8.0 Infrastructure

For the purposes of the Inventory and Analysis Report, infrastructure includes basic utilities and services (other than transportation facilities, which are addressed in Chapter 7.0) required to support existing and new development in Amherst. This chapter describes the following infrastructure systems: water, sanitary sewer, stormwater management, solid waste, and other utilities.

8.1 WATER SYSTEM

Almost the entire Town of Amherst is provided with adequate water supply under Lease-Management Agreement (LMA) with the Erie County Water Authority (ECWA). The water system exhibits above average pressures and acceptable fire flow protection. There are virtually no limitations regarding the potential for expansion of the water system to accommodate future growth.

8.2 SANITARY SEWER SYSTEM

The Town of Amherst operates its own sewage treatment facility, which has recently been re-rated by the NYS Department of Environmental Conservation to increase capacity by 50% to 36 million gallons per day (MGD). The plant is currently operating below capacity at about 22 MGD. Current sanitary sewer service within the Town is shown in Figure 16.

Amherst Sewer District No. 1 is located in the southwest portion of Amherst, an area characterized by long established neighborhoods and early twentieth century homes. Consequently, the sanitary sewer system exhibits high levels of inflow/infiltration due to failed vitrified clay pipe sewers and collapsing brick manholes. Many streets encounter surcharge conditions after regular rainfall events. Occupying almost 75% of the Town, Amherst Sewer District No. 16 relies on a series of interceptor sewers that gradually convey flows north and west to the treatment plant on Tonawanda Creek Road near Niagara Falls Boulevard.

Erie County Sewer District 5 and Town of Clarence Sewer District 2 utilize the Town of Amherst Interceptor Sewer Network and Treatment Plant for three discharge points located along the Town of Clarence border. The majority of these flows pass through the Peanut Line interceptor sewer, which is currently near capacity during peak flow periods. Recent development in Clarence has necessitated requests for additional capacity in the Peanut Line and Klein Road interceptor sewers.

The Town of Amherst downstream capacity model was developed to assist in sewer trunk capacity analysis for active development areas of the Town. A sanitary sewer typically

achieves peak flows four times the daily average flow. The model identifies the following interceptor sewers as near or beyond capacity during peak flow periods:

Sewer	Segment	Size	Capacity	Avg. Flow	Peak Flow
Peanut Line 1	Plant 16 to Ellicott Creek	84"	101 MGD	24 MGD	96 MGD
Peanut Line 2	Ellicott Creek to Campbell	66"-60"	45 MGD	10 MGD	40 MGD
Peanut Line 5	Paradise to Transit	18"	3.0 MGD	0.6 MGD	2.4 MGD
CampbellStahl	Peanut Line to Klein	30"	7.0 MGD	3.9 MGD	surcharge
North Forest 1	Klein to Maple	24"	5.5 MGD	2.0 MGD	surcharge
Maple Road 1	North Forest to Hopkins	24"	4.5 MGD	1.5 MGD	surcharge
Maple Road 2	Hopkins to Youngs	18"	2.4 MGD	0.9 MGD	surcharge
N French 3	I-990 to New	24"	4.2 MGD	1.2 MGD	surcharge
N French 4	New to Transit	24"	4.2 MGD	1.0 MGD	4.0 MGD

In addition, other sanitary trunks conveying flows north from the Eggertsville/Snyder area are not modeled, but do experience surcharge conditions during peak flow periods. The growth projections presented in Chapters 5.0 and 6.0 indicate that population increases in Planning Analysis Areas 2, 3 and 4 will create additional capacity demand on the following modeled sewers in year 2020:

Sewer	Segment	Projected Demand
N French 3	I-990 to New	Additional 0.5 MGD average flow
North Forest 1	Klein to Maple	Additional 1.0 MGD average flow
CampbellStahl	Peanut Line to Klein	Additional 1.5 MGD average flow
Peanut Line 2	Ellicott Creek to Campbell	Additional 3.8 MGD average flow
Peanut Line 1	Plant 16 to Ellicott Creek	Additional 9.1 MGD average flow

The largest portion of the Town of Amherst that remains unsewered is the area in the northern part of the Town bounded by Tonawanda Creek, Millersport Highway, I-990, and Campbell Boulevard. The main reason that this area lacks sanitary sewer service is that there are too few residences to warrant new mains and topographic conditions would make sewer extensions very costly. All development in this area must rely upon on-site wastewater disposal systems (OSDS). The predominant soils in the area are severely constrained for on-site wastewater disposal and the majority of the area is also within the 100-year floodplain or regulatory floodway.

Almost all of the soils (97.5%) in the Town of Amherst are severely constrained for the use of OSDS as a result of soil wetness, slow permeability, and susceptibility to flooding. (*USDA, Soil Conservation Service, 1978*) Installation of an OSDS in these conditions typically requires construction in fill material, subject to the County's minimum lot requirements of ¾ acre per unit.

