STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Environmental Impact Evaluation

Danbury West Side Interceptor

Dear Reviewer:

The Environmental Impact Evaluation has been prepared pursuant to Section 22a-1b of the Connecticut General Statutes and Section 22a-1a-10 of the Regulations of Connecticut State Agencies for the installation of an interceptor to address the needs of the system in the west side of the City. This project addresses an immediate concern for the potential pollution problem from septic systems in the vicinity of Lake Kenosia, which serves as a public water supply. The improvements will also address the stressed condition of the sewer system, odor control problems, and the nearing end to the life expectancy of pump station components.

The City of Danbury evaluated the long-term wastewater disposal needs for the west side of the City. The study proposes a project in two phases. The first phase will consist of a gravity sewer from an existing sanitary sewer at the intersection of Mill Plain Road and Prindle Lane to a proposed pumping station to be constructed on the north side of Interstate 84 (I-84) on property of Interstate Business Center, LLC, and a force main from the pumping station to the existing sewer approximately 250 feet west of Kenosia Avenue. The second phase will consists of a gravity sewer, starting at the end of the force main constructed under Phase 1, which will be installed parallel to the existing Mill Plain Road Interceptor and be connected to the existing Still River Interceptor east of Seegar Street. The project area is bounded to the north by Mill Plain Road (Route 6), to the west by the New York State line, to the south by the Town of Ridgefield and Miry Brook Road, and to the east by Route 7.

The Department of Environmental Protection has assessed this project and has determined that it will have no significant adverse impact on the surrounding environment. This document has been prepared and is being circulated in support of that determination.

Your review of this Environmental Impact Evaluation is encouraged. Written comments should be submitted to Stacy Pappano, Department of Environmental Protection, Bureau of Water Protection and Land Reuse, Planning & Standards Division, 79 Elm Street, Hartford, CT 06106-5127. The deadline for this submission is Friday, June 5, 2009.

Sincerely,

Paul E. Stacey
Director
Planning and Standards Division
Bureau of Water Protection and Land Reuse

DRAFT ENVIRONMENTAL IMPACT EVALUATION
for the
WEST SIDE SEWER INTERCEPTOR PROJECT
CITY OF DANBURY, FAIRFIELD COUNTY

EXECUTIVE SUMMARY

This Environmental Impact Evaluation ("EIE") for the City of Danbury's proposed West Side Sewer Interceptor Project ("the Project") has been prepared pursuant to the requirements of the Connecticut Environmental Policy Act ("CEPA"), Sections 22a-1a through 22a-1h of the Connecticut General Statutes and Sections 22a-1a-1 through 22a-1a-12 of the Regulations of Connecticut State Agencies. The findings of such environmental review are summarized in this document.

The Project will provide needed wastewater system improvements to the 3,000-acre western portion of the City, referred to as the West Side District, which extends from Mill Plain Road and Joe's Hill Road in the north to Miry Brook Road in the south, and from the New York State line east to U.S. Route 7. This area includes a mix of land uses and natural resources, and includes various existing and planned developments of regional economic significance (e.g., Danbury Fair Mall, the western campus of Western Connecticut State University, and the ongoing mixed use redevelopment of the former Union Carbide Corporate Center property).

The need for an interceptor sewer to better convey flows from the West Side District into the City's Still River Interceptor has been recognized in wastewater facilities planning studies dating to 1987. The need for the West Side Sewer Interceptor also is a key priority as identified in Danbury's 2002 *Plan of Conservation and Development*. The Project is needed specifically to:

- Address immediate concerns about potential pollution from septic systems in the vicinity of Lake Kenosia, which serves as a public water supply;

- Resolve both existing capacity and flow deficiencies by providing an adequately sized system for conveying wastewater from the West Side District to the City's municipal wastewater treatment plant;

- Provide adequate sanitary sewer service to support existing and projected land use developments within western Danbury;

- Reduce the current and future flows to the Mill Plain Road Pumping Station, delaying or eliminating the need for upgrades; and

- Resolve other impacts, such as odor control problems, linked to the existing stressed condition of the West Side District sewer system.

The Project will be developed in two phases. Phase I, which is planned for construction in 2009, will consist of the following components: (1) a new 30-inch-diameter gravity sewer that will interconnect with an existing sanitary sewer at the intersection of Mill Plain Road and Prindle Lane and will extend approximately 2,100 feet east to a proposed new pumping station; (2) a new pumping station that will

be located on a 0.25-acre upland site adjacent to Interstate 84; and a new 16-inch-diameter force main sewer that will extend east from the new pumping station to an interconnection with an existing sanitary sewer located approximately 900 feet west of Kenosia Avenue. The system will be designed to accommodate a peak flow of 6.4 million gallons per day.

Phase II of the Project, which is expected to be developed in the near future, will consist of a gravity sewer that will extend east from the end of the Phase I force main to the existing Still River Interceptor, which is located east of Segar Street.

Both the Phase I and Phase II wastewater facilities are proposed for locations primarily within developed upland areas, along or adjacent to existing road and railroad rights-of-way. The design and alignment of the Project will minimize or avoid adverse effects on environmental resources, while providing environmental benefits in terms of improved water quality within the Lake Kenosia watershed.

The City has appropriated funding for the Project and seeks state financial assistance from the Clean Water Fund to construct Phase I. The total cost of Phase I is estimated at approximately $5.7 million.

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1. PROJECT DESCRIPTION

1.1 Project Location and Service Area

The West Side Sewer Interceptor Project ("the Project") is proposed by the City of Danbury in order to serve the long-term wastewater demands of existing and approved land use developments in the City's (3,000-acre) West Side District. The Project, which was initially identified more than 20 years ago as a required element of the City's overall wastewater facilities planning, will serve the West Side District area bounded to the north by Mill Plain Road (U.S. Route 6), to the west by the Connecticut – New York State border, to the south by the Town of Ridgefield and Miry Brook Road, and to the east by U.S. Route 7 (refer to Figure 1).

The Project will be developed in two phases. Phase I, which is planned for construction in 2009, will consist of three components as identified in Figure 2 and described below:

- A 30-inch-diameter gravity sewer that will interconnect with an existing sanitary sewer at the intersection of Mill Plain Road and Prindle Lane and extend approximately 2,100 feet east along Prindle Lane and a new private road to a new pumping station.

- A new pumping station that will be located on an upland site, consisting of approximately 0.25 acre, adjacent to Interstate 84, on property owned and being developed for commercial/office use by Interstate Business Center, LLC.

- A 16-inch-diameter force main sewer that will extend east from the new pumping station, within the office park in and along access road/parking lots and along the Maybrook/Housatonic Rail Line right-of-way (ROW), approximately 3,900 feet to an interconnection with an existing sanitary sewer located approximately 900 feet west of Kenosia Avenue.

