

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

**REDEVELOPMENT
MASTER PLAN
ONEONTA RAILYARDS
CITY OF ONEONTA
OTSEGO COUNTY, NEW YORK**

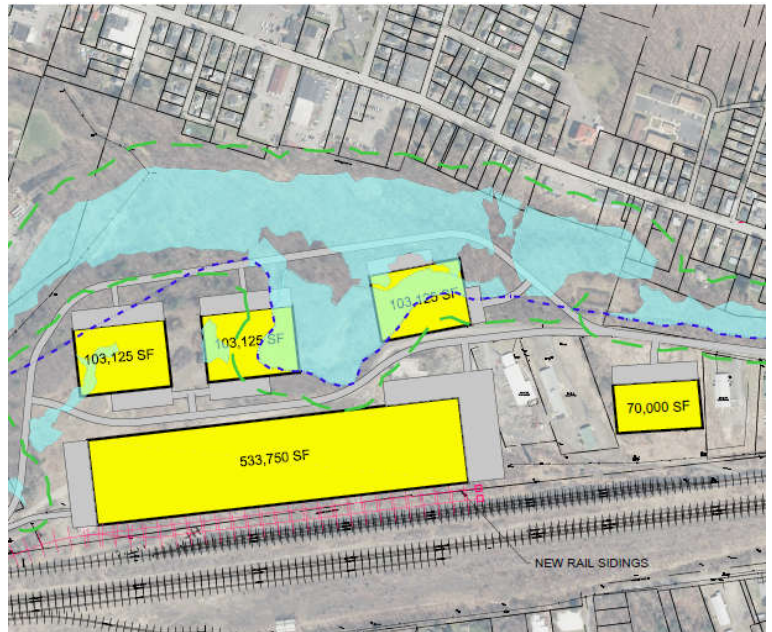
SEQRA TYPE 1 ACTION

LEAD AGENCY:

**CITY OF ONEONTA
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DECEMBER 28, 2018

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

for the

REDEVELOPMENT OF THE ONEONTA RAILYARDS

City of Oneonta, Otsego County, New York

SEQRA Type 1 Action

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Public Comment Period: January 16, 2019 – February 22, 2019

Public Hearing: February 5, 2019, Common Council meeting, City Hall

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**City of Oneonta Common Council
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**Redevelopment of the Oneonta Railyards
City of Oneonta
Otsego County, New York
Generic Environmental Impact Statement**

EXECUTIVE SUMMARY

INTRODUCTION AND PURPOSE

The City of Oneonta Common Council, as Lead Agency, is conducting an environmental review of Redevelopment of the Oneonta Railyards in the City of Oneonta, Otsego County, New York, as proposed by the County of Otsego Industrial Development Agency (COIDA). COIDA will prepare a redevelopment master plan and economic development strategy for approximately 50 acres of an 80-acre site owned by COIDA in the area known as the Oneonta Railyards (Study Area). The project will provide an opportunity to create a new industrial/commercial business park that would provide additional markets for Otsego County, create new jobs, and add to the local tax base.

Part I of the Full Environmental Assessment Form was prepared together with a brief project description and study area map. Based on a review of 6 NYCRR Part 617.4, the Common Council determined that the proposed project is a Type I Action under SEQRA involving more than one agency thus requiring coordinated agency review.

A coordinated review for Lead Agency status was initiated by the Common Council on September 28, 2017, and on January 16, 2018, the Common Council, having received no objections from involved agencies, declared itself Lead Agency for this project, made a Determination of Significance, and issued a Positive Declaration with its Notice of Intent to Prepare a Draft Generic Environmental Impact Statement (DGEIS). The Scoping process to define DGEIS included two public meetings. The Final Scope was issued May 15, 2018.

The Draft Generic Environmental Impact Statement (DGEIS) was prepared in accordance with Article 8 of the New York Environmental Conservation Law, the State

Environmental Quality Review Act (SEQRA or SEQR) and the implementing regulations incorporated in 6 NYCRR Part 617.

The DGEIS has been prepared to document the environmental review of the proposed action and to seek comments and input from the public and involved and/or interested agencies. The DGEIS presents analysis of the potentially significant adverse and beneficial environmental impacts of the proposed action, as well as reasonable alternatives and mitigation measures. Once prepared, SEQRA provides that the Lead Agency evaluates the DGEIS and determines if it is complete for public and agency review. With the DGEIS deemed complete, a comment period extending a minimum of 30 days shall be initiated. During the comment period, the public and involved and/or interested agencies are encouraged to provide comments regarding the DGEIS. At the conclusion of the comment period, the Lead Agency will prepare a Final GEIS (FGEIS) which will incorporate the DGEIS together with responses to the comments and include any supplementary material necessary to provide responses to the comments. The final step in the process is the issuance of a Findings Statement by the Lead Agency. The Findings Statement will document the environmental analysis in summary form and set forth specific conditions or criteria under which future actions may be undertaken or approved.

This DGEIS establishes thresholds for environmental review and impacts within the Study Area that will lay the groundwork for permitting of construction projects contemplated within the scope of the study. At the time a site-specific project is determined, in some cases, additional environmental review under SEQR may be necessary; in addition, applicable permits and local approvals will need to be obtained.

GOALS OF THE PROJECT

The goal of the project is to prepare a redevelopment master plan and economic development strategy for approximately 50 acres of an 80-acre site owned by COIDA at the Oneonta Rail Yard. Redevelopment of the Rail Yard will provide an opportunity to create a new industrial/commercial business park that would provide additional markets for Otsego County, create new jobs, and add to the local tax base. The environmental

review is conducted through the preparation of a Generic Environmental Impact Statement that will outline the proposed redevelopment at full build out, the existing environmental conditions, the potential environmental impacts and the likely mitigation measures that could reduce or eliminate the environmental impacts. The completion of the GEIS facilitates marketing the Railyards to prospective developers through reducing the risk associated with time and expense of the environmental review process and provides certainty as to redevelopment opportunities.

PROJECT DESCRIPTION

The redevelopment of the Oneonta Railyards site, centered on Roundhouse Road and the area south of Chestnut Street in the City of Oneonta, will involve the construction of structures, parking, and access to the site as well as the extension of utility infrastructure and site roadways, for a total potential project area consisting of approximately 50 acres with access to public water and sewer systems as well as electricity and natural gas. The master plan has been prepared around potential industrial and commercial uses including food processing, brewing/manufacturing, bottling/packaging, warehouse/storage, temperature-controlled distribution, import and export. Facilities for these activities are generally lacking in the county. The great advantage of the site is access to both highway and rail for bringing local products to outside markets.

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS IDENTIFIED

Given the nature of the proposed project at a site with an industrial history, many of the issues typically associated with a development related action on an unused site will have little or no applicability. Current conditions within the project site are documented in the DGEIS.

Topography, geology and soils as well as water and air resources were evaluated for potential impacts as a result of the proposed project. Potential impacts to land use and zoning, the transportation system and community services were analyzed. Alternative master plans were reviewed, and the use and conservation of energy resources for the proposed project were assessed.

The need for mitigation measures is identified and discussed with respect to the disturbance of wetlands. The protection, restoration and enhancement of wetlands and habitat at a ratio of at least one to one for every acre impacted should be planned. Development of the site will also add impervious surfaces, buildings, road surfaces and parking areas, which will concentrate stormwater the mitigation for which is discussed.

The traffic generated by the project will include truck transportation of goods which has the potential to decrease safety on local roads and increase congestion. A traffic impact and access study (TIAS) for the proposed redevelopment plan has been conducted. The TIAS is included as Appendix F and quantifies existing and projected traffic conditions with the redevelopment of the Oneonta Rail Yard. The TIAS also includes a sensitivity evaluation during the summertime when recreational traffic exists in the study area, primarily related to the operation of the Cooperstown All Star Village baseball camp facility. In addition, the study includes a crash evaluation of the latest three years of available data from the New York State Department of Transportation (NYSDOT). The TIAS does not identify any potentially significant adverse impacts associated with the proposed redevelopment.

Current conditions at the project site do not include sufficient electricity for the types of use proposed in the Master Plan, nor is natural gas currently available. Information from NYSEG indicates that to support an energy load for redevelopment of that projected by the Master Plan, approximately 1.5 miles of three-phase distribution would need to be extended from the existing substation to Roundhouse Road, along with another 1.7 miles of conversion work on main line circuits. Potential energy conservation measures to save costs as well as conserve resources and alternative sources of structural heating and cooling are discussed.

Feasible mitigation measures are offered for each identified impact. Project specific review and permits will be obtained from appropriate local, state and national agencies as necessary at the time a final redevelopment proposal is defined.

EXPECTED EMPLOYMENT, GROWTH AND ECONOMIC BENEFITS

The economic benefits include direct revenues generated by businesses on site, increased employment opportunities, and an increased market for local agricultural and other local products. Re-development of the Oneonta Rail Yards would result in an increase in the tax base over that of leaving the land in its mostly vacant state. The impact to schools in terms of student generation is expected to be insignificant as the intent is to fill available jobs in the local employment market. Indirect revenue from re-development, workers spending money on goods and services within the community, would also increase.

SUMMARY

City of Oneonta has conducted an environmental review for re-development of the Oneonta Rail Yards, the largest available infill location in the City of Oneonta, as proposed by the COIDA. The project will provide an opportunity to create a new industrial/commercial business park that would provide additional markets for Otsego County, create new jobs, and add to the local tax base.

Project components include a focus on:

- Redevelopment of a large already disturbed, currently vacant area in Oneonta
- Taking advantage of the existing access to rail and Interstate 88 for bringing local products to outside markets.
- Providing the space for Industrial/Commercial innovation
- Filling a need for warehousing and import/export industries in Oneonta

THE DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

1.0 INTRODUCTION

The City of Oneonta Common Council, as Lead Agency, has conducted an environmental review of Redevelopment of the Oneonta Railyards in the City of Oneonta, Otsego County, New York as proposed by the County of Otsego Industrial Development Agency (COIDA). COIDA has prepared a redevelopment master plan and economic development strategy for approximately 50 acres of an 80-acre site owned by COIDA and the surrounding area, collectively known as the Oneonta Railyards (Study Area). Figure 2.0 outlines the Former Rail Yards area.

The environmental review has been conducted in conformance with the New York State Environmental Quality Review Act (SEQR) and its implementing regulations. Actions of the nature contemplated by COIDA are accommodated through the preparation of a Generic Environmental Impact Statement (GEIS). The studies, reports and materials needed to evaluate the potential impacts, and consideration of mitigation plans have been compiled into a comprehensive GEIS document. The GEIS will evaluate several alternative concept plans that may include a mix of business, determine a preferred Master Plan, and establish thresholds for future development.

The GEIS will be made available for involved agency and public review and comment. Incorporation of the public and involved agency comments and responses as well as the issuance of a findings statement will finalize the environmental review process.

2.0 DESCRIPTION OF THE PROPOSED ACTION

The County of Otsego Industrial Development Agency (COIDA) has conducted an environmental review of an area locally known as the Oneonta Railyards, an area of approximately 200 acres comprised of 17 parcels. The Study Area is made up of acreage owned by COIDA between Chestnut Street to the north and the rail lines to the south, Fonda Avenue on the east and Ceperley Avenue on the west, within the City of Oneonta. See Figure 2.0 for a location map. COIDA has conducted the environmental review of

the Oneonta Railyards as a Generic Environmental Impact Statement that evaluates existing conditions, potential impacts related to the proposed re-development, and the mitigation measures necessary to reduce potential impacts.

2.1 PROJECT PURPOSE, NEED AND BENEFIT

This section identifies the history and background for the proposed action together with the economic and social benefits associated with the action. Commercial and/or business sectors that are envisioned to occupy the proposed site are identified and discussed relative to siting issues including local zoning and surrounding land uses, community character, transportation and other infrastructure.

2.1.1 Purpose and Need

The rail yard site is by far the largest infill development area within the City of Oneonta, and this commercial/industrial zoned land is highly underutilized. Through the creation of a Master Plan for the site, the County of Otsego Industrial Development Agency (COIDA) can better attract and anticipate development within the site. In fact, it will give COIDA the ability to actually steer development in a controlled manner.

This DGEIS establishes thresholds for environmental review and impacts within the Study Area that will lay the groundwork for permitting of construction projects of the type contemplated within the scope of this study. At the time a site-specific project is determined, additional environmental review under SEQR may be necessary; in addition, applicable local and state permits and approvals will need to be obtained.

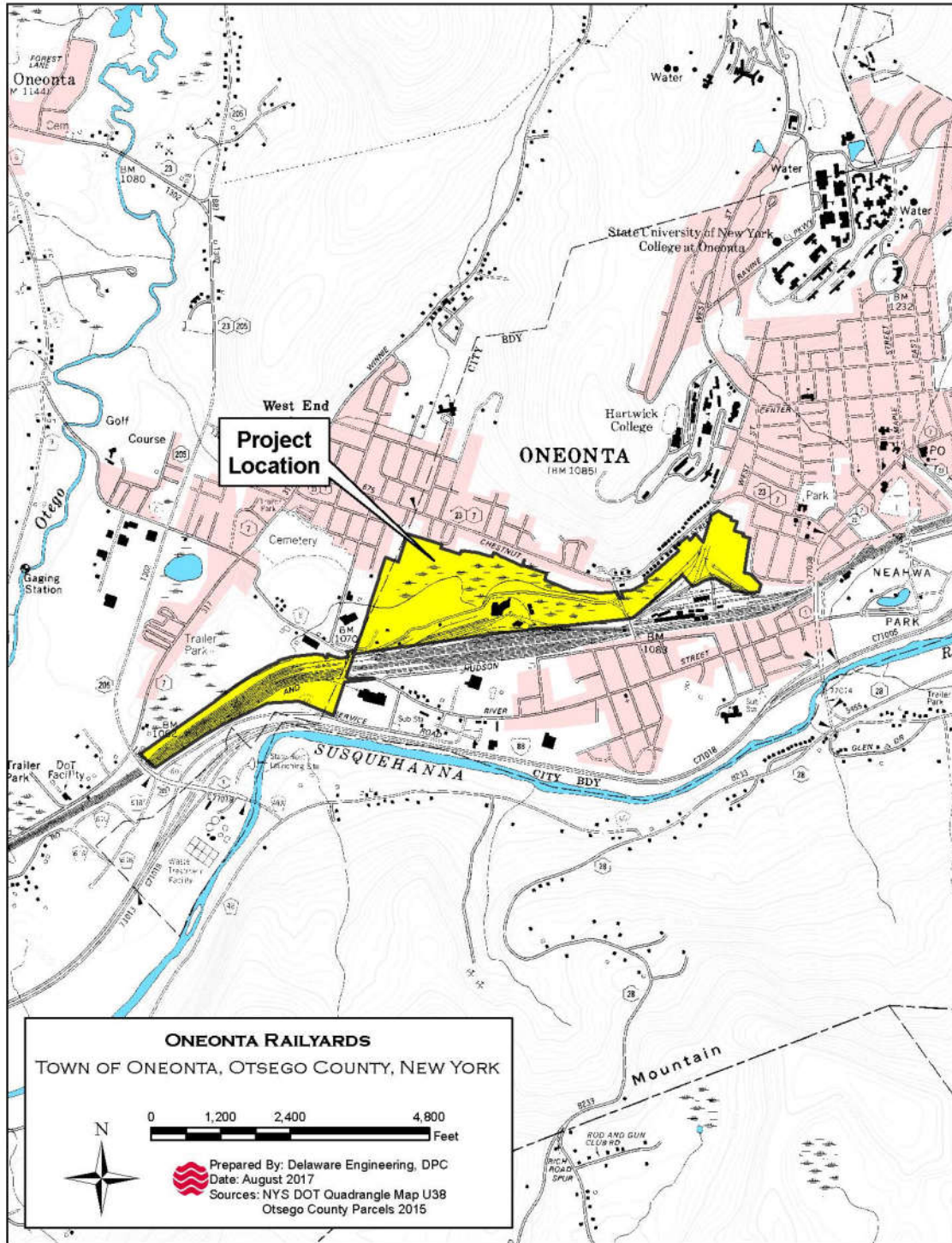


FIGURE 2.0 Location Map

2.1.2 Anticipated Economic Benefits

The economy of Upstate New York suffered from significant contraction of the manufacturing sector in the final decades of the 20th century. The economic decline hit the rural counties of the state the hardest since many of their localities are dependent on only a handful of economic drivers. Oneonta was impacted by this trend, resulting in the loss of many blue-collar jobs in the City and region. A sizable and well-connected industrial park would help to diversify and strengthen the local economy. The project will provide an opportunity to create a new light industrial/commercial business park with potential to provide additional markets for Otsego County, create new jobs and add to the local tax base.

2.2 LOCATION

The history of this site is truly the locational advantage when discussing the logic and rationale behind the redevelopment of the Oneonta Railyards. This area was previously developed for the rail access. The land was physically altered to allow for the railroad to pass through and for large scale railyard operations to be developed.

The railyards site is by far the largest infill development area within the City of Oneonta. While a few industrial businesses have continued to operate in and around the site, the railyard's potential is far greater. Its proximity and access to highway and freight infrastructure makes this location ideal for the expansion of industrial development within Otsego County and the City of Oneonta. This site also has the advantage of being accessible to multiple Oneonta City neighborhoods. Its centralized location which has served to divide neighborhoods could help to bridge those community development gaps.

2.2.1 Project Site

The redevelopment area under study consists of acreage between Chestnut Street to the north and the rail lines to the south, Fonda Avenue on the east and Ceperley Avenue on the west, within the City of Oneonta (see Figure 2.0 for location information). The overall Rail Yard area includes approximately 200 acres and is currently zoned Commercial/Industrial (City of Oneonta, Zoning District Map, 2013).

The Study Area is located at the former Delaware and Hudson railyard which was once home to the country's largest roundhouse. The roundhouse was operational between 1906 and 1954, at which time a portion was torn down. The structure was then used as storage until 1994 when it was demolished. There are several concrete structures and foundations from the former D&H Railyard still present on the site. These include an 80-ft structure formerly utilized to load coal and sand into rail cars, and a smoke stack, approximately 160 feet tall. Multiple piles of construction debris, fill material, steel barrels and trash have been noted in several places in the area and are remnants of past land use and illegal dumping.

Privately-owned Roundhouse Road passes east to west through the approximate middle of the site, from Fonda Avenue to Ceperley Avenue. North of Roundhouse Road is currently undeveloped fields, wetland and shrub/forest areas, while there are active businesses located south of the road.

2.2.2 *Regional Context*

The City of Oneonta is the principal city of the Oneonta, NY, micropolitan statistical area which is made up of all the municipalities within Otsego County. The City of Oneonta is completely surrounded by the Town of Oneonta. The City and Town of Oneonta are located in the south-central portion of the County of Otsego at the border of Delaware County. Otsego County is located in the Mohawk Valley Economic Development Area; 1 of 10 regions established by New York State to help drive development across the state. The Town of Oneonta is bordered to the northwest by the Town of Laurens, to the northeast by the Town of Milford, to the west by the Town of Otego, and to the south by the Towns of Franklin and Davenport in Delaware County.

The City contains an area of 4.33 square miles while the Town is made up of 33.47 square miles. The City of Oneonta is accessible from points east and west primarily via Interstate 88 which runs between Interstate 90 and 87 at Albany/Schenectady 82 miles to the northeast, and Interstate 81 and State Route 17 at Binghamton 60 miles to the southwest. Access to the City from the north and south is primarily through State Route

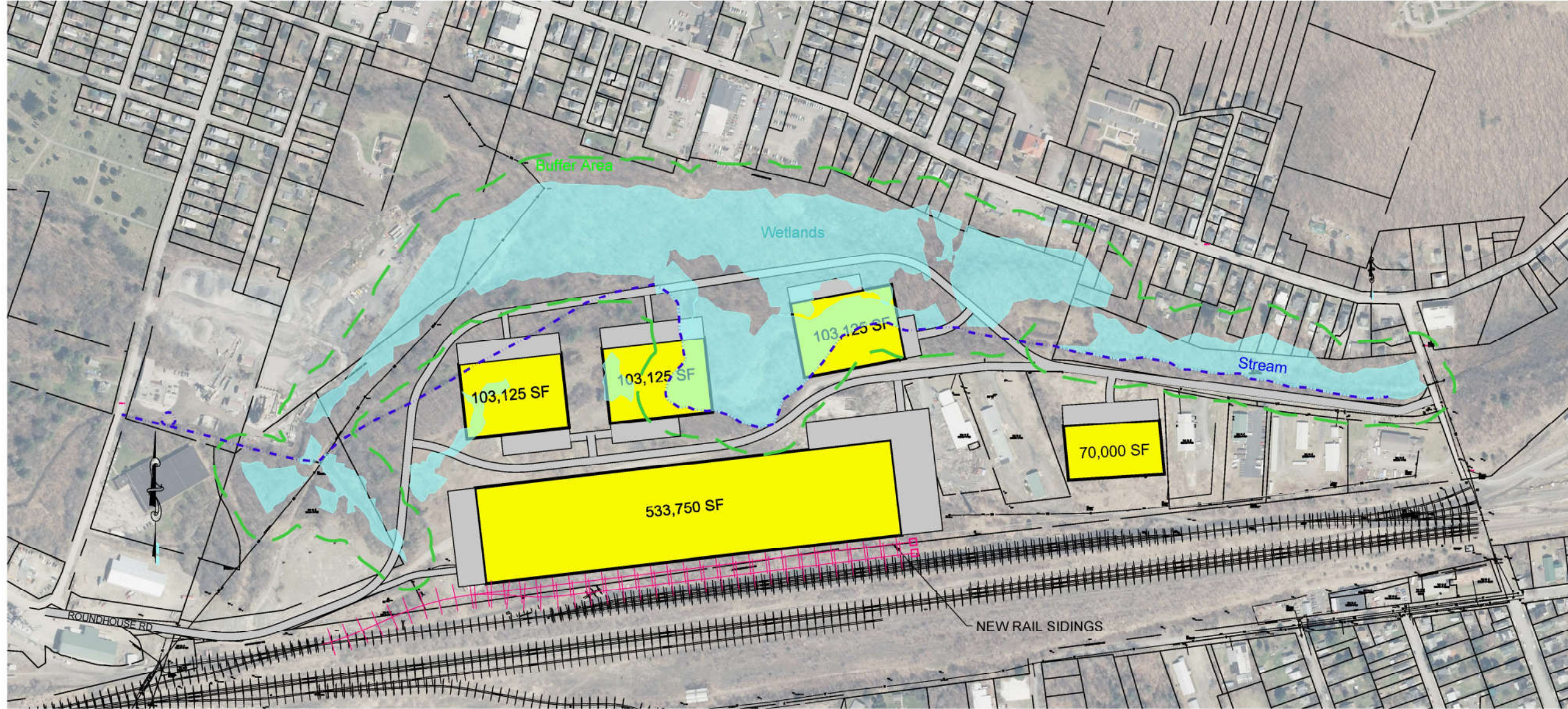
28 and 205 or by way of Route 23 via Route 8 which run between Interstate 90 at Utica 60 miles to the north and Interstate 87 at Kingston 100 miles to the southeast.