Water quality monitoring data indicate that many OSDSs in North Amherst are failing, as evidenced by fecal coliform contamination and nutrient enrichment in Ransom Creek. (*NYS DEC, Bureau of Watershed Assessment and Research, 1998*)

Figure 16. Sanitary Sewer Service

8.3 STORMWATER MANAGEMENT

Stormwater drainage is a concern to many Amherst residents. Localized flooding due to rain events affects certain areas of the Town repeatedly. The Town is mainly on lowland plains, and the soils in the northern half of the Town are hydric soils that are generally poorly drained. Several major creeks flow through the Town, including Ellicott Creek and Ransom Creek. Tonawanda Creek forms the northern border of Amherst and the Town of Tonawanda. Gott Creek and Black Creek are tributaries to Ransom Creek. Both Ellicott Creek and Ransom Creek have histories of flooding. Stormwater management features of note, including hydric soils, drainage ditches, and surface water bodies, are shown on Figure 17.

The Town has an extensive system in place to manage stormwater runoff. Amherst's stormwater system is comprised of underground storm sewer pipes, ditches, retention ponds, and dry wells with approximately 23 outfalls that are greater than 36 inches. These outfalls discharge to Ellicott Creek, Tonawanda Creek, and tributary streams.

Land development can contribute to flooding problems by changing drainage patterns. Paving over soil reduces the amount of rain that infiltrates the ground, increasing runoff. The Town addresses these potential problems by requiring a grading plan and storm drainage calculations in the site plan application process. The Code of the Town of Amherst addresses drainage on parking lots and yards. Flood hazards are addressed in a separate section of the Town Code that specifies requirements for new construction. The Town of Amherst requires that all facilities drainage elements conform to the Erie and Niagara Counties Regional Planning Board Storm Drainage Design Manual, which utilizes the rational method and a minimum recurrence storm of ten years for conveyance to an approved public outfall. The stormwater plan review process involves both the Engineering and Highway Departments and includes review of storm water calculations and effects on neighboring properties.

Several studies over the past few decades have concentrated on solving flooding in problem areas of the Town. Current studies include a reconnaissance study of the Ellicott Creek watershed by the Army Corps of Engineers, a Flood Mitigation Plan, and an Engineering improvement study for Ransom Creek. The Town does not plan any significant drainage work in the next five years, but Erie County will reconstruct Wehrle Drive in 2003. The road will be rebuilt from the bridge over Ellicott Creek to Transit Road. Some stormwater will drain to Town ditches and some will go north to Ellicott Creek. This area south of the Onondaga escarpment is characterized by hard dolomite rock one foot below grade, and therefore is difficult to drain. As documented in Section 6.8, a significant increase in employment is projected in Planning Analysis Area 6, indicating a potential increase in business parks/commercial use. The poor drainage history of this area may necessitate detention facility requirements for new construction.

In the near future, the Town of Amherst will be expected to develop a stringent storm water management program which complies with anticipated revised New York State Pollution Discharge Elimination System (SPDES) driven by the USEPA Phase II storm water regulations. The Town is undertaking a stormwater management plan to comply with EPA

regulations. Under the Clean Water Act, the Storm Water Phase II Final Rule requires towns such as Amherst to develop stormwater management programs. These programs must include plans to implement six specified minimum control measures. The Town has started with the "Pollution Prevention/Good Housekeeping" measure by assessing the municipal-owned facilities and how they are affected by the regulations.

8.4 SOLID WASTE

The Refuse Control Office of the Town is responsible for the collection and hauling of solid waste for residents and small apartment complexes. Large apartment complexes and commercial establishments use private collection services. Commercial, industrial, and institutional establishments are also required to separate recyclables by source and arrange for their collection. Solid waste includes recyclables, yard waste, garbage, and trash.

The Town Highway Department is responsible for spring brush pick-up and fall leaf pick-up, as well as collection of concrete, stone, appliances, tires, and miscellaneous metal items. Construction debris from residents' contracted projects, large do-it-yourself construction projects, as well as brick, stone, and concrete, is removed by private haulers. The Town requires private garbage collectors to be licensed. Yard waste is collected weekly and deposited at the Town's Compost facility on Millersport Highway. Wood waste is separated and converted into mulch, which is then sold to residents and local vendors. Leaves and grass are stored until the fall, when they are combined and cured through the winter, then sold as compost in the spring. The facility is permitted to accommodate 85,000 cubic yards of raw waste, and is currently operating at about 90% capacity. The diversion of yard waste to this facility reduces the annual tipping fee costs associated with conventional waste disposal. The Town is already planning an expansion of the facility to increase capacity 30% to 40%.