Phase II of the Project, which could be required within the next decade, will consist of an approximately 30-inch-diameter gravity sewer that will extend east from the end of the Phase I force main to the existing Still River Interceptor, which is located east of Segar Street. The proposed Phase II gravity sewer would be approximately 9,200 feet in length and in general would parallel the existing Mill Plain Road Interceptor, which is located along or adjacent to Mill Plain Road, Lake Avenue Extension, and the Maybrook/Housatonic Rail Line (refer to Figure 3).

As illustrated on Figures 2 and 3, both the Phase I and Phase II wastewater facilities are proposed for location primarily along or adjacent to existing road and rail ROWs.

1.2 Project History and Need

The need for a sewer interceptor to serve western Danbury was initially identified in 1987. Subsequently, the significant mix of land use developments that have occurred in the western portion of the City have made this need even more acute.

Today, the principal land uses within Danbury's West Side include Danbury Fair Mall, Danbury Square Mall, Danbury Green Shopping Center, Boehringer Ingleheim Pharmaceuticals, Western Connecticut State University's West Side Campus, G.E. Capital, Danbury Municipal Airport, Wooster School, and the Connecticut Department of Transportation's State Welcome Center on Interstate 84, as well as various smaller shopping areas, strip malls, hotels, and multi- and single-family residential areas. In addition, development of the property surrounding the former Union

Carbide World Headquarters building for mixed commercial, residential, and open space uses (referred to as "The Reserve") is a major ongoing project. The West Side District also encompasses Lake Kenosia (a secondary water supply for the City and a recreational resource), as well as the Still River, which flows into Lake Kenosia from New York State, and then east from the lake into Mill Plain Swamp, which is located at the southern end of Lake Kenosia.

A resident population of approximately 6,000 is presently served by sanitary sewers in the West Side District. However, based on water consumption data and assuming a use rate of 100 gallons per capita per day, the equivalent population being served in the District (including people who commute to the area for work, shopping, or school) is approximately 20,000.

Over the past 40 years, Danbury has conducted extensive studies to predict demands on the sanitary sewer system and thereby to identify areas in which wastewater facilities improvements are required (e.g., *Comprehensive Sewerage Study* [Manganaro, Martin, and Lincoln 1967]; *Comprehensive Sewerage Study* [Roald Haestad, Inc. 1987]; *West Side Sewer Interceptor Design Report* [Roald Haestad, Inc. 1989]; *West Side Sewer Interceptor Design Report: Updated Executive Summary* [Roald Haestad, Inc. May 2003];). These studies have shown that, with the exception of the West Side, the City's existing interceptors and trunk line sanitary sewers are generally adequate to accommodate the anticipated municipal population through the year 2020.

As noted in the 1989 *West Side Sewer Interceptor Design Report*, the West Side Interceptor is required to resolve both existing capacity and flow deficiencies and to accommodate the anticipated increase in service demand resulting from continued development in western Danbury. A majority of the existing sewer lines in the West Side District, as well as the existing Mill Plain Road pump station, date from the 1970s and now have inadequate capacity to accommodate the existing and projected level of development in the area. Historically, the sewer system in the West Side District was developed with multiple pump stations owned and operated by the City, as well as several that are privately owned.

Further, certain residential areas within the West Side District continue to rely on individual septic systems, which are of questionable effectiveness and pose potential water quality concerns to the Lake Kenosia public water supply. These include the 200-unit mobile home community located along the shores of Lake Kenosia (i.e., "Jensen's Residential Community"). During Tropical Storm Floyd in 1999, Lake Kenosia flooded, leaving several of these septic systems under water for several days.

As a result of the documented concerns about both the maintenance of water quality and the provision of infrastructure to support the existing and projected land use developments within the West Side District, the Project is the City's top priority for improving the sanitary sewer collection system. Danbury's *Comprehensive Planning Program* and *Plan of Conservation and Development* both recommend the construction of the West Side Interceptor Sewer.

Accordingly, the objectives of the Project are to:

- Resolve both existing capacity and flow deficiencies;

- Provide adequate sanitary sewer service to support existing and projected land use developments within western Danbury;

- Allow for the installation of sanitary sewers to serve Jensen's Residential Community, and thereby to improve water quality by reducing nutrient loading to Lake Kenosia and the Still River caused by discharges from existing septic systems;

- Reduce current and future flows to the existing Mill Plain Road Pumping Station, delaying or eliminating the need for upgrades, and

- Allow for abandonment of certain existing pumping stations.

1.3 Existing Conditions

In general, the WSI will be constructed through areas designated as "Neighborhood Conservation Areas" on the State Plan of Conservation and Development Areas. In Phase 1, the gravity sewer will be installed in Prindle Lane and within an existing paved and gravel driveway extension of Prindle Lane. The force main will be installed within an existing gravel drive at the toe of the highway embankment for I-84. The City has approved plans by a developer to reconstruct and pave the gravel drive to serve as an access road to a proposed business center. Easements will be obtained for the sewer, pumping station and force main. In the vicinity of the proposed pumping station, the gravity sewer and force main will be installed in an area designated as "Preservation" on the State Plan of Conservation and Development Areas. This area includes the Still River and adjacent wetlands. The only other "Preservation" areas that would be affected by the installation of the WSI would be in Phase 2 where a crossing of an unnamed tributary to Lake Kenosia near Driftway Road and wetland areas along the Still River to the southwest of the I-84 Interchange with Route 7. The unnamed tributary to Lake Kenosia would be crossed in the vicinity of an existing culvert under the Housatonic Railroad and would have little or no significant impact to the stream. In the vicinity of the I-84 Interchange with Route 7, the WSI would be installed along the existing embankment for the Housatonic Railroad and again would have little or no significant impact to the preservation area.

The Interstate Business Center is a proposed commercial development that has obtained City approvals and is currently under construction. The developer has agreed to grant the necessary easements through the site for the West Side Interceptor gravity sewer, pumping station and force main. Sanitary sewers will not be extended to Canterbury Court and Fir Drive unless failures of existing septic systems occur.

1.4 Proposed Project

Phase I is expected to be constructed over a 10-month period and is anticipated to involve the following primary types of activities:

- Prepare the right-of-way (ROW) for construction (e.g., saw cut pavement if within roads, remove vegetation and grade in areas where the route is outside of developed areas). The construction work is expected to require an approximately 30-foot-wide ROW, consisting of a 15-foot-wide permanent easement, and a temporary construction easement consisting of an additional width of 15 feet.