2.3 PREFERRED REDEVELOPMENT MASTER PLAN

A number of concepts were considered for the re-development of the rail yard. These included commercial/industrial uses compatible with the needs of the region, as proposed by COIDA. Relevant sectors considered include food processing, brewing/manufacturing, bottling/canning/packaging, cost storage, public access import and export, general distribution, cold/frozen/controlled distribution, advanced manufacturing, food hub/collection and packaging, warehouse/storage, distilling and raw material storage, barrel and storage/bottling and packaging, distribution/export. A redevelopment project engaging these sectors would improve agricultural producer access to proximate urban markets, increase regional value-added production and increase jobs.

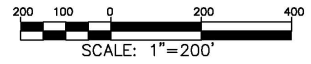
The preferred full redevelopment Master Plan (Oneonta Railyard Option 3) utilizes the existing space for five buildings ranging from 70,000 square feet (sq. ft) to 533,750 sq. ft. The Plan includes the building layout, potential uses for each building, parking areas and road access as well as potential rail siding for the larger building closest to the existing rail. See Figure 2.3.

New infrastructure to support the Master Plan includes site roads and parking, water distribution, wastewater conveyance infrastructure, telecommunications, and extension of power and natural gas. Significant site disturbance will be balanced through low-impact development to meet heating and cooling needs, effective stormwater management, and wetland/habitat preservation and restoration with wetland mitigation on- and off-site.



Building Space Distribution - Option 3

Bldg	SF	Rail Access
1	103,125	
2	103,125	
3	103,125	
4	533,750	Y
5	70,000	
Total	913,125	



CONCEPTUAL

DATE: 1/2018
 DRAWN BY: TJ
 SCALE: AS SHOWN
 REVIEWED BY: MBB
 PROJECT NO.: 16-1259-1
 FILE: FILE NAME

DELAWARE ENGINEERING, D.P.C.
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NO.	DATE	DESCRIPTION

ONEONTA RAIL YARD
 REDEVELOPMENT
 OTSEGO COUNTY IDA
 ONEONTA, NY

ONEONTA RAIL YARD
 OPTION 3

SHEET:
FIG 2.3

WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7202.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THIS ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7202.2.

2.3.1. *Development Areas*

The preferred redevelopment area is north and south of Roundhouse Road between the intersection with Fonda Avenue on the east and the border of the City of Oneonta on the west. A 533,750 sq. ft building and a 70,000 sq. ft building would be interspersed with existing buildings on the south side of Roundhouse Road, while the three 103,125 sq. ft buildings would be located north of Roundhouse Road. Roundhouse Road itself would be re-aligned north of its current alignment at its western end. Parking areas would be associated with each building. New rail siding would ideally be associated with the larger building adjacent to existing rail, as necessary, dependent on the final development plan.

2.3.2. *Site Access and Transportation*

The Oneonta Railyard area is currently accessible from the north side of the railroad tracks. Traffic from Interstate 88, at Exit 13, utilizes NYS Routes 7 and 205 to access Lower River Street and Roundhouse Road to access the Study Area. The main roadway through the project area, Roundhouse Road, is predominantly a dirt road.

The redevelopment of the Oneonta Rail Yard, centered on Roundhouse Road in the City of Oneonta, includes the construction of building structures, parking, the extension of utility infrastructure, and reconfiguration of portions of Roundhouse Road and construction of additional roadways. As proposed, primary access to site for both passenger vehicles and heavy vehicles will be provided via Lower River Street (County Road (CR) 8) at Roundhouse Road with additional passenger vehicle access provided via Ceperley Avenue at Roundhouse Road and via Fonda Avenue.

The redevelopment plan shows a maximum development of 913,125 square feet in five buildings

- Three 103,125 SF buildings with access via a new roadway extension of Roundhouse Road
- A 70,000 SF building with access on Roundhouse Road
- A 533,750 SF building with access on a shifted alignment of Roundhouse Road and with direct access to the railroad

The existing railroad will provide an option for transportation of materials and goods to the new businesses in the Oneonta Rail Yard, with direct access provided at the largest building site of 533,750 SF.

Potential land uses include food processing, brewing/manufacturing, bottling/ packaging, warehouse/storage, temperature-controlled distribution, import and export businesses.

The former Delaware & Hudson railroad tracks are now owned by Norfolk Southern Railway, providing businesses developed within the project area direct connections to a major railroad network consisting of 21,500 miles of tracks in the eastern United States. Norfolk Southern works with “Specifications for Design and Construction of Privately-Owned Industry Tracks” (May, 2017), and a process for development of agreement and sidetrack design plans. Planning for side railing additions at the rail yard would include Norfolk Southern Railway.

2.3.3. *Water*

According to the City of Oneonta Water Map 1975 (revised 1992), there are water mains within the area that supply the project site. Redevelopment of the site will require water for potable purposes for the employees on-site, fire suppression and industrial use. Water will be provided by the City of Oneonta, application for the introduction of new water mains must be made to the City Board of Public Service. Specific determinations for water quantities, access and design of water distribution additions will be developed in consultation with the City of Oneonta. Water distribution and/or storage systems may require approval from the New York State Department of Health (NYSDOH).

2.3.4. *Sewer*

The City of Oneonta Overall Sewer Plan 2007 indicates sewer main lines at the edges of project area, no branches or connections are shown. The wastewater treatment plant

(WWTP) is located on the south side of Susquehanna River, at Silas Lane, adjacent to Exit 13 off Interstate 88, and discharges to the Susquehanna River.

Wastewater will be generated by employees and by industrial use, with final volumes according to a final development proposal. Specific determinations for wastewater treatment plant connections and any industrial user permits will be developed in consultation with the City of Oneonta, according to available capacity at the WWTP. Any construction of sanitary sewer collection and conveyance system requires approval from NYSDEC.

2.3.5. Power

NYSEG provides electric service to the City of Oneonta, and currently serves commercial buildings in the Study Area. A total connected load is estimated at 7.7 MW (or 67,452 MWh/year) for the Preferred Option, considering the projected types of commercial/industrial space usage, as shown in Table 2.3.5a. The capacity to supply the projected amount of electricity needed does not currently exist at the project location.

According to information from NYSEG, the surrounding 4.8KV distribution in the vicinity of Roundhouse Road is served from the Pierce Avenue and Henry Street substations. The Pierce Avenue 4.8KV and 12.5KV substation transformers do not have the capacity to support the potential load. The Henry Street substation transformer is currently at 4.8KV, but it is a dual voltage 4.8x12.5KV 14MVA bank and appears to have about 10MVA of excess capacity. As specific development plans are prepared, NYSEG will be required to provide more details on upgrades, conversions, construction, and costs to customers.

Natural gas usage is estimated at approximately 40,000 MMBtu per year for commercial/industrial spaces of the sizes projected in the Preferred Option at maximum build out, as shown in Table 2.3.5b. Modern energy efficient construction of buildings will reduce heating and cooling demands in conformance with building codes. Currently capacity in the natural gas local distribution may not be available. As specific development plans are prepared NYSEG will be consulted.

Table 2.3.5a: Estimated Total Connected Load for the Oneonta Railyard Option 3 Concept Plan Buildings

Use of Space	Square Footage	Watts/ft ²	Watts
Food Processing	400,000	7	2,800,000
Brewing/Manufacturing	40,000	7	280,000
Bottling/Canning/Packaging	20,000	7	140,000
Cost Storage	25,000	7	175,000
Public Access/Import & Export	25,000	7	175,000
General Distribution	23,750	7	166,250
Total for Building	533,750	7	3,736,250
Distribution/Mix of Cold/Frozen/Controlled	103,125	17.8	1,835,625
Total for Building	103,125	17.8	1,835,625
Advanced Manufacturing	103,125	9	928,125
Total for Building	103,125	9	928,125
Food Hub/Collection & Packaging	53,125	7	371,875
Warehouse/Storage	50,000	7	350,000
Total for Building	103,125	7	721,875
Distilling & Raw Material Storage	40,000	7	280,000
Barrel & Storage/Bottling & Packaging	20,000	7	140,000
Distribution/Export	10,000	7	70,000
Total for Building	70,000	7	490,000
Watts			7,711,875
MW Lighting			1.70
Additional Load			6.00
MW Total			7.7

Table 2.3.5b: Estimated Total Btu/year and kWh for the Oneonta Railyard Option 3 Concept**Plan Buildings**

Use of Space	Square Footage	Cubic Ft/ Square Ft	MMBtu/year	kWh/year	kWh/day	Hourly Load
Food Processing	400,000	16,800,000	17,421.60	5,105,767	13,988	583
Brewing/Manufacturing	40,000	1,680,000	1,742.16	510,577	1,399	58
Bottling/Canning/Packaging	20,000	840,000	871.08	255,288	699	29
Cost Storage	25,000	1,050,000	1,088.85	319,110	874	36
Public Access/Import & Export	25,000	1,050,000	1,088.85	319,110	874	36
General Distribution	23,750	997,500	1,034.41	303,155	831	35
Total	533,750	22,417,500	23,246.95	6,813,008	18,666	778
Distribution/Mix of Cold/Frozen/Controlled	103,125	4,331,250	4,491.51	1,316,331	3,606	150
Total	103,125	4,331,250	4,491.51	1,316,331	3,606	150
Advanced Manufacturing	103,125	4,331,250	4,491.51	1,316,331	3,606	150
Total	103,125	4,331,250	4,491.51	1,316,331	3,606	150
Food Hub/Collection & Packaging	53,125	2,231,250	2,313.81	678,110	1,858	77
Warehouse/Storage	50,000	2,100,000	2,177.70	638,221	1,749	73
Total	103,125	4,331,250	4,491.51	1,316,331	3,606	150
Distilling & Raw Material Storage	40,000	1,680,000	1,742.16	510,577	1,399	58
Barrel & Storage/Bottling & Packaging	25,000	1,050,000	1,088.85	319,110	874	36
Distribution/Export	10,000	420,000	435.54	127,644	350	15
Total	70,000	2,940,000	3,048.78	893,509	2,448	102
Total for All Buildings	913,125	38,351,250	39,770	11,655,509	31,933	1,331

Redevelopment on the project site should include low impact design construction techniques to properly insulate buildings and include energy efficient heating and cooling. Alternative heating and cooling options such as geothermal heat pumps and solar electricity and/or solar hot water could be incorporated to reduce annual energy usage and reduce operation costs.

2.3.6. *Telecommunications*

Cornerstone, Albany, NY, (part of Magna5) and Spectrum, Rochester, NY, (part of Charter Communications) both provide phone, internet, TV to the Roundhouse Road area. Direct lines will have to be brought in to new buildings in the project area, and will be coordinated along within a final redevelopment plan.

2.3.7. *Storm Water Management*

The addition of parking areas, roadways and buildings will contribute to impervious surface increases in Study Area. New York's State Pollutant Discharge Elimination System (SPDES) is a National Pollution Discharge Elimination System (NPDES) approved program which issues permit in accordance with Articles 17 and 70 of the Environmental Conservation Law (ECL). Construction projects involving the disturbance of one or more acres must obtain coverage under the SPDES General Permit, Stormwater Discharges from Construction Activities (GP-0-15-002 or current). If conditions on the construction site constrict the ability of the project to meet the requirements in the General Permit, an Individual Permit will be required. The final re-development plan will determine the type of permit required.

A Stormwater Pollution Prevention Plan will be required for both the construction and post-construction periods of any re-development. Stormwater management practices that will be implemented include minimizing the area of disturbance to the extent practicable, construction sequencing, and a combination of structural (temporary and permanent) and vegetative measures to minimize erosion and sediment loading to the drainage features and wetlands located in the Study Area. All erosion and sediment controls will be installed in accordance with the technical standards outlined in the most recent editions of

the NYSDEC New York State Stormwater Management Design Manual (Design Manual), and the New York State Standards and Specifications for Erosion and Sediment Control (NYSSESC).

Project construction sequencing will limit the area of soil disturbance to less than five (5) acres at any one time. Post-construction, monitoring and reporting on stormwater outfalls will be required. Stormwater treatment structures and associated buffer zones as well as landscaping integrated with the conveyance system of stormwater will be owned and managed by the property owner.

2.3.8. *Wetlands/Habitat Enhancement*

Wetlands have been preliminarily delineated within the project area and require confirmation by state and federal regulatory agencies at the time a site-specific development plan is brought forward. While the final site-specific development plan will determine the total disturbance of regulated wetlands, it is expected that impacts may be substantial and exceed 8 acres, associated with either natural or manmade drainage features.

The Freshwater Wetlands Act (ECL Article 24) recognizes that wetlands provide a variety of functions and benefits important to the people and environment of New York. The Act requires that wetlands be preserved and protected “consistent with the general welfare and beneficial economic, social and agricultural development of the state”. Activities within 100 feet of a regulated wetland are also regulated if they impinge upon or otherwise substantially effect the wetland. Development activities must seek to avoid impact to wetlands, minimize impact if avoidance is impossible and then mitigate those impacts that can not be avoided. A proposed project that will impact a wetland must obtain a permit.

The stream and wetlands within the former rail yard site provide the service of water transportation and flood attenuation. Stormwater management will be designed to maintain as much of the Study Area’s natural hydrology as possible. Due to the Study Area’s history as a Rail Yard, many of the on-site wetlands have been impacted by past

land use actions. There is potential for some restoration of the wetlands on the Study Area outside of the areas intended for redevelopment.

2.3.9. *Green Space/Buffers*

Buffers between properties are required by local zoning. Green spaces will provide a better visual and practical development for occupants and stormwater management. Trees on the hill slope on the north side of the Study Area will be maintained as erosion control and as a buffer between the redevelopment and residences.

2.3.10. *Recreation*

Recreation is not a use being considered within the commercial/industrial Study Area; however, it may be possible to connect redevelopment areas to neighboring residential areas via walking paths.

2.3.11. *Structures & Parking*

Preferred Master Plan includes five buildings of different square footage footprint, each with associated parking areas. Final design plans for end users will determine needs for permitting. According to the City of Oneonta, NY, Zoning Ordinance Article II, 300-12, the project site is zoned within the Commercial Industrial district. The purpose of this district is to provide for areas within the City of Oneonta that encourage large- and small-scale commercial development as well as light and heavy industrial uses. Commercial and industrial operations must respect the character of surrounding residential uses by mitigating noise, pollution, and other environmental impacts. All new buildings in this district require site plan review by the Planning Commission. According to Municipal Code, Chapter 86, Article III Building Permits, 86-10, construction requires a separate building permit for each new building. Application for building permits is made to the City Engineer.

Zoning requirements for parking space is one space per employee for both light and heavy manufacturing (Table 300-101, Zoning). Zoning Ordinance 300-61 contains off-street parking and loading regulations applying to all zoning districts. Final number and

layout of parking spaces will depend on the final use and design of each building. Access and turnaround areas for truck delivery and emergency services will also be necessary.

2.3.12. *Lighting*

Local performance standards require Dark Sky compliant lighting fixtures. Lighting standards for any redevelopment will be established and enforced in conjunction with local land use planning and zoning requirements.

2.3.13. *Landscaping*

As site-specific users are identified, detailed landscaping plans will be prepared in accordance with requirements set forth in the City's zoning code. Utility terminals (electric power, telephone, gas TV cable) will be located in the least visible section of a building and screened by evergreen planting. Dumpsters and similar facilities will be screened with vegetation and natural fencing material. Buildings will be landscaped with lawn areas and trees and shrubs native to the area for ease of maintenance and longevity. Vegetation will be maintained so as to not hide windows or signage. Stormwater control may also include use of landscaping.

2.3.14 *Design Standards*

Re-development will be in compliance with local planning and zoning requirements. Oneonta Code includes requirements for buffers, which can be plantings, fencing, walls and/or landscaping. Maintenance and upkeep standards generally include the requirement to maintain lawns and remove unsightly objects from view. Performance standards prohibit nuisance activities which could unnecessarily disturb others. Each property owner is required to maintain all property in a safe and attractive manner. These also include painting, lawn care, repair of buildings, and prompt removal of trash.

It is not uncommon for design standards for industrial parks to be embodied within deed covenants and restrictions that will durably control elements of design including materials of construction for buildings and signage, landscaping standards, sidewalks,

outdoor and exterior building lighting and other features to ensure a cohesive aesthetic and human experience.

2.3.15. Common Area Management

Depending on the final redevelopment plan, the buildings on the redeveloped Study Area may be constructed for one owner who leases the buildings or several owners of different buildings. If there are several owners, there will be common areas including features such as roadways, buffer zones associated with stormwater management areas and landscaped areas not associated with a specific site use within the redevelopment.

Security on the site will be provided by the individual building owners/operators as appropriate. Parking lot security will also be the responsibility of each owner/operator. Any on-site security service would be the first responders to any incident requiring emergency service personnel and will work closely with local law enforcement, fire and emergency medical services.

Roadways installed in the re-developed area will be constructed to applicable standards and dedicated to either the City of Oneonta or Otsego County at the conclusion of construction. The City or the County would provide road maintenance. Currently Roundhouse Road appears to be mapped with parcels owned by the Oneonta Rail Yards LDC and is considered a private road.

Stormwater treatment structures and associated buffer zones as well as the landscape integrated with the stormwater conveyance system will be owned and managed by the end users. Management of stormwater structures may be the responsibility of the City or County along with the roads, or the responsibility of the redevelopment owner, depending upon future agreements.

2.4 OPERATIONS

As a commercial/industrial redevelopment, operational characteristics are driven by the nature of the use. Uses such as food processing, brewing/manufacturing,

bottling/canning/packaging, general distribution, cold/frozen/controlled distribution, warehouse/storage and other similar are considered in the preferred option. Operating hours, number of employees, noise, air discharges and other aspects of operations will be contingent on the final end users.

While the purpose of the DGEIS is to evaluate potential impacts, the SEQRA process does not supersede or eliminate requirements under various sections of the City of Oneonta zoning ordinance. As potential end users are identified and proceed with site design, the City will have the final review and approval of not only operational aspects of a proposed tenant but also landscaping, design standards and other issues.

2.5 CONSTRUCTION

Hours for construction activities and truck routes will be established and reviewed with local authorities prior to the initiation of any construction. These issues will be thoroughly reviewed and vetted by the Planning Board which has the ultimate authority to approve or deny any proposed re-development. Hours for construction operations may range from 7:00 AM to 4:00 PM weekdays, and the typical construction season is considered to be from early spring to late fall/early winter.

Normal operations during the construction phases consist of on-site personnel (laborers, foremen, vehicle operators, drivers, engineers, surveyors, etc.), entering and departing of vehicles from designated entrances (including personal, large construction vehicles, and material transport trucks), and establishment of trailers for base of operations. The contractors will follow a comprehensive development plan to ensure that infrastructure is installed in accordance with design standards, code and permits.

A detailed description of construction activities together with a phasing plan and a schedule for the installation of the infrastructure will be developed. The full build-out, due to the size and scope of the project, will require a NYSDEC General Permit for Stormwater Discharges from Construction Activity be obtained prior to initiation of construction. Due to the limitations of site soils in utilization of some common stormwater management techniques, an Individual SPDES permit may be required, depending upon the final redevelopment proposal and buildout design.

As part of the requirements of either permit, the Owner/Operator must supply comprehensive construction drawings and a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will incorporate comprehensive erosion and sediment control as per the standards and practices listed in “New York State Standards and Specifications for Erosion and Sediment Control (Blue Book)”, November, 2016 and post-construction stormwater controls.

2.6 PERMITS AND APPROVALS

Based on the Master Plan, a number of permits and approvals will be necessary prior to the commencement of construction activities. This list is not intended to be exhaustive but will illustrate the nature and type of permits and approval anticipated. Specific permits and approvals will be identified as the plan for redevelopment of the site is finalized.

Town, Regional and Local Approvals:

- Site Plan Review
- City of Oneonta Building Permits

Traffic and Transportation:

- City of Oneonta, Otsego County, coordination on intersection and road improvements

Water and Sewer Infrastructure:

- City of Oneonta, application for permit to Water Department
- Sanitary sewer collection and conveyance system approval from NYSDEC
- Water distribution and/or storage system approval from NYSDOH

Environmental Permits:

- SPDES General Permit for Storm Water Discharges from Construction Activity, NYSDEC GP-0-15-002, or if required, Individual Permit

- Wetland jurisdictional determination from the New York State Department of Environmental Conservation (NYSDEC) and U.S. Army Corps of Engineers (ACoE)
- Section 404/401 permit from the USACoE
- NYSDEC Article 24 (Freshwater Wetlands), Article 15 (Stream Disturbance) and Section 608 (Water Quality Certification)
- New York Division for Historic Preservation, Office of Parks, Recreation and Historic Preservation (OPRHP) – Completed 2018

3.0 ENVIRONMENTAL SETTING, POTENTIAL IMPACTS AND MITIGATIONS

This section of the DGEIS describes the existing environmental setting at the Study Area and surrounding area. The focus of the identification of potential impacts and mitigation is the Preferred Alternative (Option #3), a maximum of 913,125 square feet at full build out, though the final end use of the site may be structures of smaller size for specific uses. Where appropriate, conservative evaluations of impacts have been used to conduct the analyses discussed in the impacts and mitigations sections.

3.1 TOPOGRAPHY, GEOLOGY AND SOILS

The City of Oneonta is located in the southeast portion of the Town of Oneonta, in Otsego County, New York. The region's climate is classified as continental-humid, with cold winters and mild summers and precipitation well distributed throughout the year. The average annual temperature is 45 degrees Fahrenheit, with an average of 11 degrees in January, and an average of 81 degrees in July. Annual precipitation averages 46.8 inches. Annual snowfall averages 81 inches.

A number of resources were used to inventory topography, geology and soils information for the purposes of this GEIS, including the "Soil Survey of Otsego County, New York", the "NRCS National Cooperative Soil Survey Web Soil Survey", Phase II Brownfield

Program Environmental Site Assessment, 2006, NYSDOT Oneonta Quadrangle Topographic Map, and NYSGIS aerial orthophotography.