There is one garbage district for the Town, which covers the entire Town with the exception of the University at Buffalo, the Village of Williamsville, and the large apartment complexes and commercial establishments previously mentioned. As of June 2001 the Village of Williamsville is included in the Town's pick-up area.

Most of the solid waste collected by the Town is transported to American Refuel, a waste-to-energy company in Niagara Falls. Yard waste is transported to the Town's composting facility. Commercial establishments use landfills or the waste-to-energy facility for disposal.

8.5 PRIVATE UTILITIES

In addition to the public infrastructure systems described above, a number of privately-owned utilities are located within the Town of Amherst. In general, these utilities are widely available to serve existing and future development. The only consideration for new development would be the cost to extend certain utility lines to areas not served. However, the availability of land in serviced areas makes this a minor limitation.

Figure 17. Stormwater Management Features

A. Natural Gas

Natural gas transport for the entire Town is provided by National Fuel, whether or not the gas is purchased from them. National Fuel has adequate capacity to accommodate the needs of existing and projected future development in the Town. The cost of running lines to currently unserviced areas would be the only consideration in serving new development.

B. Electrical Service

Two companies, Niagara Mohawk and New York State Electric & Gas (NYSEG), provide electrical service for the Town of Amherst.

Niagara Mohawk: Niagara Mohawk and its distribution system provide electrical service for almost the entire Town. No significant problems are reported for the conveyance and distribution network. However, power rates for Town residents are not necessarily favorable.

Through its Economic Development Zone Rider (EDZR), Niagara Mohawk Power Corporation offers businesses that locate or expand in an Economic Development Zone (now known as Empire Zones) up to ten years of deep discounts on the delivery of incremental (new) electricity and natural gas supply. Discounts are on the delivery portion only. The electric supply, or generation cost, is the market price of electric generation, which is not controlled by Niagara Mohawk. The EDZR electricity discounts depend on the customer's service classification, delivery voltage, and energy use profile. This program provides discounts of 50% to 70% from standard electric delivery rates.

NYSEG: This company provides electric service to some properties on the west side of Transit Road. NYSEG aerial poles provide electricity from the front lots along Transit Road. Niagara Mohawk provides any back lot service to Transit Road properties.

C. High Technology

Amherst is well served by infrastructure necessary to support use of high technology by businesses and homeowners. Companies serving the Town include Adelphia Cable, Verizon, MCI, Telergy, and TC Systems.

Adelphia Cable: Adelphia maintains coaxial cable and fiber in Amherst. The company provides all of the residential cable television service to the Town, as well as Power-Link Internet access via the cable network. Adelphia also provides Hyperion, which is a telephone service network for business.

Verizon: Verizon maintains fiber in the Town of Amherst for DS1 bandwidth and above. DS1 can transport data or 24-telephone lines (DS0 is for single telephone lines). The company can serve customers directly, or its competitors purchase DS1 and break it into 24 telephone lines. Verizon has done considerable work in Amherst in the last three years and has capacity to support future development in the Town. However, additional hubs and fiber will need to be added. Presently Verizon is looking into adding a hut next to an existing one at Sweet Home Road and Commerce Drive, which is the company's busiest service area.

MCI: MCI maintains fiber optic lines in a dedicated easement running north-south between Campbell Boulevard and Hopkins Road to Sheridan Drive, where the line turns southwest

across Ellicott Creek and beyond I-290. The conduit carries two sets of fiber: a MCI long distance 277-count fiber cable and a Worldcom long distance 200-count fiber cable. The conduit has additional carrying capacity.

Telergy: Transport of data is provided by Telergy through the company's own underground duct system, existing ductwork owned by Verizon or Niagara Mohawk, or through cables on aerial poles. Although Telergy does not generally have individual accounts, the company directly services some large accounts. Telergy supplied the fiber network for communication for the Amherst Schools.

TC Systems: This company provides the backbone fiber optics for local service in the Town. Presently TC Systems has only one line going through the Town: east along Main Street from the City of Buffalo into the Village of Williamsville, north on Grove Street, east on Grove Avenue, and south on Cayuga to the Town of Cheektowaga. TC Systems plans on expanding throughout the Town of Amherst in the next five years.

D. Miscellaneous Underground Transmission Lines

Sun Pipeline: A transmission line passes through the Town just south of Klein Road and south of the University at Buffalo to the I-290 right-of-way. This line carries petroleum products such as gasoline, fuel oils, and kerosene to a terminal in Tonawanda.

Lakehead Pipe Company: A 12" crude oil pipeline runs through the Niagara Mohawk transmission line right-of–way along I-290. This pipe brings crude oil from Canada to a company in West Seneca.

Texas Brine: A transmission brine line from Wyoming County to Occidental Chemical Corporation and Olin Corporation in Niagara Falls passes through the northeast corner of the Town of Amherst.

None of the above transmission lines are useful for or a hindrance to future development in Amherst.