- Excavate a trench for the gravity sewer to the required depth. The depth of the gravity sewer will vary from about 25 feet at the intersection of Mill Plain Road and Prindle Lane to about 10 feet deep. Install the gravity sewer and backfill the trench. Install temporary pavement in paved roads.

- Excavate a trench for the force main to provide approximately 4.5 feet of cover after installation. Install the force main and backfill the trench.

- After the Housatonic Railroad Company removes the tracks, excavate a trench and install a casing pipe for the force main crossing of the railroad. Backfill the trench with flowable fill, pervious structure backfill and stone ballast. Housatonic Railroad Company will replace the tracks upon completion of backfill and placement of stone ballast.

- Excavate jacking and receiving pits at the box culvert for crossing the Still River with the gravity sewer and water main. Jack the steel casing pipes in place under the box culvert and install the carrier pipes for the gravity sewer and water main.

- Excavate a trench for the water main to provide approximately 4.5 feet of cover after installation. Install the water main and backfill the trench. Install temporary pavement in paved areas.

- Prepare the pumping station site for construction (e.g., remove vegetation and grade areas as required). Drive steel sheeting and excavate for wetwells. Install wetwells and backfill excavation with concrete. Construct pumping station.

Phase I of the project has a cost of approximately $5.7 million based on a 2008 estimate with the following breakdown of costs for construction.

West Side Sewer Interceptor
Preliminary Opinion of Costs

Gravity Sewers	$1,265,000
Force Main	$600,000
Stream Crossing	$60,000
Railroad Crossing	$100,000
Pump Station	$2,000,000
Water Main	$115,000
Subtotal	$4,140,000
Contingency and Engineering	$1,242,000
Easements	$300,000
Total	$5,682,000

The City of Danbury bonded $5,000,000 in 2004 for the project. A more recent estimate in 2008 suggests project costs nearing $5,700,000, therefore the City may have to go back out for a referendum to appropriate more monies to the project depending on the actual bids received this year.

1.5 Public Notice and Review Comments

The Connecticut Department of Environmental Protection (DEP), as the lead agency pursuant to the Connecticut Environmental Policy Act (CEPA), prepared a scoping notice for the Project, which was filed in the Council on Environmental Quality's (CEQ's) *Environmental Monitor* on April 4, 2006. The DEP contact for the Project is Stacy Pappano at the Bureau of Water Protection and Land Reuse, Planning and Standards Division, Municipal Facilities Section, 79 Elm Street, Hartford, CT 06106-5127 or at stacy.pappano@ct.gov.

2. DESCRIPTION AND ANALYSIS OF ALTERNATIVES

2.1 No Action Alternative

The "no action" alternative is unacceptable because it would not achieve the objectives of improving and protecting water quality in the Lake Kenosia watershed and of providing adequate sanitary sewer facilities to serve the existing and projected development in Danbury's West Side District. As a result, the "no action" alternative also would be inconsistent with Danbury's *Comprehensive Planning Program* (2002), which specifically identifies the construction of the West Side Interceptor as a key element of sound land use planning for the West Side District.

2.2 On-Site Subsurface Disposal System Alternatives

This option would involve rehabilitating existing septic systems and relying on private pumping stations and private package systems to provide wastewater collection and treatment and/or to convey flows into the existing Danbury sewers in the West Side District. This option is not viable because it would not provide a solution to meet the West Side District's existing and projected wastewater system demands and would not offer a practical solution for resolving potential water quality concerns in the Lake Kenosia watershed, where soil conditions and depth to groundwater or ledge limits the long-term effectiveness of on-site systems.

2.3 Alternative Interceptor Routes and Designs

After the need for the West Side Interceptor was initially defined more than 20 years ago, various alternative routes and designs for the interceptor have been identified and evaluated. These evaluations considered environmental, engineering, and cost factors, as well as the overall objective of transporting the sanitary sewer flows from the West Side District eastward to the Still River Interceptor (located approximately 1,300 feet east of Segar Street), and from there via the existing sewer system to the municipal sewage treatment plant located off Plumtrees Road.

2.3.1 1989 Route and Design Alternative

In the 1989 *West Side Sewer Interceptor Design Report*, four basic alternative routes for the interceptor sewer were evaluated, along with several variations of these routes. From among these, a preferred alternative route was identified. The 1989 selected alternative route for the West Side Interceptor would start with a connection to the existing Still River Interceptor 1,300 feet downstream (east) of Segar Street and would extend west along the Still River and railroad ROW, parallel to an existing interceptor, to Interstate 84. The interceptor would then traverse cross-country along the south side of Interstate 84 to Saint Peter's Cemetery and then proceed along the edge of the Mill Plain Swamp to Kenosia Avenue. From Kenosia Avenue the interceptor would be installed along the shore of Lake Kenosia, through the City-owned Kenosia Park, to Jensen's Residential Community. At Jensen's Residential Community, it would continue through the community, paralleling Interstate 84 and then traverse cross-country and through the Sheraton Hotel property to Old Ridgebury Road.

This alternative would require the installation of approximately 13,800 feet of 36-inch-diameter sewer pipe and 900 feet of 24-inch sewer pipe; of this, approximately 2,500 feet was proposed for installation within municipal streets or on City property, whereas approximately 12,300 feet was planned for installation in new easement. In addition, several spur lines were proposed to connect the interceptor to areas served by municipal and private pump stations, which would then be abandoned. These included a proposed 27-inch 3,700-foot-long spur

sewer to connect the interceptor to the area served by the Mill Plain Road Pump Station; a 27-inch 3,500-foot-long spur to interconnect the area served by the Backus Avenue Pump Station; and an 8-inch, 1,500-foot-long spur to Larson Drive.

The 1989 route alternative would require construction through the extensive wetland system that abuts the Danbury Fair Mall and Interstate 84, as well as construction adjacent to St. Peter's Cemetery, Mill Plain Swamp, Kenosia Lake, and Kenosia Park. In addition, approximately 89% of the sewer route would be along a new easement, located on private property. Further, the 1989 design is outdated and would not be responsive to the West Side District's current wastewater facilities planning needs.

2.3.2 2003 Route and Design Option Alternative

In 2003, at the request of the City, Roald Haestad, Inc. conducted further studies of potential options for the interceptor to reflect the changes to zoning, land uses, and the municipal sewer system (e.g., upgrades to pump stations, sewers) that had occurred in the 14 years subsequent to the publication of the 1989 *West Side Sewer Interceptor Design Report*. The resulting updated interceptor design was based on an anticipated saturated development in the West Side District, including the redevelopment of the former Union Carbide property, and was pursuant to current municipal zoning regulations and to the objectives of the City's 2002 *Plan of Conservation and Development*.