3.1.1 Existing Conditions

The surface of the site is relatively flat, at approximately 1070 feet above mean sea level (msl). The north boundary of the site is a 20- to 40-foot slope up to approximately 1,100 feet msl near Chestnut Street. The topographic maps indicate wetlands in the northern and eastern portions of the site, with a small stream running east to west before ultimately discharging to the Susquehanna river, which flows east to west approximately 1,600 feet south of the site. Norfolk Southern train rails, Interstate 88, and commercial and residential areas lie between the Study Area and the river.

The City of Oneonta is located on the southeasterly border of Otsego County. Southern parts of the County are at the northern edge of the Alleghany Plateau physiographic province. In the Southern part of the county, the Middle Devonian Hamilton Group (which overlies older formations of limestone and shale) is overlain by the fairly extensive Genesee Group. Included in this group is the red Oneonta Formation, which is named for an exposure in this area of flaggy red shale and fine-grained sandstone. Also included in this group are the Unadilla, Laurens, New Lisbon, and Gilboa Formations, which are named for exposures of shale, siltstone, and sandstone in the southwestern part of the county. These bedrock strata are commonly discontinuous beds and lens. This group covers about 200 square miles of the county.

The broader Study Area surface geology is characterized as lacustrine sand, and outwash sand and gravel. Otsego County is commonly thought to have been completely glaciated during the last ice age. It is covered by a variety of glacial deposits from the Pleistocene Epoch. Glaciers are thought to have receded from the area approximately 12,000 years ago, after several episodes of advance and retreat. Glaciers markedly affected the surface features of the county as much of the county is covered with glacial till. Till is an unsorted mixture of sand, silt, clay, and rock fragments. The depth of this material varies from just a few inches on some hilltops to several hundred feet on toeslopes of some valleys. Prior to construction of the rail line and Interstate 88, the Study Area was likely

part of the Susquehanna River floodplain. Figure 3.1 outlines the on-site soils as mapped by the Natural Resources Conservation Service's Web Soil Survey.

Specific soil types on the study site include:

Carlisle muck (Ce) – This very deep, nearly level, poorly drained soil is in bogs, in depressional areas, or in basins that receive runoff water from surrounding areas and were formerly lakes and ponds. This soil formed in well decomposed organic materials that are more than 51 inches thick over mineral deposits. Individual areas typically are irregular in shape or oval. Slopes range from 0 to 2 percent. Depth to bedrock is more than 60 inches. Wetlands regulations should be investigated before buildings, roads or streets are constructed on these soils.

Chenango gravelly silt loam, 3 to 8 percent slopes (ChB) – This very deep, gently sloping, well drained soil is on the flatter parts of glacial outwash plains, terraces, and kames. This soil formed in water-sorted, gravelly, outwash and inwash deposits. Individual areas are broad and irregular in shape. Depth to bedrock is more than 60 inches.

Udorthents, smoothed (Ue) – This unit consists of moderately deep to very deep, nearly level to steep, moderately well drained to somewhat excessively drained soil material in areas that have been altered for construction operations or that are the result of cuts and fills. Some areas of this unit along the Susquehanna River are subject to flooding. In and around the City of Oneonta, areas of this unit have a substratum that is largely coal ash and cinders.

Wayland silt loam (Wg) – This very deep, nearly level, poorly drained soils is on flood plains. It formed in recent alluvial deposits along streams. Individual areas are long and narrow. Slopes range from 0 to 2 percent.

Soils north of Roundhouse Road may cause limiting factors to redevelopment due the seasonal high-water table, ponding, low strength of its organic materials, potential for frost actions and potential subsidence.



FIGURE 3.1 Study Area Soils Map

3.1.2 Potential Impacts

Construction activity on the site that require extensive grading will have an impact on soils and topography, and could result in sedimentation, erosion and flooding. Impervious surfaces and site soils that tend to ponding will mean that stormwater runoff will increase and will have to be carefully managed during and after construction.

According to soil borings completed in 2006, the depth to the water table on the Study Area ranges from three to thirteen feet below ground surface in many places, but is at the ground surface in wetland areas.

3.1.3 Mitigation Measures

Site soils provide moderate to severe limitations for construction activities such as building and road construction; however, these impacts are routinely and safely mitigated through design and engineering standards. During the development of the proposed project, appropriate geotechnical sampling and design will be incorporated into all phases of construction.

The potential project exceeds one acre of disturbance, any redevelopment must comply with the New York State Department of Environmental Conservation (NYS DEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002). If requirements for stormwater management in the General Permit cannot be met, an Individual Permit under SPDES program will be required. Protection of soils from erosion and sedimentation both during and after construction are addressed in a project's Stormwater Pollution Prevention Plan (SWPPP), required for a SPDES permit. Control of erosion and sediment during construction will utilize a variety of Best Management Practices (BMPs) including silt fence, temporary sediment basins, temporary/permanent seeding and waterway/wetlands protection.

3.2 SOIL AND GROUNDWATER – FORMER SITE USE IMPACTS ASSESSMENT

An Environmental Site Assessment of the former Oneonta River Corporation property at the railyard was performed by H2M Group for a prospective purchaser in 1993. After a basic study, H2M concluded that no significant concerns were identified and that “observations and analytical results appear consistent with a site which has been utilized for industrial operations for more than a century...”

Also due to the industrial history of the property, a soil evaluation of the former D&H Rail Yard Area was conducted by Malcolm Pirnie, Inc., for the Oneonta River Corporation through the USEPA Brownfields Assessment Program Phase 1 (2005) and Phase 2 (2006) Environmental Site Assessments.

3.2.1 Existing Conditions

The 2006 Phase II report described site soils, and took samples from surface soils, soil borings, sediment and groundwater. Sample analytical results were compared to the Brownfield program draft soil cleanup objectives (SCO) available at the time. Materials encountered in soil borings generally consisted of 1 to 5 feet of dark brown fine to medium sands overlying 1 to 4 feet of brown fine sand and silt, with increasing gravel in formations below. Soil borings ranged from 8 to 50 feet in depth and bedrock was not encountered. Depth to groundwater at the site generally ranged from 6 to 12 feet below ground surface (bgs), with deeper groundwater level measured in a well located at the top of the outwash terrace near the northern border of the site. Direction of groundwater flow was to the south in the northern part of the site and to the southwest, toward the Susquehanna River, in the relatively flat areas of the site.

Comparison of the 2006 sampling results to current soil and groundwater standards showed the following;

Of 14 groundwater locations sampled, two petroleum compounds (1,2,4-trimethylbenzene and isopropyl benzene) and one semi-volatile organic compound (naphthalene) were detected near the former coaling tower at concentrations slightly

greater than the corresponding NYSDEC Class GA Standards or Guidance Values. One groundwater sample taken in the vicinity of the former City impound yard contained MTBE, a common gasoline additive, at a concentration slightly greater than the corresponding NYSDEC Class GA Standard. None of the groundwater samples taken from areas surrounding the former Oneonta River Corporation property contained volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), or metals at concentrations greater than applicable NYSDEC Class GA Standards. Iron concentrations exceeded the Aesthetics based ground water standard of 300 ug/L in eight of the monitoring wells and manganese concentrations exceeded the Aesthetics standard of 300 ug/L in a similar set of eight wells.

Two of eighteen soil samples collected during the Phase II contained SVOCs (benzo(a)pyrene) at concentrations greater than the 6 NYCRR Part 375 Commercial SCOs. Soil samples from the area southwest of the former Roundhouse and east of the Roundhouse showed concentrations of 2200 and 2600 ug/kg respectively, exceeding the SCO of 1000 ug/kg. Three sediment samples taken from the stream and from manmade ditches draining onto the study area also exceeded the benzo(a)pyrene SCO; two samples were taken in streams entering the study area from the east, one entering from the northwest and two samples from the stream along Roundhouse Road.

Arsenic concentrations exceeded the Part 375 Commercial SCO of 16 mg/kg in three samples of sediment, four surface soil samples and four soil boring locations. Lead SCO (1000 mg/kg) was exceeded in one soil boring (3-4 fbg) but not in a nearby surface sample, and in one sediment sample taken near the former City impoundment (SD-03) which also exceeded SCOs for arsenic and copper.

None of the soil samples collected at the site showed concentrations of VOCs above the SCOs. No PCBs were detected in a soil sample taken near the former transformers which had been located adjacent to former roundhouse. Groundwater showed sheen of non-aqueous phase liquids (NAPL) during well development at two locations, affected groundwater was properly barreled and disposed of.

3.2.2 Potential Impacts

The conclusion of the Phase II Environmental Site Assessment for the Oneonta River Corporation property was that although several sediment, surface soil, and subsurface soil samples contained SVOCs and metals at concentrations greater than the respective 6NYCRR Part 375 Commercial SCOs, certain analytes (arsenic and benzo(a)pyrene) were also present in sediment samples collected off-site and may represent typical background concentrations for these analytes in this area. Based on the sampling results, the magnitude and distribution of analytes which exceeded 6NYCRR Part 375 Commercial SCOs or NYSDEC Class GA water quality standards, further investigation or remedial activities did not appear to be warranted. This conclusion does not change when utilizing current SCOs instead of the draft SCOs in use in 2006.

3.2.3 Mitigation Measures

Past land uses of the Study Area left remnants in the form of structures, construction/demolition debris and trash that affect the Study Area today. Site preparation prior to any future construction activities will require removal of existing structures and demolition debris. It may be possible to access funding, or tax credit, under the NYS Brownfields Program for assessment and removal of the smoke stack and cooling tower.

3.3 WATER RESOURCES, WETLANDS AND HABITAT

This section will describe groundwater, surface water, and wetlands (under both Federal and State jurisdiction) as well as any critical habitat within the study area.

3.3.1 Existing Conditions

3.3.1.1 Water Resources

The Study Area is located on a Principal Aquifer. The United States Geological Survey (USGS) defines a Principal Aquifer as one that is capable of supplying 10 to 100 gallons

per minute (gpm), though not usually used intensively by major municipal systems as a source of drinking water.

A USGS study on the groundwater quality in the Upper Susquehanna River Basin, 2009, indicated that groundwater in the basin is generally of acceptable quality, although concentrations of some constituents exceeded at least one drinking water standard at 28 of the 30 wells, including; pH, sodium, aluminum, manganese, iron, arsenic (one well – 0.25 -18.4 ug/L), radon-222, residue on evaporation, total and fecal coliform.

None of the wells sampled for the USGS study were located within the Town or City of Oneonta, but information on the Study Area sample results related to the Phase II Brownfield report included exceedances of arsenic as well (due to background, not on-site influence). See Section 3.2.1 of this DGEIS for more information on the Phase II report.

The above sources do not describe depth below ground surface to the aquifer. The 2006 Phase II Brownfields Site Assessment, described in Section 3.2.1, found the water table to be generally 3 to 12 feet below the ground surface. Ground water was approximately 3 ft below grade between Roundhouse Road and the wetland area, identified in the Phase II report as “near the former cinder pit”.

Historically the Study Area was likely part of the floodplain of the Susquehanna River. Since the construction of the rail line and then Interstate 88, the Susquehanna has been cut off from this portion of the floodplain. The Study Area is mapped as north of the 500-year flood line on Flood Insurance Rate Map (FIRM) Panel 36077C0654E, 2017, included in Appendix C. The 500-year flood zone is south of the rail line. However, the map notes that the structure that impacts flood hazards in that zone has not been shown to comply with Section 65.10 of the National Flood Insurance Program regulations, and the FIRM panel will be revised at a later date.

An un-named Class C waterbody (SR 173), a perennial stream, runs through the site starting west of Fonda Avenue, north of Roundhouse Road. The stream flows to the west, receiving water from the wetland areas within the Project site, to pass through a culvert

under Ceperley Avenue. It then joins the wetlands west of Lower River Street. These wetlands eventually drain under the Norfolk and Southern rail lines and Interstate 88 to the Susquehanna River.

The Class C stream is approximately 12 feet wide, with approximately 6-foot banks, at its larger sections. It appears to have been widened and deepened, or ditched, at an unknown period of time. Water depth is approximately 2 inches in early fall. Remnants of the ditching activity, levees of soil, follow the ditch line in the west half of the property to a height of two to four feet above the top of the banks. Piles of gravel material line the banks of the stream in many places on the east side of the property, where the stream banks are lower and the stream narrower, approximately 4 feet wide.

The stream is considered a jurisdictional water as it is tributary to a Traditionally Navigable Waterway (the Susquehanna River) and will be subject to federal and state permitting for construction activities that disturb its bed or banks. The stream likely carries more water in the spring season, during snow melt, and may be considered Navigable, although no site-specific determination of navigability has been done at this time.

Currently stormwater enters the property from several locations north of the site as well as from wetlands to the east of Fonda Avenue. These include stormwater outfalls from;

- Cobleskill Stone, flowing to Wetland D, to the pond which joins the un-named Class C stream on the west side of the Study Area (before it flows through the Ceperley Avenue culvert);
- a culvert west of Schafer Street (south of Chestnut Street), emerging to the east of the Tire Repair and Auto lot, this stream was running in August and September, 2018;
- Subaru Lot on Chestnut Street, across from Richmond Avenue, runoff joins Wetland E;
- The parking lot west of the American Legion, Chestnut Street; and
- Pipes at the base of the hill slope behind an address in the 240s on Chestnut Street.

Incised water channels appear to have been created in several places along the ditched stream to allow wetland channels/streams flow to enter the ditched stream and be carried off site. Another unnamed stream enters the ditched stream at the west side of the project

site, from a small pond which receives stormwater and flow from Wetland D, before it all flows through the culvert at Ceperley Avenue.

City of Oneonta codes prohibit stormwater from being introduced into the sanitary sewer. Stormwater, and all other unpolluted drainage, is required to be discharged to storm sewers or to a natural outlet approved by the City Engineer.

3.3.1.2 Wetlands

As mapped by NYS DEC Environmental Resource Mapper, there are two identified State regulated freshwater wetlands, ON-7 (29.6 acres) and ON-9 (28.3 acres), both Class 1, within the Study Area north of Roundhouse Road. The wetlands are considered Class 1 as they are “tributary to water that could subject developed area to flooding”. The area is also mapped in the National Wetland Inventory (NWI) as freshwater forested/shrub wetlands (PFO1E – palustrine forested broad-leaved deciduous seasonally flooded/saturated) of 11.7 acres, with a mapped 0.12-acre freshwater pond at northwest side of the wetland.

The Study Area wetlands were preliminarily field delineated for this GEIS, the results of which are shown in Figure 3.3. The results indicate there are approximately 26.9 acres of potentially federal jurisdictional wetlands within the proposed Master Plan area. The wetlands report is included in Appendix A.

The wetlands include wet meadow as well as forested wetlands. Water enters the wetlands through the toe of the hillslope north of the Project site, and from the wetlands to the east of Fonda Avenue. Existing disturbance to the wetlands includes the site’s history as a railyard in which a stream and several wetland areas were ditched to convey water off-site, while other areas were filled to create work areas or rail spurs in various locations around the site. Disturbance on this site also includes a preponderance of the invasive plants glossy buckthorn (*Frangula alnus*), Tartarian honeysuckle (*Lonicera tartarica*), common reed grass (*Phragmites australis*) and knotweed (*Polygonum cuspidatum*), among others.

Figure 3.3

Prepared by: Delaware Engineering DPC, 2018
Sources: NYS Ortho Imagery 2014



3.3.1.3 Habitat

A list of threatened and endangered species that may occur on the project location was obtained through the US Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act. One threatened species that may be in this area was identified, the Northern Long-eared Bat (*Myotis septentrionalis*), which is listed wherever found. This bat is found across much of the eastern and north central United States and many Canadian provinces. No Critical Habitat has been designated for this species as the species is wide-ranging, inhabiting a variety of forest habitat in the summer and hibernating in caves or mines in the winter. Available species information indicates that the bat may use a variety of roost tree species and types of roosts (dependent on availability of cavities or loose bark) throughout their range. No Critical Habitat was found to be within the project area.

3.3.2 Potential Impacts

3.3.2.1 Water Resources

The primary site impacts to the stream within the project area would be related to stream crossings and reconfiguration of drainage patterns for a redevelopment project. An increase in the amount of impervious surface associated with roads, parking and buildings could increase both the pollutant loading from runoff (water quality), as well as alter the volume and rate of stormwater runoff (water quantity). Stormwater management systems by design divert runoff to alternate drainage features, impacting existing hydrologic conditions. These impacts would affect both groundwater and surface waters of the Study Area. Unmitigated changes in the quality and quantity of stormwater runoff would be expected to impact the stream on the Site, which could affect the downstream (off-site) wetlands and the Susquehanna River. These downstream impacts could include a decrease in water quality, increase in stream bank erosion and increased incidence of flooding. The impact might also lead to increased flooding on the Project site itself.

3.3.2.2 Wetlands

The final development plan will determine the total disturbance of regulated wetlands. For purposes of this GEIS, at full build out the permanent disturbance from building and road footprints could be 5.0 acres, 8.1 acres if DEC wetland adjacent areas within 100 feet of a wetland boundary are included. This acreage calculation does not include wetland and wetland adjacent area that may be impacted during construction itself. The purpose of the GEIS is to define the upper likelihood of disturbance and set a framework for effective wetland mitigation.

The goal of the New York State Freshwater Wetlands Act is the avoidance of impacts to wetlands. The final configuration of wetland impacts is subject to the final development plan, as well as USACoE and NYSDEC field confirmation of wetland boundaries. Changes to stormwater flow due to impervious surfaces of building roofs and parking areas will affect remaining wetland areas after construction. Final analysis of wetland impacts and mitigation requirements will be covered in the detailed permitting process required for actual construction. The preferred Alternative (Option #3) as described in the Scoping document was adjusted for this GEIS to minimize impact to the wetlands as per the information gained in the field delineation.

3.3.2.3 Habitat

According to the NYS DEC <http://www.dec.ny.gov/animals/106090.html>, the Northern Long-eared bat (NLEB) has no confirmed winter habitat in Otsego County. However, undocumented summer or winter habitat use may occur near the project site. Projects that convert forested habitat to other uses have a greater impact on NLEB as the bat uses forested habitats of all types for foraging as well as roosting.

3.3.3 Mitigation Measures

3.3.3.1 Water Resources

Construction projects involving the disturbance of one or more acres must obtain coverage under State Pollution Discharge Elimination System (SPDES), NYSDEC General Permit Stormwater Discharges from Construction Activities (GP-0-15-002 or current). If conditions on the construction site constrict the ability of the project to meet

the requirements in the General Permit an Individual Permit will be required. The primary mitigation measures for surface water impacts will be accomplished through a detailed Stormwater Pollution Prevention Plan (SWPPP). A SWPPP must be prepared prior to submitting a construction Notice of Intent during the process of compliance with the General Permit. The SWPPP will be designed to mitigate increased runoff from new impervious surfaces and will be designed to maintain as much of natural hydrology as possible. Upon actual site redevelopment, some stormwater management practices should be constructed first, prior to other site construction, as exposed soil is subject to greater risk of erosion. Stormwater quality and water quantity mitigation will be designed and implemented in accordance with the NYSDEC Technical Standards as found in the “New York State Stormwater Design Manual”, and will meet or exceed requirements under current NYSDEC General Permit.

Post-construction stormwater management practices must meet sizing criteria contained in the General Permit (Chapters 4, 9 and 10 of the New York State Stormwater Management Design Manual). Stormwater practices are sized to manage the expected amount of rainfall/snowmelt in a given area. If these sizing requirements cannot be met due to site-specific conditions, the Project will require an Individual SPDES Permit from the SPDES program.

Soils on the Study Area vary in their limitations for common stormwater management practices. Those soils in the wetlands areas (Carlisle muck, Wayland soils) are rated as “most limited” for infiltration, pond or artificial wetland stormwater practices due to the shallow depth to saturated soils. Soils in the previously disturbed areas of the Study Area are also rated “somewhat limited” due to excessive permeability (Chenango gravelly silt loam). These limitations generally can not be overcome without major soil reclamation and special engineering design and construction procedures. The Natural Resources Conservation Service soils map of the Study Area is included in Appendix B.

The Stormwater General Permit process includes the requirement to satisfy State Historic Preservation Act eligibility requirements prior to issuing a Notice of Intent for construction of a project to be covered under the General Permit. This joint process between the New York State DEC and Office of Parks, Recreation and Historical

Preservation (OPRHP) is documented in a Letter of Resolution between the two agencies (<https://www.dec.ny.gov/chemical/43133.html>). The Project site is mapped as being located in an Archaeologically Sensitive area by the OPHRP. The OPHRP has been consulted and has determined that no cultural/historic properties will be impacted by this project. The determination letter is included in Appendix D. Section 3.8 of this GEIS includes more information. Documentation of such decision must be maintained on site during the construction permitting process and during construction.

A NYS Protection of Waters Permit is required for excavating or placing fill in navigable waters of the state, below the mean high-water level, including adjacent and contiguous marshes and wetlands (6 CRR-NY 608.5). This includes placement of fill for access, construction or structure installation. A determination as to the navigability of the Class C stream (SR-173) that crosses the Project site will have to be made to determine the need for a DEC permit or permits.

A Clean Water Act Section 404 permit through the United States Army Corps of Engineers (USACoE) will be required prior to any dredging or filling of the site wetlands or stream. A NYS DEC Joint Application Form should be utilized for any disturbance of the wetland and/or stream expected during redevelopment of the Project site. Ultimate jurisdictional determinations will be made when a final Project is ready for development and permitting.

Small ponds and lakes 10 acres or less in surface area, located within the course of a stream, are considered part of the stream for purposes of the NYS Protection of Waters Program.

3.3.3.2 Wetlands

The New York State Freshwater Wetlands Act protects wetlands 12.4 acres or larger. The area of the majority of the wetlands on the Study Area will be considered as one as they are directly connected. Under this Act, the NYS DEC regulates activities in freshwater wetlands and their adjacent areas to prevent, or at least minimize, impairment of wetland functions. Activities such as construction of buildings or roadways, or placement of fill,

excavation or grading in the wetland or its adjacent area (100 feet from the wetland boundary) require a permit. At the time in which a potential redevelopment project is proposed, a Joint Permit Application for a wetlands permit would be filed between New York State and Federal agencies.

Applicants for a wetlands permit should consult with all regulatory parties early in the redevelopment design phase to assure that proposed mitigation measures meet all applicable standards and so that consistent terms and conditions can be developed for local, state and federal permits.

