" minimum above invert elevation of drainage structure. Any underdrains crossing under street pavement will be ODOT item 603 conduit, type B, 707.33 (non-perforated). The underdrain trench shall be lined with filter fabric in accordance with ODOT specifications.

3. WATER LINES:
   Contractor to notify and coordinate with City Water and Sewer Department prior to any connections being made to the existing water or sanitary sewer systems.

   All mainline water valves will only be operated by City Water Department employees.

4. NOTIFICATION:
   Contractor to notify the City Service Director twenty four (24) hours prior to starting construction. Any time utilities are involved, other than city water and sewer, notify Ohio Utilities Protection Services at 1-800-362-2764 two working days prior to excavating.

5. EROSION CONTROL:
   Contractor to allow no silt or erosion to enter existing storm sewer system or water courses during construction phase. Contractor to use erosion control measures such as inlet filters and hay bales in accordance with ODOT standard Drawing MC-11, ODOT specifications and State of Ohio standards for Storm water Management, Land Development and Urban Stream Protection, second edition 1996.

City of New Philadelphia
CHAPTER 6
Sub-Division Requirements
Roadway Street - Design

Requirement Description		Local Residential Streets 25 MPH	Main Collector Streets 35 MPH
Crest Vertical Curve - K factor (50' V.C. minimum length)		12	17
Sag Vertical Curve - K factor (50' V.C. minimum length)		16	24
Minimum Radius of Horizontal Curve		100.00 ft.	143.24 ft.
Maximum Degree of Horizontal Curve		57°-17'-45"	40°-00'
Maximum Degree of Curve without Superelevation		None Reqd.	40°-00'
Maximum centerline Deflection without Horizontal Curve		5°-30'	5°-30'
Maximum Percent Change in Vertical Alignment without a Vertical Curve		1.00%	1.85%
Maximum length for Roadways with Cul-de-sacs.		500 ft.	----
Maximum Percent Grades Local Streets - 25 MPH	Level Rolling Hilly	4% 8% 12%	10% 13% 15%
Minimum Radii of Intersection Corner Returns		15 ft (Min.) 20 ft (Desired)	15 ft (Min.) 20 ft (Desired)
Angle of Intersecting Streets: (See note 1 below)		85°- 95°	85°- 95°
Sidewalk curb ramps for handicap accessibility. (Provide curb ramp at each intersection with sidewalks intended for pedestrian crossings.)		* ODOT Std. Drawing BP-7.1	* ODOT Std. Drawing BP-7.1
Intersecting Street Grades		-2.08% See note 2	-2.08% See note 2

Note 1: Maintain a tangent length of 50' minimum from centerline of intersected street to point of curve on intersecting street.

Note 2: Intersected street grade shall continue at pavement slope (-2.08%) for additional 10 foot minimum from edge of pavement. This point will be point of curvature for either a vertical crest or vertical sag rounding, length based on K factor of intersecting grades.

* ODOT - Ohio Department Of Transportation, Standard Construction Drawings