The 2003 design alternative would involve the installation of the interceptor along a similar route to that originally identified in 1989. However, the last 900 feet of sewer to Old Ridgebury Road would be reduced in size from 24-inch to 15-inch, reflecting the design of the proposed sewer to serve "The Reserve". The length of the spur line to the Mill Plain Road Pumping Station was reduced from 3,700 feet to 2,600 feet and the length of the spur line to the Backus Avenue Pump Station was reduced from 3,500 feet to 2,800 feet. The total cost for the development of this alternative was estimated at approximately $15.9 million (2003 dollars).

Compared to the 1989 alternative, the size and lengths of certain sewer lines would be reduced in the 2003 design. However, this alternative would not eliminate the environmental impacts, specifically to water resources, that would result from the alignment of the interceptor through wetland areas south of Interstate 84, particularly in the vicinity of Danbury Fair Mall. During consultations regarding this interceptor route, the Connecticut Department of Environmental Protection (DEP) indicated that the 2003 route would not be acceptable and that less environmentally damaging, upland alignments for the Project should be investigated.

2.3.3 Proposed Project Route

The proposed route was identified to minimize potential effects on environmental resources, while still achieving the Project objectives of resolving both existing capacity and flow deficiencies and accommodating the anticipated increase in service demand as the development of the West Side District continues. As described in Section 1, the proposed route will be located predominantly north of Interstate 84 and will be aligned primarily within or adjacent to existing road or railroad ROWs.

The Phase I portion of the Project (i.e., Mill Plain Road/Prindle Lane to approximately 900 feet west of Kenosia Avenue) will be located primarily along Prindle Lane; developed areas (e.g., roads, parking lots) within the Interstate Business Center, LLC property; and along the

Maybrook/Housatonic Rail Line corridor. Phase II will continue to the east, following the railroad ROW, Mill Plain Road, and Lake Avenue Extension before diverging back along the rail line beneath Interstate 84 and U.S. Route 7 to the intersection with the Still River Interceptor, east of Segar Street.

The majority of the Phase I and Phase II routes will be through previously developed upland areas. In addition, the proposed new pump station will be located within an upland area. The Phase I route will require one crossing of the Still River and the Phase II route may involve a wetland crossing along the railroad ROW beneath Interstate 84. Within the context of the West Side District, which is characterized by numerous wetlands and slopes, the proposed Project represents the least damaging practical alternative for the interceptor sewer.

3. DESCRIPTION OF AFFECTED ENVIRONMENT: PROPOSED PROJECT

3.1 Geology, Topography, and Soils

The proposed route of the interceptor sewer is located in an area of minimal topographic relief, due in part to its location within the northern Still River valley and in part to man-made alternations of the landscape (e.g., gravel mining, construction of the rail line, removal of rock outcrops). Soils consist principally of Udorthents (excessively drained or well-drained soils that have been cut or filled), as well as Hinckley gravelly sandy loam (3-8% slopes) and Agawam fine sandy loam (3-8 % slopes). Depth to bedrock below these soils is typically greater than 5 feet, although rock outcrops are present on the Interstate Business Center, L.L.C. property (the property owner is presently working to remove these outcrops). The Agawam soils, which are only found along the Phase II route, are classified as prime farmland soils. However, because these soils are fully developed for urban or suburban purposes, they are no longer available for agricultural purposes.

3.2 Water Quality

The proposed project will have no negative impacts on the regions water quality. Several long-term beneficial impacts will result due to elimination of poorly treated sewage discharges to Lake Kenosia.

3.2.1 Water Resources

Water resources within the West Side District include Lake Kenosia, the Still River, and various wetlands, including wetland complexes associated with the Still River.

3.2.2 Wetlands

Although the proposed interceptor route will be located in upland areas, on the Interstate Business Center property, it will traverse one watercourse, the Still River, which is approximately 15 feet wide, and which subsequently flows into Lake Kenosia. The Phase I route also will be located along the existing paved / gravel Prindle Lane near a large emergent marsh wetland associated with the Still River. Several small wetland areas are located along the route at the base of the railroad embankment. The pump station will be located on the property so that it avoids potential impediment on any wetlands.

3.2.3 Flood Plains

In accordance with the Flood Insurance Rate Map prepared for the Federal Emergency Management Agency, the pumping station site and portions of the interceptor route in the

vicinity of the Still River crossing will be located within the approximate limit of the 100 year flood boundary as represented by the area designated as Zone A – Areas of 100 Year Flood; base flood elevations and flood hazard factors not determined. The pump station will be designed with components necessary for flood protection.

3.2.4 Aquifers and Water Supply

The Project is located within a preliminary aquifer protection area, as delineated by the DEP. This area encompasses most of the West Side District, with Lake Kenosia at the center. According to a February 2000 study of Lake Kenosia, existing septic systems located at or below the groundwater table, including those in the Jensens Residential Community around the lake, pose concerns for future pollution.

3.3 Biological Resources

The proposed interceptor sewer route traverses an urbanized portion of Danbury and will predominantly be located within or adjacent to existing road and railroad ROWs, in the vicinity of which vegetation is limited to lawns and ornamental trees and shrubs. Exceptions are the large emergent marsh wetland complex associated with the Still River located within the property being developed by Interstate Business Center, LLC; several small wetland areas located in depressions at the bottom of slopes along the railroad tracks; and scattered strips of mature deciduous forest vegetation. These vegetation types can be expected to provide habitat for wildlife species common to urban and suburban settings.

3.3.1 Endangered Species

The DEP Natural Diversity Data Base was consulted regarding the potential for any Federal or State listed species of concern (vegetation, wildlife, or fisheries) to occur in the general project vicinity. These consultations revealed that while no species were reported in the immediate vicinity of the Phase I Project, one species (the bog turtle (*Glyptemys [Clemmys] muhlenbergii*) was recorded in the general area in the 1970s. No habitat will be affected and the construction of this project is not anticipated to be a problem.

3.4 Land Use and Zoning

The West Side District encompasses 2,997 acres, including 402 acres of residential uses, 1,122 acres of commercial/office/industrial/institutional uses, and 1,473 acres of open space (including parks, lakes, streams, wetlands, and vacant land). Major public recreational areas in the West Side District include Lake Kenosia Park and Mill Plain Swamp along the Still River. Lands within the West Side District are zoned for a mix of commercial, residential, light industrial, and PND ("the Reserve") uses.