Mitigation is those actions taken to counter adverse effects of a project. The proposed redevelopment must minimize the degradation or loss of wetland or its adjacent area (and demonstrate that impacts to the wetland cannot be avoided entirely), must minimize any adverse impacts on the functions or benefits which that wetland provides and compensate for loss of wetland acreage and function unless it can be shown that the losses are inconsequential or economic and social need for the project outweighs the losses. A major function of wetlands is flood control as the wetlands absorb, store, and slow down the movement of rain and snowmelt water, minimizing flooding and stabilizing water flow.

The wetlands on the Study Area are listed as Class 1. Class 1 wetlands provide the most critical of the State's wetland benefits, reduction of which is acceptable only in the most unusual of circumstances; "A permit shall be issued only if it is determined that the proposed activity satisfies a compelling economic or social need that clearly and substantially outweighs the loss of or detriment to the benefits of the Class 1 wetland".

Compensatory mitigation, replacement of lost wetland acres and function, preferably should be on-site, or contiguous to the wetland impacted by the project. Wetland functions such as flood control or stormwater management usually *must* be replaced on site. Reasons for choosing a particular mitigation strategy should be documented as part of the permitting process. There must be provisions to ensure that corrective action will be taken as needed until the wetland mitigation goals are met (therefore monitoring of wetland restoration and remedial work is required). Mitigation is incorporated into a

construction schedule that must be approved by DEC and that becomes part of the project authorization. Wetland mitigation work concurrent with redevelopment work on the Project site might allow soils and vegetation from the impacted wetlands to be used in on-site mitigation.

The wetlands within the Study Area have been impacted by activities related to the former Rail Yard, other former industrial use and/or utility infrastructure. There are abandoned rail spur or road beds in several places that split wetlands, cutting off the natural flow of water within them. There are also many areas that are dominated by invasive plants, changing the natural vegetative habitat which can be a detriment to water flow and to the wildlife that utilizes the wetlands. These current conditions may allow for a certain amount of wetland mitigation on-site, through the restoration of the existing wetlands that remain after redevelopment.

3.3.3.3 Habitat

The DEC has requirements for projects that will result in a change of land use within Northern Long Eared Bat (NLEB) habitat. However, no habitat has been found on the project site. If NLEB is found on the project site in the future, these requirements need to be followed:

November 1 to March 31: During this period NLEB are inactive and are within hibernation sites – no cutting of any trees within ¼-mile buffer around a hibernation site, no activities that result in disturbance to the hibernation site including activities that would alter hydrology, increase noise or introduce fill are allowed. If such disturbance is to be made, a permit may be required from NYSDEC and USFWS. Outside of the ¼-mile buffer zone, voluntarily leave uncut known/documented roost trees and any trees within a 150-foot radius of summer occurrence.

April 1 to October 31: During this period NLEB are active and within the forested landscape. The following restrictions are required unless a permit is obtained from NYSDEC (Part 182); no cutting of any trees may occur within the ¼-mile buffer around a hibernation site. Outside of this buffer and within 1.5 miles of a summer occurrence, for

all activities at this time of year leave uncut all snag and cavity trees, leave uncut all known/documentated roost trees and any trees within a 150-foot radius of a documented summer occurrence. If any bats are observed flying from a tree or on a tree that has been cut, forestry activities in the area should be suspended and DEC wildlife staff notified.

3.4 TRANSPORTATION AND TRAFFIC

3.4.1 Existing Conditions

A traffic impact and access study (TIAS) for the proposed plan to redevelop approximately 50-acres of the Oneonta Rail Yard in the City of Oneonta in Otsego County has been conducted. The TIAS is included as Appendix F and quantifies existing and projected traffic conditions with the redevelopment of the Oneonta Rail Yard. The TIAS also includes a sensitivity evaluation during the summertime when recreational traffic exists in the study area, primarily related to the operation of the Cooperstown All Star Village baseball camp facility. In addition, the study includes a crash evaluation of the latest three years of available data from the New York State Department of Transportation (NYSDOT). The TIAS does not identify any potentially significant adverse impacts associated with the proposed redevelopment.

The study includes a detailed evaluation of the following eight intersections which are illustrated on the google aerial image in Figure 3.4.1:

1. NY Route 205/Oneida Street (NY Route 7)
2. NY Route 205/Country Club Road
3. Oneida Street (NY Route 7)/Lower River Street (CR 8)/Country Club Road
4. Lower River Street (CR 8)/Roundhouse Road/Ceperley Avenue
5. Chestnut Street (NY Route 7/23)/Ceperley Avenue/Murdock Avenue
6. Chestnut Street (NY Route 7/23)/Fonda Avenue
7. Roundhouse Road/Fonda Avenue
8. Chestnut Street (NY Route 7/23)/Main Street



Figure 3.4.1 Intersections

Evaluation of the transportation impacts associated with the proposed Oneonta Rail Yard Redevelopment Plan requires a thorough understanding of the existing transportation conditions in the study area including roadway geometry, traffic controls, daily and peak hour traffic flow, existing land uses at and surrounding the site, and multi-modal accommodations. Each of these elements is described in detail in the TIAS and is summarized below.

Currently, land uses in and near the Oneonta Rail Yard include a mix of industrial, manufacturing, warehouse/storage, lands owned by the Delaware & Hudson Railways, and other commercial land uses. Redevelopment of the Oneonta Rail Yard with the identified land uses will fit well within the character of the land uses in the study area.

Roadway Geometry

Descriptions of the study area roadways providing access to the project site and study area intersections are included below.

Roadways

Table 3.4.1a summarizes the functional classification, roadway cross-section, posted speed limit, and average daily traffic volume for the study area roadways.

Table 3.4.1a Roadway Characteristics

Location	Urban Functional Class	Cross-section	Posted Speed	AADT
NY Route 205	Principal arterial – other freeway/expressway	2, 12 ft lanes	55 mph	5,900 ^a
Oneida Street (NY Rt 7)	Minor arterial	2, 11 ft lanes	35 mph	7,350 ^a
Chestnut St (NY Rt /23)	Minor arterial	2, 10-11 ft lanes	30 mph	9,300 ^a
Country Club Rd (CR 8)	Local road	2, 10-11 ft lanes	30 mph	2,450 ^a
Lower River St (CR 8)	Local road	2, 11-12 ft lanes	30 mph	1,000 ^b
Ceperley Ave	Local road	2, 10 ft lanes	30 mph	500 ^a
Fonda Ave	Local road	2-way total 18ft	Not posted	350 ^b
Roundhouse Rd	Private road	2-way total 24ft	Not posted	210 ^b

a Most recent Annual Average Daily Traffic (AADT) volume available from NYSDOT expressed in vehicles per day.

b Average Daily Traffic estimated based on the assumption that the PM peak hour traffic is approximately 10% of the daily traffic.

Existing Traffic Volumes

Daily traffic volumes were collected on Chestnut Avenue east of Ceperley Avenue and on NY Route 205 south of Country Club Road for the period from Tuesday, May 8, 2018 through Friday, May 11, 2018 using automatic traffic recorders (ATRs). Traffic volume data was collected when school was in session for the nearby colleges and when local elementary, middle, and high schools were in session. The traffic volume data are summarized in Table 3.4.1b and are included in Appendix B in the TIAS. It is noted that the NYSDOT data is different than the data included below due to the timing and placement of the ATRs and the adjustments that the NYSDOT makes to the data they collect and publish. The data summarized below were collected specifically for the evaluation of the Redevelopment of the Oneonta Rail Yard.

Table 3.4.1b Existing Traffic Volume Summary

Location	ADT ^a	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Volume	K Factor ^b	Dir. Dist. ^c	Volume	K Factor	Dir. Dist.
Chestnut Ave	8,825	560	6.3%	66% EB	705	8.0%	51% WB
NY Route 205	7,073	483	6.8%	66% SB	629	8.9%	60% NB

Source: Based on automatic traffic recorder counts conducted on May 8 through 11, 2018.

Note: Peak hours do not necessarily coincide with the peak hours of turning movement counts.

a Average Daily Traffic (ADT) volume expressed in vehicles per day.

b Represents the percent of daily traffic that occurs during the peak hour.

c Directional distribution of peak hour traffic.

As shown, Chestnut Avenue carries approximately 8,825 vehicles per day (vpd) on a typical weekday. Traffic flow along Chestnut Avenue is heavier in the eastbound direction during the AM peak hour and slightly heavier in the westbound direction during the PM peak hour. NY Route 205 carries approximately 7,073 vpd. Traffic flow on NY Route 205 is heavier in the southbound direction during the AM peak hour and heavier in the northbound direction during the PM peak hour.

Turning movement counts (TMCs) were conducted at the eight study area intersections on May 10, 2018 when all schools were in session during the weekday AM and PM peak periods from 6:00 to 9:00 AM and 3:00 to 6:00 PM on May 10, 2018. The peak hour traffic volume data is included in Appendix C of the TIAS and the 2018 Existing peak one-hour traffic volumes are illustrated on Figures 1 and 2 of the TIAS. Based on the data, the AM peak hour varies throughout the study area but generally occurs from 7:30 AM to 8:30 AM from or 7:45 AM to 8:45 AM. The PM peak hour also varies but occurs at each intersection for a one-hour period between 3:15 PM and 5:15 PM.

Multi-Modal Accommodations

Public transportation in the study area is provided by Oneonta Public Transit (OPT). There are several bus routes that travel through at least a portion of the overall study area including the Morning Commuter, Hillside Commons, River Street, State University, West End, and Hartwick College/Southside Night Routes. Of these routes, the West End

Route and Morning Commuter Route travel closest to the Oneonta Rail Yard. The West End Route provides weekday service from 7:00 AM to 5:50 PM at approximately 30-minute intervals with a stop at the Chestnut Street/ Fonda Street intersection. The Morning Commuter Route provides weekday service from 6:00 to 7:00 AM in the study area travelling to several area employers including Corning, Industrial Park, Southside Mall/Walmart, and Browne Street. No evening commuter service is provided.

As noted in the roadway and intersection descriptions the study area includes a mix of pedestrian and bicyclists accommodations including ranging from sidewalks, shoulders, crosswalks, pedestrian indicators, and countdown timers to no accommodations requiring pedestrians and bicyclists to share the roadway with passenger vehicles. The traffic volume data did not identify any bicyclists observed during the peak hour traffic counts; however, Table 3.4.1c summarizes the number of pedestrian crossings observed during both the AM and PM peak hours.

Table 3.4.1c Peak Hour Pedestrian Crossings

Location	AM Peak Hour	PM Peak Hour
NY Rt 205/Oneida St	1	1
NY Rt 205/Country Club Rd	1	0
Country Club Rd/Oneida St/Lower River St	5	3
Lower River St/Ceperley Ave/ Roundhouse Rd	1	4
Chestnut St/Ceperley Ave/Murdock Ave	9	8
Chestnut St/Fonda Ave	4	3
Fonda Ave/Roundhouse Rd	0	0
Chestnut St/Main St	41	400

The Chestnut Street/Main Street intersection experiences a large number of pedestrian crossings due to the intersection location within the downtown center, proximity of the Oneonta Public Transit Center, many nearby employers and commercial businesses, and the nearby parking garage.

As noted in the roadway and intersection descriptions above, the study area network provides a mix of pedestrian accommodations including sidewalks, ramps, detectable warning fields, crosswalks, pedestrian indicators, pushbuttons, and countdown timers. Bicycle pavement markings are provided in multiple locations on the shoulders and in the travel lane at traffic signals to identify the location for bicyclists to wait to trigger the traffic signal to change.

Vehicular Crash History

Crash data for the study area was obtained from NYSDOT for the latest available three-year period from January 1, 2015 to December 31, 2017 for the following roadway segments:

- NY Route 205 between and including County Road 48 (south of Interstate 88) and Chestnut Street (NY Route 23)
- Chestnut Street (NY Route 23) between and including NY Route 205 and Main Street
- County Road 8 (Lower River Street/Roundhouse Road) between and including NY Route 205 and Fonda Avenue
- NY Route 7 (Oneida Street) between and including NY Route 205 and Chestnut Street (NY Route 23)

Review of the data shows that during the three-year period, a total of 220 crashes occurred on these roadway segments. Table 3.4.1d summarizes the segment and intersection crashes and shows that of the 220 crashes, there were 26 injury crashes, 80 property damage collisions, 113 non-reportable incidents (no injury and less than \$2,000 in property damage), and one fatality. Two crashes involved pedestrians and one crash involved a bicyclist. The crash data is provided in Appendix D of the TIAS.

Table 3.4.1d Summary of Three-year Crash History

Location	Total Crashes	Severity			
		Fatal	INJ ^a	PDO ^b	NR ^c
Roadway Segment ^d					
NY Rt 205 from CR 48 to NY Rt 23	42	0	11	13	18
Chestnut Street from NY Rt 205 to Main St	142	1	13	51	77
Oneida St from Rt 205 to Chestnut St	33	0	2	15	16
CR 8 from NY Rt 205 to Fonda Ave	3	0	0	1	2
Total	220	1	26	80	113
Study Intersection					
NY Rt 205/Oneida St	8	0	4	2	2
NY Rt 205/Lower River St	6	0	2	2	2
Lower River St/Oneida St	3	0	0	1	2
Lower River St/Roundhouse Rd/Ceperley Ave	0	0	0	0	0
Chestnut St/Ceperley Ave/Murdock Ave	6	0	0	2	4
Chestnut St/Fonda Ave	3	0	0	1	2
Fonda Ave/Roundhouse Rd	0	0	0	0	0
Chestnut St/Main St	16	1	1	6	8
Total	42	1	7	14	20

Source: NYSDOT crash data dated September 1, 2013 through August 31, 2016.

a Injury

b Property Damage Only

c Non-Reportable

d The study intersection crashes are included in the segment totals

As shown in Table 3.4.1d, of the 220 total crashes on the evaluated roadway segments, 42 occurred at six of the study area intersections included within the roadway segments. Of the 42 intersection crashes, 20 were rear-end crashes and 6 were overtaking with the remaining crashes a mix of head on, left-turn, right angle, sideswipe, and other/unknown. The primary contributing factors of the intersection crashes were identified as driver inattention, following too closely, failure to yield right-of-way, and disregard of traffic control devices. Review of the intersection crash data did not identify any prevalent crash types or patterns. Three crashes at the study area intersections that were noted as

being associated with heavy vehicle traffic. Additional details regarding the intersection crashes is included in the TIAS.

Of the 178 crashes that occurred on the roadway segments and were not at the study intersections, 41 were single-vehicle crashes and 137 were multi-vehicle crashes. The crashes included 69 rear end crashes, 34 angle crashes, and 14 overtaking crashes. The primary contributing factors were identified as driver inattention, following too closely, backing unsafely and failure to yield the right-of-way. Review of the segment crash data did not identify any prevalent crash types or patterns. There were four crashes that were noted as being associated with heavy vehicle traffic. Additional detail regarding the segment crashes is included in the TIAS

3.4.2 Potential Impacts

Future Conditions

The purposes of analysis, the Redevelopment Plan is based on a five-year build-out plan which is considered to be the most expeditious timeline for redevelopment; therefore, the traffic study evaluates the conditions in the study area for the year 2023 to reflect the time period for full build-out of the Plan.

No-Build Conditions

Historical traffic volumes data published by NYSDOT was reviewed for NY Routes 7, 23, and 205 in the study area. The data on NY Routes 7 and 23 showed that traffic volumes have been trending down over the last several years with decreases ranging between -1% and -4% per year. Traffic volumes on NY Route 205 showed a slight increase of 0.75% per year. To account for potential future growth in the study area, including the Downtown Revitalization Initiative, the 2018 existing traffic volumes were increased by 0.25% per year for five years to represent future 2023 conditions. This growth rate accounts for potential background traffic growth and any site-specific development projects in the study area. The resulting 2023 No-Build peak hour traffic volumes are provided on Figures 4 and 5 in the TIAS and represent future traffic volumes in the study area prior to redevelopment of the Oneonta Rail Yard.

Build Conditions

Build traffic volumes were determined by estimating site-generated traffic volumes and distributing these volumes over the study area roadways. The site generated traffic volumes include new trips that are likely to be generated with the Redevelopment Plan development.

Master Plan Generated Traffic Volumes

To estimate the site-generated traffic, the Institute of Transportation Engineers' (ITE) publication *Trip Generation, 10th Edition*¹ was utilized. The number of vehicle trips generated by the proposed Oneonta Rail Yard Redevelopment Plan with 913,125 SF of development was based on ITE land use code (LUC) 130 – Industrial Park. This land use code includes a mix of industrial or related land uses including manufacturing, service, and warehouse facilities and best represents the anticipated land uses within this site. Table 3.4.2a summarizes the projected trip generation associated with the proposed developments for the AM and PM peak hours.

Table 3.4.2a Trip Generation Summary

Weekday Time Period	Movement	Industrial Park ^a
AM Peak Hour	Enter	296
	<u>Exit</u>	<u>69</u>
	Total	365
PM Peak Hour	Enter	77
	<u>Exit</u>	<u>288</u>
	Total	365

a Trip generation estimate based on ITE LUC 130 Industrial Park for 913,125 SF

¹ Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, Washington D.C., September 2017.

The proposed Oneonta Rail Yard Master Plan with 913,125 SF of development is anticipated to generate 365 vehicle trips during the AM peak hour with 296 entering vehicles and 69 exiting vehicles and 365 vehicle trips during the PM peak hour with 77 entering trips and 288 exiting trips.

Due to the site location within a rail yard, it is anticipated that vehicle trips to the site could potentially be reduced by businesses that use the railroad as a means for importing and exporting supplies and/or products. However, since much of the peak hour travel to and from site is associated with the movement of employees to and from each business, a reduction in the AM and PM peak hour trip generation was not taken as part of the traffic evaluation. This assumption provides for a conservative evaluation of the trip generation at the site.

Trip Distribution and Assignment

The directional distribution of traffic approaching and departing the project sites is a function of several variables: population densities, existing travel patterns, and the efficiency of area roadways. Based on a review of the existing travel patterns, surrounding roadway network, and population centers in the area it is estimated that 65% of traffic will approach and depart the site via Lower River Street, 25% will access the site via Fonda Road, and the remaining 10% will travel to and from the site via Ceperley Avenue. It is noted that site-related traffic travelling to and from Fonda Road and Ceperley Avenue will be passenger vehicles and will not include heavy vehicle traffic. The detailed trip distribution pattern is illustrated on Figure 6 in the TIAS.

As noted, during the AM and PM peak hours, trips to and from the site are expected to be primarily passenger vehicles associated with employees arriving and departing the site. Passenger vehicles can access the site via Lower River Street, Fonda Road, or Ceperley Avenue. As noted previously, Fonda Road is a narrow, low volume road and Ceperley Avenue is posted with a truck restriction; therefore, all heavy vehicle traffic travelling to and from the site will be directed to use Lower River Street. Review of the existing traffic volume data shows that heavy vehicles are currently accessing the study area

through Lower River Street via NY Route 205 and Oneida Street (NY Route 7). Although the number of heavy vehicles accessing the site is anticipated to increase, the percentage of heavy vehicle traffic during the AM and PM peak hours is expected to remain consistent with the existing conditions since a higher percentage of traffic entering and exiting the site will be passenger vehicles.

Build Traffic Volumes

The site-generated traffic volumes were assigned to the roadway network according to the distribution and travel patterns described above and are shown on Figures 7 and 8 in the TIAS. The Trip Assignment volumes were added to the 2023 No-Build traffic volumes to develop the 2023 Build traffic volumes. Figures 9 and 10 in the TIAS present the resulting 2023 Build traffic volumes for the weekday AM and PM peak hours, respectively with full build-out of the Master Plan.

Traffic Operations Analysis

To assess quality of flow, intersection capacity analyses were conducted with respect to 2018 Existing, 2023 No-Build, and 2023 Build traffic volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels-of-service. The evaluation criteria used to analyze the study area intersections is based on the procedures set forth in the latest version of the *Highway Capacity Manual* (HCM)². Level of service (LOS) is a measure that considers many factors including roadway geometry, speed, and travel delay. Levels of service range from A to F, with LOS A representing short vehicle delays and LOS F representing long vehicle delays.

Intersection capacity analyses were conducted at all intersections in the study area. Analyses were conducted for the 2018 Existing, 2023 No-Build, and 2023 Build conditions. The capacity analyses worksheets are included in Appendix E of the TIAS.

² Highway Capacity Manual, Transportation Research Board, Washington D.C., 2010.

The Lower River Street/Ceperley Avenue/Roundhouse Road intersection was evaluated as a three-leg intersection assuming stop sign control on the Roundhouse Road intersection approach.

The study area intersections operate with acceptable levels of service under 2018 Existing and 2023 No-Build conditions. Under the 2023 Build conditions, the Oneida Street southbound left-turn movement at the NY Route 205/Oneida Street intersection will operate at LOS E with 55 seconds of average delay during the PM peak hour. All other intersection movements and approaches will operate at LOS D or better; however, additional detail regarding any drops in level of service are included in the TIAS. Although some minor drops in approach levels of service are anticipated during the peak hours, the study area intersections are able to accommodate full build-out of the proposed redevelopment of the Oneonta Rail Yard.

The Roundhouse Road approach to Lower River Street/Ceperley Avenue currently operates at LOS A during both peak hours. This continues through the No-Build conditions. Due to the anticipated growth in the Rail Yard and associated traffic volumes, it is recommended that the redevelopment include reconfiguration of this intersection so that the Lower River Street and Roundhouse Road approaches are the mainline and the Ceperley Avenue southbound approach is the minor, stop sign controlled approach. It is also recommended that the Lutz Feed driveway approach is better defined as a driveway to either align as a fourth intersection leg (stop sign controlled) or provide driveway(s) offset from the intersection, with offset distance maximized to minimize interaction with the intersection. To provide a worst-case evaluation of the future condition at the intersection, it was assumed a defined Lutz Feed driveway would become a fourth intersection leg. With the intersection reconfiguration as a four-leg intersection, all approaches will operate at LOS B or better during the AM and PM peak hours in the Build condition with the full redevelopment of the rail yard. The future proposed alignment is schematically shown below. As the schematic below illustrates, additional realignment of the Lower River Street and Roundhouse Road intersection approaches would further improve the intersection operations.