Principal land uses include Danbury Fair Mall, Danbury Square Mall, Boehringer Ingleheim Pharmaceuticals, Western Connecticut State University's West Side Campus, G.E. Capital, Danbury Municipal Airport, Wooster School, and the Connecticut Department of Transportation's State Welcome Center on Interstate 84, as well as various smaller shopping areas, strip malls, hotels, and multi- and single-family residential areas. In addition, the adaptive reuse of the former Union Carbide World Headquarters Campus for mixed commercial, residential, and open space uses (referred to as "The Reserve") is a major ongoing development. The West Side District also encompasses Lake Kenosia (a secondary water supply for the City and a recreational resource), as

well as the Still River, which flows into Lake Kenosia from the New York/Connecticut state line, and then east from the lake into Mill Plain Swamp, which is located at the southern end of Lake Kenosia.

3.4.1 Prime Farmlands

Phase I of this project will not encompass areas designated as prime farmland. Phase II of the proposed project does have areas designated as prime farmlands but they are already developed and cannot be converted back into farmland.

3.4.2 Wild and Scenic Rivers/Coastal Management

The Project area is not within the state designated coastal boundary and does not encompass any wild and scenic rivers.

3.5 Socioeconomics

The City of Danbury is one of the fastest growing cities in Connecticut and in 2000 reported a population of approximately 75,000. The resident population of the West Side District is reportedly approximately 6,000. However, a much larger population (estimated at 20,000) works, shops, or attends school in the District.

Economic activity in Danbury, based on a review of employment records by industry, centers around retail trade, manufacturing, and services (particularly health, education, and business services). The City's primary economic developments are centered in 12 key areas, including several within the West Side District (e.g., Backus Avenue; Miry Brook Road/Kenosia Avenue; Mill Plain Road; and Old Ridgebury/Briar Ridge/Saw Mill Road). According to the City's Comprehensive Planning Program (2002), existing and future economic growth within some of these areas (particularly in the Old Ridgebury/Briar Ridge/Saw Mill Road area) is limited by the need for additional sewer capacity.

3.6 Transportation and Infrastructure

The Project area is served by a well-developed transportation network. The road network includes Interstate 84; U.S. Routes 6, 7 and 202; and a system of local roads. Rail service is provided by the Maybrook Rail Line, which in the Project vicinity consists of a single track. The Danbury Municipal Airport, located in the West Side District south of Danbury Fair Mall, offers private aviation services.

The municipal sanitary sewer system extends throughout Danbury's urban core, as well as to outlying areas. Sewer service is proposed for extension within the West Side District, as well as to the north of the urban core. Danbury's municipal wastewater treatment facility has a permitted capacity of 15.5 million gallons per day. According to various studies, the treatment facility has sufficient capacity to serve a population of 90,000.

Danbury has established principles for extending sewer service, based on projected levels of development and density. In general, the City views the extension of sewer service as a method of reinforcing the growth patterns identified in the 2002 municipal *Plan of Conservation and Development*, except where sewers are necessary to mitigate existing or potential pollution problems associated with failing septic systems. For the West Side District within the Lake Kenosia watershed, the principles specifically state that "expanded sewer service should follow a plan that focuses on both orderly service extensions and watershed protection."

3.7 Cultural Resources

Based on a review of the historic preservation component of Danbury's Comprehensive Planning Program, there are no known cultural resources (archaeological sites, standing historic structures, or historic districts) in the immediate vicinity of Phase I. In particular, the Phase I interceptor sewer is planned for an urbanized portion of Danbury where past land use practices and ongoing development (such as the ongoing Interstate Business Center site work) are likely to have altered the context of any archaeological sites. However, the Phase II portion of the Project traverses near an area where a prehistoric archaeological site was previously recorded (i.e., the Hambridge site), and archaeological sites have been discovered in other areas of the West Side District, most notably in the vicinity of Saw Mill Road.

3.8 Air Quality, Odor, and Noise

Existing air quality and noise conditions in the Project area are influenced by Interstate 84, as well as traffic movements on U.S. Routes 6, 7, and 202. Noise and air quality conditions are generally typical of those found in other state urban – suburban environments. Odor control problems sometimes occur as a result of the conditions associated with the existing sanitary sewer system (e.g., wastewater retention time at certain of the aging pump stations) and septic system use in the West Side District.

4. POTENTIAL ENVIRONMENTAL CONSEQUENCES / MITIGATION

4.1 Direct Impacts

4.1.1 Geology, Topography, and Soils

The construction of the Project will not adversely affect physical resources. Construction activities will be conducted in accordance with applicable permit requirements and best management practices for the protection of soil resources. Temporary erosion and sedimentation controls will be installed and maintained around disturbed soil areas, as appropriate. After the installation of the interceptor sewer, disturbed areas will be returned to pre-construction grade and restored.

4.1.2 Watercourses and Wetlands

During installation of the interceptor sewer, the Project will result in short-term and highly localized adverse effects on water resources (wetlands and watercourses). These impacts will be minimized by adherence to Project permit requirements and by implementing best management practices to control erosion and sedimentation. On a long-term basis, the Project will improve water quality within the West Side District by eliminating discharges from failing septic systems.

The Phase I interceptor sewer will be installed perpendicularly across and beneath the Still River at the access road to the Interstate Business Center LLC. Construction activities will include jacking casing pipes under an existing box culvert where the Still River crosses the access road and installing the gravity sewer and a water main. Construction methods will be consistent with the conditions of regulatory approvals and will be designed to minimize erosion and downstream siltation to the extent practical. No long-term adverse effects to water resources will result.

The pumping station will be constructed within about 50 feet of the Still River and the wetland complex associated with it. Construction activities will be consistent with the conditions of regulatory approvals and will be designed to minimize erosion and siltation to the extent practical. No long-term adverse effects to water resources will result. The floor elevation of the pumping station will be located above the level of the 100 year flood.

The installation of the Phase II portion of the Project may affect wetlands located along the Maybrook Rail Line, in the vicinity of the Interstate 84 rail line underpass. Impacts to these wetlands will be minimized or avoided to the extent practical during the future final planning and design for Phase II. If construction is required in these wetlands, appropriate regulatory approvals will be obtained and both the conditions of such approvals and best management practices will be followed during construction.

4.1.3 Aquifers and Public Water Supply

By providing appropriate sanitary sewer service to the West Side District and thereby allowing municipal sewers to replace existing septic systems, the Project will improve water quality and contribute to the protection of the Kenosia Lake public water supply watershed. A stormwater management plan for aquifer protection has been developed by the City of Danbury.

4.1.4 Biological Resources

The proposed Project will be located within a developed urban area and is not expected to have any significant adverse effect on wildlife or fisheries resources. Consultations with the DEP Natural Diversity Data Base regarding the Phase I portion of the Project indicate that while there are no known extant populations of Federal or State Special Concern Species in the vicinity, an historical record of one Federal Threatened and State Endangered species (bog turtle) was recorded in the general area. The DEP's Wildlife Division is currently reviewing the Phase I Project and is expected to provide further comments and guidance. Additional consultations or field reviews may be required to confirm the presence or absence of this species in the Project area.

4.1.5 Land Use

The construction of the Phase I interceptor sewer will result in temporary adverse effects to land uses (e.g., disruption to Prindle Lane, and the paved / gravel extension of Prindle Lane, parking lots, and areas along the railroad ROW). After the installation of the interceptor sewer, the construction work area will be restored. No long-term adverse effects to land uses will occur.

The development of the new pump station on a 0.25-acre site will represent a long-term change to land uses. However, the pump station is planned for a location on an upland site that was previously approved by the City of Danbury for development of a private pump station to serve the Interstate Business Center; this private pump station will not be required with the construction of the Project.

4.1.6 Socioeconomic Impacts

The Project will require the expenditure of municipal and state funds. At its January 6, 2004 meeting the City of Danbury Common Council appropriated $5,000,000, inclusive of any and all State and Federal grants-in-aid and third party payments, for the planning, acquisition and

construction of sewer lines and pump station upgrades and replacement, including portions of the West Side Sewer Interceptor. The City is presently preparing preliminary design and assessments to provide sewer service to Jensen's residential community. As this project would discharge to the WSI pumping station and force main, a proportional share of the cost will be included in their assessment.

Localized benefits to the economy can be expected to result from the employment created by the construction of the Project. In addition, multiplier effects will occur as construction workers are likely to expend a portion of their wages in the Project vicinity.

4.1.7 Cultural Resource Impacts

The Project will be located in urbanized portions of Danbury, where past land use development practices (e.g., construction of the railroad, roads, commercial / industrial facilities) are likely to have disturbed any archaeological resources. Similarly, the Project will not traverse near any known standing historic structures. However, the Connecticut Commission on Tourism and Culture has been requested to comment on the potential sensitivity of the Project area for the location of both prehistoric and historic resources. If required by the Commission, an archaeological reconnaissance survey will be performed. No ground-disturbing activities will be initiated until the Commission has had an opportunity to review and comment on the Project.

4.1.8 Air Quality and Noise

The construction of the Project will result in short-term and localized impacts to air and noise quality associated with the operation of construction equipment and fugitive dust emissions during activities such as trench excavation, backfilling, and vehicle movements to and from work areas. Air quality impacts will be temporary (lasting only during construction) and will be minimized by adherence to standard practices for equipment maintenance and dust control. Similarly, noise impacts from construction activities will not be significant because the Project is not located near noise-sensitive areas (i.e., residential developments), and because construction work is expected to occur primarily during normal daytime work hours when noise sensitivity is low. Moreover, in the vicinity of the Project, traffic on Interstate 84 already affects the ambient sound environment.

The operation of the new pump station may cause a minor increase in ambient noise levels. However, because of its remote location (i.e., adjacent to Interstate 84, behind the Interstate Business Center LLC commercial facilities), noise emissions (if any) from the pump station are not expected to result in any adverse effects to the ambient noise environment.

4.1.9 Prime Farmlands

There are no impacts to designated prime farmland areas in phase I of the proposed project. Since the designated prime farmland areas in the proposed phase II of the project are in areas already developed and that cannot be converted back to farmlands, there are also no impacts for phase II.

4.2 Indirect Impacts

The Project will result in positive long-term environmental effects. The development of the interceptor sewer will achieve a long-term municipal and regional goal for improving wastewater service to the West Side District and thereby allowing the mixed use development of the area to

proceed in accordance with established planning objectives. In addition, the Project will permit Danbury to maintain the quality of public water supplies in the Lake Kenosia watershed by allowing areas presently using septic systems to be interconnected to the municipal sanitary sewer system.

4.3 Irreversible and Irretrievable Commitments of Resources

The construction of the Project will result in the irreversible and irretrievable commitments of resources such as fuel, labor, and materials. In addition, an approximately 0.25-acre site will be committed to use for the new pump station for the life of the Project. For the operation of the interceptor, the City will have to commit management and labor resources; however, because the interceptor represents a small element of Danbury's overall wastewater collection and treatment system, this resource commitment will be negligible.

4.4 Consistency of the Project to Approved Land Use Plans

The proposed Project is consistent with the *Conservation and Development Policies Plan for Connecticut 2005 – 2010 (state "C & D" Plan)*, as well as with the City of Danbury's current (2002) *Plan of Conservation and Development*. The state C & D Plan identifies the West Side District as encompassing Growth Areas, Neighborhood Conservation Areas, Existing Preserved Open Space, and Preservation and Conservation Areas. The C & D Plan also shows portions of the West Side District as within an Aquifer Protection Zone (i.e., the Kenosia Lake watershed). The C & D Plan's "Development Area Policies" are consistent with the City of Danbury's objectives for the West Side District. These policies promote infill development and redevelopment in Neighborhood Conservation Areas and support "staged urban-scale expansion in areas suitable for long-term economic growth that are currently less than 80% built up, but have existing or planned infrastructure to support future growth in the region."

Danbury's C & D Plan specifically includes a West Side District Plan that calls for the promotion of this area as the major center for future economic development, with the caveat that the future growth must be managed to protect the environment. Specific goals of the West Side District Plan are to construct the West Side Sewer Interceptor and to extend sanitary sewer services to the Jensen Residential (mobile home) Community area around Lake Kenosia. In addition, the City's *Land Development Plan Map* (dated March 1, 2002 and contained in the C & D Plan) identifies the future West Side District as encompassing a mix of light industrial/office and transportation uses, commercial uses, wetlands/open space, and residential areas.

4.5 Unavoidable Adverse Impacts

The unavoidable adverse effects from the Project will be limited to the construction phase. These short-term impacts will include the generation of dust and noise from construction activities, as well as potential traffic congestion from the movement of construction equipment and transport of Project materials on local roads. The installation of the interceptor sewer across the Still River and near several wetlands also cannot be avoided and may result in temporary and localized adverse effects to water quality. However, all of these unavoidable adverse effects will be short-term and will be minimized, as detailed in Sections 3 and in Section 4.6.

4.6 Mitigation of Adverse Environmental Impacts

The Project will be constructed in accordance with the conditions of any permits or approvals from regulatory agencies and with best management practices. The types of measures that will be implemented to minimize environmental effects include, but may not be limited to:

- Installation of temporary erosion and sedimentation controls (e.g., hay/straw bale, silt fence) around construction to protect streams and wetlands and to prevent and minimize the potential for off-ROW erosion and sedimentation.

- Installing the interceptor sewer by jacking a casing pipe beneath the box culvert at the Still River near Interstate 84; constructing during low flow conditions if possible; minimizing downstream sedimentation; and stabilizing/reseeding the disturbed areas along stream banks.