The redevelopment will include realignment of a portion of Roundhouse Road and an extension of the internal roadway network connecting to Roundhouse Road with a loop road. Although Roundhouse Road is currently a private road, all the internal roadways, including the existing segments of Roundhouse Road should be designed and constructed or upgraded to the appropriate City roadway standards suitable for both passenger and heavy vehicle traffic. As noted, Fonda Avenue is a narrow low volume roadway with a total pavement width of 18-feet. It is recommended that heavy vehicle traffic from the site be directed to enter and exit via Lower River Road; however, to better accommodate passenger vehicle traffic, it is recommended that Fonda Avenue be evaluated to determine the feasibility of providing additional roadway width to better accommodate the increased traffic anticipated with redevelopment. In the minimum, this roadway should be improved with resurfacing as the pavement is currently in fair condition.

Seasonal Evaluation

A sensitivity analysis was completed to determine the operations in the study area during the summer months when recreational traffic exists in the study area, mostly related to

the operation of the Cooperstown All Star Village baseball camp facility. Daily traffic volumes were collected on Chestnut Avenue east of Ceperley Avenue and on NY Route 205 south of Country Club Road, consistent with the locations data was collected in May, for the period from Thursday, August 23, 2018 through Tuesday, August 28, 2018 using automatic traffic recorders (ATRs). It was confirmed that the Cooperstown All Star Village baseball camp facility was fully operational during the count periods.

Review of the ATR data shows that traffic volumes in August are higher on Fridays and weekends than they are in May. Further review of the data shows that the Friday condition in August is higher than the weekday average in August. Table 3.4.2b provides a comparison between the average weekday condition in May and the Friday condition in August for the AM and PM peak periods and the total daily traffic volume.

Table 3.4.2b ATR Data Comparison

Location	May Weekday Average	August Friday	Change
NY Route 205			
AM Peak Period	424	418	-1.4%
PM Peak Period	582	624	7.3%
Daily	7,074	8,147	15.2%
Chestnut Street			
AM Peak Period	452	442	-2.1%
PM Peak Period	678	805	18.7%
Daily	8,825	10,509	19.1%

The volume comparison shows that during the AM peak period, the traffic volumes in August on a Friday are slightly lower than the average weekday traffic volume experienced during May; therefore, no seasonal AM peak hour evaluation is needed. There is potential for the seasonal Friday PM peak hour traffic volume conditions to occur concurrently with the PM peak hour traffic travelling to and from the Oneonta Rail Yard; therefore, to evaluate seasonal operations, the through volumes for the 2023 No-

Build traffic volumes on NY Route 205 were increased by 7.5% and the Chestnut Street volumes were increased by 19% to represent the PM peak period seasonal increase in traffic. The Trip Assignment for the PM peak hour was then added to the seasonally increased traffic volumes.

Intersection capacity analyses were conducted at the five study intersections on NY Route 205 and Chestnut Street to evaluate the operations on a Friday PM peak hour when the peak season traffic volumes may occur concurrently with the vehicles travelling to and from the proposed redevelopment project.

With redevelopment of the Oneonta Rail Yard during the peak season condition, additional increases in average vehicle delay can be expected as detailed in the TIAS. The analysis shows that there will be some drops in level of service during the PM peak hour during the Friday peak summer conditions, but the study area is able to accommodate full build-out of the proposed Oneonta Rail Yard redevelopment. These increases in delay are expected to only occur during the PM peak hour on Fridays during the summer months.

Sight Distance

As noted, primary access to the site will be provided via the existing Lower River Street/Ceperley Avenue/Roundhouse Road and Fonda Avenue/Roundhouse Road intersections. Since traffic volumes at these intersections will be increasing with redevelopment of the Oneonta Rail Yard, sight distance analysis, in conformance with guidelines of the American Association of State Highway and Transportation Officials (AASHTO)³ was performed at the two intersections. Both stopping sight distance (SSD) for traffic approaching the site access and intersection sight distance (ISD) at the site access were measured.

There is no posted speed limit on Fonda Avenue, but the speed limit on nearby roadways is posted at 30-mph; therefore, the measured sight distances were compared to a 35-mph

³ A Policy on the Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2013

operating speed (30 mph plus 5 mph). The Lower River Street/Ceperley Avenue/Roundhouse Road intersection sight distance was evaluated with the proposed reconfiguration with Ceperley Avenue as the minor street approach. The posted speed limit on Lower River Street is 30-mph; therefore, the measured sight distances were compared to a 35-mph operating speed (30 mph posted plus 5 mph). The sight distance at the Lower River Street/Ceperley Avenue/ Roundhouse Road intersection should be reconfirmed during the detailed design of the reconfiguration as the assumptions made in the field based on the current conditions and alignment could change.

SSD is the distance along the roadway for a vehicle approaching from either direction to perceive, react and come to a complete stop before colliding with an object in the road. Table 3.4.2c summarizes the stopping sight distance evaluation.

ISD is based on the time required for perception, reaction, and completion of the desired turning maneuver into or out of the site driveway. Calculation of the ISD includes the time to (1) turn and clear the intersection without conflicting with approaching vehicles; and (2) upon turning, to accelerate to the operating speed on the roadway without causing approaching vehicles on the main road to unduly reduce their speed. Table 3.4.2d summarizes the intersection sight distance analysis.

It is noted that intersection sight distance measurements were completed from the perspective of a passenger vehicle at both intersections since the Ceperley Avenue approach to Lower River Street/Roundhouse Road and Roundhouse Road approach to Fonda Avenue will primarily serve passenger vehicles and heavy vehicle traffic associated with the proposed redevelopment is not recommended on these roadway approaches.

Table 3.4.2c Stopping Sight Distance

Location	Traveling	Guideline (feet) ^a	Measured (feet) ^b
Fonda Ave at Roundhouse Rd	NB	250	310
	SB	287 ^c	340
Lower River St/Roundhouse Rd at Ceperley Ave	EB	250	600+
	WB	250	600+

a Based on standards established in A Policy on the Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2013 for a 35-mph operating speed.

b Based on field measurements taken by VHB.

c Guideline adjusted for a 9% downgrade on Fonda Avenue approaching Roundhouse Road. Review of the results of the stopping sight distance evaluation shows that the measured stopping sight distances on Fonda Avenue approaching Roundhouse Road meet the AASHTO guidelines for a 35-mph operating speed. In addition, Lower River Street and Roundhouse Road approaching a realigned Ceperley Avenue exceed the AASHTO guidelines for a 35-mph operating speed.

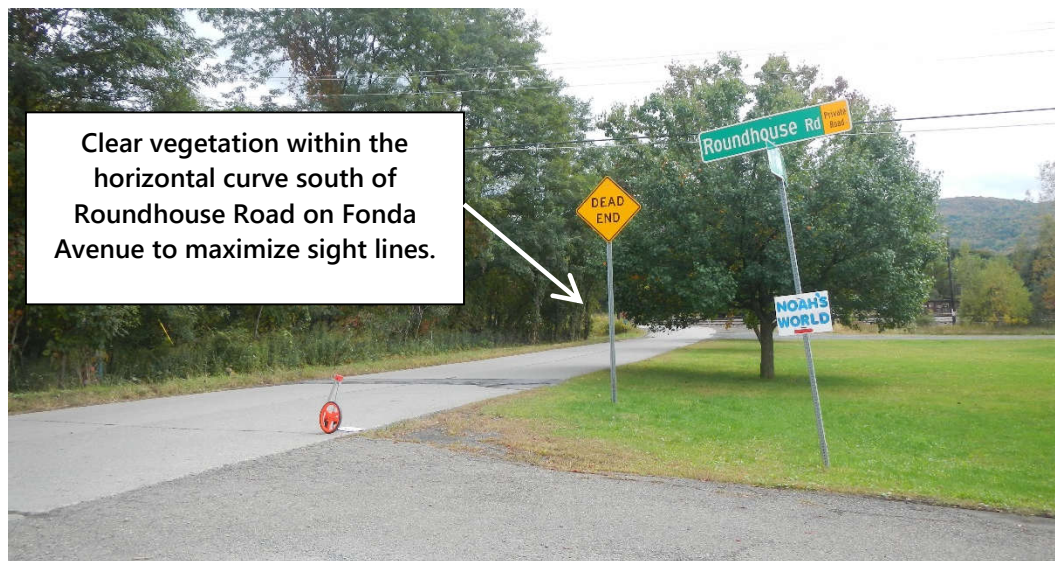
Table 3.4.2d Intersection Sight Distance

Location	<u>Field Measurement</u> ^a		<u>AASHTO Guideline (feet)</u> ^b		
	View	Distance (feet)	Left-turn Out	Right-turn Out	Left-turn In
Roundhouse Rd at Fonda Ave	Looking Left	345	390	335	NA
	Looking Right	340	390	NA	NA
	Looking Straight	345	NA	NA	285
Ceperley Ave at Lower River St/Roundhouse Rd	Looking Left	600+	390	335	NA
	Looking Right	600+	390	NA	NA
	Looking Straight	600+	NA	NA	285

a Based on field measurements

b Based on standards established in A Policy on the Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2013 for a 45-mph operating speed.

The sight distances looking left for a right-turn movement and looking straight to turn left from Roundhouse Road to Fonda Avenue meet the AASHTO guidelines for a 35-mph operating speed. The sight distances looking left and right to turn left out of Roundhouse Road are less than the AASHTO guideline by approximately 50 feet. When looking left a driver can see to the adjacent Chestnut Street intersection. When looking right, a driver can see approximately 340 feet and is limited by existing vegetation and the curve of Fonda Avenue as shown in the photograph. Based on information provided in the New York State Supplement to the Manual of Uniform Traffic Control Devices (MUTCD) the



Photograph 1: Looking right (D_R) from Roundhouse Road to Fonda Avenue

available sight distance looking to the left and right is less than desirable but not critically limited therefore sight distance mitigation like intersection warning signs are not needed. To maximize sight lines looking to the right, it is recommended that the vegetation on the east side of Fonda Avenue at the roadway curve be cleared to the extent possible (as shown in Photograph 1).

With the minor realignment and reconfiguration of the Lower River Street/Roundhouse Road/Ceperley Avenue intersection the available intersection sight distance will meet the AASHTO guidelines for a 35-mph operating speed. It is noted that to provide good sight distances looking to the right from Ceperley Avenue, parking in the southwest quadrant

of the parcel in the northwest quadrant of the intersection, as shown in the following photograph, should be restricted.



Photograph 2: Looking right (DR) from Ceperley Avenue to Lower River Street

Heavy Vehicle Access

The land uses identified for development in the Oneonta Rail Yard Redevelopment Plan includes food processing, brewing/manufacturing, bottling/packaging, warehouse/storage, temperature-controlled distribution, import and export. These types of uses have a higher percentage of heavy vehicle traffic to transport goods and materials to and from the facility. The railroad provides one source of access to the site, while the roadway surface network provides a second. As noted previously, heavy vehicles are restricted on Ceperley Avenue.

During the existing AM and PM peak hours, heavy vehicles account for approximately 10% to 20% of two-way traffic on Lower River Street, 2% to 5% of two-way traffic on Oneida Street south of Country Club Road, and approximately 4% to 9% on NY Route

205 north of Country Club Road. Review of the intersection turning movement traffic counts shows that heavy vehicles destined to and from the north from the rail yard use NY Route 205, while heavy vehicles destined to and from the south or to Interstate 88 use Oneida Street (NY Route 7). As noted, heavy vehicles are currently maneuvering through the study area and the crash data does not indicate a consistent pattern of heavy vehicle crashes indicating that the existing lane widths, approach grades, and intersection turning radii are sufficiently accommodating these types of vehicles. Heavy vehicles were also documented accessing the site via Fonda Avenue, though this number is smaller. Due to the existing truck restriction on Ceperley Avenue and the narrower width of Fonda Avenue, it is recommended that as new development occurs in the Oneonta Rail Yard, all heavy vehicle traffic be directed to access the site via Lower River Street and Country Club Road to NY Route 205 and Oneida Street. This recommendation should be reinforced with appropriate signing and will also reduce the potential for increased heavy vehicle traffic in residential areas located north of the project site.

Emergency Vehicles

Emergency vehicles currently access the project site through Lower River Street, Ceperley Avenue, and Fonda Avenue. With redevelopment, emergency vehicles will continue to access the site through these three roadways. The capacity and sight distance improvements identified previously will benefit both typical passenger vehicle traffic to and from the site and emergency vehicle access.

3.4.3 Mitigation Measures

The following recommendations are provided associated with the redevelopment of the Oneonta Rail Yard.

- It is recommended that the Lower River Street/Roundhouse Road/Ceperley Avenue intersection be reconfigured with redevelopment of the rail yard to provide a clear through movement from Lower River Street to Roundhouse Road as this is expected to be the higher volume traffic flow under future conditions. With this change, the Ceperley Avenue and Lutz Feed driveway approaches to the

roadway should operate with stop sign control. With the intersection modifications it is also recommended that the Lutz Feed driveway approach is better defined as a driveway to either align as a fourth intersection leg (stop sign controlled) or provide driveway(s) offset from the intersection, with offset distance maximized to minimize interaction with the intersection. This modification will need to be further coordinated with Lutz Feed to ensure adequate site circulation is maintained at this site.

- Within the rail yard, the existing segments of Roundhouse Road should be designed and constructed or upgraded to the appropriate City roadway standards suitable for both passenger and heavy vehicle traffic.
- Fonda Avenue is a narrow low volume roadway with a total pavement width of 18-feet. It is recommended that Fonda Avenue be further evaluated to determine the feasibility of providing additional roadway width to better accommodate the increased passenger vehicle traffic anticipated with redevelopment. In the minimum, this roadway should be improved with resurfacing as the pavement is currently in fair condition.
- To maximize sight lines looking to the right, it is recommended that the vegetation on the east side of Fonda Avenue at the roadway curve be cleared to the extent possible south of the Fonda Avenue/Roundhouse Road intersection.
- The sight distance evaluation at a reconfigured Lower River Street/Roundhouse Road/Ceperley Avenue intersection shows that the measured sight distances looking left and right from Ceperley Avenue will be provided through limiting parking in the northwest quadrant of the intersection. The sight distance at this intersection should be reconfirmed during the detailed design of the reconfiguration as the assumptions made in the field based on the current conditions and alignment could change.
- Heavy vehicles currently access the site on Lower River Street and Fonda Avenue. It is recommended that with redevelopment of the area, heavy vehicles be directed to access the Oneonta Rail Yard via Lower River Street to NY Route 205 and Oneida Street (NY Route 7). This recommendation should be reinforced

with appropriate signing and will reduce the potential for increased heavy vehicle traffic in residential areas located north of the project site.

3.5 LAND USE AND ZONING

The 2007 Comprehensive Plan of the City of Oneonta describes current physical, social and economic character of the community and provides a framework for future public and private investment and decision making. A comprehensive plan enables a community to follow its stated vision and objectives for the sake of the health, welfare, and general prosperity of its citizens. Efforts toward development of a new Comprehensive Plan were begun in 2017 and are in the process as of the writing of this DGEIS.

3.5.1 Existing Conditions

A table in the 2007 Comprehensive Plan, page 33, notes that within the City as of 2005 there were 3586 parcels of land encompassing 2201.4 acres. Approximately 73% of those parcels (28% of acreage) is Residential, 12% of the parcels (9.5% of acreage) is Commercial, 0.2% of those parcels (1.5% of acreage) is Industrial and 13% of the parcels (26% of acreage) is Vacant. The largest Vacant areas are north of Hartwick College and in the Oneonta Roundhouse area. There are no Agricultural lands within the City of Oneonta, however agricultural lands make up approximately 35% of Otsego County. (Otsego County Agricultural and Farmland Protection Plan).

The City of Oneonta Zoning, Chapter 300 of the Administrative Code, establishes the following zoning districts;

- Low-density Residential,
- Moderate-density Residential,
- High-density Residential,
- Transitional Residential,
- Downtown Mixed-use,
- Gateway Mixed-use,

- Commercial/Industrial,
- University,
- Public Open Space, and
- Planned Unit Development districts.

The Study Area is zoned Commercial/Industrial. The purpose of the Commercial/Industrial District is to provide for areas within the City of Oneonta that encourage large- and small-scale commercial development as well as light and heavy industrial uses, and moderate-sized residential developments. Commercial and industrial operations must respect the character of surrounding residential uses by mitigating noise, pollution, and other environmental impacts.

According to the Zoning code Bulk and Use Table, §300-99, the minimum lot size, in square feet, for Heavy Manufacturing is 20,000 sq. ft. (0.5 acres), and the minimum for Light Manufacturing 10,000 sq. ft. (0.23 acres). No maximum building height is specified in the commercial/industrial district. All new buildings are subject to site plan review. Impervious coverage of more than one acre, or 60% of lot, requires site plan review.

Light manufacturing is defined as a facility which manufactures, designs, assembles, or processes a product for wholesale or retail from previously prepared materials, parts or finished products. Heavy manufacturing is defined as any factory, shop, yard, warehouse, mill or other nonresidential premises utilized in whole or in part for the processing, preparation, production, containerizing, and associated storage or distribution of goods, wares, commodities, parts, materials, electricity and the like.

The City of Oneonta Zoning code also includes such requirements as access to improved streets, buffer areas, performance standards and outdoor storage of materials and equipment (and others) that apply to all Zoning Districts.

3.5.2 Potential Impacts

Zoning in the City of Oneonta reflects the Comprehensive Plan. The Study Area is zoned Commercial/Industrial. Heavy and/or Light Manufacturing are permitted uses on a lot the size of the Study Area.

Industrial uses are important generators of tax revenue, jobs and locally available goods and services, and can impact the community image as well as sense of place. However, commercial and industrial development needs to take place in a way that preserves the value of the surrounding properties and will not negatively affect the quality of life of residents with long-term environmental and service costs. Re-development in the Railyard area should pay special attention to environmental impacts due to the presence of the stream and wetlands that are tributary to the Susquehanna River. The area also borders residential areas to the north so re-development should be respectful of that transition area.

3.5.3 Mitigation Measures

Based upon the boundaries of the zoning districts and land-use maps, the Railyard re-development project is located in an area where commercial and industrial uses are appropriate and encouraged. Mitigation measures will achieve objectives established in the Comprehensive Plan, including;

- creative use of land and physical development that allows an orderly transition from a vacant state to a developed state
- an efficient use of land with respect to utility networks, roads and infrastructure
- a development pattern in harmony with the planning objectives of the City

Chapter 300-51 of the Zoning code requires buffer areas to assure an acceptable degree of transition, to reduce potential adverse incompatibility, between abutting and nearby uses, protect property values and enhance the visual and aesthetic appearance of the community. Buffer area designs are submitted and reviewed in conjunction with the building permit application review procedure. Buffers may be a combination of landscaping, plantings, fencing, planters, trellises, etc. Trees on the hillslope will be maintained as screen for residences north of Study Area.

3.6 COMMUNITY SERVICES

The Community Services section of the DGEIS incorporates a general description of public services such as potable water, sewer treatment, police, emergency services, schools, and sanitation as they relate to the proposed action.

3.6.1 Existing Conditions

3.6.1.1 Water

The City of Oneonta water system serves 15,954 people who live in the City of Oneonta, and parts of the Town of Oneonta. The source of the water supply is surface water drawn from Wilber Lake and the Lower Reservoir (along Oneonta Creek), and ground water from the Catella Park Well located in Neahwa Park.

The water flows by gravity from the Lower Reservoir and is pumped from Catella Park Well (when in use), through the Water Treatment Plant. The water is treated through filtration, disinfection, pH adjustment, fluoridation, and corrosion control treatment before being pumped to the storage tanks and the distribution system. Total water produced in 2017 was 543 million gallons, almost 1.5 million gallons per day (MGD). The highest single day production was 2.36 MGD. Approximately 28% of that water produced goes to use in flushing mains, fighting fires or is lost to leakage. (Oneonta Annual Drinking Water Quality Report for 2017).

According to the City of Oneonta Water Map 1975 (revised 1992), there are water mains along the boundary of railyard. There is a 12-inch main across the southern periphery of the area, following West Broadway; 6- and 8-inch mains along Ceperley Avenue to the west; 8-inch main along Chestnut to the north; and 6-inch main from Chestnut to West Broadway along Fonda Avenue to the east.

3.6.1.2 Sewer

Wastewater is treated at the wastewater treatment plant (WWTP) at the south side of Susquehanna River, Silas Lane, adjacent to Exit 13 off Interstate 88. The WWTP, which

utilizes Rotating Biological Contactors (RBCs), is permitted at a discharge of 4 MGD, and by-pass overflow at 5MGD, to discharge to the Susquehanna River.

The City of Oneonta Overall Sewer Plan 2007 indicates that there are sewer mains along the boundary of railyard. There is an 8-inch sewer main along River Street; a 15-inch main along the west side of the project site from River Street/Ceperley Avenue to Schaffer Avenue; 12-inch main along Chestnut Street to the north; a sewer main off Fonda Ave on the east providing 8-inch sewer to existing buildings south of Roundhouse Road in the southeast area of the project; 12-inch sewer on West Broadway south across the rail lines.

3.6.1.3 Schools

The Study Area is located within the Oneonta City School District. The School District encompasses the City of Oneonta, Town of Oneonta, and portions of the towns of Laurens, Milford, Maryland, and Davenport in Otsego and Delaware Counties. There are three elementary schools (K-5); Greater Plains, Riverside, and Valleyview. The middle school and high school are both located on East Street in Oneonta. Current enrollment in the district is approximately 1700 students in kindergarten through twelfth grade.

Hartwick College is a private liberal arts and sciences college located on Hartwick Drive within the City of Oneonta, on the hill northwest of downtown. There was a total of 1,201 students for the Fall 2017 semester.

SUNY Oneonta is a mid-size liberal arts and sciences public college with a total enrollment of 6,056 students. The campus is located on Ravine Parkway, on the hill to the north of downtown Oneonta.

Early Head Start is a community-based program for low-income families with infants and toddlers and pregnant women. The program promotes healthy prenatal outcomes, enhances child development, and promotes healthy family functioning. Families involved with Early Head Start are offered services until their child enters Head Start preschool program. In Oneonta Early Head Start is provided by Opportunities for Otsego on River Street.

The Study Area is located within 1500 feet of Hartwick College, Riverside Elementary School, Early Head Start, Angels Daycare, and Fox Adult Day Center.