- Implementation of dust control measures (e.g., sprinkler trucks) as appropriate to control fugitive dust emissions from construction activities.

- Performance of work during normal daytime hours, when human sensitivity to noise variations is lowest.

- Require construction contractors to be fully familiar with all environmental permit conditions and to strictly adhere to all Project construction requirements.

- Control sedimentation and erosion from dewatering activities, storage of excavated or stockpiled material, and trench or ditch excavation shall be in accordance with the publication entitled "Guidelines for Soil Erosion and Sediment Control" by The Connecticut Council on Soil and Water Conservation, latest revision.

- Protect all watercourses from sedimentation, both during and after construction.

- Operate all equipment and perform all construction operations so as to prevent, or reduce to a minimum, any damage to any watercourse from pollution by debris, sedimentation, or other material, or from manipulation of equipment and/or materials in or near such water bodies and on abutting property.

- In all cases involving work in a watercourse, maintain sufficient flow of water to sustain aquatic life downstream, and take efforts to return the watercourse to the highest possible standard for aesthetic value, water quality, and fish habitat.

- Limit disturbance in wooded areas and areas classified as inland wetlands to what is absolutely necessary for construction, and restore these areas, as closely as possible, to their original natural state.

- Store all fuel, oil, paint, solvents or other hazardous chemicals and petroleum products in an approved, secured secondary containment system with an impervious floor during non-working hours.

- Maintain a supply of absorbent spill response material including booms and pads at all times to clean up potential spills of hazardous chemicals and petroleum products.

- Establish procedures for vehicle and equipment fueling and maintenance during construction, including the cleanup and investigation of all spills and releases of hazardous chemicals and petroleum products, including but not limited to removal and off-site disposal of contaminated soils, equipment, materials or other affected media.

- Completion of sewer stream crossing during periods of low stream flows and when no rain is forecast.

- Installation of silt curtains and absorbent booms to minimize pollution, sedimentation and erosion at the stream crossing.

- Discharge dewatering pumps through a hay bale sediment barrier or "Dirt Bag".

- Restoration of stream banks to pre-construction conditions, such that no net fill or excavation occurs.

- Mulch and seed all disturbed areas and maintain silt curtains until permanent vegetation is established.

- Reseed and stabilize disturbed soil areas, using mulch and other stablizers as appropriate. Maintain temporary soil erosion and sedimentation controls until final site stabilization is determined to be effective.

4.7 Energy Considerations

Energy will be consumed during both the construction and operation of the Project. Energy will be expended in the production of the materials used in the Project, as well as during the operation of the construction equipment used to install the Project. The operation of the Project will require additional energy expenditures to operate the new pump station. A portion of the flow that currently discharges to the existing Mill Plain Road and Backus Avenue Pumping Stations will be diverted to the new pumping station, thereby reducing the energy expenditures at those locations.

5. LICENSES, PERMITS AND APPROVALS

The project was reviewed and approved by the City of Danbury's planning, zoning, and wetlands Commissions. Additional local, State and Federal permits for West Side Sewer may include but are not limited to the following identified in the table below.

Local permits for the West Side Sewer may include but are not limited to:

Agency	License, Permit, or Approval
Federal	
U.S. Army Corps of Engineers, New England District	Programmatic General Permit pursuant to Section 404 of the Clean Water Act (for work in federally regulated watercourse or wetlands)

State	
DEP	General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities
	Approval of design and bidding documents
DOT	Enroachment permit (for work in state ROWs, if applicable)
	Road opening permit for any pipe installation work in a State roadway
City of Danbury	
Wetlands	Environmental Impact Commission (EIC) approval for any improvement within a regulated wetlands area, including the stream crossing, pumping station and portions of the force main
Planning	Site Plan approval, Special Exception, building permit, erosion and sedimentation control permit, sanitary sewer permit, and water permit for the Pumping Station
Highway Department	Road opening permit and an erosion and sediment control permit for the gravity sewer in Prindle Lane

6. REFERENCES

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FIGURE 1
CITY OF DANBURY, CONNECTICUT
WEST SIDE SEWER INTERCEPTOR

LIMIT OF WEST SIDE SEWER INTERCEPTOR STUDY AREA

Scale: 1"=1,000'

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N.

NEW YORK
CONNECTICUT

MILL PLAIN PUMP STATION

MILL PLAIN ROAD PUMP STATION

CINNAMON TEALS RESTAURANT PUMP STATION (PRIVATE)

ONE PLAZA WEST PUMP STATION (PRIVATE)

DANBURY PRINTING AND LITHO PUMP STATION (PRIVATE)

SHERATON PUMP STATION (PRIVATE)

LARSON DRIVE PUMP STATION

UNION CARBIDE PUMP STATION (PRIVATE)

BOEHRINGER INGELHEIM PUMP STATION (PRIVATE)

KENOSIA AVE. PUMP STATION

BACKUS AVENUE PUMP STATION

LIMIT OF WEST SIDE SEWER INTERCEPTOR STUDY AREA

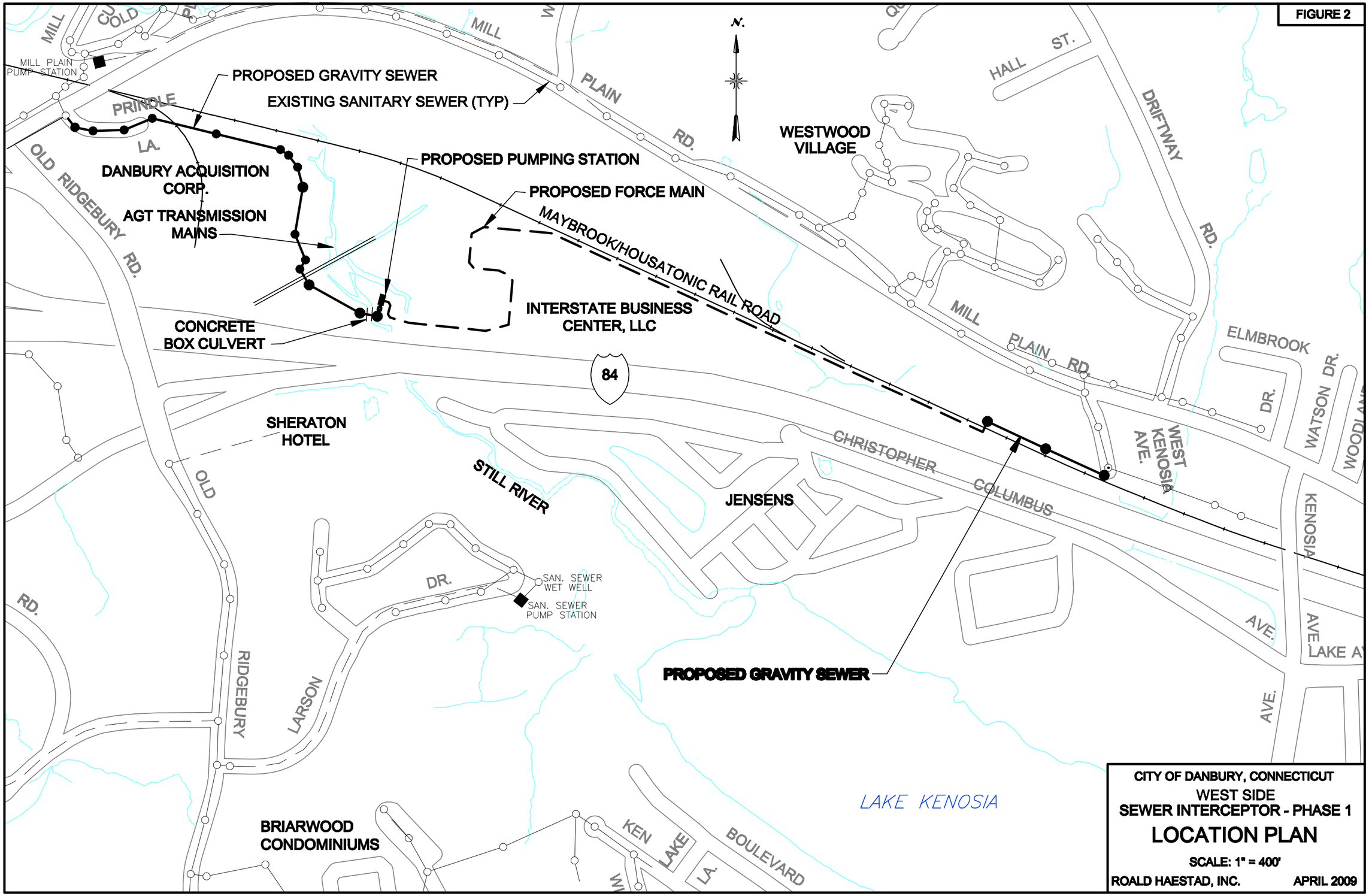
SEWERSHED LEGEND

TRIBUTARY TO PHASE 1 OF WSI GRAVITY SEWER

RESERVE

ADDITIONAL SEWERSHED THAT IS TRIBUTARY TO WSI PUMPING STATION

FIGURE 2



CITY OF DANBURY, CONNECTICUT

WEST SIDE
SEWER INTERCEPTOR - PHASE 1

LOCATION PLAN

SCALE: 1" = 400'

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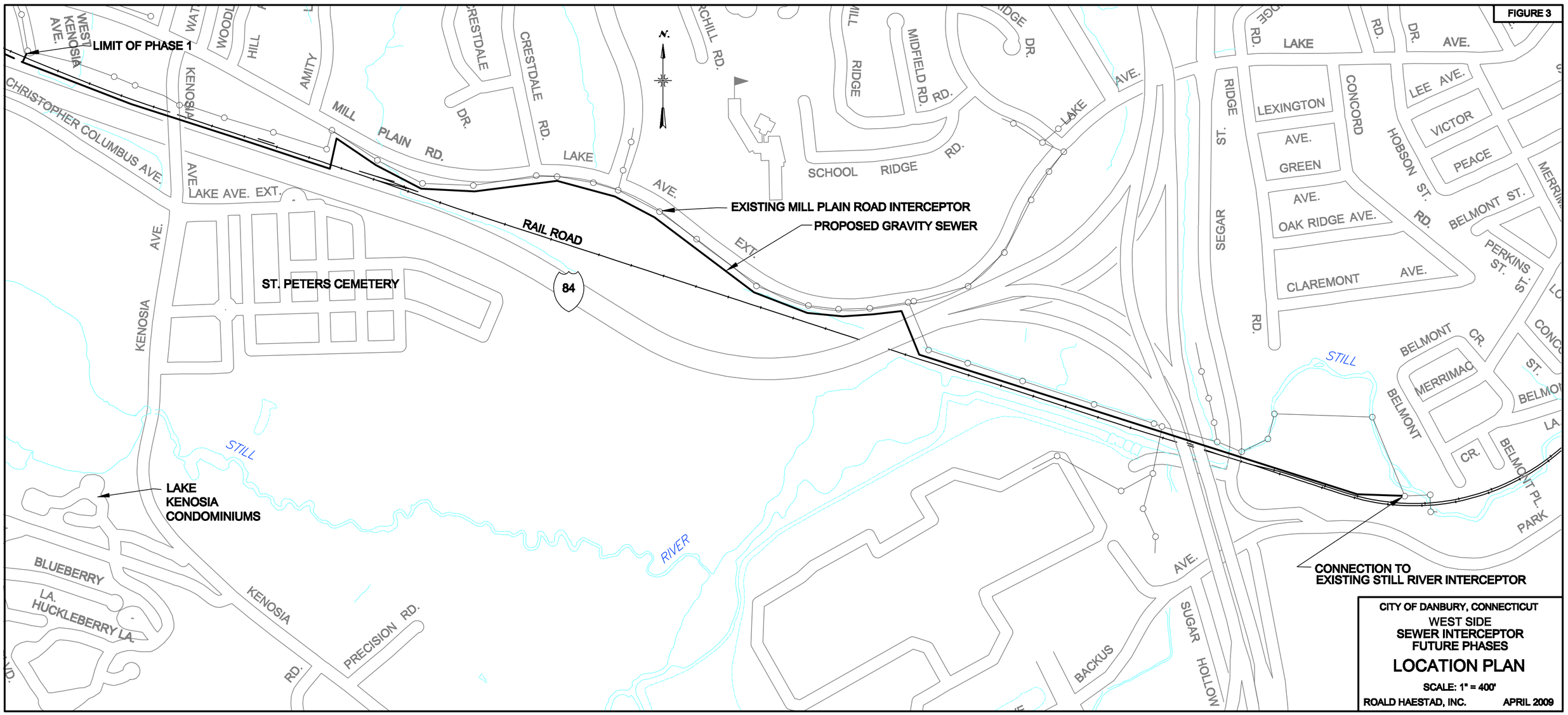
FIGURE 3



CITY OF DANBURY, CONNECTICUT

WEST SIDE
SEWER INTERCEPTOR
FUTURE PHASES

LOCATION PLAN

SCALE: 1" = 400'

ROALD HAESTAD, INC. APRIL 2009