3.6.1.4 Recreation

There are no recreation facilities within the Study Area. Approximately 0.7 miles to the east of the Study Area are Neahwa and Catella Parks which offer baseball, softball and soccer fields, tennis and volleyball courts as well as playground areas and a skate house. Wilber Park is located approximately 1.2 miles to the northeast, off Center Street, and offers tennis courts, a pool, a garden, basketball courts, a playground, picnic pavilions, practice fields and trails. The Oneonta Little League fields are located south of the Study Area, across the rail road at Riverside Avenue, approximately 0.5 miles. The Oneonta Susquehanna Greenway is a partially-finished bicycle and pedestrian trail running from the Silas Lane Loop in the West End of Oneonta to Neawha Park and New Island in the City of Oneonta. Deer Haven Campground and Cabins in located approximately 0.8 miles to the northwest of the Study Area and provides cabins and RV parking on 75 acres of land.

3.6.1.5 Police, Fire, Emergency and Health Care Services

The City of Oneonta police and fire departments are located at the Public Safety Building, 81 Main Street, providing services 24 hours a day, 7 days a week. The Oneonta Police Department is a New York State fully accredited police agency. The City of Oneonta Fire Department has 27 full-time members, supported by paid part-time/call staff. The department responds to fire emergencies in a 14-mile radius, including the City and Town of Oneonta. The fire department also responds to advanced life and basic life support medical emergencies, provides EMS transport services, and works with other volunteer and commercial medical crews from surrounding towns.

The primary healthcare facility for Oneonta, and the four surrounding counties, is the A.O. Fox Hospital on Main Street. Fox has 258 acute care beds and a nursing home, in addition to a staffed emergency department, surgical services, and maternity unit. The

Bassett Healthcare center, providing primary and secondary medical care to the region, is located on Main Street.

3.6.1.6 Telecommunications, Electric and Natural Gas

Cornerstone (Albany, NY – part of Magna5) and Spectrum (Rochester, NY- part of Charter communications) both provide phone, internet and TV to the Roundhouse Road area. Direct lines will have to be brought in to new buildings in the project area, and will be coordinated along with a final redevelopment plan or by the user after construction.

NYSEG currently supplies electricity and natural gas to the City of Oneonta. According to information from NYEG, the surrounding 4.8KV distribution in the vicinity of Roundhouse Road is served from Pierce Ave and Henry Street substations. The Pierce Avenue 4.8KV and 12.5KV substation transformers do not have the capacity to support the load projected in the preferred alternative of the Master Plan. The Henry Street substation transformer is currently at 4.8KV and is a dual voltage 4.8x12.5KV 14MVA bank that appears to have about 10MVA of excess capacity.

Natural gas is not currently supplied to Roundhouse Road.

3.6.1.7 Sanitation

Solid waste is collected, transported and delivered to the Ontario County Landfill which is operated by Casella Waste of New York. Collection of solid waste is through private hauling companies, City of Oneonta residents contract independently with local hauling contractors. All collected municipal solid waste is generally delivered to the Oneonta Transfer Station (Solid Waste and Recycling Drop-Off Center, Southern Transfer Station at 75 Silas Lane, adjacent to Exit 13 of Interstate 88, near the western edge of the city of Oneonta). Only City-licensed garbage haulers are permitted to collect garbage and solid waste within City limits. There are currently eight haulers listed as licensed on the City website. Contracting solid waste removal will be the responsibility of owners of new commercial or industrial facilities on the railyard. Recyclables at the Oneonta Transfer Station are packed for shipping and transported to a Materials Recovery Facility.

3.6.2 Potential Impacts

3.6.2.1 Water

Re-development of the Rail Yard will require water supply system extension into the buildings constructed. The current City of Oneonta water system appears to have enough capacity to accommodate re-development, however, this will be determined by the City based on end user demands.

3.6.2.2 Sewer

Re-development of the Rail Yard will require wastewater conveyance to the WWTP. The current City of Oneonta wastewater system appears to have enough capacity to accommodate re-development, however, this will be determined by the City based on end user demands. Sewer mains will need to be extended into the re-development area. Depending on what industry ultimately develops into the Study Area, a specific Industrial Discharger permit may be required from the City of Oneonta.

3.6.2.3 Schools

The impact to schools from large scale development projects is related to the relationship between the expected generation of tax revenue to the school district versus the number of students generated by the project. Since the Redevelopment of the Rail Yards aims to target local residents for employment there is no significant impact on the student population expected; however, tax revenues are anticipated to increase. Traffic in the areas of school buildings will not likely increase due to re-development.

3.6.2.4 Recreation

The project will have no impact on recreational services in the City Oneonta.

3.6.2.5 Police, Fire, Emergency and Health Care Services

The proposed re-development should have minimal impact on the Oneonta Police Department. Security at each facility will be the responsibility of the operator. Employers

will have health and safety protocols for employees and must comply with Occupational Safety and Health Administration (OSHA) regulations.

The re-development may increase demand upon the City of Oneonta Fire Department for fire repression and emergency services. Buildings will be designed and constructed with appropriate flame-retardant materials with an internal wet sprinkler system to handle initial outbreaks. Water pressure to the new facilities must be available to adequately run fire repression systems.

3.6.2.6 Telecommunications, Electric and Natural Gas

With respect to telecommunications, the development of the Rail Yards will have a positive impact upon telecommunications system providers. Providers will adequately supply each new customer with telephone, fiber or internet access. The addition of new customers will generate revenue for the providers and create lasting infrastructure for future upgrades to telecommunications systems.

Depending on the final redevelopment design plan, and what types of industry are housed there, the project may have high energy demands that may necessitate upgraded utility infrastructure. The project may require more than 7.7 MW (equivalent to 67,452 MWh/year). At over 900,000 square feet, the full build out could be expected to require approximately 40,000 MMBtu/year for heating and cooling, which may demand power system improvements, therefore, the capacity of supply must be explored. See Table 2.3.5a and Table 2.3.5b for load estimates.

3.6.2.7 Sanitation

The re-development commercial and industrial facilities will generate solid waste from office spaces, kitchens and industry specific operations. Individual entities operating on a re-developed Oneonta Rail Yards will be responsible for contracting for garbage removal from their facility in accordance with City regulations. Industrial operations may have specific needs for waste disposal outside of those materials accepted by the Ontario County landfill, which will be the responsibility of the operator.

3.6.3 Mitigation Measures

3.6.3.1 Water

Water will be provided by the City of Oneonta, application for the introduction of new water mains must be made to the City Board of Public Service. Specific determinations for water quantities, access and design of water distribution additions will be developed in consultation with the City of Oneonta. Water distribution and/or storage systems may require approval from the New York State Department of Health (NYSDOH).

3.6.3.2 Sewer

Specific determinations for wastewater treatment plant connections and any industrial user permits will be developed in consultation with the City of Oneonta, according to available capacity at the WWTP. Any construction of sanitary sewer collection and conveyance system requires approval from NYSDEC.

3.6.3.3 Schools

No mitigation efforts are needed to improve the conditions or the School District. The redevelopment of the Oneonta Rail Yard would have a negligible to very positive impact on schools due to tax revenue gained with a minimal increase in enrollment.

3.6.3.4 Recreation

There are no mitigation efforts needed to improve recreation areas or activities; however, there may be opportunities to connect redevelopment areas to adjacent residential areas through the creation of walking paths.

3.6.3.5 Police, Fire, Emergency and Health Care Services

Mitigations proposed to improve emergency services is to ensure appropriate design of any access roads in Railyard area and parking areas attached to each building for accommodation of emergency vehicles. Roads and access to buildings will also be designed to accommodate delivery trucks.

It is anticipated that all buildings on the site will be designed and constructed of flame-retardant materials with an internal wet or chemical sprinkler system to handle initial fire outbreaks as appropriate based on the end user. Installation of on-site dedicated water tank and fire pump station to provide adequate flow and pressures for a wet sprinkler system may be required. Fire hydrants will be placed to ensure easy access for connection to pumper trucks and optimal proximity to buildings, under consultation with the fire department. The fire department will need specific information about the facility structure, operations and materials handled or produced in order to ensure their staff can safely respond to a fire or emergency service request.

3.6.2.6 Telecommunications, Electric and Natural Gas

Direct impacts to telecommunication providers will be an increase in service demand, no mitigation requirements are expected.

To support the projected 7.7MW load, both the Henry Street 150 and 151 circuits will have to be converted to 12.5KV. As there is no final detailed load proposal or official service request at this time, NYSEG roughly estimates approximately 1.5 miles of 12.5KV three-phase distribution with 477AL will need to be extended from Henry Street substation to the Roundhouse Road area in addition to potentially 1.7 miles of additional 12.5KV conversion work on the main line 150 and 151 circuits.

Once detailed redevelopment information is available, detailed service requests will be submitted to NYSEG by the end users. At that time, engineering fees will be reconciled and NYSEG will provide more definitive details on upgrades, conversions, construction and costs to customers.

Geothermal and/or other energy alternatives should be considered for re-development of the Rail Yard in order to meet power needs and reduce electricity and natural gas costs. A detailed discussion of alternative energy options is included in Section 8.0 of this GEIS.

3.6.2.7 Sanitation

No mitigation is required. Each new commercial or industrial facility will be responsible for contracting for solid waste removal.

3.7 COMMUNITY CHARACTER

The City of Oneonta is situated in the foothills of the Catskills in Central New York, a community with a rich history and good quality of life. Oneonta is known to many as a quaint college town though in recent years it has become known for sports tourism and the arts as well. The City contains a well-preserved Main Street with historic buildings. Other assets include the natural surroundings, historic homes, a good park system and convenient access to Interstate 88 and transportation of goods by railroad.

During the final decades of the 20th Century, the economy of Upstate New York suffered from significant contraction in the manufacturing sector. Oneonta was impacted by this trend, resulting in the loss of many blue-collar jobs in the City and region. The City has a proud history of railroad operations, which began to decline in the decades following World War II amid changes in technology. Since that time, the local economy has transitioned to education, health care and tourism. Economic development is a major topic of concern as the population considers how to maintain good quality of life for future generations.

3.7.1 Existing Conditions

3.7.1.1 Demographics

According to American Community Survey (ACS) data, Oneonta, NY, had a population of 13,863 people in 2016. United States Census Bureau data show a population of 13,901 in 2010 and a population of 13,292 in 2000. Based upon historical population information, the City's population experienced a decrease from its peak population of

16,030 in 1970, while the County population has increased at a moderately slow rate. The sharp population decline between 1970-1980 appears to have followed a trend of migration from central cities to suburbs.

The City encompasses an area of 4.4 square miles, or 3,178.6 people per square mile. The median age was reported to be 21.8 years of age, very likely due to the two colleges within the City limits. Fifty-six percent of the population is female, 44% is male. There are 4,122 households, the average household occupancy is 2.3 persons. Forty-two percent of households are occupied by married couples and family, while an almost equal amount is occupied by non-family households. Eighty-six percent (86%) of the overall 4,789 housing units are occupied, and 53% are renter occupied. A majority of Oneonta's housing stock (65.5%) was built prior to 1939. A Housing Study is provided in Appendix H.

3.7.1.2 Economics and Employment

The median per capita income is \$17,974, or about half of the New York State per capita income. The median household income is \$41,473 or about two-thirds of that of New York State. Twenty-nine percent (29%) of persons are below the poverty line, nearly double the rate of that of New York State.

The two colleges (SUNY Oneonta and Hartwick College) and the hospital (A.O. Fox Hospital) are the main industries in the City, employing approximately 41% of residents. Arts, entertainment, recreation, accommodations, and food services as well as retail trade are other top industries employing a majority of residents (16% combined). Manufacturing employs approximately 5% of the population.

In many communities the key to economic stability or growth is in optimizing the tax base by making every acre of land as productive as it can be within the community's plan, without compromising community vitality or natural resources. Understanding existing land patterns, property ownership, number of parcels, amount of land and

configuration of redevelopment areas are key to understanding future development potential and enhancement strategies. The former Roundhouse site is by far the largest infill re-development area within the City of Oneonta. While a few industrial and commercial businesses have continued to operate in and around the site, the site's potential for re-development and contribution to the local economy is far greater than is being utilized. A Parking Study is provided in Appendix G.

3.7.1.3 Aesthetics and Noise

Landscape character is largely determined by the topography, land use, vegetation and water features that contribute to area views.

Southern parts of Otsego County are at the northern edge of the Alleghany Plateau (a physiographic section of the larger Appalachian Plateau, or Upland, province). This portion of the Plateau in central New York State was subject to glaciation and therefore has lower relief and gentler slopes than the more rugged unglaciated areas of the Plateau further to the south. The landscape consists of ridges varying from 1,000 to 2,000 feet above sea level divided by large streams or rivers. The rolling terrain has few steep slopes, however, some areas east and south of the City have slopes upward of 45 percent.

The northern border of the Study Area, south of Chestnut Street, has a steep 20 to 40 ft slope to the lower, mostly flat area at Roundhouse Road. Visually, views from the residential area north of the site are screened by trees within that slope and the properties tend to look across the valley, above the trees. Photograph 3 shows the view across the valley from businesses on Chestnut Street. Photograph 4 shows the view from the Study Area to the hill slope between the Study Area and Chestnut Street. From the south, the view to the Study Area is also screened by trees along the edges of that moderate- and high-density residential district. The Norfolk Southern Railway active rail lines lie between the Study Area and the residential area to the south. Photograph 5 shows the view of the Study Area from the south side of the active rail line.



Photograph 3: View from North; View from parking lot at Walgreens on Chestnut Street, looking south across valley (east end of project property) and over the trees on the Rail Yard.



Photograph 4: View from Study Area (north of the former City Impound area), looking north up the hillslope to the American Legion Building on Chestnut Street.



Photograph 5: View from South; View from north side of Corning, Inc. (west end of River Street) looking northeast across active rail lines to the Oneonta Rail Yard Project site (rail yard stack visible in center of photo). Tree line at right of photo continues east as buffer between active rail lines and residential properties south of rail line.

A formal noise study has not been prepared for the project area. A review of existing environmental conditions and land use patterns shows that the main source of noise surrounding the study area is the steady background of traffic noise and the occasional train.

Within the railyard area there are currently several commercial/industrial facilities that produce noise during operating hours.

Cobleskill Stone Products is an industrial operation on the west side of the Project area, on Ceperley Avenue. The company, headquartered in Cobleskill, NY, produces limestone and high friction aggregate, sand and gravel products, and asphalt and provides construction services such as highway construction and paving and site preparation for industrial, commercial and residential projects. Currently operations at the facility on Ceperley Avenue can be heard across the Study Area, while the dust produced during some operations falls on the western side of the Study Area, north of Roundhouse Road.

Lutz's Feed Co., located on Lower River Street at the west end of Roundhouse Road, is a manufacturer of feed, primarily for the dairy industry but also for chickens, pigs and horses. This facility produces some background noise and also a slight odor of meal.

The Roundhouse has not been in use for decades, and there has been a general deterioration of the site over the years. There are currently remnant concrete structures, piles of fill material, trash and construction/demolition debris on the site. Photographs 6 and 7 show the remnants of the Roundhouse and the smoke stack, and the Coaling Tower, respectively.



Photograph 6: Rail Yard Debris; A concrete floor and piles of broken concrete several inches thick remain at the site of the former Roundhouse, as well as some of the foundation. The smoke stack, approximately 160 feet tall, is visible at the rear of the photo.



Photograph 7: Rail Yard Concrete Structure; An 80-ft structure formerly utilized to load coal and sand into rail cars (coaling tower).

3.7.1.4 Historical and Archaeological Resources

The Oneonta Rail Yards and the former Roundhouse has cultural and historical significance in the City and in the region. The first excursion train from Albany arrived in Oneonta on the Albany and Susquehanna Railroad in 1865. The Oneonta Roundhouse was built in 1906. It was over 400 feet in diameter with a 75-foot turntable for housing 52

steam locomotives. Early in its history it was said to be the largest roundhouse in the world. The economy of Oneonta greatly benefitted from the activity at this facility, and in 1924 a new 105-foot turntable was installed to accommodate the newer longer locomotives. Activity here began to diminish as the use of steam power was used less in favor of diesel power. The Roundhouse had been partially demolished in 1954, 36 stalls were removed and the remaining stalls were rented out for storage. By 1993 the rest of the Roundhouse was gone, but portions of the foundation can still be seen.

The Study Area is mapped by the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPHRP) as being located within an Archaeologically Sensitive Area. The former Roundhouse area is currently no longer in use as a railyard though the footprint of the roundhouse itself is visible on aerial photos. Active rail lines remain to the south of the site, with a maintenance yard to the east. There are eight commercial properties in operation south of Roundhouse Road today.

In the process of this GEIS, a review of the Study Area was requested from the OPRHP in accordance with the New York State Preservation Act of 1980. Documentation from the Project site, including soils maps, previously completed soil borings and historical Sanborn Fire Insurance maps were provided to the OPRHP through their website, Cultural Resource Information System (CRIS). The OPRHP ultimately determined that due to amount of disturbed soils, fill soils and hydric soils there is little potential for intact archaeological sites on the Project site, and that no properties including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic places would be impacted by a redevelopment project on the Study Area. A copy of the determination letter is included in Appendix D.

3.7.2 Potential Impacts

3.7.2.1 Demographics

There will be negligible to no impacts upon the demographics of the area from the proposed project as the majority of employees are expected to come from the surrounding area.

3.7.2.2 Economics and Employment

A site-specific economic analysis on potential impacts to property tax revenue was not completed for the purpose of this DGEIS. However, a positive impact is expected as a re-developed commercial/industrial property would generate more in taxes than the current largely vacant status. The re-development of the property can be expected to generate additional tax revenues in the form of employment taxes, corporate taxes and sales tax on supplies and materials necessary to operate and maintain any future development.

Additionally, the preferred land use will generate employment, which will have a secondary effect on the local and regional economy. The secondary multiplier effect is achieved through the employees of the facility using their wages in the local economy to purchase goods and services.

The re-development is not expected to place any direct demand on the local school district and the indirect demand for services from employees of the facility is considered to be small as the new jobs generated as a result of the project are expected to be targeted to available workers in the local and regional employment pool.

3.7.2.3 Aesthetics and Noise

Potential impacts to the ambient noise levels include noise generated during construction and noise generated during the operations of a commercial/industrial re-development.

Noise will be generated during construction above current levels. The sounds of vehicles, heavy equipment, earth moving, building construction and people are expected. However, due to soil conditions, blasting, the ripping of rock and similar very loud activities are not expected.

Noise levels from operations on the project site may increase depending on what type of commercial or industrial activities are involved in the re-development. The preferred Master Plan includes the development of several industrial facilities, and a warehouse with railroad siding. Active rail lines to the immediate south of Roundhouse Road are owned by Norfolk Southern Railway. Train traffic from the Norfolk Southern line to any

rail spur to access new development on the Study Area could increase the frequency of trains accessing and breaking in the area. Future operations will include loading and unloading by train as well as by truck. A change in noise level will accompany change in road and rail traffic.

Receptors to the increase in noise include a number of residential parcels that border the site. The site is relatively isolated by topography to the north, and an existing rail line to the south, landscaping and preservation of wetlands and trees are anticipated to buffer the noise generated on the site during operations.

3.7.2.4 Historical and Archaeological Resources

After review of the Study Area the OPHRP determined that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

Redevelopment of the project site would remove debris piles that remain from the past demolition of rail yard structures and also newer accumulations of tires and trash in vacant areas. The highly visible smoke stack and coaling tower still exist, but would be removed. The site would no longer have physical/visual remains of its history as the largest roundhouse in the country.

3.7.3 Mitigation Measures

3.7.3.1 Demographics

There are no mitigation efforts needed due to there being no negative impacts on populations or housing. The Housing Study provided in Appendix H provides recommendations regarding housing stock to support existing and new residents within the City.

3.7.3.2 Economy and Employment

There are no mitigation efforts needed due to there being no negative impacts on economics and employment. The Parking Study provided in Appendix G provides recommendations regarding parking to facilitate economic development in the City.

3.7.3.3 Aesthetics and Noise

Views of the site itself, from the top of the slope on Chestnut Street or from south of the site on Broadway, are currently screened by trees outside of the area to be re-developed. The hillslope on the north of the Study Area is too steep for development as well. These vegetated buffer areas will be maintained and, together with vegetated buffers included on the re-development site as required by local zoning, will soften views and noise of a re-developed commercial/ industrial area.

Visually redevelopment would improve views of the former rail yard by removing debris piles and providing for maintained vegetated buffers and landscaping. Additionally, Roundhouse Road itself would be improved to a paved road.

3.7.3.4 Historical and Archaeological Resources

There are no mitigation efforts needed due to there being no negative impacts on cultural/historical resources. However, since the Oneonta Rail Yard and Roundhouse are a large part of the area's history, an informational kiosk or commemorative display within the Rail Yard re-development would be a community benefit.

4.0 CUMULATIVE IMPACT ANALYSIS

The cumulative impact of the proposed Master Plan and other proposed projects that existed at the time of receipt of the initial EAF will be discussed.

4.1 BACKGROUND GROWTH AND DEVELOPMENT TRENDS

The 2007 Comprehensive Plan of the City of Oneonta provides “an overall framework for future public and private investment and decision making in the community” (work began on a new Comprehensive Plan in 2017).

The 2007 Comprehensive Plan includes a Policy Area entitled Economic Health and Revitalization stated as; “It is the policy of Oneonta to support existing businesses and encourage the attraction of additional businesses that meet the needs of residents and visitors. The economic vitality of the community depends on having locally supported businesses that offer the goods and services community members need and want. Future commercial and residential development must respect the scale and character of this traditional small city”.

Under this Policy Area is an Action Item listed as “Encourage infill development, or redevelopment of vacant or dilapidated properties, in commercial and industrial areas”.

Land Use Design Guidelines within the 2007 Comprehensive Plan encourage environmentally-conscious, or “green”, design for new commercial and industrial development as these uses tend to consume large quantities of energy, especially for heating and cooling. Renewable energy sources utilized in the redevelopment will mitigate the demand for energy on the existing available network, and allow substantial long-term cost savings.

North American Industry Classification System (NAICS) data from 2017 show percentages of people employed in standard sectors in the Oneonta micropolitan area and the State of New York. Local Quotient numbers for Oneonta as compared to New York State reveal those sectors in which Oneonta has high, moderate and low participation. This data is shown in Table 4.1.

The Oneonta area has a high percentage of its working population employed in the Education (14.9%), Health Care and Social Assistance (25.4%), and Accommodation and Food Services (13.2%) sectors. The Location Quotient for these sectors is High, showing that the employment in these sectors in Oneonta is higher than the employment in these sectors in the State of New York. There is also comparatively high employment in the

Agriculture, Forestry, Fishing and Hunting; Mining, Quarrying, and Oil and Gas Extraction; and Arts, Entertainment, and Recreation sectors as compared to New York State, though overall employment in the Agricultural and Mining sectors is less than 1% each.

Other sectors show comparatively moderate or low participation in Oneonta as compared to New York State. For instance, the Manufacturing sector makes up 4.6% of the jobs in Oneonta, which is a comparatively moderate participation, while the Wholesale Trade (1.4%) and Transportation and Warehousing (0.95%) sectors show comparatively low participation.

The re-development Master Plan for the Rail Yards fills a need for jobs in sectors for which the Oneonta area is low participation (meaning not as many of those jobs available currently as in the State overall) and is compatible with local plans for revitalization of the economy and quality of life.

Table 4.1 Industry Employment Data for Oneonta and New York State

NAICS Industry 2017	%Employment Oneonta	%Employment New York State	Location Quotient (NY base)
Agriculture, Forestry, Fishing and Hunting Mining, Quarrying, and Oil and Gas Extraction	0.69	0.29	2.36
Utilities	0.18	0.05	3.85
Construction	0.53	0.47	1.14
Manufacturing	2.07	4.20	0.49
Wholesale Trade	4.57	4.88	0.94
Retail Trade	1.40	3.70	0.38
Transportation and Warehousing Information	11.71	10.02	1.17
Finance and Insurance	0.95	3.53	0.27
Real Estate and Rental and Leasing	0.72	3.12	0.23
Professional, Scientific, and Technical Services	3.88	5.68	0.68
Management of Companies and Enterprises	1.23	2.30	0.53
Administrative and Support and Waste Management and Remediation Services	2.26	7.34	0.31
Educational Services	0.43	1.66	0.26
Health Care and Social Assistance	1.27	5.62	0.23
Arts, Entertainment, and Recreation	14.82	10.03	1.48
Accommodation and Food Services	25.37	17.60	1.44
Other Services (except Public Administration)	6.16	2.05	3.01
Public Administration	13.18	8.31	1.59
	2.54	4.04	0.63
	6.03	5.10	1.18

4.2 CUMULATIVE IMPACT WITH OTHER PROPOSED ACTIONS

The City of Oneonta is currently working to make improvements for downtown businesses and buildings with funds through the New York State Downtown Revitalization Initiative (DRI). The goal is to provide support for small businesses and improve housing alternatives within downtown Oneonta. Vacant or underutilized upper story spaces will be converted into new residential units. Funding assistance is available for signage, building improvement projects and “Transformative” projects selected through the program. These projects include;

- Construction of a new transit hub and welcome center on Market Street and make improvements to the existing parking garage.
- Development of the Westcott Lot with retail and residential uses through DRI funds and private investment. The site design includes a small public plaza on Main Street and a linear public pedestrian passageway that connects Main Street to South Main Street.
- Street renovations to increase pedestrian activity, including landscaping and outdoor seating, planting of street trees, and improvement to turning lanes and access to the new transit hub and renovated parking garage.
- Funding for the Branding, Marketing and Downtown Wayfinding Program.

The Downtown Revitalization Initiative (DRI) Strategic Investment Plan for the City of Oneonta 2017 considers redevelopment of the Oneonta Rail Yard. The Plan recognizes that while it is not located in the DRI boundary, the vacant rail yard site is well connected to rail and highway and could support new light industry. The concept of developing an industrial park at the Rail Yard is supported by regional strength in light industrial uses and the site’s proximity to highway, rail, and to downtown. The Rail Yard’s location adjacent to downtown could attract future employers.

4.3 SUMMARY

The redevelopment of the Oneonta Rail Yards is responsive to the background growth and development trends of the City of Oneonta and Otsego County. Specifically, the redevelopment will take advantage of a large currently vacant property with both rail and highway access to support the local economy with industry, warehousing and transport of goods to other regional markets.

The City of Oneonta has several Downtown Revitalization Initiative projects in the planning stages. There are currently no other large-scale projects proposed for the area.

5.0 ALTERNATIVES

In this section, alternative Master Plans evaluated for the Study Area are presented. The Oneonta Rail Yard is the largest infill re-development property currently available in the City of Oneonta. Redevelopment of the Rail Yard will provide an opportunity to create a new industrial/commercial business park that would provide additional markets for Otsego County, create new jobs, and add to the local tax base. The merits and drawbacks of the various alternatives are discussed. A No-Action alternative and alternative sites that accommodate the preferred Master Plan will also be described.

5.1 ALTERNATIVE MASTER PLANS

This section presents alternative development concept plans considered. The major advantage of this site is its proximity to the active rail line and Interstate 88 for product transportation. All alternatives considered included the expected end uses of warehousing, controlled temperature storage, distribution, import/export, and brewing/bottling/canning/packaging industries. Several alternatives were not followed further due to the extent of their potential extensive environmental impact, poor cost to benefit ratios for mitigation and/or construction, and/or difficulties in traffic routing.

The purpose of the proposed Master Plan (Option 3) in the GEIS is to demonstrate impacts, benefits and potential mitigation at full build out. Redevelopment of the Rail Yards is also possible at less than full build out, and an example of this is discussed in the alternatives in this section.

While this DGEIS will satisfy SEQRA requirements for future end users who are attracted to develop the site, each project will still be required to undergo Site Plan Review and approval at the local level as well as secure a range of permits from state and federal agencies. These future actions will require additional public hearings to address specific community concerns.

5.1.1 Option 1a

Option 1A is the development of a mixed industrial/commercial business park with a total of 1,237,375 sq. ft. building footprint, as shown in Figure 5.1.1. This alternative included ten new buildings, some located on the COIDA property, but also on other properties, meaning that full re-development in this configuration would be phased according to property acquisition (where possible), or the interest of the current owner of the other parcels.

The ten buildings range in size from one of 30,000 sq.ft., two of 52,500 sq.ft., five of 103,125sq.ft. and one of 533,750 sq.ft. A significant feature of this alternative layout is the potential for rail access at two buildings, as well as workforce housing on-site.

5.1.2 Option 1b

Option 1b is the development of a mixed industrial/commercial business park with a total of 1,379,250 sq. ft. building footprint, as shown in Figure 5.1.2. There would be eight new buildings, located on the IDA property, but also on other properties, meaning that re-development in this configuration would be phased according to property acquisition (where possible), or the interest of the current owners of the other parcels.

The buildings range in size from one of 30,000 sq. ft, three of 52,500 sq.ft., two of 103,125sq.ft., one of 471,250 sq.ft. and one of 618,750 sq.ft. to allow different end uses.

Roundhouse Road would be completely reconfigured toward the south and a loop road added to the north. Significant feature of this alternative layout is the potential for rail access at three buildings, including the two largest, as well as workforce housing on-site.

This Alternative also considers a bridge from River street from the south to the center of the Rail Yard Study Area. An adjoining road inside a loop road would receive this traffic. The bridge would have to be high enough for trains to pass beneath on the active Norfolk Southern freight rail lines. The bridge would be accessed from I-88 at Exit 13 and the River Street Service Road, which would impact already congested intersections. A bridge will require both federal and state permitting, and construction expenses would be high. Over 24 acres of wetland would be built upon or disturbed to accommodate changes in the configuration of Roundhouse Road, a new road loop and buildings.

5.1.3 Option 2

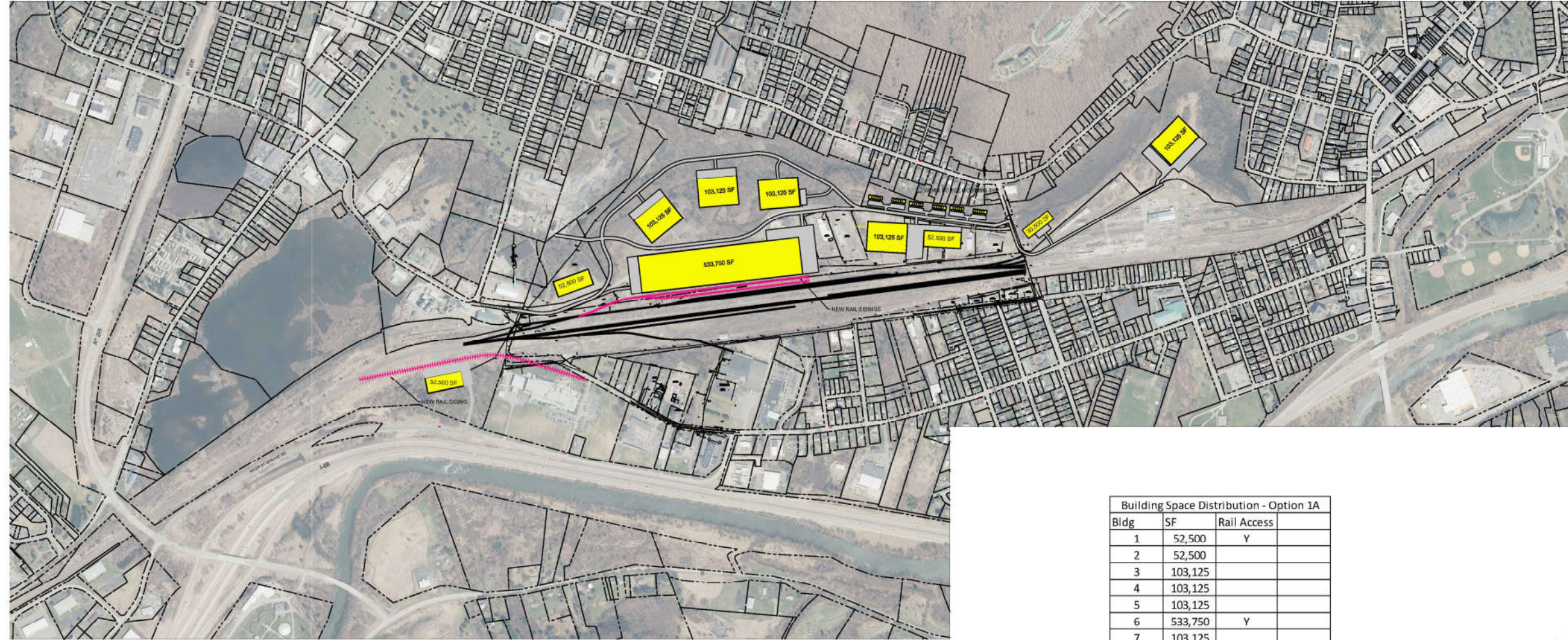
Option 2 is the development of a mixed industrial/commercial business park with a total of 1,184,875 sq.ft. building footprint, as shown in Figure 5.1.3. There would be nine new buildings, some located on the COIDA property, but also on other properties, meaning that re-development in this configuration would have to be phased, depending on property acquisition (if possible), or interest of the current owners of the other parcels.

The nine buildings range in size from one of 30,000 sq.ft., two of 52,500 sq.ft., five of 103,125sq.ft. and one of 533,750 sq.ft. to allow different end uses. Significant feature of this alternative layout is the potential for rail access at two buildings.

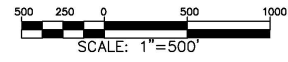
5.1.4 Option 4

Option 4 is the development of a mixed industrial/commercial business park with a total of 615,650 sq. ft. building footprint, as shown in Figure 5.1.4. There would be five new buildings located on the COIDA property, ranging in size from 26,000 sq.ft. to 358,750 sq.ft. A significant feature of this alternative layout is the potential for rail access at two buildings.

This option features buildings and parking areas placed to avoid impact to the stream and wetlands to the greatest extent possible, utilizing those areas of the property that have been developed in the past. This layout is only one example of many potential layouts with a footprint smaller than full-buildout Option 3.



Bldg	SF	Rail Access
1	52,500	Y
2	52,500	
3	103,125	
4	103,125	
5	103,125	
6	533,750	Y
7	103,125	
8	52,500	
9	30,500	
10	103,125	
Total	1,237,375	



CONCEPTUAL

**ONEONTA RAIL YARD
REDEVELOPMENT
OTSEGO COUNTY IDA
ONEONTA, NY**

**ONEONTA RAIL YARD
OPTION 1A**

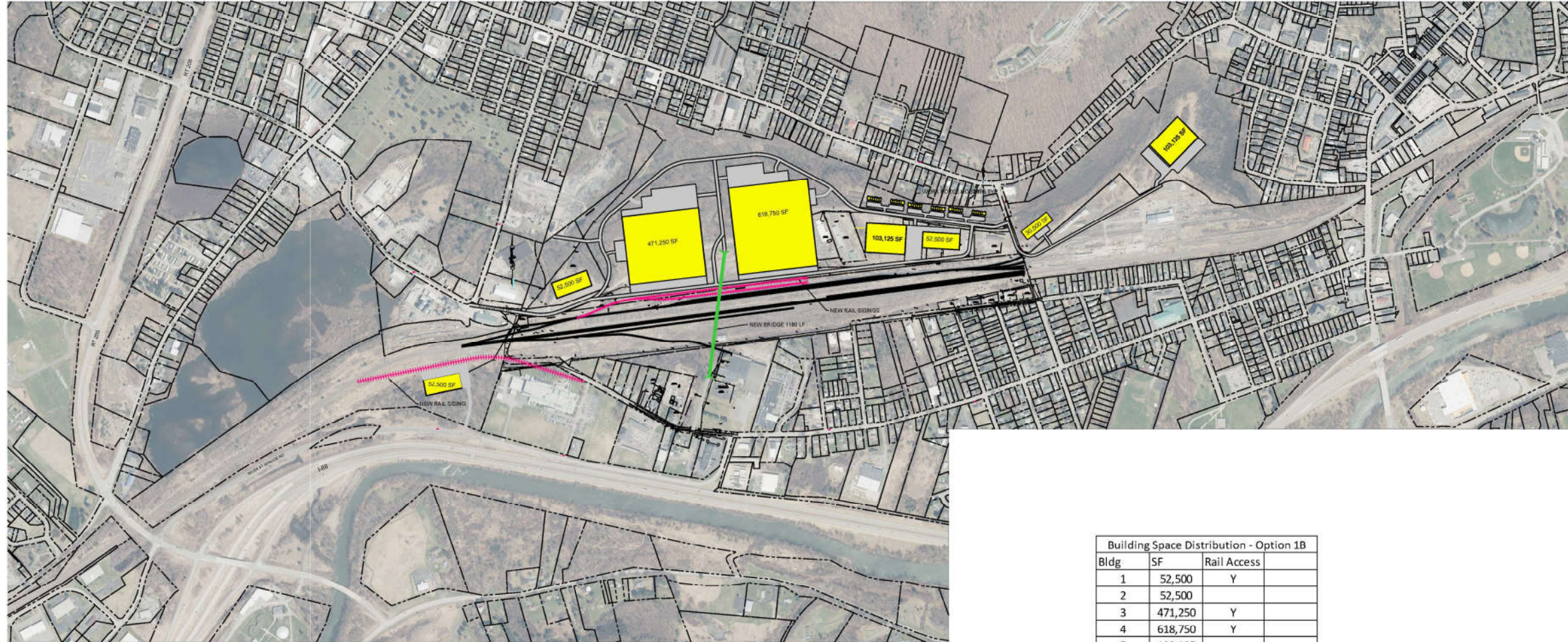
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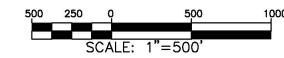
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Building Space Distribution - Option 1B		
Bldg	SF	Rail Access
1	52,500	Y
2	52,500	
3	471,250	Y
4	618,750	Y
5	103,125	
6	52,500	
7	30,500	
8	103,125	
Bridge 1180 LF		
Total	1,379,250	



CONCEPTUAL

ONEONTA RAILYARD
REDEVELOPMENT
OTSEGO COUNTY IDA
ONEONTA, NY

ONEONTA RAILYARD
OPTION 1B

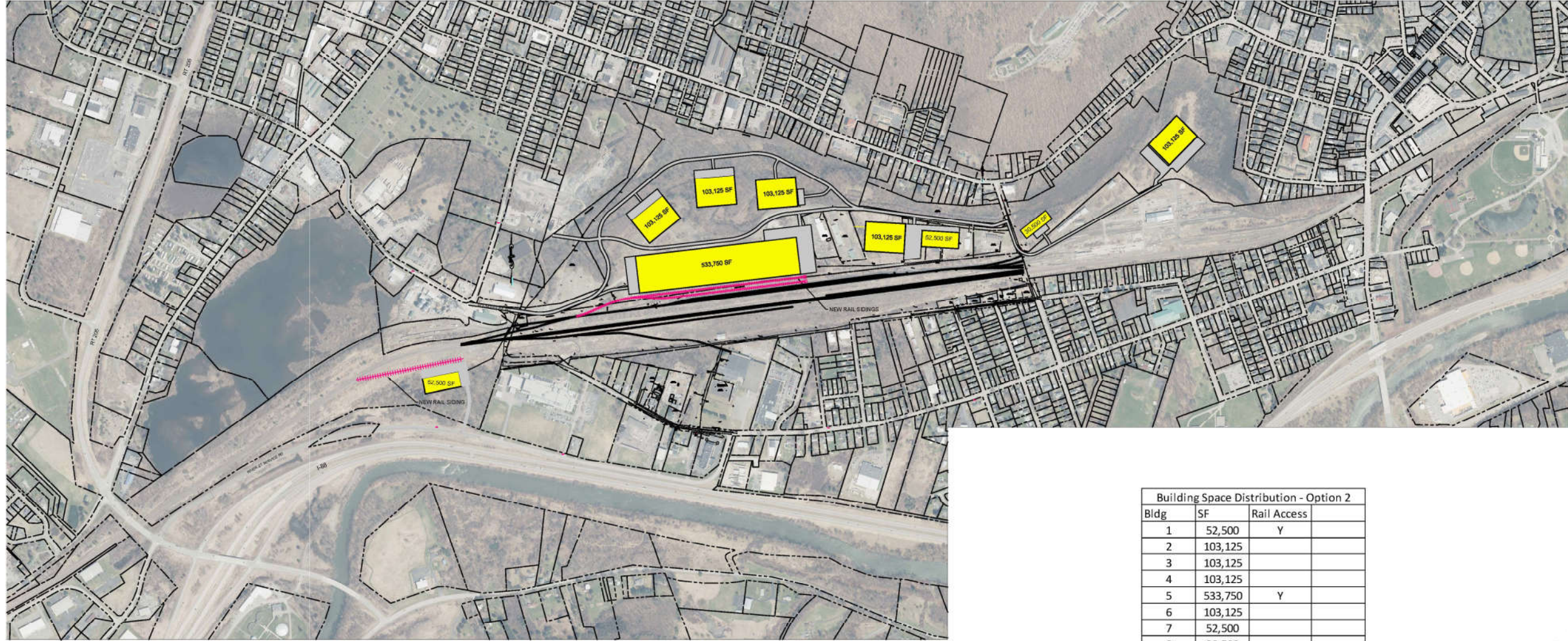
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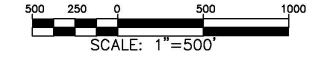
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Bldg	SF	Rail Access
1	52,500	Y
2	103,125	
3	103,125	
4	103,125	
5	533,750	Y
6	103,125	
7	52,500	
8	30,500	
9	103,125	
Total	1,184,875	



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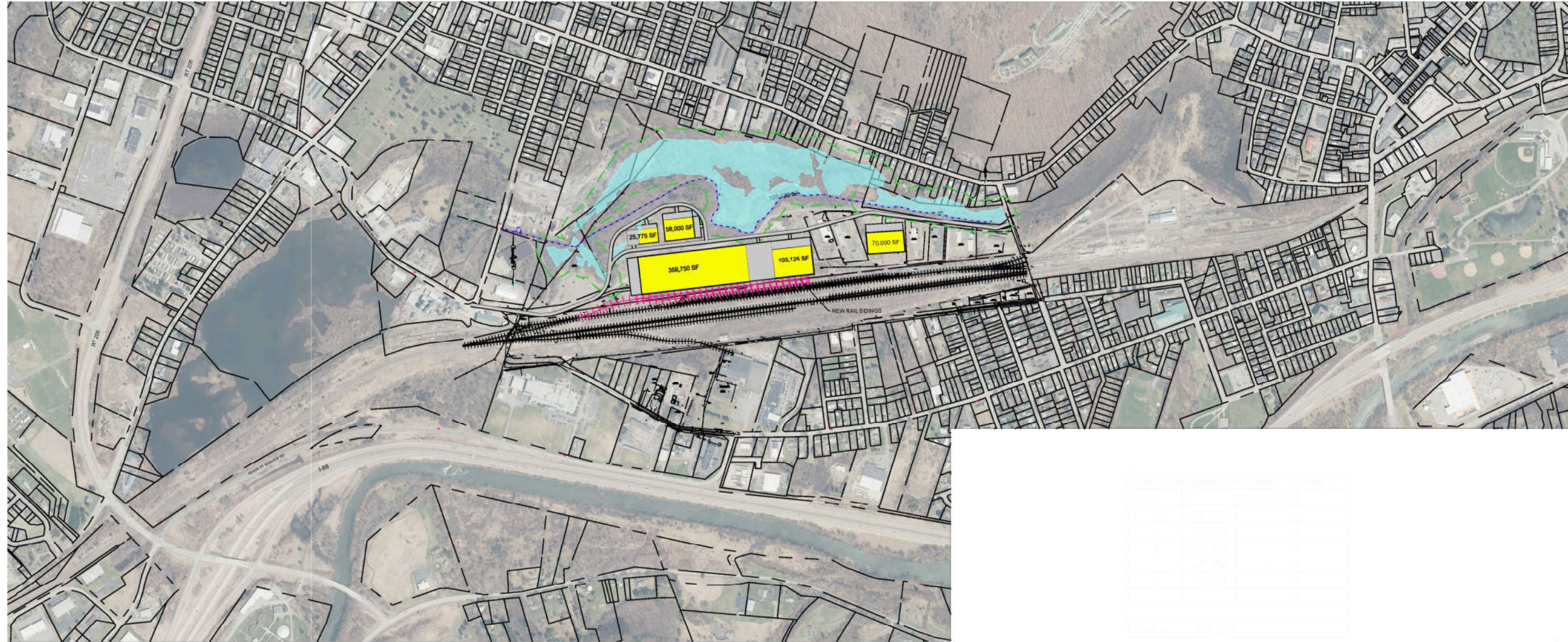
ONEONTA RAILYARD
 REDEVELOPMENT
 OTSEGO COUNTY IDA
 ONEONTA, NY

ONEONTA RAILYARD
 OPTION 2

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FIG 5.1.3

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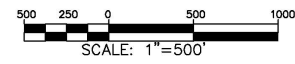
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ONEONTA RAILYARD
 REDEVELOPMENT
 OTSEGO COUNTY IDA
 ONEONTA, NY

ONEONTA RAILYARD
 OPTION 4

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FIG 5.1.4

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5.2 ALTERNATIVE ACCESS TO REDEVELOPMENT AREA ANALYSIS

The ultimate goal of the Oneonta Rail Yard project is to re-develop a currently vacant industrial parcel in the City of Oneonta in order to create jobs, provide a location for the production of goods from local products, and allow for the warehousing and distribution of local products through rail and highway. Access for re-development would be through Roundhouse Road and Lower River Road as discussed in the Traffic Impact and Access Study (Appendix F). The TIAS quantifies existing and projected traffic conditions with the redevelopment of the Oneonta Rail Yard under the preferred Master Plan (Option 3). The TIAS does not identify any potentially significant adverse impacts associated with the proposed redevelopment.

Given the location of the Railyards site relative to the existing local street network, there are no new alternatives for access to the site except the potential of a bridge over the rail line. The alternative master plans evaluated include more and larger buildings, some of which include residential buildings, and one of which includes a bridge from River Street to Roundhouse Road. These more intense alternatives to the chosen Master Plan would produce more vehicle trips per day to and from the site. The increase in vehicular traffic, both passenger vehicle and truck, were not favored due to the potential impact on the local roadways.

5.3 ALTERNATIVE INFRASTRUCTURE TO SUPPORT THE PROJECT

Water, sewer, telecommunications, and power infrastructure service for the Preferred Alternative is discussed in Section 2.3. Water supply for redevelopment will be from the City of Oneonta through extension of existing water lines. Installation of a water tank for flow and pressure to supply fire suppression sprinklers (if needed), and hydrants for fire suppression will be required. Wastewater would be collected and conveyed to the existing City of Oneonta wastewater treatment plant. Telecommunications would be extended from existing services in Oneonta.

Power would be extended into the site and the specific need for natural gas connection would be developed once there is a chosen redevelopment plan. Potential for alternative heating and cooling on-site is discussed in Section 9.

The difference between alternatives is in the overall demand for services. Alternatives including housing for employees would require more water, power and community services. A larger building foot print leaves less space for alternative heating technology such as geothermal or biomass. Any redevelopment alternative could take advantage of renewable energy sources such as geothermal or solar.

Alternatives including a bridge would require more mitigation for road access, would create a larger footprint, require additional permits, potentially require land easements, and require a much larger investment of funds.

5.4 ALTERNATIVE SITES

No other alternative sites for this project were identified. The Study Area was selected for potential redevelopment of the commercial/industrial type proposed due to the community's need for a facility of this type and its access to rail lines and highway, as well as the existing Zoning. No other vacant infill sites of similar size or access to transportation by rail and highway exist in the City of Oneonta, or Otsego County.

5.5 NO-ACTION ALTERNATIVE

Under the No-Action Alternative the Study Area would remain undeveloped in its currently vacant state. The majority of the former Roundhouse Rail Yard is currently not used for any purpose, and thus is classified as Vacant Land from a real property perspective. The Study Area currently contains former roundhouse rail yard parcels, upon some of which have been built small commercial enterprises. There are large piles of concrete remnants of the roundhouse, power plant, coaling tower and bridge abutments remaining on the former railyard, with miscellaneous associated debris (and debris accumulated post-roundhouse).

Any type of future uncoordinated development on the former railyard by smaller individual IDA efforts will also have to remove such debris prior to construction.

6.0 UNAVOIDABLE ADVERSE IMPACTS

This section summarizes any unavoidable adverse impacts as a result of the project. Impacts that cannot be mitigated will be defined and quantified, and reasons given as to why they cannot be mitigated.

The analysis conducted in preparing the GEIS indicates that the Railyards Site has the potential to be redeveloped without substantial unavoidable adverse impacts for which mitigation measures are not available. For the impacts identified, none of which rise to the level of an unavoidable adverse impact for which there is no mitigation, mitigation measures can be implemented to reduce the importance, magnitude and significance of the those impacts.

The most substantive impacts identified at any scale of redevelopment are those to the on-site wetlands. Redevelopment of the site must balance the need for return on investment in terms of the scale of construction with the impacts to wetlands that may accompany site improvements. The Preferred Master Plan is informed by this needed balance.

Redevelopment on the Oneonta Rail Yards to a lesser extent than the Preferred Master Plan at full buildout is presented as Option 4 in Section 5.0. This less intense redevelopment plan is feasible as far as it is possible to design such development and avoid impact to the wetlands and stream; however, the economic viability relative to market demands is not known. There are approximately 31 acres within the COIDA parcel not delineated as wetland or wetland adjacent area. These are portions that were utilized for the activities related to the rail yard, including the cinder area and the borrow area. The area adjacent to the rail line would be developable without impact to wetlands. A smaller footprint of similar commercial/industrial facilities would require less energy for both operations and heating and cooling. Alternative energy sources can relieve reliance on electric and natural gas. Figure 5.1.4 shows potential layout of smaller buildout.

At full buildout, the preferred Master Plan proposes a 913,125 sq. ft. (21 acres) building foot print including five buildings of differing uses and sizes. Other features include a loop road, and re-alignment of Roundhouse Road which will also impact wetlands and the stream. Approximately five acres of the existing approximately 27 acres of jurisdictional wetland would be filled in or otherwise built upon resulting in loss of wetland acreage and function (approximately 8.1 acres including the NYS DEC adjacent areas). This means that those acres of wetland impact and beneficial function loss would need to be mitigated. The wetlands are Class 1 wetlands, important for flood control as well as other habitat benefits. Mitigation on-site is the most likely mitigation to be acceptable. As the current condition of the wetlands is disturbed due to past land use practices and invasive plant species, restoration of the remaining wetlands on-site may be acceptable. If 5.0 acres are permanently impacted that leaves 22 acres, not disturbed under redevelopment, to be restored. At a one-to-one acreage, this amount of on-site wetland restoration may or may not be possible depending upon a final re-development proposal. There are other wetlands along this same tributary to the Susquehanna River, on other parcels both in the City and the Town of Oneonta, that may also have been impacted by past or current land uses. Wetland restoration along this waterway may allow replacement of wetland function lost due to redevelopment on the Rail Yard that would be acceptable according to requirements of the Freshwater Wetland Act; however, investigation of those wetlands on other parcels and landowner interest would be required to advance such a proposal.

Where necessary or feasible, issues have been identified that may require site specific mitigation once detailed plans for a specific redevelopment plan are identified. Additional redevelopment mitigation plans incorporating details as well as requirements and restrictions for wetland impacts, stormwater and traffic improvements will be incorporated where necessary during the permitting process.

7.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed redevelopment of the Railyard will involve the irreversible and irretrievable commitment of resources. These involve the commitments made during construction as well as operations of the proposed redevelopment.

During construction, water resources and raw materials such as concrete, wood, gravel and other construction supplies will be permanently committed. In addition, energy resources required to operate construction equipment will be irretrievably committed.

The use of land for this project is an irreversible commitment. With approved site plans and redevelopment, the Railyard cannot be used for any other purpose and is committed. Approximately 21 acres of wooded, grassed and wetland land will be developed. Previous development as a rail yard left irretrievable impact to the original land, redevelopment would bring the land back to commercial/industrial use.

During the operational phase of the redevelopment, resources such as energy for building heating and cooling, lighting and other equipment operations will be permanently and irretrievably committed. However, a key objective is to encourage and accommodate efficient utilization of energy resources within the redevelopment. Exploration and encouragement of green building and alternative energy sources to reduce the irreversible and irretrievable commitment of energy resources during the operational phase, while also reducing operating costs.

8.0 GROWTH INDUCING ASPECTS

Redevelopment will provide new sources of revenue to state and local governments which will minimize expense incurred by local government in cost of services to support the redevelopment. Local property taxes can be used to support the on-going needs of the community.

Despite the access to rail, interstate highways and available land adjacent to transportation infrastructure, the City's share of employment in transportation and warehousing is low. State-of-the-art industrial space with access to the rail and highway network would help to strengthen this existing weakness in the economy. The concept of developing an industrial park at the former Oneonta Rail Yard is supported by regional strength in light industrial uses and the site's proximity to highway, rail, and to downtown.

9.0 EFFECTS ON USE AND CONSERVATION OF ENERGY

This section of the DGEIS discusses the effects that the proposed project would have on energy consumption, including the benefits that can occur as a result of project measures that are proposed to conserve energy.

The proposed re-development will involve the use of energy. The consumption of fuel, either fossil fuel or other sources, will be required during both the construction and operational phases. Construction activities will involve the consumption of fossil fuels to operate construction equipment and to transport construction workers and materials to the Site. This activity causes a temporary and unavoidable increase in energy use. Examples of activities involving the use of energy during construction are clearing, grubbing, excavation, grading and building and road construction. Electricity and fossil fuel powered pumps will be needed to provide water with some construction phases for ground compaction during road construction as well as construction vehicle washing areas.

Employees of the constructed facilities, as well as clients and delivery trucks, will utilize energy in the form of fossil fuels for transportation to and from the Site. Constructed facilities will require energy for operations, lighting and environmental controls. The development will require energy for outdoor lighting for parking areas and roads. Outdoor lighting can be timed or photocell dimmed to regulate the use of energy to only when necessary.

If redevelopment of the site occurs at a scale approaching that depicted in the preferred Master Plan, electric power currently available on the Project site is unlikely to meet power needs, including manufacturing processes and heating and cooling. The Site is currently not supplied with natural gas.

There are several renewable and clean energy alternatives available for energy supply in re-development at the Site. Decisions on any energy supply plan will begin with the redevelopment conforming to electrical codes requiring energy efficient structures, and fixtures to lower the energy requirement overall. The cost efficiency of any heating/cooling power source depends on the energy efficiency of the property.

Future proposals for power supply to the Redevelopment site will be addressed at the time there is a redevelopment proposal. Options for consideration include the following;

Electric

According to information from NYSEG, the surrounding 4.8KV distribution in the vicinity of Roundhouse Road is served from the Pierce Avenue and Henry Street substations. The Pierce Avenue transformers do not have the capacity to support the load projected for the Master Plan. The Henry Street substation transformer is currently at 4.8KV and is a dual voltage 4.8x12.5KV 14MVA bank that appears to have about 10MVA of excess capacity. Conversion to 12.5KV and extension of three-phase distribution will be required.

Natural Gas

Roundhouse Road is not currently supplied with natural gas.

Geothermal

Geothermal energy can be used as sole supply for heating and cooling or to supplement a conventional HVAC system. Geothermal heat pumps, also known as ground source heat pumps, have the technical potential to save energy, reduce consumer energy costs, reduce summer electrical peak demands and reduce carbon emissions. A commercial geothermal heat pump moves heat from one place to another via a refrigeration process. In a

commercial building, a series of heat pumps removes heat from an energy supply source in the ground. The heat pump concentrates this low-grade heat, raising its temperature and then transfers it to the building's energy distribution system via a heat exchanger. In the summer the process is reversed. The heat pumps collect heat from the building and deposit it into the ground loop, providing cooling. One advantage of a heat pump is that it is located inside the building and requires no weather-related maintenance.

In a commercial setting, the source is a vertical or horizontal borehole loop field that can be located under a parking lot. The heat distribution system inside the building can be designed to allow for different temperature controls in different zones. A variable speed heat pump allows for more stable temperature control as compared to conventional HVAC as the heat pump can run continually but at lower speeds when lower amount of heat or cooling is needed (functions variably, not just on or off).

Recent case studies of GHP demonstration projects, funded in part by the 2009 American Recovery and Reinvestment Act (ARA) grant, found that these GHP systems save 30-65% primary energy compared to conventional HVAC systems. Correspondingly, they reduced CO2 emission in the range from 20 to 65%, and the operating cost was reduced by 18 to 63%. The installed cost of GHP systems is higher than conventional HVAC systems. Costs vary depending on geological conditions, building loads, system designs, and heat pump equipment. The simple payback period for GHP retrofit projects in the United States is usually 8-14 years; for new construction, a simple payback period of slightly more than 5 years is common. These systems tend to have high useful life as compared to conventional systems. Data from 2009 indicates that GHP residential applications are more concentrated in areas with a cold climate and high population density. (Liu, Xiaobing, Hughs, P., Anderson, A., An Overview of Geothermal Heat Pump Applications and a Preliminary Assessment of Its Technical Potential in the United States, GRC Transactions, Vol. 40, 2016).

Solar Thermal

The basic principal of solar thermal is to transfer solar radiation into heat via a thermodynamic system which is essentially a generator or engine. This process creates mechanical energy which can be used to generate electricity.

Solar water heating is a common way to harvest energy from the sun. Solar hot water technology has been available for decades and is quite efficient (typically 65 to 70 percent). Basic equipment is affordable and usually lasts for decades with little maintenance. A solar hot water system typically consists of a collector, a storage tank, piping, valves, controls and pumps. In freezing climates, the system may use a non-toxic glycol as the collector fluid, and a heat exchanger transfers the thermal energy to building water system. Collector systems can be flat-plate collector or evacuated tube collector.

Sufficient roof or ground space is required, free from shade during the day, south facing is ideal. A roof needs to be capable of bearing the weight of the collection system. Currently “in-roof” panels are being developed that perform the function of both a solar thermal (or solar photovoltaic) panel and normal roofing material.

A solar thermal system would not, in most cases, be able to generate all of a business’s energy requirements but could still meet a substantial proportion of need. Solar thermal can be integrated to work in conjunction with other technologies such as conventional heating or other renewable means of heat or electricity generation. It is a very reliable technology with low CO2 emissions.

Solar Photovoltaic (PV)

Solar PV is increasingly utilized on business and commercial buildings, helping to make them energy-independent and lower costs for electricity. Solar photovoltaic cells convert sunlight directly into electricity. Solar cells are connected together in panels to form arrays sized for a particular installation. New York has adopted “net metering” which allows excess electricity generated on sunny days to flow back into the electric grid, with credit or payment from the utility company for the power generated. Net metering is

available on a first-come, first-served basis to customers of the state's major investor-owned utilities. State law allow net metering for solar photovoltaic systems up to 2 MW in commercial and industrial settings. New York State and the federal government currently offer financial incentives to help defray the upfront cost of installing on-grid solar energy facilities. Size and cost of an array depend on the particular installation designed to suit a specified demand. In New York State annual average solar resources provide 4.0 to 4.5 kWh/m²/day. Even in shorter winter days, snow can act as a reflector and increase the light reaching the solar panel. As of early 2018, the average price for solar panels in New York was \$3.41 per watt.

Currently "in-roof" panels are being developed that perform the function of both a solar photovoltaic (or solar thermal) panel and normal roofing material.

A solar system would not, in most cases, be able to generate all of a business's energy requirements but could still meet a substantial proportion of need. Solar can be integrated to work in conjunction with other technologies such as conventional heating or other renewable means of heat or electricity generation. Solar electricity works well in the summer and can help supply energy during peak times. It is a very reliable technology with low CO₂ emissions.

Wind

New York is the 15th windiest state in the nation, usable wind power sites are found in most parts of the state. A small wind turbine can generate enough clean electricity for local use. The amount of energy that can be generated from small wind turbines mounted on a building's roof entirely depends on the annual average wind speed obtained at that particular site at that particular height. A decision to utilize a wind turbine to generate electricity at any particular site would need site specific data on wind speeds. Most wind turbines require smooth, laminar flow, winds to work efficiently, though there are currently attempts to design turbines to work well with the more turbulent winds normally found around developed areas at building roof heights.

According to available wind maps, the Oneonta area may have Annual Average wind speeds of 4.5-6.0 meters per second at a height of 80 meters, which is not generally considered suitable for wind development. For wind power to be utilized on a single commercial/industrial facility in the Study Area, site specific wind data at building height would be needed.

Compressed Natural Gas (CNG)

Made by compressing natural gas, which is mostly composed of methane, to less than one percent of the volume it occupies at standard atmospheric pressure. It is drawn from drilled natural gas wells or in conjunction with crude oil production. CNG is stored and distributed in hard containers at a pressure of 20-25 MPa (2,900-3,600 psi), usually in cylindrical or spherical shapes. Natural gas powers more than 12 million vehicles around the world, but has not been as highly utilized for vehicles in the United States.

Geographic areas not currently served by pipeline or distribution infrastructure can opt for portable delivery systems, often referred to as a “virtual pipeline” in which CNG can be delivered via truck. The most common use is to fuel trucks and other vehicles. New England, New York, and Pennsylvania have 10 compression plants designed to load CNG trailers. These facilities take pipeline natural gas, dry the gas and pressurize it to 3600 PSIG. A CNG Off-load, or decompression, station accepts the trailer with connection points, gas heating system, pressure reduction and regulation system, custody transfer meter, emergency shutdown, and system controls (temperature, pressure and valve position). The temperature of a gas or liquid decreases when forced through rapid expansion while insulated, therefore heat must be added to counter this effect. Single and two stage decompression units built in a 20-foot shipping container are commercially available. These are designed to operate in a Class 1 Division 2 electrical classification area. Two stage decompression systems are for fixed installations where more stable discharge pressure is desired.

Biomass

Biomass power is carbon neutral electricity generated from renewable organic waste that would otherwise be dumped in landfills or openly burned. Such organic waste can include household waste, scrap lumber, forest debris, agricultural harvest waste and other industry byproducts. Biomass power uses these natural materials to generate clean, renewable electricity, while reducing greenhouse gas emissions on a larger community scale.

Smaller commercial biomass systems are available for use in a single large building or groups of buildings. Typical biomass boilers provide hot water heat usually using wood pellets or wood chips. Biomass Combined Heat and Power (CHP) refers to a technology that generates usable heat and power, usually electricity, in a single process, with heat as a by-product. CHP systems make extensive use of the heat produced whilst generating electricity sometimes in excess of 80% efficiency. The main variable when looking at how efficient a boiler will be is the fuel type. This increase in efficiency compared to grid delivered energy is mainly due to the loss of power over distances through dispersion and the more inefficient generation methods currently employed in older power stations. There are factory-assembled, “packaged” CHP systems available for commercial buildings and small industrial spaces. The general components of a CHP system are an electricity generator, heat exchanger, controls and either an engine or a turbine. These components are packaged together into a CHP unit that can be connected to the heating and electricity systems of the building. Buildings or groups of buildings that operate around the clock (hotels, hospitals, factories) are generally particularly suited to CHP systems. A trigeneration system can also be used to produce space cooling/air conditioning through the use of a chiller. CHP Biomass plants with outputs from 25kW to 1MW per module are available. Enough for several of the individual buildings as proposed in the Master Plan.

Sourcing a local fuel supply is important in cost and efficiency calculations, and contributing to the local economy. Biomass fuel needs to be delivered physically, not by pipe or wire. Ash will need to be disposed of. CHP systems usually require less

maintenance than standard boiler, but may require more general inspection to ensure proper functioning, such as visual inspection to check lubrications of bearings, regular cleaning of flue tubes. Biomass fuel prices are much more stable than that of fossil fuel and generally much lower when purchasing in larger amounts, therefore fuel storage space is necessary as is ability to accept fuel delivery (normally a standard pallet or larger). Biomass boilers themselves also tend to be larger than conventional fossil fuel boilers.

Incentive Programs

Renewable and clean energy alternatives allow substantial savings on operational costs, as compared to conventional systems, however the installation costs can be higher. Therefore, a number of programs and tax incentives are available through the New York State Energy Research and Development Authority (NYSERDA), according to their website, to encourage commercial or industrial developments to minimize energy loss through efficient energy utilization and renewable energy technologies, including;

- Combined Heat and Power Program – Incentives of up to \$2.5 million are available for the installation of combined heat and power (CHP) systems up to 3 MW in New York State. Customers can choose from a range of pre-approved, pre-packaged CHP systems, or if a system greater than 1 MW is desired, a custom-engineered option is also available.
- Commercial New Construction Program – offers objective technical and financial support to commercial building owners and tenants to effect a permanent transformation in the way buildings are designed and constructed in NYS. NYSERDA project managers and regionally based consultants will work with building owners and their design teams to analyze efficiency opportunities for new or substantially renovated commercial buildings.
- NYSERDA Commercial Programs – Flexible Technical Assistance, Real-time Energy Management and Commercial Tenant Programs. Completing an energy

study of a building can help identify and evaluate opportunities to reduce energy costs and incorporate clean energy into capital planning. The FlexTech program shares the cost to produce an objective, site-specific and targeted study on how best to implement clean energy and/or energy efficiency technologies.

- Ground Source Heat Pump Rebate – NYSERDA is making \$15 million available for the installation of ground source heat pump systems (GSHP) at home and other properties. Funding is available through approved GSHP designer or installer participation. One building can receive a rebate of up to \$500,000 for Large Systems (those that use more than 10 tons of cooling capacity) at \$1,200 per ton.
- Industrial and Process Efficiency Program for Manufacturers – Performance-based incentives can help manufacturers and other production facilities implement energy efficiency and process improvements that will improve productivity and reduce costs.
- Manufacturing Corps (M-Corps) Pilot Program – Aims to help clean technology startups overcome manufacturing obstacles through a total of \$12 million in funding. The M-Corps Pilot Program will help New York cleantech entrepreneurs partner with manufacturers and scale up locally made products that enable cleaner, more efficient, and less costly energy use.
- NY Truck Voucher Incentive Program (NYT-VIP) – Reduces the cost of low-emitting trucks and buses to encourage adoption of advanced vehicle technologies. These vehicle technologies will include hybrids, natural gas vehicles, zero-emission vehicles, and diesel particulate emission reduction traps.
- Solar Initiative (NY-Sun) – Incentives and financing for homes and businesses, providing a range of offerings to make going solar more affordable.

- Renewable Heat NY – Provides incentives toward the installation costs of high-efficiency, low emission biomass heating systems for homeowners and businesses not currently using natural gas.
- Small Commercial Energy Efficiency Program – Offers small business and not-for-profit organizations two low-interest loan options to finance energy efficiency projects. These financing opportunities help access upfront capital to make energy efficiency upgrades through participation loan or on-bill recovery financing option.
- Strategic Energy Management Program – Offers training to industrial facilities that are interested in optimizing energy use through a continuous improvement approach, enabling companies to reduce energy consumption and waste.

In the future, when the energy demands of a specific redevelopment plan are known, an evaluation of power sources will be conducted at that time and any relevant mitigation measures identified depending on actual energy needs of redevelopment structures/industries. At that time, additional environmental review may be required.